Whitman
Environmental Sciences

5508 35th Avenue NE, Suite 108
Seattle, WA 98105

Phone: (206) 523-3505
Whitenviro@yahoo.com

September 11, 2014

Isola Homes Inc.
555 S. Renton Village Place
Renton, WA 98057

Attention: Mr. Michael Pollard

Subject: Environmental Site Investigation
7500 & 7510 15th Avenue NW
Seattle, Washington

Dear Mr. Pollard:
As you have authorized, Whitman Environmental Sciences (WES), has conducted a limited site investigation on the above referenced subject property. The site and surrounding area are shown in Figure 1, a Site Location Map. The subject property consists of two parcels on the east side of 15th Avenue NW immediately north of the intersection with NW 75th Street, totaling approximately 10,663 square feet (approximately 0.24 acre). The properties are identified by the King County Tax Parcel ID numbers 3491300011 and 3491300012.

Property History and Condition
The corner property were first developed as a residence in about 1904, while the northern parcel remained undeveloped until about 1931. A 1917 Sanborn fire insurance map and 1920 Kroll directory shows a small building on the NE corner of the intersection of 15th Avenue NW and 75th Street. A 1928 street directory lists the address as 7504 15th, with the name Jacob Mason as the resident. At that time there was no listing for the building at 7510 15th. in 1931 the current building at 7510 15th was built and used as a grocery, with apartments in the rear of the building. By 1934 a service station had replaced the residence on the corner and both properties were in commercial use. Throughout that time the corner parcel was addressed 7504 15th Avenue NW.

The service station was a relatively small structure with attached arches extending out from the building to two pump islands, located on the south and west sides of the building. Photographs of the building in historical Assessor's records show the fuel pumps on the islands, but the location of any underground storage tanks or vent lines can not be discerned. Historical references showing property details are included in Appendix A.

In about 1937 a small grease shed was built along the north side of the service station, against the middle section of the grocery. Photos show it was just large enough for one car and had an hydraulic lift in the floor. In about 1954, the service station building was converted to a cleaners. The readily ascertainable references note it to be name Van's Drive-Thru Cleaning, but it is unclear whether or not dry cleaning was conducted on the property. The cleaner operated on the site until about 1963. The old building was demolished and the current structure was constructed in 1964 as a Winchell's Donut House. It has remained in relatively consistent use since that time.

The northern parcel addressed 7510 15th Avenue NW is developed with a small retail store with a partial second story that holds two small living units. The store was built in about 1931. It remains relatively unchanged from it's original configuration, but has been cosmetically remodeled several times. Photographs and city directories show the store operated under a number of different names, but it remained a small grocery or convenience store throughout its history.

The building occupies approximately 2/3 of the property, with an open yard area behind it. Currently, the yard is cluttered with debris and vehicles owned by one of the tenants.

Adjoining Property History and Conditions

Properties in the surrounding area have a mix of commercial and residential uses. To the north, the adjacent property is currently a dry cleaning drop-off station. In the past it has served as a small office for various attorneys, real estate companies or travel agents. Beyond a residence that is partially in commercial storefront use. To the east are single family residences facing 75th Street. To the south, across 75th Street is a small commercial building and beyond, relatively new apartments. To the west, across 15th Avenue NW are an auto repair shop and two taverns.

Properties in the surrounding area are considered potential sources of recognized environmental conditions if there are land uses or conditions that would be suspected as sources of contaminants, at locations that could have the potential to impact the subject property. Generally that could occur if the sources were immediately adjacent to the subject property or in a direction where migrating contaminants would move toward the site. Contaminants typically migrate with shallow groundwater, which tends to follow topography. In this area, the ground surface slopes generally southward, so adjacent properties to the north would be considered the most likely sources of potential contaminants originating from off-site sources.

The immediately adjoining property to the north is a small commercial building currently serving as a dry-cleaning drop-off station. No dry cleaning occurs at that location. As you are aware, we have previously investigated the adjoining properties to the north and found no significant environmental issues. Our report on the adjoining properties was addressed to you on February 21, 2014.

Based on the past history of site uses and the current conditions behind the retail store at 7510 15th Avenue NW, WES recommended a site investigation to evaluate the property. This report summarizes our observations and the results of laboratory testing conducted on samples of soil from the site. This assessment found no evidence of petroleum hydrocarbons or volatile organic compounds (solvents that would be associated with dry cleaning) in soil samples from any of the locations drilled during this assessment. Groundwater was not encountered in any of the borings, which extended to depths of up to 23 feet below the ground surface.

SCOPE OF WORK

As part of this evaluation, WES subcontracted ESN, Inc., to drill borings for soil and groundwater sampling at the property. Daniel Whitman, a licensed geologist from WES, conducted all sampling for this project.

Soil Sampling

On September 8th, 2014, WES and ESN drilled six borings to obtain soil samples at accessible locations on the property that were at or near potential sources of recognized environmental conditions. The approximate locations of the borings are shown in Figure 2. Borings B-1, B-2, B-3

and B-4 were drilled in the parking lot on the north side of the 7500 15th building. Boring B-5 was located behind the 7510 15th building. Boring B-6 was drilled on the south side of the 7500 15th building, near the property line.

Boring B-1 was located near the former location of the grease shed. B-2 was located as far south as possible in the parking area, near the former location of the western pump island of the old service station. Boring B-3 was located in the southeastern part of the parking lot, in an area that may have originally held the station's underground storage tanks.

The soil borings were drilled to depths ranging from 12 to 23 feet below the ground surface. Continuous soil samples were attempted throughout the depths drilled, but recovery was sometimes limited by the dense soil conditions. As part of this scope of work WES intended to obtain groundwater samples from any borings that demonstrated wet soils or free standing water in the bore hole. However, no evidence of groundwater conditions were encountered in any of the borings.

Field Procedures

ESN used a truck-mounted hydraulically driven Geoprobe to conduct the drilling. Each boring was drilled by direct push methods, hydraulically driving a five-foot long split-spoon sampler to obtain continuous soil samples throughout the drilled depth. The samplers were cleaned prior to each sampling attempt and were equipped with new polyethylene liners which isolated the sampled soil from contact with the body of the sampler.

Representative portions of each sample were placed in laboratory prepared vials and glass jars with teflon-lined lids, chilled and held under chain-of-custody, following appropriate environmental sampling procedures. Samples intended for analysis of volatile organic compounds (solvents) were placed in laboratory prepared 40-ml vials with septum seals, in accordance with EPA Method 5035. Additional portions of all samples were held for potential laboratory testing and soil classification reference.

At the final depth of each boring, it was checked for standing water in the borehole. Groundwater was not encountered in any of the drilled borings. Soil samples obtained throughout the drilled depths were most to dry with no indication of damp or wet conditions.

After drilling and sampling was completed, the borings were sealed with bentonite and surficial cement patches were placed at the ground surface in paved areas of the site.

Field Observations

During drilling, the samples were reviewed for soil classification purposes and any field detectable evidence of soil or groundwater contamination, such as staining, odors, liquid petroleum or discoloration.

Soils consisted of brown silty and clayey sand with traces of gravel, through most of the depth drilled. Much of the soil was characterized as weathered glacial till, or fill derived from glacial till soils. At shallow depths within about 18 inches of the ground surface, the borings encountered a gravel base beneath the asphalt and moderately weathered soil with a slightly rusty brown appearance. Below a depth of about eight feet the borings encountered fine to medium sand with only traces of silt or clay. There was little or no organic topsoil zone in any of the borings.

No field indications of contamination, such as staining, odors or discoloration were observed in any of the borings completed for this investigation. Soil samples were selected for laboratory testing from the depths deemed most susceptible to impacts from the former on-site sources. The analyzed samples were from depths ranging from five to eighteen feet below the ground surface. Table 1 summarizes the soil samples selected for laboratory testing.

Laboratory Testing of Environmental Samples
Based on the observed conditions and historical site uses, laboratory testing was conducted on at least one soil sample from each boring. The selected samples were submitted to Friedman & Bruya, Inc., a Washington-state certified laboratory, for environmental analyses.

Laboratory Analyses
The soil samples were tested a parameters often associated with petroleum releases and dry cleaning. Each selected soil sample was analyzed for total petroleum hydrocarbons (TPH) in the gasoline, diesel and motor oil ranges by Washington method NWTPH-HCID. Selected samples were analyzed for a list of 62 volatile organic compounds by EPA Method 8260C.

The laboratory findings are summarized in Table 1. The table also summarizes the applicable Washington State soil cleanup criteria used by the Department of Ecology to determine whether or not cleanup is required under state regulations. The laboratory reports of analytical results are attached in Appendix B.

Results and Conclusions
This limited site investigation found no detectable concentrations of any of the analyzed parameters in any of the tested samples. The laboratory reporting limits are suitable for direct comparison to allowable levels under Washington's Model Toxics Control Act cleanup regulations.

Based on our field observations and the results of laboratory testing, there do not appear to be widespread environmental impacts related to past site uses. Because the current donut shop building partially overlies the former location of the service station on the corner lot, there is a potential that some residual features or minor impacts may remain that will not be detected until the building can be removed. The current testing suggests any releases that may remain have not spread beyond those immediate areas. No further investigation or environmental cleanup is recommended or appears warranted.

Limitations
This report has been prepared to attempt to qualify certain environmental conditions of the property. This information should be viewed only in the context of any pre-existing studies of the site and surrounding area that provide further information regarding environmental conditions. WES does not guarantee that the site is free of hazardous or potentially hazardous materials or conditions, or that latent or undiscovered conditions will not become evident in the future. This report represents the professional opinions and judgments of WES, prepared in accordance with the our General Terms and Conditions and commonly practiced environmental assessment procedures. No other warranties, representations, or certifications are made.

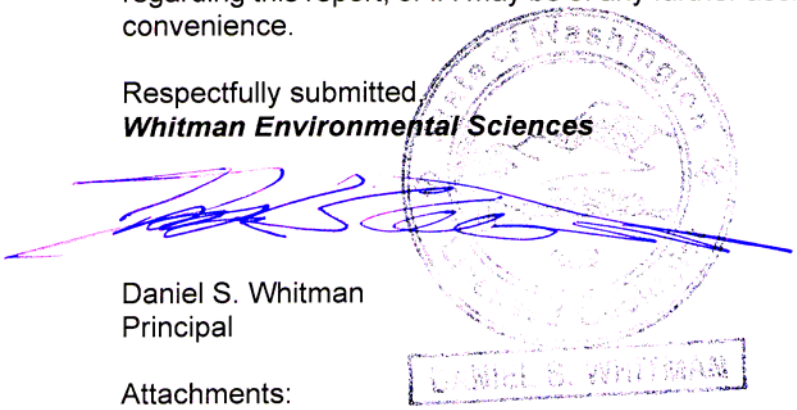
WES may have obtained, reviewed, and evaluated information available from other consultants, analytical laboratories and local, state, or federal agencies in preparing this report. WES' conclusions, opinions, and recommendations are based, in part, on this information. Where

possible, WES has made efforts to identify mistakes or insufficiencies in the information provided, but verification of all of the information is beyond the scope of this study.

Closure

Thank you for the opportunity to be of service to you in this matter. If you have any questions regarding this report, or if I may be of any further assistance, please feel free to contact me at your convenience.

Respectfully submitted,
Whitman Environmental Sciences



Daniel S. Whitman
Principal

Attachments:

Table 1 - Summary of Soil Sample Analytical Results
Figure 1 - Site Location Map
Figure 2 - Soil Sample Location Plan

Appendix A - Selected Historical References
Appendix B - Laboratory Analytical Reports
Friedman & Bruya, Inc.

TABLE 1
Summary of Soil Sample Analytical Results
7500 & 7510 15th Avenue NW
Seattle, Washington

Boring / Sample Depth (Ft.)	***Laboratory Analytical Results (mg/kg)***			
	Total Petroleum Hydrocarbons - NWTPH-HCID			***Volatile Organic Compounds*** ***(62 Individual petroleum compounds and halogenated solvents)***
	Gasoline Range	***Diesel Range***	***Motor Oil Range***	
B-1 / 5'-9'	ND (<20)	ND (<50)	ND (<250)	NA
B-2 / 5'-10'	ND (<20)	ND (<50)	ND (<250)	ND (all)
B-2 / 10' - 15'	ND (<20)	ND (<50)	ND (<250)	NA
B-3 / 15' - 18'	ND (<20)	ND (<50)	ND (<250)	NA
B-4 / 5' - 10'	ND (<20)	ND (<50)	ND (<250)	NA
B-5 / 0' - 5'	ND (<20)	ND (<50)	ND (<250)	NA
B-5 / 5' - 10'	ND (<20)	ND (<50)	ND (<250)	ND (all)
B-6 / 5' - 10'	ND (<20)	ND (<50)	ND (<250)	ND (all)
B-6 / 10' - 14'	ND (<20)	ND (<50)	ND (<250)	NA
Washington State MTCA Soil Cleanup Criteria	***30*** ***100**** ****if no benzene is present***	***2,000***** ***** combined diesel or motor oil concentration***		***Each Compound has an Individual Cleanup Level based on Toxicity***

Table 1 Notes:
ND (<XXX) - Parameter not detected at concentrations at or above the noted reporting limit.
Total Petroleum Hydrocarbons by Method NWTPH-HCID. If detections occur above the reporting limits, additional analysis is required to quantify the identified petroleum range.
Volatile Organic Compounds by EPA Method 8260C, includes a list of 62 common petroleum compounds and halogenated solvents..
MTCA Soil cleanup criteria per Chapter 173-340-740 WAC. Method A criteria presented where available.

Sample results exceeding applicable cleanup criteria are noted in ***Bold Italic.***

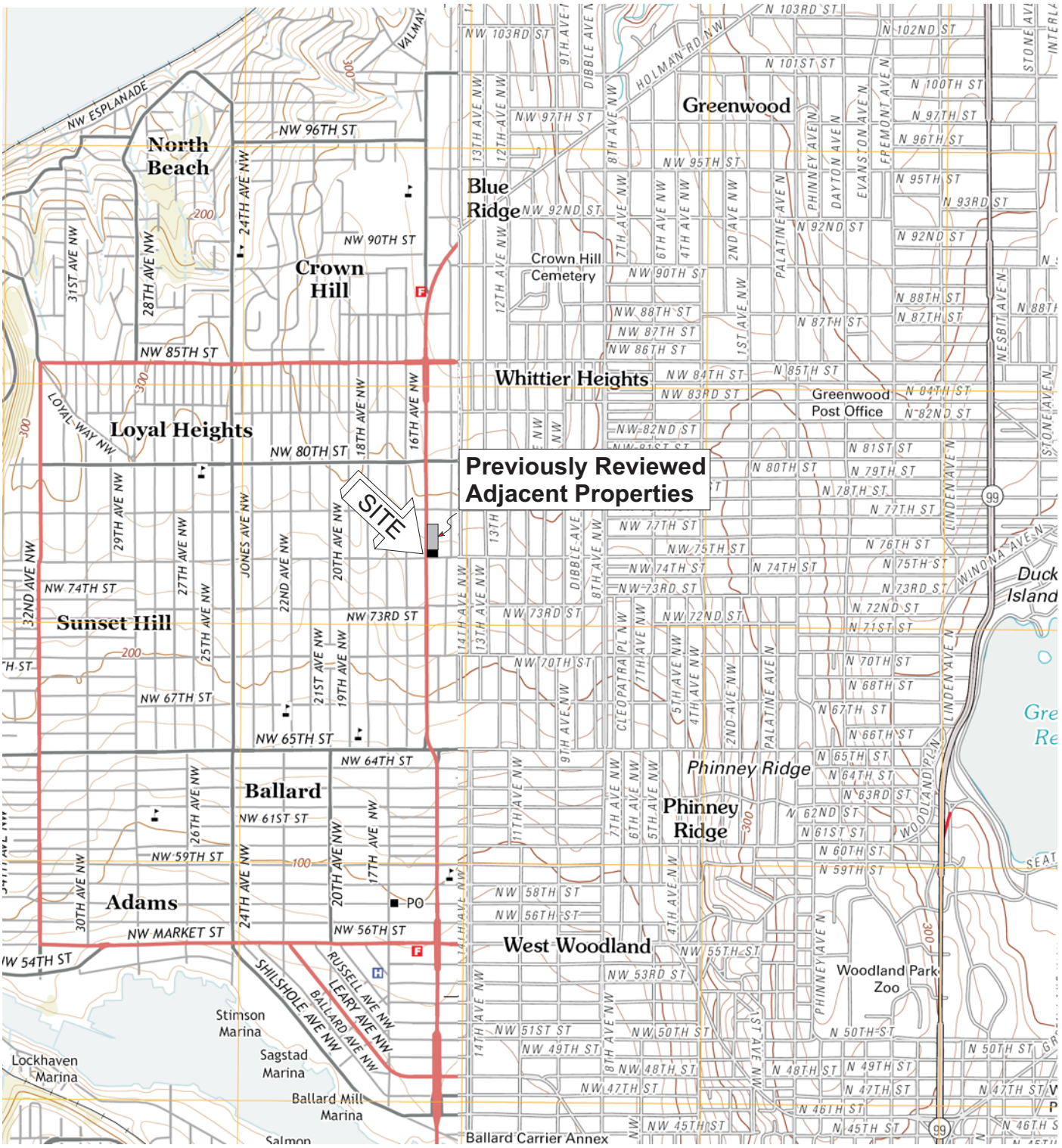


Figure 1 - Site Map

7500 & 7510 15th Avenue NW
Seattle, Washington

Project No.	WES - 1480
Date	Sept 11, 2014
File ID.	1480F1

Whitman Environmental Sciences

Boring Locations

North

0 25'

Scale 1" = Approx. 25'

Base Photo from Google Earth

Figure 2 - Site and Sampling Plan

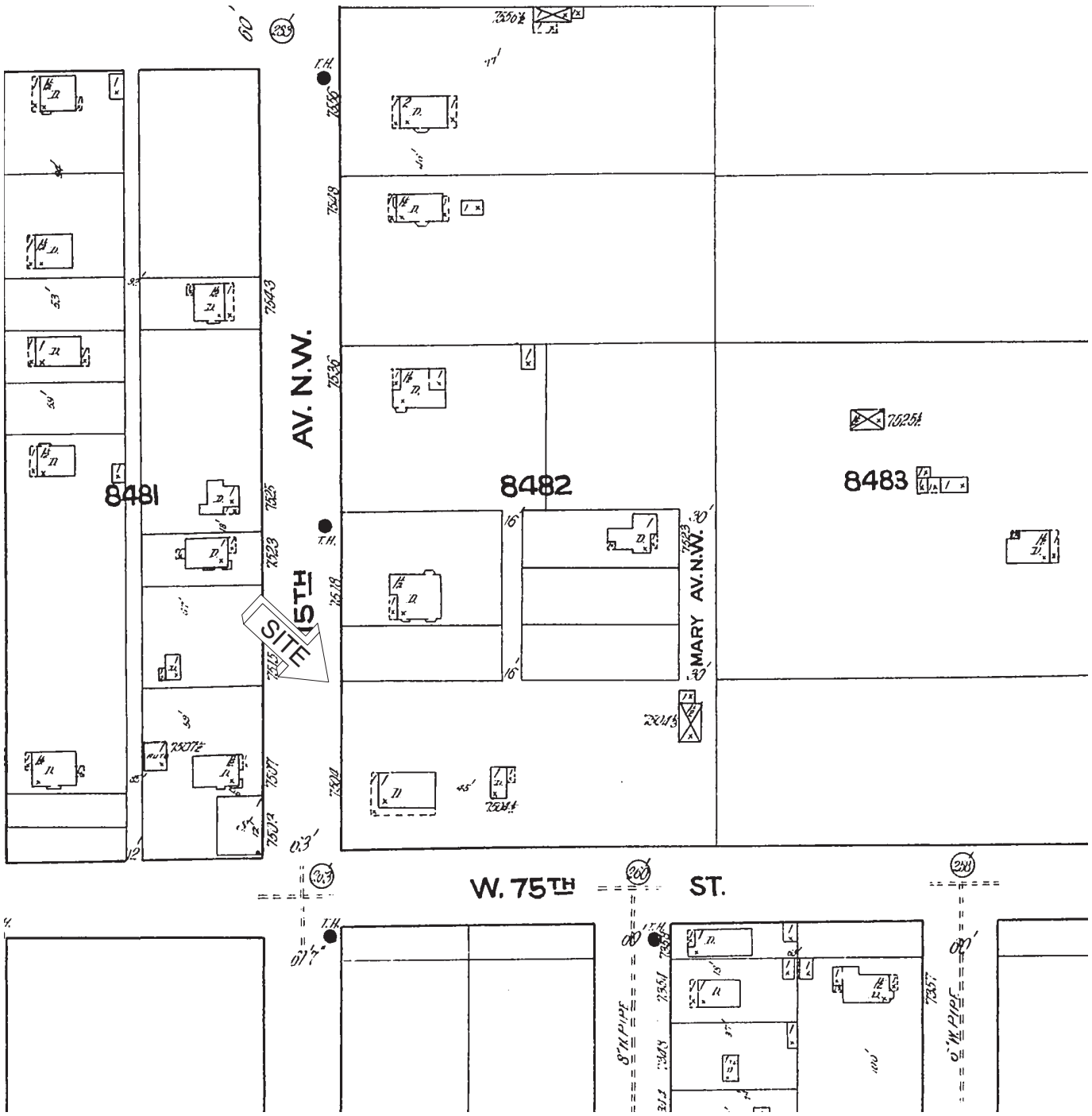
7500 & 7510 15th Avenue NW
Seattle, Washington

Project No.	WES - 1480
Date	Sept 11, 2014
File ID.	1480F2

Whitman Environmental Sciences

APPENDIX A

Historical Aerial Photographs & References



North

Historical Sanborn Map - 1917

7500 & 7510 15th Avenue NW
Seattle, Washington

From Seattle Public Library

Project No.	WES - 1480
Date	Sept 11, 2014
File ID.	1480S17

Whitman Environmental Sciences

Historical Photograph - 1937

Former Service Station
7504 15th Avenue NW
Seattle, Washington

Project No.	WES - 1480
Date	Sept 11, 2014
File ID.	1480HP37

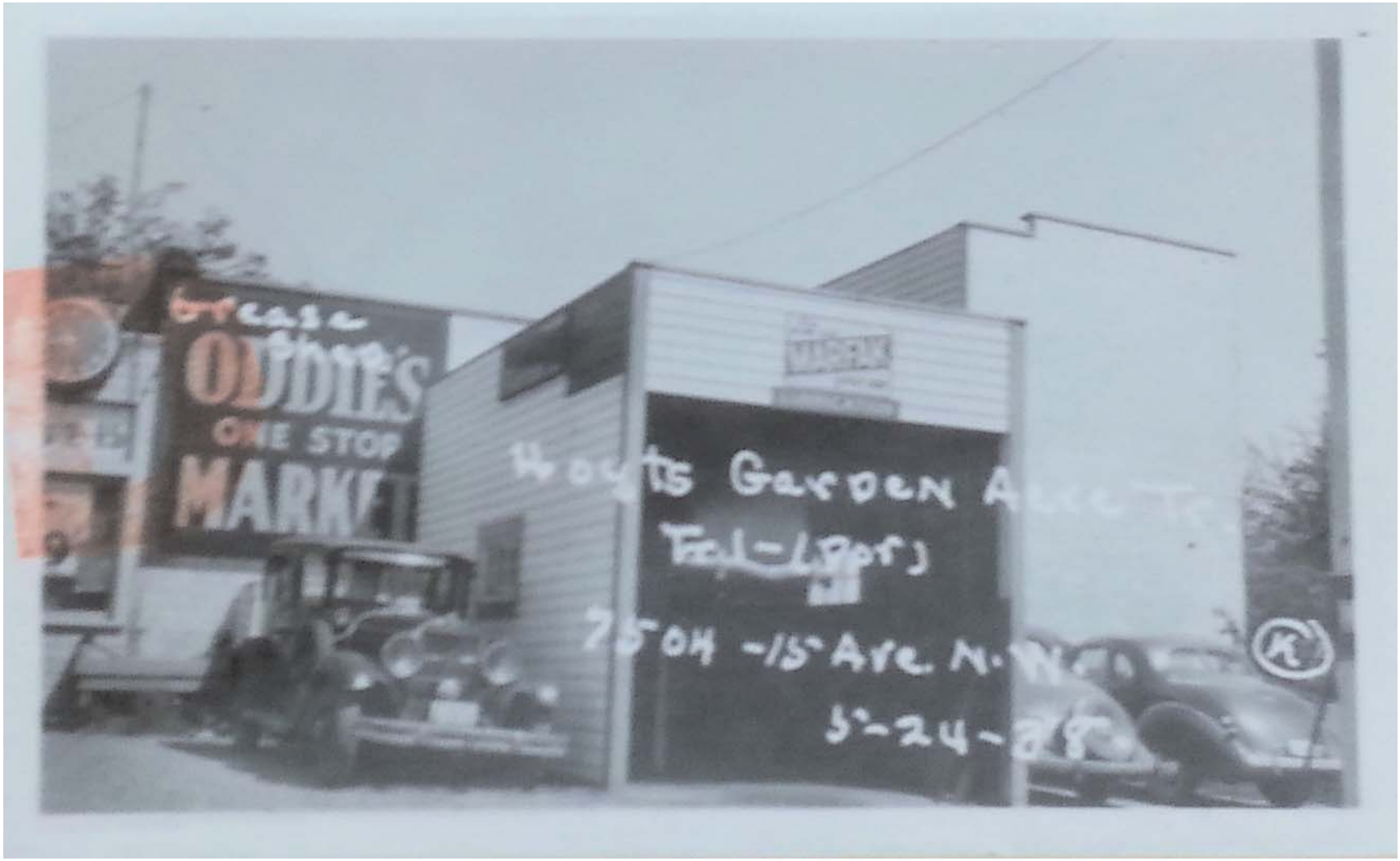
Whitman Environmental Sciences

Historical Photograph - 1937

Grocery Store
7510 15th Avenue NW
Seattle, Washington

Project No.	WES - 1480
Date	Sept 11, 2014
File ID.	1480HP372

Whitman Environmental Sciences

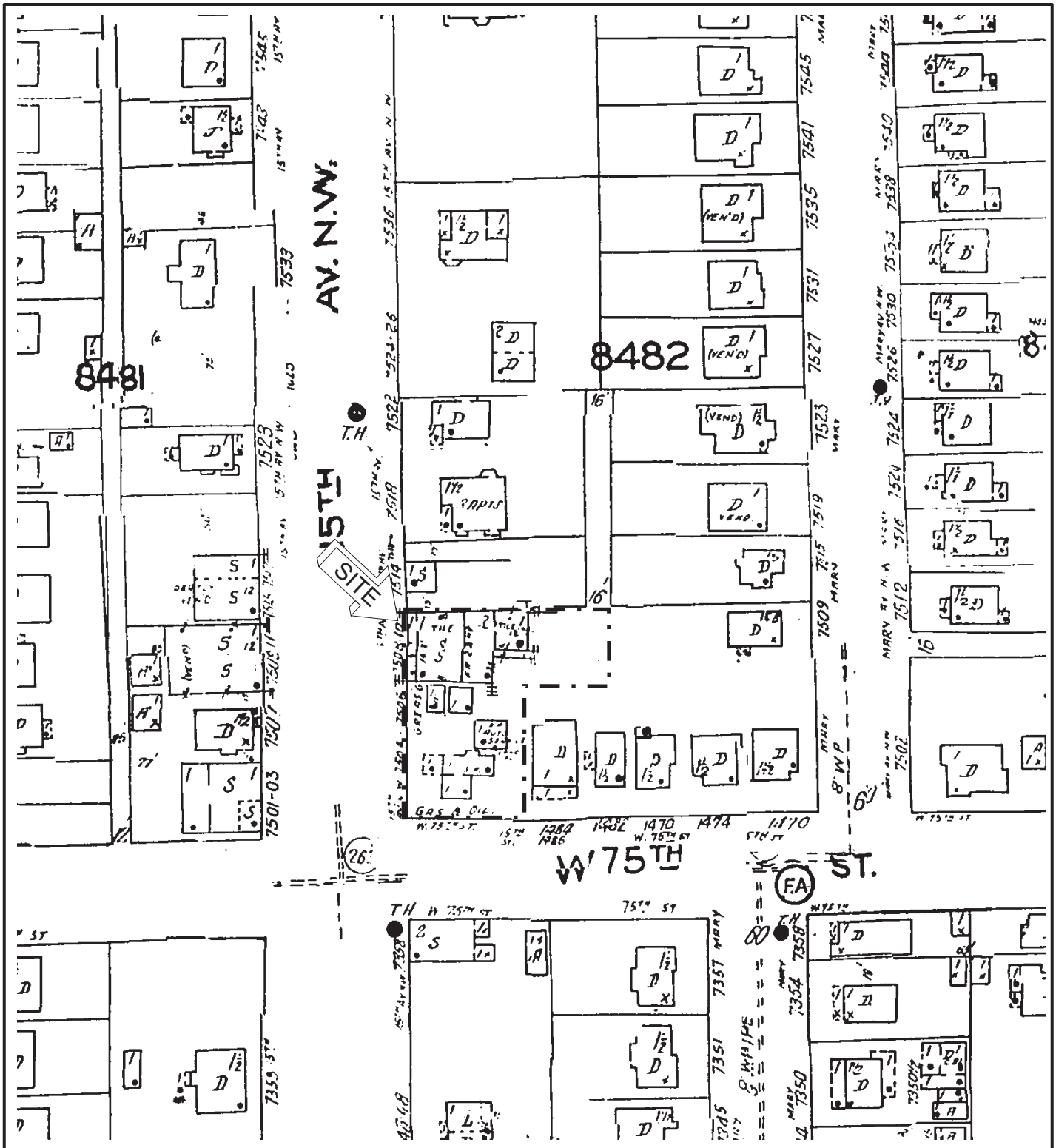


Historical Photograph - 1938

Grease Shed at Service Station
7504 15th Avenue NW
Seattle, Washington

Project No.	WES - 1480
Date	Sept 11, 2014
File ID.	1480HP332

Whitman Environmental Sciences



North

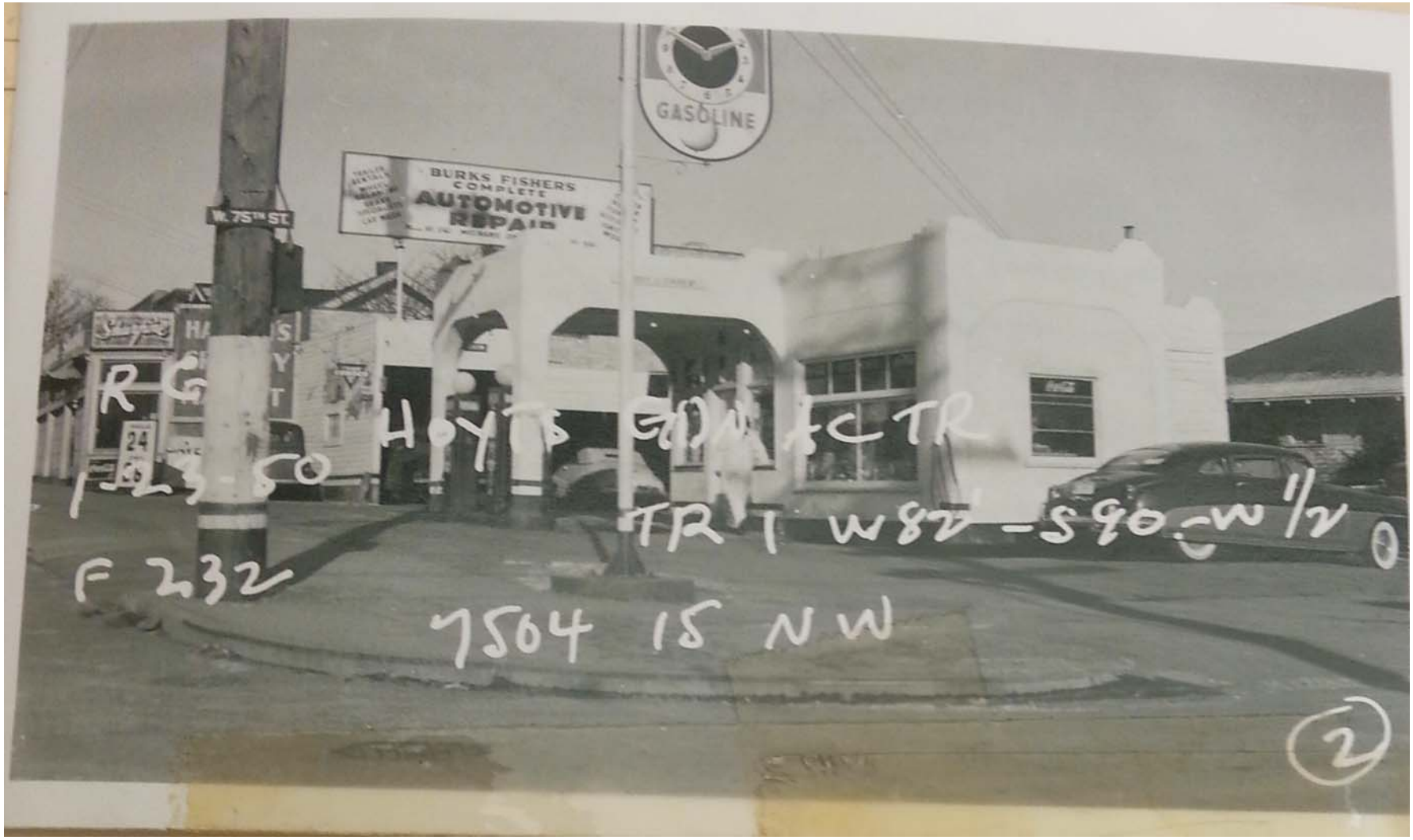
From Seattle Public Library

Historical Sanborn Map - 1950

7500 & 7510 15th Avenue NW
Seattle, Washington

Project No.	WES - 1480
Date	Sept 11, 2014
File ID.	1480S50

Whitman Environmental Sciences



Historical Photograph - 1950

Former Service Station
7504 15th Avenue NW
Seattle, Washington

Project No.	WES - 1480
Date	Sept 11, 2014
File ID.	1480HP50

Whitman Environmental Sciences

Historical Photograph - 1952

Grocery Store
7510 15th Avenue NW
Seattle, Washington

Project No.	WES - 1480
Date	Sept 11, 2014
File ID.	1480HP52

Whitman Environmental Sciences

APPENDIX B

Laboratory Analytical Reports
Friedman & Bruya, Inc.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

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

September 10, 2014

Dan Whitman, Project Manager
Whitman Environmental Sciences
5508 35th Ave. NE
Seattle, WA 98105

Dear Mr. Whitman:

Included are the results from the testing of material submitted on September 8, 2014 from the Westernco WES 1480, F&BI 409102 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 should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
WES0910R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on September 8, 2014 by Friedman & Bruya, Inc. from the Whitman Environmental Sciences Westernco WES 1480, F&BI 409102 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Whitman Environmental Sciences
409102 -01	B-1/5-9'
409102 -02	B-2/5-10'
409102 -03	B-2/10-15'
409102 -04	B-3/15-18'
409102 -05	B-4/5-10'
409102 -06	B-5/0-5
409102 -07	B-5/5-10
409102 -08	B-6/5-10
409102 -09	B-6/10-14

All quality control requirements were acceptable.

Date of Report: 09/10/14
Date Received: 09/08/14
Project: Westernco WES 1480, F&BI 409102
Date Extracted: 09/08/14
Date Analyzed: 09/08/14

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

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

Sample ID Laboratory ID	Gasoline	Diesel	Heavy Oil	Surrogate (% Recovery) (Limit 56-165)
B-1/5-9' 409102-01	ND	ND	ND	98
B-2/5-10' 409102-02	ND	ND	ND	100
B-2/10-15' 409102-03	ND	ND	ND	97
B-3/15-18' 409102-04	ND	ND	ND	98
B-4/5-10' 409102-05	ND	ND	ND	98
B-5/0-5 409102-06	ND	ND	ND	107
B-5/5-10 409102-07	ND	ND	ND	102
B-6/5-10 409102-08	ND	ND	ND	96
B-6/10-14 409102-09	ND	ND	ND	97
Method Blank 04-1808 MB	ND	ND	ND	101

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

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	B-2/5-10'	Client:	Whitman Environmental Sciences
Date Received:	09/08/14	Project:	Westernco WES 1480, F&BI 409102
Date Extracted:	09/08/14	Lab ID:	409102-02
Date Analyzed:	09/08/14	Data File:	090816.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	62	142
Toluene-d8	100	51	121
4-Bromofluorobenzene	98	32	146

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
Methylene chloride	<0.5	o-Xylene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Styrene	<0.05
trans-1,2-Dichloroethene	<0.05	Isopropylbenzene	<0.05
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	<0.05
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	<0.05
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	<0.03	1,2,4-Trimethylbenzene	<0.05
Trichloroethene	<0.02	sec-Butylbenzene	<0.05
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	<0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	<0.05	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	<0.05
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	B-5/5-10	Client:	Whitman Environmental Sciences
Date Received:	09/08/14	Project:	Westernco WES 1480, F&BI 409102
Date Extracted:	09/08/14	Lab ID:	409102-07
Date Analyzed:	09/08/14	Data File:	090817.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	62	142
Toluene-d8	101	51	121
4-Bromofluorobenzene	99	32	146

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
Methylene chloride	<0.5	o-Xylene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Styrene	<0.05
trans-1,2-Dichloroethene	<0.05	Isopropylbenzene	<0.05
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	<0.05
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	<0.05
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	<0.03	1,2,4-Trimethylbenzene	<0.05
Trichloroethene	<0.02	sec-Butylbenzene	<0.05
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	<0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	<0.05	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	<0.05
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	B-6/5-10	Client:	Whitman Environmental Sciences
Date Received:	09/08/14	Project:	Westernco WES 1480, F&BI 409102
Date Extracted:	09/08/14	Lab ID:	409102-08
Date Analyzed:	09/08/14	Data File:	090818.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	62	142
Toluene-d8	101	51	121
4-Bromofluorobenzene	98	32	146

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
Methylene chloride	<0.5	o-Xylene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Styrene	<0.05
trans-1,2-Dichloroethene	<0.05	Isopropylbenzene	<0.05
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	<0.05
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	<0.05
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	<0.03	1,2,4-Trimethylbenzene	<0.05
Trichloroethene	<0.02	sec-Butylbenzene	<0.05
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	<0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	<0.05	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	<0.05
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	Whitman Environmental Sciences
Date Received:	Not Applicable	Project:	Westernco WES 1480, F&BI 409102
Date Extracted:	09/08/14	Lab ID:	04-1770 mb
Date Analyzed:	09/08/14	Data File:	090808.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	103	62	142
Toluene-d8	100	51	121
4-Bromofluorobenzene	97	32	146

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
Methylene chloride	<0.5	o-Xylene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Styrene	<0.05
trans-1,2-Dichloroethene	<0.05	Isopropylbenzene	<0.05
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	<0.05
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	<0.05
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	<0.03	1,2,4-Trimethylbenzene	<0.05
Trichloroethene	<0.02	sec-Butylbenzene	<0.05
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	<0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	<0.05	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	<0.05
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

Date of Report: 09/10/14
Date Received: 09/08/14
Project: Westernco WES 1480, F&BI 409102

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

Laboratory Code: 409045-02 (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	18	20	10-142	11
Chloromethane	mg/kg (ppm)	2.5	<0.5	44	46	10-126	4
Vinyl chloride	mg/kg (ppm)	2.5	<0.05	45	49	10-138	9
Bromomethane	mg/kg (ppm)	2.5	<0.5	65	67	10-163	3
Chloroethane	mg/kg (ppm)	2.5	<0.5	67	66	10-176	2
Trichlorofluoromethane	mg/kg (ppm)	2.5	<0.5	61	61	10-176	0
Acetone	mg/kg (ppm)	12.5	<0.5	78	81	10-163	4
1,1-Dichloroethene	mg/kg (ppm)	2.5	<0.05	63	65	10-160	3
Methylene chloride	mg/kg (ppm)	2.5	<0.5	67	66	10-156	2
Methyl t-butyl ether (MTBE)	mg/kg (ppm)	2.5	<0.05	83	84	21-145	1
trans-1,2-Dichloroethene	mg/kg (ppm)	2.5	<0.05	73	74	14-137	1
1,1-Dichloroethane	mg/kg (ppm)	2.5	<0.05	78	78	19-140	0
2,2-Dichloropropane	mg/kg (ppm)	2.5	<0.05	98	97	10-158	1
cis-1,2-Dichloroethene	mg/kg (ppm)	2.5	<0.05	82	81	25-135	1
Chloroform	mg/kg (ppm)	2.5	<0.05	84	84	21-145	0
2-Butanone (MEK)	mg/kg (ppm)	12.5	<0.5	86	84	19-147	2
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	<0.05	83	82	12-160	1
1,1,1-Trichloroethane	mg/kg (ppm)	2.5	<0.05	81	80	10-156	1
1,1-Dichloropropene	mg/kg (ppm)	2.5	<0.05	75	74	17-140	1
Carbon tetrachloride	mg/kg (ppm)	2.5	<0.05	82	79	9-164	4
Benzene	mg/kg (ppm)	2.5	<0.03	76	75	29-129	1
Trichloroethene	mg/kg (ppm)	2.5	<0.02	76	77	21-139	1
1,2-Dichloropropane	mg/kg (ppm)	2.5	<0.05	81	78	30-135	4
Bromodichloromethane	mg/kg (ppm)	2.5	<0.05	89	87	23-155	2
Dibromomethane	mg/kg (ppm)	2.5	<0.05	87	87	23-145	0
4-Methyl-2-pentanone	mg/kg (ppm)	12.5	<0.5	93	95	24-155	2
cis-1,3-Dichloropropene	mg/kg (ppm)	2.5	<0.05	93	92	28-144	1
Toluene	mg/kg (ppm)	2.5	<0.05	77	75	35-130	3
trans-1,3-Dichloropropene	mg/kg (ppm)	2.5	<0.05	89	89	26-149	0
1,1,2-Trichloroethane	mg/kg (ppm)	2.5	<0.05	85	85	10-205	0
2-Hexanone	mg/kg (ppm)	12.5	<0.5	86	86	15-166	0
1,3-Dichloropropane	mg/kg (ppm)	2.5	<0.05	83	82	31-137	1
Tetrachloroethene	mg/kg (ppm)	2.5	<0.025	73	70	20-133	4
Dibromochloromethane	mg/kg (ppm)	2.5	<0.05	88	86	28-150	2
1,2-Dibromoethane (EDB)	mg/kg (ppm)	2.5	<0.05	86	85	28-142	1
Chlorobenzene	mg/kg (ppm)	2.5	<0.05	80	78	32-129	3
Ethylbenzene	mg/kg (ppm)	2.5	<0.05	76	75	32-137	1
1,1,1,2-Tetrachloroethane	mg/kg (ppm)	2.5	<0.05	93	90	31-143	3
m,p-Xylene	mg/kg (ppm)	5	<0.1	77	76	34-136	1
o-Xylene	mg/kg (ppm)	2.5	<0.05	80	78	33-134	3
Styrene	mg/kg (ppm)	2.5	<0.05	84	82	35-137	2
Isopropylbenzene	mg/kg (ppm)	2.5	<0.05	79	77	31-142	3
Bromoform	mg/kg (ppm)	2.5	<0.05	87	84	21-156	4
n-Propylbenzene	mg/kg (ppm)	2.5	0.083	73	71	23-146	3
Bromobenzene	mg/kg (ppm)	2.5	<0.05	79	75	34-130	5
1,3,5-Trimethylbenzene	mg/kg (ppm)	2.5	0.18	73	72	18-149	1
1,1,2,2-Tetrachloroethane	mg/kg (ppm)	2.5	<0.05	91	91	28-140	0
1,2,3-Trichloropropane	mg/kg (ppm)	2.5	<0.05	78	78	25-144	0
2-Chlorotoluene	mg/kg (ppm)	2.5	<0.05	77	73	31-134	5
4-Chlorotoluene	mg/kg (ppm)	2.5	<0.05	76	73	31-136	4
tert-Butylbenzene	mg/kg (ppm)	2.5	<0.05	79	75	30-137	5
1,2,4-Trimethylbenzene	mg/kg (ppm)	2.5	0.18	74	76	10-182	3
sec-Butylbenzene	mg/kg (ppm)	2.5	0.13	76	75	23-145	1
p-Isopropyltoluene	mg/kg (ppm)	2.5	0.16	74	73	21-149	1
1,3-Dichlorobenzene	mg/kg (ppm)	2.5	<0.05	79	76	30-131	4
1,4-Dichlorobenzene	mg/kg (ppm)	2.5	<0.05	78	74	29-129	5
1,2-Dichlorobenzene	mg/kg (ppm)	2.5	<0.05	79	76	31-132	4
1,2-Dibromo-3-chloropropane	mg/kg (ppm)	2.5	<0.5	90	90	11-161	0
1,2,4-Trichlorobenzene	mg/kg (ppm)	2.5	<0.25	80	75	22-142	6
Hexachlorobutadiene	mg/kg (ppm)	2.5	<0.25	87	83	10-142	5
Naphthalene	mg/kg (ppm)	2.5	0.47	77	86	14-157	11
1,2,3-Trichlorobenzene	mg/kg (ppm)	2.5	<0.25	83	80	20-144	4

Date of Report: 09/10/14
Date Received: 09/08/14
Project: Westernco WES 1480, F&BI 409102

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	64	10-146
Chloromethane	mg/kg (ppm)	2.5	73	27-133
Vinyl chloride	mg/kg (ppm)	2.5	84	22-139
Bromomethane	mg/kg (ppm)	2.5	90	38-114
Chloroethane	mg/kg (ppm)	2.5	95	10-163
Trichlorofluoromethane	mg/kg (ppm)	2.5	110	10-196
Acetone	mg/kg (ppm)	12.5	99	52-141
1,1-Dichloroethene	mg/kg (ppm)	2.5	96	47-128
Methylene chloride	mg/kg (ppm)	2.5	90	42-132
Methyl t-butyl ether (MTBE)	mg/kg (ppm)	2.5	105	60-123
trans-1,2-Dichloroethene	mg/kg (ppm)	2.5	99	67-127
1,1-Dichloroethane	mg/kg (ppm)	2.5	102	68-115
2,2-Dichloropropane	mg/kg (ppm)	2.5	129	52-170
cis-1,2-Dichloroethene	mg/kg (ppm)	2.5	104	72-113
Chloroform	mg/kg (ppm)	2.5	106	66-120
2-Butanone (MEK)	mg/kg (ppm)	12.5	108	57-123
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	103	56-135
1,1,1-Trichloroethane	mg/kg (ppm)	2.5	109	62-131
1,1-Dichloropropene	mg/kg (ppm)	2.5	102	69-128
Carbon tetrachloride	mg/kg (ppm)	2.5	114	60-139
Benzene	mg/kg (ppm)	2.5	100	68-114
Trichloroethene	mg/kg (ppm)	2.5	102	64-117
1,2-Dichloropropane	mg/kg (ppm)	2.5	103	72-127
Bromodichloromethane	mg/kg (ppm)	2.5	113	72-130
Dibromomethane	mg/kg (ppm)	2.5	110	70-120
4-Methyl-2-pentanone	mg/kg (ppm)	12.5	112	45-145
cis-1,3-Dichloropropene	mg/kg (ppm)	2.5	117	75-136
Toluene	mg/kg (ppm)	2.5	100	66-126
trans-1,3-Dichloropropene	mg/kg (ppm)	2.5	110	72-132
1,1,2-Trichloroethane	mg/kg (ppm)	2.5	105	75-113
2-Hexanone	mg/kg (ppm)	12.5	102	33-152
1,3-Dichloropropane	mg/kg (ppm)	2.5	102	72-130
Tetrachloroethene	mg/kg (ppm)	2.5	101	72-114
Dibromochloromethane	mg/kg (ppm)	2.5	110	74-125
1,2-Dibromoethane (EDB)	mg/kg (ppm)	2.5	106	74-132
Chlorobenzene	mg/kg (ppm)	2.5	100	76-111
Ethylbenzene	mg/kg (ppm)	2.5	100	64-123
1,1,1,2-Tetrachloroethane	mg/kg (ppm)	2.5	114	69-135
m,p-Xylene	mg/kg (ppm)	5	102	78-122
o-Xylene	mg/kg (ppm)	2.5	104	77-124
Styrene	mg/kg (ppm)	2.5	105	74-126
Isopropylbenzene	mg/kg (ppm)	2.5	103	76-127
Bromoform	mg/kg (ppm)	2.5	106	56-132
n-Propylbenzene	mg/kg (ppm)	2.5	99	74-124
Bromobenzene	mg/kg (ppm)	2.5	100	72-122
1,3,5-Trimethylbenzene	mg/kg (ppm)	2.5	101	76-126
1,1,2,2-Tetrachloroethane	mg/kg (ppm)	2.5	103	56-143
1,2,3-Trichloropropane	mg/kg (ppm)	2.5	93	61-137
2-Chlorotoluene	mg/kg (ppm)	2.5	99	74-121
4-Chlorotoluene	mg/kg (ppm)	2.5	99	75-122
tert-Butylbenzene	mg/kg (ppm)	2.5	103	73-130
1,2,4-Trimethylbenzene	mg/kg (ppm)	2.5	100	76-125
sec-Butylbenzene	mg/kg (ppm)	2.5	103	71-130
p-Isopropyltoluene	mg/kg (ppm)	2.5	102	70-132
1,3-Dichlorobenzene	mg/kg (ppm)	2.5	101	75-121
1,4-Dichlorobenzene	mg/kg (ppm)	2.5	99	74-117
1,2-Dichlorobenzene	mg/kg (ppm)	2.5	99	76-121
1,2-Dibromo-3-chloropropane	mg/kg (ppm)	2.5	108	58-138
1,2,4-Trichlorobenzene	mg/kg (ppm)	2.5	100	64-135
Hexachlorobutadiene	mg/kg (ppm)	2.5	104	50-153
Naphthalene	mg/kg (ppm)	2.5	97	63-140
1,2,3-Trichlorobenzene	mg/kg (ppm)	2.5	100	63-138

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.

409102

SAMPLE CHAIN OF CUSTODY

ME 09/08/14 VSI / D03

Send Report To Dan Wilson
Company Wilson Env. Services
Address 5508 35th Ave NE
City, State, ZIP Seattle, WA 98105
Phone # 206-523-3505 Fax #

SAMPLERS (signature)
PROJECT NAME/NO. Western
PO # 1085 1480
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	Time	Sample Type	# of containers	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS							Notes
B-1 / 5-9'	01	9-8	AM	Soil	1							X						24 HR on VOCs! PLEASE HOLD ON SAMPLES
B-2 / 5-10'	02 A D				4				X			X						
B-2 / 10-15'	03				1							X						
B-3 / 15-18'	04				1							X						
B-4 / 5-10'	05				1							X						
B-5 / 0-5	06				1							X						
B-5 / 5-10	07 A D				4				X			X						
B-6 / 5-10	08 A E				5				X			X						
B-6 / 10-14	09 A E				5							X						

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		GES	9/8/14	1350
Received by:	Dhan Phan	FEBT	9/8/14	1350
Relinquished by:				
Received by:				

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

FORMS\COC\COC.DOC

Samples received at ____ °C