

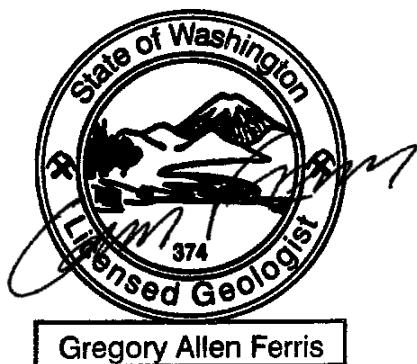
MEMORANDUM

Project No.: 150323

October 28, 2015

To: Gary Harper – Gary Harper Construction

cc: Phil Thornton – Snohomish County Fire District 1



From: Greg Ferris, LG
Senior Geologist

Steve Germiot, LHG
Principal Hydrogeologist

Re: UST Closure and Remediation Report – Snohomish County Fire Station #22, 20510
Damson Road, Lynnwood, WA

This report, prepared on behalf of Gary Harper Construction and the Snohomish County Fire District 1, presents the results of an underground storage tank (UST) Closure and Site Assessment completed by Aspect Consulting, LLC (Aspect) at Snohomish County Fire Station #22 (Site). The work was completed to assess soil quality around a 3,000-gallon double-wall fiberglass diesel fuel UST system that was used for both vehicle fueling and as a source of heat to the fire station building. Following removal of the UST, fuel lines and dispenser, 8.03 tons of petroleum-impacted soil was excavated and removed from below the former dispenser location. Following excavation, confirmation soil sampling indicates residual petroleum concentrations meet Washington State soil cleanup levels for unrestricted site use. This document was prepared in general accordance with the requirements of the Washington State Department of Ecology (Ecology) *Underground Storage Tank Statute and Regulations*, Chapter 90-76 RCW and Chapter 173-360 WAC.

Site Description, Land Use, and Water Resources

The Site is located at 20510 Damson Road, Lynnwood, Washington, as shown on Figure 1. The Site is surrounded by residential properties, and Hilltop Elementary School is to the northeast. The closest body of surface water to the Site is Swamp Creek, located approximately 1/2-mile to the west.

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Site Development

The Site building was reportedly constructed on the property in 1972. The original UST at the site (assumed to have been installed in 1972) was removed in 1982 and replaced with the 3,000-gallon double-wall fiberglass tank and fuel lines that were in use up until September 30, 2015. No other details regarding the original UST were available. Fuel lines ran from the 3,000-gallon UST to the building and dispenser located to the south. A Site Plan showing the location of the former UST, fuel lines, and dispenser is provided on Figure 2. The Fire District plans to install an aboveground diesel fuel tank for vehicle fueling and a heating source for the building.

Site Geology/Hydrogeology

Based on observations during excavations at the Site, the native soil generally consists of tan to light brown, mixed coarse sand, silty sand and cobbles characteristic of glacial outwash deposits, from ground surface to the depth of excavation, approximately 10 feet below ground surface (bgs).

Groundwater was not encountered at the Site down to the depth of the final excavation in the former UST area, approximately 10 feet bgs. Depth to groundwater at the Site is not known.

UST Closure, Site Assessment, and Remediation***UST Excavation and Closure***

On October 2, 2015, Clearcreek Contractors (Clearcreek) inerted the 3,000-gallon diesel fuel UST using dry ice. After Clearcreek determined that the tank environment was safe to work around, the UST was cleaned and rinsed, excavated from the subsurface, removed from the Site, crushed, and taken to the Snohomish County Public Works Solid Waste Division for disposal. Appendix A contains the 30-Day Notice to Ecology, Snohomish County Fire Permit, Clearcreek's Clean and Rinse Certificate, Emerald Services' Bill of Lading for disposal of the rinseate liquids pumped from the UST, and the UST disposal documentation.

During removal of the UST from the subsurface, evidence of petroleum-impacted soil was not observed (no odors, and photo-ionization detector (PID) readings of 0.0 parts per million [ppm]). Following removal from the subsurface, the tank was inspected for holes and/or signs of corrosion. The tank appeared to be in good condition with no evidence of holes or corrosion. A concrete slab was encountered at the base of the excavation and was left in place.

Confirmation soil samples were collected from the base of the UST excavation at each sidewall directly adjacent to the concrete slab (similar depth) and submitted to Friedman & Bruya Environmental Chemists (F&B) for laboratory analysis using Northwest Method NWTPH-Dx (diesel- and oil-range Total Petroleum Hydrocarbons [TPH]). Since the excavation bottom was a concrete slab, no samples were collected from directly below the former UST. Figure 3 shows the dimensions of the UST excavation and the four confirmation soil sample locations (denoted with UST- prefix).

The UST excavation confirmation soil sampling indicated diesel- and motor oil-range hydrocarbons concentrations below method reporting limits, thus well below the most stringent Washington State Model Toxics Control Act (MTCA) Method A soil cleanup levels (for unrestricted site use).

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Evidence of petroleum-impacted soil was observed below the fuel dispenser located approximately 15 feet south of the UST location (petroleum odor in soil and a PID reading of 37 ppm). One soil sample was collected below the former dispenser (DISP-100215-FL-01; Figure 3), submitted to F&B, and analyzed for: diesel- and oil-range TPH using NWTPH-Dx; benzene, toluene, ethylbenzene and xylenes (BTEX) using EPA Method 8021B; and polycyclic aromatic hydrocarbons (PAHs) using EPA Method 8270D SIM. The soil sample collected from below the dispenser indicated a diesel-range TPH concentration of 19,000 mg/kg, above the MTCA Method A cleanup level of 2,000 mg/kg for unrestricted land use. Several PAHs were detected in the sample, but the concentrations were below respective MTCA soil cleanup levels for unrestricted use.

Table 1 provides a summary of the soil sampling laboratory analytical results, including the PAHs that were detected, and a copy of the laboratory analytical report is included in Appendix B.

Copies of the completed Permanent Closure Notice and the Site Check/Site Assessment Checklist are included in Appendix C.

Photographs documenting the closure of the UST at the Site are provided in Appendix D.

Dispenser and Impacted Soil Excavation and Removal

Following removal of the dispenser and its small concrete pad, petroleum-impacted soil was excavated from below the former dispenser on October 8, 2015. The excavation of impacted soil was monitored using olfactory senses and a PID. Initial PID readings ranged from 30 to 40 ppm and dissipated as the excavation progressed. Soil from the perimeter and base of the final excavation indicated no petroleum odors, and the PID readings were 0.0 ppm. The dimensions of the final impacted soil excavation at the former dispenser were approximately 8 feet long by 6 feet wide by 4.5 feet deep. Following removal of the petroleum-impacted soil, confirmation soil samples were collected from the perimeter and base of the impacted soil excavation, submitted to F&B and analyzed for: diesel- and oil-range TPH using NWTPH-Dx; BTEX using EPA Method 8021B; and PAHs using EPA Method 8270D SIM.

The confirmation soil samples collected from the perimeter and base of the petroleum-impacted soil excavation indicated diesel- and motor oil-range TPH, BTEX and PAH concentrations below method reporting limits, and thus well below Ecology's MTCA Method A soil cleanup levels for unrestricted land use.

The petroleum-impacted soil (8.03 tons) removed from the excavation below the former dispenser was hauled to the CEMEX USA soil remediation facility in Everett, Washington, for thermal treatment and disposal on October 13, 2015. A copy of the weight ticket documenting soil disposal is included in Appendix A.

Table 1 provides a summary of the soil sampling laboratory analytical results, and a copy of the laboratory analytical report is included in Appendix B. Photographs documenting the petroleum-impacted soil excavation at the Site are provided in Appendix D.

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Conclusions

Excavation and sampling around the perimeter and base of the former 3,000-gallon UST location, fuel lines, and dispenser was performed in accordance with Washington State UST regulations (Chapter 173-360 WAC). The UST closure site assessment included soil sampling around the perimeter and base of the UST excavation, as well as sampling below the dispenser.

The confirmation soil samples collected from the UST excavation indicated petroleum-related concentrations below MTCA Method A soil cleanup levels for unrestricted land use. However, the soil sample collected below the former dispenser indicated a diesel-range TPH concentration of 19,000 mg/kg, well above the 2,000 mg/kg MTCA Method A soil cleanup level for unrestricted land use.

In response, 8.03 tons of petroleum-impacted soil was excavated and removed from below the former dispenser. Confirmation soil samples collected from the perimeter and base of the petroleum-impacted soil excavation indicated petroleum-related concentrations below MTCA soil cleanup levels for unrestricted land use.

The information collected during the UST closure and site assessment activities indicated evidence that a reportable release occurred from the UST system at the Site. Pursuant to WAC 173-340-515(4)(c), an independent remedial action was performed to successfully remove the petroleum-impacted soil from the Site, as documented by confirmation soil sampling and analysis.

This report serves as notification to Ecology of the release and completion of the independent remedial action that remediated the release (per Ecology's Toxics Cleanup Program Policy 300, June 2004).

Based on the information collected during the UST closure and site assessment, including successful remediation (excavation and disposal) of the petroleum-impacted soil, no further action is recommended for the Site.

Limitations

Work for this project was performed for Gary Harper Construction Inc. (Client) and this report prepared in accordance with generally accepted professional practices for the nature and conditions of work completed in the same or similar localities, at the time the work was performed. This report does not represent a legal opinion. No other warranty, expressed or implied, is made.

All reports prepared by Aspect Consulting are intended solely for the Client and apply only to the services described in the Agreement(s) with Client. Any use or reuse by Client for purposes outside of the scope of Client's Agreement is at the sole risk of Client and without liability to Aspect Consulting. Aspect Consulting shall not be liable for any third parties' use of the deliverables provided by Aspect Consulting. Aspect Consulting's original files/reports shall govern in the event of any dispute regarding the content of electronic documents furnished to others.

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References

Washington State Department of Ecology, 2007, Model Toxics Control Act Statute and Regulation - Model Toxics Control Act Chapter 70.105D RCW, Uniform Environmental Covenants Act Chapter 64.70 RCW, MTCA Cleanup Regulation Chapter 173-340 WAC, Publication No. 94-06, Revised November.

Washington State Department of Ecology, 2004, Toxics Cleanup Program Policy – Policy 300 Site Discovery – Reporting Releases, Policy 300, Revised June.

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Attachments

Table 1 – Soil Sample Analytical Results

Figure 1 – Site Location Map

Figure 2 – Site Plan

Figure 3 – UST Excavation and Sample Location Map

Appendix A – UST Closure Documents

Appendix B – Laboratory Analytical Reports

Appendix C – UST Permanent Closure Notice and Site Check/Site Assessment Checklist

Appendix D - Photos

V:\150323 Snohomish County Fire District 1 (Fire Station #22 Hilltop) UST Site Assessment\Deliverables\UST Closure Memo Report\UST Closure Memo Rpt - SnoCo FS 22.docx

TABLES

Table 1 - Soil Sample Analytical Results
 Project 150323 UST Closure, Snohomish County Fire Station #22
 20510 Damson Road, Lynnwood, WA

Sample ID	Sample Date	Sample Depth (Feet)	TPH as Diesel	TPH as Oil	Benzene	Toluene	Ethylbenzene	Xylenes	Naphthalene
MTCA Method A Soil Cleanup Level for Unrestricted Use =			2,000	2,000	0.03	7	6	9	5
Assessment Soil Samples from UST Excavation									
UST-100215-SW-09	10/2/2015	9	<50	<250	NA	NA	NA	NA	NA
UST-100215-NW-10	10/2/2015	10	<50	<250	NA	NA	NA	NA	NA
UST-100215-WW-08	10/2/2015	8	<50	<250	NA	NA	NA	NA	NA
UST-100215-EW-10	10/2/2015	10	<50	<250	NA	NA	NA	NA	NA
DISP-100215-FL-01	10/2/2015	1	19,000	540x	<0.02	<0.02	0.43	1.3	<0.01
Confirmation Soil Samples from Impacted Soil Excavation									
DISPEX-100815-FL-4.5	10/8/2015	4.5	<50	<250	<0.02	<0.02	<0.02	<0.06	<0.01
DISPEX-100815-WW-4	10/8/2015	4	<50	<250	<0.02	<0.02	<0.02	<0.06	<0.01
DISPEX-100815-EW-4	10/8/2015	4	<50	<250	<0.02	<0.02	<0.02	<0.06	<0.01
DISPEX-100815-SW-4	10/8/2015	4	<50	<250	<0.02	<0.02	<0.02	<0.06	<0.01
Assessment Soil Samples from UST Excavation			Phenanthrene	Anthracene	Fluoranthene	Pyrene	Benz(a)anthracene	Chrysene	Total cPAH (TEQ)
DISP-100215-FL-01	10/2/2015	1	0.16	0.083	0.33	1.2	0.020	0.038	0.009
Confirmation Soil Samples from Impacted Soil Excavation									
DISPEX-100815-FL-4.5	10/8/2015	4.5	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
DISPEX-100815-WW-4	10/8/2015	4	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
DISPEX-100815-EW-4	10/8/2015	4	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
DISPEX-100815-SW-4	10/8/2015	4	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	

All concentrations reported are in milligrams per kilogram (mg/kg).
Bold values exceed MTCA Method A Soil Cleanup Levels for non-industrial (unrestricted) use.
 TPH = Total Petroleum Hydrocarbons
 Total cPAH (TEQ) = Total carcinogenic polycyclic aromatic hydrocarbon concentration expressed as the toxic equivalent concentration of benzo(a)pyrene, calculated in accordance with MTCA (WAC 173-340-708[8][e]).
 NA = Not analyzed
 x = The sample chromatographic pattern does not resemble the fuel standard used for quantitation

FIGURES



A horizontal number line is shown with tick marks at 0, 2,000, and 4,000. The word "Feet" is written below the line. A pink rectangular segment is drawn above the line, starting at the 1,000 mark and ending at the 2,000 mark.

Site Location Map

UST Closure Report
Snohomish County Fire Station 22
20510 Damson Road
Lynnwood, Washington



OCT-2015

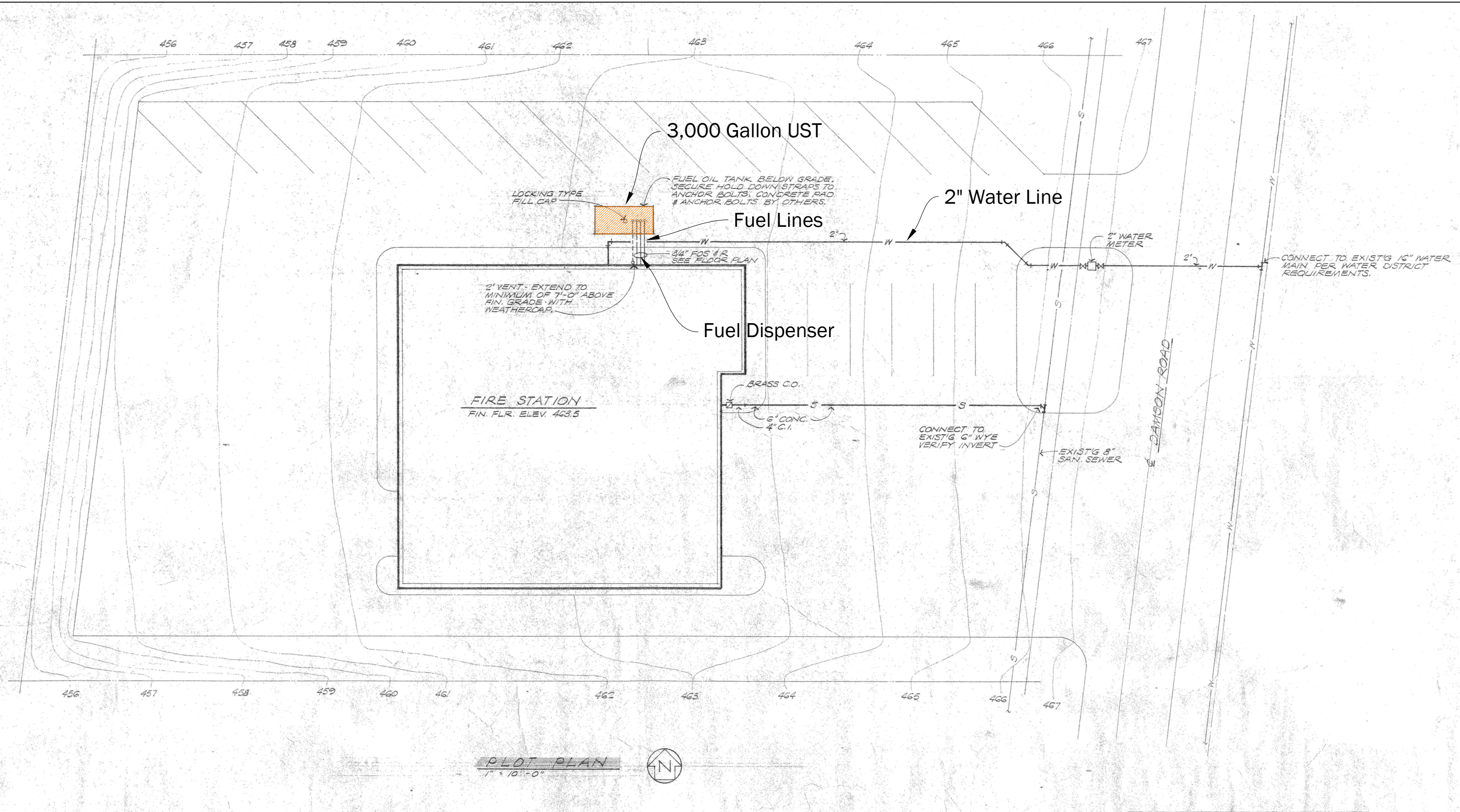
PROJECT NO
150323

BY:
GAF/SCC

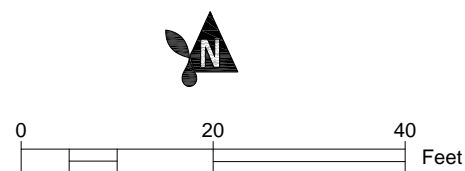
REV BY:
SCC

FIGURE NO.

1



Source: Base map provided by William Arild Johnson & Associates, Architects & Engineers, Everett, Washington.



Site Plan

UST Closure Report
Snohomish County Fire Station 22
20510 Damson Road
Lynnwood, Washington

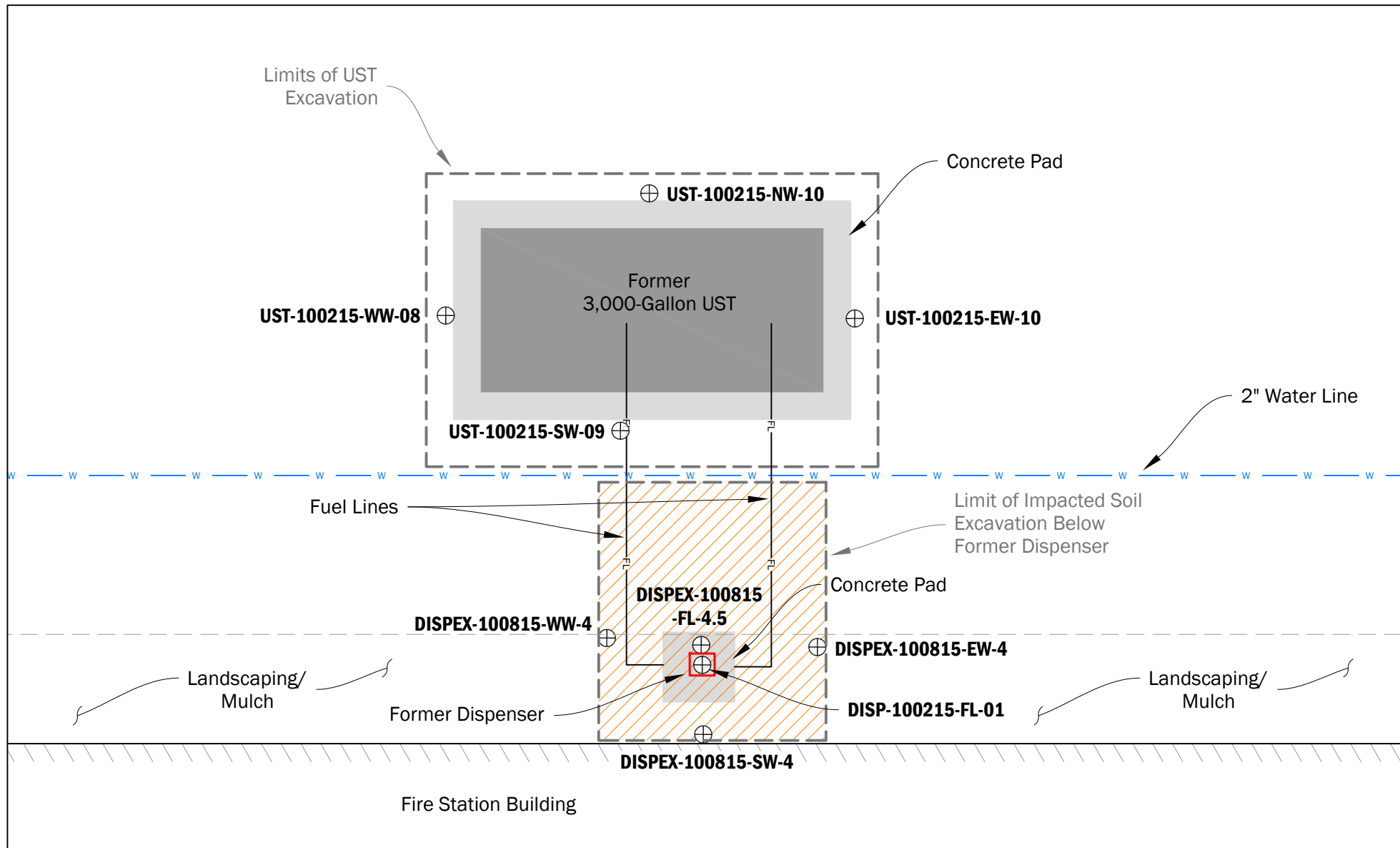


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PROJECT NO.
150323

BY:
GAF/SCC
REVISED BY:

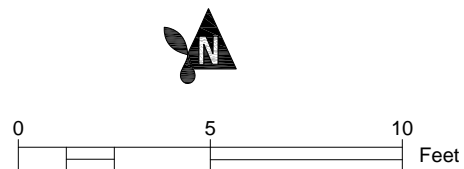
FIGURE NO.

2



Legend

⊕ Confirmation Soil Sample Location



UST Excavation & Sample Location Map

UST Closure Report
Snohomish County Fire Station 22
20510 Damson Road
Lynnwood, Washington



OCT-2015

PROJECT NO.
150323

BY:
GAF/SCC
REVISED BY:
-

FIGURE NO.

3

APPENDIX A
UST Closure Documents



30-DAY NOTICE FOR UNDERGROUND STORAGE TANKS

This form provides Ecology 30-days' advanced notice for the following projects, as required by Chapter 173-360 WAC.

Instructions are found on the back page.

NW

UST ID #: 290
County: 52299444
RECEIVED

AUG 05 2015

Please ✓ the appropriate box: ☐ Intent to Install ☒ Intent to Close ☐ Change in Service Department of Ecology
Toxics Cleanup Program

I. SITE INFORMATION			II. OWNER/OPERATOR INFORMATION	
Tag or UBI # (if applicable):			Owner/Operator Name: Gary Harper	
UST ID # (if applicable):			Business Name: Gary Harper Construction	
Site Name: Hilltop Station			Mailing Address: 14831 223rd St. SE	
Site Address: 20510 Damson Rd			City: Snohomish	State: WA Zip: 98296-1966
City: Lynnwood			Phone: (360) 863-1955	
Phone: (425) 551-1922			Email: gary@garyharperconst.com	
III. CERTIFIED SERVICE PROVIDER(S)				
Check the appropriate boxes. If more than one service provider is required for this project, fill out both sections.				
Note: Individuals performing UST services MUST be ICC-certified or have passed another qualifying exam approved by the Department of Ecology.				
1) <input type="checkbox"/> Installer <input checked="" type="checkbox"/> Decommissioning <input type="checkbox"/> Site Assessment				
Company Name: Clearcreek Contractors			Certification Type: UST Decommissioning	
Service Provider Name: Nathan Hoffman			Cert. No.: ICC00219270	Exp. Date: 6-1-2017
Provider Phone: (360) 659-2459			Provider Email: markm@clearcreekcon.com	
2) <input type="checkbox"/> Installer <input type="checkbox"/> Decommissioning <input type="checkbox"/> Site Assessment				
Company Name:			Certification Type:	
Service Provider Name:			Cert. No.:	Exp. Date:
Provider Phone:			Provider Email:	
IV. TANK INFORMATION				
TANK ID	SUBSTANCE STORED	TANK CAPACITY	DATE PROJECT IS EXPECTED TO BEGIN	COMMENTS
	Diesel	3,000 gal	9-4-2015	

Fire Permit

Permit Information

Permit Number	15115036KM	Issued Date	09/30/2015
Address	20510 DAMSON RD	Expiration Date	03/31/2017
	LYNNWOOD, 98036	Fee Paid	\$180.25
Floor	1	Order Confirmation	593759
Suite	None	Related Permit #	

Contact Information

Property Owner	* SNOHOMISH COUNTY FIRE DIST	Contractor	Clearcreek Contractors, Inc.
Address	12425 MERIDIAN AVE S EVERETT, WA	License #	CLEARCI 997K1
Contact Name	Mark McCullough	Phone #	(360) 659-2459
Phone Number	(360) 659-2459	Tenant Name	Snohomish County Fire District 1

Job Description

A (Nonresidential) (Alteration)Storage Tanks project involving (Tank Below Ground, Tank Removal, 1 Fuel Storage Tank - Below Grade 10,000 gal or less) Additional Info(3000 Gallon Diesel UST) Work Site Location(Located on north side of fire station)

Conditions - Post Permit on site. Do not cover until inspected.

Certification Statement - The applicant states:

I certify that I am the owner of this property or the owner's authorized agent, including an appropriately licensed contractor. I have furnished true and correct information. I will comply with all provisions of law and ordinances governing this type of construction work, whether specific herein or not. By submitting this application I give the jurisdiction permission to enter the property to perform inspections. I understand that failure to comply with the above may result in revocation of the permit.

Applicant: Mark McCullough

Fire Permit

Permit Information							
Permit Number	15115036KM			Issued Date	09/30/2015		
Address	20510 DAMSON RD			Expiration Date	03/31/2017		
	LYNNWOOD, 98036			Fee Paid	\$180.25		
Floor	1			Order Confirmation	593759		
Suite	None			Related Permit #			
Scheduling Inspections (425) 388-3338 or www.MyBuildingPermit.com							
Inspection	IVR	Inspector	Date	Inspection	IVR	Inspector	Date
Final	199						

Re-inspection fees may apply if work is not ready for a requested inspection.
Follow the jurisdiction's construction hours and noise restrictions.

For details visit: <http://goo.gl/IyWmF2>



**Inspection
Scheduling**



3203 15th Street
Everett, WA 98201

Ph. (425) 252-5800
Fx. (425) 252-1093



2523

JOB # Z15110	JOB NAME G.H.C. - UST	SITE ADDRESS 20510 DAMSON RD. SNOHOMISH, WA 98036
GENERATOR NAME SNOH. COV. FIRE	GENERATOR MAILING ADDRESS SAME AS SITE	GENERATOR CONTACT INFORMATION KIM CORNETT - CCC 360 699-2459

PUMP & RINSE / CLEANING CERTIFICATE

DATE	SIZE & DIMENSIONS OF TANK OR STRUCTURE	DESCRIBE CONTENTS	PUMP/RINSE	LIQUID QTY	SOLIDS QTY
			YES NO CLEANED		
			YES NO CLEANED		
			YES NO CLEANED		
			YES NO CLEANED		

NOTES	WORK PERFORMED BY
	WORKER SIGNATURE

LIQUID / SOLIDS BILL OF LADING

DATE 10/10/15	TRUCK # 34	DRIVER NATHAN HOFFMAN	LIQUID DESCRIPTION AND QUANTITY DIESEL / KOSMET 180 GAL	SOLID DESCRIPTION AND QUANTITY
	TRLR # 80	DISPOSAL/RECYCLING FACILITY EMERALD SERVICES	LIQUID PROFILE # G02901DK	SOLIDS PROFILE #
NOTES 180 GAL TOTAL 140 GAL DIESEL 40 GAL H2O			GENERATOR'S SIGNATURE CONFIRMS THIS MATERIAL IS NOT REGULATED UNDER WAC 173-303 OR 40CFR PART 261 & 40CFR PART 760 GENERATOR SIGNATURE	
			DRIVER SIGNATURE N. Hoffman	
			FACILITY SIGNATURE [Signature]	

UST CORRECTIVE ACTION CERTIFICATION

I certify that the petroleum contaminated debris and media that fail the test for Toxicity Characteristic Waste codes D018-D043 is exempt under 40CFR 261.4 and is subject to the corrective action regulation under 40 CFR 280.

GENERATOR NAME

GENERATOR SIGNATURE

DATE

DISPOSAL CERTIFICATE

DATE 10/15/15	TRUCK # 34	DRIVER Tom Dadds	ITEM(S) DESCRIPTION Fiberglass Tank
	TRLR #	DISPOSAL/RECYCLING FACILITY Snodgrass County	
NOTES			DRIVER SIGNATURE Tom Dadds
			FACILITY SIGNATURE



3919 88th Street
Marysville, WA 98270

Ph. (425) 252-5800
Fx. (425) 252-1093



JOB # 215110	JOB NAME G.H.C. UST	SITE ADDRESS 20510 Danson RD LYNNWOOD, WA
GENERATOR NAME SNOH. COUNTY FIRE	GENERATOR MAILING ADDRESS SAME AS SITE	GENERATOR CONTACT INFORMATION

PUMP & RINSE / CLEANING CERTIFICATE

DATE	SIZE & DIMENSIONS OF TANK OR STRUCTURE	DESCRIBE CONTENTS	PUMP/RINSE YES NO CLEANED YES NO	LIQUID QTY	SOLIDS QTY
10/2/15	3000 GAL UST	HEATING OIL / DIESEL / H ₂ O	YES YES	175 GAL	
DATE	SIZE & DIMENSIONS OF TANK OR STRUCTURE	DESCRIBE CONTENTS	PUMP/RINSE YES NO CLEANED YES NO	LIQUID QTY	SOLIDS QTY
DATE	SIZE & DIMENSIONS OF TANK OR STRUCTURE	DESCRIBE CONTENTS	PUMP/RINSE YES NO CLEANED YES NO	LIQUID QTY	SOLIDS QTY

NOTES UST CLEANED IN PLACE	WORK PERFORMED BY CLEARCREEK - NATHAN HOFFMAN WORKER SIGNATURE
-------------------------------	--

LIQUID / SOLIDS BILL OF LADING

DATE	TRUCK #	DRIVER	LIQUID DESCRIPTION AND QUANTITY	SOLID DESCRIPTION AND QUANTITY
	TRLR #	DISPOSAL/RECYCLING FACILITY	LIQUID PROFILE #	SOLIDS PROFILE #
NOTES			GENERATOR'S SIGNATURE CONFIRMS THIS MATERIAL IS NOT REGULATED UNDER WAC 173-303 OR 40CFR PART 261 & 40CFR PART 260 GENERATOR SIGNATURE DRIVER SIGNATURE FACILITY SIGNATURE	

UST CORRECTIVE ACTION CERTIFICATION

I certify that the petroleum contaminated debris and media that fail the test for Toxicity Characteristic Waste codes D018-D043 is exempt under 40CFR 261.4 and is subject to the corrective action regulation under 40 CFR 280.

GENERATOR NAME

GENERATOR SIGNATURE

DATE

DISPOSAL CERTIFICATE

DATE	TRUCK #	DRIVER	ITEM(S) DESCRIPTION
	TRLR #	DISPOSAL/RECYCLING FACILITY	
NOTES			DRIVER SIGNATURE FACILITY SIGNATURE



SERVICES FACILITIES
1500 AIRPORT WAY
SEATTLE, WA 98134

02882

BILL OF LADING AND GALLONAGE REPORT

CUSTOMER CLEAR CREEK DATE 10/10/15

JOB LOCATION SNOHOMISH

DRIVER NATHAN EQUIP _____

JOB NO 215110 DOCUMENT NO _____

PRODUCT DIESEL / H2O EST. GALS 180

PRODUCT _____ EST. GALS _____

PRODUCT _____ EST. GALS _____

DRUMS _____ NO _____

DRUMS _____ NO _____

PROFILE # _____ EST SOLIDS _____

WASH OUT: YES ☐ NO ☐ TIME IN _____ TIME OUT _____

WATER 40 GAL LOCATION P-1 CODE WTP-A

SOLIDS _____ GAL LOCATION _____ CODE _____

_____ % SUSPENDED SOLIDS BY CENTRIFUGE + _____ GALS. SEDIMENT

OIL/DIESEL 140 GAL LOCATION P-1 CODE STOR-DES

HOC'S _____ PCB'S _____ B.S.&W _____ APL _____ LAB: YES ☐ NO ☐

GAS _____ GAL LOCATION _____

BUNKER FUEL _____ GAL LOCATION _____

OTHER _____

FACILITY REPRESENTATIVE

DRIVERS SIGNATURE

CRASHED UP 215110
FIBERGLASS TANK



Snohomish County
Public Works Solid Waste Division
425-388-3425 | www.snoco.org

TRANSACTION RECEIPT

Load No.: AP190869
Date: 10/15/15
Entry Time: 08:06
Operator In: 128
Exit Time: 08:21
Operator Out: 226

Licence: B46776Z
Vehicle Type: 50 - TRAILER

Customer: 2000
CASH CUSTOMER

Material: 20 - MIXED CONSTRUCTION AND
DE

Gross: 8.26 ton
Tare: 7.29 ton
Net: 0.97 ton

Rate: \$ 105.00 / ton
Fee: \$ 102.32
Tax: \$ 3.68
Total Fee: \$ 106.00
Payment: \$ 106.00 Credit/Debit

Driver Signature



CEMEX
PO Box 2037
Everett, WA 98213-2037

CEMEX Construction Materials Pacific, LLC

INVOICE

PAGE 1 OF 1

Date: 10/14/2015
Invoice No: 9431954057
Terms: Net 20th prox
Payment Due On: 11/20/2015
Job No: 14173191
Legal Address: 2015 DAMSON RD - LYNNWOOD
Customer Job No: SNCO FS # 23
Account No: 3031470
Account Name: GARY HARPER CONSTRUCTION



INV2 ▲ 000201
GARY HARPER CONSTRUCTION
14831 223RD ST SE
SNOHOMISH WA 98296-3989

For All Inquiries Call:
800-355-2772

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

DETAILED INFORMATION BY PO

PO Number: VERBAL G. HARPER				DELIVERY ADDRESS: 20510 DAMSON RD. LYNNWOOD, LYNNWOOD, WA, 98036							
Ship Date	Delivery	Ref #	Product Code / Description	Qty	UOM	Net Price By UOM		Units	Amount	Freight	Tx
10/14/2015	8068350308	1875438922	1296039 QUARRY 5/8" MINUS	15.310	TON	\$13.25	1 TON	15.310	\$202.86	\$0.00	
10/14/2015	8068353213	1876084290	1192508 CLASS 3 SOIL DUMPED BY TON	8.030	TON	\$50.87	1 TON	8.030	\$408.49	\$0.00	
10/14/2015	8068353216	1876084291	1183948 TRUCK RENTAL NO TRAILER	2.000	H	\$110.00	1 H	2.000	\$0.00	\$220.00	
PO Subtotal	0.00 Yards		23.34 Tons	\$611.35 Material		\$220.00 Freight		\$14.71 Other		\$0.00 Tax	\$846.06 Total

Billing Text: "Other" amount represents Refuse Tax

0.00 Yards	23.34 Tons	\$220.00 Freight	\$14.71 Other	\$0.00 Tax	\$846.06 Invoice Total
------------	------------	------------------	---------------	------------	------------------------

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

APPENDIX B

Laboratory Analytical 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

October 9, 2015

Greg Ferris, Project Manager
Aspect Consulting, LLC
401 2nd Ave S, Suite 201
Seattle, WA 98104

Dear Mr. Ferris:

Included are the results from the testing of material submitted on October 2, 2015 from the Snohomish County Fire Station 22, 150323, F&BI 510046 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

c: data@aspectconsulting.com, Parker Wittman
ASP1009R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on October 2, 2015 by Friedman & Bruya, Inc. from the Aspect Consulting, LLC Snohomish County Fire Station 22, 150323, F&BI 510046 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>Aspect Consulting, LLC</u>
510046 -01	UST-100215-SW-09
510046 -02	UST-100215-NW-10
510046 -03	UST-100215-WW-08
510046 -04	UST-100215-EW-10
510046 -05	DISP-100215-FL-01

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/09/15

Date Received: 10/02/15

Project: Snohomish County Fire Station 22, 150323, F&BI 510046

Date Extracted: 10/02/15

Date Analyzed: 10/03/15

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

Results Reported on a Dry Weight Basis

Results Reported as mg/kg (ppm)

<u>Sample ID</u> Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl Benzene</u>	<u>Total Xylenes</u>	<u>Surrogate (% Recovery)</u> (Limit 50-150)
DISP-100215-FL-01 510046-05	<0.02	<0.02	0.43	1.3	124
Method Blank 05-2039 MB	<0.02	<0.02	<0.02	<0.06	95

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/09/15

Date Received: 10/02/15

Project: Snohomish County Fire Station 22, 150323, F&BI 510046

Date Extracted: 10/02/15

Date Analyzed: 10/02/15

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

Results Reported on a Dry Weight Basis

Results Reported as mg/kg (ppm)

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅)	<u>Motor Oil Range</u> (C ₂₅ -C ₃₆)	<u>Surrogate</u> <u>(% Recovery)</u> (Limit 53-144)
UST-100215-SW-09 510046-01	<50	<250	101
UST-100215-NW-10 510046-02	<50	<250	99
UST-100215-WW-08 510046-03	<50	<250	101
UST-100215-EW-10 510046-04	<50	<250	103
DISP-100215-FL-01 510046-05	19,000	540 x	94
Method Blank 05-2050 MB	<50	<250	107

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	DISP-100215-FL-01	Client:	Aspect Consulting, LLC
Date Received:	10/02/15	Project:	Snohomish County Fire Station 22
Date Extracted:	10/02/15	Lab ID:	510046-05 1/5
Date Analyzed:	10/05/15	Data File:	100506.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	85	31	163
Benzo(a)anthracene-d12	87	24	168

Compounds:	Concentration mg/kg (ppm)
Naphthalene	<0.01
Acenaphthylene	<0.01
Acenaphthene	<0.01
Fluorene	<0.01
Phenanthrene	0.16
Anthracene	0.083
Fluoranthene	0.33
Pyrene	1.2
Benz(a)anthracene	0.020
Chrysene	0.038
Benzo(a)pyrene	<0.01
Benzo(b)fluoranthene	<0.01
Benzo(k)fluoranthene	<0.01
Indeno(1,2,3-cd)pyrene	<0.01
Dibenz(a,h)anthracene	<0.01
Benzo(g,h,i)perylene	<0.01

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	Not Applicable	Project:	Snohomish County Fire Station 22
Date Extracted:	10/02/15	Lab ID:	05-2032 mb 1/5
Date Analyzed:	10/02/15	Data File:	100208.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	98	31	163
Benzo(a)anthracene-d12	86	24	168

Compounds:	Concentration mg/kg (ppm)
Naphthalene	<0.01
Acenaphthylene	<0.01
Acenaphthene	<0.01
Fluorene	<0.01
Phenanthrene	<0.01
Anthracene	<0.01
Fluoranthene	<0.01
Pyrene	<0.01
Benz(a)anthracene	<0.01
Chrysene	<0.01
Benzo(a)pyrene	<0.01
Benzo(b)fluoranthene	<0.01
Benzo(k)fluoranthene	<0.01
Indeno(1,2,3-cd)pyrene	<0.01
Dibenz(a,h)anthracene	<0.01
Benzo(g,h,i)perylene	<0.01

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/09/15

Date Received: 10/02/15

Project: Snohomish County Fire Station 22, 150323, F&BI 510046

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

Laboratory Code: 510036-11 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet Wt)	Duplicate Result (Wet Wt)	RPD (Limit 20)
Benzene	mg/kg (ppm)	<0.02	<0.02	nm
Toluene	mg/kg (ppm)	<0.02	<0.02	nm
Ethylbenzene	mg/kg (ppm)	<0.02	<0.02	nm
Xylenes	mg/kg (ppm)	<0.06	<0.06	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	mg/kg (ppm)	0.5	84	69-120
Toluene	mg/kg (ppm)	0.5	93	70-117
Ethylbenzene	mg/kg (ppm)	0.5	94	65-123
Xylenes	mg/kg (ppm)	1.5	92	66-120

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/09/15

Date Received: 10/02/15

Project: Snohomish County Fire Station 22, 150323, F&BI 510046

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

Laboratory Code: 510045-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet Wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	108	104	64-133	4

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	102	58-147

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/09/15

Date Received: 10/02/15

Project: Snohomish County Fire Station 22, 150323, F&BI 510046

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

Laboratory Code: 509536-01 1/5 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Acceptance Criteria
Naphthalene	mg/kg (ppm)	0.17	<0.01	85	44-129
Acenaphthylene	mg/kg (ppm)	0.17	<0.01	85	52-121
Acenaphthene	mg/kg (ppm)	0.17	<0.01	87	51-123
Fluorene	mg/kg (ppm)	0.17	<0.01	86	37-137
Phenanthrene	mg/kg (ppm)	0.17	<0.01	91	34-141
Anthracene	mg/kg (ppm)	0.17	<0.01	79	32-124
Fluoranthene	mg/kg (ppm)	0.17	<0.01	78	16-160
Pyrene	mg/kg (ppm)	0.17	<0.01	79	10-180
Benz(a)anthracene	mg/kg (ppm)	0.17	<0.01	86	23-144
Chrysene	mg/kg (ppm)	0.17	<0.01	90	32-149
Benzo(b)fluoranthene	mg/kg (ppm)	0.17	<0.01	80	23-176
Benzo(k)fluoranthene	mg/kg (ppm)	0.17	<0.01	75	42-139
Benzo(a)pyrene	mg/kg (ppm)	0.17	<0.01	74	21-163
Indeno(1,2,3-cd)pyrene	mg/kg (ppm)	0.17	<0.01	80	23-170
Dibenz(a,h)anthracene	mg/kg (ppm)	0.17	<0.01	80	31-146
Benzo(g,h,i)perylene	mg/kg (ppm)	0.17	<0.01	79	37-133

Laboratory Code: Laboratory Control Sample 1/5

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Naphthalene	mg/kg (ppm)	0.17	87	88	58-121	1
Acenaphthylene	mg/kg (ppm)	0.17	83	84	54-121	1
Acenaphthene	mg/kg (ppm)	0.17	88	89	54-123	1
Fluorene	mg/kg (ppm)	0.17	87	87	56-127	0
Phenanthrene	mg/kg (ppm)	0.17	89	91	55-122	2
Anthracene	mg/kg (ppm)	0.17	83	83	50-120	0
Fluoranthene	mg/kg (ppm)	0.17	82	83	54-129	1
Pyrene	mg/kg (ppm)	0.17	85	82	53-127	4
Benz(a)anthracene	mg/kg (ppm)	0.17	86	86	51-115	0
Chrysene	mg/kg (ppm)	0.17	91	90	55-129	1
Benzo(b)fluoranthene	mg/kg (ppm)	0.17	80	80	56-123	0
Benzo(k)fluoranthene	mg/kg (ppm)	0.17	77	77	54-131	0
Benzo(a)pyrene	mg/kg (ppm)	0.17	69	69	51-118	0
Indeno(1,2,3-cd)pyrene	mg/kg (ppm)	0.17	77	74	49-148	4
Dibenz(a,h)anthracene	mg/kg (ppm)	0.17	80	78	50-141	3
Benzo(g,h,i)perylene	mg/kg (ppm)	0.17	79	76	52-131	4

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.

E03 / 1781

Page # 1 of 1

~~Standard (2 Weeks)~~
~~BRUSH~~

Rush charges authorized by 

SAMPLE DISPOSAL
~~X~~ Dispose after 30 days

- ☐ Return samples
- ☐ Will call with instructions

							ANALYSES REQUESTED								
Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers								Notes		
						TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	MTCA PAHS (8270-Sim)			
UST-100215-SW-09	DPP	10/02/15	1130	S&I	2	X									
UST-100215-NW-1D	OJAB		1135		2	X									
UST-100215-WN-08	OJA-B		1140		2	X									
UST-100215-EW-1D	OJA-B		1145		2	X									
DISP-100215-FL-01	OJA-F	✓	1150		6	X		X				X			
	</														

TIME

1420

20

1

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

October 12, 2015

Greg Ferris, Project Manager
Aspect Consulting, LLC
401 2nd Ave S, Suite 201
Seattle, WA 98104

Dear Mr. Ferris:

Included are the results from the testing of material submitted on October 8, 2015 from the Snohomish County Fire Station 22, PO 150323, F&BI 510129 project. There are 12 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures

c: data@aspectconsulting.com, Parker Wittman
ASP1012R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on October 8, 2015 by Friedman & Bruya, Inc. from the Aspect Consulting, LLC Snohomish County Fire Station 22, PO 150323, F&BI 510129 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>Aspect Consulting, LLC</u>
510129 -01	DISPEX-100815-FL-4.5
510129 -02	DISPEX-100815-WW-4
510129 -03	DISPEX-100815-EW-4
510129 -04	DISPEX-100815-SW-4

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/12/15

Date Received: 10/08/15

Project: Snohomish County Fire Station 22, PO 150323, F&BI 510129

Date Extracted: 10/08/15

Date Analyzed: 10/08/15

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

Results Reported on a Dry Weight Basis

Results Reported as mg/kg (ppm)

<u>Sample ID</u> Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl Benzene</u>	<u>Total Xylenes</u>	<u>Surrogate (% Recovery)</u> (Limit 50-132)
DISPEX-100815-FL-4.5 510129-01	<0.02	<0.02	<0.02	<0.06	87
DISPEX-100815-WW-4 510129-02	<0.02	<0.02	<0.02	<0.06	89
DISPEX-100815-EW-4 510129-03	<0.02	<0.02	<0.02	<0.06	88
DISPEX-100815-SW-4 510129-04	<0.02	<0.02	<0.02	<0.06	87
Method Blank 05-2069 MB	<0.02	<0.02	<0.02	<0.06	90

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/12/15

Date Received: 10/08/15

Project: Snohomish County Fire Station 22, PO 150323, F&BI 510129

Date Extracted: 10/08/15

Date Analyzed: 10/08/15

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

Results Reported on a Dry Weight Basis

Results Reported as mg/kg (ppm)

<u>Sample ID</u>	<u>Diesel Range</u>	<u>Motor Oil Range</u>	<u>Surrogate</u>
Laboratory ID	(C ₁₀ -C ₂₅)	(C ₂₅ -C ₃₆)	(% Recovery) (Limit 56-165)
DISPEX-100815-FL-4.5 510129-01	<50	<250	103
DISPEX-100815-WW-4 510129-02	<50	<250	105
DISPEX-100815-EW-4 510129-03	<50	<250	98
DISPEX-100815-SW-4 510129-04	<50	<250	100
Method Blank 05-2086 MB	<50	<250	102

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	DISPEX-100815-FL-4.5	Client:	Aspect Consulting, LLC
Date Received:	10/08/15	Project:	Snohomish County Fire Station 22
Date Extracted:	10/08/15	Lab ID:	510129-01 1/5
Date Analyzed:	10/08/15	Data File:	100819.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm) Dry Weight	Operator:	ya

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	92	31	163
Benzo(a)anthracene-d12	97	24	168

Compounds:	Concentration mg/kg (ppm)
Naphthalene	<0.01
Acenaphthylene	<0.01
Acenaphthene	<0.01
Fluorene	<0.01
Phenanthrene	<0.01
Anthracene	<0.01
Fluoranthene	<0.01
Pyrene	<0.01
Benz(a)anthracene	<0.01
Chrysene	<0.01
Benzo(a)pyrene	<0.01
Benzo(b)fluoranthene	<0.01
Benzo(k)fluoranthene	<0.01
Indeno(1,2,3-cd)pyrene	<0.01
Dibenz(a,h)anthracene	<0.01
Benzo(g,h,i)perylene	<0.01

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	DISPEX-100815-WW-4	Client:	Aspect Consulting, LLC
Date Received:	10/08/15	Project:	Snohomish County Fire Station 22
Date Extracted:	10/08/15	Lab ID:	510129-02 1/5
Date Analyzed:	10/08/15	Data File:	100820.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm) Dry Weight	Operator:	ya

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

Compounds:	Concentration mg/kg (ppm)
Naphthalene	<0.01
Acenaphthylene	<0.01
Acenaphthene	<0.01
Fluorene	<0.01
Phenanthrene	<0.01
Anthracene	<0.01
Fluoranthene	<0.01
Pyrene	<0.01
Benz(a)anthracene	<0.01
Chrysene	<0.01
Benzo(a)pyrene	<0.01
Benzo(b)fluoranthene	<0.01
Benzo(k)fluoranthene	<0.01
Indeno(1,2,3-cd)pyrene	<0.01
Dibenz(a,h)anthracene	<0.01
Benzo(g,h,i)perylene	<0.01

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	DISPEX-100815-EW-4	Client:	Aspect Consulting, LLC
Date Received:	10/08/15	Project:	Snohomish County Fire Station 22
Date Extracted:	10/08/15	Lab ID:	510129-03 1/5
Date Analyzed:	10/08/15	Data File:	100821.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm) Dry Weight	Operator:	ya

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	92	31	163
Benzo(a)anthracene-d12	95	24	168

Compounds:	Concentration mg/kg (ppm)
Naphthalene	<0.01
Acenaphthylene	<0.01
Acenaphthene	<0.01
Fluorene	<0.01
Phenanthrene	<0.01
Anthracene	<0.01
Fluoranthene	<0.01
Pyrene	<0.01
Benz(a)anthracene	<0.01
Chrysene	<0.01
Benzo(a)pyrene	<0.01
Benzo(b)fluoranthene	<0.01
Benzo(k)fluoranthene	<0.01
Indeno(1,2,3-cd)pyrene	<0.01
Dibenz(a,h)anthracene	<0.01
Benzo(g,h,i)perylene	<0.01

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	DISPEX-100815-SW-4	Client:	Aspect Consulting, LLC
Date Received:	10/08/15	Project:	Snohomish County Fire Station 22
Date Extracted:	10/08/15	Lab ID:	510129-04 1/5
Date Analyzed:	10/08/15	Data File:	100822.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm) Dry Weight	Operator:	ya

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	90	31	163
Benzo(a)anthracene-d12	97	24	168

Compounds:	Concentration mg/kg (ppm)
Naphthalene	<0.01
Acenaphthylene	<0.01
Acenaphthene	<0.01
Fluorene	<0.01
Phenanthrene	<0.01
Anthracene	<0.01
Fluoranthene	<0.01
Pyrene	<0.01
Benz(a)anthracene	<0.01
Chrysene	<0.01
Benzo(a)pyrene	<0.01
Benzo(b)fluoranthene	<0.01
Benzo(k)fluoranthene	<0.01
Indeno(1,2,3-cd)pyrene	<0.01
Dibenz(a,h)anthracene	<0.01
Benzo(g,h,i)perylene	<0.01

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	Not Applicable	Project:	Snohomish County Fire Station 22
Date Extracted:	10/08/15	Lab ID:	05-2080 mb 1/5
Date Analyzed:	10/08/15	Data File:	100804.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	92	31	163
Benzo(a)anthracene-d12	97	24	168

Compounds:	Concentration mg/kg (ppm)
Naphthalene	<0.01
Acenaphthylene	<0.01
Acenaphthene	<0.01
Fluorene	<0.01
Phenanthrene	<0.01
Anthracene	<0.01
Fluoranthene	<0.01
Pyrene	<0.01
Benz(a)anthracene	<0.01
Chrysene	<0.01
Benzo(a)pyrene	<0.01
Benzo(b)fluoranthene	<0.01
Benzo(k)fluoranthene	<0.01
Indeno(1,2,3-cd)pyrene	<0.01
Dibenz(a,h)anthracene	<0.01
Benzo(g,h,i)perylene	<0.01

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/12/15

Date Received: 10/08/15

Project: Snohomish County Fire Station 22, PO 150323, F&BI 510129

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

Laboratory Code: 510127-02 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet Wt)	Duplicate Result (Wet Wt)	RPD (Limit 20)
Benzene	mg/kg (ppm)	<0.02	<0.02	nm
Toluene	mg/kg (ppm)	<0.02	<0.02	nm
Ethylbenzene	mg/kg (ppm)	<0.02	<0.02	nm
Xylenes	mg/kg (ppm)	<0.06	<0.06	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	mg/kg (ppm)	0.5	79	66-121
Toluene	mg/kg (ppm)	0.5	86	72-128
Ethylbenzene	mg/kg (ppm)	0.5	86	69-132
Xylenes	mg/kg (ppm)	1.5	87	69-131

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/12/15

Date Received: 10/08/15

Project: Snohomish County Fire Station 22, PO 150323, F&BI 510129

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

Laboratory Code: 510129-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet Wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	103	106	63-146	3

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	102	79-144

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/12/15

Date Received: 10/08/15

Project: Snohomish County Fire Station 22, PO 150323, F&BI 510129

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

Laboratory Code: 510109-01 1/5 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Naphthalene	mg/kg (ppm)	0.17	<0.01	91	91	44-129	0
Acenaphthylene	mg/kg (ppm)	0.17	<0.01	91	95	52-121	4
Acenaphthene	mg/kg (ppm)	0.17	<0.01	91	89	51-123	2
Fluorene	mg/kg (ppm)	0.17	<0.01	92	91	37-137	1
Phenanthrene	mg/kg (ppm)	0.17	<0.01	92	92	34-141	0
Anthracene	mg/kg (ppm)	0.17	<0.01	91	91	32-124	0
Fluoranthene	mg/kg (ppm)	0.17	<0.01	95	94	16-160	1
Pyrene	mg/kg (ppm)	0.17	<0.01	94	90	10-180	4
Benz(a)anthracene	mg/kg (ppm)	0.17	<0.01	101	94	23-144	7
Chrysene	mg/kg (ppm)	0.17	<0.01	99	93	32-149	6
Benzo(b)fluoranthene	mg/kg (ppm)	0.17	<0.01	87	87	23-176	0
Benzo(k)fluoranthene	mg/kg (ppm)	0.17	<0.01	82	83	42-139	1
Benzo(a)pyrene	mg/kg (ppm)	0.17	<0.01	86	86	21-163	0
Indeno(1,2,3-cd)pyrene	mg/kg (ppm)	0.17	<0.01	82	86	23-170	5
Dibenz(a,h)anthracene	mg/kg (ppm)	0.17	<0.01	81	85	31-146	5
Benzo(g,h,i)perylene	mg/kg (ppm)	0.17	<0.01	74	79	37-133	7

Laboratory Code: Laboratory Control Sample 1/5

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Naphthalene	mg/kg (ppm)	0.17	92	58-121
Acenaphthylene	mg/kg (ppm)	0.17	88	54-121
Acenaphthene	mg/kg (ppm)	0.17	90	54-123
Fluorene	mg/kg (ppm)	0.17	93	56-127
Phenanthrene	mg/kg (ppm)	0.17	94	55-122
Anthracene	mg/kg (ppm)	0.17	91	50-120
Fluoranthene	mg/kg (ppm)	0.17	99	54-129
Pyrene	mg/kg (ppm)	0.17	87	53-127
Benz(a)anthracene	mg/kg (ppm)	0.17	93	51-115
Chrysene	mg/kg (ppm)	0.17	100	55-129
Benzo(b)fluoranthene	mg/kg (ppm)	0.17	85	56-123
Benzo(k)fluoranthene	mg/kg (ppm)	0.17	86	54-131
Benzo(a)pyrene	mg/kg (ppm)	0.17	80	51-118
Indeno(1,2,3-cd)pyrene	mg/kg (ppm)	0.17	86	49-148
Dibenz(a,h)anthracene	mg/kg (ppm)	0.17	85	50-141
Benzo(g,h,i)perylene	mg/kg (ppm)	0.17	85	52-131

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.

F03 vs7



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Page # 1 of 1
TURNAROUND TIME

☐ Standard (10 Business Days)
☒ ~~RUSH~~ **ASAP**
Rush charges authorized by _____

SAMPLE DISPOSAL

☒ **Dispose after 30 days**
☐ **Archive Samples**
☐ **Other**

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: 	Greg Farris	Aspect	10/8/15	1220
Received by: 	Matt Langston	EOI	10/8/15	1220
Relinquished by:				
Received by:				

APPENDIX C

UST Permanent Closure Notice and Site Check/Site Assessment Checklist



PERMANENT CLOSURE NOTICE FOR UNDERGROUND STORAGE TANKS

This notice certifies that permanent closure activities were performed and conducted in accordance with Chapter 173-360 WAC. Instructions are found on the back page.

UST ID #: _____

County: _____

I. UST FACILITY

II. OWNER/OPERATOR INFORMATION

Facility Compliance Tag #:

Owner/Operator Name: Phil Thornton

UST ID #: 1

Business Name: Snohomish County Fire Dist. 1

Site Name: Snohomish County Fire Station 22

Address: 12425 Meridian Ave S.

Site Address: 20510 Damsen Road

City: Everett

State: WA Zip: 98208

City: Lynnwood, WA 98036

Phone: (425) 754-5258

Phone: (425) 551-1922

Email: p.thornton@firedistrict1.org

III. CERTIFIED UST DECOMMISSIONER

Company Name: CLEARCREEK CONTRACTORS

Service Provider Name: Nathan Hoffman

Address: 3919 88TH ST NE

Certification Type: UST DECOMMISSION

City: MARYSVILLE

State: WA

Zip: 98270

Cert. No.: 00219270

Exp. Date: 6/2/15

Provider Phone: 360-659-2459

Provider Email: NATHAN.HOFFMAN.CLEARCREEK

Provider Signature: N. Hoffman

Date: 10/21/15

@GMAIL.COM

IV. TANK INFORMATION

TANK ID	TANK CAPACITY	LAST SUBSTANCE STORED	CLOSURE METHOD			CLOSURE DATE
			removal	closed-in-place	change-in-service	
<u>1</u>	<u>3,000-gal</u>	<u>Diesel</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>10/2/15</u>
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

V. REQUIRED SIGNATURE

Signature acknowledges UST(s) comply with UST regulation WAC 173-360-380 Permanent Closure Requirements.

10/21/15

Date

Greg Ferris

Signature of Tank Owner/Operator or Authorized Representative

Greg Ferris / Aspect Consulting

Print or Type Name



DEPARTMENT OF
ECOLOGY
State of Washington

SITE CHECK/SITE ASSESSMENT CHECKLIST FOR UNDERGROUND STORAGE TANKS

UST ID #: _____

County: _____

This checklist certifies that site check or site assessment activities were performed in accordance with Chapter 173-360 WAC. Instructions are found on the last page.

I. UST FACILITY		II. OWNER/OPERATOR INFORMATION	
Facility Compliance Tag #:		Owner/Operator Name: Phil Thornton	
UST ID #: 1		Business Name: Snohomish County Fire Dist 1	
Site Name: Snohomish County Fire Station 22		Address: 12425 Meridian Ave S.	
Site Address: 20510 Damsen Road		City: Everett	State: WA Zip: 98208
City: Lynnwood, WA 98036		Phone: (425) 754-5258	
Phone: (425) 551-1922		Email: Pthorntm@firedistrict1.org	
III. CERTIFIED SITE ASSESSOR			
Service Provider Name: Greg Ferris		Company Name: Aspect Consulting	
Cell Phone: 206-718-5893 mail: gferris@aspectconsulting.com		Address: 401 2nd Ave S. #201	
Certification #: LCC32014723		Exp. Date: 1/9/16	City: Seattle State: WA Zip: 98104
IV. TANK INFORMATION			
TANK ID	TANK CAPACITY	LAST SUBSTANCE STORED	DATE SITE CHECK OR ASSESSMENT CONDUCTED
1	3,000-gal.	Diesel fuel	10/2/15
V. REASON FOR CONDUCTING SITE CHECK/SITE ASSESSMENT (check one)			
<input checked="" type="checkbox"/> Release investigation following permanent UST system closure (i.e. tank removal or closure-in-place).			
<input type="checkbox"/> Release investigation following a failed tank and/or line tightness test.			
<input type="checkbox"/> Release investigation following discovery of contaminated soil and/or groundwater.			
<input type="checkbox"/> Release investigation directed by Ecology to determine if the UST system is the source of offsite impacts.			
<input type="checkbox"/> UST system is undergoing a "change-in-service", which is changing from storing a regulated substance (e.g. gasoline) to storing a non-regulated substance (e.g. water).			
<input type="checkbox"/> Directed by Ecology for UST system permanently closed or abandoned before 12/22/1988.			
<input type="checkbox"/> Other (describe):			

VI. CHECKLIST

The site assessor must check each of the following items and include it in the report.
Sections referenced below can be found in the Ecology publication
Guidance for Site Checks and Site Assessments for Underground Storage Tanks.

	YES	NO
1. The location of the UST site is shown on a vicinity map.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2. A brief summary of information obtained during the site inspection is provided (Section 3.2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3. A summary of UST system data is provided (Section 3.1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4. The soils characteristics at the UST site are described. (Section 5.2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5. Is there any apparent groundwater in the tank excavation?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6. A brief description of the surrounding land use is provided. (Section 3.1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
7. The name and address of the laboratory used to perform analyses is provided. The methods used to collect and analyze the samples, including the number and types of samples collected, are also documented in the report. The data from the laboratory is appended to the report.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
8. The following items are provided in one or more sketches:		
• Location and ID number for all field samples collected	<input checked="" type="checkbox"/>	<input type="checkbox"/>
• If applicable, groundwater samples are distinguished from soil samples	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Location of samples collected from stockpiled excavated soil	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Tank and piping locations and limits of excavation pit	<input checked="" type="checkbox"/>	<input type="checkbox"/>
• Adjacent structures and streets	<input checked="" type="checkbox"/>	<input type="checkbox"/>
• Approximate locations of any on-site and nearby utilities	<input checked="" type="checkbox"/>	<input type="checkbox"/>
9. If sampling procedures are different from those specified in the guidance, has justification for using these alternative sampling procedures been provided? (Section 3.4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
10. A table is provided showing laboratory results for each sample collected including; sample ID number, constituents analyzed for and corresponding concentration, analytical method, and detection limit for that method. Any sample exceeding MTCA Method A cleanup standards are highlighted or bolded.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
11. Any factors that may have compromised the quality of the data or validity of the results are described.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
12. The results of this site check/site assessment indicate that a confirmed release of a regulated substance has occurred. The requirements for reporting confirmed releases can be found in WAC 173-360-372.	<input checked="" type="checkbox"/>	<input type="checkbox"/>

VII. REQUIRED SIGNATURES

Signature acknowledges the Site Check or Site Assessment complies with UST regulations WAC 173-360-360 through -395.

Greg Ferris
Print or Type Name


Signature of Certified Site Assessor

10/6/15
Date

APPENDIX D

Photos



Photo 001 – October 2, 2015

Looking east-southeast at the 3,000-gallon double-wall fiberglass UST in the excavation, surrounded by pea gravel.



Photo 002 – October 2, 2015

Looking southeast at the UST system, including the dispenser and fuel lines adjacent to the north wall of Fire Station #22.



Photo 003 – October 2, 2015

Looking east as the UST is being removed from the excavation and placed on plastic and secured.



Photo 004 – October 2, 2015

Looking northeast at the UST loaded on a flatbed trailer for hauling to a disposal facility.



Photo 005 – October 2, 2015

Looking northeast at the north wall of the UST excavation (a concrete slab remains below the pea gravel; soil samples were collected from edges of concrete slab).



Photo 006 – October 2, 2015

Looking southeast at the south wall of the UST excavation (a 2" water line is marked in pink paint).



Photo 007 – October 2, 2015

Looking south below the fuel dispenser location where petroleum-impacted soil was observed, south of the UST excavation area.



Photo 008 – October 8, 2015

Looking south at the former dispenser location where petroleum-impacted soil was encountered, prior to excavation.



Photo 009 – October 8, 2015

Looking south at the excavation area (7'Wx8'Lx4.5'D) to remove the petroleum-impacted soil that was observed below the former dispenser location.



Photo 010 – October 8, 2015

Looking north at ~8 tons of petroleum-impacted soil placed on and covered with plastic. The soil was eventually hauled to Cemex for disposal.