

The logo for E3RA, consisting of the letters 'E3RA' in a bold, white, sans-serif font, positioned in the upper left corner of a dark purple vertical bar.

**E3RA**

## **Soil Remediation Closeout Report**

**Ruth Dykeman Children's Center  
1033 SW 152nd Street  
Burien, Washington**

**Submitted to:**

**Navos Mental Health  
Attention: Cassie Undlin  
2600 SW Holden Street  
Seattle, WA 98126**

**Submitted by:**

**E3RA, Inc.  
PO Box 44840  
Tacoma, Washington 98448**

**March 21, 2014**

**Project No. T12050f**

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## 1.0 EXECUTIVE SUMMARY

On February 25, 2014, E3RA Inc. (E3RA) was contracted by Navos Mental Health<sup>1</sup> (Navos) to observe the removal of Petroleum Contaminated Soils (PCS) at the site located at 1033 SW 152nd St in Burien, Washington (Site). E3RA's work was necessary since a noticeable odor and visible indicators were encountered while Langseth Environmental Services, Inc. (LES)<sup>2</sup> was removing several Underground Storage Tanks (UST) from the Site. As LES confirmed in their report (attached in Appendix D), one of the four tanks removed had leakage from a hole in the bottom of the tank. This tank served the recently demolished Holly Building. The initial samples from the site were submitted by LES to Libby Environmental<sup>3</sup> for Diesel and Oil range organics testing and to Fremont Analytical<sup>4</sup> for Polyaromatic Hydrocarbon (PAH) testing. The results of this testing confirmed the presence of PCS above the Model Toxics Control Act (MTCA) clean up levels for the Site.

On March 3, 2014, E3RA monitored the removal of approximately (~) 17 cubic yards (cy) (28.3 tons) of PCS. These materials were loaded directly into the dump truck, leaving no clean overburden, by BNBuilders<sup>5</sup> (BNB) under contract to Navos. The PCS was delivered to Waste Management Inc.'s Alaska Street Reload and Recycle Facility (Waste Management) in Seattle<sup>6</sup> a waste disposal site for petroleum contaminated soils. No groundwater was encountered during any soils excavations on the Site.

During the course of the excavations, the tentative extent of PCS was evaluated through visual and passive olfactory observations and field screening with Oil-In-Soil screening test kits capable of identifying the presence of hydrocarbons including LNAPLs and DNAPLs in soil down to levels of 500 ppm TPH. Once these methods indicated that the PCS were removed, E3RA collected soil samples from both the base and sidewalls of the excavations. These samples were analyzed for Benzene, Ethylbenzene, Toluene, Xylenes (BETX), diesel, heavy oil range (NWTPH-Dx), and Carcinogenic PAHs. Based on this data, we believe that all PCS have been removed from the Site that were associated with the damaged UST.

In summary, the Site was found to have ~17 cy of soil (28.3 tons) with diesel-range hydrocarbons above MTCA Method A Cleanup Limits (2,000 ppm) that appears to be related to historic heating oil operations for the previously existing Holly Building that was removed from the Site. The PCS were excavated and transported off site to Waste Management for disposal. Analytical data from the excavation side wall and base samples indicates that the PCS from the above mentioned historic petroleum heating oil operations release was removed from the Site. Investigative and remediation efforts throughout the project were photo-documented for review during report generation. Selected photographs are provided in Appendix A. The remaining photographs are retained in E3RA's project file and are available for duplication upon request.

Copies of this report should be submitted to the Washington State Department of Ecology-Northwest Regional Office (WSDOE-NWRO) in accordance with the requirements of WAC 173-340.

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<sup>1</sup>Navos Mental Health, 2600 SW Holden St, Seattle, WA 98126

<sup>2</sup>Langseth Environmental Services, Inc., 7517 Portland Avenue, Suite A, Tacoma, WA 98404

<sup>3</sup>Libby Environmental, 4139 Libby Road NE, Olympia, WA 98506-2518

<sup>4</sup>Fremont Analytical, 3600 Fremont Avenue N, Seattle, WA 98103

<sup>5</sup>BNBuilders, 2601 4th Avenue, Suite 350, Seattle, WA 98121

<sup>6</sup>Waste Management, Inc.'s Alaska Street Reload and Recycle Facility, 70 South Alaska Street, Seattle, WA 98106

## 2.0 SITE BACKGROUND

The site is located at 1033 SW 152nd Street and encompasses 7.49 acres on an irregularly shaped lot. The parcel is developed with two large structures and associated paving for parking and access. The parcel abuts Lake Burien. Five large buildings (Gym, Holly Building, Admin Building, and a Barn) were recently demolished and removed from the site. Three known UST's were associated with those structures and identified in a Phase I ESA prepared by E3RA and dated August 27, 2012. LES recently removed the tanks and discovered an additional small starter tank they also removed.

## 3.0 SITE CONDITIONS

At the time of E3RA's arrival, all the Site structures had been removed with the exception of the two newer structures located in the north area of the site that were to remain. The construction area on the southern half of the site was completely fenced with construction fencing. The excavations for the four USTs were visible with the excavation for the Holly Building UST having visible signs of PCS. The excavation had recently been cleaned with a vactor truck to remove any rain water that had entered the excavation. The water and soils that were removed by the vactor truck were taken to the Waste Management disposal site.

Soils on the Site encountered during the soils excavation process were Glacial Till (SM) in a very dense condition. Ground water was not encountered during the excavation process to depths of approximately 8 feet below previously existing grades. No signs that ground water fluctuates above this elevation, such as soil mottling, were encountered.

Lake Burien exists abutting the site to the west. A dry well was found during site activities to a depth of 50 ft and was found to be below the lake level by approximately 25 feet indicating that little to no groundwater exists close to the surface and the lake is perched on the Glacial Till.

## 4.0 ANALYTICAL DATA METHODOLOGY

Prior to the collection of soil samples from the base and sidewalls of the excavation and during suspect PCS segregation, soils were screened for indications of petroleum hydrocarbons through visual and/or passive olfactory methods and by using Oil-In-Soil kits. Soils were considered suspect PCS if the water or soil in the Oil-In-Soil kit turned red after several minutes. Samples were collected in locations where it was considered most likely to contain elevated concentrations of petroleum hydrocarbons through screening methods. Once collected, soil samples were immediately placed in the appropriate, laboratory-prepared container and preserved according to method protocol for the planned analyses.

All soil samples were submitted to ESN Northwest, Inc.<sup>7</sup> in Olympia, Washington for petroleum, cPAH and BTEX analysis. Laboratory analytical data reports are provided in Appendix B of this report. Volatile organic analyses of soils collected from excavation bases or sidewalls were performed in accordance with EPA Methods 5035 guidelines. Soil samples were selected for laboratory analysis by the following analytical methods based upon where a noticeable odor occurred or soil discoloration was evident:

- Carcinogenic Polyaromatic Hydrocarbons (PAHs) by EPA Method 8270;
- Diesel-range petroleum hydrocarbons by NWTPH-Dx;
- Benzene, Toluene, Ethylbenzene, and Xylenes (BETX) by EPA Method 8021;

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<sup>7</sup>ESN Northwest, Inc., 1210 Eastside Street SE, Suite 200, Olympia, WA 98501

## 5.0 INVESTIGATIVE AND ANALYTICAL DATA SUMMARY

This section summarizes observations and analytical data associated with investigative and remediation efforts conducted on March 3, 2014. A Phase I Environmental Site Assessment (August 27, 2012) and a Phase II Limited Site Investigation (August 27, 2012) for the site were prepared by E3RA. During the Phase I investigation, we noted three USTs that were removed by LES recently as previously discussed.

On February 25, 2014, E3RA was contracted by Navos to observe the removal of Petroleum Contaminated Soils at a site located at 1033 SW 152nd St, Burien, Washington. E3RA's work was necessary since a noticeable odor and visible indicators were encountered while LES was removing several USTs from the Site. As LES confirmed in their report (attached in Appendix D), one of the four tanks removed had leakage from a hole in the bottom of the tank. This tank served the recently demolished Holly Building. The initial samples from the site were submitted by LES to Libby Environmental for Diesel and Oil range organics testing and to Fremont Analytical for Polyaromatic Hydrocarbons (PAH) testing. The results of this testing confirmed the presence of PCS above the Model Toxics Control Act (MTCA) clean up levels for the Site. The lab results are presented in Table 1 for initial PCS characterization.

On March 3, 2014, E3RA monitored the removal of approximately (~) 17 cy (28.3 tons) of PCS. These materials were loaded directly into the dump truck, leaving no clean overburden, by BNB under contract to Navos. The PCS was delivered to Waste Management, a waste disposal site for petroleum contaminated soils. No groundwater was encountered during any soils excavations on this Site.

During the course of the excavations, the tentative extent of PCS was evaluated through visual and passive olfactory observations and field screening with Oil-In-Soil screening test kits capable of identifying the presence of hydrocarbons including LNAPLs and DNAPLs in soil down to levels of 500 ppm TPH. Once these methods indicated that the PCS were removed, E3RA collected soil samples from both the base and sidewalls of the excavations. These samples were analyzed for Benzene, Ethylbenzene, Toluene, Xylenes (BETX), diesel, heavy oil range (NWTPH-Dx), and Carcinogenic PAHs. Based on this data, we believe that all Petroleum Contaminated Soils have been removed from the Site that was associated with the damaged UST.

Laboratory analytical data reported that the soil samples collected from the excavation base, and north, south, east, and west side walls had no detectable levels of the analytes tested. Table 2 (below) summarizes the results of the excavation base and sidewall sampling for the excavation location and Figure 3 (attached) shows the location of the samples and extent of the excavation area. No stockpile was created. The soils excavated were loaded directly from the excavation into the dump truck by BNB.

<b>TABLE 1</b> <b>SOIL ANALYTICAL SUMMARY</b> <b>Initial PCS Characterization</b> <b>February 13, 2014</b>							
Sample ID	NWTPH-Dx (diesel range)	NWTPH-Dx (heavy oil range)	Benzene	cPAH	Benz(a)anthracene	2-Fluorobiphenyl	Terphenyl-d14
7	<b>7,470</b>	ND (<40)	ND (<0.2)	0.013	132	115	139
Cleanup Level†	2,000	2,000	0.03	0.1			
<b>Bold text indicates concentrations in excess of cleanup standard</b> Reported in milligrams per kilogram (mg/kg) NA – Not Analyzed ND – Less than the laboratory's limit of detection † - Based upon Washington State Department of Ecology MTCA Method A Cleanup Levels for Soil							

<b>TABLE 2</b> <b>SOIL ANALYTICAL SUMMARY</b> <b>Holly Building UST Excavation Base and Side Wall Samples</b> <b>March 3, 2014</b>									
Sample ID	Base or Side Wall Sample	Depth of Sample	cPAH	NWTPH-Dx (diesel range)	NWTPH-Dx (lube oil range)	Benzene	Toluene	Ethyl Benzene	Xylenes
1	South	4'	ND (<0.02)	ND (<50)	ND (<100)	ND (<0.02)	ND (<0.05)	ND (<0.05)	ND (<0.15)
2	North	4'	ND (<0.02)	ND (<50)	ND (<100)	ND (<0.02)	ND (<0.05)	ND (<0.05)	ND (<0.15)
3	East	4'	ND (<0.02)	ND (<50)	ND (<100)	ND (<0.02)	ND (<0.05)	ND (<0.05)	ND (<0.15)
4	West	4'	ND (<0.02)	ND (<50)	ND (<100)	ND (<0.02)	ND (<0.05)	ND (<0.05)	ND (<0.15)
5	Base	8'	ND (<0.02)	ND (<50)	ND (<100)	ND (<0.02)	ND (<0.05)	ND (<0.05)	ND (<0.15)
Cleanup Level†			0.1	2,000	2,000	0.03	7	6	9
<b>Bold text indicates concentrations in excess of cleanup standard</b> Reported in milligrams per kilogram (mg/kg) NA – Not Analyzed ND – Less than the laboratory's limit of detection † - Based upon Washington State Department of Ecology MTCA Method A Cleanup Levels for Soil									

## 6.0 CONCLUSIONS

The Site was found to have (~) 17 cy of soil (28.3 tons) with diesel-range hydrocarbons above MTCA Method A Cleanup Limits (2,000 ppm) that appears to be related to historic heating oil operations for the previously existing Holly Building that was removed from the Site. The PCS was excavated and transported off site to Waste Management for disposal. Analytical data from the excavation side wall and base samples indicates that the PCS from the above mentioned historic petroleum heating oil operations release was removed from the Site. At no time was groundwater encountered and we have no reason to suspect groundwater contamination from this Site.

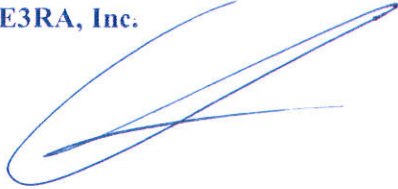
In accordance with the requirements of WAC 173-340, it is recommended that copies of this report be submitted to WSDOE-NWRO.

## 7.0 CLOSURE

E3RA appreciates the opportunity to be of service to Navos Mental Health. Should you have any questions regarding this report, please contact our office at your earliest convenience.

Sincerely,

**E3RA, Inc.**



Casey R. Lowe, P.E.  
Project Engineer



Dean M. White, P.E.  
Principal Engineer

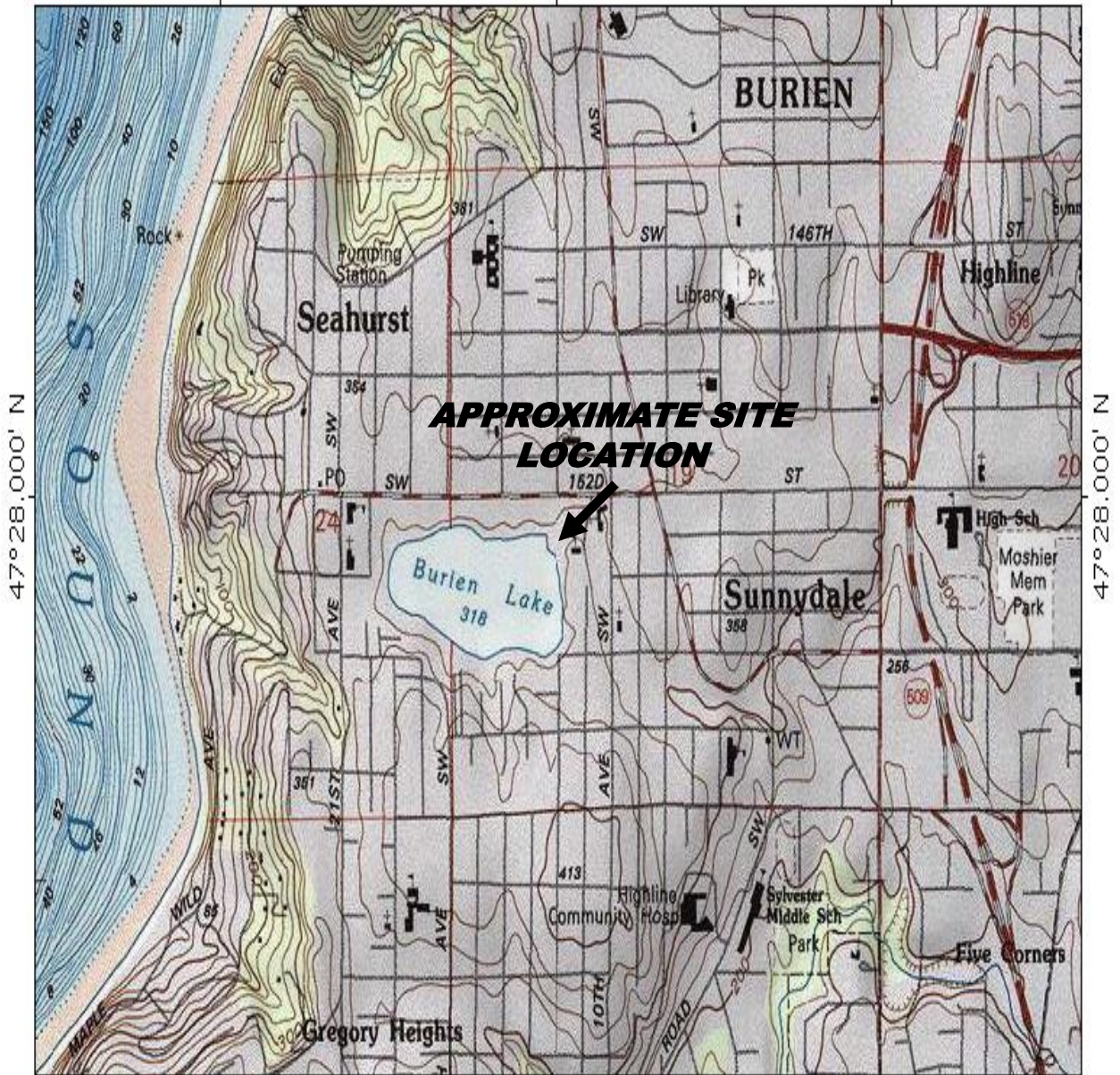
CRL:DMW:jb  
TACOW\Tacnew\2012 JOB FILES\T12050f Navos Mental Health - Youth Homes Soils Remediation\Navos report\Soil Remediation Closeout Report.doc

One copy submitted via email

122°22.000' W

122°21.000' W

WGS84 122°20.000' W



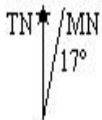
47°28.000' N

47°28.000' N

122°22.000' W

122°21.000' W

WGS84 122°20.000' W

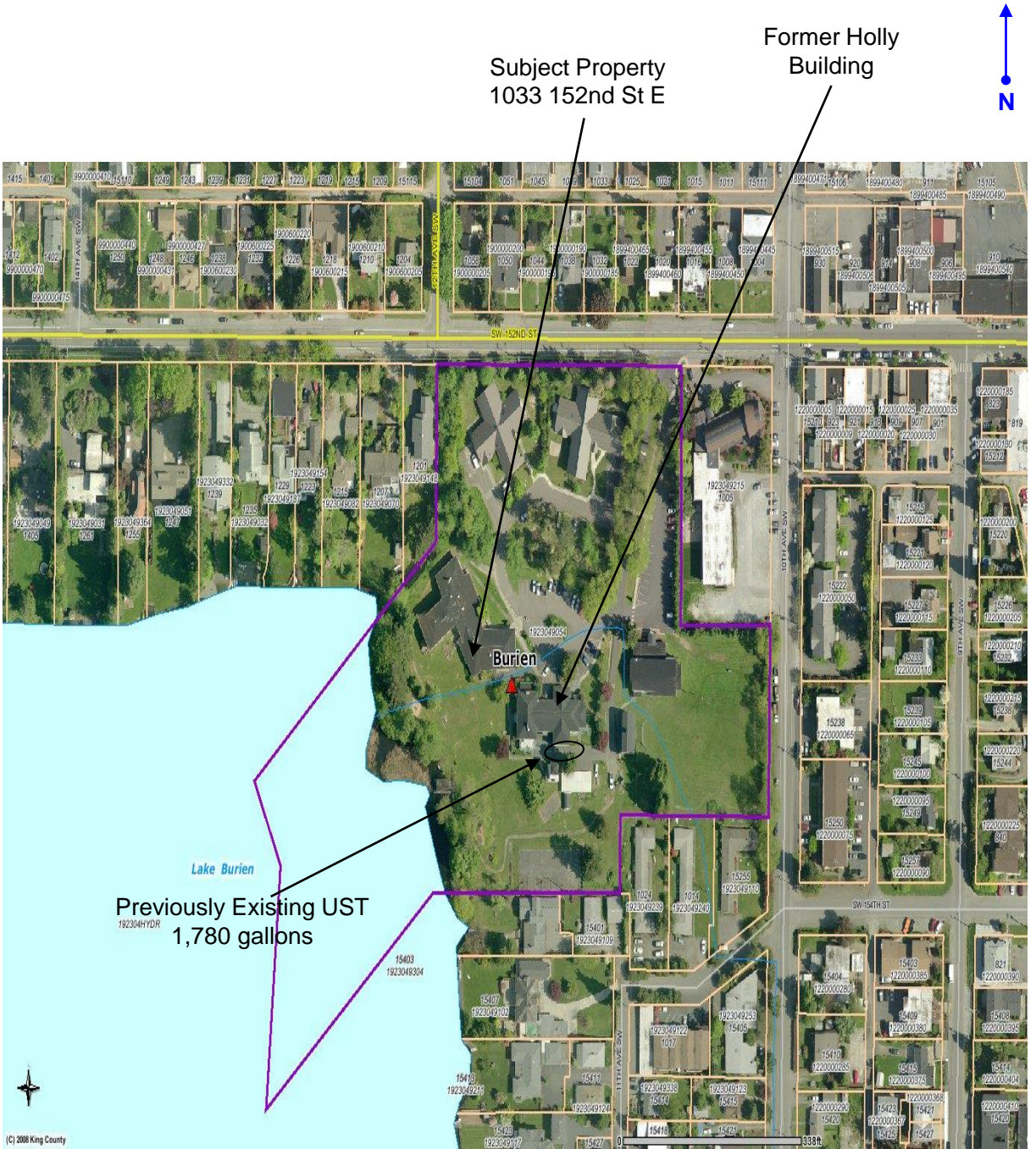


Map created with TOPO!® ©2003 National Geographic (www.nationalgeographic.com/topo)

**E3RA, Inc.**  
**P.O. Box 44840**  
**Tacoma, WA 98448**

1033 SW 152<sup>ND</sup> ST  
 TOPOGRAPHIC AND LOCATION MAP  
 BURIEN, WASHINGTON

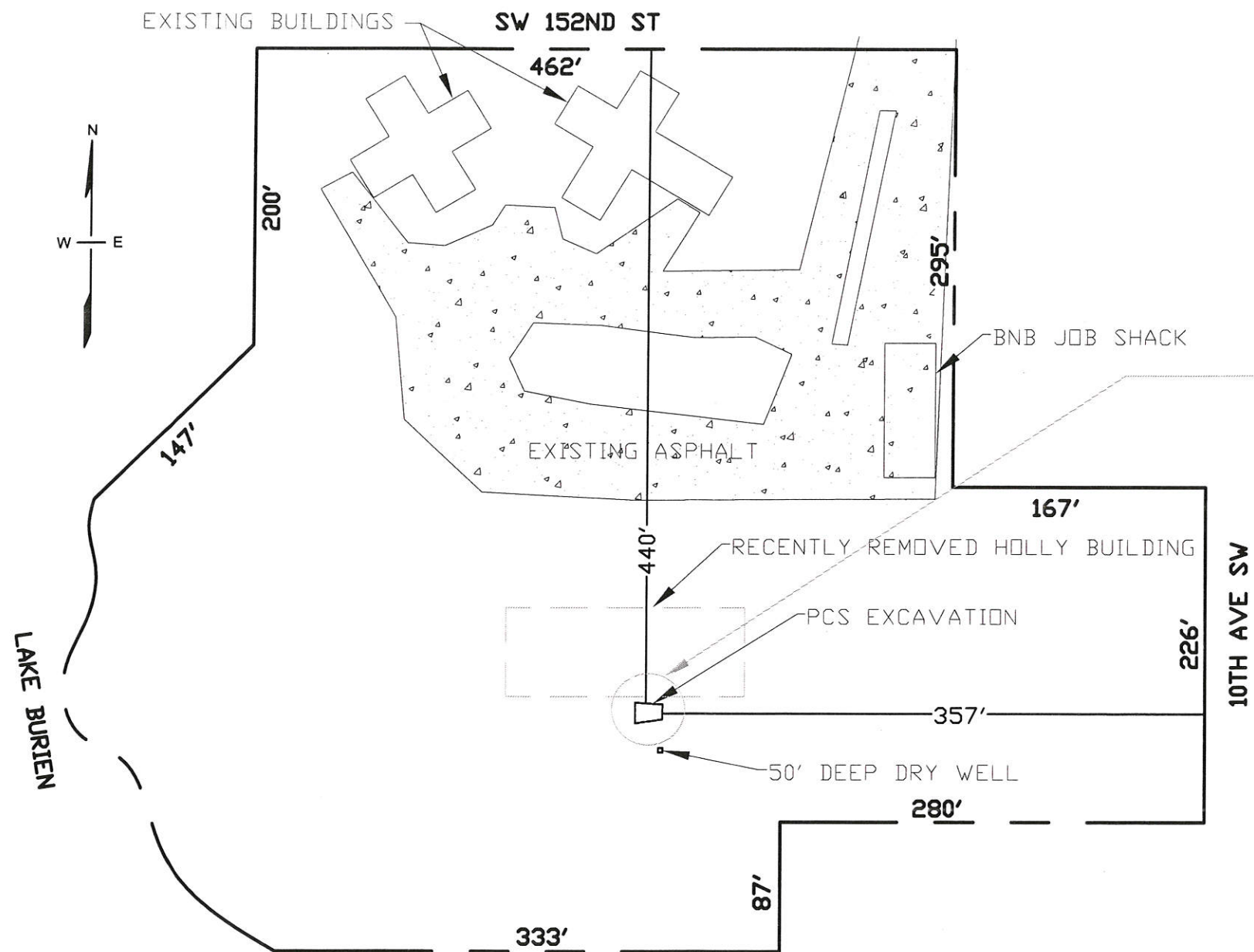
**FIGURE 1**  
**T12050f**



**E3RA, Inc.**  
**P.O. Box 44840**  
**Tacoma, WA 98448**

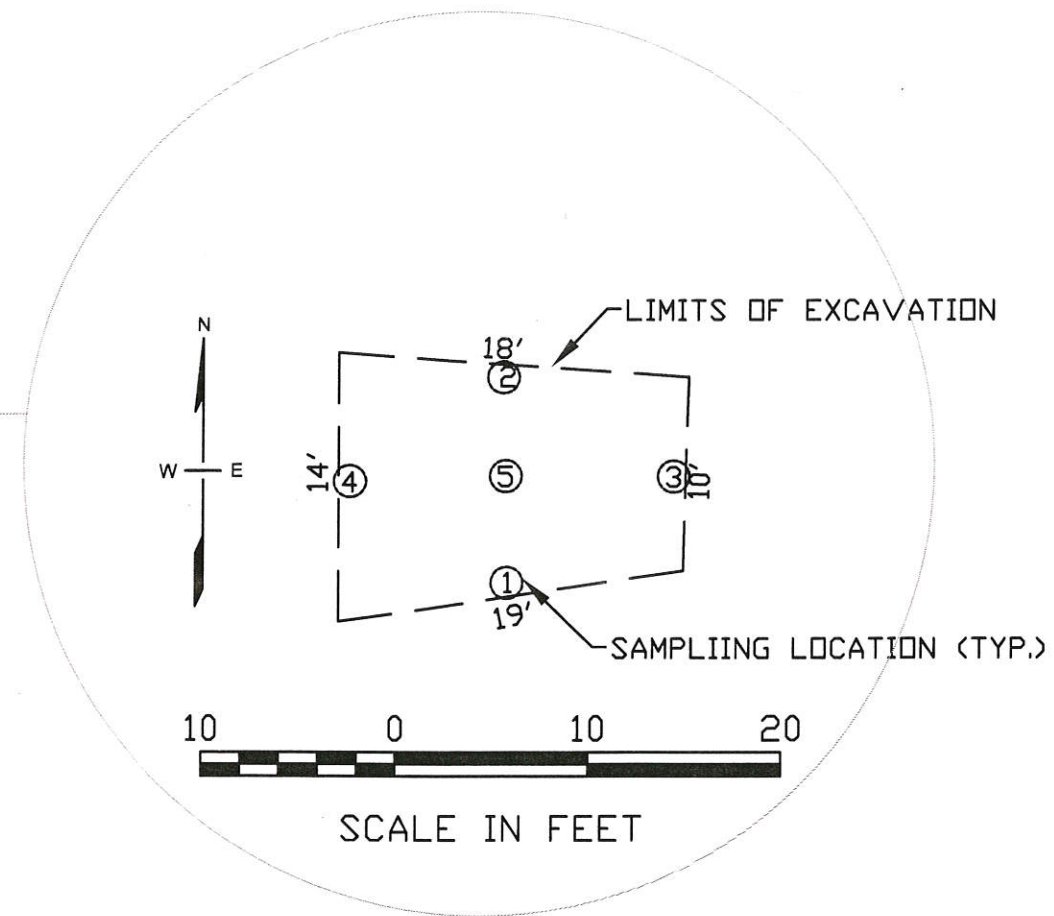
**1033 SW 152ND ST**  
**TOPOGRAPHIC AND LOCATION MAP**  
**BURIEN, WASHINGTON**

**FIGURE 2**  
**SITE PLAN**  
**T12050f**



SCALE IN FEET

NOTE:  
BOUNDARY AND TOPOGRAPHY ARE BASED ON MAPPING PROVIDED TO E3RA AND OBSERVATIONS MADE IN THE FIELD. THE INFORMATION SHOWN DOES NOT CONSTITUTE A FIELD SURVEY BY E3RA.



NOTE:  
SOILS LOADED DIRECTLY INTO DUMP TRUCK.  
NO SOIL STOCKPILE WAS CREATED.

**E3RA** Inc.  
PO Box 44840  
Tacoma, WA 98448  
253-537-9400  
253-537-9401 fax  
www.e3ra.com

PROJECT: 1033 SW 152nd St Burien, Washington	
SHEET TITLE: Sampling Location Site Plan	
DESIGNER: CRL	JOB NO. T12050f
DRAWN BY: CRL	SCALE: As Shown
CHECKED BY: JEB	FIGURE: 3
DATE: March 14, 2014	FILE: T12050f.dwg

**APPENDIX A**

**SITE PHOTOGRAPHS**

<b>Client:</b> Navos Mental Health	<b>Project:</b> Slavic Navos PCS Removal	<b>E3RA Project #:</b> T12050f <b>Date:</b> 03/14/14
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<b>Photo No.</b> 1
<b>Direction Photo Taken:</b> South
<b>Description:</b> View of excavation upon E3RA arrival.



<b>Photo No.</b> 2
<b>Direction Photo Taken:</b> East
<b>Description:</b> View of PCS being loaded into dump truck.



<b>Client:</b> Navos Mental Health	<b>Project:</b> Slavic Navos PCS Removal	<b>E3RA Project #:</b> T12050f <b>Date:</b> 03/14/14
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<b>Photo No.</b> 3	
<b>Direction Photo Taken:</b> Northeast	
<b>Description:</b> View of excavation.	

<b>Photo No.</b> 4	
<b>Direction Photo Taken:</b> East	
<b>Description:</b> View of PCS being excavated.	

## **APPENDIX B**

### **LABORATORY ANALYTICAL DATA REPORTS**



**ESN NORTHWEST CHEMISTRY LABORATORY**

E3RA  
NAVOS PROJECT  
Client Project #T12050e  
Burien, Washington

ESN Northwest  
1210 Eastside Street SE Suite 200  
Olympia, WA 98501  
(360) 459-4670 (360) 459-3432 Fax  
lab@esnnw.com

**Analysis of Diesel Range Organics & Lube Oil Range Organics in Soil by Method NWTPH-Dx/Dx Extended**

Sample Number	Date Prepared	Date Analyzed	Surrogate Recovery (%)	Diesel Range Organics (mg/kg)	Lube Oil Range Organics (mg/kg)
Method Blank	3/4/2014	3/4/2014	94	nd	nd
LCS	3/4/2014	3/4/2014	92	106%	---
#1	3/4/2014	3/4/2014	95	nd	nd
#2	3/4/2014	3/4/2014	84	nd	nd
#3	3/4/2014	3/4/2014	90	nd	nd
#4	3/4/2014	3/4/2014	90	nd	nd
#5	3/4/2014	3/4/2014	90	nd	nd
#5 Duplicate	3/4/2014	3/4/2014	88	nd	nd
Reporting Limits				50	100

"---" Indicates not tested for component.

"nd" Indicates not detected at the listed detection limits.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE : 50% TO 150%

**ESN NORTHWEST CHEMISTRY LABORATORY**

E3RA  
 NAVOS PROJECT  
 Client Project #T12050e  
 Burien, Washington

ESN Northwest  
 1210 Eastside Street SE Suite 200  
 Olympia, WA 98501  
 (360) 459-4670 (360) 459-3432 Fax  
 lab@esnnw.com

**Analyses of BTEX (EPA Method 8260) in Soil**

Sample Number	Date Prepared	Date Analyzed	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	Surrogate Recovery (%)
Method Blank	3/4/2014	3/4/2014	nd	nd	nd	nd	91
LCS	3/4/2014	3/4/2014	119%	111%	106%	83%	106
LCSD	3/4/2014	3/4/2014	100%	95%	95%	75%	92
#1	3/4/2014	3/4/2014	nd	nd	nd	nd	91
#2	3/4/2014	3/4/2014	nd	nd	nd	nd	94
#3	3/4/2014	3/4/2014	nd	nd	nd	nd	93
#4	3/4/2014	3/4/2014	nd	nd	nd	nd	100
#5	3/4/2014	3/4/2014	nd	nd	nd	nd	102
#5 Duplicate	3/4/2014	3/4/2014	nd	nd	nd	nd	89
Reporting Limits			0.02	0.05	0.05	0.15	

"nd" Indicates not detected at the listed detection limits.

"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (4-Bromofluorobenzene) & LCS : 65% TO 135%

ESN NORTHWEST CHEMISTRY LABORATORY

E3RA  
 NAVOS PROJECT  
 Client Project #T12050e  
 Burien, Washington

ESN Northwest  
 1210 Eastside Street SE Suite 200  
 Olympia, WA 98501  
 (360) 459-4670 (360) 459-3432 Fax  
 lab@esnnw.com

Analysis of Polynuclear Aromatic Hydrocarbons in Soil by Method 8270

Analytical Results

		MTH BLK	LCS	#1	#2	#3	#4	#5	MS	MSD	RPD
Date extracted	Reporting	03/04/14	03/04/14	03/04/14	03/04/14	03/04/14	03/04/14	03/04/14	03/04/14	03/04/14	03/04/14
Date analyzed	Limits	03/04/14	03/04/14	03/04/14	03/04/14	03/04/14	03/04/14	03/04/14	03/04/14	03/04/14	03/04/14
Moisture, %	(mg/kg)			11%	14%	15%	11%	13%			
Naphthalene	0.02	nd	122%	nd	nd	nd	nd	nd			
2-Methylnaphthalene	0.02	nd	99%	nd	nd	nd	nd	nd			
1-Methylnaphthalene	0.02	nd	ns	nd	nd	nd	nd	nd			
Acenaphthylene	0.02	nd	125%	nd	nd	nd	nd	nd			
Acenaphthene	0.02	nd	140%	nd	nd	nd	nd	nd	124%	120%	3%
Fluorene	0.02	nd	119%	nd	nd	nd	nd	nd			
Phenanthrene	0.02	nd	140%	nd	nd	nd	nd	nd			
Anthracene	0.02	nd	119%	nd	nd	nd	nd	nd			
Fluoranthene	0.02	nd	119%	nd	nd	nd	nd	nd			
Pyrene	0.02	nd	115%	nd	nd	nd	nd	nd	122%	125%	2%
Benzo(a)anthracene*	0.02	nd	118%	nd	nd	nd	nd	nd			
Chrysene*	0.02	nd	132%	nd	nd	nd	nd	nd			
Benzo(b)fluoranthene*	0.02	nd	122%	nd	nd	nd	nd	nd			
Benzo(k)fluoranthene*	0.02	nd	123%	nd	nd	nd	nd	nd			
Benzo(a)pyrene*	0.02	nd	129%	nd	nd	nd	nd	nd			
Indeno(1,2,3-cd)pyrene*	0.02	nd	115%	nd	nd	nd	nd	nd			
Dibenzo(a,h)anthracene*	0.02	nd	142%	nd	nd	nd	nd	nd			
Benzo(ghi)perylene	0.02	nd	147%	nd	nd	nd	nd	nd			
Total Carcinogens				nd	nd	nd	nd	nd			
Surrogate recoveries:											
2-Fluorobiphenyl		110%	111%	116%	101%	108%	104%	110%	107%	103%	
p-Terphenyl-d14		119%	114%	121%	107%	114%	115%	115%	115%	113%	

Data Qualifiers and Analytical Comments

\* - Carcinogenic Analyte

nd - not detected at listed reporting limits

ns - not spiked

Results reported on dry-weight basis

Acceptable Recovery limits: 50% TO 150%

Acceptable RPD limit: 35%

## **APPENDIX C**

### **PCS SOIL DISPOSAL RECIEPTS**



Permit No.: 7676-05  
Issuance Date: May 16, 2011  
Effective Date: May 28, 2011  
Expiration Date: May 27, 2016



**King County**

## **WASTE DISCHARGE PERMIT**

Department of Natural Resources and Parks  
Industrial Waste Program  
130 Nickerson Street, Suite 200  
Seattle, WA 98109-1658

In accordance with the provisions of Chapter 90.48 RCW as amended,  
Public Law 92-500, and King County Code 28.84.060,  
a Waste Discharge Permit is issued to:

### **Marine Vacuum Service**

Plant Location: 1516 S. Graham Street  
Seattle, WA 98108

Business Hours Phone: 206-762-0240

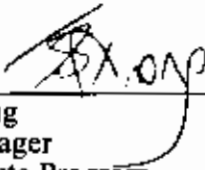
Emergency (24-Hour) Phone: 206-762-0240

Mailing Address: P.O. Box 24263  
Seattle, WA 98124

Permission is hereby granted to discharge industrial wastewater from the above-identified facility into the King County sewerage system in accordance with the effluent limitations and monitoring requirements set forth in this permit.

This permit is based on information provided in the permit application, which together with the following conditions and requirements are considered part of the permit. All requirements and ordinances of King County pertaining to the discharge of wastes into the King County sewerage system are hereby made a condition of this permit. All discharges and activities authorized herein shall be consistent with the terms and conditions of this permit.

This permit is not transferable without authorization from the King County Industrial Waste Program. Failure to provide advance notice of a transfer renders this waste discharge permit voidable on the date of facility transfer.

By   
Despina Strong  
Program Manager  
Industrial Waste Program

### **S3. SPECIAL CONDITIONS**

#### **A. Determination of Authorized 24-Hour Composite Sample Collection Methods**

1. Within 30 days of permit effective date, Marine Vacuum Service shall submit to the King County Industrial Waste Program a plan to implement flow-proportioned sampling or document why time-proportioned composite sampling provides a representative sample for compliance. This plan should consider:
  - a. Flow volumes from various processes and batch discharges
  - b. The variability of these flows and the pollutant levels anticipated in each waste stream
  - c. The treatment systems employed
  - d. Discharge mode (continuous vs. batch, gravity vs. pumped)
  - e. The variability observed in wastewater quality to date
  - f. Any available comparisons between time and flow-proportioned samples from this or similar sites
2. The King County Industrial Waste Program will use this documentation to determine whether flow-proportioned or time-proportioned composite sampling will be required.
3. If King County determines Marine Vacuum Service must implement flow-proportioned composite sampling, Marine Vacuum Service shall have a minimum of 60 days upon receipt of King County's decision to implement changes necessary and implement flow-proportioned sampling.

#### **B. Allowable Industrial Discharges**

1. The following types of industrial wastewater may be discharged after treatment by Marine Vacuum Service:

Bilge water	Catch basin cleaning wastewater
Tank cleaning wastewater	Wastewater from spill response
Contaminated stormwater	Clothes washing (from on site)
Truck wash water	Hydro-blast wastewater
Contaminated groundwater	Boiler blow down (from on site)
Oil/water separator wastewater	Boiler maintenance
Slurry water	
2. Sanitary wastewater (gray water and sewage holding tank wastewater) from marine vessels may be discharged directly to the sewer system without analysis or treatment.
3. Other types of wastewater not specifically described in this permit may not be discharged without prior authorization from King County Industrial Waste.
4. Marine Vacuum Service may not accept wastes for disposal or treatment that designate as dangerous (hazardous) waste as per WAC 173-303.
5. New processes and holding tanks shall be labeled as they are added.

**KING COUNTY INDUSTRIAL WASTE  
COMPANY FACT SHEET**

Date: May 16, 2011

**COMPANY INFORMATION**

**Company Name:** Marine Vacuum Service  
**Plant Address:** 1516 S. Graham Street  
 Seattle, WA 98108  
**Mailing Address:** P.O. Box 24263  
 Seattle, WA 98124  
**Treatment Plant:** West Point  
**Corp. Contact & Phone:** Charlie Campbell, 206-762-0240  
**Plant Contact & Phone:** Tom Myler, 206-762-0240  
**Company Type:** Centralized Waste Treatment -  
 40 CFR 437D PSES, Subparts B (Oils) and C (Organics)  
**Days Operating:** 285  
**SIC#:** 4499      **EPA ID #:** WAD 980974521  
**Investigator:** Jim Sifford

**PERMIT INFORMATION**

**Permit No.:** 7676-05  
**Effective Date:** May 28, 2011  
**Expiration Date:** May 27, 2016

**DESCRIPTION OF SAMPLE SITES, LIMIT TYPES, & DISCHARGE VOLUMES**

Sample Site No.	Description	Limit Type	Maximum Industrial Volume (gpd)
A4297	Sample tap on batch discharge tank	CFR 437D (B&C) PSES KC Organics Surcharge	120,000
Total Industrial discharge volume (gpd) (add all sites)			120,000
Cooling Water (non regulated) (gpd)			10
Sanitary Waste (non regulated) (gpd)			340



# WASTE MANAGEMENT

March 10, 2014

Rob Dodge  
1033 SW 152<sup>nd</sup> Street  
Burien, Washington

## CERTIFICATE OF DISPOSAL

Waste Management, Inc. dba Alaska Street Reload and Recycling has received nonhazardous soils Diesel Fuel Impacted Soil and Debris from Rob Dodge for ultimate disposal at Columbia Ridge Landfill

**Dates of Disposed:** 3/3/2014  
**Profile #:** 108567WA  
**Total Tons:** 28.3  
**Waste Type:** Nonhazardous Diesel Fuel Impacted Soils and Debris

I certify, on behalf of the above listed facility, that the above-described non hazardous waste was managed in compliance with all applicable laws.

*K. Castner*

Kristin Castner  
Waste Management  
Waste Approvals Manager – PNW

# KING COUNTY INDUSTRIAL WASTE COMPANY FACT SHEET

**Date:** May 16, 2011

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## COMPANY INFORMATION

**Company Name:** Marine Vacuum Service  
**Plant Address:** 1516 S. Graham Street  
 Seattle, WA 98108  
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Total Industrial discharge volume (gpd) (add all sites)	120,000
Cooling Water (non regulated) (gpd)	10
Sanitary Waste (non regulated) (gpd)	340

**APPENDIX D**

**LANGSETH ENVIRONMENTAL SERVICES, INC.  
SITE CHARACTERIZATION AND UST REMOVAL REPORT**



March 3, 2014

NAVOS  
2600 SW Holden St.  
Seattle, WA 98126

RE: NAVOS – Lake Burien Campus  
Heating Oil Tank Removal Project

To Whom It May Concern:

Enclosed is the **Site Characterization Report** for the recently completed underground heating oil storage tank (UST) removal project at the 1033 SW 152<sup>nd</sup> St. site in Burien, WA. As summarized in the report, visual and olfactory observations, field screenings and the soil sample analytical results have indicated that petroleum-contaminated soil (PCS), above the MTCA Method A cleanup level for unrestricted land use, is present in the former tank pit area of the Holly building site. All final confirmation soil sample analytical results for the remaining three tanks were at the non-detect level. This site will be listed in the Department of Ecology database as a 'leaking tank' site until such time as the PCS remediation is completed.

Thank you for the opportunity to work with you on this project. Please give me a call if you have any questions regarding this or any future projects.

Sincerely,

A handwritten signature in blue ink, appearing to read "Tom Langseth", is written over the typed name.

Tom Langseth  
Registered Site Assessor  
Licensed Decommissioning Supervisor  
Langseth Environmental Services, Inc.

Cc: Lyle Harris, NW EcoDesign, LLC



# SITE CHARACTERIZATION REPORT

**1033 SW 152<sup>ND</sup> St.**

**DOE Site ID #: Not Registered**

**Parcel Number: 192304-9054**

***SITE LOCATION:***

NAVOS – Lake Burien Campus  
Ruth Dykeman Children's Center  
1033 SW 152<sup>nd</sup> ST.  
Burien, WA 98166

***PROJECT CONTACT:***

NW EcoDesign, LLC  
Attn: Lyle Harris  
10017 SW 174<sup>th</sup>  
Vashon, WA 98070  
206.755.7338  
Lyle@nwecodesign.com

Underground Heating Oil Storage Tanks Removal Project

March 3, 2014

# SITE CHARACTERIZATION REPORT

**1033 SW 152<sup>nd</sup> St.**

W.D.O.E. Site ID #: Not Registered

PARCEL NUMBER: 192304-9054

*SITE LOCATION:*

NAVOS – Lake Burien Campus  
Ruth Dykeman Children's Center  
1033 SW 152<sup>nd</sup> St.  
Burien, WA 98166

*PROJECT CONTACT:*

NW EcoDesign, LLC  
Attn: Lyle Harris  
10017 SW 174<sup>th</sup>  
Vashon, WA 98070  
206.755.7338  
Lyle@nwecodesign.com

Underground Heating Oil Storage Tanks  
Removal Project

This report was compiled by Tom Langseth, registered and licensed with the Washington State Department of Ecology to perform environmental site assessments in accordance with WAC 173-340 through the International Code Council.

## **PROJECT BACKGROUND**

This site is located in King County, WA, inside of Burien city limits in a residential / light commercial area. The project site address is 1033 SW 152<sup>nd</sup> St., Burien, WA 98166. The site is the location of NAVOS – Lake Burien Campus, a behavioral healthcare center for children, youth, and families.

The site is currently under construction for a major upgrade to the facility. The contact person for this project was project manager Lyle Harris with NW EcoDesign, LLC. Mr. Harris's telephone number is 253.755.7338.

This project entailed the removal of four underground storage tanks (UST's) used for the storage of heating oil for three separate structures at the site. One diesel heating oil tank was sized at 500 gallons, one diesel heating oil tank was sized at 1,000 gallons, one PS 300 (black oil) / diesel heating oil tank was size at 1,780 gallons, and one diesel fuel starter tank was sized at 41 gallons. The tanks were all constructed of singlewall steel and had been connected to the various structure heating systems via copper tubing and single wall steel piping. Prior to tank removal, the tanks were pumped and triple rinsed by Langseth Environmental Services, Inc. (LES) personnel (manifest enclosed). The intent of this project was to remove the four UST's and to obtain confirmation soil samples indicating that no petroleum-contaminated soil was present in the four UST pit areas of the site.

### **WORK PERFORMED**

The site is currently under construction for a large campus capital improvement project. As part of this project, the three structures associated with the heating oil storage tanks were demolished. The buildings were known as the Holly Building, the Heather Building, and the gym. The UST removal portion of this project was completed following the structure demolitions. The tank removals were permitted through King County Fire District #2. After securing the permits and scheduling the required inspections, the removal project was begun on February 13, 2014. All excavation work for this project was completed by the demolition contractor, Rhine Demolition, under the supervision of a Langseth Environmental Licensed Decommissioning Supervisor.

### **Gym Building**

The gym building was located on the NAVOS campus, directly south of the SW 152<sup>nd</sup> St. entrance to the site. The gym building had been demolished prior to the tank removal. The UST was located in front (west) of the former structure. The heating oil UST was exposed under approximately 26" of earth cover. The tank was sized at 44.5" X 73", with a nominal capacity of 500 gallons. No pin holes and/or steel or weld failures were noted on the removed tank. The soil in the tank pit area of the gym site consisted of a silty, clay type material (Unified Soil Classification System group symbol of CL, with typical names such as inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays) to a depth of at least 6.5'. No visual or olfactory indications of petroleum-contaminated soil (PCS) were noted in the tank pit area. No groundwater was encountered in the gym tank pit area. Following UST removal, three confirmation soil samples were obtained from the tank pit area.

One sample was obtained from the pit bottom and the two additional confirmation samples were obtained from the SE and NW walls of the pit. The laboratory analytical results of the obtained samples from the gym site UST pit were all at the non-detect level.

### **Heather Building**

The Heather building was located west of the gym building and southwest of the Cedar building. The building had been demolished prior to the UST removal. The heating oil UST was located in the northwest alcove of the former building, near the rear entrance. The tank was exposed under approximately 12" of earth cover. The tank was sized at 64" X 72", with a nominal capacity of 1,000 gallons. No pin holes and/or steel or weld failures were noted on the removed tank. The soil in the tank pit area of the Heather building site were consistent with the soil encountered in the gym tank pit area. No visual or olfactory indications of petroleum-contaminated soil were noted in the tank pit area. Groundwater was encountered at an approximate depth of 8'. Following UST removal, three confirmation soil samples were obtained from the tank pit area. One sample was obtained from the pit bottom at approximately 7.5' - 8'. The two additional confirmation samples were obtained from the SW and NE pit walls at approximately 6.5' – 7.5'. The laboratory analytical results of the obtained samples from the Heather building site UST pit were all at the non-detect level.

### **Holly Building**

The Holly building was located on the south side of the campus, between the gym and Heather building. The building had been demolished prior to the UST removal. The heating oil UST was located at the rear of the former building in the driveway/parking area. The tank was exposed under approximately 20" of asphalt and earth cover. The tank was sized at 60" X 12', with a nominal capacity of 1,780 gallons. The tank had originally contained PS 300 (black oil) for the building's heating system. At some unknown time in the past, the heating system was converted to diesel fuel. A large hole was noted on the removed tank bottom. The soil in the tank pit area of the Holly building was consistent with the soil encountered in both the gym and Heather building tank pit areas. Visual and olfactory indications of possible PCS were noted in the tank pit bottom soil. Because of the possible PCS encountered, only one confirmation soil sample was obtained from the tank pit. The laboratory analytical result of the obtained sample confirmed that petroleum-contaminated soil above the MTCA Method A cleanup level was present in the Holly building tank pit area.

During the course of the UST removal, another heating oil tank fill pipe was observed approximately 20' west of the large UST, in a garden area adjacent to the sidewalk. This tank was measured and was determined to be sized at 20" X 30", with a nominal capacity of 41 gallons.

It is assumed that this tank had been used as a diesel fuel starter tank when the larger UST contained the PS 300 fuel. The tank was exposed under 20" of earth cover. No pin holes and/or steel or weld failures were noted on the removed tank. The soil in this tank pit area was consistent with the soil encountered in the other tank pit areas of the site. No visual or olfactory indications of PCS were noted in the tank pit area. One soil sample was obtained from the tank pit bottom at approximately 4.5' - 5'. The laboratory analytical result of the obtained sample was at the non-detect level.

### **RECOMMENDATIONS FOR FURTHER ACTION**

Soil sampling was conducted in accordance with Washington State Department of Ecology guidelines. The samples were collected utilizing the backhoe and/or hand tool method, utilizing clean hand tools and sampling containers provided by the laboratory. VOC sampling was accomplished utilizing the EPA 5035A method. The samples were stored in an iced cooler on the site and during transport to the lab. The samples were transported to Libby Environmental, Inc., 4139 Libby Road NE, Olympia, WA for analysis. The samples were tested utilizing the NWTPH-Dx/Dx Extended method. Additional cPAH and benzene sampling was completed on the Holly building sample because of the PS 300 (black oil) encountered. These analytical procedures test for the presence of diesel and heavy oil petroleum hydrocarbons, benzene, and carcinogenic polynuclear aromatic hydrocarbons.

Based on the soil sample analytical results, field screenings, and visual observations during this tank removal project, it is the conclusion of this consultant that petroleum-contaminated soil, above the MTCA Method A cleanup level for unrestricted land use, is present in the former tank pit area of the Holly building site. All final confirmation soil sample analytical results for the remaining three tanks were below the MTCA Method A cleanup level for unrestricted land use (the remaining samples were at the non-detect level). This site will be listed in the Department of Ecology database as a 'leaking tank' site until such time as remediation is completed.

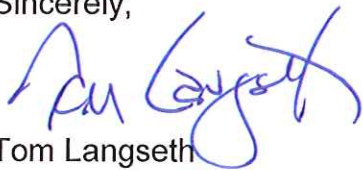
Enclosed are site and sampling location maps, laboratory analytical data, the chain-of-custody forms, and the tanks' cleaning and disposal manifests. Pertinent permits and photographs taken throughout the project are located at the end of the report.

This report has been prepared for the exclusive use of NAVOS and their agents, in accordance with generally accepted professional practices for the nature and condition of the work completed in the same or similar localities, at the time the work was performed. The findings contained herein are relevant to the dates of the Langseth Environmental Services, Inc. UST removal project and should not be relied upon to represent conditions at later dates.

Site Characterization Report  
NAVOS – Lake Burien Campus  
March 3, 2014  
Report # 012714  
Page 5

No additional warranty is expressed or implied. In the event that changes in the nature, usage or layout of the property or nearby properties are made, the conclusions and recommendations contained in this report may not be valid. If additional information becomes available, it should be provided to Langseth Environmental Services, Inc. so that the original conclusions and recommendations can be modified as necessary.

Sincerely,



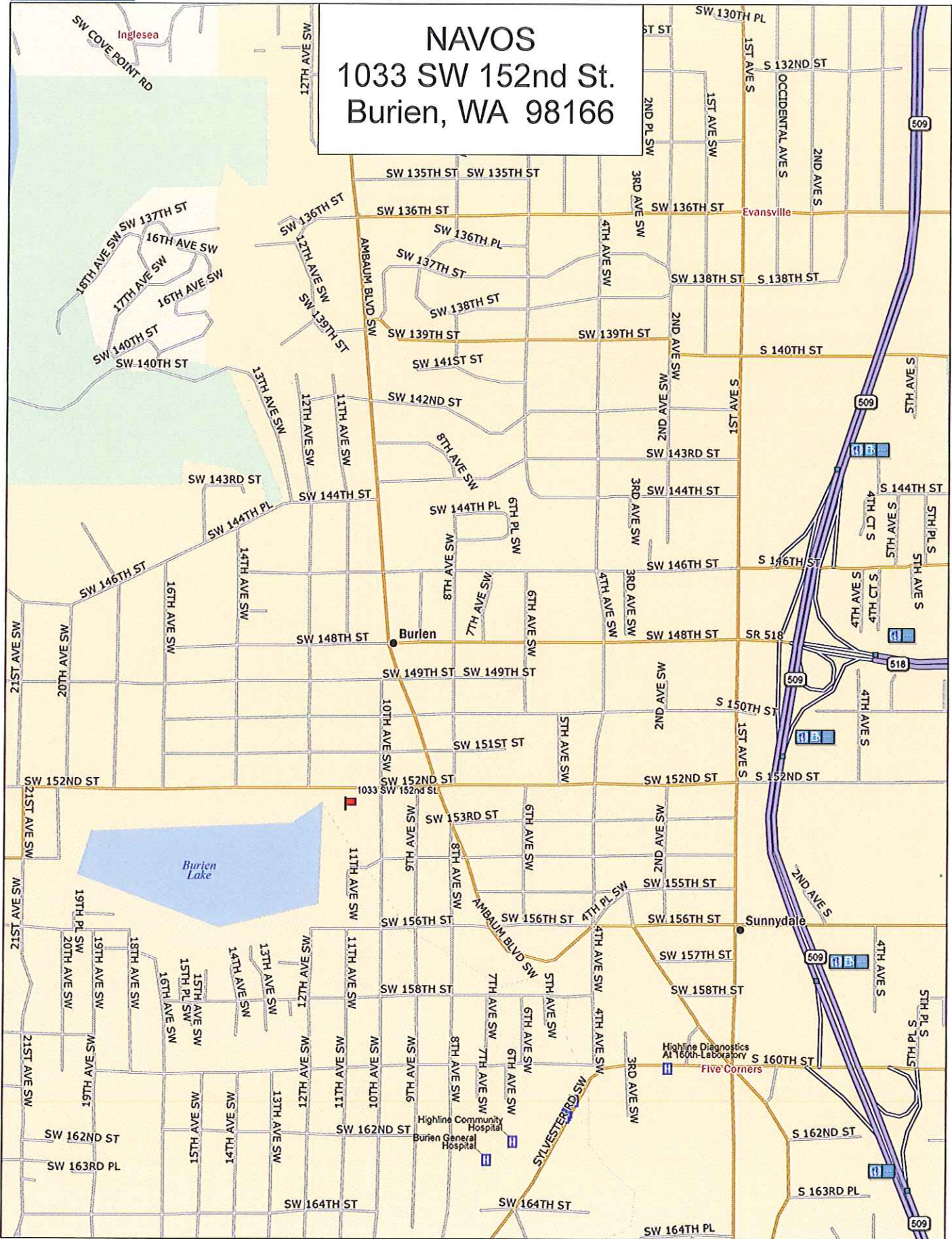
Tom Langseth  
Registered Site Assessor  
Licensed Decommissioning Supervisor  
Langseth Environmental Services, Inc.

Cc: Lyle Harris, NW EcoDesign, LLC

**SITE & SAMPLING**

**LOCATION MAPS**

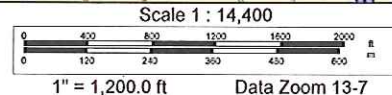
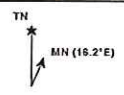
**NAVOS**  
 1033 SW 152nd St.  
 Burien, WA 98166



Data use subject to license.

© DeLorme, DeLorme Street Atlas USA® 2010.

www.delorme.com





Google earth



**King County Department of Assessments**  
Fair, Equitable, and Understandable Property Valuations

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Department of Assessments  
500 Fourth Avenue,  
Suite ADM-AS-0703,  
Seattle, WA 98104

Office Hours:  
Mon - Fri  
8:30 a.m. to 4:30 p.m.

TEL: 206-296-7300  
FAX: 206-296-5107  
TTY: 206-296-7883

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PARCEL DATA			
Parcel	192304-9054	Jurisdiction	BURIEN
Name	NAVOS	Levy Code	0937
Site Address		Property Type	C
Geo Area	50-25	Plat Block / Building Number	
Spec Area	0-0	Plat Lot / Unit Number	
Property Name	Ruth Dykeman Center	Quarter-Section-Township-Range	SW-19-23-4

**Legal Description**

BEG 30 FT SLY FR NE COR OF GL 1 OF STR 19-23-04 TH S 01-16-49 E 203.69 FT TH S 51-14-12 W 407.71 FT TH S 01-16-49 E 401.31 FT TH N 51-14-12 E 407.71 FT TH N 89-22-15 E 355.88 FT TH NLY 90 FT THELY 278 FT TO J A KLEN RD SCHOENING AVE TH N 00-58-49 W ALG SD RD 520 FT TO S LN OF CO RD TH S 69-22-15 W ALG SD S LN 637.35 FT TO BEG & SHORELANDS ADJ - ESMT PSP & L CO LESS N 300 FT OF E 170 FT  
Plat Block:  
Plat Lot:

**LAND DATA**

Highest & Best Use As If Vacant	EDUCATIONAL SERVICE	Percentage Unusable	0
Highest & Best Use As Improved	PRESENT USE	Unbuildable	NO
Present Use	School(Private)	Restrictive Size Shape	YES
Base Land Value SqFt	12	Zoning	SPA-2
Base Land Value	3,914,100	Water	WATER DISTRICT
% Base Land Value Impacted	100	Sewer/Septic	PUBLIC
Base Land Valued Date	1/9/2014	Road Access	PUBLIC
Base Land Value Tax Year	2015	Parking	ADEQUATE
Land SqFt	326,175	Street Surface	PAVED
Acres	7.49		

**Views**

Rainier	
Territorial	
Olympics	
Cascades	
Seattle Skyline	
Puget Sound	
Lake Washington	
Lake Sammamish	
Lake/River/Creek	
Other View	

**Waterfront**

Waterfront Location	
Waterfront Footage	
Lot Depth Factor	
Waterfront Bank	
Tide/Shore	
Waterfront Restricted Access	
Waterfront Access Rights	NO
Poor Quality	
Proximity Influence	NO

**Designations**

Historic Site	
Current Use	
Nbr Bldg Sites	
Adjacent to Golf Fairway	NO
Adjacent to Greenbelt	NO
Other Designation	NO
Deed Restrictions	NO
Development Rights Purchased	NO
Easements	NO
Native Growth Protection Easement	NO
DNR Lease	NO

**Nuisances**

Topography	NO
Traffic Noise	
Airport Noise	
Power Lines	NO
Other Nuisances	NO

**Problems**

Water Problems	NO
Transportation Concurrency	NO
Other Problems	NO

**Environmental**

Environmental	NO
---------------	----

**BUILDING**

Building Number	1
Building Description	Administration-Classroom Bldg
Number Of Buildings Aggregated	1
Predominant Use	ELEMENTARY SCHOOL (ENTIRE) (365)
Shape	Rect or Slight Irreg
Construction Class	WOOD FRAME

Click the camera to see more pictures.



**Reference Links:**

- [King County Tax Links](#)
- [Property Tax Advisor](#)
- [Washington State Department of Revenue \(External Link\)](#)
- [Washington State Board of Tax Appeals \(External Link\)](#)
- [Board of Appeals/Equalization](#)
- [Districts Report](#)
- [iMap](#)
- [Recorder's Office](#)

[Scanned images of surveys and other map documents](#)

by: **Address** Search Find Intersection Zoom to Advanced tools Basemaps

Print ?

Search results

**Selected parcel(s)**

New selection  Add to selection

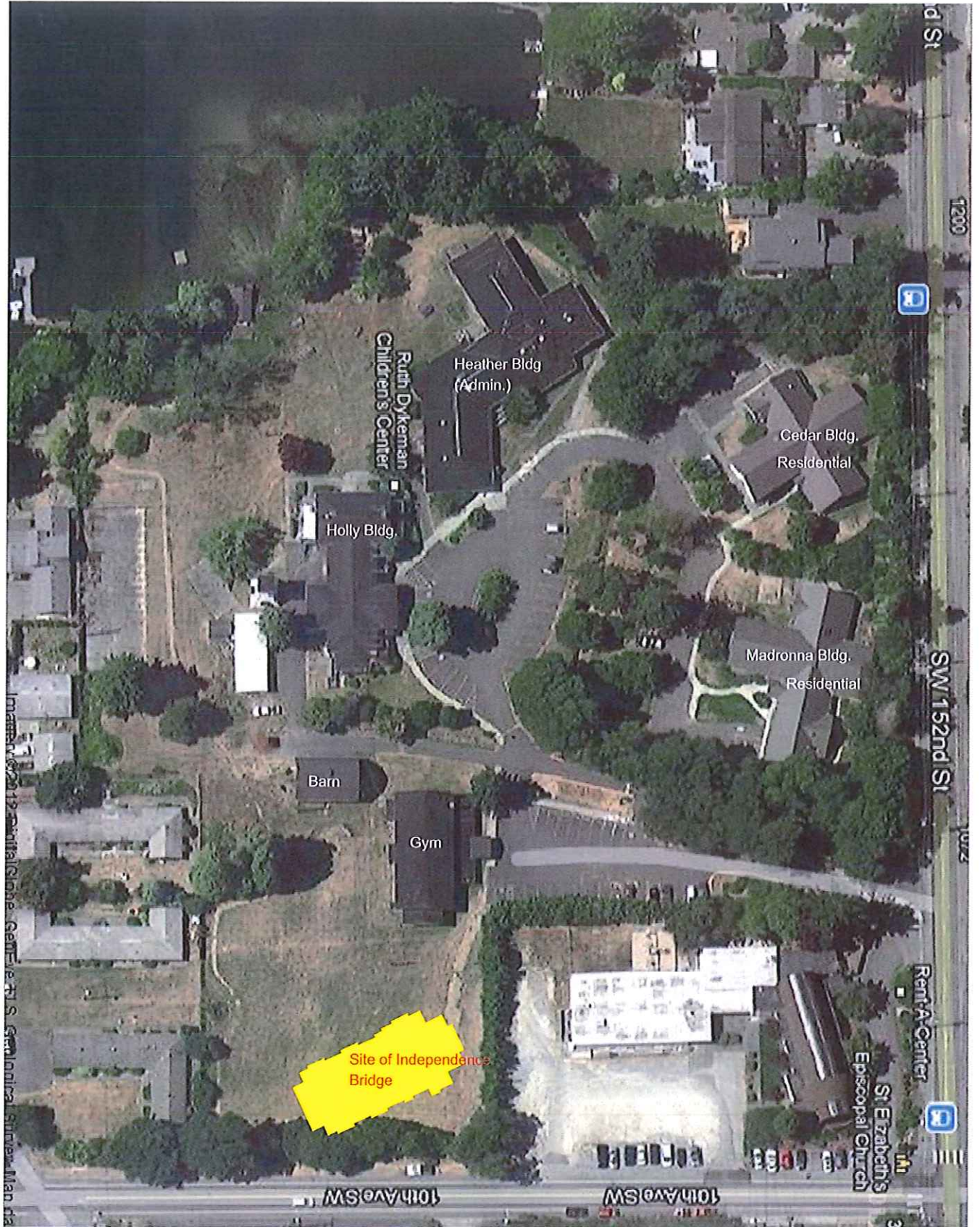
Selected parcels: 1

Parcel number	Address
<input checked="" type="checkbox"/> 1923049054	N/A

Map layers

**Parcel 1923049054**

Present use: School(Private)  
Property name: Ruth Dykeman Cer  
Jurisdiction: BURIEN  
Taxpayer name: NAVOS  
Address: N/A  
Appraised value: \$5,139,300  
Lot area: 326,175  
Levy code: 0937



Site of Independence Bridge

Ruth Dykeman Children's Center

Heather Bldg (Admin.)

Cedar Bldg. Residential

Holly Bldg.

Madronna Bldg. Residential

Barn

Gym

SW 152nd St

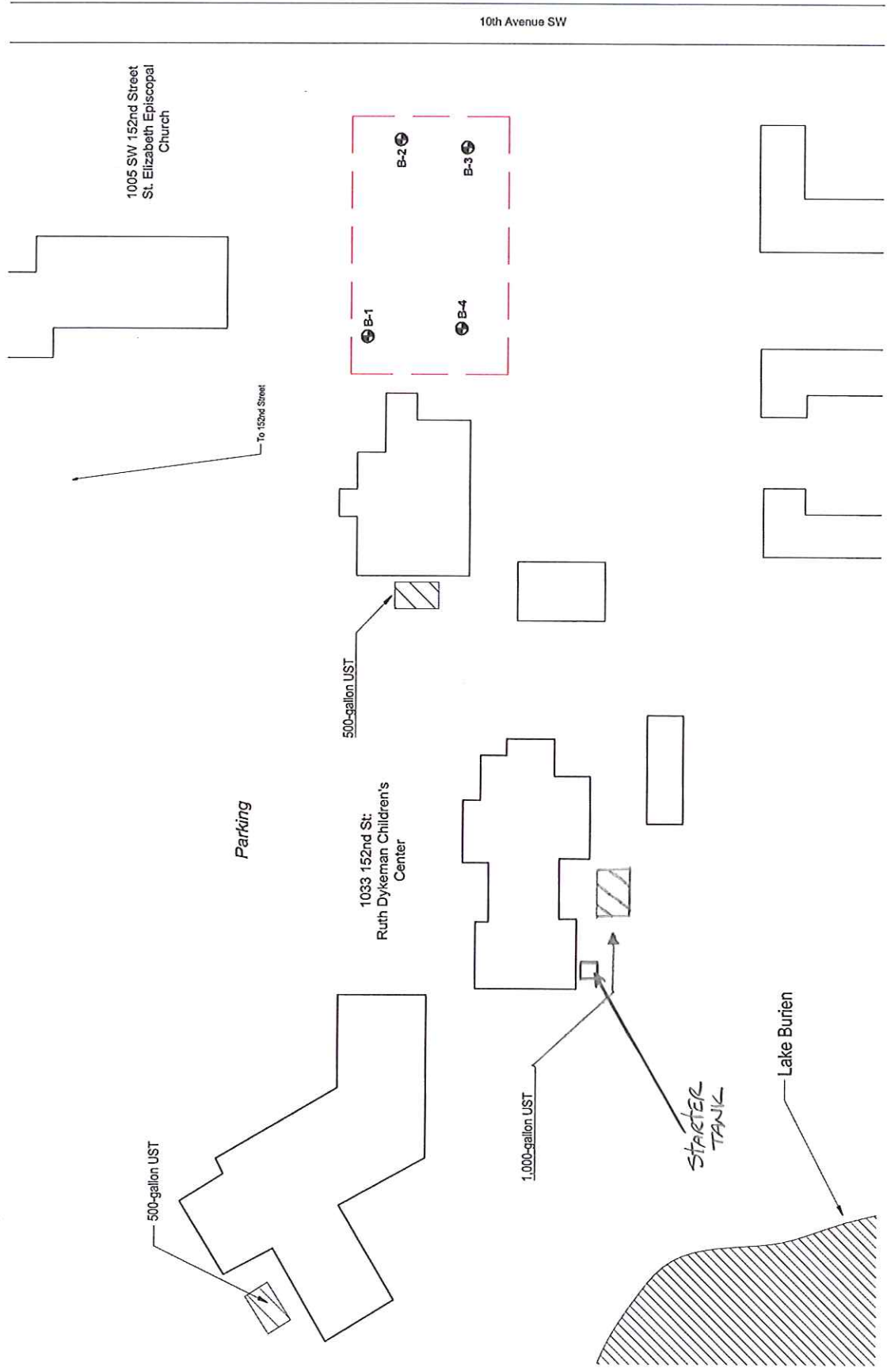
Rent-A-Center

St. Elizabeth's Episcopal Church

10th Ave SW

1200





**LEGEND:**



**B-1 BORING NUMBER AND APPROXIMATE LOCATION**

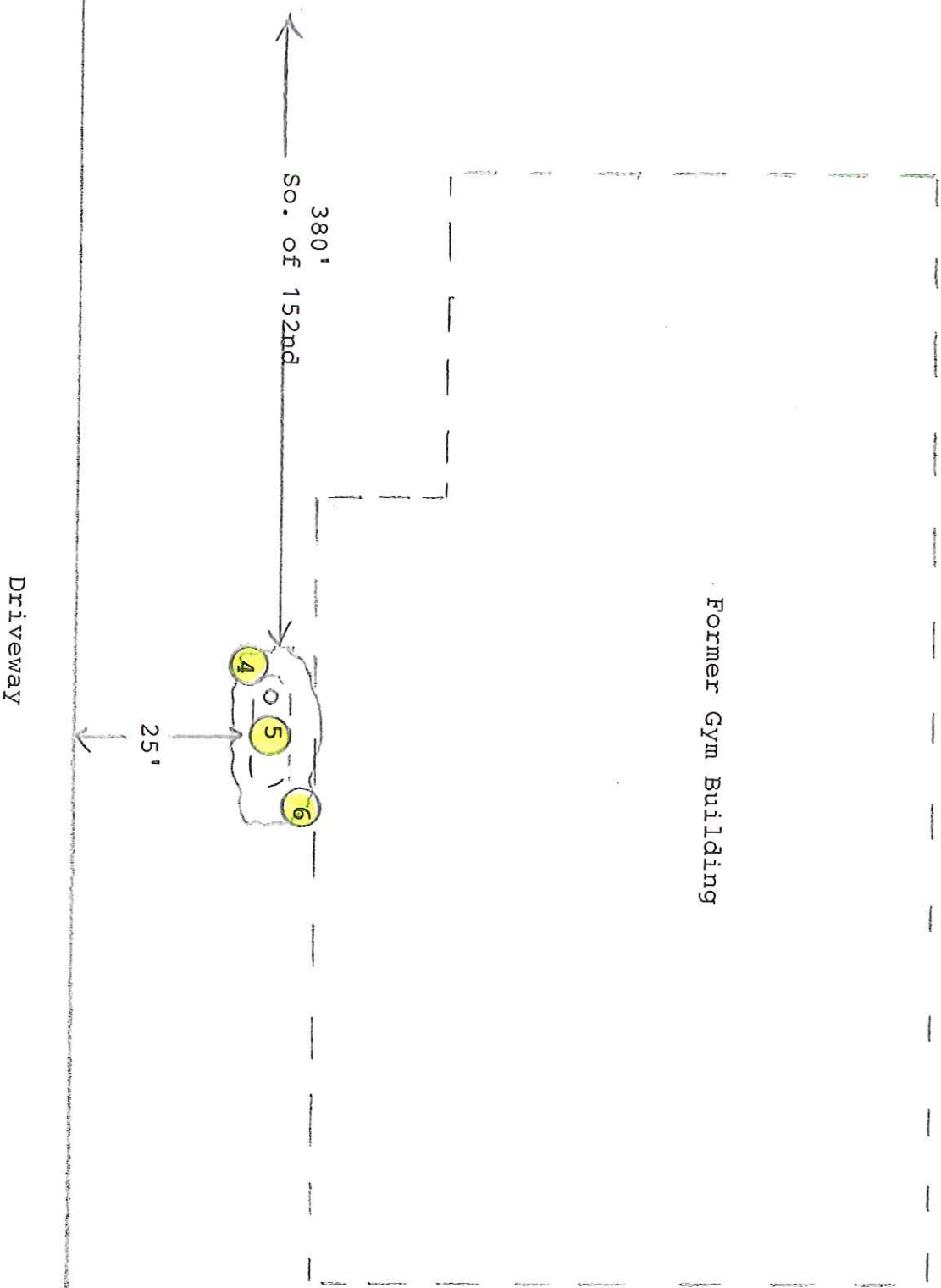
Project Mgr:	CDK
Drawn By:	EMP
Checked By:	CDK
Approved By:	MYW
Project No.	81127047
Scale:	Not to scale
File No.	
Date:	August 2012

**Terracon**  
 Consulting Engineers and Scientists  
 2195 64th Avenue W., Ste 100 Mountlake Terrace, WA 98043  
 PH: (425) 771-3304 FAX: (425) 771-3549

**SITE**  
 1033 152nd Street LSI  
 Burien, King County, Washington  
 E3RA

SITE & SAMPLING LOCATION MAP

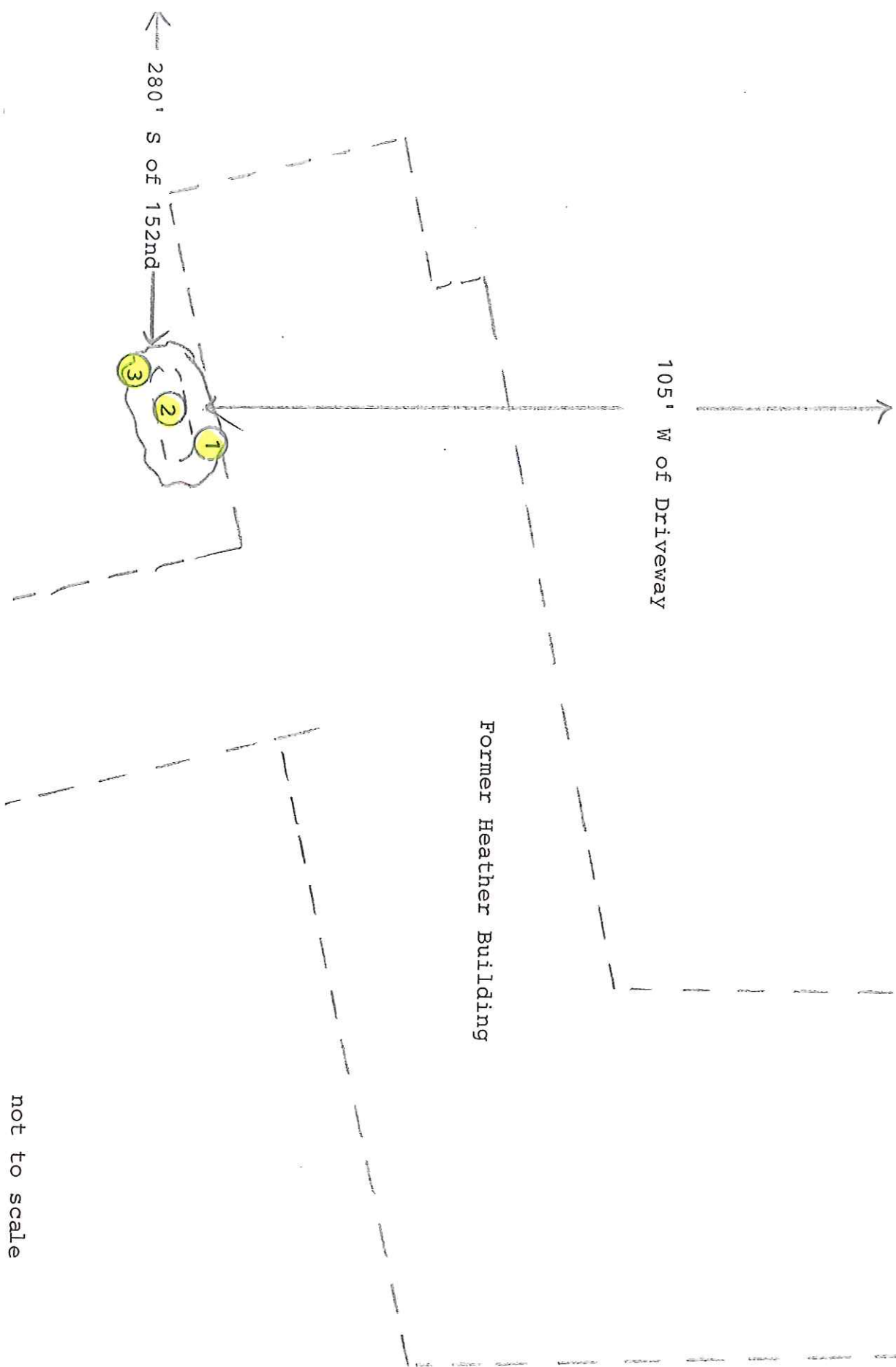
NAVOS  
Lake Burien Campus



not to scale

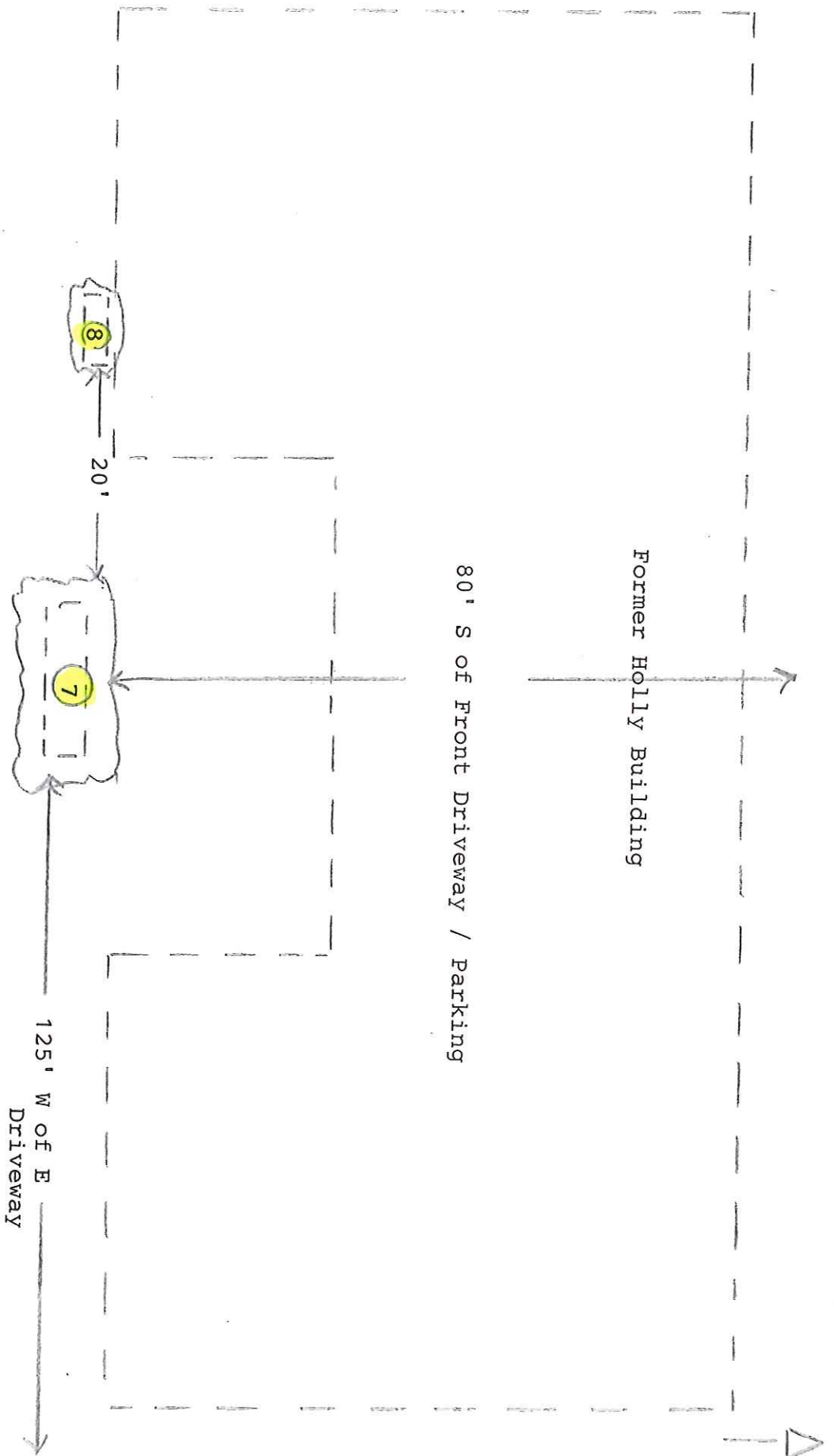


SITE & SAMPLING LOCATION MAP  
NAVOS  
Burien Lake Campus



not to scale

SITE & SAMPLING LOCATION MAP  
NAVOS  
Burien Lake Campus



not to scale

## SOIL SAMPLE RESULTS TABLE

### NAVOS

1033 SW 152nd St.  
Burien, WA 98166

Sample #	Location	Diesel	Heavy Oil	Sample Date
1	NE wall - Heather @ 6.5'-7'	nd	nd	2/13/2014
2	Pit bottom - Heather @ 7.5'-8'	nd	nd	"
3	SW wall - Heather @ 6.5'-7'	nd	nd	"
4	NW wall - Gym @ 6'	nd	nd	"
5	Pit bottom - Gym @ 6.5'	nd	nd	"
6	SE wall - Gym @ 6'	nd	nd	"
7	Suspect PCS - Holly	<b>7,470</b>	nd	"
8	Starter UST bottom @ 4.5'-5'	nd	nd	2/14/2014
PQL		25	40	
<i>MTCA CLEANUP LEVEL</i>		2000	2000	
Sample #	Location	Benzene	cPAH	
7	Suspect PCS	nd	0.013	
PQL		0.02	0.02	
<i>MTCA CLEANUP LEVEL</i>		0.03	0.1	

Diesel and Heavy Oil by NWTPH-Dx/Dx Ext, Benzene by EPA 8021B  
cPah's by EPA 8270  
Results reported in mg/Kg = ppm (parts per million)  
"nd" = indicates not detected at the listed detection limit  
**BOLD** indicates above the MTCA cleanup level

**SOIL SAMPLE**  
**ANALYTICAL DATA**

# Libby Environmental, Inc.

# Chain of Custody Record

4139 Libby Road NE  
 Olympia, WA 98506  
 Ph: 360-352-2110  
 Fax: 360-352-4154

Date: 2-14-14 Page: 1 of 1

Client: Libby Environmental

Project Manager: Tom Langseth

Address: 7517 Portland Ave.

Project Name: NAVOS

City: Tacoma State: WA Zip: 98404

Location: Bullion City, State: WA

Phone: 360-536-6961 Fax:

Collector: Tom Langseth Date of Collection: 2-13-14

Client Project #

Email: tomlangseth@libby.com



Sample Number	Depth	Time	Sample Type	Container Type	VOA 8021B	VOA 8021B BTEX Only	VOA 8260	SEMI VOL 8270	NWTPH-HCID	NWTPH-GX	NWTPH-DX	NWTPH-DX Ext	PAH 8270	CPH H 8270	PCB's 8082	MTCA 5 Metals	Field Notes
1	7'	11:35a	soil	glass													
2	6.5'	11:45a															
3	6'	11:51a															
4	6.5'	11:58a															
5	6.5'	11:59a															
6	8.5'-9'	11:28a															
7	6'	11:40a															
8																	
9																	
10																	
11																	
12																	
13																	
14																	
15																	
16																	
17																	

Relinquished by: \_\_\_\_\_ Date / Time: \_\_\_\_\_ Received by: \_\_\_\_\_ Date / Time: \_\_\_\_\_

Relinquished by: \_\_\_\_\_ Date / Time: \_\_\_\_\_ Received by: \_\_\_\_\_ Date / Time: \_\_\_\_\_

Relinquished by: \_\_\_\_\_ Date / Time: \_\_\_\_\_ Received by: \_\_\_\_\_ Date / Time: \_\_\_\_\_

Sample Receipt: \_\_\_\_\_

Remarks: \_\_\_\_\_

TAT: 24HR 48HR 5-DAY

LEGAL ACTION CLAUSE: In the event of default of payment and/or failure to pay, Client agrees to pay the costs of collection including court costs and reasonable attorney fees to be determined by a court of law.



# Libby Environmental, Inc.

4139 Libby Road NE • Olympia, WA 98506-2518

February 25, 2014

Tom Langseth  
Langseth Environmental Services, Inc.  
7517 Portland Avenue  
Tacoma, WA 98404

Dear Mr. Langseth:

Please find enclosed the analytical data report for the NAVOS Project located in Burien, Washington. Soil samples were analyzed for Benzene by EPA Method 8021B, Diesel & Oil by NWTPH-Dx/Dx Extended and Polyaromatic Hydrocarbons (PAH) by EPA Method 8270 SIM on February 17 & 18, 2014.

The results of the analyses are summarized in the attached tables. Applicable detection limits and QA/QC data are included. All soil samples are reported on a dry weight basis. An invoice for this analytical work is enclosed.

Libby Environmental, Inc. appreciates the opportunity to have provided analytical services for this project. If you have any further questions about the data report, please give me a call. It was a pleasure working with you on this project, and we are looking forward to the next opportunity to work together.

Sincerely,

Jamie L. Deyman  
*President*  
*Libby Environmental, Inc.*

Phone (360) 352-2110 • Fax (360) 352-4154 • [libbyenv@aol.com](mailto:libbyenv@aol.com)

[www.LibbyEnvironmental.com](http://www.LibbyEnvironmental.com)

# Libby Environmental, Inc.

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

NAVOS PROJECT  
Langseth Environmental Services, Inc  
Burien, Washington  
Libby Project # L140214-4

## Analyses of Diesel & Oil (NWTPH-Dx/Dx Extended) in Soil

Sample Number	Date Analyzed	Surrogate Recovery (%)	Diesel (mg/kg)	Oil (mg/kg)
Method Blank	2/17/14	92	nd	nd
3 SW Well-Admin	2/17/14	94	nd	nd
5 Pit Bottom-Gym	2/17/14	86	nd	nd
6 SE Wall-Gym	2/17/14	96	nd	nd
7 Suspect PCS-Holly Bldg	2/17/14	int	7470	nd
1 NE Wall-Admin	2/17/14	102	nd	nd
2 Pit Bottom-Admin	2/17/14	110	nd	nd
4 NW Wall-Gym	2/17/14	96	nd	nd
Practical Quantitation Limit			25	40

"nd" Indicates not detected at the listed detection limits.

"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (2-F Biphenyl): 65% TO 135%

ANALYSES PERFORMED BY: Jamie Deyman

# Libby Environmental, Inc.

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

NAVOS PROJECT  
Langseth Environmental Services, Inc  
Burien, Washington  
Libby Project # L140214-4

## Analyses of Benzene by EPA Method 8021B in Soil

Sample Number	Date Analyzed	Benzene (mg/kg)	Surrogate Recovery (%)
Method Blank	2/17/14	nd	122
LCS	2/17/14	108%	111
Suspect PCS-Holly Bldg	2/17/14	nd	87
Suspect PCS-Holly Bldg Dup	2/17/14	nd	88
Suspect PCS-Holly Bldg MS	2/17/14	100%	
Practical Quantitation Limit		0.02	

"nd" Indicates not detected at the listed detection limits.

"int" Indicates that interference prevents determination.

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

ANALYSES PERFORMED BY: Jamie Deyman



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

**Libby Environmental**  
Jamie Deyman  
4139 Libby Rd. NE  
Olympia, WA 98506

**RE: Navos**  
**Lab ID: 1402129**

February 19, 2014

**Attention Jamie Deyman:**

Fremont Analytical, Inc. received 1 sample(s) on 2/17/2014 for the analyses presented in the following report.

***Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)***  
***Sample Moisture (Percent Moisture)***

This report consists of the following:

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

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

Thank you for using Fremont Analytical.

Sincerely,

Michael Dee  
Sr. Chemist / Principal



**Fremont**

Date: 02/19/2014

---

**CLIENT:** Libby Environmental  
**Project:** Navos  
**Lab Order:** 1402129

---

**Work Order Sample Summary**

<b>Lab Sample ID</b>	<b>Client Sample ID</b>	<b>Date/Time Collected</b>	<b>Date/Time Received</b>
1402129-001	#7 Suspect ACS-Holly Bldg	02/13/2014 11:58 AM	02/17/2014 8:25 AM

---

Note: If no "Time Collected" is supplied, a default of 12:00AM is assigned



## Case Narrative

WO#: 1402129

Date: 2/19/2014

---

**CLIENT:** Libby Environmental  
**Project:** Navos

---

### I. SAMPLE RECEIPT:

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

### II. GENERAL REPORTING COMMENTS:

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

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

### III. ANALYSES AND EXCEPTIONS:

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



# Analytical Report

WO#: 1402129

Date Reported: 2/19/2014

Client: Libby Environmental

Collection Date: 2/13/2014 11:58:00 AM

Project: Navos

Lab ID: 1402129-001

Matrix: Soil

Client Sample ID: #7 Suspect ACS-Holly Bldg

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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**Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)**

Batch ID: 6615

Analyst: MD

Benz(a)anthracene	132	51.0		µg/Kg-dry	1	2/18/2014 2:09:00 AM
Chrysene	ND	51.0		µg/Kg-dry	1	2/18/2014 2:09:00 AM
Benzo(b)fluoranthene	ND	51.0		µg/Kg-dry	1	2/18/2014 2:09:00 AM
Benzo(k)fluoranthene	ND	51.0		µg/Kg-dry	1	2/18/2014 2:09:00 AM
Benzo(a)pyrene	ND	51.0		µg/Kg-dry	1	2/18/2014 2:09:00 AM
Indeno(1,2,3-cd)pyrene	ND	51.0		µg/Kg-dry	1	2/18/2014 2:09:00 AM
Dibenz(a,h)anthracene	ND	51.0		µg/Kg-dry	1	2/18/2014 2:09:00 AM
Surr: 2-Fluorobiphenyl	115	50.4-142		%REC	1	2/18/2014 2:09:00 AM
Surr: Terphenyl-d14 (surr)	139	48.8-157		%REC	1	2/18/2014 2:09:00 AM

**Sample Moisture (Percent Moisture)**

Batch ID: R12556

Analyst: KZ

Percent Moisture	13.4			wt%	1	2/17/2014 2:08:08 PM
------------------	------	--	--	-----	---	----------------------

<b>Qualifiers:</b>	B	Analyte detected in the associated Method Blank	D	Dilution was required
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits



Date: 2/19/2014

**QC SUMMARY REPORT**  
**Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)**

Work Order: 1402129  
 CLIENT: Libby Environmental  
 Project: Navos

Sample ID:	MB-6615	SampType:	MBLK	Units:	µg/Kg	Prep Date:	2/17/2014	RunNo:	12570		
Client ID:	MBLKS	Batch ID:	6615			Analysis Date:	2/17/2014	SeqNo:	250940		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benz(a)anthracene	ND	50.0									
Chrysene	ND	50.0									
Benzo(b)fluoranthene	ND	50.0									
Benzo(k)fluoranthene	ND	50.0									
Benzo(a)pyrene	ND	50.0									
Indeno(1,2,3-cd)pyrene	ND	50.0									
Dibenz(a,h)anthracene	ND	50.0									
Surr: 2-Fluorobiphenyl	486		500.0		97.3	50.4	142				
Surr: Terphenyl-d14 (surr)	475		500.0		95.0	48.8	157				

Sample ID:	LCS-6615	SampType:	LCS	Units:	µg/Kg	Prep Date:	2/17/2014	RunNo:	12570		
Client ID:	LCSS	Batch ID:	6615			Analysis Date:	2/17/2014	SeqNo:	250941		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benz(a)anthracene	769	50.0	1,000	0	76.9	41.9	136				
Chrysene	984	50.0	1,000	0	98.4	51.4	135				
Benzo(b)fluoranthene	938	50.0	1,000	0	93.8	39.7	137				
Benzo(k)fluoranthene	1,090	50.0	1,000	0	109	45.7	138				
Benzo(a)pyrene	1,030	50.0	1,000	0	103	45.3	135				
Indeno(1,2,3-cd)pyrene	784	50.0	1,000	0	78.4	45.4	137				
Dibenz(a,h)anthracene	789	50.0	1,000	0	78.9	45.8	134				
Surr: 2-Fluorobiphenyl	479		500.0		95.9	50.4	142				
Surr: Terphenyl-d14 (surr)	459		500.0		91.7	48.8	157				

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- R RPD outside accepted recovery limits
- D Dilution was required
- J Analyte detected below quantitation limits
- RL Reporting Limit
- E Value above quantitation range
- ND Not detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits



Date: 2/19/2014

**QC SUMMARY REPORT**  
**Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)**

Work Order: 1402129

CLIENT: Libby Environmental

Project: Navos

Sample ID: 1402113-001ADUP	SampType: DUP	Units: µg/Kg-dry	Prep Date: 2/17/2014	RunNo: 12570
Client ID: BATCH	Batch ID: 6615	%REC	Analysis Date: 2/17/2014	SeqNo: 250943

Analyte	Result	RL	SPK value	SPK RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Benz(a)anthracene	97.7	51.7						70.55	32.3	30	R
Chrysene	161	51.7						98.40	48.0	30	R
Benzo(b)fluoranthene	329	51.7						143.6	78.5	30	R
Benzo(k)fluoranthene	318	51.7						137.6	79.0	30	R
Benzo(a)pyrene	309	51.7						120.5	87.7	30	R
Indeno(1,2,3-cd)pyrene	156	51.7						92.61	51.2	30	R
Dibenz(a,h)anthracene	152	51.7						98.17	42.9	30	R
Surr: 2-Fluorobiphenyl	478		517.0		92.4	50.4	142		0		
Surr: Terphenyl-d14 (surr)	474		517.0		91.6	48.8	157		0		

**NOTES:**

R - High RPD due to suspected sample inhomogeneity and/or sample matrix. The method is in control as indicated by the Laboratory Control Sample (LCS).

Sample ID: 1402113-002AMS	SampType: MS	Units: µg/Kg-dry	Prep Date: 2/17/2014	RunNo: 12570
Client ID: BATCH	Batch ID: 6615	%REC	Analysis Date: 2/17/2014	SeqNo: 250945

Analyte	Result	RL	SPK value	SPK RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Benz(a)anthracene	871	50.3	1,005	8,294	95.8	57.5	169				
Chrysene	878	50.3	1,005	22,09	85.2	45.2	146				
Benzo(b)fluoranthene	893	50.3	1,005	11,50	87.7	42.2	168				
Benzo(k)fluoranthene	1,120	50.3	1,005	13,20	110	48	161				
Benzo(a)pyrene	1,080	50.3	1,005	9,560	106	34.4	179				
Indeno(1,2,3-cd)pyrene	924	50.3	1,005	54,92	86.4	41.1	165				
Dibenz(a,h)anthracene	971	50.3	1,005	0	96.6	38.1	166				
Surr: 2-Fluorobiphenyl	476		502.6		94.8	50.4	142				
Surr: Terphenyl-d14 (surr)	480		502.6		95.5	48.8	157				

**Qualifiers:** B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
R RPD outside accepted recovery limits

D Dilution was required  
J Analyte detected below quantitation limits  
RL Reporting Limit

E Value above quantitation range  
ND Not detected at the Reporting Limit  
S Spike recovery outside accepted recovery limits



Client Name: <b>LIBBY</b>	Work Order Number: <b>1402129</b>
Logged by: <b>Clare Griggs</b>	Date Received: <b>2/17/2014 8:25:00 AM</b>

### Chain of Custody

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

### Log In

3. Coolers are present? Yes  No  NA
4. Shipping container/cooler in good condition? Yes  No
5. Custody seals intact on shipping container/cooler? Yes  No  Not Required
6. Was an attempt made to cool the samples? Yes  No  NA
7. Were all coolers received at a temperature of >0°C to 10.0°C? Yes  No  NA
8. Sample(s) in proper container(s)? Yes  No
9. Sufficient sample volume for indicated test(s)? Yes  No
10. Are samples properly preserved? Yes  No
11. Was preservative added to bottles? Yes  No  NA
12. Is the headspace in the VOA vials? Yes  No  NA
13. Did all samples containers arrive in good condition(unbroken)? Yes  No
14. Does paperwork match bottle labels? Yes  No
15. Are matrices correctly identified on Chain of Custody? Yes  No
16. Is it clear what analyses were requested? Yes  No
17. Were all holding times able to be met? Yes  No

### Special Handling (if applicable)

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

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

19. Additional remarks:

### Item Information

Item #	Temp °C	Condition
Cooler	2.9	Good
Sample	5.9	Good

# Libby Environmental, Inc.

4139 Libby Road NE  
 Olympia, WA 98505  
 Phone: 360-362-2110  
 Fax: 360-362-4154

# Chain of Custody Record

1402429

www.LibbyEnvironmental.com

Client: Libby Environmental, Inc.  
 Address: (see above)  
 City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Date: 2-15-14 Page: 1 of 1  
 Project Manager: Jamie Dezman  
 Project Name: WAVOS

Project: \_\_\_\_\_ Fax: \_\_\_\_\_  
 Client Project #: \_\_\_\_\_

Location: \_\_\_\_\_ City: Burien WA  
 Collector: \_\_\_\_\_ Date of Collection: 2-13-14  
 Email: \_\_\_\_\_



Sample Number	Depth	Time	Sample Type	Container Type	VOA 802/8 VOA 802/8 BTEX Only VOA 8-180 SEMI VOL 8270 NWTPH-INDID NWTPH-GS NWTPH-DX NWTPH-DX EKI PAH 8270 C-PAH PCB's BTEX MTEC'S MWPS	Field Notes
7	Suspens	ACS-Holly Bldg	Water	See		
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						

Requested by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_ Received by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Requested by: Eric R Date: 2/5/14 Time: 1455 Received by: Deanna Date: 2/17/14 Time: 8:25  
 Requested by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_ Received by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Sample Receipt:  
 Gassy Containers? \_\_\_\_\_  
 Other? \_\_\_\_\_  
 Remarks: Standard

Total Number of Containers: 1 TAT: 24HR 48HR 5 DAY

# Libby Environmental, Inc.

# Chain of Custody Record

4139 Libby Road NE  
Olympia, WA 98506

Ph: 360-352-2110  
Fax: 360-352-4154

Client: Langseth Environmental

Date: 2-18-14 Page: 1 of 1

Address: 9517 Portland Ave.

Project Manager: Tom Langseth

City: Tacoma State: WA Zip: 98404

Project Name: NAVOS

Phone: 360-536-6961 Fax: \_\_\_\_\_

Location: Burien City, State: WA

Client Project # \_\_\_\_\_

Collector: Tom Langseth Date of Collection: 2-14-14

Email: LangsethEnviro@gmail.com

8. Under room storage

Email: \_\_\_\_\_

Field Notes



Sample Number	Depth	Time	Sample Type	Container Type	VOA 8021B	VOA 8021B BTEX Only	VOA 8260	SEMI VOL 8270	NWTPH-HCID	NWTPH-GX	NWTPH-DX	NWTPH-DX Ext.	PAH 8270	PCB's 8082	MTCA 5 Metals	Remarks
1																
2																
3																
4																
5																
6																
7																
8																
9																
10																
11																
12																
13																
14																
15																
16																
17																
Relinquished by: <u>[Signature]</u> Date / Time: <u>2-18-14 12:15</u> Received by: <u>[Signature]</u> Date / Time: <u>2-18-14 12:16</u> Relinquished by: <u>[Signature]</u> Date / Time: <u>2-18-14</u> Received by: <u>[Signature]</u> Date / Time: <u>2-18-14 2:30 pm</u>																
Sample Receipt: _____ Good Condition? _____ Cold? _____ Seals Intact? _____ Total Number of Containers: _____																
TAT: 24HR 48HR 5-DAY																

LEGAL ACTION CLAUSE: In the event of default of payment and/or failure to pay, Client agrees to pay the costs of collection including court costs and reasonable attorney fees to be determined by a court of law.



# Libby Environmental, Inc.

4139 Libby Road NE • Olympia, WA 98506-2518

February 25, 2014

Tom Langseth  
Langseth Environmental Services, Inc.  
7517 Portland Avenue  
Tacoma, WA 98404

Dear Mr. Langseth:

Please find enclosed the analytical data report for the NAVOS Project located in Burien, Washington. A soil sample was analyzed for Diesel & Oil by NWTPH-Dx/Dx Extended on February 19, 2014.

The results of the analyses are summarized in the attached tables. Applicable detection limits and QA/QC data are included. All soil samples are reported on a dry weight basis. An invoice for this analytical work is enclosed.

Libby Environmental, Inc. appreciates the opportunity to have provided analytical services for this project. If you have any further questions about the data report, please give me a call. It was a pleasure working with you on this project, and we are looking forward to the next opportunity to work together.

Sincerely,

Jamie L. Deyman  
*President*  
*Libby Environmental, Inc.*

Phone (360) 352-2110 • Fax (360) 352-4154 • [libbyenv@aol.com](mailto:libbyenv@aol.com)

[www.LibbyEnvironmental.com](http://www.LibbyEnvironmental.com)

# Libby Environmental, Inc.

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

NAVOS PROJECT  
Langseth Environmental Services  
Burien, Washington  
Libby Project # L140218-7

## Analyses of Diesel & Oil (NWTPH-Dx/Dx Extended) in Soil

Sample Number	Date Analyzed	Surrogate Recovery (%)	Diesel (mg/kg)	Oil (mg/kg)
Method Blank	2/19/14	95	nd	nd
8 Under Rem. Starter Tank-Holly Bldg	2/19/14	105	nd	nd
8 Under Rem. Starter Tank-Holly Bldg Dup	2/19/14	105	nd	nd
Practical Quantitation Limit			25	40

"nd" Indicates not detected at the listed detection limits.

"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (2-F Biphenyl): 65% TO 135%

ANALYSES PERFORMED BY: Kyle Williams

# **ANCILLARY DOCUMENTATION**

## **PERMIT'S**

### **UST CLEANING & DISPOSAL MANIFESTS**



King County Fire District #2  
 15100 8<sup>th</sup> Avenue SW  
 Burien, WA 98166  
 Phone 206 242-2040 / Fax 206 433-6042  
[www.burienfire.org](http://www.burienfire.org)

**RESIDENTIAL  
 UNDERGROUND STORAGE  
 TANK CLOSURE PERMIT**

**TO BE COMPLETED BY APPLICANT**

Property Owner Name: MAVOS Application Date: 1-15-14  
 Site Address: 1033 SW 152 Requested Date of Closure, Call Inspector @  
 City: Burien Zip code: 98166 206 242-2040 ext. 106 for date confirmation.  
 Contractor Name: Langseth Environmental Services, Inc. 253-536-6961 LANGSESO77DU (48 hour notification advised)  
 Contractor Phone # \_\_\_\_\_ Contractor Registration # \_\_\_\_\_

**REMOVAL**

**ABANDONMENT IN-PLACE**

- |   |   |
|---|---|
| <input checked="" type="checkbox"/> \$50.00 Permit Fee <u>PAID</u>  | <input type="checkbox"/> \$50.00 Permit Fee <u>PAID</u>   |
| <input checked="" type="checkbox"/> Tank liquids removed.   | <input type="checkbox"/> Tank liquids removed and tank cleaned.   |
| <input checked="" type="checkbox"/> Piping drained and removed.   | <input type="checkbox"/> Piping drained and removed.  |
| <input checked="" type="checkbox"/> Clean and inert tank.   | <input type="checkbox"/> Fill tank with: <u>slurry</u> * <input type="checkbox"/> or <u>foam</u> <input type="checkbox"/>   |
| <input checked="" type="checkbox"/> Tank will be properly disposed of.  | <input type="checkbox"/> Fill line permanently capped, below grade.   |
| <input checked="" type="checkbox"/> Documentation received by Fire Department.<br>(site diagram, clean and inert certificate) | <input type="checkbox"/> Documentation received by Fire Department.<br>(site diagram, pump and rinse certificate and<br>* slurry mix certification if applicable - see below) |

*Slurry Mix Certification*  
 \* I certify that the tank slurry mix complies with the following "Slurry mix proportions".

Certification Name/Signature \_\_\_\_\_

Date \_\_\_\_\_

**Slurry mix proportions:** 1 yard sand, 1.5 sacks Portland cement, 47 gallons water, and 24 oz. air entraining agent  
 (Master Builders, Darex), 18 oz. wetting agent (Wr. Grace Co., Pozzoilth 300-N, Master Builders).

**PAID**

<b>OFFICE USE ONLY:</b>	Check # <u>19871</u>	Receipt # <u>9845</u> - \$150
-------------------------	----------------------	-------------------------------

Notified D.O.E. of Contamination 425 649-7229

Signature of Inspector: [Signature] Date: 2/13/14

**PAID**

**King County Fire District #2**  
15100 8th Ave. S.W. • Seattle, WA 98166  
(206) 242-2040

<b>RECEIPT</b>		Date <u>2/13</u> 20 <u>14</u>	No 9876
Received from <u>Navos</u>			
Address _____			
_____		Amount \$ <u>50</u> <sup>00</sup>	
For <u>tank permit @ 1033 SW 153rd</u>			
<b>HOW PAID</b>		BY <u>Colleen Nash</u>	
CASH <input checked="" type="checkbox"/>	<input type="checkbox"/>		
CHECK <input type="checkbox"/>	<input type="checkbox"/>		
MONEY ORDER <input type="checkbox"/>	<input type="checkbox"/>		



## **PUMP AND RINSE CERTIFICATION**

DATE: 2-14-14

JOB # 12714

TO WHOM IT MAY CONCERN:

This letter is to certify that the following tank(s), sized at  
20" X 30" = 41 gallons (Diesel Heating Fuel & H<sup>2</sup>O)

Has been pumped and rinsed for removal.

Work was performed at:

1033 SW 152<sup>nd</sup> St., Burien, WA 98166

For:

NAVOS Lake Burien Campus

Please note that this letter does not certify that the above tank(s) have  
been cleaned for disposal or that it (they) should be considered gas-free.

Sincerely,

A handwritten signature in blue ink, appearing to read "A. G. [unclear]", is written over the word "Sincerely,".

Langseth Environmental Services, Inc.

253-536-6961



## **PUMP AND RINSE CERTIFICATION**

DATE: 2-14-14

JOB # 12714

TO WHOM IT MAY CONCERN:

This letter is to certify that the following tank(s), sized at  
60" X 144" = 1780 gallons (Diesel / PS300 Heating Fuel)

Has been pumped and rinsed for removal.

Work was performed at:

1033 SW 152<sup>nd</sup> St., Burien, WA 98166

For:

NAVOS Lake Burien Campus

Please note that this letter does not certify that the above tank(s) have  
been cleaned for disposal or that it (they) should be considered gas-free.

Sincerely,

A handwritten signature in purple ink, appearing to read "Langseth", is written over the word "Sincerely,".

Langseth Environmental Services, Inc.

253-536-6961



## **PUMP AND RINSE CERTIFICATION**

DATE: 2-14-14

JOB # 12714

TO WHOM IT MAY CONCERN:

This letter is to certify that the following tank(s), sized at  
64" X 72" = 1000 gallons (Diesel Heating Fuel)

Has been pumped and rinsed for removal.

Work was performed at:

1033 SW 152<sup>nd</sup> St., Burien, WA 98166

For:

NAVOS Lake Burien Campus

Please note that this letter does not certify that the above tank(s) have  
been cleaned for disposal or that it (they) should be considered gas-free.

Sincerely,

A handwritten signature in blue ink, appearing to read "A. G. Langseth", is written over the word "Sincerely,".

Langseth Environmental Services, Inc.

253-536-6961



## **PUMP AND RINSE CERTIFICATION**

DATE: 2-14-14

JOB # 12714

TO WHOM IT MAY CONCERN:

This letter is to certify that the following tank(s), sized at  
44.5" X 73" = 500 gallons (Diesel Heating Fuel)

Has been pumped and rinsed for removal.

Work was performed at:

1033 SW 152<sup>nd</sup> St., Burien, WA 98166

For:

NAVOS Lake Burien Campus

Please note that this letter does not certify that the above tank(s) have  
been cleaned for disposal or that it (they) should be considered gas-free.

Sincerely,

A handwritten signature in purple ink, appearing to read "Ken [unclear]", is written over the word "Sincerely,".

Langseth Environmental Services, Inc.

253-536-6961



## TANK CLEANING CERTIFICATE

To: NW EcoDesign, LLC  
C/o Lyle Harris  
10017 SW 174<sup>th</sup>  
Vashon, WA 98070

Date Cleaned: February 27, 2014

This document serves as certification that Langseth Environmental Services, Inc. has properly cleaned, in accordance with all Federal, State and Local codes and regulation, the following tank(s). (Tank Cleaning by Northern Environmental)

Property Owner Name: NAVOS – Lake Burien Campus

Location of Tank(s): 1033 SW 152<sup>nd</sup> ST.  
Burien, WA 98166

Description of Tank(s): Underground Heating Oil Tank  
64" X 72" - 1000 gallons

Work Was Performed At: LES Facility  
Tacoma, WA 98404

Last Known Product(s): Diesel Heating Fuel

Disposal Location: Schnitzer Steel .. Tacoma, WA

Signed:

A handwritten signature in blue ink, appearing to read "Lyle Harris", is written over the "Signed:" label.

Date: 2-27-2014

Title: Decommissioning Supervisor (ICC 0910875-U2)



## TANK CLEANING CERTIFICATE

To: NW EcoDesign, LLC  
C/o Lyle Harris  
10017 SW 174<sup>th</sup>  
Vashon, WA 98070

Date Cleaned: February 27, 2014

This document serves as certification that Langseth Environmental Services, Inc. has properly cleaned, in accordance with all Federal, State and Local codes and regulation, the following tank(s). (Tank Cleaning by Northern Environmental)

Property Owner Name: NAVOS – Lake Burien Campus

Location of Tank(s): 1033 SW 152<sup>nd</sup> ST.  
Burien, WA 98166

Description of Tank(s): Underground Heating Oil Tank  
44.5" X 73" - 500 gallons

Work Was Performed At: LES Facility  
Tacoma, WA 98404

Last Known Product(s): Diesel Heating Fuel

Disposal Location: Schnitzer Steel .. Tacoma, WA

Signed:

A handwritten signature in blue ink, appearing to read 'Andrew Galt', is written over the 'Signed:' label.

Date: 2-27-2014

Title: Decommissioning Supervisor (ICC 0910875-U2)



## TANK CLEANING CERTIFICATE

To: NW EcoDesign, LLC  
C/o Lyle Harris  
10017 SW 174<sup>th</sup>  
Vashon, WA 98070

Date Cleaned: February 27, 2014

This document serves as certification that Langseth Environmental Services, Inc. has properly cleaned, in accordance with all Federal, State and Local codes and regulation, the following tank(s). (Tank Cleaning by Northern Environmental)

Property Owner Name: NAVOS – Lake Burien Campus  
Location of Tank(s): 1033 SW 152<sup>nd</sup> ST.  
Burien, WA 98166  
Description of Tank(s): Underground PS 300 Heating Oil Tank  
60" X 144" - 1780 gallons (40 bbl.)  
Work Was Performed At: LES Facility  
Tacoma, WA 98404  
Last Known Product(s): Diesel Heating Fuel  
Disposal Location: Schnitzer Steel .. Tacoma, WA

Signed:

A handwritten signature in blue ink, appearing to read "Lyle Harris", is written over the "Signed:" label.

Date: 2-27-2014

Title: Decommissioning Supervisor (ICC 0910875-U2)



**DISPOSAL CERTIFICATION**

February 26, 2014

To: NW EcoDesign, LLC  
C/o: Lyle Harris  
10017 SW 174th  
Vashon, WA 98070

To whom it may concern,

This letter is to certify that Langseth Environmental Services, Inc. has received the following tank for cleaning and disposal in accordance with all federal, state, and local rules / regulations.

**One (1) 41 - Gallon Underground Diesel Fuel  
Storage Tank Sized at 20" X 30"**

Date Removed: 2-14-14

Date Cleaned: 2-18-14

Date of Disposal: 2-18-14

Method of Disposal: Scrap Steel (Schnitzer Steel)

Tank Locations: NAVOS – Lake Burien Campus  
1033 SW 152<sup>nd</sup> St.  
Burien, WA 98166

If you have any questions or request for services, please feel free to contact this office at (253) 536-6961.

Sincerely,

Tom Langseth  
Licensed Decommissioning Supervisor  
Registered Site Assessor  
Langseth Environmental Services, Inc.



# Ticket # TIMGBF

## PURCHASE TICKET

Schnitzer Steel Industries, Inc.  
1902 Marine View Drive  
Tacoma, WA 98422 US  
253-572-4000

Ticket # TIMGBF  
Vehicle ID: LANGSETH

Date: 03/03/14  
Ship Date: 03/03/14

Vehicle No: TK WHT

Purchased From: LANG24  
TOM LANGSETH  
7517 PORTLAND AVE.  
SUITE A  
TACOMA, WA 98404

*NAUOS*  
*500 D / 1000 D*

itm Shpmt Material	Pounds		Adj	Pd Wt
	Gross	Tare		
1. TIMGBF SHEARABLE UNPREPARED	15380a	14100a	0	1280
Totals			0	1280

Gross Wght Date/Time 03/03/14 10:29  
Tare Wght Date/Time 03/03/14 10:41

Ticket Comment: TRK & TRL

Weighmaster Signature \_\_\_\_\_  
(LORI DUNCAN)

Customer Signature \_\_\_\_\_

(All weights are reported in Pounds unless otherwise indicated)  
(All non-Pound weights are assumed to be manual weights)  
(a=Scale 1 b=Scale 2 c=Scale 3 d=Scale 4 m=Manual Weight)

I affirm under penalty of law that the property I am selling in this transaction is not, to the best of my knowledge, stolen property and I am the lawful owner and can convey legal title to Purchaser/Payer. I warrant that this material does not contain any hazardous substances as defined by the federal and/or state law, and I agree to indemnify Purchaser/Payer if this is untrue.

**DISCLAIMER AND WAIVER OF LIABILITY**  
Disclaimer and Waiver of Liability for present and future deliveries. For mutual consideration the customer and driver acknowledge and assume the risk involved in discharging scrap metal in the yard. The customer and driver release discharge and hold harmless Schnitzer Steel Industries, Inc., its employees and its insurance carrier from any and all liability for damages both to person and property including but not limited to damage to motor vehicles while driving through the yard or loading or unloading scrap metal in the yard in connection with present and future delivery of scrap.

Customer Copy



# Ticket # TIMHMN

## PURCHASE TICKET

Schnitzer Steel Industries, Inc.  
1902 Marine View Drive  
Tacoma, WA 98422 US  
253-572-4000

Ticket # TIMHMN  
Vehicle ID: LANGSETH

Date: 03/03/14  
Ship Date: 03/03/14

Vehicle No: TK WHT

Purchased From: LANG24  
TOM LANGSETH  
7517 PORTLAND AVE.  
SUITE A  
TACOMA, WA 98404

*NAVOS  
4066L*

itm Shpmt Material	Pounds			Adj	Pd Wt
	Gross	Tare	Net		
1. TIMHMN SHEARABLE UNPREPARED	15600a	14060a	1540	0	1540
Totals			1540	0	1540

Gross Wght Date/Time 03/03/14 13:00  
Tare Wght Date/Time 03/03/14 13:08

Ticket Comment: TRK & TRL

Weighmaster Signature \_\_\_\_\_  
(LORI DUNCAN)

Customer Signature \_\_\_\_\_

(All weights are reported in Pounds unless otherwise indicated)  
(All non-Pound weights are assumed to be manual weights)  
(a=Scale 1 b=Scale 2 c=Scale 3 d=Scale 4 m=Manual Weight)

I affirm under penalty of law that the property I am selling in this transaction is not, to the best of my knowledge, stolen property and I am the lawful owner and can convey legal title to Purchaser/Payer. I warrant that this material does not contain any hazardous substances as defined by the federal and/or state law, and I agree to indemnify Purchaser/Payer if this is untrue.

**DISCLAIMER AND WAIVER OF LIABILITY**  
Disclaimer and Waiver of Liability for present and future deliveries. For mutual consideration the customer and driver acknowledge and assume the risk involved in discharging scrap metal in the yard. The customer and driver release discharge and hold harmless Schnitzer Steel Industries, Inc., its employees and its insurance carrier from any and all liability for damages both to person and property including but not limited to damage to motor vehicles while driving through the yard or loading or unloading scrap metal in the yard in connection with present and future delivery of scrap.

Customer Copy

# PHOTOGRAPHS



Gym tank top exposed under 30" of earth cover.



Removed 500 gallon gym site tank. No visual or olfactory indications of PCS noted.



Gym UST tank pit bottom. Soil sample analytical results were at the non-detect level.



Heather building UST exposed under 12" of earth cover.



Removed Heather building tank was sized at 64" x 72" with a nominal capacity of 1,000 gallons.



Heather building tank pit following removal. No visual or olfactory indications of PCS noted.



Holly building tank top exposed under 20" of asphalt and earth cover.



The removed Holly building tank was sized at 60" x 144", with a nominal capacity of 1,780 gallons (40 bbl).



A large hole was discovered in the UST bottom. The tank had originally contained PS 300 (black oil) prior to being converted to a diesel heating fuel storage tank.



Looking west at the Holly building tank pit following removal. Obvious PCS noted.



The additional diesel fuel starter tank discovered at the Holly building was exposed under 20" of earth cover.



The removed starter tank was sized at 20" x 30", with a nominal capacity of 41 gallons.



Looking south at the starter tank pit bottom subsequent to removal. No visual or olfactory indications of PCS noted.