Underground Storage Tank Closure & Site Assessment Report

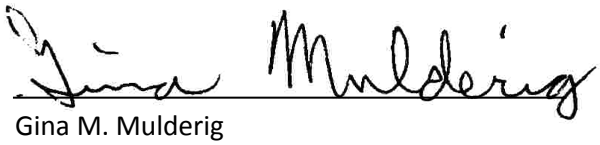
Department of Ecology Facility ID: 1794148

January 29, 2015

Site Address:
5603 North Waterfront Drive
Tacoma, WA 98407

Prepared For:
Breakwater Marina
5603 North Waterfront Drive
Tacoma, Washington 98407

Authored By:



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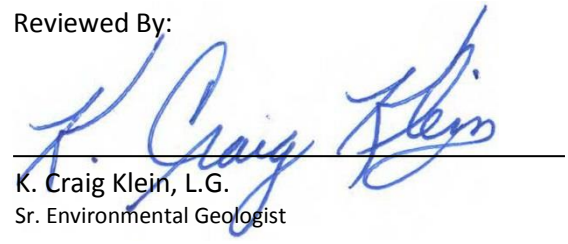

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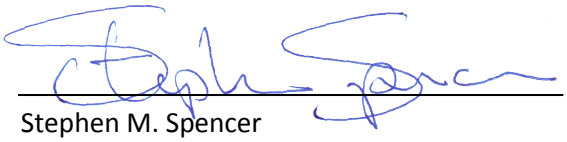

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ECI Project No.: 0483-04

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1.0 Introduction

Eco Con, Inc. (ECI) has prepared this Underground Storage Tank (UST) Decommissioning and Site Assessment Report to document activities that occurred during decommissioning and remediation activities at the Breakwater Marina site located in Tacoma, Washington. The Breakwater Marina site is addressed at 5603 North Waterfront Drive, Tacoma, Washington (Subject Site). Pursuant to the Washington State Department of Ecology (Ecology) UST regulations, decommissioning and site assessment activities were completed in accordance with the following documents published by Ecology; refer to Appendix A: Project Figures.

Relevant Publications:

- Underground Storage Tank Regulations – Chapter 173-360 WAC
- Guidance for Site Checks and Site Assessments for Underground Storage Tanks (Ecology, 2003)
- The Model Toxics Control Act Cleanup Regulation, Chapter 173-340 WAC

The project scope was to provide oversight of the UST decommissioning and provide site assessment services during the decommissioning. The scope also included the collection of soil samples to determine the presence or absence of petroleum contamination associated with the historic gas station operation on the site.

1.1 Site Location and Description

The Subject Site is identified as Pierce County Tax Parcel 8950100010, a commercial marina that formerly dispensed gasoline and diesel fuel. According to the Pierce County Assessor records, this Parcel is an irregular shaped lot that occupies 29.30 acres (1,276,308 square feet). Mr. Michael Marchetti currently operates the marina on land subleased from the Tacoma Yacht Club, who leases the land from the owner, Tacoma Metropolitan Park District.

The following table includes the associated Pierce County parcel number and associated abbreviated legal description:

Parcel Number	Abbreviated Legal Description
8950100010	Section 23 Township 21 Range 02 Quarter 11 TACOMA TIDELAND SUPL 61: THAT POR OF BLK A 1961 SUPPLEMENTAL EXCEPTING THEREFROM BEG AT MOST WLY COR SD BLK A TH ON SWLY LI ON AZIMUTH OF 307 DEG 39 MIN 10 SEC 1561.83 FT TH ON AZIMUTH OF 238 DEG 57 MIN 10 SEC 265 FT TH ON AZIMUTH OF 142 DEG 25 MIN 30 SEC 730 FT TH ON AZIMUTH OF 238 DEG 56 MIN 25 SEC 216.76 FT TH ON AZIMUTH OF 142 DEG 25 MIN 30 SEC 540.19 FT TO NWLY LI OF BLK A TH ON AZIMUTH OF 71 DEG 00 MIN 10 SEC 925 FT TO BEG ALSO EXC FOLL DESC PROP BEG AT MOST WLY COR SD BLK A TH N 71 DEG 00 MIN 10 SEC E 925.09 FT TH S 37 DEG 34 MIN 30 SEC E 540.19 FT TO POB TH SWLY LI ON AZIMUTH OF 238 DEG 56 MIN 25 SEC 216.76 FT TH S 37 DEG 34 MIN 30 SEC E 740 FT TH S 58 DEG 57 MIN 10 SEC W 265 FT TH S 52 DEG 20 MIN 50 SEC E 981 FT TO SE COR OF BLK A TH N 58 DEG 57 MIN 10 SEC E 230 FT TH N 37 DEG 34 MIN 30 SEC W TO POB SEG E 7139 DC/BL 03-16-06BL

1.2 Utility location identification

Prior to implementing site activities, ECI notified the Public Underground Utilities Alert Network with details of intrusive subsurface activities. The service contacted appropriate agencies or companies with underground utilities in the area. These agencies then marked the location of their utilities.

1.3 Contaminants of Concern (COCs)

Contaminants of concern (COCs), by association with the historical site activities have been identified as gasoline range organics (GRO), diesel range organics (DRO), select volatile organic compounds - benzene, toluene, ethylbenzene and xylenes (BTEX), and total lead. Cleanup levels have been derived from the Model Toxics Control Act's (MTCA) the Method-A (MTCA-A) Soil Cleanup Levels (CUL) for Unrestricted Land Use. In addition to the MTCA-A CUL additional COCs are provided in WAC 173-340: Table 830-1 – Required Testing for Petroleum Releases.

Contaminants of Concern & Applicable Cleanup Levels – Soil & Groundwater

Method-A Soil and Groundwater Cleanup Levels for Unrestricted Land Use Table 720-1 Method A Cleanup Levels for Ground Water Table 740-1 Method A Soil Cleanup Levels for Unrestricted Land Uses			
Primary Contaminant of Concern	Analytical Method	Cleanup Levels (CUL) Soil - mg/kg	Cleanup Levels (CUL) Groundwater - µg/l
Diesel Range Organics (DRO)	NWTPH-Dx	2,000	500
Heavy Oil Range Organics (HRO/ORO)	NWTPH-Dx Extended	2,000	500
Gasoline Range Organics (GRO)	NWTPH-Gx	100/30*	1,000/800*
Benzene (B)	EPA 8021B	0.03	5
Toluene (T)	EPA 8021B	7	1,000
Ethylbenzene (E)	EPA 8021B	6	700
Xylenes (X)	EPA 8021B	9	1,000
Total Lead	EPA 200.8	250	15

2.0 Site Conditions

The site is addressed at 5603 North Waterfront Drive, Tacoma, Washington, located adjacent to the Washington State Department of Transportation Ferry Dock (Pt. Defiance-Vashon Island Ferry Run) to the northwest and the Tacoma Yacht Club to the southeast. A steep hillside bounds the site to the southwest and the waters of Commencement Bay and Puget Sound bound the site to the northeast. The development of the site includes one building, with the remainder of the site covered with asphalt. Potable water for the site is provided by the Tacoma Public Utilities water system.

2.1 Geology and Hydrogeology

The site is located in the Puget Lowlands geologic region, an elongated topographic and structural depression filled with complex sequences of glacial and non-glacial sediments that overlie bedrock. Continental ice sheets up to 3,000 feet thick covered portions of the Puget Lowland several times during the Quaternary period. Retreating ice carved new landscapes, rechanneled rivers, drained or formed lakes, and deposited glacial drift including till and outwash (WA DNR, 2002).

The primary aquifers in the Puget Sound region are typically overlain by relatively impermeable glacial till deposits that are present at or near the ground surface. Within these till deposits are localized areas or lenses of water-bearing sands and gravels that may result in a shallow, perched water table. Lateral and vertical migration of shallow groundwater may be impeded by the relatively impermeable nature of the till and by the sometimes-discontinuous nature of the perched water-bearing sands and gravel. Perched and discontinuous zones of shallow groundwater may be seasonally or perennially present, depending on site-specific conditions. Shallow groundwater flow directions fluctuate and tend to follow topographic gradient but are also highly affected by tidal influences. Groundwater migration pathways may also follow underground conduits such as utility trenches.

The site is immediately adjacent to the nearest surface water, Commencement Bay of Puget Sound to the northeast. Groundwater has fluctuated between five and ten feet below ground surface (bgs). During excavation activities, the excavation was observed containing water at approximately five feet bgs.

3.0 UST Decommissioning & Site Assessment Activities

ECI managed the decommissioning and completed an underground storage tank (UST) site assessment during the decommissioning for the Subject Site.

A summary of the scope of work for decommissioning activities includes the following:

- Permitting with Department of Ecology and Tacoma Fire Department;
- Site preparation including utility locates, asphalt/concrete cutting/removal and site security;
- Inertion of USTs and certification for safe removal and transport;
- Removal of USTs and associated piping;
- Perform UST Site Assessment, including the collection and analysis of soil samples;
- Interim Site Restoration;
- Report Preparation

3.1 Permitting

Prior to the UST closure, Ecology was notified using the required 30-day notification (Appendix D). The UST removal and closure permit was obtained from the Tacoma-Pierce County Health Department (TPCHD) and the Tacoma Fire Department (Appendix D).

3.2 UST Decommissioning and Removal

During the week prior to UST removal (December 9 through 16, 2014), the contents of the USTs and product piping were emptied by Marine Vacuum Service (MarVac) of Seattle, Washington and the asphalt and concrete covering the USTs was removed (Project Photographs – Appendix A). The removal of the USTs commenced on December 17, 2014. Due to the limited space and safety concerns at the site, each UST was exposed and inerted[1] with carbon dioxide (CO_2) prior to the removal. ECI UST Site Assessor Gina Mulderig[2], ECI UST Decommissioner Brad Reilly[3], Marine Chemist George Blair (as required by the Tacoma Fire Marshall), Rob Olsen from the TPCHD, and representatives from the Tacoma Yacht Club and the Metropolitan Park District were onsite during the decommissioning, UST removal and Site Assessment activities.

Following inertion of the USTs and the Marine Chemist atmosphere inertion certification, each of the three 3,000 gallon USTs were excavated and removed from the UST basin, beginning on the east side of the Site (Project Photographs 4 and 5– Appendix A). Following the removal of the three 3,000 gallon USTs, the two 8,000 gallon USTs were excavated and removed.

[1] Inertion / Inerting: the process of reducing the oxygen atmosphere to a level that will not sustain combustion, typically less than 10% oxygen.

[2] International Code Council (ICC) identification: 5319877

[3] ICC identification: 8289423

During the removal of the 8,000 gallon USTs soil that appeared to be impacted by petroleum hydrocarbons, as evidenced by field observations (odor, sheen and discoloration), adhered to the USTs as they were removed. This soil was scraped from each of the USTs prior to the transport for off-site disposal. Each UST was loaded onto trailers provided by MarVac, and transported to their facility in Seattle, Washington to be triple rinsed and then disposed at a local metal recycler. The UST cleaning and disposal certificates are presented in Appendix E.

Upon removal of the two 8,000 gallon USTs, groundwater with free-phase petroleum product was observed in the excavation (Photograph 12, Appendix A). Approximately 2,800 gallons of the water/free product mixture was pumped from the excavation by MarVac, and transported off-site for recycling (Photographs 13-16, Appendix A). Groundwater returned to the excavation following dewatering activities and was observed showing only minor evidence (sheen) of the presence of petroleum hydrocarbons.

3.3 UST Inspection

Following their removal, inspections were completed on each of the five USTs for signs of deterioration or evidence of a fuel release. The USTs were constructed of single-wall steel and appeared in fair condition. The steel walls of the USTs were observed with rust and pitting. The two 8,000-gallon USTs appeared to be in slightly better condition with rust or pitting observed.

Evidence of a fuel release was observed on the both of the 8,000 gallons USTs. Soil with strong petroleum odor was observed near the product piping on both USTs. Also of note, the product piping was observed to be hand tight on several of the connection.

The USTs removed (decommissioned) included:

- One 8,000 gallon Diesel Fuel UST (single walled steel measuring 8’ x 22’)
- One 8,000 gallon Gasoline Tank (single walled steel measuring 8’ x 22’)
- Two 3,000 gallon Gasoline USTs (single walled steel measuring 6’ x 13.4’)
- One 3,000 gallon Diesel UST (single walled steel measuring 6’ x 13.4’)

4.0 Site Assessment

Soil sampling and analytical reporting for this project were based on the current Washington Administrative Code (WAC) 176-360), UST Regulations. Sampling protocol for this project was in accordance with Ecology's "Guidance for Site Check and Site Assessments for Underground Storage Tanks" (Ecology Publication, 2003).

4.1 Sampling Methodology

Sample collection was completed by a properly trained environmental professional using appropriate sampling techniques including EPA sampling method 5035. Each sample was placed into a new analyte-specific laboratory provided sample container. Excavation / pit water was sampled collected using a properly decontaminated Teflon sampling spoon from the surface of the excavation water and then transferred into one-liter containers and 40-milliliter vials. Following collection, each sample was provide a sample identification number (Example: S1-9'-010115) and placed into a climate controlled container maintained at 4° Celsius until delivered to the Labroatory. Each sample was analyzed within the appropriate sample hold time.

4.2 Sample Collection

During the UST site assessment activities, soil samples were field-screened for any visual (soil staining, discoloration and/or sheen) or olfactory (odor) evidence that might indicate a release of hydrocarbon contaminants. Several samples collected from the perimeter of the UST excavation and from soil collected off the exterior of both 8,000 gallon USTs had visual and olfactory evidence of petroleum impact.

Following the removal of each UST, twenty-six soil samples and one pit water sample were collected from the UST excavation. Sample locations are depicted on Figure 3, Appendix A.

Sidewall samples were collected at the soil/water interface at approximately six to seven feet bgs. Additionally, five samples were collected from the overburden soils. Soil stockpiling was not possible due to space constraints at the site and the overburden soil was placed back in the excavation following the removal of each UST.

ECI also collected a grab water sample from the excavation approximately two weeks after the USTs had been removed and the water/free product mixture pumped from the excavation. One grab groundwater sample was collected from the excavation following the removal of the USTs and dewatering of approximately 2,800 gallon of contaminated groundwater.

4.3 Sample Analytical Results

Based on historical Site activities, the contaminants of concern (COCs) at the Site are identified as Gasoline Range Organics (GRO); Diesel Range Organics (DRO); Heavy Oil Range Organics (HRO); Benzene, Toluene, Ethylbenzene, and Total Xylenes (BTEX); and Total Lead.

Soil samples were analyzed for the site specific COCs. Laboratory analytical results for the samples were then compared to the Unrestricted Model Toxic Control Act Method A Cleanup levels (MTCA Method A CULs).

Soil sample analytical results identified the presence GRO in fifteen (15) of the samples, DRO in three (3) of the samples, benzene in two (2) of the samples, total xylenes in three (3) of the samples, and total lead in one (1) of the samples at concentrations that exceed their applicable MTCA Method-A soil cleanup levels.

Analytical results of the groundwater sample reported the presence of DRO and lead at concentrations above laboratory method detection limits, but below the MTCA Method-A cleanup levels. None of the other analytes were identified above the method detection limits.

Analytical results are presented in Appendix B, Tables 1 and 2. The laboratory analytical reports are included in Appendix C.

4.4 Site Restoration

Following the removal of the USTs and sampling activities, the UST excavations were backfilled with the previously excavated soil and the Subject Site secured with fencing. Additional fill material was not brought to the site to return the excavation to surface grade as the identification of a release from the USTs warrants additional investigation and remediation of the site.

5.0 Summary and Recommendations

ECI completed the decommissioning and underground storage tank (UST) site assessment during the closure of five USTs at a commercial marina located at 5603 North Waterfront Drive, Tacoma, Washington. The system consisted of five USTs: one 8,000 gallon diesel (single-walled steel measuring 8' x 22'), one 8,000 gallon gasoline (single-walled steel measuring 8' x 22'), two 3,000 gallon gasoline (single-walled steel measuring 6' x 13.4') and one 3,000 gallon diesel (single-walled steel measuring 6' x 13.4').

Each UST was decommissioned by removal and transported off-site for cleaning and disposal. The Soil sampling conducted following the UST removal (site assessment) revealed the presence of diesel and gasoline-range organics, benzene, total xylenes, and total lead exceeding applicable Model Toxic Control Act (MTCA) Method A Cleanup Levels.

The MTCA guidance document (WAC 173-340-300:2) states that owners and operators are required to report the discovery of a release of hazardous substances that may pose a threat to human health or the environment and that the release must be reported within ninety calendar days of the date of discovery.

5.1 Opinion

The results of this UST Site Assessment confirm a release of gasoline and diesel from the USTs system has impacted soil at concentrations above the applicable MTCA Method A CUL. Visual observations of diesel in / on the ground water following the removal of both 8,000 gallon USTs further confirms the release.

The source of the release appears to be loose product piping and / or possibly overfilling / spilling during the filling of the 8,000 gallon USTs. Contaminated soil adhering to the surface on both 8,000 gallon USTs and heavy sheen and product on groundwater following the removal of the 8,000 gallon USTs supports this theory. Further investigation of the subject site will be necessary to delineate the vertical and horizontal extent of impacted soil and groundwater underlying the subject site.

6.0 Standard Limitations

This report has been prepared to document the activities that occurred during decommissioning and closure of a five USTs at 5603 North Waterfront Drive in Tacoma, Washington. The findings and conclusions documented in this report have been prepared for the specific application to this project and have been developed in a manner consistent with the level of care and skill normally exercised by members of the environmental science profession currently practicing under similar conditions in the area. No warranty, expressed or implied, is made. This report is for the exclusive use of Laurelhurst Corporation and/or its representatives.

If new information develops in future site work (which may include excavations, additional borings, or other studies), ECI should be contacted to re-evaluate the interpretations in this report, and to provide amendments as required.

6.1 References

- Underground Storage Tank Regulations – Chapter 173-360 WAC
- Guidance for Site Checks and Site Assessments for Underground Storage Tanks (Ecology, 2003)
- The Model Toxics Control Act Cleanup Regulation, Chapter 173-340 WAC

Appendix A

Project Figures

Figure 1: Site Location Map - 1 Sheet
Figure 2: Site Topographic Map - 1 Sheet
Figure 3: Sample Location Map - 1 Sheet
Figure 4: Project Photographs - 3 Sheets

Not To Scale

Project Location Map
UST Site Assessment
5603 North Waterfront Drive
Tacoma, Washington

Date:	December 29, 2014
Completed By:	K. Spencer
Reviewed By.:	S. Spencer
Version:	ECI-001
Project No.:	0483-04

Figure No.: 01
Sheet 01 of 06

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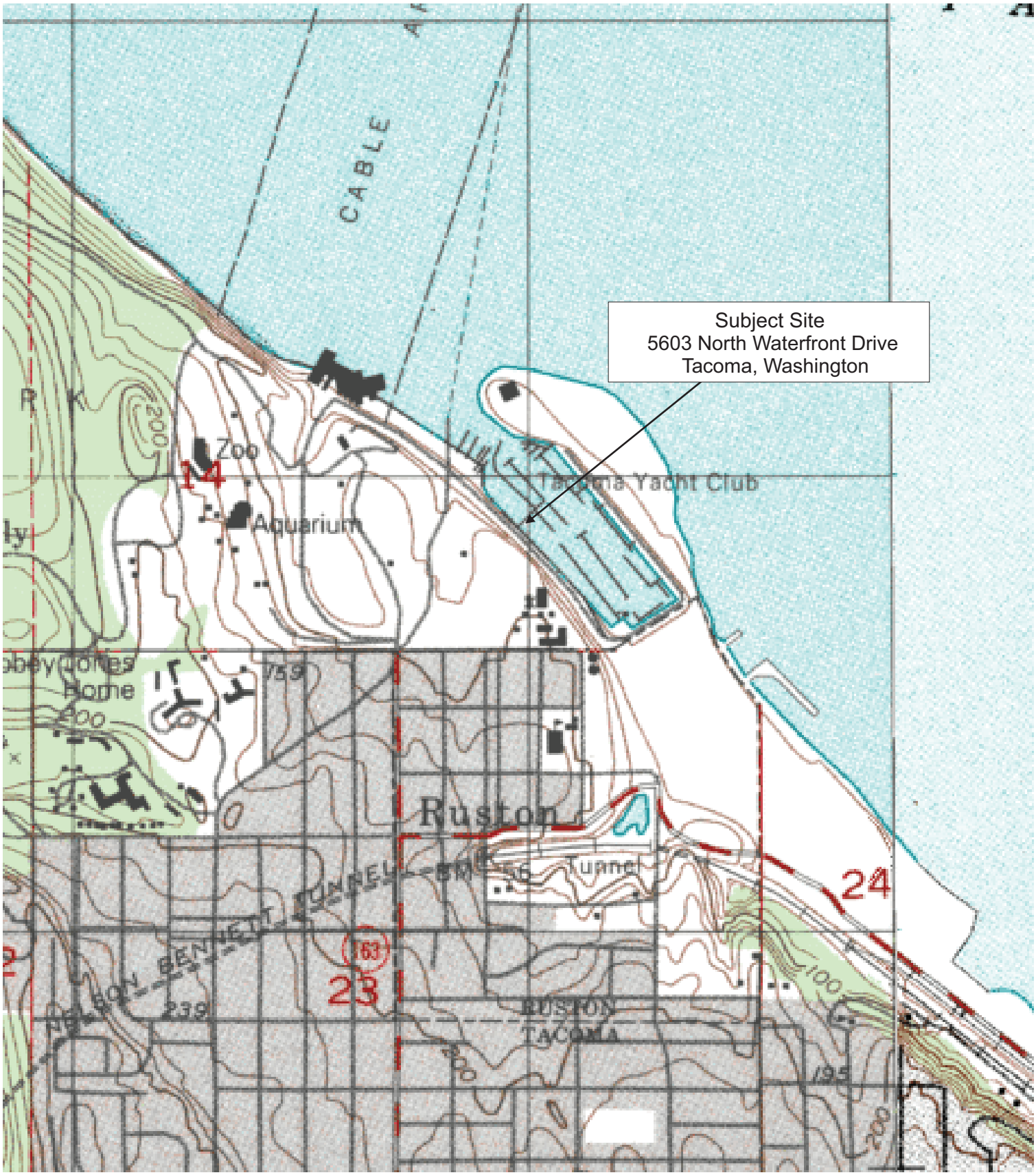

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Not To Scale

Project Topographic Map
UST Site Assessment
5603 North Waterfront Drive
Tacoma, Washington

Date:	December 29, 2014
Completed By:	K. Spencer
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Figure No.: 02
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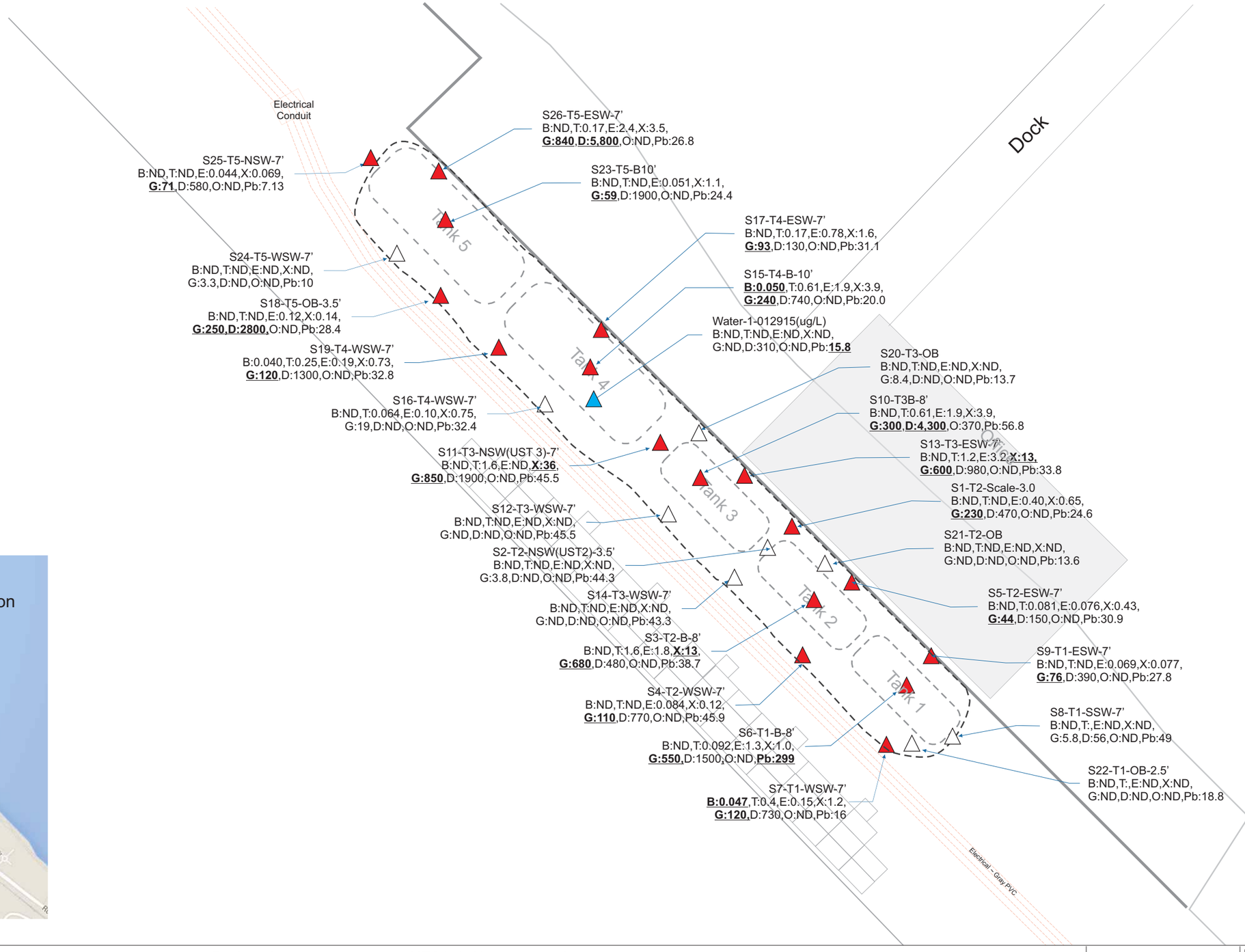

N

0 10 20 40

Approximate Scale in Feet

Explanation

- △ Sample Location Below MTCA
- ▲ Sample Location Exceeding MTCA
- G: Gasoline Range Organics
- D: Diesel Range Organics
- O: Oil Range Organics
- Pb: Total Lead

MTCA-A Cleanup Levels

Gasoline Range Organics: 100/30* mg/kg
Diesel Range Organics: 2000 mg/kg
Oil Range Organics: 2000 mg/kg
Total Lead: 250 mg/kg

Soil Sample Location Map

UST Site Assessment
5603 North Waterfront Drive
Tacoma, Washington

Date:	January 13, 2015
Completed By:	K. Spencer
Reviewed By.:	S. Spencer
Version:	ECI-002-011315
Project No.:	0483-04

Figure No.: 03

Sheet 03 of 05

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Photograph 01: UST Locations - View North west

Photograph 02: UST Locations - View South east

Photograph 03:Preparing USTs for Removal - View North west

Photograph 04: Preparing USTs for Removal - View North west

Photograph 04:Excavation of USTs one and two - View South east

Photograph 05: Removal of 3000 Gallon UST One - View South east

Project Photographs
UST Site Assessment
5603 North Waterfront Drive
Tacoma, Washington

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Version:	ECI-001
Project No.:	0483-04

Figure No.: 04

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Photograph 07: Preparing UST three for removal - View South east

Photograph 08: Removal of 3000 gallon UST three - View South east

Photograph 09: Excavation of USTs four and five - View South

Photograph 10: Removal of 8000 gallon UST four - View East

Photograph 11: Removal of 8000 gallon UST five - View South east

Photograph 12: UST four and five excavation following UST removal - View South

Project Photographs
UST Site Assessment
5603 North Waterfront Drive
Tacoma, Washington

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Version:	ECI-001
Project No.:	0483-04

Figure No.: 04

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Photograph 13: Pumping impacted water from UST Excavation

Photograph 14: Pumping impacted water from Excavation

Photograph 15:Continued pumping of impacted water from excavation

Photograph 16: Excavation area following dewatering activities - View South

Photograph 17:Excavation area post UST removal - View south

Photograph 18: Excavation area post UST removal - View North

Project Photographs
UST Site Assessment
5603 North Waterfront Drive
Tacoma, Washington

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Project No.:	0483-04

Figure No.: 04

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Appendix B

Project Tables

Table 1: Soil Sample Analytical Results
Table 2: Groundwater Sample Analytical Results
Table 740-1 Method A Soil Cleanup Levels for Unrestricted Land Uses

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Table 1 - Soil Sample Analytical Results
UST Site Assessment
5603 North Waterfront Drive
Tacoma, Washington

January 6, 2015

Sample Number	Sample Location		Sample Date	NWTPH-Dx		NWTPH-Gx	SW8021B				EPA 200.8
				Diesel Range Organics	Oil Range Organics	Gasoline Range Organics	Benzene	Toluene	Ethylbenzene	Total Xylenes	Lead
	Longitude	Latitude		Reported in milligrams per kilogram (mg/kg)							
S1-T2-Scale	47°18'14.85"N	122°30'43.68"W	12/17/2014	**470**	<250	**230**	<0.02	<0.02	**0.4**	**0.65**	**24.6**
S2-T2-NSW(UST2)-3.5	47°18'14.72"N	122°30'43.67"W	12/17/2014	<50	<250	**3.8**	<0.02	<0.02	<0.02	<0.06	44.3
S3-T2-B-8	47°18'14.70"N	122°30'43.60"W	12/17/2014	**480**	<250	**680**	<0.02	**1.6**	**1.8**	**13**	**38.7**
S4-T2-WSW-7'	47°18'14.66"N	122°30'43.61"W	12/17/2014	**770**	<250	**110**	<0.02	<0.02	**0.084**	**0.12**	**45.9**
S5-T2-ESW-7'	47°18'14.73"N	122°30'43.51"W	12/17/2014	**150**	<250	**44**	<0.02	**0.081**	**0.076**	**0.43**	**30.9**
S6-T1-B8	47°18'14.65"N	122°30'43.47"W	12/17/2014	**1500**	<250	**550**	<0.02	**0.092**	**1.3**	**1**	**299**
S7-T1-WSW-7	47°18'14.63"N	122°30'43.49"W	12/17/2014	**730**	<250	**120**	**0.047**	**0.4**	**0.15**	**1.2**	**16**
S8-T1-SSW-7	47°18'14.61"N	122°30'43.38"W	12/17/2014	**56**	<250	**5.8**	<0.02	<0.02	<0.02	<0.06	**49**
S9-T1-ESW-7	47°18'14.68"N	122°30'43.41"W	12/17/2014	**390**	<250	**76**	<0.02	<0.02	0.069	0.077	**27.8**
S10-T3-B 8'	47°18'14.96"N	122°30'43.91"W	12/23/2014	**4300**	**370**	**300**	<0.02	**0.61**	**1.9**	**3.9**	**56.8**
S11-T3-NSW(UST3)-7'	47°18'15.01"N	122°30'43.96"W	12/23/2014	**1900**	<250	**850**	<0.02 j	**1.6**	**<0.1**	**36**	**28.5**
S12-T3-WSW-7'	47°18'14.95"N	122°30'43.93"W	12/23/2014	<50	<250	<2	<0.02	0.02	<0.02	<0.06	45.5
S13-T3-ESW-7'	47°18'14.99"N	122°30'43.85"W	12/23/2014	**980**	<250	**600**	<0.02	**1.2**	**3.2**	**13**	**33.8**
S14-T3-WSW-7'	47°18'14.91"N	122°30'43.81"W	12/23/2014	<50	<250	<2	<0.02	**0.02**	<0.02	<0.06	43.3
S15-T4-B-10'	47°18'15.11"N	122°30'44.08"W	12/23/2014	**740**	<250	**240**	**0.05**	**0.41**	**0.84**	**3.6**	**20**
S16-T4-WSW-7'	47°18'15.08"N	122°30'44.13"W	12/23/2014	<50	<250	**19**	<0.02	**0.064**	**0.1**	**0.75**	**32.4**
S17-T4-ESW-7'	47°18'15.13"N	122°30'44.07"W	12/23/2014	**130**	<250	**93**	<0.02	**0.17**	**0.78**	**1.6**	**31.1**
S18-T5 OB-3.5'	47°18'15.24"N	122°30'44.27"W	12/23/2014	**2800**	<250	**250**	<0.02	<0.02	**0.12**	**0.14**	**28.4**
S19-T4 OB-3'	47°18'15.10"N	122°30'44.49"W	12/23/2014	**1300**	<250	**120**	**0.04**	**0.25**	**0.19**	**0.73**	**32.8**

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Table 1 - Soil Sample Analytical Results
UST Site Assessment
5603 North Waterfront Drive
Tacoma, Washington

January 6, 2015

Sample Number	Sample Location		Sample Date	NWTPH-Dx		NWTPH-Gx	SW8021B				EPA 200.8
				Diesel Range Organics	Oil Range Organics	Gasoline Range Organics	Benzene	Toluene	Ethylbenzene	Total Xylenes	Lead
	Longitude	Latitude		Reported in milligrams per kilogram (mg/kg)							
S20-T3-OB	47°18'14.98"N	122°30'43.93"W	12/23/2014	<50	<250	**8.4**	<0.02	<0.02	<0.02	<0.06	**13.7**
S21-T2-OB	47°18'14.89"N	122°30'43.77"W	12/23/2014	<50	<250	<2	<0.02	<0.02	<0.02	<0.06	**13.6**
S22-T1-OB	47°18'14.74"N	122°30'43.71"W	12/23/2014	<50	<250	<2	<0.02	<0.02	<0.02	<0.06	**18.8**
S23-T5-B-10'	47°18'15.46"N	122°30'44.70"W	12/23/2014	**1900**	<250	**59**	<0.02	<0.02	**0.051**	**0.11**	**24.4**
S24-T5-WSW-7'	47°18'15.38"N	122°30'44.70"W	12/23/2014	<50	<250	**3.3**	<0.02	<0.02	<0.02	<0.06	**10**
S25-T5-NSW-7'	47°18'15.48"N	122°30'44.78"W	12/23/2014	**580**	<250	**71**	<0.02	<0.02	**0.044**	**0.069**	**7.13**
S26-T5-ESW-7'	47°18'15.44"N	122°30'44.65"W	12/23/2014	**5800**	<250	**840**	<0.02	**0.17**	**2.4**	**3.5**	**26.8**
Minimum Method Reporting Level (MRL)				50	250	2	0.02	0.02	0.02	0.06	1
Model Toxic Control Act - Method A Soil Cleanup Level				2000	2000	100/30*	0.03	7	6	9	250

Bold / Shaded: Analysis reported exceeding the MTCA Method A cleanup level
Bold: Analysis reported exceeding laboratory method reporting levels
MTCA 2007 Method A Cleanup Levels for Groundwater from the Model Toxics Control Act (MTCA) amendment Table 720-1 WAC 173-340 -900 Tables
Samples reported in micrograms per kilograms (µg/L)
Cleanup level for Gasoline is 30 mg/kg when benzene is present or the total of ethyl benzene, toluene and xylene are greater than 1% of the gasoline mixture
Longitude & Latitude coordinates are estimated
bgs: below ground surface
NT: Not Tested

ECI environmental services
www.ecocononline.com

Table 2 - Water Sample Analytical Results
UST Site Assessment
5603 North Waterfront Drive
Tacoma, Washington

January 30, 2015

Sample Number	Sample Location		Sample Date	NWTPH-Dx		NWTPH-Gx	SW8021B				EPA200.8
				Diesel Range Organics	Oil Range Organics	Gasoline Range Organics	Benzene	Toluene	Ethylbenzene	Total Xylenes	Lead
	Longitude	Latitude		reported in milligrams per kilogram (mg/kg)							
Water-1-012915	47°18'15.11"N	122°30'44.08"W	1/23/2015	**310 x**	<250	<100	<1	<1	<1	<3	**15.8**
Minimum Method Reporting Level (MRL)				50	250	100	<1	<1	<1	<3	<1
Model Toxic Control Act - Method A Soil Cleanup Level				500	500	800/1000	5	1000	700	1000	15

Bold / Shaded: Analysis reported exceeding the MTCA Method A cleanup level
Bold: Analysis reported exceeding laboratory method reporting levels
MTCA 2007 Method A Cleanup Levels for Groundwater from the Model Toxics Control Act (MTCA) amendment Table 720-1 WAC 173-340 -900 Tables
Samples reported in micrograms per kilograms (µg/L)
Cleanup level for Gasoline is 800 ug/L when benzene is present or the total of ethyl benzene, toluene and xylene are greater than 1% of the gasoline mixture
Longitude & Latitude coordinates are estimated
bgs: below ground surface
NT: Not Tested
X: The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

Appendix C

Project Analytical Results

Laboratory Analytical Reports
Sample Chains of Custody

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

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

December 23, 2014

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

Dear Ms. Mulderig:

Included are the results from the testing of material submitted on December 18, 2014 from the Breakwater Marine, F&BI 412318 project. There are 17 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: Steve Spencer
EMS1223R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on December 18, 2014 by Friedman & Bruya, Inc. from the EcoCon Breakwater Marine, F&BI 412318 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	EcoCon
412318 -01	S1-T2-Scale
412318 -02	S2-T2-NSW-3.5
412318 -03	S3-T2-B8
412318 -04	S4-T2-WSW-7'
412318 -05	S5-T2-ESW-7'
412318 -06	S6-T1-B8
412318 -07	S7-T1-WSW-7
412318 -08	S8-T1-SSW-7
412318 -09	S9-T1-ESW-7

All quality control requirements were acceptable.

Date of Report: 12/23/14
Date Received: 12/18/14
Project: Breakwater Marine, F&BI 412318
Date Extracted: 12/18/14
Date Analyzed: 12/19/14

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

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Gasoline Range	Surrogate (% Recovery) (Limit 50-132)
S1-T2-Scale 412318-01	<0.02	<0.02	0.40	0.65	230	127
S2-T2-NSW-3.5 412318-02	<0.02	<0.02	<0.02	<0.06	3.8	102
S3-T2-B8 412318-03 1/5	<0.02 j	1.6	1.8	13	680	124
S4-T2-WSW-7' 412318-04	<0.02	<0.02	0.084	0.12	110	107
S5-T2-ESW-7' 412318-05	<0.02	0.081	0.076	0.43	44	105
S6-T1-B8 412318-06	<0.02	0.092	1.3	1.0	550	119
S7-T1-WSW-7 412318-07	0.047	0.40	0.15	1.2	120	110
S8-T1-SSW-7 412318-08	<0.02	<0.02	<0.02	<0.06	5.8	97
S9-T1-ESW-7 412318-09	<0.02	<0.02	0.069	0.077	76	106
Method Blank 04-2514 MB	<0.02	<0.02	<0.02	<0.06	<2	109

Date of Report: 12/23/14
Date Received: 12/18/14
Project: Breakwater Marine, F&BI 412318
Date Extracted: 12/18/14
Date Analyzed: 12/19/14

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)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 56-165)
S1-T2-Scale 412318-01	470	<250	98
S2-T2-NSW-3.5 412318-02	<50	<250	97
S3-T2-B8 412318-03	480	<250	90
S4-T2-WSW-7' 412318-04	770	<250	87
S5-T2-ESW-7' 412318-05	150	<250	92
S6-T1-B8 412318-06	1,500	<250	100
S7-T1-WSW-7 412318-07	730	<250	98
S8-T1-SSW-7 412318-08	56	<250	196
S9-T1-ESW-7 412318-09	390	<250	98
Method Blank 04-2540 MB	<50	<250	94

Analysis For Total Metals By EPA Method 200.8

Client ID:	S1-T2-Scale	Client:	EcoCon
Date Received:	12/18/14	Project:	Breakwater Marine, F&BI 412318
Date Extracted:	12/19/14	Lab ID:	412318-01
Date Analyzed:	12/19/14	Data File:	412318-01.033
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm) Dry Weight	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	96	60	125

Analyte:	Concentration mg/kg (ppm)
Lead	24.6

Analysis For Total Metals By EPA Method 200.8

Client ID:	S2-T2-NSW-3.5	Client:	EcoCon
Date Received:	12/18/14	Project:	Breakwater Marine, F&BI 412318
Date Extracted:	12/19/14	Lab ID:	412318-02
Date Analyzed:	12/19/14	Data File:	412318-02.034
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm) Dry Weight	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	96	60	125

Analyte:	Concentration mg/kg (ppm)
Lead	44.3

Analysis For Total Metals By EPA Method 200.8

Client ID:	S3-T2-B8	Client:	EcoCon
Date Received:	12/18/14	Project:	Breakwater Marine, F&BI 412318
Date Extracted:	12/19/14	Lab ID:	412318-03
Date Analyzed:	12/19/14	Data File:	412318-03.035
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm) Dry Weight	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	98	60	125

Analyte:	Concentration mg/kg (ppm)
Lead	38.7

Analysis For Total Metals By EPA Method 200.8

Client ID:	S4-T2-WSW-7'	Client:	EcoCon
Date Received:	12/18/14	Project:	Breakwater Marine, F&BI 412318
Date Extracted:	12/19/14	Lab ID:	412318-04
Date Analyzed:	12/19/14	Data File:	412318-04.036
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm) Dry Weight	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	94	60	125

Analyte:	Concentration mg/kg (ppm)
Lead	45.9

Analysis For Total Metals By EPA Method 200.8

Client ID:	S5-T2-ESW-7'	Client:	EcoCon
Date Received:	12/18/14	Project:	Breakwater Marine, F&BI 412318
Date Extracted:	12/19/14	Lab ID:	412318-05
Date Analyzed:	12/19/14	Data File:	412318-05.037
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm) Dry Weight	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	99	60	125

Analyte:	Concentration mg/kg (ppm)
Lead	30.9

Analysis For Total Metals By EPA Method 200.8

Client ID:	S6-T1-B8	Client:	EcoCon
Date Received:	12/18/14	Project:	Breakwater Marine, F&BI 412318
Date Extracted:	12/19/14	Lab ID:	412318-06
Date Analyzed:	12/19/14	Data File:	412318-06.038
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm) Dry Weight	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	96	60	125

Analyte:	Concentration mg/kg (ppm)
Lead	299

Analysis For Total Metals By EPA Method 200.8

Client ID:	S7-T1-WSW-7	Client:	EcoCon
Date Received:	12/18/14	Project:	Breakwater Marine, F&BI 412318
Date Extracted:	12/19/14	Lab ID:	412318-07
Date Analyzed:	12/19/14	Data File:	412318-07.039
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm) Dry Weight	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	97	60	125

Analyte:	Concentration mg/kg (ppm)
Lead	16.0

Analysis For Total Metals By EPA Method 200.8

Client ID:	S8-T1-SSW-7	Client:	EcoCon
Date Received:	12/18/14	Project:	Breakwater Marine, F&BI 412318
Date Extracted:	12/19/14	Lab ID:	412318-08
Date Analyzed:	12/19/14	Data File:	412318-08.041
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm) Dry Weight	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	96	60	125

Analyte:	Concentration mg/kg (ppm)
Lead	49.0

Analysis For Total Metals By EPA Method 200.8

Client ID:	S9-T1-ESW-7	Client:	EcoCon
Date Received:	12/18/14	Project:	Breakwater Marine, F&BI 412318
Date Extracted:	12/19/14	Lab ID:	412318-09
Date Analyzed:	12/19/14	Data File:	412318-09.042
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm) Dry Weight	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	96	60	125

Analyte:	Concentration mg/kg (ppm)
Lead	27.8

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	EcoCon
Date Received:	NA	Project:	Breakwater Marine, F&BI 412318
Date Extracted:	12/19/14	Lab ID:	I4-813 mb
Date Analyzed:	12/19/14	Data File:	I4-813 mb.024
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm) Dry Weight	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	99	60	125

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

Date of Report: 12/23/14
Date Received: 12/18/14
Project: Breakwater Marine, F&BI 412318

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES, AND TPH AS GASOLINE USING EPA METHOD 8021B AND NWTPH-Gx

Laboratory Code: 412318-02 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet Wt)	Duplicate Result (Wet Wt)	RPD (Limit 20)
Benzene	mg/kg (ppm)	<0.02	<0.02	nm
Toluene	mg/kg (ppm)	<0.02	<0.02	nm
Ethylbenzene	mg/kg (ppm)	<0.02	<0.02	nm
Xylenes	mg/kg (ppm)	<0.06	<0.06	nm
Gasoline	mg/kg (ppm)	4	<2	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	mg/kg (ppm)	0.5	96	66-121
Toluene	mg/kg (ppm)	0.5	98	72-128
Ethylbenzene	mg/kg (ppm)	0.5	102	69-132
Xylenes	mg/kg (ppm)	1.5	101	69-131
Gasoline	mg/kg (ppm)	20	100	61-153

Date of Report: 12/23/14
Date Received: 12/18/14
Project: Breakwater Marine, F&BI 412318

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

Laboratory Code: 412318-01 (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	430	99	109	63-146	10

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	103	79-144

Date of Report: 12/23/14
Date Received: 12/18/14
Project: Breakwater Marine, F&BI 412318

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL METALS USING EPA METHOD 200.8

Laboratory Code: 412296-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Lead	mg/kg (ppm)	50	1.67	102	102	59-148	0

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Lead	mg/kg (ppm)	50	101	80-120

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.

Libby Environmental, Inc.

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

4/12318 4T

Chain of Custody Record

ME 12/18/14

www.LibbyEnvironmental.com

VS1 / BL3

Client: FCI

Address:

City: State: Zip:

Phone: Fax:

Client Project #

Date: 12/17/14 Page 1 of 1

Project Manager: B. Riley

Project Name: Breakwater Marine

Location: 5603 N. Waterfront Dr City, State: Tacoma WA

Collector: Mulderig Date of Collection: 12/17/14

Email: GMulderig@ECOLINE.COM

Sample Number	Depth	Time	Sample Type	Lab ID / ~~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	TCLP Lead	Field Notes
1 S1-T2-SCW		1100	S	01 A-D	X				X	X					X		
2 S2-T2-NSW-3.5	3.5	1130		02 A-D													
3 S3-T2-BS	8	115		03 A-D													
4 S4-T2-WSW-7'	7	130		04 A-D													
5 S5-T2-ESW-7'	7	215		05 A-C													
6 S6-T1-BS	8	300		06 A-D													
7 S7-T1-WSW7	7	315		07 A-C													
8 S8-T1-SSW7	7	330		08 A-C													
9 S9-T1-ESW7	7	345		09 A-C													
10																	
11																	
12																	
13																	
14																	
15																	
16																	
17																	

Relinquished by:	Date / Time	Received by:	Date / Time
[signature]	12/17/14	[signature]	12/18/14
Relinquished by:	Date / Time	Received by:	Date / Time
		HONG NGUYEN	
Relinquished by:	Date / Time	Received by:	Date / Time

Sample Receipt:

Good Condition?	
Cold?	
Seals Intact?	
Total Number of Containers	

Remarks:

Samples received at 4 °C

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.*

Distribution: White - Lab, Yellow - File, Pink - Originator

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

January 6, 2015

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

Dear Ms. Mulderig:

Included are the results from the testing of material submitted on December 23, 2014 from the Breakwater Marina 0483-04, F&BI 412388 project. There are 22 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: Steve Spencer
EMS0106R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on December 23, 2014 by Friedman & Bruya, Inc. from the EcoCon Breakwater Marina 0483-04, F&BI 412388 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	EcoCon
412388 -01	S10-T3-B 8'
412388 -02	S11-T3-NSW-7'
412388 -03	S12-T3-WSW-7'
412388 -04	S13-T3-ESW-7'
412388 -05	S14-T3-SSW-7'
412388 -06	S15-T4-B-10'
412388 -07	S16-T4-WSW-7'
412388 -08	S17-T4-ESW-7'
412388 -09	S18-T5 OB-3.5'
412388 -10	S19-T4 OB-3'
412388 -11	S20-T3-OB
412388 -12	S21-T2-OB
412388 -13	S22-T1-OB
412388 -14	S23-T5-B-10'
412388 -15	S24-T5-WSW-7'
412388 -16	S25-T5-NSW-7'
412388 -17	S26-T5-ESW-7'

All quality control requirements were acceptable.

Date of Report: 01/06/15
Date Received: 12/23/14
Project: Breakwater Marina 0483-04, F&BI 412388
Date Extracted: 12/23/14
Date Analyzed: 12/23/14, 12/24/14 and 12/29/14

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

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Gasoline Range	Surrogate (% Recovery) (Limit 50-150)
S10-T3-B 8' 412388-01	<0.02	0.61	1.9	3.9	300	126
S11-T3-NSW-7' 412388-02 1/5	<0.02 j	1.6	<0.1	36	850	105
S12-T3-WSW-7' 412388-03	<0.02	<0.02	<0.02	<0.06	<2	100
S13-T3-ESW-7' 412388-04	<0.02	1.2	3.2	13	600	110
S14-T3-SSW-7' 412388-05	<0.02	<0.02	<0.02	<0.06	<2	99
S15-T4-B-10' 412388-06	0.050	0.41	0.84	3.6	240	106
S16-T4-WSW-7' 412388-07	<0.02	0.064	0.10	0.75	19	99
S17-T4-ESW-7' 412388-08	<0.02	0.17	0.78	1.6	93	107
S23-T5-B-10' 412388-14	<0.02	<0.02	0.051	0.11	59	99
S24-T5-WSW-7' 412388-15	<0.02	<0.02	<0.02	<0.06	3.3	99

Date of Report: 01/06/15
Date Received: 12/23/14
Project: Breakwater Marina 0483-04, F&BI 412388
Date Extracted: 12/23/14
Date Analyzed: 12/23/14, 12/24/14 and 12/29/14

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

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Gasoline Range	Surrogate (% Recovery) (Limit 50-150)
S25-T5-NSW-7' 412388-16	<0.02	<0.02	0.044	0.069	71	86
S26-T5-ESW-7' 412388-17	<0.02	0.17	2.4	3.5	840	ip
Method Blank 04-2555 MB	<0.02	<0.02	<0.02	<0.06	<2	98

Date of Report: 01/06/15
Date Received: 12/23/14
Project: Breakwater Marina 0483-04, F&BI 412388
Date Extracted: 12/26/14
Date Analyzed: 12/26/14

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)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 48-168)
S10-T3-B 8' 412388-01	4,300	370 x	107
S11-T3-NSW-7' 412388-02	1,900	<250	103
S12-T3-WSW-7' 412388-03	<50	<250	97
S13-T3-ESW-7' 412388-04	980	<250	101
S14-T3-SSW-7' 412388-05	<50	<250	103
S15-T4-B-10' 412388-06	740	<250	94
S16-T4-WSW-7' 412388-07	<50	<250	100
S17-T4-ESW-7' 412388-08	130	<250	103
S23-T5-B-10' 412388-14	1,900	<250	107
S24-T5-WSW-7' 412388-15	<50	<250	101
S25-T5-NSW-7' 412388-16	580	<250	103

Date of Report: 01/06/15
Date Received: 12/23/14
Project: Breakwater Marina 0483-04, F&BI 412388
Date Extracted: 12/26/14
Date Analyzed: 12/26/14

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)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 48-168)
S26-T5-ESW-7' 412388-17	5,800	<250	96
Method Blank 04-2567 MB	<50	<250	109

Analysis For Total Metals By EPA Method 200.8

Client ID:	S10-T3-B 8'	Client:	EcoCon
Date Received:	12/23/14	Project:	Breakwater Marina 0483-04, F&BI 412388
Date Extracted:	12/31/14	Lab ID:	412388-01
Date Analyzed:	01/02/15	Data File:	412388-01.063
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm) Dry Weight	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	101	60	125

Analyte:	Concentration mg/kg (ppm)
Lead	56.8

Analysis For Total Metals By EPA Method 200.8

Client ID:	S11-T3-NSW-7'	Client:	EcoCon
Date Received:	12/23/14	Project:	Breakwater Marina 0483-04, F&BI 412388
Date Extracted:	12/31/14	Lab ID:	412388-02
Date Analyzed:	01/02/15	Data File:	412388-02.064
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm) Dry Weight	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	100	60	125

Analyte:	Concentration mg/kg (ppm)
Lead	28.5

Analysis For Total Metals By EPA Method 200.8

Client ID:	S12-T3-WSW-7'	Client:	EcoCon
Date Received:	12/23/14	Project:	Breakwater Marina 0483-04, F&BI 412388
Date Extracted:	12/31/14	Lab ID:	412388-03
Date Analyzed:	01/02/15	Data File:	412388-03.065
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm) Dry Weight	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	102	60	125

Analyte:	Concentration mg/kg (ppm)
Lead	45.5

Analysis For Total Metals By EPA Method 200.8

Client ID:	S13-T3-ESW-7'	Client:	EcoCon
Date Received:	12/23/14	Project:	Breakwater Marina 0483-04, F&BI 412388
Date Extracted:	12/31/14	Lab ID:	412388-04
Date Analyzed:	01/02/15	Data File:	412388-04.066
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm) Dry Weight	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	101	60	125

Analyte:	Concentration mg/kg (ppm)
Lead	33.8

Analysis For Total Metals By EPA Method 200.8

Client ID:	S14-T3-SSW-7'	Client:	EcoCon
Date Received:	12/23/14	Project:	Breakwater Marina 0483-04, F&BI 412388
Date Extracted:	12/31/14	Lab ID:	412388-05
Date Analyzed:	01/02/15	Data File:	412388-05.067
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm) Dry Weight	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	99	60	125

Analyte:	Concentration mg/kg (ppm)
Lead	43.3

Analysis For Total Metals By EPA Method 200.8

Client ID:	S15-T4-B-10'	Client:	EcoCon
Date Received:	12/23/14	Project:	Breakwater Marina 0483-04, F&BI 412388
Date Extracted:	12/31/14	Lab ID:	412388-06
Date Analyzed:	01/02/15	Data File:	412388-06.068
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm) Dry Weight	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	101	60	125

Analyte:	Concentration mg/kg (ppm)
Lead	20.0

Analysis For Total Metals By EPA Method 200.8

Client ID:	S16-T4-WSW-7'	Client:	EcoCon
Date Received:	12/23/14	Project:	Breakwater Marina 0483-04, F&BI 412388
Date Extracted:	12/31/14	Lab ID:	412388-07
Date Analyzed:	01/02/15	Data File:	412388-07.069
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm) Dry Weight	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	98	60	125

Analyte:	Concentration mg/kg (ppm)
Lead	32.4

Analysis For Total Metals By EPA Method 200.8

Client ID:	S17-T4-ESW-7'	Client:	EcoCon
Date Received:	12/23/14	Project:	Breakwater Marina 0483-04, F&BI 412388
Date Extracted:	12/31/14	Lab ID:	412388-08
Date Analyzed:	01/02/15	Data File:	412388-08.070
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm) Dry Weight	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	101	60	125

Analyte:	Concentration mg/kg (ppm)
Lead	31.1

Analysis For Total Metals By EPA Method 200.8

Client ID:	S23-T5-B-10'	Client:	EcoCon
Date Received:	12/23/14	Project:	Breakwater Marina 0483-04, F&BI 412388
Date Extracted:	12/31/14	Lab ID:	412388-14
Date Analyzed:	01/02/15	Data File:	412388-14.074
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm) Dry Weight	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	103	60	125

Analyte:	Concentration mg/kg (ppm)
Lead	24.4

Analysis For Total Metals By EPA Method 200.8

Client ID:	S24-T5-WSW-7'	Client:	EcoCon
Date Received:	12/23/14	Project:	Breakwater Marina 0483-04, F&BI 412388
Date Extracted:	12/31/14	Lab ID:	412388-15
Date Analyzed:	01/02/15	Data File:	412388-15.075
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm) Dry Weight	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	99	60	125

Analyte:	Concentration mg/kg (ppm)
Lead	10.0

Analysis For Total Metals By EPA Method 200.8

Client ID:	S25-T5-NSW-7'	Client:	EcoCon
Date Received:	12/23/14	Project:	Breakwater Marina 0483-04, F&BI 412388
Date Extracted:	12/31/14	Lab ID:	412388-16
Date Analyzed:	01/02/15	Data File:	412388-16.076
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm) Dry Weight	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	102	60	125

Analyte:	Concentration mg/kg (ppm)
Lead	7.13

Analysis For Total Metals By EPA Method 200.8

Client ID:	S26-T5-ESW-7'	Client:	EcoCon
Date Received:	12/23/14	Project:	Breakwater Marina 0483-04, F&BI 412388
Date Extracted:	12/31/14	Lab ID:	412388-17
Date Analyzed:	01/02/15	Data File:	412388-17.077
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm) Dry Weight	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	102	60	125

Analyte:	Concentration mg/kg (ppm)
Lead	26.8

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	EcoCon
Date Received:	NA	Project:	Breakwater Marina 0483-04, F&BI 412388
Date Extracted:	12/31/14	Lab ID:	I4-833 mb
Date Analyzed:	01/02/15	Data File:	I4-833 mb.038
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm) Dry Weight	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	100	60	125

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

Date of Report: 01/06/15
Date Received: 12/23/14
Project: Breakwater Marina 0483-04, F&BI 412388

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES, AND TPH AS GASOLINE USING METHOD 8021B AND NWTPH-Gx

Laboratory Code: 412388-05 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet Wt)	Duplicate Result (Wet Wt)	RPD (Limit 20)
Benzene	mg/kg (ppm)	<0.02	<0.02	nm
Toluene	mg/kg (ppm)	<0.02	<0.02	nm
Ethylbenzene	mg/kg (ppm)	<0.02	<0.02	nm
Xylenes	mg/kg (ppm)	<0.06	<0.06	nm
Gasoline	mg/kg (ppm)	<2	<2	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	mg/kg (ppm)	0.5	93	69-120
Toluene	mg/kg (ppm)	0.5	94	70-117
Ethylbenzene	mg/kg (ppm)	0.5	93	65-123
Xylenes	mg/kg (ppm)	1.5	87	66-120
Gasoline	mg/kg (ppm)	20	90	71-131

Date of Report: 01/06/15
Date Received: 12/23/14
Project: Breakwater Marina 0483-04, F&BI 412388

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

Laboratory Code: 412408-01 (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	4,100	87	77	73-135	12

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	106	74-139

Date of Report: 01/06/15
Date Received: 12/23/14
Project: Breakwater Marina 0483-04, F&BI 412388

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL METALS USING EPA METHOD 200.8

Laboratory Code: 412383-04 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Lead	mg/kg (ppm)	50	10.1	100	99	59-148	1

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Lead	mg/kg (ppm)	50	108	80-120

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.

412388

SAMPLE CHAIN OF CUSTODY

ME 12/23/14

VSY/AUA

Page # 1 of 2

Send Report To Gina Mulderig

Company ECI

Address

City, State, ZIP

Phone # Fax #

SAMPLERS (signature) Gina Mulderig

PROJECT NAME/NO Breskuske Marina

PO# 0483-04

REMARKS

TURNAROUND TIME
- ☒ Standard (2 Weeks)
- ☐ RUSH
- Rush charges authorized by

SAMPLE DISPOSAL
- ☐ Dispose after 30 days
- ☐ Return samples
- ☐ Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by8260	SVOCs by 8270	HFS	Lead	Notes
S10-T3-B 8'	01 A-C	12/19/14	1110	S	3	X	X	X				(X)	(X) - per SS 12/30/14 MG.
S11-T3-NSW-7'	02 A-C	12/19/14	1120										
S12-T3-WSW 7'	03	12/19/14	1130										
S13-T3-ESW 7'	04	12/19/14	1140										
S14-T3-SSW-7'	05	12/19/14	150										
S15-T4-B-10'	06	12/22/14	1230										
S16-T4-WSW-7'	07	12/22/14	1245										
S17-T4-ESW 7'	08	12/22/14	100										
S18-T5 OB-35'	09	12/22/14	310										Hold for approval
S19-T4 OB-3'	10	12/22/14	320										Hold " "

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Gina Mulderig	ECI	12/23/14	
Received by:	Khan Phan	FCBI	12/23/14	1330
Relinquished by:				
Received by:		Samples received at ____ °C		

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

412388

SAMPLE CHAIN OF CUSTODY

ME 12/23/14 VS2/A04

Page # 2 of 2

Send Report To Gina Muldery

Company FCI

Address

City, State, ZIP

Phone # Fax #

SAMPLERS (signature) Gina Muldery

PROJECT NAME/NO. Breakwater Marina PO# 0483-04

REMARKS

TURNAROUND TIME
- [x] Standard (2 Weeks)
- [ ] RUSH
- Rush charges authorized by

SAMPLE DISPOSAL
- [ ] Dispose after 30 days
- [ ] Return samples
- [ ] Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by8260	SVOCs by 8270	HFS	Lead	Notes
S20-T3-OB	11	12/22/14	350	S	3	X	X	X					
S21-T2-OB	12		350										Hold
S22-T1-OB	13		355										Hold
S23-T5-B-10'	14		430										Hold
S24-T5-WSW-7'	15		435									(X)	
S25-T5-NSW-7'	16		440										
S26-T5-ESW-7'	17		445										
												↓	

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3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
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FORMS\COC\COC.DOC

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Gina Muldery	Gina Muldery	FCI	12/23/14	
Received by:		Nhan Phan	FEBI	12/23/14	1330
Relinquished by:					
Received by:					

Samples received at ____ °C

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

January 29, 2015

Steve Spencer, Project Manager
EcoCon, Inc.
PO Box 153
Fox Island, WA 98333

Dear Mr. Spencer:

Included are the results from the testing of material submitted on January 26, 2015 from the 0483-04, F&BI 501349 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
EMS0129R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on January 26, 2015 by Friedman & Bruya, Inc. from the EcoCon 0483-04, F&BI 501349 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	EcoCon
501349 -01	Water-1-12315

All quality control requirements were acceptable.

Date of Report: 01/29/15
Date Received: 01/26/15
Project: 0483-04, F&BI 501349
Date Extracted: 01/27/15
Date Analyzed: 01/27/15

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

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Gasoline Range	Surrogate (% Recovery) (Limit 52-124)
Water-1-12315 501349-01	<1	<1	<1	<3	<100	97
Method Blank 05-162 MB	<1	<1	<1	<3	<100	90

Date of Report: 01/29/15
Date Received: 01/26/15
Project: 0483-04, F&BI 501349
Date Extracted: 01/27/15
Date Analyzed: 01/28/15

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

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 51-134)
Water-1-12315 501349-01	310 x	<250	82
Method Blank 05-190 MB	<50	<250	76

Analysis For Total Metals By EPA Method 200.8

Client ID:	Water-1-12315	Client:	EcoCon
Date Received:	01/26/15	Project:	0483-04, F&BI 501349
Date Extracted:	01/27/15	Lab ID:	501349-01
Date Analyzed:	01/27/15	Data File:	501349-01.056
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	102	60	125

Analyte:	Concentration ug/L (ppb)
Lead	15.8

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	EcoCon
Date Received:	NA	Project:	0483-04, F&BI 501349
Date Extracted:	01/27/15	Lab ID:	I5-044 mb
Date Analyzed:	01/27/15	Data File:	I5-044 mb.045
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	101	60	125

Analyte:	Concentration ug/L (ppb)
Lead	<1

Date of Report: 01/29/15
Date Received: 01/26/15
Project: 0483-04, F&BI 501349

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES, AND TPH AS GASOLINE USING EPA METHOD 8021B AND NWTPH-Gx

Laboratory Code: 501325-06 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 20)
Benzene	ug/L (ppb)	<1	<1	nm
Toluene	ug/L (ppb)	<1	<1	nm
Ethylbenzene	ug/L (ppb)	<1	<1	nm
Xylenes	ug/L (ppb)	<3	<3	nm
Gasoline	ug/L (ppb)	<100	<100	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	ug/L (ppb)	50	90	65-118
Toluene	ug/L (ppb)	50	91	72-122
Ethylbenzene	ug/L (ppb)	50	89	73-126
Xylenes	ug/L (ppb)	150	90	74-118
Gasoline	ug/L (ppb)	1,000	100	69-134

Date of Report: 01/29/15
Date Received: 01/26/15
Project: 0483-04, F&BI 501349

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

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	88	82	58-134	7

Date of Report: 01/29/15
Date Received: 01/26/15
Project: 0483-04, F&BI 501349

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TOTAL METALS USING EPA METHOD 200.8

Laboratory Code: 501304-02 1/10 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Lead	ug/L (ppb)	10	<10	108	104	79-121	4

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Lead	ug/L (ppb)	10	110	83-115

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.

501349

SAMPLE CHAIN OF CUSTODY

ME 01/26/15

VI/AE3

Send Report To Stephen Spencer

Company ECI

Address PO Box 153

City, State, ZIP Fox Island, WA, 98333

Phone # 253-921-7059 Fax #

Email Address

SAMPLERS (signature)

PROJECT NAME/NO. 0483-001

PO #

PROJECT ADDRESS

• ELECTRONIC DATA REQUESTED

Page # 1 of 1

TURNAROUND TIME
• Standard Turnaround
• RUSH 48 hour
Rush charges authorized by:

SAMPLE DISPOSAL
• Dispose after 30 days
• Return samples
• Will call with instructions

Samples Received at ____ °C

Sample ID	Lab ID	Date	Time	Sample Type	# of containers	ANALYSES REQUESTED: TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	Total Lead					Notes
Water-1-12315	01AE	1/23/15	4:00	water	5	X	X	X				X					

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

FORMS\COC\COC.DOC

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:			ECI	1/26/15	9:15
Received by:		D Herzog	FedEx SDC	1/26/15	4:10
Relinquished by:					
Received by:		Nhan Phan	FEBT	1/26/15	1600

Samples received at 6 °C

Appendix D

Project Permitting

Ecology - 30 Day UST Notice

Ecology - Closure & Site Assessment Notice

Ecology - Site Check/Site Assessment Checklist

TPCHD - Underground Storage Tank Removal/Site Closure Application/Approval

TPCHD - Waste Disposal Application / Authorization

City of Tacoma Fire Department Permits

DEPARTMENT OF ECOLOGY
State of Washington

UNDERGROUND STORAGE TANK (UST)
30-DAY NOTICE

(See back of form for instructions)

Please ✓ the appropriate box: ☐ Intent to Install ☒ Intent to Close

HQ (360)407-7170 / Central (509)575-2490 / Eastern (509)329-3400 / Northwest (425)649-7000 / Southwest (360)407-6300

SITE INFORMATION

Tag or UBI number

Breakwater Marina
Site Name

5603 North Waterfront Drive
Site Physical Address

Tacoma, Washington 98407
City Zip Code

253-381-2173
Site Phone Number

OWNER INFORMATION

Breakwater Marina
UST Owner/Operator

5603 North Waterfront Drive
Mailing Address/PO Box

Tacoma, WA 98407
City Zip Code

253-381-2173
Owner/Operator Phone Number

michael@breakwatermarina.com
Owner/Operator Email Address

TANK INFORMATION

Tank ID	Substance Stored	Capacity	Date Project is Expected to Begin	Comments:
1	Gasoline	8000	June 1, 2014	
2	Diesel	8000	June 1, 2014	
3	Diesel	3000	June 1, 2014	
4	Gasoline	1000	June 1, 2014	
5	Gasoline	3000	June 1, 2014	

1) SERVICE PROVIDER INFORMATION

PLEASE NOTE: INDIVIDUALS PERFORMING UST SERVICES MUST BE ICC CERTIFIED OR HAVE PASSED ANOTHER QUALIFYING EXAM APPROVED BY THE DEPARTMENT OF ECOLOGY.

☐ Installer ☒ Decommissioner ☒ Site Assessor

EcoCon, Inc.
Service Provider Company Name

Stephen Spencer
Contact Person

Gina Mulderig
Certified Service Provider Name

253-932-7059
Contact Phone Number

5319877 (Supervisor & Site Assessor)
ICC Certification #

sspencer@ecocononline.com
Contact Email Address

2) SERVICE PROVIDER INFORMATION (REQUIRED IF USING MORE THAN ONE PROVIDER) -

☐ Installer ☐ Decommissioner ☐ Site Assessor

Service Provider Company Name

Contact Person

Certified Service Provider Name

Contact Phone Number

ICC Certification #

Contact Email Address

Instructions

Please Read Carefully

AFTER COMPLETING THIS FORM, RETURN TO:

DEPARTMENT OF ECOLOGY
TOXICS CLEANUP PROGRAM
P.O. BOX 47655
OLYMPIA, WA 98504-7655

GENERAL

Under WAC 173-360-200 and 173-360-385, owners and operators are required to notify Ecology 30 days prior to beginning underground storage tank (UST) installation or decommissioning projects. Please use a separate form for each activity. Once this form is received and processed by Ecology, it is date stamped and returned to the owner listed on the form. Installation and decommissioning projects may begin 30 days after the date stamped on the form. If a project cannot meet the deadlines described below, you must submit an additional 30-Day Notice. The 30-day wait period may be waived on these additional 30-Day Notices by contacting the inspector in your region.

SITE AND OWNER INFORMATION

Fill in the site and owner information and be sure to provide telephone numbers and email addresses so that any problems can be resolved quickly. Include the facility compliance tag or UBI number for tank closures.

TANK INFORMATION

List tanks to be installed or closed, substance stored (e.g. gas, diesel, etc), tank size and date the project is expected to begin. **The contact person listed on this form must confirm the exact date an installation and/or decommissioning project will begin at least three business days before proceeding.** Please report tank ID number(s) for tanks to be closed and assign new Tank ID number(s) to tanks being installed. If you are installing new tanks, do not assign a Tank ID number that has previously been used at the facility. Use the Comments box to include additional information, such as when product was removed so that no more than one inch of residue remains in the system.

TANK INSTALLATIONS

List the installation company. The date stamped on the form indicates the beginning of a 90-day period in which an installation project must begin. Once, processed, this form also allows you to receive a one-time drop of product, for UST system testing purposes only. The fuel drop is not required to occur within this 90-day period.

To dispense product and receive additional deliveries, you must complete the Business License registration and obtain your facility compliance tag from Ecology. The registration information must be submitted to the Department of Revenue within 30 days of installation to receive a Business License with the appropriate tank endorsement(s). **If, at any time, your tank(s) store greater than one inch of product, you must begin using an acceptable release detection method to monitor for leaks every month.**

PERMANENT TANK CLOSURES

List the closure and site assessor companies. Upon receiving a completed 30-day closure form, Ecology will stamp the date received on the form and return a copy to the owner. Decommissioning projects must be completed 90 days after the stamped date. **No work may begin within the first 30 days unless a waiver has been obtained from Ecology.**

Contact your local fire marshal and planning department prior to tank closure to find out if any additional permits are required by county or other local jurisdictions. Compliance with the State Environmental Policy Act (SEPA) Rules, Chapter 197-11 WAC, may be required.

A site assessment is required at the time of closure. Contamination found or suspected at the site must be reported to the appropriate Ecology regional office within 24 hours. If the contamination is confirmed, a site characterization report must be submitted to the regional office within 90 days; if contamination is not confirmed, a site assessment report must be submitted to the above address within 30 days.

The following are examples of tanks that are exempt from notification requirements.

- Farm or residential tanks, 1,100 gallons or less, used to store motor fuel for personal or farm use only. The fuel must be used for farm purposes and cannot be for resale.
- Tanks used for storing heating oil that is used solely for the purpose of heating the premises.
- Tanks with a capacity of 110 gallons or less.
- Equipment or machinery tanks such as hydraulic lifts or electrical equipment tanks.
- Emergency overflow tanks, catch basins, or sumps.

WASHINGTON STATE DEPARTMENT OF ECOLOGY

UNDERGROUND STORAGE TANK
Closure and Site Assessment Notice

See back of form for instructions

FOR OFFICE USE ONLY
Site ID #:_____
Facility Site ID #: _____

Please ✓ the appropriate box(es)
❑ Temporary Tank Closure ❑ Change-In-Service ☒ Permanent Tank Closure ☒ Site Check/Site Assessment

Site Information

Site ID Number 2974
(Available from Ecology if the tanks are registered)
Site/Business Name Breakwater Marina
Site Address 5603 N Waterfront Drive
Street
City/State Tacoma, WA
Zip Code 98407 Telephone (253) 381-2173

Owner Information

UST Owner/Operator Breakwater Marina
Mailing Address 5603 N Waterfront Drive
Street
P.O. Box
City/State Tacoma, WA
Zip Code 98407 Telephone (253) 381-2173

Owners Signature _____

Tank Closure/Change-In-Service Company

Service Company EcoCon, Inc.
Certified Supervisor Gina Mulderig Decommissioning Certification No. 5319877
Supervisor's Signature Gina Mulderig Date _____
Address PO Box 153
Street P.O. Box
Fox Island WA 98333 Telephone (253) 238-9270
City State Zip Code

Site Check/Site Assessor

Certified Site Assessor Gina M. Mulderig, EcoCon, Inc.
Address PO Box 153
Street P.O. Box
Fox Island Washington 98333 Telephone (253) 238-9270
City State Zip Code

Tank Information

Tank ID	Closure Date	Closure Method	Tank Capacity	Substance Stored
001	12/16/14	Removal	3000	Gasoline
002	12/16/14	Removal	3000	Gasoline
003	12/17/14	Removal	3000	Diesel
004	12/18/14	Removal	8000	Gasoline
005	12/18/14	Removal	8000	Diesel

Contamination Present at the Time of Closure

☒ Yes ☐ No ☐ Unknown
Check unknown if no obvious contamination was observed and sample results have not yet been received from analytical lab.

☒ Yes ☐ No
If contamination is present, has the release been reported to the appropriate regional office?

To receive this document in an alternative format, contact the Toxics Cleanup Program at 360-407-7170 (voice) or 1-800-833-6388 OR 711 (TTY)

Instructions

Please Read Carefully

AFTER COMPLETING THIS FORM. RETURN TO:

TOXICS CLEANUP PROGRAM
DEPARTMENT OF ECOLOGY
P.O. BOX 47655
OLYMPIA, WA 98504-7655

This form is to be completed by the tank owner and submitted to Ecology within 30 days of tank closure. Mark the appropriate box(es) for temporary tank closure, permanent tank closure, change-in-service, or site assessment.

Permanent Closure and Change-In-Service require a site assessment be performed.

Site and Owner Information

Fill in the site and owner information. Include the Ecology site number, if known; also, be sure to provide telephone numbers so that any problems can be resolved quickly. **The tank owner MUST sign this form.**

Tank Closure/Change-In-Service Company and Site Check/Site Assessor

List the closure company and fill in the site assessor information for permanent closure or change-in-service. Ask to see the closure company supervisor's ICC Certification and make sure that the certified supervisor signs this form.

Please note: Individuals performing services MUST be certified by the International Code Council (ICC), or other nationally recognized association by which they demonstrate appropriate knowledge pertaining to USTs or have passed another qualifying exam approved by the Department.

Tank Information and Contamination Present at Time of Closure

Please fill in the tank information requested using tank ID numbers previously reported to Ecology. In the column entitled "Closure Method," indicate what manner of closure was used, such as closure in place or removal. Check the appropriate box(es) indicating if contamination is present and has been reported. Contamination found or suspected at the site must be reported to the appropriate Ecology regional office within 24 hours [see below for telephone numbers]. **If contamination is confirmed, a site characterization report must be submitted to the regional office within 90 days; if contamination is not confirmed, then this form, a site assessment checklist, and a site assessment report must be submitted to the above address within 30 days.**

Central	**Eastern**	**Southwest**	**Northwest**
(509) 575-2490	(509) 329-3400	(360) 407-6300	(425) 649-7000

The following tanks are exempt from notification requirements:

- Farm or residential tanks, 1,100 gallons or less, used to store motor fuel for personal or farm use only. The fuel must not be for resale or used for business purposes.
- Tanks used for storing heating oil that is used on the premises where the tank is located.
- Tanks with a capacity of 110 gallons or less.
- Equipment or machinery tanks such as hydraulic lifts or electrical equipment tanks.
- Emergency overflow tanks, catch basins, or sumps.

For more information, call toll free in the state of Washington 1-800-826-7716 (Message).

WASHINGTON STATE DEPARTMENT OF ECOLOGY

UNDERGROUND STORAGE TANK
Site Check/Site Assessment Checklist

FOR OFFICE USE ONLY
Site #:_____
Facility Site ID #:_____

INSTRUCTIONS

When a release has not been confirmed and reported, this Site Check/Site Assessment Checklist must be completed and signed by a person certified by ICC or a Washington registered professional engineer who is competent, by means of examination, experience, or education, to perform site assessments. **The results of the site check or site assessment must be included with this checklist.** This form must be submitted to Ecology at the address shown below within 30 days after completion of the site check/site assessment.

SITE INFORMATION: Include the Ecology site ID number if the tanks are registered with Ecology. This number may be found on the tank owner's invoice or tank permit.

TANK INFORMATION: Please list all tanks for which the site check or site assessment is being conducted. Use the owner's tank ID numbers if available, and indicate tank capacity and substance stored.

REASON FOR CONDUCTING SITE CHECK/SITE ASSESSMENT: Please check the appropriate item.

CHECKLIST: Please initial each item in the appropriate box.

SITE ASSESSOR INFORMATION: This information must be signed by the registered site assessor who is responsible for conducting the site check/site assessment.

Underground Storage Tank Section
Department of Ecology
PO Box 47655
Olympia WA 98504-7655

SITE INFORMATION

Site ID Number (Available from Ecology if the tanks are registered): 2974
Site/Business Name: Breakwater Marina
Site Address: 5603 N. Waterfront Drive (Street) Telephone: (253) 381-2173
Tacoma, WA 98407 (City / State / Zip Code)

TANK INFORMATION

Tank ID No.	Tank Capacity		Substance Stored
001	12/16/14	3000	Gasoline
002	12/16/14	3000	Gasoline
003	12/17/14	3000	Diesel
004	12/18/14	8000	Gasoline
005	12/18/14	8000	Diesel

REASON FOR CONDUCTING SITE CHECK/SITE ASSESSMENT

Check one:

- [X] Investigate suspected release due to on-site environmental contamination.
- [ ] Investigate suspected release due to off-site environmental contamination.
- [ ] Extend temporary closure of UST system for more than 12 months.
- [ ] UST system undergoing change-in-service.
- [X] UST system permanently closed with tank removed.
- [ ] Abandoned tank containing product.
- [ ] Required by Ecology or delegated agency for UST system closed before 12/22/88.
- [ ] Other (describe): _____

CHECKLIST

Each item of the following checklist shall be initialed by the person registered with the Department of Ecology whose signature appears below.	YES	NO
1. The location of the UST site is shown on a vicinity map.	X	`
2. A brief summary of information obtained during the site inspection is provided. (see Section 3.2 in site assessment guidance)	X	
3. A summary of UST system data is provided. (see Section 3.1.)	X	
4. The soils characteristics at the UST site are described. (see Section 5.2)	X	
5. Is there any apparent groundwater in the tank excavation?	X	
6. A brief description of the surrounding land use is provided. (see Section 3.1)	X	
7. Information has been provided indicating the number and types of samples collected, methods used to collect and analyze the samples, and the name and address of the laboratory used to perform the analyses.	X	
8. A sketch or sketches showing the following items is provided:		
- location and ID number for all field samples collected	X	
- groundwater samples distinguished from soil samples (if applicable)	X	
- samples collected from stockpiled excavated soil	X	
- tank and piping locations and limits of excavation pit	X	
- adjacent structures and streets	X	
- approximate locations of any on-site and nearby utilities	X	
9. If sampling procedures different from those specified in the guidance were used, has justification for using these alternative sampling procedures been provided? (see Section 3.4)	X	
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.	X	
11. Any factors that may have compromised the quality of the data or validity of the results are described.		X

12. The results of this site check/site assessment indicate that a confirmed release of a regulated substance has occurred.	X	

SITE ASSESSOR INFORMATION

Gina M. Mulderig
Person registered with Ecology

EcoCon, Inc.
Firm Affiliated with

Business Address: PO Box 153
Street

Telephone: (253) 238-9270

Fox Island
City

WA
State

98333
Zip Code

I hereby certify that I have been in responsible charge of performing the site check/site assessment described above. Persons submitting false information are subject to penalties under Chapter 173.360 WAC.

01/13/2015
Date

Signature of Person Registered with Ecology

If you need this publication in an alternate format, please contact Toxics Cleanup Program at (360) 407-7170. For persons with a speech or hearing impairment call 711 for relay service or 800-833-6388 for TTY.

Underground Storage Tanks
Removal/Site Closure Application

Tacoma-Pierce County Health Department
Healthy People in Healthy Communities

An application for permit to conduct UST Removal and Site Closure activities must be submitted at least ten (10) working days in advance. Site Closure, as defined in the Tacoma-Pierce County Health Department's (Health Department) Environmental Health Code Chapter 4: USTs, requires completion of UST removal, assessment and/or remediation of all contaminated media. UST site activity schedules must be proposed at least five (5) working days in advance unless otherwise approved by the Health Department. A permit to commence UST Removal and Site Closure activities will be issued after approval of this application. The permit will expire 365 days after issuance, after which a renewal will be required if Site Closure has not been achieved.

UST Fee Validation

UST Permit Type: ■ Initial ❑ Renewal– work occurred last year ❑ Renewal– after year or more of inactivity

Phase of Activity: ■ UST Removal ❑ Site Investigation ■ Site Remediation ❑ Monitoring

Site Information:

Facility Name Breakwater Marina

Site Address 5603 N. Waterfront Drive

City Tacoma State WA Zip 98407

Parcel Number 2009790000 8950100010

UST Site Activity Date 11/26/2014 # USTs to be Removed 5

Site (Property) Owner Information:

Owner Michael Marchetti

Phone (253)752-6663

Email michael@breakwatermarina.com

Address 5603 N. Waterfront Drive

City Tacoma State WA Zip 98407

UST Owner Information:

■ Same as Site Owner

Name

Phone

Email

Address

City State Zip

UST Removal/Remediation Company:

Company EcoCon, Inc.

Certified Decommissioner Brad Reilly

Phone 206-779-0050

Email breilly@ecocononline.com

Address 1931 Fawcett ave. #200

City Tacoma State WA Zip 98444

Site Assessor/Qualified Consultant:

■ Same UST Removal/Remediation Company

Company

Qualified Staff

Phone

Email

Address

City State Zip

Information submitted is subject to Public Records Act, Chapter 42.56 RCW.

Underground Storage Tanks
Removal/Site Closure Application

Tacoma-Pierce County Health Department
Healthy People in Healthy Communities

Description of current facility use, past facility use, and plans for facility

Facility is currently main office and fueling facility for small boat harbor. Facility has been in operation since 1964.

Future use is continued use as small boat harbor, without fueling provisions.

Description of UST(s) to be removed (If applicable):

	UST Size	Material Contained	Material of Construction	Age
1.	8000 g	Gasoline	steel	39 yrs
2.	8000 g	Diesel	steel	50 yrs
3.	1000 g	Gasoline	steel	41 yrs
4.	3000 g	Gasoline	steel	41 yrs
5.	3000 g	Diesel	steel	42 yrs
6.				

Number of product dispensers 2

Do the results from a prior investigation indicate contamination from the UST system? Yes

If a prior investigation identified a release, the Health Department will likely require the submission of that data before issuing a UST Removal/Site Closure Permit. For Permit Renewals, our office may already have this data – in this case, please enter 'Filed with Health Department.' Call the UST Program with questions about submittal requirements.

Have all other permits and approvals been provided by the appropriate agencies (i.e. WA Department of Ecology; Fire Marshal; Building Official)? yes

Please attach a Site Diagram identifying features of the project area along with any other information pertinent to Health Department review of this Application.

For additional information search "*Underground Storage Tank*" at www.tpchd.org or call (253) 798-2855.

Certification

I hereby certify I am authorized to sign on behalf of the UST Owner/Site Owner. I have personally examined and am familiar with the information submitted in this document. I believe the submitted information is true, accurate and complete to the best of my knowledge and ability and all known and suspected hazards have been disclosed. I understand a closure/site assessment or status report must be submitted within ninety (90) days of tank removal or other UST Site activity and ***this permit is valid only for three hundred sixty five (365) days, after which a new permit is required if Site Closure has not been achieved.***

Submitted by Brad Reilly (*Print*) _____ (*Signature*) Date 11/21/2014

Information submitted is subject to Public Records Act, Chapter 42.56 RCW.

Tacoma | Pierce County
Health Department
Healthier. Safer. Smarter.

WASTE DISPOSAL AUTHORIZATION APPLICATION

The information requested below is essential in determining if this waste is acceptable for disposal at the City of Tacoma Landfill, the LRI Landfill, the Hidden Valley Transfer Station, or other permitted solid waste facilities such as petroleum contaminated soils treatment facilities. It is unlikely that you will be able to respond in the space provided. Feel free to modify the format and/or address the information on additional pages, but at a minimum include all the information requested below. For more information call **253 798-6470**. The information listed below may be mailed or faxed to:

Tacoma-Pierce County Health Department
Waste Management Program
3629 South D Street, MS-304
Tacoma, WA 98418-6813
Fax - (253) 798-6498

Date: 11/25/2014 Site/Facility Name: Breakwater Marina

Consultant/Contractor/Company representative: EcoCon, Inc. / Brad Reilly

Proposed Solid Waste Disposal/Treatment Facility: LRI

Describe Where Waste Originated (physical location, company name, project name, etc.):

5603 N. Waterfront Drive, Tacoma, WA 98407; Breakwater Marina, Inc. UST removal

Projected Quantity or Volume of Waste (generated per month, quarter, year, etc.): 50 tons, one time

Describe How Waste is Generated/Source of Waste:

UST excavation, unintentional release

Describe the Site History (if applicable):

Site has been operating as a small boat marina since the 1960's with fueling dock for boats providing gasoline and diesel. Oldest tank is recorded as being installed 1964.

Describe the Sampling Method(s) or Submit Sampling Plan:

direct - push boring around tank area. Additional sampling to be done upon tank removal.

Describe and/or Justify the Number of Samples per Volume of Waste:

Nineteen borings were taken around the tank basin. Contamination was discovered only in one boring at the north end of the tank basin.

Describe and/or Justify the Parameters Selected for Analysis:

Tanks have historically contained diesel and gasoline. Therefore the analytical chosen was based on the typical contaminates encountered when dealing with underground storage tanks holding diesel and gasoline. Analysis completed was for gasoline, benzene, toluene, ethylbenzene, xylene, diesel and heavy oil. We also collected soil and water samples for total and dissolved organic and inorganic lead.

In addition to the information requested above, please enclose copies of the analytical results, chain of custody forms, a sampling plan, and any other documents relevant to the review of the site, facility, and/or waste being characterized.

By my signature below, I certify that the information presented in this application is true and complete to the best of my knowledge.

Applicant Signature	Brad Reilly, Project Manager Applicant Name & Title	11/25/2014 Date
EcoCon, Inc. Company Name	1931 Fawcett Ave, #200 Company Address	
206-779-0050 Phone Number	breilly@ecocononline.com Email Address	
253-369-6228 Fax Number		

Tacoma Fire Department
Fire Prevention Bureau 253.591.5740
FAX Number 253.594.7943
3471 S. 35th St. Tacoma, WA 98409
www.tacomafiredepartment.org

Permit Application #2000.3 Underground Tank – Removal or Decommissioning - Commercial

To be completed by the Permit Applicant (type in the grey box or print out and complete)

Business Information				
Date:	April 28, 2014	Projected Start Date: June 1, 2014		
Business Name:	Breakwater Marina			
Address:	Street 5603 North Waterfront	City Tacoma	State WA	Zip 98407
Site Address:	(if different from above)			
Contact Name:	Stephen Spencer			
Phone:	(253) 921-7059	Alternate Phone/Cell: (253) 238-9270		
E-mail Address:	sspencer@ecocononline.com			
City of Tacoma Business License: 500072846	Washington State Contractor License: ECOCOI894K3	ICC UST Gina Mulderig Certification # 5319877		
Comments:				

Please include a check made payable to the CITY OF TACOMA TREASURER, or request an invoice.

☒ Check this box to have the applicant invoiced for the permit fee.

FPB OFFICIAL USE ONLY			
Approved By:		Date:	
Denied: ☐	Reason for Denial:		
Comments:			
Permit Number:			
Permit Fees:	Date Received:	Receipt Number:	Check Number:

See attached documentation for description of conditions that must be met prior to the issuance of this permit.

-Underground Tank-

Tacoma Fire Department

PERMIT CONDITIONS: # 2000.3 Underground Tank Removal or Decommissioning - Commercial
Scope: This permit applies to tanks over 1100 gallons.

All of the following conditions must be met prior to the issuance of a permit.

1. Time Lines

a. Applications to be submitted 14 days prior to projected removal or decommissioning date.

2. Regulatory References

a. International Fire Code (IFC) Chapter 34
b. NFPA Standard 30
c. Washington State Department of Ecology UST Tank Closure
d. WAC 173-360-385
e. Tacoma Municipal Code 13.09
f. South Tacoma Ground Water Protection District Reference map

3. Required Submittals

a. Tacoma Fire Department Permit Application
b. City of Tacoma business license (enter on application)
c. Washington State contractors license (enter on application)
d. Tacoma Pierce County Health Department approval permit (all tanks)
e. ICC UST Certification

UPON COMPLETION SUBMIT A COPY OF:

f. Washington State Dept. of Ecology 30 Day Notice - Form ECY020-95
g. Washington State Dept. of Ecology Form ECY-94
h. Washington State Dept. of Ecology Form ECY 010-158

4. Inspection Requirements

a. Site inspection prior to tank removal- NO EXCAVATION is allowed until approved by Tacoma Fire Department
b. Site inspection after decommissioning
c. Site inspection after removal
d. Schedule inspection 48 hours in advance

5. Requirements

Tanks located in the South Tacoma Ground Water Protection District:

a. Notification of the Tacoma Pierce County Health Department at least 60 days in advance of any closing. 253.798.6429, tpchd.org/STGPD

b. Permanently remove the tank unless the tank is located under a permanent building and cannot be removed without removing the building.

Tanks outside the boundaries of the South Tacoma Ground Water Protection District:

Removal vs. Abandonment in Place

Both removal and abandonment in place are methods of decommissioning available for underground tanks, however, removal of the tank is strongly recommended.

Applicants should carefully review the merits of their options before choosing a method of decommissioning. Tanks suspected of leaking should be removed from the ground rather than abandoned in place. The Tacoma Fire Department cannot predict what future regulations may require of tanks abandoned in place under the current guidelines. A tank abandoned in place now may later require removal at additional cost and potential hazard.

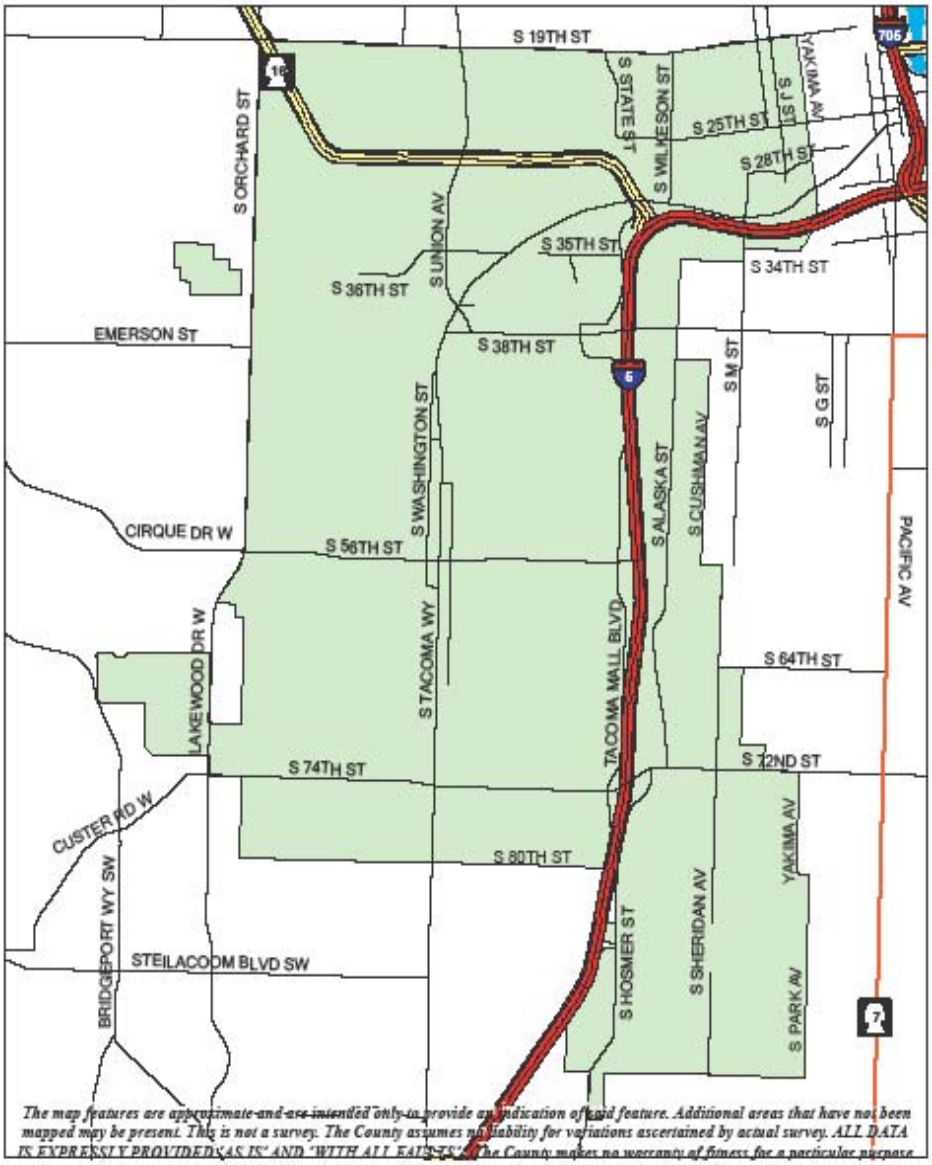
Removal:

a. Two 40BC rated fire extinguishers are to be on site within 50 feet of operation
b. Rope or ribbon barricades must be provided circling a minimum of 10 feet from operation if yard is not fully fenced
c. No smoking signs must be posted in visible locations
d. A certificate provided by an ICC UST certified decommissioner verifying that the tank has been properly inerted or is otherwise certified "Safe for Hot Work" shall be issued and available on site for inspection for each underground and aboveground tank being removed regardless of the product previously contained.
    1. The tanks' atmosphere must be inert using one of the following approved methods:
        - Dry ice (pellets or chunks of solid CO_2). Minimum 30 lbs per 1000 gallons of air space is recommended.
        - Compressed CO_2 gas in cylinders (Note: This method may only be performed by a Certified Marine Chemist).
        - Purging with air (gas-freeing) using Venturi tube apparatus, with proper bonding and grounding and after the tank has been pumped and rinsed by an approved company.
e. No cutting or welding allowed unless tanks are certified gas free.
f. A separate Fire Prevention Bureau permit is required for cutting and welding operations.

Abandoned in Place***:***

a. Flammable and combustible liquids shall be removed from the tank and connecting piping
b. The suction, inlet, gauge, vapor return, and vapor lines shall be disconnected
c. Tanks shall be filled completely with an approved inert solid material
d. Remaining underground piping shall be capped or plugged
e. A record of tank size, location, and date of abandonment shall be retained
f. For tanks being decommissioned in place that previously contained Class I liquids a Certified Marine Chemist certificate must be issued and available on site for inspection certifying that the tank has been properly inerted prior to filling.
g. No tanks shall be filled prior to inspection by Tacoma Fire Department
h. Tanks being decommissioned in place must be filled with a lean concrete mixture. Filling with foam is prohibited

South Tacoma Groundwater Protection District



0 0.25 0.5 1 Miles

N

Map Legend

South Tacoma Groundwater Protection District

Tacoma | Pierce County Health Department

Pierce County
Geographic Information Services

George D Blair - Northwest Marine Chemist, Inc.
P. O. Box 7084, Tacoma, WA 98406
Office: 253-752-0149 Fax: 253-759-3523
Email: gbcmc637@gmail.com

MARINE CHEMIST CERTIFICATE

Serial 637-00368

ECI	Breakwater Marina	Dec 17, 2014
Survey Requested by	Vessel Owner Agent	Date
Tank Farm	Underground Storage Tank	5603 N. Waterfont Drive
Vessel	Type of Vessel	Specific Location of Vessel
Gasoline, Diesel	O_2, LEL, Visual	9:30
Last Three 3 Loadings	Tests Performed	Time Survey Completed

Inspected Spaces:
Group 1. 1-3,000 Gal UST'-Ex-Gasoline Tank
1-3,000 Gal. UST-Ex-Diesel Fuel Tank

Safety Designations:
NOT SAFE FOR WORKERS
SAFE FOR LIMITED HOT WORK
LIMITATIONS:
Specific Location: *At job site.*
Hot Work Type: *These tanks have been purged with CO2 to less than 6% Oxygen and are safe for excavation and transportation.*
INERTED
Inert Medium: *Carbon Dioxide (CO2)*
Method for maintaining safe conditions: *All openings are and must remain secured.*
Measures for safe disposal of inert gas: *Ventilate and test for 20.8% Oxygen to properly dispose of inerting gas.*

Test Results	**% O_2**	**% LEL**
Inspected spaces group 1	<6%	N/A

In the event of physical or atmospheric changes affecting the STANDARD SAFETY DESIGNATIONS assigned to any of the above spaces, this certificate is voided; spaces not listed on the Certificate are not to be entered unless authorized on another Certificate and/or maintained in accordance with OSHA 29 CFR 1915; or if in any doubt, immediately stop all work and contact the undersigned Marine Chemist. Unless otherwise stated on the Certificate, all spaces and affected adjacent spaces are to be reinspected daily or more often as necessary by the competent person or the authority having jurisdiction as applicable in support of work prior to entry or recommencement of work.

QUALIFICATIONS: Transfer of ballast, cargo, fuel or manipulation of valves or closure equipment tending to alter conditions in pipelines, tanks, or compartments subject to gas accumulation, unless specifically approved on this Certificate, requires inspection and a new Certificate for spaces so affected. All lines, vents, heating coils, valves, and similar enclosed appurtenances shall be considered "not safe" unless otherwise specifically designated. Movement of the vessel from its specific location voids the Certificate unless shifting of the vessel within the facility has been specifically authorized on this certificate.

STANDARD SAFETY DESIGNATIONS: (partial list, paraphrased from NFP 306, Subsections 4.3.1 through 4.3.6)

ATMOSPHERE SAFE FOR WORKERS: In the compartment or space so designated (a) the oxygen content of the atmosphere shall be at least 19.5 percent and not greater than 22 percent by volume; (b) the concentration of flammable materials is below 10 percent of the lower explosive limit; (c) any toxic materials in the atmosphere associated with cargo, fuel, tank coatings, inerting mediums, or fumigants are within permissible concentrations at the time of the inspection.

NOT SAFE FOR WORKERS: In the compartment or space so designated, entry shall not be permitted.

ENTER WITH RESTRICTIONS: In the compartment or space so designated, entry for work is permitted only if conditions of proper protective equipment, or clothing, or time, or all of the aforementioned, as appropriate, are as specified.

SAFE FOR HOT WORK: In the compartment or space so designated (a) the oxygen content of the atmosphere is not greater than 22 percent by volume; (b) the concentration of flammable materials in the atmosphere is less than 10 percent of the lower explosive limit; (c) the residues, scale, or preservative coatings are cleaned sufficiently to prevent the spread of fire and are not be capable of producing a higher concentration than permitted by (a) or (b); (d) all adjacent spaces, containing or having contained flammable or combustible materials shall be sufficiently cleaned of residues, scale, or preservative coatings to prevent the spread of fire; or they are inerted. Ship's fuel tanks, lube tanks, or engine room or fire room bilges, or other machinery spaces, are treated in accordance with the Marine Chemist's requirements.

SAFE FOR LIMITED HOT WORK: In the compartment or space so designated (a) portions of the space meet the requirements Safe for Hot Work and Partial Cleaning, as applicable, or (b) the space is inerted, adjacent spaces meet the requirements for Safe for Hot Work, and hot work is restricted to specific locations, (c) portions of the space shall meet the requirements for Safe for Hot Work, as applicable; and the nature or type of hot work shall be limited or restricted.

NOT SAFE FOR HOT WORK: In the compartment or space so designated, hot is not permitted.

CHEMIST'S ENDORSEMENT. This is to certify that I have personally determined that all spaces in the foregoing list are in accordance with NFPA 306 Control of Gas Hazards on Vessels and have found the condition of each to be in accordance with its assigned designation.

"The undersigned acknowledges receipt of this Certificate under NFPA 306 and understands conditions and limitations under which it was issued, and the requirements for maintaining its validity."

This Certificate is based on conditions existing at the time the inspection herein set forth was completed and is issued subject to compliance with all qualifications and instructions.

Authorized Representative	Dec 17, 2014 Date	ECI Company	Signed Marine Chemist	637 CMC No.

George D Blair - Northwest Marine Chemist, Inc.
P. O. Box 7084, Tacoma, WA 98406
Office: 253-752-0149 Fax: 253-759-3523
Email: gbcmc637@gmail.com

MARINE CHEMIST CERTIFICATE

Serial 637-00371

ECI	Breakwater Marina	Dec 19, 2014
Survey Requested by	Vessel Owner Agent	Date
Tank Farm	Underground Storage Tank	5603 N. Waterfont Drive
Vessel	Type of Vessel	Specific Location of Vessel
Gasoline, Diesel	O_2, LEL, Visual	11:07
Last Three 3 Loadings	Tests Performed	Time Survey Completed

Inspected Spaces:

Group 1. 1-3,000 Gal UST'-Ex-Diesel FuelTank
1-8,000 Gal. UST-Ex-Gasoline Tank

Safety Designations:

NOT SAFE FOR WORKERS
SAFE FOR LIMITED HOT WORK
LIMITATIONS:
Specific Location: *At job site.*
Hot Work Type: *These tanks have been purged with CO2 to less than 6% Oxygen and are safe for excavation and transportation.*
INERTED
Inert Medium: *Carbon Dioxide (CO2)*
Method for maintaining safe conditions: *All openings are and must remain secured.*
Measures for safe disposal of inert gas: *Ventilate and test for 20.8% Oxygen to properly dispose of inerting gas.*

Test Results	% O_2	% LEL
Inspected spaces group 1	<6%	N/A

In the event of physical or atmospheric changes affecting the STANDARD SAFETY DESIGNATIONS assigned to any of the above spaces, this certificate is voided; spaces not listed on the Certificate are not to be entered unless authorized on another Certificate and/or maintained in accordance with OSHA 29 CFR 1915; or if in any doubt, immediately stop all work and contact the undersigned Marine Chemist. Unless otherwise stated on the Certificate, all spaces and affected adjacent spaces are to be reinspected daily or more often as necessary by the competent person or the authority having jurisdiction as applicable in support of work prior to entry or recommencement of work.

QUALIFICATIONS: Transfer of ballast, cargo, fuel or manipulation of valves or closure equipment tending to alter conditions in pipelines, tanks, or compartments subject to gas accumulation, unless specifically approved on this Certificate, requires inspection and a new Certificate for spaces so affected. All lines, vents, heating coils, valves, and similar enclosed appurtenances shall be considered "not safe" unless otherwise specifically designated. Movement of the vessel from its specific location voids the Certificate unless shifting of the vessel within the facility has been specifically authorized on this certificate.

STANDARD SAFETY DESIGNATIONS: (partial list, paraphrased from NFP 306, Subsections 4.3.1 through 4.3.6)

ATMOSPHERE SAFE FOR WORKERS: In the compartment or space so designated (a) the oxygen content of the atmosphere shall be at least 19.5 percent and not greater than 22 percent by volume, (b) the concentration of flammable materials is below 10 percent of the lower explosive limit, (c) any toxic materials in the atmosphere associated with cargo, fuel, tank coatings, inerting mediums, or fumigants are within permissible concentrations at the time of the inspection.

NOT SAFE FOR WORKERS: In the compartment or space so designated, entry shall not be permitted.

ENTER WITH RESTRICTIONS: In the compartment or space so designated, entry for work is permitted only if conditions of proper protective equipment, or clothing, or time, or all of the aforementioned, as appropriate, are as specified.

SAFE FOR HOT WORK: In the compartment or space so designated (a) the oxygen content of the atmosphere is not greater than 22 percent by volume; (b) the concentration of flammable materials in the atmosphere is less than 10 percent of the lower explosive limit; (c) the residues, scale, or preservative coatings are cleaned sufficiently to prevent the spread of fire and are not be capable of producing a higher concentration than permitted by (a) or (b), (d) all adjacent spaces, containing or having contained flammable or combustible materials shall be sufficiently cleaned of residues, scale, or preservative coatings to prevent the spread of fire, or they are inerted. Ship's fuel tanks, lube tanks, or engine room or fire room bilges, or other machinery spaces, are treated in accordance with the Marine Chemist's requirements.

SAFE FOR LIMITED HOT WORK: In the compartment or space so designated (a) portions of the space meet the requirements Safe for Hot Work and Partial Cleaning, as applicable, or (b) the space is inerted, adjacent spaces meet the requirements for Safe for Hot Work, and hot work is restricted to specific locations; (c) portions of the space shall meet the requirements for Safe for Hot Work, as applicable; and the nature or type of hot work shall be limited or restricted.

NOT SAFE FOR HOT WORK: In the compartment or space so designated, hot is not permitted.

CHEMISTS ENDORSEMENT. This is to certify that I have personally determined that all spaces in the foregoing list are in accordance with NFPA 306 Control of Gas Hazards on Vessels and have found the condition of each to be in accordance with its assigned designation.

"The undersigned acknowledges receipt of this Certificate under NFPA 306 and understands conditions and limitations under which it was issued, and the requirements for maintaining its validity."

This Certificate is based on conditions existing at the time the inspection herein set forth was completed and is issued subject to compliance with all qualifications and instructions.

Authorized Representative	Dec 19, 2014 Date	ECI Company	Signed Marine Chemist	637 CMC No.

George D Blair - Northwest Marine Chemist, Inc.
P. O. Box 7084, Tacoma, WA 98406
Office: 253-752-0149 Fax: 253-759-3523
Email: gbcmc637@gmail.com

MARINE CHEMIST CERTIFICATE

Serial 637-00372

ECI	Breakwater Marina	Dec 22, 2014
Survey Requested by	Vessel Owner Agent	Date
Tank Farm	Underground Storage Tank	5603 N. Waterfront Drive
Vessel	Type of Vessel	Specific Location of Vessel
Gasoline, Diesel	O_2, LEL, Visual	11:51
Last Three 3 Loadings	Tests Performed	Time Survey Completed

Inspected Spaces:

Group 1. 1-8,000 Gal UST'-Ex-Diesel FuelTank
1-8,000 Gal. UST-Ex-Gasoline Tank

Safety Designations:

NOT SAFE FOR WORKERS
SAFE FOR LIMITED HOT WORK
LIMITATIONS:
Specific Location: *At job site.*
Hot Work Type: *These tanks have been purged with CO2 to less than 6% Oxygen and are safe for excavation and transportation.*
INERTED
Inert Medium: *Carbon Dioxide (CO2)*
Method for maintaining safe conditions: *All openings are and must remain secured.*
Measures for safe disposal of inert gas: *Ventilate and test for 20.8% Oxygen to properly dispose of inerting gas.*

Test Results	% O_2	% LEL
Inspected spaces group 1	<6%	N/A

In the event of physical or atmospheric changes affecting the STANDARD SAFETY DESIGNATIONS assigned to any of the above spaces, this certificate is voided; spaces not listed on the Certificate are not to be entered unless authorized on another Certificate and/or maintained in accordance with OSHA 29 CFR 1915; or if in any doubt, immediately stop all work and contact the undersigned Marine Chemist. Unless otherwise stated on the Certificate, all spaces and affected adjacent spaces are to be reinspected daily or more often as necessary by the competent person or the authority having jurisdiction as applicable in support of work prior to entry or recommencement of work.

QUALIFICATIONS: Transfer of ballast, cargo, fuel or manipulation of valves or closure equipment tending to alter conditions in pipelines, tanks, or compartments subject to gas accumulation, unless specifically approved on this Certificate, requires inspection and a new Certificate for spaces so affected. All lines, vents, heating coils, valves, and similar enclosed appurtenances shall be considered "not safe" unless otherwise specifically designated. Movement of the vessel from its specific location voids the Certificate unless shifting of the vessel within the facility has been specifically authorized on this certificate.

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NOT SAFE FOR WORKERS: In the compartment or space so designated, entry shall not be permitted.

ENTER WITH RESTRICTIONS: In the compartment or space so designated, entry for work is permitted only if conditions of proper protective equipment, or clothing, or time, or all of the aforementioned, as appropriate, are as specified.

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SAFE FOR LIMITED HOT WORK: In the compartment or space so designated (a) portions of the space meet the requirements Safe for Hot Work and Partial Cleaning, as applicable, or (b) the space is inerted, adjacent spaces meet the requirements for Safe for Hot Work, and hot work is restricted to specific locations; (c) portions of the space shall meet the requirements for Safe for Hot Work, as applicable; and the nature or type of hot work shall be limited or restricted.

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This Certificate is based on conditions existing at the time the inspection herein set forth was completed and is issued subject to compliance with all qualifications and instructions.

Authorized Representative	Dec 22, 2014 Date	ECI Company	Signed Marine Chemist	637 CMC No.

Appendix E

Project Documentation

UST Decommissioning Certification (5 USTs) - ECI
UST Cleaning & Disposal (5 USTs) – Marine Vacuum Services
Dewatering Water Disposal – Marine Vacuum Services

ECI | environmental services
www.ecocononline.com

January 25, 2015

Underground Storage Tank Decommissioning Certification

This underground storage tank (UST) decommissioning statement is provided by EcoCon, Inc. (ECI) following the decommissioning of: (2)-3,000 gallon Gasoline USTs, (1)-3,000 gallon Diesel Oil UST, (1)-8,000 gallon Diesel Oil UST and (1)-8,000 gallon Gasoline UST located at 5603 N. Waterfront Dr., Tacoma, Washington. ECI issues this statement to the owner of the property, or their representative or assigns, from where the USTs were decommissioned.

ECI states this decommissioning has occurred under the supervision of an ICC Certified UST Decommissioner (WAC 173-360) following the local and state rules and regulations as defined by the Uniform Fire Code (UFC) and Washington Administrative Code (WAC).

Project Client: **Mr. Michael Marchetti**

Project Name: **UST Closure Project – Breakwater Marina, Inc.**

Project Address: **5603 N. Waterfront Dr., Tacoma, Washington**

Type of Decommissioning: **Closure by Removal**

UST Installation Date: **Varies – 1964-1976**

UST Decommissioning Date: **December 23, 2014**

Permit Issuance Date: **November 24, 2014**

UST(s) Dimensions: **3-3,000 gallon tanks, 2-8,000 gallon tanks**

UST(s) Construction: **Single Wall Steel**

Ecology UST ID: **24591, 24743, 24428, 24489, 24551**

Certified UST Decommissioner: **Brad Reilly, ECI – ICC: 8289423**

Licensed UST Site Assessor: **Gina Mulderig, ECI – ICC: 5104802**

Brad N. Reilly
ICC Certified Decommissioner

January 25, 2015
Date

Gina M. Mulderig
ICC Certified Site Assessor

January 25, 2015
Date

Marine Vacuum Service, _Inc._

GENERAL CONTRACTOR

CONTRACTORS LICENSE # MARINVS097JA

P0. Box 24263 Seattle, Washington 98124

Telephone (206) 762-0240

FAX (206) 763-8084

1-800-540-7491

STORAGE TANK

CERTIFICATE OF DESTRUCTION

DATE: 1/19/15

DOS: 12/22/14

TANK OWNER: BREAKWATER MARINA

TANK LOCATION: 5603 N. WATERFRONT DR.
TACOMA, WA

TANK DESCRIPTION: (2) 8,000 GALLON UST

LAST CONTENTS HELD IN TANKS: GAS | DIESEL

Marine Vacuum Service, Inc certifies that the tank mentioned above was pumped of all liquid materials and washed clean with a high-pressure washer and soap solution. The tank and contents therein have been disposed of according to all Local, State and Federal Regulations.

Thank you,

Marine Vacuum Service, Inc.

Marine Vacuum Service, _Inc._

GENERAL CONTRACTOR

CONTRACTORS LICENSE # MARINVS097JA

P0. Box 24263 Seattle, Washington 98124

Telephone (206) 762-0240

FAX (206) 763-8084

1-800-540-7491

STORAGE TANK

CERTIFICATE OF DESTRUCTION

DATE: 1/19/2015

DOS: 12/18/2014

TANK OWNER: BREAKWATER MARINA

TANK LOCATION: 5603 N WATERFRONT DR.
TACOMA, WA

TANK DESCRIPTION: (1) 3,000 GALLON UST

LAST CONTENTS HELD IN TANKS: GAS/DIESEL

Marine Vacuum Service, Inc certifies that the tank mentioned above was pumped of all liquid materials and washed clean with a high-pressure washer and soap solution. The tank and contents therein have been disposed of according to all Local, State and Federal Regulations.

Thank you,

Marine Vacuum Service, Inc.

Marine Vacuum Service, _Inc._

GENERAL CONTRACTOR

CONTRACTORS LICENSE # MARINVS097JA

P0. Box 24263 Seattle, Washington 98124

Telephone (206) 762-0240

FAX (206) 763-8084

1-800-540-7491

STORAGE TANK

CERTIFICATE OF DESTRUCTION

DATE: 1/19/2015

DOS: 12/17/14

TANK OWNER: BREAKWATER MARINA

TANK LOCATION: 5603 N. WATERFRONT DR.
TACOMA, WA

TANK DESCRIPTION: (2) 3,000 GAL UST

LAST CONTENTS HELD IN TANKS: GAS / DIESEL

Marine Vacuum Service, Inc certifies that the tank mentioned above was pumped of all liquid materials and washed clean with a high-pressure washer and soap solution. The tank and contents therein have been disposed of according to all Local, State and Federal Regulations.

Thank you,

Marine Vacuum Service, Inc.

This Shipping Order

must be legibly filled in, in Ink indelible Pencil, or in Carbon, and retained by the agent

Shipper No. 017923

Carrier No. 29

Page 1 of 1

(Name of carrier) (SCAC)

Date 12-23-14

On Collect on Delivery shipments, the letters "COD" must appear before consignee's name or as otherwise provided in Item 430, Sec.1.

TO:
Consignee Manac
Street 1516 S Graham St.
City Seattle State WA Zip Code 98108

FROM:
Shipper Ecocon mc
Street 5603 W Waterfront Dr
City Tacoma State WA Zip Code
24 hr. Emergency Contact Tel. No. 800-540-7491

Route

Vehicle Number

No. of Units & Container Type	HM	BASIC DESCRIPTION UN or NA Number, Proper Shipping Name, Hazard Class, Packing Group	TOTAL QUANTITY (Weight, Volume, Gallons, etc.)	WEIGHT (Subject to Correction)	RATE	CHARGES (For Carrier Use Only)
1 TK		oily water	2800	gal		
		29				

PLACARDS TENDERED: YES ☐ NO ☐

Note — (1) Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property, as follows: "The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding _____ per _____."
(2) Where the applicable tariff provisions specify a limitation of the carrier's liability absent a release or a value declaration by the shipper and the shipper does not release the carrier's liability or declare a value, the carrier's liability shall be limited to the extent provided by such provisions. See NMFC Item 172.
(3) Commodities requiring special or additional care or attention in handling or stowing must be so marked and packaged as to ensure safe transportation. See Section 2(e) of Item 360, Bills of Lading, Freight Bills and Statements of Charges and Section 1(a) of the Contract Terms and Conditions for a list of such articles.

I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name and are classified, packaged, marked and labelled/placarded, and are in all respects in proper condition for transport, according to applicable international and national governmental regulations.

_____ Signature

REMIT C.O.D. TO:
ADDRESS

COD Amt: $ 6 Ke

Subject to Section 7 of the conditions, if this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement.
The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges.

(Signature of Consignor)

C.O.D. FEE: PREPAID ☐ COLLECT ☐ $

TOTAL CHARGES $

FREIGHT CHARGES
FREIGHT PREPAID except when box at right is checked ☐ Check box if charges are to be collect

RECEIVED, subject to the classifications and tariffs in effect on the date of the issue of this Bill of Lading, the property described above in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned, and destined as indicated above which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed as to each carrier of all or any of, said property over all or any portion of said route to destination and as to each party at any time interested in all or any said property, that every service to be performed hereunder shall be subject to all the bill of lading terms and conditions in the governing classification on the date of shipment.
Shipper hereby certifies that he is familiar with all the lading terms and conditions in the governing classification and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns.

SHIPPER

PER

CARRIER MARINE VACUUM SERVICE, INC.

PER Ryan Hall

DATE 12-23-14

2

Permanent post-office address of shipper.