



PERIODIC REVIEW

**Marine Fluid Systems
Facility Site ID#: 76266689**

**801 NW 42nd,
Seattle, Washington**

Northwest Region Office

TOXICS CLEANUP PROGRAM

March 2010

1.0 INTRODUCTION.....	1
2.0 SUMMARY OF SITE CONDITIONS	2
2.1 Site Description and History	2
2.2 Site Investigations and Sample Results	3
2.3 Cleanup Actions	3
2.4 Cleanup Levels.....	13
2.5 Restrictive Covenant.....	14
3.0 PERIODIC REVIEW.....	16
3.1 Effectiveness of completed cleanup actions	16
3.2 New scientific information for individual hazardous substances for mixtures present at the Site	16
3.3 New applicable state and federal laws for hazardous substances present at the Site	16
3.4 Current and projected site use.....	17
3.5 Availability and practicability of higher preference technologies	17
3.6 Availability of improved analytical techniques to evaluate compliance with cleanup levels	17
4.0 CONCLUSIONS.....	18
4.1 Next Review.....	18
5.0 REFERENCES.....	19
6.0 APPENDICES.....	20
6.1 Vicinity Map	21
6.2 Site Plan	22
6.3 TPH-Dx Concentration Map.....	23
6.4 Environmental Covenant	24
6.5 Photo log	30

1.0 INTRODUCTION

This document is a review by the Washington State Department of Ecology (Ecology) of post-cleanup site conditions and monitoring data to ensure that human health and the environment are being protected at the [site name] (Site). Cleanup at this Site was implemented under the Model Toxics Control Act (MTCA) regulations, Chapter 173-340 Washington Administrative Code (WAC).

Cleanup activities at this Site were completed under the Voluntary Cleanup Program (VCP). The cleanup actions resulted in concentrations of petroleum hydrocarbons (TPH), carcinogenic polyaromatic hydrocarbons (cPAHs), and metals remaining at the Site which exceed MTCA cleanup levels. The MTCA cleanup levels for soil are established under WAC 173-340-740. The MTCA cleanup levels for groundwater are established under WAC 173-340-720. WAC 173-340-420 (2) requires that Ecology conduct a periodic review of a site every five years under the following conditions:

- (a) Whenever the department conducts a cleanup action
- (b) Whenever the department approves a cleanup action under an order, agreed order or consent decree
- (c) Or, as resources permit, whenever the department issues a no further action opinion;
- (d) and one of the following conditions exists:
 - 1. Institutional controls or financial assurance are required as part of the cleanup
 - 2. Where the cleanup level is based on a practical quantitation limit
 - 3. Where, in the department's judgment, modifications to the default equations or assumptions using site-specific information would significantly increase the concentration of hazardous substances remaining at the site after cleanup or the uncertainty in the ecological evaluation or the reliability of the cleanup action is such that additional review is necessary to assure long-term protection of human health and the environment.

When evaluating whether human health and the environment are being protected, the factors the department shall consider include [WAC 173-340-420(4)]:

- (a) The effectiveness of ongoing or completed cleanup actions, including the effectiveness of engineered controls and institutional controls in limiting exposure to hazardous substances remaining at the site;
- (b) New scientific information for individual hazardous substances of mixtures present at the site;
- (c) New applicable state and federal laws for hazardous substances present at the Site;
- (d) Current and projected site use;
- (e) Availability and practicability of higher preference technologies; and
- (f) The availability of improved analytical techniques to evaluate compliance with cleanup levels.

The Department shall publish a notice of all periodic reviews in the Site Register and provide an opportunity for public comment.

2.0 SUMMARY OF SITE CONDITIONS

2.1 Site Description and History

The subject property includes an irregular shaped parcel covering approximately 2.53 acres (110,533 square feet) of land located along the north shore of the Lake Washington Ship Canal. Approximately 10,590 square feet of the parcel are inundated by the Lake Washington Ship Canal. The western-most machine and carpenter shop building, occupied by Marine Fluid Systems, a boat repair and painting company, is located partially atop a wooden wharf, is two stories in height and was reportedly constructed in 1919. The northern-most office/warehouse building was one-story in height and was reportedly erected in 1920 of wood frame construction. The eastern-most warehouse building was one-story in height and was reportedly erected in 1942 of wood frame construction. The general storage building to the west of the eastern warehouse building was reportedly erected in the 1950s and was of wood frame construction with metal siding. Additional developments include a marine railway and winch house, and a small wooden wharf along the south side of the marine railway.

The site is utilized primarily by Marine Fluid Systems, which became the master tenant in 1997, but has maintained a shop at the property since 1994; however, the northern office warehouse was occupied by a marine software company and an ornamental iron shop at the time of Site work, while an artist (welding) and general storage occupied the eastern warehouse. General storage occurred in the central warehouse building. Electricity is utilized to provide heat to portions of each of the buildings with an above ground tank (AST) providing fuel storage for the northern office/warehouse building. Formerly, the northern office/warehouse used heating fuel stored in an approximately 300-gallon capacity underground storage tank (UST), with an AST in use located just west of the former UST location. Additionally, an approximately 1,200-gallon capacity UST was located generally at the northwest corner of the central general warehouse building. These USTs were removed in 1988, following receipt of the required permits from the Seattle Fire Department.

The Site is predominantly covered with paving of various types. Four areas of the property were unpaved including the submerged area of the property: the northwest corner of the Site, the northeast corner of the Site, and a small area south of the eastern warehouse. Within the fenced area north of the concrete paved marine railway was a large concrete pad. A concrete pad also extended several feet south of the marine railway. The southern portion of the property was paved by very tough asphaltic concrete. The eastern drive between the general storage warehouse and the eastern warehouse south to just east of the winch house was asphalt paved, as was the extreme northwest corner of the property at the entrance to the Site from Northwest 42nd Street. The drive located north of the fenced area south of the northern office/warehouse building was paved by concrete that was reportedly brought in by Salmon Bay Sand and Gravel. According to Mr. Dana Bostwick of Marine Fluid Systems, the concrete was leftover or excess concrete that was dumped at the site in small quantities of less than a few cubic yards. This concrete paving was very rough, and was not reinforced with rebar or wire mesh. Similar “patched” areas were also located south of the marine railway overlying asphaltic concrete. A small concrete patched

area was located at the northwest corner of the general storage warehouse and was thought to represent the former location of the 1,200 gallon capacity gasoline UST. A long-time Site employee, Mr. Ron Leighton, noted that the fuel pump for the tank was formerly located immediately north of the fence north of the patched area. The Site is bordered on the north by the former Birmingham Steel Ballard Mill, a former manufacturer of rolled steel and re-bar. This property was occupied by Alaska Outport Transportation, a dry goods barge company providing services to Southeast Alaska. Bowles Company NW, a plumbing supply company was located across Northwest 42nd Street from the subject Site. Northwest Nut and Bolt formerly occupied the property to the northeast of the Site. Trident Seafoods currently occupies the property to the east and southeast of the subject Site. Salmon Bay Sand and Gravel had a small storage yard east of the northeastern portion of the eastern property line. Located to the south and west of the subject Site is the Lake Washington Ship Canal.

Topographically, the site is situated on a generally level surface approximately 17 feet above sea level. Based upon inference from topography and local drainage patterns, along with information developed by the consultant, it appears that shallow seated groundwater in the vicinity of the subject property flows in a southwesterly direction perpendicular to the Ship Canal.

2.2 Site Investigations and Sample Results

Parametrix, Inc. in November 1993, presented the findings of a Phase 1 Environmental Site Assessment of the Union Bay Shipbuilding Corporation Site (the subject property was occupied by Union Bay Shipbuilding at that time) to Tippet Marine Services. Surficial and shallow soils, asphalt and concrete in at least five localities were stained with what appeared to be petroleum hydrocarbons. Parametrix opined that elevated metal concentrations from sandblasting grit may also be present at these localities. The recommendation was to excavate and dispose of the soil or treat the soil on-site.

Approximately thirty (30) to forty (40) 55-gallon capacity drums and ten (10) to twenty (20) one to five-gallon containers were stored in the northwest corner of the site, and were thought to be solvents such as methyl ethyl ketone (MEK), motor oil and water. An unknown volume of these materials was thought to have occupied this area, and the drums were not properly secured. Parametrix recommended sampling and disposal of the drums. Mr. Dana Bostwick also informed the consultant that upon Marine Fluid Systems occupancy of the property, there was a small drum storage area located east of the winch house on the unpaved portion of the property, but that no drums were located at the northwest corner of the property. Additionally, Parametrix noted that Mr. Tom Dyer of Union Bay Shipbuilding Company stated to them that soil at the northeast corner of the site had been excavated and treated on-site in 1991, but that the area had been re-contaminated since the 1991 remediation effort.

Three test pit excavations, along with soil sampling, in accessible unpaved areas at the site were completed. A very large boat was being repaired at the southeast corner of the property south of the eastern warehouse, making this portion of the site inaccessible. Six (6) soil borings, with four (4) of the borings installed as monitoring wells across the property, along with soil sampling

from each boring and groundwater sampling from the four monitoring wells were completed. Due to the presence of concrete that was impenetrable by the hollow-stem auger drilling rig at one locality, only five borings were completed. This area was subsequently evaluated using Cascade Probe technology (a Geoprobe).

During subsurface sampling at the subject Site by Environmental Associates, Inc. (EAI) varying amounts of interpreted fill materials predominantly consisting of sand, although some silts and sand with gravel were encountered. The fill was typically less than approximately 5 to 6 feet in thickness, although at boring B-4/MW-4 (near the ship canal) and at boring B-5 (near the former heating oil UST installation), the fill is interpreted to be approximately 8 feet in thickness. Below the fill material, sand, silt and clay were encountered to the maximum depth explored of 19 feet at B-1/MW-1.

Groundwater was encountered at depths of approximately 2 feet below ground surface in most of the explorations, although at B-1/MW-1, groundwater was not encountered until approximately 13 feet below ground surface. Groundwater stabilized at all wells completed at the Site at a depth of approximately 1.5 to 3.5 feet below ground surface. During the excavation activities at the Site, thin seeps were identified in the test pit exploration at the northwest corner of the property (TP-1) at a depth of approximately 3.75 feet, and at TP-2 and TP-3, several groundwater seeps were noted at depths below approximately 3 feet. These seeps were located in coarser grained soils (mainly sands), likely occur in lenses, and in the opinion of the consultant may not represent the local "water table".

Soil sampling as part of a National Pollution Discharge Elimination System (NPDES) permit application were obtained and submitted to Pacific Testing Laboratories for analyses including EP Toxicity for heavy metals, and total petroleum hydrocarbons (TPH) by an unknown methodology. Five of the samples obtained contained concentrations of TPH in excess of the Method A cleanup level published in the Model Toxics Control Act (MTCA), Chapter 173-340 WAC. The samples were located at the northeast, northwest and southeast corners of the property. Results of the EP Toxicity analyses for metals were all below the concentration at which the soil would be designated Dangerous Waste (in accordance with the Dangerous Waste Regulations of Washington State, Chapter 173-303-090 WAC). Please note that copper and zinc had elevated leachate levels. These levels were possibly a result of sand blasting grit being present in the sample with elevated copper and zinc concentrations. There is no published level at which these materials would be designated as Dangerous Wastes, based upon leachate tests.

EAI completed five (5) hollow-stem auger soil borings on April 1, 1998, four (4) of which were installed as monitoring wells, at the approximate locations noted as B-1/MW-1, B-2/MW-2, B-3/MW-3, B-4/MW-4 and B-5. The location of B-1/MW-1 was selected due to its presence at the northeast corner of the property in an up-gradient position from the majority of the Site, its location in an area of petroleum impacted soil, and due to the presence of the off-Site Northwest Nut & Bolt Leaking Underground Storage Tank facility located to the northwest of the subject property in an inferred hydrologically up-gradient position. The location of B-2/MW-2 was selected to assess groundwater quality at a location where Mr. Bostwick stated drums had been stored, and to assess groundwater quality possibly impacted by adjacent properties to the east.

The location of B-3/MW-3 was also selected to assess groundwater quality moving onto the property from properties to the north and northeast. B-4/MW-4 was located south of the marine railway to assess groundwater quality moving off the property and discharging into the Lake Washington Ship Canal. Boring B-5 was placed in close proximity to the reported location of the former heating oil UST. The hollow stem auger boring in the vicinity of the interpreted former gasoline UST could not be completed due to the presence of heavy steel used in Marine Fluid Systems' course of business; however, several soil probes (Cascade Probes) were completed in the vicinity of the interpreted former gasoline UST at a later date as described below. The maximum depth of the hollow stem auger borings was 19 feet at boring B-1. Three test pit explorations were completed at the site on May 4, 1998, following receipt of laboratory analyses of soil samples obtained during hollow stem auger drilling. TP-1 was completed at the northwest corner of the property in the vicinity of the former drum storage area noted by Parametrix, which was also an area where petroleum contamination in soil had been reported. TP-2 was located at the northeast corner of the property in another area where petroleum impacted soil was reported. TP-3 was completed at the southeast corner of the property in an area of historic drum storage and in an area where uncontrolled sandblasting grit had been present.

Following receipt of laboratory results of samples obtained from the borings and test pit excavations and with the authorization of Mr. Bostwick, on October 23, 1998, a Geoprobe or direct-push hydraulic soil sampling apparatus (Cascade Probe) was utilized to obtain samples at 13 different locations across the property. Based upon the results of laboratory analysis of soil samples completed in April and May of 1998, three soil probes (SP-1, SP-2, and SP-3) were completed in the vicinity of known hydrocarbon impacted soil at the northwest corner of the property in the vicinity of TP-1, and one soil probe (SP-5) was completed in the vicinity of MW-1 and TP-2. SP-4 was completed in the vicinity of the reported former location of the heating oil UST. SP-9 was completed adjacent to MW-4, based upon the presence of hydrocarbons in soil and groundwater at this locality. SP-10 and SP-11 were completed in the vicinity of the interpreted former location of the gasoline UST at the property. Soil probes SP-6, SP-7, SP-8, SP-12 and SP-13 were completed in areas of the property that had not been evaluated.

A single grab soil sample (SS-1) was obtained on October 23, 1998 from the vicinity of MW-1 at the northeast corner of the property at a depth of approximately one (1) foot for later analysis for polychlorinated biphenyls. This sample was obtained from close proximity to boring B-1, which contained elevated hydrocarbon concentrations at this depth. Two surficial soil grab samples were obtained from the southeast corner of the property on September 28, 1998, at the locations at the southeast edge of the property identified as GRIT-1 and GRIT-2. The soil samples contained abundant sandblasting grit. These samples were obtained due to concerns raised by the adjacent Trident Seafoods that debris cleanup activities completed by Marine Fluid Systems in this area and partially involving the Trident property had possibly adversely impacted the Trident Seafoods property. Trident noted that sandblasting grit was present in this area. The consultant for Trident had stated that "old black glass", possibly ASARCO sandblasting grit that could potentially contain elevated concentrations of lead and arsenic had been noted in this area. No "older black glass" was noted during the course of the site work.

TABLE 4: WTPH-Dx/WTPH-D Results (Soil) ¹					
Sample	Depth (feet)	Diesel Result	Oil Result	Diesel PQL	Oil PQL
B-1-1	2.5-4.0	303 ^O	870	10.0	25.0
B-4-1	2.5-4.0	245 ^O	2,440	110	275
B-5-1	2.5-4.0	1,160	Not analyzed	10.0	Not applicable
TP-1-2.25'	2.25	167 ^O	687	10.0	25.0
TP-1-3.25'	3.25	ND ²	ND	10.0	25.0
TP-2-5'	5.0	ND	ND	10.0	25.0
SP-1-1.5'	1.5	76 ^A	1,200	28	52
SP-3-2'	2.0	49 ^A	220	28	57
SP-4-5.5'	5.5	ND	ND	30	61
SP-5-1.5'	1.5	150 ^A	510	27	55
SP-6-8"	0.66	ND	ND	31	62
SP-7-1'	1.0	1,600 ^{A, S}	1,700	29	58
SP-8-6"	0.5	ND ^{A, D}	540	150	120
SP-9-1'	1.0	200 ^{A, D}	1,100	130	110
MTCA Cleanup Guideline ³		200	200	Not applicable	Not applicable
Note: Bold typeface and gray shading indicate an exceedance of the Method A cleanup guideline. 1 - All results, practical quantitation limits (PQLs) and cleanup levels given in milligrams per kilogram (mg/kg). 2 - ND indicates that the analyte was not detected above the stated Practical Quantitation Limit (PQL). 4 - Method A soil cleanup levels are published in the Model Toxics Control Act (MTCA), Chapter 173-340 WAC. O - The laboratory reports that the diesel result is elevated due to overlap from oil-range hydrocarbons. A - The laboratory reports that the sample underwent acid cleanup procedures. S - The laboratory reports that surrogate recovery data not available due to coelution of target compounds. D - The laboratory reports that surrogate recovery data not available due to necessary dilution of the sample.					

The laboratory testing results of the submitted soil samples, as summarized in the table above confirm that concentrations of diesel and oil range petroleum hydrocarbons were present in several samples above the Ecology Method A cleanup level:

- Samples obtained from the unpaved northeast corner of the property contain concentrations of diesel and oil range hydrocarbons. Based upon the results of analysis of samples B-1-1 (at a depth of 2.5 feet), TP-2-5' (at a depth of 5 feet), and SP-5-1.5' (at a depth of 1.5 feet), it would appear that the petroleum contamination in this area is limited to soil from the ground surface to a maximum depth of 5 feet. Also, it would appear that these soils are predominantly impacted by oil range petroleum hydrocarbons, with concentrations less than approximately 2,500 milligrams per kilogram (mg/kg).
- Samples obtained from the unpaved northwest corner of the property contain oil range hydrocarbons at concentrations above the Method A cleanup level (diesel results were below the cleanup level). Based upon the results of analysis of samples TP-1-2.25, TP-1-3.25', SP-1-1.5' and SP-3-2' (at the depths indicated by the last number in the sample name), it would appear that the petroleum hydrocarbons in soil exceeding the Method A cleanup level at the northwest corner of the property impact soil only at depths shallower than approximately 3.25 feet, with concentrations not exceeding approximately 1,400 mg/kg.

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- Results of analysis of soils obtained from the vicinity of the heating oil UST (Samples B-5-1 at a depth of 2.5 feet and SP-4-5.5') suggest that diesel-range contamination above the Method A cleanup level may be limited to approximately the upper 5 feet of soil. The petroleum hydrocarbons present in soil at this location are predominantly diesel range hydrocarbons. The petroleum contamination at this locality may be a result of surface spillage and/or overfill of the former UST and/or the current above-ground tank in this area.
 - The results of analysis of soil samples obtained from the southern portion of the property (samples B-4-1 at a depth of 2.5 feet, SP-7-1', SP-8-6'', and SP-9-1) suggest that a combination of diesel and/or oil range petroleum residues are present in shallow soil across this portion of the property at concentrations above the Method A cleanup level. Visual and olfactory observations of soil during sampling of these borings/soil probes suggests that the petroleum hydrocarbons are limited to the upper approximately 5 feet.
 - Soil at the southeastern edge of the property does not appear to contain detectable petroleum hydrocarbons, based upon analysis of samples B-2-2 at a depth of 5 feet and SP-6-8''.
 - Soil samples obtained from across the central portion of the property at depths ranging from 1 foot to 5 feet (SP-12-1', SP-12-5', and SP-13-2.75') do not appear to contain detectable concentrations of petroleum hydrocarbons based upon the results of Washington TPH identification (WTPH-HCID) analyses.
 - The UST which was formerly located at the northwest corner of the general storage warehouse was used to store gasoline in the course of its useful life, so selected samples from soil probes SP-1- and SP-11 completed in this area were submitted for analysis for gasoline and gasoline constituents benzene, toluene, ethylbenzene, and xylenes (BTEX). Test results indicated no detectable contaminants.

The consultant recommended Ecology's risk-based approach for setting cleanup levels (please see Section 2.4 below). Ballard Land Management accepted the recommendation to evaluate the petroleum impacted soil discovered during boring and test pit excavations, and several samples obtained during subsequent soil probe sampling were submitted to the project laboratory for extended and volatile petroleum hydrocarbon (EPH/VPH) testing:

- A sample obtained from soil Probe SP-2 at a depth of 3 feet, approximating the depth at which diesel range petroleum hydrocarbons were detected in a soil sample obtained from test pit TP-1 at a depth of 2.25 feet (the northwest corner of the property).
- A sample obtained from SP-4 at a depth of 2 feet, in very close proximity to the locality at which diesel range petroleum hydrocarbons were detected at a depth of approximately 2.5 feet at boring B-S. These borings/soil probes were very close to the reported former location of the heating fuel UST.
- A sample obtained from soil probe SP-9 at a depth of 3.5 feet. This sample was obtained from within six feet of boring/monitoring well MW-4, which contained elevated diesel and oil range petroleum hydrocarbon concentrations at a depth of approximately 2.5 feet. The soil sample submitted from SP-9 for analysis also exhibited obvious visual and olfactory indications of petroleum contamination at a depth of between 3.5 and 4.0 feet.

- A sample obtained from soil probe SP-10 at a depth of 5.5 feet. This sample was obtained from within one foot of the interpreted former location of the gasoline UST. This sample was submitted for analysis due to a faint to moderate odor of petroleum hydrocarbons in soil at this location from a depth of approximately 5.5 feet to approximately 6.5 feet.
- A surficial soil sample obtained from the northeast corner of the property (sample SS- 1) was submitted for analysis due to the presence of petroleum hydrocarbons reported at this location by previous workers (the former site owner) and the finding of petroleum contamination in this vicinity during our test pit and hollow stem auger boring sampling and analysis performed earlier in 1998. Soils at the northeast corner of the property appear to be impacted by petroleum hydrocarbons from approximately the ground surface to a depth of approximately three feet.

Following advancement and sampling of the soil probes, selected samples from depths at which hydrocarbons had been encountered at elevated concentrations were submitted to the project laboratory for analysis performed in accordance with Ecology EPH/VPH methodology. Additionally, these samples were also analyzed for PAHs performed in accordance with EPA Method 8270C. Samples obtained from the northeast, northwest, and southwest portions of the property which exhibited visual and olfactory indications of significant contamination by petroleum hydrocarbons (typically in the oil range at these portions of the property) were analyzed for the presence of PCBs using EPA Method 8082. The results show that concentrations Aroclor 1254 and Aroclor 1260 are present in detectible concentrations in sample SP-2-3', and Aroclor 1254 was detectible in sample SS-1. Sample SP-9-3.5' did not contain detectible concentrations of PCBs. The detected concentrations in SP-2-3 and SS-1 are well below the Method A cleanup levels for both residential and industrial soils. Additionally, the total concentration of PCBs in these samples was below the Method A (residential and industrial) cleanup levels. No additional characterization for PCBs at the Site appeared to be warranted.

Samples submitted for analysis for EPH and VPH analyses for hydrocarbons were also analyzed for the presence of polynuclear aromatic hydrocarbons (PAHs). Several non-carcinogenic PAHs were detected in samples SP-2-3' and SS-1. None of the non-carcinogenic PAHs exceed their respective cleanup guidelines. Similarly, carcinogenic PAHs (cPAHs) were only detected in samples SP-2-3' and SS-1. While several of the cPAHs exceed the Method B cleanup guideline, the total (the summation) of the cPAHs in each sample is well below the Method A Industrial cleanup guideline. The consultant felt it was unlikely that cPAHs are present in site soil in the study area at concentrations exceeding the Method A Industrial cleanup guideline of 20.0 mg/kg, considering that soil sample SP-2-3 would appear to represent a "worst case" scenario, based upon the Ecology Method Washington TPH-Diesel (WTPH-Dx) data obtained during this study.

Finally, samples SP-2-3', SP-4-2', SP-9-3.5', SP-10-5.5' and SS-1 were submitted for petroleum hydrocarbon analysis performed using Ecology's EPH/VPH methodology. The EPH/VPH analysis (Method B TPH cleanup) for sample SP-2-3' would pass only for commercial or industrial uses since the calculated residential risk is above 1×10^{-6} (or 1E-06), the allowable risk for residential properties. Sample SP-4-2', would appear to pass for residential, commercial or industrial uses as the Hazard Quotient (HQ) is below one (1) in each case, and the risk is below 1×10^{-6} (or 1E-06) for residential use and 1×10^{-5} (or 1E-05) commercial or industrial uses. The

results for sample SP-9-3 .5', fails for residential and commercial uses, as the HQ for these uses exceeds one (1), but would pass for industrial uses. Sample SP-10-5.5' would appear to pass for all uses, similar to sample SP-4-2'. The results of sample SS-1 fails for residential and commercial uses since the risk posed by the cPAHs is greater than 1×10^{-6} for residential uses and 1×10^{-5} for commercial uses, but would pass for industrial uses. Also, all five samples would appear to pass the soil to groundwater pathway "test," since the concentration calculated for each sample is less than or equal to 0.1 milligrams per liter (mg/l), well below the 1.0 mg/l threshold for use of the TPH Method B cleanup.

Based upon EPH/VP/PAH laboratory analyses and Ecology published evaluation of the samples as summarized above, the surficial petroleum impacted soil at the Site required no further cleanup or assessment using the TPH Method B cleanup. This methodology does not take into account the vapor pathway for potential impacts. Considering that no enclosed basements are located on or near the subject Site, and the contaminants are not volatile, the vapor pathway was not considered to be an issue at this cleanup. Also, considering that almost the entire site is paved, the potential for impacts to surface water would also appear to be relatively low. Mr. Bostwick of Ballard Land Management/ Marine Fluid Systems has stated that should he purchase the property, his plan is to pave the remaining exposed soil areas of the site, thereby further reducing any additional potential impacts to surface water quality, if any exist.

Several soil samples obtained from across the property were submitted to the project laboratory for analysis for total metals including arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver (RCRA Metals) using inductively coupled plasma (ICP) and atomic absorption (AA) performed in accordance with EPA Method 6000/7000 series analyses. Soil samples selected for analysis included surficial samples obtained from borings B-1 and B-2, shallow soil samples obtained from B-4, samples obtained from varying depths at TP-1, and samples obtained from TP-2 and TP-3. Additionally, attempting to respond to concerns raised by Trident Seafoods regarding cleanup of soil and sandblasting grit stored by Marine Fluid Systems on a very small portion of the adjacent Trident property, two samples (GRIT-1 and GRIT-2) of surficial soil consisting predominantly of sandblasting grit were composited at the project laboratory and analyzed for total metals. None of the samples analyzed contain concentrations of metals in excess of the applicable MTCA Method A Industrial or Method B cleanup levels. Selenium and silver were not detected in any of the analyzed samples, and mercury was detected in only two of the analyzed samples. Only one sample (TP-3-1') contained an "elevated" arsenic concentration, and two samples (TP-1-2.25' and TP-3-1') contained "elevated" lead concentrations, however, these concentrations are well below the Method A Industrial cleanup levels for arsenic and lead. Sample B-1-S obtained from the ground surface at the northeast corner of the property contained a concentration of mercury (0.908 mg/kg) approaching the cleanup level (1.0 mg/kg), but considering that the other sample obtained from this area (TP-2-5') did not contain detectable concentrations of mercury, the consultant felt that this occurrence in sample B-1-S may not be representative of general shallow soil conditions at the northeast corner of the property. Additionally, the two samples of soil containing abundant sandblasting grit (GRIT- 1 and GRIT-2) did not contain "elevated" concentrations of any metal included in the analysis. In an effort to confirm that the sandblasting grit containing soils would not be considered "dangerous waste" if removed from the property, the composite grit sample was

submitted for analysis using the Toxics Characteristic Leachate Procedure (TCLP) performed in accordance with EPA Method 1311/6010B/7470A. Based upon the results of the TCLP analysis of the abundant grit-containing soils, the grit containing soils at the southeast corner of the property would not be considered “dangerous waste” if removed from the property. The soils also appeared to be unregulated under the Model Toxics Control Act, as these soils also did not exhibit concentrations of metals above the MTCA cleanup level. Regardless, removal and placement of these soils on non-industrial properties was not recommend; rather, the consultant recommended that the soils remain at the Site. Similarly, it would appear that the sandblasting grit currently in use at the Site was not considered dangerous waste if removed from the property during regular maintenance/cleanup activities performed by Marine Fluid Systems.

Selected samples from the reported drum storage areas at the Site (Parametrix, 1993), were submitted to the project laboratory for analysis for volatile organic compounds (VOCs) using gas chromatography performed in accordance with EPA Method 8260B. Samples selected for analysis were chosen based upon odor (if any), proximity to the water table/seeps, or proximity to a relatively impermeable clay layer. The Method 8260B includes analysis for over 64 chlorinated and non-chlorinated compounds. VOCs are not detectible in any of the samples analyzed with the exception of sample B-2-2, completed at the southeastern edge of the property. The concentrations detected in sample B-2-2 obtained from a depth of 5.0 feet are all well below their respective cleanup levels, if available. Typically, when cleanup levels are not available, it is because there is insufficient toxicology data in the published literature to develop a reference dose used in the calculation of Method B cleanup levels. A possible candidate source for the VOCs detected in sample B-2-2 could be the reported drum storage that occurred in the area of boring B-2 during the occupancy of the property by Union Bay Shipbuilding Company. It was decided that no additional characterization of soil at the property for the presence of VOCs was warranted.

Four (4) of the borings were completed as monitoring wells in an effort to determine groundwater quality beneath the site. Groundwater occurs at a depth of less than approximately 5 feet below ground surface; therefore, the monitoring well borings were completed to a depth of between 12 and 19 feet, with the screened interval placed from the base of the borings to within approximately 3 feet to 7 feet of the ground surface.

The potential contaminants at the site have been identified as consisting predominantly of metals, volatile organic compounds (VOCs), and petroleum products. The following paragraphs summarize the results of laboratory analyses of groundwater for these potential contaminants. On May 6, 1998, following depth to water measurement and developmental purge bailing as described previously, groundwater samples were obtained from each well and submitted to the laboratory for analysis performed in accordance with Ecology Method Washington TPH-Diesel (WTPH-Dx), since only diesel and oil range petroleum hydrocarbons were detected in soil samples at the site. Groundwater at monitoring wells MW-1 and MW-3 did not contain detectible concentrations of petroleum hydrocarbons in the diesel and oil boiling ranges. Groundwater at MW-2 and MW-4 do not contain detectible concentrations of oil boiling range hydrocarbons; however, petroleum hydrocarbons as diesel were detected at concentrations below the MTCA Method A cleanup level. Based upon these results, groundwater at the site has not

been significantly impacted by petroleum hydrocarbons in the diesel and/or oil boiling ranges possibly related to either surficial petroleum spillage or the former on-site underground storage tanks.

Metals groundwater samples obtained on May 6, 1998 were submitted to the laboratory for analysis for total and dissolved metals including arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver (RCRA Metals) using inductively coupled plasma (ICP) and atomic absorption (AA) performed in accordance with EPA Method 6000/7000 series analyses. Groundwater at all four monitoring wells on the property did not contain detectible concentrations of cadmium, lead, mercury, and silver, either total or dissolved. Dissolved chromium was consistently detected at very low concentrations in all four samples, but was not detected on a totals basis. This is possibly the result of sampling methodology, which included preservation of the field filtered (through a 0.45 micrometer membrane) sample with nitric acid (HNO₃), which could possibly leach chromium from any remaining suspended sediment following filtration. Selenium was detected only in the sample obtained from MW-1, and similar to chromium, was only identified in the dissolved sample, however, the dissolved concentration is well below the MTCA Method B cleanup level. Arsenic and barium were consistently detected in groundwater obtained from all wells, with the exception of the total barium concentration in groundwater obtained from MW-4, which was not detected. Excluding the total arsenic concentration in groundwater at MW-3, none of the total or dissolved concentrations of arsenic and barium reported exceed the respective cleanup levels for arsenic and barium. The total concentration of arsenic at MW-3, 7.59 micrograms per liter (ug/l), is only slightly in excess of the cleanup level (5.0 ug/l), however, the dissolved concentration is below the current 5.0 ug/l MTCA Method A cleanup level.

Based upon these results, groundwater at the subject site has not been significantly impacted by metals. It was decided that no further characterization of site groundwater would be warranted with respect to total or dissolved metals.

Volatile Organic Compounds (VOCs) identified at the drum storage areas (Parametrix, 1992), and the use of certain paint thinners at the property currently and in the past, caused groundwater samples to be obtained, and they were submitted to the project laboratory for analysis for VOCs using gas chromatography performed in accordance with EPA Method 8260B. The Method 8260B includes analysis for over 64 chlorinated and non-chlorinated compounds. None of the 64 VOCs were detected in groundwater obtained from any of the monitoring wells completed at the property. Based upon the absence of detectible concentrations of VOCs in groundwater obtained from the Site, it would appear that no additional characterization of groundwater with respect to VOCs was warranted.

2.3 Cleanup Actions

The consultant formed the following conclusions:

- Soil at the subject property had not been impacted above the MTCA Method A Industrial cleanup levels by volatile organic compounds (VOCs). Trace concentrations of several

VOCs including xylenes, 4-chlorotoluene, ethylbenzene, and 1,2,4-trimethylbenzene, were detected at a single locality at the property (boring B-2-2 at a depth of 5 feet); however, the concentrations were well below the MTCA Method A cleanup level.

- Soil beneath the Site did not contain concentrations of metals in excess of their respective MTCA Method A Industrial or Method B cleanup levels. Additionally, sandblasting grit in soils located predominantly at the southeast corner of the property did not appear to contain leachable concentrations of metals in excess of the Dangerous Waste Regulations, Chapter 173-303 WAC. The current sandblasting grit in use at the subject property also does not contain concentrations leachable metals. Soil and sandblasting grit at the property would not be designated as hazardous or dangerous waste if removed from the property. Removal of soil from the property was not recommend, however, since certain metals concentrations (arsenic and lead) are in excess of the MTCA Method A residential cleanup levels.
- Polynuclear aromatic hydrocarbons (PAHs) were present at several (predominantly surficial) localities across the property, and may be present at any locality exhibiting elevated hydrocarbon concentrations. The non-carcinogenic PAHs at all of the localities analyzed were well below their respective Method B cleanup levels. The carcinogenic PAHs that were detected were present at concentrations exceeding the Method B cleanup level; however, the total concentration of carcinogenic PAHs detected at two localities (SP-2 at the northwest corner of the property and SS- 1 at the northeast corner of the property) are below the MTCA Method A Industrial cleanup guideline. Additionally, analysis of these samples using the MTCA Method B petroleum cleanup method suggests that the presence of these carcinogenic PAH compounds would not present a significant risk to human health or the environment or present the potential for impacts to groundwater.
- Soil at the subject property that was impacted by oil-range hydrocarbons did not appear to contain concentrations of polychlorinated biphenyls in excess of the MTCA Method A industrial or residential cleanup guidelines.
- Soil in the vicinity of the reported former location of a 1,200 gallon gasoline underground storage tank did not contain detectible concentrations of gasoline-range petroleum hydrocarbons or BTEX constituents.
- Groundwater at the subject property did not appear to be impacted by metals, volatile organic compounds, or petroleum hydrocarbons in concentrations exceeding their respective MTCA Method A or Method B cleanup guidelines for groundwater. Volatile organic compounds were not detectible at any of the four monitoring wells at the subject property, and with the exception of arsenic at MW-3, metal concentrations (both total and dissolved) are well below the respective Method A or Method B cleanup guidelines. Dissolved arsenic was not present at a concentration exceeding the Method A cleanup guideline at MW-3 and the total concentration of arsenic was only slightly in excess (7.59 ug/l) of the Method A cleanup guideline for arsenic (5.0 ug/l). Petroleum hydrocarbons were detected at two of the monitoring wells at the property (MW-2 and MW-4); however, the concentrations reported (0.468 mg/l at MW-2 and 0.731 mg/l at MW-4) were well below the MTCA Method A cleanup guideline of 1.0 mg/l.
- Soil at the site at several localities contained concentrations of petroleum hydrocarbons in excess of the MTCA Method A cleanup level. These localities were the northeastern and

northwestern unpaved areas of the property, in the immediate vicinity of the heating oil above ground storage tank/former heating oil UST location, and along the southern boundary of the property. The depth of petroleum contamination did not appear to exceed approximately four feet along the southern side of the property and in the vicinity of the heating oil above-ground tank. The contamination at the northeastern and northwestern unpaved portions of the property did not appear to extend below depths of approximately 5 feet and 3.25 feet, respectively. The contamination is predominantly in the diesel and oil boiling ranges, with primarily diesel-range hydrocarbons in soil in the vicinity of the above- ground heating fuel tank.

The source for the diesel and oil range hydrocarbons at all localities identified was likely the result of surface spillage/releases. This would appear to be supported by the information provided by Dana Bostwick, who related to us that diesel engines were formerly stored at both the northeastern and northwestern corners of the site. Along the southern portion of the property, surface spillage/releases and/or petroleum impacted fill material were likely responsible for the hydrocarbon contamination. The maximum concentration reported using WTPH-Dx was 2,440 mg/kg at B-4-1, and the maximum concentration reported by EPH/VPH methodology was 22,000 mg/kg at SP-9, which were both located along the southern side of the property. It would therefore appear that impacts to soil by petroleum hydrocarbons are greatest south of the marine railway. The EPH/VPH laboratory results suggest that the highest concentrations occur as C21 and higher hydrocarbons, which corresponds to the oil boiling range.

The sampling and analysis completed in accordance with the Interim and Interpretive Policy Statement - Cleanup of Total Petroleum Hydrocarbons using the industrial land risk assessment and hazard quotient has documented that these shallow-seated petroleum impacted soils present little potential for additional impacts to groundwater or human health. For this reason, the no further action alternative with regard to the shallow petroleum impacted soil at the property was considered to satisfy the intent of the Model Toxics Control Act, and be protective of health, and groundwater.

2.4 Cleanup Levels

Following receipt of the initial laboratory testing of soil samples obtained from test pit excavations and borings, petroleum contamination at the site was determined to be relatively low level, and limited to diesel and oil range petroleum hydrocarbons. The consultant recommended that Ballard Land Management consider implementation of the Ecology's Interim Interpretive and Policy Statement - Cleanup of Total Petroleum Hydrocarbons (Ecology, January 1997, Publication No. ECY97-600). This method was commonly referred to as the Method B TPH cleanup approach. This risk-based approach accepted by Ecology is accomplished by analyzing and assigning risk to the various fractions of petroleum hydrocarbon products. Under the interim TPH Policy, hydrocarbons are divided into two major fractions: aliphatic hydrocarbons (hydrocarbons with straight carbon chains), and aromatics (hydrocarbons consisting of six-carbon ring structures). Each of these fractions is then subdivided into smaller fractions defined by the number of carbon atoms in the structure. Each of these hydrocarbon fractions is then represented by a surrogate compound for which toxicology data has been established/adopted by

Ecology. The risk posed by each of these fractions is therefore represented by the risk posed by the surrogate compound representing that fraction. The risk for direct human contact with the impacted soil and the risk to groundwater are evaluated by entering the concentration of each fraction into a worksheet provided by Ecology. Additionally, the direct human contact risk calculation evaluates the risk posed depending upon the type of land use (residential, commercial, industrial). Finally, as a part of the Ecology Method B TPH cleanup approach, laboratory analysis for the presence of polynuclear aromatic hydrocarbons (PAHs) is required. The results of the analysis for carcinogenic PAHs (cPAHs) for each sample are also used in calculating the risk presented by the petroleum-impacted soil.

According to the City of Seattle Department of Construction and Land Use Zoning Map, the subject property is zoned as general industrial, which provides the basis for the use of the Method B cleanup levels used in this report in accordance with the Model Toxics Control Act (MTCA), Chapter 173- 340 WAC; however, where applicable, the MTCA Method A Industrial cleanup guidelines were utilized.

2.5 Restrictive Covenant

Based on the Site use, surface cover and cleanup levels, it was determined that the Site was eligible for a 'No Further Action' determination if a Restrictive Covenant was recorded for the property. A Restrictive Covenant was recorded for the Site in 1999 which imposed the following limitations:

Section 1. The Property shall be used only for traditional industrial uses, as described in RCW 70 1 05D 020(23) and defined in and allowed under the City of Seattle's zoning regulations codified in the Municipal Code of the City of Seattle, Title 23, Land Use Code, as of the date of the Restrictive Covenant.

Section 2. Any activity on the Property that may interfere with the integrity of the Remedial Action and continued protection of human health and the environment is prohibited.

Section 3. Any activity on the Property that may result in the release or exposure to the environment of a hazardous substance that remains on the Property as part of the Remedial Action, or create a new exposure pathway, is prohibited without prior written approval from Ecology.

Section 4. The owner of the Property must give thirty (30) day advance written notice to Ecology of the Owner's intent to convey any interest in the Property. No conveyance of title, easement, lease, or other interest in the Property shall be consummated by the Owner without adequate and complete provision for continued monitoring, operation, and maintenance of the Remedial Action.

Section 5. The owner must restrict leases to uses and activities consistent with the Restrictive Covenant and notify all lessees of the restrictions on the use of the Property.

Section 6. The owner must notify and obtain approval from Ecology prior to any use of the Property that is inconsistent with the terms of this Restrictive Covenant. Ecology may approve any inconsistent use only after public notice and comment.

Section 7. The owner shall allow authorized representatives of Ecology the right to enter the Property at reasonable times for the purpose of evaluating the Remedial Action, to take samples,

to inspect Remedial Actions conducted at the property, and to inspect records that are related to the Remedial Action.

Section 8. The owner of the Property reserves the right under WAC 173-340-440 to record an instrument that provides that this Restrictive Covenant shall no longer limit use of the Property or be of any further force or effect. However, such an instrument may be recorded only if Ecology, after public notice and opportunity for comment, concurs.

The Restrictive Covenant is available as Appendix 6.4.

3.0 PERIODIC REVIEW

3.1 Effectiveness of completed cleanup actions

The Restrictive Covenant for the Site was recorded and is in place. This Restrictive Covenant prohibits activities that will result in the release of contaminants at the Site without Ecology's approval, and prohibits any use of the property that is inconsistent with the Covenant. This Restrictive Covenant serves to ensure the long term integrity of the remedy.

Based upon the site visit conducted on March 17, 2010, the remedy at the Site continues to eliminate exposure to contaminated soils by ingestion and contact. The asphalt appears in satisfactory condition and no repair, maintenance, or contingency actions have been required. The Site is still operating as a marine repair and maintenance facility. A photo log is available as Appendix 6.5.

Soils with TPH concentrations higher than MTCA cleanup levels are still present at the Site. However, the remedy (a cap of Site structures and pavement, and industrial use) prevent human exposure to this contamination by ingestion and direct contact with soils. The Restrictive Covenant for the property will ensure that the contamination remaining is contained and controlled.

3.2 New scientific information for individual hazardous substances for mixtures present at the Site

There is no new scientific information for the contaminants related to the Site.

3.3 New applicable state and federal laws for hazardous substances present at the Site

The cleanup at the site was governed by Chapter 173-340 WAC (1996 ed.). WAC 173-340-702(12) (c) [2001 ed.] provides that,

“A release cleaned up under the cleanup levels determined in (a) or (b) of this subsection shall not be subject to further cleanup action due solely to subsequent amendments to the provision in this chapter on cleanup levels, unless the department determines, on a case-by-case basis, that the previous cleanup action is no longer sufficiently protective of human health and the environment.”

Although cleanup levels changed for petroleum hydrocarbon compounds as a result of modifications to MTCA in 2001, contamination remains at the site above the new MTCA Method A and B cleanup levels. Even so, the cleanup action is still protective of human health and the environment. A table comparing MTCA cleanup levels from 1991 to 2001 is available below.

Analyte	1991 MTCA Method A Soil Cleanup Level (ppm)	2001 MTCA Method A Soil Cleanup Level (ppm)	1991 MTCA Method A Groundwater Cleanup level (ppb)	2001 MTCA Method A Groundwater Cleanup Level (ppb)
Cadmium	2	2	5	5
Lead	250	250	5	15
TPH	NL	NL	1000	NL
TPH-Gas	100	100/30	NL	1000/800
TPH- Diesel	200	2000	NL	500
TPH-Oil	200	2000	NL	500

NL = None listed

3.4 Current and projected site use

The Site is currently used for commercial and industrial purposes. There have been no changes in current or projected future site or resource uses.

3.5 Availability and practicability of higher preference technologies

The remedy implemented included containment of hazardous substances, and it continues to be protective of human health and the environment. While higher preference cleanup technologies may be available, they are still not practicable at this Site.

3.6 Availability of improved analytical techniques to evaluate compliance with cleanup levels

The analytical methods used at the time of the remedial action were capable of detection below selected site cleanup levels. The presence of improved analytical techniques would not affect decisions or recommendations made for the site.

4.0 CONCLUSIONS

The following conclusions have been made as a result of this periodic review:

- The cleanup actions completed at the Site appear to be protective of human health and the environment.
- Soils cleanup levels have not been met at the standard point of compliance for the Site, or do not meet residential standards; however, the cleanup action has been determined to comply with cleanup standards since the long-term integrity of the containment system is ensured, and the requirements for containment technologies are being met.
- The Restrictive Covenant for the property is in place and continues to be effective in protecting public health and the environment from exposure to hazardous substances and protecting the integrity of the cleanup action.

Based on this periodic review, the Department of Ecology has determined that the requirements of the Restrictive Covenant continue to be met. No additional cleanup actions are required by the property owner. It is the property owner's responsibility to continue to inspect the site to assure that the integrity of the remedy is maintained.

4.1 Next Review

The next review for the site will be scheduled five years from the date of this periodic review. In the event that additional cleanup actions or institutional controls are required, the next periodic review will be scheduled five years from the completion of those activities.

5.0 REFERENCES

Subsurface Environmental Study, Marine Fluid Systems, 801 Northwest 42nd Street, Seattle (Ballard), Washington, prepared for Dana Bostwick, Ballard Land Management, Roy, WA, by Environmental Associates, Inc , Bellevue, WA, March 17, 1999;

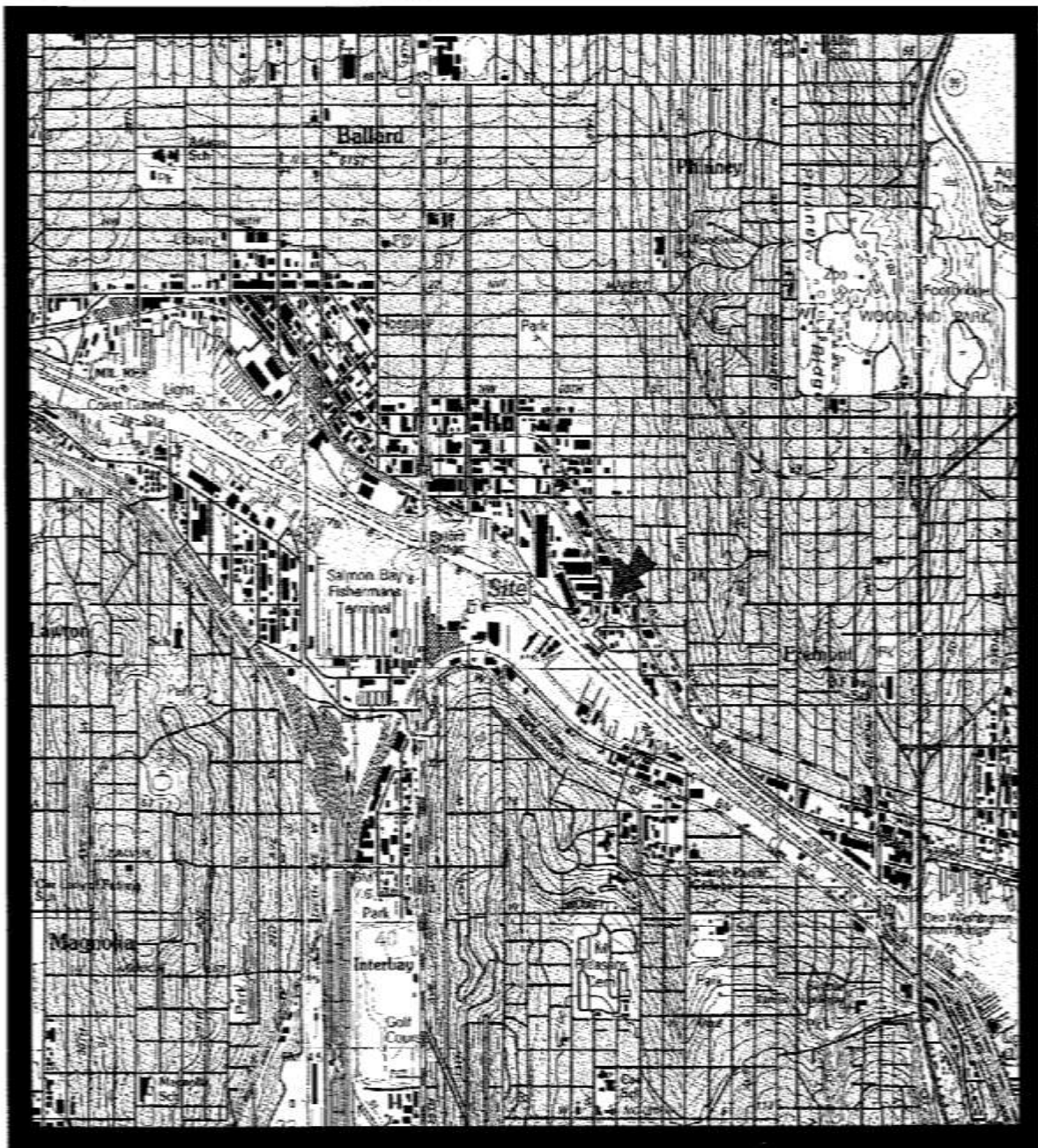
Parametrix, November 1993, Phase 1 Environmental Site Assessment, Union Bay Shipbuilding Corporation Site, 801 Northwest 42nd Street, Seattle, Washington 98107;

1999 Restrictive Covenant.

Ecology, 2010, Site Visit.

6.0 APPENDICES

6.1 Vicinity Map



(Source: USGS, 1983, Seattle North, WA 7.5x15 Minute (1:25,000 scale) Quadrangle. From aerial photographs obtained in 1977, 1 sheet. Contour Interval = 5 meters (16.4 feet) feet)



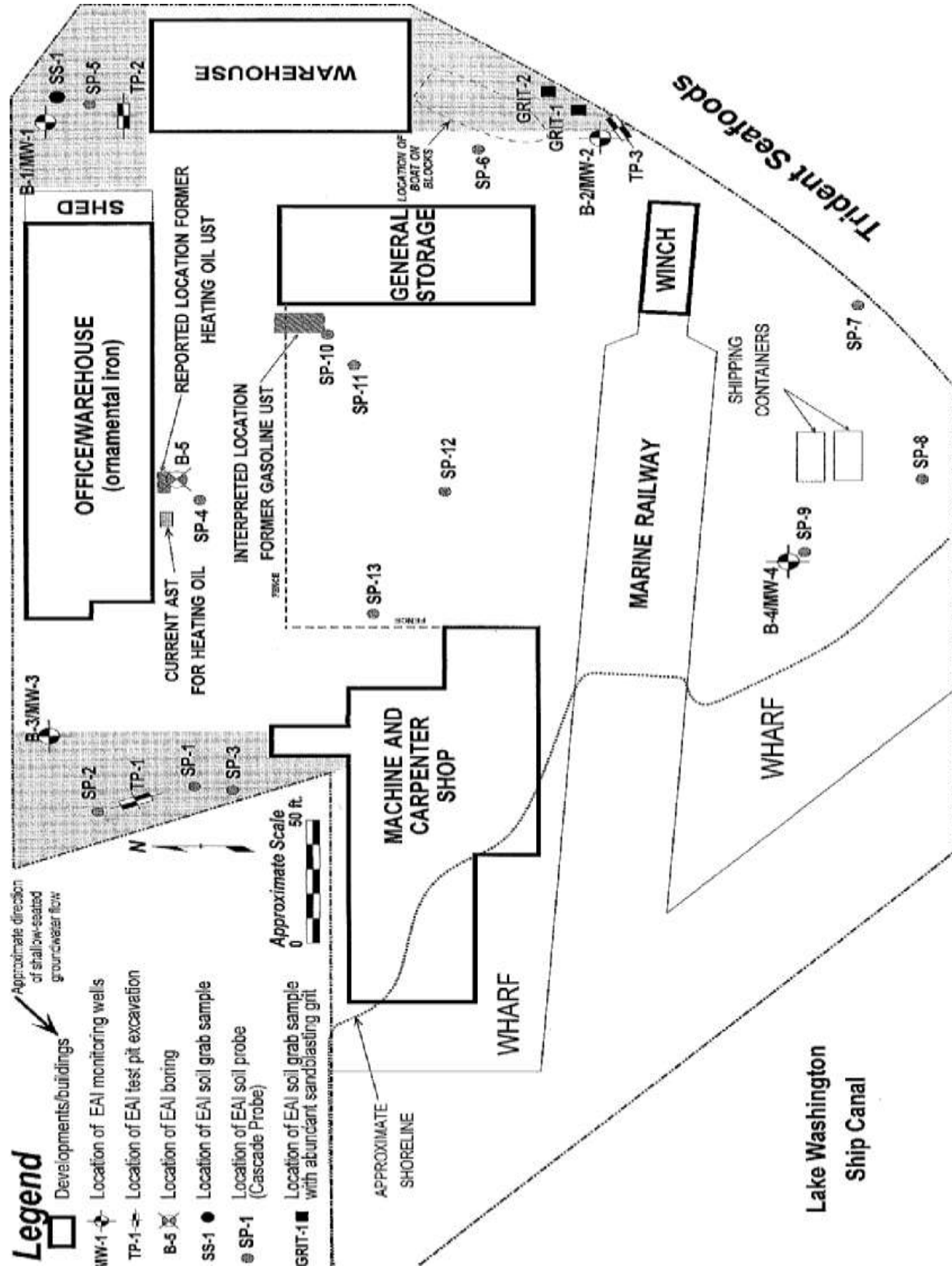
Probable Direction of Shallow-Seated Groundwater Flow

Scale

0 1/2 1 mile



6.2 Site Plan



6.3 TPH-Dx Concentration Map

not available

6.4 Environmental Covenant

1999 121 7001233

WHEN RECORDED RETURN TO:
ROBERT L. DENORMANDIE JR.
YOUNG, DENORMANDIE & OSCARSSON
1191 2ND AVENUE, SUITE 1901
SEATTLE, WA 98101

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REFERENCE NUMBER(s) OF DOCUMENT ASSIGNED OR RELEASED:
☐ Additional reference numbers on page ____ of document

GRANTOR(s) :

1 FLORENCE J. EVANS
2
3

☐ Additional names on page ____ of document

GRANTEE(s) :

1 STATE OF WASHINGTON DEPT. OF ECOLOGY
2
3

☐ Additional names on page ____ of document

ABBREVIATED LEGAL DESCRIPTION:

LOTS 3-6, BLOCK 1, SEATTLE TIDE LANDS AND A PORTION OF GOVERNMENT LOT 3 IN THE NORTHWEST QUARTER OF 13-25-3, TGM VAC STREETS ADJ.

☐ Complete legal description is on page ____ of document

ASSESSOR'S PROPERTY TAX PARCEL ACCOUNT NUMBER(s) :

132503-9001-03

Additional Tax Accounts are on page ____ of document

Note: This cover sheet is prepared to conform to the requirements of Chapter 143, Laws of 1996. Nothing on this sheet alters the names, legal description or other information in the attached document. The only purpose of this cover sheet is to assist the auditor in indexing the document in conformance with statute.

The Recorder will rely on the information provided on this form. The staff will not read the document to verify the accuracy or completeness of the indexing information provided herein.

COVER2/RDA/899

RESTRICTIVE COVENANT

Florence J. Evans

This Declaration of Restrictive Covenant is made pursuant to RCW 70.105D.030(1) (f) and (g) and WAC 173-340-440 by Florence J. Evans, her successors and assigns, and the State of Washington Department of Ecology, its successors and assigns (hereafter referred to as "Ecology").

An independent remedial action (hereafter referred to as "Remedial Action") occurred at the property that is the subject of this restrictive covenant (hereafter referred to as "Restrictive Covenant"). The Remedial Action conducted at the property is described in the following documents:

1. Phase 1 Environmental Site Assessment; Union Bay Ship Building Corporation Site, prepared for Ms. Billie Adams, Tippet Marine Services, Seattle, WA. by Parametrix, Inc., Kirkland, WA., November, 1993.
2. Subsurface Environmental Study, Marine Fluid Systems, 801 Northwest 42nd Street, Seattle (Ballard), Washington, prepared for Dana Bostwick, Ballard Land Management, Roy, WA., by Environmental Associates, Inc., Bellevue, WA., March 17, 1999.

These documents are on file at Ecology's Northwest Regional Office.

This Restrictive Covenant is required because a Remedial Action has determined that the property contains diesel, heavy oil and carcinogenic polynuclear aromatic hydrocarbons, and metals, in soils which exceed the Model Toxics Control Act Method A Residential Cleanup Levels for soil established under WAC 173-340-740.

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The undersigned, Florence J. Evans, is the fee owner of the real property in the County of King, State of Washington (hereafter referred to as "Property"), that is subject to this Restrictive Covenant. The Property is legally described as follows:

Lots 3, 4, 5, and 6, Block 1, Seattle Tide Lands; ALSO, that portion of Section 13, Township 25 North, Range 3 East, W.M. in King County, Washington, described as follows; Beginning at the northeast corner of Government Lot 3 of said Section 13; thence south 50°24'29" east along the northerly line of that portion of 8th Avenue Northwest vacated by Ordinance No. 76354 of the City of Seattle, 39.50 feet to the northwest corner of Lot 1, Block 1, Ross Home Addition, according to plat recorded in Volume 11 of Plats, page 25, King County, Washington; thence southerly along the west line of said Lot 1, to an intersection with the southeasterly line of that certain tract of land dedicated to the City of Seattle by the Northern Pacific Railway Company by deed recorded in Volume 871 of Deeds, page 242, under Auditor's File No. 915617, and later vacated by Ordinance No. 75290 of said City; thence southwesterly along the southeast line of said tract, as vacated by said Ordinance No. 76290 to an intersection with the east line of Burns Avenue Northwest (formerly Ewing Street) as established by Ordinance No. 14267 of said City; thence continuing southwesterly along the southeasterly line of that portion of said Burns Avenue Northwest, as vacated by Ordinance No 76354 of said County, to an intersection with the northeasterly line of Block 1, Seattle Tide Lands; thence north 21°47'24" west along the said northeast line of Block 1, Seattle Tide Lands, being also the southwesterly line of that portion of said Burns Avenue Northwest, as vacated by Ordinance Nos. 76354 and 72347 and 69210 of said City, to an intersection with the south line West 42nd Street; thence north 89°58'31" east along south line to the point of beginning.

Florence J. Evans, makes the following declaration as to limitations, restrictions, and uses to which the Property may be put and specifies that such declarations shall constitute covenants to run with the land, as provided by law and shall be binding on all parties and all persons claiming under them, including

(2)

all current and future owners of any portion of or interest in the Property
(hereafter referred to as "Owner").

Section 1. The Property shall be used only for traditional industrial uses, as described in RCW 70.105D.020(23) and defined in and allowed under the City of Seattle's zoning regulations codified in the Municipal Code of the City of Seattle, Title 23, Land Use Code, as of the date of the Restrictive Covenant.

Section 2. Any activity on the Property that may interfere with the integrity of the Remedial Action and continued protection of human health and the environment is prohibited.

Section 3. Any activity on the Property that may result in the release or exposure to the environment of a hazardous substance that remains on the Property as part of the Remedial Action, or create a new exposure pathway, is prohibited without prior written approval from Ecology.

Section 4. The owner of the Property must give thirty (30) day advance written notice to Ecology of the Owner's intent to convey any interest in the Property. No conveyance of title, easement, lease, or other interest in the Property shall be consummated by the Owner without adequate and complete provision for continued monitoring, operation, and maintenance of the Remedial Action.

Section 5. The owner must restrict leases to uses and activities consistent with the Restrictive Covenant and notify all lessees of the restrictions on the use of the Property. *gd*

(3)

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Section 6. The owner must notify and obtain approval from Ecology prior to any use of the Property that is inconsistent with the terms of this Restrictive Covenant.

Ecology may approve and inconsistent use only after public notice and comment.

Section 7. The owner shall allow authorized representatives of Ecology the right to enter the Property at reasonable times for the purpose of evaluating the Remedial Action; to take samples; to inspection Remedial Actions conducted at the property, and to inspect records that are related to the Remedial Action.

Section 8. The owner of the Property reserves the right under WAC 173-340-440 to record an instrument that provides that this Restrictive Covenant shall no longer limit use of the Property or be of any further force or effect. However, such and instrument may be recorded only if Ecology, after public notice and opportunity for comment, concurs.

APPROVED BAIRD LAND MANAGEMENT
R. Baird

Dated at Seattle, Washington, this 15 day of December, 1999

By

Florence J. Evans
Florence J. Evans, Owner

Date 12-15-99

(4)

1999 121 7001233

SIGNATURE PAGE

Florence Evans
FLORENCE EVANS

STATE OF WASHINGTON

SS

COUNTY OF KING

ON THIS 15TH DAY OF DECEMBER, 1999 9 BEFORE ME, THE UNDERSIGNED,
A NOTARY PUBLIC IN AND FOR THE STATE OF WASHINGTON, DULY COMMISSIONED
AND SWORN, PERSONALLY APPEARED FLORENCE EVANS KNOWN TO ME TO BE THE
INDIVIDUAL(S) DESCRIBED IN AND WHO EXECUTED THE WITHIN INSTRUMENT AND
ACKNOWLEDGED THAT SHE SIGNED AND SEALED THE SAME AS HER FREE AND
VOLUNTARY ACT AND DEED, FOR THE USES AND PURPOSES HEREIN MENTIONED.

Scott Smouse
NOTARY SIGNATURE

PRINTED NAME: Scott Smouse

NOTARY PUBLIC IN AND FOR THE STATE OF WASHINGTON

RESIDING AT Bellevue

MY COMMISSION EXPIRES ON 3/2/2001



xpaper/r/m/4-9-97

6.5 Photo log

Photo 1: Entrance to new building – looking north



Photo 2: An area of contamination – looking east



Photo 3: Another area of contamination under corner of new building - looking northeast



Photo 4: Remaining old building and part of work yard – looking south

