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TACOMA PUBLIC UTILITIES
SOIL REMEDIATION
NEAR PORT OF TACOMA, PIER 7
TACOMA, WASHINGTON

JULY 2015

by

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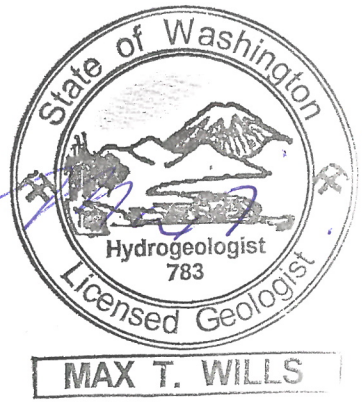

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TACOMA PUBLIC UTILITIES
Soil Remediation Near Port of Tacoma, Pier 7
Tacoma, Washington
July 2015

FIGURES

APPENDICES

1.0 Background

1.1 Purpose and Objectives

The activities described in this report were conducted to remediate soils contaminated from a release of dielectric fluid (mineral oil) from a single, pad-mounted electrical transformer. The subject transformer is owned and maintained by Tacoma Public Utilities (TPU). As described in Section 1.3, the subject transformer failed because all of the mineral oil drained out of the unit. The inspection by the TPU crew replacing the failed unit revealed that much of the oil likely infiltrated into the underlying ground. The soil remediation documented in this report was performed as an independent remedial action as described in WAC173-340-515 (Model Toxics Control Act).

1.2 Site Location

The transformer is located on Port of Tacoma property identified by the Pierce County Assessor as tax parcel 2275200633. The transformer is located on the east side of the Sitcum Waterway along the Kaiser Access Road in an area of the Port of Tacoma property referred to as Pier 7 or alternatively T-7 (Figure 1). The site is specifically located within Section 34 of Township 21 North, Range 3 East, relative to the Willamette Meridian.

Figure 1: Release was located off the Kaiser Access Road at the Port of Tacoma, Washington
Image from City of Tacoma govME website

1.3 Transformer and Release History

The subject transformer is a pad-mounted, 750 KVA, industrial-type unit, which is owned and operated by TPU. Figure 2 shows a detail of the transformer and surrounding area. TPU reported that the subject transformer failed in December 2014 and was subsequently replaced with a new unit. Upon inspection of the failed transformer, TPU estimated that as much as 143 gallons of mineral oil (approximately half of the unit's capacity) may have leaked to the underlying soil. Laboratory analysis requested by TPU indicated the presence of mineral oil in the soils in the well of the underlying concrete pad at a concentration of 136,000 mg/kg. The Model Toxic Control Act (MTCA) Method A cleanup level for mineral oil in soil is 4,000 mg/kg. TPU records indicate that the dielectric fluid used in the subject transformer contained less than one part per million (ppm) polychlorinated biphenyls (PCBs). The Model Toxic Control Act (MTCA) Method A cleanup limit for PCBs in soil is 1.0 mg/kg (equivalent to 1.0 ppm).

2.0 Site Activities

2.1 Pre-assessment

On May 4, Robinson Noble conducted a preliminary assessment of subsurface conditions in the area immediately around the transformer. This assessment was completed to evaluate the level of effort that would be required to complete remediation of the mineral oil spill and the approximate length of time that the transformer would need to be out of service. This preliminary assessment involved the placement of direct-push borings around the outside of the fenced enclosure around the transformer (see Figure 2), and the subsequent evaluation of potential soil and groundwater impacts from each of the borings. The preliminary assessment did not find any impacts to groundwater or soil in the area around the transformer. A copy of our letter report documenting the results of the preliminary assessment is included in Appendix B.

2.2 Site Remediation

Remediation of the subject site was conducted on July 5 by excavating impacted soils and removing them from the site (see Section 2.3 for disposal). During remedial excavation, a Robinson Noble geologist field screened soils for odor, sheen, and overall appearance. In general, excavation of the soil proceeded until field screening no longer identified impacted soils. Upon reaching the apparent limits of the contamination (based on field screening), our geologist collected soil samples from the margins of the excavation and submitted them to an on-site mobile laboratory to confirm that the mineral-oil concentrations were below the 4,000 mg/kg cleanup level. If analyses indicated that mineral concentrations were still above the cleanup level, additional soil was removed and the area subsequently re-sampled and re-analyzed. Figure 2 presents a diagram showing the approximate limits of the final excavation and the locations where each of the soil samples were collected.

Prior to the start of remediation, a TPU crew de-energized the existing transformer, disconnected the electrical leads, and then moved the unit out of the way. TPU personnel then lifted the concrete pad and moved it off to the side so that the pad could be cleaned and the underlying soils could be accessed. The excavation contractor, NRC Environmental Services, Inc. (NRC) cleaned the pad with a pressure washer. Wash water was captured with a Vactor truck for subsequent disposal (see Section 2.3).

Upon removing the pad, impacted soils were observed to be constrained primarily in the small area of the well pad (Figures 2 and 3). Field screening did not indicate impacts to the soils in the other areas directly below the pad. At this point, NRC began to vacuum excavated soils from the area of the release using a Vactor truck (Figure 4). The remedial excavation initially pro-

ceeded to a depth of one foot uniformly over the entire area below the concrete pad (see Figure 2). Soils on the western half of the excavation, which did not appear to be impacted, were removed to accommodate the placement of structural fill following remediation. The eastern half of the excavation (in the area below the pad well and conduits) was subsequently deepened to four feet to expose the soils below the conduits. At this point, field screening indicated only minor impact in the soils below the primary conduit.

Figure 3: Impacted soils were constrained primarily to the area of the well pad.

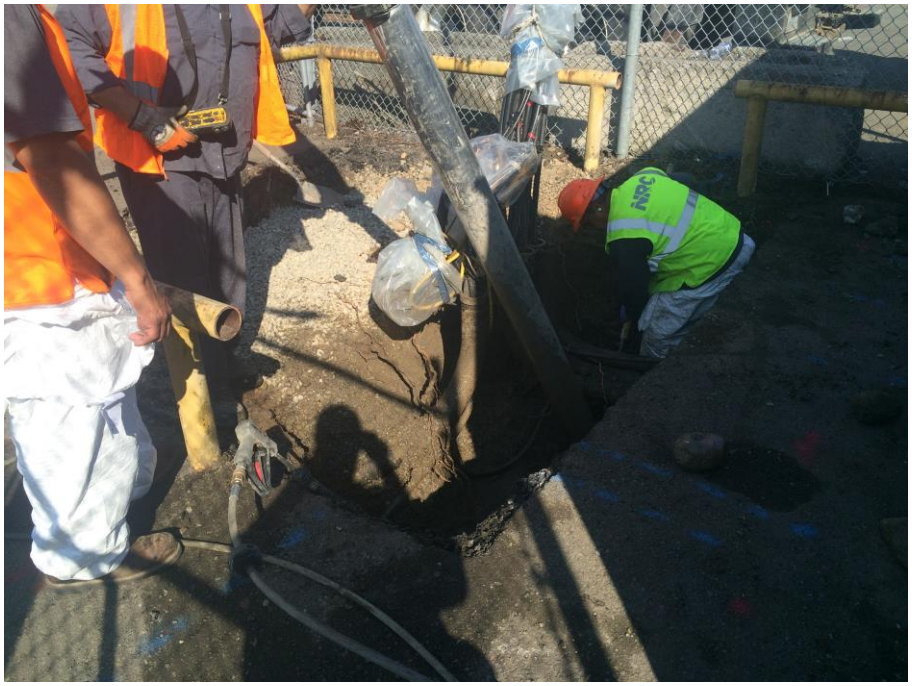


Figure 4: Excavating impacted soils using a Vactor truck.

Samples 1 and 2 were collected from the base of the east side of the excavation, and samples 3 through 6 were collected from the sidewalls of the excavation in this area. Sample 7 was collected from the base of the west side of the excavation. With the exception of sample 1 (collected from the area below the primary conduit), laboratory analyses did not indicate the presence of mineral oil above the 4,000 mg/kg cleanup level in any of these samples. Mineral oil was detected in sample 1 at a concentration of 18,000 mg/kg.

At this point, the southeastern portion of the excavation (below the primary conduit; see Figure 2) was excavated to a depth of five feet and resampled (sample 8). Chemical analyses of sample 8 still indicated similarly high concentrations of mineral oil (17,000 mg/kg). The excavation was subsequently deepened to seven feet and resampled (sample 9). Again, analysis indicated high concentrations of mineral oil (11,000 mg/kg). The excavation was then extended to a depth of 8½ feet, at which point groundwater was encountered.

A review of tidal records indicated that lowest tide for the area was due to occur within the hour. Over the next approximately 40 minutes, groundwater was observed to drop below the base of the excavation with the falling tide. At this point, sample 10 was collected from the base of the excavation (at 8½ feet) and submitted to the mobile laboratory for analysis. Analysis again, however, indicated a high mineral-oil concentration (22,000 mg/kg). The excavation was deepened to approximately nine feet, and groundwater was again observed in the base of the excavation. Groundwater at this point, however, did not appear to be dropping further, presumably because the tide had reached the low slack-water period. Additional excavation could not be accomplished because extreme caving was occurring and threatening to undermine the Port of Tacoma's adjacent electrical equipment.

As shown on Figure 2, the final excavation covered an area of approximately 10 feet by 11 feet, which approximately corresponds to the area below the concrete pad. The western half of the excavation extended to a depth of one foot, the northeastern portion to a depth of four feet, and the southeastern portion to a depth of nine feet. The estimated excavated volume is just over 16 cubic yards. The excavated soils to a depth of 4½ feet consist of brown sand and gravel. Soils below the 4½ feet to the final depth of the excavation at 9 feet consist of brown sand. These materials are known in this area to imported or reworked (fill). As discussed above, groundwater was encountered in the excavation at a depth of 8½ feet and appeared to be tidally influenced.

It is estimated that the final depth of the remedial excavation extended approximately ½ foot below the groundwater interface (from 8½ to 9 feet). A review of tidal records also indicated the low tide that occurred during remediation was among the lowest for the year. Based on this information, together with the fact that mineral oil (and petroleum products in general) tends to accumulate at the groundwater interface, it is likely that the majority of the impacted soil was removed during remedial excavation. It should also be noted that mineral-oil impacts were not detected in groundwater obtained from the temporary wells place around the transformer during the pre-assessment phase of this project (see Section 2.1 and Appendix B). It appears from the observed pattern of impact that the release likely occurred from the area of the primary connection bushing and migrated primarily vertically downward through the porous sandy material and terminated at the water table.

2.3 Disposal

The excavation contractor transported the wash water and excavated soils to PRS Group, Inc., a permitted disposal facility located in Tacoma, Washington. The entry logs provided by the disposal facility indicates a total of 5.92 tons of oily waste water and 11.85 tons of oily solids were transported from the site and received by the facility (Appendix C).

2.4 Restoration

Following the completion of remediation activities, TPU personnel backfilled the excavation with clean, imported backfill material. The cleaned concrete pad and transformer were then re-set and power subsequently restored. TPU's grounds crew then restored the surrounding area to a condition similar to that existing prior to the start of remediation.

3.0 Sample Collection and Laboratory Results

3.1 Sample Collection

During site remediation, we collected soil samples directly into laboratory-supplied containers using pre-cleaned stainless-steel spoons, using each spoon only once. The samples were placed into laboratory-supplied, manufacturer-cleaned four-ounce glass jars with Teflon®-lined plastic lids and delivered directly to the on-site mobile laboratory.

3.2 Laboratory Methods (Target Analytes) and Detection Limits

For this project, the only analyte of concern was mineral oil. During the site remediation, an on-site mobile laboratory analyzed the collected soil samples for mineral oil using Ecology Test Method NWTPH-Dx/Dx-Extended. The laboratory detection limit for this analytical method is 200 mg/kg.

NWTPH-Dx/Dx-Extended is a qualitative and quantitative method to determine concentrations of semi-volatile ("diesel") petroleum products in soil and water. Petroleum products applicable for this method include jet fuels, kerosene, diesel oils, hydraulic fluids, mineral oils, lubricating oils, and fuel oils.

3.3 Laboratory Results

Laboratory analysis performed by the on-site mobile laboratory did not indicate the presence of mineral oil above the laboratory detection limit (200 mg/kg) in bottom samples 2 and 7 and sidewall samples 4, 5, and 6. Analysis indicated the presence of mineral oil in sidewall sample 3 at a concentration of 230 mg/kg, below the 4,000 mg/kg cleanup level. Laboratory analysis indicated the presence of mineral oil above the cleanup level in bottom samples 1, 8, 9, and 10 at respective concentrations of 18,000, 17,000, 11,000, and 22,000 mg/kg. Analytical results are presented below in Table 1 and in Appendix D of this report.

Table 1. Analytical Results

Sample No.	Depth (feet)	Sample Location	Mineral Oil (mg/kg)*
1	4	Bottom	**18,000**
2	4	Bottom	<200
3	3½	Sidewall	230
4	3½	Sidewall	<200
5	3½	Sidewall	<200
6	3½	Side wall	<200
7	1	Bottom	<200
8	5	Bottom	**17,000**
9	7	Bottom	**11,000**
10	8½	Bottom	**22,000**
MTCA Method A Cleanup Level for Unrestricted Land Uses			**4,000**

*__Bolded__ values indicate result exceeds applicable cleanup level

4.0 Quality Assurance/Quality Control

4.1 Daily Field QA/QC

Documentation including sample logs, custody forms, and field logs were reviewed prior to samples being delivered to the laboratory. Review was done for completeness, accuracy, and consistency. No discrepancies were noted during this project.

4.2 Chain-of-Custody

Chain-of-custody forms accompanied samples submitted to the on-site mobile laboratory. The chain-of-custody forms were in order as noted in the analytical narrative from the contractor laboratory. No discrepancies were noted during this project.

4.3 Laboratory QA/QC

Narratives regarding quality assurance and quality control is provided with the laboratory analysis reports. These narratives indicate that quality control is within acceptable limits. Interference in surrogate recovery was noted for samples 1, 3, 8, 9, and 10 because the concentration of mineral oil in those samples exceeded the calibration range of the laboratory equipment. As a result, the reported concentration for those samples is an estimate. This interference is from the target analyte and should not interfere with the overall integrity of the data.

5.0 Project Summary and Conclusions

As documented in this report, just over 16 cubic yards of soil impacted by a release of mineral oil from a TPU transformer were removed from the site and disposed of at PRS. An approximately equal volume of imported, clean material was used to backfill the excavation.

Based on the pattern of impact observed during remediation, it appears that the release of mineral oil occurred from the area of the transformer's primary connection bushing, leaked into the subsurface through the pad well, and then migrated vertically downward through the porous sands underlying the transformer. It appears that the horizontal extent of the impacted soil is confined within the transformer foot-print. This is supported by the analysis of confirmation samples collected during remedial excavation. Except for the bottom samples collected directly below the primary conduit, we did not detect mineral oil concentrations above the MTCA Method A cleanup level of 4,000 mg/kg.

Impacted soils below the primary conduit were excavated in a stepwise manor until the water table, at low tide, was encountered at a depth of nine feet. The excavation found the vertical extent of the contamination was impacted by tidally influenced groundwater. However, given that the low tide on the day the remedial excavation was completed was among the lowest tides for the year, it is likely that the majority of the soil contamination was removed during remedial excavation. Analysis of groundwater samples collected from several temporary wells installed adjacent to the transformer enclosure during a preliminary assessment effort (see Appendix B) did not indicate any impacts to groundwater. This data suggests that any impacts to groundwater from the mineral oil release, if present at all, are likely confined to very small area directly below the transformer. However, given that the vertical limits of the mineral oil release were not completely determined, the potential presence of localized groundwater impacts presently cannot be ruled out.

6.0 References

Washington State Department of Ecology, Toxics Cleanup Program, Model Toxics Control Act Cleanup Regulation, Chapter 173-340 WAC, amended February 2001, Publication No. 94-06

Washington State Department of Ecology, Toxics Cleanup Program, Cleanup levels and risk calculations (CLARC II) update, Publication No. 94-145

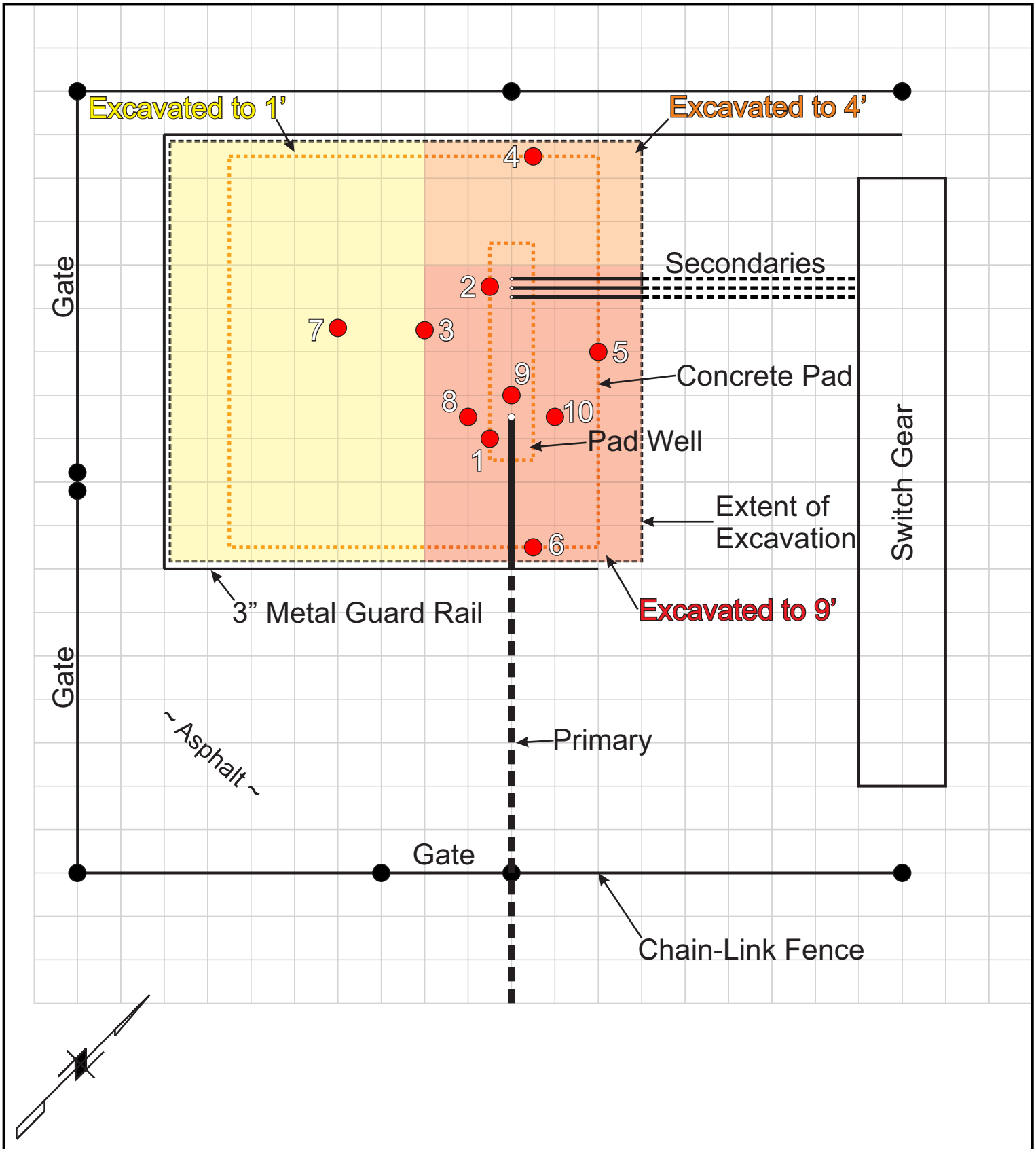
Chapter 70.105D RCW, Hazardous Waste Cleanup - Model Toxics Control Act

Washington Department of Ecology, Toxics Cleanup Program, Guidance on sampling and data analysis methods, Publication No. 94-49

Washington State Department of Ecology, Analytical methods for petroleum hydrocarbons, Publication No. ECY 97-602

City of Tacoma govME website, http://www.govme.com

FIGURE



Grid squares = 1.0 ft.

ROBINSON NOBLE	PM: MTW July 2015 1922-318A	Pierce County T 21 N/R 03 E - 34	Figure 2 Site and Sample Location Diagram Tacoma Public Utilities: Port of Tacoma Pier 7 Transformer Cleanup

APPENDIX A

Assessor-Treasurer electronic Property Information Profile

Parcel Summary for 2275200633

07/21/2015 03:41 PM

Have a question?

Property Details		Taxpayer Details	
Parcel Number:	2275200633	**Taxpayer Name:**	PORT OF TACOMA
Site Address:	XXX Undetermined Situs	**Mailing Address:**	PO BOX 1837 TACOMA WA 98401-1837
Account Type:	Real Property		
Category:	Land and Improvements		
Use Code:	6700-GOVERNMENTAL SERVICES		

Appraisal Details		Assessment Details	
Value Area:	PI2	**2015 Values for 2016 Tax**	
Appr Acct Type:	Industrial	**Taxable Value:**	0
Business Name:	PORT OF TACOMA	**Assessed Value:**	57,564,600
Last Inspection:	02/04/2015 - Physical Inspection	**Exemptions:**	Municipal Corp and Misc Taxing Districts

Related Parcels

Group Account Number: 2250

Mobile/MFG Home and Personal Property parcel(s) located on this parcel: 1200040813 1200098484 2004197430 2818070614

Real parcel on which this parcel is located: n/a

Tax Description

Section 34 Township 21 Range 03 Quarter 21 ASHTONS RPT BLKS 13-48 TAC TDLDS: ASHTONS RPT BLKS 13-48 TAC TDLDS NE & NW 34-21-03E & SW 27-21-03E COMB TO RESTORE PARCEL SEG'D FOR TAX PURPOSES ONLY 108.15 AC B 16 & 16A EASE OF REC COMB OF 063-2 & 063-1 SEG R-0067 AS 07-11-02AS

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Assessor-Treasurer electronic Property Information Profile

Land Characteristics for 2275200633

07/21/2015 03:42 PM

Property Details		Taxpayer Details	
Parcel Number:	2275200633	**Taxpayer Name:**	PORT OF TACOMA
Site Address:	XXX Undetermined Situs	**Mailing Address:**	PO BOX 1837 TACOMA WA 98401-1837
Account Type:	Real Property		
Category:	Land and Improvements		
Use Code:	6700-GOVERNMENTAL SERVICES		

Location:		Size	
LEA:	4182	**SF:**	4,711,014
RTSQQ:	03-21-34-21	**Acres:**	108.15
		Front Ft:	1,860

Amenities		Utilities	
WF Type:	n/a	**Electric:**	Power Installed
View Quality:	n/a	**Sewer:**	Sewer/Septic Installed
Street Type:	Paved	**Water:**	Water Installed

Warning: Appraisal data provided is for informational purposes only and is incomplete for determination of value.

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Building Characteristics for 2275200633

07/21/2015 03:42 PM

Have a question?

Property Details		Taxpayer Details	
Parcel Number:	2275200633	**Taxpayer Name:**	PORT OF TACOMA
Site Address:	XXX Undetermined Situs	**Mailing Address:**	PO BOX 1837 TACOMA WA 98401-1837
Account Type:	Real Property		
Category:	Land and Improvements		
Use Code:	6700-GOVERNMENTAL SERVICES		

Building ID: **7 building(s) on this parcel**

1 2 3 4 6 7 8

General Characteristics

Property Type:	Industrial	**SF:**	30,000	**Fin. Attic SF:**	0
Condition:	Average	**Net SF:**	30,000	**Total Bsmnt. SF:**	0
Quality:	Good	**Atch. Garage SF:**	0	**Fin. Bsmnt. SF:**	0
Neighborhood:	802 / 957	**Det. Garage SF:**	0	**Bsmnt. Gar. Door:**	0
Occupancy:	Office Class B	**Carport SF:**	0	**Fireplaces:**	0

Built-As

Description	Year Built	Adj. Year Built	SF	Stories	Bed-rooms	Bath-rooms	Exterior	Class	Roof	HVAC	Units	Sprinkler SF
Office Building	1965	1990	30,000	2	n/a	n/a	n/a	Masonry	n/a	Heat Pump	1	0

Improvement Details

Detail Type	Detail Description	Units
Add On	Chain Link 6 ft with top rail	4,000
Add On	Concrete (Reinforced)(> 3000 Sq Ft)	3,676,028

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Building Characteristics for 2275200633

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Have a question?

Property Details		Taxpayer Details	
Parcel Number:	2275200633	**Taxpayer Name:**	PORT OF TACOMA
Site Address:	XXX Undetermined Situs	**Mailing Address:**	PO BOX 1837 TACOMA WA 98401-1837
Account Type:	Real Property		
Category:	Land and Improvements		
Use Code:	6700-GOVERNMENTAL SERVICES		

Building ID: **7 building(s) on this parcel**

1 **2** 3 4 6 7 8

General Characteristics

Property Type:	Industrial	**SF:**	51,250	**Fin. Attic SF:**	0
Condition:	Average	**Net SF:**	51,250	**Total Bsmnt. SF:**	0
Quality:	Average	**Atch. Garage SF:**	0	**Fin. Bsmnt. SF:**	0
Neighborhood:	802 / 957	**Det. Garage SF:**	0	**Bsmnt. Gar. Door:**	0
Occupancy:	Gen Warehouse 20,000 to 199,999 SF	**Carport SF:**	0	**Fireplaces:**	0

Built-As

Description	Year Built	Adj. Year Built	SF	Stories	Bed-rooms	Bath-rooms	Exterior	Class	Roof	HVAC	Units	Sprinkler SF
Storage Warehouse	1975	1980	51,250	1	n/a	n/a	n/a	Wood Frame	n/a	None	1	0

Improvement Details

No additional improvement details.

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Assessor-Treasurer electronic Property Information Profile

Building Characteristics for 2275200633

07/21/2015 03:43 PM

Have a question?

Property Details		Taxpayer Details	
Parcel Number:	2275200633	**Taxpayer Name:**	PORT OF TACOMA
Site Address:	XXX Undetermined Situs	**Mailing Address:**	PO BOX 1837 TACOMA WA 98401-1837
Account Type:	Real Property		
Category:	Land and Improvements		
Use Code:	6700-GOVERNMENTAL SERVICES		

Building ID: **7 building(s) on this parcel**

1 2 **3** 4 6 7 8

General Characteristics

Property Type:	Industrial	**SF:**	7,000	**Fin. Attic SF:**	0
Condition:	Average	**Net SF:**	7,000	**Total Bsmnt. SF:**	0
Quality:	Average	**Atch. Garage SF:**	0	**Fin. Bsmnt. SF:**	0
Neighborhood:	802 / 957	**Det. Garage SF:**	0	**Bsmnt. Gar. Door:**	0
Occupancy:	Gen Warehouse up to 19,999 SF	**Carport SF:**	0	**Fireplaces:**	0

Built-As

Description	Year Built	Adj. Year Built	SF	Stories	Bed-rooms	Bath-rooms	Exterior	Class	Roof	HVAC	Units	Sprinkler SF
Storage Warehouse	1992	1992	7,000	1	n/a	n/a	n/a	Wood Frame	n/a	None	1	0

Improvement Details

No additional improvement details.

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Building Characteristics for 2275200633

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Have a question?

Property Details		Taxpayer Details	
Parcel Number:	2275200633	**Taxpayer Name:**	PORT OF TACOMA
Site Address:	XXX Undetermined Situs	**Mailing Address:**	PO BOX 1837 TACOMA WA 98401-1837
Account Type:	Real Property		
Category:	Land and Improvements		
Use Code:	6700-GOVERNMENTAL SERVICES		

Building ID: **7 building(s) on this parcel**

1 2 3 **4** 6 7 8

General Characteristics

Property Type:	Industrial	**SF:**	40,000	**Fin. Attic SF:**	0
Condition:	Average	**Net SF:**	40,000	**Total Bsmnt. SF:**	0
Quality:	Average	**Atch. Garage SF:**	0	**Fin. Bsmnt. SF:**	0
Neighborhood:	802 / 957	**Det. Garage SF:**	0	**Bsmnt. Gar. Door:**	0
Occupancy:	Auto Related	**Carport SF:**	0	**Fireplaces:**	0

Built-As

Description	Year Built	Adj. Year Built	SF	Stories	Bed-rooms	Bath-rooms	Exterior	Class	Roof	HVAC	Units	Sprinkler SF
Service Garage	1977	1980	40,000	1	n/a	n/a	n/a	Metal Frame	n/a	None	1	0

Improvement Details

No additional improvement details.

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Building Characteristics for 2275200633

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Have a question?

Property Details		Taxpayer Details	
Parcel Number:	2275200633	**Taxpayer Name:**	PORT OF TACOMA
Site Address:	XXX Undetermined Situs	**Mailing Address:**	PO BOX 1837 TACOMA WA 98401-1837
Account Type:	Real Property		
Category:	Land and Improvements		
Use Code:	6700-GOVERNMENTAL SERVICES		

Building ID: **7 building(s) on this parcel**

1 2 3 4 **6** 7 8

General Characteristics

Property Type:	Industrial	**SF:**	4,045	**Fin. Attic SF:**	0
Condition:	Average	**Net SF:**	4,045	**Total Bsmnt. SF:**	0
Quality:	Average	**Atch. Garage SF:**	0	**Fin. Bsmnt. SF:**	0
Neighborhood:	802 / 957	**Det. Garage SF:**	0	**Bsmnt. Gar. Door:**	0
Occupancy:	Auto Related	**Carport SF:**	0	**Fireplaces:**	0

Built-As

Description	Year Built	Adj. Year Built	SF	Stories	Bed-rooms	Bath-rooms	Exterior	Class	Roof	HVAC	Units	Sprinkler SF
Service Garage	1998	1998	4,045	1	n/a	n/a	n/a	Wood Frame	n/a	None	1	0

Improvement Details

Detail Type	Detail Description	Units
Mezzanine	Office	783

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Building Characteristics for 2275200633

07/21/2015 03:44 PM

Have a question?

Property Details		Taxpayer Details	
Parcel Number:	2275200633	**Taxpayer Name:**	PORT OF TACOMA
Site Address:	XXX Undetermined Situs	**Mailing Address:**	PO BOX 1837 TACOMA WA 98401-1837
Account Type:	Real Property		
Category:	Land and Improvements		
Use Code:	6700-GOVERNMENTAL SERVICES		

Building ID: **7 building(s) on this parcel**

1 2 3 4 6 **7** 8

General Characteristics

Property Type:	Industrial	**SF:**	24,000	**Fin. Attic SF:**	0
Condition:	Average	**Net SF:**	24,000	**Total Bsmnt. SF:**	0
Quality:	Average	**Atch. Garage SF:**	0	**Fin. Bsmnt. SF:**	0
Neighborhood:	802 / 957	**Det. Garage SF:**	0	**Bsmnt. Gar. Door:**	0
Occupancy:	Gen Warehouse 20,000 to 199,999 SF	**Carport SF:**	0	**Fireplaces:**	0

Built-As

Description	Year Built	Adj. Year Built	SF	Stories	Bed-rooms	Bath-rooms	Exterior	Class	Roof	HVAC	Units	Sprinkler SF
Storage Warehouse	1992	1992	24,000	1	n/a	n/a	n/a	Wood Frame	n/a	None	1	0

Improvement Details

No additional improvement details.

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2401 South 35th St Room 142
Tacoma, Washington 98409
(253)798-6111 or Fax (253)798-3142
www.piercecountywa.org/atr

Assessor-Treasurer electronic Property Information Profile

Building Characteristics for 2275200633

07/21/2015 03:44 PM

Have a question?

Property Details		Taxpayer Details	
Parcel Number:	2275200633	**Taxpayer Name:**	PORT OF TACOMA
Site Address:	XXX Undetermined Situs	**Mailing Address:**	PO BOX 1837 TACOMA WA 98401-1837
Account Type:	Real Property		
Category:	Land and Improvements		
Use Code:	6700-GOVERNMENTAL SERVICES		

Building ID: **7 building(s) on this parcel**

1 2 3 4 6 7 **8**

General Characteristics

Property Type:	Industrial	**SF:**	5,504	**Fin. Attic SF:**	0
Condition:	Average	**Net SF:**	5,504	**Total Bsmnt. SF:**	0
Quality:	Average	**Atch. Garage SF:**	0	**Fin. Bsmnt. SF:**	0
Neighborhood:	802 / 957	**Det. Garage SF:**	0	**Bsmnt. Gar. Door:**	0
Occupancy:	Office Class C	**Carport SF:**	0	**Fireplaces:**	0

Built-As

Description	Year Built	Adj. Year Built	SF	Stories	Bed-rooms	Bath-rooms	Exterior	Class	Roof	HVAC	Units	Sprinkler SF
Relocatable Office	2000	2000	5,504	2	n/a	n/a	n/a	Wood Frame	n/a	Electric	0	0

Improvement Details

No additional improvement details.

Warning: Appraisal data provided is for informational purposes only and is incomplete for determination of value.

Pierce County Assessor-Treasurer
Mike Lonergan
2401 South 35th St Room 142
Tacoma, Washington 98409
(253)798-6111 or Fax (253)798-3142
www.piercecountywa.org/atr

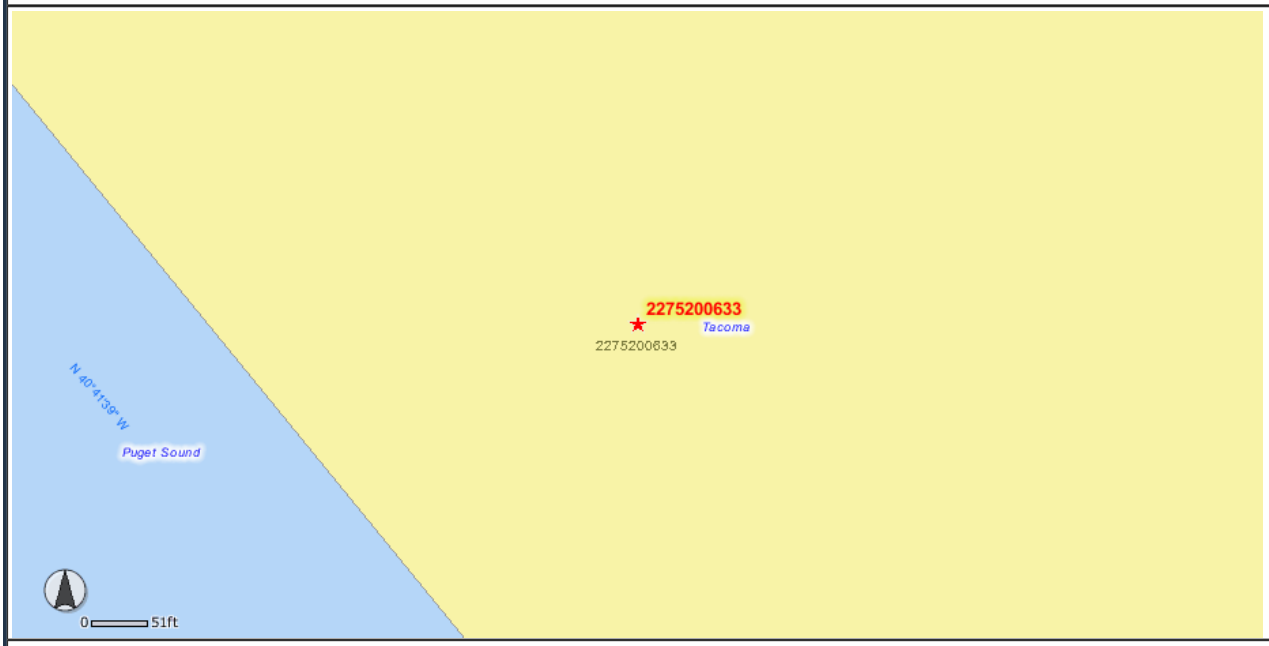
Assessor-Treasurer electronic Property Information Profile

Parcel Map for 2275200633

07/21/2015 03:44 PM

Have a question?

Property Details		Taxpayer Details	
Parcel Number:	2275200633	**Taxpayer Name:**	PORT OF TACOMA
Site Address:	XXX Undetermined Situs	**Mailing Address:**	PO BOX 1837 TACOMA WA 98401-1837
Account Type:	Real Property		
Category:	Land and Improvements		
Use Code:	6700-GOVERNMENTAL SERVICES		



For additional mapping options, visit Public GIS

RTSQ Maps: Normal (200 Scale) | Detailed (100 Scale)

Pierce County Assessor-Treasurer
Mike Lonergan
2401 South 35th St Room 142
Tacoma, Washington 98409
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www.piercecountywa.org/atr

WEBSITE INFORMATION

Privacy Policy
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APPENDIX B

ROBINSON
NOBLE

May 28, 2015

Jeromy Adams
Environmental Compliance Manager
Tacoma Public Utilities
3628 South 35th Street
Tacoma, WA 98409

Subject: Preliminary assessment of Tacoma Public Utilities transformer spill at Pier 7, Port of Tacoma

Dear Jeromy,

This letter report presents the findings of our preliminary assessment of the Tacoma Public Utilities (TPU) transformer spill at Pier 7 of the Port of Tacoma. As discussed in our meeting at TPU's office on January 28, Robinson Noble completed the testing of several borings around the subject transformer to assess the extent of impact from a previous leak of dielectric fluid (mineral oil). This assessment was completed to evaluate the level of effort that will be required to complete final remediation of the mineral oil spill and to anticipate the length of time that the transformer could potentially be out of service.

The subject transformer is a pad-mounted, 750 KVA, industrial-type unit, which is owned and operated by TPU. The transformer is located on Port of Tacoma property identified by the Pierce County Assessor as tax parcel 2275200633. The site is specifically located within Section 34 of Township 21 North, Range 3 East, relative to the Willamette Meridian. Figure 1 presents a general vicinity map of the site. Figure 2 shows a detail of the transformer and surrounding area.

TPU reported that the subject transformer failed in December 2014 and was subsequently replaced with a new unit. Upon inspecting the failed transformer, TPU estimated that as much as 143 gallons of mineral oil (approximately half of the unit's capacity) may have leaked to the underlying soil. Laboratory analysis requested by TPU indicated the presence of mineral oil in the soils below the subject transformer at a concentration of 136,000 mg/Kg, confirming the underlying soil was impacted. The Model Toxic Control Act (MTCA) Method A cleanup level for mineral oil in soil is 4,000 mg/Kg. TPU records indicate that the dielectric fluid used in the subject transformer contained less than one part per million (ppm) polychlorinated biphenyls (PCBs). The Model Toxic Control Act (MTCA) Method A cleanup limit for PCBs in soil is 1.0 mg/kg.

On May 4, Robinson Noble directed the placement of seven direct-push borings in the area just outside the fenced enclosure surrounding the transformer. The locations of these borings, designated as B1 through B7, are shown on Figure 2. A log of the materials encountered in each boring is presented on Figure 3. As shown on Figure 3, each of the borings was installed to a depth of ten feet. The materials encountered in each boring generally consisted of sands and gravels, which are known to be reworked or imported (fill). Groundwater was encountered in each boring at a depth of approximately nine feet. During drilling, our on-site geologist field

screened the soils from each boring for signs of impact using visual and olfactory cues. Field screening did not indicated the presence of impacts in any of the boring materials.

Representative soil samples were collected from each boring and submitted to an on-site mobile laboratory for analysis of mineral oil. The mobile laboratory was supplied by Libby Environmental, Inc. (Libby), which is accredited by the State of Washington to perform this analysis. All samples were collected into pre-cleaned, laboratory supplied jars and submitted directly to the mobile laboratory. Laboratory analyses did not detect the presence of mineral oil above the laboratory detection limit in any of the soil samples. The complete laboratory report is attached with his letter.

Temporary wells were also set in borings B1, B3, B5, and B6 through which to obtain samples of the groundwater. Prior to sampling, each of the temporary wells was purged of at least three well volumes to clear turbidity and obtain representative groundwater samples. Samples were collected using Department of Ecology prescribed low-flow sampling techniques. Again, all samples were collected into pre-cleaned, laboratory supplied jars and submitted directly to the mobile laboratory for analysis of mineral oil. Laboratory analyses did not detect the presence of mineral oil above the laboratory detection limit in any of the groundwater samples (see attached laboratory report).

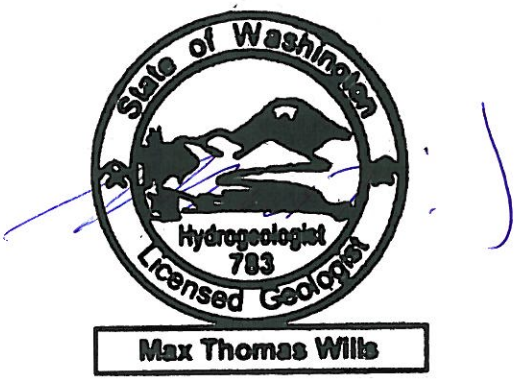
Findings from this preliminary assessment indicate that soil impacts associated with the release of mineral oil from the subject transformer do not extend laterally beyond the fenced enclosure and are likely constrained to the area directly below the transformer. Findings from this assessment also indicate that groundwater in the area of the transformer is not impacted, which also suggest that soil impacts do not extend to a significant depth. Based on this information, it is our opinion that the impacted soils below the subject transformer could be remediated in a relatively short period of time, possibly within a single eight-hour work period. This could involve a power outage of between 10 to 14 hours, depending on the complexities of removing and reinstalling the existing transformer.

There are multiple underground utilities in the area of the transformer, and as such, we recommend that remedial excavation work be conducted using Vactor trucks only. We also recommend that a minimum of two Vactor trucks be utilized and that all excavated soil be transported to the nearby PRS Group, Inc. (PRS) facility in Tacoma. This will allow soil excavation to continue uninterrupted. Finally, we recommend that Libby provide mobile laboratory service so that all confirmation samples can be expedited and analyzed on site.

If you have any questions regarding this assessment or need additional information, please contact us at your convenience. It is our pleasure to be of continued service to Tacoma Public Utilities.

Respectfully submitted,
Robinson Noble, Inc.

Max Wills, LHG
Senior Hydrogeologist

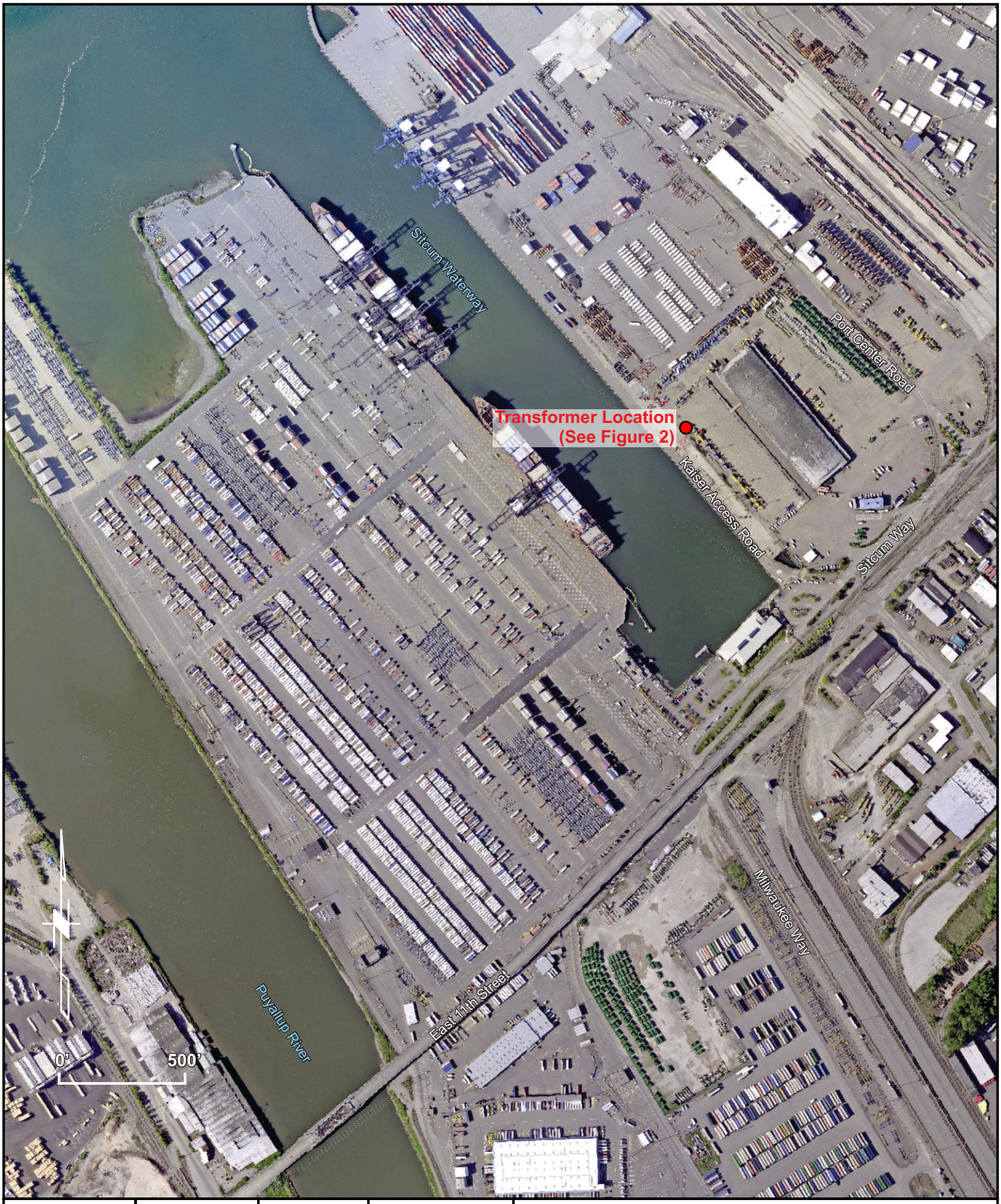


cc: Mike Rhubright

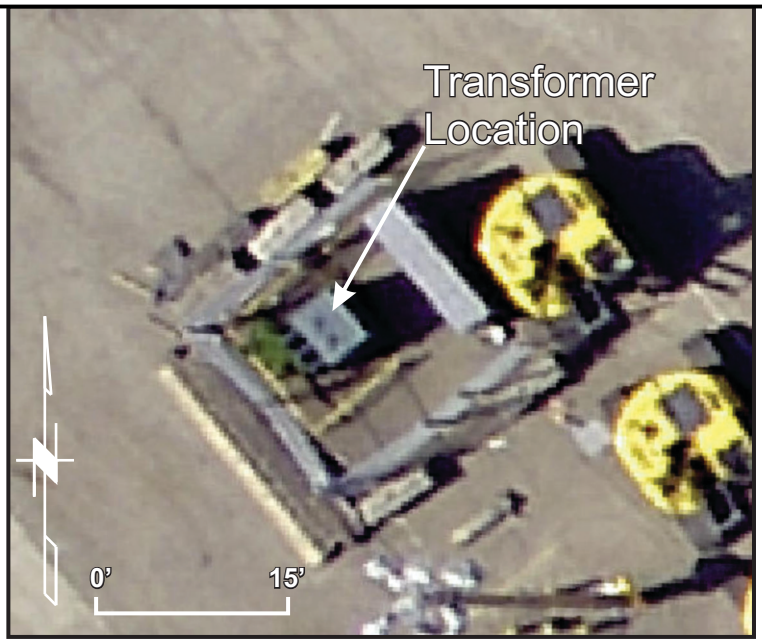
attachments: Figure 1 – Vicinity Map
Figure 2 – Site and Sample Location Diagram
Figure 3 – Geologic Logs for Boreholes B1 through B7
Laboratory Report

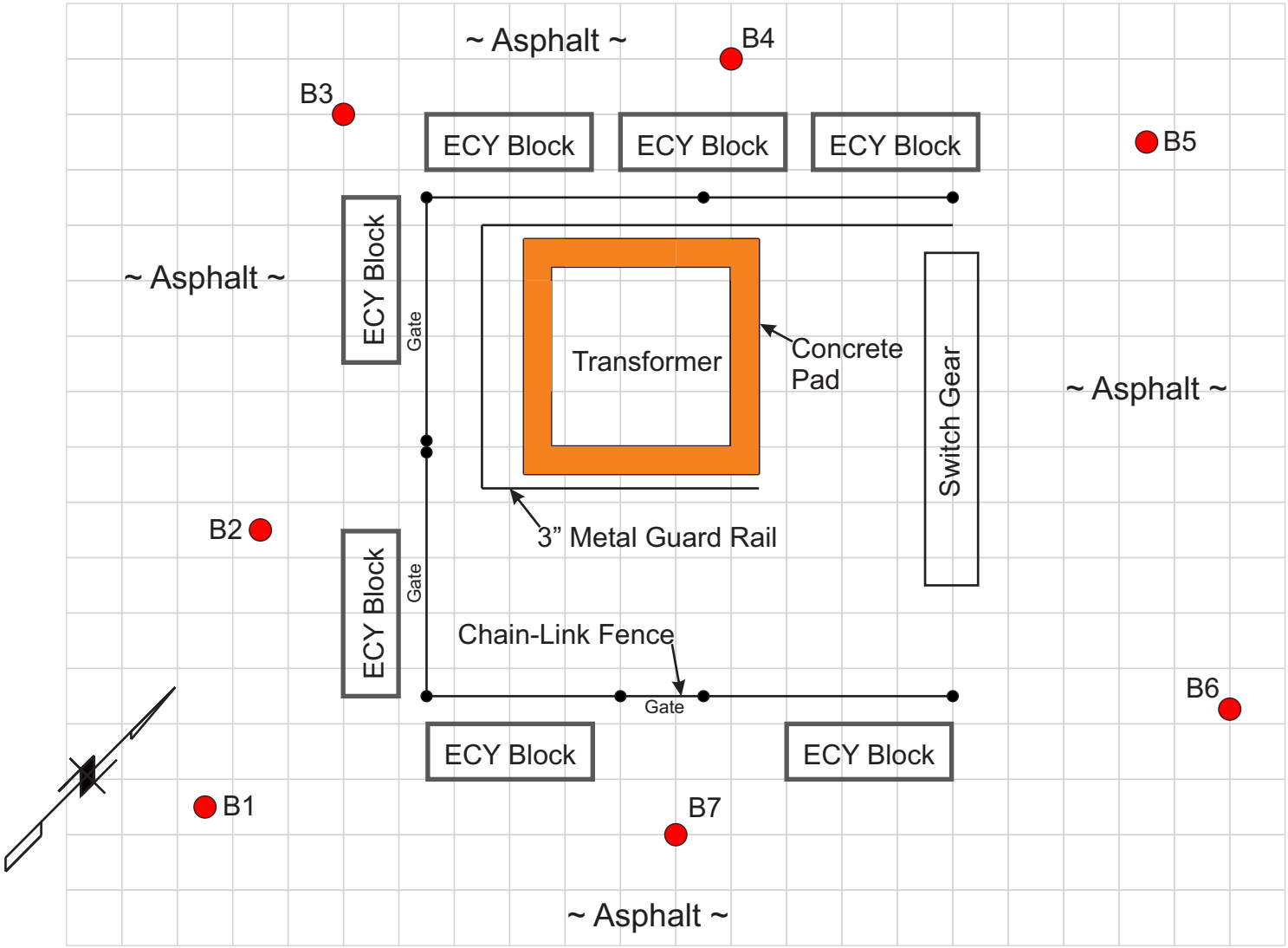
The statements, conclusions, and recommendations provided in this report are to be exclusively used within the context of this document. They are based upon generally accepted environmental and hydrogeologic practices and are the result of analysis by Robinson Noble, Inc. staff. This report, and any attachments to it, is for the exclusive use of Tacoma Public Utilities. Unless specifically stated in the document, no warranty, expressed or implied, is made.

ATTACHMENTS



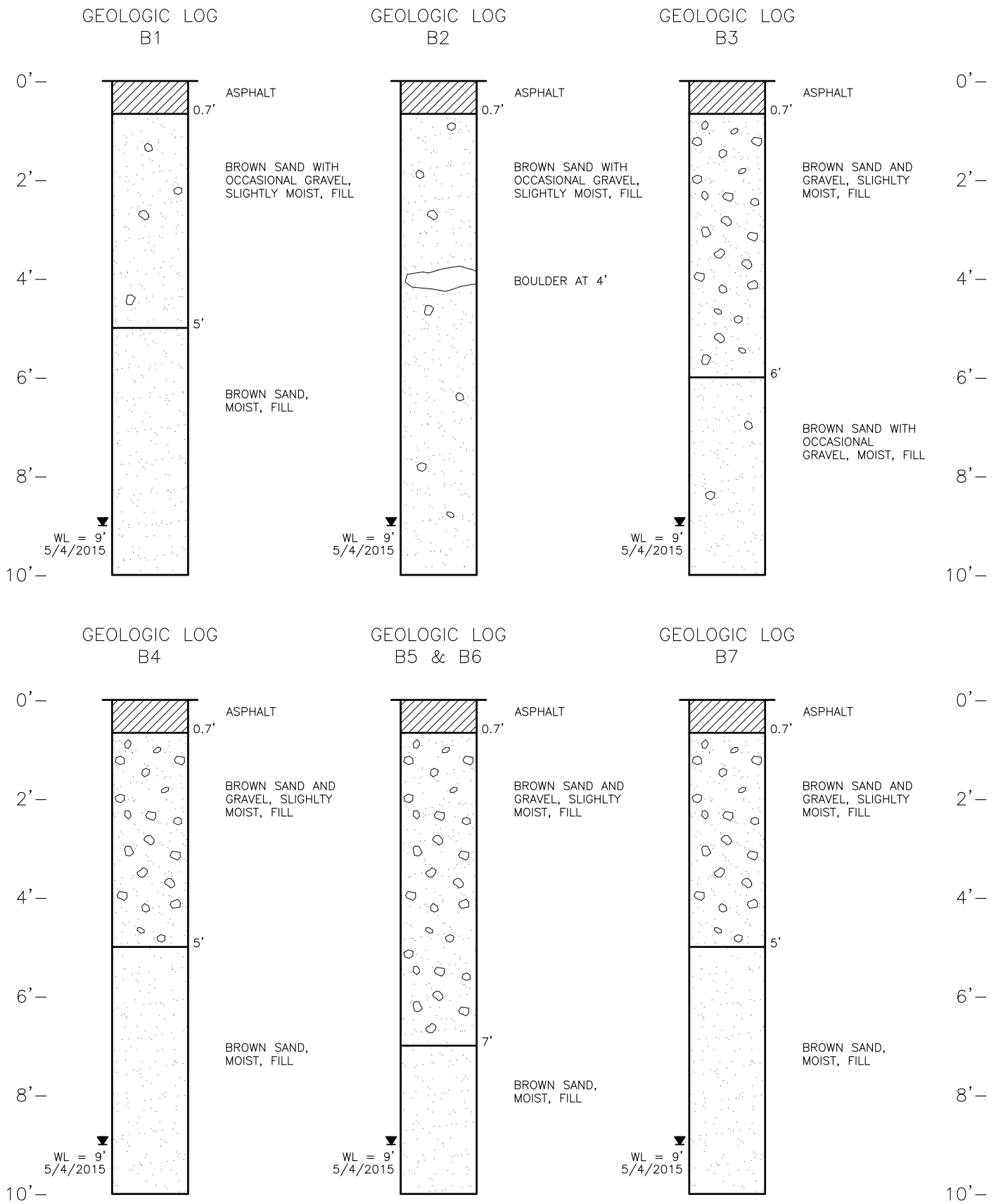
ROBINSON NOBLE	Note: Basemap taken from USGS Tacoma North Quadrangle	PM: MTW May 2015 1922-318A	Pierce County T 21 N/R 03 E - 34 Scale 1" = 500'	Figure 1 Vicinity Map Tacoma Public Utilities: Pier 7 Transformer Cleanup





Grid squares = 2.0 ft.

ROBINSON NOBLE	Note: Aerial Image from Tacoma govME	PM: MTW May 2015 1922-318A	Pierce County T 21 N/R 03 E - 34	Figure 2 **Site and Sample Location Diagram** Tacoma Public Utilities: Pier 7 Transformer Cleanup



ROBINSON NOBLE	PM: MTW May 2015 1922-318A	Pierce County T 21 N/R 03 E - 34	Figure 3 **Geologic Logs for Boreholes B1 through B7** Tacoma Public Utilities: Port of Tacoma Pier 7 Remediation

Libby Environmental, Inc.

4139 Libby Road NE • Olympia, WA 98506-2518

May 8, 2015

Max Wills
Robinson Noble
17625 130th Avenue NE, Suite 102
Woodinville, WA 98072

Dear Mr. Wills:

Please find enclosed the analytical data report for the TPU / P7 of Tacoma Pier 7 Project located in Tacoma, Washington.

The results of the analyses are summarized in the attached tables. Applicable detection limits and QA/QC data are included. The sample(s) will be disposed of in 30 days unless we are contacted to arrange long term storage.

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

Sincerely,

Kurt Johnson
Senior Chemist
Libby Environmental, Inc.

Phone (360) 352-2110 • Fax (360) 352-4154 • libbyenv@aol.com

www.LibbyEnvironmental.com

Libby Environmental, Inc.

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

TPU/P7 OF TACOMA PIER 7 PROJECT
ROBINSON NOBLE
Tacoma, Washington
Libby Project # L150504-30
Client Project # 1922-318A

Analyses of Mineral Oil (NWTPH-Dx/Dx Extended) in Soil

Sample Number	Date Analyzed	Surrogate Recovery (%)	Mineral Oil (mg/kg)
Method Blank	5/4/15	107	nd
B1-2	5/4/15	71	nd
B1-7	5/4/15	97	nd
B2-2	5/4/15	126	nd
B2-7	5/4/15	94	nd
B3-2	5/4/15	82	nd
B3-6	5/4/15	99	nd
B4-3	5/4/15	71	nd
B4-6	5/4/15	103	nd
B5-3	5/4/15	93	nd
B5-7	5/4/15	92	nd
B5-7 Dup	5/4/15	95	nd
B6-2	5/4/15	98	nd
B6-7	5/4/15	72	nd
B7-3	5/4/15	98	nd
B7-6	5/4/15	86	nd
Practical Quantitation Limit			40

"nd" Indicates not detected at the listed detection limits.
"int" Indicates that interference prevents determination.

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

ANALYSES PERFORMED BY: Jamie Deyman

Libby Environmental, Inc.

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

TPU/P7 OF TACOMA PIER 7 PROJECT
ROBINSON NOBLE
Tacoma, Washington
Libby Project # L150504-30
Client Project # 1922-318A

Analyses of Mineral Oil (NWTPH-Dx/Dx Extended) in Water

Sample Number	Date Analyzed	Surrogate Recovery (%)	Mineral Oil (µg/l)
Method Blank	5/4/15	120	nd
B1-W	5/4/15	67	nd
B3-W	5/4/15	70	nd
B5-W	5/4/15	70	nd
B6-W	5/4/15	73	nd
B6-W Dup	5/4/15	83	nd
Practical Quantitation Limit			400

"nd" Indicates not detected at the listed detection limits.
"int" Indicates that interference prevents determination.

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

ANALYSIS PERFORMED BY: Jamie Deyman

Libby Environmental, Inc.

Chain of Custody Record

www.LibbyEnvironmental.com

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

Client: ROBINSON NOBLE
Address: 17625 130th AVE NE #102
City: WOODINVILLE State: WA Zip: 98072
Phone: (206) 550 7215 Fax:
Client Project # 1922-318A

Date: 5/4/2015 Page: 1 of 2
Project Manager: MAX WILLS
Project Name: TPU/PT of TACOMA PIER 7
Location: PT TACOMA - PIER 7 City, State: TACOMA WA
Collector: MTW Date of Collection: 5/4/2015
Email: MWILLS@ROBINSON-NOBLE.COM

	Sample Number	Depth	Time	Sample Type	Container Type	VOA 8021B	VOA 8021B BTEX Only	VOA 8260	SEMI VOL 8270	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx Ext.	PAH 8270	PCB's 8082	MTCA 5 Metals	MINERAL OIL			Field Notes
1	B1-2	2	8:40	SOIL	4 oz											X				
2	B1-7	7	9:05													X				
3	B2-2	2	9:00													X				
4	B2-7	7	9:10													X				
5	B3-2	2	9:20	SOIL	4 oz											X				
6	B3-6	6	9:40	SOIL	4 oz											X				
7	B4-3	3	9:30													X				
8	B4-6	6	9:50													X				
9	B5-3	3	10:00													X				
10	B5-7	7	10:00													X				
11	B6-2	2	10:15													X				
12	B6-7	7	10:30													X				
13	B7-3	3	10:20													X				
14	B7-6	6	10:50	SOIL	4 oz											X				
15	B1-W	—	11:00	WTR	AMB											X				
16	B3-W	—	11:05	WTR	AMB											X				
17	B5-W	—	11:10	WTR	AMB											X				

Relinquished by:	Date / Time	Received by:	Date / Time
[signature]	5/4/15 14:32	[signature]	5/4/15 14:32
Relinquished by:	Date / Time	Received by:	Date / Time
Relinquished by:	Date / Time	Received by:	Date / Time

Sample Receipt:

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

Remarks:

MOBILE LAB

TAT: 24HR 48HR 5-DAY

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

Libby Environmental, Inc.

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

Chain of Custody Record

www.LibbyEnvironmental.com

Date: 5/4/2015 Page: 2 of 2

Client: ROBINSON NOBLE
Address: 17625 130th AVE NE #102
City: WOODINVILLE State: WA Zip: 98072
Phone: (206)550 7215 Fax:
Client Project # 1922-318A

Project Manager: MAX WILLS
Project Name: TPU/PT of TACOMA PIER 7
Location: PT TACOMA - PIER 7 City, State: TACOMA WA
Collector: MTW Date of Collection: 5/4/2015
Email: MWILLS@ROBINSON-NOBLE.COM

	Sample Number	Depth	Time	Sample Type	Container Type	VOA 8021B	VOA 8021B BTEX Only	VOA 8260	SEMI VOL 8270	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx Ext.	PAH 8270	PCB's 8082	MTCA 5 Metals	MINERAL OIL			Field Notes
1	BG-W	—	11:15	WTR	AMB											X				
2																				
3																				
4																				
5																				
6																				
7																				
8																				
9																				
10																				
11																				
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16																				
17																				

Relinquished by:	Date / Time	Received by:	Date / Time
[signature]	5/4/15 14:32	[signature]	5/4/15 14:32
Relinquished by:	Date / Time	Received by:	Date / Time
Relinquished by:	Date / Time	Received by:	Date / Time

Sample Receipt:

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

Remarks:

MOBILE LAB

TAT: 24HR 48HR 5-DAY

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

APPENDIX C

61877

PRS Group, Inc.

ENTRY LOG FOR NON-HAZARDOUS ITEMS

3003 Taylor Way
Tacoma, WA 98421
Phone: (253)383-4175 Fax: (253)383-4531
prs@prsplant.net

Date: 7-5-2015	**Carrier:** Nrc	**Vehicle #:** 2185
Drivers Signature *:	**Plant Employee:** Zach	**Time:** 2:09 PM

% Water: 10%	**Ph:** n/a	**Flash>140** ☒ Other Value (Fuel Only):
% Solids: 90%	**Tank # Or Area:** PIT	**Chlor Test:NA** ☒ **Chlor Value <1000:** ☐

Generator Name	Profile #	Work Order, BOL, Or Manifest #	Used Oil	Spent Antifreeze	Used Oil Filters	Off Spec. Fuel	Oily Waste Water	Oily Solids	PCS	Absorbent	Empty Drums	Other
Robinson Noble	4361 -b	1922-318a						1.97				lc

* The information contained in this entry log describes your waste as specified in the specific waste profile approved in to the PRS facility. Please verify the information for accuracy prior to signing.

61875

PRS Group, Inc.

ENTRY LOG FOR NON-HAZARDOUS ITEMS

3003 Taylor Way
Tacoma, WA 98421
Phone: (253)383-4175 Fax: (253)383-4531
prs@prsplant.net

Date: 7-5-2015	**Carrier:** Nrc	**Vehicle #:** 2185
Drivers Signature *:	**Plant Employee:** Zach	**Time:** 11:49 AM

% Water: 10%	**Ph:** n/a	**Flash>140** ☒ Other Value (Fuel Only):
% Solids: 90%	**Tank # Or Area:** PIT	**Chlor Test:NA** ☒ **Chlor Value <1000:** ☐

Generator Name	Profile #	Work Order, BOL, Or Manifest #	Used Oil	Spent Antifreeze	Used Oil Filters	Off Spec. Fuel	Oily Waste Water	Oily Solids	PCS	Absorbent	Empty Drums	Other
Robinson Noble	4361 -b	1922-318a						5.72				ic

* The information contained in this entry log describes your waste as specified in the specific waste profile approved in to the PRS facility. Please verify the information for accuracy prior to signing.

61876

PRS Group, Inc.

ENTRY LOG FOR NON-HAZARDOUS ITEMS

3003 Taylor Way
Tacoma, WA 98421
Phone: (253)383-4175 Fax: (253)383-4531
prs@prsplant.net

Date: 7-5-2015	**Carrier:** Nrc	**Vehicle #:** 2155
Drivers Signature *:	**Plant Employee:** Zach	**Time:** 1:01 PM

% Water: 10%	**Ph:** n/a	**Flash>140** ☒ Other Value (Fuel Only):
% Solids: 90%	**Tank # Or Area:** PIT	**Chlor Test:NA** ☒ **Chlor Value <1000:** ☐

Generator Name	Profile #	Work Order, BOL, Or Manifest #	Used Oil	Spent Antifreeze	Used Oil Filters	Off Spec. Fuel	Oily Waste Water	Oily Solids	PCS	Absorbent	Empty Drums	Other
Robinson Noble	4361 -b	1922-318a						4.16t				ic

* The information contained in this entry log describes your waste as specified in the specific waste profile approved in to the PRS facility. Please verify the information for accuracy prior to signing.

61874

PRS Group, Inc.

ENTRY LOG FOR NON-HAZARDOUS ITEMS

3003 Taylor Way
Tacoma, WA 98421
Phone: (253)383-4175 Fax: (253)383-4531
prs@prsplant.net

Date: 7-5-2015	**Carrier:** Nrc	**Vehicle #:** 2155
Drivers Signature *:	**Plant Employee:** Zach	**Time:** 9:37 AM

% Water: 20%	**Ph:** 7.5	**Flash>140** ☒ Other Value (Fuel Only):
% Solids: 80%	**Tank # Or Area:** PIT	**Chlor Test:NA** ☒ **Chlor Value <1000:** ☐

Generator Name	Profile #	Work Order, BOL, Or Manifest #	Used Oil	Spent Antifreeze	Used Oil Filters	Off Spec. Fuel	Oily Waste Water	Oily Solids	PCS	Absorbent	Empty Drums	Other
Robinson Noble	4361 -b						5.92t					ic

* The information contained in this entry log describes your waste as specified in the specific waste profile approved in to the PRS facility. Please verify the information for accuracy prior to signing.

APPENDIX D

Libby Environmental, Inc.

4139 Libby Road NE • Olympia, WA 98506-2518

July 8, 2015

Max Wills
Robinson Noble
17625 130th Avenue NE, Suite 102
Woodinville, WA 98072

Dear Mr. Wills:

Please find enclosed the analytical data report for the TPU / Port of Tacoma Pier 7 Project located in Tacoma, Washington.

The results of the analyses are summarized in the attached tables. Applicable detection limits and QA/QC data are included. The sample(s) will be disposed of in 30 days unless we are contacted to arrange long term storage.

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

Sincerely,

Sherry L. Chilcutt
Senior Chemist
Libby Environmental, Inc.

Phone (360) 352-2110 • Fax (360) 352-4154 • libbyenv@aol.com

www.LibbyEnvironmental.com

Libby Environmental, Inc.

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

TPU / PORT OF TACOMA PIER 7 PROJECT
Robinson Noble, Inc.
Tacoma, Washington
Libby Project # L150705-30
Client Project # 1922-318A

Analyses of Mineral Oil (NWTPH-Dx/Dx Extended) in Soil

Sample Number	Date Analyzed	Surrogate Recovery (%)	Mineral Oil (mg/kg)
Method Blank	7/5/15	127	nd
1	7/5/15	int	18000 E
2	7/5/15	106	nd
3	7/5/15	int	230
4	7/5/15	103	nd
5	7/5/15	126	nd
6	7/5/15	101	nd
6 Dup	7/5/15	125	nd
7	7/5/15	121	nd
8	7/5/15	int	17000 E
9	7/5/15	int	11000 E
10	7/5/15	int	22000 E
Practical Quantitation Limit			200

"E" Reported result is an estimate because it exceeds the calibration range.
"nd" Indicates not detected at the listed detection limits.
"int" Indicates that interference prevents determination.

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

ANALYSES PERFORMED BY: Sherry Chilcutt

Libby Environmental, Inc.

Chain of Custody Record

www.LibbyEnvironmental.com

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

Date: 7/5/15 Page: 1 of 1

Client: ROBINSON NOBLE

Address: 17625 130th AVE NE Suite 102

City: WOODINVILLE State: WA Zip: 98072

Phone: 425 488 0599 Fax:

Client Project # 1922-318A

Project Manager: MAX WILLS

Project Name: TPU / PORT OF TACOMA PIER 7

Location: PORT OF TACOMA City, State: TACOMA WA

Collector: MTW Date of Collection: 7/5/15

Email: MWILLS@ROBINSON-NOBLE.COM

Sample Number	Depth	Time	Sample Type	Container Type	VOA 8021B	VOA 8021B BTEX Only	VOA 8260	SEMI VOL 8270	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx	NWTPH-Dx Ext.	PAH 8270	PCB's 8082	MTCA 5 Metals	MINERAL OIL		Field Notes
1 1	#4	9:30	SOIL	4 oz											X			
2 2	#4	9:35	"	"											X			
3 3	#3.5	9:40	"	"											X			
4 4	#3.5	9:50	"	"											X			
5 5	#3.5	9:55	"	"											X			
6 6	#3.5	10:00	"	"											X			
7 7	1	10:10	SOIL	4 oz											X			
8 8	5	11:10	"	"											X			
9 9	7	11:45	"	"											X	X		
10 10	8.5'	12:30	"	"											X	X		
11																		
12																		
13																		
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Relinquished by:	Date / Time	Received by:	Date / Time
[signature]	7/5/15 1300	[signature] UPS	7-5-15 1300
Relinquished by:	Date / Time	Received by:	Date / Time
Relinquished by:	Date / Time	Received by:	Date / Time

Sample Receipt:

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

Remarks:

ML

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