



September 28, 2017

ESC17-E034
Page No. 1

Mr. Michael Warfel
Department of Ecology
3190 160th Avenue SE
Bellevue, Washington 98008-5452

Subject: Summary of Issues Requiring Resolution: January 13, 2017
L & E Auto Sales
Naval Avenue & 2101 Burwell Place
Bremerton, Washington
VCP No.: NW2785

Dear Mr. Warfel:

Thank you for your summary of the remaining issues from the Ecology Opinion Letter dated 11/27/2013. EnviroSound Consultants (EnviroSound) has prepared this letter 1) to review and respond to the list of remaining issues; 2) to update and correct data presented in previous figures and reports and offer evidence that the site meets the Ecology criteria for No Further Action (NFA) and no further cleanup is necessary for the site; and 3) to ask that you reconsider Ecology's request for an RI/FS for this site.

The specific numbered issues and our status update are listed below:

Bullet	Data Gap/Issues to be Resolved	Response
1	RI Report required per Ecology Requirements	The Site has been adequately characterized and nature and extent of contamination has been adequately documented. The Site does not represent a threat to groundwater, human health, or the environment and meets the criteria for NFA.
1	Summary of Former Site uses and history	All available information regarding Site history has been submitted to Ecology. The Site was utilized by a taxi cab company during the 1950's. The three underground storage tanks (USTs) were utilized for fueling the cabs. The small garage on the site was used for servicing the vehicles with a waste oil tank in the garage itself. Historical air photos from 1956 and 1963 show a pump island on the subject property. When the cab company left the property, the pump islands were removed and the USTs were left in place. The Site was then utilized as a used car lot with minor maintenance performed in a garage. The existing building on the Site was constructed during 1953.

Bullet	Data Gap/Issues to be Resolved	Response
2	<p>Complete description of Site geology and hydrogeology, including boring logs and local well logs, and locations of subsurface utilities. Request for additional information provided by ESC and DLH boring logs. Use this information to develop a description of the hydrogeologic framework and CSM, per the RI report checklist; include a scaled hydrogeologic cross section showing former USTs, remedial excavations and soil sampling results. All maps and cross sections must be to scale.</p>	<p>Cross sections and revised maps are included as attachments to this letter.</p>
3a	<p>Horizontal and vertical extent of soil contamination not delineated; former gasoline USTs. Confirmation soil samples from the final UST excavation depth of 14 feet were not collected directly beneath the locations where shallower samples showed TPH-G ranging from 4,900 to 12,000 mg/kg.</p>	<p>We disagree that confirmation soil samples from beneath shallower samples showing contamination were not collected and we regret this was not clearer in our previous reports. The primary purpose of installation of the test pits and sample collection was to identify potentially stained soil and find vertical and horizontal boundaries of potentially remaining soil contamination. Tables and figures have been simplified and expanded to better show locations and depths of samples. Please see revised figures Attachment 1.</p>
3b	<p>Horizontal and vertical extent of soil contamination not delineated; former waste oil UST. DLH soil sample 81910-B+4 (8 ft depth) had TPH-D and TPH-O greater than cleanup levels and is outside the bounds of test pit 1, leaving the extent of impacts from the former waste oil tank as unresolved; also see bullet 6 below.</p>	<p>We disagree that confirmation soil samples from beneath shallower samples showing contamination were not collected. Sample ESC-E002-N-SL01 was collected below these two 81910 samples. Figures have been simplified and expanded to better illustrate conditions at the Site. Revised figures are provided with this letter.</p> <p>Associated confirmation samples between DLH samples and bounding EnviroSound samples are presented for the waste oil tank and the gasoline tanks in corrected Tables 1 and 2 of this letter.</p>

Bullet	Data Gap/Issues to be Resolved	Response
4	Unknown disposition of soil excavated during test pit sampling.	No contaminated soil was identified during test pit excavation and sampling (no staining, no odor, laboratory analysis of samples did not detect contaminants of concern.) Test pit soil was replaced in the excavations.
5	Tank 3 product piping	Resolved.
6	Waste oil chemicals not analyzed in soil samples from waste oil tank area.	PCBs, VOCs, and metals were analyzed in soil from the waste oil tank area in Sample 81910-N. VOCs and PCBs were not detected. Metal concentrations are provided on Figure. This data has been included in tabulated data, is provided in as an Attachment with this letter, and has been loaded to the EIM for this project.
7	TEE required	Completed TEE Exclusion form is provided with this letter.
8	Development of a work plan recommended.	We believe the Site has been adequately characterized and that documentation for clean confirmation samples has been provided.

**Corrected Table 1. Summary of Soil Diesel and Oil Results
 Comparison of DLH and EnviroSound Sample Results
 2101 Burwell Place, Bremerton, Washington**

Location	Sample Number	Sampling Depth	Diesel (mg/kg)	Lube Oil (mg/kg)
Former Hydraulic Lift	81910-Hyd-7'	8	<50	<250
Former Waste Oil UST	81910-N*	4.0 feet	7,100	27,000
	81910-B+4*	8.0 feet	5,600	13,000
	ESC-E002-N-SL02	5.0 feet	< 25	< 50
	ESC-E002-N-SL01	9.0 feet	< 25	< 50
B-1	B1-6*	6.0 feet	250	2,500
	ESC-E002-B1-SL03	7.0 feet	< 25	< 50
MTCA Method A Cleanup Levels			2,000	2,000

Notes:

* Samples reported by DLH (2010)
 Concentrations listed in milligrams per kilogram (mg/kg), or parts per million (ppm).
 Standards are MTCA Method A Soil Cleanup Levels from Chapter 173-200 WAC.

**Corrected Table 2. Summary of Gasoline and BTEX Results
 Comparison of DLH and EnviroSound Sample Results
 2101 Burwell Place, Bremerton, Washington**

Location	Sample Number	Sampling Depth	Benzene	Ethyl-benzene	Toluene	Xylenes	Gasoline
South USTs	101110-S-14*	14.0 feet	<0.02	0.47	0.35	4.3	140
	ESC-E002-S14-SL4	15.0 feet	< 0.02	<0.03	< 0.05	< 0.05	< 3
West USTs	101110-W-14*	14.0 feet	<2.0	72	68	420	5,700
	ESC-E002-W-SL5	15.0 feet	< 0.02	< 0.03	< 0.05	< 0.05	< 3
MTCA Method A Cleanup Levels			0.03	7	6	9	**30/100

Notes:

* Samples reported by DLH (2010)
 Concentrations listed in milligrams per kilograms (mg/kg), or parts per million (ppm).
 **Gasoline cleanup levels in soil is 30 mg/kg if benzene is present, and 100 mg/kg if benzene is not present.
 Standards are MTCA Method A Soil Cleanup Levels from Chapter 173-200 WAC.

Former gasoline USTs

The source of contamination (three gasoline USTs) has been removed, as has 75.95 tons of impacted soil. EnviroSound collected samples below samples previously collected by DLH to determine the vertical extent of contamination with corresponding sample results shown on Table 1. Samples collected from borings placed around the USTs during the Phase II ESA by DLH had no detectable concentrations of NWTPH-Dx at depths ranging from 15 to 20 feet and no petroleum-impacted soils were observed in test pits logged by EnviroSound adjacent to the UST excavation.

Former Garage

The source of contamination (waste oil tank and the hydraulic lift) has been removed along with the petroleum-impacted soils. No stained soils were observed in the EnviroSound test pit excavated in the former waste oil tank location. Diesel and lube oil were not detected in soil samples collected by EnviroSound at 5 and 9 feet bgs below the areas of concern.

EnviroSound test pit TP-2 excavated in the area of DLH boring B-1 did not encounter any petroleum stained soils and diesel was not detected in the sample collected at 7.0 feet bgs.

Summary

The area of the Site is 0.25 acres and has been assigned a ranking of 5 by Ecology (with 5 being of least concern). No groundwater was encountered in the DLH borings to a depth of 20 feet. No groundwater or groundwater seepage was encountered in exploratory test pits excavated to 15 feet. The nearest well to the subject site is approximately 200 yards to the north at 2101 West 6th Avenue. The depth to water at that location is 72 feet. Clay soils were encountered in test pits TP-3 and TP-4 at depths of 14.0 and 14.5 feet, and clay soils were encountered in the bottom of the gasoline UST excavation. Clay soils limit potential vertical migration of the contamination from the USTs.

In summary, it is our opinion that DLH identified and removed the sources of contamination and associated impacted soil from the Site and that EnviroSound confirmed the removal of the impacted soil from the site. There is no potential impact to groundwater at the site and there is no remaining risk to human health or the environment.

However, if after review of updated material and discussion, any specific questions remain regarding potential areas of concern, a targeted investigation specific to that question would be the most cost-effective means to work toward achieving a No Further Action designation for the site.

Should you have any questions or concerns, which have not been addressed, or if we may be of additional assistance, please call our office at (360) 698-5950.

Sincerely,



Shawn E. Williams, L.G.
Senior Environmental Geologist

cc: Frick N Frack Holdings Inc.

Attachments:

Figure 1 – Site Location Map
Figure 2 – Site Plan
Figure 3 – Site Detail and Sampling Locations
Figure 4 – Fuel Tanks Excavation, Sampling, and Results
Figure 5 – Cross Section A-A'
Figure 6 – Cross Section B-B'
Tabulated Data
Terrestrial Ecological Evaluation Worksheet



2017 Dwg\17 ESC\17 BUR SC FILE: 17-E034-BUR-SC-F1.DWG PLOTTED: 9/26/17.

DATE: SEPT. 2017
REV.: -
CHKD: K.L.W.
DRAWN: C.E.H.
PROJ. No.: ESC17-E034



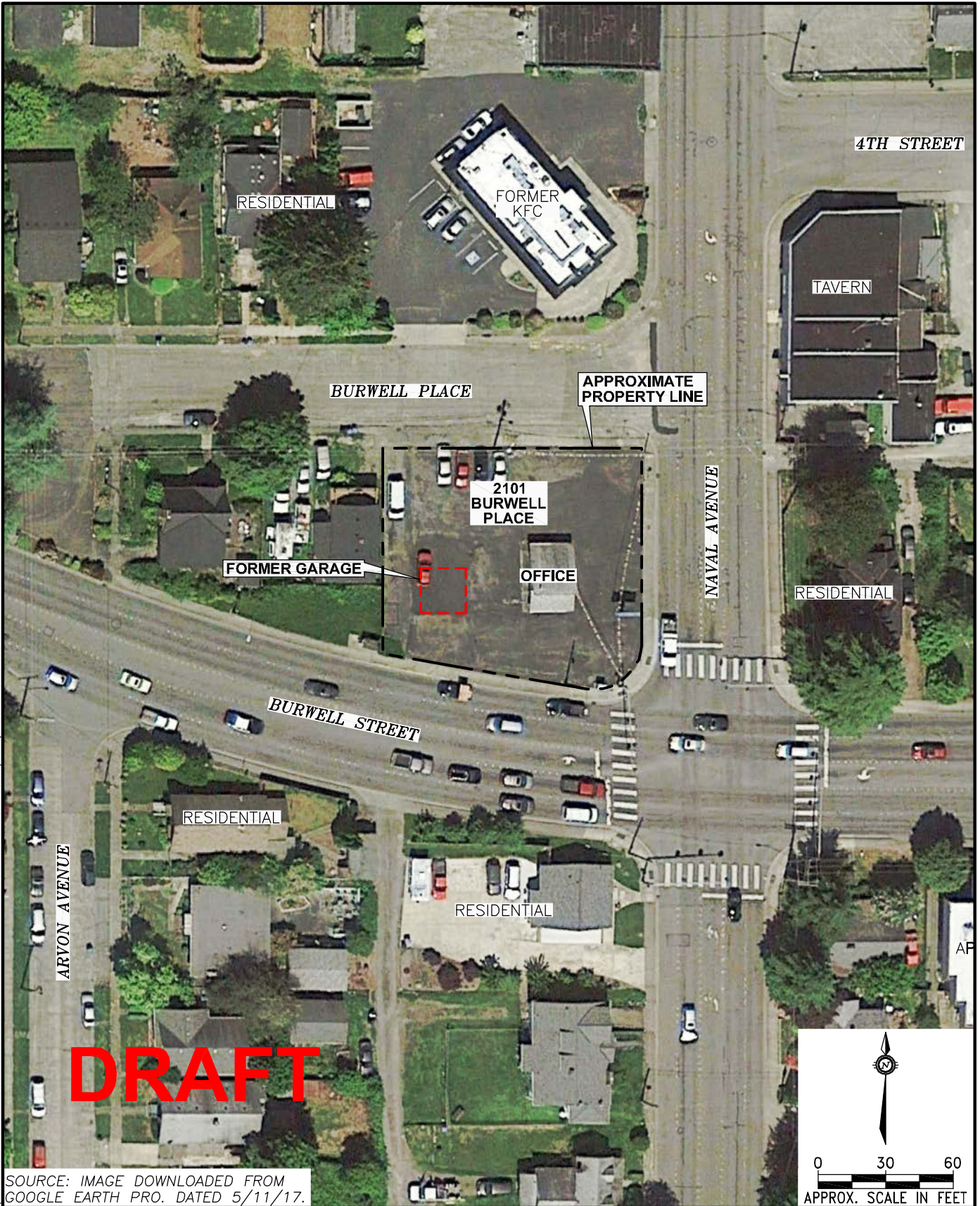
SITE LOCATION MAP

BURWELL PLACE
2017 SITE CHARACTERIZATION
Bremerton, Washington

FIGURE

1

2017 Dwg\17 ESC\17 BUR SC FILE: 17-E034-BUR-SC-F2.DWG PLOTTED: 9/26/17.



DRAFT

SOURCE: IMAGE DOWNLOADED FROM GOOGLE EARTH PRO. DATED 5/11/17.

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SITE PLAN

BURWELL PLACE
2017 SITE CHARACTERIZATION
Bremerton, Washington

FIGURE

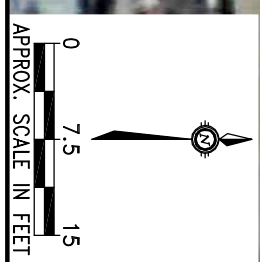
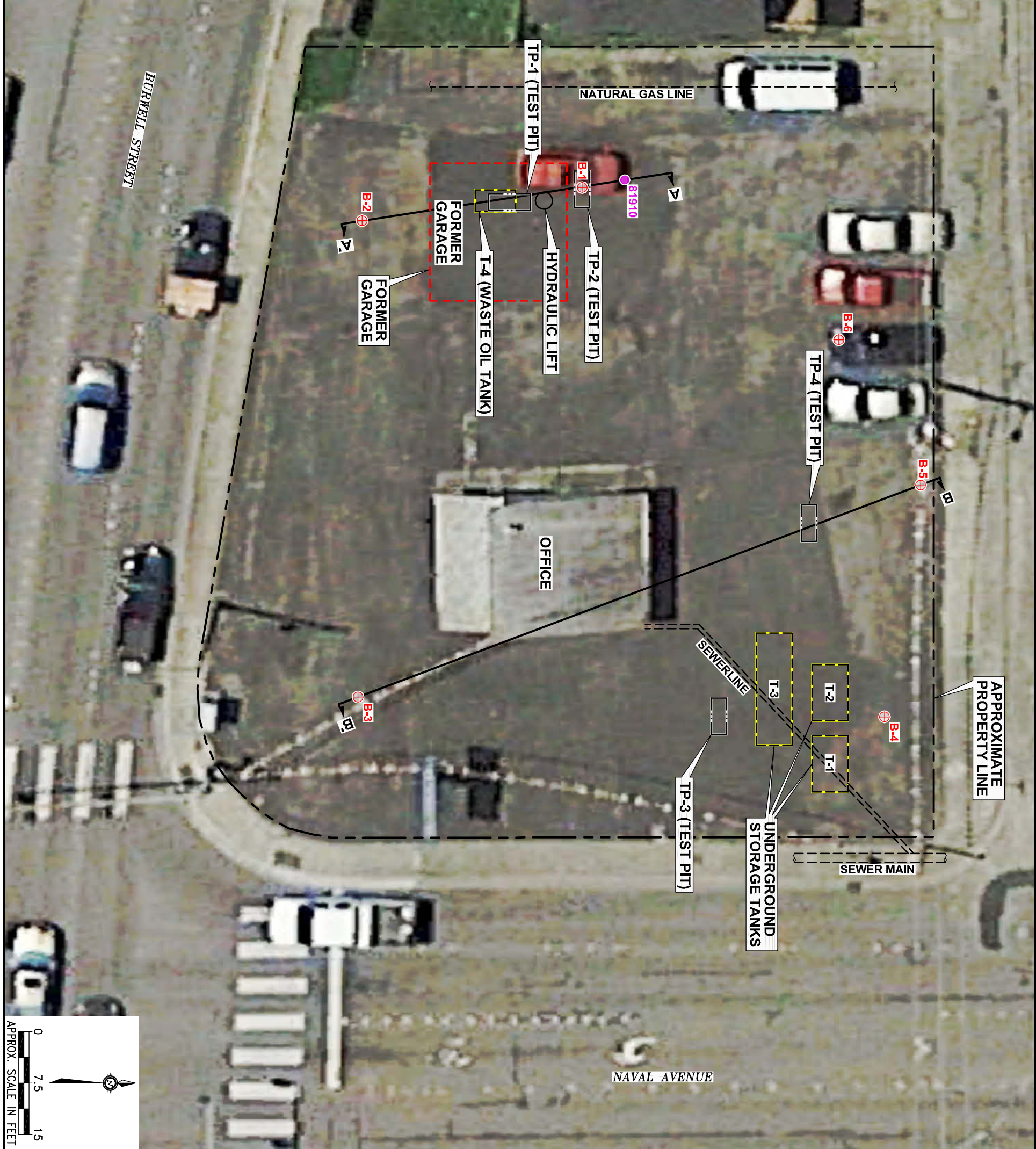
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LEGEND

- B-1 ⊕ SOIL BORING LOCATION
- 81910 ● SOIL SAMPLE LOCATION
- A-A' CROSS SECTION A-A' (SEE FIGURE 4)

NOTE:
 ALL SITE FEATURES AND SAMPLE LOCATIONS HAVE BEEN DIGITIZED FROM REPORTS BY OTHERS AND LOCATIONS SHOULD BE CONSIDERED APPROXIMATE. SOURCE: IMAGE DOWNLOADED FROM GOOGLE EARTH PRO. DATED 5/11/17.



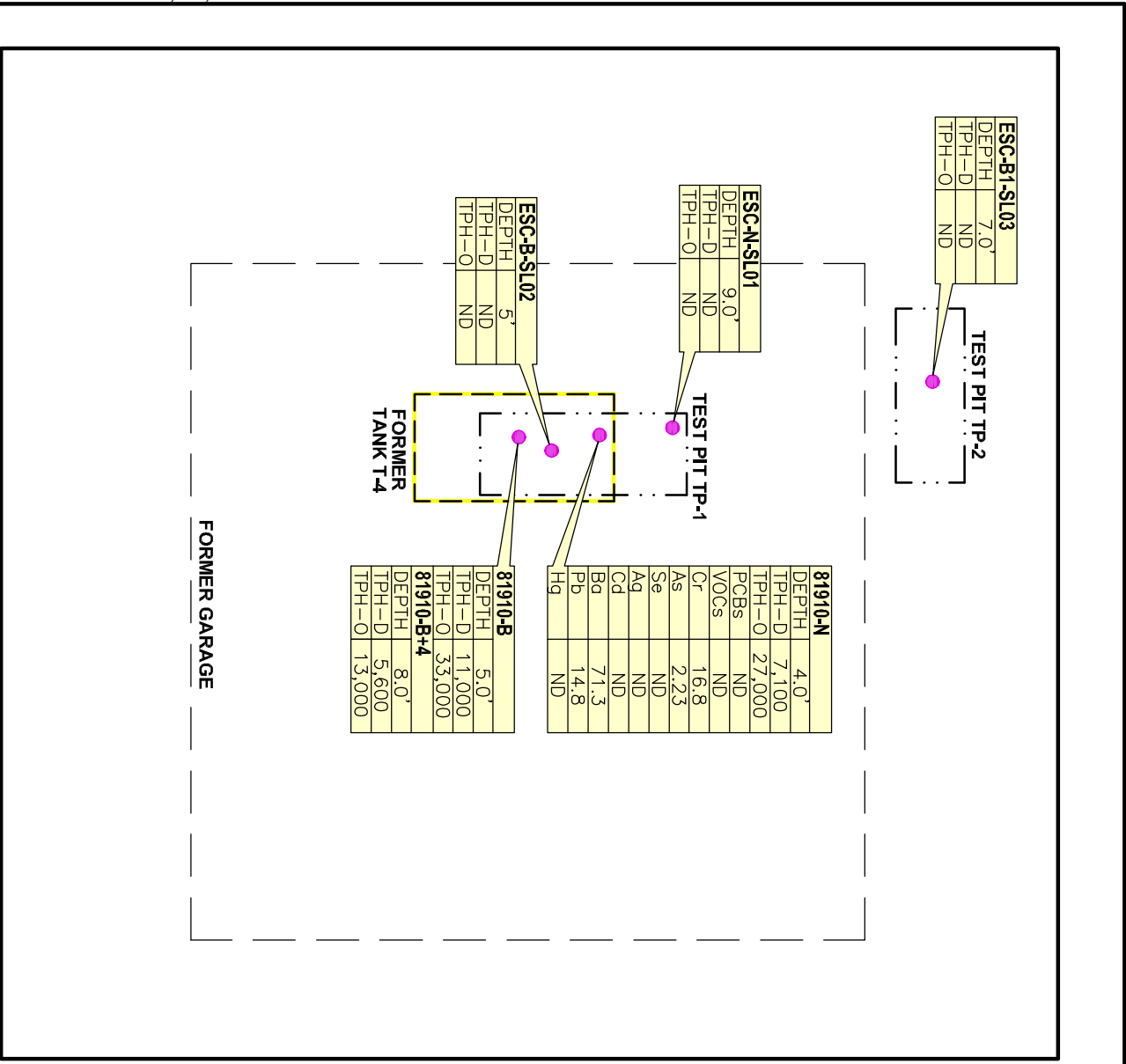
DATE: SEPT. 2017
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 DRAWN: C.E.H.
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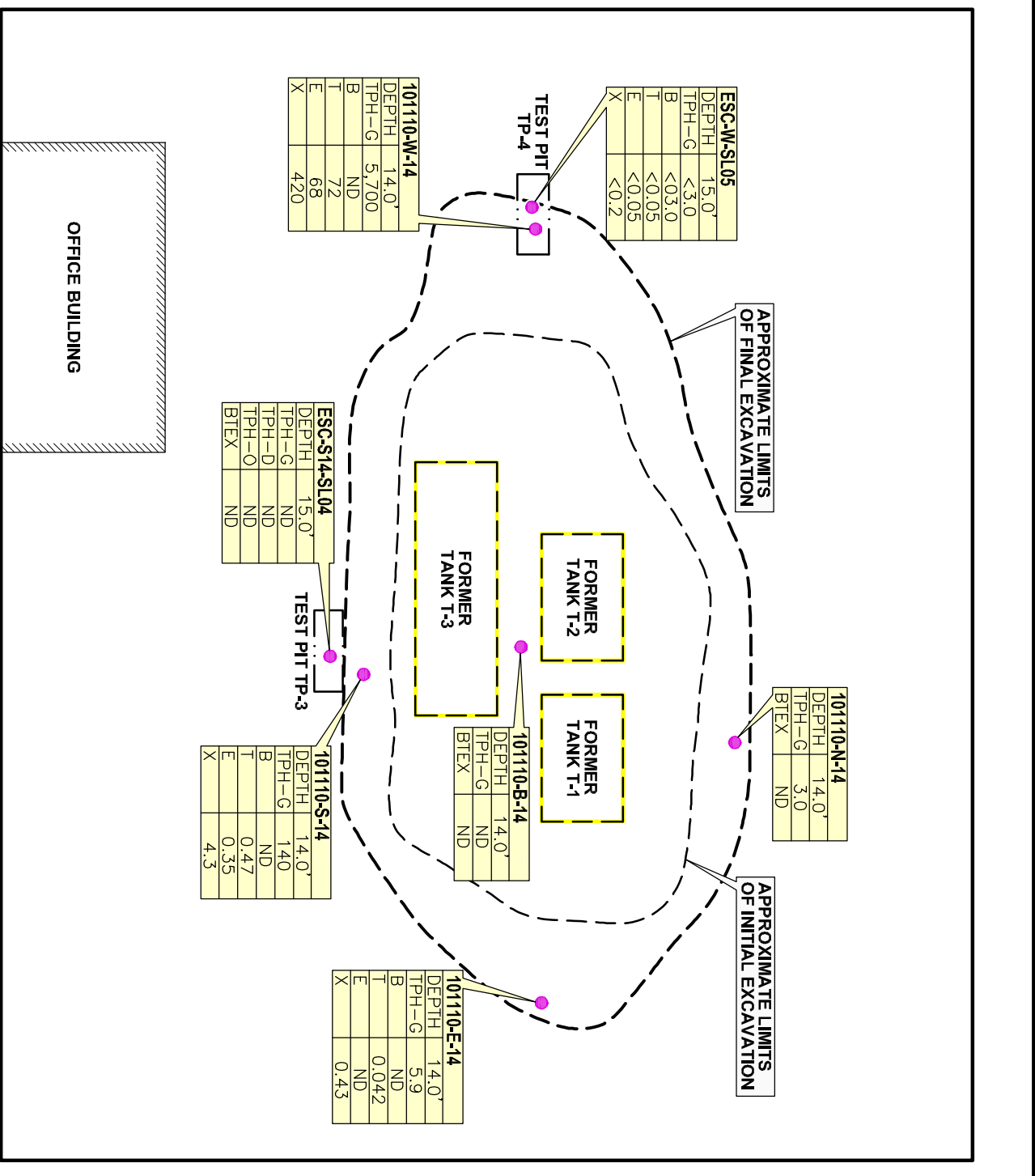
SITE DETAIL AND SAMPLING LOCATIONS

BURWELL PLACE
 2017 SITE CHARACTERIZATION
 Bremerton, Washington

FIGURE
 3



WASTE OIL TANK
SCALE: 1" = 5'



GASOLINE UNDERGROUND STORAGE TANKS - T1, T2, AND T3
SCALE: 1" = 10'

LEGEND

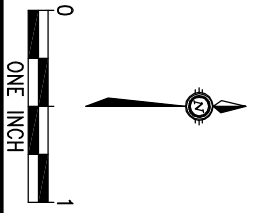
● SOIL SAMPLE LOCATION

ANALYTICAL RESULTS IN mg/kg

TPH-G	TOTAL PETROLEUM HYDROCARBONS-GASOLINE	As	ARSENIC
TPH-D	TOTAL PETROLEUM HYDROCARBONS-DIESEL	Se	SELENIUM
TPH-O	TOTAL PETROLEUM HYDROCARBONS-OIL	Ag	SILVER
BTEX	BENZENE, TOLUENE, ETHYLBENZENE, XYLENES	Cd	CADMIUM
PCBS	POLYCHLORINATED BIPHENYLS	Ba	BARIUM
VOCS	VOLATILE ORGANIC COMPOUNDS	Pb	LEAD
Cr	CHROMIUM	Hg	MERCURY
		ND	NOT DETECTED

NOTE:
ALL SITE FEATURES AND SAMPLE LOCATIONS HAVE BEEN DIGITIZED FROM REPORTS BY OTHERS AND LOCATIONS SHOULD BE CONSIDERED APPROXIMATE.

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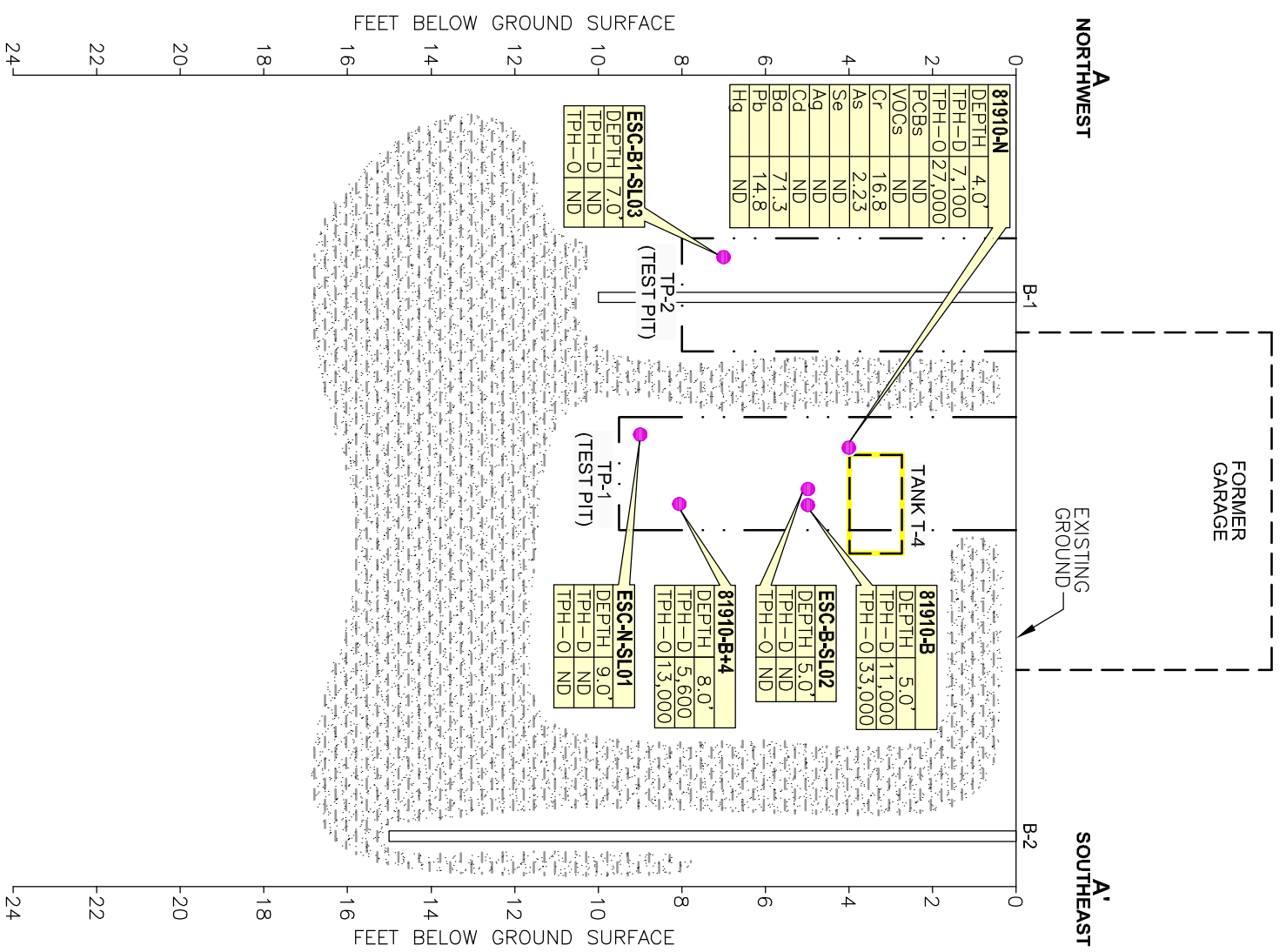
FUEL TANK EXCAVATION, SAMPLING, AND RESULTS

BURWELL PLACE
2017 SITE CHARACTERIZATION
Bremerton, Washington

FIGURE

4

NOTE:
ALL SITE FEATURES AND SAMPLE LOCATIONS HAVE BEEN DIGITIZED FROM REPORTS BY OTHERS AND LOCATIONS SHOULD BE CONSIDERED APPROXIMATE.



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HORIZONTAL SCALE: 1"=10'
VERTICAL SCALE: 1"=4'
EXAGGERATION 2.5X

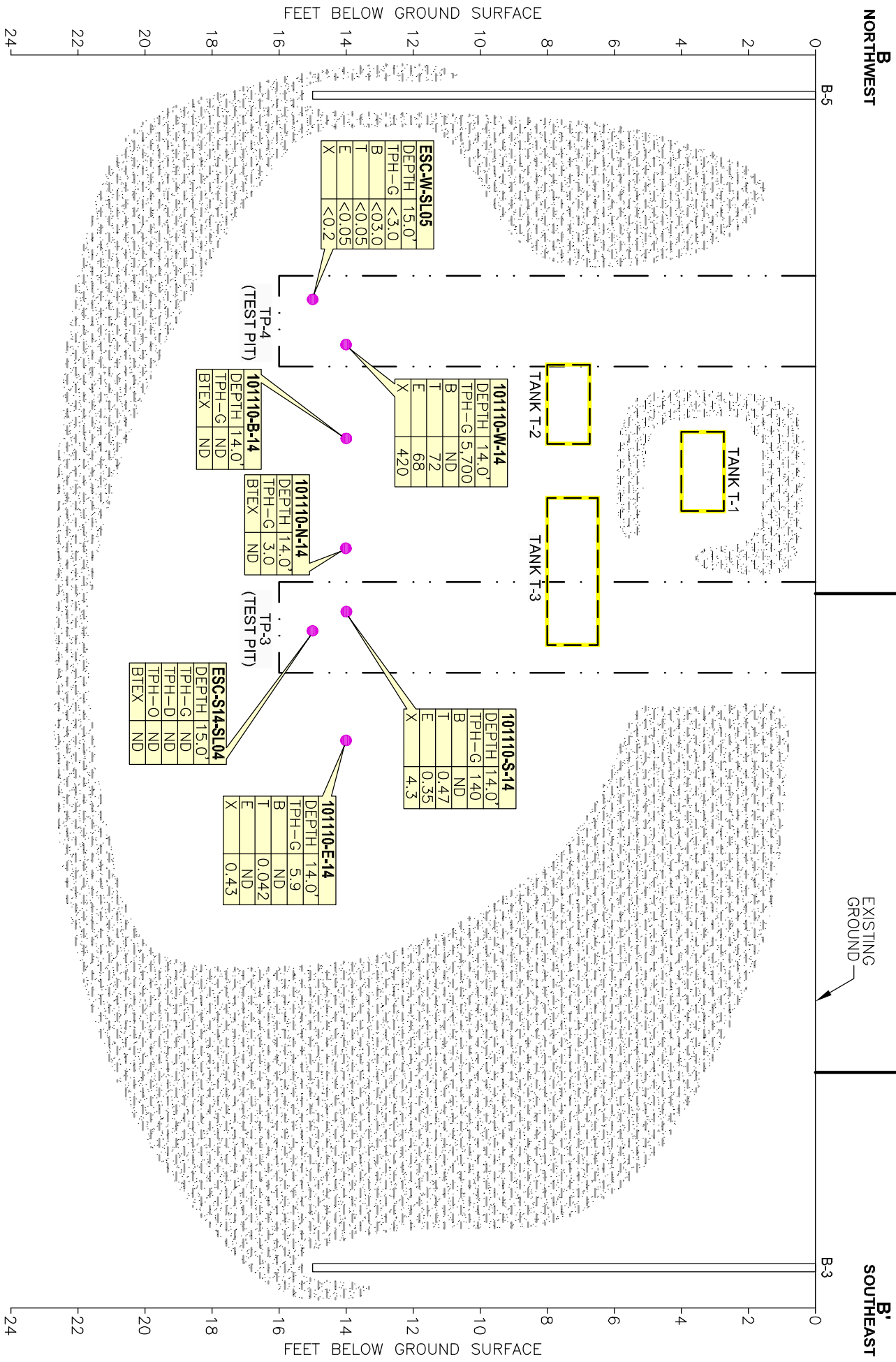
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CROSS SECTION A-A'
BURWELL PLACE
2017 SITE CHARACTERIZATION
Bremerton, Washington

FIGURE
5

NOTE:
ALL SITE FEATURES AND SAMPLE LOCATIONS HAVE BEEN DIGITIZED FROM REPORTS BY OTHERS AND LOCATIONS SHOULD BE CONSIDERED APPROXIMATE.



LEGEND

B-1 BORING DESIGNATION
 BOREHOLE LOCATION
 SOIL SAMPLE LOCATION

TAN SILTY SAND WITH CLAY TRACES

ANALYTICAL RESULTS IN mg/kg

TPH-G	TPH-D	TPH-O	BTEX	PCBs	VOCs	Cr
GASOLINE RANGE ORGANICS	DIESEL RANGE ORGANICS	RESIDUAL RANGE ORGANICS	BENZENE, TOLUENE, ETHYLBENZENE, XYLENES	POLYCHLORINATED BIPHENYLS	VOLATILE ORGANIC COMPOUNDS	CHROMIUM
As	As	As	Ag	Ba	Pb	Hg
GASOLINE RANGE ORGANICS	GASOLINE RANGE ORGANICS	GASOLINE RANGE ORGANICS	SILVER	CADMIUM	BARIUM	LEAD
ARSENIC	ARSENIC	ARSENIC	MERCURY	NOT DETECTED		

DRAFT

HORIZONTAL SCALE: 1"=10'
 VERTICAL SCALE: 1"=4'
 EXAGGERATION 2.5X

DATE: SEPT. 2017
 REV.: -
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 PROJ. No.: ESC17-E034



CROSS SECTION B-B'

BURWELL PLACE
 2017 SITE CHARACTERIZATION
 Bremerton, Washington

FIGURE
6

Tabulated Data			Soil Borings									
Sample ID			B1-6	B1-10	B2-15	B3-15	B4-15	B5-15	B5-20	B6-3	B6-10	B6-15
Location			B1	B1	B2	B3	B4	B5	B5	B6	B6	B6
Date			3-Jun-10	3-Jun-10	3-Jun-10	3-Jun-10	3-Jun-10	3-Jun-10	3-Jun-10	3-Jun-10	3-Jun-10	3-Jun-10
Depth (ft) bgs			6	10	15	15	15	15	20	3	10	15
Analyte	Unit	MTCA										
TPH NWTPH-HCID												
Diesel	mg/kg	2,000	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Lube Oil	mg/kg	2,000	2500	<250	<250	<250	<250	<250	<250	<250	<250	<250
Gasoline	mg/kg	100	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
NWTPH-Gx												
TPH Gasoline Range	mg/kg	100	--	--	--	--	--	--	--	--	--	--
BTEX EPA-8021												
Benzene	mg/kg	0.3	<0.03	<0.02	--	<0.02	--	--	--	--	--	--
Ethylbenzene	mg/kg	7	<0.05	<0.05	--	<0.05	--	--	--	--	--	--
Toluene	mg/kg	6	<0.05	<0.05	--	<0.05	--	--	--	--	--	--
Xylene (total)	mg/kg	9	<0.05	<0.15	--	<0.15	--	--	--	--	--	--
Metals EPA-200.8												
Lead	mg/kg	250	14.8	<5.0	--	<5.0	--	--	--	--	--	--
Cadmium	mg/kg	2	<1.0	<1.0	--	<1.0	--	--	--	--	--	--
Chromium	mg/kg	2,000	16.8	28	--	20	--	--	--	--	--	--
Arsenic	mg/kg	20	2.3	<5.0	--	<5.0	--	--	--	--	--	--
Mercury	mg/kg	2	<0.2	<0.5	--	<0.5	--	--	--	--	--	--
Selenium	mg/kg	5.2	<1.0	--	--	--	--	--	--	--	--	--
Silver	mg/kg	13.6	<1.0	--	--	--	--	--	--	--	--	--
Barium	mg/kg	1,650	71.3	--	--	--	--	--	--	--	--	--
Metals EPA-8082A												
PCBs (individual Aroclors)	mg/kg	1.0	<0.1	--	--	--	--	--	--	--	--	--

bold indicates value greater than MTCA cleanup level

-- = Not Analyzed

ND = Not detected

< = Not detected at reporting limit

ft = feet

mg/kg = milligrams per kilogram

bgs = below ground surface

Tabulated Data			Waste Oil Tank (T4) Soil Sampling						
Sample ID	81910-N	81910-S	81910-E	81910-W	81910-B	81910-B+4'	81910-Hyd-7'		
Location	North sidewall	South sidewall	East sidewall	West sidewall	Bottom of excavation below tank	Bottom of excavation below tank	Below hydraulic lift		
Date	19-Aug-10	19-Aug-10	19-Aug-10	19-Aug-10	19-Aug-10	19-Aug-10	19-Aug-10		
Depth (ft) bgs	4	4	4	4	5	8	8		
Analyte	Unit	MTCA							
TPH NWTPH-HCID									
Diesel	mg/kg	2,000	7100	<50	<50	<50	11000	5600	<50
Lube Oil	mg/kg	2,000	27000	<250	<250	<250	33000	13000	<250
Gasoline	mg/kg	100	--	--	--	--	--	--	--
NWTPH-Gx									
TPH Gasoline Range	mg/kg	100	--	--	--	--	--	--	--
BTEX EPA-8021									
Benzene	mg/kg	0.3	--	--	--	--	--	--	--
Ethylbenzene	mg/kg	7	--	--	--	--	--	--	--
Toluene	mg/kg	6	--	--	--	--	--	--	--
Xylene (total)	mg/kg	9	--	--	--	--	--	--	--
Metals EPA-200.8									
Lead	mg/kg	250	--	--	--	--	--	--	--
Cadmium	mg/kg	2	--	--	--	--	--	--	--
Chromium	mg/kg	2,000	--	--	--	--	--	--	--
Arsenic	mg/kg	20	--	--	--	--	--	--	--
Mercury	mg/kg	2	--	--	--	--	--	--	--
Selenium	mg/kg	5.2	--	--	--	--	--	--	--
Silver	mg/kg	13.6	--	--	--	--	--	--	--
Barium	mg/kg	1,650	--	--	--	--	--	--	--
Metals EPA-8082A									
PCBs (individual Aroclors)	mg/kg	1.0	--	--	--	--	--	--	--

bold indicates value greater than MTCA cleanup l

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Tabulated Data											
Sample ID			82010-Pipes	82010-T1-B	82010-T1-E	82010-T1-N	82010-T1-S	82010-T2-N	82010-T2-B-2	82010-W	82010-B-4
Location			Below product lines	Below tank 1	East Sidewall	North Sidewall	South Sidewall	North Sidewall	Below tank 2	West Sidewall	4 ft below bottom of tank
Date			20-Aug-10	20-Aug-10	20-Aug-10	20-Aug-10	20-Aug-10	20-Aug-10	20-Aug-10	20-Aug-10	20-Aug-10
Depth (ft) bgs			?	8	8	8	8	8	8	8	12
Analyte	Unit	MTCA									
TPH NWTPH-HCID											
Diesel	mg/kg	2,000	--	--	--	--	--	--	--	--	--
Lube Oil	mg/kg	2,000	--	--	--	--	--	--	--	--	--
Gasoline	mg/kg	100	--	--	--	--	--	--	--	--	--
NWTPH-Gx											
TPH Gasoline Range	mg/kg	100	<2.0	5100	<2.0	4900	7400	8700	12000	120	20000
BTEX EPA-8021											
Benzene	mg/kg	0.3	<0.02	<0.8	<0.02	<0.8	<0.8	6	1.5	<0.02	3.4
Ethylbenzene	mg/kg	7	<0.02	19	<0.02	3.6	15	92	120	0.15	460
Toluene	mg/kg	6	<0.02	40	<0.02	15	36	100	110	0.32	290
Xylene (total)	mg/kg	9	<0.06	300	<0.06	69	280	720	790	2	2000
Metals EPA-200.8											
Lead	mg/kg	250	--	19.6	--	--	--	--	18.3	--	--
Cadmium	mg/kg	2	--	--	--	--	--	--	--	--	--
Chromium	mg/kg	2,000	--	--	--	--	--	--	--	--	--
Arsenic	mg/kg	20	--	--	--	--	--	--	--	--	--
Mercury	mg/kg	2	--	--	--	--	--	--	--	--	--
Selenium	mg/kg	5.2	--	--	--	--	--	--	--	--	--
Silver	mg/kg	13.6	--	--	--	--	--	--	--	--	--
Barium	mg/kg	1,650	--	--	--	--	--	--	--	--	--
Metals EPA-8082A											
PCBs (individual Aroclors)	mg/kg	1.0	--	--	--	--	--	--	--	--	--

bold indicates value greater than MTCA cleanup l

-- = Not Analyzed

ND = Not detected

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ft = feet

mg/kg = milligrams per kilogram

bgs = below ground surface

Tabulated Data			Tank 3 Initial Soil Sampling Analytical Results						
Sample ID			82310-T3-B-9'5"	82310-T3-B-12'	82310-T3-W-9	82310-T3-S-10	82310-T3-E-10	82310-Paint-White	82310-Paint-Blue
Location			Below tank at 9'5"	Below tank at 12'	Below tank at 12'	South Sidewall	East Sidewall	Paint from garage	Paint from garage
Date			23-Aug-10	23-Aug-10	23-Aug-10	23-Aug-10	23-Aug-10	23-Aug-10	23-Aug-10
Depth (ft) bgs			9'5"	12	12	10	10	NA	NA
Analyte	Unit	MTCA							
TPH NWTPH-HCID									
Diesel	mg/kg	2,000	--	--	--	--	--	--	--
Lube Oil	mg/kg	2,000	--	--	--	--	--	--	--
Gasoline	mg/kg	100	--	--	--	--	--	--	--
NWTPH-Gx									
TPH Gasoline Range	mg/kg	100	6600	32	6600	8900	15		
BTEX EPA-8021									
Benzene	mg/kg	0.3	<2	0.09	9.1	<2	<0.02		
Ethylbenzene	mg/kg	7	93	1.6	320	49	0.075		
Toluene	mg/kg	6	120	0.8	170	100	0.11		
Xylene (total)	mg/kg	9	790	4.6	1100	830	0.75		
Metals EPA-200.8					EPA 200.8		TCLP 200.8	TCLP 200.8	
Lead	mg/kg	250	--	--	19.6	--	--	2.76 mg/L	3.19 mg/L
Cadmium	mg/kg	2	--	--	--	--	--	--	--
Chromium	mg/kg	2,000	--	--	--	--	--	--	--
Arsenic	mg/kg	20	--	--	--	--	--	--	--
Mercury	mg/kg	2	--	--	--	--	--	--	--
Selenium	mg/kg	5.2	--	--	--	--	--	--	--
Silver	mg/kg	13.6	--	--	--	--	--	--	--
Barium	mg/kg	1,650	--	--	--	--	--	--	--
Metals EPA-8082A									
PCBs (individual Aroclors)	mg/kg	1.0	--	--	--	--	--	--	--

bold indicates value greater than MTCA cleanup l

-- = Not Analyzed

ND = Not detected

< = Not detected at reporting limit

ft = feet

mg/kg = milligrams per kilogram

bgs = below ground surface

Tabulated Data			Final Confirmation Samples											
Sample ID	101110-B-14	101110-S-14	101110-N-14	101110-E-14	101110-W-14			ESC-N-SL01	ESC-B-SL02	ESC-B1-SL03	ESC-S14-SL04	ESC-W-SL05		
Location	Bottom	South Sidewall	North Sidewall	East Sidewall	West Sidewall									
Date	11-Oct-10	11-Oct-10	11-Oct-10	11-Oct-10	11-Oct-10			22-Feb-13	22-Feb-13	29-Mar-13	29-Mar-13	29-Mar-13		
Depth (ft) bgs	14	14	14	14	14			9	5	7	15	15		
Analyte	Unit	MTCA												
TPH NWTPH-HCID						TPH NWTPH-Dx								
Diesel	mg/kg	2,000	--	--	--	--	--	<25	<25	<25	<25	--		
Lube Oil	mg/kg	2,000	--	--	--	--	--	<50	<50	<50	<50	--		
Gasoline	mg/kg	100	--	--	--	--	--	--	--	--	--	--		
NWTPH-Gx						NWTPH-Gx/8260								
TPH Gasoline Range	mg/kg	100	<5.0	140	3	5.9	5700	--	--	--	<3.0	<3.0		
BTEX EPA-8021						BTEX EPA-8021								
Benzene	mg/kg	0.3	<0.02	<0.02	<0.02	<0.02	<2.0	--	--	--	<0.03	<0.03		
Ethylbenzene	mg/kg	7	<0.02	0.35	<0.02	<0.02	68	--	--	--	<0.05	<0.05		
Toluene	mg/kg	6	<0.02	0.47	<0.02	0.042	72	--	--	--	<0.05	<0.05		
Xylene (total)	mg/kg	9	<0.06	4.3	<0.06	0.43	420	--	--	--	<0.2	<0.2		
Metals EPA-200.8			EPA 200.8			TCLP 200.8		TCLP 200.8		Metals EPA-6020				
Lead	mg/kg	250	19.6	--	--	2.76 mg/L	3.19 mg/L	--	--	--	--	--		
Cadmium	mg/kg	2	--	--	--	--	--	--	--	--	--	--		
Chromium	mg/kg	2,000	--	--	--	--	--	--	--	--	--	--		
Arsenic	mg/kg	20	--	--	--	--	--	--	--	--	--	--		
Mercury	mg/kg	2	--	--	--	--	--	--	--	--	--	--		
Selenium	mg/kg	5.2	--	--	--	--	--	--	--	--	--	--		
Silver	mg/kg	13.6	--	--	--	--	--	--	--	--	--	--		
Barium	mg/kg	1,650	--	--	--	--	--	--	--	--	--	--		
Metals EPA-8082A														
PCBs (individual Aroclors)	mg/kg	1.0	--	--	--	--	--	--	--	--	--	--		

bold indicates value greater than MTCA cleanup l

-- = Not Analyzed

ND = Not detected

< = Not detected at reporting limit

ft = feet

mg/kg = milligrams per kilogram

bgs = below ground surface



Voluntary Cleanup Program

Washington State Department of Ecology
Toxics Cleanup Program

TERRESTRIAL ECOLOGICAL EVALUATION FORM

Under the Model Toxics Control Act (MTCA), a terrestrial ecological evaluation is necessary if hazardous substances are released into the soils at a Site. In the event of such a release, you must take one of the following three actions as part of your investigation and cleanup of the Site:

1. Document an exclusion from further evaluation using the criteria in WAC 173-340-7491.
2. Conduct a simplified evaluation as set forth in WAC 173-340-7492.
3. Conduct a site-specific evaluation as set forth in WAC 173-340-7493.

When requesting a written opinion under the Voluntary Cleanup Program (VCP), you must complete this form and submit it to the Department of Ecology (Ecology). The form documents the type and results of your evaluation.

Completion of this form is not sufficient to document your evaluation. You still need to document your analysis and the basis for your conclusion in your cleanup plan or report.

If you have questions about how to conduct a terrestrial ecological evaluation, please contact the Ecology site manager assigned to your Site. For additional guidance, please refer to www.ecy.wa.gov/programs/tcp/policies/terrestrial/TEEHome.htm.

Step 1: IDENTIFY HAZARDOUS WASTE SITE

Please identify below the hazardous waste site for which you are documenting an evaluation.

Facility/Site Name: Burwell Place

Facility/Site Address: 2101 Burwell Place, Bremerton, WA 98337

Facility/Site No:

VCP Project No.: NW2785

Step 2: IDENTIFY EVALUATOR

Please identify below the person who conducted the evaluation and their contact information.

Name: Krista Webb

Title: Principal/Senior Scientist

Organization: Krista Webb Consulting for EnviroSound Consulting

Mailing address: PO Box 776

City: Tracyton

State: WA

Zip code: 98393

Phone: 360-265-3984

Fax:

E-mail: kristaleewebb@gmail.com

Step 3: DOCUMENT EVALUATION TYPE AND RESULTS

A. Exclusion from further evaluation.

1. Does the Site qualify for an exclusion from further evaluation?

- Yes *If you answered "YES," then answer **Question 2**.*
- No or Unknown *If you answered "NO" or "UNKNOWN," then skip to **Step 3B** of this form.*

2. What is the basis for the exclusion? Check all that apply. Then skip to **Step 4** of this form.

Point of Compliance: WAC 173-340-7491(1)(a)

- All soil contamination is, or will be,* at least 15 feet below the surface.
- All soil contamination is, or will be,* at least 6 feet below the surface (or alternative depth if approved by Ecology), and institutional controls are used to manage remaining contamination.

Barriers to Exposure: WAC 173-340-7491(1)(b)

- All contaminated soil, is or will be,* covered by physical barriers (such as buildings or paved roads) that prevent exposure to plants and wildlife, and institutional controls are used to manage remaining contamination.

Undeveloped Land: WAC 173-340-7491(1)(c)

- There is less than 0.25 acres of contiguous# undeveloped± land on or within 500 feet of any area of the Site and any of the following chemicals is present: chlorinated dioxins or furans, PCB mixtures, DDT, DDE, DDD, aldrin, chlordane, dieldrin, endosulfan, endrin, heptachlor, heptachlor epoxide, benzene hexachloride, toxaphene, hexachlorobenzene, pentachlorophenol, or pentachlorobenzene.
- For sites not containing any of the chemicals mentioned above, there is less than 1.5 acres of contiguous# undeveloped± land on or within 500 feet of any area of the Site.

Background Concentrations: WAC 173-340-7491(1)(d)

- Concentrations of hazardous substances in soil do not exceed natural background levels as described in WAC 173-340-200 and 173-340-709.

* An exclusion based on future land use must have a completion date for future development that is acceptable to Ecology.

± "Undeveloped land" is land that is not covered by building, roads, paved areas, or other barriers that would prevent wildlife from feeding on plants, earthworms, insects, or other food in or on the soil.

"Contiguous" undeveloped land is an area of undeveloped land that is not divided into smaller areas of highways, extensive paving, or similar structures that are likely to reduce the potential use of the overall area by wildlife.

B. Simplified evaluation.

1. Does the Site qualify for a simplified evaluation?

- Yes *If you answered "YES," then answer **Question 2** below.*
- No or Unknown *If you answered "NO" or "UNKNOWN," then skip to **Step 3C** of this form.*

2. Did you conduct a simplified evaluation?

- Yes *If you answered "YES," then answer **Question 3** below.*
- No *If you answered "NO," then skip to **Step 3C** of this form.*

3. Was further evaluation necessary?

- Yes *If you answered "YES," then answer **Question 4** below.*
- No *If you answered "NO," then answer **Question 5** below.*

4. If further evaluation was necessary, what did you do?

- Used the concentrations listed in Table 749-2 as cleanup levels. *If so, then skip to **Step 4** of this form.*
- Conducted a site-specific evaluation. *If so, then skip to **Step 3C** of this form.*

5. If no further evaluation was necessary, what was the reason? Check all that apply. Then skip to **Step 4 of this form.**

Exposure Analysis: WAC 173-340-7492(2)(a)

- Area of soil contamination at the Site is not more than 350 square feet.
- Current or planned land use makes wildlife exposure unlikely. Used Table 749-1.

Pathway Analysis: WAC 173-340-7492(2)(b)

- No potential exposure pathways from soil contamination to ecological receptors.

Contaminant Analysis: WAC 173-340-7492(2)(c)

- No contaminant listed in Table 749-2 is, or will be, present in the upper 15 feet at concentrations that exceed the values listed in Table 749-2.
- No contaminant listed in Table 749-2 is, or will be, present in the upper 6 feet (or alternative depth if approved by Ecology) at concentrations that exceed the values listed in Table 749-2, and institutional controls are used to manage remaining contamination.
- No contaminant listed in Table 749-2 is, or will be, present in the upper 15 feet at concentrations likely to be toxic or have the potential to bioaccumulate as determined using Ecology-approved bioassays.
- No contaminant listed in Table 749-2 is, or will be, present in the upper 6 feet (or alternative depth if approved by Ecology) at concentrations likely to be toxic or have the potential to bioaccumulate as determined using Ecology-approved bioassays, and institutional controls are used to manage remaining contamination.

C. Site-specific evaluation. A site-specific evaluation process consists of two parts: (1) formulating the problem, and (2) selecting the methods for addressing the identified problem. Both steps require consultation with and approval by Ecology. See WAC 173-340-7493(1)(c).

1. Was there a problem? See WAC 173-340-7493(2).

- Yes *If you answered "YES," then answer **Question 2** below.*
- No *If you answered "NO," then identify the reason here and then skip to **Question 5** below:*
- No issues were identified during the problem formulation step.
 - While issues were identified, those issues were addressed by the cleanup actions for protecting human health.

2. What did you do to resolve the problem? See WAC 173-340-7493(3).

- Used the concentrations listed in Table 749-3 as cleanup levels. *If so, then skip to **Question 5** below.*
- Used one or more of the methods listed in WAC 173-340-7493(3) to evaluate and address the identified problem. *If so, then answer **Questions 3 and 4** below.*

3. If you conducted further site-specific evaluations, what methods did you use?

Check all that apply. See WAC 173-340-7493(3).

- Literature surveys.
- Soil bioassays.
- Wildlife exposure model.
- Biomarkers.
- Site-specific field studies.
- Weight of evidence.
- Other methods approved by Ecology. If so, please specify:

4. What was the result of those evaluations?

- Confirmed there was no problem.
- Confirmed there was a problem and established site-specific cleanup levels.

5. Have you already obtained Ecology's approval of both your problem formulation and problem resolution steps?

- Yes If so, please identify the Ecology staff who approved those steps:
- No

Step 4: SUBMITTAL

Please mail your completed form to the Ecology site manager assigned to your Site. If a site manager has not yet been assigned, please mail your completed form to the Ecology regional office for the County in which your Site is located.

<p>Northwest Region: Attn: VCP Coordinator 3190 160th Ave. SE Bellevue, WA 98008-5452</p>	<p>Central Region: Attn: VCP Coordinator 1250 West Alder St. Union Gap, WA 98903-0009</p>
<p>Southwest Region: Attn: VCP Coordinator P.O. Box 47775 Olympia, WA 98504-7775</p>	<p>Eastern Region: Attn: VCP Coordinator N. 4601 Monroe Spokane WA 99205-1295</p>

