December 19, 2014

TO: Cris Matthews (Ecology)
FROM: Karen Mixon (URS)

CC: Mike Droppo (Kinder Morgan), Patrick Davis (Trans Mountain), Cary Brown (URS), Demetrio Cabanillas (URS), Dan Heimbigner (Whatcom Environmental)

RE:	URS Progress Report – November 1 to 30, 2014
PROJECT:	Cleanup Action Consent Decree No. 14-2-01294-9 (effective 6-5-2014) Laurel Station 1009 E. Smith Road, Bellingham, Washington
TRANS MOUNTAIN PM:	Mike Droppo
ECOLOGY CASE MGR:	Cris Matthews
URS PROJ NO:	33764321 and 33764823
URS PROJ MGR:	Karen Mixon

Introduction:
This monthly progress report is presented in accordance with Consent Decree 14-2-01294-9 (effective 6-5-2014) and is intended to present the information as noted under Section XI PROGRESS REPORTS in the Consent Decree. This report is the fourth progress report presented under the referenced Consent Decree.

Work Accomplished During Reporting Period:
Slot Cuts 2, 4, 6, and 7 adjacent to the Piping Manifold Shelter were completed using the slurry/trench excavation method (refer to attached Figure 4A). Samples were collected as planned (reference Table 3 in the draft Compliance Monitoring Plan [CMP]). As noted in the October 2014 progress report, Slot Cuts 4 and 7 were combined due to the installation of rebar and soil/cement/bentonite (SCB) mixture in the northwest corner of Slot Cut 4 to prevent pea gravel associated with the backfill around an underground tank from sloughing into Slot Cut 4.

The perimeter wall surrounding the planned excavation adjacent to the piping manifold shelter was completed using a series of perimeter trench cuts, PT1 through PT8 (refer to Figure 4A). Perimeter samples were collected as planned (in the draft CMP) at locations Perimeter 1, Perimeter 2, and Perimeter 3.

Contaminated soil was transferred from the stockpile area to Republic Services transfer stations located in Ferndale, Washington and Seattle, Washington.

Whatcom Environmental continued weekly site visits to assess effectiveness of erosion control methods to prevent exceedances of turbidity at outfalls. No reportable exceedances were found. As rainy weather continued through this period, erosion control methods were upgraded as needed and street sweeping was continued if weather (icy conditions) did not prevent water application on the road between the stockpile area and excavation.

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Due to wet weather conditions, dewatering of the excavation was required on several days. The water was containerized and sampled to assess offsite disposal options.

Deviations to Approved Plans Not Previously Documented:
Based on field observations (PID readings, sheen tests, visual and olfactory observations) deviations to the plans were made as indicated below.

Slot Cuts Adjacent to Piping Manifold Shelter (refer to attached Figure 4A, Table 3 of the draft CMP):

- As noted in the October 2014 progress report, sample collection was affected by the infiltration of slurry mix into the soil. The mixing of slurry into the soil was more problematic at depth and appears to be associated with the soil density and physical movement of heavy equipment resulting from the effort necessary to excavate the dense soil in this area. The slurry mixed in the soil potentially may affect the representativeness of several samples and was documented in the field notes accordingly.

- Samples were collected as planned in Slot Cuts 2 and 4; however, samples were not collected in the shallow soil above 10 feet. Contaminated soil had not been observed in the field above 10 feet below ground surface (bgs). An additional sample was collected at Slot Cut 6 at the depth of the excavation beneath the Piping Manifold Shelter. Sample locations for all slot cuts are shown on Figure 4A.

- The slurry mix used for the slot cuts was discarded with contaminated soil and not reused following completion of the final slot cut adjacent to the Piping Manifold Shelter. It was previously observed that petroleum contaminants in the soil remained in the slurry mix after use in this area. Samples of used and fresh slurry were collected in October 2014 to confirm observations. The data did confirm that the used slurry contained petroleum hydrocarbons and the fresh slurry did not.

Perimeter Trench Cuts Surrounding Primary Excavation Area Adjacent to Piping Manifold Shelter (refer to attached Figure 4A, Table 3 of the draft CMP):

- The perimeter of the excavation was adjusted based on the information from Exploratory Trenches 1, 2, and 3 completed in October 2014. Based on the experience with using the slurry trench excavation method in the slot cuts adjacent to the Piping Manifold Shelter, the excavation method for the perimeter of the primary excavation was revised. The excavation of the perimeter was conducted using a trench box and conventional excavation in a series of perimeter trench cuts (PT). Referring to Figure 4A, trench cuts PT1 through PT8 were excavated in the order numbered. Following completion of each cut, the cut was backfilled to ground surface with SCB. This work was completed during November.

- LNAPL was observed in soil between 12 and 20 feet bgs on the northeast and southeast walls of PT2, at 11 feet bgs on the southeast wall of PT5, and between 6 and 18 feet bgs on the northeast wall of PT6. Soil samples were collected from PT2 at 12, 16, and 25 feet bgs and PT6 at 21 feet bgs to assess concentrations of petroleum hydrocarbons present. The deepest samples from each location were submitted for analysis. These areas are identified as areas to return with potential excavation outside of the perimeter wall following completion of the primary excavation or consideration for inclusion in the DPE system.

Additional Hillside Removal:

- To access the perimeter trench locations, additional hillside removal was necessary to allow a setback and working area on the south/southeast side of the excavation (approximately PT2, PT5, and PT7).

Deviation to Scope of Work and Schedule as Presented in the Cleanup Action Plan (Exhibit A of Consent Decree):
During this period, deviations to the overall Scope of Work described in the Cleanup Action Plan (CAP) have not been identified; however, as noted previously, due to difficulties encountered using the slurry/trench method in the dense soils of the slot cuts adjacent to the piping manifold shelter, the technical team did evaluate the perimeter excavation method and adjusted as described under Deviations to Plan. This change did not affect the overall intent of the cleanup action.

The overall field schedule has been impacted by the slower than expected progress of excavation. The slurry trench method proved slower than anticipated due to field conditions and wet weather has resulted in dewatering the excavation area several days and continued upgrades to erosion control measures on the site. By the close of 2014, excavation work should be completed on the site in both the Pump Station Area and the Material Storage Area and most of the stockpiled contaminated soil will be offsite. However, the planned changes/installations to the surface drainage and installation of the subsurface DPE components in the Pump Station Area will be initiated but not completed. The asphalt surface in the Pump Station Area will also be pending at the end of 2014. The remaining work is anticipated to be completed during the 1st quarter of 2015. A request for schedule extension will be formally submitted to Ecology. Currently, the DPE system is expected to be fully operational in April 2015. The draft version of the project completion report will be delayed from the original schedule (Table 3 in the Cleanup Action Plan) to May/June 2015.

Data Received During Reporting Period:
Soil samples were collected from Slot Cuts 2, 4/7, and 6 and the perimeter trench (locations Perimeter 1, Perimeter 2, and Perimeter 3). Samples were collected from soil stockpiled as potentially clean that was removed from the surface to 5 feet bgs over the perimeter trench and from the additional material removed on the hillside. Additional soil samples (labeled PT2 and PT6) were collected from Perimeter Trenches 2 and 6 to assess petroleum constituent concentrations where contamination was observed. Samples of containerized stormwater from dewatering operations were also collected. All of the associated data was received during November and are currently in various stages of data review and database entry. These data are tabulated with previous data in data summary tables attached to this report. Notations are provided where needed to indicate if review is not complete.

Plans for the Next Reporting Period:
The following are planned activities for the period from December 1 through December 31, 2014.

- Submit a revised CMP responsive to Ecology's comments.

- Complete all data validation and project database update for samples collected through the period. Initiate entry to EIM database.

- Complete excavation in the Pump Station Area.

- Install dual-phase extraction wells DPE-3 and DPE-4, and passive vent wells PV-1 and PV-2 beneath the Pump Station Building

- Complete excavation in the Material Storage Area

- Initiate process for Notice of Construction to Northwest Clean Air Agency (NWCAA) for air permit for DPE system

- Provide information to Ecology to initiate Administrative Order to facility stormwater permit for discharge of treated groundwater from the DPE system

- Complete cost estimate for Ecology review to address financial assurance requirements of Consent Decree

- Submit letter to Ecology indicating that based on current field schedule, the planned changes/installations to the surface drainage, asphalt capping and installation of the subsurface and above-ground DPE components in the Pump Station Area are expected to be completed in first quarter 2015.

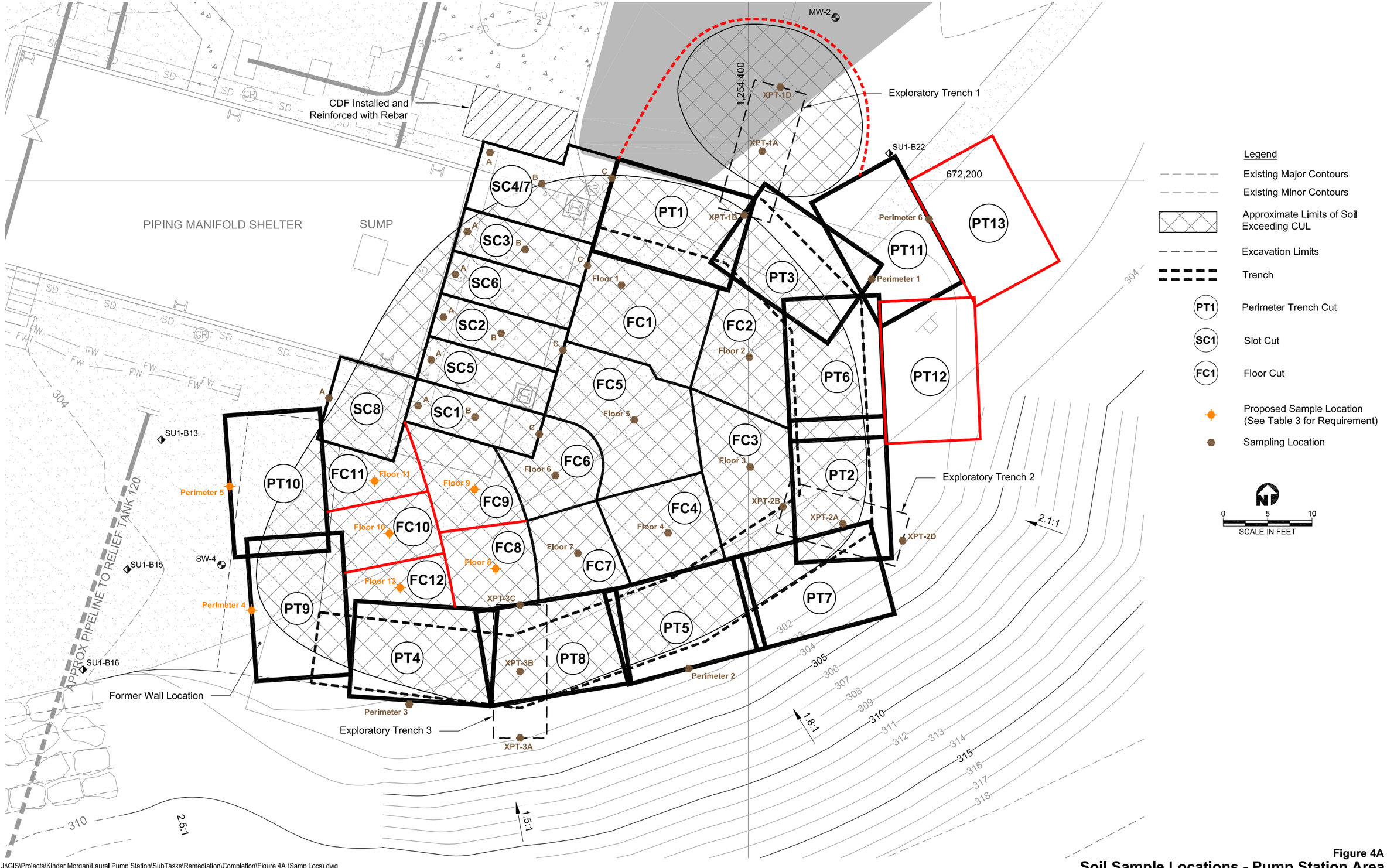
Please contact Karen Mixon at (206) 438-2234 if you have any questions or comments regarding this progress report.

References:

URS Corporation, 2014. Draft Compliance Monitoring Plan, Laurel Station, 1009 East Smith Road, Bellingham, Washington, October 3, 2014.

Attachments:

Figure 4A
Table – Soil Sample Results – Borrow Source Materials
Table – Soil Sample Results – Exploratory Trenches
Table – Soil Sample Results – Slot Cuts Adjacent to Piping Manifold Shelter
Table – Soil Sample Results – Perimeter Trench at Piping Manifold Shelter
Table – Slurry and SCB Sample Results
Table – Containerized Water for Disposal



J:\GIS\Projects\Kinder Morgan\Laurel Pump Station\SubTasks\Remediation\Completion\Figure 4A (Samp Locs).dwg
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URS

Figure 4A
Soil Sample Locations - Pump Station Area

Laurel Station
Bellingham, Washington

Soil Sample Results - Borrow Source Materials
Laurel Station Cleanup Action
Bellingham, Washington

Sample ID / Sample Date	Soil Cleanup Levels [1]	Structural Soil/Hillside Removal - Pump Station Area					Top Soil/Hillside Removal - Pump Station Area		Soil Removed at Piping Manifold Shelter (top 2 feet)				
		1-Structural/Hill	2-Structural/Hill	3-Structural/Hill	4-Structural/Hill	5-Structural/Hill	1-TopSoil/Hill	2-TopSoil/Hill	PMS-S-1	PMS-S-2	PT0-5-1	PT0-5-2	SF6
		10/3/14	10/3/14	10/3/14	10/3/14	10/3/14	10/3/14	10/3/14	10/21/14	10/21/14	11/20/14	11/20/14	11/20/14
Total Petroleum Hydrocarbons (mg/kg)													
Gasoline-range (Gx)	200	7.4 U	6.9 U	6.1 U	6.0 U	7.6 U	8.5 U	8.7 U	18	12	4.2	6.7 U	6.3 U
Diesel-range (Dx)	NE	5.7 U	5.6 U	5.6 U	5.6 U	5.7 U	8.6	45	27	30	30	34	6.3
Motor Oil-range	NE	13	11 U	11 U	11 U	11 U	29	86	32	38	26	30	12 U
Total TPH (Sum Dx, Oil-range, mg/kg)	460	13	ND	ND	ND	ND	38	131	59	68	56	64	6.3
BTEX 8021B (ug/kg)													
Benzene	18,182	19 U	17 U	15 U	15 U	19 U	21 U	22 U	16 U	15 U	6.8 U	17 U	16 U
Toluene	6,400,000	19 U	17 U	15 U	15 U	19 U	21 U	22 U	16 U	15 U	6.8 U	17 U	16 U
Ethylbenzene	8,000,000	19 U	17 U	15 U	15 U	19 U	21 U	22 U	16 U	15 U	6.8 U	17 U	16 U
m,p-Xylene	16,000,000	37 U	34 U	30 U	30 U	38 U	42 U	44 U	31 U	30 U	14 U	33 U	32 U
o-Xylene	16,000,000	19 U	17 U	15 U	15 U	19 U	21 U	22 U	16 U	15 U	6.8 U	17 U	16 U

Notes:

[1] Soil Cleanup Levels are established in the Cleanup Action Plan (Exhibit A, Consent Decree No. 14-2-01294-9)

mg/kg - milligram per kilogram

ND - not detected

NE - not established

U - Compound was analyzed for but not detected above the reporting limit shown.

ug/kg - microgram per kilogram

Soil Sample Results - Exploratory Trenches
Laurel Station Cleanup Action
Bellingham, Washington

QC Check Pending

Sample ID		Exploratory Trench 1											
		ExpTrench1-A						ExpTrench1-B					
Sample Depth (feet bgs)	Soil Cleanup	9	11.5	15	18	21	24	9	12		15	18	21
Sample Date	Levels [1]	10/9/14	10/9/14	10/9/14	10/9/14	10/9/14	10/9/14	10/9/14	10/9/14	10/9/14 (DUP)	10/9/14	10/9/14	10/9/14
Field Measurements													
PID Reading (ppm)	NA	94	60.6	6.6	1.5	91.3	0.2	238	28.7	NA	458	356	4.5
Sheen Test	NA	Light Sheen	No Sheen	No Sheen	No Sheen	Light Sheen	No Sheen	No Sheen	No Sheen	NA	No Sheen	Light Sheen	No Sheen
Presence of LNAPL (Yes / No)	NA	No	No	No	No	No	No	No	No	NA	No	No	No
Total Petroleum Hydrocarbons (mg/kg)													
Gasoline-range (Gx)	200	190	28	14	27	430	6.3 U	360	190	220	560	320	10
Diesel-range (Dx)	NE	400	79	5.3 U	5.4 U	480	5.4 U	400	79 J	170 J	700	890	5.4 U
Motor Oil-range (NWTPH-Dx)	NE	410	70	11 U	11 U	380	11 U	360	70 J	140 J	550	690	11 U
Total TPH (Sum Dx, Oil-range, mg/kg)	460	810	149	ND	ND	860	ND	760	149	310	1,250	1,580	ND
Total TPH (Sum Gx,Dx, Oil-range, mg/kg)	See Note 2	1,000	177	14	27	1,290	ND	1,120	339	530	1,810	1,900	10
BTEX 8021B (ug/kg)													
Benzene	18,182	15 U	14 U	15 U	12 U	14 U	16 U	14 U	15 U	13 U	15 U	14 U	14 U
Toluene	6,400,000	15 U	14 U	15 U	12 U	14 U	35	14 U	15 U	13 U	15 U	14 U	14 U
Ethylbenzene	8,000,000	15 U	14 U	15 U	12 U	870	16 U	770	340	410	910	560	26
m,p-Xylene	16,000,000	29 U	28 U	30 U	24 U	27 U	35	28 U	30 U	26 U	400	28 U	28 U
o-Xylene	16,000,000	15 U	14 U	15 U	12 U	14 U	16 U	14 U	15 U	13 U	15 U	14 U	14 U
Extractable Petroleum Hydrocarbons (ug/kg)													
C8-C10 Aliphatics	NE	NA	NA	NA	NA	NA	NA	9,200	NA	NA	11,000	29,000	NA
C10-C12 Aliphatics	NE	NA	NA	NA	NA	NA	NA	23,000	NA	NA	19,000	64,000	NA
C12-C16 Aliphatics	NE	NA	NA	NA	NA	NA	NA	74,000	NA	NA	50,000	180,000	NA
C16-C21 Aliphatics	NE	NA	NA	NA	NA	NA	NA	90,000	NA	NA	62,000	210,000	NA
C21-C34 Aliphatics	NE	NA	NA	NA	NA	NA	NA	130,000	NA	NA	79,000	290,000	NA
C8-C10 Aromatics	NE	NA	NA	NA	NA	NA	NA	2,000 U	NA	NA	2,200 U	2,200 U	NA
C10-C12 Aromatics	NE	NA	NA	NA	NA	NA	NA	2,000 U	NA	NA	2,600	6,800	NA
C12-C16 Aromatics	NE	NA	NA	NA	NA	NA	NA	15,000	NA	NA	13,000	41,000	NA
C16-C21 Aromatics	NE	NA	NA	NA	NA	NA	NA	58,000	NA	NA	33,000	120,000	NA
C21-C34 Aromatics	NE	NA	NA	NA	NA	NA	NA	91,000	NA	NA	38,000	150,000	NA
Volatile Petroleum Hydrocarbons (ug/kg)													
Benzene	NE	NA	NA	NA	NA	NA	NA	940 U	NA	NA	5,700 U	5,500 U	NA
Toluene	NE	NA	NA	NA	NA	NA	NA	940 U	NA	NA	5,700 U	5,500 U	NA
Ethylbenzene	NE	NA	NA	NA	NA	NA	NA	2,900	NA	NA	5,700 U	5,500 U	NA
m,p-Xylene	NE	NA	NA	NA	NA	NA	NA	1,900 U	NA	NA	11,000 U	11,000 U	NA
o-Xylene	NE	NA	NA	NA	NA	NA	NA	1,900	NA	NA	5,700 U	5,500 U	NA
Methyl tert butylether	NE	NA	NA	NA	NA	NA	NA	940 U	NA	NA	5,700 U	5,500 U	NA
n-Pentane	NE	NA	NA	NA	NA	NA	NA	940 U	NA	NA	5,700 U	5,500 U	NA
n-Hexane	NE	NA	NA	NA	NA	NA	NA	940 U	NA	NA	5,700 U	5,500 U	NA
n-Octane	NE	NA	NA	NA	NA	NA	NA	11,000	NA	NA	5,700 U	7,700	NA
n-Decane	NE	NA	NA	NA	NA	NA	NA	3,900	NA	NA	5,700 U	5,500 U	NA
n-Dodecane	NE	NA	NA	NA	NA	NA	NA	5,600	NA	NA	5,700 U	5,500 U	NA
C8-C10 Aromatics	NE	NA	NA	NA	NA	NA	NA	100,000	NA	NA	57,000 U	55,000 U	NA
C10-C12 Aromatics	NE	NA	NA	NA	NA	NA	NA	120,000	NA	NA	57,000 U	68,000	NA
C12-C13 Aromatics	NE	NA	NA	NA	NA	NA	NA	57,000	NA	NA	57,000 U	55,000 U	NA
C5-C6 Aliphatics	NE	NA	NA	NA	NA	NA	NA	9,400 U	NA	NA	57,000 U	55,000 U	NA
C6-C8 Aliphatics	NE	NA	NA	NA	NA	NA	NA	49,000	NA	NA	57,000 U	55,000 U	NA
C8-C10 Aliphatics	NE	NA	NA	NA	NA	NA	NA	61,000	NA	NA	57,000 U	55,000 U	NA
C10-C12 Aliphatics	NE	NA	NA	NA	NA	NA	NA	9,400 U	NA	NA	57,000 U	55,000 U	NA
Polycyclic Aromatic Hydrocarbons (ug/kg)													
1-Methylnaphthalene	34,500	NA	NA	NA	NA	NA	NA	82	NA	NA	240	620	NA
2-Methylnaphthalene	320,000	NA	NA	NA	NA	NA	NA	90	NA	NA	320	740	NA
Acenaphthene	4,800,000	NA	NA	NA	NA	NA	NA	6.7 U	NA	NA	7.1	10 J	NA
Acenaphthylene	NE	NA	NA	NA	NA	NA	NA	6.7 U	NA	NA	5.5 U	7.9 U	NA
Anthracene	24,000,000	NA	NA	NA	NA	NA	NA	10 J	NA	NA	5.5 U	16 J	NA
Benzo(a)anthracene [3]	1,370	NA	NA	NA	NA	NA	NA	6.7 U	NA	NA	5.5 U	7.9 U	NA
Benzo(a)pyrene [3]	137	NA	NA	NA	NA	NA	NA	6.7 U	NA	NA	5.5 U	7.9 U	NA
Benzo(b)fluoranthene [3]	1,370	NA	NA	NA	NA	NA	NA	7.8 J	NA	NA	5.5 U	11 J	NA
Benzo(g,h,i)perylene	NE	NA	NA	NA	NA	NA	NA	6.7 U	NA	NA	5.5 U	7.9 U	NA
Benzo(k)fluoranthene [3]	13,700	NA	NA	NA	NA	NA	NA	6.7 U	NA	NA	5.5 U	7.9 U	NA
Chrysene [3]	137,000	NA	NA	NA	NA	NA	NA	36	NA	NA	14	51	NA
Dibenz(a,h)anthracene [3]	137	NA	NA	NA	NA	NA	NA	6.7 U	NA	NA	5.5 U	7.9 U	NA
Dibenzofuran	80,000	NA	NA	NA	NA	NA	NA	14	NA	NA	14	24 J	NA
Fluoranthene	3,200,000	NA	NA	NA	NA	NA	NA	15	NA	NA	5.5 U	7.9 U	NA
Fluorene	3,200,000	NA	NA	NA	NA	NA	NA	89	NA	NA	62	120 J	NA
Indeno(1,2,3-cd)pyrene [3]	1,370	NA	NA	NA	NA	NA	NA	6.7 U	NA	NA	5.5 U	7.9 U	NA
Naphthalene	1,600,000	NA	NA	NA	NA	NA	NA	6.7 U	NA	NA	30	71	NA
Phenanthrene	NE	NA	NA	NA	NA	NA	NA	92	NA	NA	120	240	NA
Pyrene	2,400,000	NA	NA	NA	NA	NA	NA	22	NA	NA	7.1	23	NA
TTEC	137	NA	NA	NA	NA	NA	NA	1.14	NA	NA	0.14	1.61	NA
MTCATPH 11.1 Workbook Tool Output [4]													
Sum (mg/kg, Section A.1.2)		NA	NA	NA	NA	NA	NA	863.667	NA	NA	373.456	1,215.79	NA
Method B, Direct Contact (mg/kg, Section A.2.1)		NA	NA	NA	NA	NA	NA	3,133.39	NA	NA	4,134.26	3,393.50	NA
Pass/Fail (Method B section A.2.1)		NA	NA	NA	NA	NA	NA	Pass	NA	NA	Pass	Pass	NA

Notes:
bgs - below ground surface
DUP - field duplicate
mg/kg - milligram per kilogram
J- estimated value
NA - not analyzed or not applicable
NE- not established
ND - not detected
TTEC - Total Toxicity Equivalent Concentration, reference WAC173-340-708
U - Compound was analyzed for but not detected above the reporting limit shown.
ug/kg - microgram per kilogram

[1] Soil Cleanup Levels are established in the Cleanup Action Plan (Exhibit A, Consent Decree No. 14-2-01294-9)

[2] The total TPH sum is used for information only. The direct contact cleanup level for TPH is 3,300 mg/kg and comparison to this cleanup level is based on calculation using additional sample results and Ecology's MTCATPH 11.1 Workbook Tool.

[3] This is considered a carcinogenic PAH compound.

[4] Results calculated using BTEX by Method 8021B

Samples collected from each location as below
Exploratory Trench 1-A-3, 7, 9, 11.5, 15, 18, 21, 24 feet bgs
Exploratory Trench 1-B-3, 6, 9, 12, 15, 18, 21, 25 feet bgs
Exploratory Trench 1-D-5, 7, 9, 12, 15, 18, 21, 24 feet bgs
Exploratory Trench 2-A-4, 6, 9, 12, 15, 18, 21, 25 feet bgs
Exploratory Trench 2-B-3, 6, 9, 12, 15, 18, 21, 25 feet bgs
Exploratory Trench 2-D-3, 6, 9, 12, 15, 18, 21, 25 feet bgs
Exploratory Trench 3-A-3, 6, 9, 12, 15, 18, 21, 24 feet bgs
Exploratory Trench 3-B-3, 6, 9, 12, 15, 18, 21, 24 feet bgs
Exploratory Trench 3-C-3, 6, 9, 12, 15, 18, 21, 24 feet bgs

Soil Sample Results - Exploratory Trenches
Laurel Station Cleanup Action
Bellingham, Washington

Sample ID		Exploratory Trench 1									Exploratory Trench 2			
		ExpTrench1-D									ExpTrench2-A		ExpTrench2-B	
Sample Depth (feet bgs)	Soil Cleanup	5	7	9	12	15	18		21	24	12	25	12	25
Sample Date	Levels [1]	10/9/14	10/9/14	10/9/14	10/9/14	10/9/14	10/9/14	10/9/14 (DUP)	10/9/14	10/9/14	10/10/14	10/10/14	10/10/14	10/10/14
Field Measurements														
PID Reading (ppm)	NA	0	14.7	411	410	32.2	19.9	NA	50.4	5.2	0	65	0	35.4
Sheen Test	NA	No Sheen	Light Sheen	Heavy Sheen	Light Sheen	No Sheen	No Sheen	NA	No Sheen	No Sheen	No Sheen	Sheen	No Sheen	No Sheen
Presence of LNAPL (Yes / No)	NA	No	No	No	No	No	No	NA	No	No	No	No	No	No
Total Petroleum Hydrocarbons (mg/kg)														
Gasoline-range (Gx)	200	5.6 U	740	2,300	700	270	180	130	200	140	5.1 U	140	6.4	480
Diesel-range (Dx)	NE	5.2 U	710	2,900	1,100	120	130	140	210	140	5.4 U	320	5.5 U	370
Motor Oil-range (NWTPH-Dx)	NE	10 U	630	2,400	960	120	120	200	280	120	11 U	250	11 U	260
Total TPH (Sum Dx, Oil-range, mg/kg)	460	ND	1,340	5,300	2,060	240	250	340	490	260	ND	570	ND	630
Total TPH (Sum Gx,Dx, Oil-range, mg/kg)	See Note 2	ND	2,080	7,600	2,760	510	430	470	690	400	ND	710	6.4	1,110
BTEX 8021B (ug/kg)														
Benzene	18,182	14 U	14 U	140 U	15 U	14 U	11 U	19 U	12 U	14 U	13 U	14 U	14 U	70 U
Toluene	6,400,000	14 U	14 U	140 U	15 U	14 U	11 U	19 U	12 U	14 U	13 U	14 U	14 U	70 U
Ethylbenzene	8,000,000	14 U	1,200	4,300	1,600	450	250 J	140 J	290	170	13 U	14 U	14 U	70 U
m,p-Xylene	16,000,000	28 U	27 U	280 U	30 U	29 U	22 U	37 U	23 U	27 U	25 U	28 U	27 U	140 U
o-Xylene	16,000,000	14 U	14 U	140 U	15 U	14 U	11 U	19 U	12 U	14 U	13 U	14 U	14 U	70 U
Extractable Petroleum Hydrocarbons (ug/kg)														
C8-C10 Aliphatics	NE	NA	24,000	120,000	40,000	NA	NA	NA	NA	NA	NA	3,900	NA	NA
C10-C12 Aliphatics	NE	NA	67,000	280,000	87,000	NA	NA	NA	NA	NA	NA	11,000	NA	NA
C12-C16 Aliphatics	NE	NA	190,000	660,000	230,000	NA	NA	NA	NA	NA	NA	60,000	NA	NA
C16-C21 Aliphatics	NE	NA	220,000	680,000	270,000	NA	NA	NA	NA	NA	NA	82,000	NA	NA
C21-C34 Aliphatics	NE	NA	340,000	1,000,000	400,000	NA	NA	NA	NA	NA	NA	120,000	NA	NA
C8-C10 Aromatics	NE	NA	5,300	2,200 U	2,300 U	NA	NA	NA	NA	NA	NA	2,100 U	NA	NA
C10-C12 Aromatics	NE	NA	3,400	21,000	11,000	NA	NA	NA	NA	NA	NA	2,100 U	NA	NA
C12-C16 Aromatics	NE	NA	28,000	110,000	60,000	NA	NA	NA	NA	NA	NA	8,100	NA	NA
C16-C21 Aromatics	NE	NA	110,000	340,000	150,000	NA	NA	NA	NA	NA	NA	42,000	NA	NA
C21-C34 Aromatics	NE	NA	200,000	500,000	230,000	NA	NA	NA	NA	NA	NA	68,000	NA	NA
Volatile Petroleum Hydrocarbons (ug/kg)														
Benzene	NE	NA	4,900 U	5,100 U	5,800 U	NA	NA	NA	NA	NA	NA	990 U	NA	NA
Toluene	NE	NA	4,900 U	5,100 U	5,800 U	NA	NA	NA	NA	NA	NA	990 U	NA	NA
Ethylbenzene	NE	NA	4,900 U	7,200	5,900	NA	NA	NA	NA	NA	NA	990 U	NA	NA
m,p-Xylene	NE	NA	9,800 U	10,000 U	12,000 U	NA	NA	NA	NA	NA	NA	2,000 U	NA	NA
o-Xylene	NE	NA	4,900 U	5,100 U	5,800 U	NA	NA	NA	NA	NA	NA	990 U	NA	NA
Methyl tert butylether	NE	NA	4,900 U	5,100 U	5,800 U	NA	NA	NA	NA	NA	NA	990 U	NA	NA
n-Pentane	NE	NA	4,900 U	5,100 U	5,800 U	NA	NA	NA	NA	NA	NA	990 U	NA	NA
n-Hexane	NE	NA	4,900 U	5,100 U	5,800 U	NA	NA	NA	NA	NA	NA	990 U	NA	NA
n-Octane	NE	NA	4,900 U	45,000	40,000	NA	NA	NA	NA	NA	NA	2,700	NA	NA
n-Decane	NE	NA	4,900 U	9,600	9,000	NA	NA	NA	NA	NA	NA	1,200	NA	NA
n-Dodecane	NE	NA	4,900 U	12,000	12,000	NA	NA	NA	NA	NA	NA	3,600	NA	NA
C8-C10 Aromatics	NE	NA	49,000 U	230,000	210,000	NA	NA	NA	NA	NA	NA	44,000	NA	NA
C10-C12 Aromatics	NE	NA	49,000 U	260,000	280,000	NA	NA	NA	NA	NA	NA	68,000	NA	NA
C12-C13 Aromatics	NE	NA	49,000 U	170,000	190,000	NA	NA	NA	NA	NA	NA	43,000	NA	NA
C5-C6 Aliphatics	NE	NA	49,000 U	51,000 U	58,000 U	NA	NA	NA	NA	NA	NA	9,900 U	NA	NA
C6-C8 Aliphatics	NE	NA	49,000 U	260,000	260,000	NA	NA	NA	NA	NA	NA	13,000	NA	NA
C8-C10 Aliphatics	NE	NA	49,000 U	230,000	180,000	NA	NA	NA	NA	NA	NA	18,000	NA	NA
C10-C12 Aliphatics	NE	NA	49,000 U	51,000 U	58,000 U	NA	NA	NA	NA	NA	NA	9,900 U	NA	NA
Polycyclic Aromatic Hydrocarbons (ug/kg)														
1-Methylnaphthalene	34,500	NA	150	280	1,500	NA	NA	NA	NA	NA	NA	46	NA	NA
2-Methylnaphthalene	320,000	NA	220	270	1,700	NA	NA	NA	NA	NA	NA	39	NA	NA
Acenaphthene	4,800,000	NA	4.7 U	18 U	16 J	NA	NA	NA	NA	NA	NA	4.9 U	NA	NA
Acenaphthylene	NE	NA	4.7 U	18 U	11 U	NA	NA	NA	NA	NA	NA	4.9 U	NA	NA
Anthracene	24,000,000	NA	12 J	25 J	11 U	NA	NA	NA	NA	NA	NA	4.9 U	NA	NA
Benzo(a)anthracene [3]	1,370	NA	8.5	18 U	11 U	NA	NA	NA	NA	NA	NA	4.9 U	NA	NA
Benzo(a)pyrene [3]	137	NA	6.7	18 U	11 U	NA	NA	NA	NA	NA	NA	4.9 U	NA	NA
Benzo(b)fluoranthene [3]	1,370	NA	10 J	26 J	13 J	NA	NA	NA	NA	NA	NA	4.9 U	NA	NA
Benzo(g,h,i)perylene	NE	NA	4.7 U	19 J	12	NA	NA	NA	NA	NA	NA	4.9 U	NA	NA
Benzo(k)fluoranthene [3]	13,700	NA	4.7 U	18 U	11 U	NA	NA	NA	NA	NA	NA	4.9 U	NA	NA
Chrysene [3]	137,000	NA	64	140 J	60	NA	NA	NA	NA	NA	NA	23	NA	NA
Dibenz(a,h)anthracene [3]	137	NA	4.7 U	18 U	11 U	NA	NA	NA	NA	NA	NA	4.9 U	NA	NA
Dibenzofuran	80,000	NA	9.5 J	36 J	75 J	NA	NA	NA	NA	NA	NA	4.9 U	NA	NA
Fluoranthene	3,200,000	NA	26	18 U	11 U	NA	NA	NA	NA	NA	NA	4.9 U	NA	NA
Fluorene	3,200,000	NA	61 J	230 J	240 J	NA	NA	NA	NA	NA	NA	31	NA	NA
Indeno(1,2,3-cd)pyrene [3]	1,370	NA	4.7 U	18 U	11 U	NA	NA	NA	NA	NA	NA	4.9 U	NA	NA
Naphthalene	1,600,000	NA	8.4	18 U	170	NA	NA	NA	NA	NA	NA	4.9 U	NA	NA
Phenanthrene	NE	NA	98	240	360	NA	NA	NA	NA	NA	NA	37	NA	NA
Pyrene	2,400,000	NA	34	49 J	21	NA	NA	NA	NA	NA	NA	11	NA	NA
TTEC	137	NA	9.19	4.0	1.9	NA	NA	NA	NA	NA	NA	0.23	NA	NA
MTCATPH 11.1 Workbook Tool Output [4]														
Sum (mg/kg, Section A.1.2)		NA	1,251.975	4,646.480	2,526.893	NA	NA	NA	NA	NA	NA	575.154	NA	NA
Method B, Direct Contact (mg/kg, Section A.2.1)		NA	3,687.98	3,459.78	3,354.03	NA	NA	NA	NA	NA	NA	3,291.74	NA	NA
Pass/Fail (Method B section A.2.1)		NA	3,683	Fail	Pass	NA	NA	NA	NA	NA	NA	Pass	NA	NA

Notes:
bgs - below ground surface
DUP - field duplicate
mg/kg - milligram per kilogram
J- estimated value
NA - not analyzed or not applicable
NE- not established
ND - not detected
TTEC - Total Toxicity Equivalent Concentration, reference WAC173-340-708
U - Compound was analyzed for but not detected above the reporting limit shown.
ug/kg - microgram per kilogram

Samples collected from each location as below
Exploratory Trench 1-A-3, 7, 9, 11.5, 15, 18, 21, 24 feet bgs
Exploratory Trench 1-B-3, 6, 9, 12, 15, 18, 21, 25 feet bgs
Exploratory Trench 1-D-5, 7, 9, 12, 15, 18, 21, 24 feet bgs
Exploratory Trench 2-A-4, 6, 9, 12, 15, 18, 21, 25 feet bgs
Exploratory Trench 2-B-3, 6, 9, 12, 15, 18, 21, 25 feet bgs
Exploratory Trench 2-D-3, 6, 9, 12, 15, 18, 21, 25 feet bgs
Exploratory Trench 3-A-3, 6, 9, 12, 15, 18, 21, 24 feet bgs
Exploratory Trench 3-B-3, 6, 9, 12, 15, 18, 21, 24 feet bgs
Exploratory Trench 3-C-3, 6, 9, 12, 15, 18, 21, 24 feet bgs

[1] Soil Cleanup Levels are established in the Cleanup Action Plan (Exhibit A, Consent Decree No. 14-2-01294-9)
[2] The total TPH sum is used for information only. The direct contact cleanup level for TPH is 3,300 mg/kg and comparison to this cleanup level is based on calculation using additional sample results and Ecology's MTCATPH 11.1 Workbook Tool.
[3] This is considered a carcinogenic PAH compound.
[4] Results calculated using BTEX by Method 8021B

Soil Sample Results - Exploratory Trenches
Laurel Station Cleanup Action
Bellingham, Washington

Sample ID		Exploratory Trench 2					Exploratory Trench 3						
		ExpTrench2-D					ExpTrench3-A						
Sample Depth (feet bgs)	Soil Cleanup	12	15	18	21	25	9	12	15	18	21		24
Sample Date	Levels [1]	10/10/14	10/10/14	10/10/14	10/10/14	10/10/14	10/11/14	10/11/14	10/11/14	10/11/14	10/11/14	10/11/04 (DUP)	10/11/14
Field Measurements													
PID Reading (ppm)	NA	0	79.5	238	56.9	84.9	0	0	0	0	0.1	NA	1.4
Sheen Test	NA	No Sheen	Heavy Sheen	Sheen	Sheen	Moderate Sheen	No Sheen	No Sheen	No Sheen	No Sheen	No Sheen	NA	No Sheen
Presence of LNAPL (Yes / No)	NA	No	Yes	No	No	No	No	No	No	No	No	NA	No
Total Petroleum Hydrocarbons (mg/kg)													
Gasoline-range (Gx)	200	5.9 U	370	220	130	200	5.8 U	6.6 U	5.1 U	5.6 U	5.0 U	5.6 U	29
Diesel-range (Dx)	NE	5.4 U	890	680	89	300	5.4 U	5.3 U	160	40	5.3 U	5.4 U	22
Motor Oil-range (NWTPH-Dx)	NE	11 U	740	500	74	220	11 U	11 U	300	120	11 U	11 U	19
Total TPH (Sum Dx, Oil-range, mg/kg)	460	ND	1,630	1,180	163	520	ND	ND	460	160	ND	ND	41
Total TPH (Sum Gx,Dx, Oil-range, mg/kg)	See Note 2	ND	2,000	1,400	293	720	ND	ND	460	160	ND	ND	70
BTEX 8021B (ug/kg)													
Benzene	18,182	15 U	18 U	17 U	10 U	13 U	14 U	16 U	13 U	14 U	13 U	14 U	15 U
Toluene	6,400,000	15 U	18 U	17 U	10 U	13 U	14 U	16 U	13 U	14 U	13 U	14 U	15 U
Ethylbenzene	8,000,000	15 U	18 U	17 U	10 U	13 U	14 U	16 U	13 U	14 U	13 U	14 U	15 U
m,p-Xylene	16,000,000	29 U	35 U	34 U	21 U	27 U	29 U	33 U	26 U	28 U	25 U	28 U	29 U
o-Xylene	16,000,000	15 U	18 U	17 U	10 U	13 U	14 U	16 U	13 U	14 U	13 U	14 U	15 U
Extractable Petroleum Hydrocarbons (ug/kg)													
C8-C10 Aliphatics	NE	NA	19,000	21,000	NA	NA	NA	NA	NA	NA	NA	NA	NA
C10-C12 Aliphatics	NE	NA	100,000	46,000	NA	NA	NA	NA	NA	NA	NA	NA	NA
C12-C16 Aliphatics	NE	NA	320,000	150,000	NA	NA	NA	NA	NA	NA	NA	NA	NA
C16-C21 Aliphatics	NE	NA	350,000	170,000	NA	NA	NA	NA	NA	NA	NA	NA	NA
C21-C34 Aliphatics	NE	NA	600,000	250,000	NA	NA	NA	NA	NA	NA	NA	NA	NA
C8-C10 Aromatics	NE	NA	2,200 U	2,200 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
C10-C12 Aromatics	NE	NA	2,200 U	6,900	NA	NA	NA	NA	NA	NA	NA	NA	NA
C12-C16 Aromatics	NE	NA	22,000	33,000	NA	NA	NA	NA	NA	NA	NA	NA	NA
C16-C21 Aromatics	NE	NA	170,000	87,000	NA	NA	NA	NA	NA	NA	NA	NA	NA
C21-C34 Aromatics	NE	NA	330,000	120,000	NA	NA	NA	NA	NA	NA	NA	NA	NA
Volatile Petroleum Hydrocarbons (ug/kg)													
Benzene	NE	NA	4,900 U	5,900 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toluene	NE	NA	4,900 U	5,900 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	NE	NA	4,900 U	5,900 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
m,p-Xylene	NE	NA	9,800 U	12,000 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
o-Xylene	NE	NA	4,900 U	5,900 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methyl tert butylether	NE	NA	4,900 U	5,900 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
n-Pentane	NE	NA	4,900 U	5,900 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
n-Hexane	NE	NA	4,900 U	5,900 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
n-Octane	NE	NA	4,900 U	13,000	NA	NA	NA	NA	NA	NA	NA	NA	NA
n-Decane	NE	NA	4,900 U	5,900 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
n-Dodecane	NE	NA	8,500	5,900 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
C8-C10 Aromatics	NE	NA	49,000 U	70,000	NA	NA	NA	NA	NA	NA	NA	NA	NA
C10-C12 Aromatics	NE	NA	130,000	98,000	NA	NA	NA	NA	NA	NA	NA	NA	NA
C12-C13 Aromatics	NE	NA	110,000	70,000	NA	NA	NA	NA	NA	NA	NA	NA	NA
C5-C6 Aliphatics	NE	NA	49,000 U	59,000 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
C6-C8 Aliphatics	NE	NA	49,000 U	75,000	NA	NA	NA	NA	NA	NA	NA	NA	NA
C8-C10 Aliphatics	NE	NA	49,000 U	68,000	NA	NA	NA	NA	NA	NA	NA	NA	NA
C10-C12 Aliphatics	NE	NA	49,000 U	59,000 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
Polycyclic Aromatic Hydrocarbons (ug/kg)													
1-Methylnaphthalene	34,500	NA	14 U	880	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	320,000	NA	24	1,100	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthene	4,800,000	NA	14 U	8.8 J	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene	NE	NA	14 U	7.7 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
Anthracene	24,000,000	NA	14 U	9.9 J	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene [3]	1,370	NA	14 U	7.7 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene [3]	137	NA	14 U	7.7 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(b)fluoranthene [3]	1,370	NA	21 J	10 J	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(g,h,i)perylene	NE	NA	14 U	7.7 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene [3]	13,700	NA	14 U	7.7 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chrysene [3]	137,000	NA	110	41	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenz(a,h)anthracene [3]	137	NA	14 U	7.7 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzofuran	80,000	NA	14 U	37	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	3,200,000	NA	18	12	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluorene	3,200,000	NA	14 U	150	NA	NA	NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene [3]	1,370	NA	14 U	7.7 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	1,600,000	NA	14 U	240	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	NE	NA	14 U	250	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pyrene	2,400,000	NA	31	23	NA	NA	NA	NA	NA	NA	NA	NA	NA
TTEC	137	NA	3.2	1.41	NA	NA	NA	NA	NA	NA	NA	NA	NA
MTCATPH 11.1 Workbook Tool Output [4]													
Sum (mg/kg, Section A.1.2)		NA	2,185.174	1,240.325	NA	NA	NA	NA	NA	NA	NA	NA	NA
Method B, Direct Contact (mg/kg, Section A.2.1)		NA	3,452.47	3,472.82	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pass/Fail (Method B section A.2.1)		NA	Pass	Pass	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:
bgs - below ground surface
DUP - field duplicate
mg/kg - milligram per kilogram
J- estimated value
NA - not analyzed or not applicable
NE- not established
ND - not detected
TTEC - Total Toxicity Equivalent Concentration, reference WAC173-340-708
U - Compound was analyzed for but not detected above the reporting limit shown.
ug/kg - microgram per kilogram

[1] Soil Cleanup Levels are established in the Cleanup Action Plan (Exhibit A, Consent Decree No. 14-2-01294-9)

[2] The total TPH sum is used for information only. The direct contact cleanup level for TPH is 3,300 mg/kg and comparison to this cleanup level is based on calculation using additional sample results and Ecology's MTCATPH 11.1 Workbook Tool.

[3] This is considered a carcinogenic PAH compound.

[4] Results calculated using BTEX by Method 8021B

Samples collected from each location as below
Exploratory Trench 1-A-3, 7, 9, 11.5, 15, 18, 21, 24 feet bgs
Exploratory Trench 1-B-3, 6, 9, 12, 15, 18, 21, 25 feet bgs
Exploratory Trench 1-D-5, 7, 9, 12, 15, 18, 21, 24 feet bgs
Exploratory Trench 2-A-4, 6, 9, 12, 15, 18, 21, 25 feet bgs
Exploratory Trench 2-B-3, 6, 9, 12, 15, 18, 21, 25 feet bgs
Exploratory Trench 2-D-3, 6, 9, 12, 15, 18, 21, 25 feet bgs
Exploratory Trench 3-A-3, 6, 9, 12, 15, 18, 21, 24 feet bgs
Exploratory Trench 3-B-3, 6, 9, 12, 15, 18, 21, 24 feet bgs
Exploratory Trench 3-C-3, 6, 9, 12, 15, 18, 21, 24 feet bgs

Soil Sample Results - Exploratory Trenches
Laurel Station Cleanup Action
Bellingham, Washington

Sample ID		Exploratory Trench 3							
		ExpTrench3-B						ExpTrench3-C	
Sample Depth (feet bgs)	Soil Cleanup Levels [1]	9	12	15	18	21	24	9	24
Sample Date		10/11/14	10/11/14	10/11/14	10/11/14	10/11/14	10/11/14	10/11/14	10/11/14
Field Measurements									
PID Reading (ppm)	NA	0	0.1	60	1088 (peak), 400-600	62.3	33	0	21.5
Sheen Test	NA	No Sheen	Light sheen, spotty	Sheen	Sheen	Sheen	Light Sheen	No Sheen	No Sheen
Presence of LNAPL (Yes / No)	NA	No	??	No	No	No	No	No	No
Total Petroleum Hydrocarbons (mg/kg)									
Gasoline-range (Gx)	200	7.5 U	4.9 U	770	1,900	220	5.4 U	5.9 U	62
Diesel-range (Dx)	NE	5.4 U	5.4 U	3,200	2,200	240	43	5.4 U	47
Motor Oil-range (NWTPH-Dx)	NE	11 U	11 U	2,500	1,700	220	38	11 U	43
Total TPH (Sum Dx, Oil-range, mg/kg)	460	ND	ND	5,700	3,900	460	81	ND	90
Total TPH (Sum Gx,Dx, Oil-range, mg/kg)	See Note 2	ND	ND	6,470	5,800	680	81	ND	152
BTEX 8021B (ug/kg)									
Benzene	18,182	19 U	12 U	13 U	350 U	16 U	14 U	15 U	15 U
Toluene	6,400,000	19 U	12 U	13 U	350 U	16 U	14 U	15 U	15 U
Ethylbenzene	8,000,000	19 U	12 U	13 U	350 U	16 U	14 U	15 U	15 U
m,p-Xylene	16,000,000	38 U	24 U	27 U	830	33 U	27 U	30 U	31 U
o-Xylene	16,000,000	19 U	12 U	13 U	350 U	16 U	14 U	15 U	15 U
Extractable Petroleum Hydrocarbons (ug/kg)									
C8-C10 Aliphatics	NE	NA	NA	34,000	25,000	NA	NA	NA	NA
C10-C12 Aliphatics	NE	NA	NA	100,000	68,000	NA	NA	NA	NA
C12-C16 Aliphatics	NE	NA	NA	280,000	220,000	NA	NA	NA	NA
C16-C21 Aliphatics	NE	NA	NA	300,000	260,000	NA	NA	NA	NA
C21-C34 Aliphatics	NE	NA	NA	360,000	380,000	NA	NA	NA	NA
C8-C10 Aromatics	NE	NA	NA	2,100 U	2,100 U	NA	NA	NA	NA
C10-C12 Aromatics	NE	NA	NA	2,100	10,000	NA	NA	NA	NA
C12-C16 Aromatics	NE	NA	NA	26,000	52,000	NA	NA	NA	NA
C16-C21 Aromatics	NE	NA	NA	130,000	140,000	NA	NA	NA	NA
C21-C34 Aromatics	NE	NA	NA	200,000	200,000	NA	NA	NA	NA
Volatile Petroleum Hydrocarbons (ug/kg)									
Benzene	NE	NA	NA	5,000 U	6,600 U	NA	NA	NA	NA
Toluene	NE	NA	NA	5,000 U	6,600 U	NA	NA	NA	NA
Ethylbenzene	NE	NA	NA	5,000 U	11,000	NA	NA	NA	NA
m,p-Xylene	NE	NA	NA	9,900 U	13,000 U	NA	NA	NA	NA
o-Xylene	NE	NA	NA	5,000 U	6,600 U	NA	NA	NA	NA
Methyl tert butylether	NE	NA	NA	5,000 U	6,600 U	NA	NA	NA	NA
n-Pentane	NE	NA	NA	5,000 U	6,600 U	NA	NA	NA	NA
n-Hexane	NE	NA	NA	5,000 U	6,600 U	NA	NA	NA	NA
n-Octane	NE	NA	NA	5,000 U	68,000	NA	NA	NA	NA
n-Decane	NE	NA	NA	5,000 U	6,600 UJ	NA	NA	NA	NA
n-Dodecane	NE	NA	NA	5,000 U	19,000	NA	NA	NA	NA
C8-C10 Aromatics	NE	NA	NA	50,000 U	370,000	NA	NA	NA	NA
C10-C12 Aromatics	NE	NA	NA	50,000 U	420,000	NA	NA	NA	NA
C12-C13 Aromatics	NE	NA	NA	50,000 U	260,000	NA	NA	NA	NA
C5-C6 Aliphatics	NE	NA	NA	50,000 U	66,000 U	NA	NA	NA	NA
C6-C8 Aliphatics	NE	NA	NA	50,000 U	350,000	NA	NA	NA	NA
C8-C10 Aliphatics	NE	NA	NA	50,000 U	300,000	NA	NA	NA	NA
C10-C12 Aliphatics	NE	NA	NA	50,000 U	66,000 U	NA	NA	NA	NA
Polycyclic Aromatic Hydrocarbons (ug/kg)									
1-Methylnaphthalene	34,500	NA	NA	29	2,800	NA	NA	NA	NA
2-Methylnaphthalene	320,000	NA	NA	46	3,600	NA	NA	NA	NA
Acenaphthene	4,800,000	NA	NA	11 U	29 J	NA	NA	NA	NA
Acenaphthylene	NE	NA	NA	11 U	38 J	NA	NA	NA	NA
Anthracene	24,000,000	NA	NA	11 U	25 J	NA	NA	NA	NA
Benzo(a)anthracene [3]	1,370	NA	NA	11 U	14 U	NA	NA	NA	NA
Benzo(a)pyrene [3]	137	NA	NA	11 U	14 U	NA	NA	NA	NA
Benzo(b)fluoranthene [3]	1,370	NA	NA	14 J	24 J	NA	NA	NA	NA
Benzo(g,h,i)perylene	NE	NA	NA	11 U	14 U	NA	NA	NA	NA
Benzo(k)fluoranthene [3]	13,700	NA	NA	11 U	14 U	NA	NA	NA	NA
Chrysene [3]	137,000	NA	NA	68	140	NA	NA	NA	NA
Dibenz(a,h)anthracene [3]	137	NA	NA	11 U	14 U	NA	NA	NA	NA
Dibenzofuran	80,000	NA	NA	11 U	89	NA	NA	NA	NA
Fluoranthene	3,200,000	NA	NA	13	23	NA	NA	NA	NA
Fluorene	3,200,000	NA	NA	23	370	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene [3]	1,370	NA	NA	11 U	14 U	NA	NA	NA	NA
Naphthalene	1,600,000	NA	NA	11 U	820	NA	NA	NA	NA
Phenanthrene	NE	NA	NA	37	710	NA	NA	NA	NA
Pyrene	2,400,000	NA	NA	22	50	NA	NA	NA	NA
TTEC	137	NA	NA	2.08	3.8	NA	NA	NA	NA
MTCATPH 11.1 Workbook Tool Output [4]									
Sum (mg/kg, Section A.1.2)		NA	NA	1,488.413	3,016.925	NA	NA	NA	NA
Method B, Direct Contact (mg/kg, Section A.2.1)		NA	NA	3,591.27	3,270.72	NA	NA	NA	NA
Pass/Fail (Method B section A.2.1)		NA	NA	Pass	Pass	NA	NA	NA	NA

Notes:
bgs - below ground surface
DUP - field duplicate
mg/kg - milligram per kilogram
J- estimated value
NA - not analyzed or not applicable
NE- not established
ND - not detected
TTEC - Total Toxicity Equivalent Concentration, reference WAC173-340-708
U - Compound was analyzed for but not detected above the reporting limit shown.
ug/kg - microgram per kilogram

[1] Soil Cleanup Levels are established in the Cleanup Action Plan (Exhibit A, Consent Decree No. 14-2-01294-9)
[2] The total TPH sum is used for information only. The direct contact cleanup level for TPH is 3,300 mg/kg and comparison to this cleanup level is based on calculation using additional sample results and Ecology's MTCATPH 11.1 Workbook Tool.
[3] This is considered a carcinogenic PAH compound.
[4] Results calculated using BTEX by Method 8021B

Samples collected from each location as below
Exploratory Trench 1-A-3, 7, 9, 11.5, 15, 18, 21, 24 feet bgs
Exploratory Trench 1-B-3, 6, 9, 12, 15, 18, 21, 25 feet bgs
Exploratory Trench 1-D-5, 7, 9, 12, 15, 18, 21, 24 feet bgs
Exploratory Trench 2-A-4, 6, 9, 12, 15, 18, 21, 25 feet bgs
Exploratory Trench 2-B-3, 6, 9, 12, 15, 18, 21, 25 feet bgs
Exploratory Trench 2-D-3, 6, 9, 12, 15, 18, 21, 25 feet bgs
Exploratory Trench 3-A-3, 6, 9, 12, 15, 18, 21, 24 feet bgs
Exploratory Trench 3-B-3, 6, 9, 12, 15, 18, 21, 24 feet bgs
Exploratory Trench 3-C-3, 6, 9, 12, 15, 18, 21, 24 feet bgs

Soil Sample Results - Slot Cuts Adjacent to Piping Manifold Shelter
Laurel Station Cleanup Action **QC Pending**
Bellingham, Washington

		Slot Cut 1			Slot Cut 2									Slot Cut 3			
		Slot Cut 1-A	Slot Cut 1-B	Slot Cut 1-C	Slot Cut 2-A							SC2-B	SC2-C	Slot Cut 3-A			
Sample ID		SC1-A	SC1-B	SC1-C	SC2-A	SC2-A	SC2-A		SC2-A	SC2-A	SC2-A	SC2-B	SC2-C	SC3-A	SC3-A-6	SC3-A	SC3-A
Sample Depth (feet bgs)	Soil Cleanup	24	25	25	10	12	14		18	21	23	25	25	4	6	9	12
Sample Date	Levels [1]	10/22/14	10/22/14	10/22/14	11/8/14	11/8/14	11/8/14	11/8/2014 (DUP)	11/8/14	11/8/14	11/11/14	11/11/14	11/11/14	10/23/14	10/24/14	10/24/14	10/24/14
Field Measurements																	
PID Reading (ppm)	NA	119	51.8	66.1	33	256	315	NA	383	4.7	0.3	0.3	0.0	0.1	80	21.4	147
Sheen Test	NA	Moderate Sheen	Light Sheen	Light Sheen	Trace Sheen	Slight Sheen	Slight Sheen	NA	Sheen	No Sheen	No Sheen	No Sheen	No Sheen	Slight Sheen	Moderate Sheen	Light Sheen	Moderate Sheen
Presence of LNAPL (Yes / No)	NA	No	No	No	No	No	Yes	NA	Yes	No	No	No	Yes	No	Yes	No	Yes
Total Petroleum Hydrocarbons (mg/kg)																	
Gasoline-range (Gx)	200	270	220	280	180	1,200	2,000 J	6,300 J	1,800	960	550	540	490	6.0 U	140	670	1,200
Diesel-range (Dx)	NE	150	420	540	380	1,900	6,100	5,700	4,000	1,100	1,600	680	840	14	2,700	1,600	6,100
Motor Oil-range	NE	100	290	370	340	1,200	3,200	3,000	2,300	810	1,400	610	750	50	1,900	1,100	3,600
Total TPH (Sum Dx, Oil-range, mg/kg)	460	250	710	910	720	3,100	9,300	8,700	6,300	1,910	3,000	1,290	1,590	64	4,600	2,700	9,700
Total TPH (Sum Gx,Dx, Oil-range, mg/kg)	See Note 2	520	930	1,190	900	4,300	11,300	15,000	8,100	2,870	3,550	1,830	2,080	64	4,740	3,370	10,900
BTEX 8021B (ug/kg)																	
Benzene	18,182	16 U	37 J	17 U	16 U	140 U	280 U	400 U	130 U	55 U	24 U	18 U	18 U	15 U	19 U	28 U	170 U
Toluene	6,400,000	16 U	18 U	17 U	16 U	140 U	280 U	400 U	130 U	55 U	24 U	18 U	18 U	15 U	78	75	170 U
Ethylbenzene	8,000,000	16 U	18 U	17 U	16 U	140 U	280 U	400 U	130 U	55 U	24 U	18 U	18 U	15 U	19 U	28 U	170 U
m,p-Xylene	16,000,000	70	86	34 U	38	270 U	570 U	800 U	270 U	110 U	47 U	36 U	35 U	30 U	48	150	340 U
o-Xylene	16,000,000	16 U	18 U	17 U	16 U	840	1,100 J	5,200 J	1,400	680	220	290	310	15 U	19 U	560	680
Extractable Petroleum Hydrocarbons (ug/kg)																	
C8-C10 Aliphatics	NE	7,800	11,000	14,000	5,800 J	28,000	110,000	77,000	80,000	52,000	NA	NA	NA	NA	NA	NA	NA
C10-C12 Aliphatics	NE	6,900	23,000	27,000	10,000	130,000	480,000	380,000	280,000	92,000	NA	NA	NA	NA	NA	NA	NA
C12-C16 Aliphatics	NE	22,000	84,000	96,000	63,000	440,000	1,200,000	980,000	770,000	300,000	NA	NA	NA	NA	NA	NA	NA
C16-C21 Aliphatics	NE	28,000	110,000	120,000	92,000	460,000	1,200,000	920,000	720,000	330,000	NA	NA	NA	NA	NA	NA	NA
C21-C34 Aliphatics	NE	33,000	160,000	170,000	160,000	690,000	1,700,000	1,500,000	1,200,000	530,000	NA	NA	NA	NA	NA	NA	NA
C8-C10 Aromatics	NE	2,200 U	2,300 U	2,700 U	2,300 U	2,200 U	3,700	2,600	2,400 U	4,600 U	NA	NA	NA	NA	NA	NA	NA
C10-C12 Aromatics	NE	2,200 U	2,300 U	2,700 U	2,300 U	20,000	49,000	40,000	22,000	12,000	NA	NA	NA	NA	NA	NA	NA
C12-C16 Aromatics	NE	5,400	9,400	9,300	8,400	120,000	240,000	220,000	150,000	64,000	NA	NA	NA	NA	NA	NA	NA
C16-C21 Aromatics	NE	19,000	49,000	50,000	49,000 J	290,000 J	660,000 J	630,000 J	460,000 J	200,000 J	NA	NA	NA	NA	NA	NA	NA
C21-C34 Aromatics	NE	22,000	78,000	76,000	85,000	330,000	820,000	770,000	620,000	260,000	NA	NA	NA	NA	NA	NA	NA
Volatile Petroleum Hydrocarbons(ug/kg)																	
Benzene	NE	1,200 U	1,200 U	1,600 U	1,100 U	2,400 U	6,400 U	5,400 U	3,100 U	3,300 U	NA	NA	NA	NA	NA	NA	NA
Toluene	NE	1,200 U	1,200 U	1,600 U	1,100 U	2,400 U	6,400 U	5,400 U	3,100 U	3,300 U	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	NE	1,200 U	1,200 U	1,600 U	1,100 U	8,100	14,000	10,000	8,900	3,300 U	NA	NA	NA	NA	NA	NA	NA
m,p-Xylene	NE	2,500 U	2,500 U	3,200 U	2,200 U	4,900 U	13,000 U	11,000 U	6,300 U	6,600 U	NA	NA	NA	NA	NA	NA	NA
o-Xylene	NE	1,200 U	1,200 U	1,600 U	1,100 U	2,400 U	6,400 U	5,400 U	3,600	3,300 U	NA	NA	NA	NA	NA	NA	NA
Methyl tert butylether	NE	1,200 U	1,200 U	1,600 U	1,100 U	2,400 U	6,400 U	5,400 U	3,100 U	3,300 U	NA	NA	NA	NA	NA	NA	NA
n-Pentane	NE	1,200 U	1,200 U	1,600 U	1,100 U	2,400 U	6,400 U	5,400 U	3,100 U	3,300 U	NA	NA	NA	NA	NA	NA	NA
n-Hexane	NE	1,200 U	1,200 U	1,600 U	1,100 U	2,400 U	6,400 U	5,400 U	3,100 U	3,300 U	NA	NA	NA	NA	NA	NA	NA
n-Octane	NE	4,800	4,900	4,400	1,100 U	12,000	67,000	65,000	32,000	16,000	NA	NA	NA	NA	NA	NA	NA
n-Decane	NE	1,200 U	1,200 U	1,600 U	1,100 U	2,400 U	18,000	6,600	4,600	3,300 U	NA	NA	NA	NA	NA	NA	NA
n-Dodecane	NE	1,600	2,800	3,400	2,000	7,100	27,000	16,000	17,000	5,800	NA	NA	NA	NA	NA	NA	NA
C8-C10 Aromatics	NE	25,000	29,000	37,000	24,000	120,000	480,000	370,000	300,000	92,000	NA	NA	NA	NA	NA	NA	NA
C10-C12 Aromatics	NE	32,000	54,000	67,000	35,000	180,000	550,000	460,000	370,000	110,000	NA	NA	NA	NA	NA	NA	NA
C12-C13 Aromatics	NE	23,000	41,000	51,000	30,000	120,000	350,000	280,000	210,000	83,000	NA	NA	NA	NA	NA	NA	NA
C5-C6 Aliphatics	NE	12,000 U	12,000 U	16,000 U	11,000 U	24,000 U	64,000 U	54,000 U	31,000 U	33,000 U	NA	NA	NA	NA	NA	NA	NA
C6-C8 Aliphatics	NE	29,000	30,000	27,000	11,000 U	100,000	400,000	440,000	200,000	91,000	NA	NA	NA	NA	NA	NA	NA
C8-C10 Aliphatics	NE	18,000	18,000	20,000	12,000	74,000	340,000	230,000	190,000	66,000	NA	NA	NA	NA	NA	NA	NA
C10-C12 Aliphatics	NE	12,000 U	12,000 U	16,000 U	11,000 U	24,000 U	64,000 U	54,000 U	31,000 U	33,000 U	NA	NA	NA	NA	NA	NA	NA
Polycyclic Aromatic Hydrocarbons (ug/kg)																	
1-Methylnaphthalene	34,500	120	150	220	87	1,900	4,100	3,900	1,300	1,100	NA	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	320,000	130	180	220	67	2,700	4,700	4,600	1,400	1,600	NA	NA	NA	NA	NA	NA	NA
Acenaphthene	4,800,000	4.8 U	7.4 U	12 U	16	580	1,100	1,200	430	290	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene	NE	4.8 U	7.4 U	12 U	9.4	130	210	310	94	50 U	NA	NA	NA	NA	NA	NA	NA
Anthracene	24,000,000	4.8 U	7.4 U	15 J	12	56	84	290 U	40	50 U	NA	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene [3]	1,370	4.8 U	7.4 U	12 U	20	49	54	290 U	34	50 U	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene [3]	137	4.8 U	7.4 U	12 U	12	33	37	290 U	30 U	50 U	NA	NA	NA	NA	NA	NA	NA
Benzo(b)fluoranthene [3]	1,370	4.8 U	8.4	15	11	31	71	290 U	37	50 U	NA	NA	NA	NA	NA	NA	NA
Benzo(g,h,i)perylene	NE	4.8 U	7.4 U	12 U	8.7	26	42	290 U	31	50 U	NA	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene [3]	13,700	4.8 U	7.4 U	12 U	7.0	19 U	29 U	290 U	30 U	50 U	NA	NA	NA	NA	NA	NA	NA
Chrysene [3]	137,000	16	52	86	54	200	540	620	320	100	NA	NA	NA	NA	NA	NA	NA
Dibenz(a,h)anthracene [3]	137	4.8 U	7.4 U	12 U	4.8 U	19 U	29 U	290 U	30 U	50 U	NA	NA	NA	NA	NA	NA	NA
Dibenzofuran	80,000	7.6	9.9 J	14 J	4.8 U	98	180	290 U	37	59	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	3,200,000	4.8 U	8.4	14	44	150	220	290 U	120	50 U	NA	NA	NA	NA	NA	NA	NA
Fluorene	3,200,000	35	50	72	32	420	810	840	220	190	NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene [3]	1,370	4.8 U	7.4 U	12 U	4.8 U	19 U	32	290 UJ	30 U	50 U	NA	NA	NA	NA	NA	NA	NA
Naphthalene	1,600,000	7.9	12	12	16	230	590	720	160	180	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	NE	68	92	140	69	1,000	1,700	1,700	580	440	NA	NA	NA	NA	NA	NA	NA
Pyrene	2,400,000	7.3	24	40	43	160	330	340	160	64	NA	NA	NA	NA	NA	NA	NA
TTEC	137	0.16	1.36	2.36	16.34	43	58.1	6.2	10.3	1.0	NA	NA	NA	NA	NA	NA	NA
MTCATPH 11.1 Workbook Tool Output [4]																	
Method B, Direct Contact (mg/kg, Section A.2.1)		3,298	3,554	3,485	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING	NA	NA	NA	NA	NA	NA	NA
Sum (mg/kg, Section A.1.2)		265.476	683.162	751.217	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING	NA	NA	NA	NA	NA	NA	NA
Pass/Fail (Method B section A.2.1)		Pass	Pass	Pass	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING	NA	NA	NA	NA	NA	NA	NA

Notes:

[1] Soil Cleanup Levels are established in the Cleanup Action Plan (Exhibit A, Consent Decree No. 14-2-01294-9)

[2] The total TPH sum is used for information only. The direct contact cleanup level for TPH is 3,300 mg/kg and comparison to this cleanup level is based on calculation using additional sample results and Ecology's MTCATPH 11.1 Workbook Tool.

[3] This is considered a carcinogenic PAH compound.

[4] Results calculated using BTEX by Method 8021B

bgs - below ground surface
DUP - field duplicate
J- estimated value
mg/kg - milligram per kilogram
NA - not analyzed or not applicable
NE - not established
ND - not detected
TTEC - Total Toxicity Equivalent Concentration, reference WAC173-340-708
U - Compound was analyzed for but not detected above the reporting limit shown.
ug/kg - microgram per kilogram

Soil Sample Results - Slot Cuts Adjacent to Piping Manifold Shelter
Laurel Station Cleanup Action **QC Pending**
Bellingham, Washington

		Slot Cut 3							Slot Cut 4							
		Slot Cut 3-A					Slot Cut 3-B	Slot Cut 3-C	Slot Cut 4-A							Slot Cut 4-B
Sample ID		SC3-A	SC3-A		SC3-A	SC3-A	SC3	SC3	SC4-A	SC4-A	SC4-A	SC4-A		SC4-A	SC4-A	SC4-B
Sample Depth (feet bgs)	Soil Cleanup	15	17		21	25	25	25	10	12	15	18		21	24	25
Sample Date	Levels [1]	10/24/14	10/24/14	10/24/14 (DUP)	10/24/14	10/25/14	10/25/14	10/25/14	11/6/14	11/6/14	11/6/14	11/7/14	11/7/2014 (DUP)	11/7/14	11/7/14	11/7/14
Field Measurements																
PID Reading (ppm)	NA	372	458	NA	525	94.7	53.4	175	0	2	5.8	0	NA	0	14.9	8.4
Sheen Test	NA	Slight Sheen	No Sheen	NA	Heavy Sheen	Moderate Sheen	Heavy Sheen	Heavy Sheen	No Sheen	Natural Sheen (slight rainbow)	Natural Sheen (slight rainbow)	Natural Sheen (slight rainbow)	NA	Natural Sheen (slight rainbow)	Natural Sheen (slight rainbow)	Natural Sheen (slight rainbow)
Presence of LNAPL (Yes / No)	NA	Yes	Yes	NA	No	No	No	No	No	No	No	No	NA	No	No	No
Total Petroleum Hydrocarbons (mg/kg)																
Gasoline-range (Gx)	200	2,400	4,300	3,300	4,200	1,400	320	1,200	6.9 U	640	410	6.3 U	6.4 U	39	20	180
Diesel-range (Dx)	NE	1,000	6,800	6,100	10,000	2,900	1,400	5,400	170	1,300	190	8.3	13	45	62	340
Motor Oil-range	NE	700	3,000	2,800	4,900	1,700	960	2,800	140	920	250	11 U	12	38	57	300
Total TPH (Sum Dx, Oil-range, mg/kg)	460	1,700	9,800	8,900	14,900	4,600	2,360	8,200	310	2,220	440	8.3	25	83	119	640
Total TPH (Sum Gx,Dx, Oil-range, mg/kg)	See Note 2	4,100	14,100	12,200	19,100	6,000	2,680	9,400	310	2,860	850	8.3	25	122	139	820
BTEX 8021B (ug/kg)																
Benzene	18,182	15 U	190 U	190 U	190 U	16 U	16 U	200 U	17 U	18 U	250	16 U	16 U	17 U	16 U	29 U
Toluene	6,400,000	15 U	660	190 U	610	150	16 U	200 U	17 U	71	36	16 U	16 U	17 U	16 U	29 U
Ethylbenzene	8,000,000	15 U	190 U	190 U	190 U	16 U	16 U	200 U	17 U	18 U	14 U	16 U	16 U	17 U	16 U	29 U
m,p-Xylene	16,000,000	1,500	380 U	380 U	380 U	31 U	33 U	390 U	34 U	36 U	28 U	31 U	32 U	35 U	32 U	57 U
o-Xylene	16,000,000	1,500	3,900	2,900	3,600	1,200	190	490	17 U	620	280	16 U	16 U	17 U	16 U	110
Extractable Petroleum Hydrocarbons (ug/kg)																
C8-C10 Aliphatics	NE	43,000 J	310,000 J	300,000 J	NA	77,000 J	NA	NA	3,500 J	13,000	4,900 J	2,700 J	3,900 J	3,000 J	3,100 J	4,500
C10-C12 Aliphatics	NE	82,000	580,000	580,000	NA	170,000	NA	NA	2,600	47,000	6,100	2,100 U	2,100 U	2,200 U	2,400 U	11,000
C12-C16 Aliphatics	NE	240,000	1,300,000	1,400,000	NA	460,000	NA	NA	19,000	160,000	38,000	2,100 U	2,100 U	4,300	7,000	64,000
C16-C21 Aliphatics	NE	270,000 J	1,200,000 J	1,300,000 J	NA	480,000 J	NA	NA	24,000 J	180,000 J	54,000 J	2,100 U	2,100 U	8,500 J	12,000 J	86,000
C21-C34 Aliphatics	NE	380,000	1,500,000	1,600,000	NA	660,000	NA	NA	29,000	260,000	82,000	2,100 U	2,100 U	7,600	12,000	130,000
C8-C10 Aromatics	NE	4,500	12,000	12,000	NA	2,400 U	NA	NA	2,200 U	2,200 U	2,200 U	2,100 U	2,100 U	2,200 U	4,200	3,100 U
C10-C12 Aromatics	NE	15,000	100,000	100,000	NA	24,000	NA	NA	2,200 U	8,000	2,200 U	2,100 U	2,100 U	2,200 U	2,400 U	3,100 U
C12-C16 Aromatics	NE	60,000	340,000	340,000	NA	110,000	NA	NA	3,400	47,000	3,800	2,100 U	2,100 U	2,200 U	2,400 U	13,000
C16-C21 Aromatics	NE	140,000	680,000	710,000	NA	280,000	NA	NA	14,000 J	110,000 J	19,000 J	2,100 U	2,100 U	2,200 U	6,100 J	59,000
C21-C34 Aromatics	NE	170,000	700,000	750,000	NA	350,000	NA	NA	11,000	140,000	35,000	2,100 U	2,100 U	2,200 U	4,700	88,000
Volatile Petroleum Hydrocarbons(ug/kg)																
Benzene	NE	5,500 U	7,500 U	6,100 U	NA	4,000 U	NA	NA	1,100 U	1,200 U	1,200 U	1,200 U	1,300 U	1,200 U	1,300 U	2,100 U
Toluene	NE	5,500 U	7,500 U	6,100 U	NA	4,000 U	NA	NA	1,100 U	1,200 U	1,200 U	1,200 U	1,300 U	1,200 U	1,300 U	2,100 U
Ethylbenzene	NE	5,500 U	18,000	11,000	NA	5,800	NA	NA	1,100 U	1,700	1,200 U	1,200 U	1,300 U	1,200 U	1,300 U	2,100 U
m,p-Xylene	NE	11,000 U	15,000 U	12,000 U	NA	8,100 U	NA	NA	2,100 U	2,300 U	2,400 U	2,400 U	2,600 U	2,400 U	2,500 U	4,300 U
o-Xylene	NE	5,500 U	7,500 U	6,100 U	NA	4,000 U	NA	NA	1,100 U	1,200 U	1,200 U	1,200 U	1,300 U	1,200 U	1,300 U	2,100 U
Methyl tert butylether	NE	5,500 U	7,500 U	6,100 U	NA	4,000 U	NA	NA	1,100 U	1,200 U	1,200 U	1,200 U	1,300 U	1,200 U	1,300 U	2,100 U
n-Pentane	NE	5,500 U	7,500 U	6,100 U	NA	4,000 U	NA	NA	1,100 U	1,200 U	1,200 U	1,200 U	1,300 U	1,200 U	1,300 U	2,100 U
n-Hexane	NE	5,500 U	7,500 U	6,100 U	NA	4,000 U	NA	NA	1,100 U	1,200 U	1,200 U	1,200 U	1,300 U	1,200 U	1,300 U	2,100 U
n-Octane	NE	38,000	160,000	120,000	NA	21,000	NA	NA	1,100 U	7,000	3,200	1,200 U	1,300 U	1,200 U	1,300 U	3,800
n-Decane	NE	5,500 U	8,300	6,100 U	NA	4,000 U	NA	NA	1,100 U	2,300	1,200 U	1,200 U	1,300 U	1,200 U	1,300 U	2,100 U
n-Dodecane	NE	9,300	26,000	14,000	NA	5,200	NA	NA	1,100 U	3,200	3,300	1,200 U	1,300 U	1,200 U	1,300 U	2,100 U
C8-C10 Aromatics	NE	190,000	600,000	350,000	NA	94,000	NA	NA	11,000 U	57,000	34,000	12,000 U	13,000 U	12,000 U	13,000 U	23,000
C10-C12 Aromatics	NE	220,000	650,000	400,000	NA	120,000	NA	NA	11,000 U	75,000	66,000	12,000 U	13,000 U	12,000 U	13,000 U	38,000
C12-C13 Aromatics	NE	140,000	370,000	220,000	NA	81,000	NA	NA	11,000 U	56,000	53,000	12,000 U	13,000 U	12,000 U	13,000 U	33,000
C5-C6 Aliphatics	NE	55,000 U	75,000 U	61,000 U	NA	40,000 U	NA	NA	11,000 U	12,000 U	12,000 U	12,000 U	13,000 U	12,000 U	13,000 U	21,000 U
C6-C8 Aliphatics	NE	300,000	760,000	620,000	NA	96,000	NA	NA	11,000 U	34,000	20,000	12,000 U	13,000 U	12,000 U	13,000 U	21,000 U
C8-C10 Aliphatics	NE	140,000	460,000	330,000	NA	87,000	NA	NA	11,000 U	32,000	18,000	12,000 U	13,000 U	12,000 U	13,000 U	21,000 U
C10-C12 Aliphatics	NE	55,000 U	87,000	61,000 U	NA	40,000 U	NA	NA	11,000 U	12,000 U	12,000 U	12,000 U	13,000 U	12,000 U	13,000 U	21,000 U
Polycyclic Aromatic Hydrocarbons (ug/kg)																
1-Methylnaphthalene	34,500	2,100	7,400	9,000	NA	3,700	NA	NA	34	2,300	58	8.6	8.0	30	22	320
2-Methylnaphthalene	320,000	3,200	11,000	14,000	NA	5,400	NA	NA	24	2,700	56	14	16	41	24	260
Acenaphthene	4,800,000	31 UJ	59 UJ	85 UJ	NA	31 UJ	NA	NA	29	600	10	4.7 U	4.8 U	4.9 U	4.7 U	58
Acenaphthylene	NE	40 UJ	230 J	250 UJ	NA	38 UJ	NA	NA	4.9 U	110	7.0	4.7 U	4.8 U	4.9 U	4.7 U	13
Anthracene	24,000,000	13	50 J	50 J	NA	36 J	NA	NA	4.9 U	39	4.8	4.7 U	4.8 U	4.9 U	4.7 U	5.8
Benzo(a)anthracene [3]	1,370	8.9	58	53	NA	23 U	NA	NA	4.9 U	31	6.6	4.7 U	4.8 U	4.9 U	4.7 U	8.3
Benzo(a)pyrene [3]	137	5.5 J	29	32	NA	23 U	NA	NA	4.9 U	20 U	6.0	4.7 U	4.8 U	4.9 U	4.7 U	5.0
Benzo(b)fluoranthene [3]	1,370	14 J	62 J	55 J	NA	23 U	NA	NA	4.9 U	21	7.9	4.7 U	4.8 U	4.9 U	4.7 U	7.2
Benzo(g,h,i)perylene	NE	8.7	25	25	NA	23 U	NA	NA	4.9 U	20 U	8.6	4.7 U	4.8 U	4.9 U	4.7 U	5.8
Benzo(k)fluoranthene [3]	13,700	5.0 U	24 U	24 U	NA	23 U	NA	NA	4.9 U	20 U	4.8 U	4.7 U	4.8 U	4.9 U	4.7 U	5.0 U
Chrysene [3]	137,000	88	390	400	NA	170	NA	NA	13	150	28	4.7 U	4.8 U	4.9 U	6.2	46
Dibenz(a,h)anthracene [3]	137	5.0 U	24 U	24 U	NA	23 U	NA	NA	4.9 U	20 U	4.8 U	4.7 U	4.8 U	4.9 U	4.7 U	5.0 U
Dibenzofuran	80,000	54	210	260	NA	96	NA	NA	4.9 U	100	5.2	4.7 U	4.8 U	4.9 U	4.7 U	16
Fluoranthene	3,200,000	22	99	120	NA	36	NA	NA	4.9 U	70	17	4.7 U	4.8 U	4.9 U	4.7 U	18
Fluorene	3,200,000	200	890	960	NA	390	NA	NA	18	450	23	4.7 U	4.8 U	12	10	54
Indeno(1,2,3-cd)pyrene [3]	1,370	5.0 U	24 U	24 U	NA	23 U	NA	NA	4.9 U	20 U	4.8 U	4.7 U	4.8 U	4.9 U	4.7 U	5.0 U
Naphthalene	1,600,000	810	3,200	4,300	NA	140	NA	NA	4.9 U	260	9.6	5.7	6.1	7.7	4.7 U	13
Phenanthrene	NE	410	1,500	1,600	NA	1,000	NA	NA	63	1,100	52	4.7 U	4.8 U	25	25	150
Pyrene	2,400,000	39	200	200	NA	78	NA	NA	8.1	86	22	4.7 U	4.8 U	4.9 U	4.7 U	23
TTEC	137	8.67	44.9	46.8	NA	1.7	NA	NA	0.13	6.7	7.73	ND	ND	ND	0.062	7.01
MTCATPH 11.1 Workbook Tool Output [4]																
Method B, Direct Contact (mg/kg, Section A.2.1)		PENDING	PENDING	PENDING	NA	PENDING	NA	NA	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING
Sum (mg/kg, Section A.1.2)		PENDING	PENDING	PENDING	NA	PENDING	NA	NA	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING
Pass/Fail (Method B section A.2.1)		PENDING	PENDING	PENDING	NA	PENDING	NA	NA	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING

Notes:
[1] Soil Cleanup Levels are established in the Cleanup Action Plan (Exhibit A, Consent Decree No. 14-2-01294-9)
[2] The total TPH sum is used for information only. The direct contact cleanup level for TPH is 3,300 mg/kg and comparison to this cleanup level is based on calculation using additional sample results and Ecology's MTCATPH 11.1 Workbook Tool.
[3] This is considered a carcinogenic PAH compound.
[4] Results calculated using BTEX by Method 8021B
bgs - below ground surface
DUP - field duplicate
J- estimated value
mg/kg - milligram per kilogram
NA - not analyzed or not applicable
NE - not established
ND - not detected
TTEC - Total Toxicity Equivalent Concentration, reference WAC173-340-708
U - Compound was analyzed for but not detected above the reporting limit shown.
ug/kg - microgram per kilogram

Soil Sample Results - Slot Cuts Adjacent to Piping Manifold Shelter
Laurel Station Cleanup Action **QC Pending**
Bellingham, Washington

Sample ID	Soil Cleanup Levels [1]	Slot Cut 4						Slot Cut 5			Slot Cut 6	Slot Cut 8				
		Slot Cut 4-C						Slot Cut 5-A			Slot Cut 6-A	Slot Cut 8-A				
		SC4-C	SC4-C	SC4-C	SC4-C	SC4-C	SC4-C	SC5-A	SC5-A	SC5-A	SC6-A	SC8-A	SC8-A	SC8-A	SC8-A	SC8-A
Sample Depth (feet bgs)		10	12	15	18	21	25	13	18	25	23	6	10	14	18	21
Sample Date		11/6/14	11/6/14	11/6/14	11/7/14	11/7/14	11/7/14	10/27/14	10/27/14	10/28/14	11/3/14	10/30/14	10/30/14	10/30/14	10/30/14	10/30/14
Field Measurements																
PID Reading (ppm)	NA	213	0.7	7.8	6.2	0	31.8	271	NA	10.6	122	137	34.4	198	22.3	0
Sheen Test	NA	Sheen	Natural Sheen (slight rainbow)	Natural Sheen	Natural Sheen	Natural Sheen (slight rainbow)	Natural Sheen (trace rainbow)	Faint Sheen	Faint Sheen	Faint Sheen	Faint Sheen	Slight Sheen	Light Sheen	Sheen	Light Sheen	Slight Sheen
Presence of LNAPL (Yes / No)	NA	Yes	No	Yes	Yes	No	No	No	No	No	Yes	No	No	Yes	No	No
Total Petroleum Hydrocarbons (mg/kg)																
Gasoline-range (Gx)	200	2,700	1,900	3,300	47	280	44	1,200	930	220	1,900	10	320	460	1,100	210
Diesel-range (Dx)	NE	4,900	690	36	180	710	68	1,400	5,500	61	2,300	570	760	2,000	1,100	110
Motor Oil-range	NE	3,000	550	32	160	580	59	1,100	3,200	46	1,600	500	720	1,700	790	92
Total TPH (Sum Dx, Oil-range, mg/kg)	460	7,900	1,240	68	340	1,290	127	2,500	8,700	107	3,900	1,070	1,480	3,700	1,890	202
Total TPH (Sum Gx,Dx, Oil-range, mg/kg)	See Note 2	10,600	3,140	3,368	387	1,570	171	3,700	9,630	327	5,800	1,080	1,800	4,160	2,990	412
BTEX 8021B (ug/kg)																
Benzene	18,182	18 U	14 U	18 U	16 U	18 U	17 U	190 U	200 U	150 U	200 U	13 U	16 U	22 U	47 U	16 U
Toluene	6,400,000	250	14 U	18 U	20	18 U	17 U	190 U	200 U	150 U	200 U	13 U	16 U	22 U	100	16 U
Ethylbenzene	8,000,000	18 U	14 U	18 UJ	16 U	18 U	17 U	190 U	200 U	150 U	200 U	13 U	16 U	22 U	47 U	16 U
m,p-Xylene	16,000,000	37 U	27 U	35 U	33 U	37 U	33 U	370 U	400 U	290 U	390 U	25 U	31 U	45 U	94 U	32 U
o-Xylene	16,000,000	2,000	1,200	2,000	16 U	230	17 U	190 U	200 U	150 U	1,300	13 U	210	260	780	120
Extractable Petroleum Hydrocarbons (ug/kg)																
C8-C10 Aliphatics	NE	12,000	2,300 U	2,500 U	3,500	2,400 U	2,300 U	44,000 J	220,000 J	NA	19,000	NA	NA	NA	NA	NA
C10-C12 Aliphatics	NE	170,000	9,800	2,500 U	2,300 U	12,000	2,300 U	98,000	410,000	NA	120,000	NA	NA	NA	NA	NA
C12-C16 Aliphatics	NE	690,000	100,000	3,900	21,000	100,000	4,200	280,000	960,000	NA	420,000	NA	NA	NA	NA	NA
C16-C21 Aliphatics	NE	690,000	120,000	10,000	36,000	140,000	9,400	360,000	990,000	NA	460,000 J	NA	NA	NA	NA	NA
C21-C34 Aliphatics	NE	1,000,000	200,000	11,000	50,000	210,000	10,000	570,000 J	1,400,000 J	NA	700,000	NA	NA	NA	NA	NA
C8-C10 Aromatics	NE	2,300 U	2,300 U	2,500 U	2,300 U	2,400 U	2,300 U	2,400 U	2,800	NA	2,300 U	NA	NA	NA	NA	NA
C10-C12 Aromatics	NE	28,000	2,300 U	2,500 U	2,300 U	2,400 U	2,300 U	8,800	54,000	NA	12,000	NA	NA	NA	NA	NA
C12-C16 Aromatics	NE	180,000	22,000	2,500 U	3,300	21,000	2,300 U	51,000	220,000	NA	83,000	NA	NA	NA	NA	NA
C16-C21 Aromatics	NE	400,000	85,000	5,700	22,000	81,000	7,000	170,000	520,000	NA	250,000 J	NA	NA	NA	NA	NA
C21-C34 Aromatics	NE	470,000	120,000	8,600	34,000	120,000	11,000	280,000	640,000	NA	380,000	NA	NA	NA	NA	NA
Volatile Petroleum Hydrocarbons(ug/kg)																
Benzene	NE	5,500 U	5,600 U	5,400 U	1,400 U	1,300 U	1,300 U	5,600 U	1,800 U	NA	2,600 U	NA	NA	NA	NA	NA
Toluene	NE	5,500 U	5,600 U	5,400 U	1,400 U	1,300 U	1,300 U	5,600 U	1,800 U	NA	2,600 U	NA	NA	NA	NA	NA
Ethylbenzene	NE	7,400	5,600 U	5,400 U	1,400 U	1,300	1,300 U	5,600 U	4,500	NA	3,800	NA	NA	NA	NA	NA
m,p-Xylene	NE	11,000 U	11,000 U	11,000 U	2,800 U	2,500 U	2,600 U	11,000 U	3,600 U	NA	5,200 U	NA	NA	NA	NA	NA
o-Xylene	NE	5,500 U	5,600 U	5,400 U	1,400 U	1,300 U	1,300 U	5,600 U	1,800 U	NA	2,600 U	NA	NA	NA	NA	NA
Methyl tert butylether	NE	5,500 U	5,600 U	5,400 U	1,400 U	1,300 U	1,300 U	5,600 U	1,800 U	NA	2,600 U	NA	NA	NA	NA	NA
n-Pentane	NE	5,500 U	5,600 U	5,400 U	1,400 U	1,300 U	1,300 U	5,600 U	1,800 U	NA	2,600 U	NA	NA	NA	NA	NA
n-Hexane	NE	5,500 U	5,600 U	5,400 U	1,400 U	1,300 U	1,300 U	5,600 U	1,800 U	NA	2,600 U	NA	NA	NA	NA	NA
n-Octane	NE	42,000	6,800	6,600	1,400 U	3,300	1,300 U	18,000	35,000	NA	12,000	NA	NA	NA	NA	NA
n-Decane	NE	5,700	5,600 U	5,400 U	1,400 U	1,300 U	1,300 U	5,600 U	5,800	NA	5,100	NA	NA	NA	NA	NA
n-Dodecane	NE	17,000	5,600 U	5,400 UJ	1,400 U	3,100	1,300 U	8,000	7,400	NA	7,100	NA	NA	NA	NA	NA
C8-C10 Aromatics	NE	260,000	56,000 U	66,000	14,000 U	46,000	13,000 U	98,000	150,000	NA	120,000	NA	NA	NA	NA	NA
C10-C12 Aromatics	NE	420,000	56,000 U	54,000 U	14,000 U	66,000	13,000 U	140,000	190,000	NA	150,000	NA	NA	NA	NA	NA
C12-C13 Aromatics	NE	300,000	56,000 U	62,000	14,000 U	51,000	13,000 U	100,000	98,000	NA	110,000	NA	NA	NA	NA	NA
C5-C6 Aliphatics	NE	55,000 U	56,000 U	54,000 U	14,000 U	13,000 U	13,000 U	56,000 U	18,000 U	NA	26,000 U	NA	NA	NA	NA	NA
C6-C8 Aliphatics	NE	160,000	56,000 U	94,000	14,000 U	28,000	13,000 U	100,000	240,000	NA	87,000	NA	NA	NA	NA	NA
C8-C10 Aliphatics	NE	140,000	56,000 U	66,000	14,000 U	24,000	13,000 U	88,000	130,000	NA	92,000	NA	NA	NA	NA	NA
C10-C12 Aliphatics	NE	55,000 U	56,000 U	54,000 U	14,000 U	13,000 U	13,000 U	56,000 U	18,000 U	NA	26,000 U	NA	NA	NA	NA	NA
Polycyclic Aromatic Hydrocarbons (ug/kg)																
1-Methylnaphthalene	34,500	7,400	610	36	84	790	38	1,200	7,500	NA	1,200	NA	NA	NA	NA	NA
2-Methylnaphthalene	320,000	9,600	760	47	79	790	30	1,800	9,800	NA	1,200	NA	NA	NA	NA	NA
Acenaphthene	4,800,000	1,700	130	4.8 U	26	200	17	20 U	130	NA	580	NA	NA	NA	NA	NA
Acenaphthylene	NE	280	25	4.8 U	5.1	43	4.8 U	20 U	190	NA	20 U	NA	NA	NA	NA	NA
Anthracene	24,000,000	110	11	4.8 U	4.8 U	14 U	4.8 U	20 U	34 U	NA	39	NA	NA	NA	NA	NA
Benzo(a)anthracene [3]	1,370	97 U	7.3	4.8 U	4.8 U	19	4.8 U	20 U	86	NA	45	NA	NA	NA	NA	NA
Benzo(a)pyrene [3]	137	97 U	8.2	4.8 U	4.8 U	14 U	4.8 U	23	49	NA	20	NA	NA	NA	NA	NA
Benzo(b)fluoranthene [3]	1,370	97 U	9.6	4.8 U	4.8 U	17	4.8 U	31	85	NA	39	NA	NA	NA	NA	NA
Benzo(g,h,i)perylene	NE	97 U	9.4	4.8 U	4.8 U	14 U	4.8 U	22	45	NA	26	NA	NA	NA	NA	NA
Benzo(k)fluoranthene [3]	13,700	97 U	4.9 U	4.8 U	4.8 U	14 U	4.8 U	20 U	38	NA	20 U	NA	NA	NA	NA	NA
Chrysene [3]	137,000	260	67	5.8	18	83	6.9	180	490	NA	280	NA	NA	NA	NA	NA
Dibenz(a,h)anthracene [3]	137	97 U	4.9 U	4.8 U	4.8 U	14 U	4.8 U	20 U	34 U	NA	20 U	NA	NA	NA	NA	NA
Dibenzofuran	80,000	300	25	4.9	6.8	42	5.6	44	240	NA	58	NA	NA	NA	NA	NA
Fluoranthene	3,200,000	110	30	4.8 U	8.8	34	4.8 U	57 J	160 J	NA	89	NA	NA	NA	NA	NA
Fluorene	3,200,000	1,100	110	13	19	170	20	190	870	NA	310	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene [3]	1,370	97 U	5.7	4.8 U	4.8 U	14 U	4.8 U	20 U	34 U	NA	20 U	NA	NA	NA	NA	NA
Naphthalene	1,600,000	1,400	100	9.1	10	47	5.1	230	1,300	NA	83	NA	NA	NA	NA	NA
Phenanthrene	NE	3,000	280	36	50	380	32	470 J	2,100	NA	800	NA	NA	NA	NA	NA
Pyrene	2,400,000	170	41	4.8 U	8.8	48	4.8 U	94	230	NA	160	NA	NA	NA	NA	NA
TTEC	137	2.6	11.13	0.058	0.18	4.43	0.069	27.9	74.8	NA	31.2	NA	NA	NA	NA	NA
MTCATPH 11.1 Workbook Tool Output [4]																
Method B, Direct Contact (mg/kg, Section A.2.1)		PENDING	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING	NA	PENDING	NA	NA	NA	NA	NA
Sum (mg/kg, Section A.1.2)		PENDING	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING	NA	PENDING	NA	NA	NA	NA	NA
Pass/Fail (Method B section A.2.1)		PENDING	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING	NA	PENDING	NA	NA	NA	NA	NA

Notes:

[1] Soil Cleanup Levels are established in the Cleanup Action Plan (Exhibit A, Consent Decree No. 14-2-01294-9)

[2] The total TPH sum is used for information only. The direct contact cleanup level for TPH is 3,300 mg/kg and comparison to this cleanup level is based on calculation using additional sample results and Ecology's MTCATPH 11.1 Workbook Tool.

[3] This is considered a carcinogenic PAH compound.

[4] Results calculated using BTEX by Method 8021B

bgs - below ground surface
DUP - field duplicate
J- estimated value

mg/kg - milligram per kilogram
NA - not analyzed or not applicable
NE - not established
ND - not detected
TTEC - Total Toxicity Equivalent Concentration, reference WAC173-340-708
U - Compound was analyzed for but not detected above the reporting limit shown.
ug/kg - microgram per kilogram

Soil Sample Results - Perimeter Trench at Piping Manifold Shelter
Laurel Station Cleanup Action
Bellingham, Washington

Draft QC pending

Draft - Numerical results have been checked to lab reports, but final data validation is pending and data qualifers may be assigned.

Sample ID / Sample Depth (feet bgs) / Sample Date	Soil Cleanup Levels [1]	Perimeter 1									Perimeter 2						
		Perimeter 1-5 5 11/18/14	Perimeter 1-8 8 11/18/14	Perimeter 1-11 11 11/18/14	Perimeter 1-14 14 11/18/14	Perimeter 1-14 14 11/18/2014 (DUP)	Perimeter 1-17 17 11/18/14	Perimeter 1-20 20 11/18/14	Perimeter 1-23 23 11/18/14	Perimeter 1-26 26 11/18/14	Perimeter 2-5 5 11/20/14	Perimeter 2-8 8 11/20/14	Perimeter 2-14 14 11/20/14	Perimeter 2-17 17 11/20/14	Perimeter 2-23 23 11/20/14	Perimeter 2-23 23 11/20/2014 (DUP)	Perimeter 2-25 25 11/20/14
Field Measurements																	
PID Reading (ppm)		7.0	370	505	62	NA	464.2	2.9	67.2	0.9	0.0	0.0	671.2	1.2	43.2	NA	6.2
Sheen Test		No Sheen	NA	Sheen Present	NA	NA	Sheen Present	NA	NA	NA	Trace Sheen	No Sheen	No Sheen	Little Sheen	Some Sheen	NA	Little Sheen
Presence of LNAPL (Yes / No)		No	No	Yes	No	NA	Yes	No	No	No	No	No	No	No	No	NA	No
Total Petroleum Hydrocarbons (mg/kg)																	
Gasoline-range (Gx)	200	44	7.4	2,200	1,300	810	3,100	200	440	7.1	5.3 U	7.2 U	3,900	14	450	390	14
Diesel-range (Dx)	NE	37	180	2,900	1,900	1,400	1,900	5.4 U	870	8.9	5.5 U	5.3 U	5,200	5.2 U	320	150	12
Motor Oil-range	NE	40	230	2,200	1,500	1,100	1,300	11 U	630	11 U	11 U	11 U	3,500	10 U	240	120	14
Total TPH (Sum Dx, Oil-range, mg/kg)	460	77	410	5,100	3,400	2,500	3,200	ND	1,500	8.9	ND	ND	8,700	ND	560	270	26
Total TPH (Sum Gx,Dx, Oil-range, mg/kg)	See Note 2	121	417	7,300	4,700	3,310	6,300	200	1,940	16	ND	ND	12,600	ND	1,010	660	40
BTEX 8021B (ug/kg)																	
Benzene	18,182	14 U	15 U	280 U	14 U	17 U	14 U	14 U	14 U	12 U	13 U	18 U	140 U	14 U	14 U	13 U	16 U
Toluene	6,400,000	14 U	15 U	280 U	120	99	320	14 U	45	12 U	13 U	18 U	480	14 U	43	39	16 U
Ethylbenzene	8,000,000	14 U	15 U	280 U	14 U	17 U	6,900	14 U	14 U	12 U	13 U	18 U	7800	14 U	14 U	13 U	16 U
m,p-Xylene	16,000,000	28 U	30 U	560 U	27 U	33 U	27 U	27 U	28 U	24 U	26 U	36 U	280 U	29 U	27 U	25 U	32 U
o-Xylene	16,000,000	14 U	15 U	1600	1100	930	2,000	150	430	12 U	13 U	18 U	3100	14 U	350	310	16 U
Extractable Petroleum Hydrocarbons (ug/kg)																	
C8-C10 Aliphatics	NE	2,200 U	2,200 U	50,000	24,000	32,000	21,000	2,100 U	15,000	2,200 U	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING
C10-C12 Aliphatics	NE	2,200 U	2,800	190,000	120,000	77,000	84,000	2,100 U	47,000	2,200 U	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING
C12-C16 Aliphatics	NE	3,300	17,000	460,000	320,000	210,000	250,000	2,100 U	150,000	2,200 U	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING
C16-C21 Aliphatics	NE	6,300	27,000	480,000	370,000	220,000	280,000	2,100 U	160,000	2,200 U	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING
C21-C34 Aliphatics	NE	8,200	53,000	810,000	580,000	370,000	430,000	2,100 U	260,000	2,200 U	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING
C8-C10 Aromatics	NE	2,200 U	2,200 U	2,100 U	2,200 U	2,200 U	2,200 U	2,100 U	2,200 U	2,200 U	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING
C10-C12 Aromatics	NE	2,200 U	2,200 U	5,900	8,300	6,000	7,200	2,100 U	3,800	2,200 U	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING
C12-C16 Aromatics	NE	2,200 U	2,200 U	72,000	59,000	39,000	54,000	2,100 U	31,000	2,200 U	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING
C16-C21 Aromatics	NE	2,200 U	16,000	290,000	200,000	130,000	170,000	2,100 U	110,000	2,200 U	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING
C21-C34 Aromatics	NE	2,200 U	51,000	480,000	300,000	220,000	210,000	2,100 U	150,000	2,200 U	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING
Volatile Petroleum Hydrocarbons(ug/kg)											PENDING	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING
Benzene	NE	950 U	1,100 U	910 U	1,000 U	910 U	940 U	990 U	820 U	970 U	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING
Toluene	NE	950 U	1,100 U	910 U	1,000 U	910 U	940 U	990 U	820 U	970 U	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING
Ethylbenzene	NE	950 U	1,100 U	9,200	12,000	3,900	12,000	990 U	970	970 U	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING
m,p-Xylene	NE	1,900 U	2,100 U	1,800 U	2,100 U	1,800 U	1,900 U	2,000 U	1,600 U	1,900 U	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING
o-Xylene	NE	950 U	1,100 U	3,700	2,300	1,600	2,400	990 U	820 U	970 U	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING
Methyl tert butylether	NE	950 U	1,100 U	910 U	1,000 U	910 U	940 U	990 U	820 U	970 U	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING
n-Pentane	NE	950 U	1,300	910 U	1,000 U	910 U	1,400	990 U	820 U	970 U	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING
n-Hexane	NE	950 U	1,100 U	910 U	1,000 U	910 U	940 U	990 U	820 U	970 U	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING
n-Octane	NE	950 U	1,100 U	43,000	28,000	19,000	30,000	990 U	3,900	970 U	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING
n-Decane	NE	950 U	1,100 U	10,000	7,000	5,200	7,400	990 U	1,300	970 U	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING
n-Dodecane	NE	1,400	1,100 U	12,000	10,000	8,000	11,000	990 U	2,600	970 U	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING
C8-C10 Aromatics	NE	12,000	11,000 U	310,000	200,000	140,000	210,000	9,900 U	38,000	9,700 U	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING
C10-C12 Aromatics	NE	30,000	11,000 U	250,000	230,000	180,000	270,000	9,900 U	66,000	9,700 U	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING
C12-C13 Aromatics	NE	30,000	15,000	32,000	54,000	51,000	46,000	9,900 U	50,000	9,700 U	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING
C5-C6 Aliphatics	NE	9,500 U	11,000 U	9,100 U	10,000 U	9,100 U	9,400 U	9,900 U	8,200 U	9,700 U	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING
C6-C8 Aliphatics	NE	9,500 U	11,000 U	280,000	170,000	120,000	130,000	9,900 U	18,000	9,700 U	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING
C8-C10 Aliphatics	NE	9,500 U	11,000 U	210,000	130,000	91,000	100,000	9,900 U	14,000	9,700 U	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING
C10-C12 Aliphatics	NE	9,500 U	11,000 U	87,000	25,000	17,000	15,000	9,900 U	8,200 U	9,700 U	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING
Polycyclic Aromatic Hydrocarbons (ug/kg)																	
1-Methylnaphthalene	34,500	6.0	7.6	18 U	470	470	930	4.9 U	500	5.0 U	4.6 U	4.8 U	12,000	5.5	320	210	9.9
2-Methylnaphthalene	320,000	4.9	4.9 U	18 U	240	310	890	9.2	500	5.0 U	4.6 U	4.8 U	19,000	9.1	410	220	12
Acenaphthene	4,800,000	4.7 U	4.9 U	95	150	140	280	4.9 U	130	5.0 U	4.6 U	4.8 U	980	4.7 U	51	42	4.9 U
Acenaphthylene	NE	4.7 U	4.9 U	46	47	40	62	4.9 U	38	5.0 U	4.6 U	4.8 U	220	4.7 U	9.1	7.5	4.9 U
Anthracene	24,000,000	4.7 U	4.9 U	20	20	14 U	20	4.9 U	16	5.0 U	4.6 U	4.8 U	64	4.7 U	4.8 U	4.8 U	4.9 U
Benzo(a)anthracene [3]	1,370	4.7 U	4.9 U	24	14 U	14 U	20	4.9 U	11	5.0 U	4.6 U	4.8 U	36	4.7 U	4.8 U	4.8 U	4.9 U
Benzo(a)pyrene [3]	137	4.7 U	4.9 U	18 U	14 U	14	13 U	4.9 U	11 U	5.0 U	4.6 U	4.8 U	27 U	4.7 U	4.8 U	4.8 U	4.9 U
Benzo(b)fluoranthene [3]	1,370	4.7 U	4.9 U	18 U	14 U	14 U	15	4.9 U	11 U	5.0 U	4.6 U	4.8 U	37	4.7 U	4.8 U	4.8 U	4.9 U
Benzo(g,h,i)perylene	NE	4.7 U	4.9 U	18 U	14 U	14 U	13 U	4.9 U	11 U	5.0 U	4.6 U	4.8 U	37	4.7 U	4.8 U	4.8 U	4.9 U
Benzo(k)fluoranthene [3]	13,700	4.7 U	4.9 U	18 U	16	14 U	13 U	4.9 U	11 U	5.0 U	4.6 U	4.8 U	27 U	4.7 U	4.8 U	4.8 U	4.9 U
Chrysene [3]	137,000	7.8	11	180	120	77	110	4.9 U	67	5.0 U	4.6 U	4.8 U	340	4.7 U	21	13	4.9 U
Dibenz(a,h)anthracene [3]	137	4.7 U	4.9 U	18 U	14 U	14 U	13 U	4.9 U	11 U	5.0 U	4.6 U	4.8 U	27 U	4.7 U	4.8 U	4.8 U	4.9 U
Dibenzofuran	80,000	4.7 U	4.9 U	18 U	14 U	35	46	4.9 U	26	5.0 U	4.6 U	4.8 U	300	4.7 U	12	7.4	4.9 U
Fluoranthene	3,200,000	4.7 U	4.9 U	54	42	30	36	4.9 U	25	5.0 U	4.6 U	4.8 U	100	4.7 U	5.0	5.8	4.9 U
Fluorene	3,200,000	4.7 U	4.9 U	100	140	130	170	4.9 U	110	5.0 U	4.6 U	4.8 U	970	4.7 U	45	31	4.9 U
Indeno(1,2,3-cd)pyrene [3]	1,370	4.7 U	4.9 U	18 U	14 U	14 U	13 U	4.9 U	11 U	5.0 U	4.6 U	4.8 U	27 U	4.7 U	4.8 U	4.8 U	4.9 U
Naphthalene	1,600,000	4.7 U	4.9 U	18 U	40	30	120	4.9 U	50	5.0 U	4.6 U	4.8 U	5,500	4.7 U	83	48	4.9 U
Phenanthrene	NE	5.7	4.9 U	130	220	210	400	4.9 U	220	5.0 U	4.6 U	4.8 U	1,800	4.7 U	93	66	4.9 U
Pyrene	2,400,000	4.7 U	4.9 U	99	71	49	58	4.9 U	41	5.0 U	4.6 U	4.8 U	160	4.7 U	6.9	6.6	4.9 U
TTEC	137	0.078	0.11	4.2	2.8	15	4.6	ND	1.8	ND	ND	ND	11	ND	0.21	0.13	ND
MTCATPH 11.1 Workbook Tool Output [4]																	
Method B, Direct Contact (mg/kg, Section A.2.1)		PENDING	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING
Sum (mg/kg, Section A.1.2)		PENDING	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING
Pass/Fail (Method B section A.2.1)		PENDING	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING

Notes:
bgs - below ground surface
DUP - field duplicate
NA - not analyzed or not applicable
NE - not established
ND - not detected
mg/kg - milligram per kilogram
TTEC - Total Toxicity Equivalent Concentration, reference WAC173-340-708

U - Compound was analyzed for but not detected above the reporting limit shown.
ug/kg - microgram per kilogram
[1] Soil Cleanup Levels are established in the Cleanup Action Plan (Exhibit A, Consent Decree No. 14-2-01294-9)
[2] The total TPH sum is used for information only. The direct contact cleanup level for TPH is 3,300 mg/kg and comparison to this cleanup level is based on calculation using additional sample results and Ecology's MTCATPH 11.1 Workbook Tool.
[3] This is considered a carcinogenic PAH compound.
[4] Results calculated using BTEX by Method 8021B
-Field dup location uncertain

Soil Sample Results - Perimeter Trench at Piping Manifold Shelter
Laurel Station Cleanup Action
Bellingham, Washington

Draft - Numerical results have been checked to lab reports, but final data validation is pending and data qualifers may be assigned.

Sample ID Sample Depth (feet bgs) Sample Date	Soil Cleanup Levels [1]	Perimeter 3							PT2	PT6
		Perimeter 3-5 5 11/19/14	Perimeter 3-8 8 11/19/14	Perimeter 3-11 11 11/19/14	Perimeter 3-14 14 11/19/14	Perimeter 3-17 17 11/19/14	Perimeter 3-20 20 11/19/14	Perimeter 3-25 25 11/19/14	PT2-25 25 11/15/14	PT6-21 21 11/21/14
Field Measurements										
PID Reading (ppm)		0.0	0.0	0.0	1.9	2.2	0.4	7.0	7.8	0.4
Sheen Test		No Sheen	No Sheen	No Sheen	No Sheen	No Sheen	No Sheen	No Sheen	Mostly Sheen	Trace Sheen
Presence of LNAPL (Yes / No)		No	No	No	No	No	No	No	No	No
Total Petroleum Hydrocarbons (mg/kg)										
Gasoline-range (Gx)	200	6.1 U	5.1 U	6.1 U	6.1	11	79	7.2	250	13
Diesel-range (Dx)	NE	5.5 U	5.4 U	5.7 U	150	44	120	80	230	32
Motor Oil-range	NE	11 U	11 U	11 U	320	47	100	67	180	28
Total TPH (Sum Dx, Oil-range, mg/kg)	460	ND	ND	ND	470	91	220	147	410	60
Total TPH (Sum Gx,Dx, Oil-range, mg/kg)	See Note 2	ND	ND	ND	476	102	299	154	660	73
BTEX 8021B (ug/kg)										
Benzene	18,182	15 U	13 U	15 U	13 U	14 U	15 U	13 U	12 U	21 U
Toluene	6,400,000	15 U	13 U	15 U	13 U	14 U	15 U	13 U	12 U	21 U
Ethylbenzene	8,000,000	15 U	13 U	15 U	13 U	14 U	15 U	13 U	12 U	21 U
m,p-Xylene	16,000,000	30 U	26 U	31 U	26 U	28 U	29 U	25 U	25 U	42 U
o-Xylene	16,000,000	15 U	13 U	15 U	13 U	14 U	43	13 U	200	21 U
Extractable Petroleum Hydrocarbons (ug/kg)										
C8-C10 Aliphatics	NE	2,200 U	2,200 U	2,300 U	2,200 U	2,100 U	2,200 U	2,200 U	NA	NA
C10-C12 Aliphatics	NE	2,200 U	2,200 U	2,300 U	2,200 U	2,100 U	2,200 U	2,200 U	NA	NA
C12-C16 Aliphatics	NE	2,200 U	2,200 U	2,300 U	5,100	2,100 U	6,600	4,600	NA	NA
C16-C21 Aliphatics	NE	2,200 U	2,200 U	2,300 U	15,000	4,700	14,000	10,000	NA	NA
C21-C34 Aliphatics	NE	2,200 U	2,200 U	2,300 U	45,000	5,500	21,000	13,000	NA	NA
C8-C10 Aromatics	NE	2,200 U	2,200 U	2,300 U	2,200 U	2,100 U	2,200 U	2,200 U	NA	NA
C10-C12 Aromatics	NE	2,200 U	2,200 U	2,300 U	2,200 U	2,100 U	2,200 U	2,200 U	NA	NA
C12-C16 Aromatics	NE	2,200 U	2,200 U	2,300 U	2,200 U	2,100 U	2,200 U	2,200 U	NA	NA
C16-C21 Aromatics	NE	2,200 U	2,200 U	2,300 U	10,000	2,100 U	7,800	6,200	NA	NA
C21-C34 Aromatics	NE	2,200 U	2,200 U	2,300 U	42,000	2,300	13,000	9,100	NA	NA
Volatile Petroleum Hydrocarbons(ug/kg)										
Benzene	NE	1,000 U	880 U	1,200 U	1,000 U	930 U	1,000 U	860 U	NA	NA
Toluene	NE	1,000 U	880 U	1,200 U	1,000 U	930 U	1,000 U	860 U	NA	NA
Ethylbenzene	NE	1,000 U	880 U	1,200 U	1,000 U	930 U	1,000 U	860 U	NA	NA
m,p-Xylene	NE	2,000 U	1,800 U	2,400 U	2,100 U	1,900 U	2,000 U	1,700 U	NA	NA
o-Xylene	NE	1,000 U	880 U	1,200 U	1,000 U	930 U	1,000 U	860 U	NA	NA
Methyl tert butylether	NE	1,000 U	880 U	1,200 U	1,000 U	930 U	1,000 U	860 U	NA	NA
n-Pentane	NE	1,700	880 U	1,200 U	1,000 U	930 U	1,000 U	860 U	NA	NA
n-Hexane	NE	1,000 U	880 U	1,200 U	1,000 U	930 U	1,000 U	860 U	NA	NA
n-Octane	NE	1,000 U	880 U	1,200 U	1,000 U	930 U	1,000 U	860 U	NA	NA
n-Decane	NE	1,000 U	880 U	1,200 U	1,000 U	930 U	1,000 U	860 U	NA	NA
n-Dodecane	NE	1,000 U	880 U	1,200 U	1,300	930 U	1,000 U	860 U	NA	NA
C8-C10 Aromatics	NE	10,000 U	8,800 U	12,000 U	10,000 U	9,300 U	10,000 U	8,600 U	NA	NA
C10-C12 Aromatics	NE	10,000 U	8,800 U	12,000 U	31,000	9,500	17,000	8,600 U	NA	NA
C12-C13 Aromatics	NE	10,000 U	8,800 U	12,000 U	33,000	13,000	20,000	8,600 U	NA	NA
C5-C6 Aliphatics	NE	10,000 U	8,800 U	12,000 U	10,000 U	9,300 U	10,000 U	8,600 U	NA	NA
C6-C8 Aliphatics	NE	10,000 U	8,800 U	12,000 U	10,000 U	9,300 U	10,000 U	8,600 U	NA	NA
C8-C10 Aliphatics	NE	10,000 U	8,800 U	12,000 U	10,000 U	9,300 U	10,000 U	8,600 U	NA	NA
C10-C12 Aliphatics	NE	10,000 U	8,800 U	12,000 U	10,000 U	9,300 U	10,000 U	8,600 U	NA	NA
Polycyclic Aromatic Hydrocarbons (ug/kg)										
1-Methylnaphthalene	34,500	4.6 U	4.9 U	4.8 U	11 U	4.8 U	30	13	230	17
2-Methylnaphthalene	320,000	4.6 U	4.9 U	4.8 U	17	6.7	25	8.8	220	22
Acenaphthene	4,800,000	4.6 U	4.9 U	4.8 U	11 U	4.8 U	6.6	5.0 U	57	5.6
Acenaphthylene	NE	4.6 U	4.9 U	4.8 U	11 U	4.8 U	5.0 U	5.0 U	10	5.0 U
Anthracene	24,000,000	4.6 U	4.9 U	4.8 U	11 U	4.8 U	5.0 U	5.0 U	4.7 U	5.0 U
Benzo(a)anthracene [3]	1,370	4.6 U	4.9 U	4.8 U	11 U	4.8 U	5.0 U	5.0 U	4.7 U	5.0 U
Benzo(a)pyrene [3]	137	4.6 U	4.9 U	4.8 U	11 U	4.8 U	5.0 U	5.0 U	4.7 U	5.0 U
Benzo(b)fluoranthene [3]	1,370	4.6 U	4.9 U	4.8 U	11 U	4.8 U	5.0 U	5.0 U	4.7 U	5.0 U
Benzo(g,h,i)perylene	NE	4.6 U	4.9 U	4.8 U	11 U	4.8 U	5.0 U	5.0 U	4.7 U	5.0 U
Benzo(k)fluoranthene [3]	13,700	4.6 U	4.9 U	4.8 U	11 U	4.8 U	5.0 U	5.0 U	4.7 U	5.0 U
Chrysene [3]	137,000	4.6 U	4.9 U	4.8 U	20	4.8 U	9.9	6.3	22	5.0 U
Dibenz(a,h)anthracene [3]	137	4.6 U	4.9 U	4.8 U	11 U	4.8 U	5.0 U	5.0 U	4.7 U	5.0 U
Dibenzofuran	80,000	4.6 U	4.9 U	4.8 U	11 U	4.8 U	5.0 U	5.0 U	11	5.0 U
Fluoranthene	3,200,000	4.6 U	4.9 U	4.8 U	11 U	4.8 U	5.0 U	5.0 U	8.5	5.0 U
Fluorene	3,200,000	4.6 U	4.9 U	4.8 U	11 U	4.8 U	8.7	5.2	39	7.7
Indeno(1,2,3-cd)pyrene [3]	1,370	4.6 U	4.9 U	4.8 U	11 U	4.8 U	5.0 U	5.0 U	4.7 U	5.0 U
Naphthalene	1,600,000	4.6 U	4.9 U	4.8 U	11 U	4.8 U	5.0 U	5.0 U	31	5.0 U
Phenanthrene	NE	4.6 U	4.9 U	4.8 U	11 U	4.8 U	22	10	93	17
Pyrene	2,400,000	4.6 U	4.9 U	4.8 U	11 U	4.8 U	5.0 U	5.0 U	13	5.0 U
TTEC	137	ND	ND	ND	0.20	ND	0.099	0.063	0.22	ND
MTCATPH 11.1 Workbook Tool Output [4]										
Method B, Direct Contact (mg/kg, Section A.2.1)		PENDING	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING
Sum (mg/kg, Section A.1.2)		PENDING	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING
Pass/Fail (Method B section A.2.1)		PENDING	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING	PENDING

Notes:
bgs - below ground surface
DUP - field duplicate
NA - not analyzed or not applicable
NE - not established
ND - not detected
mg/kg - milligram per kilogram
TTEC - Total Toxicity Equivalent Concentration, reference WAC173-340-708
U - Compound was analyzed for but not detected above the reporting limit shown.
ug/kg - microgram per kilogram
[1] Soil Cleanup Levels are established in the Cleanup Action Plan (Exhibit A, Consent Decree No. 14-2-01294-9)
[2] The total TPH sum is used for information only. The direct contact cleanup level for TPH is 3,300 mg/kg and comparison to this cleanup level is based on calculation using additional sample results and Ecology's MTCATPH 11.1 Workbook Tool.
[3] This is considered a carcinogenic PAH compound.
[4] Results calculated using BTEX by Method 8021B
-Field dup location uncertain

Slurry and SCB Sample Results
Laurel Station Cleanup Action
Bellingham, Washington

Sample ID / Sample Date	Soil Cleanup Levels [1]	Slurry				SCB	
		SC1-1-2 10/23/14	SC1-10-12 10/23/14	SC1-20-22 10/23/14	Slurry 2 10/29/14	SCB1 10/23/14	SCB2 10/29/14
Total Petroleum Hydrocarbons (mg/kg							
Gasoline-range (Gx)	200	180	160	170	24 U	190	180
Diesel-range (Dx)	NE	180	210	240	0.10 UJ *	110	120
Motor Oil-range	NE	130	170	200	0.20 UJ *	96	87
Total TPH (Sum Dx, Oil-range, mg/kg)	460	310	380	440	ND	206	207
Total TPH (Sum Gx,Dx, Oil-range, mg/kg)	See Note 2	490	540	610	ND	396	387
BTEX 8021B (ug/kg)							
Benzene	18,182	110 U	110 U	110 U	59 U	22 U	22 U
Toluene	6,400,000	110 U	110 U	110 U	59 U	22 U	22 U
Ethylbenzene	8,000,000	110 U	110 U	110 U	59 U	22 U	22 U
m,p-Xylene	16,000,000	230 U	220 U	220 U	120 U	45 U	44 U
o-Xylene	16,000,000	110 U	110 U	110 U	59 U	22 U	110
Polycyclic Aromatic Hydrocarbons (ug/kg)							
1-Methylnaphthalene	34,500	280	340	300	0.1 UJ	120	120
2-Methylnaphthalene	320,000	340	380	400	0.1 UJ	170	120
Acenaphthene	4,800,000	6.2 U	6.2 U	6.2 U	0.1 UJ	5.0 U	4.8 U
Acenaphthylene	NE	6.2 U	6.2 U	6.2 U	0.1 UJ	5.0 U	4.8 U
Anthracene	24,000,000	12	12	8.4 J	0.1 UJ	5.0 U	4.8 U
Benzo(a)anthracene [3]	1,370	9.6	8.3	6.2 U	0.1 UJ	14	4.8 U
Benzo(a)pyrene [3]	137	6.2 U	6.2 U	6.2 U	0.1 UJ	12	4.8 U
Benzo(b)fluoranthene [3]	1,370	12	6.5	7.7	0.1 UJ	11	4.8 U
Benzo(g,h,i)perylene	NE	6.2 U	6.2 U	6.2 U	0.1 UJ	7.8 J	4.8 U
Benzo(k)fluoranthene [3]	13,700	6.2 U	6.2 U	6.2 U	0.1 UJ	5.0 U	4.8 U
Chrysene [3]	137,000	47	47	45	0.1 UJ	28	14
Dibenz(a,h)anthracene [3]	137	6.2 U	6.2 U	6.2 U	0.1 UJ	5.0 U	4.8 U
Dibenzofuran	80,000	19	20 J	19 J	0.1 UJ	7.6	4.8 U
Fluoranthene	3,200,000	32	29	9.0	0.1 UJ	24	4.8 U
Fluorene	3,200,000	83	88	87	0.1 UJ	31	21
Indeno(1,2,3-cd)pyrene [3]	1,370	6.2 U	6.2 U	6.2 U	0.1 UJ	5.5	4.8 U
Naphthalene	1,600,000	16	21	26	0.1 UJ	16	11
Phenanthrene	NE	190	190	180	0.1 UJ	70	54
Pyrene	2,400,000	37	35	21	0.1 UJ	25	6.2

Notes:

[1] Soil Cleanup Levels are established in the Cleanup Action Plan (Exhibit A, Consent Decree No. 14-2-01294-9)

[2] The total TPH sum is used for information only. The direct contact cleanup level for TPH is 3,300 mg/kg and comparison to this cleanup level is based on calculation using additional sample results and Ecology's MTCATPH 11.1 Workbook Tool.

[3] This is considered a carcinogenic PAH compound.

J- estimated value

mg/kg - milligram per kilogram

NE - not established

ND - not detected

SCB - soil, cement, bentonite mixture (used for backfill)

U - Compound was analyzed for but not detected above the reporting limit shown

ug/kg - microgram per kilogram

UJ - Compound was analyzed for but not detected above the reporting limit shown. Reporting limit is an estimated value.

*Analyzed as a water; results in milligram per liter (mg/L)

Containerized Water for Disposal
Laurel Station Cleanup Action
Bellingham, Washington

	Baker Tank	
Sample ID	**PMS Baker Tank 1**	**Baker Tank 2**
Sample Date	11/1/14	11/8/14
Total Petroleum Hydrocarbons (mg/L)		
Gasoline-range (Gx)	0.10 U	NA
Diesel-range (Dx)	0.60	NA
Motor Oil-range	0.21	NA
Total TPH (Sum Dx, Oil-range, mg/L)	0.81	NA
BTEX 8021B (ug/kg)		
Benzene	0.25 U	NA
Toluene	0.25 U	NA
Ethylbenzene	0.25 U	NA
m,p-Xylene	0.50 U	NA
o-Xylene	0.25 U	NA
Polycyclic Aromatic Hydrocarbons (ug/L)		
1-Methylnaphthalene	0.43	NA
2-Methylnaphthalene	0.35	NA
Acenaphthene	0.10 U	NA
Acenaphthylene	0.10 U	NA
Anthracene	0.10 U	NA
Benzo(a)anthracene [1]	0.10 U	NA
Benzo(a)pyrene [1]	0.10 U	NA
Benzo(b)fluoranthene [1]	0.10 U	NA
Benzo(g,h,i)perylene	0.10 U	NA
Benzo(k)fluoranthene [1]	0.10 U	NA
Chrysene [1]	0.12	NA
Dibenz(a,h)anthracene [1]	0.10 U	NA
Dibenzofuran	0.10 U	NA
Fluoranthene	0.10 U	NA
Fluorene	0.16	NA
Indeno(1,2,3-cd)pyrene [1]	0.10 U	NA
Naphthalene	0.10 U	NA
Phenanthrene	0.10	NA
Pyrene	0.10 U	NA
TTEC	0.0012	NA
Total lead	NA	8.6
Conventionals (mg/L)		
Total Suspended Solids	NA	1,240
Total Dissolved Solids	NA	139

mg/L - milligram per liter
NA - not analyzed or not applicable
U - Compound was analyzed for but not detected above the reporting limit shown.
ug/L - microgram per liter
TTEC - Total Toxicity Equivalent Concentration, reference WAC173-340-708
[1] This is considered a carcinogenic PAH compound.