

**Surface Soil Characterization (Aspect, 2017)**

- ▲ Discrete VOC Sampling Location

**ISM Increment Soil Sample Location**

- Sample ISM-DU1-072617 Increment
- Sample ISM-DU2-072617 Increment
- Sample ISM-DU3-072617 Increment

- Decision Unit 1 (DU1)
- Decision Unit 2 (DU2)
- Decision Unit 3 (DU3)

**Geophysical Survey Results (HGI, 2017)**

- Interpreted Landfill Boundary
- ?- Inferred Potential Boundary Outside Survey Area
- - - Electrical Resistivity Line

**Site Features**

- Landfill Parcel
- Forested Area
- Access Roads
- Transmission Tower
- Transmission Line

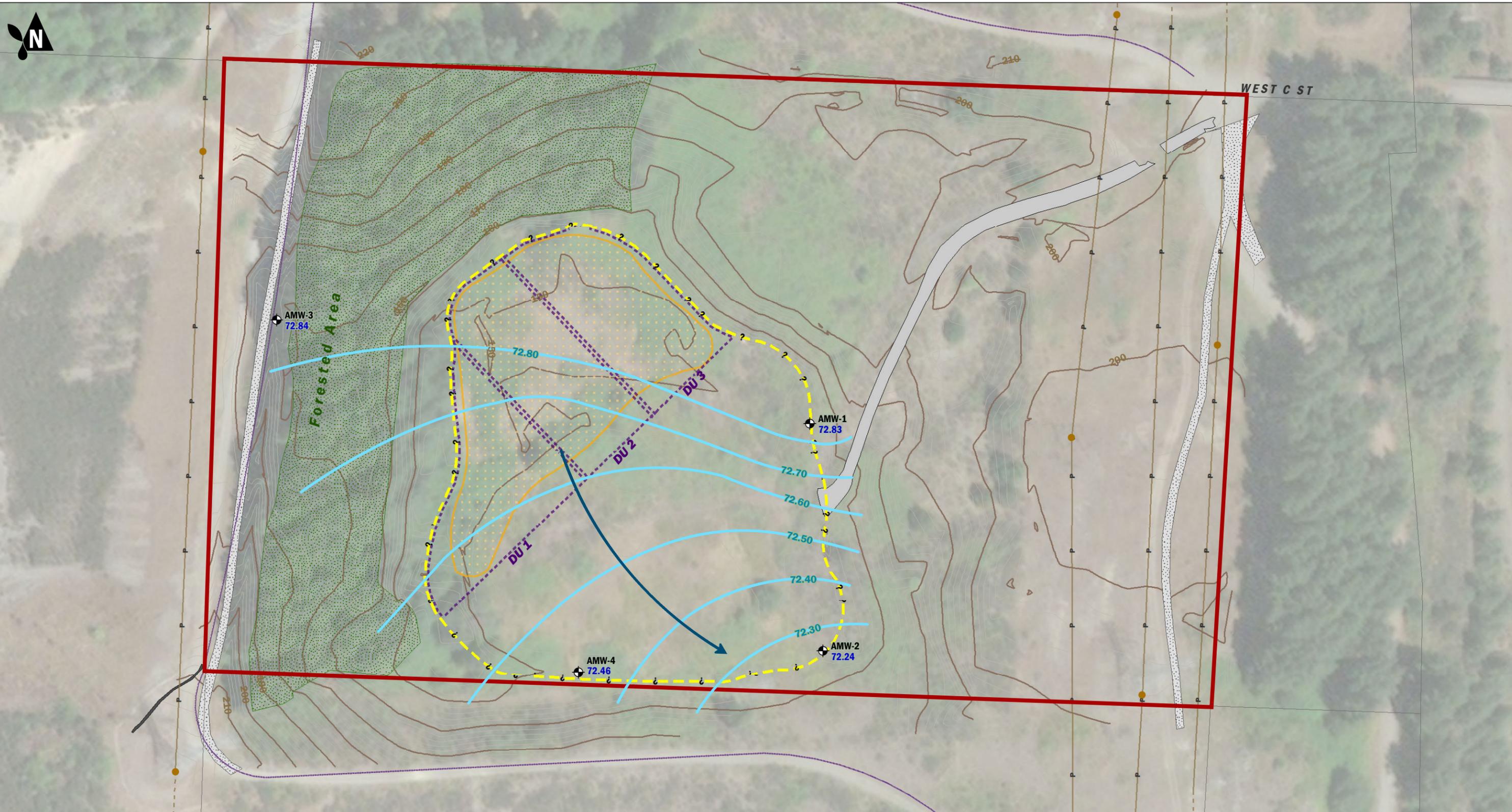
Note: Aerial imagery from August 2015 NAIP.

**Results of Geophysical Survey  
and Surface Soil Characterization**

**DRAFT** Shelton C Street Landfill  
Shelton, Washington

	SEP-2017	BY: ALC / RAP	FIGURE NO. <b>1</b>
	PROJECT NO. 150074	REVISED BY: ---	

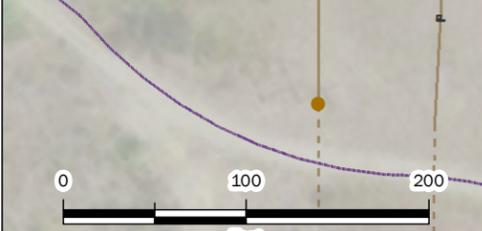
GIS Path: T:\projects\_B\Shelton\_C Street Landfill\Delivered\_Results\_of\_Geophysical\_Survey\_and\_Surface\_Characterization.mxd | Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet | Date Saved: 9/13/2017 | User: rpepin | Print Date: 9/13/2017



- Well Name **AMW-1**  
Groundwater Elevation (ft) **72.83**
- Groundwater Elevation Contour (ft)
- Inferred Groundwater Flow Direction
- Surface Characterization Decision Unit (DU)

- Preliminary Estimated Extent of Landfill Waste
- 1986 Sludge Disposal Area
- Landfill Parcel
- Forested Area

- Transmission Tower
- Transmission Line
- Access Roads
- Asphalt Road
- Concrete Block Wall
- Gravel Road
- Tax Parcel



### Groundwater Potentiometric Map

#### January 12<sup>th</sup>, 2018

Shelton C Street Landfill  
Shelton, Washington

# DRAFT

 ASPECT CONSULTING	JAN-2018 PROJECT NO. 150074	BY: KB / RAP REVISED BY: ---	FIGURE NO. ---
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Note: All site feature locations are approximate. Topographic contours from PLS Survey October 2017. Aerial imagery from August 2015 NAIP.  
 Basemap Layer Credits || Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

GIS Path: T:\projects\_8\Shelton C Street Landfill\Delivered\Groundwater Contours - Jan 2018.mxd | Coordinate System: NAD 1983 StatePlane Washington South FIPS 4602 Feet | Data Served: 1/29/2018 | User: mepin | Print Date: 1/29/2018

**Table 1. Surface Soil Characterization Data - Dioxins/Furans, PAHs, and Metals**

Project No. 150074, City of Shelton, C-Street Landfill  
Shelton, WA

Analyte (by group)	Site-Specific Screening Level	Natural Background Concentrations	Decision Unit	DU-1	DU-2	DU-3
			Sample Type	ISM	ISM	ISM
			Sample Location	DU-1	DU-2	DU-3
			Sample ID	ISM-DU1-072617	ISM-DU2-072617	ISM-DU3-072517
			Sample Date	7/26/2017	7/26/2017	7/25/2017
<b>Polycyclic Aromatic Hydrocarbons (PAHs) (mg/kg)</b>						
1-Methylnaphthalene	34	--		< 0.05 U	< 0.05 U	< 0.1 U
2-Methylnaphthalene	320	--		< 0.05 U	< 0.05 U	< 0.1 U
Acenaphthene	20	--		< 0.1 U	< 0.1 U	< 0.01 U
Acenaphthylene	--	--		< 0.1 U	< 0.1 U	< 0.01 U
Anthracene	24000	--		< 0.1 U	< 0.1 U	<b>0.011</b>
Benzo(g,h,i)perylene	--	--		<b>1.7</b>	<b>0.59</b>	<b>0.39</b>
Fluoranthene	3200	--		<b>2.2</b>	<b>0.88</b>	<b>0.41</b>
Fluorene	30	--		< 0.1 U	< 0.1 U	< 0.01 U
Naphthalene	1600	--		<b>0.18</b>	< 0.1 U	<b>0.029</b>
Phenanthrene	--	--		<b>1</b>	<b>0.47</b>	<b>0.16</b>
Pyrene	2400	--		<b>1.4</b>	<b>0.65</b>	<b>0.23</b>
Benz(a)anthracene	1.37	--		<b>0.42</b>	<b>0.22</b>	<b>0.13</b>
Benzo(a)pyrene	0.14	--		<b>0.61</b>	<b>0.29</b>	<b>0.22</b>
Benzo(b)fluoranthene	1.37	--		<b>2</b>	<b>0.74</b>	<b>0.54</b>
Benzo(k)fluoranthene	13.7	--		<b>0.49</b>	<b>0.2</b>	<b>0.15</b>
Chrysene	137	--		<b>1.1</b>	<b>0.46</b>	<b>0.31</b>
Dibenzo(a,h)anthracene	0.14	--		<b>0.11</b>	< 0.1 U	<b>0.04</b>
Indeno(1,2,3-cd)pyrene	1.37	--		<b>1.3</b>	<b>0.45</b>	<b>0.32</b>
Total cPAHs TEQ (ND = 1/2 RDL)	0.14	--		<b>1.053</b>	<b>0.4606</b>	<b>0.3411</b>
<b>Dioxins/Furans (pg/g)</b>						
<b>Chlorinated dibenzo-p-dioxins (CDDs)</b>						
2,3,7,8-TCDD	2	--		<b>828</b>	<b>234</b>	<b>144</b>
1,2,3,7,8-PeCDD	--	--		<b>5170</b>	<b>1100</b>	<b>724</b>
1,2,3,4,7,8-HxCDD	--	--		<b>9860</b>	<b>2180</b>	<b>1480</b>
1,2,3,6,7,8-HxCDD	--	--		<b>20800</b>	<b>4210</b>	<b>2920</b>
1,2,3,7,8,9-HxCDD	--	--		<b>16600</b>	<b>3370</b>	<b>2260</b>
1,2,3,4,6,7,8-HpCDD	--	--		<b>145000 *</b>	<b>31200</b>	<b>22000</b>
OCDD	--	--		<b>104000 *</b>	<b>21900</b>	<b>30200</b>
Dioxin TEQ	2.2	5.2		<b>12205</b>	<b>2629</b>	<b>1763</b>
<b>Chlorinated Dibenzofurans (CDFs)</b>						
2,3,7,8-TCDF	--	--		<b>2980 F</b>	<b>702 F</b>	<b>399 F</b>
1,2,3,7,8-PeCDF	--	--		<b>2440</b>	<b>580</b>	<b>345</b>
2,3,4,7,8-PeCDF	--	--		<b>4390</b>	<b>730</b>	<b>371</b>
1,2,3,4,7,8-HxCDF	--	--		<b>1670 *</b>	<b>347 D,M,J</b>	<b>257 D,M,J</b>
1,2,3,6,7,8-HxCDF	--	--		<b>2130 D,M*,J</b>	<b>495 D,M,J</b>	<b>330 D,M,J</b>
1,2,3,7,8,9-HxCDF	--	--		<b>934 *</b>	<b>173</b>	<b>114</b>
2,3,4,6,7,8-HxCDF	--	--		<b>3040 *</b>	<b>576</b>	<b>389</b>
1,2,3,4,6,7,8-HpCDF	--	--		<b>4240</b>	<b>780</b>	<b>721</b>
1,2,3,4,7,8,9-HpCDF	--	--		<b>1030</b>	<b>176</b>	<b>141</b>
OCDF	--	--		<b>1460</b>	<b>404</b>	<b>1510</b>
Furan TEQ	2.2	5.2		<b>2519</b>	<b>475</b>	<b>280</b>
<b>Metals (mg/kg)</b>						
Arsenic	7	7		<b>4.4</b>	<b>1.26</b>	<b>2.4</b>
Barium	102	--		<b>129</b>	<b>66</b>	<b>162</b>
Cadmium	4	0.77		<b>1.54</b>	<b>0.66</b>	<b>1.7</b>
Chromium (total)	48	48		<b>21.4 J</b>	<b>14.5 J</b>	<b>25.5 J</b>
Copper	50	36		<b>69.5 J</b>	<b>36.7 J</b>	<b>80.6 J</b>
Lead	50	24		<b>182 R</b>	<b>69.6</b>	<b>182 R</b>
Mercury	0.1	0.07		<b>1.15</b>	<b>0.938</b>	<b>0.812</b>
Nickel	30	--		<b>13.2 J</b>	<b>11.5 J</b>	<b>24.3 J</b>
Selenium	0.78	0.78		<b>0.79</b>	< 0.5 U	<b>0.54</b>
Silver	2	0.61		<b>6.55</b>	<b>1.65</b>	<b>3.62</b>
Zinc	86	85		<b>134 J</b>	<b>81.9 J</b>	<b>355 J</b>

Notes:

**Bold** indicates a detected concentration

Gray shading indicates a concentration that exceeds the Site-Specific Screening Level.

"--" indicates not established or not applicable

U = the analyte was analyzed for, but was considered not detected at the reporting limit or reported value.

J = the analyte was detected above the reported quantitation limit, and the reported concentration was an estimated value.

UJ = the analyte was analyzed for, and the associated quantitation limit was an estimated value.

X = the sample chromatographic pattern does not resemble the fuel standard used for quantitation.

R = the sample results are unusable due to the quality of the data generated because certain criteria were not met.

\* = the result is taken from dilution due to high dioxin/furan concentrations in the sample

D = presence of diphenyl ethers

M = maximum possible concentration

mg/kg = milligrams per kilogram

pg/g = picograms per gram

TEQ = Toxicity equivalent quotient. TEQs for total cPAHs and total dioxins/furans were calculated using the methodology and the toxicity equivalency factors (TEFs) prescribed in Washington State Model Toxics Control Act (MTCA) and WAC 173-340-708(8)(e).

TCDD = tetrachloro dibenzo-p-dioxin

PeCDD = pentachloro dibenzo-p-dioxin

HxCDD = hexachloro dibenzo-p-dioxin

HpCDD = heptachloro dibenzo-p-dioxin

OCDD = octachloro dibenzo-p-dioxin

TCDF = tetrachloro dibenzofuran

PeCDF = pentachloro dibenzofuran

HxCDF = hexachlorodibenzofuran

HpCDF = heptachloro dibenzofuran

OCDF = octachlorodibenzofuran

**Table 2. Surface Soil Characterization Data - TPH, Pesticides/Herbicides, PCBs, and SVOCs**

DRAFT

Project No. 150074, City of Shelton, C-Street Landfill  
Shelton, WA

Decision Unit	DU-1	DU-2	DU-3	
Sample Type	ISM	ISM	ISM	
Sample Location	DU-1	DU-2	DU-3	
Sample ID	ISM-DU1-072617	ISM-DU2-072617	ISM-DU3-072517	
Sample Date	7/26/2017	7/26/2017	7/25/2017	
Analyte (by group)	Site-Specific Screening Levels			
<b>Petroleum Hydrocarbons (mg/kg)</b>				
Gasoline Range Organics	100	< 2 U	< 2 U	3.5
Diesel Range Organics	200	< 50 U	< 50 U	< 50 U
Motor Oil Range Organics	2000	< 250 U	< 250 U	< 250 U
<b>Organochlorine Pesticides (mg/kg)</b>				
4,4'-DDD	4.17	< 0.0111 U	< 0.0107 U	< 0.0104 U
4,4'-DDE	2.94	< 0.0111 U	< 0.0107 U	< 0.0104 U
4,4'-DDT	2.94	<b>0.0163</b>	<b>0.013</b>	<b>0.0166</b>
Aldrin	0.0588	< 0.0111 U	< 0.0107 U	< 0.0104 U
Alpha-BHC	6	< 0.0111 U	< 0.0107 U	< 0.0104 U
Beta-BHC	6	< 0.0111 U	< 0.0107 U	< 0.0104 U
cis-Chlordane	1	< 0.0111 U	< 0.0107 U	< 0.0104 U
Delta-BHC	6	< 0.0111 U	< 0.0107 U	< 0.0104 U
Dieldrin	0.1	< 0.0111 U	< 0.0107 U	< 0.0104 U
Endosulfan I	480	< 0.0111 U	< 0.0107 U	< 0.0104 U
Endosulfan II	480	< 0.0111 U	< 0.0107 U	< 0.0104 U
Endosulfan Sulfate	--	< 0.0111 U	< 0.0107 U	< 0.0104 U
Endrin	0.2	< 0.0111 U	< 0.0107 U	< 0.0104 U
Endrin Aldehyde	--	< 0.0111 U	< 0.0107 U	< 0.0104 U
Endrin ketone	--	< 0.0111 U	< 0.0107 U	< 0.0104 U
gamma-Chlordane	--	< 0.0111 U	< 0.0107 U	< 0.0104 U
Heptachlor	0.222	< 0.0111 U	< 0.0107 U	< 0.0104 U
Heptachlor Epoxide	0.11	< 0.0111 U	< 0.0107 U	< 0.0104 U
Lindane (gamma-BHC)	0.909	< 0.0111 U	< 0.0107 U	< 0.0104 U
Methoxychlor	400	< 0.0111 U	< 0.0107 U	< 0.0104 U
Total DDT/DDD/DDE	0.75	<b>0.0163</b>	<b>0.013</b>	<b>0.0166</b>
Toxaphene	0.9	< 0.111 U	< 0.107 U	< 0.104 U
<b>Chlorinated Herbicides (mg/kg)</b>				
2,4,5-T	--	< 56.0 U	< 53.1 U	< 52.0 U
2,4,6-Trichlorophenol	10	< 0.5 U	< 0.5 U	< 1 U
2,4-D	--	< 33.6 U	< 31.9 U	< 31.2 U
2,4-DB	640000	< 28.0 U	< 26.6 U	< 26.0 U
3,5-Dichlorobenzoic acid	--	< 44.8 U	< 42.5 U	< 41.6 U
Acifluorfen	--	< 89.6 U	< 85.0 U	< 83.3 U
Bentazone	--	< 39.2 U	< 37.2 U	< 36.4 U
Chloramben	--	< 22.4 UJ	< 21.3 UJ	< 20.8 UJ
Chlorthal-dimethyl	--	< 33.6 U	< 31.9 U	< 31.2 U
Dalapon	2400000	< 224 U	< 213 U	< 208 U
Dicamba	2400000	< 39.2 U	< 37.2 U	< 36.4 U
Dichloroprop	--	< 28.0 U	< 26.6 U	< 26.0 U
Dinoseb	80000	< 33.6 U	< 31.9 U	< 31.2 U
MCPA	--	< 3140 U	< 2980 U	< 2910 U
MCPP	--	< 4930 U	< 4680 U	< 4580 U
Picloram	--	< 56.0 U	< 53.1 U	< 52.0 U
Silvex (2,4,5-TP)	640000	< 22.4 U	< 21.3 U	< 20.8 U
<b>Polychlorinated Biphenyls (mg/kg)</b>				
Aroclor 1016	5.6	< 0.2 U	< 0.2 U	< 0.2 U
Aroclor 1221	--	< 0.2 U	< 0.2 U	< 0.2 U
Aroclor 1232	--	< 0.2 U	< 0.2 U	< 0.2 U
Aroclor 1242	--	< 0.2 U	< 0.2 U	< 0.2 U
Aroclor 1248	--	< 0.2 U	< 0.2 U	< 0.2 U
Aroclor 1254	0.5	< 0.2 U	< 0.2 U	< 0.2 U
Aroclor 1260	0.5	< 0.2 U	< 0.2 U	< 0.2 U
Aroclor 1262	--	< 0.2 U	< 0.2 U	< 0.2 U
Aroclor 1268	--	< 0.2 U	< 0.2 U	< 0.2 U
Sum of Aroclors	0.5	< 0.2 U	< 0.2 U	< 0.2 U
<b>Semi-Volatile Organic Compounds (SVOCs) (mg/kg)</b>				
1,2,4-Trichlorobenzene	20	< 0.05 U	< 0.05 U	< 0.1 U
1,2-Dichlorobenzene	7200	< 0.05 U	< 0.05 U	< 0.1 U
1,3-Dichlorobenzene	--	< 0.05 U	< 0.05 U	< 0.1 U
1,4-Dichlorobenzene	20	<b>0.079</b>	< 0.05 U	< 0.1 U
2,4,5-Trichlorophenol	4	< 0.5 U	< 0.5 U	< 1 U
2,4-Dichlorophenol	240	< 0.5 U	< 0.5 U	< 1 U
2,4-Dimethylphenol	1600	< 0.5 U	< 0.5 U	< 1 U
2,4-Dinitrophenol	20	< 1.5 U	< 1.5 U	< 3 U
2,4-Dinitrotoluene	3.23	< 0.25 U	< 0.25 U	< 0.5 U
2,6-Dinitrotoluene	0.667	< 0.25 U	< 0.25 U	< 0.5 U
2-Chloronaphthalene	--	< 0.05 U	< 0.05 U	< 0.1 U
2-Chlorophenol	400	< 0.5 U	< 0.5 U	< 1 U
2-Methylphenol	4000	< 0.5 U	< 0.5 U	< 1 U
2-Nitroaniline	800	< 0.25 U	< 0.25 U	< 0.5 U
2-Nitrophenol	--	< 0.5 U	< 0.5 U	< 1 U

**Table 2. Surface Soil Characterization Data - TPH, Pesticides/Herbicides, PCBs, and SVOCs**

DRAFT

Project No. 150074, City of Shelton, C-Street Landfill  
Shelton, WA

Decision Unit Sample Type Sample Location Sample ID Sample Date		DU-1 ISM DU-1 ISM-DU1-072617 7/26/2017	DU-2 ISM DU-2 ISM-DU2-072617 7/26/2017	DU-3 ISM DU-3 ISM-DU3-072517 7/25/2017
Analyte (by group)	Site-Specific Screening Levels			
3 & 4 Methylphenol	--	< 1 U	< 1 U	< 2 U
3-Nitroaniline	--	< 5 U	< 5 U	< 10 U
4,6-Dinitro-2-methylphenol	--	< 1.5 U	< 1.5 U	< 3 U
4-Bromophenyl phenyl ether	--	< 0.05 U	< 0.05 U	< 0.1 U
4-Chloro-3-methylphenol	--	< 0.5 U	< 0.5 U	< 1 U
4-Chloroaniline	--	< 5 U	< 5 U	< 10 U
4-Chlorophenyl phenyl ether	--	< 0.05 U	< 0.05 U	< 0.1 U
4-Nitroaniline	--	< 5 U	< 5 U	< 10 U
4-Nitrophenol	--	< 1.5 U	< 1.5 U	< 3 U
4-Nitrophenol	--	< 33.6 UJ	< 31.9 UJ	< 31.2 UJ
Benzoic acid	320000	< 2.5 U	< 2.5 U	< 5 U
Benzyl alcohol	8000	< 0.5 U	< 0.5 U	< 1 U
Benzyl butyl phthalate	526	< 0.5 U	< 0.5 U	< 1 U
Bis(2-chloro-1-methylethyl) ether	--	< 0.05 U	< 0.05 U	< 0.1 U
Bis(2-chloroethoxy)methane	--	< 0.05 U	< 0.05 U	< 0.1 U
Bis(2-chloroethyl) ether	0.91	< 0.05 U	< 0.05 U	< 0.1 U
Bis(2-ethylhexyl) phthalate	71.4	<b>2.6 J</b>	< 0.8 U	< 1.6 U
Carbazole	--	< 0.5 U	< 0.5 U	< 1 U
Dibenzofuran	80	<b>0.12</b>	< 0.05 U	< 0.1 U
Diethyl phthalate	100	< 0.5 U	< 0.5 U	< 1 U
Dimethyl phthalate	200	< 0.5 U	< 0.5 U	< 1 U
Di-n-butyl phthalate	8000	< 0.5 U	< 0.5 U	< 1 U
Di-n-octyl phthalate	800	< 0.5 U	< 0.5 U	< 1 U
Hexachlorobenzene	0.625	< 0.05 U	< 0.05 U	< 0.1 U
Hexachlorobutadiene	13	< 0.05 U	< 0.05 U	< 0.1 U
Hexachlorocyclopentadiene	10	< 0.15 U	< 0.15 U	< 0.3 U
Hexachloroethane	25	< 0.05 U	< 0.05 U	< 0.1 U
Isophorone	1053	< 0.05 U	< 0.05 U	< 0.1 U
Nitrobenzene	40	< 0.05 U	< 0.05 U	< 0.1 U
N-Nitroso-di-n-propylamine	0.14	< 0.05 U	< 0.05 U	< 0.1 U
N-Nitrosodiphenylamine	20	< 0.05 U	< 0.05 U	< 0.1 U
Pentachlorophenol	2.5	< 0.5 U	< 0.5 U	< 1 U
Phenol	30	< 0.5 U	< 0.5 U	< 1 U

**Notes:**

**Bold** indicates a detected concentration

Gray shading indicates a concentration that exceeds the Site-Specific Screening Level.

"--" indicates not established or not applicable

U = the analyte was analyzed for, but was considered not detected at the reporting limit or reported value.

J = the analyte was detected above the reported quantitation limit, and the reported concentration was an estimated value.

UJ = the analyte was analyzed for, and the associated quantitation limit was an estimated value.

mg/kg = milligrams per kilogram

**Table 3. Surface Soil Characterization Data - VOCs**

DRAFT

Project No.150074, City of Shelton, C-Street Landfill  
Shelton, WA

Decision Unit	Sample Type	Sample Location	Sample ID	Sample Date	DU-1			DU-2		DU-3	
					Discrete DU1-H3	Discrete DU1-G7	Discrete DU1-C2	Discrete DU2-L2	Discrete DU2-L7	Discrete DU3-P3	Discrete DU3-P7
					DU2-G2-072617^	DU2-G7-072617^	DU2-C2-072617^	DU2-L2-072617	DU2-L7-072617	DU3-P3-072617	DU3-P7-072617
					7/26/2017	7/26/2017	7/26/2017	7/26/2017	7/26/2017	7/26/2017	7/26/2017
Analyte (by group)	Site-Specific Screening Levels										
<b>Petroleum Hydrocarbons (mg/kg)</b>											
Gasoline Range Organics	100	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U
<b>Volatile Organic Compounds (VOCs) (mg/kg)</b>											
1,1,1,2-Tetrachloroethane	38	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U
1,1,1-Trichloroethane	160000	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U
1,1,2,2-Tetrachloroethane	5	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U
1,1,2-Trichloroethane	18	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U
1,1-Dichloroethane	175	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U
1,1-Dichloroethene	4000	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U
1,1-Dichloropropene	--	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U
1,2,3-Trichlorobenzene	--	< 0.25 U	< 0.25 U	< 0.25 U	< 0.25 U	< 0.25 U	< 0.25 U	< 0.25 U	< 0.25 U	< 0.25 U	< 0.25 U
1,2,3-Trichloropropane	0.03	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U
1,2,4-Trichlorobenzene	20	< 0.25 U	< 0.25 U	< 0.25 U	< 0.25 U	< 0.25 U	< 0.25 U	< 0.25 U	< 0.25 U	< 0.25 U	< 0.25 U
1,2,4-Trimethylbenzene	--	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U
1,2-Dibromo-3-chloropropane	1.3	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,2-Dibromoethane (EDB)	0.5	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U
1,2-Dichlorobenzene	7200	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U
1,2-Dichloroethane (EDC)	11	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U
1,2-Dichloropropane	28	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U
1,3,5-Trimethylbenzene	800	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U
1,3-Dichlorobenzene	--	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U
1,3-Dichloropropane	--	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U
1,4-Dichlorobenzene	20	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U
2,2-Dichloropropane	--	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U
2-Butanone	48000	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
2-Chlorotoluene	--	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U
2-Hexanone	--	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
4-Chlorotoluene	--	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U
4-Methyl-2-pentanone	6400	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Acetone	72000	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Benzene	18.2	< 0.03 U	< 0.03 U	< 0.03 U	< 0.03 U	< 0.03 U	< 0.03 U	< 0.03 U	< 0.03 U	< 0.03 U	< 0.03 U
Bromobenzene	--	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U
Bromodichloromethane	16.1	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U
Bromoform	127	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U
Bromomethane	112	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Carbon Tetrachloride	14	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U
Chlorobenzene	40	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U
Chloroethane	--	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Chloroform	32	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U
Chloromethane	--	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
cis-1,2-Dichloroethene (DCE)	160	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U
cis-1,3-Dichloropropene	--	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U
Dibromochloromethane	11.9	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U
Dibromomethane	--	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U
Dichlorodifluoromethane	--	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Ethylbenzene	8000	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U
Hexachlorobutadiene	13	< 0.25 U	< 0.25 U	< 0.25 U	< 0.25 U	< 0.25 U	< 0.25 U	< 0.25 U	< 0.25 U	< 0.25 U	< 0.25 U
Isopropylbenzene	8000	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U
m,p-Xylenes	16000	< 0.1 U	< 0.1 U	< 0.1 U	< 0.1 U	< 0.1 U	< 0.1 U	< 0.1 U	< 0.1 U	< 0.1 U	< 0.1 U
Methyl tert-butyl ether (MTBE)	556	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U
Methylene Chloride	--	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Naphthalene	1600	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U
n-Hexane	--	< 0.25 U	< 0.25 U	< 0.25 U	< 0.25 U	< 0.25 U	< 0.25 U	< 0.25 U	< 0.25 U	< 0.25 U	< 0.25 U
n-Propylbenzene	8000	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U
o-Xylene	16000	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U
p-Isopropyltoluene	--	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U
sec-Butylbenzene	8000	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U
Styrene	300	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U
tert-Butylbenzene	8000	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U
Tetrachloroethene (PCE)	476	< 0.025 U	< 0.025 U	< 0.025 U	< 0.025 U	< 0.025 U	< 0.025 U	< 0.025 U	< 0.025 U	< 0.025 U	< 0.025 U
Toluene	200	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	<b>0.059</b>	< 0.05 U	< 0.05 U	< 0.05 U
Total Xylenes	16000	< 0.1 U	< 0.1 U	< 0.1 U	< 0.1 U	< 0.1 U	< 0.1 U	< 0.1 U	< 0.1 U	< 0.1 U	< 0.1 U
trans-1,2-Dichloroethene	1600	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U
trans-1,3-Dichloropropene	--	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U
Trichloroethene (TCE)	12	< 0.02 U	< 0.02 U	< 0.02 U	< 0.02 U	< 0.02 U	< 0.02 U	< 0.02 U	< 0.02 U	< 0.02 U	< 0.02 U
Trichlorofluoromethane	24000	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Vinyl Chloride	0.67	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U

**Notes:**

**Bold** indicates a detected concentration

Gray shading indicates a concentration that exceeds the Site-Specific Screening Level.

^Sample IDs for these samples were misspelled on the chain of custody and lab report dated September 8, 2017 and do not correlate with the actual sample location names indicated in this table and on the attached Figure 1.

"--" indicates not established or not applicable

U = the analyte was analyzed for, but was considered not detected at the reporting limit or reported value.

J = the analyte was detected above the reported quantitation limit, and the reported concentration was an estimated value.

UJ = the analyte was analyzed for, and the associated quantitation limit was an estimated value.

mg/kg = milligrams per kilogram

**Table 4. Prevalidated Groundwater Data - Geochemistry and Metals**

Project No. 150074, City of Shelton, C-Street Landfill  
Shelton, WA

Sample Location Date Sample Name DTW (ft bTOC) Water Level Elevation (feet NAVD88)	AMW-1 01/12/2018 AMW-1-011218 83.07 72.83	AMW-1 01/12/2018 AMW-5-011218* 83.07 72.83	AMW-2 01/12/2018 AMW-2-011218 83.3 72.24	AMW-3 01/12/2018 AMW-3-011218 100.1 72.84	AMW-4 01/12/2018 AMW-4-011218 81.22 72.46	
Analyte (by group)	Site-Specific Screening Level	(Field duplicate)				
<b>Field Parameters</b>						
Temperature (deg C)	--	10.1	10.1	10.1	10.3	10.3
Specific Conductance (uS/cm)	--	219.8	219.8	232.6	252.2	730
Dissolved Oxygen (mg/L)	--	2.67	2.67	0.26	6.25	2.52
pH	--	6.81	6.81	6.91	7.07	6.87
Oxidation Reduction Potential (mV)	--	106.6	106.6	41.2	146.7	191.4
Turbidity (NTU)	--	2.73	2.73	1.47	3.89	130
<b>Geochemical Indicator Parameters (mg/L)</b>						
Alkalinity, Total	--	112	110	114	138	375
Ammonia as Nitrogen	--	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U
Chloride	250	2.28	2.28	2.1	1.91	5.46
Cyanide (total)	0.0096	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U
Dissolved Organic Carbon	--	18.1	17	21.6	15.3	54.4
Nitrate as Nitrogen	10	0.200 UJ	0.200 UJ	0.500 UJ	0.858 J	1.39 J
Nitrite as Nitrogen	1	0.200 UJ	0.200 UJ	0.500 UJ	0.100 UJ	1.00 UJ
Sulfate	250	17.4	17.3	14.9	14	55.7
Sulfide	--	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U
<b>Total Petroleum Hydrocarbons (ug/L)</b>						
Gasoline Range Organics	1000	100 U	100 U	100 U	100 U	100 U
Diesel Range Organics	500	50 U	50 U	50 U	50 U	60 X
Motor Oil Range Organics	500	250 U	250 U	250 U	250 U	250 U
<b>Dissolved Metals (ug/L)</b>						
Arsenic	0.2	0.2 U	0.2 U	0.291	0.2 U	0.24
Barium	2000	3.98	4.05	4.65	2.4	25.3
Cadmium	5	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Calcium	--	30300	31200	31700	30500	67400
Chromium	100	0.699	0.744	0.909	0.86	1.72
Copper	640	0.67	0.651	1.72	0.883	2.98
Iron	300	114	111	463	128	235
Lead	15	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Magnesium	--	12400	12000	13900	17700	22000
Manganese	50	58.1	58.6	1140	132	307
Mercury	2	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Nickel	100	1.63	1.64	1.73	1.06	3.45
Selenium	50	0.5 U	0.5 U	0.5 U	0.5 U	0.728
Silver	80	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Sodium	--	4940	4940	5330	3870	76000
Zinc	4800	4 U	4 U	4 U	4 U	4 U
<b>Total Metals (ug/L)</b>						
Arsenic	0.2	0.2 U	0.2 U	0.31	0.2 U	0.665
Barium	2000	4.69	4.66	5.05	2.86	42.7
Cadmium	5	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Calcium	--	30600	30100	30900	29800	75000
Chromium	100	0.933	0.952	1.17	1.06	7.35
Copper	640	1.08	1.06	2.26	1.08	9.27
Iron	300	233	234	566	241	3250
Lead	15	0.1 U	0.1 U	0.1 U	0.1 U	0.334
Magnesium	--	12100	12400	13300	16900	23300
Manganese	50	71.4	68.3	1250	130	402
Mercury	2	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Nickel	100	1.86	1.93	1.82	1.17	7.61
Selenium	50	0.5 U	0.5 U	0.5 U	0.5 U	0.916
Silver	80	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Sodium	--	4820	4510	4600	3730	73300
Zinc	4800	4 U	4 U	4 U	4 U	5.46

**Notes:**

**Bold** indicates a detected concentration

Gray shading indicates a concentration that exceeds the Site-Specific Screening Level

\*Field duplicate of AMW-1-011218

"--" indicates not established or not applicable

U = the analyte was analyzed for, but was considered not detected at the reporting limit or reported value.

J = the analyte was detected above the reported quantitation limit, and the reported concentration was an estimated value.

UJ = the analyte was analyzed for, and the associated quantitation limit was an estimated value.

X = the sample chromatographic pattern does not resemble the fuel standard used for quantitation.

mg/L = milligrams per liter

ug/L = micrograms per liter

deg C = degrees Celsius

uS/cm = microSiemens per centimeter

mV = millivolts

NTU = Nephelometric Turbidity Units

**Table 5. Prevalidated Groundwater Data - PAHs, SVOCs, and VOCs**

Project No. 150074, City of Shelton, C-Street Landfill  
Shelton, WA

Sample Location Date Sample Name	AMW-1 01/12/2018 AMW-1-011218	AMW-1 01/12/2018 AMW-5-011218*	AMW-2 01/12/2018 AMW-2-011218	AMW-3 01/12/2018 AMW-3-011218	AMW-4 01/12/2018 AMW-4-011218
Analyte (by group)	Site-Specific Screening Level	(Field duplicate)			
<b>Polycyclic Aromatic Hydrocarbons (ug/L)</b>					
1-Methylnaphthalene	1.51	0.01 U	0.01 U	0.01 U	0.01 U
2-Methylnaphthalene	32	0.01 U	0.01 U	0.01 U	0.01 U
Acenaphthene	960	0.01 U	0.01 U	0.01 U	0.01 U
Acenaphthylene	--	0.01 U	0.01 U	0.01 U	0.01 U
Anthracene	4800	0.01 U	0.01 U	0.01 U	0.01 U
Benzo(g,h,i)perylene	--	0.01 U	0.01 U	0.01 U	0.01 U
Fluoranthene	640	0.01 U	0.01 U	<b>0.014</b>	0.01 U
Fluorene	640	0.01 U	0.01 U	0.01 U	0.01 U
Naphthalene	160	0.1 U	0.1 U	0.1 U	0.1 U
Phenanthrene	--	0.01 U	0.01 U	<b>0.021</b>	0.01 U
Pyrene	480	0.01 U	0.01 U	<b>0.018</b>	0.01 U
Benzo(a)pyrene	0.012	0.01 U	0.01 U	0.01 U	0.01 U
Benz(a)anthracene	0.12	0.01 U	0.01 U	0.01 U	0.01 U
Benzo(b)fluoranthene	0.12	0.01 U	0.01 U	0.01 U	0.01 U
Benzo(k)fluoranthene	1.2	0.01 U	0.01 U	0.01 U	0.01 U
Chrysene	12	0.01 U	0.01 U	0.01 U	0.01 U
Dibenzo(a,h)anthracene	0.012	0.01 U	0.01 U	0.01 U	0.01 U
Indeno(1,2,3-cd)pyrene	0.12	0.01 U	0.01 U	0.01 U	0.01 U
Total cPAHs TEQ (ND = 1/2 RDL)	0.012	nd	nd	nd	nd
<b>Semivolative Organic Compounds (ug/L)</b>					
2,4,5-Trichlorophenol	800	0.5 U	0.5 U	0.5 U	0.5 U
2,4-Dichlorophenol	24	0.5 U	0.5 U	0.5 U	0.5 U
2,4-Dimethylphenol	160	0.5 U	0.5 U	0.5 U	0.5 U
2,4-Dinitrophenol	32	1.5 U	1.5 U	1.5 U	1.5 U
2,4-Dinitrotoluene	1	0.25 U	0.25 U	0.25 U	0.25 U
2,6-Dinitrotoluene	1	0.25 U	0.25 U	0.25 U	0.25 U
2-Chloronaphthalene	--	0.05 U	0.05 U	0.05 U	0.05 U
2-Chlorophenol	40	0.5 U	0.5 U	0.5 U	0.5 U
2-Methylphenol	400	0.5 U	0.5 U	0.5 U	0.5 U
2-Nitroaniline	160	0.25 U	0.25 U	0.25 U	0.25 U
2-Nitrophenol	--	0.5 U	0.5 U	0.5 U	0.5 U
3 & 4 Methylphenol	--	1 U	1 U	1 U	1 U
3-Nitroaniline	--	5 U	5 U	5 U	5 U
4,6-Dinitro-2-methylphenol	--	1.5 U	1.5 U	1.5 U	1.5 U
4-Bromophenyl phenyl ether	--	0.05 U	0.05 U	0.05 U	0.05 U
4-Chloro-3-methylphenol	--	0.5 U	0.5 U	0.5 U	0.5 U
4-Chloroaniline	--	5 U	5 U	5 U	5 U
4-Chlorophenyl phenyl ether	--	0.05 U	0.05 U	0.05 U	0.05 U
4-Nitroaniline	--	5 U	5 U	5 U	5 U
4-Nitrophenol	--	0.748 UJ	0.749 UJ	0.749 UJ	0.749 UJ
Benzoic acid	64000	2.5 U	2.5 U	2.5 U	2.5 U
Benzyl alcohol	800	0.5 U	0.5 U	0.5 U	0.5 U
Benzyl butyl phthalate	46	0.5 U	0.5 U	0.5 U	0.5 U
Bis(2-chloro-1-methylethyl) ether	--	<b>0.05 J</b>	<b>0.052 J</b>	<b>0.061 J</b>	<b>0.053 J</b>
Bis(2-chloroethoxy)methane	--	0.05 U	0.05 U	0.05 U	0.05 U
Bis(2-chloroethyl) ether	1	0.05 U	0.05 U	0.05 U	0.05 U
Bis(2-ethylhexyl) phthalate	6	0.8 U	0.8 U	0.8 U	0.8 U
Carbazole	--	0.5 U	0.5 U	0.5 U	0.5 U
Dibenzofuran	16	0.05 U	0.05 U	0.05 U	0.05 U
Diethyl phthalate	12800	0.5 U	0.5 U	0.5 U	0.5 U
Dimethyl phthalate	--	0.5 U	0.5 U	0.5 U	0.5 U
Di-n-butyl phthalate	1600	0.5 U	0.5 U	0.5 U	0.5 U
Di-n-octyl phthalate	160	0.5 U	0.5 U	0.5 U	0.5 U
Hexachlorobenzene	0.0547	0.05 U	0.05 U	0.05 U	0.05 U
Hexachlorobutadiene	0.56	0.05 U	0.05 U	0.05 U	0.05 U
Hexachlorocyclopentadiene	48	0.15 U	0.15 U	0.15 U	0.15 U
Hexachloroethane	1.1	0.05 U	0.05 U	0.05 U	0.05 U
Isophorone	46	0.05 U	0.05 U	0.05 U	0.05 U
Nitrobenzene	16	0.05 U	0.05 U	0.05 U	0.05 U
N-Nitroso-di-n-propylamine	1	0.05 U	0.05 U	0.05 U	0.05 U
N-Nitrosodiphenylamine	17.9	0.05 U	0.05 U	0.05 U	0.05 U
Pentachlorophenol	10	0.5 U	0.5 U	0.5 U	0.5 U
Phenol	2400	0.5 U	0.5 U	0.5 U	0.5 U
<b>Volatile Organic Compounds (ug/L)</b>					
1,1,1,2-Tetrachloroethane	1.7	0.2 U	0.2 U	0.2 U	0.2 U
1,1,1-Trichloroethane	200	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2,2-Tetrachloroethane	0.22	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2-Trichloroethane	0.77	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethane	7.68	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	7	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloropropene	--	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichlorobenzene	--	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichloropropane	0.5	0.5 U	0.5 U	0.5 U	0.5 U
1,2,4-Trichlorobenzene	1.5	0.05 U	0.05 U	0.05 U	0.05 U
1,2,4-Trimethylbenzene	--	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dibromo-3-chloropropane	0.5	0.5 U	0.5 U	0.5 U	0.5 U

Aspect Consulting

3/20/2018

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**Table 5**

Remedial Investigation

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**Table 5. Prevalidated Groundwater Data - PAHs, SVOCs, and VOCs**

Project No. 150074, City of Shelton, C-Street Landfill  
Shelton, WA

Analyte (by group)	Sample Location	AMW-1	AMW-1	AMW-2	AMW-3	AMW-4
	Date	01/12/2018	01/12/2018	01/12/2018	01/12/2018	01/12/2018
	Sample Name	AMW-1-011218	AMW-5-011218*	AMW-2-011218	AMW-3-011218	AMW-4-011218
	Site-Specific Screening Level		(Field duplicate)			
1,2-Dibromoethane (EDB)	0.2	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichlorobenzene	600	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,2-Dichloroethane (EDC)	0.48	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloropropane	1.2	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3,5-Trimethylbenzene	80	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichlorobenzene	--	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,3-Dichloropropane	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,4-Dichlorobenzene	8.1	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
2,2-Dichloropropane	--	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2-Butanone	4800	2 U	2 U	2 U	2 U	2 U
2-Chlorotoluene	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2-Hexanone	--	2 U	2 U	2 U	2 U	2 U
4-Chlorotoluene	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
4-Methyl-2-pentanone	640	2 U	2 U	2 U	2 U	2 U
Acetone	7200	50 U	50 U	50 U	50 U	50 U
Benzene	0.8	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromobenzene	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromodichloromethane	0.71	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromoform	5.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromomethane	11.2	1 U	1 U	1 U	1 U	1 U
Carbon Tetrachloride	0.63	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chlorobenzene	100	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloroethane	--	1 U	1 U	1 U	1 U	1 U
Chloroform	1.4	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloromethane	--	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,2-Dichloroethene (DCE)	16	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
cis-1,3-Dichloropropene	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Ethylbenzene	700	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromochloromethane	0.52	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromomethane	--	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Dichlorodifluoromethane	--	1 U	1 U	1 U	1 U	1 U
Isopropylbenzene	800	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
m,p-Xylenes	1600	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
Methyl tert-butyl ether (MTBE)	24.3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylene Chloride	--	1 U	1 U	1 U	1 U	1 U
n-Hexane	--	1 U	1 U	1 U	1 U	1 U
n-Propylbenzene	800	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
o-Xylene	1600	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
p-Isopropyltoluene	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
sec-Butylbenzene	800	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Styrene	100	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
tert-Butylbenzene	800	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Tetrachloroethene (PCE)	5	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Toluene	640	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Total Xylenes	1600	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
trans-1,2-Dichloroethene	100	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
trans-1,3-Dichloropropene	--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichloroethene (TCE)	0.54	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichlorofluoromethane	2400	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Vinyl Chloride	0.2	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U

**Notes:**

**Bold** indicates a detected concentration

Gray shading indicates a concentration that exceeds the Site-Specific Screening Level.

\*Field duplicate of AMW-1-011218

"--" indicates not established or not applicable

nd = non-detect

U = the analyte was analyzed for, but was considered not detected at the reporting limit or reported value.

J = the analyte was detected above the reported quantitation limit, and the reported concentration was an estimated value.

UJ = the analyte was analyzed for, and the associated quantitation limit was an estimated value.

X = the sample chromatographic pattern does not resemble the fuel standard used for quantitation.

ug/L = micrograms per liter

**Table 6. Prevalidated Groundwater Data - Dioxins/Furans, Pesticides/Herbicides, and PCBs**

DRAFT

Project No. 150074, City of Shelton, C-Street Landfill  
Shelton, WA

Sample Location	AMW-1	AMW-1	AMW-2	AMW-3	AMW-4
Date	01/12/2018	01/12/2018	01/12/2018	01/12/2018	01/12/2018
Sample Name	AMW-1-011218	AMW-5-011218*	AMW-2-011218	AMW-3-011218	AMW-4-011218
Analyte (by group)	Site-Specific Screening Level	(Field duplicate)			
<b>Dioxins/Furans (pg/L)</b>					
<b>Chlorinated di-benzo-p-dioxins (CDDs)</b>					
2,3,7,8-TCDD	30	5.00 U	5.00 U	5.00 U	5.00 U
1,2,3,7,8-PeCDD	--	25.0 U	25.0 U	25.0 U	25.0 U
1,2,3,4,7,8-HxCDD	--	25.0 U	25.0 U	25.0 U	25.0 U
1,2,3,6,7,8-HxCDD	--	25.0 U	25.0 U	25.0 U	25.0 U
1,2,3,7,8,9-HxCDD	--	25.0 U	25.0 U	25.0 U	25.0 U
1,2,3,4,6,7,8-HpCDD	--	25.0 U	25.0 U	25.0 U	<b>2.08 J</b>
OCDD	--	50.0 U	50.0 U	<b>22.2 J</b>	50.0 U
Dioxin TEQ (ND = 1/2 RDL)	30	nd	nd	<b>18.88</b>	nd
<b>Chlorinated Dibenzofurans (CDFs)</b>					
2,3,7,8-TCDF	--	5.00 U	5.00 U	5.00 U	5.00 U
1,2,3,7,8,9-HxCDF	--	25.0 U	25.0 U	25.0 U	25.0 U
1,2,3,7,8-PeCDF	--	25.0 U	25.0 U	25.0 U	25.0 U
2,3,4,6,7,8-HxCDF	--	25.0 U	25.0 U	25.0 U	25.0 U
2,3,4,7,8-PeCDF	--	25.0 U	25.0 U	25.0 U	25.0 U
1,2,3,4,6,7,8-HpCDF	--	25.0 U	25.0 U	25.0 U	25.0 U
1,2,3,4,7,8,9-HpCDF	--	25.0 U	25.0 U	25.0 U	25.0 U
1,2,3,4,7,8-HxCDF	--	25.0 U	25.0 U	25.0 U	25.0 U
1,2,3,6,7,8-HxCDF	--	25.0 U	25.0 U	25.0 U	25.0 U
OCDF	--	50.0 U	50.0 U	50.0 U	50.0 U
Furan TEQ (ND = 1/2 RDL)	30	nd	nd	nd	nd
<b>Polychlorinated Biphenyls (ug/L)</b>					
Aroclor 1016	1.1	0.025 U	0.025 U	0.025 U	0.025 U
Aroclor 1221	--	0.025 U	0.025 U	0.025 U	0.025 U
Aroclor 1232	--	0.025 U	0.025 U	0.025 U	0.025 U
Aroclor 1242	--	0.025 U	0.025 U	0.025 U	0.025 U
Aroclor 1248	--	0.025 U	0.025 U	0.025 U	0.025 U
Aroclor 1254	0.044	0.025 U	0.025 U	0.025 U	0.025 U
Aroclor 1260	0.044	0.025 U	0.025 U	0.025 U	0.025 U
Aroclor 1262	--	0.025 U	0.025 U	0.025 U	0.025 U
Aroclor 1268	--	0.025 U	0.025 U	0.025 U	0.025 U
Total PCBs (Sum of Aroclors)	0.044	nd	nd	nd	nd
<b>Organochlorine Pesticides (ug/L)</b>					
4,4'-DDD	0.365	0.005 U	0.005 U	0.005 U	0.005 U
4,4'-DDE	0.257	0.025 U	0.025 U	0.025 U	0.025 U
4,4'-DDT	0.257	0.005 U	0.005 U	0.005 U	0.005 U
Aldrin	0.005	0.005 U	0.005 U	0.005 U	0.005 U
Alpha-BHC	--	0.005 U	0.005 U	0.005 U	0.005 U
Beta-BHC	--	0.005 U	0.005 U	0.005 U	0.005 U
cis-Chlordane	--	0.005 U	0.005 U	0.005 U	0.005 U
Delta-BHC	--	0.005 U	0.005 U	0.005 U	0.005 U
Dieldrin	0.0055	0.005 U	0.005 U	0.005 U	0.005 U
Endosulfan I	96	0.005 U	0.005 U	0.005 U	0.005 U
Endosulfan II	96	0.025 U	0.025 U	0.025 U	0.025 U
Endosulfan Sulfate	--	0.005 U	0.005 U	0.005 U	0.005 U
Endrin	2	0.005 U	0.005 U	0.005 U	0.005 U
Endrin Aldehyde	--	0.025 U	0.025 U	0.025 U	0.025 U
Endrin ketone	--	0.005 U	0.005 U	0.005 U	0.005 U
Heptachlor	0.0194	0.005 U	0.005 U	0.005 U	0.005 U
Heptachlor Epoxide	0.005	0.005 U	0.005 U	0.005 U	0.005 U
Lindane	0.0795	0.005 U	0.005 U	0.005 U	0.005 U
Methoxychlor	40	0.005 U	0.005 U	0.005 U	0.005 U
Toxaphene	0.0795	0.25 U	0.25 U	0.25 U	0.25 U
trans-Chlordane	0.25	0.005 U	0.005 U	0.005 U	0.005 U

**Table 6. Prevalidated Groundwater Data - Dioxins/Furans, Pesticides/Herbicides, and PCBs**

DRAFT

Project No. 150074, City of Shelton, C-Street Landfill  
Shelton, WA

Sample Location	AMW-1	AMW-1	AMW-2	AMW-3	AMW-4
Date	01/12/2018	01/12/2018	01/12/2018	01/12/2018	01/12/2018
Sample Name	AMW-1-011218	AMW-5-011218*	AMW-2-011218	AMW-3-011218	AMW-4-011218
Analyte (by group)	Site-Specific Screening Level	(Field duplicate)			
<b>Chlorinated Herbicides (ug/L)</b>					
2,4,5-T	--	0.997 U	0.999 U	0.998 U	0.999 U
2,4-D	--	1.99 U	2.00 U	2.00 U	2.00 U
2,4-DB	128	2.99 U	3.00 U	2.99 U	3.00 U
3,5-Dichlorobenzoic acid	--	4.99 U	5.00 U	4.99 U	5.00 U
Acifluorfen	--	4.24 U	4.25 U	4.24 U	4.25 U
Bentazone	--	2.69 U	2.70 U	2.70 U	2.70 U
Chloramben	--	1.20 U	1.20 U	1.20 U	1.20 U
Chlorthal-dimethyl	--	0.848 U	0.849 U	0.849 U	0.849 U
Dalapon	200	3.99 UJ	4.00 UJ	3.99 UJ	4.00 UJ
Dicamba	480	4.49 U	4.50 U	4.49 U	4.50 U
Dichloroprop	--	0.997 U	0.999 U	0.998 U	0.999 U
Dinoseb	7	3.74 U	3.75 U	3.74 U	3.75 U
MCPA	--	9.97 U	9.99 U	9.98 U	9.99 U
MCPP	--	9.97 U	9.99 U	9.98 U	9.99 U
Picloram	--	0.499 U	0.500 U	0.499 U	0.500 U
Silvex	50	0.598 U	0.600 U	0.599 U	0.599 U

**Notes:**

**Bold** indicates a detected concentration

Gray shading indicates a concentration that exceeds the Site-Specific Screening Level.

\*Field duplicate of AMW-1-011218

--" indicates not established or not applicable

U = the analyte was analyzed for, but was considered not detected at the reporting limit or reported value.

J = the analyte was detected above the reported quantitation limit, and the reported concentration was an estimated value.

UJ = the analyte was analyzed for, and the associated quantitation limit was an estimated value.

X = the sample chromatographic pattern does not resemble the fuel standard used for quantitation.

TCDD = tetrachloro dibenzo-p-dioxin

PeCDD = entachloro dibenzo-p-dioxin

HxCDD = hexachloro dibenzo-p-dioxin

HpCDD = heptachloro dibenzo-p-dioxin

OCDD = octachloro dibenzo-p-dioxin

TCDF = tetrachloro dibenzofuran

PeCDF = pentachloro dibenzofuran

HxCDF = hexachlorodibenzofuran

HpCDF = heptachloro dibenzofuran

OCDF = octachlorodibenzofuran

ug/L = micrograms per liter