HWA GEOSCIENCES INC.
DBE/MWBE

February3, 2020
HWA Project No. 98165-660

City of Everett Public Works Department
3200 Cedar Street
Everett, WA 98201

Attention: Mark Sadler

Subject: **Performance Monitoring Annual Report 2019**
Everett Landfill/Tire Fire Site
Everett, Washington

Dear Mark,

This letter presents the annual report for 2019, for ground water monitoring at the Everett Landfill/Tire Fire Site (herein referred to as Landfill), per the Compliance Monitoring and Contingency Plan.

GROUND WATER MONITORING

HWA collected ground water samples semi-annually, in mid-January and July 2019. Figure 1 shows the location of the ground water sampling locations. Sampling locations included:

- Five deep aquifer network monitoring wells: MW-11R, MW-21R (upgradient), and MW-29R, MW-30, MW-31 (downgradient).
- Three deep point-of-compliance monitoring wells: MW-36, MW-38, and MW-39R.
- Well MW-37 was formerly a point-of-compliance monitoring well, but monitoring was discontinued from 2006 to 2015, due to the influence of saline water from the river on ground water sample quality. Sampling was resumed in July 2015 at the request of Ecology.

ANALYSIS

Samples collected in January and July were submitted to ALS Environmental (ALS, formerly CCI Analytical Laboratories) in Everett, Washington and the City of Everett Environmental Laboratory (EEL) for the following analyses:

- Semi-volatile organic compounds (SVOCs), including: bis(2-ethylhexyl)phthalate (submitted to ALS);
- Dissolved metals, including: arsenic, iron, manganese, nickel, and zinc (submitted to EEL); and
- Chloride (submitted to EEL).

RESULTS

Table 1 summarizes the ground water analytical results. Appendix A contains copies of the ALS and EEL laboratory reports and HWA's data verification quality control/quality assurance report.

Referring to Table 1, in the 2019 monitoring period, site-specific ground water cleanup levels were exceeded in point of compliance wells as follows:

- MW-37, 1/29/2019 and 7/11/2019, Chloride = 465 and 884 mg/L, respectively. Monitoring at this well was discontinued from 2006 to 2015, due to the influence of saline water from the river on ground water sample quality. Sampling was resumed in July 2015 at the request of Ecology. This well has had multiple chloride detections exceeding the cleanup level, and has exhibited variation in chloride concentration, likely in response to tidal, seasonal and river stage effects.

Cleanup levels were exceeded in deep aquifer network monitoring wells as follows:

- 2019 ground water samples analyzed from deep aquifer network monitoring well MW-31 exceeded cleanup levels for iron, which is consistent with all previous results from this well.

All other analytes monitored in the ground water samples collected during the 2019 monitoring period were either below the cleanup levels or not detected above laboratory detection limits.

GROUND WATER GRADIENT / HYDRAULIC CONTROL

Table 2 lists ground water depths and elevations. Based on numerous past studies, ground water in the deep aquifer flows to the east, towards the Snohomish River, with gradients ranging from 0.01 to 0.02 ft/ft. Although ground water levels are still being measured in all wells sampled, ground water gradients are no longer mapped and interpreted, per the 2015 SAP. Shallow and deep ground water gradients have already been established over many years of monitoring, and most of the remaining wells are located in a line parallel to the river, making estimation of the gradient direction and magnitude difficult.

During the 2019 monitoring year, ground water levels at and near the Everett Landfill leachate collection system were monitored to evaluate hydraulic control of the shallow aquifer as ground water moves east from the Everett Landfill towards the Snohomish River. Using a datalogging level sensor installed inside wet well LS 21 and a datalogging pressure transducer installed in piezometer MW-46, located just west of the leachate collection system (see Figure 1), water level readings have been collected every hour from December 11, 2017 to December 24, 2019.

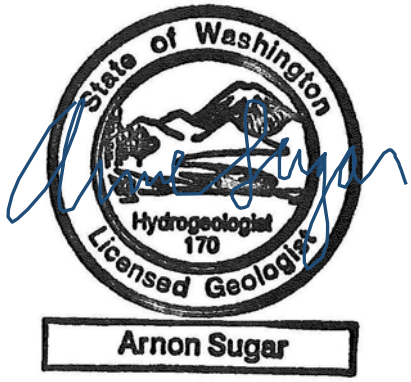
Results showed that during 2019 wet well water elevations generally occurred between 0.50 feet and -1.70 feet, corresponding to the high and low pump level settings (Figure 2). Some brief excursions extended outside this range and were likely due to pumps being shut down for general

operation and maintenance activities. 2019 Ground water elevations in MW-46, screened within the shallow aquifer, ranged from 3.6 feet to 11.9 feet. Water levels inside the wet well therefore ranged from approximately 3 to 10 feet lower than ground water levels monitored in MW-46, which is similar to the previous two years of monitoring, and demonstrates overall hydraulic control of the shallow (leachate) aquifer and that shallow aquifer discharge into the Snohomish River is not occurring.

We appreciate the opportunity to provide our services. Please feel free to call if you have any questions or need more information.

Sincerely,

HWA GEOSCIENCES INC.



Austin York, LG
Environmental Geologist

Arnie Sugar, LG, LHG
Principal Hydrogeologist

Attachments:
Table 1, Performance Monitoring Ground Water Analytical Results
Table 2, Ground Water Elevations

Figure 1, Everett Landfill Ground Water Monitoring Wells
Figure 2, LS-21 vs PZ-46 Water Elevation Data: January 2016 to December 2019

Appendix A - Laboratory Reports and QA/QC Report

Table 1
Performance Monitoring
Ground Water Analytical Results
Everett Landfill

			Dissolved Metals					Conventional	SVOC
	Chemical Name		Arsenic	Iron	Manganese	Nickel	Zinc	Chloride	bis (2-Ethylhexyl) phthalate
	Unit		(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(mg/L)	(ug/L)
Sample Location	Sample Type	C.L. / Date	25	23687	4040	10	76.6	230	10
MW-11R	NET	7/9/2001	6 U	9223	1430	5 U	8 U	11.8	1 U
MW-11R		10/3/2001	6 U	7945	1553	2 U	8 U	18.0	1 U
MW-11R		1/18/2002	6 U	9439	1910	2 U	10.45	11.6	4 U
MW-11R		4/10/2002	6 U	8742	2025	4 U	8 U	13.8	4 U
MW-11R		7/11/2002	4 U	32	440	4 U	8 U	13.3	4 U
MW-11R		10/9/2002	4	12400	2210	4 U	8 U	19.8	4 U
MW-11R		1/13/2003	4 U	3970	97	4.6	8	40.3	1 U
MW-11R		4/23/2003	4 U	11000	1810	4 U	8 U	20.2	1 U
MW-11R		10/9/2003	4 U	12800	1860	4 U	8 U	38.4	2.8 B
MW-11R		4/6/2004	2 U	10200	1260	2 U	8 U	8.8	1 U
MW-11R		7/15/2005	2 U	12500	1260	2 U	8 U	8.0	10 U
MW-11R		2/1/2006	4 U	11800	1240	2 U	8 U	14.0	10 U
MW-11R		7/10/2006	4 U	13500	1700	2 U	8 U	13.0	2 U
MW-11R		1/10/2007	4 U	12400	1560	4 U	8 U	18.3	2 U
MW-11RD		1/10/2007	4 U	12700	1600	4 U	8 U	18.3	2 U
MW-11R		7/17/2007	4 U	11800	1600	4 U	8 U	15.6	2 U
MW-11R		1/24/2008	2 U	11500	1490	4 U	8 U	12.6	10 U
MW-11R		6/18/2008	1.4 U	12300	1410	0.5 U	5 U	11.5	2 U
MW-11RD		6/18/2008	1.4 U	12400	1420	0.5 U	5 U	11.4	2 U
MW-11R		1/21/2009	1.7 U	12200	1430	0.5 U	5 U	10.7	2 U
MW-11R		7/10/2009	1.2	14100	1410	1 U	10 U	14.5	2 U
MW-11R		1/29/2010	1.9	10800	1300	1 U	10 U	12.9	2 U
MW-11R		7/28/2010	0.6 U	9860	992	0.5 U	5 U	7.4	2 U
MW-11R		1/20/2011	1.4 J	11300	1250	1 U	10 U	10.8	2 U
MW-11R		7/19/2011	1 U	7960	716	1 U	10 U	8.8	2 U
MW-11RD		7/19/2011	1 U	7980	720	1 U	10 U	8.8	2 U
MW-11R		1/23/2012	NS	NS	NS	NS	NS	NS	NS
MW-11R		7/11/2012	2.3	7600	535	0.5 U	5 U	4.1	2 U
MW-11R		1/22/2013	1.5 J	3320	294	1 U	10 U	3.5	2 U
MW-11R		7/18/2013	0.6 J	5800	444	0.5 U	5 U	3.9	2.6
MW-11R		1/31/2014	0.8 J	6260	446	0.5 U	5 U	8.3	2 U
MW-11R		7/25/2014	0.6 J	5920	400	0.5 U	5 U	4.9	2 U
MW-11R		2/9/2015	1 U	5630	433	1 U	10 U	3.1	2 U
MW-11R		7/29/2015	1 U	5600	509	1 U	10 U	3.4	2 U
MW-11R		1/19/2016	1 U	159000	20700	2.3 J	10 U	2320	2 U
MW-11R		7/18/2016	1 U	5880	640	1 U	10 U	18.2	2 U
MW-11R		1/26/2017	1 U	8250	1060	1 U	10 U	14.3	2 U
MW-11R		7/19/2017	1 U	180	131	1 U	10 U	4.6	2 U
MW-11R		2/9/2018	1 U	4430	877	1 U	10 U	7.6	2 U
MW-11R		7/31/2018	1 U	780	768	1 U	10.3 U	7.6	2 U
MW-11R		1/15/2019	1 U	3330	727	1 U	10 U	10.7	2 U
MW-11R		7/10/2019	1 U	320	559	1 U	10 U	8.5	2 U
MW-21	NET	7/3/2001	6 U	15	234	5 U	8 U	18.1	1 U
MW-21		10/2/2001	6 U	25	147	7.8	8 U	19.7	1 U
MW-21		1/18/2002	6 U	49	199	9.06	8 U	20.0	4 U
MW-21		4/9/2002	6 U	37	222	8.82	8 U	18.2	4 U
MW-21		7/9/2002	4 U	17	166	7.6	8 U	21.1	4 U
MW-21		10/9/2002	4 U	15	241	8.2	8 U	16.3	4 U
MW-21		1/14/2003	4 U	22	205	8.3	8 U	19.7	1 U
MW-21		4/22/2003	4 U	25	159	8.4	8 U	20.2	1 U
MW-21		10/9/2003	4 U	17	245	9.1	8 U	16.0	1 U
MW-21		4/5/2004	2 U	36	293	9.9	8 U	17.9	1 U
MW-21		7/14/2005	2 U	22	189	8.6	8 U	18.0	10 U
MW-21		1/31/2006	4 U	49	132	7.9	9	18.0	10 U
MW-21R	NET	1/21/2009	22.3	2470	1210	2.3	8 U	13.7	2 U
MW-21R		7/9/2009	31	7950	1970	1 U	10 U	9.1	2 U
MW-21RD		7/9/2009	30.4	7910	1940	1 U	10 U	9.4	2 U
MW-21R		1/28/2010	16.9	7510	1410	1 U	10 U	12.6	2 U
MW-21R		7/28/2010	23.7	8580	1660	0.5 U	5 U	9.1	2 U
MW-21R		1/20/2011	24.2	11400	1720	1 U	10 U	10.0	2 U
MW-21R		7/19/2011	25	11700	1830	1 U	10 U	8.5	2 U
MW-21R		1/23/2012	24.6	11400	2080	1 U	10 U	8.4	2 U
MW-21R		7/18/2012	6.8	8820	1600	0.6 J	5 U	11.1	2 U
MW-21R		1/22/2013	1.0 J	290	50	1 U	10 U	10.4	2 U
MW-21R		7/18/2013	0.7 J	98	121	0.7 J	5 U	12.2	2 U
MW-21R		2/1/2014	20.6	10300	1860	0.5 U	5 U	7.4	2 U
MW-21R		7/25/2014	15.0	9220	1280	0.5 U	5 U	9.6	2 U
MW-21R		2/10/2015	21	13700	1720	1 U	10 U	10.2	2 U
MW-21RD		2/10/2015	24.2	14000	1730	1 U	10 U	10.5	16
MW-21R		7/30/2015	1.8 J	42 J	3 J	1 U	10 U	10.9	2 U
MW-21R		1/19/2016	15.1	13500	1330	1 U	10 U	16.2	2 U
MW-21R		7/18/2016	1.5 J	100 J	19.3	1 U	10 U	13.3	2 U
MW-21R		1/26/2017	14.8	13900	1760	1 U	10 U	16.3	2 U
MW-21R		7/19/2017	1.5 J	48 J	4.5	1 U	10 U	14.0	2 U
MW-21R		2/9/2018	15.7	12100	1670	1 U	10 U	18.9	2.1
MW-21RD		2/9/2018	17.3	13600	1770	1 U	10 U	18.6	2.2
MW-21R		7/31/2018	1.4 J	50 J	13.1	1 U	10.3 U	17.0	2 U
MW-21R		1/15/2019	1.0 J	1950	1440	1 U	10 U	16.0	2 U
MW-21R		7/10/2019	1 U	67 J	9	1 U	10	12.2	2 U
MW-28	NET	7/6/2001	8	7972	247	5 U	8 U	4.5	1 U
MW-28		10/5/2001	8	5414	161	2 U	8 U	4.8	1 U
MW-28		1/23/2002	8.52	9332	273	2 U	8 U	4.8	4 U
MW-28		4/15/2002	8.18	7644	239	4 U	8 U	4.7	4 U
MW-28		7/9/2002	13	8220	231	4 U	8 U	5.3	4 U
MW-28D		7/9/2002	12	8260	233	4 U	8 U	5.3	4 U
MW-28		10/14/2002	8	7490	217	4 U	8 U	5.1	4 U
MW-28		1/16/2003	8	9190	257	4 U	8 U	5.4	1 U
MW-28		4/24/2003	8	7350	239	4 U	8 U	5.0	1 U
MW-28		10/14/2003	8	8020	225	4 U	8 U	5.2	5.6
MW-28		4/12/2004	7	7450	248	2 U	8 U	4.9	1 U
MW-28		7/19/2005	8	8750	265	2 U	8 U	5.0	10 U
MW-28		2/3/2006	8	8950	244	2 U	8 U	5.0	10 U
MW-28		7/11/2006	8	6440	200	2 U	10	5.2	2 U
MW-28		1/10/2007	8	8960	250	4 U	8 U	5.3	2 U
MW-28		7/18/2007	7	6110	240	4 U	8 U	5.6	2 U
MW-28		1/29/2008	9	7300	230	4 U	8 U	5.2	10 U
MW-28D		1/29/2008	7	6420	220	4 U	8 U	5.1	10 U
MW-28		6/19/2008	10.2	9000	236	0.5 U	5 U	4.9	2 U

Table 1
Performance Monitoring
Ground Water Analytical Results
Everett Landfill

			Dissolved Metals					Conventional	SVOC
	Chemical Name		Arsenic	Iron	Manganese	Nickel	Zinc	Chloride	bis (2-Ethylhexyl) phthalate
	Unit		(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(mg/L)	(ug/L)
Sample Location	Sample Type	C.L. / Date	25	23687	4040	10	76.6	230	10
MW-29	NET	7/10/2001	6 U	**3930**	**378**	5 U	8 U	**9.8**	1 U
MW-29		10/3/2001	6 U	**288**	**186**	2 U	8 U	**10.1**	1 U
MW-29		1/24/2002	6 U	**4472**	**376**	2 U	8 U	**10.1**	4 U
MW-29		4/12/2002	6 U	**4593**	**372**	4 U	8 U	**9.7**	4 U
MW-29		7/10/2002	4 U	**5240**	**361**	4 U	8 U	**10.4**	4 U
MW-29		10/11/2002	4 U	**4580**	**367**	4 U	8 U	**10.7**	4 U
MW-29		1/17/2003	4 U	**4480**	**346**	4 U	8 U	**11.3**	**1.1**
MW-29		4/30/2003	4 U	**4800**	**356**	4 U	8 U	**10.4**	**2**
MW-29		10/13/2003	4 U	**4670**	**373**	4 U	8 U	**10.4**	1 U
MW-29		4/9/2004	2 U	**5180**	**400**	2 U	8 U	**11.6**	1 U
MW-29		7/18/2005	2 U	**4310**	**394**	2 U	8 U	**10.0**	10 U
MW-29		2/3/2006	**5**	**4030**	**319**	2 U	8 U	**11.0**	10 U
MW-29		7/11/2006	4 U	**3320**	**360**	2 U	**8**	**10.4**	2 U
MW-29		1/12/2007	4 U	**4040**	**350**	4 U	8 U	**11.0**	2 U
MW-29		7/18/2007	4 U	**4270**	**380**	4 U	8 U	**11.4**	2 U
MW-29		1/29/2008	2 U	**4140**	**370**	4 U	8 U	**10.5**	10 U
MW-29		6/18/2008	0.5 U	**4650**	**352**	0.5 U	5 U	**10.7**	2 U
MW-29		1/22/2009	0.5 U	**7210**	**361**	0.5 U	5 U	**11.4**	2 U
MW-29		7/10/2009	1 U	**7010**	**380**	**1.3**	10 U	**10.7**	2 U
MW-29		1/28/2010	1 U	**4550**	**355**	1 U	10 U	**9.7**	2 U
MW-29		7/30/2010	0.6 J	**4270**	**326**	0.5 U	5 U	**9.1**	2 U
MW-29		1/21/2011	1 U	**5520**	**358**	1 U	10 U	**10.0**	2 U
MW-29		7/18/2011	1 U	**4420**	**341**	1 U	10 U	**9.3**	**2.4**
MW-29		1/23/2012	NS	NS	NS	NS	NS	NS	NS
MW-29		7/18/2012	NS	NS	NS	NS	NS	NS	NS
MW-29		1/22/2013	NS	NS	NS	NS	NS	NS	NS
MW-29R		7/29/2015	2.6 J	**1800**	**473**	3.6 J	10 U	**108**	**7.7**
MW-29R		1/19/2016	1 U	**9360**	**604**	1 U	10 U	**11.7**	2 U
MW-29R		7/14/2016	1 U	**7500**	**493**	1 U	10 U	**28.4**	2 U
MW-29R		1/26/2017	1 U	**10200**	**675**	1 U	10 U	**13.4**	2 U
MW-29R		7/20/2017	1 U	**9630**	**643**	1 U	10 U	**13.7**	2 U
MW-29R		2/9/2018	1 U	**9210**	**604**	1 U	10 U	**14.1**	2 U
MW-29R		8/1/2018	1 U	**6450**	**557**	1 U	10.3 U	**14.9**	2 U
MW-29R		1/29/2019	1 U	**160**	**500**	1 U	10 U	**15.8**	2 U
MW-29R		7/10/2019	1 U	**4110**	**527**	1 U	10 U	**13.3**	2 U
MW-30	NET	7/5/2001	**8**	**4653**	**573.75**	5 U	8 U	**27.1**	1 U
MW-30		10/3/2001	6 U	**254**	**186**	2 U	8 U	**26.5**	1 U
MW-30		1/25/2002	**9.34**	**6578**	**548.08**	2 U	8 U	**23.7**	4 U
MW-30		4/11/2002	**11.14**	**6253**	**506.64**	4 U	8 U	**23.1**	4 U
MW-30		7/10/2002	4 U	**222**	**324**	4 U	8 U	**23.9**	4 U
MW-30		10/10/2002	**11**	**5810**	**484**	4 U	8 U	**19.4**	4 U
MW-30		1/16/2003	**11**	**6240**	**505**	4 U	8 U	**19.6**	1 U
MW-30		4/29/2003	**9**	**5850**	**500**	4 U	8 U	**19.7**	1 U
MW-30		10/13/2003	**10**	**5380**	**478**	4 U	8 U	**17.0**	1 U
MW-30		4/8/2004	**11**	**5160**	**495**	2 U	8 U	**18.4**	1 U
MW-30		7/14/2005	**9**	**5070**	**480**	2 U	8 U	**21.0**	10 U
MW-30		2/3/2006	**13**	**5290**	**460**	2 U	8 U	**20.0**	10 U
MW-30		7/11/2006	4 U	**4070**	**450**	2 U	8 U	**17.4**	2 U
MW-30		1/12/2007	**7**	**5780**	**490**	4 U	8 U	**16.8**	2 U
MW-30		7/18/2007	**5**	**3690**	**400**	4 U	8 U	**14.6**	2 U
MW-30		1/29/2008	**9**	**5240**	**480**	4 U	8 U	**13.2**	10 U
MW-30		6/18/2008	0.7 U	47 J	**116**	0.5 U	5 U	**16.8**	2 U
MW-30		1/22/2009	**5.6**	**4130**	**475**	0.5 U	5 U	**23.5**	2 U
MW-30		7/10/2009	**6.6**	**3630**	**346**	1 U	10 U	**12.9**	2 U
MW-30		1/28/2010	**7.2**	**4310**	**421**	1 U	10 U	**15.3**	2 U
MW-30		7/30/2010	**7**	**5250**	**406**	0.5 U	5 U	**15.7**	2 U
MW-30		1/21/2011	**8.5**	**5420**	**428**	1 U	10 U	**11.9**	2 U
MW-30		7/18/2011	**8.2**	**4940**	**417**	1 U	10 U	**12.3**	2 U
MW-30		1/24/2012	**7.2**	**5000**	**445**	1 U	10 U	**12.8**	2 U
MW-30		7/18/2012	1.7 J	**2340**	**691**	0.5 U	5 U	**13.5**	2 U
MW-30D		7/18/2012	1.8 J	**2380**	**688**	0.5 U	5 U	**13.0**	2 U
MW-30		1/22/2013	**6.7**	**4730**	**424**	1 U	10 U	**13.8**	2 U
MW-30D		1/22/2013	**6.8**	**4710**	**423**	1 U	10 U	**12.9**	2 U
MW-30		7/18/2013	**4.3**	**3530**	**386**	0.5 U	5 U	**14.7**	**2.4**
MW-30D		7/18/2013	**4.8**	**3820**	**394**	0.5 U	5 U	**14.9**	2 U
MW-30		1/31/2014	**8.2**	**6300**	**428**	0.5 U	5 U	**11.1**	2 U
MW-30		7/28/2014	1.2 J	**790**	**116**	0.5 U	5 U	**11.0**	2 U
MW-30		2/9/2015	b	**7110**	**447**	1 U	10 U	**10.7**	2 U
MW-30		7/29/2015	1 U	**320**	**25**	1 U	10 U	**9.8**	2 U
MW-30		1/19/2016	**4.3**	**6780**	**465**	1 U	10 U	**33.6**	2 U
MW-30		7/14/2016	**8**	**8320**	**559**	1 U	10 U	**142**	2 U
MW-30		1/26/2017	**8.6**	**7290**	**446**	1 U	**72**	**11.2**	2 U
MW-30		7/20/2017	1 U	**150** J	**14.4**	1 U	10 U	**11.2**	2 U
MW-30		2/9/2018	**9**	**8830**	**509**	1 U	10 U	**11.1**	2 U
MW-30		8/1/2018	**7.6**	**8690**	**482**	1 U	10.3 U	**12.8**	2 U
MW-30		1/15/2019	**7.2**	**8490**	**495**	1 U	10 U	**13.1**	2 U
MW-30		7/10/2019	**1.8** J	**1780**	**174**	1 U	10 U	**9.0**	2 U

Table 1
Performance Monitoring
Ground Water Analytical Results
Everett Landfill

			Dissolved Metals					Conventional	SVOC
	Chemical Name		Arsenic	Iron	Manganese	Nickel	Zinc	Chloride	bis (2-Ethylhexyl) phthalate
	Unit		(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(mg/L)	(ug/L)
Sample Location	Sample Type	C.L. / Date	25	23687	4040	10	76.6	230	10
MW-31	NET	7/5/2001	6 U	43672	1261.8	5 U	8 U	149.8	1 U
MW-31		10/3/2001	6 U	29424	866.99	3.9	8 U	150.0	1 U
MW-31		1/22/2002	6 U	39542	1206.2	5.83	8 U	137.5	6
MW-31		4/10/2002	6 U	38227	1178	4 U	8 U	136.9	4 U
MW-31		7/11/2002	4 U	41700	1190	4 U	8 U	132.0	4 U
MW-31		10/10/2002	4 U	42000	1190	4.4	8 U	150.0	4 U
MW-31D		10/10/2002	4 U	41800	1180	4 U	8 U	151.0	4 U
MW-31		1/16/2003	4 U	38400	1150	4.5	8 U	13.5	1 U
MW-31		4/29/2003	4 U	38800	1130	4 U	8 U	131.0	320
MW-31		10/13/2003	4 U	41300	1230	4.4	8 U	147.0	1 U
MW-31		4/8/2004	3	35600	1220	4.7	8 U	120.0	1.5 B
MW-31		7/14/2005	2 U	33400	1150	3.9	8 U	127.0	10 U
MW-31		2/3/2006	4 U	31800	1150	2.9	8 U	130.0	10 U
MW-31		7/12/2006	4 U	36100	1160	3	8 U	132.0	2 U
MW-31		1/12/2007	4 U	34300	1170	4	16	134.0	2 U
MW-31		7/17/2007	4 U	37100	1180	7	8 U	149.0	2 U
MW-31		1/29/2008	2 U	32200	1160	4 U	8 U	138.0	10 U
MW-31		6/18/2008	1.8 U	39500	1160	3.2	5 U	132.0	2 U
MW-31		1/22/2009	1.5 U	32400	1080	3	5 U	149.7	2 U
MW-31		7/10/2009	1.3	40300	1170	3.2	10 U	148.0	2 U
MW-31		1/28/2010	1.3	31200	1130	3.2	10 U	147.0	2 U
MW-31		7/30/2010	1.4 J	38600	1150	3	5 U	143.0	2 U
MW-31D		7/30/2010	1.3 J	37600	1110	3.2	5 U	144.0	2 U
MW-31		1/21/2011	1.4 J	36500	1160	3 J	10 U	157.0	2 U
MW-31D		1/21/2011	1.4 J	36300	1160	3 J	10 U	161.0	2 U
MW-31		7/18/2011	1.5 J	39600	1210	3.9 J	10 U	132.0	2 U
MW-31		1/24/2012	1.4 J	34500	1190	3.4 J	10 U	143.0	2 U
MW-31		7/18/2012	1.5 J	39700	1150	3.2	5 U	138.0	2 U
MW-31		1/22/2013	1.6 J	42100	1210	3.5 J	10 U	134.0	2.7
MW-31		7/19/2013	1.5 J	39900	1180	3.1	7 J	149.0	3
MW-31		1/31/2014	1.5 J	44300	1220	3.3	5 U	139.0	2 U
MW-31		7/28/2014	1.6 J	48100	1170	3.3	5 U	150.0	2 U
MW-31		2/9/2015	2.5 J	70400	1180	3.8 J	10 U	144.0	2 U
MW-31		7/29/2015	2 J	59600	1220	3.1 J	10 U	148.0	2 U
MW-31D		7/29/2015	2 J	58800	1220	3.7 J	10 U	149.0	2 U
MW-31		1/19/2016	1.4 J	40400	1010	2.7 J	10 U	148.0	2 U
MW-31D		1/19/2016	1.5 J	40600	1010	2.6 J	10 U	148.0	2 U
MW-31		7/14/2016	1.9 J	58300	1250	3.6 J	10 U	36.8	2 U
MW-31D		7/14/2016	2 J	58500	1260	3.4 J	10 U	142.0	2 U
MW-31		1/26/2017	1.7 J	48300	1190	3.4 J	10 U	141.0	2 U
MW-31		7/20/2017	1.9 J	47500	1240	3.5 J	10 U	140.0	2 U
MW-31D		7/20/2017	1.9 J	48300	1250	3.5 J	10 U	130.0	2 U
MW-31		2/9/2018	2.3 J	52700	1260	3.6 J	10 U	137.0	2.8
MW-31		8/1/2018	1.5 J	42400	1170	3.1 J	10.3 U	133.0	2 U
MW-31		1/15/2019	1.9 J	45900	1140	3.3 J	10 U	133.0	2 U
MW-31		7/10/2019	1.6 J	42200	1210	3.1 J	10 U	136.0	2 U
MW-33	BG	7/5/2001	6 U	14 U	54	5 U	8 U	20.4	1 U
MW-33		10/2/2001	NS	NS	NS	NS	NS	NS	NS
MW-33		1/17/2002	6 U	14 U	27	3.67	42.2	8.7	4 U
MW-33		4/9/2002	6 U	14 U	20	4.36	32.12	8.3	4 U
MW-33		7/8/2002	4 U	14 U	16	4 U	462.6	5.3	4 U
MW-33		10/8/2002	4 U	14 U	3	4 U	23	7.9	4 U
MW-33		1/21/2003	4 U	14 U	1	4 U	26	7.8	1.1
MW-33		4/22/2003	4 U	14 U	1 U	4 U	48	7.2	1 U
MW-33		10/7/2003	4 U	14 U	1 U	4 U	19	8.5	1 U
MW-33		4/5/2004	2 U	14 U	1 U	3	15	8.3	1 U
MW-33		7/18/2005	2 U	14 U	1 U	3	19	12.0	10 U
MW-33		1/31/2006	4 U	14 U	1 U	2.7	18	8.0	10 U
MW-33		7/10/2006	4 U	14 U	1 U	3	11	6.6	2 U
MW-33		1/12/2007	4 U	14 U b		6	33	7.2	2 U
MW-33		7/20/2007	4 U	14 U	1	4 U	70	6.2	2 U
MW-33		1/30/2008	2 U	14 U	1 U	4 U	68	5.3	10 U
MW-33		6/19/2008	0.6 U	30 U	2 U	3.2 U	29	5.1	2 U
MW-35	BG	7/5/2001	6 U	14 U	109	5 U	8 U	46.3	1 U
MW-35		10/2/2001	6 U	14 U	19	2.3	48.85	47.1	1 U
MW-35		1/17/2002	6 U	14 U	6	2.97	8 U	43.1	4 U
MW-35		4/9/2002	6 U	47	2	4 U	8 U	42.5	4 U
MW-35		7/8/2002	4 U	14 U	1 U	4 U	8 U	42.5	4 U
MW-35		10/8/2002	4 U	14 U	1 U	4 U	8 U	43.8	4 U
MW-35		1/14/2003	4 U	14 U	1 U	4 U	8 U	48.6	1 U
MW-35		4/22/2003	4 U	14 U	1 U	4 U	8 U	44.2	1 U
MW-35		10/7/2003	4 U	25	1 U	4 U	8 U	45.0	1 U
MW-35		4/5/2004	2 U	14 U	1 U	2 U	8 U	45.0	1 U
MW-35		7/18/2005	2 U	14 U	1 U	2 U	8 U	44.0	10 U
MW-35		2/1/2006	4 U	14 U	1 U	2 U	8 U	42.0	10 U
MW-36	POC	7/6/2001	14.7	12552	728	5 U	8 U	69.3	1 U
MW-36		10/8/2001	9	12067	543	2 U	8 U	59.1	1 U
MW-36		1/22/2002	8.46	15896	648	2.85	8 U	41.6	4 U
MW-36		4/10/2002	6 U	24681	663	4 U	8 U	96.5	4 U
MW-36		7/11/2002	10	15300	670	4 U	8 U	44.5	4 U
MW-36		10/9/2002	9	16500	687	4 U	8 U	44.0	4 U
MW-36		1/15/2003	8	17300	705	4 U	8 U	40.4	1 U
MW-36		4/23/2003	6	14700	693	4 U	8 U	41.0	1 U
MW-36		10/9/2003	7	16400	728	4 U	8 U	36.8	2.9 B
MW-36		4/6/2004	9	17100	778	2 U	8 U	52.5	1 U
MW-36		7/15/2005	8	18000	852	2 U	8 U	38.9	10 U
MW-36		2/1/2006	4 U	255	26.1	2 U	43	2.2	10 U
MW-36		7/13/2006	14	18200	850	2	9	35.5	2 U
MW-36		1/12/2007	9	17600	850	4 U	8 U	29.1	2 U
MW-36		7/20/2007	9	18300	870	4 U	8 U	34.4	2 U
MW-36		1/25/2008	6	11600	890	4 U	26	28.3	10 U
MW-36		6/19/2008	5	15000	690	1.1 U	9 U	28.6	2 U
MW-36		1/22/2009	1.7 U	1000	390	2.7	29	8.8	2 U
MW-36D		1/22/2009	0.9 U	420	300	2.4	28	12.0	2 U
MW-36		7/9/2009	3.1	18100	742	1 U	10 U	29.8	2 U

Table 1
Performance Monitoring
Ground Water Analytical Results
Everett Landfill

			Dissolved Metals					Conventional	SVOC
	Chemical Name		Arsenic	Iron	Manganese	Nickel	Zinc	Chloride	bis (2-Ethylhexyl) phthalate
	Unit		(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(mg/L)	(ug/L)
Sample Location	Sample Type	C.L. / Date	25	23687	4040	10	76.6	230	10
MW-36		1/29/2010	**3.8**	**6820**	**759**	**2.3**	36	**23.2**	2 U
MW-36		7/29/2010	**4.1**	**15800**	**685**	0.9 J	5 U	**40.3**	2 U
MW-36		1/20/2011	**4.5**	**16400**	**685**	1 U	10 U	**32.3**	2 U
MW-36		7/19/2011	**4.7**	**16100**	**698**	1.1 J	10 U	**32.6**	2 U
MW-36		1/23/2012	**5.6**	**16000**	**724**	1 U	10 U	**27.5**	2 U
MW-36D		1/23/2012	**5.6**	**16000**	**728**	1 U	10 U	**28.5**	2 U
MW-36		7/18/2012	**4.8**	**14800**	**677**	0.8 J	5 U	**29.4**	2 U
MW-36		1/22/2013	**4.4**	**14200**	**850**	2.5 J	22 J	**25.7**	2 U
MW-36		7/18/2013	**6.3**	**15800**	**745**	0.9 J	6 J	**26.0**	2 U
MW-36		1/31/2014	**5.6**	**14800**	**757**	0.8 J	5 U	**22.4**	2 U
MW-36		7/25/2014	**5.4**	**12300**	**650**	0.9 J	5 U	**33.0**	2 U
MW-36		2/10/2015	**6.6**	**18700**	**765**	1 U	10 U	**27.0**	2 U
MW-36		7/29/2015	1 U	40 U	1 U	1 U	10 U	**210.0**	2 U
MW-36		1/22/2016	**4.6**	**24900**	**1350**	2.7 J	10 U	**253.0**	2 U
MW-36		7/14/2016	**5.1**	**580**	**131**	3.3 J	10 U	**86.4**	2 U
MW-36		2/1/2017	1 U	**240**	**94.2**	2.2 J	10 U	**111**	2 U, H
MW-36		7/20/2017	2.2 J	**680**	**351**	2 J	10 U	**69.8**	2 U
MW-36		2/9/2018	2.2 J	**10500**	**640**	1 U	10 U	**131**	2 U
MW-36		8/1/2018	1.4 J	**3960**	**427**	1.3 J	10.3 U	**91.4**	2 U
MW-36		1/29/2019	1.1 J	**4740**	**277**	1 U	10 U	**81**	2 U
MW-36		7/11/2019	3.6 J	**7450**	**334**	1 U	10 U	**49.7**	2 U
MW-37	POC	7/6/2001	6 U	**22907**	**700**	5 U	8 U		1 U
MW-37		10/8/2001	6 U	**20327**	**599**	2 U	8 U	**87.0**	1 U
MW-37		1/22/2002	6 U	**22525**	**678**	**2.87**	**8.1**	**92.3**	4 U
MW-37		4/10/2002	**9.4**	**16182**	**665**	4 U	8 U	**48.3**	4 U
MW-37		7/11/2002	4 U	**25400**	**688**	4 U	8 U	**92.3**	4 U
MW-37	not	10/9/2002	4 U	**25500**	**664**	4 U	**11**	**112.0**	4 U
MW-37	sampled	1/15/2003	4 U	**26800**	**694**	4 U	8 U	**114.0**	1 U
MW-37	2006-2015	4/23/2003	4 U	**23100**	**598**	4 U	8 U	**117.0**	1 U
MW-37	due to	10/8/2003	4 U	**22700**	**651**	4 U	8 U	**190.0**	1 U
MW-37	saline river	4/6/2004	**3**	**25100**	**724**	2 U	8 U	**157.0**	1 U
MW-37	water	7/15/2005	2 U	**26500**	**807**	2 U	8 U	**248.0**	10 U
MW-37	biasing	2/1/2006	4 U	**29900**	**956**	2 U	8 U	**461.0**	10 U
MW-37	results	7/13/2006	4 U	**26500**	**840**	2 U	**61**	**257.0**	2 U
MW-37D		7/13/2006	4 U	**26800**	**840**	2 U	8 U	**298.0**	2 U
MW-37		7/29/2015	1.2 J	**2710**	**491**	1.3 J	10 U	**31.0**	2 U
MW-37		1/22/2016	1 U	**33300**	**894**	1.4 J	23 J	**155.0**	2 U
MW-37		7/14/2016	1 U	**28200**	**720**	1 U	10 U	**251.0**	2 U
MW-37		2/1/2017	1 U	**35100**	**1230**	1 U	10 U	**1690**	2 U, H
MW-37D		2/1/2017	1 U	**34400**	**1200**	1 U	10 U	**1680**	2 U, H
MW-37	resample	4/5/2017						**840**	
MW-37		7/20/2017	1 U	**18900**	**830**	1 U	10 U	**1790**	2 U
MW-37		2/9/2018	1 U	**9180**	**494**	1 U	10 U	**1590**	**2.5**
MW-37		8/2/2018	1 U	**11100**	**509**	1 U	10.3 U	**1360**	2 U
MW-37		1/29/2019	1 U	**12800**	**419**	1 U	10 U	**465**	2 U
MW-37		7/11/2019	1 U	**20600**	**873**	1 U	10 U	**884**	2 U
MW-37D		7/11/2019	1 U	**20600**	**870**	1 U	10 U	**880**	2 U
MW-38	POC	7/6/2001	6 U	**3022**	**384**	5 U	8 U	**17.1**	1 U
MW-38		10/8/2001	6 U	**4066**	**287**	2 U	8 U	**20.6**	1 U
MW-38		1/23/2002	6 U	**3653**	**272**	2 U	**8.3**	**15.4**	4 U
MW-38		4/12/2002	6 U	**3665**	**263**	4 U	8 U	**15.4**	**5.4**
MW-38		7/11/2002	4 U	**3480**	**262**	4 U	8 U	**19.4**	4 U
MW-38		10/15/2002	4 U	**2290**	**234**	4 U	8 U	**19.2**	4 U
MW-38		1/15/2003	4 U	**4200**	**284**	4 U	8 U	**20.9**	1 U
MW-38		4/23/2003	4 U	**1560**	**219**	4 U	8 U	**16.2**	1 U
MW-38		10/8/2003	4 U	**4070**	**296**	4 U	8 U	**23.8**	1 U
MW-38		4/6/2004	2 U	**3690**	**279**	2 U	8 U	**22.1**	1 U
MW-38		7/15/2005	2 U	**4850**	**331**	2 U	8 U	**27.0**	10 U
MW-38		2/2/2006	4 U	**4130**	**289**	2 U	8 U	**24.0**	10 U
MW-38		7/10/2006	4 U	**4230**	**290**	2 U	8 U	**24.4**	2 U
MW-38		1/10/2007	4 U	**4120**	**300**	4 U	8 U	**26.4**	2 U
MW-38		7/20/2007	4 U	**1680**	**260**	4 U	8 U	**22.5**	2 U
MW-38		1/25/2008	2 U	**2470**	**230**	4 U	**31**	**16.5**	10 U
MW-38		6/19/2008	0.5 U	**6240**	**325**	0.5 U	5 U	**39.2**	2 U
MW-38		1/22/2009	0.5 U	**420**	**39**	1.2 U	**600**	**8.9**	2 U
MW-38		2/26/2009					**36**		
MW-38		7/9/2009	1 U	**3220**	**259**	1 U	**52**	**22.4**	2 U
MW-38		1/29/2010	1 U	**3300**	**267**	1 U	10 U	**16.2**	2 U
MW-38		7/29/2010	0.5 U	**3480**	**253**	0.5 U	5 U	**17.1**	2 U
MW-38		1/20/2011	1 U	**3610**	**265**	1 U	10 U	**13.9**	2 U
MW-38		7/18/2011	1 U	**4020**	**272**	1 U	10 U	**22.4**	2 U
MW-38		1/24/2012	1 U	**4000**	**301**	1 U	10 U	**17.1**	2 U
MW-38		7/18/2012	0.5 U	71 J	**107**	0.5 U	17 J	**16.2**	2 U
MW-38		1/22/2013	1 U	**3530**	**287**	1 U	10 U	**12.8**	2 U
MW-38		7/192013	0.5 U	**4190**	**288**	0.5 U	7 J	**30.4**	**2.1**
MW-38		2/6/2014	0.5 U	**3420**	**264**	0.5 U	5 U	**12.8**	2 U
MW-38		7/28/2014	0.5 U	**550**	**136**	0.5 U	7 J	**15.0**	2 U
MW-38		2/9/2015	1 U	**2720**	**236**	2 J	11 J	**10.5**	2 U
MW-38		7/29/2015	1 U	40 U	**213**	1 U	14 J	**11.1**	2 U
MW-38		1/22/2016	1 U	**3400**	**275**	1 U	10 U	**9.1**	2 U
MW-38		7/14/2016	1 U	**5460**	**502**	1 U	10 U	**86.4**	2 U
MW-38		2/1/2017	1 U	**3490**	**306**	1 U	10 U	**17.0**	**2** H
MW-38		7/20/2017	1 U	**3580**	**300**	1 U	10 U	**17.7**	2 U
MW-38		2/9/2018	1 U	**2810**	**295**	1 U	10 U	**11.0**	2 U
MW-38		8/2/2018	1 U	**1230**	**210**	1 U	10.3 U	**12.8**	2 U
MW-38D		8/2/2018	1 U	**970**	**202**	1 U	10.3 U	**12.9**	2 U
MW-38		1/29/2019	1 U	**2430**	**271**	1 U	10 U	**12.4**	2 U
MW-38D		1/29/2019	1 U	**2400**	**274**	1 U	10 U	**12.2**	2 U
MW-38		7/11/2019	1 U	**800**	**169**	1 U	10 U	**12.1**	2 U

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Ground Water Analytical Results
Everett Landfill

			Dissolved Metals					Conventional	SVOC
	Chemical Name		Arsenic	Iron	Manganese	Nickel	Zinc	Chloride	bis (2-Ethylhexyl) phthalate
	Unit		(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(mg/L)	(ug/L)
Sample Location	Sample Type	C.L. / Date	25	23687	4040	10	76.6	230	10
MW-39	POC	7/6/2001	6 U	**420**	**206**	5 U	30	**49.8**	1 U
MW-39		10/8/2001	6 U	**916**	**236**	2 U	8 U	**45.7**	1 U
MW-39		1/23/2002	6 U	**1365**	**398**	2 U	8 U	**7.9**	**6.5**
MW-39		4/12/2002	6 U	**1638**	**384**	4 U	8 U	**6.8**	**7.2**
MW-39		7/9/2002	**8**	**2520**	**430**	4 U	**12**	**6.2**	**4.8**
MW-39		10/15/2002	**4**	**2740**	**398**	4 U	8 U	**5.6**	4 U
MW-39		1/15/2003	4 U	**2870**	**353**	4 U	8 U	**6.5**	1 U
MW-39		4/24/2003	4 U	**2080**	**363**	4 U	8 U	**5.1**	**74**
MW-39		10/8/2003	4 U	**3690**	**366**	4 U	8 U	**5.6**	1 U
MW-39		4/6/2004	**4**	**3730**	**323**	2 U	8 U	**5.3**	1 U
MW-39		7/15/2005	2 U	**18.2**	**300**	2 U	**16**	**6.0**	10 U
MW-39		2/2/2006	**6**	**3780**	**269**	2 U	8 U	**5.0**	10 U
MW-39		7/10/2006	4 U	**990**	**220**	2 U	**17**	**4.3**	2 U
MW-39		1/10/2007	4 U	**6980**	**280**	4 U	8 U	**5.4**	2 U
MW-39		7/19/2007	4 U	**5310**	**270**	4 U	8 U	**5.7**	2 U
MW-39D		7/19/2007	4 U	**5490**	**280**	4 U	8 U	**5.9**	2 U
MW-39		1/24/2008	**3**	**5560**	**260**	4 U	8 U	**5.8**	10 U
MW-39		6/18/2008	b	**4320**	**282**	0.5 U	5 U	**5.3**	2 U
MW-39		1/22/2009	1.5 U	**1950**	**252**	0.5 U	9 U	**6.1**	2 U
MW-39		7/9/2009	**1.1**	**1960**	**154**	1 U	10 U	**5.9**	2 U
MW-39		1/29/2010	**2.1**	**4930**	**239**	1 U	10 U	**6.3**	2 U
MW-39D		1/29/2010	**2.2**	**5030**	**240**	1 U	10 U	**6.2**	2 U
MW-39		7/29/2010	1.5 J	**2990**	**224**	0.5 U	5 U	**6.1**	2 U
MW-39		1/20/2011	2.5 J	**5750**	**249**	1 U	10 U	**6.3**	2 U
MW-39		7/18/2011	1.6 J	**3210**	**212**	1 U	10 U	**5.6**	2 U
MW-39		1/24/2012	2.6 J	**6150**	**246**	1 U	10 U	**5.4**	2 U
MW-39		7/18/2012	**2.1**	**5430**	**234**	0.5 U	5 U	**5.9**	2 U
MW-39		1/22/2013	NS	NS	NS	NS	NS	NS	NS
MW-39R		7/29/2015	2 J	130 J	229	2 J	10 U	5.0	8.1
MW-39R		1/19/2016	2.4 J	**650**	**255**	2.1 J	30 J	**5.5**	2 U
MW-39R		7/15/2016	1 U	**4040**	**231**	1 U	10 U	**7.1**	2 U
MW-39R		1/26/2017	1 U	**4270**	**272**	1 U	10 U	**7.6**	2 U
MW-39R		7/20/2017	1 U	40 U	**10.1**	1.4 J	10 U	**1.4**	2 U
MW-39R		2/9/2018	1 U	**4460**	**249**	1 U	10 U	**7.9**	2 U
MW-39R		7/31/2018	1 U	**4600**	**239**	1 U	10.3 U	**7.6**	2 U
MW-39R		1/29/2019	1 U	40 U	**8.2**	1.0 J	10 U	**3.0**	2 U
MW-39R		7/10/2019	1 U	**2700**	**227**	1 U	10 U	**4.5**	2 U
MW-40		7/10/2006	4 U	**20100**	**450**	2 U	8 U		
MW-40		1/9/2007	4 U	**6060**	**940**	4 U	8 U	**225.0**	2 U
MW-40		7/19/2007	4 U	**4080**	**730**	4 U	8 U	**24.1**	2 U
MW-40		1/30/2008	2 U	**12200**	**1190**	4 U	8 U	**166.0**	10 U
MW-41		7/10/2006	4 U	**5360**	**970**	2 U	8 U		
MW-41		1/9/2007	4 U	**5780**	**1030**	4 U	8 U	**1610.0**	2 U
MW-41		7/19/2007	4 U	**4710**	**990**	4 U	8 U	**1880.0**	2 U
MW-41		1/30/2008	2 U	**1090**	**2710**	4 U	40 U	**6120.0**	10 U
MW-42		7/10/2006	**24**	**7290**	**430**	2 U	8 U	**8.4**	2 U
MW-42D		7/15/2006	**23**	**7280.0**	**420**	0 U	8 U	**4.0**	2 U
MW-42		1/9/2007	**22**	**7300.0**	**410**	4 U	8 U	**3.8**	2 U
MW-42		7/19/2007	**21**	**7040.0**	**390**	4 U	8 U	**4.5**	2 U
MW-42		1/30/2008	**22**	**7090.0**	**390**	4 U	8 U	**3.9**	10 U

NOTES:
Bold Analyte detected
Highlighted Analyte exceeds cleanup level
NET = network well for Performance and Confirmational Monitoring
BG = upgradient background well
POC = deep aquifer point of compliance monitoring well
C.L. = cleanup level
ug/L = micrograms per liter
mg/L = milligrams per liter
U = not detected at reporting limit shown
J = estimated concentration
NS = Not sampled
BKG = background (established after 3 year evaluation monitoring period)
B = likely laboratory contamination, analyte detected in field blank
D = duplicate sample collected
H = Sample analyzed outside of holding time

Table 2
Ground Water Elevations
Everett Landfill

Well	Type	Date	Water Depth	Water Elevation
MW-05	S, INT	7/2/2001	13.57	11.71
MW-05		10/1/2001	12.44	12.84
MW-05		1/16/2002	10.75	14.53
MW-05		4/8/2002	10.97	14.31
MW-05		7/3/2002	14.15	11.13
MW-05		10/7/2002	14.63	10.65
MW-05		1/16/2003	13.32	11.96
MW-05		4/21/2003	10.97	14.31
MW-05		10/6/2003	15.12	10.16
MW-05		4/2/2004	14.17	11.11
		Decommissioned 1/05		
MW-08	INT	7/2/2001	19.42	7.59
MW-08		10/1/2001	22.43	4.58
MW-08		1/16/2002	19.57	7.44
MW-08		4/8/2002	19.74	7.27
MW-08		7/3/2002	21.82	5.19
MW-08		10/7/2002	22.99	4.02
MW-08		1/16/2003	17.24	9.77
MW-08		4/21/2003	20.50	6.51
MW-08		10/6/2003	23.88	3.13
MW-08		4/2/2004	21.45	5.56
		Decommissioned 1/05		
MW-11R	NET	1/16/2002	6.25	6.47
MW-11R		4/8/2002	6.60	6.12
MW-11R		4/8/2002	6.60	6.12
MW-11R		7/3/2002	8.68	4.04
MW-11R		10/7/2002	10.56	2.16
MW-11R		1/16/2003	3.12	9.60
MW-11R		4/21/2003	5.77	6.95
MW-11R		10/6/2003	3.61	9.11
MW-11R		4/2/2004	8.62	4.10
MW-11R		7/13/2005	8.10	4.62
MW-11R		2/7/2006	4.34	8.38
MW-11R		7/10/2006	7.84	4.88
MW-11R		1/8/2007	2.89	9.83
MW-11R		7/16/2007	11.76	0.96
MW-11R		1/23/2008	4.48	8.24
MW-11R		6/17/2008	9.45	3.27
MW-11R		1/13/2009	5.53	7.19
MW-11R		7/8/2009	NR	----
MW-11R		1/26/2010	4.88	7.84
MW-11R		7/28/2010	7.05	5.67
MW-11R		1/21/2011	4.73	7.99
MW-11R		7/15/2011	9.27	3.45
MW-11R		1/23/2012	NR	----
MW-11R		7/19/2012	14.65	0.42
MW-11R		1/23/2013	11.52	2.68
MW-11R		7/18/2013	11.00	3.20
MW-11R		1/31/2014	9.08	3.20
MW-11R		7/25/2014	16.82	-2.62
MW-11R		7/28/2015	11.59	2.61
MW-11R		1/19/2016	14.11	0.09
MW-11R		7/18/2016	17.19	-2.99
MW-11R		1/26/2017	12.05	2.15
MW-11R		7/20/2017	16.11	-1.91
MW-11R		2/9/2018	10.87	3.33
MW-11R		7/31/2018	16.12	-1.92
MW-11R		1/15/2019	9.17	5.03
MW-11R		7/10/2019	15.62	-1.42

Table 2
Ground Water Elevations
Everett Landfill

Well	Type	Date	Water Depth	Water Elevation
MW-14	S, INT	7/2/2001	17.85	8.40
MW-14		10/1/2001	20.38	5.87
MW-14		1/16/2002	18.20	8.05
MW-14		4/8/2002	18.45	7.80
MW-14		7/3/2002	20.36	5.89
MW-14		10/7/2002	20.35	5.90
MW-14		1/16/2003	19.52	6.73
MW-14		4/21/2003	18.16	8.09
MW-14		10/6/2003	20.39	5.86
		Decommissioned 1/05		
MW-17	S, INT	7/2/2001	11.32	13.89
MW-17		10/1/2001	2.91	22.30
MW-17		1/16/2002	NR	----
MW-17		4/8/2002	NR	----
MW-17		7/3/2002	NR	----
MW-17		10/7/2002	NR	----
MW-17		1/16/2003	NR	----
MW-17		4/21/2003	13.91	12.44
MW-17		10/6/2003	17.40	7.76
MW-17		4/2/2004	16.95	9.40
		Decommissioned 1/05		
MW-21	NET	7/2/2001	17.19	25.33
MW-21		10/1/2001	17.23	24.96
MW-21		1/16/2002	16.51	25.68
MW-21		4/8/2002	16.39	25.80
MW-21		7/3/2002	16.72	25.47
MW-21		10/7/2002	17.19	25.00
MW-21		1/16/2003	17.10	25.09
MW-21		4/21/2003	16.93	25.26
MW-21		10/6/2003	17.78	24.41
MW-21		4/2/2004	17.52	24.67
MW-21		7/13/2005	17.79	24.40
MW-21		2/7/2006	17.00	25.19
		Abandoned, 2006		
MW-21R	NET	1/13/2009	13.78	25.58
MW-21R		7/8/2009	14.26	25.10
MW-21R		1/26/2010	13.94	25.42
MW-21R		7/28/2010	13.06	26.30
MW-21R		1/21/2011	13.08	26.28
MW-21R		7/15/2011	12.66	26.70
MW-21R		1/23/2012	13.05	26.31
MW-21R		7/19/2012	12.55	26.81
MW-21R		1/23/2013	11.78	27.58
MW-21R		7/18/2013	12.19	27.17
MW-21R		2/1/2014	12.32	27.04
MW-21R		7/25/2014	12.36	27.00
MW-21R		2/10/2015	11.95	27.41
MW-21R		7/30/2015	12.61	26.75
MW-21R		1/19/2016	12.78	26.58
MW-21R		7/18/2016	12.72	26.64
MW-21R		1/26/2017	12.41	26.95
MW-21R		7/20/2017	12.92	26.44
MW-21R		2/9/2018	11.42	27.94
MW-21R		7/31/2018	11.91	27.45
MW-21R		1/15/2019	11.86	27.50
MW-21R		7/10/2019	12.45	26.91

Table 2
Ground Water Elevations
Everett Landfill

Well	Type	Date	Water Depth	Water Elevation
MW-22	S, NET	7/2/2001	10.98	16.79
MW-22		10/1/2001	10.93	16.84
MW-22		1/16/2002	11.04	16.73
MW-22		4/8/2002	10.94	16.83
MW-22		7/3/2002	11.01	16.76
MW-22		10/7/2002	11.05	16.72
MW-22		1/16/2003	10.99	16.78
MW-22		4/21/2003	10.94	16.83
MW-22		10/6/2003	11.01	16.76
MW-22		4/2/2004	10.95	16.82
MW-22		7/13/2005	10.99	16.78
MW-22		2/7/2006	10.87	16.90
MW-22		7/10/2006	10.84	16.93
MW-22		1/8/2007	10.79	16.98
MW-22		7/16/2007	8.43	19.34
MW-22		1/23/2008	10.68	17.09
MW-22		6/17/2008	10.78	16.99
MW-22		1/13/2009	10.63	17.14
MW-22		7/8/2009	NR	----
MW-22		1/26/2010	NR	----
MW-22		7/28/2010	NR	----
MW-22		1/21/2011	NR	----
MW-22		7/15/2011	10.50	17.27
MW-22		1/23/2012	13.13	14.64
MW-22		7/19/2012	NR	----
MW-22		1/23/2013	15.56	12.21
MW-22		7/18/2013	15.78	11.99
MW-22		2/1/2014	15.81	11.96
MW-22		7/28/2014	21.65	6.12
MW-22		2/10/2015	15.43	12.34
MW-23	S, INT	7/2/2001	19.44	12.05
MW-23		10/1/2001	19.70	11.79
MW-23		1/16/2002	18.71	12.78
MW-23		4/8/2002	18.69	12.80
MW-23		7/3/2002	19.58	11.91
MW-23		10/7/2002	19.74	11.75
MW-23		1/16/2003	18.90	12.59
MW-23		4/21/2003	18.42	13.07
MW-23		10/6/2003	19.72	11.77
MW-23		4/2/2004	18.93	12.56
		Decommissioned 1/05		
MW-24	S, NET	7/2/2001	8.14	9.76
MW-24		10/1/2001	9.52	8.38
MW-24		1/16/2002	6.66	11.24
MW-24		4/8/2002	7.33	10.57
MW-24		7/3/2002	8.68	9.22
MW-24		10/7/2002	16.73	1.17
MW-24		1/16/2003	7.29	10.61
MW-24		4/21/2003	6.95	10.95
MW-24		10/6/2003	11.14	6.76
MW-24		4/2/2004	7.61	10.29
MW-24		7/13/2005	8.68	9.22
MW-24		2/7/2006	6.97	10.93
MW-24		7/10/2006	8.26	9.64
MW-24		1/8/2007	7.71	10.19
MW-24		7/16/2007	6.66	11.24
MW-24		1/23/2008	7.36	10.54
MW-24		6/17/2008	7.57	10.33
MW-24		1/13/2009	7.04	10.86
MW-24		7/8/2009	8.65	9.25
MW-24		1/26/2010	6.90	11.00
MW-24		7/28/2010	8.26	9.64
MW-24		1/21/2011	5.90	12.00
MW-24		7/15/2011	7.82	10.08
MW-24		1/24/2012	7.50	10.40
MW-24		7/19/2012	7.66	10.24
MW-24		1/23/2013	7.35	10.55
MW-24		7/18/2013	4.12	New TOC
MW-24		1/31/2014	2.58	New TOC
MW-24		7/28/2014	3.15	New TOC
MW-24		2/9/2015	2.55	New TOC

Table 2
Ground Water Elevations
Everett Landfill

Well	Type	Date	Water Depth	Water Elevation
MW-25	S, NET	7/2/2001	8.46	7.92
MW-25		10/1/2001	8.65	7.73
MW-25		1/16/2002	6.76	9.62
MW-25		4/8/2002	7.57	8.81
MW-25		7/3/2002	8.22	8.16
MW-25		10/7/2002	9.05	7.33
MW-25		1/16/2003	6.98	9.40
MW-25		4/21/2003	7.00	9.38
MW-25		10/6/2003	9.17	7.21
MW-25		4/2/2004	7.94	8.44
MW-25		7/13/2005	8.19	8.19
MW-25		2/7/2006	6.78	9.60
MW-25		7/10/2006	8.13	8.25
MW-25		1/8/2007	5.78	10.60
MW-25		7/16/2007	7.02	9.36
MW-25		1/23/2008	6.30	10.08
MW-25		6/17/2008	6.66	9.72
MW-25		1/13/2009	6.27	10.11
MW-25		7/8/2009	8.06	8.32
MW-25		1/26/2010	5.86	10.52
MW-25		7/28/2010	7.99	8.39
MW-25		1/21/2011	4.90	11.48
MW-25		7/15/2011	7.54	8.84
MW-25		1/24/2012	5.33	11.05
MW-25		7/19/2012	6.90	9.48
MW-25		1/23/2013	6.20	10.18
MW-25		7/18/2013	3.70	NEW TOC
MW-25		1/31/2014	1.32	NEW TOC
MW-25		7/28/2014	3.54	NEW TOC
MW-25		2/9/2015	2.02	NEW TOC
MW-26	S, NET	7/2/2001	10.31	6.13
MW-26		10/1/2001	10.20	6.24
MW-26		1/16/2002	6.11	10.33
MW-26		4/8/2002	6.35	10.09
MW-26		7/3/2002	10.29	6.15
MW-26		10/7/2002	10.43	6.01
MW-26		1/16/2003	6.55	9.89
MW-26		4/21/2003	6.42	10.02
MW-26		10/6/2003	10.47	5.97
MW-26		4/2/2004	9.81	6.63
MW-26		7/13/2005	10.07	6.37
MW-26		2/7/2006	9.27	7.17
MW-26		7/10/2006	11.02	5.42
MW-26		1/8/2007	7.94	8.50
MW-26		7/16/2007	9.16	7.28
MW-26		1/23/2008	9.60	6.84
MW-26		6/17/2008	9.85	6.59
MW-26		1/13/2009	8.43	8.01
MW-26		7/8/2009	9.64	6.80
MW-26		1/26/2010	8.85	7.59
MW-26		7/28/2010	9.05	7.39
MW-26		1/21/2011	4.10	12.34
MW-26		7/15/2011	8.08	8.36
MW-26		1/23/2012	5.52	10.92
MW-26		1/23/2013	4.90	11.54
MW-26		7/18/2013	4.17	NEW TOC
MW-27	S, NET	7/2/2001	8.30	8.11
MW-27		10/1/2001	7.77	8.64
MW-27		1/17/2002	9.20	7.21
MW-27		4/8/2002	6.62	9.79
MW-27		7/3/2002	6.81	9.60
MW-27		10/7/2002	6.00	10.41
MW-27		1/16/2003	6.46	9.95
MW-27		4/21/2003	6.75	9.66
MW-27		10/6/2003	7.87	8.54
MW-27		4/2/2004	5.49	10.92
MW-27		7/13/2005	5.94	10.47
MW-27		2/7/2006	6.90	9.51
MW-27		7/10/2006	6.96	9.45
MW-27		1/8/2007	6.09	10.32
MW-27		7/16/2007	6.02	10.39
MW-27		1/23/2008	6.84	9.57
MW-27		6/17/2008	7.03	9.38
MW-27		Decommissioned 11/08		

Table 2
Ground Water Elevations
Everett Landfill

Well	Type	Date	Water Depth	Water Elevation
MW-28	NET	7/2/2001	9.98	6.65
MW-28		10/1/2001	10.35	6.28
MW-28		1/17/2002	8.67	7.96
MW-28		4/8/2002	9.01	7.62
MW-28		7/3/2002	10.52	6.11
MW-28		10/7/2002	11.72	4.91
MW-28		1/16/2003	6.46	10.17
MW-28		4/21/2003	9.45	7.18
MW-28		10/6/2003	9.62	7.01
MW-28		4/2/2004	10.15	6.48
MW-28		7/13/2005	10.25	6.38
MW-28		2/7/2006	7.61	9.02
MW-28		7/10/2006	12.71	3.92
MW-28		1/8/2007	6.78	9.85
MW-28		7/16/2007	10.51	6.12
MW-28		1/23/2008	9.12	7.51
MW-28		6/17/2008	10.00	6.63
		Decommissioned 11/08		
MW-29	NET	7/2/2001	8.44	7.52
MW-29		10/1/2001	8.75	7.21
MW-29		1/16/2002	7.36	8.6
MW-29		4/8/2002	7.75	8.21
MW-29		7/3/2002	9.06	6.90
MW-29		10/7/2002	10.21	5.75
MW-29		1/16/2003	5.92	10.04
MW-29		4/21/2003	7.05	8.91
MW-29		10/6/2003	7.60	8.36
MW-29		4/2/2004	8.60	7.36
MW-29		7/13/2005	8.56	7.40
MW-29		2/7/2006	5.94	10.02
MW-29		7/10/2006	11.27	4.69
MW-29		1/8/2007	5.08	10.88
MW-29		7/16/2007	8.54	7.42
MW-29		1/23/2008	7.41	8.55
MW-29		6/17/2008	8.50	7.46
MW-29		1/13/2009	6.03	9.93
MW-29		7/8/2009	9.64	6.32
MW-29		1/26/2010	5.12	10.84
MW-29		7/28/2010	10.05	5.91
MW-29		1/21/2011	3.84	12.12
MW-29		7/15/2011	5.63	10.33
MW-29		1/23/2012	NR	----
		Well damaged		
MW-29R		7/28/2015	7.64	No TOC Survey
MW-29R		1/19/2016	11.50	No TOC Survey
MW-29R		7/14/2016	4.92	No TOC Survey
MW-29R		1/26/2017	3.18	No TOC Survey
MW-29R		7/20/2017	5.65	No TOC Survey
MW-29R		2/8/2018	1.92	No TOC Survey
MW-29R		8/1/2018	3.90	No TOC Survey
MW-29R		1/29/2019	3.61	No TOC Survey
MW-29R		7/10/2019	5.87	No TOC Survey
MW-30	NET	7/2/2001	7.95	7.95
MW-30		10/1/2001	13.29	2.61
MW-30		1/16/2002	9.06	6.84
MW-30		4/8/2002	9.09	6.81
MW-30		7/3/2002	11.70	4.20
MW-30		10/7/2002	12.87	3.03
MW-30		1/16/2003	5.92	9.98
MW-30		4/21/2003	11.07	4.83
MW-30		10/6/2003	6.08	9.82
MW-30		4/2/2004	11.38	4.52
MW-30		7/13/2005	11.51	4.39
MW-30		2/7/2006	7.25	8.65
MW-30		7/10/2006	15.37	0.53
MW-30		1/8/2007	6.37	9.53
MW-30		7/16/2007	13.18	2.72
MW-30		1/23/2008	7.21	8.69
MW-30		6/17/2008	13.11	2.79
MW-30		1/13/2009	8.40	7.50
MW-30		7/8/2009	NR	----
MW-30		1/26/2010	8.37	7.53
MW-30		7/28/2010	10.17	5.73
MW-30		1/21/2011	6.12	9.78
MW-30		7/15/2011	11.28	4.62
MW-30		1/24/2012	8.00	7.90
MW-30		7/19/2012	13.90	2.00
MW-30		1/23/2013	8.85	7.05
MW-30		7/18/2013	6.65	NEW TOC

Table 2
Ground Water Elevations
Everett Landfill

Well	Type	Date	Water Depth	Water Elevation
MW-30		1/31/2014	5.22	NEW TOC
MW-30		7/28/2014	11.87	NEW TOC
MW-30		2/9/2015	4.66	NEW TOC
MW-30		7/28/2015	13.31	NEW TOC
MW-30		1/19/2016	3.41	NEW TOC
MW-30		7/14/2016	6.79	NEW TOC
MW-30		1/26/2017	6.97	NEW TOC
MW-30		7/20/2017	7.24	NEW TOC
MW-30		2/8/2018	3.63	NEW TOC
MW-30		8/1/2018	5.37	NEW TOC
MW-30		2/8/2018	3.63	NEW TOC
MW-30		8/1/2018	5.37	NEW TOC
MW-30		1/15/2019	2.81	NEW TOC
MW-30		7/10/2019	8.33	NEW TOC
MW-31	NET	7/2/2001	11.45	6.96
MW-31		10/1/2001	15.77	2.64
MW-31		1/16/2002	12.32	6.09
MW-31		4/8/2002	12.36	6.05
MW-31		7/3/2002	15.00	3.41
MW-31		10/7/2002	16.61	1.80
MW-31		1/16/2003	8.61	9.80
MW-31		4/21/2003	13.16	5.25
MW-31		10/6/2003	9.08	9.33
MW-31		4/2/2004	14.63	3.78
MW-31		7/13/2005	14.20	4.21
MW-31		2/7/2006	10.20	8.21
MW-31		7/10/2006	18.57	-0.16
MW-31		1/8/2007	9.06	9.35
MW-31		7/16/2007	18.76	-0.35
MW-31		1/23/2008	12.58	5.83
MW-31		6/17/2008	16.24	2.17
MW-31		1/13/2009	11.34	7.07
MW-31		7/8/2009	18.93	-0.52
MW-31		1/26/2010	10.97	7.44
MW-31		7/28/2010	13.10	5.31
MW-31		1/21/2011	9.69	8.72
MW-31		7/15/2011	14.31	4.10
MW-31		1/24/2012	11.95	6.46
MW-31		7/19/2012	17.55	0.86
MW-31		1/23/2013	12.05	6.36
MW-31		7/18/2013	14.72	NEW TOC
MW-31		1/31/2014	9.35	NEW TOC
MW-31		7/28/2014	11.86	NEW TOC
MW-31		2/9/2015	7.38	NEW TOC
MW-31		7/28/2015	14.47	NEW TOC
MW-31		1/19/2016	5.29	NEW TOC
MW-31		7/14/2016	10.30	NEW TOC
MW-31		1/26/2017	8.31	NEW TOC
MW-31		7/20/2017	11.80	NEW TOC
MW-31		2/8/2018	5.80	NEW TOC
MW-31		8/1/2018	7.60	NEW TOC
MW-31		1/15/2019	3.96	NEW TOC
MW-31		7/10/2019	11.13	NEW TOC
MW-32	INT	7/2/2001	4.62	17.55
MW-32		10/1/2001	5.55	16.62
MW-32		1/17/2002	2.69	19.48
MW-32		4/8/2002	2.80	19.37
MW-32		7/3/2002	4.54	17.63
MW-32		10/7/2002	4.85	17.32
MW-32		1/16/2003	3.72	18.45
MW-32		4/21/2003	2.54	19.63
MW-32		10/6/2003	4.52	17.65
MW-32		4/2/2004	5.10	17.07
		Decommissioned 1/05		

Table 2
Ground Water Elevations
Everett Landfill

Well	Type	Date	Water Depth	Water Elevation
MW-33	BG	7/2/2001	48.54	25.76
MW-33		10/1/2001	NR	NR
MW-33		1/16/2002	48.34	25.96
MW-33		4/8/2002	48.16	26.14
MW-33		7/3/2002	48.43	25.87
MW-33		10/7/2002	NR	----
MW-33		1/17/2003	49.06	25.24
MW-33		4/21/2003	48.67	25.63
MW-33		10/6/2003	47.20	27.10
MW-33		4/2/2004	49.25	25.05
MW-33		7/13/2005	NR	----
MW-33		2/7/2006	NR	----
MW-33		7/10/2006	NR	----
MW-33		1/8/2007	NR	----
MW-33		7/16/2007	NR	----
MW-33		1/23/2008	47.97	26.33
MW-33		6/17/2008	NR	----
MW-33		1/13/2009	48.15	26.15
MW-33		7/8/2009	NR	----
MW-33		1/26/2010	48.37	25.93
MW-33		7/28/2010	48.02	26.28
MW-33		1/21/2011	NR	----
MW-33		7/15/2011	46.92	27.38
MW-33		1/23/2012	47.56	26.74
MW-33		7/19/2012	46.84	27.46
MW-33		1/23/2013	46.05	28.25
MW-33		7/18/2013	46.50	27.80
MW-33		2/1/2014	NR	----
MW-33		7/25/2014	46.60	27.70
MW-33		2/10/2015	46.33	27.97
MW-34	S, BG	7/2/2001	17.18	57.19
MW-34		10/1/2001	17.59	56.78
MW-34		1/16/2002	16.78	57.59
MW-34		4/8/2002	16.46	57.91
MW-34		7/3/2002	16.74	57.63
MW-34		10/7/2002	17.17	57.20
MW-34		1/16/2003	17.04	57.33
MW-34		4/21/2003	16.92	57.45
MW-34		10/6/2003	17.76	56.61
MW-34		4/2/2004	16.97	57.40
MW-34		7/13/2005	17.31	57.06
MW-34		2/7/2006	17.04	57.33
MW-34		7/10/2006	17.28	57.09
MW-34		1/8/2007	16.84	57.53
MW-34		7/16/2007	16.63	57.74
MW-34		1/23/2008	16.42	57.95
MW-34		6/17/2008	NR	----
MW-34		1/13/2009	16.50	57.87
MW-34		7/8/2009	NR	----
MW-34		1/26/2010	16.82	57.48
MW-34		7/28/2010	16.71	57.59
MW-34		1/21/2011	NR	----
MW-34		7/15/2011	16.15	58.15
MW-34		1/23/2012	16.61	57.69
MW-34		7/19/2012	16.24	58.06
MW-34		1/23/2013	15.85	58.45
MW-34		7/18/2013	16.15	58.15
MW-34		2/1/2014	16.45	57.85
MW-34		7/25/2014	16.60	57.70
MW-34		2/10/2015	16.17	58.13
MW-35	BG	7/2/2001	48.43	24.82
MW-35		10/1/2001	48.89	24.36
MW-35		1/16/2002	48.32	24.93
MW-35		4/8/2002	48.11	25.14
MW-35		7/3/2002	48.46	24.79
MW-35		10/7/2002	48.85	24.40
MW-35		1/16/2003	48.89	24.36
MW-35		4/21/2003	48.77	24.48
MW-35		10/6/2003	49.38	23.87
MW-35		4/2/2004	49.24	24.01
MW-35		7/13/2005	49.53	23.72
MW-35		2/7/2006	49.06	24.19
MW-35		7/10/2006	49.02	24.23
		Abandoned, 2006		

Table 2
Ground Water Elevations
Everett Landfill

Well	Type	Date	Water Depth	Water Elevation
MW-36	POC	7/2/2001	9.79	1.13
MW-36		10/1/2001	9.98	0.94
MW-36		1/16/2002	5.10	5.82
MW-36		4/8/2002	4.92	6.00
MW-36		7/3/2002	6.95	3.97
MW-36		10/7/2002	9.11	1.81
MW-36		1/16/2003	1.78	9.14
MW-36		4/21/2003	8.10	2.82
MW-36		10/6/2003	9.97	0.95
MW-36		4/2/2004	7.46	3.46
MW-36		7/13/2005	5.89	5.03
MW-36		2/7/2006	2.68	8.24
MW-36		7/10/2006	12.40	-1.48
MW-36		1/8/2007	1.07	9.85
MW-36		7/16/2007	6.82	4.10
MW-36		1/23/2008	3.53	7.39
MW-36		6/17/2008	7.98	2.94
MW-36		1/13/2009	3.34	7.58
MW-36		7/8/2009	11.44	-0.52
MW-36		1/26/2010	3.14	7.78
MW-36		7/28/2010	5.65	5.27
MW-36		1/21/2011	3.75	7.17
MW-36		7/15/2011	7.86	3.06
MW-36		1/23/2012	4.26	6.66
MW-36		7/19/2012	7.33	3.59
MW-36		1/23/2013	4.62	6.30
MW-36		7/18/2013	3.45	7.47
MW-36		1/31/2014	4.03	6.89
MW-36		7/28/2014	8.00	2.92
MW-36		2/10/2015	0.70	10.22
MW-36		7/29/2015	5.83	5.09
MW-36		1/22/2016	3.01	7.91
MW-36		7/14/2016	10.39	0.53
MW-36		2/1/2017	4.71	6.21
MW-36		7/20/2017	10.05	0.87
MW-36		2/9/2018	3.40	7.52
MW-36		8/1/2018	9.04	1.88
MW-36		1/29/2019	1.70	9.22
MW-36		7/10/2019	9.11	1.81
MW-37	POC	7/2/2001	12.41	1.87
MW-37		10/1/2001	13.77	0.51
MW-37		1/16/2002	8.30	5.98
MW-37		4/8/2002	7.99	6.29
MW-37		7/3/2002	10.12	4.16
MW-37		10/7/2002	12.55	1.73
MW-37		1/16/2003	5.27	9.01
MW-37		4/21/2003	12.10	2.18
MW-37		10/6/2003	12.89	1.39
MW-37		4/2/2004	10.82	3.46
MW-37		7/13/2005	9.02	5.26
MW-37		2/7/2006	5.79	8.49
MW-37		7/10/2006	16.15	-1.87
MW-37		1/8/2007	4.50	9.78
MW-37		7/16/2007	10.32	3.96
MW-37		1/23/2008	5.90	8.38
MW-37		6/17/2008	12.38	1.90
MW-37		1/13/2009	5.55	8.73
MW-37		7/8/2009	15.27	-0.99
MW-37		1/26/2010	6.77	7.51
MW-37		7/28/2010	8.82	5.46
MW-37		1/21/2011	7.13	7.15
MW-37		7/15/2011	11.94	2.34
MW-37		1/23/2012	NR	----
MW-37		7/29/2015	2.56	11.72
MW-37		1/22/2016	6.08	8.20
MW-37		7/14/2016	14.05	0.23
MW-37		2/1/2017	10.38	3.90
MW-37		7/20/2017	13.13	1.15
MW-37		2/8/2018	7.25	7.03
MW-37		8/2/2018	11.55	2.73
MW-37		1/29/2019	4.50	9.78
MW-37		7/10/2019	11.52	2.76

Table 2
Ground Water Elevations
Everett Landfill

Well	Type	Date	Water Depth	Water Elevation
MW-38	POC	7/2/2001	10.16	3.46
MW-38		10/1/2001	12.49	1.13
MW-38		1/16/2002	7.91	5.71
MW-38		4/8/2002	7.18	6.44
MW-38		7/3/2002	9.71	3.91
MW-38		10/7/2002	9.34	4.28
MW-38		1/16/2003	5.00	8.62
MW-38		4/21/2003	11.25	2.37
MW-38		10/6/2003	5.55	8.07
MW-38		4/2/2004	10.19	3.43
MW-38		7/13/2005	8.47	5.15
MW-38		2/7/2006	5.59	8.03
MW-38		7/10/2006	15.25	-1.63
MW-38		1/8/2007	4.17	9.45
MW-38		7/16/2007	9.12	4.50
MW-38		1/23/2008	6.75	6.87
MW-38		6/17/2008	12.82	0.80
MW-38		1/13/2009	8.06	5.56
MW-38		7/8/2009	14.34	-0.72
MW-38		1/26/2010	6.27	7.35
MW-38		7/28/2010	8.43	5.19
MW-38		1/21/2011	6.53	7.09
MW-38		7/15/2011	10.85	2.77
MW-38		1/24/2012	5.53	8.09
MW-38		7/19/2012	10.58	3.04
MW-38		1/23/2013	6.85	6.77
MW-38		7/18/2013	13.00	0.62
MW-38		1/31/2014	9.33	4.29
MW-38		7/28/2014	13.86	-0.24
MW-38		2/9/2015	2.82	10.80
MW-38		7/28/2015	13.26	0.36
MW-38		1/22/2016	5.78	7.84
MW-38		7/14/2016	12.23	1.39
MW-38		2/1/2017	11.13	2.49
MW-38		7/20/2017	13.02	0.60
MW-38		2/9/2018	5.99	7.63
MW-38		7/20/2017	13.02	0.60
MW-38		2/9/2018	5.99	7.63
MW-38		8/2/2018	12.06	1.56
MW-38		1/29/2019	5.30	8.32
MW-38		7/10/2019	8.33	5.29
MW-39	POC	7/2/2001	6.91	6.99
MW-39		10/1/2001	9.02	4.88
MW-39		1/16/2002	6.69	7.21
MW-39		4/8/2002	7.48	6.42
MW-39		7/3/2002	8.72	5.18
MW-39		10/7/2002	9.90	4.00
MW-39		1/16/2003	6.31	7.59
MW-39		4/21/2003	7.85	6.05
MW-39		10/6/2003	10.44	3.46
MW-39		4/2/2004	8.34	5.56
MW-39		7/13/2005	8.46	5.44
MW-39		2/7/2006	5.91	7.99
MW-39		7/10/2006	9.67	4.23
MW-39		1/8/2007	5.02	8.88
MW-39		7/16/2007	7.49	6.41
MW-39		1/23/2008	7.47	6.43
MW-39		6/17/2008	8.63	5.27
MW-39		1/13/2009	6.08	7.82
MW-39		7/8/2009	10.35	3.55
MW-39		1/26/2010	5.13	8.77
MW-39		7/28/2010	8.05	5.85
MW-39		1/21/2011	5.00	8.90
MW-39		7/15/2011	7.43	6.47
MW-39		1/24/2012	5.23	8.67
MW-39		7/19/2012	10.28	3.62
MW-39		1/23/2013	6.85	7.05
MW-39		7/18/2013	NR	--
MW-39		1/31/2014	NR	--
MW-39		7/25/2014	NR	--
MW-39R		7/28/2015	12.68	No TOC Survey
MW-39R		1/19/2016	9.23	No TOC Survey
MW-39R		7/15/2016	11.79	No TOC Survey
MW-39R		2/1/2017	8.44	No TOC Survey
MW-39R		7/20/2017	12.41	No TOC Survey
MW-39R		2/8/2018	7.68	No TOC Survey
MW-39R		7/31/2018	10.60	No TOC Survey
MW-39R		1/29/2019	5.90	No TOC Survey
MW-39R		7/10/2019	10.28	No TOC Survey

Table 2
Ground Water Elevations
Everett Landfill

Well	Type	Date	Water Depth	Water Elevation
MW-40	BGM	7/19/2005	14.86	-0.65
MW-40		2/7/2006	7.75	6.46
MW-40		7/10/2006	9.84	4.37
MW-40		1/8/2007	6.38	7.83
MW-40		7/16/2007	15.23	-1.02
MW-40		1/23/2008	8.01	6.20
		Decommissioned 2/08		
MW-41	BGM	7/19/2005	16.40	-2.01
MW-41		2/7/2006	7.98	6.42
MW-41		7/10/2006	9.68	4.72
MW-41		1/8/2007	6.83	7.57
MW-41		7/16/2007	14.71	-0.32
		Decommissioned 2/08		
MW-42	BGM	7/19/2005	1.25	16.04
MW-42		2/7/2006	1.84	15.45
MW-42		7/10/2006	3.80	13.49
MW-42		1/8/2007	1.52	15.77
MW-42		7/16/2007	3.24	14.49
MW-42		1/23/2008	1.40	15.89
		Decommissioned 2/08		

NOTES:

NR = no reading, well decommissioned, damaged, or not located

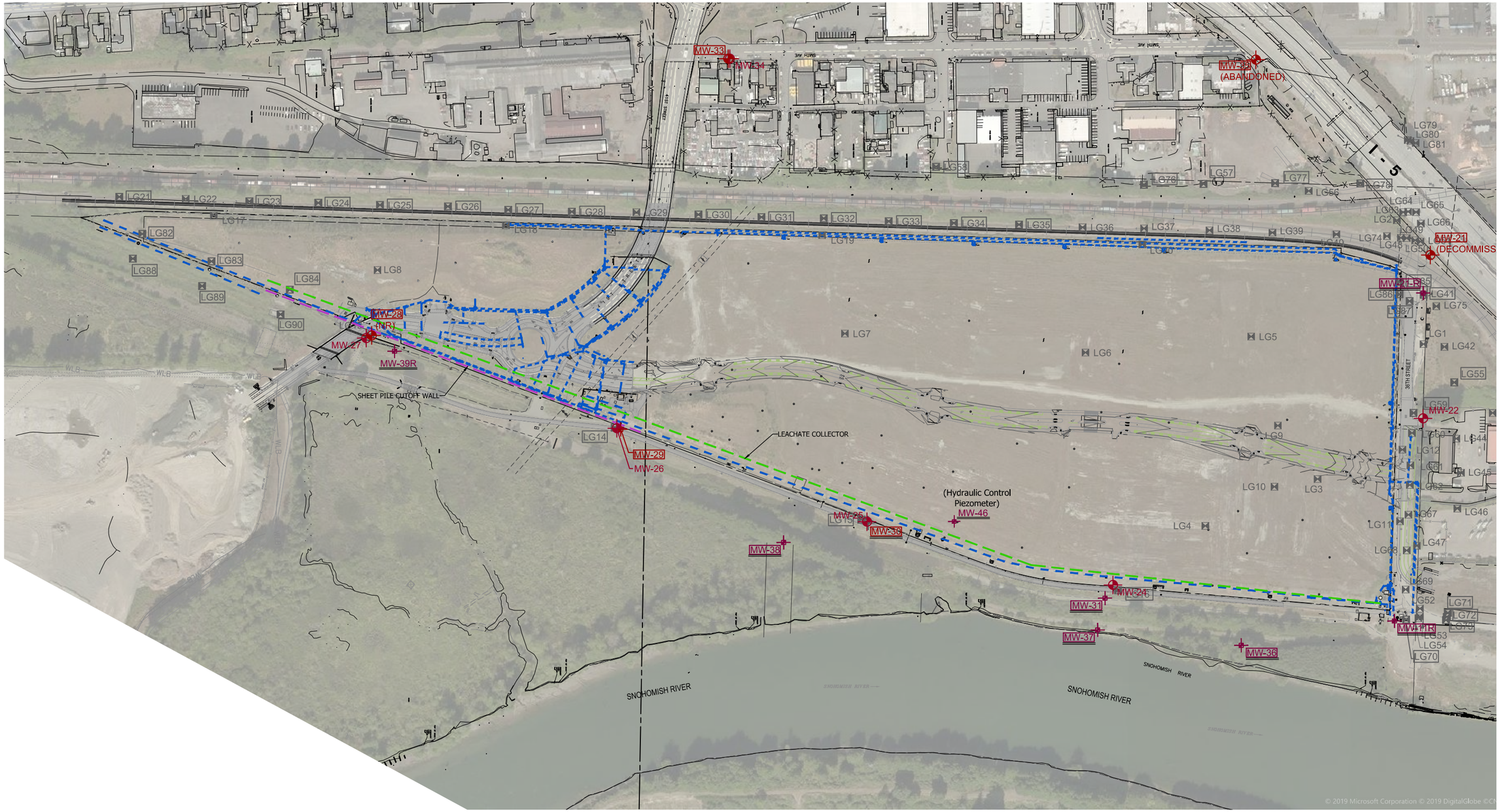
S = shallow well (all others are in deep aquifer)

INT = Interior, well located in interior of site

BG =Upgradient background well

BGM= background metals well

POC = deep aquifer point of compliance monitoring well



EXPLORATION LEGEND

- MW-12 — SHALLOW MONITORING WELLS
- MW-12 — DEEP MONITORING WELLS
- MW-12 — WELLS TO BE MONITORED

0 150 300 450 600

SCALE: 1" = 300'

BASE MAP PROVIDED BY: BING AND SURVEYOR

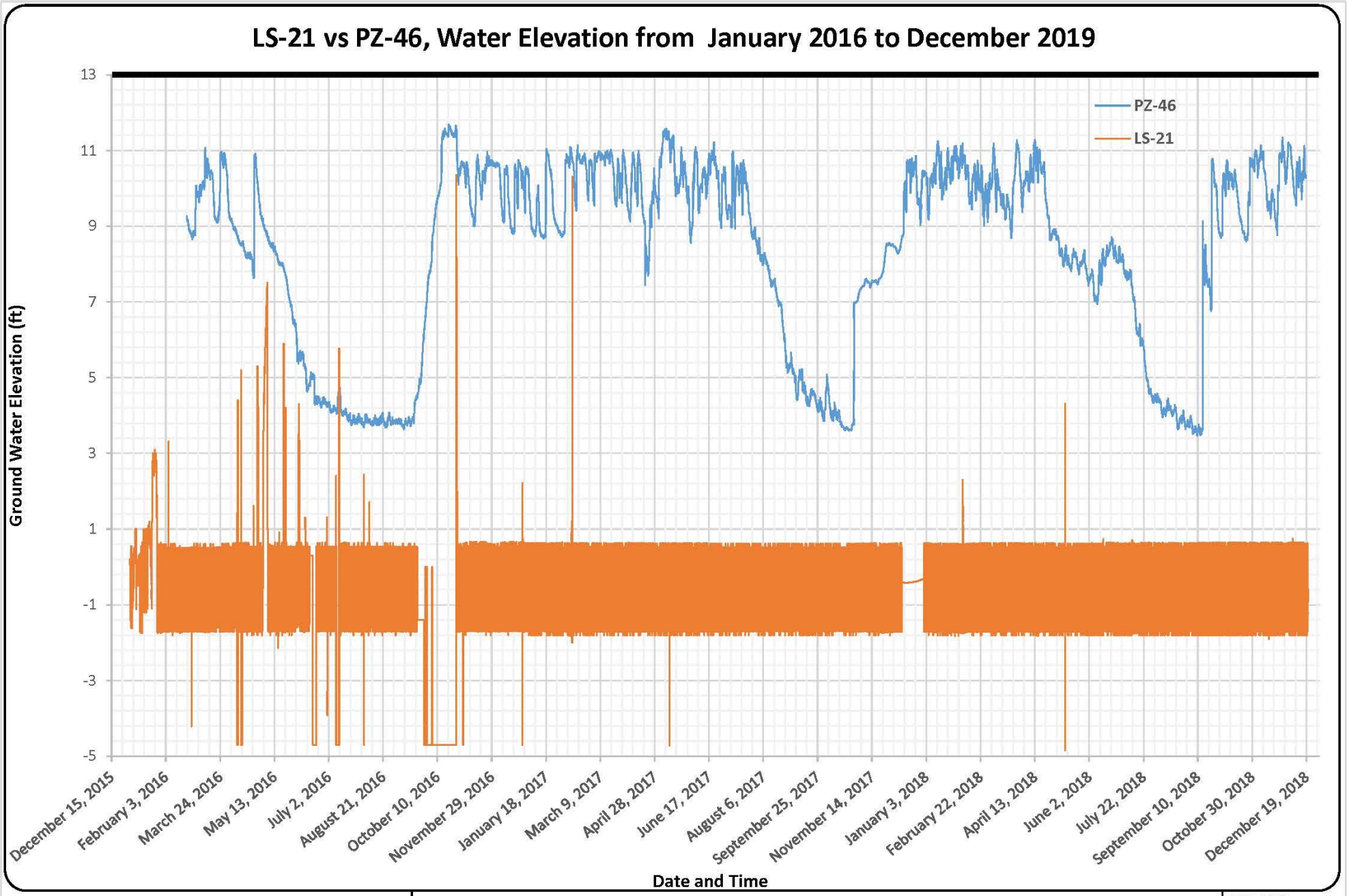
H:\HWA GEOTECHNICAL\2016-061-21 EVERGREEN\HAZMAT\2015-061 EVERETT RIVERFRONT - HAZMAT 10.18.2019.DWG <2> Plotted: 10/21/2019 4:42 PM

HWA GEOSCIENCES INC. DBE/MWBE

EVERETT LANDFILL
EVERETT, WASHINGTON

GROUNDWATER MONITORING WELLS

DRAWN BY:	FIGURE NO.:
CF / BFM	1
CHECK BY:	PROJECT NO.:
AS	2015-061-21 TASK 600



HWA GeoSciences Inc.

LS-21 vs PZ-46 WATER ELEVATION DATA

EVERETT LANDFILL
EVERETT, WASHINGTON

FIGURE NO.
2

PROJECT NO.
1998-98165

APPENDIX A

LABORATORY REPORTS AND QA/QC REPORT

January 28, 2019

Mr. Arnie Sugar
HWA Geosciences Inc.
21312 - 30th Drive SE, Suite 110
Bothell, WA 98021-7010

Dear Mr. Sugar,

On January 15th, 4 samples were received by our laboratory and assigned our laboratory project number EV19010092. The project was identified as your None Given. The sample identification and requested analyses are outlined on the attached chain of custody record.

No abnormalities or nonconformances were observed during the analyses of the project samples.

Please do not hesitate to call me if you have any questions or if I can be of further assistance.

Sincerely,

ALS Laboratory Group

Rick Bagan
Laboratory Director

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	HWA Geosciences Inc. 21312 - 30th Drive SE, Suite 110 Bothell, WA 98021-7010	DATE:	1/28/2019
		ALS JOB#:	EV19010092
		ALS SAMPLE#:	EV19010092-01
CLIENT CONTACT:	Arnie Sugar	DATE RECEIVED:	01/15/2019
CLIENT PROJECT:	None Given	COLLECTION DATE:	1/15/2019 10:20:00 AM
CLIENT SAMPLE ID	MW-21R	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Bis(2-Ethylhexyl)Phthalate	EPA-8270	U	2.0	1	UG/L	01/25/2019	JMK

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
Terphenyl-d14	EPA-8270	**107**	01/25/2019	JMK

U - Analyte analyzed for but not detected at level above reporting limit.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	HWA Geosciences Inc. 21312 - 30th Drive SE, Suite 110 Bothell, WA 98021-7010	DATE:	1/28/2019
		ALS JOB#:	EV19010092
		ALS SAMPLE#:	EV19010092-02
CLIENT CONTACT:	Arnie Sugar	DATE RECEIVED:	01/15/2019
CLIENT PROJECT:	None Given	COLLECTION DATE:	1/15/2019 11:56:00 AM
CLIENT SAMPLE ID	MW-11R	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Bis(2-Ethylhexyl)Phthalate	EPA-8270	U	2.0	1	UG/L	01/25/2019	JMK

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
Terphenyl-d14	EPA-8270	**105**	01/25/2019	JMK

U - Analyte analyzed for but not detected at level above reporting limit.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	HWA Geosciences Inc. 21312 - 30th Drive SE, Suite 110 Bothell, WA 98021-7010	DATE:	1/28/2019
		ALS JOB#:	EV19010092
		ALS SAMPLE#:	EV19010092-03
CLIENT CONTACT:	Arnie Sugar	DATE RECEIVED:	01/15/2019
CLIENT PROJECT:	None Given	COLLECTION DATE:	1/15/2019 2:01:00 PM
CLIENT SAMPLE ID	MW-30	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Bis(2-Ethylhexyl)Phthalate	EPA-8270	U	2.0	1	UG/L	01/25/2019	JMK

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
Terphenyl-d14	EPA-8270	**105**	01/25/2019	JMK

U - Analyte analyzed for but not detected at level above reporting limit.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	HWA Geosciences Inc. 21312 - 30th Drive SE, Suite 110 Bothell, WA 98021-7010	DATE:	1/28/2019
		ALS JOB#:	EV19010092
		ALS SAMPLE#:	EV19010092-04
CLIENT CONTACT:	Arnie Sugar	DATE RECEIVED:	01/15/2019
CLIENT PROJECT:	None Given	COLLECTION DATE:	1/15/2019 1:02:00 PM
CLIENT SAMPLE ID	MW-31	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Bis(2-Ethylhexyl)Phthalate	EPA-8270	U	2.0	1	UG/L	01/25/2019	JMK

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
Terphenyl-d14	EPA-8270	**87.9**	01/25/2019	JMK

U - Analyte analyzed for but not detected at level above reporting limit.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	HWA Geosciences Inc. 21312 - 30th Drive SE, Suite 110 Bothell, WA 98021-7010	DATE:	1/28/2019
		ALS SDG#:	EV19010092
		WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Arnie Sugar		
CLIENT PROJECT:	None Given		

LABORATORY BLANK RESULTS

MB-012219W - Batch 137095 - Water by EPA-8270

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Phenol	EPA-8270	U	UG/L	2.0	01/25/2019	JMK
Pyrene	EPA-8270	U	UG/L	2.0	01/25/2019	JMK
Bis(2-Ethylhexyl)Phthalate	EPA-8270	U	UG/L	2.0	01/25/2019	JMK

U - Analyte analyzed for but not detected at level above reporting limit.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	HWA Geosciences Inc. 21312 - 30th Drive SE, Suite 110 Bothell, WA 98021-7010	DATE:	1/28/2019
		ALS SDG#:	EV19010092
		WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Arnie Sugar		
CLIENT PROJECT:	None Given		

LABORATORY CONTROL SAMPLE RESULTS

ALS Test Batch ID: 137095 - Water by EPA-8270

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Phenol - BS	EPA-8270	**41.6**			5	84	01/25/2019	JMK
Phenol - BSD	EPA-8270	**36.1**	**14**		5	84	01/25/2019	JMK
Pyrene - BS	EPA-8270	**105**			18	136	01/25/2019	JMK
Pyrene - BSD	EPA-8270	**105**	**0**		18	136	01/25/2019	JMK
Bis(2-Ethylhexyl)Phthalate - BS	EPA-8270	**102**			20	150	01/25/2019	JMK
Bis(2-Ethylhexyl)Phthalate - BSD	EPA-8270	**105**	**3**		20	150	01/25/2019	JMK

APPROVED BY

Laboratory Director

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental
8620 Holly Drive, Suite 100
Everett, WA 98208
Phone (425) 356-2600
Fax (425) 356-2626
http://www.alsglobal.com

Chain Of Custody/ Laboratory Analysis Request

ALS Job# (Laboratory Use Only): EN19010092

Date 1/15/19 Page 1 Of 1

PROJECT ID:
REPORT TO COMPANY: HWA Geosciences
PROJECT MANAGER: Anne Sugar
ADDRESS: 21312 30th Dr SE
Bothell, WA 98021
PHONE: 206-754-3145 P.O. #:
E-MAIL: Asugar@hwageo.com / Ayork@hwageo.com
INVOICE TO COMPANY:
ATTENTION:
ADDRESS:

SAMPLE I.D.	DATE	TIME	TYPE	LAB#	NWTPH-HCID	NWTPH-DX	NWTPH-GX	BTEX by EPA 8021 ☐ BTEX by EPA 8260 ☐	MTBE by EPA 8021 ☐ MTBE by EPA 8260 ☐	Halogenated Volatiles by EPA 8260	Volatile Organic Compounds by EPA 8260	EDB / EDC by EPA 8260 SIM (water)	EDB / EDC by EPA 8260 (soil)	Semivolatile Organic Compounds by EPA 8270 *	Polycyclic Aromatic Hydrocarbons (PAH) by EPA 8270 SIM	PCB by EPA 8082 ☐ Pesticides by EPA 8081 ☐	Metals-MTCA-5 ☐ RCRA-8 ☐ Pri Pol ☐ TAL ☐	Metals Other (Specify)	TCLP-Metals ☐ VOA ☐ Semi-Vol ☐ Pest ☐ Herbs ☐	OTHER (Specify)	NUMBER OF CONTAINERS	RECEIVED IN GOOD CONDITION?
1. MW-21R	1-15-19	1020	water	1										X								
2. MW-11R	"	1156	"	2										X								
3. MW-30	"	1401	"	3										X								
4. MW-31	1-15-19	1302	water	4										X								
5.																						
6.																						
7.																						
8.																						
9.																						
10.																						

SPECIAL INSTRUCTIONS * Bis (2-ethylhexyl) phthalate

SIGNATURES (Name, Company, Date, Time):

1. Relinquished By: HWA, Geosciences, 1/15/19 1445
Received By: Ben Pierce ALS 1/15/19 14:45
2. Relinquished By:
Received By:

TURNAROUND REQUESTED in Business Days*

Organic, Metals & Inorganic Analysis: 10 Standard | 5 | 3 | 2 | 1 | SAME DAY

Fuels & Hydrocarbon Analysis: 5 Standard | 3 | 1 | SAME DAY

OTHER:
Specify:

*Turnaround request less than standard may incur Rush Charges

January 31, 2019

Mr. Arnie Sugar
HWA Geosciences Inc.
21312 - 30th Drive SE, Suite 110
Bothell, WA 98021-7010

Dear Mr. Sugar,

On January 29th, 6 samples were received by our laboratory and assigned our laboratory project number EV19010166. The project was identified as your None Given. The sample identification and requested analyses are outlined on the attached chain of custody record.

No abnormalities or nonconformances were observed during the analyses of the project samples.

Please do not hesitate to call me if you have any questions or if I can be of further assistance.

Sincerely,

ALS Laboratory Group

Rick Bagan
Laboratory Director

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	HWA Geosciences Inc. 21312 - 30th Drive SE, Suite 110 Bothell, WA 98021-7010	DATE:	1/31/2019
		ALS JOB#:	EV19010166
		ALS SAMPLE#:	EV19010166-01
CLIENT CONTACT:	Arnie Sugar	DATE RECEIVED:	01/29/2019
CLIENT PROJECT:	None Given	COLLECTION DATE:	1/29/2019 9:37:00 AM
CLIENT SAMPLE ID	MW-39R	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Bis(2-Ethylhexyl)Phthalate	EPA-8270	U	2.0	1	UG/L	01/30/2019	JMK

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
Terphenyl-d14	EPA-8270	**103**	01/30/2019	JMK

U - Analyte analyzed for but not detected at level above reporting limit.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	HWA Geosciences Inc. 21312 - 30th Drive SE, Suite 110 Bothell, WA 98021-7010	DATE: ALS JOB#: ALS SAMPLE#:	1/31/2019 EV19010166 EV19010166-02
CLIENT CONTACT:	Arnie Sugar	DATE RECEIVED:	01/29/2019
CLIENT PROJECT:	None Given	COLLECTION DATE:	1/29/2019 10:17:00 AM
CLIENT SAMPLE ID	MW-29	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Bis(2-Ethylhexyl)Phthalate	EPA-8270	U	2.0	1	UG/L	01/30/2019	JMK

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
Terphenyl-d14	EPA-8270	**106**	01/30/2019	JMK

U - Analyte analyzed for but not detected at level above reporting limit.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	HWA Geosciences Inc. 21312 - 30th Drive SE, Suite 110 Bothell, WA 98021-7010	DATE:	1/31/2019
		ALS JOB#:	EV19010166
		ALS SAMPLE#:	EV19010166-03
CLIENT CONTACT:	Arnie Sugar	DATE RECEIVED:	01/29/2019
CLIENT PROJECT:	None Given	COLLECTION DATE:	1/29/2019 11:01:00 AM
CLIENT SAMPLE ID	MW-38	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Bis(2-Ethylhexyl)Phthalate	EPA-8270	U	2.0	1	UG/L	01/30/2019	JMK

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
Terphenyl-d14	EPA-8270	**105**	01/30/2019	JMK

U - Analyte analyzed for but not detected at level above reporting limit.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	HWA Geosciences Inc. 21312 - 30th Drive SE, Suite 110 Bothell, WA 98021-7010	DATE: ALS JOB#: ALS SAMPLE#:	1/31/2019 EV19010166 EV19010166-04
CLIENT CONTACT:	Arnie Sugar	DATE RECEIVED:	01/29/2019
CLIENT PROJECT:	None Given	COLLECTION DATE:	1/29/2019 12:07:00 PM
CLIENT SAMPLE ID	MW-36	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Bis(2-Ethylhexyl)Phthalate	EPA-8270	U	2.0	1	UG/L	01/30/2019	JMK

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
Terphenyl-d14	EPA-8270	**101**	01/30/2019	JMK

U - Analyte analyzed for but not detected at level above reporting limit.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	HWA Geosciences Inc. 21312 - 30th Drive SE, Suite 110 Bothell, WA 98021-7010	DATE: ALS JOB#: ALS SAMPLE#:	1/31/2019 EV19010166 EV19010166-05
CLIENT CONTACT:	Arnie Sugar	DATE RECEIVED:	01/29/2019
CLIENT PROJECT:	None Given	COLLECTION DATE:	1/29/2019 1:36:00 PM
CLIENT SAMPLE ID	MW-37	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Bis(2-Ethylhexyl)Phthalate	EPA-8270	U	2.0	1	UG/L	01/30/2019	JMK

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
Terphenyl-d14	EPA-8270	**98.7**	01/30/2019	JMK

U - Analyte analyzed for but not detected at level above reporting limit.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	HWA Geosciences Inc. 21312 - 30th Drive SE, Suite 110 Bothell, WA 98021-7010	DATE:	1/31/2019
		ALS JOB#:	EV19010166
		ALS SAMPLE#:	EV19010166-06
CLIENT CONTACT:	Arnie Sugar	DATE RECEIVED:	01/29/2019
CLIENT PROJECT:	None Given	COLLECTION DATE:	1/29/2019
CLIENT SAMPLE ID	DUP-0129	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Bis(2-Ethylhexyl)Phthalate	EPA-8270	U	2.0	1	UG/L	01/30/2019	JMK

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
Terphenyl-d14	EPA-8270	**97.2**	01/30/2019	JMK

U - Analyte analyzed for but not detected at level above reporting limit.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	HWA Geosciences Inc. 21312 - 30th Drive SE, Suite 110 Bothell, WA 98021-7010	DATE:	1/31/2019
		ALS SDG#:	EV19010166
		WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Arnie Sugar		
CLIENT PROJECT:	None Given		

LABORATORY BLANK RESULTS

MB-012919W - Batch 137213 - Water by EPA-8270

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Phenol	EPA-8270	U	UG/L	2.0	01/30/2019	JMK
Pyrene	EPA-8270	U	UG/L	2.0	01/30/2019	JMK
Bis(2-Ethylhexyl)Phthalate	EPA-8270	U	UG/L	2.0	01/30/2019	JMK

U - Analyte analyzed for but not detected at level above reporting limit.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	HWA Geosciences Inc. 21312 - 30th Drive SE, Suite 110 Bothell, WA 98021-7010	DATE:	1/31/2019
		ALS SDG#:	EV19010166
		WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Arnie Sugar		
CLIENT PROJECT:	None Given		

LABORATORY CONTROL SAMPLE RESULTS

ALS Test Batch ID: 137213 - Water by EPA-8270

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Phenol - BS	EPA-8270	**42.0**			5	84	01/30/2019	JMK
Phenol - BSD	EPA-8270	**42.4**	**1**		5	84	01/30/2019	JMK
Pyrene - BS	EPA-8270	**98.9**			18	136	01/30/2019	JMK
Pyrene - BSD	EPA-8270	**98.5**	**0**		18	136	01/30/2019	JMK
Bis(2-Ethylhexyl)Phthalate - BS	EPA-8270	**110**			20	150	01/30/2019	JMK
Bis(2-Ethylhexyl)Phthalate - BSD	EPA-8270	**111**	**1**		20	150	01/30/2019	JMK

APPROVED BY

Laboratory Director

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental
8620 Holly Drive, Suite 100
Everett, WA 98208
Phone (425) 356-2600
Fax (425) 356-2626
http://www.alsglobal.com

Chain Of Custody/ Laboratory Analysis Request

ALS Job# (Laboratory Use Only): EV1901016 6

Date 1/29/19 Page 1 Of 1

PROJECT ID:
REPORT TO COMPANY: HWA Geosciences
PROJECT MANAGER: Annie Sugar
ADDRESS: 21312 30th Dr. SE
Bothell, WA 98021
PHONE: 206-794-3145 P.O. #:
E-MAIL: Asugar@hwageo.com / Ayork@hwageo.com
INVOICE TO COMPANY:
ATTENTION:
ADDRESS:

	SAMPLE I.D.	DATE	TIME	TYPE	LAB#	NWTPH-HCID	NWTPH-DX	NWTPH-GX	BTEX by EPA 8021 ☐ BTEX by EPA 8260 ☐	MTBE by EPA 8021 ☐ MTBE by EPA 8260 ☐	Halogenated Volatiles by EPA 8260	Volatile Organic Compounds by EPA 8260	EDB / EDC by EPA 8260 SIM (water)	EDB / EDC by EPA 8260 (soil)	Semivolatile Organic Compounds by EPA 8270 *	Polycyclic Aromatic Hydrocarbons (PAH) by EPA 8270 SIM	PCB by EPA 8082 ☐ Pesticides by EPA 8081 ☐	Metals-MTCA-5 ☐ RCRA-8 ☐ Pri Pol ☐ TAL ☐	Metals Other (Specify)	TCLP-Metals ☐ VOA ☐ Semi-Vol ☐ Pest ☐ Herbs ☐	NUMBER OF CONTAINERS	RECEIVED IN GOOD CONDITION?
1.	MW-39R	1-29-19	0937	water	1										X							
2.	MW-29	"	1017	"	2										X							
3.	MW-38	"	1101	"	3										X							
4.	MW-36	"	1207	"	4										X							
5.	MW-37	↓	1336	↓	5										X							
6.	DUP-0129	1-29-19	—	water	6										X							
7.																						
8.																						
9.																						
10.																						

OTHER (Specify)

SPECIAL INSTRUCTIONS * Bis (2-ethylhexyl) phthalate

SIGNATURES (Name, Company, Date, Time):

1. Relinquished By: HWA Geosciences 1/29/19 1445
Received By: ALS 1/29/19 1445
2. Relinquished By:
Received By:

TURNAROUND REQUESTED in Business Days*

Organic, Metals & Inorganic Analysis: [10] Standard [5] [3] [2] [1] [SAME DAY]

Fuels & Hydrocarbon Analysis: [5] Standard [3] [1] [SAME DAY]

OTHER:
Specify:

*Turnaround request less than standard may incur Rush Charges

CITY OF EVERETT
ENVIRONMENTAL LABORATORY

PROJECT #
00052968

Client:	HWA GEOSCIENCES	Date Received:	01/29/19
Program:	Contract - HWA - Landfill	Data Release:	CK
Contact:	ARNIE SUGAR	Date Reported:	3/7/2019

Department	Analysis	Units	DL	Method	PQL	BL76317 MW-39R 1/29/2019	BL76318 MW-29 1/29/2019
METALS	Dis. Arsenic	µg/L	1.0	200.2-200.8/6020	4.0	<1.0	<1.0
	Dis. Iron	µg/L	40	200.2-200.8/6020	160	<40	160
	Dis. Manganese	µg/L	1.0	200.2-200.8/6020	4.0	8.2	500
	Dis. Nickel	µg/L	1.0	200.2-200.8/6020	4.0	1.0 J	<1.0
	Dis. Zinc	µg/L	10	200.2-200.8/6020	40	<10	<10
NUTRIENTS	Chloride	mg/L	0.2	4500-CL-E	0.8	3.0	15.8

Department	Analysis	Units	DL	Method	PQL	BL76319 MW-38 1/29/2019	BL76320 MW-36 1/29/2019
METALS	Dis. Arsenic	µg/L	1.0	200.2-200.8/6020	4.0	<1.0	1.1 J
	Dis. Iron	µg/L	40	200.2-200.8/6020	160	2430	4740
	Dis. Manganese	µg/L	1.0	200.2-200.8/6020	4.0	271	277
	Dis. Nickel	µg/L	1.0	200.2-200.8/6020	4.0	<1.0	<1.0
	Dis. Zinc	µg/L	10	200.2-200.8/6020	40	<10	<10
NUTRIENTS	Chloride	mg/L	0.2	4500-CL-E	0.8	12.4	81.1

Department	Analysis	Units	DL	Method	PQL	BL76321 MW-37 1/29/2019	BL76322 DUP-0129 1/29/2019
METALS	Dis. Arsenic	µg/L	1.0	200.2-200.8/6020	4.0	<1.0	<1.0
	Dis. Iron	µg/L	40	200.2-200.8/6020	160	12800	2400
	Dis. Manganese	µg/L	1.0	200.2-200.8/6020	4.0	419	274
	Dis. Nickel	µg/L	1.0	200.2-200.8/6020	4.0	<1.0	<1.0
	Dis. Zinc	µg/L	10	200.2-200.8/6020	40	<10	<10
NUTRIENTS	Chloride	mg/L	0.2	4500-CL-E	0.8	465	12.2

DL = Detection Limit
PQL = Practical Quantitation Limit (= 4xDL)
J = Analyte concentration less than PQL
SA = See Attached
ND = No Data

DATA REPORTING QUALIFIERS

When Dissolved Metals > Total Metals note possible filtering process contamintion
P/A (used for Total Coliform results) P= Coliforms present, A = Coliforms absent
Y/N (used for E. Coli Results) Y= E. Coli present, N=E. Coli absent
E = Estimated Value. Count from plates not within ideal range.
R = Sample was re-analyzed after holding time.
CG = Confluent Growth

CITY OF EVERETT
ENVIRONMENTAL LABORATORY

Phone: (425)257-8230 Fax: (425)257-8228
Sample Dropoff: 4027 4th St SE, Everett WA 98201
Mailing Address: 3200 Cedar St, Everett WA 98201

PROJECT # 52968

ANALYSIS REQUEST
CHAIN OF CUSTODY

Date: _____

Client: HWA Geosciences | Address: 21312 30th Dr SE Bothell, WA 98021
Program: | Sample Site: Everett LF
Phone: 206-794-3145 | Collected By: Austin York | Requested By:
Requested sample report date (If less than 30 days): _____
Purpose: ___ In Lab Contract ___ Outside Lab Contract

Sample Description:	LIMS ID # (Lab Use Only)	Sample Date	Sample Time	Comp Grab	Sample Matrix	Analyses Requested: Chlorine	* Diss. Metals
MW-39R		1-29-19	0937	G	water	X	X
MW-29			1017			X	X
MW-39			1101			X	X
MW-36			1207			X	X
MW-37			1336			X	X
DUP-0129		1-29-19	—	G	water	X	X

Cooler w/Ice? Y / N | Rec Temp: °C | –INDICATE: LAB PERFORMING ANALYSIS / # OF CONTAINERS–

CHAIN OF CUSTODY

		Date	Time
*Relinquished: Austin York	Received: Tyler Witte	1-29-19	1415
*Relinquished:	Received:	Date:	Time:
*Relinquished:	Received:	Date:	Time:

COMMENTS:
* Dissolved Metals Field Filtered
NI, ZN, FE, AR, MANGANESE,
Report to Asugar@hwageo.com

**Because the City of Everett Environmental Laboratory is a public ... orts and other documents are public records and therefore subject to disclosure t... est pursuant to RCW Chap. 42.17.*

CITY OF EVERETT
ENVIRONMENTAL LABORATORY

PROJECT #
00052893

Client:	HWA GEOSCIENCES	Date Received:	01/15/19
Program:	Contract - HWA - Landfill	Data Release:	CK
Contact:	ARNIE SUGAR	Date Reported:	3/7/2019

Department	Analysis	Units	DL	Method	PQL	BL71702 MW-21R 1/15/2019	BL71703 MW-11R 1/15/2019
METALS	Dis. Arsenic	µg/L	1.0	200.2-200.8/6020	4.0	**1.0 J**	**<1.0**
	Dis. Iron	µg/L	40	200.2-200.8/6020	160	**1950**	**3330**
	Dis. Manganese	µg/L	1.0	200.2-200.8/6020	4.0	**1440**	**727**
	Dis. Nickel	µg/L	1.0	200.2-200.8/6020	4.0	**<1.0**	**<1.0**
	Dis. Zinc	µg/L	10	200.2-200.8/6020	40	**<10**	**<10**
NUTRIENTS	Chloride	mg/L	0.2	4500-CL-E	0.8	**16.0**	**10.7**

Department	Analysis	Units	DL	Method	PQL	BL71704 MW-30 1/15/2019	BL71705 MW-31 1/15/2019
METALS	Dis. Arsenic	µg/L	1.0	200.2-200.8/6020	4.0	**7.2**	**1.9 J**
	Dis. Iron	µg/L	40	200.2-200.8/6020	160	**8490**	**45900**
	Dis. Manganese	µg/L	1.0	200.2-200.8/6020	4.0	**495**	**1140**
	Dis. Nickel	µg/L	1.0	200.2-200.8/6020	4.0	**<1.0**	**3.3 J**
	Dis. Zinc	µg/L	10	200.2-200.8/6020	40	**<10**	**<10**
NUTRIENTS	Chloride	mg/L	0.2	4500-CL-E	0.8	**13.1**	**133**

DATA REPORTING QUALIFIERS

DL = Detection Limit
PQL = Practical Quantitation Limit (= 4xDL)
J = Analyte concentration less than PQL
SA = See Attached
ND = No Data

When Dissolved Metals > Total Metals note possible filtering process contamintion
P/A (used for Total Coliform results) P= Coliforms present, A = Coliforms absent
Y/N (used for E. Coli Results) Y= E. Coli present, N=E. Coli absent
E = Estimated Value. Count from plates not within ideal range.
R = Sample was re-analyzed after holding time.
CG = Confluent Growth

CITY OF EVERETT
ENVIRONMENTAL LABORATORY
3200 CEDAR STREET; EVERETT WA 98201
Phone: (425)257-8230 Fax: (425)257-8228

PROJECT # 52893

ANALYSIS REQUEST
CHAIN OF CUSTODY

Date: 1/15/19

Client: HWA Geosciences		**Address:** 21312 30th Dr SE Bothell, WA 98021
Program:	**Sample Site:** Everett LF	
Phone: 206-794-3145	**Collected By:** Austin York	**Requested By:**

Requested sample report date (If less than 30 days): _____

Purpose:
___ In Lab Contract ___ Outside Lab Contract

Sample Description:	LIMS ID # (Lab Use Only)	Sample Date	Sample Time	Comp Grab	Sample Matrix	Analyses Requested: Chloride	Dissolved Metals
MW-21R	BL 71702	1-15-19	1020	G	water	X	X
MW-11R	03	↓	1156	↓	↓	X	X
MW-30	04	↓	1401	↓	↓	X	X
MW-31	05	1-15-19	1302	G	water	X	X

Cooler? Y / N Cooler Temp: °C --INDICATE: LAB PERFORMING ANALYSIS / # OF CONTAINERS--

CHAIN OF CUSTODY

*Relinquished: Austin York	Received:	Date: 1-15-19	Time: 1415
*Relinquished:	Received:	Date:	Time:
*Relinquished:	Received:	Date:	Time:
*Relinquished:	Received:	Date:	Time:

COMMENTS:
* Dissolved Metals Field Filtered Ni, Zn, Fe, Mn, As
Everett sampling requested by Mark Sadler, Bill to Arnie Sugar, Asugar@hwageo.com

Because the City of Everett Environmental Laboratory is a public agency, data, test results, reports and other documents are public records and therefore subject to disclosure to third parties upon their request pursuant to RCW Chap. 42.17.

July 18, 2019

Mr. Arnie Sugar
HWA Geosciences Inc.
21312 - 30th Drive SE, Suite 110
Bothell, WA 98021-7010

Dear Mr. Sugar,

On July 11th, 10 samples were received by our laboratory and assigned our laboratory project number EV19070079. The project was identified as your Everett Landfill (ELF). The sample identification and requested analyses are outlined on the attached chain of custody record.

No abnormalities or nonconformances were observed during the analyses of the project samples.

Please do not hesitate to call me if you have any questions or if I can be of further assistance.

Sincerely,

ALS Laboratory Group

Rick Bagan
Laboratory Director

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	HWA Geosciences Inc. 21312 - 30th Drive SE, Suite 110 Bothell, WA 98021-7010	DATE:	7/18/2019
		ALS JOB#:	EV19070079
		ALS SAMPLE#:	EV19070079-01
CLIENT CONTACT:	Arnie Sugar	DATE RECEIVED:	07/11/2019
CLIENT PROJECT:	Everett Landfill (ELF)	COLLECTION DATE:	7/10/2019 10:19:00 AM
CLIENT SAMPLE ID	MW-11R	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Bis(2-Ethylhexyl)Phthalate	EPA-8270	U	2.0	1	UG/L	07/15/2019	JMK

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
Terphenyl-d14	EPA-8270	**114**	07/15/2019	JMK

U - Analyte analyzed for but not detected at level above reporting limit.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	HWA Geosciences Inc. 21312 - 30th Drive SE, Suite 110 Bothell, WA 98021-7010	DATE: ALS JOB#: ALS SAMPLE#:	7/18/2019 EV19070079 EV19070079-02
CLIENT CONTACT:	Arnie Sugar	DATE RECEIVED:	07/11/2019
CLIENT PROJECT:	Everett Landfill (ELF)	COLLECTION DATE:	7/10/2019 9:17:00 AM
CLIENT SAMPLE ID	MW-21R	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Bis(2-Ethylhexyl)Phthalate	EPA-8270	U	2.0	1	UG/L	07/15/2019	JMK

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
Terphenyl-d14	EPA-8270	**109**	07/15/2019	JMK

U - Analyte analyzed for but not detected at level above reporting limit.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	HWA Geosciences Inc. 21312 - 30th Drive SE, Suite 110 Bothell, WA 98021-7010	DATE: ALS JOB#: ALS SAMPLE#:	7/18/2019 EV19070079 EV19070079-03
CLIENT CONTACT:	Arnie Sugar	DATE RECEIVED:	07/11/2019
CLIENT PROJECT:	Everett Landfill (ELF)	COLLECTION DATE:	7/10/2019 1:37:00 PM
CLIENT SAMPLE ID	MW-29	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Bis(2-Ethylhexyl)Phthalate	EPA-8270	U	2.0	1	UG/L	07/15/2019	JMK

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
Terphenyl-d14	EPA-8270	**116**	07/15/2019	JMK

U - Analyte analyzed for but not detected at level above reporting limit.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	HWA Geosciences Inc. 21312 - 30th Drive SE, Suite 110 Bothell, WA 98021-7010	DATE: ALS JOB#: ALS SAMPLE#:	7/18/2019 EV19070079 EV19070079-04
CLIENT CONTACT:	Arnie Sugar	DATE RECEIVED:	07/11/2019
CLIENT PROJECT:	Everett Landfill (ELF)	COLLECTION DATE:	7/10/2019 12:33:00 PM
CLIENT SAMPLE ID	MW-30	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Bis(2-Ethylhexyl)Phthalate	EPA-8270	U	2.0	1	UG/L	07/15/2019	JMK

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
Terphenyl-d14	EPA-8270	**120**	07/15/2019	JMK

U - Analyte analyzed for but not detected at level above reporting limit.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	HWA Geosciences Inc. 21312 - 30th Drive SE, Suite 110 Bothell, WA 98021-7010	DATE: ALS JOB#: ALS SAMPLE#:	7/18/2019 EV19070079 EV19070079-05
CLIENT CONTACT:	Arnie Sugar	DATE RECEIVED:	07/11/2019
CLIENT PROJECT:	Everett Landfill (ELF)	COLLECTION DATE:	7/10/2019 11:26:00 AM
CLIENT SAMPLE ID	MW-31	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Bis(2-Ethylhexyl)Phthalate	EPA-8270	U	2.0	1	UG/L	07/15/2019	JMK

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
Terphenyl-d14	EPA-8270	**102**	07/15/2019	JMK

U - Analyte analyzed for but not detected at level above reporting limit.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	HWA Geosciences Inc. 21312 - 30th Drive SE, Suite 110 Bothell, WA 98021-7010	DATE: ALS JOB#: ALS SAMPLE#:	7/18/2019 EV19070079 EV19070079-06
CLIENT CONTACT:	Arnie Sugar	DATE RECEIVED:	07/11/2019
CLIENT PROJECT:	Everett Landfill (ELF)	COLLECTION DATE:	7/11/2019 11:20:00 AM
CLIENT SAMPLE ID	MW-36	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Bis(2-Ethylhexyl)Phthalate	EPA-8270	U	2.0	1	UG/L	07/16/2019	JMK

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
Terphenyl-d14	EPA-8270	**112**	07/16/2019	JMK

U - Analyte analyzed for but not detected at level above reporting limit.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	HWA Geosciences Inc. 21312 - 30th Drive SE, Suite 110 Bothell, WA 98021-7010	DATE: ALS JOB#: ALS SAMPLE#:	7/18/2019 EV19070079 EV19070079-07
CLIENT CONTACT:	Arnie Sugar	DATE RECEIVED:	07/11/2019
CLIENT PROJECT:	Everett Landfill (ELF)	COLLECTION DATE:	7/11/2019 11:58:00 AM
CLIENT SAMPLE ID	MW-37	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Bis(2-Ethylhexyl)Phthalate	EPA-8270	U	2.0	1	UG/L	07/16/2019	JMK

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
Terphenyl-d14	EPA-8270	**111**	07/16/2019	JMK

U - Analyte analyzed for but not detected at level above reporting limit.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	HWA Geosciences Inc. 21312 - 30th Drive SE, Suite 110 Bothell, WA 98021-7010	DATE: ALS JOB#: ALS SAMPLE#:	7/18/2019 EV19070079 EV19070079-08
CLIENT CONTACT:	Arnie Sugar	DATE RECEIVED:	07/11/2019
CLIENT PROJECT:	Everett Landfill (ELF)	COLLECTION DATE:	7/11/2019 1:50:00 PM
CLIENT SAMPLE ID	MW-38	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Bis(2-Ethylhexyl)Phthalate	EPA-8270	U	2.0	1	UG/L	07/16/2019	JMK

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
Terphenyl-d14	EPA-8270	**114**	07/16/2019	JMK

U - Analyte analyzed for but not detected at level above reporting limit.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	HWA Geosciences Inc. 21312 - 30th Drive SE, Suite 110 Bothell, WA 98021-7010	DATE: ALS JOB#: ALS SAMPLE#:	7/18/2019 EV19070079 EV19070079-09
CLIENT CONTACT:	Arnie Sugar	DATE RECEIVED:	07/11/2019
CLIENT PROJECT:	Everett Landfill (ELF)	COLLECTION DATE:	7/10/2019 2:57:00 PM
CLIENT SAMPLE ID	MW-39R	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Bis(2-Ethylhexyl)Phthalate	EPA-8270	U	2.0	1	UG/L	07/17/2019	JMK

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
Terphenyl-d14	EPA-8270	**113**	07/17/2019	JMK

U - Analyte analyzed for but not detected at level above reporting limit.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	HWA Geosciences Inc. 21312 - 30th Drive SE, Suite 110 Bothell, WA 98021-7010	DATE: ALS JOB#: ALS SAMPLE#:	7/18/2019 EV19070079 EV19070079-10
CLIENT CONTACT:	Arnie Sugar	DATE RECEIVED:	07/11/2019
CLIENT PROJECT:	Everett Landfill (ELF)	COLLECTION DATE:	7/11/2019
CLIENT SAMPLE ID	DUP-0711	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Bis(2-Ethylhexyl)Phthalate	EPA-8270	U	2.0	1	UG/L	07/16/2019	JMK

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
Terphenyl-d14	EPA-8270	**118**	07/16/2019	JMK

U - Analyte analyzed for but not detected at level above reporting limit.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	HWA Geosciences Inc. 21312 - 30th Drive SE, Suite 110 Bothell, WA 98021-7010	DATE:	7/18/2019
		ALS SDG#:	EV19070079
		WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Arnie Sugar		
CLIENT PROJECT:	Everett Landfill (ELF)		

LABORATORY BLANK RESULTS

MB-071519W - Batch 143070 - Water by EPA-8270

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Phenol	EPA-8270	U	UG/L	2.0	07/17/2019	JMK
Pyrene	EPA-8270	U	UG/L	2.0	07/17/2019	JMK
Bis(2-Ethylhexyl)Phthalate	EPA-8270	U	UG/L	2.0	07/17/2019	JMK

U - Analyte analyzed for but not detected at level above reporting limit.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	HWA Geosciences Inc. 21312 - 30th Drive SE, Suite 110 Bothell, WA 98021-7010	DATE:	7/18/2019
		ALS SDG#:	EV19070079
		WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Arnie Sugar		
CLIENT PROJECT:	Everett Landfill (ELF)		

LABORATORY CONTROL SAMPLE RESULTS

ALS Test Batch ID: 143070 - Water by EPA-8270

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Phenol - BS	EPA-8270	**23.7**			5	84	07/15/2019	JMK
Phenol - BSD	EPA-8270	**26.5**	**11**		5	84	07/15/2019	JMK
Pyrene - BS	EPA-8270	**86.5**			18	136	07/15/2019	JMK
Pyrene - BSD	EPA-8270	**86.1**	**1**		18	136	07/15/2019	JMK
Bis(2-Ethylhexyl)Phthalate - BS	EPA-8270	**35.0**			20	150	07/15/2019	JMK
Bis(2-Ethylhexyl)Phthalate - BSD	EPA-8270	**36.0**	**3**		20	150	07/15/2019	JMK

APPROVED BY

Laboratory Director

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental
8620 Holly Drive, Suite 100
Everett, WA 98208
Phone (425) 356-2600
Fax (425) 356-2626
http://www.alsglobal.com

Chain Of Custody/ Laboratory Analysis Request

ALS Job# (Laboratory Use Only): EV1907079

Date 7-11-19 Page 1 Of 1

PROJECT ID: Everett Landfill (ELF)
REPORT TO COMPANY: HWA Geosciences
PROJECT MANAGER: Arnie Sugar
ADDRESS: 21312 30th Dr. SE
Bothell, WA 98021
PHONE: 206-794-3145 P.O. #:
E-MAIL: Ayork@hwageo.com / Asugar@hwageo.com
INVOICE TO COMPANY: Same
ATTENTION:
ADDRESS:

SAMPLE I.D.	DATE	TIME	TYPE	LAB#	NWTPH-HCID	NWTPH-DX	NWTPH-GX	BTEX by EPA 8021 ☐ BTEX by EPA 8260 ☐	MTBE by EPA 8021 ☐ MTBE by EPA 8260 ☐	Halogenated Volatiles by EPA 8260	Volatile Organic Compounds by EPA 8260	EDB / EDC by EPA 8260 SIM (water)	EDB / EDC by EPA 8260 (soil)	Semivolatile Organic Compounds by EPA 8270 *	Polycyclic Aromatic Hydrocarbons (PAH) by EPA 8270 SIM	PCB by EPA 8082 ☐ Pesticides by EPA 8081 ☐	Metals-MTCA-5 ☐ RCRA-8 ☐ Pri Pol ☐ TAL ☐	Metals Other (Specify)	TCLP-Metals ☐ VOA ☐ Semi-Vol ☐ Pest ☐ Herbs ☐	OTHER (Specify)	NUMBER OF CONTAINERS	RECEIVED IN GOOD CONDITION?
1. MW-11R	7-10-19	1019	water	1										X								
2. MW-21R	7-10-19	0917		2																		
3. MW-29	7-10-19	1337		3																		
4. MW-30	7-10-19	1233		4																		
5. MW-31	7-10-19	1126		5																		
6. MW-36	7-11-19	1120		6																		
7. MW-37	7-11-19	1158		7																		
8. MW-38	7-11-19	1350		8																		
9. MW-39R	7-10-19	1457		9																		
10. DUP-071119	7-11-19	—	water	10										X								

SPECIAL INSTRUCTIONS * Bis (2-ethylhexyl) pthalate

SIGNATURES (Name, Company, Date, Time):

1. Relinquished By: Austin York, HWA Geo, 7-11-19, 1510
   Received By: Shawn Robinson ALS 7/11/19 1510
2. Relinquished By: _____
   Received By: _____

TURNAROUND REQUESTED in Business Days*

Organic, Metals & Inorganic Analysis: [X] Standard [5] [3] [2] [1] [SAME DAY]

Fuels & Hydrocarbon Analysis: [5] Standard [3] [1] [SAME DAY]

OTHER:
Specify: _____

*Turnaround request less than standard may incur Rush Charges

CITY OF EVERETT
ENVIRONMENTAL LABORATORY

PROJECT #
00054074

Client:	HWA GEOSCIENCES	Date Received:	07/11/19
Program:	Contract - HWA - Landfill	Data Release:	SF SF
Contact:	ARNIE SUGAR	Date Reported:	8/28/2019

Department	Analysis	Units	DL	Method	PQL	BM06842 MW - 11R 7/10/2019	BM06843 MW - 21R 7/10/2019
METALS(D)	Dis. Arsenic	µg/L	1.0	200.8/6020B	4.0	<1.0	<1.0
	Dis. Iron	µg/L	40	6020B	160	320	67 J
	Dis. Manganese	µg/L	1.0	200.8/6020B	4.0	559	9.2
	Dis. Nickel	µg/L	1.0	200.8/6020B	4.0	<1.0	<1.0
	Dis. Zinc	µg/L	10	200.8/6020B	40	<10	<10
NUTRIENTS	Chloride	mg/L	0.2	SM4500-CL-E	0.8	8.5	12.2

Department	Analysis	Units	DL	Method	PQL	BM06844 MW - 29 7/10/2019	BM06845 MW - 30 7/10/2019
METALS(D)	Dis. Arsenic	µg/L	1.0	200.8/6020B	4.0	<1.0	1.8 J
	Dis. Iron	µg/L	40	6020B	160	4110	1780
	Dis. Manganese	µg/L	1.0	200.8/6020B	4.0	527	174
	Dis. Nickel	µg/L	1.0	200.8/6020B	4.0	<1.0	<1.0
	Dis. Zinc	µg/L	10	200.8/6020B	40	<10	<10
NUTRIENTS	Chloride	mg/L	0.2	SM4500-CL-E	0.8	13.3	9.0

Department	Analysis	Units	DL	Method	PQL	BM06846 MW - 31 7/10/2019	BM06847 MW - 36 7/11/2019
METALS(D)	Dis. Arsenic	µg/L	1.0	200.8/6020B	4.0	1.6 J	3.6 J
	Dis. Iron	µg/L	40	6020B	160	42200	7450
	Dis. Manganese	µg/L	1.0	200.8/6020B	4.0	1210	334
	Dis. Nickel	µg/L	1.0	200.8/6020B	4.0	3.1 J	<1.0
	Dis. Zinc	µg/L	10	200.8/6020B	40	<10	<10
NUTRIENTS	Chloride	mg/L	0.2	SM4500-CL-E	0.8	136	49.7

Department	Analysis	Units	DL	Method	PQL	BM06848 MW - 37 7/11/2019	BM06849 MW - 38 7/11/2019
METALS(D)	Dis. Arsenic	µg/L	1.0	200.8/6020B	4.0	<1.0	<1.0
	Dis. Iron	µg/L	40	6020B	160	20600	800
	Dis. Manganese	µg/L	1.0	200.8/6020B	4.0	873	169
	Dis. Nickel	µg/L	1.0	200.8/6020B	4.0	<1.0	<1.0
	Dis. Zinc	µg/L	10	200.8/6020B	40	<10	<10
NUTRIENTS	Chloride	mg/L	0.2	SM4500-CL-E	0.8	884	12.1

Department	Analysis	Units	DL	Method	PQL	BM06850 MW - 39R 7/11/2019	BM06851 DUP 0711 7/11/2019
METALS(D)	Dis. Arsenic	µg/L	1.0	200.8/6020B	4.0	<1.0	<1.0
	Dis. Iron	µg/L	40	6020B	160	2700	20600
	Dis. Manganese	µg/L	1.0	200.8/6020B	4.0	227	870
	Dis. Nickel	µg/L	1.0	200.8/6020B	4.0	<1.0	<1.0
	Dis. Zinc	µg/L	10	200.8/6020B	40	<10	<10
NUTRIENTS	Chloride	mg/L	0.2	SM4500-CL-E	0.8	4.5	880

DATA REPORTING QUALIFIERS

DL = Detection Limit
PQL = Practical Quantitation Limit (= 4xDL)
J = Analyte concentration less than PQL
SA = See Attached
ND = No Data
TNTC = Too numerous to count

When Dissolved Metals > Total Metals note possible filtering process contamintion
P/A (used for Total Coliform results) P= Coliforms present, A = Coliforms absent
Y/N (used for E. Coli Results) Y= E. Coli present, N=E. Coli absent
E = Estimated Value. Count from plates not within ideal range.
R = Sample was re-analyzed after holding time.
CG = Confluent Growth

CITY OF EVERETT
ENVIRONMENTAL LABORATORY

Phone: (425)257-8230 Fax: (425)257-8228
Sample Dropoff: 4027 4th St SE, Everett WA 98201
Mailing Address: 3200 Cedar St, Everett WA 98201

PROJECT # 54074

ANALYSIS REQUEST
CHAIN OF CUSTODY

Date: 7-11-19

Client: HWA Geosciences | Address: ~~HWA~~ 21312 30th Dr SE Bothell, WA 98021

Program: | Sample Site: Everett Landfill

Phone: 206-794-3145 | Collected By: Austin York | Requested By:

Requested sample report date (If less than 30 days): _____

Purpose: ___ In Lab Contract ___ Outside Lab Contract

Sample Description:	LIMS ID # (Lab Use Only)	Sample Date	Sample Time	Comp Grab	Sample Matrix	Analyses Requested: Chloride	* Diss. Metals
MW-11R	BM 06542	7-10-19	1019	G	water	X	X
~~MW-21R~~		~~7-10-19~~	~~1245~~				
MW-21R	43	7-10-19	0917				
MW-29	44	7-10-19	1337				
MW-30	45	7-10-19	1233				
MW-31	46	7-10-19	1126				
MW-36	47	7-11-19	1120				
MW-37	48	7-11-19	1158				
MW-38	49	7-11-19	1350				
MW-39R	50	7-10-19	1457	↓	↓	↓	↓
DUP-0711	51	7-11-19	—	G	water	X	X

Cooler w/Ice? Y / N | Rec Temp: °C | INDICATE: LAB PERFORMING ANALYSIS / # OF CONTAINERS

CHAIN OF CUSTODY

*Relinquished: Austin York	Received: Cristiana Cristache	Date: 7-11-19	Time: 1435
*Relinquished:	Received:	Date:	Time:
*Relinquished:	Received:	Date:	Time:

COMMENTS: * Dissolved Metals Field Filtered

**Because the City of Everett Environmental Laboratory is a public agency, data, test results, reports and other documents are public records and therefore subject to disclosure to third parties upon their request pursuant to RCW Chap. 42.17.*

QUALITY CONTROL REVIEW OF ANALYTICAL DATA

Sampling Location: Everett Landfill/Tire Fire Site, Everett, Washington
Samples collected by HWA GeoSciences, Inc. (HWA)
Sample Dates: January 15 and 29 and July 10 and 11, 2019

Ground Water Sample Locations:

- Monitoring wells MW-11R, MW-21R, MW-29R, MW-30, MW-31, MW-36, MW-37, MW-38, and MW-39R

Analyses Performed:

- City of Everett Environmental Laboratory (EEL): dissolved metals by EPA Method 200.8; chloride by Standard Method 4500-CL-E
- ALS Environmental Laboratory Everett (ALS): Bis(2-Ethylhexyl)Phthalate by EPA Method 8270

Field QA/QC:

- Field sampling data sheets for all of the 2019 sampling events indicate that proper well micro-purging techniques were employed and sample bottles utilized
- A ground water field duplicate was collected on January 29, 2019 from well MW-38 and on July 11, 2019 at well MW-37. Except for iron, all analytes were within an approximately 2 percent relative percent difference (RPD) between the two samples. The duplicate data is summarized in the table below:

Sample ID	bis(2-ethylhexyl) phthalate (µg/L)	DISS Arsenic (µg/L)	DISS Iron (µg/L)	DISS Manganese (µg/L)	DISS Nickel (µg/L)	DISS Zinc (µg/L)	Chloride (mg/L)
MW38	<2.0	<1.0	**2430**	**271**	<1.0	<10	**12.4**
Dup - 0129	<2.0	<1.0	**2400**	**274**	<1.0	<10	**12.2**
RPD	-	-	**1.24**	**1.10**	-	-	**1.63**
MW-37	<2.0	<1.0	**20600**	**873**	<1.0	<10	**884**
Dup - 0711	<2.0	<1.0	**20600**	**870**	<1.0	<10	**880**
RPD	-	-	**0**	**0.34**	-	-	**0.45**

- No trip blanks were submitted during the 2019 sampling events.
- No field blanks were collected during the 2019 sampling events, as all sampling equipment used was disposable.
- No other internal QA/QC issues were noted

Laboratory QA/QC:

- The City of Everett Environmental Laboratory did not provide any QA/QC data with their analytical data; thus HWA cannot evaluate the validity of the reported data

- ALS used laboratory method blanks, surrogate spikes in field samples, spike blank/ spike blank duplicates (SB/SBD), method blanks, and relative percent difference (RPD) calculations between SB/SBDs to maintain quality control during analyses

Holding Times:

- All samples were submitted to the EEL and ALS laboratories within 48 hours of sample collection. All samples were analyzed within standard holding times.

SVOCs by GC/MS:

- No bis(2-ethylhexyl)phthalate was detected in the laboratory method blanks above the laboratory reporting limit
- Surrogate, SB and SBD recoveries were generally all within control limits.
- SB/SBD RPDs were all within control limits

Laboratory Flags:

- The only data flags noted were for estimated concentrations (J flags) of dissolved arsenic, iron, and nickel, which reported a concentration close to the City of Everett Environmental Laboratory's reporting limits

Summary:

HWA's review of the analytical data determined them to be acceptable for their intended use; a caveat to HWA's review is the lack of laboratory QC data for the analyses performed by the City of Everett Environmental Laboratory.