HWA GEOSCIENCES INC.
Geotechnical & Pavement Engineering • Hydrogeology • Geoenvironmental • Planning & Permitting • Inspection & Testing

September 11, 2012
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**
Everett Landfill/Tire Fire Site
Everett, Washington

Dear Mark,

This letter presents the annual report for the period of July 31, 2011 to August 1, 2012, for ground water sampling at the Everett Landfill/Tire Fire Site, per the Compliance Monitoring and Contingency Plan.

Ground water samples were collected semi-annually, in January and July 2012. 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), MW-29, MW-30, MW-31
- Three deep point of compliance monitoring wells: MW-36, MW-38, MW-39

We submitted the samples to CCI Analytical Laboratories (CCI) in Everett, Washington and the Everett Environmental Laboratory (EEL) for the following analyses:

- Dissolved metals, including: arsenic, iron, manganese, nickel, and zinc (submitted to EEL)
- Conventional parameters, including: chloride (submitted to EEL)
- Semi-volatile organic compounds, including: bis(2-ethylhexyl) phthalate (submitted to CCI)

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

Well 11R was not sampled during the January 2012 sampling event because the well was obscured by construction during installation of new utilities adjacent to the well location. The well was subsequently located and sampled during the July 2012 sampling event.

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The well casing was extended by the contractor to account for filling at the location.

Well MW-29, located along the southeastern portion of the landfill, has apparently been damaged by construction activities. During the January 2012 sampling event, the well was found to have a constriction at approximately 12 feet from top of casing (TOC) (8 feet below grade) and a sounding probe only reached 21 feet TOC; the installed depth of this well is 48 feet. The bottom was soft, consistent with sediment in the well. The well is located approximately three feet east of the new sheet pile cutoff wall, and wall installation may have damaged the well. The well was not sampled.

The new monitoring well MW-21R (installed in November 2008 to replace MW-21, which had been covered during construction of railroad tracks) previously contained dissolved arsenic at 25 ug/L, at the background-derived site cleanup level of 25 ug/L during the July 2011 sampling round. Neither the January nor July 2012 samples exceeded the site cleanup level. This well is located upgradient of the landfill, and arsenic in ground water is likely a background condition, as described in the in the HWA 2007 *Iron, Manganese & Arsenic Background Investigation* Report.

No exceedances were recorded for any of the other performance monitoring wells sampled during these two rounds.

Activities affecting the site during this sampling period included installation of a sheet pile ground water cutoff wall along the east landfill boundary and completion of construction of the roundabout and utilities at 41st Street.

GROUND WATER GRADIENT

Table 2 shows ground water depths and elevations. Figures 1 and 2 show potentiometric surface or ground water gradient maps of the deep aquifer at the landfill for January and July 2012. 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.

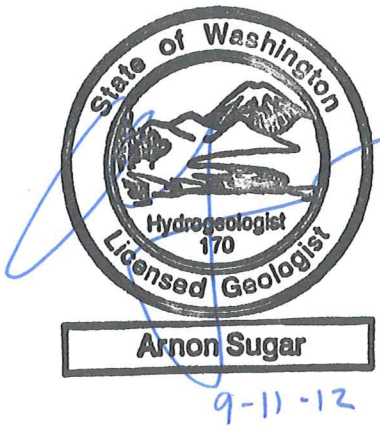
September 11, 2012
HWA Project No. 98165-660

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.

Vance Atkins, LG, LHG
Hydrogeologist



Arnie Sugar, LG, LHG
President

Attachment A - Laboratory Reports And QA/QC Reports

MW-33
(26.74)
MW-34
MW-35
(ABANDONED)
MW-21
(DECOMMISSIONED)
MW-21-R
(26.31)
MW-27
MW-28
(NR)
MW-39
(8.67)
MW-26
MW-29
(NR)
MW-22
MW-25
MW-30
(7.98)
MW-38
(8.09)
MW-24
MW-31
(6.46)
MW-37
(NR)
MW-36
(6.66)
MW-11R
(NR)

26
24
22
20
18
16
14
12
10
8

SNOHOMISH RIVER

LEGEND

MW–12 SHALLOW MONITORING WELLS

MW–12 DEEP MONITORING WELLS

10 GROUND WATER ELEVATION CONTOUR

0' 100' 200' 300' 600'

SCALE: 1"=300'

HWA GEOSCIENCES INC.

EVERETT LANDFILL
EVERETT, WASHINGTON

DEEP AQUIFER
GROUNDWATER GRADIENT
JANUARY 23–24, 2012

DRAWN BY EFK
CHECKED BY VA
DATE 09.14.12

FIGURE NO. 1
PROJECT NO. 98165–660

S:\1998 PROJECTS\98165 EVERETT LANDFILL\CAD\NBB GW.DWG <FIG 1 JAN 23–24 2012> Plotted: 9/11/2012 2:29 PM

LEGEND

MW–12 SHALLOW MONITORING WELLS

MW–12 DEEP MONITORING WELLS

10 GROUND WATER ELEVATION CONTOUR

0' 100' 200' 300' 600'

SCALE: 1"=300'

HWA GEOSCIENCES INC.

EVERETT LANDFILL
EVERETT, WASHINGTON

DEEP AQUIFER
GROUNDWATER GRADIENT
JULY 19, 2012

DRAWN BY EFK	FIGURE NO. 2
CHECKED BY VA	
DATE 09.14.12	PROJECT NO. 98165–660

S:\1998 PROJECTS\98165 EVERETT LANDFILL\CAD\NBB GW.DWG <FIG 1 july 19 2012> Plotted: 9/11/2012 2:27 PM

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	10.453	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-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-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-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-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

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-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	42.197	8.7	4 U
MW-33		4/9/2002	6 U	14 U	20	4.36	32.115	8.3	4 U
MW-33		7/8/2002	4 U	14 U	16	4 U	**462.59**	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	3	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	48.845	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
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

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-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	no	1/22/2002	6 U	22525	678	2.87	8.1	92.3	4 U
MW-37	longer	4/10/2002	9.4	16182	665	4 U	8 U	48.3	4 U
MW-37	sampled	7/11/2002	4 U	**25400**	688	4 U	8 U	92.3	4 U
MW-37		10/9/2002	4 U	**25500**	664	4 U	11	112.0	4 U
MW-37		1/15/2003	4 U	**26800**	694	4 U	8 U	114.0	1 U
MW-37		4/23/2003	4 U	23100	598	4 U	8 U	117.0	1 U
MW-37		10/8/2003	4 U	22700	651	4 U	8 U	190.0	1 U
MW-37		4/6/2004	3	**25100**	724	2 U	8 U	157.0	1 U
MW-37		7/15/2005	2 U	**26500**	807	2 U	8 U	**248.0**	10 U
MW-37		2/1/2006	4 U	**29900**	956	2 U	8 U	**461.0**	10 U
MW-37		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-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-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	2.3	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

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-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:
Exceedance results in bold, detections shaded
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
NS - Not sampled
BKG = background (established after 3 year evaluation monitoring period)
B = likely laboratory contamination, analyte detected in field blank
R - Nitrate is a calculated by subtraction of NO2 from NO2+NO3. Where NO2 results are non-detect, NO2 results are given as a range (NO2 DL to NO2+NO3 result)

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-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
MW-14		4/2/2004	20.15	6.10
		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		

Table 2
Ground Water Elevations
Everett Landfill

Well	Type	Date	Water Depth	Water Elevation
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-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-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		

Table 2
Ground Water Elevations
Everett Landfill

Well	Type	Date	Water Depth	Water Elevation
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-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-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

Table 2
Ground Water Elevations
Everett Landfill

Well	Type	Date	Water Depth	Water Elevation
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		
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		

Table 2
Ground Water Elevations
Everett Landfill

Well	Type	Date	Water Depth	Water Elevation
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-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-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-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-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		
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

Table 2
Ground Water Elevations
Everett Landfill

Well	Type	Date	Water Depth	Water Elevation
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-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

Table 2
Ground Water Elevations
Everett Landfill

Well	Type	Date	Water Depth	Water Elevation
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-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
MW-42		6/17/2008	1.72	15.57
		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; will be abandoned after Ev

NET = Network well for Performance and Confirmational Monitoring

BG =Upgradient background well

BGM= background metals well

POC = deep aquifer point of compliance monitoring well

APPENDIX A

LABORATORY REPORTS AND QA/QC REPORTS

January 30, 2012

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

Dear Mr. Atkins,

On January 24th, 8 samples were received by our laboratory and assigned our laboratory project number 1201081. The project was identified as your Everett Landfill / 98165. 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 98208 | PHONE 425-356-2600 | FAX 425-356-2626
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CERTIFICATE OF ANALYSIS

CLIENT:	HWA Geosciences Inc. 21312 - 30th Drive SE, Suite 110 Bothell, WA 98021-7010	DATE:	1/30/2012
		ALS JOB#:	1201081
		ALS SAMPLE#:	-01
CLIENT CONTACT:	Vance Atkins	DATE RECEIVED:	1/24/2012
CLIENT PROJECT:	Everett Landfill / 98165	COLLECTION DATE:	1/23/2012 13:45
CLIENT SAMPLE ID	MW-36-0112	WDOE ACCREDITATION:	C601

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	01/26/2012	LAP

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
Phenol-d5	EPA-8270	**29.0**	01/26/2012	LAP

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

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CERTIFICATE OF ANALYSIS

CLIENT:	HWA Geosciences Inc. 21312 - 30th Drive SE, Suite 110 Bothell, WA 98021-7010	DATE:	1/30/2012
		ALS JOB#:	1201081
		ALS SAMPLE#:	-02
CLIENT CONTACT:	Vance Atkins	DATE RECEIVED:	1/24/2012
CLIENT PROJECT:	Everett Landfill / 98165	COLLECTION DATE:	1/23/2012 15:40
CLIENT SAMPLE ID	MW-21R-0112	WDOE ACCREDITATION:	C601

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	01/26/2012	LAP

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
Phenol-d5	EPA-8270	**34.4**	01/26/2012	LAP

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

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CERTIFICATE OF ANALYSIS

CLIENT:	HWA Geosciences Inc. 21312 - 30th Drive SE, Suite 110 Bothell, WA 98021-7010	DATE:	1/30/2012
		ALS JOB#:	1201081
		ALS SAMPLE#:	-03
CLIENT CONTACT:	Vance Atkins	DATE RECEIVED:	1/24/2012
CLIENT PROJECT:	Everett Landfill / 98165	COLLECTION DATE:	1/23/2012 16:00
CLIENT SAMPLE ID	DUP-0112	WDOE ACCREDITATION:	C601

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	01/26/2012	LAP

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
Phenol-d5	EPA-8270	**33.4**	01/26/2012	LAP

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

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CERTIFICATE OF ANALYSIS

CLIENT:	HWA Geosciences Inc. 21312 - 30th Drive SE, Suite 110 Bothell, WA 98021-7010	DATE:	1/30/2012
		ALS JOB#:	1201081
		ALS SAMPLE#:	-04
CLIENT CONTACT:	Vance Atkins	DATE RECEIVED:	1/24/2012
CLIENT PROJECT:	Everett Landfill / 98165	COLLECTION DATE:	1/23/2012 16:10
CLIENT SAMPLE ID	FB-0112	WDOE ACCREDITATION:	C601

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	01/26/2012	LAP

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
Phenol-d5	EPA-8270	**32.9**	01/26/2012	LAP

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

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ALS Laboratory Group A Campbell Brothers Limited Company

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CERTIFICATE OF ANALYSIS

CLIENT:	HWA Geosciences Inc. 21312 - 30th Drive SE, Suite 110 Bothell, WA 98021-7010	DATE:	1/30/2012
		ALS JOB#:	1201081
		ALS SAMPLE#:	-05
CLIENT CONTACT:	Vance Atkins	DATE RECEIVED:	1/24/2012
CLIENT PROJECT:	Everett Landfill / 98165	COLLECTION DATE:	1/24/2012 09:20
CLIENT SAMPLE ID	MW-39-0112	WDOE ACCREDITATION:	C601

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	01/26/2012	LAP

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
Phenol-d5	EPA-8270	**34.1**	01/26/2012	LAP

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

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CERTIFICATE OF ANALYSIS

CLIENT:	HWA Geosciences Inc. 21312 - 30th Drive SE, Suite 110 Bothell, WA 98021-7010	DATE:	1/30/2012
		ALS JOB#:	1201081
		ALS SAMPLE#:	-06
CLIENT CONTACT:	Vance Atkins	DATE RECEIVED:	1/24/2012
CLIENT PROJECT:	Everett Landfill / 98165	COLLECTION DATE:	1/24/2012 10:00
CLIENT SAMPLE ID	MW-38-0112	WDOE ACCREDITATION:	C601

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	01/26/2012	LAP

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
Phenol-d5	EPA-8270	**36.7**	01/26/2012	LAP

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CERTIFICATE OF ANALYSIS

CLIENT:	HWA Geosciences Inc. 21312 - 30th Drive SE, Suite 110 Bothell, WA 98021-7010	DATE:	1/30/2012
		ALS JOB#:	1201081
		ALS SAMPLE#:	-07
CLIENT CONTACT:	Vance Atkins	DATE RECEIVED:	1/24/2012
CLIENT PROJECT:	Everett Landfill / 98165	COLLECTION DATE:	1/24/2012 10:50
CLIENT SAMPLE ID	MW-30-0112	WDOE ACCREDITATION:	C601

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	01/26/2012	LAP

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
Phenol-d5	EPA-8270	**32.7**	01/26/2012	LAP

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

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CERTIFICATE OF ANALYSIS

CLIENT:	HWA Geosciences Inc. 21312 - 30th Drive SE, Suite 110 Bothell, WA 98021-7010	DATE:	1/30/2012
		ALS JOB#:	1201081
		ALS SAMPLE#:	-08
CLIENT CONTACT:	Vance Atkins	DATE RECEIVED:	1/24/2012
CLIENT PROJECT:	Everett Landfill / 98165	COLLECTION DATE:	1/24/2012 11:45
CLIENT SAMPLE ID	MW-31-0112	WDOE ACCREDITATION:	C601

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	01/26/2012	LAP

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
Phenol-d5	EPA-8270	**34.1**	01/26/2012	LAP

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

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CERTIFICATE OF ANALYSIS

CLIENT:	HWA Geosciences Inc. 21312 - 30th Drive SE, Suite 110 Bothell, WA 98021-7010	DATE:	1/30/2012
		ALS SDG#:	1201081
		WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Vance Atkins		
CLIENT PROJECT:	Everett Landfill / 98165		

LABORATORY BLANK RESULTS

MB-012512W - Batch 2451 - Water by EPA-8270

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Phenol	EPA-8270	U	2.0	1	UG/L	01/26/2012	LAP
Pyrene	EPA-8270	U	2.0	1	UG/L	01/26/2012	LAP
Bis(2-Ethylhexyl)Phthalate	EPA-8270	U	2.0	1	UG/L	01/26/2012	LAP

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CERTIFICATE OF ANALYSIS

CLIENT:	HWA Geosciences Inc. 21312 - 30th Drive SE, Suite 110 Bothell, WA 98021-7010	DATE: ALS SDG#: WDOE ACCREDITATION:	1/30/2012 1201081 C601
CLIENT CONTACT:	Vance Atkins		
CLIENT PROJECT:	Everett Landfill / 98165		

LABORATORY CONTROL SAMPLE RESULTS

ALS Test Batch ID: 2451 - Water by EPA-8270

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	ANALYSIS DATE	ANALYSIS BY
Phenol - BS	EPA-8270	**36.4**			01/26/2012	LAP
Phenol - BSD	EPA-8270	**36.0**	**1**		01/26/2012	LAP
Pyrene - BS	EPA-8270	**113**			01/26/2012	LAP
Pyrene - BSD	EPA-8270	**115**	**2**		01/26/2012	LAP

APPROVED BY

Laboratory Director

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Everett, WA 98208
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http://www.alsglobal.com

Chain Of Custody/ Laboratory Analysis Request

1201081

Date 1/24/12 Page 1 Of 1

PROJECT ID: Eugene Land Fill 98165
REPORT TO COMPANY: HWA
PROJECT MANAGER: V. Atkins
ADDRESS:
PHONE: FAX:
P.O. NUMBER: 98165 E-MAIL: VATKINS@HWAGEO
INVOICE TO COMPANY: Same
ATTENTION:
ADDRESS:

ANALYSIS REQUESTED

SAMPLE I.D.	DATE	TIME	TYPE	LAB#	NWTPH-HCID	NWTPH-DX	NWTPH-GX	BTEX by EPA-8021	MTBE by EPA-8021 ☐ 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 ☐ Pesticides ☐ by EPA 8081/8082	Metals-MTCA-5 ☐ RCRA-8 ☐ Pri Pol ☐ TAL ☐	Metals Other (Specify)	TCLP-Metals ☐ VOA ☐ Semi-Vol ☐ Pest ☐ Herbs ☐	OTHER (Specify) Bis(2-ethylhexyl)Phthalate	NUMBER OF CONTAINERS	RECEIVED IN GOOD CONDITION?
1. MW-36-0112	1/23/12	1345	H2O	1																X	1	
2. MW-21R-0112		1540		2																X		
3. DUP-0112		1600		3																X		
4. FB-0112		1610		4																X		
5. MW-39-0112	1/24/12	920		5																X		
6. MW-38-0112		1000		6																X		
7. MW-30-0112		1050		7																X		
8. MW-31-912		1145		8																X		
9.																						
10.																						

SPECIAL INSTRUCTIONS 1-30-12 Vance changed MW-37 to MW-38 - RB

SIGNATURES (Name, Company, Date, Time):
1. Relinquished By: [signature] Hwa - 1/24/12 - 1305
Received By: [signature] ALS 1-24-12 1305
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

LABORATORY COPY

PUBLIC WORKS
EVERETT

March 1, 2012

HWA GeoSciences Inc.
21312 30th Dr SE
Bothell, WA 98021
Attn: Vance Atkins

Re: Project # 36974

Dear Vance:

Enclosed are the result and the original chain-of-custody (COC) record for the above-referenced project. We received eight water samples in good condition on January 24, 2012. There were no discrepancies between the COC and sample containers. All sample and quality control analyses proceeded without incident of note. A printed copy of the QC report for your data set is available upon request.

A copy of this report and the original benchsheets will be kept on file at the Everett Environmental Laboratory, should you need further information about the results or copies of any documentation.

If you have any questions, please call me any time at (425) 257-8230.

Sincerely,

Everett Environmental Laboratory

Christiane Khairzada
Quality Assurance Coordinator

enclosures

CITY OF EVERETT
ENVIRONMENTAL LABORATORY

PROJECT #
00036974

Client:
Program: Contract - HWA - Landfill
Contact:

Date Received: 01/24/12
Data Release: CK
Date Reported: 03/01/12

Department	Analysis	Units	DL	Method	PQL	BE67109 MW-36-0112 01/23/12	BE67110 MW-21R-0112 01/23/12
METALS	Dis. Arsenic	µg/L	1.0	200.8	4.0	5.6	24.6
	Dis. Iron	µg/L	40	200.8	160	16000	11400
	Dis. Manganese	µg/L	1.0	200.8	4.0	724	2080
	Dis. Nickel	µg/L	1.0	200.8	4.0	< 1.0	< 1.0
	Dis. Zinc	µg/L	10	200.8	40	< 10	< 10
NUTRIENTS	Chloride	mg/L	0.2	4500-CL-E	0.8		8.4
			1.0	4500-CL-E	4.0	27.5	

Department	Analysis	Units	DL	Method	PQL	BE67111 DUP-0112 01/23/12	BE67112 FB-0112 01/23/12
METALS	Dis. Arsenic	µg/L	1.0	200.8	4.0	5.6	< 1.0
	Dis. Iron	µg/L	40	200.8	160	16000	< 40
	Dis. Manganese	µg/L	1.0	200.8	4.0	728	< 1.0
	Dis. Nickel	µg/L	1.0	200.8	4.0	< 1.0	< 1.0
	Dis. Zinc	µg/L	10	200.8	40	< 10	< 10
NUTRIENTS	Chloride	mg/L	0.2	4500-CL-E	0.8		< 0.2
			1.0	4500-CL-E	4.0	28.5	

Department	Analysis	Units	DL	Method	PQL	BE67113 MW-39-0112 01/24/12	BE67114 MW-38-0112 01/24/12
METALS	Dis. Arsenic	µg/L	1.0	200.8	4.0	2.6 J	< 1.0
	Dis. Iron	µg/L	40	200.8	160	6150	4000
	Dis. Manganese	µg/L	1.0	200.8	4.0	246	301
	Dis. Nickel	µg/L	1.0	200.8	4.0	< 1.0	< 1.0
	Dis. Zinc	µg/L	10	200.8	40	< 10	< 10
NUTRIENTS	Chloride	mg/L	0.2	4500-CL-E	0.8	5.4	17.1

Department	Analysis	Units	DL	Method	PQL	BE67115 MW-30-0112 01/24/12	BE67116 MW-31-0112 01/24/12
METALS	Dis. Arsenic	µg/L	1.0	200.8	4.0	7.2	1.4 J
	Dis. Iron	µg/L	40	200.8	160	5000	34500
	Dis. Manganese	µg/L	1.0	200.8	4.0	445	1190
	Dis. Nickel	µg/L	1.0	200.8	4.0	< 1.0	3.4 J
	Dis. Zinc	µg/L	10	200.8	40	< 10	< 10
NUTRIENTS	Chloride	mg/L	0.2	4500-CL-E	0.8	12.8	
			4.0	4500-CL-E	16.0		143

DATA REPORTING QUALIFIES

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) 257-6033

ANALYSIS REQUEST
CHAIN OF CUSTODY

PROJECT # [illegible] 3014

DATE: 1/24/12

CLIENT: HWA		ADDRESS: [illegible]
PROGRAM:	SAMPLE SITE: [illegible]	[illegible]
PHONE: [illegible]	COLLECTED BY: [illegible]	REQUESTED BY: [illegible]

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	ANALYSIS REQUESTED								
MW-36-011212	67109	1/12/12	1[illegible]			1	1							
MW-21R2-011212	10		1[illegible]			1	1							
DUP-011212	11		1600			1	1							
FB-011212	12		1615			1	1							
MW-34-011212	13	1/12/12	[illegible]			1	1							
MW-38-011212	14		[illegible]			1	1							
MW-30-011212	15		[illegible]			1	1							
MW-31-011212	16		1145			1	1							

INDICATE: LAB PERFORMING ANALYSIS / # OF CONTAINERS

CHAIN OF CUSTODY

		DATE	TIME
*Relinquished: [illegible]	*Received: [illegible]	1/24/12	1230
*Relinquished:	*Received:	DATE	TIME
*Relinquished:	*Received:	DATE	TIME
*Relinquished:	*Received:	DATE	TIME

COMMENTS:
Metals not 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.*

July 27, 2012

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

Dear Mr. Atkins,

On July 18th, 9 samples were received by our laboratory and assigned our laboratory project number EV12070071. The project was identified as your Everett Landfill #98165. 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

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CERTIFICATE OF ANALYSIS

CLIENT:	HWA Geosciences Inc. 21312 - 30th Drive SE, Suite 110 Bothell, WA 98021-7010	DATE:	7/27/2012
		ALS JOB#:	EV12070071
		ALS SAMPLE#:	-01
CLIENT CONTACT:	Vance Atkins	DATE RECEIVED:	7/18/2012
CLIENT PROJECT:	Everett Landfill #98165	COLLECTION DATE:	7/18/2012 9:20:00 AM
CLIENT SAMPLE ID	MW-36-0712	WDOE ACCREDITATION:	C601

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	07/25/2012	LAP

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
Phenol-d5	EPA-8270	**21.0**	07/25/2012	LAP
Nitrobenzene-d5	EPA-8270	**58.2**	07/25/2012	LAP
Terphenyl-d14	EPA-8270	**74.5**	07/25/2012	LAP

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

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CERTIFICATE OF ANALYSIS

CLIENT:	HWA Geosciences Inc. 21312 - 30th Drive SE, Suite 110 Bothell, WA 98021-7010	DATE:	7/27/2012
		ALS JOB#:	EV12070071
		ALS SAMPLE#:	-02
CLIENT CONTACT:	Vance Atkins	DATE RECEIVED:	7/18/2012
CLIENT PROJECT:	Everett Landfill #98165	COLLECTION DATE:	7/18/2012 10:10:00 AM
CLIENT SAMPLE ID	MW-11R-0712	WDOE ACCREDITATION:	C601

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	07/25/2012	LAP

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
Phenol-d5	EPA-8270	**21.9**	07/25/2012	LAP
Nitrobenzene-d5	EPA-8270	**80.7**	07/25/2012	LAP
Terphenyl-d14	EPA-8270	**90.1**	07/25/2012	LAP

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CERTIFICATE OF ANALYSIS

CLIENT:	HWA Geosciences Inc. 21312 - 30th Drive SE, Suite 110 Bothell, WA 98021-7010	DATE:	7/27/2012
		ALS JOB#:	EV12070071
		ALS SAMPLE#:	-03
CLIENT CONTACT:	Vance Atkins	DATE RECEIVED:	7/18/2012
CLIENT PROJECT:	Everett Landfill #98165	COLLECTION DATE:	7/18/2012 10:50:00 AM
CLIENT SAMPLE ID	MW-21R-0712	WDOE ACCREDITATION:	C601

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	07/25/2012	LAP

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
Phenol-d5	EPA-8270	**25.4**	07/25/2012	LAP
Nitrobenzene-d5	EPA-8270	**82.4**	07/25/2012	LAP
Terphenyl-d14	EPA-8270	**90.2**	07/25/2012	LAP

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CERTIFICATE OF ANALYSIS

CLIENT:	HWA Geosciences Inc. 21312 - 30th Drive SE, Suite 110 Bothell, WA 98021-7010	DATE:	7/27/2012
		ALS JOB#:	EV12070071
		ALS SAMPLE#:	-04
CLIENT CONTACT:	Vance Atkins	DATE RECEIVED:	7/18/2012
CLIENT PROJECT:	Everett Landfill #98165	COLLECTION DATE:	7/18/2012 11:40:00 AM
CLIENT SAMPLE ID	MW-30-0712	WDOE ACCREDITATION:	C601

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	07/25/2012	LAP

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
Phenol-d5	EPA-8270	**29.2**	07/25/2012	LAP
Nitrobenzene-d5	EPA-8270	**66.0**	07/25/2012	LAP
Terphenyl-d14	EPA-8270	**82.3**	07/25/2012	LAP

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CERTIFICATE OF ANALYSIS

CLIENT:	HWA Geosciences Inc. 21312 - 30th Drive SE, Suite 110 Bothell, WA 98021-7010	DATE:	7/27/2012
		ALS JOB#:	EV12070071
		ALS SAMPLE#:	-05
CLIENT CONTACT:	Vance Atkins	DATE RECEIVED:	7/18/2012
CLIENT PROJECT:	Everett Landfill #98165	COLLECTION DATE:	7/18/2012 12:45:00 PM
CLIENT SAMPLE ID	MW-31-0712	WDOE ACCREDITATION:	C601

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	07/25/2012	LAP

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
Phenol-d5	EPA-8270	**22.8**	07/25/2012	LAP
Nitrobenzene-d5	EPA-8270	**69.2**	07/25/2012	LAP
Terphenyl-d14	EPA-8270	**81.9**	07/25/2012	LAP

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

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CERTIFICATE OF ANALYSIS

CLIENT:	HWA Geosciences Inc. 21312 - 30th Drive SE, Suite 110 Bothell, WA 98021-7010	DATE: ALS JOB#: ALS SAMPLE#:	7/27/2012 EV12070071 -06
CLIENT CONTACT:	Vance Atkins	DATE RECEIVED:	7/18/2012
CLIENT PROJECT:	Everett Landfill #98165	COLLECTION DATE:	7/18/2012 2:45:00 PM
CLIENT SAMPLE ID	MW-39-0712	WDOE ACCREDITATION:	C601

DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Bis(2-Ethylhexyl)Phthalate	EPA-8270	**2.1**	2.0	1	UG/L	07/25/2012	LAP

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
Phenol-d5	EPA-8270	**24.8**	07/25/2012	LAP
Nitrobenzene-d5	EPA-8270	**80.3**	07/25/2012	LAP
Terphenyl-d14	EPA-8270	**89.9**	07/25/2012	LAP

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CERTIFICATE OF ANALYSIS

CLIENT:	HWA Geosciences Inc. 21312 - 30th Drive SE, Suite 110 Bothell, WA 98021-7010	DATE:	7/27/2012
		ALS JOB#:	EV12070071
		ALS SAMPLE#:	-07
CLIENT CONTACT:	Vance Atkins	DATE RECEIVED:	7/18/2012
CLIENT PROJECT:	Everett Landfill #98165	COLLECTION DATE:	7/18/2012 3:30:00 PM
CLIENT SAMPLE ID	MW-38-0712	WDOE ACCREDITATION:	C601

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	07/25/2012	LAP

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
Phenol-d5	EPA-8270	**23.9**	07/25/2012	LAP
Nitrobenzene-d5	EPA-8270	**81.4**	07/25/2012	LAP
Terphenyl-d14	EPA-8270	**94.7**	07/25/2012	LAP

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

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Laboratory Group A Campbell Brothers Limited Company

Environmental www.alsglobal.com
RIGHT SOLUTIONS RIGHT PARTNER

CERTIFICATE OF ANALYSIS

CLIENT:	HWA Geosciences Inc. 21312 - 30th Drive SE, Suite 110 Bothell, WA 98021-7010	DATE:	7/27/2012
		ALS JOB#:	EV12070071
		ALS SAMPLE#:	-08
CLIENT CONTACT:	Vance Atkins	DATE RECEIVED:	7/18/2012
CLIENT PROJECT:	Everett Landfill #98165	COLLECTION DATE:	7/18/2012 8:00:00 AM
CLIENT SAMPLE ID	FB-0712	WDOE ACCREDITATION:	C601

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	07/25/2012	LAP

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
Phenol-d5	EPA-8270	**21.8**	07/25/2012	LAP
Nitrobenzene-d5	EPA-8270	**65.4**	07/25/2012	LAP
Terphenyl-d14	EPA-8270	**94.7**	07/25/2012	LAP

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

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CERTIFICATE OF ANALYSIS

CLIENT:	HWA Geosciences Inc. 21312 - 30th Drive SE, Suite 110 Bothell, WA 98021-7010	DATE:	7/27/2012
		ALS JOB#:	EV12070071
		ALS SAMPLE#:	-09
CLIENT CONTACT:	Vance Atkins	DATE RECEIVED:	7/18/2012
CLIENT PROJECT:	Everett Landfill #98165	COLLECTION DATE:	7/18/2012 8:30:00 AM
CLIENT SAMPLE ID	DUP-0712	WDOE ACCREDITATION:	C601

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	07/25/2012	LAP

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
Phenol-d5	EPA-8270	**23.2**	07/25/2012	LAP
Nitrobenzene-d5	EPA-8270	**78.4**	07/25/2012	LAP
Terphenyl-d14	EPA-8270	**91.6**	07/25/2012	LAP

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

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ALS Laboratory Group A Campbell Brothers Limited Company

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CERTIFICATE OF ANALYSIS

CLIENT:	HWA Geosciences Inc. 21312 - 30th Drive SE, Suite 110 Bothell, WA 98021-7010	DATE:	7/27/2012
		ALS SDG#:	EV12070071
		WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Vance Atkins		
CLIENT PROJECT:	Everett Landfill #98165		

LABORATORY BLANK RESULTS

MB-072312W - Batch 2954 - Water by EPA-8270

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Phenol	EPA-8270	U	2.0	1	UG/L	07/25/2012	LAP
Pyrene	EPA-8270	U	2.0	1	UG/L	07/25/2012	LAP
Bis(2-Ethylhexyl)Phthalate	EPA-8270	U	2.0	1	UG/L	07/25/2012	LAP

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CERTIFICATE OF ANALYSIS

CLIENT:	HWA Geosciences Inc. 21312 - 30th Drive SE, Suite 110 Bothell, WA 98021-7010	DATE: ALS SDG#: WDOE ACCREDITATION:	7/27/2012 EV12070071 C601
CLIENT CONTACT:	Vance Atkins		
CLIENT PROJECT:	Everett Landfill #98165		

LABORATORY CONTROL SAMPLE RESULTS

ALS Test Batch ID: 2954 - Water by EPA-8270

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	ANALYSIS DATE	ANALYSIS BY
Phenol - BS	EPA-8270	**26.0**			07/25/2012	LAP
Phenol - BSD	EPA-8270	**27.7**	**7**		07/25/2012	LAP
Pyrene - BS	EPA-8270	**92.9**			07/25/2012	LAP
Pyrene - BSD	EPA-8270	**106**	**13**		07/25/2012	LAP

APPROVED BY

Laboratory Director

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Laboratory Group A Campbell Brothers Limited Company

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EV1207071

HWA GeoSciences Inc.

21312 30th Drive SE, Suite 110, Bothell, Washington 98021-7010
Tel 425.774.0106 Fax 425.774.2714 www.hwageo.com

Chain of Custody and Laboratory Anaylsis Request

DATE: 7/18/12
PAGE: 1 of 1

PROJECT NAME: Everett Landfill #: 9165
SAMPLERS NAME: Atkins PHONE:
SAMPLERS SIGNATURE: [signature] DATE: 7/18/12
HWA CONTACT: Atkins PHONE:

HWA SAMPLE ID	DATE	TIME	MATRIX	LAB ID	# OF BOTTLE
MW-36-0712	7/18/12	920	W	1	1
MW-11R-0712		1010		2	1
MW-21R-0712		1050		3	1
MW-30-0712		1140		4	1
MW-31-0712		1245		5	1
MW-39-0712		1445		6	1
MW-38-0712		1530		7	1
FB-0712		0800	W	8	1
Dup-0712		830	W	9	1

ANALYSIS REQUESTED

Bis(2-ethylhexyl) Phthalate	EDD
✓	
✓	
✓	
✓	
✓	
✓	
✓	
✓	
✓	

TURNAROUND TIME
☐ DAYS
☑ STANDARD

REMARKS

PRINT NAME	SIGNATURE	COMPANY	DATE	TIME	REMARKS
Relinquished by: Vince Atkins	[signature]	HWA	7/18/12	1635	
Received by: Shawn Robinson	Shawn Robinson	ALS	7/18/12	16:35	
Relinquished by:					
Received by:					

DISTRIBUTION: WHITE - Return to HWA GeoSciences; YELLOW - Retain by Lab; PINK - Retain by Sampler

PUBLIC WORKS

EVERETT

RECEIVED
AUG 15 2012
HWA GeoSciences Inc.

August 10, 2012

HWA GeoSciences Inc.
21312 30th Dr SE
Bothell, WA 98021
Attn: Vance Atkins

Re: Project # 38121

Dear Vance:

Enclosed are the result and the original chain-of-custody (COC) record for the above-referenced project. We received nine water samples in good condition on July 19, 2012. There were no discrepancies between the COC and sample containers. All sample and quality control analyses proceeded without incident of note. A printed copy of the QC report for your data set is available upon request.

A copy of this report and the original benchsheets will be kept on file at the Everett Environmental Laboratory, should you need further information about the results or copies of any documentation.

If you have any questions, please call me any time at (425) 257-8230.

Sincerely,

Everett Environmental Laboratory

Christiane Khairzada
Quality Assurance Coordinator

enclosures

CITY OF EVERETT
ENVIRONMENTAL LABORATORY

PROJECT #
00038121

Client:
Program: Contract - HWA - Landfill
Contact:

Date Received: 07/19/12
Data Release: CK
Date Reported: 08/09/12

Department	Analysis	Units	DL	Method	PQL	BE97910 MW36-0712 07/18/12	BE97911 MW11-0712 07/18/12	BE97912 MW21R-0712 07/18/12	BE97913 MW30-0712 07/18/12
METALS	Dis. Arsenic	µg/L	0.5	200.8	2.0	4.8	2.3	6.8	1.7 J
	Dis. Iron	µg/L	20	200.8	80	14800	7600	8820	2340
	Dis. Manganese	µg/L	0.5	200.8	2.0	677	535	1600	691
	Dis. Nickel	µg/L	0.5	200.8	2.0	0.8 J	< 0.5	0.6 J	< 0.5
	Dis. Zinc	µg/L	5	200.8	20	< 5	< 5	< 5	< 5
NUTRIENTS	Chloride	mg/L	0.2	4500-CL-E	0.8		4.1	11.1	13.5
			1.0	4500-CL-E	4.0	29.4			

Department	Analysis	Units	DL	Method	PQL	BE97914 MW31-0712 07/18/12	BE97915 MW39-0712 07/18/12	BE97916 MW38-0712 07/18/12	BE97917 FB-0712 07/18/12
METALS	Dis. Arsenic	µg/L	0.5	200.8	2.0	1.5 J	2.1	< 0.5	< 0.5
	Dis. Iron	µg/L	20	200.8	80	39700	5430	71 J	< 20
	Dis. Manganese	µg/L	0.5	200.8	2.0	1150	234	107	< 0.5
	Dis. Nickel	µg/L	0.5	200.8	2.0	3.2	< 0.5	< 0.5	< 0.5
	Dis. Zinc	µg/L	5	200.8	20	< 5	< 5	17 J	< 5
NUTRIENTS	Chloride	mg/L	0.2	4500-CL-E	0.8		5.9	16.2	< 0.2
			4.0	4500-CL-E	16.0	138			

Department	Analysis	Units	DL	Method	PQL	BE97918 DUP-0712 07/18/12
METALS	Dis. Arsenic	µg/L	0.5	200.8	2.0	1.8 J
	Dis. Iron	µg/L	20	200.8	80	2380
	Dis. Manganese	µg/L	0.5	200.8	2.0	688
	Dis. Nickel	µg/L	0.5	200.8	2.0	< 0.5
	Dis. Zinc	µg/L	5	200.8	20	< 5
NUTRIENTS	Chloride	mg/L	0.2	4500-CL-E	0.8	13.0

DATA REPORTING QUALIFIES

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 contamination
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.

CITY OF EVERETT
ENVIRONMENTAL LABORATORY
3200 CEDAR STREET, EVERETT, WA 98201
Phone: (425) 257-8230 Fax: (425) 257-6033

ANALYSIS REQUEST
CHAIN OF CUSTODY

PROJECT # 38121

DATE: _____

CLIENT: HWA	ADDRESS: HWA GeoSciences
PROGRAM:	SAMPLE SITE: EVT Land Fill
PHONE: 425-774-0103	COLLECTED BY: Vance Atkins
	REQUESTED BY: ON FILE

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	ANALYSIS REQUESTED: Chlorides	As, Fe, Mn, Ni, Zn							
MW36-0712	BE 6440	7.11.12	920		W									
MW11-0712	11		1010											
MW21R-0712	12		1030											
MW30-0712	13		1140											
MW31-0712	14		1245											
MW35-0712	15		1415											
MW33-0712	16		1530											
FB0712	17		0930											
Dup-0712	18		830											

• INDICATE: LAB PERFORMING ANALYSIS / # OF CONTAINERS

CHAIN OF CUSTODY

		DATE	TIME
*Relinquished:	*Received:	7-18-12	1605
*Relinquished:	*Received:	DATE	TIME
*Relinquished:	*Received:	DATE	TIME
*Relinquished:	*Received:	DATE	TIME

COMMENTS: 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.*

CCI Analytical Laboratories, Inc. Quality Control REVIEW
Sample Location: Everett Landfill, Everett, Washington
Samples collected by HWA GeoSciences, Inc (HWA)
Samples analyzed by CCI Analytical Laboratories, Inc. (CCI)
Sample Dates: January 23-24, 2012
Event: January 2011 ground water sampling round of performance monitoring phase
Reviewed by Vance Atkins and Arnie Sugar of HWA
Reviewed on August 17, 2012
Finalized on September 7, 2012

Analyses Performed:

- Method 8270 for selected semivolatile organic compounds (SVOCs) by GC/MS for Bis(2-ethylhexyl)phthalate.

Ground Water Samples collected at the following locations:
MW-21R, MW-30, MW-31, MW-36, MW-38, MW-39

Field QA/QC:

- A ground water field duplicate was collected on January 23, 2011 at MW-36 (DUP-0112). Bis(2-ethylhexyl)phthalate was not detected above PQL in MW-36 or DUP-0112, hence no relative percent difference (RPD) was calculated.
- No trip blanks were submitted for analysis, as no VOCs are being analyzed.
- One ground water field blank (FB-0112) was collected on January 23, 2012 at MW-36, using water purified by reverse osmosis and/or de-ionization. No bis(2-ethylhexyl)phthalate was detected in the field blank FB-01-0111 above PQL.

HWA internal issues:

- No other internal QA/QC issues were noted.

Laboratory QA/QC

- CCI 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 SVOCs were analyzed within holding times.

Report # 1201081: Samples MW-21R, MW-30, MW-31, MW-36, MW-38, MW-39, DUP-0112 and FB-0112.

SVOCs by GC/MS

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

The analyses of the samples reviewed herein were determined to be acceptable for their intended use.

Vance Atkins, L.G., L.H.G.

City of Everett Environmental Laboratory Quality Control REVIEW
Sample Location: Everett Landfill, Everett, Washington.
Samples collected by HWA GeoSciences, Inc (HWA)
Samples analyzed by Everett Environmental Laboratory (EEL)
Sample Dates: January 23-24, 2012
Event: January 2012 ground water sampling round of performance monitoring phase
Reviewed by Vance Atkins and Arnie Sugar of HWA
Reviewed on August 17, 2012
Finalized on September 7, 2012

Analyses Performed:

- Conventional parameter analysis for chloride.
- Dissolved Metals: arsenic, iron, manganese, nickel, zinc.

Ground Water Samples collected at the following locations:
MW- 21R, MW-30, MW-31, MW-36, MW-38, MW-39

Field QA/QC:

- A ground water field duplicate was collected on January 23, 2012 at MW-36 (DUP-0112). All applicable relative percent differences (RPD's) for metals and conventionals detections in field sample and duplicate were <20%.
- One field blank (FB-0112) was collected on January 23, 2013 at MW-33. The ground water field blank was collected using water purified by reverse osmosis and/or de-ionization. All metals results in this field blank were below the laboratory detection limits or PQLs.

HWA internal issues:

- No internal QA/QC issues were noted.

Laboratory QA/QC
Reported laboratory QC included method blanks, duplicates, matrix spikes, check standards, and standard reference materials.

Holding Times:

- All metals and conventional parameters (anions) were analyzed within holding times.

Project 36974: Samples MW- 21R, MW-30, MW-31, MW-36, MW-38, MW-39, FB-01-0111, DUP-01-0111

Dissolved Metals

- Method Blanks: All method blanks were non-detect.
- Check standard: All recoveries were reported by the laboratory to be within established control limits
- Spikes: All recoveries were reported by the laboratory to be within established limits.
- Standard Reference Materials: All recoveries were reported by the laboratory to be within established control limits

- Duplicates: Laboratory duplicate RPDs were reported by the laboratory to be within established control limits.

Conventional Parameters:

- Check Standard: All recoveries were reported by the laboratory to be within established control limits.
- Matrix Spikes: Spike recoveries were reported by the laboratory to be within established control limits.
- Standard Reference Materials: All recoveries were reported by the laboratory to be within established control limits.
- Duplicates: Laboratory duplicate RPDs were reported by the laboratory to be within established control limits.

These data are considered valid and suitable for their intended purpose.

Vance Atkins, L.G., L.H.G.

CCI Analytical Laboratories, Inc. Quality Control REVIEW
Sample Location: Everett Landfill, Everett, Washington
Samples collected by HWA GeoSciences, Inc (HWA)
Samples analyzed by CCI Analytical Laboratories, Inc. (CCI)
Sample Dates: July 18, 2009
Event: July 2011 ground water sampling round of performance monitoring phase
Reviewed by Vance Atkins and Arnie Sugar of HWA
Reviewed on August 17, 2012
Finalized on September 7, 2012

Analyses Performed:

- Method 8270 for selected semivolatile organic compounds (SVOCs) by GC/MS for Bis(2-ethylhexyl)phthalate.

Ground Water Samples collected at the following locations:
MW-11R, MW- 21R, MW-30, MW-31, MW-36, MW-38, MW-39

Field QA/QC:

- A ground water field duplicate was collected on July 18, 2012 at MW-30 (DUP-0712). Bis(2-ethylhexyl)phthalate was not detected above PQL in MW-21R or DUP-0712 hence no relative percent difference (RPD) was calculated.
- No trip blanks were submitted for analysis, as no VOCs are being analyzed.
- One ground water field blank (FB-0712) was collected on July 18, 2012 at MW-11R, using water purified by reverse osmosis and/or de-ionization. No bis(2-ethylhexyl)phthalate was detected in the field blank FB-1 above PQL.

HWA internal issues:

- No other internal QA/QC issues were noted.

Laboratory QA/QC

- CCI 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 SVOCs were analyzed within holding times.

Report # 12070071: Samples MW-11R, MW- 21R, MW-30, MW-31, MW-36, MW-38, MW-39, DUP-0712 and FB-0712

SVOCs by GC/MS

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

The analyses of the samples reviewed herein were determined to be acceptable for their intended use.

HWA Project No. 98165-660

Vance Atkins, L.G., L.H.G.

City of Everett Environmental Laboratory Quality Control REVIEW
Sample Location: Everett Landfill, Everett, Washington.
Samples collected by HWA GeoSciences, Inc (HWA)
Samples analyzed by Everett Environmental Laboratory (EEL)
Sample Dates: July 18, 2012
Event: July 2012 ground water sampling round of performance monitoring phase
Reviewed by Vance Atkins and Arnie Sugar of HWA
Reviewed on August 17, 2012
Finalized on September 7, 2012

Analyses Performed:

- Conventional parameter analysis for chloride.
- Dissolved Metals: arsenic, iron, manganese, nickel, zinc.

Ground Water Samples collected at the following locations:
MW-11R, MW- 21R, MW-30, MW-31, MW-36, MW-38, MW-39

Field QA/QC:

- A ground water field duplicate was collected on July 18, 2012 at MW-30 (DUP-0712). All applicable relative percent differences (RPD's) for metals and conventionals detections in field sample and duplicate were <20%.
- One field blank (FB-0712) was collected on July 18, 2012 at MW-11R. The ground water field blank was collected using water purified by reverse osmosis and/or de-ionization. All metals results in this field blank were below the laboratory detection limits.

HWA internal issues:

- No internal QA/QC issues were noted.

Laboratory QA/QC
Reported laboratory QC included method blanks, duplicates, matrix spikes, check standards, and standard reference materials.

Holding Times:

- All metals and conventional parameters (anions) were analyzed within holding times.

Project 38121: Samples: MW-11R, MW- 21R, MW-30, MW-31, MW-36, MW-38, MW-39, DUP-0712 and FB-0712

Dissolved Metals

- Method Blanks: All method blanks were non-detect.
- Check standard: All recoveries were reported by the laboratory to be within established control limits
- Spikes: All recoveries were reported by the laboratory to be within established limits.

- Standard Reference Materials: All recoveries were reported by the laboratory to be within established control limits
- Duplicates: Laboratory duplicate RPDs were reported by the laboratory to be within established control limits.

Conventional Parameters:

- Method Blanks: All method blanks were non-detect.
- Check Standard: All recoveries were reported by the laboratory to be within established control limits.
- Matrix Spikes: Spike recoveries were reported by the laboratory to be within established control limits.
- Standard Reference Materials: All recoveries were reported by the laboratory to be within established control limits.
- Duplicates: Laboratory duplicate RPDs were reported by the laboratory to be within established control limits.

These data are considered valid and suitable for their intended purpose.

Vance Atkins, L.G., L.H.G.