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SCS ENGINEERS

June 6, 2011
File No. 04211003.03

Mr. David Bosch
Environmental Health Specialist
Tacoma-Pierce County Health Department
3629 South D Street
Tacoma, Washington 98418-6813

Subject: First Quarter 2011 Monitoring, Hidden Valley Landfill

Dear David:

The following provides a summary of monitoring activities performed at the closed Hidden Valley Landfill during the First Quarter (January through March) of 2011.

Monthly rainfall totals and monthly leachate volumes pumped from Cell 1 (main sump), Cell 2 (side slope sump), and the leak detection sump (leakage flow), are summarized in Table 1. Leachate and leakage flow are recorded on a daily basis using a programmable logic controller. Leakage volumes from the side slope liner leak detection system are based on meter readings recorded by on-site personnel. Rainfall totals were recorded with an on-site rain gauge.

Landfill gas monitoring was performed on January 25, February 24, and March 18. All gas probe measurements this quarter were less than 5 percent methane by volume, with the exception of GP-15A on March 18 (6.6 percent methane by volume). LRI personnel were notified of this measurement and adjustments were made to the landfill gas extraction system to recapture the gas. On-site buildings were monitored for the presence of landfill gas on January 25. No methane detections were reported in the buildings. A summary of monitoring data for the landfill gas probes and on-site buildings is enclosed.

First Quarter 2011 groundwater monitoring was the annual sampling event as described in the Hidden Valley Landfill Groundwater Compliance Monitoring Plan (February 2001). Groundwater samples were collected by SCS Engineers (SCS) on January 4 through January 7. Low-flow sampling techniques were used to purge and collect samples from the monitoring wells. Field quality control samples consisted of one duplicate sample and one field blank. Water supply well samples were collected at Corliss Resources, Inc. (Corliss) and the Paul Bunyan Rifle & Sportsman Club (Paul Bunyan). A leachate sample and a sample from the side-slope liner leak detection system were collected. The hydraulic gradient control system beneath the main leachate collection sump did not accumulate fluids and require pumping, therefore, fluids from this system were not sampled.

Samples were shipped to TestAmerica Laboratories, Inc. in Arvada, Colorado via FedEx the same day as collected. Groundwater data generated from the Hidden Valley Landfill during the

First Quarter of 2011 were validated and input into the Washington Department of Ecology Environmental Information Management (EIM) system.

Depths to water measurements were collected on January 6. Figures 1 through 3 display water level contour maps for; the shallow perched aquifer, upper regional aquifer, and the lower regional aquifer, respectively.

Groundwater field data and laboratory test results are summarized on the following tables: Table 2, Water Level Elevations; Table 3, Field Parameters; Table 4, Inorganic Parameters; Table 5, Dissolved Metals; Table 6, Volatile Organic Compounds; Table 7, Duplicate Samples; and Table 8, Water Supply Wells; Table 9, Side Slope liner Monitoring. Field Sampling Data Sheets are attached. Laboratory reports for First Quarter 2011 groundwater monitoring were provided under separate cover. Groundwater sample results are similar to previous wet-season results. An update of time series plots and groundwater statistics will be included with the 2011 Annual Report. A quality assurance review of the First Quarter 2011 analytical data is attached.

The landfill cover system and the condensate recirculation system were inspected on January 25. The inspections found minor maintenance issues which are detailed on the attached forms.

A new landfill gas flare and blower system began operation at the Hidden Valley landfill on March 16, 2011. The new system includes a Perennial Energy flare rated for 15 million BTU per hour and a flow rate range 50 to 500 standard cubic feet per minute (scfm), assuming 50 percent methane. Since start-up, the flow rate at the new flare has been approximately 375 scfm at approximately 30 to 33 percent methane.

A portion of the landfill gas extraction system on the south slope of the landfill was taken off-line in early September 2009 to help mitigate a suspected subsurface smoldering fire (see 2009 and 2010 Annual Reports for further discussion). These extraction wells remain off-line.

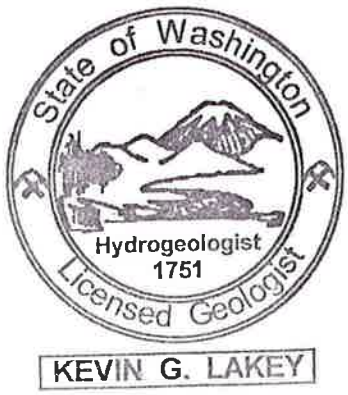
Three temporary gas probes (LFG-1, LFG-2, and LFG-3) were installed in the vicinity of the suspected subsurface fire in September 2009. Probes LFG-1 and LFG-2 are located just outside the waste on the south side of the first sinkhole. Probe LFG-3 is located within the waste, north of the first sinkhole. These probes are monitored monthly for methane, carbon dioxide, and oxygen. A chart of gas trends at the temporary probes is included with the landfill gas monitoring results.

LRI and SCS are continuing to inspect the sinkhole repair area and south slope for stabilization, slope erosion, and odors. These inspections include weekly visual surveys by LRI personnel and monthly inspections by SCS personnel. Final repair of the composite geomembrane cover will occur after site inspection and monitoring data suggest the subsurface fire is extinguished. These criteria include increasing concentrations of methane and carbon dioxide in landfill gas probes and extraction wells, stabilization of the sinkhole area and south slope, and an absence of burning odors.

If you have any questions regarding the monitoring results, please call me at (425) 289-5447.

Sincerely,

Kevin Lakey, PE, LHG
Project Director
SCS ENGINEERS



Attachment: Groundwater Data Validation Report
Groundwater Data Summary Tables (Tables 1 through 8)
Groundwater Contour Maps (Figures 1 through 3)

Enclosure: Hidden Valley Leachate Treatment System Data
Field Sampling Data Sheets
Landfill Gas Monitoring Results
Site Inspection Forms

cc: Mohsen Kourehdar, Ecology
Rebecca Lawson, Ecology (w/o enclosure)
Jody Snyder, LRI (w/o enclosure)
Wes Gavett, WCI (w/o enclosure)

Groundwater Data Validation Report
First Quarter 2011
Hidden Valley Landfill

Holding Times. All analyses were performed within quality control (QC) holding times, with the exception of ammonia in samples from wells MW-18S, MW-18D, MW-20R, MW-26R, Corliss, and the side-slope leak detection sump due to an omission on the chain-of-custody form. Ammonia data from the referenced samples were flagged with a "J" to indicate estimated value.

Surrogate Recovery. Surrogate recoveries were within USEPA guidelines.

Matrix Spike. Matrix spike recoveries were within USEPA guidelines, with the following exceptions: iron in batch 580-79352 reported a matrix spike recovery slightly greater than the guidance criteria (121% vs 120%); ammonia in batches 280-49098 and 280-49816, reported matrix spike recoveries below the guidance criteria (71% to 77% vs 90%); cyanide in in batch 280-48570 reported a matrix spike recovery slightly greater than the acceptance criteria (112% vs 110%), and trans-1,2-dichloroethene in batch 280-48495 reported a matrix spike recovery slightly greater than the acceptance criteria (125% vs 120%). In addition, arsenic, barium, chromium, copper, lead, manganese, nickel, and zinc in batch 280-48391 associated with the leachate and side-slope liner samples reported matrix spike recoveries outside acceptance criteria range (see laboratory report 280-11435-1). In each case the relative percent difference between the matrix spike and the matrix spike duplicate were within quality control guidelines. In addition, in each case laboratory control spike results verified method precision and accuracy.

Blanks. One field blank and one trip blank were included this quarter. De-ionized water from Integra Chemical in Kent, Washington, was used to prepare the field blank. Trichloroethene was detected in the field blank at a concentration of 0.90 µg/L. No other detections of trichloroethene were reported. No other VOCs, dissolved metals, or inorganic compounds were reported in the field blank, trip blank or laboratory method blanks above the method reporting limits.

Duplicate Samples. A field duplicate sample was collected from well MW-13D. All test results greater than five times the method-reporting limit (MRL) were within 20 percent relative percent difference (RPD). In addition, laboratory duplicate analyses were performed on all analytes and results were within 20 percent RPD.

Quantitation Limits. The reporting limits for all analyses were within the limits specified in the 2001 Groundwater Compliance Monitoring Plan.

Completeness. Samples were analyzed as requested.

Data Assessment. The data are considered acceptable for entry into the database. Ammonia data associated with a holding time exceedance will be flagged "J" as discussed above.

Table 1. 2011 Performance Monitoring Data

2011 Performance Monitoring Data Main Sump and Side Slope Liner Areas Hidden Valley Landfill, Pierce County, Washington				
Month	Cell 1 Monthly Leachate Volume (gallons)	Cell 2 Monthly Leachate Volume (gallons)	Cell 2 Monthly Leakage Flow[a] (gallons/month)	Monthly Rainfall (inches)
January	22,438	12,017	320	9.9
February	44,148	7,305	0	4.4
March	37,193	3,309	1,083	12.4

[a] Leakage is based on the volume of fluid pumped from the leak detection sump as recorded by LRI staff.

Table 2
Water Level Elevations
January 6, 2011
Hidden Valley Landfill, Pierce County, Washington

Well Number	Well Casing Elevation	Depth to Water	Water Level Elevation
MW-10S	460.17	NM	NM
MW-10D	460.69	27.56	433.13
MW-11S	516.44	90.45	425.99
MW-11D	516.56	90.99	425.57
MW-11D(2)	515.53	90.41	425.12
MW-12S	489.94	63.11	426.83
MW-12D	489.97	64.99	424.98
MW-13S	448.81	22.74	426.07
MW-13D	448.94	22.73	426.21
MW-14S	477.95	46.66	431.29
MW-14D	477.98	49.28	428.70
MW-14R	476.84	117.08	359.76
MW-15S	498.76	72.68	426.08
MW-15D	498.52	77.81	420.71
MW-17S	552.44	127.29	425.15
MW-18S	538.40	129.32	409.08
MW-18D	539.00	129.38	409.62
MW-19S	485.71	53.61	432.10
MW-19D	485.82	59.79	426.03
MW-20R	469.43	104.40	365.03
MW-22U	545.92	137.40	408.52
MW-22L	546.07	140.36	405.71
MW-23S	448.34	19.74	428.60
MW-23D	448.25	22.97	425.28
MW-25S	527.80	124.16	403.64
MW-25D	527.52	126.83	400.69
MW-26R	481.81	60.66	421.15
MW-27S	531.81	104.04	427.77
MW-27D	531.92	104.11	427.81
MW-28S	466.87	40.04	426.83
FMW-01	542.59	142.14	400.45
FMW-02	536.40	134.42	401.98
BC-4S	526.68	123.41	403.27
BC-4D	526.94	NM	NM

Notes:
(NM) = not measured

Table 3
Field Parameters
January 2011 (First Quarter) Groundwater Monitoring
Hidden Valley Landfill, Pierce County, Washington

Sample ID	Sample Number	Sample Date	Method	pH	Conductance (uS)	Temperature (° C)
MW-10S	HVL-010411-04	01/04/11	DP	6.47	164	12.6
MW-10D	HVL-010411-03	01/04/11	DP	6.64	241	11.7
MW-11S	HVL-010511-11	01/05/11	SP	5.85	656	15.1
MW-11D(2)	HVL-010511-12	01/05/11	SP	6.67	448	14.1
MW-12S	HVL-010411-06	01/04/11	DP	5.80	337	19.4
MW-13S	HVL-010511-13	01/05/11	SP	6.21	489	16.2
MW-13D	HVL-010411-07	01/04/11	DP	6.58	313	15.7
MW-14S	HVL-010411-02	01/04/11	DP	6.11	108	12.2
MW-14D	HVL-010411-01	01/04/11	SP	6.49	188	11.8
MW-14R	HVL-010511-18	01/05/11	SP	6.84	108	10.7
MW-15S	HVL-010511-15	01/05/11	SP	5.94	527	15.2
MW-15D	HVL-010511-14	01/05/11	SP	6.65	653	13.5
MW-17S	HVL-010511-17	01/05/11	SP	6.00	**1,329**	17.8
MW-18S	HVL-010711-27	01/07/11	SP	6.28	409	14.9
MW-18D	HVL-010711-28	01/07/11	SP	6.61	308	15.2
MW-20R	HVL-010711-30	01/07/11	SP	7.12	99	9.8
MW-23S	HVL-010611-24	01/06/11	SP	6.11	209	11.0
MW-25S	HVL-010611-22	01/06/11	SP	6.54	301	11.9
MW-26R	HVL-010711-26	01/07/11	SP	7.03	135	10.2
MW-28S	HVL-010611-25	01/06/11	SP	6.31	194	11.4
FMW-01	HVL-010511-09	01/05/11	SP	6.36	554	9.2
FMW-02	HVL-010511-10	01/05/11	SP	6.13	**951**	14.6
Water Supply Well, P. Bunyan	HVL-010611-23	01/06/11	Grab	6.98	277	5.4
Water Supply Well, Corliss	HVL-010711-29	01/07/11	Grab	7.16	204	10.8
Leak Detection, Side Slope	HVL-010711-20	01/07/11	Grab	7.60	23,560	17.9
Leachate, East Area	HVL-010511-19	01/05/11	Grab	7.67	12,056	14.9

Notes:

The groundwater cleanup level for specific conductance is 700 uS/cm.

Parameter concentrations that are greater than cleanup levels are shown in bold.

The secondary drinking water standard for pH is 6.5 ─ 8.5

(μS) = microsiemens

(°C) = degrees Centigrade

(Grab) = collected from sampling point

(SP) = submersible bladder-pump

(DP) = dedicated bladder-pump

Table 4
Inorganic Parameters (mg/L)
January 2011 (First Quarter) Groundwater Monitoring
Hidden Valley Landfill, Pierce County, Washington

	MRL	Cleanup Levels	MW-10D	MW-10S	MW-11D(2)	MW-11S	MW-12D	MW-12S	MW-13D	MW-13S	MW-14D	MW-14R	MW-14S	MW-15D	MW-15S	MW-17S	MW-18D	MW-18S	MW-20R	MW-23S	MW-25S	MW-26R	MW-28S	FMW-01	FMW-02
			Background																						
Alkalinity	5	—	140	49	100	54	160	57	130	86	71	48	36	150	83	110	130	140	47	74	120	61	74	110	130
Bicarbonate Alkalinity	5	—	140	49	100	54	160	57	130	86	71	48	36	150	83	110	130	140	47	74	120	61	74	110	130
Chloride	0.2-4.0	250[(b)]	5.1	6.4	10.1	14.4	11.7	18.5	13.1	11.1	6.0	1.8	4.0	15.7	18.3	20.8	11.1	13.4	1.8	8.8	9.8	3.8	6.3	13.9	15.0
Ammonia as Nitrogen	0.10	—	*	*	*	*	*	0.44	*	*	2.90	*	*	*	2.90	2.60	*	*	*	*	*	*	*	*	0.23
Nitrate as Nitrogen	0.50	10[(a)]	1.7	1.90	2.1	**17.0**	1.3	**18.0**	1.7	3.3	*	*	1.40	*	3.6	**47.0**	1.6	9.5	*	*	1.7	*	0.6	1.7	**24.0**
Sulfate	0.5-10.0	250[(b)]	7.8	14.8	5.1	24.4	5.3	9.5	14.1	17.5	10.1	3.8	6.5	10.4	10.8	9.8	5.1	10.1	3.2	14.6	7.4	7.3	8.4	15.8	16.5
Total Dissolved Solids	10	500[(b)]	160	110	150	220	220	250	200	160	120	110	86	200	160	440	190	240	90	130	170	110	120	180	320
Total Organic Carbon	1.0	—	*	*	*	*	*	1.7	*	*	1.9	*	1.6	1.3	2.0	1.7	*	1.5	*	*	*	*	*	1.2	1.4

Notes:
Parameter concentrations that are greater than cleanup levels are shown in bold
Analyses performed by TestAmerica, Arvada, Colorado
(mg/L) = milligrams per liter
(*) indicates not reported at or above the MRL (Method Reporting Limit)
(—) indicates not analyzed or not applicable
(a) indicates Primary Drinking Water Standard
(b) indicates Secondary Drinking Water Standard

Table 5
Dissolved Metals (mg/L)
January 2011 (First Quarter) Groundwater Monitoring
Hidden Valley Landfill, Pierce County, Washington

	MRL	Cleanup Levels	MW-10D	MW-10S	MW-11D(2)	MW-11S	MW-12D	MW-12S	MW-13D	MW-13S	MW-14D	MW-14R	MW-14S	MW-15D	MW-15S	MW-17S	MW-18D	MW-18S	MW-20R	MW-23S	MW-25S	MW-26R	MW-28S	FMW-01	FMW-02
			Background																						
Iron	0.200	0.30[(b)]	*	*	*	*	*	*	*	*	**2.100**	*	*	*	*	*	*	*	*	*	*	**0.630**	*	*	**0.430**
Manganese	0.001	0.05[(b)]	*	*	*	*	*	**0.200**	*	0.003	**0.760**	**0.130**	0.012	**0.340**	**0.840**	**1.200**	*	*	*	0.010	*	**0.280**	0.010	*	**0.120**

Notes:

Parameter concentrations that are greater than cleanup levels are shown in **bold**

Analyses performed by TestAmerica, Arvada, Colorado

(mg/L) = milligrams per liter

(*) indicates not reported at or above the MRL (Method Reporting Limit)

(b) indicates Secondary Drinking Water Standard

Table 6
Volatile Organic Compounds (µg/L)
January 2011 (First Quarter) Groundwater Monitoring
Hidden Valley Landfill, Pierce County, Washington

	MRL	Cleanup Levels	MW-10D	MW-10S	MW-11D(2)	MW-11S	MW-12D	MW-12S	MW-13D	MW-13S	MW-14D	MW-14R	MW-14S	MW-15D	MW-15S	MW-17S	MW-18D	MW-18S	MW-20R	MW-23S	MW-25S	MW-26R	MW-28S	FMW-01	FMW-02
			Background																						
Tetrachloroethene	0.5	5.0[(a)]	*	*	0.91	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*

Notes:

Analyses performed by TestAmerica, Arvada, Colorado

Volatile organic compounds not listed were not present at concentrations exeeding the MRL
(µg/L) = micrograms per liter
(*) indicates not reported at or above the MRL (Method Reporting Limit)
(a) indicates Primary Drinking Water standard

Table 7
Duplicate Samples
January 2011 (First Quarter) Groundwater Monitoring
Hidden Valley Landfill, Pierce County, Washington

	MRL	MW-13D	DUP (MW-13D)	RPD (%)
Volatile Organics (µg/L)				
No Detections	—	*	*	*
Dissolved Metals (mg/L)				
No Detections	—	*	*	*
Inorganic Parameters (mg/L)				
Alkalinity	5	130	130	**
Bicarbonate Alkalinity	5	130	130	**
Ammonia as Nitrogen	0.10	*	*	*
Total Organic Carbon	1.0	*	*	*
Chloride	4.0	13.1	12.2	7.1
Nitrate as Nitrogen	0.2	1.7	1.7	**
Total Dissolved Solids	10	200	200	**
Sulfate	0.5	14.1	14.0	**<1.0**

Notes:
Analyses performed by TestAmerica, Arvada, Colorado
Analytes not listed were not present at concentrations exceeding the MRL
RPD = relative percent difference
µg/L = micrograms per liter
mg/L = milligrams per liter
(*) = not reported at or above the MRL (Method Reporting Limit)
(**) = indicates less than 5X the MRL
(—) = not applicable

Table 8
Water Supply Wells
January 2011 (First Quarter) Groundwater Monitoring
Hidden Valley Landfill, Pierce County, Washington

	MRL	Corliss	Paul Bunyan
Volatile Organics (µg/L)			
No Detections	0.5	*	*
Total Metals (mg/L)			
Iron	0.200	*	*
Manganese	0.001	0.006	*
Zinc	0.010	0.049	0.017
Inorganic Parameters (mg/L)			
Chloride	0.2-4.0	6.6	4.7
Ammonia as Nitrogen	0.10	0.3	*
Nitrate as Nitrogen	0.5	1.5	1.8
Nitrite as Nitrogen	0.5	*	*
Sulfate	0.5	9.9	9.8
Chemical Oxygen Demand (COD)	20	20.0	20.0
Total Organic Carbon (TOC)	1.0	*	*
Color	5.0	*	*

Notes:

Analyses performed by TestAmerica, Arvada, Colorado

Volatile organic compounds not listed were not present at concentrations exceeding the MRL

Color reported in color units

µg/L = micrograms per liter

mg/L = milligrams per liter

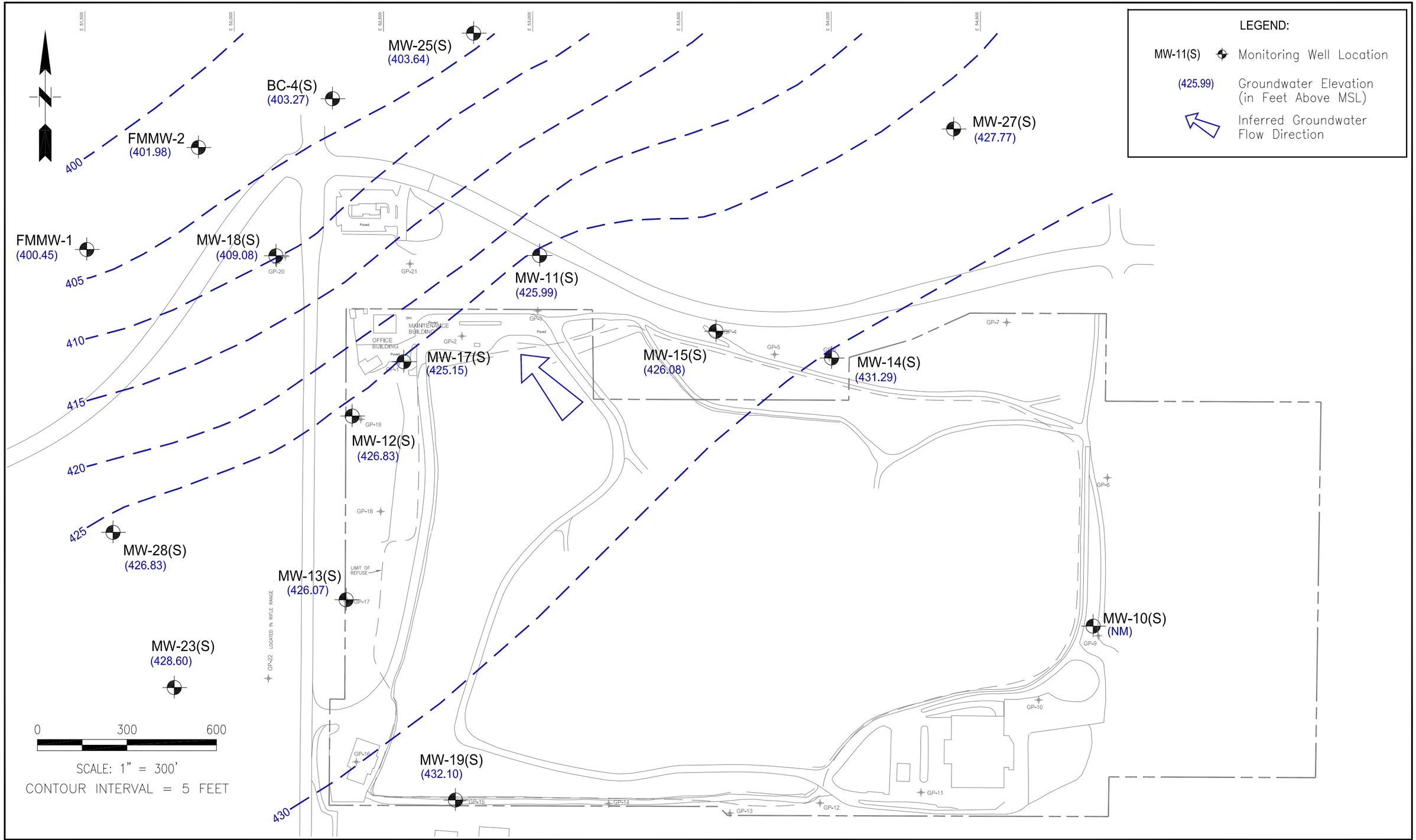
(—) = not applicable or not analyzed

(*) = not reported at or above the MRL (Method Reporting Limit)

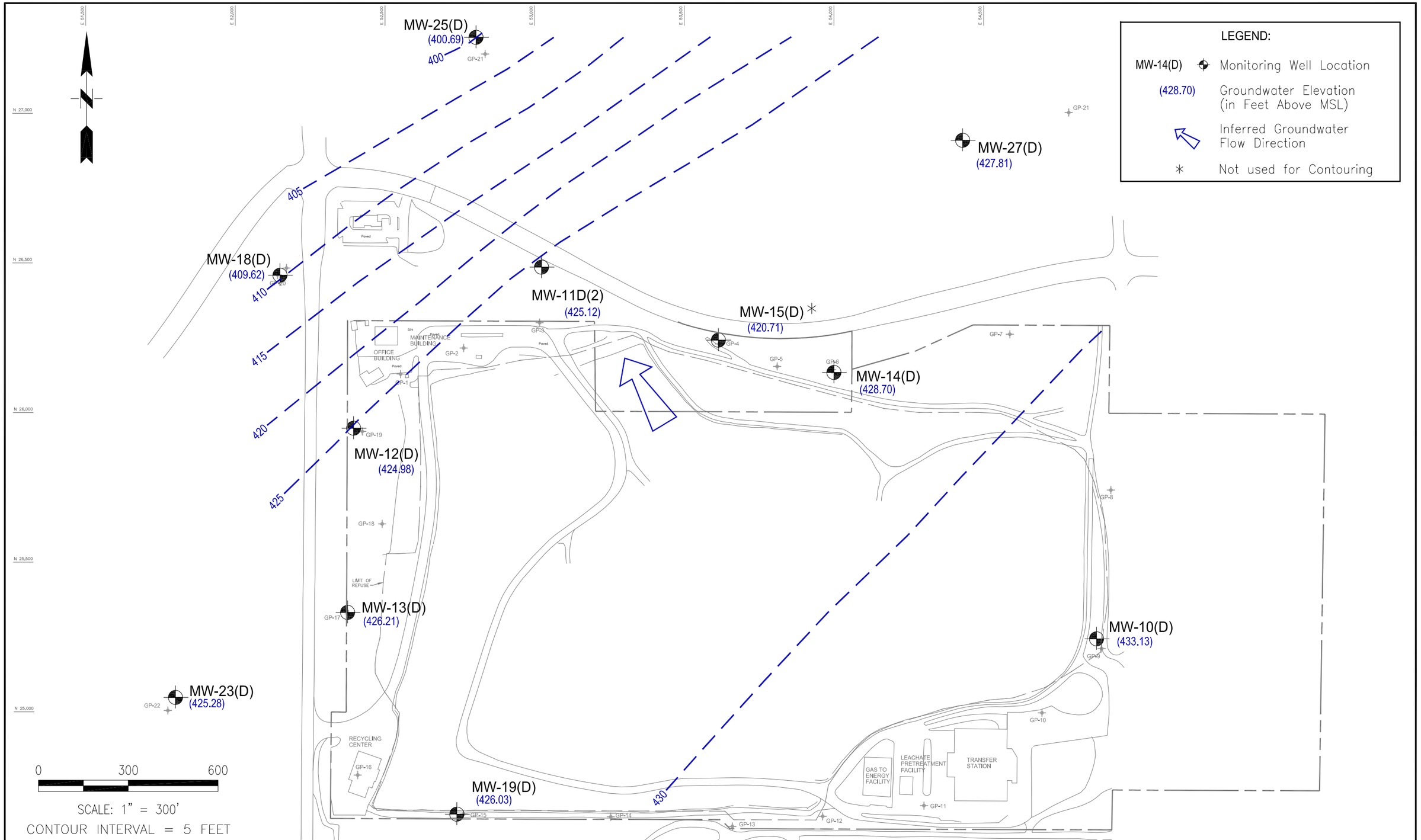
Table 9
Leachate and Side Slope Liner Monitoring
January 2011 (First Quarter)
Hidden Valley Landfill, Pierce County, Washington

	MRL	Leak Detection-Side Slope	Leachate-East Area
Volatile Organics (µg/L)			
Acetone	10-40	18.0	*
Benzene	0.5-2	1.4	2.0
2-Hexanone	5-20	36.0	*
Carbon Disulfide	0.5-2	*	4.6
1,4-Dichlorobenzene	0.5-2	*	2.3
cis-1,2-dichloroethene	0.5-2	1.3	*
m,p-Xylenes	0.5-2	0.9	4.7
Methylene Chloride	2-8	*	2.4
Toluene	0.5-2	3.1	*
Total Metals (mg/L)			
Antimony	0.004	0.10	*
Arsenic	0.010	0.16	0.02
Barium	0.002	0.39	0.45
Calcium	0.200	12.00	130.00
Chromium	0.004	0.05	0.10
Cobalt	0.010	0.02	0.02
Copper	0.004	0.02	*
Iron	0.200	3.70	5.20
Lead	0.002	0.01	*
Magnesium	0.200	19.00	5.20
Manganese	0.002	0.19	0.00
Nickel	0.004	0.35	0.27
Potassium	3.000	380.00	270.00
Sodium	1.000	4600.00	2500.00
Vanadium	0.010	0.12	0.09
Zinc	0.020	0.04	0.03
Inorganic Parameters (mg/L)			
Alkalinity	5-10	6900	4600
Bicarbonate Alkalinity	5-10	6900	4600
Chloride		3000	1680
Ammonia as Nitrogen	10.0	—	400
Sulfate		1.8	414
Chemical Oxygen Demand	400	2600	2100
Total Dissolved Solids	100-200	8600	6700
Total Organic Carbon	20	820	560
Biochemical Oxygen Demand	50-100	75	100
Cyanide, total	0.01	0.031	*
Coliform, total	2	*	800
Field Parameters			
pH	—	7.60	7.67
Conductance (µS)	—	23,560	12,056
Temperature (°C)	—	17.9	14.9

Notes:
Analyses performed by Test America, Arvada, Colorado
Volatile organic compounds not listed were not present at concentrations exceeding the MRL
Total coliform reported in MPN/100 milliliter
(TNC) = To numerous to count
(µg/L) = micrograms per liter
(mg/L) = milligrams per liter
(µS) = microsiemens
(°C) = degrees centigrade
(J) = estimated concentration
(>) = greater than
(*) = not reported at or above the MRL (Method Reporting Limit)
(—) = not applicable or not analyzed



SCS ENGINEERS Environmental Consultants and Contractors 2405 140th Avenue NE, Suite 107 Bellevue, Washington 98005 (425) 746-4600 FAX: (425) 746-6747			PROJECT NO. 042110003.03	DES BY ES	SHALLOW PERCHED AQUIFER WATER LEVEL MAP JANUARY 6, 2011 HIDDEN VALLEY LANDFILL PIERCE COUNTY, WASHINGTON	DATE APRIL 2011
			SCALE AS SHOWN	CHK BY KGL		FIGURE 1
			CAD FILE FIGURE 1	APP BY KGL		



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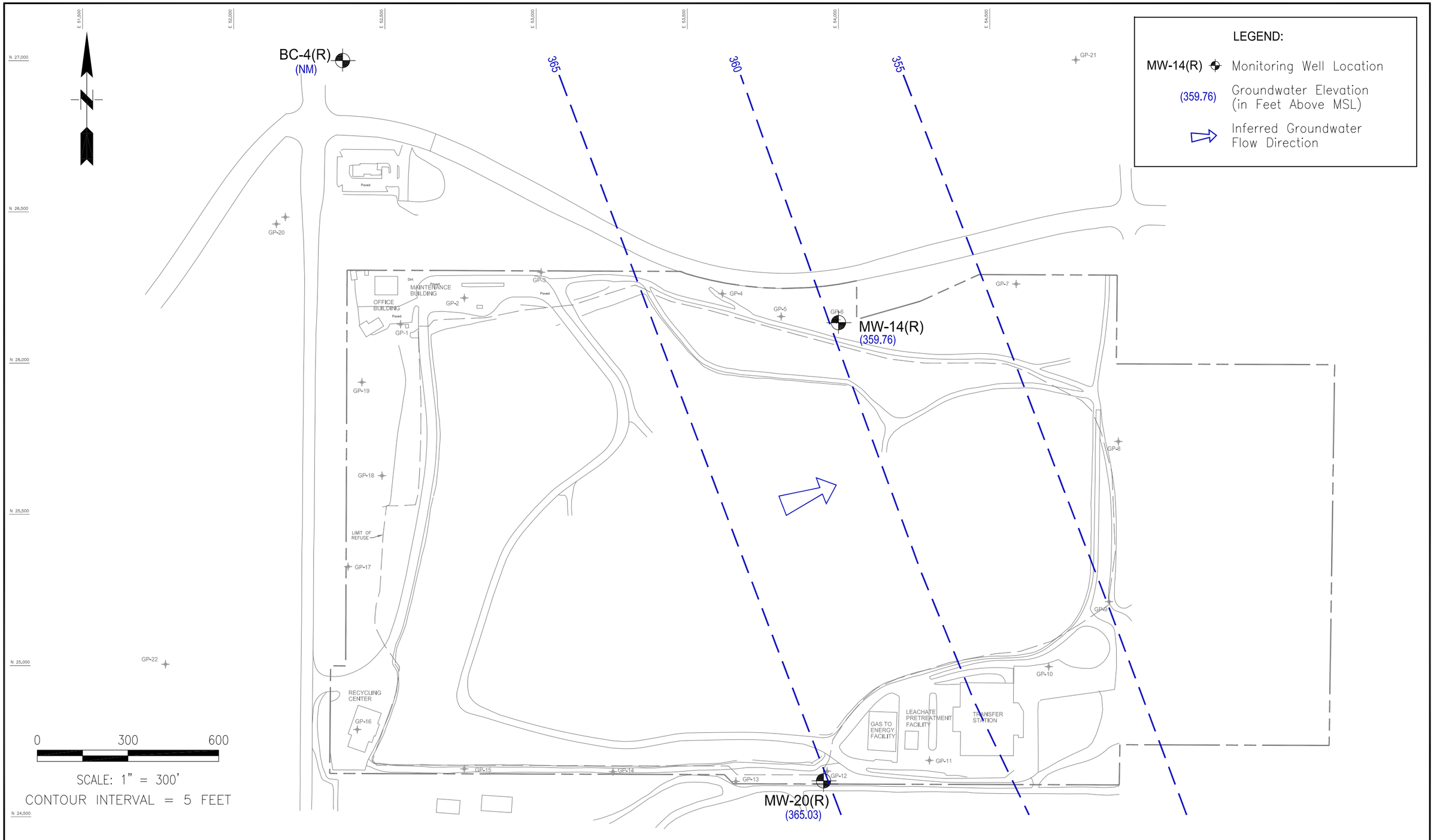
PROJECT NO. 042110003.03	DES BY ES	UPPER REGIONAL AQUIFER WATER LEVEL MAP JANUARY 6, 2011	DATE APRIL 2011
SCALE AS SHOWN	CHK BY KGL	HIDDEN VALLEY LANDFILL PIERCE COUNTY, WASHINGTON	FIGURE 2
CAD FILE FIGURE 2	APP BY KGL		



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PROJECT NO. 04211003.03	DES BY KGL	LOWER REGIONAL AQUIFER WATER LEVEL MAP JANUARY 6, 2011	DATE APRIL 2011
SCALE AS SHOWN	CHK BY KGL	HIDDEN VALLEY LANDFILL PIERCE COUNTY, WASHINGTON	FIGURE 3
CAD FILE FIGURE 3	APP BY KGL		

Landfill Gas Probe Monitoring

SCS Engineers

Hidden Valley Landfill

04209037.02

PCRCD dba LRI

January-11

Location Reference Designation	Date	Time	Pressure (in. H_2O)	CH_4 (% vol.)	CO_2 (% vol.)	O_2 (% vol.)	Comments: Spike CH4 *Note 1* (% vol.)	Comments: Spike CO2 *Note 1* (% vol.)	Comments: Other
Gas Probes									
GP-1A	25-Jan	9:51	-0.06	0.0	5.1	1.3			
GP-1B	25-Jan	9:58	0.00	0.0	4.7	17.1			
GP-1C	25-Jan	10:04	0.04	0.0	2.0	19.6			
GP-2A	25-Jan	10:15	-0.05	0.0	13.0	6.4			
GP-2B	25-Jan	10:20	0.00	0.0	0.4	21.1			
GP-3S	25-Jan	10:28	-0.05	0.0	4.1	8.7			
GP-3M	25-Jan	10:32	-0.05	0.0	2.6	12.1			
GP-3D	25-Jan	10:35	-0.03	0.0	9.5	10.1			
GP-4A	25-Jan	10:42	-0.01	0.0	0.3	21.0			
GP-4B	25-Jan	10:46	0.09	0.0	0.2	21.1			
GP-5A	25-Jan	10:52	-0.02	0.0	0.1	21.0			
GP-5B	25-Jan	10:56	0.00	0.0	0.1	20.9			
GP-6	25-Jan	11:02	-0.01	0.0	0.1	20.9			
GP-7S	25-Jan	11:08	0.00	0.0	0.2	20.7			
GP-7D	25-Jan	11:11	0.00	0.0	0.3	20.7			
GP-8A	25-Jan	11:20	0.00	0.0	0.2	20.9			
GP-8B	25-Jan	11:23	0.00	0.0	0.1	21.1			
GP-9	25-Jan	11:31	0.00	0.0	1.4	20.1			
GP-10	25-Jan	11:39	0.00	0.0	0.2	21.1			
GP-11	25-Jan	11:46	0.00	0.0	1.3	19.7			
GP-12	25-Jan	12:02	0.02	0.0	1.6	17.8			
GP-13A	25-Jan	12:09	0.00	0.0	10.2	0.0			
GP-13B	25-Jan	12:12	0.07	0.0	0.6	21.0			
GP-14S	25-Jan	12:23	0.01	0.0	6.3	16.5			
GP-14D	25-Jan	12:29	0.00	0.0	16.8	2.7			
GP-15A	25-Jan	12:55	0.01	0.0	4.5	16.8			
GP-15B	25-Jan	12:59	0.02	0.0	6.9	3.7			
GP-16A	25-Jan	13:10	0.01	0.0	1.1	20.0			
GP-16B	25-Jan	13:13	0.33	0.0	1.2	19.8			
GP-17	25-Jan	13:22	0.01	0.0	2.9	18.7			
GP-18	25-Jan	13:28	0.01	0.0	0.7	20.5			
GP-19	25-Jan	13:36	0.02	0.0	1.9	19.6			
LFG-1	25-Jan	12:35	0.02	0.4	16.3	0.8			
LFG-2	25-Jan	12:41	0.03	0.7	17.5	0.0			
LFG-3	25-Jan	12:47	0.04	2.8	19.1	0.0			

General Data

Date:	25-Jan-11	Weather Conditions	
Monitored by:	KLK	Sky Cover:	Partly Cloudy
Instruments:	GEM 2000	Wind / Rain / Snow:	
Calibration Date:	25-Jan-11	Temperature (^{o}F):	47

Notes

1. Measurement for spike concentrations of CH4 and CO2 are recorded if observed during sampling

GP = Gas Probe	CH_4 = Methane	S = shallow	A= shallow
NM = Not measured	CO_2 = Carbon Dioxide	M = medium	B = medium
	O_2 = Oxygen	D = deep	C = deep

Landfill Gas Probe Monitoring

SCS Engineers

Hidden Valley Landfill

04209037.02

PCRCD dba LRI

February-11

Location Reference Designation	Date	Time	Pressure (in. H_2O)	CH_4 (% vol.)	CO_2 (% vol.)	O_2 (% vol.)	Comments: Spike CH4 *Note 1* (% vol.)	Comments: Spike CO2 *Note 1* (% vol.)	Comments: Other
Gas Probes									
GP-1A	24-Feb	8:29	0.00	0.0	4.9	1.4			
GP-1B	24-Feb	8:33	0.00	0.0	4.3	17.7			
GP-1C	24-Feb	8:37	-0.02	0.0	6.2	16.8			
GP-2A	24-Feb	8:52	-0.02	0.0	11.3	11.1			
GP-2B	24-Feb	8:55	0.00	0.0	1.3	21.5			
GP-3S	24-Feb	9:01	-0.01	0.0	4.9	11.3			
GP-3M	24-Feb	9:05	-0.01	0.0	2.9	12.5			
GP-3D	24-Feb	9:09	1.93	0.0	8.4	11.3			
GP-4A	24-Feb	9:19	0.00	0.0	0.5	21.8			
GP-4B	24-Feb	9:22	0.15	0.0	0.3	21.7			
GP-5A	24-Feb	9:28	-0.01	0.0	0.2	21.8			
GP-5B	24-Feb	9:31	-0.01	0.0	0.1	21.8			
GP-6	24-Feb	9:36	0.00	0.0	0.1	21.8			
GP-7S	24-Feb	9:44	0.00	0.0	0.2	21.6			
GP-7D	24-Feb	9:53	0.00	0.0	0.3	21.3			
GP-8A	24-Feb	10:01	0.00	0.0	0.3	21.4			
GP-8B	24-Feb	10:05	0.00	0.0	0.1	21.5			
GP-9	24-Feb	10:18	0.00	0.0	1.4	20.0			
GP-10	24-Feb	10:25	0.00	0.0	0.3	21.3			
GP-11	24-Feb	10:32	0.00	0.0	1.2	20.2			
GP-12	24-Feb	10:39	0.00	0.0	0.4	21.1			
GP-13A	24-Feb	10:47	-0.03	1.7	11.0	0.0			
GP-13B	24-Feb	10:53	0.05	0.0	0.5	21.2			
GP-14S	24-Feb	11:18	0.01	0.0	10.6	13.3			
GP-14D	24-Feb	11:21	0.00	0.0	19.0	0.0			
GP-15A	24-Feb	11:27	0.00	0.0	5.6	13.9			
GP-15B	24-Feb	11:30	0.01	0.0	8.2	7.6			
GP-16A	24-Feb	11:37	0.00	0.0	1.1	20.6			
GP-16B	24-Feb	11:40	0.22	0.0	0.9	20.7			
GP-17	24-Feb	11:51	0.00	0.0	3.4	19.3			
GP-18	24-Feb	11:56	0.00	0.0	1.0	20.7			
GP-19	24-Feb	12:03	-0.04	0.0	0.3	21.4			
LFG-1	24-Feb	11:02	0.01	0.4	15.8	1.4			
LFG-2	24-Feb	11:07	0.05	2.8	19.3	0.0			
LFG-3	NM	NM	NM	NM	NM	NM			

General Data

Date:	24-Feb-11	Weather Conditions	
Monitored by:	KLK	Sky Cover:	Partly Cloudy
Instruments:	GEM 2000	Wind / Rain / Snow:	
Calibration Date:	24-Feb-11	Temperature (^{o}F):	47

Notes

1. Measurement for spike concentrations of CH4 and CO2 are recorded if observed during sampling

GP = Gas Probe	CH_4 = Methane	S = shallow	A= shallow
NM = Not measured	CO_2 = Carbon Dioxide	M = medium	B = medium
	O_2 = Oxygen	D = deep	C = deep

Landfill Gas Probe Monitoring

SCS Engineers

Hidden Valley Landfill

04211003.02

PCRCD dba LRI

March-11

Location Reference Designation	Date	Time	Pressure (in. H_2O)	CH_4 (% vol.)	CO_2 (% vol.)	O_2 (% vol.)	Comments: Spike CH4 *Note 1* (% vol.)	Comments: Spike CO2 *Note 1* (% vol.)	Comments: Other
Gas Probes									
GP-1A	18-Mar	7:58	0.14	0.0	4.8	0.8			
GP-1B	18-Mar	8:02	0.07	0.0	4.1	17.7			
GP-1C	18-Mar	8:06	0.00	0.0	2.7	19.6			
GP-2A	18-Mar	8:15	0.04	0.0	11.3	10.2			
GP-2B	18-Mar	8:18	0.01	0.0	1.0	21.0			
GP-3S	18-Mar	8:26	0.00	0.0	2.3	17.0			
GP-3M	18-Mar	8:29	0.00	0.0	2.6	12.0			
GP-3D	18-Mar	8:32	-0.01	0.0	8.2	8.1			
GP-4A	18-Mar	8:41	-0.01	0.0	0.5	21.2			
GP-4B	18-Mar	8:43	0.04	0.0	0.4	21.2			
GP-5A	18-Mar	8:48	-0.02	0.0	0.2	21.3			
GP-5B	18-Mar	8:51	-0.01	0.0	0.1	21.5			
GP-6	18-Mar	8:58	0.00	0.0	0.2	21.2			
GP-7S	18-Mar	9:05	0.00	0.0	0.3	21.4			
GP-7D	18-Mar	9:09	0.00	0.0	0.4	21.0			
GP-8A	18-Mar	9:25	0.00	0.0	0.3	21.1			
GP-8B	18-Mar	9:30	0.00	0.0	0.2	21.0			
GP-9	18-Mar	9:36	-0.01	0.0	1.4	19.0			
GP-10	18-Mar	9:44	0.00	0.0	0.4	21.2			
GP-11	18-Mar	9:59	0.00	1.1	5.8	1.1	1.6		
GP-12	18-Mar	10:08	0.00	0.0	1.7	17.7			
GP-13A	18-Mar	10:24	0.00	3.7	11.7	NM	3.7		
GP-13B	18-Mar	10:30	0.06	0.0	0.5	20.9			
GP-14S	18-Mar	10:40	0.05	0.0	6.6	16.1			
GP-14D	18-Mar	10:43	-0.02	0.0	18.8	NM			
GP-15A	18-Mar	11:02	0.00	6.6	11.6	NM	6.8		
GP-15B	18-Mar	11:05	-6.55	0.0	8.7	4.3			
GP-16A	18-Mar	11:38	-0.01	0.0	0.9	20.1			
GP-16B	18-Mar	11:40	0.03	0.0	0.8	20.1			
GP-17	18-Mar	11:48	0.29	0.0	2.4	19.3			
GP-18	18-Mar	11:52	-0.01	0.0	1.3	19.8			
GP-19	18-Mar	11:58	-0.01	0.0	0.3	21.2			
LFG-1	18-Mar	11:13	-0.01	0.4	15.6	NM			
LFG-2	18-Mar	11:20	0.03	10.5	20.4	NM	26.1		
LFG-3	18-Mar	11:26	0.00	1.8	16.5	NM			

General Data

Date:	18-Mar-11	Weather Conditions	
Monitored by:	SEA	Sky Cover:	Partly Cloudy
Instruments:	GEM 2000	Wind / Rain / Snow:	
Calibration Date:	18-Mar-11	Temperature (^{o}F):	42

Notes

1. Measurement for spike concentrations of CH4 and CO2 are recorded if observed during sampling

GP = Gas Probe	CH_4 = Methane	S = shallow	A= shallow
NM = Not measured -	CO_2 = Carbon Dioxide	M = medium	B = medium
equipment malfunction	O_2 = Oxygen	D = deep	C = deep

Hidden Valley Landfill
Landfill Gas Monitoring of On-site Buildings

Project Number: 04209037.02

Date: 1/25/2011
Weather Conditions:
Instrument:
Measured By: Kelly Kieft

The atmosphere inside buildings at the landfill were monitored for possible intrusion of methane gas. Per WAC 173-351, concentrations of methane in on-site structures must not exceed 25% of the lower explosive limit (LEL). If off-site gas migration is suspected, concentrations of methane in off-site structures must not exceed 100 ppm methane.

The areas monitored included:
- The general overall work area
- Floor drains
- Underground conduit protrusions
- Closed areas where landfill gas could collect, such as under cupboards and inside closets

The gas detection instrument must be calibrated using calibration gas containing methane equal to 50 % LEL. Calibration must be performed before and after the survey is completed.

Checked boxes indicate that the survey revealed **no detectable methane**.

- [x] Main Office - individual office spaces, storage areas and within open crawl-space area.
- [x] Repair Shop – survey atmosphere conditions throughout (lower height levels).
- [x] Pay/Scale Booth – interior of building.
- [x] Recycle Building – throughout facility and water drainage areas.
- [x] Leachate Treatment Building – all lower level office spaces, restrooms, water drainage system and storage/equipment areas.
- [x] Gas to Energy Building – central monitoring/control room, engine room and storage cabinets.
- [x] Transfer Station Building – throughout entire building and lower levels.

Kelly Kieft
Signature

Hidden Valley Landfill

Month of Jan-11

Day	Leachate Level	Cell 2 Leak Level	Cell 2 Daily Avg. GPM	Cell 2 Leak GPD	Cell 1 Influent GPD	Cell 2 Influent GPD	304th Influent GPD	Treatment Discharge Avg GPM	Treatment Discharge GPD
31	19.98	20.46	0	0	3,136	1	5,310	34.17	22,792
1	20.29	21.85	0	0	0	0	3,826	34.30	16,497
2	20.46	22.24	0	0	6,779	0	5,716	34.15	24,724
3	20.81	23.33	0	0	0	0	5,270	33.91	22,683
4	23.33	8.34	0	590	0	1	5,480	33.56	23,461
5	22.50	8.99	0	0	0	0	5,313	33.15	22,777
6	21.81	9.69	0	0	0	0	6,343	32.51	27,404
7	21.50	0.00	48	0	1,099	1,629	6,533	31.98	28,335
8	21.72	0.00	0	0	0	0	6,720	31.59	29,157
9	17.20	0.00	44	0	2,695	6,536	5,388	30.86	23,234
10	15.77	0.00	0	0	0	0	6,054	29.72	25,259
11	16.59	0.00	0	0	0	0	5,209	28.68	21,825
12	17.81	0.00	0	0	1,192	0	5,835	28.80	24,569
13	16.55	0.00	0	0	0	0	6,101	28.68	25,988
14	18.46	0.22	0	0	4,669	0	6,575	28.22	28,446
15	18.03	0.78	0	0	2,574	0	6,828	27.49	29,932
16	14.12	0.78	44	0	3,430	3,851	6,744	27.21	29,497
17	18.37	1.48	0	0	0	0	5,781	26.96	25,077
18	8.95	2.17	0	0	0	0	5,140	26.75	22,092
19	0.00	3.04	0	0	0	0	5,433	26.88	23,575
20	0.00	3.65	0	0	0	0	5,792	27.78	25,062
21	0.00	3.65	0	0	0	0	7,044	27.69	30,571
22	0.00	4.60	0	0	0	0	6,598	27.42	28,793
23	0.00	5.00	0	0	0	0	6,576	26.54	28,827
24	0.00	5.13	0	0	0	0	5,413	26.22	23,520
25	0.00	5.73	0	0	0	0	4,709	25.98	20,449
26	2.00	6.12	0	0	0	0	6,807	25.78	23,746
27	18.50	6.82	0	0	0	0	5,520	24.75	24,304
28	5.00	6.78	0	0	0	0	5,868	24.09	25,726
29	17.03	7.08	0	0	0	0	4,624	23.75	20,446
30	1.61	7.30	0	0	0	0	4,007	23.61	17,711
31	0.00	7.56	0	0	0	0	8,604	24.48	19,141
			Total Gallons:	**590**	**22,438**	**12,017**	**178,027**		**746,331**
				Cell 2 Leak	Cell 1 Leachate	Cell 2 Leachate	304th Influent		Treatment Discharge

Hidden Valley Landfill Hour Meters Totalizers

Jan-11

	Discharge Pump 12		Cell 2 Influent Pump		Cell 2 Daily	Pump 12 Daily	Cell 1 Leachate	Cell 2 Leachate	Cell 2 Leak	304th Influent	Treatment Discharge
Day	(hr)	(min)	(hr)	(min)	Hours	Hours	Total Gals.	Total Gals.	Total Gals.	Total Gals.	Total Gals.
31	34683	58	2913	50	0	11.12	5930916	3,924,149	95592	87,364,546	74,845,021
1	34,691	59	2913	50	0.00	8.02	5930916	3,924,149	95592	87,368,372	74,861,518
2	34,704	3	2913	51	0.02	12.07	5937695	3,924,150	95592	87,374,088	74,886,242
3	34,715	12	2913	51	0.00	11.15	5937695	3,924,150	95592	87,379,358	74,908,925
4	34,726	51	2914	3	0.20	11.65	5937695	3,924,150	96182	87,384,838	74,932,386
5	34,738	18	2914	3	0.00	11.45	5937695	3,924,150	96182	87,390,151	74,955,163
6	34,752	21	2914	3	0.00	14.05	5937695	3,924,150	96182	87,396,494	74,982,567
7	34,767	7	2914	37	0.57	14.77	5938794	3,925,779	96182	87,403,027	75,010,901
8	34,782	30	2914	37	0.00	15.38	5938794	3,925,779	96182	87,409,747	75,040,058
9	34,795	3	2917	6	2.48	12.55	5941489	3,932,315	96182	87,415,135	75,063,292
10	34,809	13	2917	6	0.00	14.17	5941489	3,932,315	96182	87,421,189	75,088,551
11	34,821	54	2917	6	0.00	12.68	5941489	3,932,315	96182	87,426,398	75,110,376
12	34,836	7	2917	6	0.00	14.22	5942681	3,932,315	96182	87,432,234	75,134,945
13	34,851	13	2917	6	0.00	15.10	5942681	3,932,315	96182	87,438,335	75,160,933
14	34,868	1	2917	6	0.00	16.80	5947350	3,932,315	96182	87,444,910	75,189,379
15	34,886	10	2917	6	0.00	18.15	5949925	3,932,315	96182	87,451,738	75,219,311
16	34,904	14	2918	34	1.47	18.07	5953354	3,936,166	96182	87,458,483	75,248,808
17	34,919	44	2918	34	0.00	15.50	5953354	3,936,166	96182	87,464,264	75,273,885
18	34,933	30	2918	34	0.00	13.77	5953354	3,936,166	96182	87,469,404	75,295,977
19	34,948	7	2918	34	0.00	14.62	5953354	3,936,166	96182	87,474,837	75,319,552
20	34,963	9	2918	34	0.00	15.03	5953354	3,936,166	96182	87,480,629	75,344,613
21	34,981	33	2918	34	0.00	18.40	5953354	3,936,166	96182	87,487,673	75,375,184
22	34,999	3	2918	34	0.00	17.50	5953354	3,936,166	96182	87,494,271	75,403,978
23	35,017	9	2918	34	0.00	18.10	5953354	3,936,166	96182	87,500,847	75,432,805
24	35,032	6	2918	34	0.00	14.95	5953354	3,936,166	96182	87,506,260	75,456,326
25	35,045	13	2918	34	0.00	13.12	5953354	3,936,166	96182	87,510,969	75,476,774
26	35,060	34	2918	34	0.00	15.35	5953354	3,936,166	96182	87,517,776	75,500,520
27	35,076	56	2918	34	0.00	16.37	5953354	3,936,166	96182	87,523,296	75,524,824
28	35,094	44	2918	34	0.00	17.80	5953354	3,936,166	96182	87,529,164	75,550,550
29	35,109	5	2918	34	0.00	14.35	5953354	3,936,166	96182	87,533,788	75,570,996
30	35,121	35	2918	34	0.00	12.50	5953354	3,936,166	96182	87,537,795	75,588,707
31	35,134	37	2918	34	0.00	13.03	5953354	3,936,166	96182	87,546,399	75,607,849
					Total	**Gallons**	**22,438**	**12,017**	**590**	**178,027**	**746,331**
							Cell 1 Leachate	Cell 2 Leachate	Cell 2 Leak	304th Influent	Treatment Discharge

Hidden Valley Landfill

Month of Feb-11

Day	Leachate Level	Cell 2 Leak Level	Cell 2 Daily Avg. GPM	Cell 2 Leak GPD	Cell 1 Influent GPD	Cell 2 Influent GPD	304th Influent GPD	Treatment Discharge Avg GPM	Treatment Discharge GPD
31	0.00	7.56	0	0	0	0	8,604	24.48	19,141
1	30.80	7.91	0	0	0	0	3,630	26.89	15,809
2	18.81	8.04	0	0	0	0	4,825	36.93	20,642
3	0.00	8.43	0	0	968	0	15,734	38.68	22,320
4	13.29	8.47	0	0	0	0	9,044	37.50	22,837
5	0.00	8.90	0	0	4,226	0	5,490	36.73	23,579
6	18.16	9.30	0	0	0	0	5,422	36.75	23,409
7	22.11	9.38	0	0	0	0	5,865	36.42	19,118
8	33.06	9.64	0	0	0	0	11,130	37.23	22,151
9	38.31	10.21	0	0	0	0	7,352	36.68	16,467
10	2.52	10.56	0	0	0	0	7,967	37.18	20,190
11	45.91	11.03	44	0	5,096	349	16,304	37.35	34,395
12	27.10	10.69	0	0	7,821	0	13,659	36.19	28,987
13	20.72	12.16	0	0	6,809	0	16,804	36.89	28,962
14	0.00	11.90	0	0	0	0	10,130	36.26	20,523
15	14.16	12.60	0	0	0	0	19,274	37.59	31,503
16	16.68	13.12	44	0	4,722	4,197	29,078	38.98	33,055
17	24.72	13.86	59	0	2,942	59	24,467	38.10	28,994
18	35.14	14.42	0	0	0	0	5,408	34.58	23,308
19	42.61	14.99	0	0	4,361	0	20,944	37.99	31,760
20	53.08	15.68	0	0	0	0	25,855	40.26	25,202
21	43.35	16.38	0	0	0	0	19,820	38.52	25,075
22	39.27	16.85	43	0	1,671	1,985	23,699	38.80	28,282
23	37.53	17.72	43	0	5,533	645	10,230	36.41	21,664
24	38.01	18.37	0	0	0	0	6,080	34.65	25,397
25	17.16	20.20	0	0	0	0	5,708	34.53	24,172
26	18.68	20.68	0	0	0	0	5,527	34.31	23,707
27	20.37	22.24	0	0	0	0	4,862	33.90	20,885
28	12.90	21.85	35	0	0	70	6,060	33.75	25,889

Note: Transducer replaced on February 28

	Cell 2 Leak	Cell 1 Leachate	Cell 2 Leachate	304th Influent	Treatment Discharge
Total Gallons:	**0**	**44,148**	**7,305**	**340,367**	**688,282**

Hidden Valley Landfill Hour Meters Totalizers

Feb-11

	Discharge Pump 12		Cell 2 Influent Pump		Cell 2 Daily	Pump 12 Daily	Cell 1 Leachate	Cell 2 Leachate	Cell 2 Leak	304th Influent	Treatment Discharge
Day	(hr)	(min)	(hr)	(min)	Hours	Hours	Total Gals.	Total Gals.	Total Gals.	Total Gals.	Total Gals.
31	35,134	37	2918	34	0.00	13.03	5953354	3,936,166	96182	87,546,399	75,607,849
1	35,144	25	2918	34	0.00	9.80	5953354	3,936,166	96182	87,550,029	75,623,658
2	35,153	44	2918	34	0.00	9.32	5953354	3,936,166	96182	87,554,854	75,644,300
3	35,163	21	2918	34	0.00	9.62	5954322	3,936,166	96182	87,570,588	75,666,620
4	35,173	30	2918	34	0.00	10.15	5954322	3,936,166	96182	87,579,632	75,689,457
5	35,184	12	2918	34	0.00	10.70	5958549	3,936,166	96182	87,585,122	75,713,037
6	35,194	49	2918	34	0.00	10.62	5958549	3,936,166	96182	87,590,544	75,736,446
7	35,203	34	2918	34	0.00	8.75	5958549	3,936,166	96182	87,596,409	75,755,564
8	35,213	29	2918	34	0.00	9.92	5958549	3,936,166	96182	87,607,539	75,777,715
9	35,220	58	2918	34	0.00	7.48	5958549	3,936,166	96182	87,614,891	75,794,183
10	35,230	1	2918	34	0.00	9.05	5958549	3,936,166	96182	87,622,857	75,814,373
11	35,245	22	2918	42	0.13	15.35	5963644	3,936,515	96182	87,639,161	75,848,768
12	35,258	43	2918	42	0.00	13.35	5971465	3,936,515	96182	87,652,820	75,877,755
13	35,271	48	2918	42	0.00	13.08	5978275	3,936,515	96182	87,669,624	75,906,716
14	35,281	14	2918	42	0.00	9.43	5978275	3,936,515	96182	87,679,754	75,927,239
15	35,295	12	2918	42	0.00	13.97	5978275	3,936,515	96182	87,699,029	75,958,742
16	35,309	20	2920	18	1.60	14.13	5982996	3,940,712	96182	87,728,107	75,991,796
17	35,322	1	2920	19	0.02	12.68	5985938	3,940,771	96182	87,752,574	76,020,791
18	35,333	15	2920	19	0.00	11.23	5985938	3,940,771	96182	87,757,982	76,044,098
19	35,347	11	2920	19	0.00	13.93	5990299	3,940,771	96182	87,778,926	76,075,858
20	35,357	37	2920	19	0.00	10.43	5990299	3,940,771	96182	87,804,781	76,101,060
21	35,368	28	2920	19	0.00	10.85	5990299	3,940,771	96182	87,824,601	76,126,135
22	35,380	37	2921	5	0.77	12.15	5991970	3,942,756	96182	87,848,300	76,154,417
23	35,390	32	2921	20	0.25	9.92	5997503	3,943,401	96182	87,858,530	76,176,081
24	35,402	45	2921	20	0.00	12.22	5997503	3,943,401	96182	87,864,610	76,201,478
25	35,414	25	2921	20	0.00	11.67	5997503	3,943,401	96182	87,870,317	76,225,650
26	35,425	56	2921	20	0.00	11.52	5997503	3,943,401	96182	87,875,844	76,249,356
27	35,436	12	2921	20	0.00	10.27	5997503	3,943,401	96182	87,880,706	76,270,242
28	35,448	59	2921	22	0.03	12.78	5997503	3,943,471	96182	87,886,766	76,296,131
					Total	**Gallons**	**44,148**	**7,305**	**0**	**340,367**	**688,282**
							Cell 1 Leachate	Cell 2 Leachate	Cell 2 Leak	304th Influent	Treatment Discharge

Hidden Valley Landfill

Month of Mar-11

Day	Leachate Level	Cell 2 Leak Level	Cell 2 Daily Avg. GPM	Cell 2 Leak GPD	Cell 1 Influent GPD	Cell 2 Influent GPD	304th Influent GPD	Treatment Discharge Avg GPM	Treatment Discharge GPD
28	12.90	21.85	35	0	0	70	6,060	33.75	25,889
1	13.94	6.21	0	973	4,803	0	6,324	33.71	27,037
2	13.51	5.30	0	0	5,592	0	6,831	33.61	29,513
3	13.60	5.26	0	0	3,004	0	14,462	34.56	30,068
4	13.99	6.21	0	0	3,991	0	7,853	33.22	33,823
5	14.38	6.56	0	0	4,720	0	23,275	35.60	34,139
6	14.64	7.21	0	0	4,794	0	19,556	34.98	29,905
7	14.86	7.21	0	0	0	0	18,699	33.98	30,816
8	15.12	7.56	0	0	0	0	20,873	34.45	32,384
9	15.90	8.69	0	0	4,139	0	28,246	35.79	31,423
10	15.25	7.69	0	0	0	0	9,381	34.34	14,116
11	16.03	8.77	0	0	0	0	20,662	34.81	29,591
12	16.16	9.08	0	0	0	0	18,066	33.75	21,901
13	16.25	9.25	0	0	0	0	23,389	34.21	25,691
14	17.11	10.38	0	0	0	0	23,093	33.06	24,100
15	16.72	10.38	0	0	0	0	29,418	32.68	32,648
16	16.81	10.43	0	0	3,846	0	31,418	32.45	32,677
17	17.29	11.21	0	0	0	0	29,293	32.39	28,181
18	17.51	11.77	0	0	0	0	30,716	30.97	31,340
19	17.77	12.86	0	0	0	0	27,936	31.21	27,431
20	17.98	13.20	0	0	0	0	28,091	30.16	28,262
21	17.98	13.73	0	0	0	0	26,818	29.31	24,677
22	18.29	14.33	0	0	0	0	26,620	29.96	27,229
23	18.94	15.81	0	0	0	0	26,846	30.04	26,618
24	18.72	16.07	0	0	0	0	25,304	29.40	27,575
25	19.11	16.98	0	0	0	0	31,821	28.91	34,978
26	19.03	17.38	0	0	0	0	29,147	29.23	27,093
27	18.98	2.69	0	1030	0	0	20,399	27.00	26,834
28	19.63	3.56	0	0	0	0	26,845	27.32	29,257
29	15.85	3.61	44	0	988	3,309	15,956	25.55	29,587
30	16.33	4.08	0	0	1,315	0	27,323	27.53	32,737
31	16.51	4.17	0	0	0	0	31,451	28.84	29,964
			Total Gallons:	**2,003**	**37,193**	**3,309**	**706,113**		**891,593**
				Cell 2 Leak	Cell 1 Leachate	Cell 2 Leachate	304th Influent		Treatment Discharge

Hidden Valley Landfill Hour Meters Totalizers

Mar-11

	Discharge Pump 12		Cell 2 Influent Pump		Cell 2 Daily	Pump 12 Daily	Cell 1 Leachate	Cell 2 Leachate	Cell 2 Leak	304th Influent	Treatment Discharge
Day	(hr)	(min)	(hr)	(min)	Hours	Hours	Total Gals.	Total Gals.	Total Gals.	Total Gals.	Total Gals.
28	35,448	59	2921	22	0.03	12.78	5997503	3,943,471	96182	87,886,766	76,296,131
1	35,462	21	2921	41	0.32	13.37	6002306	3,943,471	97155	87,893,090	76,323,168
2	35,476	59	2921	41	0.00	14.63	6007898	3,943,471	97155	87,899,921	76,352,680
3	35,491	29	2921	41	0.00	14.50	6010902	3,943,471	97155	87,914,383	76,382,748
4	35,508	27	2921	41	0.00	16.97	6014894	3,943,471	97155	87,922,236	76,416,570
5	35,524	26	2921	41	0.00	15.98	6019614	3,943,471	97155	87,945,512	76,450,709
6	35,538	41	2921	41	0.00	14.25	6024407	3,943,471	97155	87,965,067	76,480,614
7	35,553	48	2921	41	0.00	15.12	6024407	3,943,471	97155	87,983,767	76,511,430
8	35,569	28	2921	41	0.00	15.67	6024407	3,943,471	97155	88,004,639	76,543,814
9	35,584	6	2921	41	0.00	14.63	6028546	3,943,471	97155	88,032,885	76,575,237
10	35,590	57	2921	41	0.00	6.85	6028546	3,943,471	97155	88,042,266	76,589,353
11	35,605	7	2921	41	0.00	14.17	6028546	3,943,471	97155	88,062,928	76,618,944
12	35,615	56	2921	41	0.00	10.82	6028546	3,943,471	97155	88,080,994	76,640,845
13	35,628	27	2921	41	0.00	12.52	6028546	3,943,471	97155	88,104,383	76,666,536
14	35,640	36	2921	41	0.00	12.15	6028546	3,943,471	97155	88,127,476	76,690,636
15	35,657	15	2921	41	0.00	16.65	6028546	3,943,471	97155	88,156,894	76,723,284
16	35,674	2	2921	41	0.00	16.78	6032392	3,943,471	97155	88,188,313	76,755,961
17	35,688	32	2921	41	0.00	14.50	6032392	3,943,471	97155	88,217,605	76,784,142
18	35,705	24	2921	41	0.00	16.87	6032392	3,943,471	97155	88,248,322	76,815,483
19	35,720	3	2921	41	0.00	14.65	6032392	3,943,471	97155	88,276,258	76,842,914
20	35,735	40	2921	41	0.00	15.62	6032392	3,943,471	97155	88,304,349	76,871,176
21	35,749	42	2921	41	0.00	14.03	6032392	3,943,471	97155	88,331,167	76,895,853
22	35,764	51	2921	41	0.00	15.15	6032392	3,943,471	97155	88,357,787	76,923,082
23	35,779	37	2921	41	0.00	14.77	6032392	3,943,471	97155	88,384,633	76,949,700
24	35,795	15	2921	41	0.00	15.63	6032392	3,943,471	97155	88,409,938	76,977,275
25	35,815	25	2921	41	0.00	20.17	6032392	3,943,471	97155	88,441,758	77,012,253
26	35,830	52	2921	41	0.00	15.45	6032392	3,943,471	97155	88,470,905	77,039,346
27	35,847	26	2922	1	0.33	16.57	6032392	3,943,471	98185	88,491,304	77,066,180
28	35,865	17	2922	1	0.00	17.85	6032392	3,943,471	98185	88,518,149	77,095,437
29	35,884	35	2923	16	1.25	19.30	6033381	3,946,780	98185	88,534,105	77,125,023
30	35,904	24	2923	16	0.00	19.82	6034696	3,946,780	98185	88,561,428	77,157,760
31	35,921	43	2923	16	0.00	17.32	6034696	3,946,780	98185	88,592,879	77,187,724
					Total	**Gallons**	**37,193**	**3,309**	**2,003**	**706,113**	**891,593**
							Cell 1 Leachate	Cell 2 Leachate	Cell 2 Leak	304th Influent	Treatment Discharge

Facility Inspection Checklist

Hidden Valley Landfill, Pierce County, Washington

Name: Sam Adlington Date: January 25, 2011

Signature: _____ Weather: Cloudy, 50F

Items	Yes	No	Comments
Cover System			
Settlement Depressions (sinkholes)		x	
Cracking of Cover Soils		x	
Inadequate Cover Soil or Rock		x	
Standing Water	x		Near CS-8 in ditch
Vegetation			
Bare or Sparsely Vegetated Areas	x		Patches near CS-5, North (downhill) of E-32 and E-33, and North of E-31
Areas of Dying Vegetation	X		
Large Root Vegetation (ex. Bushes)	x		Scotch broom and black berry bushes at various locations on the landfill.
Stormwater Conveyance System			
Ditch Obstructions or Flat Areas		x	
Culvert Obstructions		x	
Catch Basin Debris or Silt Accumulation	x		High silt and debris accumulation in basin.
Stormwater Basin Debris or Silt	x		Silt in and around opening and inside basin.
Cover Erosion			
Gullies and/or Erosion Scars		x	
Presence of Seeps		x	
Vector Control			
Evidence of Ground Burrows		x	
Leachate Collection & Leak Detection Systems			
Piping or Valve Issues	x		Noticeable leak SE of N8 in T-connection at joint.
Pump or Meter Issues		x	
Foaming at Pump	x		Foaming at Side Slope Sump when sampled as part of Q1 GW sample.

Other Remarks:

Condensate Recirculation Inspection Checklist

Hidden Valley Landfill, Pierce County, Washington

Name: Sam Adlington Date: January 25, 2010

Signature: _____ Weather: Cloudy 50F

Instructions: Inspect each sump for pump operation and condensate fluid level, which should be below the overflow drainage pipe. Note any unusual observations such as soil staining or air leaks in the comments section.

Sump	Operation per Design (Y or N)	Comments
Sump No. 1	Y	
Sump No. 2	Y	Only 3 bolts on sump
Sump No. 3	N	No visible water in sump
Sump No. 4	Y	
Sump No. 5	Y	
Sump No. 6	Y	
Sump No. 7	Y	
Sump No. 8	Y	Rubber seal should be replaced
Sump No. 9	Y	High vacuum in sump
Sump No. 10	Y	

Other Remarks: none

Environmental Consultants
and Contractors

2405 140th Avenue, NE
Suite 107
Bellevue, WA 98005-1877

425 746-4600
FAX 425 746-6747
www.scsengineers.com

SCS ENGINEERS

January 10, 2011
File No. 04209037.05

Subject: Hidden Valley Landfill First Quarter Ground Water Sampling

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Hidden Valley Landfill
First Quarter Groundwater Monitoring
January 2011
1/4/2011 to 1/7/2011

Notes/Sampling Decoding:

- Dedicated pumps were used for purging and sampling wells MW-10S, -10D, -12S, -12D, -13D, -14S, -14D, -20R, and -26R.
- The SamplePro pump was used to for purging and sampling wells MW-11S, -11D2, -13S, -14R, -15S, -15D, -17S, -18S, -18D, -23S, -25S, -28S, FMW-1, and FMW-2.
- The water supply wells were sampled as direct grab samples.
- A field duplicate was collected at MW-13D.
- A complete round of waters levels was completed on 1/6/11.
- Meters were calibrated prior to sampling.
- Field Blank samples were filled with D.I. water.

Sample Number	**Well Number**
HVL-010411-01	MW-14D
HVL-010411-02	MW-14S
HVL-010411-03	MW-10D
HVL-010411-04	MW-10S
HVL-010411-05	MW-12D
HVL-010411-06	MW-12S
HVL-010411-07	MW-13D
HVL-010411-08	DUP (MW-13D)
HVL-010511-09	FMW-01

HVL-010511-10	FMW-02
HVL-010511-11	MW-11S
HVL-010511-12	MW-11D(2)
HVL-010511-13	MW-13S
HVL-010511-14	MW-15D
HVL-010511-15	MW-15S
HVL-010511-16	Field Blank
HVL-010511-17	MW-17S
HVL-010511-18	MW-14R
HVL-010511-19	Leachate
HVL-010711-20	Side Slope Sump
HVL-010611-22	MW-25S
HVL-010611-23	WS-Paul Bunyon
HVL-010611-24	MW-23S
HVL-010611-25	MW-28S
HVL-010711-26	MW-26R
HVL-010711-27	MW-18S
HVL-010711-28	MW-18D
HVL-010711-29	WS-Corliss
HVL-010711-30	MW-20R

FIELD SAMPLING DATA SHEET

SCS ENGINEERS
2405 140th Avenue, NE Suite A101
Bellevue, WA 98005
Phone: 425 746-4600 Fax: 425 746-6747

Client: LRI	Date: 1/ 4 /2011	Purging Method: WW
Project No.: 04209037.05	Well I.D.: MW - 140	
Site Name: Hidden Valley Landfill	Sample I.D.: HVL-01 04 11- 01	
Site Location:	Weather: OVERCAST	
Stabilization Parameters: pH/DO ± 0.2, SpC ± 10%, Temp ± 5°C, Turb. ± 10% or ≤ 5		

Well Information

Purge Time:	DTW: 49.19	Total Depth:	TOS:	Intake:	BOS:

Parameters ***Sampling Interval***

Volume Purged (gal)												
Time	0910	0913	0916	0919								
Temperature (°C)	10.54	11.75	11.81	11.77								
Conductance (µS/cm)	184.4	184.7	187.2	188.2								
Dissolved O_2 (mg/L)	0.79	0.73	0.86	0.71								
pH (units)	6.28	6.36	6.56	6.49								
ORP (mV)	69	39	32	32								
Turbidity		3.75	2.22									
Depth to Water												
Controller Refill	11.5											
Controller Discharge	3.5											
Controller psi	45											
Flow (Q)	500											

Well Sampling

Bottle Type	Date/ Time	Sampling Method	Container			Sampling Depth: Filtered (Y/N)	Preservative	Iced (Y/N)
			Type	Volume	Number			
VOA Glass		Dedicated Pump	G	40 ml		N	HCl	Y
White Poly		Dedicated Pump	Poly	ml		N	None	Y
Yellow Glass Amber		Dedicated Pump	GA	ml		N		Y
Red Poly, Total		Dedicated Pump	Poly	ml		N	HNO_3	Y
Red Poly, Dissolved		Dedicated Pump	Poly	ml		Y	HNO_3	Y

Notes

Total No. of Bottles _____
Sampler: SAM ADLINGTON
Signature _____

FIELD SAMPLING DATA SHEET

SCS ENGINEERS
2405 140th Avenue, NE Suite A101
Bellevue, WA 98005
Phone: 425 746-4600 Fax: 425 746-6747

Client: LRI	Date: 1/ 4 /2011	Purging Method: DP
Project No.: 04209037.05	Well I.D.: MW-14S	
Site Name: Hidden Valley Landfill	Sample I.D.: HVL-01 04 11-02	
Site Location: Stabilization Parameters: pH/DO ± 0.2, SpC ± 10%, Temp ± 5°C, Turb. ± 10% or ≤ 5	Weather: OVERCAST	

Well Information

Purge Time: 0937	DTW: OBSTRUCTED	Total Depth: ~~—~~	~~TOS:~~	~~Intake:~~	~~BOS:~~

Parameters ***Sampling Interval***

Volume Purged (gal)													
Time	0940	0943	0946										
Temperature (°C)	11.82	12.27	12.21										
Conductance (µS/cm)	109.7	108.4	108.4										
Dissolved O_2 (mg/L)	0.99	0.86	0.89										
pH (units)	6.11	6.04	6.11										
ORP (mV)	96	130	147										
Turbidity		1.25	1.65										
Depth to Water													
Controller Refill	8												
Controller Discharge	2												
Controller psi	40												
Flow (Q)	450												

Well Sampling

Bottle Type	Date/ Time	Sampling Method	Container			Sampling Depth: Filtered (Y/N)	Preservative	Iced (Y/N)
			Type	Volume	Number			
VOA Glass		Dedicated Pump	G	40 ml		N	HCl	Y
White Poly		Dedicated Pump	Poly	ml		N	None	Y
Yellow Glass Amber		Dedicated Pump	GA	ml		N		Y
Red Poly, Total		Dedicated Pump	Poly	ml		N	HNO_3	Y
Red Poly, Dissolved		Dedicated Pump	Poly	ml		Y	HNO_3	Y

Notes RUSTY FLAKES IN WATER

Total No. of Bottles_____
Sampler: SAM ADDINGTON
Signature Sam A

FIELD SAMPLING DATA SHEET

SCS ENGINEERS
2405 140th Avenue, NE Suite A101
Bellevue, WA 98005
Phone: 425 746-4600 Fax: 425 746-6747

Client: LRI	Date: 1/ 4 /2011	Purging Method: DP
Project No.: 04209037.05	Well I.D.: MW-10D	
Site Name: Hidden Valley Landfill	Sample I.D.: HVL-01 04 11- 03	
Site Location:	Weather: OVERCAST	
Stabilization Parameters: pH/DO ± 0.2, SpC ± 10%, Temp ± 5°C, Turb. ± 10% or ≤ 5		

Well Information

Purge Time: 1014	DTW: 27.76	Total Depth:	~~TOS:~~	Intake:	~~BOS:~~

Parameters ***Sampling Interval***

Volume Purged (gal)												
Time	1017	1020	1023	1026	1029	1032						
Temperature (°C)	11.92	11.92	11.86	11.88	11.86	11.74						
Conductance (µS/cm)	144.4	149.2	199.8	231.9	237.1	241.0						
Dissolved O_2 (mg/L)	2.31	2.41	1.67	1.31	1.32	1.34						
pH (units)	6.44	6.54	6.54	6.59	6.66	6.64						
ORP (mV)	146.3	150	156	158	173	168						
Turbidity	0.28	0.21			4.40							
Depth to Water												
Controller Refill	10											
Controller Discharge	5											
Controller psi	50											
Flow (Q)	500											

Well Sampling

Bottle Type	Date/ Time	Sampling Method	Container			Sampling Depth: Filtered (Y/N)	Preservative	Iced (Y/N)
			Type	Volume	Number			
VOA Glass		Dedicated Pump	G	40 ml		N	HCl	Y
White Poly		Dedicated Pump	Poly	ml		N	None	Y
Yellow Glass Amber		Dedicated Pump	GA	ml		N		Y
Red Poly, Total		Dedicated Pump	Poly	ml		N	HNO_3	Y
Red Poly, Dissolved		Dedicated Pump	Poly	ml		Y	HNO_3	Y

Notes

Total No. of Bottles
Sampler: SAM ADLINGTON
Signature

FIELD SAMPLING DATA SHEET

SCS ENGINEERS
2405 140th Avenue, NE Suite A101
Bellevue, WA 98005
Phone: 425 746-4600 Fax: 425 746-6747

Client: LRI	Date: 1/ 04 /2011	Purging Method: DEDICATED
Project No.: 04209037.05	Well I.D.: MW-10S	
Site Name: Hidden Valley Landfill	Sample I.D.: HVL-01 04 11-04	
Site Location:	Weather: OVERCAST	
Stabilization Parameters: pH/DO ± 0.2, SpC ± 10%, Temp ± 5°C, Turb. ± 10% or ≤ 5		

Well Information

Purge Time: 1059	DTW: OBSTRUCTED	Total Depth: ~~—~~	~~TOS:~~	~~Intake:~~	~~BOS:~~

Parameters ***Sampling Interval***

Volume Purged (gal)												
Time	1102	1105	1108									
Temperature (°C)	12.09	12.41	12.62									
Conductance (µS/cm)	162.7	163.2	164.3									
Dissolved O_2 (mg/L)	2.33	2.45	2.43									
pH (units)	6.35	6.45	6.47									
ORP (mV)	168	168	173									
Turbidity		0.22										
Depth to Water												
Controller Refill	10	11										
Controller Discharge	5	4										
Controller psi	20	20										
Flow (Q)		500										

Well Sampling

Bottle Type	Date/ Time	Sampling Method	Container			Sampling Depth: Filtered (Y/N)	Preservative	Iced (Y/N)
			Type	Volume	Number			
VOA Glass		Dedicated Pump	G	40 ml		N	HCl	Y
White Poly		Dedicated Pump	Poly	ml		N	None	Y
Yellow Glass Amber		Dedicated Pump	GA	ml		N		Y
Red Poly, Total		Dedicated Pump	Poly	ml		N	HNO_3	Y
Red Poly, Dissolved		Dedicated Pump	Poly	ml		Y	HNO_3	Y

Notes

Total No. of Bottles
Sampler: SAM ADLINGTON
Signature

FIELD SAMPLING DATA SHEET

SCS ENGINEERS
2405 140th Avenue, NE Suite A101
Bellevue, WA 98005
Phone: 425 746-4600 Fax: 425 746-6747

Client: LRI	Date: 1/ 04 /2011	Purging Method: DP
Project No.: 04209037.05	Well I.D.: MW-12D	
Site Name: Hidden Valley Landfill	Sample I.D.: HVL-01 04 11- 05	
Site Location:	Weather: OVERCAST	
Stabilization Parameters: pH/DO ± 0.2, SpC ± 10%, Temp ± 5°C, Turb. ± 10% or ≤ 5		

Well Information

Purge Time: 1204	DTW: 65.03	Total Depth:	TOS:	Intake:	BOS:

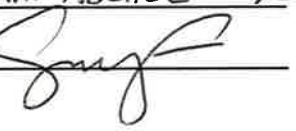
Parameters ***Sampling Interval***

Volume Purged (gal)												
Time	1207	1210	1213	1216								
Temperature (°C)	14.73	17.64	17.95	17.92								
Conductance (µS/cm)	310.8	330.8	347.2	352.5								
Dissolved O_2 (mg/L)	0.68	0.20	0.25	0.26								
pH (units)	6.75	6.47	6.49	6.60								
ORP (mV)	166	168	169	171								
Turbidity	0.14	0.21										
Depth to Water												
Controller Refill	14											
Controller Discharge	6											
Controller psi	50											
Flow (Q)												

Well Sampling

Bottle Type	Date/ Time	Sampling Method	Container			Sampling Depth: Filtered (Y/N)	Preservative	Iced (Y/N)
			Type	Volume	Number			
VOA Glass		Dedicated Pump	G	40 ml		N	HCl	Y
White Poly		Dedicated Pump	Poly	ml		N	None	Y
Yellow Glass Amber		Dedicated Pump	GA	ml		N		Y
Red Poly, Total		Dedicated Pump	Poly	ml		N	HNO_3	Y
Red Poly, Dissolved		Dedicated Pump	Poly	ml		Y	HNO_3	Y

Notes

Total No. of Bottles_____
Sampler: SAM ADLINGTON
Signature 

FIELD SAMPLING DATA SHEET

SCS ENGINEERS
2405 140th Avenue, NE Suite A101
Bellevue, WA 98005
Phone: 425 746-4600 Fax: 425 746-6747

Client: LRI	Date: 1/ 4 /2011	Purging Method: DP
Project No.: 04209037.05	Well I.D.: MW-12S	
Site Name: Hidden Valley Landfill	Sample I.D.: HVL-01 04 11- 06	
Site Location:	Weather: OVERCAST	
Stabilization Parameters: pH/DO ± 0.2, SpC ± 10%, Temp ± 5°C, Turb. ± 10% or ≤ 5		

Well Information

Purge Time: 1240	DTW: 63.08	Total Depth:	TOS:	Intake:	BOS:

Parameters ***Sampling Interval***

Volume Purged (gal)												
Time	1243	1246	1249									
Temperature (°C)	18.00	18.82	19.35									
Conductance (µS/cm)	335.7	336.4	337.3									
Dissolved O_2 (mg/L)	0.25	0.15	0.12									
pH (units)	5.85	5.81	5.80									
ORP (mV)	178	197	204.4									
Turbidity	0.89	0.62	0.52									
Depth to Water												
Controller Refill	14											
Controller Discharge	6											
Controller psi	30											
Flow (Q)												

Well Sampling

Bottle Type	Date/ Time	Sampling Method	Container			Sampling Depth: Filtered (Y/N)	Preservative	Iced (Y/N)
			Type	Volume	Number			
VOA Glass		Dedicated Pump	G	40 ml		N	HCl	Y
White Poly		Dedicated Pump	Poly	ml		N	None	Y
Yellow Glass Amber		Dedicated Pump	GA	ml		N		Y
Red Poly, Total		Dedicated Pump	Poly	ml		N	HNO_3	Y
Red Poly, Dissolved		Dedicated Pump	Poly	ml		Y	HNO_3	Y

Notes

Total No. of Bottles
Sampler: SAM ADLINGTON
Signature

FIELD SAMPLING DATA SHEET

SCS ENGINEERS
2405 140th Avenue, NE Suite A101
Bellevue, WA 98005
Phone: 425 746-4600 Fax: 425 746-6747

Client: LRI	Date: 1/ 4 /2011	Purging Method:
Project No.: 04209037.05	Well I.D.: MW-13D	
Site Name: Hidden Valley Landfill	Sample I.D.: HVL-01 04 11- 07	
Site Location:	Weather: OVERCAST	DUP TAKEN AS. HVL-010411-08
Stabilization Parameters: pH/DO ± 0.2, SpC ± 10%, Temp ± 5°C, Turb. ± 10% or ≤ 5		

Well Information

Purge Time: 1405	DTW: 22.72	Total Depth:	TOS:	Intake:	BOS:

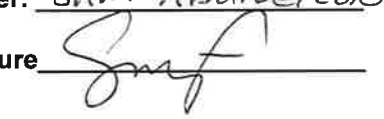
Parameters ***Sampling Interval***

Volume Purged (gal)												
Time	1408	1411	1414	1417								
Temperature (°C)	13.51	15.77	15.59	15.69								
Conductance (µS/cm)	309.5	310.0	314.0	313.2								
Dissolved O_2 (mg/L)	0.45	0.20	0.20	0.21								
pH (units)	6.54	6.58	6.59	6.58								
ORP (mV)	185	187	185.4	184								
Turbidity		0.71	0.75									
Depth to Water												
Controller Refill	11	11	10									
Controller Discharge	4	4	5									
Controller psi	70	70	90									
Flow (Q)	500	~0	500									

Well Sampling

Bottle Type	Date/ Time	Sampling Method	Container			Sampling Depth: Filtered (Y/N)	Preservative	Iced (Y/N)
			Type	Volume	Number			
VOA Glass		Dedicated Pump	G	40 ml		N	HCl	Y
White Poly		Dedicated Pump	Poly	ml		N	None	Y
Yellow Glass Amber		Dedicated Pump	GA	ml		N		Y
Red Poly, Total		Dedicated Pump	Poly	ml		N	HNO_3	Y
Red Poly, Dissolved		Dedicated Pump	Poly	ml		Y	HNO_3	Y

Notes

Total No. of Bottles_____
Sampler: SAM ADDINGTON
Signature 

FIELD SAMPLING DATA SHEET

SCS ENGINEERS
2405 140th Avenue, NE Suite A101
Bellevue, WA 98005
Phone: 425 746-4600 Fax: 425 746-6747

Client: LRI	Date: 1/ 05 /2011	Purging Method: BP
Project No.: 04209037.05	Well I.D.: FM-1	
Site Name: Hidden Valley Landfill	Sample I.D.: HVL-01 05 11- 09	
Site Location:	Weather: RAIN	
Stabilization Parameters: pH/DO ± 0.2, SpC ± 10%, Temp ± 5°C, Turb. ± 10% or ≤ 5		

Well Information

Purge Time: 07:53	DTW: 42.17	Total Depth:	TOS:	Intake:	BOS:

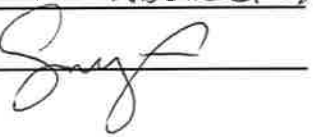
Parameters ***Sampling Interval***

Volume Purged (gal)	0806	0809	0812									
Time	~~0753~~											
Temperature (°C)	7.73	8.28	9.26									
Conductance (µS/cm)	556.9	551.3	5534									
Dissolved O_2 (mg/L)	0.02	0.02	0.08									
pH (units)	6.37	6.34	6.36									
ORP (mV)	203.6	203	200									
Turbidity		3.94	3.37									
Depth to Water												
Controller Refill		12.5	11.5	10.5								
Controller Discharge		7.5	8.5	9.5								
Controller psi		95										
Flow (Q)		75	120	180								

Well Sampling

Bottle Type	Date/ Time	Sampling Method	Container			Sampling Depth: Filtered (Y/N)	Preservative	Iced (Y/N)
			Type	Volume	Number			
VOA Glass		Dedicated Pump	G	40 ml		N	HCl	Y
White Poly		Dedicated Pump	Poly	ml		N	None	Y
Yellow Glass Amber		Dedicated Pump	GA	ml		N		Y
Red Poly, Total		Dedicated Pump	Poly	ml		N	HNO_3	Y
Red Poly, Dissolved		Dedicated Pump	Poly	ml		Y	HNO_3	Y

Notes

Total No. of Bottles_____
Sampler: SAM ADLINGTON
Signature 

FIELD SAMPLING DATA SHEET

SCS ENGINEERS
2405 140th Avenue, NE Suite A101
Bellevue, WA 98005
Phone: 425 746-4600 Fax: 425 746-6747

Client: LRI	Date: 1/ 5 /2011	Purging Method: BP
Project No.: 04209037.05	Well I.D.: FMW-2	
Site Name: Hidden Valley Landfill	Sample I.D.: HVL-01 05 11- 10	
Site Location:	Weather: OVERCAST / RAIN	
Stabilization Parameters: pH/DO ± 0.2, SpC ± 10%, Temp ± 5°C, Turb. ± 10% or ≤ 5		

Well Information

Purge Time: 0903	DTW: 134.41	Total Depth:	TOS:	Intake:	BOS:

Parameters ***Sampling Interval***

Volume Purged (gal)												
Time	0906	0909	0912									
Temperature (°C)	12.83	13.95	14.60									
Conductance (µS/cm)	939.6	950.0	951.0									
Dissolved O_2 (mg/L)	0.00	0.00	0.00									
pH (units)	6.14	6.13	6.13									
ORP (mV)	186	185	186									
Turbidity		3.67	3.07									
Depth to Water												
Controller Refill		8.5										
Controller Discharge		11.5										
Controller psi		85										
Flow (Q)		320										

Well Sampling

Bottle Type	Date/ Time	Sampling Method	Container			Sampling Depth: Filtered (Y/N)	Preservative	Iced (Y/N)
			Type	Volume	Number			
VOA Glass		Dedicated Pump	G	40 ml		N	HCl	Y
White Poly		Dedicated Pump	Poly	ml		N	None	Y
Yellow Glass Amber		Dedicated Pump	GA	ml		N		Y
Red Poly, Total		Dedicated Pump	Poly	ml		N	HNO_3	Y
Red Poly, Dissolved		Dedicated Pump	Poly	ml		Y	HNO_3	Y

Notes

Total No. of Bottles
Sampler: SAM ADDINGTON
Signature

FIELD SAMPLING DATA SHEET

SCS ENGINEERS
2405 140th Avenue, NE Suite A101
Bellevue, WA 98005
Phone: 425 746-4600 Fax: 425 746-6747

Client: LRI	Date: 1/ 05 /2011	Purging Method: BP
Project No.: 04209037.05	Well I.D. MW-11 S	
Site Name: Hidden Valley Landfill	Sample I.D.: HVL-01 05 11- 11	
Site Location:	Weather: OVERCAST	
Stabilization Parameters: pH/DO ± 0.2, SpC ± 10%, Temp ± 5°C, Turb. ± 10% or ≤ 5		

Well Information

Purge Time: 0943	DTW: 90.73	Total Depth:	TOS:	Intake:	BOS:

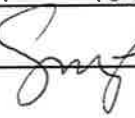
Parameters ***Sampling Interval***

Volume Purged (gal)												
Time	0946	0949	0952	0955								
Temperature (°C)	12.02	14.56	15.00	15.12								
Conductance (µS/cm)	627.4	648.9	655.2	656.2								
Dissolved O_2 (mg/L)	0.00	0.00	0.00	0.00								
pH (units)	5.86	5.85	5.85	5.85								
ORP (mV)	178	185	189	191								
Turbidity	5.12	2.09	0.82									
Depth to Water												
Controller Refill	7	7.5										
Controller Discharge	8	7.5										
Controller psi	70	75										
Flow (Q)	360	440										

Well Sampling

Bottle Type	Date/ Time	Sampling Method	Container			Sampling Depth: Filtered (Y/N)	Preservative	Iced (Y/N)
			Type	Volume	Number			
VOA Glass		Dedicated Pump	G	40 ml		N	HCl	Y
White Poly		Dedicated Pump	Poly	ml		N	None	Y
Yellow Glass Amber		Dedicated Pump	GA	ml		N		Y
Red Poly, Total		Dedicated Pump	Poly	ml		N	HNO_3	Y
Red Poly, Dissolved		Dedicated Pump	Poly	ml		Y	HNO_3	Y

Notes

Total No. of Bottles_____
Sampler: SAM ADLINGTON
Signature 

FIELD SAMPLING DATA SHEET

SCS ENGINEERS
2405 140th Avenue, NE Suite A101
Bellevue, WA 98005
Phone: 425 746-4600 Fax: 425 746-6747

Client: LRI	Date: 1/ 05 /2011	Purging Method: BP
Project No.: 04209037.05	Well I.D.: MW-11D(2)	
Site Name: Hidden Valley Landfill	Sample I.D.: HVL-01 05 11-12	
Site Location:	Weather: OVERCAST	
Stabilization Parameters: pH/DO ± 0.2, SpC ± 10%, Temp ± 5°C, Turb. ± 10% or ≤ 5		

Well Information

Purge Time: 1019	DTW: 90.42	Total Depth:	TOS:	Intake:	BOS:

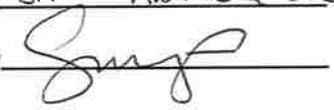
Parameters ***Sampling Interval***

Volume Purged (gal)												
Time	1022	1025	1028	1031	1034	1037	1040	1043	1046	1049	1052	1055
Temperature (°C)	12.18	13.63	14.03	14.17	14.23	14.18	14.18	14.08	14.03	14.11	14.13	14.12
Conductance (µS/cm)	456.5	450.1	449.1	449.1	448.0	448.5	447.2	448.2	448.3	448.2	447.9	447.9
Dissolved O_2 (mg/L)	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.10
pH (units)	6.75	6.69	6.68	6.67	6.67	6.67	6.67	6.66	6.68	6.67	6.69	6.67
ORP (mV)	186	184.5	183	181	180.6	179.8	177.6	176.8	~~447~~ 174	173.1	170.6	170.3
Turbidity	134	580	465	300	188	161	87.8	68.2	59.2	32.5	23.8	18.0
Depth to Water												
Controller Refill	6		6									
Controller Discharge	14		9									
Controller psi	80		85									
Flow (Q)	30		320									

Well Sampling

Bottle Type	Date/ Time	Sampling Method	Container			Sampling Depth: Filtered (Y/N)	Preservative	Iced (Y/N)
			Type	Volume	Number			
VOA Glass		Dedicated Pump	G	40 ml		N	HCl	Y
White Poly		Dedicated Pump	Poly	ml		N	None	Y
Yellow Glass Amber		Dedicated Pump	GA	ml		N		Y
Red Poly, Total		Dedicated Pump	Poly	ml		N	HNO_3	Y
Red Poly, Dissolved		Dedicated Pump	Poly	ml		Y	HNO_3	Y

Notes

Total No. of Bottles_____
Sampler: SAM ADDINGTON
Signature 

FIELD SAMPLING DATA SHEET

SCS ENGINEERS
2405 140th Avenue, NE Suite A101
Bellevue, WA 98005
Phone: 425 746-4600 Fax: 425 746-6747

Client: LRI	Date: 1/ 05 /2011	Purging Method: BP
Project No.: 04209037.05	Well I.D.: MW-13S	
Site Name: Hidden Valley Landfill	Sample I.D.: HVL-01 05 11- 13	
Site Location:	Weather: OVERCAST	
Stabilization Parameters: pH/DO ± 0.2, SpC ± 10%, Temp ± 5°C, Turb. ± 10% or ≤ 5		

Well Information

Purge Time: 11:34	DTW: 22.33	Total Depth:	TOS:	Intake:	BOS:

Parameters ***Sampling Interval***

Volume Purged (gal)												
Time	1138	1141	1144									
Temperature (°C)	15.60	16.13	16.19									
Conductance (µS/cm)	467.5	486.9	488.7									
Dissolved O_2 (mg/L)	0.05	0.03	0.03									
pH (units)	6.22	6.22	6.21									
ORP (mV)	162	165	168.4									
Turbidity	9.81	3.35	1.31									
Depth to Water												
Controller Refill	7											
Controller Discharge	8											
Controller psi	40											
Flow (Q)	440											

Well Sampling

Bottle Type	Date/ Time	Sampling Method	Container			Sampling Depth: Filtered (Y/N)	Preservative	Iced (Y/N)
			Type	Volume	Number			
VOA Glass		Dedicated Pump	G	40 ml		N	HCl	Y
White Poly		Dedicated Pump	Poly	ml		N	None	Y
Yellow Glass Amber		Dedicated Pump	GA	ml		N		Y
Red Poly, Total		Dedicated Pump	Poly	ml		N	HNO_3	Y
Red Poly, Dissolved		Dedicated Pump	Poly	ml		Y	HNO_3	Y

Notes

Total No. of Bottles_____
Sampler: SAM ARLINGTON
Signature Sam A

FIELD SAMPLING DATA SHEET

SCS ENGINEERS
2405 140th Avenue, NE Suite A101
Bellevue, WA 98005
Phone: 425 746-4600 Fax: 425 746-6747

Client: LRI	Date: 1/ 05 /2011	Purging Method: BP
Project No.: 04209037.05	Well I.D.: MW-15D	
Site Name: Hidden Valley Landfill	Sample I.D.: HVL-01 05 11- 14	
Site Location:	Weather: OVERCAST / RAIN	
Stabilization Parameters: pH/DO ± 0.2, SpC ± 10%, Temp ± 5°C, Turb. ± 10% or ≤ 5		

Well Information

Purge Time: 1227	DTW: 77.77	Total Depth:	TOS:	Intake:	BOS:

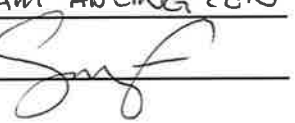
Parameters ***Sampling Interval***

Volume Purged (gal)												
Time	1232	1235	1238	1241	1244	1247	1250	1253	1256	1259	1302	
Temperature (°C)	12.17	13.36	13.78	13.86	13.73	13.72	13.80	13.88	13.79	13.71	13.48	
Conductance (µS/cm)	620.4	648.8	649.4	649.3	649.6	649.0	648.6	649.3	650.8	651.5	653.0	
Dissolved O_2 (mg/L)	41.3%	11.5%	6.1%	4.3%	3.2%	2.5%	2.2%	2.1%	1.7%	1.9%	1.5%	
pH (units)	6.72	6.70	6.69	6.68	6.67	6.66	6.66	6.65	6.65	6.65	6.65	
ORP (mV)	73	76	79	82	85	85	86.4	87.8	87	88.1	89.0	
Turbidity	>1000	>1000	537	309	200	160	114	92	84	61	55	
Depth to Water												
Controller Refill		7	6									
Controller Discharge		13	14									
Controller psi		65	65									
Flow (Q)		300	330									

Well Sampling

Bottle Type	Date/ Time	Sampling Method	Container			Sampling Depth: Filtered (Y/N)	Preservative	Iced (Y/N)
			Type	Volume	Number			
VOA Glass		Dedicated Pump	G	40 ml		N	HCl	Y
White Poly		Dedicated Pump	Poly	ml		N	None	Y
Yellow Glass Amber		Dedicated Pump	GA	ml		N		Y
Red Poly, Total		Dedicated Pump	Poly	ml		N	HNO_3	Y
Red Poly, Dissolved		Dedicated Pump	Poly	ml		Y	HNO_3	Y

Notes DO mg/L READING "0.00" WHOLE TIME CHOSE TO READ % INSTEAD

Total No. of Bottles_____
Sampler: SAM ARLINGTON
Signature 

FIELD SAMPLING DATA SHEET

SCS ENGINEERS
2405 140th Avenue, NE Suite A101
Bellevue, WA 98005
Phone: 425 746-4600 Fax: 425 746-6747

Client: LRI	Date: 1/ 05 /2011	Purging Method: BP
Project No.: 04209037.05	Well I.D.: MW-15S	
Site Name: Hidden Valley Landfill	Sample I.D.: HVL-01 05 11- 15	
Site Location:	Weather: OVERCAST/RAIN	
Stabilization Parameters: pH/DO ± 0.2, SpC ± 10%, Temp ± 5°C, Turb. ± 10% or ≤ 5		

Well Information

Purge Time: 1330	DTW: 72.65	Total Depth:	TOS:	Intake:	BOS:

Parameters ***Sampling Interval***

Volume Purged (gal)													
Time	1333	1336	1339	1342	1345								
Temperature (°C)	13.98	14.88	15.03	15.16	15.19								
Conductance (µS/cm)	478.5	518.3	524.7	526.0	526.7								
Dissolved O_2 (mg/L)	0.02	0.00	0.00	0.00	0.00								
pH (units)	5.97	5.95	5.95	5.94	5.94								
ORP (mV)	132	138	139.3	145	148								
Turbidity	~~1210~~ 127	1.52			0.78								
Depth to Water													
Controller Refill	7.5												
Controller Discharge	12.5												
Controller psi	60												
Flow (Q)	330												

Well Sampling

Bottle Type	Date/ Time	Sampling Method	Container			Sampling Depth: Filtered (Y/N)	Preservative	Iced (Y/N)
			Type	Volume	Number			
VOA Glass		Dedicated Pump	G	40 ml		N	HCl	Y
White Poly		Dedicated Pump	Poly	ml		N	None	Y
Yellow Glass Amber		Dedicated Pump	GA	ml		N		Y
Red Poly, Total		Dedicated Pump	Poly	ml		N	HNO_3	Y
Red Poly, Dissolved		Dedicated Pump	Poly	ml		Y	HNO_3	Y

Notes FB HVL-01 05 11-16 @ 1409

Total No. of Bottles

Sampler: SAM ADLINGTON

Signature

FIELD SAMPLING DATA SHEET

SCS ENGINEERS
2405 140th Avenue, NE Suite A101
Bellevue, WA 98005
Phone: 425 746-4600 Fax: 425 746-6747

Client: LRI	Date: 1/ 05 /2011	Purging Method: BP
Project No.: 04209037.05	Well I.D.: MW-17S	
Site Name: Hidden Valley Landfill	Sample I.D.: HVL-01 05 11- 17	
Site Location:	Weather: OVERCAST	
Stabilization Parameters: pH/DO ± 0.2, SpC ± 10%, Temp ± 5°C, Turb. ± 10% or ≤ 5		

Well Information

Purge Time: 1440	DTW: 127.28	Total Depth:	TOS:	Intake:	BOS:

Parameters ***Sampling Interval***

Volume Purged (gal)												
Time	1443	1446	1449	1452								
Temperature (°C)	13.63	15.67	17.36	17.78								
Conductance (µS/cm)	1120	1251	1314	1329								
Dissolved O_2 (mg/L)	~~0.00~~	0.00	0.00	0.00								
pH (units)	5.89	5.97	6.00	6.00								
ORP (mV)	128	133.4	138.5	142								
Turbidity	12.2	4.63	0.57	0.31								
Depth to Water												
Controller Refill		8.5										
Controller Discharge		11.5										
Controller psi		80										
Flow (Q)		300										

Well Sampling

Bottle Type	Date/ Time	Sampling Method	Container			Sampling Depth: Filtered (Y/N)	Preservative	Iced (Y/N)
			Type	Volume	Number			
VOA Glass		Dedicated Pump	G	40 ml		N	HCl	Y
White Poly		Dedicated Pump	Poly	ml		N	None	Y
Yellow Glass Amber		Dedicated Pump	GA	ml		N		Y
Red Poly, Total		Dedicated Pump	Poly	ml		N	HNO_3	Y
Red Poly, Dissolved		Dedicated Pump	Poly	ml		Y	HNO_3	Y

Notes

Total No. of Bottles
Sampler: SAM ADLINGTON
Signature

FIELD SAMPLING DATA SHEET

SCS ENGINEERS
2405 140th Avenue, NE Suite A101
Bellevue, WA 98005
Phone: 425 746-4600 Fax: 425 746-6747

Client: LRI	Date: 1/ 06 /2011	Purging Method: BP
Project No.: 04209037.05	Well I.D.: MW-14R	
Site Name: Hidden Valley Landfill	Sample I.D.: HVL-01 06 11- 18	
Site Location:	Weather: RAIN	
Stabilization Parameters: pH/DO ± 0.2, SpC ± 10%, Temp ± 5°C, Turb. ± 10% or ≤ 5		

Well Information

Purge Time: 0806	DTW: 117.08	Total Depth:	TOS:	Intake:	BOS: ↑

Parameters ***Sampling Interval*** REEL CAN NOT REACH BOTTOM WITHOUT TO END OF REEL

Volume Purged (gal)												
Time	0809	0812	0815	0818	0821	0824	0827					
Temperature (°C)	10.71	10.65	10.67	10.67	10.68	10.72	10.72					
Conductance (µS/cm)	109.4	109.5	109.0	108.5	108.1	107.8	107.9					
Dissolved O_2 (mg/L)	3.35	2.64	2.25	2.01	1.65	1.53	1.48					
pH (units)	6.62	6.68	6.78	6.77	6.79	6.82	6.84					
ORP (mV)	177	175	172	170	170	164	167					
Turbidity	6.71	5.45	3.16				3.22					
Depth to Water												
Controller Refill												
Controller Discharge												
Controller psi												
Flow (Q)												

Well Sampling

Bottle Type	Date/ Time	Sampling Method	Container Type	Container Volume	Container Number	Sampling Depth: Filtered (Y/N)	Preservative	Iced (Y/N)
VOA Glass		Dedicated Pump	G	40 ml		N	HCl	Y
White Poly		Dedicated Pump	Poly	ml		N	None	Y
Yellow Glass Amber		Dedicated Pump	GA	ml		N		Y
Red Poly, Total		Dedicated Pump	Poly	ml		N	HNO_3	Y
Red Poly, Dissolved		Dedicated Pump	Poly	ml		Y	HNO_3	Y

13D = 22.73
13S = 22.74

Notes

DTW
15S = 72.60
15D = 77.81

10D = 27.56
10S = OBST. ~4
20R = 104.40
17S = 127.29
26R = 60.06
12S = 63.11
12D = 64.99

Total No. of Bottles

Sampler: SAM ADLINGTON

Signature

FIELD SAMPLING DATA SHEET

SCS ENGINEERS
2405 140th Avenue, NE Suite A101
Bellevue, WA 98005
Phone: 425 746-4600 Fax: 425 746-6747

Client: LRI	Date: 1/ 06 /2011	Purging Method: GRAB
Project No.: 04209037.05	Well I.D.: LECHATE	
Site Name: Hidden Valley Landfill	Sample I.D.: HVL-01 06 11- 19	
Site Location:	Weather: OVERCAST / INDOORS	
Stabilization Parameters: pH/DO ± 0.2, SpC ± 10%, Temp ± 5°C, Turb. ± 10% or ≤ 5		

Well Information

Purge Time:	DTW: —	Total Depth:	TOS:	Intake:	BOS:

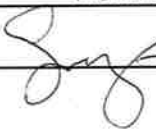
Parameters ***Sampling Interval***

Volume Purged (gal)												
Time	1045											
Temperature (°C)	14.93											
Conductance (µS/cm)	12056											
Dissolved O_2 (mg/L)	999.99	76%										
pH (units)	7.67											
ORP (mV)	-178											
Turbidity	—											
Depth to Water												
Controller Refill												
Controller Discharge												
Controller psi												
Flow (Q)												

Well Sampling

Bottle Type	Date/ Time	Sampling Method	Container			Sampling Depth: Filtered (Y/N)	Preservative	Iced (Y/N)
			Type	Volume	Number			
VOA Glass		Dedicated Pump	G	40 ml		N	HCl	Y
White Poly		Dedicated Pump	Poly	ml		N	None	Y
Yellow Glass Amber		Dedicated Pump	GA	ml		N		Y
Red Poly, Total		Dedicated Pump	Poly	ml		N	HNO_3	Y
Red Poly, Dissolved		Dedicated Pump	Poly	ml		Y	HNO_3	Y

Notes

Total No. of Bottles _____
Sampler: SAM ADLINGTON
Signature 

FIELD SAMPLING DATA SHEET

SCS ENGINEERS
2405 140th Avenue, NE Suite A101
Bellevue, WA 98005
Phone: 425 746-4600 Fax: 425 746-6747

Client: LRI	Date: 1/ 06 /2011	Purging Method: GRAB
Project No.: 04209037.05	Well I.D.: SIDE SLOPE SUMP	
Site Name: Hidden Valley Landfill	Sample I.D.: HVL-01 06 11- [redacted] 20	
Site Location:	Weather:	
Stabilization Parameters: pH/DO ± 0.2, SpC ± 10%, Temp ± 5°C, Turb. ± 10% or ≤ 5		

Well Information

Purge Time:	DTW:	Total Depth:	TOS:	Intake:	BOS:

Parameters ***Sampling Interval***

Volume Purged (gal)												
Time	1100											
Temperature (°C)	17.92											
Conductance (µS/cm)	23560											
Dissolved O_2 (mg/L)	999.99% 83.6%											
pH (units)	7.60				ONLY ENOUGH TO GET PARAMS -							
ORP (mV)	-186				NO SAMPLE TAKEN							
Turbidity												
Depth to Water												
Controller Refill												
Controller Discharge												
Controller psi												
Flow (Q)												

Well Sampling

Bottle Type	Date/ Time	Sampling Method	Container			Sampling Depth: Filtered (Y/N)	Preservative	Iced (Y/N)
			Type	Volume	Number			
VOA Glass		Dedicated Pump	G	40 ml		N	HCl	Y
White Poly		Dedicated Pump	Poly	ml		N	None	Y
Yellow Glass Amber		Dedicated Pump	GA	ml		N		Y
Red Poly, Total		Dedicated Pump	Poly	ml		N	HNO_3	Y
Red Poly, Dissolved		Dedicated Pump	Poly	ml		Y	HNO_3	Y

Notes

Total No. of Bottles_____
Sampler: _____

Signature_____

FIELD SAMPLING DATA SHEET

SCS ENGINEERS
2405 140th Avenue, NE Suite A101
Bellevue, WA 98005
Phone: 425 746-4600 Fax: 425 746-6747

Client: LRI	Date: 1/ 07 /2011	Purging Method: GRAB
Project No.: 04209037.05	Well I.D.: SIDE SLOPE SUMP	
Site Name: Hidden Valley Landfill	Sample I.D.: HVL-01 07 11- 20	
Site Location:	Weather: RAIN	
Stabilization Parameters: pH/DO ± 0.2, SpC ± 10%, Temp ± 5°C, Turb. ± 10% or ≤ 5		

Well Information

Purge Time: 11	DTW:	Total Depth:	TOS:	Intake:	BOS:

Parameters ***Sampling Interval***

Volume Purged (gal)												
Time	1135											
Temperature (°C)	35.79											
Conductance (µS/cm)	19942											
Dissolved O_2 (mg/L)	64.5%	999.99										
pH (units)	7.65											
ORP (mV)	-1											
Turbidity	—											
Depth to Water												
Controller Refill												
Controller Discharge												
Controller psi												
Flow (Q)												

Well Sampling

Bottle Type	Date/ Time	Sampling Method	Container			Sampling Depth: Filtered (Y/N)	Preservative	Iced (Y/N)
			Type	Volume	Number			
VOA Glass		Dedicated Pump	G	40 ml		N	HCl	Y
White Poly		Dedicated Pump	Poly	ml		N	None	Y
Yellow Glass Amber		Dedicated Pump	GA	ml		N		Y
Red Poly, Total		Dedicated Pump	Poly	ml		N	HNO_3	Y
Red Poly, Dissolved		Dedicated Pump	Poly	ml		Y	HNO_3	Y

Notes

Total No. of Bottles _____
Sampler: SAM ADLINGTON
Signature _____

FIELD SAMPLING DATA SHEET

SCS ENGINEERS
2405 140th Avenue, NE Suite A101
Bellevue, WA 98005
Phone: 425 746-4600
Fax: 425 746-6747

Client: LRI	Date: 1/ 07 /2011	Purging Method: GRAB
Project No.: 04209037.05	Well I.D.: MAIN SUMP	
Site Name: Hidden Valley Landfill	Sample I.D.: HVL-01 07 11- 21	
Site Location: Stabilization Parameters: pH/DO ± 0.2, SpC ± 10%, Temp ± 5°C, Turb. ± 10% or ≤ 5	Weather:	

Well Information

Purge Time:	DTW:	Total Depth:	TOS:	Intake:	BOS:

Parameters ***Sampling Interval***

Volume Purged (gal)												
Time	1200											
Temperature (°C)												
Conductance (µS/cm)												
Dissolved O_2 (mg/L)												
pH (units)												
ORP (mV)												
Turbidity												
Depth to Water												
Controller Refill												
Controller Discharge												
Controller psi												
Flow (Q)												

DRY — NOT SAMPLED, NO READINGS TAKEN

Well Sampling

Bottle Type	Date/ Time	Sampling Method	Container			Sampling Depth: Filtered (Y/N)	Preservative	Iced (Y/N)
			Type	Volume	Number			
VOA Glass		Dedicated Pump	G	40 ml		N	HCl	Y
White Poly		Dedicated Pump	Poly	ml		N	None	Y
Yellow Glass Amber		Dedicated Pump	GA	ml		N		Y
Red Poly, Total		Dedicated Pump	Poly	ml		N	HNO_3	Y
Red Poly, Dissolved		Dedicated Pump	Poly	ml		Y	HNO_3	Y

Notes

Total No. of Bottles
Sampler: SAM ADLINGTON
Signature

FIELD SAMPLING DATA SHEET

SCS ENGINEERS
2405 140th Avenue, NE Suite A101
Bellevue, WA 98005
Phone: 425 746-4600 Fax: 425 746-6747

Client: LRI	Date: 1/ 06 /2011	Purging Method: BP
Project No.: 04209037.05	Well I.D.: MW-25 S	
Site Name: Hidden Valley Landfill	Sample I.D.: HVL-01 06 11-22	
Site Location:	Weather: RAIN / OVERCAST	
Stabilization Parameters: pH/DO ± 0.2, SpC ± 10%, Temp ± 5°C, Turb. ± 10% or ≤ 5		

Well Information

Purge Time: 1204	DTW: 124.16	Total Depth:	TOS:	Intake:	BOS:

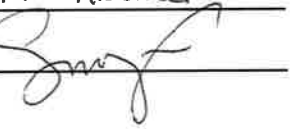
Parameters ***Sampling Interval***

Volume Purged (gal)												
Time	1207	1210	1213	1216	1219	1222	1225	1228	1231			
Temperature (°C)	10.53	11.40	11.72		11.86	11.91	11.97	11.91	11.88			
Conductance (µS/cm)	121.2	264.9	280.5		298.3	297.0	297.4	299.8	300.5			
Dissolved O_2 (mg/L)	7.42	1.29	0.87		0.58	0.57	0.56	0.54	0.54			
pH (units)	6.54	6.49	6.51		6.54	6.54	6.55	6.54	6.54			
ORP (mV)	-12	1	-2.9		2.4	5.6	4.9	6.0	5.4			
Turbidity		95.4	83.9		24.3	9.03	5.67	3.21				
Depth to Water												
Controller Refill		10										
Controller Discharge		10										
Controller psi		90										
Flow (Q)		330										

Well Sampling

Bottle Type	Date/ Time	Sampling Method	Container			Sampling Depth: Filtered (Y/N)	Preservative	Iced (Y/N)
			Type	Volume	Number			
VOA Glass		Dedicated Pump	G	40 ml		N	HCl	Y
White Poly		Dedicated Pump	Poly	ml		N	None	Y
Yellow Glass Amber		Dedicated Pump	GA	ml		N		Y
Red Poly, Total		Dedicated Pump	Poly	ml		N	HNO_3	Y
Red Poly, Dissolved		Dedicated Pump	Poly	ml		Y	HNO_3	Y

Notes

Total No. of Bottles_____
Sampler: SAM ADLINGTON
Signature 

FIELD SAMPLING DATA SHEET

SCS ENGINEERS
2405 140th Avenue, NE Suite A101
Bellevue, WA 98005
Phone: 425 746-4600 Fax: 425 746-6747

Client: LRI	Date: 1/ 06 /2011	Purging Method: GRAB
Project No.: 04209037.05	Well I.D.: WS - PB	
Site Name: Hidden Valley Landfill	Sample I.D.: HVL-01 06 11- 23	
Site Location:	Weather: OVERCAST	
Stabilization Parameters: pH/DO ± 0.2, SpC ± 10%, Temp ± 5°C, Turb. ± 10% or ≤ 5		

Well Information

Purge Time:	DTW: —	Total Depth:	TOS:	Intake:	BOS:

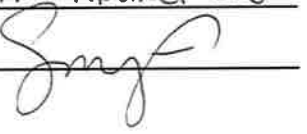
Parameters ***Sampling Interval***

Volume Purged (gal)												
Time	1350											
Temperature (°C)	5.39											
Conductance (µS/cm)	276.9											
Dissolved O_2 (mg/L)	1.36											
pH (units)	6.98											
ORP (mV)	34.7											
Turbidity												
Depth to Water												
Controller Refill												
Controller Discharge												
Controller psi												
Flow (Q)												

Well Sampling

Bottle Type	Date/ Time	Sampling Method	Container			Sampling Depth: Filtered (Y/N)	Preservative	Iced (Y/N)
			Type	Volume	Number			
VOA Glass		Dedicated Pump	G	40 ml		N	HCl	Y
White Poly		Dedicated Pump	Poly	ml		N	None	Y
Yellow Glass Amber		Dedicated Pump	GA	ml		N		Y
Red Poly, Total		Dedicated Pump	Poly	ml		N	HNO_3	Y
Red Poly, Dissolved		Dedicated Pump	Poly	ml		Y	HNO_3	Y

Notes

Total No. of Bottles_____
Sampler: SAM ADLINGTON
Signature 

FIELD SAMPLING DATA SHEET

SCS ENGINEERS
2405 140th Avenue, NE Suite A101
Bellevue, WA 98005
Phone: 425 746-4600 Fax: 425 746-6747

Client: LRI	Date: 1/ 06 /2011	Purging Method: BP
Project No.: 04209037.05	Well I.D.: MW-23S	
Site Name: Hidden Valley Landfill	Sample I.D.: HVL-01 0611-24	
Site Location:	Weather: OVERCAST	
Stabilization Parameters: pH/DO ± 0.2, SpC ± 10%, Temp ± 5°C, Turb. ± 10% or ≤ 5		

Well Information

Purge Time: 1455	DTW: 19.74	Total Depth:	TOS:	Intake:	BOS:

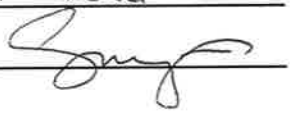
Parameters ***Sampling Interval***

Volume Purged (gal)													
Time	1458	1501	1504	1507	1510								
Temperature (°C)	10.93	10.96	10.96	10.96	10.96								
Conductance (µS/cm)	217.5	214.2	212.0	210.1	209.0								
Dissolved O_2 (mg/L)	0.52	0.21	0.19	0.18	0.18								
pH (units)	6.18	6.15	6.13	6.12	6.11								
ORP (mV)	31.0	50.7	59.2	61.0	64.4								
Turbidity	62.5	26.8	8.57	6.69	2.53								
Depth to Water													
Controller Refill			8.5										
Controller Discharge			6.5										
Controller psi			35										
Flow (Q)			440										

Well Sampling

Bottle Type	Date/ Time	Sampling Method	Container			Sampling Depth: Filtered (Y/N)	Preservative	Iced (Y/N)
			Type	Volume	Number			
VOA Glass		Dedicated Pump	G	40 ml		N	HCl	Y
White Poly		Dedicated Pump	Poly	ml		N	None	Y
Yellow Glass Amber		Dedicated Pump	GA	ml		N		Y
Red Poly, Total		Dedicated Pump	Poly	ml		N	HNO_3	Y
Red Poly, Dissolved		Dedicated Pump	Poly	ml		Y	HNO_3	Y

Notes

Total No. of Bottles_____
Sampler: SAM ADLINGTON
Signature 

FIELD SAMPLING DATA SHEET

SCS ENGINEERS
2405 140th Avenue, NE Suite A101
Bellevue, WA 98005
Phone: 425 746-4600 Fax: 425 746-6747

Client: LRI	Date: 1/ 06 /2011	Purging Method: BP
Project No.: 04209037.05	Well I.D.: MW-28S	
Site Name: Hidden Valley Landfill	Sample I.D.: HVL-01 06 11-25	
Site Location:	Weather: OVERCAST	
Stabilization Parameters: pH/DO ± 0.2, SpC ± 10%, Temp ± 5°C, Turb. ± 10% or ≤ 5		

Well Information

Purge Time: 1408	DTW: 40.04	Total Depth:	TOS:	Intake:	BOS:

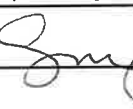
Parameters ***Sampling Interval***

Volume Purged (gal)													
Time	1411	1414	1417	1420	1423								
Temperature (°C)	11.27	11.40	11.40	11.42	11.44								
Conductance (µS/cm)	199.4	188.2	195.4	198.4	194.1								
Dissolved O_2 (mg/L)	3.79	4.09	3.82	3.81	3.92								
pH (units)	6.40	6.33	6.32	6.30	6.31								
ORP (mV)	52.2	61	65	67	70								
Turbidity	234	50.2	19.2	10.3	4.87								
Depth to Water													
Controller Refill	7												
Controller Discharge	8												
Controller psi	40												
Flow (Q)	400												

Well Sampling

Bottle Type	Date/ Time	Sampling Method	Container			Sampling Depth: Filtered (Y/N)	Preservative	Iced (Y/N)
			Type	Volume	Number			
VOA Glass		Dedicated Pump	G	40 ml		N	HCl	Y
White Poly		Dedicated Pump	Poly	ml		N	None	Y
Yellow Glass Amber		Dedicated Pump	GA	ml		N		Y
Red Poly, Total		Dedicated Pump	Poly	ml		N	HNO_3	Y
Red Poly, Dissolved		Dedicated Pump	Poly	ml		Y	HNO_3	Y

Notes

Total No. of Bottles_____
Sampler: SAM ADLINGTON
Signature 

FIELD SAMPLING DATA SHEET

SCS ENGINEERS
2405 140th Avenue, NE Suite A101
Bellevue, WA 98005
Phone: 425 746-4600 Fax: 425 746-6747

Client: LRI	Date: 1/ 07 /2011	Purging Method: BP
Project No.: 04209037.05	Well I.D.: MW-26R	
Site Name: Hidden Valley Landfill	Sample I.D.: HVL-01 07 11- 26	
Site Location:	Weather: OVERCAST	
Stabilization Parameters: pH/DO ± 0.2, SpC ± 10%, Temp ± 5°C, Turb. ± 10% or ≤ 5		

Well Information

Purge Time: 0733	DTW: 60.54	Total Depth:	TOS:	Intake:	BOS:

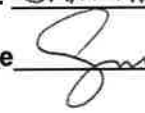
Parameters ***Sampling Interval***

Volume Purged (gal)													
Time	0736	0739	0742	0745	0748	0751							
Temperature (°C)	9.77	10.17	10.20	10.25	10.19	10.21							
Conductance (µS/cm)	157.1	106.5	101.1	111.6	125.3	134.6							
Dissolved O_2 (mg/L)	4.60	3.93	2.43	1.95	1.75	1.83							
pH (units)	6.20	6.53	6.73	6.86	6.95	7.03							
ORP (mV)	-59	-57	-90	-102	-108	-112							
Turbidity	28.4	8.87	3.61	4.39	3.03								
Depth to Water													
Controller Refill		7											
Controller Discharge		8											
Controller psi		80											
Flow (Q)		400											

Well Sampling

Bottle Type	Date/ Time	Sampling Method	Container Type	Container Volume	Container Number	Sampling Depth: Filtered (Y/N)	Preservative	Iced (Y/N)
VOA Glass		Dedicated Pump	G	40 ml		N	HCl	Y
White Poly		Dedicated Pump	Poly	ml		N	None	Y
Yellow Glass Amber		Dedicated Pump	GA	ml		N		Y
Red Poly, Total		Dedicated Pump	Poly	ml		N	HNO_3	Y
Red Poly, Dissolved		Dedicated Pump	Poly	ml		Y	HNO_3	Y

Notes SULFUROUS ODOR TO WATER STARTING @ 0739

Total No. of Bottles_____
Sampler: SAM ADDINGTON
Signature 

FIELD SAMPLING DATA SHEET

SCS ENGINEERS
2405 140th Avenue, NE Suite A101
Bellevue, WA 98005
Phone: 425 746-4600 Fax: 425 746-6747

Client: LRI	Date: 1/ 07 /2011	Purging Method: BP
Project No.: 04209037.05	Well I.D.: MW-18S	
Site Name: Hidden Valley Landfill	Sample I.D.: HVL-01 07 11-27	
Site Location:	Weather: OVERCAST	
Stabilization Parameters: pH/DO ± 0.2, SpC ± 10%, Temp ± 5°C, Turb. ± 10% or ≤ 5		

Well Information

Purge Time: 0830	DTW: 129.37	Total Depth:	TOS:	Intake:	BOS:

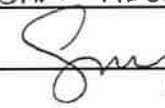
Parameters ***Sampling Interval***

Volume Purged (gal)												
Time	0833	0836	0839	0842								
Temperature (°C)	12.36	14.39	14.70	14.92								
Conductance (µS/cm)	396.3	405.6	407.8	468.8								
Dissolved O_2 (mg/L)	0.36	0.16	0.13	0.12								
pH (units)	6.27	6.28	6.28	6.28								
ORP (mV)	34.6	49	56	62.8								
Turbidity	3.45		1.00									
Depth to Water												
Controller Refill		9.5										
Controller Discharge		10.5										
Controller psi		85										
Flow (Q)		300										

Well Sampling

Bottle Type	Date/ Time	Sampling Method	Container			Sampling Depth: Filtered (Y/N)	Preservative	Iced (Y/N)
			Type	Volume	Number			
VOA Glass		Dedicated Pump	G	40 ml		N	HCl	Y
White Poly		Dedicated Pump	Poly	ml		N	None	Y
Yellow Glass Amber		Dedicated Pump	GA	ml		N		Y
Red Poly, Total		Dedicated Pump	Poly	ml		N	HNO_3	Y
Red Poly, Dissolved		Dedicated Pump	Poly	ml		Y	HNO_3	Y

Notes

Total No. of Bottles_____
Sampler: SAM ADLINGTON
Signature 

FIELD SAMPLING DATA SHEET

SCS ENGINEERS
2405 140th Avenue, NE Suite A101
Bellevue, WA 98005
Phone: 425 746-4600 Fax: 425 746-6747

Client: LRI	Date: 1/ 07 /2011	Purging Method: BP
Project No.: 04209037.05	Well I.D.:	
Site Name: Hidden Valley Landfill	Sample I.D.: HVL-01 07 11- 28	
Site Location:	Weather: OVERCAST	
Stabilization Parameters: pH/DO ± 0.2, SpC ± 10%, Temp ± 5°C, Turb. ± 10% or ≤ 5		

Well Information

Purge Time: 0914	DTW: 129.42	Total Depth:	TOS:	Intake:	BOS:

Parameters ***Sampling Interval***

Volume Purged (gal)													
Time	0917	0920	0923	0926	0929	0932	0935						
Temperature (°C)	12.31	14.29	14.94	14.96	15.11	15.15	15.19						
Conductance (µS/cm)	306.9	306.7	308	308.1	307.6	307.8	307.7						
Dissolved O_2 (mg/L)	1.10	0.66	0.45	0.41	0.39	0.38	0.38						
pH (units)	6.73	6.65	6.64	6.63	6.62	6.61	6.61						
ORP (mV)	43.5	54.2	59.5	62	64	65	66						
Turbidity		95.4	48.3	22.9	12.1	8.18	4.34						
Depth to Water													
Controller Refill		8		8									
Controller Discharge		12		12									
Controller psi		100		95									
Flow (Q)		420		300									

Well Sampling

Bottle Type	Date/ Time	Sampling Method	Container			Sampling Depth: Filtered (Y/N)	Preservative	Iced (Y/N)
			Type	Volume	Number			
VOA Glass		Dedicated Pump	G	40 ml		N	HCl	Y
White Poly		Dedicated Pump	Poly	ml		N	None	Y
Yellow Glass Amber		Dedicated Pump	GA	ml		N		Y
Red Poly, Total		Dedicated Pump	Poly	ml		N	HNO_3	Y
Red Poly, Dissolved		Dedicated Pump	Poly	ml		Y	HNO_3	Y

Notes

Total No. of Bottles_____
Sampler: SAM ARLINGTON
Signature Sam F

FIELD SAMPLING DATA SHEET

SCS ENGINEERS
2405 140th Avenue, NE Suite A101
Bellevue, WA 98005
Phone: 425 746-4600 Fax: 425 746-6747

Client: LRI	Date: 1/ 07 /2011	Purging Method: GRAB
Project No.: 04209037.05	Well I.D.: WS - CORLISS	
Site Name: Hidden Valley Landfill	Sample I.D.: HVL-01 07 11- 29	
Site Location:	Weather: OVERCAST	
Stabilization Parameters: pH/DO ± 0.2, SpC ± 10%, Temp ± 5°C, Turb. ± 10% or ≤ 5		

Well Information

Purge Time:	DTW: ———	Total Depth:	TOS:	Intake:	BOS:

Parameters ***Sampling Interval***

Volume Purged (gal)												
Time	1010											
Temperature (°C)	10.75											
Conductance (µS/cm)	204.2											
Dissolved O_2 (mg/L)	3.90											
pH (units)	7.16											
ORP (mV)	29											
Turbidity												
Depth to Water												
Controller Refill												
Controller Discharge												
Controller psi												
Flow (Q)												

Well Sampling

Bottle Type	Date/ Time	Sampling Method	Container			Sampling Depth: Filtered (Y/N)	Preservative	Iced (Y/N)
			Type	Volume	Number			
VOA Glass		Dedicated Pump	G	40 ml		N	HCl	Y
White Poly		Dedicated Pump	Poly	ml		N	None	Y
Yellow Glass Amber		Dedicated Pump	GA	ml		N		Y
Red Poly, Total		Dedicated Pump	Poly	ml		N	HNO_3	Y
Red Poly, Dissolved		Dedicated Pump	Poly	ml		Y	HNO_3	Y

Notes

Total No. of Bottles ____
Sampler: SAM ADLINGTON
Signature Sam

FIELD SAMPLING DATA SHEET

SCS ENGINEERS
2405 140th Avenue, NE Suite A101
Bellevue, WA 98005
Phone: 425 746-4600 Fax: 425 746-6747

Client: LRI	Date: 1/ 07 /2011	Purging Method: BP
Project No.: 04209037.05	Well I.D.: MW-20R	
Site Name: Hidden Valley Landfill	Sample I.D.: HVL-01 07 11- 30	
Site Location:	Weather: OVERCAST	
Stabilization Parameters: pH/DO ± 0.2, SpC ± 10%, Temp ± 5°C, Turb. ± 10% or ≤ 5		

Well Information

Purge Time: 1028	DTW: 104.92	Total Depth:	TOS:	Intake:	BOS:

Parameters ***Sampling Interval***

Volume Purged (gal)	1032	1035	1038	1041									
Time					1044	1047	1050						
Temperature (°C)	10.90	10.33	10.01	9.84	9.80	9.78	9.78						
Conductance (µS/cm)	100.2	99.74	99.70	99.07	99.61	99.49	99.42						
Dissolved O_2 (mg/L)	7.52	5.46	3.74	2.92	2.64	2.60	2.51						
pH (units)	7.14	7.11	7.10	7.10	7.11	7.12	7.12						
ORP (mV)	45	48	48	47	46	46	45						
Turbidity	1.97		1.10			0.73							
Depth to Water													
Controller Refill	7.5												
Controller Discharge	7.5												
Controller psi	60												
Flow (Q)	350												

Well Sampling

Bottle Type	Date/ Time	Sampling Method	Container			Sampling Depth: Filtered (Y/N)	Preservative	Iced (Y/N)
			Type	Volume	Number			
VOA Glass		Dedicated Pump	G	40 ml		N	HCl	Y
White Poly		Dedicated Pump	Poly	ml		N	None	Y
Yellow Glass Amber		Dedicated Pump	GA	ml		N		Y
Red Poly, Total		Dedicated Pump	Poly	ml		N	HNO_3	Y
Red Poly, Dissolved		Dedicated Pump	Poly	ml		Y	HNO_3	Y

Notes

Total No. of Bottles_____
Sampler: SAM ARLINGTON
Signature