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SCS ENGINEERS

October 26, 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: Third 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 Third Quarter (July through September) 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 July 22, August 16, and September 21. All gas probe measurements this quarter were less than 5 percent methane by volume, with the exception of GP-3D, GP-13A, and GP-15A, on at least one occasion. After each of these readings, LRI personnel were notified and adjustments were made to the landfill gas extraction system to recapture the gas. However, re-balancing of the landfill gas control system is still an ongoing process. On-site buildings were monitored for the presence of landfill gas on July 22. No methane detections were reported within the buildings. A summary of monitoring data for the landfill gas probes, barometric pressure trends, and on-site buildings is enclosed.

The groundwater monitoring program followed the Hidden Valley Landfill Groundwater Compliance Monitoring Plan (February 2001) and was a quarterly event. Groundwater samples were collected by SCS Engineers (SCS) on July 5 through July 8. 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).

Samples were shipped to TestAmerica Laboratories, Inc. in Arvada, Colorado via FedEx the same day as collected, with the exception of the samples collected July 7. These samples were shipped the following day, and all sample hold times were met. Groundwater data generated from the Hidden Valley Landfill during the Third 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 July 7. 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 1 , 2011 Performance Monitoring Data; 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. Field Sampling Data Sheets are attached. Laboratory reports for Third Quarter 2011 groundwater monitoring were provided under separate cover. Groundwater sample results are similar to previous dry-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 Third Quarter 2011 analytical data is attached.

The landfill cover system and the condensate recirculation system were inspected on July 22. The inspections found minor maintenance issues which are detailed on the attached forms and are being addressed by LRI staff.

A new landfill gas flare and blower system began operation at the Hidden Valley landfill on March 16, 2011 (see the 2011 First Quarter Monitoring Report). 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. SCS Engineers performed gas system balancing and maintenance repairs on August 31 and September 1, 2, 8, and 9. These efforts improved the gas at the flare station to about 44% methane, 27% carbon dioxide, and 2% oxygen with a flow rate of about 550 scfm. A flare source test was completed on September 9. A source test report has not yet been issued.

A portion of the landfill gas extraction system (gas wells N42, N43, N60, N61, N62, and N54) 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 at (425) 289-5447.

Sincerely,

Kevin Lakey, PE, LHG
Project Director
SCS ENGINEERS

Attachment: 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
CD with .pdf of complete report

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
Third Quarter 2011
Hidden Valley Landfill

Holding Times. All analyses were performed within quality control (QC) holding times.

Surrogate Recovery. Surrogate recoveries were within USEPA guidelines.

Laboratory Control Samples (LCS). The LCS for carbon tetrachloride in batch 280-1772 was above control limits, however, all samples were non-detect for carbon tetrachloride. Therefore, no corrective action was taken.

Matrix Spike and Matrix Spike Duplicate (MS/MSD). Matrix spike recoveries were within USEPA guidelines, with the following exceptions:

- Ethylbenzene in batch 280-17667, carbon tetrachloride in batch 280-1772, and bromomenthane in batch 280-17863 were reported with an MS/MSD recovery outside the acceptable limits. No further action was taken.

- Ammonia in batches 280-17667, 280-17863 and 280-17722 was reported with a MS/MSD recovery below the lower control acceptable limit. This indices the possible presence of a matrix interference. No further action was taken.

- In lot numbers 280-17722 and 280-17863 manganese was reported outside the acceptable recovery percentage, because the sample concentration was greater than four times the spike amount. No further action was taken.

Blanks. One field blank was included this quarter. De-ionized water (catalogue # W210.10.44) from Integra Chemical in Kent, Washington, was used to prepare the field blank by pumping the water through an unused bladder in the submersible bladder-pump. Trichloroethene was detected in the field blank at a concentration of 0.53 µg/L. No other detections of trichloroethene were reported. No other VOCs, dissolved metals, or inorganic compounds were reported in the field blank or laboratory method blanks.

Duplicate Samples. A field duplicate sample was collected from well MW-17S. All test results greater than five times the method reporting limit (MRL) were within 20 percent RPD, with the exception of Ammonia (26%). However, ammonia recovery in the MS/MSD was below the recovery control limits per USEPA guidelines, indicating possible matrix interference. Therefore, since the MS/MSD performed on the sample from MW-17S for ammonia was outside control limits, no data were flagged.

The lab duplicate in batch 280-17667 reported an RPD of 15% for total dissolved solids (TDS) outside of control limits (10%). No corrective action was taken, as all other QC criteria for TDS were in control.

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.

Table 1
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	22438	12017	320	9.90
February	44148	7305	0	4.40
March	37193	3309	1083	12.40
April	41457	6789	421	8.50
May	13670	3399	0	5.80
June	25381	6819	794	3.10
July	5351	6650	0	1.25
August	26908	0	0	0.30
September	1996	9604	605	0.95

Notes:
(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
July 7, 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	25.80	434.89
MW-11S	516.44	89.45	426.99
MW-11D	516.56	89.69	426.87
MW-11D(2)	515.53	87.70	427.83
MW-12S	489.94	61.89	428.05
MW-12D	489.97	63.17	426.80
MW-13S	448.81	20.90	427.91
MW-13D	448.94	21.29	427.65
MW-14S	477.95	44.62	433.33
MW-14D	477.98	46.62	431.36
MW-14R	476.84	114.13	362.71
MW-15S	498.76	70.77	427.99
MW-15D	498.52	75.09	423.43
MW-17S	552.44	126.25	426.19
MW-18S	538.40	128.44	409.96
MW-18D	539.00	126.89	412.11
MW-19S	485.71	53.07	432.64
MW-19D	485.82	61.85	423.97
MW-20R	469.43	102.93	366.50
MW-22U	545.92	137.33	408.59
MW-22L	546.07	137.77	408.30
MW-23S	448.34	19.27	429.07
MW-23D	448.25	18.45	429.80
MW-25S	527.80	119.60	408.20
MW-25D	527.52	118.20	409.32
MW-26R	481.81	58.50	423.31
MW-27S	531.81	101.00	430.81
MW-27D	531.92	101.08	430.84
MW-28S	466.87	39.47	427.40
FMW-01	542.59	138.40	404.19
FMW-02	536.40	131.65	404.75
BC-4S	526.68	121.20	405.48
BC-4D	526.94	NM	NM

Notes:
(NM) = not measured

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

Sample ID	Sample Number	Sample Date	Method	pH	Conductance (µS)	Temperature (° C)
MW-10S	HVL-070611-15	07/06/11	DP	6.76	127	12.4
MW-10D	HVL-070611-14	07/06/11	DP	6.87	201	11.2
MW-11S	HVL-070511-08	07/05/11	SP	6.15	184	17.6
MW-11D(2)	HVL-070511-07	07/05/11	SP	6.97	211	17.1
MW-12S	HVL-070811-23	07/08/11	DP	6.40	326	19.2
MW-12D	HVL-070811-22	07/08/11	DP	6.76	270	18.3
MW-13S	HVL-070511-06	07/05/11	SP	6.30	383	20.9
MW-13D	HVL-070611-16	07/06/11	SP	6.50	380	19.4
MW-14S	HVL-070811-21	07/08/11	DP	6.20	107	12.7
MW-14D	HVL-070811-20	07/08/11	DP	6.40	154	12.7
MW-15S	HVL-070611-12	07/06/11	SP	6.24	154	17.2
MW-15D	HVL-070611-13	07/06/11	SP	6.65	280	25.0
MW-17S	HVL-070511-04	07/05/11	SP	6.78	356	21.8
MW-18S	HVL-070611-10	07/06/11	SP	6.28	312	18.0
MW-18D	HVL-070611-11	07/06/11	SP	6.73	275	18.8
MW-23S	HVL-070711-19	07/07/11	SP	6.43	204	12.2
MW-25S	HVL-070611-09	07/06/11	SP	6.53	196	12.9
MW-28S	HVL-070711-18	07/07/11	SP	6.45	212	12.5
FMW-01	HVL-070511-01	07/05/11	SP	6.35	302	15.7
FMW-02	HVL-070511-02	07/05/11	SP	6.43	286	19.5
Water Supply Well, P. Bunyan	HVL-070711-17	07/07/11	GRAB	7.01	250	17.3
Water Supply Well, Corliss	HVL-070711-16	07/07/11	GRAB	6.29	206	20.2

Notes:
The groundwater cleanup level for specific conductance is 700 (µS).
(µS) = microsiemens
(°C) = degrees Celcius
(GRAB) = collected from sampling point
(SP) = submersible bladder-pump (non-dedicated)
(DP) = dedicated bladder-pump

Table 4
Inorganic Parameters (mg/L)
July 2011 (Third 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-14S	MW-15D	MW-15S	MW-17S	MW-18D	MW-18S	MW-23S	MW-25S	MW-28S	FMW-01	FMW-02
			Background																			
Alkalinity	5	—	81	53	100	51	130	160	170	160	64	38	140	60	170	130	150	82	88	64	120	120
Bicarbonate Alkalinity	5	—	81	53	100	51	130	160	170	160	64	38	140	60	170	130	150	82	88	64	120	120
Chloride	0.2-4.0	250[(b)]	6.2	21.1	5.5	10.0	9.5	19.4	21.1	26.3	5.5	4.9	10.4	6.8	18.9	5.4	20.0	12.1	7.4	16.6	20.2	17.6
Ammonia as Nitrogen	0.10	—	*	*	*	0.22	*	1.80	*	0.11	3.00	0.39	1.90	1.40	3.50	*	*	*	*	*	*	0.11
Nitrate as Nitrogen	0.50	10[(a)]	1.40	*	1.80	3.30	1.60	*	*	*	*	0.51	0.57	*	*	1.60	*	*	1.50	4.00	2.10	1.00
Sulfate	0.5-10.0	250[(b)]	16.5	17.5	5.0	19.0	5.1	1.2	17.5	17.7	11.1	9.9	8.6	11.6	6.8	8.3	5.1	13.5	6.1	9.2	12.8	14.6
Total Dissolved Solids	10	500[(b)]	150	84	160	160	190	230	260	270	110	81	200	110	260	220	240	150	160	160	210	230
Total Organic Carbon	1.0	—	*	1.0	*	1.1	*	3.9	1.8	2.1	1.7	1.1	1.6	1.5	2.6	*	2.4	*	*	*	1.4	1.7

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)
July 2011 (Third Quarter) Groundwater Monitoring
Hidden Valley Landfill, Pierce County, Washington

	MRL	Cleanup Levels	MW-10D (Background)	MW-10S (Background)	MW-11D(2)	MW-11S	MW-12D	MW-12S	MW-13D	MW-13S	MW-14D	MW-14S	MW-15D	MW-15S	MW-17S	MW-18D	MW-18S	MW-23S	MW-25S	MW-28S	FMW-01	FMW-02
Iron	0.200	0.30[(b)]	*	*	*	*	*	*	*	*	0.280	*	*	*	*	*	*	*	*	*	*	*
Manganese	0.001	0.05[(b)]	*	*	*	0.038	*	**0.490**	*	0.047	**0.560**	**0.220**	**0.430**	**0.380**	**0.940**	0.001	*	**0.068**	0.002	*	0.003	**0.091**

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

Table 6
Volatile Organic Compounds (µg/L)
July 2011 (Third 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-14S	MW-15D	MW-15S	MW-17S	MW-18D	MW-18S	MW-23S	MW-25S	MW-28S	FMW-01	FMW-02
			Background																			
1,4-Dichlorobenzene	0.5	1.82	*	*	*	*	*	1.20	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Tetrachloroethene	0.5	5.0[(a)]	*	*	0.9	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*

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)
(—) indicates not analyzed or not applicable
(a) indicates Primary Drinking Water standard

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

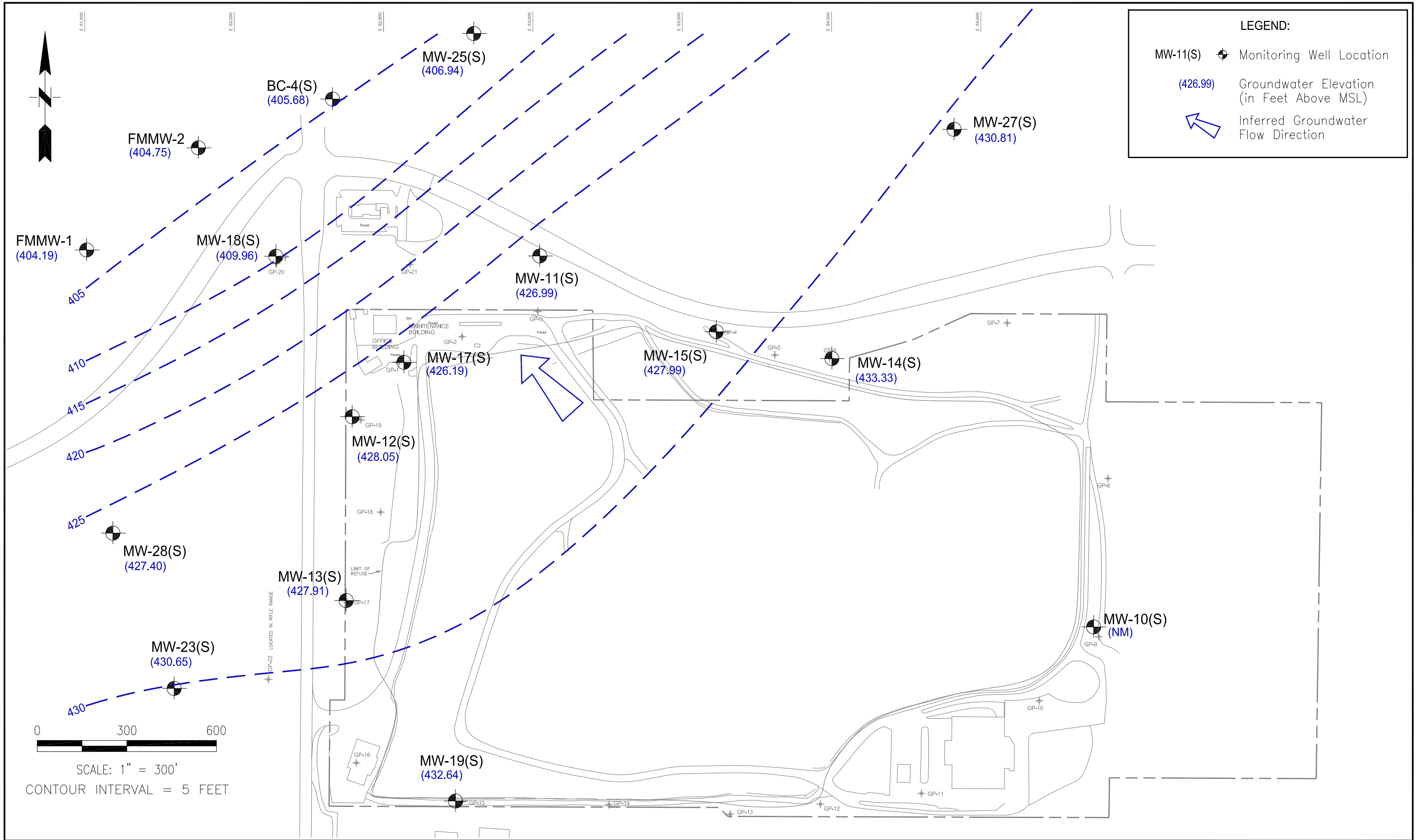
	MRL	MW-17S	DUP (MW-17S)	RPD (%)
Volatile Organics (µg/L)				
No Detections	—	*	*	—
Dissolved Metals (mg/L)				
Arsenic	0.005	*	*	—
Iron	0.20	*	*	—
Manganese	0.001	0.940	0.940	0
Inorganic Parameters (mg/L)				
Alkalinity	5	170	170	0
Bicarbonate Alkalinity	5	170	170	0
Ammonia as Nitrogen	0.10	3.5	2.7	26
Total Organic Carbon	1.0	2.6	2.8	7
Chloride	4.0	18.9	19.1	1
Nitrate as Nitrogen	0.2	*	*	—
Total Dissolved Solids	10	260	260	0
Sulfate	0.5	6.8	6.7	1

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
July 2011 (Third Quarter) Groundwater Monitoring
Hidden Valley Landfill, Pierce County, Washington

	MRL	Paul Bunyan	Corliss
Volatile Organics (µg/L)			
No Detections	—	*	*
Total Metals (mg/L)			
Arsenic	0.005	*	*
Iron	0.200	*	*
Manganese	0.001	*	0.005
Zinc	0.010	0.011	0.016
Inorganic Parameters (mg/L)			
Chloride	0.2 - 1.0	4.4	4.9
Ammonia as Nitrogen	0.1	0.3	0.2
Nitrate as Nitrogen	0.5	1.8	1.4
Nitrite as Nitrogen	0.5	*	*
Sulfate	0.5	9.9	8.7
Chemical Oxygen Demand (COD)	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)



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PROJECT NO. 042110003.03	DES BY SA	SHALLOW PERCHED AQUIFER WATER LEVEL MAP JULY 7, 2011 HIDDEN VALLEY LANDFILL PIERCE COUNTY, WASHINGTON	DATE JULY 2011
SCALE AS SHOWN	CHK BY ES		FIGURE 1
CAD FILE FIGURE 1	APP BY KGL		

LEGEND:

MW-14(D) — Monitoring Well Location

(431.36) — Groundwater Elevation (in Feet Above MSL)

Inferred Groundwater Flow Direction

* — Not used for Contouring

MW-25(D) (408.46)

MW-27(D) (430.84)

MW-18(D) (412.11)

MW-11D(2) (427.83)

MW-15(D) * (423.43)

MW-14(D) (431.36)

MW-12(D) (426.80)

MW-13(D) (427.65)

MW-10(D) (434.89)

MW-23(D) (425.28)

MW-19(D) * (423.97)

410 415 420 425 430

E 51,500 E 52,000 E 52,500 E 53,000 E 53,500 E 54,000 E 54,500

N 27,000 N 26,500 N 26,000 N 25,500 N 25,000

GP-1 GP-2 GP-3 GP-4 GP-5 GP-6 GP-7 GP-8 GP-9 GP-10 GP-11 GP-12 GP-13 GP-14 GP-15 GP-16 GP-17 GP-18 GP-19 GP-20 GP-21 GP-22

MAINTENANCE BUILDING

OFFICE BUILDING

LIMIT OF REFUSE

RECYCLING CENTER

GAS TO ENERGY FACILITY

LEACHATE PRETREATMENT FACILITY

TRANSFER STATION

0 300 600

SCALE: 1" = 300'

CONTOUR INTERVAL = 5 FEET

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PROJECT NO. 042110003.03	DES BY SA	UPPER REGIONAL AQUIFER WATER LEVEL MAP JULY 7, 2011 HIDDEN VALLEY LANDFILL PIERCE COUNTY, WASHINGTON	DATE JULY 2011
SCALE AS SHOWN	CHK BY ES		FIGURE 2
CAD FILE FIGURE 2	APP BY KGL		

E 51,500 E 52,000 E 52,500 E 53,000 E 53,500 E 54,000 E 54,500

N 27,000 N 26,500 N 26,000 N 25,500 N 25,000 N 24,500

LEGEND:

MW-14(R) — Monitoring Well Location

(362.71) — Groundwater Elevation (in Feet Above MSL)

Inferred Groundwater Flow Direction

BC-4(R)
(NM)

365

360

GP-21

GP-20

Paved

Dirt

MAINTENANCE BUILDING

OFFICE BUILDING

Paved

GP-1

GP-2

GP-3

Paved

GP-4

MW-14(R)
(362.71)

GP-5

GP-6

GP-7

GP-19

GP-18

GP-8

LIMIT OF REFUSE

GP-17

GP-9

GP-22

GP-10

RECYCLING CENTER

GP-16

GAS TO ENERGY FACILITY

LEACHATE PRETREATMENT FACILITY

TRANSFER STATION

GP-11

GP-15

GP-14

GP-13

GP-12

MW-20(R)
(366.50)

0 300 600

SCALE: 1" = 300'

CONTOUR INTERVAL = 5 FEET

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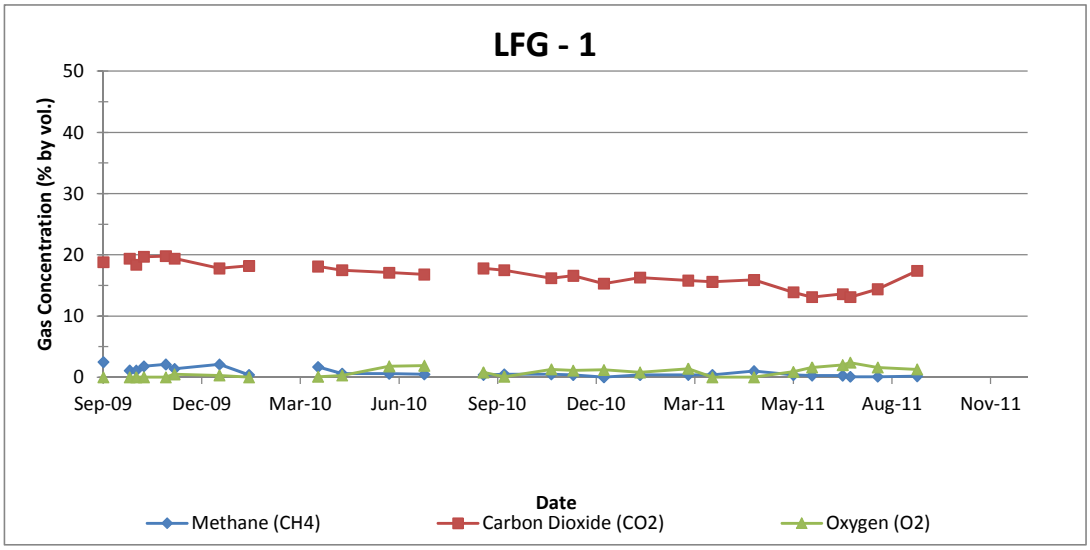
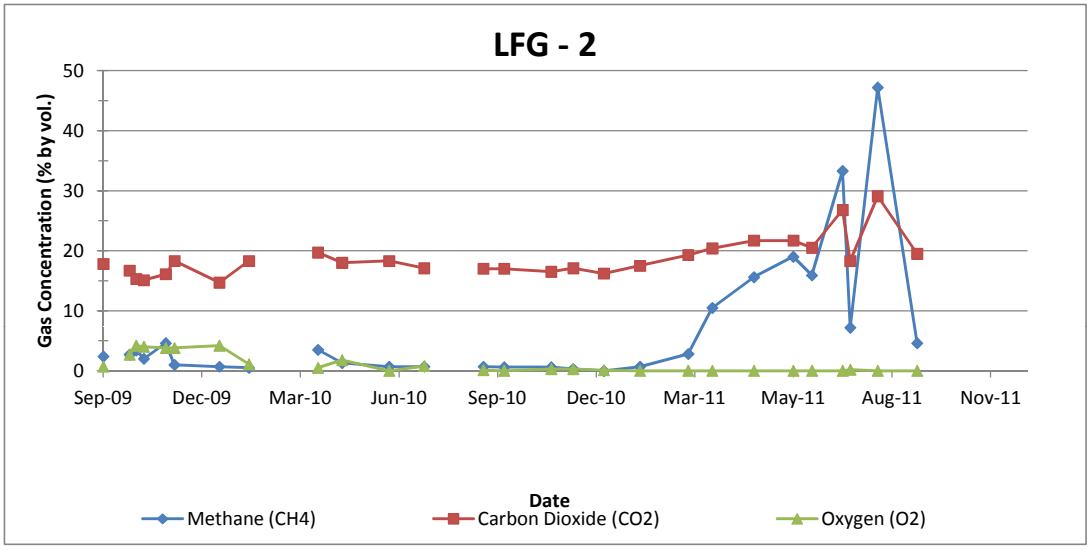
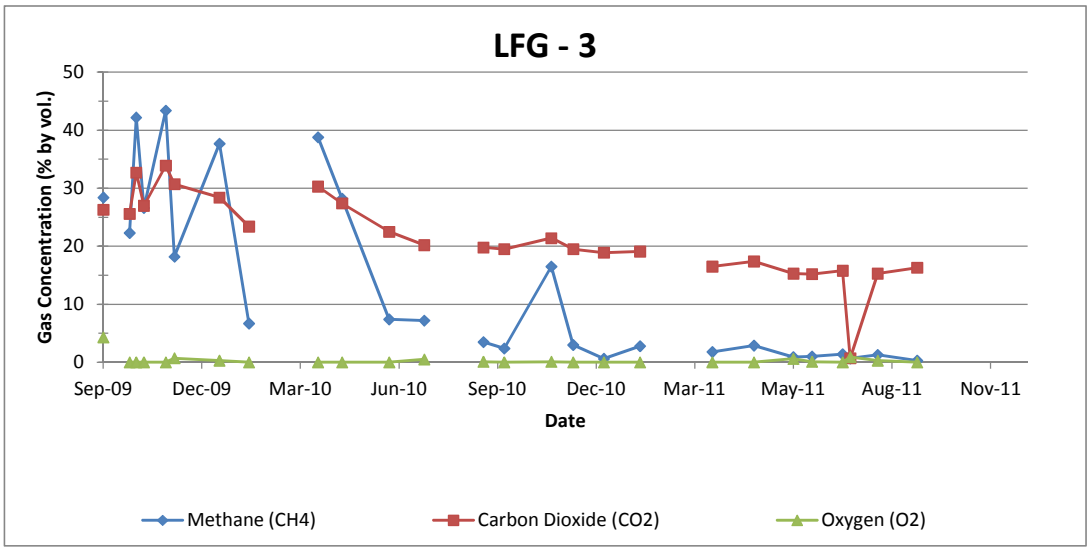
PROJECT NO. 04211003.03	DES BY KGL	LOWER REGIONAL AQUIFER WATER LEVEL MAP JULY 7, 2011 HIDDEN VALLEY LANDFILL PIERCE COUNTY, WASHINGTON	DATE JULY 2011
SCALE AS SHOWN	CHK BY KGL		FIGURE 3
CAD FILE FIGURE 3	APP BY KGL		

Hidden Valley Landfill
Subsurface Oxidation Area Evaluation







Landfill Gas Probe Monitoring

SCS Engineers

Hidden Valley Landfill

04211003.02

PCRCD dba LRI

July 22, 2011

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	22-Jul	8:45	-0.01	0.0	4.5	1.6			
GP-1B	22-Jul	8:50	-0.02	0.0	7.1	11.8			
GP-1C	22-Jul	8:55	0.00	0.0	3.0	18.9			
GP-2A	22-Jul	13:56	0.01	0.0	13.0	4.2			
GP-2B	22-Jul	13:59	0.00	0.0	0.2	20.0			
GP-3S	22-Jul	9:06	-0.03	0.0	0.8	19.3			
GP-3M	22-Jul	9:11	0.00	0.0	2.7	13.6			
GP-3D	22-Jul	9:21	0.00	7.4	13.5	2.7			
GP-4A	22-Jul	9:35	0.00	0.0	0.9	20.1			
GP-4B	22-Jul	9:41	0.07	0.0	0.3	21.0			
GP-5A	22-Jul	9:50	0.01	0.0	0.8	20.2			
GP-5B	22-Jul	9:55	0.00	0.0	2.1	16.5			
GP-6	22-Jul	10:03	0.01	0.0	0.7	20.5			
GP-7S	22-Jul	10:12	0.02	0.0	1.0	18.8			
GP-7D	22-Jul	10:21	0.00	0.0	0.9	19.9			
GP-8A	22-Jul	10:36	0.00	0.0	3.6	17.4			
GP-8B	22-Jul	10:45	0.02	0.0	1.0	20.3			
GP-9	22-Jul	10:50	0.01	0.0	1.4	16.8			
GP-10	22-Jul	10:55	0.02	0.0	0.7	20.0			
GP-11	22-Jul	11:13	-0.01	0.0	8.6	9.3			
GP-12	22-Jul	11:22	0.00	0.2	13.2	0.5			
GP-13A	22-Jul	11:46	0.00	23.0	14.1	0.6			
GP-13B	22-Jul	11:54	0.06	0.0	0.3	20.9			
GP-14S	22-Jul	12:02	0.06	0.0	11.7	11.7			
GP-14D	22-Jul	12:05	0.06	0.0	14.5	2.8			
GP-15A	22-Jul	12:15	0.07	1.9	13.7	0.3			
GP-15B	22-Jul	12:20	0.00	0.0	6.3	10.0			
GP-16A	22-Jul	12:58	0.00	0.0	6.3	14.5			
GP-16B	22-Jul	13:04	-0.01	0.0	5.0	17.0			
GP-17	22-Jul	13:16	-0.03	0.0	2.8	19.4			
GP-18	22-Jul	13:35	-0.01	0.0	0.4	21.8			
GP-19	22-Jul	13:38	0.09	0.0	0.3	20.2			
LFG-1	22-Jul	12:29	0.11	0.1	13.1	2.4			
LFG-2	22-Jul	12:36	0.15	7.2	18.3	0.2			
LFG-3	22-Jul	12:41	0.11	0.7	14.3	0.9			

General Data

Monitored by: WC

Instruments: GEM 2000

Calibration Date: 22-Jul-11

Weather Conditions

Sky Cover: Clear

Wind / Rain / Snow:

Temperature (^{o}F): 58

Notes

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

GP = Gas Probe

NM = Not measured - equipment malfunction

CH_4 = Methane

CO_2 = Carbon Dioxide

O_2 = Oxygen

S = shallow

M = medium

D = deep

A= shallow

B = medium

C = deep

Landfill Gas Probe Monitoring

SCS Engineers

Hidden Valley Landfill

04211003.02

PCRCD dba LRI

August 16, 2011

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	16-Aug	8:52	0.02	0.2	4.6	1.0			
GP-1B	16-Aug	8:57	0.00	0.2	9.3	8.4			
GP-1C	16-Aug	9:06	0.00	0.1	5.4	15.8			
GP-2A	16-Aug	9:12	0.03	0.1	2.3	17.3			
GP-2B	16-Aug	9:16	0.06	0.0	0.0	20.2			
GP-3S	16-Aug	9:25	0.04	0.0	1.3	17.3			
GP-3M	16-Aug	9:29	-0.02	0.0	2.5	15.4			
GP-3D	16-Aug	9:49	-0.01	9.3	14.4	1.3			
GP-4A	16-Aug	9:59	0.00	0.0	1.2	19.4			
GP-4B	16-Aug	10:02	0.06	0.0	0.6	20.0			
GP-5A	16-Aug	10:08	0.00	0.0	1.0	18.9			
GP-5B	16-Aug	10:13	0.02	0.0	2.2	15.1			
GP-6	16-Aug	10:21	0.02	0.0	1.1	19.9			
GP-7S	16-Aug	10:29	0.00	0.0	1.0	19.3			
GP-7D	16-Aug	10:34	0.00	0.0	1.0	19.1			
GP-8A	16-Aug	10:46	0.00	0.0	5.8	14.0			
GP-8B	16-Aug	10:50	0.00	0.0	2.9	17.6			
GP-9	16-Aug	10:57	0.00	0.0	1.6	16.0			
GP-10	16-Aug	11:03	0.00	0.0	1.3	18.1			
GP-11	16-Aug	11:10	0.01	0.0	4.2	17.5			
GP-12	16-Aug	11:22	0.02	1.3	15.9	0.1			
GP-13A	16-Aug	12:13	0.04	14.8	15.3	0.1			
GP-13B	16-Aug	12:16	0.17	0.0	0.4	20.3			
GP-14S	16-Aug	12:30	0.11	0.0	9.5	13.4			
GP-14D	16-Aug	12:34	0.09	0.0	15.0	1.9			
GP-15A	16-Aug	12:42	0.12	8.5	14.8	0.1			
GP-15B	16-Aug	12:45	0.09	0.0	6.7	8.5			
GP-16A	16-Aug	13:23	0.12	0.0	0.4	20.8			
GP-16B	16-Aug	13:26	0.11	0.0	0.4	20.9			
GP-17	16-Aug	13:35	0.00	0.0	6.3	14.2			
GP-18	16-Aug	13:41	-0.01	0.0	6.9	12.4			
GP-19	16-Aug	13:49	-0.01	0.0	2.6	19.1			
LFG-1	16-Aug	12:55	0.14	0.1	14.4	1.6			
LFG-2	16-Aug	13:02	0.19	47.4	29.1	0.0			
LFG-3	16-Aug	13:08	0.14	1.3	15.3	0.3			

General Data

Monitored by: WC

Instruments: GEM 2000

Calibration Date: 16-Aug-11

Weather Conditions

Sky Cover: Clear

Wind / Rain / Snow:

Temperature (°F): 68

Notes

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

GP = Gas Probe

NM = Not measured - equipment malfunction

CH_4 = Methane

CO_2 = Carbon Dioxide

O_2 = Oxygen

S = shallow

M = medium

D = deep

A= shallow

B = medium

C = deep

Landfill Gas Probe Monitoring

SCS Engineers

Hidden Valley Landfill

04211003.02

PCRCD dba LRI

September 21, 2011

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	21-Sep	7:42	-0.01	0.0	4.8	0.4			
GP-1B	21-Sep	7:45	-0.02	0.0	10.0	6.9			
GP-1C	21-Sep	7:49	-0.01	0.0	2.5	17.9			
GP-2A	21-Sep	7:54	0.33	0.0	1.0	19.5			
GP-2B	21-Sep	7:56	0.16	0.0	0.2	21.0			
GP-3S	21-Sep	8:01	0.00	0.0	0.7	18.4			
GP-3M	21-Sep	8:04	-0.02	0.0	2.4	18.1			
GP-3D	21-Sep	8:12	-0.01	8.6	15.1	1.0	8.8		
GP-4A	21-Sep	8:24	0.00	0.0	1.0	20.1			
GP-4B	21-Sep	8:27	0.13	0.0	0.4	21.0			
GP-5A	21-Sep	8:33	0.00	0.0	1.3	20.6			
GP-5B	21-Sep	8:36	0.00	0.0	0.6	20.0			
GP-6	21-Sep	8:41	0.00	0.0	0.6	20.8			
GP-7S	21-Sep	8:48	-0.10	0.0	1.4	20.1			
GP-7D	21-Sep	8:51	-0.09	0.0	0.9	20.0			
GP-8A	21-Sep	9:01	0.17	0.0	5.2	17.1			
GP-8B	21-Sep	9:05	0.16	0.0	1.5	19.9			
GP-9	21-Sep	9:11	0.00	0.0	2.5	17.2			
GP-10	21-Sep	9:16	0.00	0.0	1.5	19.8			
GP-11	21-Sep	9:21	0.02	0.0	3.0	17.5			
GP-12	21-Sep	9:31	0.00	0.0	13.9	1.6			
GP-13A	21-Sep	9:44	0.19	6.5	16.8	0.0			
GP-13B	21-Sep	9:47	0.09	0.0	0.3	21.1			
GP-14S	21-Sep	10:11	0.00	0.0	21.3	1.9			
GP-14D	21-Sep	10:14	-0.01	0.0	17.0	0.0			
GP-15A	21-Sep	10:19	0.00	0.0	4.6	16.7			
GP-15B	21-Sep	10:22	0.00	0.0	6.5	16.0			
GP-16A	21-Sep	10:28	0.00	0.0	0.6	20.4			
GP-16B	21-Sep	10:30	0.07	0.0	0.5	20.5			
GP-17	21-Sep	10:37	0.26	0.0	6.8	12.8			
GP-18	21-Sep	10:43	0.01	0.0	3.0	19.1			
GP-19	21-Sep	10:47	0.02	0.0	2.2	19.4			
LFG-1	21-Sep	9:57	0.02	0.2	17.4	1.3			
LFG-2	21-Sep	10:02	0.05	4.6	19.5	0.0	5.3		
LFG-3	21-Sep	10:07	0.02	0.3	16.3	0.0			

General Data

		Weather Conditions	
Monitored by:	SEA	Sky Cover:	Clear
Instruments:	GEM 2000	Wind / Rain / Snow:	
Calibration Date:	21-Sep-11	Temperature (^{o}F):	68

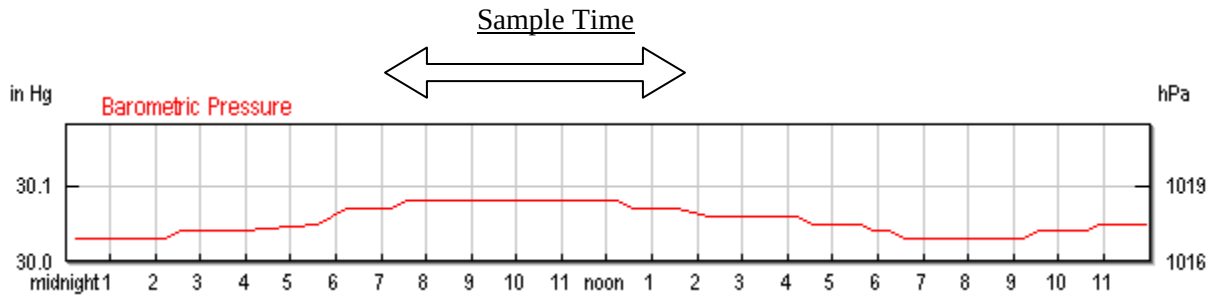
Notes

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

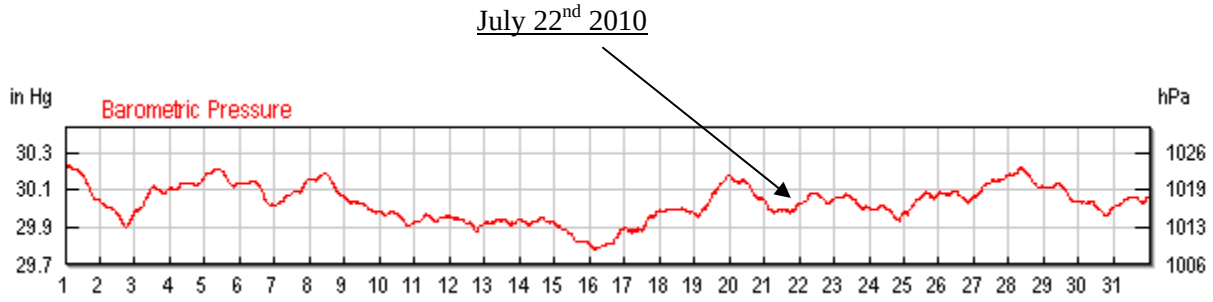
GP = Gas Probe	CH_4 = Methane	S = shallow	A= shallow
NM = Not measured -	CO_2 = Carbon Dioxide	M = medium	B = medium
equipment malfunction	O_2 = Oxygen	D = deep	C = deep

Barometric Pressure Trend
Hidden Valley Landfill
July 2011

Barometric Pressure Trend for July 22nd, 2011



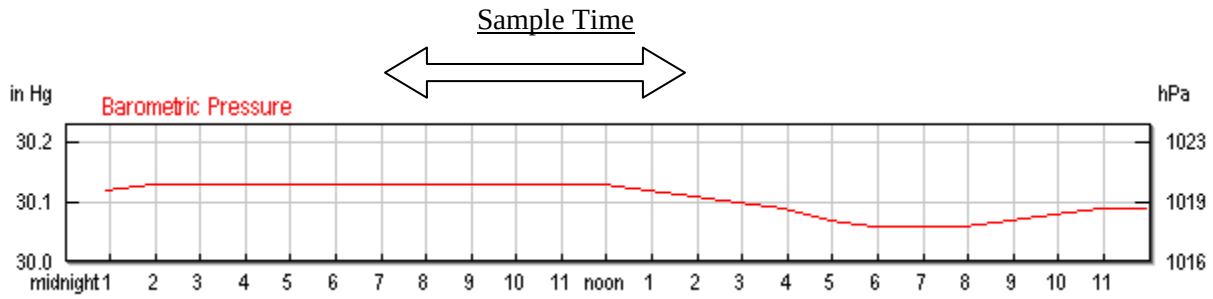
Barometric Pressure Trend for July 2011



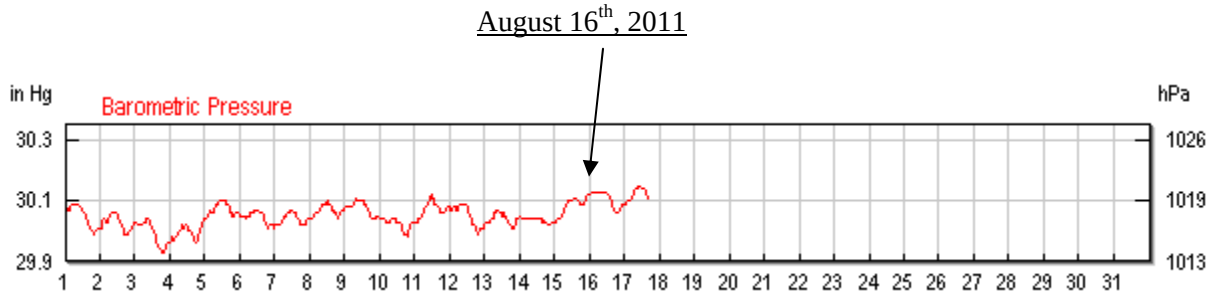
Weather Station
Puyallup (KPLU)

Barometric Pressure Trend
Hidden Valley Landfill
August 2011

Barometric Pressure Trend for August 16th, 2011



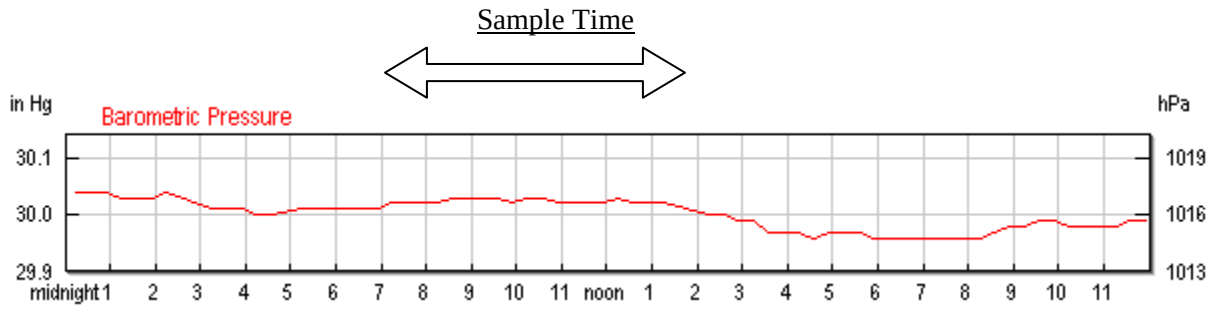
Barometric Pressure Trend for August 2011



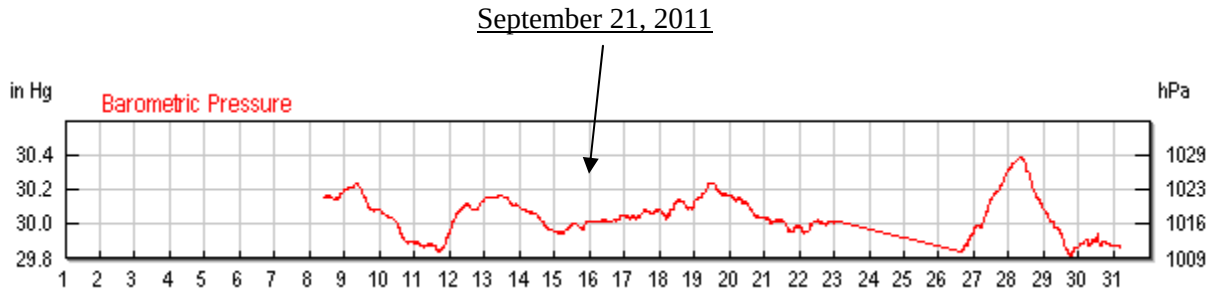
Weather Station
Puyallup (KPLU)

Barometric Pressure Trend
Hidden Valley Landfill
September 2011

Barometric Pressure Trend for September 21st, 2011



Barometric Pressure Trend for September 2011



Weather Station
Puyallup (KPLU)

Hidden Valley Landfill
Landfill Gas Monitoring of On-site Buildings

Project Number: 04211003.02

Date: 7/22/2011
Weather Conditions:
Instrument:
Measured By: Wayne Chang

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.

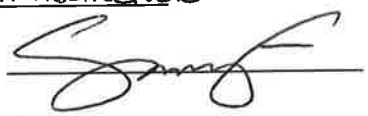
Wayne Chang
Signature

Condensate Recirculation Inspection Checklist

Hidden Valley Landfill, Pierce County, Washington

Name: SAM ADLINGTON

Date: 7/15/2011

Signature: 

Weather: SUNNY W/ CLOUDS

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.

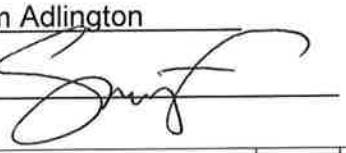
Sump	Operation per Design (Y or N)	Comments
Sump No. 1	Y	
Sump No. 2	Y	3 BOLTS
Sump No. 3	Y	CAN NOT SEE BOTTOM FAINT HISSING NOISE
Sump No. 4	Y	
Sump No. 5	Y	
Sump No. 6	Y	
Sump No. 7	Y	SLIGHT HISSING NOISE
Sump No. 8	Y	
Sump No. 9	Y	VACUUM PRESENT
Sump No. 10	N	FOUL ODOR WHEN OPENED, PUMP REMOVED

Other Remarks:

Facility Inspection Checklist

Hidden Valley Landfill, Pierce County, Washington

Name: Sam Adlington

Signature: 

Date: 7/15/2011

Weather: SUNNY W/ CLOUDS

Items	Yes	No	Comments
Cover System			
Settlement Depressions (sinkholes)		X	
Cracking of Cover Soils		X	
Inadequate Cover Soil or Rock		X	
Standing Water		X	
Vegetation			
Bare or Sparsely Vegetated Areas	X		DRY WEATHER CAUSING GRASS TO DIE IN VARIOUS PATCHES ON MOUNDS
Areas of Dying Vegetation	X		
Large Root Vegetation (ex. Bushes)		X	COVER WAS BEING MOWED WHILE INSPECTING MAY HAVE BEEN THERE NOT VISABLE
Stormwater Conveyance System			
Ditch Obstructions or Flat Areas		X	
Culvert Obstructions		X	
Catch Basin Debris or Silt Accumulation	X	X	NEED TO BE CLEANED NEAR TRANSFER STATION
Stormwater Basin Debris or Silt		X	
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	
Pump or Meter Issues		X	
Foaming at Pump		X	

Other Remarks:

Hidden Valley Landfill

Month of Jul-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
30	16.46	3.48	0	0	0	0	33,072	34.75	38,955
1	16.85	3.04	0	0	0	0	38,835	35.44	41,464
2	16.85	3.13	0	0	0	0	20,714	35.15	22,428
3	17.07	3.74	0	0	0	0	15,451	32.91	22,742
4	17.20	3.56	0	0	0	0	14,760	31.65	22,757
5	17.51	3.30	0	0	0	0	18,628	31.30	31,365
6	17.77	3.78	0	0	0	0	16,818	30.51	36,279
7	17.77	4.00	0	0	359	0	13,517	30.69	29,185
8	18.16	4.39	0	0	4,992	0	32,488	34.63	35,976
9	18.29	4.69	0	0	0	0	21,189	34.70	24,500
10	18.42	4.87	0	0	0	0	12,608	32.02	22,507
11	18.59	4.78	0	0	0	0	13,522	30.53	28,907
12	18.85	5.04	0	0	0	0	26,747	32.80	33,357
13	15.42	4.95	44	0	0	3,061	23,027	31.64	33,923
14	15.77	5.47	0	0	0	0	23,466	30.96	38,541
15	11.08	5.65	42	0	0	3,589	25,105	31.42	33,835
16	11.29	6.43	0	0	0	0	5,810	27.80	20,597
17	11.55	6.47	0	0	0	0	4,066	27.15	17,973
18	11.90	6.34	0	0	0	0	19,233	30.32	25,199
19	11.99	7.82	0	0	0	0	27,759	29.69	39,638
20	12.47	6.73	0	0	0	0	23,512	37.26	26,155
21	12.47	6.65	0	0	0	0	27,436	49.20	35,030
22	12.81	6.86	0	0	0	0	24,628	50.63	22,832
23	13.12	6.95	0	0	0	0	22,652	49.91	28,199
24	13.25	7.47	0	0	0	0	18,021	48.67	21,023
25	13.47	7.82	0	0	0	0	25,841	50.13	27,569
26	13.81	7.25	0	0	0	0	31,794	48.33	34,553
27	13.99	8.43	0	0	0	0	38,180	48.81	40,607
28	14.29	7.95	0	0	0	0	26,623	47.87	34,660
29	14.55	8.21	0	0	0	0	23,231	48.57	24,433
30	14.68	8.38	0	0	0	0	21,151	49.81	23,163
31	14.90	8.25	0	0	0	0	21,738	48.99	26,502
			Total Gallons:	**0**	**5,351**	**6,650**	**678,550**		**905,898**
				Cell 2 Leak	Cell 1 Leachate	Cell 2 Leachate	304th Influent		Treatment Discharge

Hidden Valley Landfill Hour Meters Totalizers

Jul-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.
30	37,199	46	2930	29	0.00	18.68	6115204	3,963,787	100433	90,556,857	79,896,888
1	37,219	16	2930	29	0.00	19.50	6115204	3,963,787	100433	90,595,692	79,938,351
2	37,229	54	2930	29	0.00	10.63	6115204	3,963,787	100433	90,616,406	79,960,779
3	37,241	25	2930	29	0.00	11.52	6115204	3,963,787	100433	90,631,857	79,983,521
4	37,253	24	2930	29	0.00	11.98	6115204	3,963,787	100433	90,646,617	80,006,278
5	37,270	6	2930	29	0.00	16.70	6115204	3,963,787	100433	90,665,245	80,037,643
6	37,289	55	2930	29	0.00	19.82	6115204	3,963,787	100433	90,682,063	80,073,922
7	37,305	46	2930	29	0.00	15.85	6115563	3,963,787	100433	90,695,580	80,103,106
8	37,323	5	2930	29	0.00	17.32	6120555	3,963,787	100433	90,728,068	80,139,082
9	37,334	51	2930	29	0.00	11.77	6120555	3,963,787	100433	90,749,257	80,163,582
10	37,346	34	2930	29	0.00	11.72	6120555	3,963,787	100433	90,761,865	80,186,089
11	37,362	21	2930	29	0.00	15.78	6120555	3,963,787	100433	90,775,388	80,214,996
12	37,379	18	2930	29	0.00	16.95	6120555	3,963,787	100433	90,802,135	80,248,353
13	37,397	10	2931	39	1.17	17.87	6120555	3,966,848	100433	90,825,162	80,282,276
14	37,417	55	2931	39	0.00	20.75	6120555	3,966,848	100433	90,848,628	80,320,816
15	37,435	52	2933	4	1.42	17.95	6120555	3,970,437	100433	90,873,733	80,354,652
16	37,448	13	2933	4	0.00	12.35	6120555	3,970,437	100433	90,879,543	80,375,248
17	37,459	15	2933	4	0.00	11.03	6120555	3,970,437	100433	90,883,609	80,393,221
18	37,473	6	2933	4	0.00	13.85	6120555	3,970,437	100433	90,902,842	80,418,420
19	37,495	21	2933	4	0.00	22.25	6120555	3,970,437	100433	90,930,601	80,458,058
20	37,507	3	2933	4	0.00	11.70	6120555	3,970,437	100433	90,954,114	80,484,213
21	37,518	55	2933	4	0.00	11.87	6120555	3,970,437	100433	90,981,550	80,519,243
22	37,526	26	2933	4	0.00	7.52	6120555	3,970,437	100433	91,006,178	80,542,075
23	37,535	51	2933	4	0.00	9.42	6120555	3,970,437	100433	91,028,830	80,570,274
24	37,543	3	2933	4	0.00	7.20	6120555	3,970,437	100433	91,046,850	80,591,298
25	37,552	13	2933	4	0.00	9.17	6120555	3,970,437	100433	91,072,691	80,618,867
26	37,564	8	2933	4	0.00	11.92	6120555	3,970,437	100433	91,104,485	80,653,419
27	37,577	60	2933	4	0.00	13.87	6120555	3,970,437	100433	91,142,665	80,694,027
28	37,590	4	2933	4	0.00	12.07	6120555	3,970,437	100433	91,169,287	80,728,687
29	37,598	27	2933	4	0.00	8.38	6120555	3,970,437	100433	91,192,518	80,753,120
30	37,606	12	2933	4	0.00	7.75	6120555	3,970,437	100433	91,213,669	80,776,283
31	37,615	13	2933	4	0.00	9.02	6120555	3,970,437	100433	91,235,407	80,802,785
					Total	**Gallons**	**5,351**	**6,650**	**0**	**678,550**	**905,898**
							Cell 1 Leachate	Cell 2 Leachate	Cell 2 Leak	304th Influent	Treatment Discharge

Hidden Valley Landfill

Month of Aug-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	14.90	8.25	0	0	0	0	21,738	48.99	26,502
1	15.20	8.56	0	0	0	0	18,857	46.72	28,222
2	15.33	8.73	0	0	0	0	34,431	47.33	37,247
3	15.55	9.25	0	0	0	0	28,079	46.70	31,007
4	15.68	9.38	0	0	0	0	30,348	46.01	40,260
5	15.94	9.30	0	0	0	0	34,985	43.73	44,997
6	16.20	9.12	0	0	0	0	18,475	43.50	22,444
7	16.33	9.60	0	0	0	0	21,013	44.07	26,092
8	16.51	9.73	0	0	57	0	22,738	43.42	30,612
9	16.72	10.25	0	0	736	0	32,338	41.23	43,127
10	16.90	10.38	0	0	6,598	0	26,785	41.02	39,093
11	17.16	10.51	0	0	2,333	0	27,054	38.75	42,354
12	17.24	10.73	0	0	6,465	0	22,368	35.34	36,540
13	17.55	10.77	0	0	3,755	0	23,583	34.50	32,124
14	17.68	10.90	0	0	2,480	0	28,798	37.64	30,524
15	17.90	11.55	0	0	0	0	26,023	36.43	32,746
16	17.98	11.51	0	0	0	0	43,707	35.77	43,705
17	18.16	11.68	0	0	0	0	39,525	37.44	45,266
18	18.46	11.95	0	0	0	0	35,333	34.39	45,014
19	18.59	12.34	0	0	0	0	38,593	34.47	39,715
20	18.81	12.81	0	0	4,479	0	26,209	37.93	25,718
21	18.90	13.29	0	0	0	0	25,510	36.88	21,499
22	19.16	13.29	0	0	0	0	32,644	36.44	29,148
23	19.29	13.86	0	0	0	0	25,705	33.16	34,680
24	19.55	14.59	0	0	0	0	34,988	33.91	35,161
25	19.63	14.90	0	0	0	0	30,615	34.14	30,969
26	19.81	15.20	0	0	0	0	25,949	34.14	31,789
27	19.98	15.68	0	0	0	0	18,133	33.96	26,081
28	20.15	16.38	0	0	0	0	15,247	32.27	24,042
29	20.33	16.59	0	0	0	0	5,452	30.36	23,374
30	20.46	17.46	0	0	0	0	6,685	30.75	27,887
31	20.50	17.16	0	32	5	0	13,771	31.92	30,898
			Total Gallons:	**32**	**26,908**	**0**	**813,941**		**1,032,336**
				Cell 2 Leak	Cell 1 Leachate	Cell 2 Leachate	304th Influent		Treatment Discharge

Hidden Valley Landfill Hour Meters Totalizers

Aug-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
Day	(hr)	(min)	(hr)	(min)	Hours	Hours	Total Gals.	Total Gals.	Total Gals.	Total Gals.
31	37,615	13	2933	4	0.00	9.02	6120555	3,970,437	100433	91,235,407
1	37,625	17	2933	4	0.00	10.07	6120555	3,970,437	100433	91,254,264
2	37,638	24	2933	4	0.00	13.12	6120555	3,970,437	100433	91,288,695
3	37,649	28	2933	4	0.00	11.07	6120555	3,970,437	100433	91,316,774
4	37,664	3	2933	4	0.00	14.58	6120555	3,970,437	100433	91,347,122
5	37,681	12	2933	4	0.00	17.15	6120555	3,970,437	100433	91,382,107
6	37,689	48	2933	4	0.00	8.60	6120555	3,970,437	100433	91,400,582
7	37,699	40	2933	4	0.00	9.87	6120555	3,970,437	100433	91,421,596
8	37,711	25	2933	4	0.00	11.75	6120612	3,970,437	100433	91,444,334
9	37,728	51	2933	4	0.00	17.43	6121348	3,970,437	100433	91,476,672
10	37,744	44	2933	4	0.00	15.88	6127946	3,970,437	100433	91,503,457
11	37,762	57	2933	4	0.00	18.22	6130279	3,970,437	100433	91,530,511
12	37,780	11	2933	4	0.00	17.23	6136744	3,970,437	100433	91,552,879
13	37,795	42	2933	4	0.00	15.52	6140498	3,970,437	100433	91,576,461
14	37,809	13	2933	4	0.00	13.52	6142979	3,970,437	100433	91,605,259
15	37,824	12	2933	4	0.00	14.98	6142979	3,970,437	100433	91,631,282
16	37,844	34	2933	4	0.00	20.37	6142979	3,970,437	100433	91,674,989
17	37,864	43	2933	4	0.00	20.15	6142979	3,970,437	100433	91,714,514
18	37,886	32	2933	4	0.00	21.82	6142979	3,970,437	100433	91,749,848
19	37,905	44	2933	4	0.00	19.20	6142979	3,970,437	100433	91,788,441
20	37,917	2	2933	4	0.00	11.30	6147457	3,970,437	100433	91,814,649
21	37,926	45	2933	4	0.00	9.72	6147457	3,970,437	100433	91,840,159
22	37,940	5	2933	4	0.00	13.33	6147457	3,970,437	100433	91,872,803
23	37,957	31	2933	4	0.00	17.43	6147457	3,970,437	100433	91,898,508
24	37,974	48	2933	4	0.00	17.28	6147457	3,970,437	100433	91,933,497
25	37,989	55	2933	4	0.00	15.12	6147457	3,970,437	100433	91,964,111
26	38,005	26	2933	4	0.00	15.52	6147457	3,970,437	100433	91,990,061
27	38,018	14	2933	4	0.00	12.80	6147457	3,970,437	100433	92,008,193
28	38,030	39	2933	4	0.00	12.42	6147457	3,970,437	100433	92,023,440
29	38,043	29	2933	4	0.00	12.83	6147457	3,970,437	100433	92,028,892
30	38,058	36	2933	4	0.00	15.12	6147458	3,970,437	100433	92,035,576
31	38,074	44	2933	5	0.02	16.13	6147463	3,970,437	100466	92,049,347
					Total	**Gallons**	**26,908**	**0**	**32**	**813,941**
							Cell 1 Leachate	Cell 2 Leachate	Cell 2 Leak	304th Influent

Treatment Discharge Total Gals.
80,802,785
80,831,007
80,868,254
80,899,262
80,939,521
80,984,518
81,006,962
81,033,054
81,063,666
81,106,793
81,145,886
81,188,240
81,224,780
81,256,904
81,287,429
81,320,175
81,363,880
81,409,146
81,454,160
81,493,875
81,519,593
81,541,092
81,570,240
81,604,920
81,640,082
81,671,051
81,702,840
81,728,921
81,752,962
81,776,336
81,804,223
81,835,121
1,032,336
Treatment Discharge

Hidden Valley Landfill
Month of Sep-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	20.50	17.16	0	32	5	0	13,771	31.92	30,898
1	20.72	18.29	0	0	0	0	1,884	30.21	7,946
2	20.89	18.24	0	0	0	0	4,294	31.39	17,421
3	21.07	17.94	0	0	0	0	8,228	32.02	21,615
4	21.15	19.16	0	0	0	0	23,024	33.63	30,169
5	21.20	19.55	0	0	0	0	6,394	30.08	26,259
6	21.50	20.07	0	0	0	0	6,662	28.61	27,404
7	21.55	20.33	0	0	0	0	6,560	28.00	27,079
8	21.68	20.63	0	0	0	0	6,422	26.15	26,437
9	21.89	21.37	0	0	0	0	4,325	26.32	17,790
10	22.07	22.02	0	0	0	0	6,035	26.79	25,023
11	21.98	22.59	0	0	0	0	5,519	25.45	22,957
12	22.24	22.59	0	0	0	0	5,689	26.30	23,877
13	22.50	23.33	0	0	0	0	4,932	28.31	20,465
14	22.67	24.02	0	0	0	0	6,618	29.64	27,360
15	22.72	24.54	0	0	0	0	6,337	34.16	16,192
16	22.89	4.39	0	1121	0	0	6,186	38.65	24,965
17	12.12	4.82	44	0	0	9,604	6,978	38.54	28,406
18	12.34	5.13	0	0	0	0	6,151	38.55	24,709
19	12.68	5.43	0	0	0	0	7,081	39.03	28,336
20	12.99	5.69	0	0	0	0	6,992	39.45	28,051
21	13.12	5.86	0	0	0	0	7,300	39.07	28,250
22	13.42	6.08	0	0	0	0	12,632	40.06	26,558
23	13.60	6.21	0	0	0	0	7,010	38.65	27,790
24	13.81	6.47	0	0	0	0	6,890	38.34	27,755
25	14.12	6.39	0	0	0	0	6,445	38.86	25,999
26	14.12	6.69	0	0	1,996	0	7,012	44.01	27,858
27	14.33	6.78	0	0	0	0	6,829	34.94	27,326
28	14.86	7.17	0	0	0	0	6,575	47.29	27,287
29	14.90	7.34	0	0	0	0	6,966	47.38	28,714
30	15.16	7.64	0	0	0	0	10,129	48.20	27,327
			Total Gallons:	**1,121**	**1,996**	**9,604**	**214,099**		**747,328**
				Cell 2 Leak	Cell 1 Leachate	Cell 2 Leachate	304th Influent		Treatment Discharge

Hidden Valley Landfill Hour Meters Totalizers

Sep-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	38,074	44	2933	5	0.02	16.13	6147463	3,970,437	100466	92,049,347	81,835,121
1	38,079	7	2933	5	0.00	4.38	6147463	3,970,437	100466	92,051,231	81,843,067
2	38,088	22	2933	5	0.00	9.25	6147463	3,970,437	100466	92,055,525	81,860,488
3	38,099	37	2933	5	0.00	11.25	6147463	3,970,437	100466	92,063,753	81,882,104
4	38,114	34	2933	5	0.00	14.95	6147463	3,970,437	100466	92,086,777	81,912,273
5	38,129	7	2933	5	0.00	14.55	6147463	3,970,437	100466	92,093,171	81,938,532
6	38,145	5	2933	5	0.00	15.97	6147463	3,970,437	100466	92,099,833	81,965,936
7	38,161	12	2933	5	0.00	16.12	6147463	3,970,437	100466	92,106,393	81,993,015
8	38,178	3	2933	5	0.00	16.85	6147463	3,970,437	100466	92,112,815	82,019,452
9	38,189	19	2933	5	0.00	11.27	6147463	3,970,437	100466	92,117,140	82,037,243
10	38,204	53	2933	5	0.00	15.57	6147463	3,970,437	100466	92,123,175	82,062,266
11	38,219	55	2933	5	0.00	15.03	6147463	3,970,437	100466	92,128,694	82,085,223
12	38,235	3	2933	5	0.00	15.13	6147463	3,970,437	100466	92,134,383	82,109,100
13	38,247	6	2933	5	0.00	12.05	6147463	3,970,437	100466	92,139,316	82,129,564
14	38,262	29	2933	5	0.00	15.38	6147463	3,970,437	100466	92,145,934	82,156,924
15	38,270	23	2933	5	0.00	7.90	6147463	3,970,437	100466	92,152,271	82,173,116
16	38,281	9	2933	27	0.37	10.77	6147463	3,970,437	101586	92,158,457	82,198,081
17	38,293	26	2937	6	3.65	12.28	6147463	3,980,041	101586	92,165,436	82,226,487
18	38,304	7	2937	6	0.00	10.68	6147463	3,980,041	101586	92,171,587	82,251,197
19	38,316	13	2937	6	0.00	12.10	6147463	3,980,041	101586	92,178,668	82,279,533
20	38,328	4	2937	6	0.00	11.85	6147463	3,980,041	101586	92,185,660	82,307,584
21	38,340	7	2937	6	0.00	12.05	6147463	3,980,041	101586	92,192,960	82,335,834
22	38,351	10	2937	6	0.00	11.05	6147463	3,980,041	101586	92,205,592	82,362,392
23	38,363	9	2937	6	0.00	11.98	6147463	3,980,041	101586	92,212,602	82,390,182
24	38,375	13	2937	6	0.00	12.07	6147463	3,980,041	101586	92,219,492	82,417,937
25	38,386	22	2937	6	0.00	11.15	6147463	3,980,041	101586	92,225,936	82,443,936
26	38,396	55	2937	6	0.00	10.55	6149459	3,980,041	101586	92,232,948	82,471,794
27	38,409	57	2937	6	0.00	13.03	6149459	3,980,041	101586	92,239,777	82,499,120
28	38,419	34	2937	6	0.00	9.62	6149459	3,980,041	101586	92,246,352	82,526,408
29	38,429	40	2937	6	0.00	10.10	6149459	3,980,041	101586	92,253,318	82,555,122
30	38,439	7	2937	6	0.00	9.45	6149459	3,980,041	101586	92,263,447	82,582,449
					Total	**Gallons**	**1,996**	**9,604**	**1,121**	**214,099**	**747,328**
							Cell 1 Leachate	Cell 2 Leachate	Cell 2 Leak	304th Influent	Treatment Discharge