OPERATION AND MAINTENANCE ANNUAL REPORT
JULY 2013 THROUGH JUNE 2014

REFUSE HIDEAWAY LANDFILL
7562 U.S. HIGHWAY 14
MIDDLETON, WISCONSIN 53562

Prepared For:

Wisconsin Department of Natural Resources

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1.0 INTRODUCTION

The following Operation and Maintenance (O&M) Annual Report was prepared by Leggette, Brashears & Graham, Inc. (LBG) on behalf of the Wisconsin Department of Natural Resources (Department) for the Refuse Hideaway Landfill (RHL) located at 7562 U.S. Highway 14 in Middleton, Wisconsin (Site). This O&M Annual Report summarizes activities conducted by LBG during the July 2013 through June 2014 contract period. The report includes project background information, a summary of leachate recovery system operational data, a synopsis of landfill gas (LFG) extraction and combustion system operations, landfill perimeter gas probe monitoring results, and an evaluation of landfill surface cover and drainage way conditions. Recommendations for future Site activities are also presented.

The 23-acre RHL, located in the Town of Middleton, Dane County, Wisconsin, was filled with approximately 1.3 million cubic yards of municipal, commercial, and industrial waste. A Site map is included as **Figure 1**. The landfill was closed in May 1988 and was covered in October 1988 with a minimum of 2 feet of clay, 18 inches of general soil, and 6 inches of topsoil. The State of Wisconsin, through the Environmental Repair Program, constructed an active gas extraction and combustion system and a leachate recovery system, which became operational on September 1, 1991. System O&M activities and landfill surface inspections have been conducted since operation began.

The LFG recovery system consists of a blower/flare station, a LFG collection network, and gas monitoring locations. The blower/flare station includes one centrifugal LFG blower, an enclosed flare (currently off-line), a pedestal flare (previously used as a backup combustion unit but put into service in July 2013 in lieu of the enclosed flare; see **Section 4.4**), and associated controls and appurtenances. The LFG collection network consists of 13 extraction wells, 4 drip legs, and associated gas header piping. Eleven monitoring wells are located throughout the Site and an ambient air monitoring location has been designated within a nearby Speedway building.

The LFG recovery system withdraws gas from the landfill in order to control surface emissions and subsurface migration. Odors and emissions are controlled by combusting the gas at the flare.

The leachate collection system was upgraded in 1996 and currently consists of pneumatic pumps installed in nine of the extraction wells. The purpose of leachate extraction is to lower leachate head levels and reduce the potential for groundwater contamination. A compressor located near the blower/flare station supplies air to the pneumatic pumps. The leachate is stored onsite in a 25,000-gallon underground storage tank (UST). Leachate is subsequently removed from the tank and transported to the Madison Metropolitan Sewerage District (MMSD) for treatment and disposal.

2.0 LEACHATE RECOVERY SYSTEM

2.1 Leachate Levels

Leachate levels were measured on a monthly basis in the gas extraction wells using an electric water level indicator. The leachate head measurements in the gas extraction wells are summarized on **Table 1**. Leachate levels in the various extraction wells ranged from approximately 2 feet to 43 feet above the well bottom during the contract period and were generally consistent with measurements from previous contract years except for GW9. Leachate levels were typically elevated in GW9 during the 2013-2014 contract period compared to the prior contract period. Equipment malfunctions resulted in the intermittent operation of the leachate extraction and likely contributed to the higher average leachate level in GW9.

2.2 Leachate Quantity

Approximately 190,229 gallons of leachate were recovered and removed from RHL from July 2013 through June 2014 **(Table 2)**. The recovered volume for the past few contract periods is depicted on **Figure 2**.

The volume of leachate recovered and the corresponding annual rainfall total is documented in the table below. For the current contract period, the Dane County Airport weather station precipitation data was obtained from Weather Underground database (wunderground.com). The volume of leachate recovered and the annual rainfall during the current contract period are both less than during the July 2012 to June 2013 contract period.

CONTRACT PERIOD	LEACHATE VOLUME RECOVERED (gallons)	ANNUAL RAINFALL TOTAL (inches)	O&M CONTRACTOR
July 2013-June 2014	190,229	35.73	LBG
July 2012-June 2013	275,061	45.92	LBG
July 2011-June 2012	304,143	22.28	LBG
July 2010-June 2011	563,145	36.67	LBG
July 2009-June 2010	469,239	36.25	LBG
July 2008-June 2009	214,360	37.13	Other consultant
July 2007-June 2008	226,606	55.24	Other consultant

During the current contract period, monthly leachate recovery volumes ranged from no recovery to approximately 39,417 gallons. The volume of recovered leachate is influenced by numerous factors including, but not limited to, the number of operational pneumatic pumps, interruptions to compressor operations, the severity of blockages within the leachate piping network (i.e. freezing wellhead conditions, biological fouling, natural scaling), seasonal weather variations, the condition of the clay cap, the frequency and duration of precipitation events, and the corresponding leachate elevation within the landfill. A graph of the monthly leachate recovery volumes is included as **Figure 3**. The highest recovery rate during the contract period was experienced during the first quarter (July, August and September), when the compressor and leachate pumps operated with few interruptions. The lowest recovery rates were observed during the late fall and winter months (November 2013 – February 2014), while the compressor required repairs and precipitation remained on the surface of the landfill as snowfall.

2.3 Leachate Quality

Leachate samples were collected on a quarterly basis for laboratory analysis. On September 24, 2013, December 18, 2013, March 24, 2014, and June 17, 2014, leachate samples were collected by LBG personnel by lowering a disposable bailer into the UST. The samples were placed in the appropriate containers, packaged in ice in a cooler, and sent to Test America, Inc. (Wisconsin Certification No. 999580010) for laboratory analysis of 12 inorganic parameters. Pursuant to the MMSD Wastewater Discharge Permit (Permit) NTO-5.11 and the Department's request for proposal, the samples were analyzed for cadmium, chromium, hexavalent chromium, copper, lead, mercury, molybdenum, nickel, selenium, silver, zinc, and total cyanide. As

indicated on **Table 3,** concentrations of the inorganic compounds were less than the discharge permit effluent limitations. The laboratory analytical reports are included in **Appendix I**.

2.4 Leachate Discharge Permit Compliance

Leachate is pumped on an as-needed basis from the UST by A-1 Sewer Service and is transported to a MMSD facility for treatment and disposal as allowed by the Permit. As stated above, concentrations of the analyzed parameters did not exceed any discharge permit limits. To fulfill the reporting requirements of Permit NTO-5.11 Part 3, Section 3.01, monitoring results were submitted to the MMSD within sixty days of the end of each quarterly monitoring period. The expiration date for Permit NTO-5.11 was June 30, 2014; therefore, a request to renew the permit was submitted to the MMSD during the contract period. On June 9, 2014, the MMSD issued Permit NTO-5.12 which will expire on June 30, 2019. A copy of Permit NTO-5.12 is included as **Appendix II**.

2.5 Operational Duration and Maintenance Activities

The compressed air delivery system experienced sporadic operation during the second half of the contract period. In November 2013, the compressor was shutdown due to malfunctioning solenoid valves within the air dryer system. The solenoid valves were replaced and the compressor resumed operations. During the period of January through March, the compressor experienced issues with the soft-start system and oil/water filter. The soft start system and oil/water filter were replaced and the compressor was fully operational at the end of March. On June 17, 2014, the compressor was taken off-line for the remainder of the reporting period due to mechanical issues.

The ventilation system for the compressor enclosure was operational for the entire contract period. The ventilation system, replaced in January 2013, prevents equipment from overheating during the summer months.

The operation of select leachate pumps remained sporadic. Interruptions to leachate pump operations were primarily caused by the fouling of wellhead leachate discharge lines and the fouling of internal pump components which prevents the pump from properly cycling. As deemed necessary throughout the contract period, leachate pumps were removed for troubleshooting. The pumps were typically cleaned and the magnet spacing was adjusted to

allow for proper cycling. As a component of the annual site visit, pumps were cleaned and adjusted with the exception of GW7. The GW7 well pump has not been removed from the well for several years due to blockages within the well casing. The compressor was down during the annual pulling/cleaning of GW4, GW5, GW10, and GW13. As a result, their operation post-cleaning could not be verified. Among the other pulled pumps, GW9, GW11, and GW12 cycled after they were cleaned; however, the pump in GW8 did not. When the compressor is back on-line, additional testing and maintenance activities will be conducted on the GW8 pump if it fails to cycle when it is sufficiently submerged.

As a component of the annual inspection, a contractor was retained to conduct jetting of the leachate lines, driplegs and cleanouts. Approximately 750 feet of leachate lines were cleaned along the Central branch and in between GW9 and GW11. The jetting was completed using similar access ports and in a similar fashion to past jetting events.

3.0 LFG EXTRACTION SYSTEM

3.1 Collection Network

The gas extraction system consists of a network of 13 vertical extraction wells. The wells, which connect to a header pipe, are grouped together in "branches". The header pipe from each of the branches is connected to the blower in order to draw the LFG from the wells.

The header piping system is divided into three branches; the North, Central, and South. The branches are also connected by header segments at their extremities to provide redundancy. The pipe segment connecting the South and Central branches at their extremities contains a buried control valve CV1, consisting of a butterfly valve with a geared actuator extended to the surface. The pipe segment connecting the Central and North branches at their extremities contains control valve CV2 (**Figure 1**). The control valves may be opened to re-route flow in the event a branch becomes unusable. The three branches enter the blower station and are valved individually. The three flows are then combined before entering the blower.

Sufficient vacuum was applied to the wells connected to the North and Central branches during the contract period. However, vacuum cannot be sustained at wellheads GW1 through GW5 on the South branch, though leachate recovery pumps are operational in GW4 and GW5 (**Table 4**). Low points within the South branch and within the redundant connection between the

South branch and the Central branch extremities accumulate liquids which prevent LFG recovery from the South branch wells.

During 1993, two lateral wells were installed and connected to the GW5 wellhead due to stressed vegetation, LFG emanating through the landfill cover in the GW5 area, and elevated methane concentrations in property line gas probe GP-11. Despite previous efforts to rectify these issues, elevated methane concentrations remain in the GW5 area. Furthermore, pressure is observed on a consistent basis within the GW5 lateral extraction wells indicating the build-up of LFG under the landfill cover. A blockage likely exists within the solid pipe that extends halfway through each lateral trench segment.

Through a remedial design services contract, LBG has designed upgrades to the LFG system directed at restoring vacuum to GW4, GW5, and the east and west lateral wells installed at GW5 (GW5-LE, GW5-LW). During the contract period, LBG has completed the design and bidding of a pipe network that will connect GW4, GW5, GW5-LE, and GW5-LW to the Central branch of the LFG collection network. The construction work associated with the LFG system upgrade will be completed during the next contract year.

3.2 Operational Duration

The LFG extraction blower did not experience any malfunctions during the contract period. However, the blower was manually taken off-line for short periods of time. When methane concentrations were below operating levels or oxygen concentrations were elevated, the LFG extraction blower was temporarily taken off-line. Cycling the gas extraction system on and off resulted in the extraction blower operating approximately 69 percent of the contract period (**Table 5**). Preventative maintenance activities (e.g. greasing) were completed.

4.0 LFG COMBUSTION SYSTEM

4.1 LFG Combustion System Upgrade

During July 2013, LBG rehabilitated the existing pedestal flare for reuse at the Site. The pedestal flare is designed to operate at a lower flow rate and methane concentration than the enclosed flare; thereby, resulting in a higher operational percentage and less direct emissions of LFG to the atmosphere.

During July 2013, LBG replaced the ignitor connection and electrical wiring to the pedestal flare to complete the combustion system upgrade project.

4.2 Operational Duration

The LFG combustion system was not fully operational during the contract period. As indicated on **Table 5**, the LFG extraction blower operated 69 percent of the time. The flare operated within the range of 67 to 69 percent of the time. The operational hours for the flare (5,833 hours in 2013-2014) were about a 100 percent increase from the previous two contract years (2,806 hours in 2012-2013) and (2,844 hours in 2011-2012). On numerous occasions, the LFG collection and combustion systems were taken off-line for a period of a few days in order to allow LFG methane concentrations to rebound. Upon system restart, elevated methane concentrations were typically evident. Despite cycling efforts, the LFG recovery system may have been emitting LFG directly to the atmosphere up to approximately 7 days out of the contract year. However, this is the fewest potential direct venting days by far since LBG has been the O&M contractor (57 days in 2012-2013; 94 days in 2012-2013; 131 days in 2010-2011; 113 days in 2009-2010) and is attributable to the switch from the enclosed flare to the smaller pedestal flare as well as persistent system and well optimization efforts.

4.3 Operational Parameters

LFG flow rates varied considerably during the contract period due to the number of extraction wells on-line and other site factors (i.e. leachate head levels). The total LFG flow rate of the three branches ranged from approximately 288 to 1,413 standard cubic feet per minute. A summary of blower and flare station flow rates and methane concentrations is attached as **Appendix III**.

4.4 Troubleshooting Activities

Flare troubleshooting activities have included monitoring wellhead LFG concentrations frequently and adjusting wellhead valves accordingly in order to minimize the oxygen content and to maximize the methane concentration and the flow rate of the gas stream. When these activities did not produce methane concentrations sufficient for flare operation, the gas extraction system was taken off-line for a few days.

The pedestal flare ignition transformer and electrode were replaced in January and February, respectively.

5.0 LANDFILL PERIMETER GAS PROBE MONITORING RESULTS

5.1 Monthly Monitoring

During the contract period, methane was detected in three perimeter gas probe clusters (G-1S/G-1D, G-2S, and GP-11S/GP-11D) at concentrations greater than the lower explosive limit (LEL) of 5 percent by volume. The methane concentrations at these three clusters ranged from non-detect to 13.0 percent by volume (**Table 6**). These clusters are located within approximately 125 feet of the landfill limits **(Figure 1)**. Cluster G-1 is located in the vicinity of the Speedway buildings; however, methane was not detected within the closest Speedway building during the contract period. Clusters G-2 and GP-11 are located in close proximity to the property line. Well GW5 is the closest extraction well to clusters G-2 and GP-11. The LFG system upgrade described in **Section 3.1** will aid in the recovery of methane from this area of the landfill.

5.2 Wellhead Repairs

During June 2014, LBG personnel conducted repairs to the perimeter gas probe monitoring network. New tubing and ball valves were installed on gas probes in need of repair. The gas probes will be equipped with locks. A map of the network is included as **Figure 4**.

6.0 LANDFILL SURFACE COVER AND DRAINAGE INSPECTION

6.1 Landfill Surface

The landfill surface was inspected monthly between the months of April and November to evaluate cap integrity, determine the condition of the drainage ways, and assess the extent of vegetative cover. Limited areas of the landfill cover have experienced minimal settlement resulting in pools/ponding of storm water collecting on the landfill surface, particularly in the drainage way east of GW7 between April and June 2014. Small areas of stressed vegetation with some minor erosion were noted along the Southern branch, particularly around GW4 and GW5.

6.2 Sedimentation Basin

The sedimentation basin was visited during August 2014 to evaluate the current depth between the invert of the outlet structure and the top of the sediment. Field measurements indicated that the depth of water within the basin was greater than 3 feet; therefore, the accumulation of sediment has not adversely diminished the allowable storm water storage volume of the basin.

7.0 CONCLUSIONS AND RECOMMENDATIONS

7.1 Conclusions

Based on the information presented above, the following conclusions have been made:

- Leachate levels in the various extraction wells ranged from approximately 2 feet to 43 feet.
- Approximately 190,229 gallons of leachate were removed from RHL. The compressor was frequently under repair during the contract period, attributing to the lower volume of leachate recovered.
- Monthly leachate recovery volumes ranged from no recovery to approximately 39,417 gallons.
- Concentrations of inorganic compounds in the quarterly leachate samples were less than the discharge permit effluent limitations.
- The compressed air delivery system experienced sporadic operation resulting from the malfunctioning of solenoid valves, the soft-start system, the oil/water filter, and the compressor. The compressor will be replaced during the next contract period. The operation of select leachate pumps was interrupted on occasion due to the fouling of internal pump components and wellhead leachate discharge lines.
- Leachate collects in the lateral pipe segment between GW5 and control valve CV1 instead of draining into the conveyance line that slopes from GW5 toward GW4. A low spot(s) has likely developed in the conveyance line for the South branch. The accumulation of leachate or condensate within the low spot(s) blocks LFG from being

extracted from the South branch. LBG is completing a LFG system upgrade project directed at restoring vacuum to GW4, GW5, GW5-LE, and GW5-LW.

- The LFG extraction blower was taken off-line for short periods when methane concentrations were below operating levels or oxygen levels were elevated. The extraction blower operated approximately 69 percent of the contract period.
- The enclosed flare reached the end of its useful life cycle and was replaced by the existing pedestal flare during July 2013.
- Due to limited flame failures, the LFG combustion system may have been emitting LFG directly to the atmosphere for up to 7 days out of the contract year.
- Methane was detected in three perimeter gas probe clusters at concentrations greater than the LEL. One cluster is located in the vicinity of the Speedway buildings and two clusters are located in close proximity to the southwestern property line. Methane was not detected within the Speedway buildings.
- Landfill surface inspections indicate that limited areas have experienced minimal settlement resulting in pools/ponding of storm water collecting on the landfill surface, particularly in the drainage way east of GW7 between April and June 2014. Small areas of stressed vegetation and erosion have been noted around GW4 and GW5.
- The accumulation of sediment has not adversely diminished the allowable storm water storage volume of the sedimentation basin.

7.2 Recommendations

Based on the Site activities conducted by LBG to date, the following task is being recommended for implementation during the subsequent contract year in order to optimize system operations and supplement routine O&M activities:

- A regular (biennial) pressure test of the leachate tank interstitial space should be conducted during 2015.

TABLES

TABLE 1

WISCONSIN DEPARTMENT OF NATURAL RESOURCES
REFUSE HIDEAWAY LANDFILL
MIDDLETON, WISCONSIN

LEACHATE EXTRACTION WELL SUMMARY

Well	Date	Well Depth	Depth to Leachate (feet)	Leachate Level (feet above well bottom)	Wellhead Pressure (psi)	Primary Counter			Secondary Counter			Comments
						Pump Cycle Reading	Cycles Per Period	Cycles Per Hour	Pump Cycle Reading	Cycles Per Period	Cycles Per Hour	
GW1	7/12/2013	53.7	36.4	17.3								
GW1	8/28/2013	53.7	37.0	16.7								
GW1	9/23/2013	53.7	36.5	17.2								
GW1	10/25/2013	53.7	42.0	11.7								
GW1	11/26/2013	53.7	38.0	15.7								
GW1	12/23/2013	53.7	39.0	14.7								
GW1	1/30/2014	53.7	41.5	12.2								
GW1	2/28/2014	53.7	43.0	10.7								
GW1	3/28/2014	53.7	42.0	11.7								
GW1	4/25/2014	53.7	38.5	15.2								
GW1	5/29/2014	53.7	37.5	16.2								
GW1	6/24/2014	53.7	38.5	15.2								
GW2	7/12/2013	53.9	36.2	17.7								
GW2	8/28/2013	53.9	--	--								Bees prevented access to well.
GW2	9/23/2013	53.9	37.0	16.9								
GW2	10/25/2013	53.9	37.0	16.9								
GW2	11/26/2013	53.9	37.0	16.9								
GW2	12/23/2013	53.9	37.5	16.4								
GW2	1/30/2014	53.9	37.5	16.4								
GW2	2/28/2014	53.9	37.5	16.4								
GW2	3/28/2014	53.9	37.5	16.4								
GW2	4/25/2014	53.9	37.5	16.4								
GW2	5/29/2014	53.9	37.0	16.9								
GW2	6/24/2014	53.9	30.0	23.9								
GW3	7/12/2013	59.7	55.8	3.9								
GW3	8/28/2013	59.7	56.0	3.7								
GW3	9/23/2013	59.7	55.0	4.7								
GW3	10/25/2013	59.7	55.0	4.7								
GW3	11/26/2013	59.7	56.0	3.7								
GW3	12/23/2013	59.7	55.5	4.2								
GW3	1/30/2014	59.7	56.0	3.7								
GW3	2/28/2014	59.7	56.0	3.7								

TABLE 1

WISCONSIN DEPARTMENT OF NATURAL RESOURCES
REFUSE HIDEAWAY LANDFILL
MIDDLETON, WISCONSIN

LEACHATE EXTRACTION WELL SUMMARY

Well	Date	Well Depth	Depth to Leachate (feet)	Leachate Level (feet above well bottom)	Wellhead Pressure (psi)	Primary Counter			Secondary Counter			Comments
						Pump Cycle Reading	Cycles Per Period	Cycles Per Hour	Pump Cycle Reading	Cycles Per Period	Cycles Per Hour	
GW3	3/28/2014	59.7	55.5	4.2								
GW3	4/25/2014	59.7	55.5	4.2								
GW3	5/29/2014	59.7	55.5	4.2								
GW3	6/24/2014	59.7	55.0	4.7								
GW4	7/12/2013	~65	34.1	31	40	--	--	--				Pump observed cycling.
GW4	8/28/2013	~65	41.5	24	40	145,789	110,978	59				Pump observed cycling.
GW4	9/23/2013	~65	58.0	7	40	198,515	52,726	84				Pump observed cycling.
GW4	10/25/2013	~65	58.0	7	40	232,705	34,190	45				Pump observed cycling.
GW4	11/26/2013	~65	43.0	22	--	232,705	0	0				Compressor down. No pressure in
GW4	12/23/2013	~65	58.5	7	43	--	--	--				Pump observed cycling.
GW4	1/30/2014	~65	-- [a]	-- [a]	0	259,638	26,933	17				Compressor down. No pressure in system.
GW4	2/28/2014	~65	46.0	19.0	0	259,638	0	0				Compressor down. No pressure in system.
GW4	3/28/2014	~65	58.0	7.0	40	264,849	5,211	8				Pump observed cycling.
GW4	4/25/2014	~65	58.0	7.0	40	275,655	16,017	8				Pump observed cycling.
GW4	5/29/2014	~65	-- [a]	-- [a]	40	313,641	37,986	47				Pump observed cycling.
GW4	6/24/2014	~65	42.5	22.5	0	341,307	27,666	44				Compressor down. No pressure in system.
GW5	7/12/2013	~70	41.5	29	80	--	--	--	--	--	--	Pump observed cycling.
GW5	8/28/2013	~70	42.5	28	80	435,619	--	--	14,041	--	--	Pump not observed cycling.
GW5	9/23/2013	~70	42.5	28	80	435,619	0	0	14,165	124	0	Pump not observed cycling.
GW5	10/25/2013	~70	45.0	25	40	435,619	0	0	16,462	2,297	3	Pump observed cycling.
GW5	11/26/2013	~70	45.0	25	--	435,619	0	0	16,462	0	0	Compressor down. No pressure in
GW5	12/23/2013	~70	46.5	24	85	--	--	--	17,242	780	1	Pump observed cycling.
GW5	1/30/2014	~70	46.5	24	0	435,619	0	0	17,332	90	0	Compressor down. No pressure in system.
GW5	2/28/2014	~70	48.5	22	0	435,619	0	0	17,332	0	0	Compressor down. No pressure in system.
GW5	3/28/2014	~70	47.0	23	80	435,619	0	0	17,335	3	0	Pump observed cycling.
GW5	4/25/2014	~70	45.0	25	95	435,619	0	0	17,345	10	0	Pump observed cycling.
GW5	5/29/2014	~70	43.0	27	85	435,619	0	0	17,390	45	0	Pump observed cycling.
GW5	6/24/2014	~70	43.0	27	0	435,619	0	0	17,949	559	1	Compressor down. No pressure in system.

TABLE 1

WISCONSIN DEPARTMENT OF NATURAL RESOURCES
REFUSE HIDEAWAY LANDFILL
MIDDLETON, WISCONSIN

LEACHATE EXTRACTION WELL SUMMARY

Well	Date	Well Depth	Depth to Leachate (feet)	Leachate Level (feet above well bottom)	Wellhead Pressure (psi)	Primary Counter			Secondary Counter			Comments
						Pump Cycle Reading	Cycles Per Period	Cycles Per Hour	Pump Cycle Reading	Cycles Per Period	Cycles Per Hour	
GW6	7/12/2013	40.0	32.5	7.5								
GW6	8/28/2013	40.0	35.0	5.0								
GW6	9/23/2013	40.0	36.0	4.0								
GW6	10/25/2013	40.0	35.5	4.5								
GW6	11/26/2013	40.0	34.5	5.5								
GW6	12/24/2013	40.0	35.5	4.5								
GW6	1/30/2014	40.0	36.0	4.0								
GW6	2/27/2014	40.0	36.0	4.0								
GW6	3/28/2014	40.0	--[a]	--[a]								
GW6	4/25/2014	40.0	34.0	6								
GW6	5/29/2014	40.0	34.5	6								Compressor down. No pressure in system.
GW6	6/24/2014	40.0	32.0	8								Compressor down. No pressure in system.
GW7	7/12/2013	~60	39.0	21	80	--	--	--	--	--	--	Pump not observed cycling.
GW7	8/28/2013	~60	40.5	20	80	558,263	19	0	843,587	--	--	Pump not observed cycling.
GW7	9/23/2013	~60	44.0	16	80	558,263	0	0	843,587	0	0	Pump not observed cycling.
GW7	10/25/2013	~60	44.0	16	40	558,265	2	0	843,587	12	0	Pump not observed cycling.
GW7	11/26/2013	~60	46.0	14	--	558,265	0	0	843,587	0	0	Compressor down. No pressure in
GW7	12/24/2013	~60	47.0	13	75	558,265	0	0	--	--	--	Pump not observed cycling.
GW7	1/30/2014	~60	46.5	14	0	558,265	0	0	843,587	0	0	Compressor down. No pressure in
GW7	2/27/2014	~60	45.0	15	0	558,265	0	0	843,587	0	0	Compressor down. No pressure in system.
GW7	3/28/2014	~60	46.0	14	80	558,265	0	0	843,587	0	0	Pump not observed cycling.
GW7	4/25/2014	~60	43.0	17	75	558,265	0	0	843,587	0	0	Pump not observed cycling.
GW7	5/29/2014	~60	42.5	18	80	558,267	2	0	843,589	2	0	Pump observed cycling.
GW7	6/24/2014	~60	36.0	24	0	558,267	0	0	843,589	0	0	Compressor down. No pressure in system.
GW8	7/12/2013	~69	44.0	25	80	--	--	--	--	--	--	Pump observed cycling.
GW8	8/28/2013	~69	40.0	29	80	655,341	--	--	654,382	--	--	Pump not observed cycling.
GW8	9/23/2013	~69	38.0	31	80	665,367	-29	0	654,405	23	0	Pump not observed cycling.
GW8	10/25/2013	~69	41.0	28	40	665,600	233	0	654,566	161	0	Pump not observed cycling.
GW8	11/26/2013	~69	42.0	27	--	665,600	0	0	654,566	0	0	Compressor down. No pressure in

TABLE 1

WISCONSIN DEPARTMENT OF NATURAL RESOURCES
REFUSE HIDEAWAY LANDFILL
MIDDLETON, WISCONSIN

LEACHATE EXTRACTION WELL SUMMARY

Well	Date	Well Depth	Depth to Leachate (feet)	Leachate Level (feet above well bottom)	Wellhead Pressure (psi)	Primary Counter			Secondary Counter			Comments
						Pump Cycle Reading	Cycles Per Period	Cycles Per Hour	Pump Cycle Reading	Cycles Per Period	Cycles Per Hour	
GW8	12/24/2013	~69	43.5	26	85	--	--	--	654,568	2	0	Pump not observed cycling.
GW8	1/30/2014	~69	41.5	28	0	655,567	0	0	654,568	0	0	Compressor down. No pressure in
GW8	2/27/2014	~69	43.5	26	0	655,567	0	0	654,568	0	0	Compressor down. No pressure in system.
GW8	3/28/2014	~69	43.0	26	80	655,572	5	0	654,570	2	0	Pump not observed cycling.
GW8	4/25/2014	~69	42.0	27	90	655,612	45	0	654,594	24	0	Pump not observed cycling.
GW8	5/29/2014	~69	43.0	26	80	655,621	9	0	654,598	4	0	Pump not observed cycling.
GW8	6/24/2014	~69	43.0	26	0	655,711	90	0	654,603	5	0	Compressor down. No pressure in system.
GW9	7/12/2013	~65	45.0	20	80	--	--	--	-	--	--	Pump not observed cycling.
GW9	8/28/2013	~65	45.5	20	--	--	--	--	--	--	--	Pump down for repair.
GW9	9/23/2013	~65	--	--	--	--	--	--	--	--	--	Pump down for repair.
GW9	10/25/2013	~65	45.0	20	40	582,703	1,850	2	56,825	2,152	3	Pump not observed cycling.
GW9	11/26/2013	~65	46.5	19	--	582,703	0	0	56,825	0	0	Compressor down. No pressure in
GW9	12/24/2013	~65	46.5	19	5	582,705	2	0	56,826	1	0	Pump not observed cycling.
GW9	1/30/2014	~65	46.5	19	0	582,705	0	0	56,826	0	0	Compressor down. No pressure in
GW9	2/28/2014	~65	44.5	21	0	582,705	0	0	56,826	0	0	Compressor down. No pressure in system.
GW9	3/28/2014	~65	47.5	18	--	--	--	--	--	--	--	Pump not observed cycling.
GW9	4/25/2014	~65	43.5	22	65	582,706	1	0	56,828	2	0	Pump observed cycling.
GW9	5/29/2014	~65	--[a]	--[a]	60	582,746	40	0	56,875	47	0	Pump observed cycling.
GW9	6/24/2014	~65	44.0	21	0	582,749	3	0	56,880	5	0	Compressor down. No pressure in system.
GW10	7/12/2013	~70	64.5	6	80	--	--	--				Pump observed cycling.
GW10	8/28/2013	~70	60.0	10	--	--	--	--				Pump observed cycling.
GW10	9/23/2013	~70	65.0	5	--	684,723	40,687	16				Pump observed cycling.
GW10	10/25/2013	~70	64.5	6	40	695,213	10,490	14				Pump observed cycling.
GW10	11/26/2013	~70	60.5	10	--	695,213	0	0				Compressor down. No pressure in
GW10	12/24/2013	~70	61.5	9	70	695,920	707	1				Pump not observed cycling.
GW10	1/30/2014	~70	60.5	10	0	697,009	1,089	1				Compressor down. No pressure in
GW10	2/28/2014	~70	60.5	10	0	697,009	0	0				Compressor down. No pressure in system.
GW10	3/28/2014	~70	60.0	10	70	699,294	2,285	3				Pump observed cycling.

TABLE 1

WISCONSIN DEPARTMENT OF NATURAL RESOURCES
REFUSE HIDEAWAY LANDFILL
MIDDLETON, WISCONSIN

LEACHATE EXTRACTION WELL SUMMARY

Well	Date	Well Depth	Depth to Leachate (feet)	Leachate Level (feet above well bottom)	Wellhead Pressure (psi)	Primary Counter			Secondary Counter			Comments
						Pump Cycle Reading	Cycles Per Period	Cycles Per Hour	Pump Cycle Reading	Cycles Per Period	Cycles Per Hour	
GW10	4/25/2014	~70	60.5	10	65	701,120	4,111	6				Pump observed cycling.
GW10	5/29/2014	~70	61.5	9	67	702,749	1,629	2				Pump observed cycling.
GW10	6/24/2014	~70	32.5	38	0	703,018	269	0				Compressor down. No pressure in system.
GW11	7/12/2013	~65	63.0	2	40	--	--	--	--	--	--	Pump observed cycling
GW11	8/28/2013	~65	61.5	4	40	100,885	--	--	799,555	--	--	Pump observed cycling.
GW11	9/23/2013	~65	60.2	5	40	100,885	0	0	819,196	19,641	31	Pump observed cycling.
GW11	10/25/2013	~65	62.0	3	40	100,885	0	0	837,922	38,367	28	Pump observed cycling.
GW11	11/26/2013	~65	47.5	18	--	100,885	0	0	837,922	0	0	Compressor down. No pressure in
GW11	12/24/2013	~65	47.0	18	45	100,885	0	0	838,202	280	0	Pump not observed cycling.
GW11	1/30/2014	~65	49.0	16	0	100,885	0	0	847,455	9,253	10	Compressor down. No pressure in
GW11	2/28/2014	~65	50.0	15	0	100,885	0	0	847,455	0	0	Compressor down. No pressure in system.
GW11	3/28/2014	~65	62.5	3	50	100,885	0	0	852,361	4,906	7	Pump observed cycling.
GW11	4/25/2014	~65	61.5	4	45	100,885	0	0	866,008	13,647	20	Pump observed cycling.
GW11	5/29/2014	~65	62.0	3	70	100,886	1	0	882,215	16,207	20	Pump observed cycling.
GW11	6/24/2014	~65	48.0	17	0	100,886	0	0	890,972	8,757	14	Compressor down. No pressure in system.
GW12	7/12/2013	~81	39.0	42	80	--	--	--	--	--	--	Pump observed cycing.
GW12	8/28/2013	~81	43.0	38	80	54,426	--	--	785,989	--	--	Pump not observed cycling.
GW12	9/23/2013	~81	43.0	38	70	54,426	0	0	785,989	0	0	Pump not observed cycling.
GW12	10/25/2013	~81	38.0	43	25	54,426	0	0	785,992	3	0	Pump not observed cycling.
GW12	11/26/2013	~81	46.5	35	--	54,426	0	0	785,922	0	0	
GW12	12/24/2013	~81	48.5	33	80	54,426	0	0	790,785	4,863	7	Pump not observed cycling.
GW12	1/30/2014	~81	48.5	33	0	54,427	1	0	792,165	1,380	2	Compressor down. No pressure in
GW12	2/28/2014	~81	49.0	32	0	54,427	0	0	792,165	0	0	Compressor down. No pressure in system.
GW12	3/28/2014	~81	50.0	31	80	54,427	0	0	805,508	13,343	20	Pump observed cycling.
GW12	4/25/2014	~81	47.5	34	95	54,427	0	0	823,262	17,754	9	Pump observed cycling.
GW12	5/29/2014	~81	44.0	37	75	54,432	5	0	828,902	5,640	7	Pump observed cycling.
GW12	6/24/2014	~81	46.5	35	0	54,432	0	0	830,322	1,420	2	Compressor down. No pressure in system.
GW13	7/12/2013	~69	60.0	9	80	--	--	--	--	--	--	Pump observed cycling.

TABLE 1

WISCONSIN DEPARTMENT OF NATURAL RESOURCES
REFUSE HIDEAWAY LANDFILL
MIDDLETON, WISCONSIN

LEACHATE EXTRACTION WELL SUMMARY

Well	Date	Well Depth	Depth to Leachate (feet)	Leachate Level (feet above well bottom)	Wellhead Pressure (psi)	Primary Counter			Secondary Counter			Comments
						Pump Cycle Reading	Cycles Per Period	Cycles Per Hour	Pump Cycle Reading	Cycles Per Period	Cycles Per Hour	
GW13	8/28/2013	~69	--	--	--	--	--	--	--	--	--	Bees prevented access to pump.
GW13	9/23/2013	~69	39.0	30	80	624,871	0	0	5,082	0	0	Pump observed cycling. Cycle counter not functional.
GW13	10/25/2013	~69	60.0	9	40	624,871	0	0	5,082	0	0	Pump observed cycling. Cycle counter not functional.
GW13	11/26/2013	~69	55.0	14	--	624,871	0	0	5,082	0	0	Compressor down. No pressure in system.
GW13	12/24/2013	~69	55.5	14	80	624,872	1	0	5,082	0	0	Pump observed cycling.
GW13	1/30/2014	~69	53.5	16	0	624,878	6	0	5,082	0	0	Compressor down. No pressure in
GW13	2/28/2014	~69	50.0	19	0	624,878	0	0	--	--	--	Compressor down. No pressure in system.
GW13	3/28/2014	~69	53.0	16	70	624,878	0	0	5,082	0	0	Pump observed cycling.
GW13	4/25/2014	~69	52.5	17	95	624,879	1	0	--	--	--	Pump observed cycling.
GW13	5/29/2014	~69	61.0	8	80	624,880	1	0	5,082	0	0	Pump observed cycling.
GW13	6/24/2014	~69	51.5	18	0	624,880	0	0	5,082	0	0	Compressor down. No pressure in system.

~ : Value approximated.

-- : Not measured.

psi : Pounds per square inch.

[a] : Suspect measurement.

TABLE 2

WISCONSIN DEPARTMENT OF NATURAL RESOURCES
REFUSE HIDEAWAY LANDFILL
MIDDLETON, WISCONSIN

MONTHLY LEACHATE COLLECTION VOLUME

Month	Reported Volume Hauled (gallons)	Cumulative Volume Hauled (gallons)
July 2013	39,417	39,417
August 2013	29,305	68,722
September 2013	32,105	100,827
October 2013	13,611	114,438
November 2013	0	114,438
December 2013	4,417	118,855
January 2014	4,906	123,761
February 2014	0	123,761
March 2014	14,139	137,900
April 2014	9,858	147,758
May 2014	27,952	175,710
June 2014	14,519	190,229
Total	**190,229**	

TABLE 3

WISCONSIN DEPARTMENT OF NATURAL RESOURCES
REFUSE HIDEAWAY LANDFILL
MIDDLETON, WISCONSIN

QUARTERLY LEACHATE EFFLUENT ANALYTICAL RESULTS - INORGANICS
(all results are in milligrams per liter (mg/L))

Date	Cadmium	Chromium	Chromium Hexavalent	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Zinc	Cyanide (Total)
Local Ordinance Effluent Limitations* (daily maximum)	**0.25**	**10.0**	**0.5**	**1.5**	**5**	**0.02**	**--**	**2.0**	**0.3**	**3**	**8**	**0.1**
9/24/2013	0.0015 JB	0.013	0.0078 J	0.0029 J	<0.0023	<0.000064	0.0028 J	0.042	<0.0046	<0.00057	0.0084 JB	0.0080 JB
12/18/2013	0.0016 JB	0.0063 J	<0.0038	0.0044 J	0.0050	<0.000064	<0.0021	0.029	<0.0046	<0.00057	0.031 B	0.0038 J
3/24/2014	<0.00026	0.016	<0.0076	0.0038 J	<0.0023	<0.000072	<0.0021	0.046	<0.0046	<0.00057	0.015 JB	0.010
6/17/2014	0.00056 J	0.0080 J	<0.0038	0.0055 J B	<0.0023	<0.000072	0.0058 J	0.023 B	0.010	<0.00057	0.031 B	0.0048 J

* : Madison Metropolitan Sewerage District Use Ordinance - Wastewater Discharge Permit NTO-5.11.
J : Estimated value. Analyte detected at a level less than reporting limit (RL) and greater than or equal to the laboratory method detection limit (MDL).
B : Analyte was detected in associated method blank.
-- : Effluent limitation not set.
< : Less than laboratory method detection limit.

TABLE 4

WISCONSIN DEPARTMENT OF NATURAL RESOURCES
REFUSE HIDEAWAY LANDFILL
MIDDLETON, WISCONSIN

GAS WELL MONITORING RESULTS

Location	Date	CH_4	O_2	CO_2	Balance Gas*	Well Pressure	Valve Position		Gas Velocity	Gas Flow**	Gas Temp
		(%)	(%)	(%)	(%)	(in WC)	Initial (%)	After (%)	(fpm)	(cfm)	(deg F)
GW1	7/11/2013	65.0	1.6	39.8	-6.4	0.25	0	0	--	--	92.2
GW1	8/28/2013	39.5	2.1	26.6	31.8	-0.30	0	0	--	--	76.0
GW1	9/23/2013	37.5	6.4	26.8	29.3	0.00	0	0	--	--	71.0
GW1	10/25/2013	60.0	0.3	36.4	3.3	0.00	0	0	--	--	43.5
GW1	11/26/2013	33.0	1.0	27.4	38.6	1.00	0	0	--	--	34.8
GW1	12/23/2013	70.5	2.2	36.6	-9.3	0.00	0	0	0	0.0	24.7
GW1	1/30/2014	56.5	0.7	34.4	8.4	0.25	0	0	0	0.0	31.9
GW1	2/28/2014	24.5	13.4	12.6	49.5	0.00	0	0	0	0.0	30.7
GW1	3/28/2014	20.0	7.2	19.2	53.6	-0.20	0	0	0	0.0	50.7
GW1	4/25/2014	0.1	20.9	0.0	79.1	-0.35	0	0	0	0.0	69.2
GW1	5/29/2014	5.0	19.5	2.0	73.5	-0.15	0	0	0	0.0	85.8
GW1	6/24/2014	0.2	20.9	0.0	78.9	-0.30	0	0	0	0	88.1
GW2	7/11/2013	32.0	4.1	19.4	44.5	-1.50	0	0	--	--	93.0
GW2	8/28/2013	--	--	--	--	--	0	0	--	--	--
GW2	9/23/2013	0.0	20.9	0.0	79.1	0.00	0	0	--	--	96.4
GW2	10/25/2013	13.0	1.9	15.0	70.1	0.00	0	0	--	--	--
GW2	11/26/2013	14.5	0.8	17.0	67.7	-1.25	0	0	--	--	31.0
GW2	12/23/2013	11.5	7.9	12.4	68.2	1.25	0	0	0	0.0	20.2
GW2	1/30/2014	9.5	4.9	16.0	69.6	2.50	0	0	0	0.0	30.5
GW2	2/28/2014	9.5	7.6	12.6	70.3	2.00	0	0	0	0.0	26.5
GW2	3/28/2014	4.8	7.5	11.4	76.3	0.00	0	0	0	0.0	48.3
GW2	4/25/2014	2.7	5.9	12.4	79.1	-0.15	0	0	0	0.0	67.8
GW2	5/29/2014	3.8	6.3	12.4	77.6	4.00	0	0	0	0.0	91.3
GW2	6/24/2014	0.2	6.9	11.2	81.7	0.00	0	0	0	0	90.6
GW3	7/11/2013	43.0	7.7	21.6	27.7	-0.15	0	0	--	--	92.8
GW3	8/28/2013	1.8	20.7	1.4	76.1	-0.15	0	0	--	--	78.2
GW3	9/23/2013	0.3	18.1	3.6	78.0	0.05	0	0	--	--	89.5
GW3	10/25/2013	59.5	0.9	29.8	9.8	0.00	0	0	--	--	40.0
GW3	11/26/2013	0.6	20.9	0.2	78.4	-1.60	0	0	--	--	31.2
GW3	12/23/2013	6.0	18.6	3.0	72.4	-0.75	100	100	0	0.0	17.2
GW3	1/30/2014	54.5	1.4	30.6	13.5	0.50	0	0	0	0.0	29.8
GW3	2/28/2014	29.0	11.9	12.0	47.1	-0.15	0	0	0	0.0	22.2
GW3	3/28/2014	2.1	19.8	0.8	77.3	0.90	0	0	0	0.0	44.2

TABLE 4

WISCONSIN DEPARTMENT OF NATURAL RESOURCES
REFUSE HIDEAWAY LANDFILL
MIDDLETON, WISCONSIN

GAS WELL MONITORING RESULTS

Location	Date	CH_4 (%)	O_2 (%)	CO_2 (%)	Balance Gas* (%)	Well Pressure (in WC)	Valve Position		Gas Velocity (fpm)	Gas Flow** (cfm)	Gas Temp (deg F)
							Initial (%)	After (%)			
GW3	4/25/2014	0.5	20.9	0.2	78.5	-1.10	0	0	0	0.0	66.9
GW3	5/29/2014	16.5	13.9	7.6	62.0	-0.65	0	0	0	0.0	86.1
GW3	6/24/2014	38.5	6.9	20.2	34.4	-0.30	0	0	0	0	87.4
GW4	7/11/2013	79.0	1.7	30.2	-10.9	0.00	0	0	--	--	--
GW4	8/28/2013	39.5	3.2	25.0	32.3	0.00	0	0	--	--	75.5
GW4	9/23/2013	74.5	1.0	28.0	-3.5	0.10	0	0	--	--	103.4
GW4	10/25/2013	73.0	0.6	25.6	0.8	0.00	0	0	--	--	42.2
GW4	11/26/2013	77.0	0.7	25.8	-3.5	0.00	0	0	--	--	33.4
GW4	12/23/2013	89.0	1.6	24.0	-14.6	0.00	0	0	0	0.0	18.1
GW4	1/30/2014	67.5	1.1	22.6	8.8	0.05	0	0	0	0.0	30.3
GW4	2/28/2014	89.0	0.2	22.0	-11.2	0.15	0	0	0	0.0	25.5
GW4	3/28/2014	39.5	6.9	15.8	37.8	0.00	0	0	0	0.0	44.9
GW4	4/25/2014	66.0	0.7	28.2	5.1	0.35	0	0	0	0.0	66.7
GW4	5/29/2014	69.5	0.2	25.6	4.7	0.15	0	0	0	0.0	90.6
GW4	6/24/2014	73.0	1.0	26.4	-0.4	0.15	0	0	0	0	93.0
GW5	7/11/2013	1.6	15.6	9.2	73.6	0.00	0	0	--	--	--
GW5	8/28/2013	*9.5*	*14.5*	*7.4*	68.6	0.00	0	0	--	--	76.4
GW5	9/23/2013	59.0	4.2	24.6	12.2	0.00	0	0	--	--	94.4
GW5	10/25/2013	46.0	6.6	20.8	26.6	0.00	0	0	--	--	45.1
GW5	11/26/2013	73.0	0.2	30.2	-3.4	0.95	0	0	--	--	32.8
GW5	12/23/2013	58.0	6.9	20.4	14.7	0.00	0	0	0	0.0	16.5
GW5	1/30/2014	58.5	1.9	25.4	14.2	1.00	0	0	0	0.0	28.5
GW5	2/28/2014	82.0	0.3	27.0	-9.3	10.00	0	0	0	0.0	25.8
GW5	3/28/2014	63.0	1.7	25.8	9.5	0.00	0	0	0	0.0	47.2
GW5	4/25/2014	59.5	1.5	26.8	12.2	0.25	0	0	0	0.0	69.9
GW5	5/29/2014	62.5	1.6	26.0	9.9	0.15	0	0	0	0.0	102.1
GW5	6/24/2014	54.0	0.8	28.8	16.4	0.20	0	0	0	0	92.6
GW5 - Lat East	7/11/2013	79.0	0.9	30.1	-10.0	0.70	--	--	--	--	--
GW5 - Lat East	8/28/2013	78.0	0.3	31.4	-9.7	0.00	--	--	--	--	--
GW5 - Lat East	9/23/2013	74.5	1.3	33.8	-9.6	0.15	--	--	--	--	--
GW5 - Lat East	10/25/2013	67.5	1.0	28.0	3.5	0.15	--	--	--	--	--
GW5 - Lat East	11/26/2013	70.5	0.2	31.6	-2.3	0.05	--	--	--	--	--
GW5 - Lat East	12/23/2013	--	--	--	--	--	--	--	--	--	--

TABLE 4

WISCONSIN DEPARTMENT OF NATURAL RESOURCES
REFUSE HIDEAWAY LANDFILL
MIDDLETON, WISCONSIN

GAS WELL MONITORING RESULTS

Location	Date	CH_4 (%)	O_2 (%)	CO_2 (%)	Balance Gas* (%)	Well Pressure (in WC)	Valve Position		Gas Velocity (fpm)	Gas Flow** (cfm)	Gas Temp (deg F)
							Initial (%)	After (%)			
GW5 - Lat East	1/30/2014	-- [a]	-- [a]	-- [a]	-- [a]	-- [a]	0	0	-- [a]	-- [a]	-- [a]
GW5 - Lat East	2/28/2014	-- [a]	-- [a]	-- [a]	-- [a]	-- [a]	0	0	-- [a]	-- [a]	-- [a]
GW5 - Lat East	3/28/2014	-- [a]	-- [a]	-- [a]	-- [a]	-- [a]	0	0	-- [a]	-- [a]	-- [a]
GW5 - Lat East	4/25/2014	-- [a]	-- [a]	-- [a]	-- [a]	-- [a]	0	0	--	--	--
GW5 - Lat East	5/29/2014	-- [a]	-- [a]	-- [a]	-- [a]	-- [a]	0	0	--	--	--
GW5 - Lat East	6/24/2014	-- [a]	-- [a]	-- [a]	-- [a]	-- [a]	0	0	--	--	--
GW5 - Lat West	7/11/2013	73.5	1.3	35.4	-10.2	0.35	--	--	--	--	--
GW5 - Lat West	8/28/2013	74.0	0.3	36.6	-10.9	0.10	--	--	--	--	--
GW5 - Lat West	9/23/2013	68.0	0.7	38.4	-7.1	0.00	--	--	--	--	--
GW5 - Lat West	10/25/2013	64.5	0.3	30.4	4.8	0.05	--	--	--	--	--
GW5 - Lat West	11/26/2013	71.0	0.3	32.4	-3.7	0.10	--	--	--	--	--
GW5 - Lat West	12/23/2013	--	--	--	--	--	--	--	--	--	--
GW5 - Lat West	1/30/2014	55.5	0.8	24.6	19.1	0.15	0	0	0	0.0	29.6
GW5 - Lat West	2/28/2014	65.5	0.7	23.6	10.2	0.05	0	0	--	--	--
GW5 - Lat West	3/28/2014	*0.0*	*20.9*	*0.0*	*79.1*	*0.00*	0	0	--	--	--
GW5 - Lat West	4/25/2014	63.5	0.7	27.0	8.8	0.30	0	0	--	--	--
GW5 - Lat West	5/29/2014	70.5	0.5	28.0	1.0	0.40	0	0	--	--	--
GW5 - Lat West	6/24/2014	51.5	1.5	31.0	16.0	0.60	0	0	--	--	--
GW6	7/11/2013	54.0	2.8	33.0	10.2	-28	100	100	1475	66.4	88.5
GW6	8/28/2013	33.0	0.4	37.0	29.6	-28	100	100	1225	55.1	75.3
GW6	9/23/2013	23.5	0.5	25.5	50.5	-28	100	100	2130	95.9	78.0
GW6	10/25/2013	55.0	0.9	29.2	14.9	-30	100	100	3250	146.3	54.3
GW6	11/26/2013	27.5	0.4	26.8	45.3	-28	100	100	870	39.2	34.0
GW6	12/24/2013	6.0	9.0	10.4	74.6	0.40	100	0	0	0.0	23.3
GW6	1/30/2014	52.0	1.3	27.0	19.7	-21	0	100	1640	73.8	40.6
GW6	2/27/2014	46.0	2.3	26.8	24.9	-26	100	100	875	39.4	37.5
GW6	3/28/2014	31.0	0.9	24.0	44.1	-26	100	100	730	32.9	54.3
GW6	4/25/2014	28.5	1.4	25.6	44.5	-29	100	100	1030	46.4	69.6
GW6	5/29/2014	34.5	0.5	24.8	40.2	-30	100	100	1350	60.8	82.2
GW6	6/24/2014	34.0	1.0	26.8	38.2	-29	100	100	5000	225.0	88.1
GW7	7/11/2013	15.5	12.8	6.0	65.7	-28	0	50	1230	55.4	94.2
GW7	8/28/2013	13.5	12.0	9.2	65.3	-28	50	0	--	--	83.1
GW7	9/23/2013	26.0	2.7	22.4	48.9	-28	0	30	--	--	85.0

TABLE 4

WISCONSIN DEPARTMENT OF NATURAL RESOURCES
REFUSE HIDEAWAY LANDFILL
MIDDLETON, WISCONSIN

GAS WELL MONITORING RESULTS

Location	Date	CH_4 (%)	O_2 (%)	CO_2 (%)	Balance Gas* (%)	Well Pressure (in WC)	Valve Position		Gas Velocity (fpm)	Gas Flow** (cfm)	Gas Temp (deg F)
							Initial (%)	After (%)			
GW7	10/25/2013	8.5	11.5	9.6	70.4	-28	30	0	--	--	55.5
GW7	11/26/2013	19.0	15.7	7.2	58.1	-28	0	0	--	--	39.3
GW7	12/24/2013	0.5	20.9	0.2	78.5	0.30	0	0	0	0.0	22.6
GW7	1/30/2014	0.1	20.9	0.0	79.1	0.50	0	0	0	0.0	31.6
GW7	2/27/2014	48.0	0.7	17.4	33.9	-26	0	100	775	34.9	29.2
GW7	3/28/2014	13.0	7.2	10.8	69.0	-26	100	0	0	0.0	53.1
GW7	4/25/2014	9.5	4.4	12.0	74.1	-29	0	0	0	0.0	70.5
GW7	5/29/2014	46.0	6.5	13.8	33.7	-28	0	50	1230	55.4	84.1
GW7	6/24/2014	11.0	8.5	10.4	70.1	-28	50	0	0	0	93.9
GW8	12/28/2010	63.5	0.2	32.0	4.3	--	0	50	700	31.5	--
GW8	7/11/2013	6.5	17.4	2.8	73.3	-28	100	50	1180	53.1	96.4
GW8	8/28/2013	25.5	13.7	6.6	54.2	-28	50	0	--	--	79.1
GW8	9/23/2013	15.5	16.0	4.2	64.3	-28	0	30	405	18.2	84.3
GW8	10/25/2013	28.0	7.9	11.4	52.7	-12	30	0	--	--	55.7
GW8	11/26/2013	46.0	3.7	16.8	33.5	-28	0	0	--	--	35.4
GW8	12/24/2013	56.0	0.7	19.6	23.7	0.00	0	100	0	0.0	28.5
GW8	1/30/2014	18.0	12.1	6.4	63.5	-19	100	0	0	0.0	27.3
GW8	2/27/2014	52.0	0.5	18.8	28.7	-0.95	0	100	700	31.5	19.2
GW8	3/28/2014	18.0	12.1	6.6	63.3	-26	100	0	0	0.0	52.3
GW8	4/25/2014	-- [c]	-- [c]	-- [c]	-- [c]	-- [c]	0	0	-- [c]	-- [c]	-- [c]
GW8	5/29/2014	18.5	13.5	5.4	62.6	0.0	0	0	0	0.0	--
GW8	6/24/2014	60.5	3.7	20.7	15.1	0.0	0	0	0	0	99.8
GW9	7/11/2013	15.0	13.1	4.0	67.9	-28	0	50	2700	121.5	98.4
GW9	8/28/2013	--	--	--	--	--	--	--	--	--	--
GW9	9/23/2013	--	--	--	--	--	--	--	--	--	--
GW9	10/25/2013	50.5	4.2	9.6	35.7	-26	0	100	1300	58.5	46.5
GW9	11/26/2013	80.0	1.1	14.6	4.3	-28	100	100	1060	47.7	37.2
GW9	12/24/2013	8.5	14.0	3.6	73.9	0.25	100	0	0	0.0	26.5
GW9	1/30/2014	79.0	0.3	14.4	6.3	-28	0	100	--	--	29.6
GW9	2/28/2014	10.5	17.9	1.8	69.8	-16	100	0	0	0.0	24.7
GW9	3/28/2014	57.5	4.7	9.6	28.2	-26	0	50	850	38.3	49.5
GW9	4/25/2014	8.5	16.0	2.4	73.1	-23	50	0	0	0.0	76.4
GW9	5/29/2014	4.6	18.6	1.8	75.0	7	0	0	0	0.0	85.9

TABLE 4

WISCONSIN DEPARTMENT OF NATURAL RESOURCES
REFUSE HIDEAWAY LANDFILL
MIDDLETON, WISCONSIN

GAS WELL MONITORING RESULTS

Location	Date	CH_4 (%)	O_2 (%)	CO_2 (%)	Balance Gas* (%)	Well Pressure (in WC)	Valve Position		Gas Velocity (fpm)	Gas Flow** (cfm)	Gas Temp (deg F)
							Initial (%)	After (%)			
GW9	6/24/2014	59.0	0.1	12.4	28.5	-29	0	100	4900	220.5	96.4
GW10	7/11/2013	19.5	3.0	8.8	68.7	-14	0	50	780	35.1	94.0
GW10	8/28/2013	12.5	3.6	10.1	73.8	--	50	30	630	28.4	82.0
GW10	9/24/2013	8.5	6.9	12.0	72.6	-12	30	50	1460	65.7	82.7
GW10	10/25/2013	9.0	3.4	15.4	72.2	-12	50	0	--	--	66.0
GW10	11/26/2013	52.5	0.2	22.0	25.3	-12	0	100	650	29.3	46.0
GW10	12/24/2013	0.0	20.9	0.0	79.1	0.45	100	0	0	0.0	25.3
GW10	1/30/2014	44.0	0.5	18.2	37.3	-10	0	100	425	19.1	34.3
GW10	2/28/2014	44.5	2.6	18.4	34.5	-4	100	100	220	9.9	28.0
GW10	3/28/2014	18.5	14.1	17.0	50.4	-12	100	0	0	0.0	53.7
GW10	4/25/2014	0.9	17.9	2.0	79.2	-14	0	0	0	0.0	80.5
GW10	5/29/2014	45.5	0.5	19.2	34.8	-12	0	100	735	33.1	88.8
GW10	6/24/2014	48.0	0.2	25.8	26.0	-18	100	0	0	0	94.0
GW11	7/11/2013	83.5	0.0	15.6	0.9	-5	0	100	560	25.2	92.2
GW11	8/28/2013	20.0	16.0	3.6	60.4	-12	100	0	--	--	82.7
GW11	9/24/2013	7.0	18.9	1.8	72.3	-0.70	0	0	--	--	78.9
GW11	10/25/2013	30.0	12.5	5.4	52.1	-8	0	0	--	--	49.5
GW11	11/26/2013	86.0	0.3	14.8	-1.1	-7	0	100	500	22.5	35.0
GW11	12/24/2013	2.0	18.8	1.6	77.6	0.30	100	0	0	0.0	27.6
GW11	1/30/2014	13.0	15.4	3.2	68.4	0.75	0	0	0	0.0	27.1
GW11	2/28/2014	30.0	14.0	4.0	52.0	-3	0	0	0	0.0	25.1
GW11	3/28/2014	33.0	0.8	11.0	55.2	-10	0	100	350	15.8	49.4
GW11	4/25/2014	16.5	14.0	5.6	63.9	-13	100	0	0	0.0	80.9
GW11	5/29/2014	30.0	9.3	6.6	54.1	-1	0	30	687	30.9	90.1
GW11	6/24/2014	10.5	18.0	1.8	69.7	0	30	0	0	0	97.8
GW12	7/11/2013	30.0	3.1	21.4	45.5	-28	0	100	1360	61.2	93.7
GW12	8/28/2013	81.0	0.7	27.8	-9.5	-26	100	100	1400	63.0	78.0
GW12	9/24/2013	15.5	1.9	21.0	61.6	-30	100	100	1220	54.9	81.3
GW12	10/25/2013	14.0	1.0	19.2	65.8	-30	100	0	--	--	55.9
GW12	11/26/2013	39.0	6.7	20.4	33.9	0	0	0	--	--	33.0
GW12	12/24/2013	44.0	0.9	25.0	30.1	0.25	0	0	0	0.0	29.2
GW12	1/30/2014	21.5	11.0	12.8	54.7	-0.50	0	0	0	0.0	26.4
GW12	2/28/2014	74.5	0.4	24.8	0.3	-18	0	100	565	25.4	31.2

TABLE 4

WISCONSIN DEPARTMENT OF NATURAL RESOURCES
REFUSE HIDEAWAY LANDFILL
MIDDLETON, WISCONSIN

GAS WELL MONITORING RESULTS

Location	Date	CH_4 (%)	O_2 (%)	CO_2 (%)	Balance Gas* (%)	Well Pressure (in WC)	Valve Position		Gas Velocity (fpm)	Gas Flow** (cfm)	Gas Temp (deg F)
							Initial (%)	After (%)			
GW12	3/28/2014	21.0	1.4	18.4	59.2	-28	100	30	600	27.0	51.7
GW12	4/25/2014	9.5	1.9	15.6	73.0	-25	30	0	0	0.0	76.0
GW12	5/29/2014	10.0	2.3	13.8	73.9	-26	0	0	0	0.0	92.6
GW12	6/24/2014	48.0	0.2	25.8	26.0	-24	0	100	2500	112.5	88.6
GW13	7/11/2013	49.0	5.1	25.0	20.9	-28	30	75	1330	59.9	95.7
GW13	8/28/2013	--	--	--	--	--	75	75	--	--	--
GW13	9/24/2013	26.0	9.5	18.0	46.5	-28	75	100	--	--	--
GW13	10/25/2013	36.5	2.8	26.6	34.1	-30	100	100	1100	49.5	58.2
GW13	11/26/2013	68.5	0.4	26.4	4.7	-28	100	100	1050	47.3	38.4
GW13	12/24/2013	3.3	12.5	7.0	77.3	0.20	100	0	0	0.0	33.6
GW13	1/30/2014	51.0	1.5	20.6	26.9	-27	0	100	537	24.2	28.0
GW13	2/28/2014	68.5	1.1	24.6	5.8	-18	100	100	550	24.8	24.9
GW13	3/28/2014	31.0	0.2	25.4	43.4	-28	100	100	950	42.8	54.1
GW13	4/25/2014	23.5	0.8	24.6	51.1	-29	100	100	1030	46.4	75.0
GW13	5/29/2014	24.0	0.7	22.2	53.1	-29	100	100	1240	55.8	89.5
GW13	6/24/2014	25.5	3.8	20.4	50.3	-28	100	100	4300	193.5	93.1
Annual Minimum		0.0	0.1			-30.0			0	0.0	16.5
Annual Maximum		89.0	20.9			10.00			5000	225.0	103.4
Annual Average						-12.8			560	38.8	61.6
Annual Total***									63334	15137.8	

* : Balance gas calculated as 100% - (%CH_4+%CO_2+%O_2).

** : Gas Flow (cfm) calculated by multiplying gas velocity (fpm) by pipe area 0.045 (3" diameter).

*** : Only wells that are open following inspection on given date are included in the total flow calculation.

-- : Not measured.

fpm : Feet per minute.

cfm : Cubic feet per minute.

in WC : Inches of water column.

deg F : Degrees Fahrenheit.

[a] : Broken valve.

[c] : Well opened for pump maintenance.

TABLE 5

WISCONSIN DEPARTMENT OF NATURAL RESOURCES
REFUSE HIDEAWAY LANDFILL
MIDDLETON, WISCONSIN

BLOWER AND FLARE STATION OPERATIONAL DURATION

Date	Blower				Flare			Comments
	Hour Counter (hours)	Operational Hours Per Period (hours)	Percent Operational (%)	Motor Current (amps)	Hours Per Period (hours)	Operational Hours Per Period (hours)	Percent Operational (%)	
7/1/13 5:17 PM	53,405.0	78	100%	7.0	78	0 *	0%	Blower operational upon arrival. Flare down upon arrival. System shutdown due to high oxygen.
7/8/13 1:55 PM	53,405.0	0	0%	--	165	0	0%	Blower and flare down upon arrival. System restarted and operational upon departure.
7/11/13 3:42 PM	53,474.5	70	94%	7.0	74	70	94%	Blower and flare operational upon arrival and departure. Pedestal flare brought online.
7/12/13 3:54 PM	53,498.7	24	100%	--	24	24	100%	Blower and flare operational upon arrival. System shut down as a precaution for the weekend.
7/15/13 11:45 AM	53,498.7	0	0%	--	68	0	0%	Blower and flare down upon arrival. System restarted and operational upon departure.
7/16/13 12:40 PM	53,523.7	25	100%	--	25	25	100%	Blower and flare operational upon arrival.
7/17/13 12:40 PM	53,523.7	0	0%	--	24	0	0%	Blower and flare down upon arrival. System restarted and operational upon departure.
7/18/13 12:00 PM	53,547.1	23	100%	7.0	23	23	100%	Blower and flare operational upon arrival and departure.
7/19/13 11:35 AM	53,570.7	24	100%	--	24	24	100%	Blower and flare operational upon arrival. System shut down as a precaution for the weekend.
7/22/13 9:45 AM	53,570.7	0	0%	--	70	0	0%	Blower and flare down upon arrival. System restarted and operational upon departure.
7/24/13 2:24 PM	53,623.4	53	100%	--	53	53	100%	Blower and flare operational upon arrival and departure.
7/26/13 11:55 AM	53,668.9	46	100%	--	46	46	100%	Blower and flare operational upon arrival. System shut down as a precaution for the weekend.
7/30/13 8:55 AM	53,669.0	0	0%	--	93	0	0%	Blower and flare down upon arrival. System restarted and operational upon departure.
7/31/13 3:55 PM	53,700.0	31	100%	7.0	31	31	100%	Blower and flare operational upon arrival and departure.
Monthly Summary		**373**	**47%**		**796**	**295**	**37%**	
8/2/13 11:15 AM	53,743.3	43	100%	--	43	43	100%	Blower and flare operational upon arrival and departure.
8/5/13 1:52 PM	53,817.9	75	100%	7.0	75	75	100%	Blower and flare operational upon arrival and departure.

TABLE 5

WISCONSIN DEPARTMENT OF NATURAL RESOURCES
REFUSE HIDEAWAY LANDFILL
MIDDLETON, WISCONSIN

BLOWER AND FLARE STATION OPERATIONAL DURATION

Date	Blower				Flare			Comments
	Hour Counter (hours)	Operational Hours Per Period (hours)	Percent Operational (%)	Motor Current (amps)	Hours Per Period (hours)	Operational Hours Per Period (hours)	Percent Operational (%)	
8/7/13 3:26 PM	53,867.5	50	100%	--	50	50	100%	Blower and flare operational upon arrival and departure.
8/9/13 2:20 PM	53,914.2	47	100%	--	47	47	100%	Blower and flare operational upon arrival and departure.
8/13/13 11:05 AM	54,006.7	93	100%	--	93	93	100%	Blower and flare operational upon arrival and departure.
8/15/13 12:55 PM	54,056.3	50	100%	7.0	50	50	100%	Blower and flare operational upon arrival and departure.
8/16/13 1:30 PM	54,081.0	25	100%	--	25	25	100%	Blower and flare operational upon arrival and departure.
8/19/13 2:00 PM	54,153.6	73	100%	--	73	73	100%	Blower and flare operational upon arrival and departure.
8/21/13 10:48 AM	54,198.4	45	100%	7.0	45	45	100%	Blower and flare operational upon arrival and departure.
8/23/13 2:43 PM	54,250.3	52	100%	--	52	52	100%	Blower and flare operational upon arrival and departure.
8/26/13 3:28 PM	54,323.1	73	100%	7.0	73	73	100%	Blower and flare operational upon arrival and departure.
8/30/13 1:02 PM	54,416.6	94	100%	--	94	94	100%	Blower and flare operational upon arrival and departure.
Monthly Summary		**717**	**100%**		**717**	**717**	**100%**	
9/3/13 9:26 AM	54,509.0	92	100%	7.0	92	92	100%	Blower and flare operational upon arrival and departure.
9/10/13 9:50 AM	54,677.4	168	100%	--	168	168	100%	Blower and flare operational upon arrival and departure.
9/13/13 1:17 PM	54,752.9	76	100%	7.0	75	76	100%	Blower and flare operational upon arrival and departure.
9/17/13 4:05 PM	54,851.7	99	100%	--	99	99	100%	Blower and flare operational upon arrival and departure.
9/20/13 9:00 AM	54,916.6	65	100%	7.0	65	65	100%	Blower and flare operational upon arrival and departure.
9/23/13 4:00 PM	54,995.6	79	100%	--	79	79	100%	Blower and flare operational upon arrival and departure.

TABLE 5

WISCONSIN DEPARTMENT OF NATURAL RESOURCES
REFUSE HIDEAWAY LANDFILL
MIDDLETON, WISCONSIN

BLOWER AND FLARE STATION OPERATIONAL DURATION

Date	Blower				Flare			Comments
	Hour Counter (hours)	Operational Hours Per Period (hours)	Percent Operational (%)	Motor Current (amps)	Hours Per Period (hours)	Operational Hours Per Period (hours)	Percent Operational (%)	
9/24/13 2:25 PM	55,018.0	22	100%	7.0	22	0*	0%	Blower operational upon arrival. Flare down upon arrival. System shutdown due to high oxygen.
9/26/13 1:45 PM	55,018.0	0	0%	--	47	0	0%	System restarted and operational upon departure.
Monthly Summary		**601**	**93%**		**649**	**579**	**89%**	
10/1/13 12:30 PM	55,136.6	119	100%	--	119	119	100%	Blower and flare operational upon arrival and departure.
10/4/13 11:50 AM	55,207.8	71	100%	7.0	71	71	100%	Blower and flare operational upon arrival and departure.
10/9/13 9:07 AM	55,325.3	118	100%	--	117	118	100%	Blower and flare operational upon arrival and departure.
10/11/13 10:38 AM	55,374.8	50	100%	7.0	50	50	100%	Blower and flare operational upon arrival and departure.
10/16/13 4:00 PM	55,500.0	125	100%	7.0	125	125	100%	Blower and flare operational upon arrival and departure.
10/22/13 4:10 PM	55,644.3	144	100%	--	144	144	100%	Blower and flare operational upon arrival and departure.
10/29/13 2:45 PM	55,810.0	166	99%	7.0	167	166	99%	Blower and flare operational upon arrival and departure.
Monthly Summary		**792**	**100%**		**793**	**792**	**100%**	
11/1/13 3:15 PM	55,883.4	73	101%	--	72	73	101%	Blower and flare operational upon arrival and departure.
11/5/13 7:42 AM	55,971.9	89	100%	--	88	89	100%	Blower and flare operational upon arrival and departure.
11/8/13 1:52 PM	56,051.0	79	101%	7.0	78	79	101%	Blower and flare operational upon arrival and departure.
11/13/13 3:45 PM	56,172.9	122	100%	--	122	122	100%	Blower and flare operational upon arrival and departure.
11/15/13 3:50 PM	56,221.2	48	100%	7.0	48	48	100%	Blower and flare operational upon arrival and departure.
11/20/13 9:17 AM	56,334.4	113	100%	7.0	113	113	100%	Blower and flare operational upon arrival and departure.

TABLE 5

WISCONSIN DEPARTMENT OF NATURAL RESOURCES
REFUSE HIDEAWAY LANDFILL
MIDDLETON, WISCONSIN

BLOWER AND FLARE STATION OPERATIONAL DURATION

Date	Blower				Flare			Comments
	Hour Counter (hours)	Operational Hours Per Period (hours)	Percent Operational (%)	Motor Current (amps)	Hours Per Period (hours)	Operational Hours Per Period (hours)	Percent Operational (%)	
11/22/13 1:50 PM	56,387.0	53	100%	--	53	53	100%	Blower and flare operational upon arrival and departure.
11/26/13 11:41 AM	56,480.8	94	100%	7.0	94	94	100%	Blower and flare operational upon arrival and departure.
Monthly Summary		**671**	**100%**		**669**	**671**	**100%**	
12/3/13 2:20 PM	56,651.5	171	100%	7.0	171	171	100%	Blower & flare operational upon arrival and departure.
12/4/13 8:39 AM	56,669.8	18	100%	--	18	18	100%	Blower & flare operational upon arrival and departure.
12/6/13 1:56 PM	56,723.1	53	100%	--	53	53	100%	Blower & flare operational upon arrival. System shutdown upon departure due to high oxygen.
12/9/13 2:51 PM	56,723.5	0	1%	--	73	0	1%	Blower and flare down upon arrival. System restarted & operational upon departure.
12/12/13 1:43 PM	56,794.4	71	100%	7.0	71	71	-2900%	Blower & flare operational upon arrival. System shutdown upon departure due to high oxygen.
12/17/13 11:29 AM	56,795.5	1	1%	--	118	1	1%	Blower and flare down upon arrival. System restarted & operational upon departure.
12/20/13 2:47 PM	56,870.8	75	100%	7.0	75	75	100%	Blower & flare operational upon arrival. System shutdown upon departure due to high oxygen.
12/23/13 4:31 PM	56,874.9	4	6%	--	74	4	6%	Blower & flare down upon arrival and departure.
12/24/13 2:36 PM	56,874.9	0	0%	7.0	22	0	0%	Blower & flare down upon arrival and departure.
12/30/13 2:47 PM	56,875.3	0	0%	--	144	0	0%	Blower & flare down upon arrival and departure.
Monthly Summary		**395**	**48%**		**819**	**395**	**48%**	
1/3/14 2:28 PM	56,875.5	0	0%	7.0	96	0	0%	Blower & flare down upon arrival and departure.
1/8/14 3:31 PM	56,875.9	0	0%	--	121	0	0%	Blower & flare down upon arrival and departure.
1/10/14 11:45 AM	56,876.3	0	1%	7.0	44	0	1%	Blower & flare down upon arrival and departure.

TABLE 5

WISCONSIN DEPARTMENT OF NATURAL RESOURCES
REFUSE HIDEAWAY LANDFILL
MIDDLETON, WISCONSIN

BLOWER AND FLARE STATION OPERATIONAL DURATION

Date	Blower				Flare			Comments
	Hour Counter (hours)	Operational Hours Per Period (hours)	Percent Operational (%)	Motor Current (amps)	Hours Per Period (hours)	Operational Hours Per Period (hours)	Percent Operational (%)	
1/13/14 1:03 PM	56,876.3	0	0%	--	73	0	0%	Blower & flare down upon arrival and departure.
1/15/14 2:02 PM	56,876.3	0	0%	--	49	0	0%	Blower & flare down upon arrival and departure.
1/17/14 1:55 PM	56,876.3	0	0%	7.0	48	0	0%	Blower & flare down upon arrival and departure; new ignitor transformer was installed; electrode broke during pre-startup inspection.
1/21/14 4:13 PM	56,876.7	0	0%	--	98	0	0%	Blower & flare down upon arrival and departure.
1/24/14 2:24 PM	56,877.1	0	1%	7.0	70	0	1%	Blower & flare down upon arrival and departure.
1/29/14 1:49 PM	56,877.1	0	0%	7.0	119	0	0%	Blower & flare down upon arrival and departure.
Monthly Summary		**2**	**0%**		**719**	**2**	**0%**	
2/6/14 9:00 AM	-- [a]	-- [a]	-- [a]	-- [a]	-- [a]	-- [a]	-- [a]	Blower and flare down upon arrival and departure.
2/12/14 2:56 PM	56,880.5	3	1%	7.0	337	3	1%	Blower and flare down upon arrival and departure.
2/19/14 2:50 PM	56,880.7	0	0%	7.0	168	0	0%	Blower and flare down upon arrival and departure.
2/27/14 3:07 PM	56,883.1	2	1%	7.0	192	2	1%	Blower and flare down upon arrival. System restarted and operational upon departure.
2/28/14 3:11 PM	56,907.1	24	100%	--	24	24	100%	Blower and flare operational upon arrival and departure.
Monthly Summary		**30**	**4%**		**721**	**30**	**4%**	
3/5/14 2:01 PM	57,026.0	119	100%	--	119	119	100%	Blower and flare operational upon arrival and departure.
3/7/14 8:25 AM	57,068.4	42	100%	7.0	42	42	100%	Blower and flare operational upon arrival and departure.
3/12/14 2:28 PM	57,193.4	125	99%	7.0	126	125	99%	Blower and flare operational upon arrival and departure.
3/19/14 2:19 PM	57,361.3	168	100%	--	168	168	100%	Blower and flare operational upon arrival and departure.

TABLE 5

WISCONSIN DEPARTMENT OF NATURAL RESOURCES
REFUSE HIDEAWAY LANDFILL
MIDDLETON, WISCONSIN

BLOWER AND FLARE STATION OPERATIONAL DURATION

Date	Blower				Flare			Comments
	Hour Counter (hours)	Operational Hours Per Period (hours)	Percent Operational (%)	Motor Current (amps)	Hours Per Period (hours)	Operational Hours Per Period (hours)	Percent Operational (%)	
3/21/14 2:10 PM	57,409.1	48	100%	7.0	48	48	100%	Blower and flare operational upon arrival and departure.
3/24/14 1:42 PM	57,480.7	72	100%	--	72	0 *	0%	Blower operational upon arrival. Flare down upon arrival. System shutdown due to high oxygen.
3/28/14 1:16 PM	57,480.9	0	0%	7.0	96	0	0%	Blower and flare down upon arrival. System restarted and operational upon departure.
3/31/14 3:24 PM	57,555.1	74	100%	--	74	74	100%	Blower and flare operational upon arrival and departure.
Monthly Summary		**648**	**87%**		**744**	**576**	**77%**	
4/3/14 3:54 PM	57,627.5	72	100%	7.0	72	72	100%	Blower and flare operational upon arrival and departure.
4/9/14 3:22 PM	57,771.0	144	100%	7.0	143	144	100%	Blower and flare operational upon arrival and departure.
4/11/14 1:56 PM	57,817.6	47	100%	--	47	47	100%	Blower and flare operational upon arrival. System shutdown due to low methane.
4/14/14 3:50 PM	57,817.9	0	0%	--	74	0	0%	Blower and flare down upon arrival. System restarted and operational upon departure.
4/16/14 4:55 PM	57,866.9	49	100%	7.0	49	49	100%	Blower and flare operational upon arrival and departure.
4/22/14 4:06 PM	58,010.1	143	100%	--	143	143	100%	Blower and flare operational upon arrival and departure.
4/25/14 4:20 PM	58,082.2	72	100%	7.0	72	72	100%	Blower and flare operational upon arrival. System shutdown upon departure.
4/28/14 4:30 PM	58,082.2	0	0%	--	72	0	0%	Blower and flare down upon arrival. System restarted and operational upon departure.
4/30/14 9:50 AM	58,123.6	41	100%	7.0	41	41	100%	Blower and flare operational upon arrival and departure.
Monthly Summary		**527**	**78%**		**673**	**527**	**78%**	
5/6/14 4:50 PM	58,274.6	151	100%	7.0	151	151	100%	Blower and flare operational upon arrival and departure.
5/15/14 5:10 PM	58,490.9	216	100%	7.0	216	216	100%	Blower and flare operational upon arrival and departure.

TABLE 5

WISCONSIN DEPARTMENT OF NATURAL RESOURCES
REFUSE HIDEAWAY LANDFILL
MIDDLETON, WISCONSIN

BLOWER AND FLARE STATION OPERATIONAL DURATION

Date	Blower				Flare			Comments
	Hour Counter (hours)	Operational Hours Per Period (hours)	Percent Operational (%)	Motor Current (amps)	Hours Per Period (hours)	Operational Hours Per Period (hours)	Percent Operational (%)	
5/19/14 4:41 PM	58,586.4	96	100%	--	96	96	100%	Blower and flare operational upon arrival and departure.
5/22/14 1:48 PM	58,655.5	69	100%	--	69	69	100%	Blower and flare operational upon arrival and departure.
5/28/14 4:01 PM	58,801.8	146	100%	7.0	146	146	100%	Blower and flare operational upon arrival and departure.
5/29/14 4:00 PM	58,825.7	24	100%	--	24	24	100%	Blower and flare operational upon arrival and departure.
Monthly Summary		**702**	**100%**		**702**	**702**	**100%**	
6/5/14 3:04 PM	58,992.8	167	100%	6.0	167	167	100%	Blower and flare operational upon arrival and departure.
6/9/14 3:42 PM	59,089.4	97	100%	--	97	97	100%	Blower and flare operational upon arrival. System shutdown due to high oxygen.
6/12/14 3:59 PM	59,089.8	0	1%	7.0	72	0	1%	Blower and flare down upon arrival. System restarted and operational upon departure.
6/17/14 12:28 PM	59,205.6	116	61%	7.0	116	116	99%	Blower and flare operational upon arrival. System shutdown due to high oxygen.
6/18/14 12:43 PM	59,205.7	0	0%	--	24	0	0%	Blower and flare down upon arrival. System restarted and operational upon departure.
6/25/14 12:20 PM	59,373.2	168	100%	7.0	168	168	100%	Blower and flare operational upon arrival. System shutdown due to high oxygen.
6/27/14 12:20 PM	59,373.7	1	1%	--	48	1	1%	Blower and Flare down upon arrival. System remained down due to high oxygen.
Monthly Summary		**548**	**79%**		**692**	**548**	**79%**	
Annual Summary		**6005**	**69%**		**8695**	**5833**	**67%**	

-- : Not measured.

* : Current system configuration does not allow for notification when the flare goes down. Worst case scenario calculated assuming flare went down immediately following departure from site

[a] : Weekly monitoring data not available.

TABLE 6

WISCONSIN DEPARTMENT OF NATURAL RESOURCES
REFUSE HIDEAWAY LANDFILL
MIDDLETON, WISCONSIN

MONTHLY GAS PROBE MONITORING RESULTS

Location	Date	Pressure	CH_4*		O_2	CO_2	Balance Gas**	Comments
		(in. WC)	(% LEL)	(% Vol)	(% Vol)	(% Vol)	(% Vol)	
G-1S	7/11/13	0.00	260.0	**13.0**	0.5	17.0	69.5	
G-1S	8/5/13	0.00	220.0	**11.0**	0.3	18.4	70.3	
G-1S	9/24/13	0.00	0.0	0.0	7.2	10.0	82.8	
G-1S	10/22/13	0.00	0.0	0.0	20.9	0.0	79.1	
G-1S	11/26/13	-0.05	0.0	0.0	20.9	0.0	79.1	
G-1S	12/17/13	-0.02	0.0	0.0	20.9	0.0	79.1	
G-1S	1/24/14	0.00	0.0	0.0	20.9	0.0	79.1	
G-1S	2/27/14	-0.05	0.0	0.0	20.9	0.0	79.1	
G-1S	3/24/14	0.00	0.0	0.0	20.9	0.0	79.1	
G-1S	4/28/14	0.00	0.0	0.0	18.1	1.4	80.5	
G-1S	5/28/14	0.00	0.0	0.0	3.8	9.6	86.6	test results in 90% CH4 reading of
G-1S	6/24/14	0.00	0.0	0.0	10.6	4.2	85.2	
G-1D	7/11/13	0.00	94.0	4.7	0.3	15.8	79.2	
G-1D	8/5/13	0.00	100.0	**5.0**	0.1	16.8	78.1	
G-1D	9/24/13	0.00	0.0	0.0	1.5	16.0	82.5	
G-1D	10/22/13	0.00	0.0	0.0	20.9	0.0	79.1	
G-1D	11/26/13	-0.05	0.0	0.0	20.9	0.0	79.1	
G-1D	12/17/13	-0.05	0.0	0.0	20.9	0.0	79.1	
G-1D	1/24/14	0.00	0.0	0.0	20.9	0.0	79.1	
G-1D	2/27/14	-0.05	0.0	0.0	20.9	0.0	79.1	
G-1D	3/24/14	0.00	0.0	0.0	20.9	0.0	79.1	
G-1D	4/28/14	0.00	0.0	0.0	11.1	4.6	84.3	
G-1D	5/28/14	0.00	0.0	0.0	14.0	2.8	83.2	
G-1D	6/24/14	0.00	9.0	0.5	4.5	11.4	83.7	
G-2S	7/11/13	0.00	150.0	**7.5**	0.4	17.8	74.3	
G-2S	8/5/13	0.00	150.0	**7.5**	0.2	19.0	73.3	
G-2S	9/24/13	0.00	150.0	**7.5**	0.3	18.6	73.6	
G-2S	10/22/13	0.00	0.0	0.0	20.9	0.0	79.1	
G-2S	11/26/13	-0.05	0.0	0.0	21.3	0.0	78.7	
G-2S	12/17/13	0.00	0.0	0.0	20.9	0.0	79.1	
G-2S	1/24/14	0.00	0.0	0.0	20.0	1.2	78.8	
G-2S	2/27/14	0.00	0.0	0.0	20.9	0.0	79.1	
G-2S	3/24/14	0.00	0.0	0.0	11.1	6.4	82.5	

TABLE 6

WISCONSIN DEPARTMENT OF NATURAL RESOURCES
REFUSE HIDEAWAY LANDFILL
MIDDLETON, WISCONSIN

MONTHLY GAS PROBE MONITORING RESULTS

Location	Date	Pressure	CH_4*		O_2	CO_2	Balance Gas**	Comments
		(in. WC)	(% LEL)	(% Vol)	(% Vol)	(% Vol)	(% Vol)	
G-2S	4/28/14	0.00	0.0	0.0	20.9	0.0	79.1	
G-2S	5/28/14	0.00	14.0	0.7	17.4	2.8	79.1	
G-2S	6/24/14	0.00	0.0	0.0	19.1	1.8	79.1	
G-2D	7/11/13	0.00	1.0	0.0	17.3	3.4	79.3	
G-2D	8/5/13	0.00	0.0	0.0	8.0	6.2	85.8	
G-2D	9/24/13	0.00	40.0	2.0	16.0	4.2	77.8	
G-2D	10/22/13	0.00	0.0	0.0	20.9	0.0	79.1	
G-2D	11/26/13	0.00	0.0	0.0	21.4	0.0	78.6	
G-2D	12/17/13	0.00	0.0	0.0	20.9	0.0	79.1	
G-2D	1/24/14	0.00	0.0	0.0	19.0	1.4	79.6	
G-2D	2/27/14	0.00	0.0	0.0	20.9	0.0	79.1	
G-2D	3/24/14	0.00	0.0	0.0	19.2	1.0	79.8	
G-2D	4/28/14	0.00	0.0	0.0	20.9	0.0	79.1	
G-2D	5/28/14	0.00	0.0	0.0	17.6	2.4	80.0	
G-2D	6/24/14	0.00	85.0	4.3	4.7	13.0	78.1	RKI measuring high CH4; bump test results in 70% CH4 reading of 50%standard
G-6	8/5/13	0.00	0.0	0.0	19.0	1.2	79.8	
G-6	7/11/13	0.00	2.0	0.0	20.9	0.2	78.9	
G-6	9/24/13	0.00	0.0	0.0	19.8	1.4	78.8	
G-6	10/22/13	0.00	0.0	0.0	18.1	1.6	80.3	
G-6	11/26/13	0.00	0.0	0.0	20.2	1.8	78.0	
G-6	12/17/13	0.00	0.0	0.0	20.9	1.0	78.1	
G-6	1/24/14	0.00	0.0	0.0	20.9	0.4	78.7	
G-6	2/27/14	0.00	0.0	0.0	20.9	0.0	79.1	
G-6	3/24/14	0.00	0.0	0.0	20.9	0.2	78.9	
G-6	4/28/14	0.00	0.0	0.0	20.9	0.0	79.1	
G-6	5/28/14	0.00	0.0	0.0	20.9	0.0	79.1	
G-6	6/24/14	0.00	0.0	0.0	20.9	0.0	79.1	
G-8	7/11/13	0.00	1.0	0.0	19.8	0.0	80.2	
G-8	8/5/13	0.00	0.0	0.0	20.9	0.0	79.1	
G-8	9/24/13	0.00	0.0	0.0	19.6	0.0	80.4	
G-8	10/22/13	0.00	0.0	0.0	19.4	0.0	80.6	

TABLE 6

WISCONSIN DEPARTMENT OF NATURAL RESOURCES
REFUSE HIDEAWAY LANDFILL
MIDDLETON, WISCONSIN

MONTHLY GAS PROBE MONITORING RESULTS

Location	Date	Pressure	CH_4*		O_2	CO_2	Balance Gas**	Comments
		(in. WC)	(% LEL)	(% Vol)	(% Vol)	(% Vol)	(% Vol)	
G-8	11/26/13	0.00	0.0	--	--	--	--	Readings were suspect.
G-8	12/17/13	0.00	0.0	0.0	20.9	0.0	79.1	
G-8	1/24/14	0.00	0.0	0.0	20.9	0.0	79.1	
G-8	2/27/14	0.00	0.0	0.0	20.9	0.0	79.1	
G-8	3/24/14	0.00	0.0	0.0	20.9	0.0	79.1	
G-8	4/28/14	0.00	0.0	0.0	20.9	0.0	79.1	
G-8	5/28/14	0.00	0.0	0.0	20.9	0.0	79.1	
G-8	6/24/14	0.00	0.0	0.0	19.9	0.0	80.1	
G-9	7/11/13	0.00	2.0	0.0	20.9	0.0	79.1	
G-9	8/5/13	0.00	0.0	0.0	20.9	0.0	79.1	
G-9	9/24/13	0.00	0.0	0.0	20.9	0.0	79.1	
G-9	10/22/13	0.00	0.0	0.0	20.3	0.4	79.3	
G-9	11/26/13	0.00	0.0	--	--	--	--	Readings were suspect.
G-9	12/17/13	0.00	0.0	0.0	12.8	3.6	83.6	
G-9	1/24/14	0.00	0.0	0.0	12.6	3.4	84.0	
G-9	2/27/14	0.00	0.0	0.0	20.9	0.0	79.1	
G-9	3/24/14	0.00	0.0	0.0	13.8	3.0	83.2	
G-9	4/28/14	0.00	0.0	0.0	11.5	3.6	84.9	
G-9	5/28/14	0.00	2.0	0.0	20.9	0.0	79.1	
G-9	6/24/14	0.00	0.0	0.0	20.9	0.0	79.1	
G-10	7/11/13	0.00	0.0	0.0	20.9	0.0	79.1	
G-10	8/5/13	0.00	0.0	0.0	20.4	0.6	79.0	
G-10	9/24/13	0.00	0.0	0.0	20.9	0.0	79.1	
G-10	10/22/13	0.00	0.0	0.0	20.9	0.0	79.1	
G-10	11/26/13	0.00	0.0	0.0	20.9	0.0	79.1	
G-10	12/17/13	0.00	0.0	0.0	19.4	0.8	79.8	casing partially filled with snow
G-10	1/24/14	0.00	0.0	0.0	20.6	0.6	78.8	well casing interior surface iced
G-10	2/27/14	0.00	0.0	0.0	20.9	0.0	79.1	well casing interior surface iced
G-10	3/24/14	0.00	0.0	0.0	20.9	0.0	79.1	
G-10	4/28/14	0.00	1.0	0.0	19.4	0.8	79.8	
G-10	5/28/14	0.00	0.0	0.0	20.9	0.0	79.1	
G-10	6/24/14	0.00	0.0	0.0	20.9	0.0	79.1	
GP-11S	7/11/13	0.00	**180.0**	**9.0**	1.1	13.2	76.7	

TABLE 6

WISCONSIN DEPARTMENT OF NATURAL RESOURCES
REFUSE HIDEAWAY LANDFILL
MIDDLETON, WISCONSIN

MONTHLY GAS PROBE MONITORING RESULTS

Location	Date	Pressure	CH_4*		O_2	CO_2	Balance Gas**	Comments
		(in. WC)	(% LEL)	(% Vol)	(% Vol)	(% Vol)	(% Vol)	
GP-11S	8/5/13	0.00	**140.0**	**7.0**	0.2	16.6	76.2	
GP-11S	9/24/13	0.00	62.0	3.1	1.3	15.0	80.7	
GP-11S	10/22/13	0.00	0.0	0.0	19.7	1.8	78.5	
GP-11S	11/26/13	0.00	0.0	0.0	20.9	0.2	78.9	
GP-11S	12/17/13	0.05	0.0	0.0	20.8	0.4	78.8	
GP-11S	1/24/14	0.00	0.0	0.0	20.9	0.4	78.7	
GP-11S	2/27/14	0.00	0.0	0.0	20.9	0.0	79.1	
GP-11S	3/24/14	0.00	0.0	0.0	20.9	0.4	78.7	
GP-11S	4/28/14	0.00	0.0	0.0	20.2	0.8	79.0	
GP-11S	5/28/14	0.00	0.0	0.0	3.9	5.6	90.5	
GP-11S	6/24/14	0.00	90.0	4.5	5.6	8.6	81.3	RKI measuring high CH4; bump test results in 70% CH4 reading of 50%standard
GP-11D	7/11/13	0.00	**200.0**	**10.0**	1.6	14.8	73.6	
GP-11D	8/5/13	0.00	**180.0**	**9.0**	0.2	17.6	73.2	
GP-11D	9/24/13	0.00	**140.0**	**7.0**	2.9	16.2	73.9	
GP-11D	10/22/13	0.00	20.0	1.0	17.9	3.6	77.5	
GP-11D	11/26/13	-0.05	0.0	0.0	21.2	0.0	78.8	
GP-11D	12/17/13	0.00	0.0	0.0	20.9	0.0	79.1	
GP-11D	1/24/14	0.00	0.0	0.0	20.9	0.0	79.1	
GP-11D	2/27/14	0.00	0.0	0.0	20.9	0.0	79.1	
GP-11D	3/24/14	0.00	0.0	0.0	20.9	0.0	79.1	
GP-11D	4/28/14	0.00	0.0	0.0	20.3	0.6	79.1	
GP-11D	5/28/14	0.00	**100.0**	**5.0**	1.5	11.2	82.3	
GP-11D	6/24/14	0.00	**100.0**	**5.0**	9.7	5.8	79.5	RKI measuring high CH4; bump test results in 70% CH4 reading of 50%standard
GPW-1S	7/11/13	0.00	0.0	0.0	16.4	2.4	81.2	
GPW-1S	8/5/13	0.00	0.0	0.0	20.5	0.6	78.9	
GPW-1S	9/24/13	0.00	0.0	0.0	20.9	0.4	78.7	
GPW-1S	10/22/13	0.00	0.0	0.0	18.3	3.0	78.7	
GPW-1S	11/26/13	0.00	0.0	0.0	20.9	0.0	79.1	
GPW-1S	12/17/13	0.00	0.0	0.0	20.7	0.4	78.9	
GPW-1S	1/24/14	0.00	0.0	0.0	19.7	1.4	78.9	

TABLE 6

WISCONSIN DEPARTMENT OF NATURAL RESOURCES
REFUSE HIDEAWAY LANDFILL
MIDDLETON, WISCONSIN

MONTHLY GAS PROBE MONITORING RESULTS

Location	Date	Pressure	CH_4*		O_2	CO_2	Balance Gas**	Comments
		(in. WC)	(% LEL)	(% Vol)	(% Vol)	(% Vol)	(% Vol)	
GPW-1S	2/27/14	0.00	0.0	0.0	20.4	1.0	78.6	
GPW-1S	3/24/14	0.00	0.0	0.0	19.8	1.0	79.2	
GPW-1S	4/28/14	0.00	0.0	0.0	19.1	1.6	79.3	
GPW-1S	5/28/14	0.00	0.0	0.0	19.1	1.8	79.1	
GPW-1S	6/24/14	0.00	0.0	0.0	18.5	1.8	79.7	
GPW-1M	7/11/13	0.50	0.0	0.0	20.9	0.0	79.1	
GPW-1M	8/5/13	0.50	0.0	0.0	20.6	0.6	78.8	
GPW-1M	9/24/13	0.35	0.0	0.0	20.9	0.4	78.7	
GPW-1M	10/22/13	0.20	0.0	0.0	20.9	0.0	79.1	
GPW-1M	11/26/13	-0.25	0.0	0.0	21.0	0.0	79.0	
GPW-1M	12/17/13	0.25	0.0	0.0	20.7	0.4	78.9	
GPW-1M	1/24/14	3.00	0.0	0.0	20.9	0.2	78.9	
GPW-1M	2/27/14	-0.90	0.0	0.0	20.9	0.0	79.1	
GPW-1M	3/24/14	0.70	0.0	0.0	20.9	0.0	79.1	
GPW-1M	4/28/14	0.45	0.0	0.0	20.3	0.4	79.3	
GPW-1M	5/28/14	-0.10	0.0	0.0	20.9	0.0	79.1	
GPW-1M	6/24/14	-0.40	0.0	0.0	20.9	0.0	79.1	
GPW-1D	7/11/13	0.00	0.0	0.0	18.0	1.4	80.6	
GPW-1D	8/5/13	0.65	0.0	0.0	19.0	1.4	79.6	
GPW-1D	9/24/13	0.40	0.0	0.0	18.6	2.4	79.0	
GPW-1D	10/22/13	0.20	0.0	0.0	19.0	2.4	78.6	
GPW-1D	11/26/13	-0.25	0.0	0.0	20.9	0.0	79.1	
GPW-1D	12/17/13	0.27	0.0	0.0	19.1	1.8	79.1	
GPW-1D	1/24/14	3.00	0.0	0.0	20.1	1.6	78.3	
GPW-1D	2/27/14	-1.00	0.0	0.0	19.9	1.2	78.9	
GPW-1D	3/24/14	0.80	0.0	0.0	19.3	1.0	79.7	
GPW-1D	4/28/14	0.45	0.0	0.0	19.5	1.2	79.3	
GPW-1D	5/28/14	-0.15	0.0	0.0	19.6	1.2	79.2	
GPW-1D	6/24/14	-0.45	0.0	0.0	20.9	0.0	79.1	
Speedway Buildings	7/11/13		0.0	0.0	20.9	0.0	79.1	
Speedway Buildings	8/5/13		0.0	0.0	20.9	0.0	79.1	
Speedway Buildings	9/24/13		0.0	0.0	20.9	0.0	79.1	

TABLE 6

WISCONSIN DEPARTMENT OF NATURAL RESOURCES
REFUSE HIDEAWAY LANDFILL
MIDDLETON, WISCONSIN

MONTHLY GAS PROBE MONITORING RESULTS

Location	Date	Pressure	CH_4*		O_2	CO_2	Balance Gas**	Comments
		(in. WC)	(% LEL)	(% Vol)	(% Vol)	(% Vol)	(% Vol)	
Speedway Buildings	10/22/13		0.0	0.0	20.9	0.0	79.1	
Speedway Buildings	11/26/13		0.0	0.0	20.9	0.0	79.1	
Speedway Buildings	12/17/13		0.0	0.0	20.9	0.0	79.1	
Speedway Buildings	1/24/14		0.0	0.0	20.9	0.0	79.1	
Speedway Buildings	2/27/14		0.0	0.0	20.9	0.0	79.1	
Speedway Buildings	3/24/14		0.0	0.0	20.9	0.0	79.1	
Speedway Buildings	4/28/14		0.0	0.0	20.9	0.0	79.1	
Speedway Buildings	5/28/14		0.0	0.0	20.9	0.0	79.1	
Speedway Buildings	6/24/14		0.0	0.0	20.9	0.0	79.1	

% LEL: Percent of lower explosive limit.
% Vol: Percent volume.
*: Percent volume calculated as % LEL/20.
**: Balance gas calculated as 100% - ($\%CH_4+\%CO_2+\%O_2$).
in. WC: Inches of water column.

85.0 Bold values indicate methane concentrations greater than 1.25% volume in landfill perimeter gas probes located near the property line or in the vicinity of Speedway buildings.

FIGURES

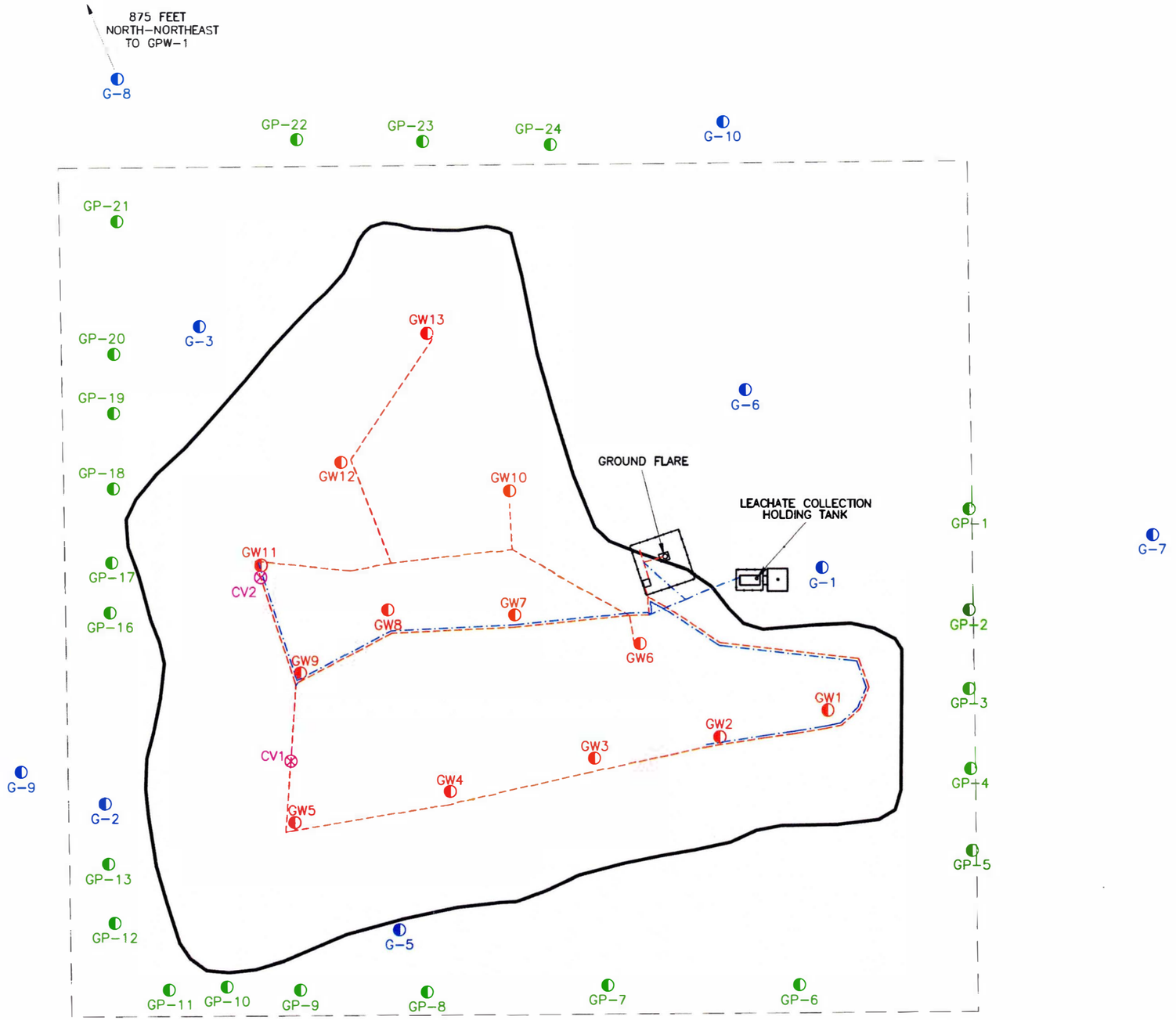
WISCONSIN DEPARTMENT OF NATURAL RESOURCES
REFUSE HIDEAWAY LANDFILL
MIDDLETON, WI

SITE MAP

FILE: SITEMAP.DWG | DATE: SEPTEMBER 2009 | FIGURE: 1

LEGEND

- GW9 — EXISTING LEACHATE/GAS EXTRACTION WELL LOCATION
- G-8 — GAS PROBE LOCATION ("G" SERIES)
- GP-16 — GAS PROBE LOCATION ("GP" SERIES)
- CV1 — CONTROL VALVE LOCATION
- PROPERTY BOUNDARY
- FILL LIMITS
- GAS HEADER PIPE
- LEACHATE CONVEYANCE PIPE
- FENCE LINE



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SCALE IN FEET

Prepared By:
LEGGETTE, BRASHEARS & GRAHAM, INC.
Professional Groundwater and
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6409 Odana Road, Suite C
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REVISED 5/02

FIGURE 2

WISCONSIN DEPARTMENT OF NATURAL RESOURCES
REFUSE HIDEWAY LANDFILL
MIDDLETON, WISCONSIN

ANNUAL LEACHATE COLLECTION VOLUME (2007-2014)

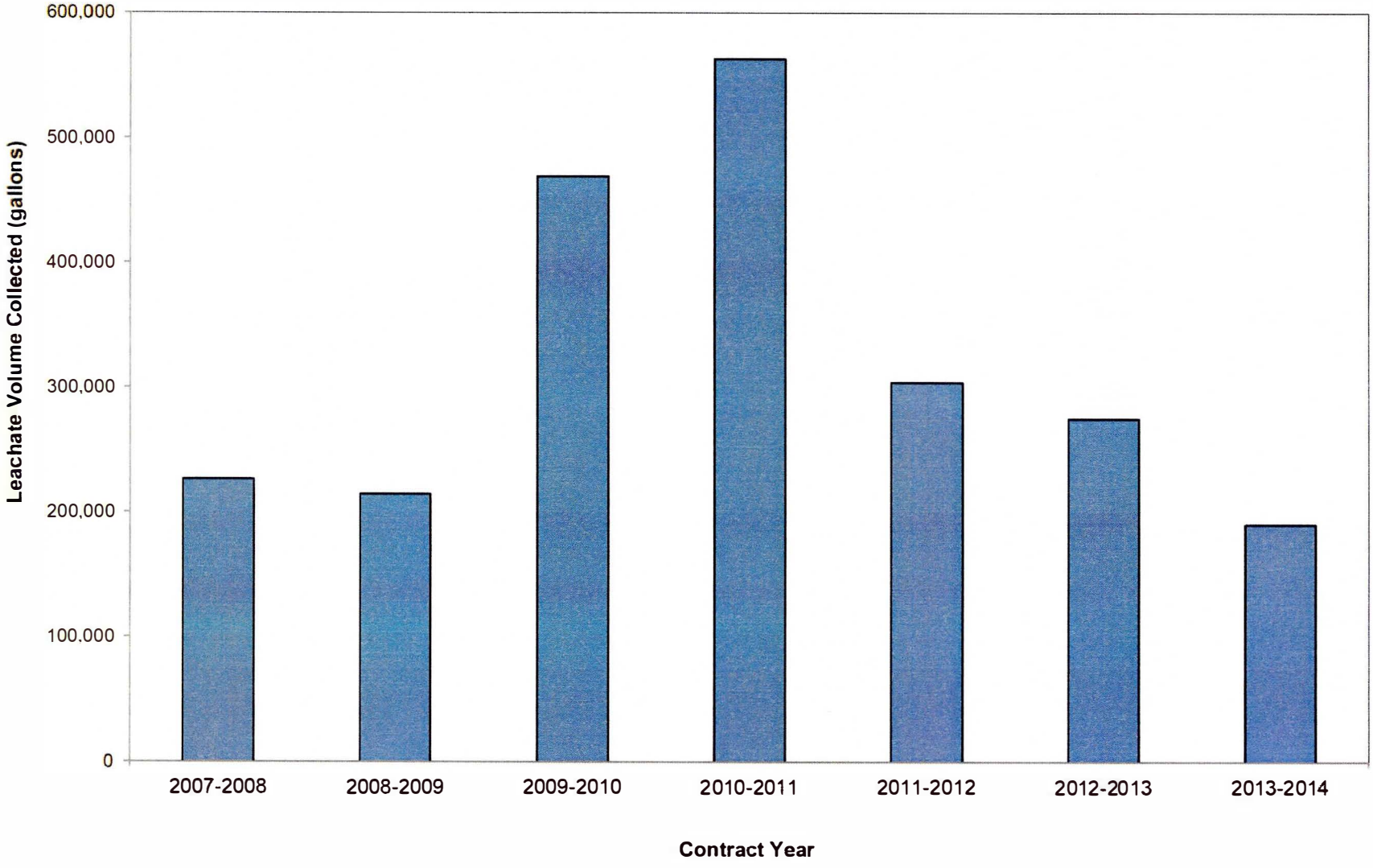
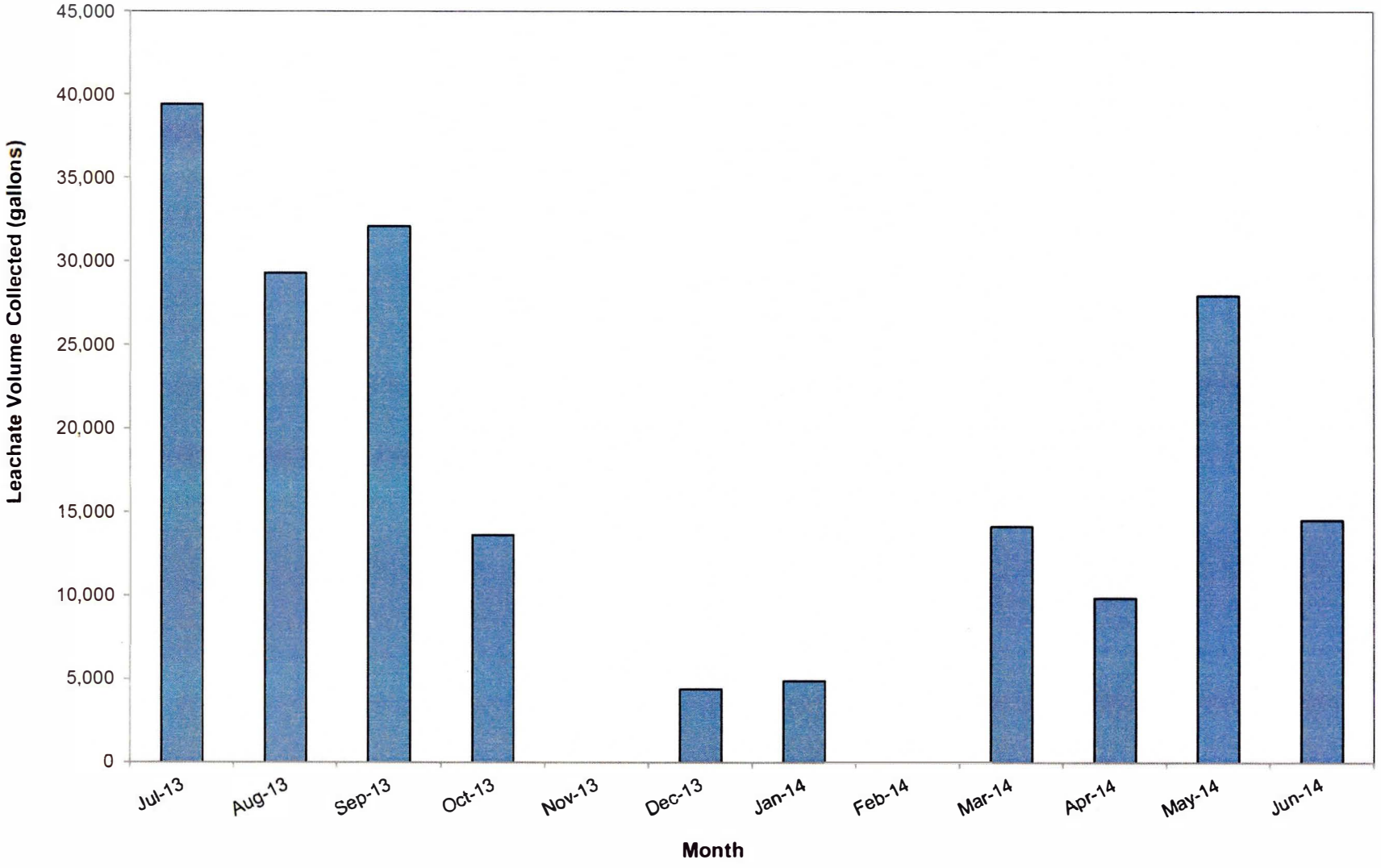


FIGURE 3

WISCONSIN DEPARTMENT OF NATURAL RESOURCES
REFUSE HIDEWAY LANDFILL
MIDDLETON, WISCONSIN

MONTHLY LEACHATE COLLECTION VOLUME (JULY 2013-JUNE 2014)



Service Layer Credits: Source: Esri, i-cubed, USDA, USGS, AEX, GeoEye, Getmapping, Aerogrid, IGN, IGP, and the GIS User Community

Z:\GIS\Refuse_Hideaway\maps\g3refuse01a.mxd 9/18/2013 8:30:28 AM NAD 1983 UTM Zone 16N

Prepared By:
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REFUSE HIDEAWAY LANDFILL

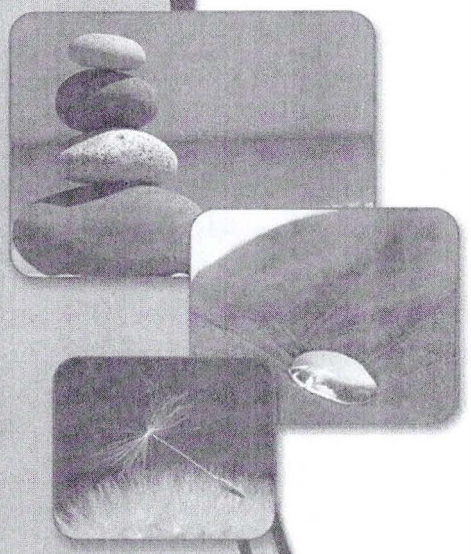
MIDDLETON, WISCONSIN

SITE GAS WELLS/PROBES

FILE: g3refuse01a.MXD	DATE: 9/13/2013	FIGURE: 4

APPENDIX I

LEACHATE LABORATORY ANALYTICAL REPORTS AND CHAIN-OF-CUSTODY DOCUMENTS



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TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Chicago
2417 Bond Street
University Park, IL 60484
Tel: (708)534-5200

TestAmerica Job ID: 500-63611-1
Client Project/Site: Refuse Hideaway 1013.DNRRHL.00.003.03

For:
Leggette, Brashears & Graham, Inc.
6409 Odana Road
Suite 11
Madison, Wisconsin 53719

Attn: Jennifer Shelton

Sandie Fredrick

Authorized for release by:
10/1/2013 10:36:32 AM

Sandie Fredrick, Project Manager I
(920)261-1660
sandie.fredrick@testamericainc.com

Table of Contents

Job ID: 500-63611-1

Laboratory: TestAmerica Chicago

Narrative

Job Narrative
500-63611-1

Comments
No additional comments.

Receipt
The sample was received on 9/25/2013 10:00 AM; the sample arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.4° C.

Metals
No analytical or quality issues were noted.

General Chemistry
Method(s) SM 3500 CR B: The hexavalent chromium matrix spike (MS) recovery for batch 204241 was outside control limits. The associated laboratory control sample (LCS) recovery met acceptance criteria. A matrix spike duplicate could not be analyzed due to limited volume.

No other analytical or quality issues were noted.

Detection Summary

Client: Leggette, Brashears & Graham, Inc.
Project/Site: Refuse Hideaway 1013.DNRRHL.00.003.03

TestAmerica Job ID: 500-63611-1

Client Sample ID: Leachate

Lab Sample ID: 500-63611-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cadmium	0.0015	J B	0.0020	0.00026	mg/L	1		6010B	Total/NA
Chromium	0.013		0.010	0.0010	mg/L	1		6010B	Total/NA
Copper	0.0029	J	0.010	0.0019	mg/L	1		6010B	Total/NA
Molybdenum	0.0028	J	0.010	0.0021	mg/L	1		6010B	Total/NA
Nickel	0.042		0.010	0.0012	mg/L	1		6010B	Total/NA
Zinc	0.0084	J B	0.020	0.0025	mg/L	1		6010B	Total/NA
Chromium, hexavalent	0.0078	J	0.010	0.0038	mg/L	1		SM 3500 CR B	Total/NA
Cyanide, Total	0.0080	J B	0.010	0.0012	mg/L	1		SM 4500 CN E	Total/NA

This Detection Summary does not include radiochemical test results

Method Summary

Client: Leggette, Brashears & Graham, Inc.
Project/Site: Refuse Hideaway 1013.DNRRHL.00.003.03

TestAmerica Job ID: 500-63611-1

Method	Method Description	Protocol	Laboratory
6010B	Metals (ICP)	SW846	TAL CHI
7470A	Mercury (CVAA)	SW846	TAL CHI
SM 3500 CR B	Chromium, Hexavalent	SM	TAL CHI
SM 4500 CN E	Cyanide, Total	SM	TAL CHI

Protocol References:

SM = "Standard Methods For The Examination Of Water And Wastewater",

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates

Laboratory References:

TAL CHI = TestAmerica Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

Sample Summary

Client: Leggette, Brashears & Graham, Inc.
Project/Site: Refuse Hideaway 1013.DNRRHL.00.003.03

TestAmerica Job ID: 500-63611-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-63611-1	Leachate	Leachate	09/24/13 16:00	09/25/13 10:00

Client Sample ID: Leachate

Date Collected: 09/24/13 16:00
Date Received: 09/25/13 10:00

Lab Sample ID: 500-63611-1

Matrix: Leachate

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	**0.0015**	**J B**	0.0020	0.00026	mg/L		09/25/13 15:00	09/30/13 19:32	1
Chromium	**0.013**		0.010	0.0010	mg/L		09/25/13 15:00	09/30/13 19:32	1
Copper	**0.0029**	**J**	0.010	0.0019	mg/L		09/25/13 15:00	09/30/13 19:32	1
Lead	<0.0023		0.0050	0.0023	mg/L		09/25/13 15:00	09/30/13 19:32	1
Molybdenum	**0.0028**	**J**	0.010	0.0021	mg/L		09/25/13 15:00	09/30/13 19:32	1
Nickel	**0.042**		0.010	0.0012	mg/L		09/25/13 15:00	09/30/13 19:32	1
Selenium	<0.0046		0.010	0.0046	mg/L		09/25/13 15:00	09/30/13 19:32	1
Silver	<0.00057		0.0050	0.00057	mg/L		09/25/13 15:00	09/30/13 19:32	1
Zinc	**0.0084**	**J B**	0.020	0.0025	mg/L		09/25/13 15:00	09/30/13 19:32	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.064		0.20	0.064	ug/L		09/27/13 16:10	09/30/13 10:23	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium, hexavalent	**0.0078**	**J**	0.010	0.0038	mg/L			09/25/13 14:02	1
Cyanide, Total	**0.0080**	**J B**	0.010	0.0012	mg/L		09/26/13 12:05	09/27/13 17:37	1

Qualifiers

Metals

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value

General Chemistry

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value
B	Compound was found in the blank and sample.
F	MS/MSD Recovery and/or RPD exceeds the control limits

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Metals

Prep Batch: 204237

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-63611-1	Leachate	Total/NA	Leachate	3010A	
LCS 500-204237/2-A	Lab Control Sample	Total/NA	Water	3010A	
MB 500-204237/1-A	Method Blank	Total/NA	Water	3010A	

Prep Batch: 204642

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-63611-1	Leachate	Total/NA	Leachate	7470A	
LCS 500-204642/13-A	Lab Control Sample	Total/NA	Water	7470A	
MB 500-204642/12-A	Method Blank	Total/NA	Water	7470A	

Analysis Batch: 204862

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-63611-1	Leachate	Total/NA	Leachate	7470A	204642
LCS 500-204642/13-A	Lab Control Sample	Total/NA	Water	7470A	204642
MB 500-204642/12-A	Method Blank	Total/NA	Water	7470A	204642

Analysis Batch: 204973

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-63611-1	Leachate	Total/NA	Leachate	6010B	204237
LCS 500-204237/2-A	Lab Control Sample	Total/NA	Water	6010B	204237
MB 500-204237/1-A	Method Blank	Total/NA	Water	6010B	204237

General Chemistry

Analysis Batch: 204241

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-63611-1	Leachate	Total/NA	Leachate	SM 3500 CR B	
500-63611-1 MS	Leachate	Total/NA	Leachate	SM 3500 CR B	
LCS 500-204241/4	Lab Control Sample	Total/NA	Water	SM 3500 CR B	
LCSD 500-204241/5	Lab Control Sample Dup	Total/NA	Water	SM 3500 CR B	
MB 500-204241/3	Method Blank	Total/NA	Water	SM 3500 CR B	

Prep Batch: 204393

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-63611-1	Leachate	Total/NA	Leachate	Distill/CN	
500-63611-1 MS	Leachate	Total/NA	Leachate	Distill/CN	
500-63611-1 MSD	Leachate	Total/NA	Leachate	Distill/CN	
LCS 500-204393/2-A	Lab Control Sample	Total/NA	Water	Distill/CN	
MB 500-204393/1-A	Method Blank	Total/NA	Water	Distill/CN	

Analysis Batch: 204700

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-63611-1	Leachate	Total/NA	Leachate	SM 4500 CN E	204393
500-63611-1 MS	Leachate	Total/NA	Leachate	SM 4500 CN E	204393
500-63611-1 MSD	Leachate	Total/NA	Leachate	SM 4500 CN E	204393
DLCK 500-204700/5 DLCK	Lab Control Sample	Total/NA	Water	SM 4500 CN E	
LCS 500-204393/2-A	Lab Control Sample	Total/NA	Water	SM 4500 CN E	204393
MB 500-204393/1-A	Method Blank	Total/NA	Water	SM 4500 CN E	204393

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 500-204237/1-A
Matrix: Water
Analysis Batch: 204973

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 204237

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	0.000263	J	0.0020	0.00026	mg/L		09/25/13 15:00	09/30/13 19:04	1
Chromium	<0.0010		0.010	0.0010	mg/L		09/25/13 15:00	09/30/13 19:04	1
Copper	<0.0019		0.010	0.0019	mg/L		09/25/13 15:00	09/30/13 19:04	1
Lead	<0.0023		0.0050	0.0023	mg/L		09/25/13 15:00	09/30/13 19:04	1
Molybdenum	<0.0021		0.010	0.0021	mg/L		09/25/13 15:00	09/30/13 19:04	1
Nickel	<0.0012		0.010	0.0012	mg/L		09/25/13 15:00	09/30/13 19:04	1
Selenium	<0.0046		0.010	0.0046	mg/L		09/25/13 15:00	09/30/13 19:04	1
Silver	<0.00057		0.0050	0.00057	mg/L		09/25/13 15:00	09/30/13 19:04	1
Zinc	0.00360	J	0.020	0.0025	mg/L		09/25/13 15:00	09/30/13 19:04	1

Lab Sample ID: LCS 500-204237/2-A
Matrix: Water
Analysis Batch: 204973

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 204237

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cadmium	0.0500	0.0475		mg/L		95	80 - 120
Chromium	0.200	0.194		mg/L		97	80 - 120
Copper	0.250	0.249		mg/L		100	80 - 120
Lead	0.100	0.0984		mg/L		98	80 - 120
Molybdenum	1.00	0.978		mg/L		98	80 - 120
Nickel	0.500	0.474		mg/L		95	80 - 120
Selenium	0.100	0.0852		mg/L		85	80 - 120
Silver	0.0500	0.0472		mg/L		94	80 - 120
Zinc	0.500	0.475		mg/L		95	80 - 120

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 500-204642/12-A
Matrix: Water
Analysis Batch: 204862

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 204642

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.064		0.20	0.064	ug/L		09/27/13 16:10	09/30/13 09:27	1

Lab Sample ID: LCS 500-204642/13-A
Matrix: Water
Analysis Batch: 204862

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 204642

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	2.00	2.05		ug/L		103	80 - 120

Method: SM 3500 CR B - Chromium, Hexavalent

Lab Sample ID: MB 500-204241/3
Matrix: Water
Analysis Batch: 204241

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium, hexavalent	<0.0038		0.010	0.0038	mg/L			09/25/13 14:01	1

Lab Sample ID: LCS 500-204241/4
Matrix: Water
Analysis Batch: 204241

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chromium, hexavalent	0.250	0.251		mg/L		100	85 - 115

Lab Sample ID: LCSD 500-204241/5
Matrix: Water
Analysis Batch: 204241

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chromium, hexavalent	0.250	0.249		mg/L		100	85 - 115	1	20

Lab Sample ID: 500-63611-1 MS
Matrix: Leachate
Analysis Batch: 204241

Client Sample ID: Leachate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chromium, hexavalent	0.0078	J	0.250	0.0808	F	mg/L		29	85 - 115

Method: SM 4500 CN E - Cyanide, Total

Lab Sample ID: MB 500-204393/1-A
Matrix: Water
Analysis Batch: 204700

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 204393

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	0.00150	J	0.010	0.0012	mg/L		09/26/13 12:05	09/27/13 17:35	1

Lab Sample ID: LCS 500-204393/2-A
Matrix: Water
Analysis Batch: 204700

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 204393

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	0.100	0.105		mg/L		105	80 - 120

Lab Sample ID: 500-63611-1 MS
Matrix: Leachate
Analysis Batch: 204700

Client Sample ID: Leachate
Prep Type: Total/NA
Prep Batch: 204393

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	0.0080	J B	0.0400	0.0468		mg/L		97	75 - 125

Method: SM 4500 CN E - Cyanide, Total (Continued)

Lab Sample ID: 500-63611-1 MSD
Matrix: Leachate
Analysis Batch: 204700

Client Sample ID: Leachate
Prep Type: Total/NA
Prep Batch: 204393

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cyanide, Total	0.0080	J B	0.0400	0.0462		mg/L		96	75 - 125	1	20

Lab Sample ID: DLCK 500-204700/5 DLCK
Matrix: Water
Analysis Batch: 204700

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	DLCK Result	DLCK Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	0.00500	0.00610	J	mg/L		122	10 - 190

Lab Chronicle

Client: Leggette, Brashears & Graham, Inc.
Project/Site: Refuse Hideaway 1013.DNRRHL.00.003.03

TestAmerica Job ID: 500-63611-1

Client Sample ID: Leachate
Date Collected: 09/24/13 16:00
Date Received: 09/25/13 10:00

Lab Sample ID: 500-63611-1
Matrix: Leachate

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	7470A			204642	09/27/13 16:10	BJB	TAL CHI
Total/NA	Analysis	7470A		1	204862	09/30/13 10:23	BJB	TAL CHI
Total/NA	Prep	3010A			204237	09/25/13 15:00	RLL	TAL CHI
Total/NA	Analysis	6010B		1	204973	09/30/13 19:32	LEG	TAL CHI
Total/NA	Analysis	SM 3500 CR B		1	204241		KD1	TAL CHI
						(Start) 09/25/13 14:02		
						(End) 09/25/13 14:03		
Total/NA	Prep	Distill/CN			204393	09/26/13 12:05	EAT	TAL CHI
Total/NA	Analysis	SM 4500 CN E		1	204700		EAT	TAL CHI
						(Start) 09/27/13 17:37		
						(End) 09/27/13 17:37		

Laboratory References:

TAL CHI = TestAmerica Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

Certification Summary

Client: Leggette, Brashears & Graham, Inc.
Project/Site: Refuse Hideaway 1013.DNRRHL.00.003.03

TestAmerica Job ID: 500-63611-1

Laboratory: TestAmerica Chicago

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alabama	State Program	4	40461	04-30-14
California	NELAP	9	01132CA	04-30-14
Georgia	State Program	4	N/A	04-30-14
Hawaii	State Program	9	N/A	04-30-14
Illinois	NELAP	5	100201	04-30-14
Indiana	State Program	5	C-IL-02	04-30-14
Iowa	State Program	7	82	05-01-14
Kansas	NELAP	7	E-10161	10-31-13
Kentucky	State Program	4	90023	12-31-13
Kentucky (UST)	State Program	4	66	04-30-14
Louisiana	NELAP	6	30720	06-30-14
Massachusetts	State Program	1	M-IL035	06-30-14
Mississippi	State Program	4	N/A	04-30-14
North Carolina DENR	State Program	4	291	12-31-13
North Dakota	State Program	8	R-194	04-30-14
Oklahoma	State Program	6	8908	08-31-14
South Carolina	State Program	4	77001	10-30-13 *
Texas	NELAP	6	T104704252-09-TX	02-28-14
USDA	Federal		P330-12-00038	02-06-15
Wisconsin	State Program	5	999580010	08-31-14
Wyoming	State Program	8	8TMS-Q	04-30-14

* Expired certification is currently pending renewal and is considered valid.

TestAmerica

THE LEADER IN ENVIRONMENTAL

2417 Bond Street, University Park, IL 6048
Phone: 708.534.5200 Fax: 708.534.5

500-63611 COC

Chain of Custody Record

Lab Job #: 500-63611

Chain of Custody Number:

Page 1 of 1

Temperature °C of Cooler: 2.4

Report To (optional)	Bill To (optional)
Contact: J. Shelton	Contact: J. Shelton
Company: LBG	Company: LBG
Address:	Address:
Address:	Address:
Phone:	Phone:
Fax:	Fax:
E-Mail:	PO#/Reference#

Client: LBG	Client Project #: 1013.DURRHG.00.003.03	Preservative	Nitric Acid / Sodium Hydroxide / —
Project Name: ~~Quarter~~ Refuse Hideaway Landfill		Parameter	Metals/Mercury / Cyanide / Hex. Chrome
Project Location/State: Middleton WI	Lab Project #: 500068867		
Sampler:	Lab PM:		

Preservative Key
1. HCL, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. NaHSO4
7. Cool to 4°
8. None
9. Other

Lab ID	MS/MSD	Sample ID	Sampling Date	Sampling Time	# of Containers	Matrix	Metals/Mercury	Cyanide	Hex. Chrome	Comments
1		Leachate	9-24	1600	3	L	X	X	X	

Turnaround Time Required (Business Days)
___ 1 Day ___ 2 Days ___ 5 Days ___ 7 Days ___ 10 Days ___ 15 Days _____ Other
Requested Due Date _____

Sample Disposal
☐ Return to Client ☐ Disposal by Lab ☐ Archive for _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Relinquished By	Company	Date	Time	Received By	Company	Date	Time
AWH	LBG	9-24	1630	[illegible]	TA-ART	9/25/13	1000

Lab Courier
Shipped: Fedex
Hand Delivered

Matrix Key
WW – Wastewater
W – Water
S – Soil
SL – Sludge
MS – Miscellaneous
OL – Oil
A – Air
SE – Sediment
SO – Soil
L – Leachate
WI – Wipe
DW – Drinking Water
O – Other

Client Comments
Metals: Cadmium, Chromium, copper, Lead, Selenium, silver, Zinc, molybdenum

Lab Comments:

Login Sample Receipt Checklist

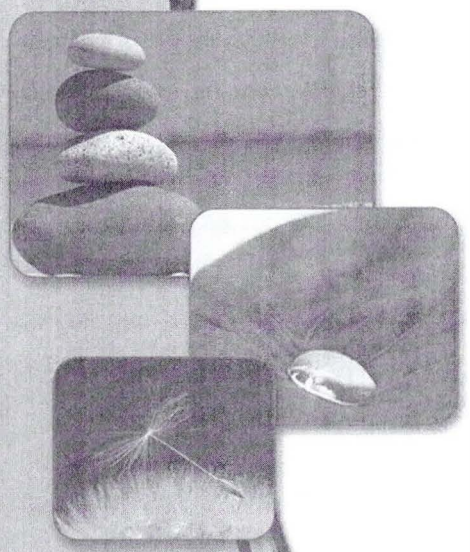
Client: Leggette, Brashears & Graham, Inc.

Job Number: 500-63611-1

Login Number: 63611
List Number: 1
Creator: Scott, Sherri L

List Source: TestAmerica Chicago

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.4
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Chicago
2417 Bond Street
University Park, IL 60484
Tel: (708)534-5200

TestAmerica Job ID: 500-68890-1
Client Project/Site: Refuse Hideaway Landfill

For:
Leggette, Brashears & Graham, Inc.
6409 Odana Road
Suite 11
Madison, Wisconsin 53719

Attn: Jennifer Shelton

Sandie Fredrick

Authorized for release by:
12/27/2013 11:49:37 AM

Sandie Fredrick, Project Manager II
(920)261-1660
sandie.fredrick@testamericainc.com

Table of Contents

Case Narrative

Client: Leggette, Brashears & Graham, Inc.
Project/Site: Refuse Hideaway Landfill

TestAmerica Job ID: 500-68890-1

Job ID: 500-68890-1

Laboratory: TestAmerica Chicago

Narrative

Job Narrative
500-68890-1

Comments
No additional comments.

Receipt
The sample was received on 12/19/2013 10:50 AM; the sample arrived in good condition, properly preserved and, where required, on ice.
The temperature of the cooler at receipt was 3.2° C.

Metals
No analytical or quality issues were noted.

General Chemistry
No analytical or quality issues were noted.

Detection Summary

Client: Leggette, Brashears & Graham, Inc.
Project/Site: Refuse Hideaway Landfill

TestAmerica Job ID: 500-68890-1

Client Sample ID: Leachate

Lab Sample ID: 500-68890-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cadmium	0.0016	J B	0.0020	0.00026	mg/L	1		6010B	Total/NA
Chromium	0.0063	J	0.010	0.0010	mg/L	1		6010B	Total/NA
Copper	0.0044	J	0.010	0.0019	mg/L	1		6010B	Total/NA
Lead	0.0050		0.0050	0.0023	mg/L	1		6010B	Total/NA
Nickel	0.029		0.010	0.0012	mg/L	1		6010B	Total/NA
Zinc	0.031	B	0.020	0.0025	mg/L	1		6010B	Total/NA
Cyanide, Total	0.0038	J	0.010	0.0012	mg/L	1		SM 4500 CN E	Total/NA

This Detection Summary does not include radiochemical test results.

Method Summary

Client: Leggette, Brashears & Graham, Inc.
Project/Site: Refuse Hideaway Landfill

TestAmerica Job ID: 500-68890-1

Method	Method Description	Protocol	Laboratory
6010B	Metals (ICP)	SW846	TAL CHI
7470A	Mercury (CVAA)	SW846	TAL CHI
SM 3500 CR B	Chromium, Hexavalent	SM	TAL CHI
SM 4500 CN E	Cyanide, Total	SM	TAL CHI

Protocol References:

SM = "Standard Methods For The Examination Of Water And Wastewater",

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL CHI = TestAmerica Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

Sample Summary

Client: Leggette, Brashears & Graham, Inc.
Project/Site: Refuse Hideaway Landfill

TestAmerica Job ID: 500-68890-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-68890-1	Leachate	Leachate	12/18/13 16:50	12/19/13 10:50

Client: Leggette, Brashears & Graham, Inc.
Project/Site: Refuse Hideaway Landfill

TestAmerica Job ID: 500-68890-1

Client Sample ID: Leachate
Date Collected: 12/18/13 16:50
Date Received: 12/19/13 10:50

Lab Sample ID: 500-68890-1
Matrix: Leachate

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	**0.0016**	J B	0.0020	0.00026	mg/L		12/26/13 08:00	12/26/13 18:41	1
Chromium	**0.0063**	J	0.010	0.0010	mg/L		12/26/13 08:00	12/26/13 18:41	1
Copper	**0.0044**	J	0.010	0.0019	mg/L		12/26/13 08:00	12/26/13 18:41	1
Lead	**0.0050**		0.0050	0.0023	mg/L		12/26/13 08:00	12/26/13 18:41	1
Molybdenum	<0.0021		0.010	0.0021	mg/L		12/26/13 08:00	12/26/13 18:41	1
Nickel	**0.029**		0.010	0.0012	mg/L		12/26/13 08:00	12/26/13 18:41	1
Selenium	<0.0046		0.010	0.0046	mg/L		12/26/13 08:00	12/26/13 18:41	1
Silver	<0.00057		0.0050	0.00057	mg/L		12/26/13 08:00	12/26/13 18:41	1
Zinc	**0.031**	B	0.020	0.0025	mg/L		12/26/13 08:00	12/26/13 18:41	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.064		0.20	0.064	ug/L		12/20/13 16:00	12/26/13 09:20	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium, hexavalent	<0.0038		0.010	0.0038	mg/L			12/19/13 16:28	1
Cyanide, Total	**0.0038**	J	0.010	0.0012	mg/L		12/22/13 19:30	12/22/13 22:52	1

Qualifiers

Metals

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Metals

Prep Batch: 217197

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-68890-1	Leachate	Total/NA	Leachate	7470A	
LCS 500-217197/13-A	Lab Control Sample	Total/NA	Water	7470A	
MB 500-217197/12-A	Method Blank	Total/NA	Water	7470A	

Prep Batch: 217747

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-68890-1	Leachate	Total/NA	Leachate	3010A	
LCS 500-217747/2-A	Lab Control Sample	Total/NA	Water	3010A	
MB 500-217747/1-A	Method Blank	Total/NA	Water	3010A	

Analysis Batch: 217772

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-68890-1	Leachate	Total/NA	Leachate	7470A	217197
LCS 500-217197/13-A	Lab Control Sample	Total/NA	Water	7470A	217197
MB 500-217197/12-A	Method Blank	Total/NA	Water	7470A	217197

Analysis Batch: 217865

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-68890-1	Leachate	Total/NA	Leachate	6010B	217747
LCS 500-217747/2-A	Lab Control Sample	Total/NA	Water	6010B	217747
MB 500-217747/1-A	Method Blank	Total/NA	Water	6010B	217747

General Chemistry

Analysis Batch: 217069

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-68890-1	Leachate	Total/NA	Leachate	SM 3500 CR B	
LCS 500-217069/4	Lab Control Sample	Total/NA	Water	SM 3500 CR B	
MB 500-217069/3	Method Blank	Total/NA	Water	SM 3500 CR B	

Prep Batch: 217381

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-68890-1	Leachate	Total/NA	Leachate	Distill/CN	
LCS 500-217381/2-A	Lab Control Sample	Total/NA	Water	Distill/CN	
MB 500-217381/1-A	Method Blank	Total/NA	Water	Distill/CN	

Analysis Batch: 217389

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-68890-1	Leachate	Total/NA	Leachate	SM 4500 CN E	217381
LCS 500-217381/2-A	Lab Control Sample	Total/NA	Water	SM 4500 CN E	217381
MB 500-217381/1-A	Method Blank	Total/NA	Water	SM 4500 CN E	217381

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 500-217747/1-A
Matrix: Water
Analysis Batch: 217865

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 217747

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	0.000415	J	0.0020	0.00026	mg/L		12/26/13 08:00	12/26/13 17:13	1
Chromium	<0.0010		0.010	0.0010	mg/L		12/26/13 08:00	12/26/13 17:13	1
Copper	<0.0019		0.010	0.0019	mg/L		12/26/13 08:00	12/26/13 17:13	1
Lead	<0.0023		0.0050	0.0023	mg/L		12/26/13 08:00	12/26/13 17:13	1
Molybdenum	<0.0021		0.010	0.0021	mg/L		12/26/13 08:00	12/26/13 17:13	1
Nickel	<0.0012		0.010	0.0012	mg/L		12/26/13 08:00	12/26/13 17:13	1
Selenium	<0.0046		0.010	0.0046	mg/L		12/26/13 08:00	12/26/13 17:13	1
Silver	0.000823	J	0.0050	0.00057	mg/L		12/26/13 08:00	12/26/13 17:13	1
Zinc	0.00483	J	0.020	0.0025	mg/L		12/26/13 08:00	12/26/13 17:13	1

Lab Sample ID: LCS 500-217747/2-A
Matrix: Water
Analysis Batch: 217865

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 217747

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cadmium	0.0500	0.0487		mg/L		97	80 - 120
Chromium	0.200	0.191		mg/L		95	80 - 120
Copper	0.250	0.251		mg/L		100	80 - 120
Lead	0.100	0.0998		mg/L		100	80 - 120
Molybdenum	1.00	1.01		mg/L		101	80 - 120
Nickel	0.500	0.488		mg/L		98	80 - 120
Selenium	0.100	0.0939		mg/L		94	80 - 120
Silver	0.0500	0.0483		mg/L		97	80 - 120
Zinc	0.500	0.472		mg/L		94	80 - 120

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 500-217197/12-A
Matrix: Water
Analysis Batch: 217772

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 217197

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.064		0.20	0.064	ug/L		12/20/13 16:00	12/26/13 08:53	1

Lab Sample ID: LCS 500-217197/13-A
Matrix: Water
Analysis Batch: 217772

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 217197

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	2.00	2.08		ug/L		104	80 - 120

Method: SM 3500 CR B - Chromium, Hexavalent

Lab Sample ID: MB 500-217069/3
Matrix: Water
Analysis Batch: 217069

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium, hexavalent	<0.0038		0.010	0.0038	mg/L			12/19/13 16:26	1

Lab Sample ID: LCS 500-217069/4
Matrix: Water
Analysis Batch: 217069

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chromium, hexavalent	0.250	0.227		mg/L		91	85 - 115

Method: SM 4500 CN E - Cyanide, Total

Lab Sample ID: MB 500-217381/1-A
Matrix: Water
Analysis Batch: 217389

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 217381

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.0012		0.010	0.0012	mg/L		12/22/13 19:30	12/22/13 22:46	1

Lab Sample ID: LCS 500-217381/2-A
Matrix: Water
Analysis Batch: 217389

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 217381

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	0.100	0.112		mg/L		112	80 - 120

Lab Chronicle

Client: Leggette, Brashears & Graham, Inc.
Project/Site: Refuse Hideaway Landfill

TestAmerica Job ID: 500-68890-1

Client Sample ID: Leachate

Date Collected: 12/18/13 16:50
Date Received: 12/19/13 10:50

Lab Sample ID: 500-68890-1
Matrix: Leachate

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	7470A			217197	12/20/13 16:00	RLL	TAL CHI
Total/NA	Analysis	7470A		1	217772	12/26/13 09:20	RLL	TAL CHI
Total/NA	Prep	3010A			217747	12/26/13 08:00	MJP	TAL CHI
Total/NA	Analysis	6010B		1	217865	12/26/13 18:41	PJ1	TAL CHI
Total/NA	Analysis	SM 3500 CR B		1	217069		CCK	TAL CHI
						(Start) 12/19/13 16:28		
						(End) 12/19/13 16:29		
Total/NA	Prep	Distill/CN			217381	12/22/13 19:30	NLR	TAL CHI
Total/NA	Analysis	SM 4500 CN E		1	217389		NLR	TAL CHI
						(Start) 12/22/13 22:52		
						(End) 12/22/13 22:52		

Laboratory References:

TAL CHI = TestAmerica Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

Certification Summary

Client: Leggette, Brashears & Graham, Inc.
Project/Site: Refuse Hideaway Landfill

TestAmerica Job ID: 500-68890-1

Laboratory: TestAmerica Chicago

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alabama	State Program	4	40461	04-30-14
California	NELAP	9	01132CA	04-30-14
Georgia	State Program	4	N/A	04-30-14
Hawaii	State Program	9	N/A	04-30-14
Illinois	NELAP	5	100201	04-30-14
Indiana	State Program	5	C-IL-02	04-30-14
Iowa	State Program	7	82	05-01-14
Kansas	NELAP	7	E-10161	10-31-14
Kentucky	State Program	4	90023	12-31-13
Kentucky (UST)	State Program	4	66	04-30-14
Louisiana	NELAP	6	30720	06-30-14
Massachusetts	State Program	1	M-IL035	06-30-14
Mississippi	State Program	4	N/A	04-30-14
North Carolina DENR	State Program	4	291	12-31-14
North Dakota	State Program	8	R-194	04-30-14
Oklahoma	State Program	6	8908	08-31-14
South Carolina	State Program	4	77001	04-30-14
Texas	NELAP	6	T104704252-09-TX	02-28-14
USDA	Federal		P330-12-00038	02-06-15
Wisconsin	State Program	5	999580010	08-31-14
Wyoming	State Program	8	8TMS-Q	04-30-14

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

2417 Bond Street, University Park, IL 60484
Phone: 708.534.5200 Fax: 708.534.5211

Chain of Custody Record

Lab Job #: 500-68890

Chain of Custody Number:

Page _____ of _____

Temperature °C of Cooler: 3.2

Report To (optional)	Bill To (optional)
Contact: J. Skelton	Contact: J. Skelton
Company: LBG	Company: LBG
Address:	Address:
Address:	Address:
Phone:	Phone:
Fax:	Fax:
E-Mail:	PO#/Reference#

Client: LBG | Client Project #:

Project Name: Refuse Hideaway Landfill

Project Location/State: Middleton WI | Lab Project #:

Sampler: Alexandrea Beebe | Lab PM:

Preservative: Nitric Acid | Sodium Hydroxide —

Parameter: metals/mercury | Cyanide | Hex. Chrome

Lab ID	MS/MSD	Sample ID	Sampling Date	Sampling Time	# of Containers	Matrix	metals/mercury	Cyanide	Hex. Chrome
1		Leachate	12-18-13	1650	3	L	X	X	X

Preservative Key

500-68890 COC

Comments

Turnaround Time Required (Business Days)

___ 1 Day ___ 2 Days ___ 5 Days ___ 7 Days ___ 10 Days ___ 15 Days _____ Other

Requested Due Date_____

Sample Disposal: ☐ Return to Client ☐ Disposal by Lab ☐ Archive for _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Relinquished By	Company	Date	Time	Received By	Company	Date	Time
Alexandrea Babe	LBG	12-18-13	1715	[signature]	TAL	12/19/13	1050
Relinquished By	Company	Date	Time	Received By	Company	Date	Time
Relinquished By	Company	Date	Time	Received By	Company	Date	Time

Lab Courier:

Shipped: FX

Hand Delivered:

Matrix Key

WW – Wastewater	SE – Sediment
W – Water	SO – Soil
S – Soil	L – Leachate
SL – Sludge	WI – Wipe
MS – Miscellaneous	DW – Drinking Water
OL – Oil	O – Other
A – Air	

Client Comments: metals: cadmium, chromium, copper, lead, selenium, silver, zinc, molybdenum

Lab Comments:

Login Sample Receipt Checklist

Client: Leggette, Brashears & Graham, Inc.

Job Number: 500-68890-1

Login Number: 68890
List Number: 1
Creator: Kelsey, Shawn M

List Source: TestAmerica Chicago

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	3.2c
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	True	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Chicago
2417 Bond Street
University Park, IL 60484
Tel: (708)534-5200

TestAmerica Job ID: 500-73814-1
Client Project/Site: Refuse Hideaway Landfill

For:
Leggette, Brashears & Graham, Inc.
6409 Odana Road
Suite 11
Madison, Wisconsin 53719

Attn: Jennifer Shelton

Sandie Fredrick

Authorized for release by:
3/28/2014 11:02:06 AM

Sandie Fredrick, Project Manager II
(920)261-1660
sandie.fredrick@testamericainc.com

Table of Contents

Case Narrative

Client: Leggette, Brashears & Graham, Inc.
Project/Site: Refuse Hideaway Landfill

TestAmerica Job ID: 500-73814-1

Job ID: 500-73814-1

Laboratory: TestAmerica Chicago

Narrative

Job Narrative
500-73814-1

Comments
No additional comments.

Receipt
The sample was received on 3/25/2014 10:00 AM; the sample arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 1.1° C.

Metals
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry
Method(s) SM 3500 CR B: The following hexavalent chromium samples in batch 228753 have been diluted due to the matrices and therefore the samples have been reported as non-detects with elevated reporting limits: Leachate (500-73814-1).

No other analytical or quality issues were noted.

Detection Summary

Client: Leggette, Brashears & Graham, Inc.
Project/Site: Refuse Hideaway Landfill

TestAmerica Job ID: 500-73814-1

Client Sample ID: Leachate

Lab Sample ID: 500-73814-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chromium	0.016		0.010	0.0010	mg/L	1		6010B	Total/NA
Copper	0.0038	J	0.010	0.0019	mg/L	1		6010B	Total/NA
Nickel	0.046		0.010	0.0012	mg/L	1		6010B	Total/NA
Zinc	0.015	J B	0.020	0.0025	mg/L	1		6010B	Total/NA
Cyanide, Total	0.010		0.010	0.0012	mg/L	1		SM 4500 CN E	Total/NA

This Detection Summary does not include radiochemical test results.

Method Summary

Client: Leggette, Brashears & Graham, Inc.
Project/Site: Refuse Hideaway Landfill

TestAmerica Job ID: 500-73814-1

Method	Method Description	Protocol	Laboratory
6010B	Metals (ICP)	SW846	TAL CHI
7470A	Mercury (CVAA)	SW846	TAL CHI
SM 3500 CR B	Chromium, Hexavalent	SM	TAL CHI
SM 4500 CN E	Cyanide, Total	SM	TAL CHI

Protocol References:

SM = "Standard Methods For The Examination Of Water And Wastewater",

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates

Laboratory References:

TAL CHI = TestAmerica Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

Sample Summary

Client: Leggette, Brashears & Graham, Inc.
Project/Site: Refuse Hideaway Landfill

TestAmerica Job ID: 500-73814-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-73814-1	Leachate	Leachate	03/24/14 16:00	03/25/14 10:00

Client: Leggette, Brashears & Graham, Inc.
Project/Site: Refuse Hideaway Landfill

TestAmerica Job ID: 500-73814-1

Client Sample ID: Leachate
Date Collected: 03/24/14 16:00
Date Received: 03/25/14 10:00

Lab Sample ID: 500-73814-1
Matrix: Leachate

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	<0.00026		0.0020	0.00026	mg/L		03/26/14 15:30	03/27/14 13:45	1
Chromium	**0.016**		0.010	0.0010	mg/L		03/26/14 15:30	03/27/14 13:45	1
Copper	**0.0038**	J	0.010	0.0019	mg/L		03/26/14 15:30	03/27/14 13:45	1
Lead	<0.0023		0.0050	0.0023	mg/L		03/26/14 15:30	03/27/14 13:45	1
Molybdenum	<0.0021		0.010	0.0021	mg/L		03/26/14 15:30	03/27/14 13:45	1
Nickel	**0.046**		0.010	0.0012	mg/L		03/26/14 15:30	03/27/14 13:45	1
Selenium	<0.0046		0.010	0.0046	mg/L		03/26/14 15:30	03/27/14 13:45	1
Silver	<0.00057		0.0050	0.00057	mg/L		03/26/14 15:30	03/27/14 13:45	1
Zinc	**0.015**	J B	0.020	0.0025	mg/L		03/26/14 15:30	03/27/14 13:45	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.072		0.20	0.072	ug/L		03/25/14 13:00	03/26/14 11:20	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium, hexavalent	<0.0076		0.020	0.0076	mg/L			03/25/14 15:54	2
Cyanide, Total	**0.010**		0.010	0.0012	mg/L		03/26/14 18:15	03/26/14 21:35	1

Definitions/Glossary

Client: Leggette, Brashears & Graham, Inc.
Project/Site: Refuse Hideaway Landfill

TestAmerica Job ID: 500-73814-1

Qualifiers

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B	Compound was found in the blank and sample

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Metals

Prep Batch: 228552

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-73814-1	Leachate	Total/NA	Leachate	7470A	
LCS 500-228552/13-A	Lab Control Sample	Total/NA	Water	7470A	
MB 500-228552/12-A	Method Blank	Total/NA	Water	7470A	

Analysis Batch: 228792

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-73814-1	Leachate	Total/NA	Leachate	7470A	228552
LCS 500-228552/13-A	Lab Control Sample	Total/NA	Water	7470A	228552
MB 500-228552/12-A	Method Blank	Total/NA	Water	7470A	228552

Prep Batch: 228878

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-73814-1	Leachate	Total/NA	Leachate	3010A	
LCS 500-228878/2-A	Lab Control Sample	Total/NA	Water	3010A	
MB 500-228878/1-A	Method Blank	Total/NA	Water	3010A	

Analysis Batch: 229099

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-73814-1	Leachate	Total/NA	Leachate	6010B	228878
LCS 500-228878/2-A	Lab Control Sample	Total/NA	Water	6010B	228878
MB 500-228878/1-A	Method Blank	Total/NA	Water	6010B	228878

General Chemistry

Analysis Batch: 228753

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-73814-1	Leachate	Total/NA	Leachate	SM 3500 CR B	
LCS 500-228753/5	Lab Control Sample	Total/NA	Water	SM 3500 CR B	
MB 500-228753/13	Method Blank	Total/NA	Water	SM 3500 CR B	

Prep Batch: 228823

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-73814-1	Leachate	Total/NA	Leachate	Distill/CN	
LCS 500-228823/2-A	Lab Control Sample	Total/NA	Water	Distill/CN	
MB 500-228823/1-A	Method Blank	Total/NA	Water	Distill/CN	

Analysis Batch: 228899

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-73814-1	Leachate	Total/NA	Leachate	SM 4500 CN E	228823
LCS 500-228823/2-A	Lab Control Sample	Total/NA	Water	SM 4500 CN E	228823
MB 500-228823/1-A	Method Blank	Total/NA	Water	SM 4500 CN E	228823

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 500-228878/1-A
Matrix: Water
Analysis Batch: 229099

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 228878

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	<0.00026		0.0020	0.00026	mg/L		03/26/14 15:30	03/27/14 13:33	1
Chromium	<0.0010		0.010	0.0010	mg/L		03/26/14 15:30	03/27/14 13:33	1
Copper	<0.0019		0.010	0.0019	mg/L		03/26/14 15:30	03/27/14 13:33	1
Lead	0.00369	J	0.0050	0.0023	mg/L		03/26/14 15:30	03/27/14 13:33	1
Molybdenum	<0.0021		0.010	0.0021	mg/L		03/26/14 15:30	03/27/14 13:33	1
Nickel	<0.0012		0.010	0.0012	mg/L		03/26/14 15:30	03/27/14 13:33	1
Selenium	<0.0046		0.010	0.0046	mg/L		03/26/14 15:30	03/27/14 13:33	1
Silver	<0.00057		0.0050	0.00057	mg/L		03/26/14 15:30	03/27/14 13:33	1
Zinc	0.00647	J	0.020	0.0025	mg/L		03/26/14 15:30	03/27/14 13:33	1

Lab Sample ID: LCS 500-228878/2-A
Matrix: Water
Analysis Batch: 229099

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 228878

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cadmium	0.0500	0.0479		mg/L		96	80 - 120
Chromium	0.200	0.195		mg/L		97	80 - 120
Copper	0.250	0.248		mg/L		99	80 - 120
Lead	0.100	0.0993		mg/L		99	80 - 120
Molybdenum	1.00	0.986		mg/L		99	80 - 120
Nickel	0.500	0.487		mg/L		97	80 - 120
Selenium	0.100	0.0879		mg/L		88	80 - 120
Silver	0.0500	0.0483		mg/L		97	80 - 120
Zinc	0.500	0.479		mg/L		96	80 - 120

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 500-228552/12-A
Matrix: Water
Analysis Batch: 228792

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 228552

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.072		0.20	0.072	ug/L		03/25/14 13:00	03/26/14 10:54	1

Lab Sample ID: LCS 500-228552/13-A
Matrix: Water
Analysis Batch: 228792

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 228552

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	2.00	2.18		ug/L		109	80 - 120

Method: SM 3500 CR B - Chromium, Hexavalent

Lab Sample ID: MB 500-228753/13
Matrix: Water
Analysis Batch: 228753

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium, hexavalent	<0 0038		0.010	0.0038	mg/L			03/25/14 15:57	1

Lab Sample ID: LCS 500-228753/5
Matrix: Water
Analysis Batch: 228753

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chromium, hexavalent	0.250	0 249		mg/L		100	85 - 115

Method: SM 4500 CN E - Cyanide, Total

Lab Sample ID: MB 500-228823/1-A
Matrix: Water
Analysis Batch: 228899

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 228823

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.0012		0.010	0.0012	mg/L		03/26/14 18:15	03/26/14 21:30	1

Lab Sample ID: LCS 500-228823/2-A
Matrix: Water
Analysis Batch: 228899

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 228823

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	0.100	0 101		mg/L		101	80 - 120

Lab Chronicle

Client: Leggette, Brashears & Graham, Inc.
Project/Site: Refuse Hideaway Landfill

TestAmerica Job ID: 500-73814-1

Client Sample ID: Leachate

Date Collected: 03/24/14 16:00
Date Received: 03/25/14 10:00

Lab Sample ID: 500-73814-1
Matrix: Leachate

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3010A			228878	03/26/14 15:30	LA1	TAL CHI
Total/NA	Analysis	6010B		1	229099	03/27/14 13:45	LEG	TAL CHI
Total/NA	Prep	7470A			228552	03/25/14 13:00	RLL	TAL CHI
Total/NA	Analysis	7470A		1	228792	03/26/14 11:20	PFK	TAL CHI
Total/NA	Analysis	SM 3500 CR B		2	228753		CCK	TAL CHI
						(Start) 03/25/14 15:54		
						(End) 03/25/14 15:55		
Total/NA	Prep	Distill/CN			228823	03/26/14 18:15	BIS	TAL CHI
Total/NA	Analysis	SM 4500 CN E		1	228899		BIS	TAL CHI
						(Start) 03/26/14 21:35		
						(End) 03/26/14 21:35		

Laboratory References:

TAL CHI = TestAmerica Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

Certification Summary

Client: Leggette, Brashears & Graham, Inc.
Project/Site: Refuse Hideaway Landfill

TestAmerica Job ID: 500-73814-1

Laboratory: TestAmerica Chicago

The certifications listed below are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Wisconsin	State Program	5	999580010	08-31-14

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

2417 Bond Street, University Park, IL 60484
Phone: 708.534.5200 Fax: 708.534.5211

Chain of Custody Record

Lab Job #: 500-73814

Chain of Custody Number:

Page _____ of _____

Temperature °C of Cooler: 1.1

Report To (optional)		Bill To (optional)	
Contact:	J. Shelton	Contact:	J. Shelton
Company:	LBG	Company:	LBG
Address:		Address:	
Address:		Address:	
Phone:		Phone:	
Fax:		Fax:	
E-Mail:		PO#/Reference#	

Client: LBG	Client Project #:	Preservative	Nitric Acid	NaOH	1							Preservative Key: 500-73814 COC	
Project Name: Refuse Hideaway Landfill		Parameter	Metals/ Mercury	Cyanide	Hex. Chrome.								
Project Location/State: Middleton, WI	Lab Project #:												
Sampler: Charles Burgis	Lab PM:												
Lab ID	MS/MSD	Sample ID	Sampling Date	Sampling Time	# of Containers	Matrix							Comments
1		Leachate	3-24-14	1600	3	L	X	X	X				

Turnaround Time Required (Business Days)

___ 1 Day ___ 2 Days ___ 5 Days ___ 7 Days ___ 10 Days ___ 15 Days _____ Other

Requested Due Date _____

Sample Disposal: ☐ Return to Client ☐ Disposal by Lab ☐ Archive for _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Relinquished By	Company	Date	Time	Received By	Company	Date	Time
	LBG	3-24-14	1645		TAL	03/25/14	1000
Relinquished By	Company	Date	Time	Received By	Company	Date	Time
Relinquished By	Company	Date	Time	Received By	Company	Date	Time

Lab Courier: _____

Shipped: FX

Hand Delivered: _____

Matrix Key

WW - Wastewater	SE - Sediment
W - Water	SO - Soil
S - Soil	L - Leachate
SL - Sludge	WI - Wipe
MS - Miscellaneous	DW - Drinking Water
OL - Oil	O - Other
A - Air	

Client Comments: Metals: Cadmium, Chromium, Copper, Lead, Selenium, Silver, Zinc, Molybdenum

Lab Comments:

Login Sample Receipt Checklist

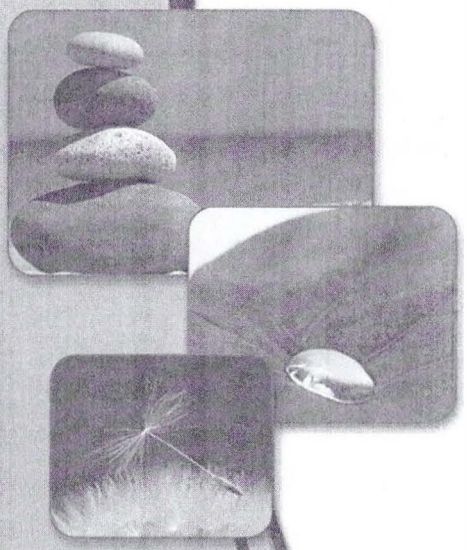
Client: Leggette, Brashears & Graham, Inc.

Job Number: 500-73814-1

Login Number: 73814
List Number: 1
Creator: Kelsey, Shawn M

List Source: TestAmerica Chicago

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	1.1c
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	True	



LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Chicago
2417 Bond Street
University Park, IL 60484
Tel: (708)534-5200

TestAmerica Job ID: 500-79011-1
Client Project/Site: Refuse Hideaway LF

For:
Leggette, Brashears & Graham, Inc.
6409 Odana Road
Suite 11
Madison, Wisconsin 53719

Attn: Jennifer Shelton

Therese Hargraves

Authorized for release by:
6/27/2014 12:36:02 PM
Therese Hargraves, Project Manager I
therese.hargraves@testamericainc.com

Designee for

Sandie Fredrick, Project Manager II
(920)261-1660
sandie.fredrick@testamericainc.com

Table of Contents

Case Narrative

Client: Leggette, Brashears & Graham, Inc.
Project/Site: Refuse Hideaway LF

TestAmerica Job ID: 500-79011-1

Job ID: 500-79011-1

Laboratory: TestAmerica Chicago

Narrative

Job Narrative
500-79011-1

Comments
No additional comments

Receipt
The sample was received on 6/18/2014 10:10 AM; the sample arrived in good condition, properly preserved and, where required, on ice.
The temperature of the cooler at receipt was 4.3° C.

Metals
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Detection Summary

Client: Leggette, Brashears & Graham, Inc.
Project/Site: Refuse Hideaway LF

TestAmerica Job ID: 500-79011-1

Client Sample ID: Leachate

Lab Sample ID: 500-79011-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cadmium	0.00056	J	0.0020	0.00026	mg/L	1		6010B	Total/NA
Chromium	0.0080	J	0.010	0.0010	mg/L	1		6010B	Total/NA
Copper	0.0055	J B	0.010	0.0019	mg/L	1		6010B	Total/NA
Molybdenum	0.0058	J	0.010	0.0021	mg/L	1		6010B	Total/NA
Nickel	0.023	B	0.010	0.0012	mg/L	1		6010B	Total/NA
Selenium	0.010		0.010	0.0046	mg/L	1		6010B	Total/NA
Zinc	0.031	B	0.020	0.0025	mg/L	1		6010B	Total/NA
Cyanide, Total	0.0048	J	0.010	0.0012	mg/L	1		SM 4500 CN E	Total/NA

This Detection Summary does not include radiochemical test results

Method Summary

Client: Leggette, Brashears & Graham, Inc.
Project/Site: Refuse Hideaway LF

TestAmerica Job ID: 500-79011-1

Method	Method Description	Protocol	Laboratory
6010B	Metals (ICP)	SW846	TAL CHI
7470A	Mercury (CVAA)	SW846	TAL CHI
SM 3500 CR B	Chromium, Hexavalent	SM	TAL CHI
SM 4500 CN E	Cyanide, Total	SM	TAL CHI

Protocol References:

SM = "Standard Methods For The Examination Of Water And Wastewater",

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL CHI = TestAmerica Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

Sample Summary

Client: Leggette, Brashears & Graham, Inc.
Project/Site: Refuse Hideaway LF

TestAmerica Job ID: 500-79011-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-79011-1	Leachate	Leachate	06/17/14 13:00	06/18/14 10:10

Client Sample Results

Client: Leggette, Brashears & Graham, Inc.
Project/Site: Refuse Hideaway LF

TestAmerica Job ID: 500-79011-1

Client Sample ID: Leachate
Date Collected: 06/17/14 13:00
Date Received: 06/18/14 10:10

Lab Sample ID: 500-79011-1
Matrix: Leachate

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	0.00056	J	0.0020	0.00026	mg/L		06/18/14 15:00	06/25/14 01:24	1
Chromium	0.0080	J	0.010	0.0010	mg/L		06/18/14 15:00	06/25/14 01:24	1
Copper	0.0055	J B	0.010	0.0019	mg/L		06/18/14 15:00	06/25/14 01:24	1
Lead	<0.0023		0.0050	0.0023	mg/L		06/18/14 15:00	06/25/14 01:24	1
Molybdenum	0.0058	J	0.010	0.0021	mg/L		06/18/14 15:00	06/25/14 01:24	1
Nickel	0.023	B	0.010	0.0012	mg/L		06/18/14 15:00	06/25/14 01:24	1
Selenium	0.010		0.010	0.0046	mg/L		06/18/14 15:00	06/25/14 01:24	1
Silver	<0.00057		0.0050	0.00057	mg/L		06/18/14 15:00	06/25/14 01:24	1
Zinc	0.031	B	0.020	0.0025	mg/L		06/25/14 15:00	06/26/14 21:46	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.072		0.20	0.072	ug/L		06/19/14 11:30	06/20/14 08:44	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium, hexavalent	<0.0038		0.010	0.0038	mg/L			06/18/14 12:37	1
Cyanide, Total	0.0048	J	0.010	0.0012	mg/L		06/19/14 12:30	06/19/14 18:54	1

Definitions/Glossary

Client: Leggette, Brashears & Graham, Inc.
Project/Site: Refuse Hideaway LF

TestAmerica Job ID: 500-79011-1

Qualifiers

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B	Compound was found in the blank and sample

General Chemistry

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Metals

Prep Batch: 241505

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-79011-1	Leachate	Total/NA	Leachate	3010A	
LCS 500-241505/2-A	Lab Control Sample	Total/NA	Water	3010A	
MB 500-241505/1-A	Method Blank	Total/NA	Water	3010A	

Prep Batch: 241670

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-79011-1	Leachate	Total/NA	Leachate	7470A	
LCS 500-241670/13-A	Lab Control Sample	Total/NA	Water	7470A	
MB 500-241670/12-A	Method Blank	Total/NA	Water	7470A	

Analysis Batch: 241822

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-79011-1	Leachate	Total/NA	Leachate	7470A	241670
LCS 500-241670/13-A	Lab Control Sample	Total/NA	Water	7470A	241670
MB 500-241670/12-A	Method Blank	Total/NA	Water	7470A	241670

Analysis Batch: 242382

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-79011-1	Leachate	Total/NA	Leachate	6010B	241505
LCS 500-241505/2-A	Lab Control Sample	Total/NA	Water	6010B	241505
MB 500-241505/1-A	Method Blank	Total/NA	Water	6010B	241505

Prep Batch: 242478

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-79011-1	Leachate	Total/NA	Leachate	3010A	
LCS 500-242478/2-A	Lab Control Sample	Total/NA	Water	3010A	
MB 500-242478/1-A	Method Blank	Total/NA	Water	3010A	

Analysis Batch: 242734

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-79011-1	Leachate	Total/NA	Leachate	6010B	242478
LCS 500-242478/2-A	Lab Control Sample	Total/NA	Water	6010B	242478
MB 500-242478/1-A	Method Blank	Total/NA	Water	6010B	242478

General Chemistry

Analysis Batch: 241489

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-79011-1	Leachate	Total/NA	Leachate	SM 3500 CR B	
500-79011-1 MS	Leachate	Total/NA	Leachate	SM 3500 CR B	
LCS 500-241489/4	Lab Control Sample	Total/NA	Water	SM 3500 CR B	
LCSD 500-241489/5	Lab Control Sample Dup	Total/NA	Water	SM 3500 CR B	
MB 500-241489/3	Method Blank	Total/NA	Water	SM 3500 CR B	

Prep Batch: 241642

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-79011-1	Leachate	Total/NA	Leachate	Distill/CN	
LCS 500-241642/2-A	Lab Control Sample	Total/NA	Water	Distill/CN	
MB 500-241642/1-A	Method Blank	Total/NA	Water	Distill/CN	

General Chemistry (Continued)

Analysis Batch: 241793

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-79011-1	Leachate	Total/NA	Leachate	SM 4500 CN E	241642
LCS 500-241642/2-A	Lab Control Sample	Total/NA	Water	SM 4500 CN E	241642
MB 500-241642/1-A	Method Blank	Total/NA	Water	SM 4500 CN E	241642

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 500-241505/1-A
Matrix: Water
Analysis Batch: 242382

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 241505

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	<0.00026		0.0020	0.00026	mg/L		06/18/14 15:00	06/25/14 01:10	1
Chromium	<0.0010		0.010	0.0010	mg/L		06/18/14 15:00	06/25/14 01:10	1
Copper	0.00279	J	0.010	0.0019	mg/L		06/18/14 15:00	06/25/14 01:10	1
Lead	0.00375	J	0.0050	0.0023	mg/L		06/18/14 15:00	06/25/14 01:10	1
Molybdenum	<0.0021		0.010	0.0021	mg/L		06/18/14 15:00	06/25/14 01:10	1
Nickel	0.00305	J	0.010	0.0012	mg/L		06/18/14 15:00	06/25/14 01:10	1
Selenium	<0.0046		0.010	0.0046	mg/L		06/18/14 15:00	06/25/14 01:10	1
Silver	<0.00057		0.0050	0.00057	mg/L		06/18/14 15:00	06/25/14 01:10	1

Lab Sample ID: LCS 500-241505/2-A
Matrix: Water
Analysis Batch: 242382

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 241505

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cadmium	0.0500	0.0488		mg/L		98	80 - 120
Chromium	0.200	0.194		mg/L		97	80 - 120
Copper	0.250	0.251		mg/L		101	80 - 120
Lead	0.100	0.0952		mg/L		95	80 - 120
Molybdenum	1.00	1.05		mg/L		105	80 - 120
Nickel	0.500	0.483		mg/L		97	80 - 120
Selenium	0.100	0.0925		mg/L		92	80 - 120
Silver	0.0500	0.0472		mg/L		94	80 - 120

Lab Sample ID: MB 500-242478/1-A
Matrix: Water
Analysis Batch: 242734

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 242478

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Zinc	0.00831	J	0.020	0.0025	mg/L		06/25/14 15:00	06/26/14 21:38	1

Lab Sample ID: LCS 500-242478/2-A
Matrix: Water
Analysis Batch: 242734

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 242478

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Zinc	0.500	0.532		mg/L		106	80 - 120

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 500-241670/12-A
Matrix: Water
Analysis Batch: 241822

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 241670

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.072		0.20	0.072	ug/L		06/19/14 11:30	06/20/14 08:40	1

Method: 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: LCS 500-241670/13-A
Matrix: Water
Analysis Batch: 241822

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 241670

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	2.00	2.23		ug/L		112	80 - 120

Method: SM 3500 CR B - Chromium, Hexavalent

Lab Sample ID: MB 500-241489/3
Matrix: Water
Analysis Batch: 241489

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium, hexavalent	<0.0038		0.010	0.0038	mg/L			06/18/14 12:36	1

Lab Sample ID: LCS 500-241489/4
Matrix: Water
Analysis Batch: 241489

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chromium, hexavalent	0.250	0.242		mg/L		97	85 - 115

Lab Sample ID: LCSD 500-241489/5
Matrix: Water
Analysis Batch: 241489

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chromium, hexavalent	0.250	0.240		mg/L		96	85 - 115	1	20

Lab Sample ID: 500-79011-1 MS
Matrix: Leachate
Analysis Batch: 241489

Client Sample ID: Leachate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chromium, hexavalent	<0.0038		0.250	0.224		mg/L		90	85 - 115

Method: SM 4500 CN E - Cyanide, Total

Lab Sample ID: MB 500-241642/1-A
Matrix: Water
Analysis Batch: 241793

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 241642

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.0012		0.010	0.0012	mg/L		06/19/14 12:30	06/19/14 18:52	1

Lab Sample ID: LCS 500-241642/2-A
Matrix: Water
Analysis Batch: 241793

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 241642

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	0.100	0.108		mg/L		108	80 - 120

Lab Chronicle

Client: Leggette, Brashears & Graham, Inc.
Project/Site: Refuse Hideaway LF

TestAmerica Job ID: 500-79011-1

Client Sample ID: Leachate

Lab Sample ID: 500-79011-1

Date Collected: 06/17/14 13:00

Matrix: Leachate

Date Received: 06/18/14 10:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3010A			241505	06/18/14 15:00	LA1	TAL CHI
Total/NA	Analysis	6010B		1	242382	06/25/14 01:24	PJ1	TAL CHI
Total/NA	Prep	3010A			242478	06/25/14 15:00	LA1	TAL CHI
Total/NA	Analysis	6010B		1	242734	06/26/14 21:46	PJ1	TAL CHI
Total/NA	Prep	7470A			241670	06/19/14 11:30	RLL	TAL CHI
Total/NA	Analysis	7470A		1	241822	06/20/14 08:44	RLL	TAL CHI
Total/NA	Analysis	SM 3500 CR B		1	241489		BIS	TAL CHI
					(Start)	06/18/14 12:37		
					(End)	06/18/14 12:38		
Total/NA	Prep	Distill/CN			241642	06/19/14 12:30	BIS	TAL CHI
Total/NA	Analysis	SM 4500 CN E		1	241793		BIS	TAL CHI
					(Start)	06/19/14 18:54		
					(End)	06/19/14 18:55		

Laboratory References:

TAL CHI = TestAmerica Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

Certification Summary

Client: Leggette, Brashears & Graham, Inc.
Project/Site: Refuse Hideaway LF

TestAmerica Job ID: 500-79011-1

Laboratory: TestAmerica Chicago

The certifications listed below are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Wisconsin	State Program	5	999580010	08-31-14

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

2417 Bond Street, University Park, IL 60484
Phone: 708.534.5200 Fax: 708.534.5211

Chain of Custody Record

Lab Job #: 500-79011

Chain of Custody Number:

Page _____ of _____

Temperature °C of Cooler: 4-3

Report To (optional)		Bill To (optional)	
Contact:	J. Shelton	Contact:	J. Shelton
Company:	LBG	Company:	LBG
Address:		Address:	
Address:		Address:	
Phone:		Phone:	
Fax:		Fax:	
E-Mail:		PO#/Reference#	

Client	LBG	Client Project #		Preservative	Nitric Acid	NaOH	1						
Project Name	Refuse Hideaway Landfill			Parameter	Metals/ Mercury	Cyanide	Hex. Chrome.						
Project Location/State	Middleton, WI	Lab Project #											
Sampler	Charles Burgis	Lab PM											

Lab ID	MS/MSD	Sample ID	Sampling Date	Sampling Time	# of Containers	Matrix									Comments
1		Leachate	6-17-14	1300	3	L	X	X	X						

Preservative Key
1
2
3
4
5
6
7 500-79011 COC
8
9. Other

Turnaround Time Required (Business Days)
___ 1 Day ___ 2 Days ___ 5 Days ___ 7 Days ___ 10 Days ___ 15 Days _____ Other
Requested Due Date _____

Sample Disposal
☐ Return to Client ☐ Disposal by Lab ☐ Archive for _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Relinquished By	Company	Date	Time	Received By	Company	Date	Time
	LBG	6-17-14	1334		TAL	06/18/14	1010
Relinquished By	Company	Date	Time	Received By	Company	Date	Time
Relinquished By	Company	Date	Time	Received By	Company	Date	Time

Lab Courier ☐
Shipped ☐
Hand Delivered ☐

Matrix Key
WW - Wastewater
W - Water
S - Soil
SL - Sludge
MS - Miscellaneous
OL - Oil
A - Air
SE - Sediment
SO - Soil
L - Leachate
WI - Wipe
DW - Drinking Water
O - Other

Client Comments: Metals: Cadmium, Chromium, Copper, Lead, Selenium, Silver, Zinc, Molybdenum, Nickel

Lab Comments:

Login Sample Receipt Checklist

Client: Leggette, Brashears & Graham, Inc.

Job Number: 500-79011-1

Login Number: 79011
List Number: 1
Creator: Kelsey, Shawn M

List Source: TestAmerica Chicago

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	4.3c
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	True	

APPENDIX II

MADISON METROPOLITAN SEWERAGE DISTRICT
WASTEWATER DISCHARGE PERMIT NTO-5.12

Madison Metropolitan Sewerage District

1610 Moorland Road Madison, WI 53713-3398 Telephone (608) 222-1201 Fax (608) 222-2703 madsewer.org

June 18, 2014

Mr. Charles Burgis
Leggette, Brashears, & Graham, Inc.
6409 Odana Road, Suite 11
Madison, WI 53719

Mr. Burgis:

Enclosed is the permit that allows continued hauling of leachate from the Refuse Hideaway Landfill to the Nine Springs Wastewater Treatment Plant. The permit is valid for five years.

We appreciate when O&M managers provide us updates on atypical circumstances that they encounter and resolve; please include such narrative data when appropriate in your reports.

You can reach me at extension 362; I'd be glad to discuss these permit matters with you.

Sincerely,

Ralph Erickson
Pretreatment and Waste Acceptance Coordinator

Enclosure:

Cc: Hank Kuehling, WDNR

WASTEWATER DISCHARGE PERMIT NTO-5.11

In compliance with the provisions of section 66.24(1)(d) and 66.25(3) of the Wisconsin Statutes, Articles 5 and 6 of the Madison Metropolitan Sewerage District Sewer Use Ordinance, and the District's Policy on Acceptance of Wastewater Containing Non-Typical Organic and Inorganic Constituents,

Wisconsin Department of Natural Resources
BOX 7921 Madison, WI 53707,
for the site,
Refuse Hideaway Landfill,
located at,
US Highway 14, Middleton, WI,
with wastewater O&M provided by,
Leggette, Brashears, & Graham, Inc of Madison

is hereby authorized to discharge leachate from the **Refuse Hideaway Landfill** located at the above address, via a permitted waste hauler, to the Nine Springs Wastewater Treatment Plant in accordance with the effluent limitations, monitoring requirements, and other conditions set forth in this permit.

All discharges authorized herein shall be consistent with the terms and conditions of this permit. The discharge of any pollutant identified in this permit more frequently than or at a level in excess of that authorized shall constitute a violation of the permit.

This permit shall be effective for five years. It shall become effective on July 1, 2014 and shall expire at midnight, June 30, 2019. Any appeals to the conditions of this permit must be made to the Chief Engineer and Director within thirty days of the signature date.

The Permittee shall not discharge after the date of expiration. If the Permittee wishes to continue to discharge after this expiration date an application shall be filed for reissuance of this permit in accordance with the requirements of Article 5 of the Madison Metropolitan Sewerage District Sewer Use Ordinance, at least 90-days prior to the expiration date.

In accordance with Articles 5 and 6 of the Madison Metropolitan Sewerage District Sewer Use Ordinance, the District reserves the right to amend this permit from time to time.

By _____
D. Michael Mucha
Chief Engineer and Director

Dated this 9 day of June 2014.

Permit: NTO-5.12 Table of Contents

Part 1 - LIMITS

1.01 INTRODUCTION

(1) Discharges from the outfalls regulated by this permit are subject to the local limits established by the District in the Sewer Use Ordinance 84-001 (Revised June 14, 2010). Based upon these requirements, the District has established the pretreatment standards set forth in secs. 1.02 to 1.03 of this permit.

(2) The Permittee shall comply with all requirements imposed by federal, state, and local municipal governments relating to operation of the licensed landfill.

1.02 OUTFALL NTO-5A

(1) Outfall NTO-5A is the discharge point of the leachate collection system serving the Refuse Hideaway Landfill. The Permittee has constructed facilities to allow for collection of a representative sample from the on-site 25,000 gallon storage tank. Grab samples will be collected from the discharge point per the requirements of sec. 2.04. Outfall NTO-5A shall contain only leachate.

(2) The Refuse Hideaway Landfill is located outside of the District's sewer service area. Therefore, all leachate from the site must be hauled to the Nine Springs Wastewater Treatment Plant. The waste hauler shall have a Septage Disposal Permit, as issued annually by the District.

(3) The following MMSD limits apply to discharges from Outfall NTO-5A:

Outfall NTO-5A
Applicable Local Limits

Parameter	Local Ordinance Effluent Limitations (daily maximum) (mg/L)	POTW maximum allowance per landfill site
Cadmium (T)	0.25	
Chromium (T)	10.0	
Copper (T)	1.5	
Lead (T)	5.0	
Nickel (T)	2.0	
Selenium (T)	0.3	
Silver (T)	3.0	
Zinc (T)	8.0	
Molybdenum (T)	None set	
Mercury (T)	0.02	

1.03 OTHER OUTFALLS

The Permittee may not discharge groundwater to any location other than as described for the outfalls listed in sub.(1.02). Domestic wastewater shall only flow into any outfalls after the sampling points for process wastewater.

Part 2 - SAMPLING

2.01 SAMPLING FREQUENCY PER MMSD REQUIREMENTS

The Permittee shall sample (self-monitor) for the pollutants shown in the following table.

Outfall	Required Parameters/Measurements & Frequency	
Outfall NTO-5A	Volume	Recorded per load
	ICP metals (9)	Quarterly
	Mercury	Quarterly

2.02 REPRESENTATIVE SAMPLES

The Permittee's self-monitoring shall represent discharges normally occurring during the reporting period.

2.03 SAMPLE COLLECTION AND ANALYSIS

(1) The Permittee shall use the following primary devices for flow measurement:

Outfall	Primary Device
NTO-5A	In-line meter or Pumping runtime records

(2) The Permittee shall collect, preserve, and analyze samples using techniques that provide sufficient precision and accuracy to measure the regulated pollutants at or below the applicable limit to a reasonable degree of scientific certainty, using analytical methods included in 40 CFR Part 136 or ch. NR 219, Wis. Adm. Code, or other methods approved by the Department of Natural Resources. For analysis, the Permittee, whenever possible, shall use a laboratory certified or registered by the Department of Natural Resources, according ch. NR 149, Wis. Adm. Code, for the parameter being analyzed. With prior District approval, per NR 211.15(8), the Permittee may be allowed to use a laboratory not certified or registered in Wisconsin.

(3) The District will randomly collect and analyze samples of leachate, taken from the hauling vehicle, to verify leachate quality and treatability.

(4) Samples collected by the Permittee shall be independent of samples collected by the District. The Permittee is allowed split samples from District sampling events; however the Permittee must collect its own independent samples on a different date per sub. (2.01).

Part 3 - REPORTING

3.01 SELF-MONITORING REPORTS

All self-monitoring results must be submitted to the District within sixty (60) days of the end of a quarterly monitoring period.

(1) All monitoring data is to be reported if the Permittee monitors a pollutant more frequently than required by this permit using the sample type and the sample collection, preservation, and the analytical techniques set forth in sec. 2.03 to 2.04.

(2) Self-monitoring Reporting Format

(a) The Permittee shall report to the District the results of all sampling required by sec. 2.01 to 2.04.

(b) Reports shall include:

1. The place, date, type, and time of the sample or sub-samples;

2. The names of the persons collecting the samples, the persons doing the analyses, and the laboratory performing the analyses;

3. The dates the analyses were performed;

4. The analytical techniques used; and

5. The analytical results.

3.02 REPORT OF VIOLATION AND RESAMPLING

(1) If sampling performed by the Permittee identifies a violation of any applicable pretreatment standard or requirement, the Permittee shall:

(a) Notify the District within 24-hours of becoming aware of the violation,

(b) Provide a written report with sample results to the District within five (5) days after becoming aware of the violation, and

(c) Repeat the sampling and analysis of the violation-parameter(s) and submit the results of the repeat analysis to the District within thirty (30) days after becoming aware of the violation.

(2) The reports required by sub. (1) shall be signed by the responsible corporate officer according to sub. (3.04) and sec. (2.1)(44) of the District Sewer Use Ordinance.

3.03 NOTICE OF INTENT TO CHANGE DISCHARGE

Before any activity that would result in a 25 percent long-term increase or decrease in the volume of non-domestic wastewater discharged by the Permittee or that would significantly change the characteristics of the discharge, the Permittee shall submit a written Notice of Intent to the District (sec. 5.13).

3.04 SIGNATURE BY RESPONSIBLE CORPORATE OFFICER

All reports shall be signed and sworn by a principal executive officer, or his/her designee.

3.05 REPORTING ADDRESSES

The Permittee shall submit all reports required by this permit to the District and the City of Madison Engineering Department at the following addresses:

Madison Metropolitan Sewerage District
1610 Moorland Road
Madison, Wisconsin 53713-3398

Part 4 - SPECIAL CONDITIONS

4.01 DISTRICT RATE DETERMINATIONS AND BILLING

(1) The District will track each load delivered and will prepare quarterly bills for treatment costs. The rate for disposal is based on samples drawn at the Nine Springs Wastewater Treatment Plant for the parameters CBOD, TSS, TKN, and TP. The rate is adjusted annually, in December, based on service charge rates set for the following year. Outside-the-District surcharges apply to this site and are capped at 100% per District policy. Leachate treatment charges have typically been set at two times the minimum hauled wastewater rate, based on historical analytical data for the billing parameters.

(2) The primary contact for the Refuse Hideaway Landfill is Leggette, Brashears, & Graham, Inc. of Madison. Discharges made to the Nine Springs Wastewater Treatment Plant under the provisions of this permit, will be billed quarterly to:

Mr. Charles Burgis
Leggette, Brashears, & Graham, Inc.
6409 Odana Road, Suite C
Madison, WI 53719

Part 5 - GENERAL CONDITIONS

5.01 COMPLIANCE WITH ALL LOCAL, STATE, AND FEDERAL REQUIREMENTS

The Permittee shall comply with all applicable pretreatment standards and requirements set forth in the District Sewer Use Ordinance, the Wisconsin Administrative Code, and the Code of Federal Regulations, regardless of their enumeration in this permit.

5.02 SEVERABILITY

The provisions of this permit are severable, and if any provision of this permit or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

5.03 DUTY TO COMPLY

The Permittee must comply with all conditions of this permit. Failure to comply with the requirements of this permit may be grounds for administrative action, or enforcement proceedings including civil or criminal penalties, injunctive relief, and summary abatements.

5.04 DUTY TO MITIGATE

The Permittee shall take all reasonable actions necessary to minimize and correct any adverse impacts to the sewerage system or the environment resulting from noncompliance with this permit. The Permittee shall notify the District within 24-hours of its first awareness of the commencement of the adverse impact (upset) in accordance with sec. 5.6.5 of the District Sewer Use Ordinance.

5.05 DUTY TO REAPPLY

If the Permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the Permittee must submit an application for a new permit at least 90-days before the expiration date of this permit.

5.06 CONTINUATION OF EXPIRED PERMIT

An expired permit will continue to be effective and enforceable until the permit is reissued if:

(1) The Permittee has submitted a complete permit application at least 90-days prior to the expiration date of the user's existing permit.

(2) The failure to reissue the permit, prior to expiration of the previous permit, is not due to any act or failure to act on the part of the Permittee.

5.07 PERMIT MODIFICATION

The District may modify this wastewater discharge permit at any time to reflect changes in federal, state, or local law, to incorporate the terms of an order, or to reflect changed circumstances. Any modifications which result in new conditions in the permit shall include a reasonable time schedule for compliance if necessary.

5.08 PERMIT TRANSFER

Wastewater discharge permits are issued to a specific user for a specific operation and are not assignable to another user or transferable to any other location without prior written approval of the District. Sale of a user shall obligate the purchaser to seek prior written approval of the District for continued discharge to the District sewerage system. If an owner or operator changes without the prior approval of the District, then this permit is void.

5.09 SAMPLING LOCATION

The Permittee may change sampling locations only after receiving approval from the District. The District shall ensure that any change in the Permittee's sampling location will not allow the Permittee to substitute dilution for adequate treatment.

5.10 SAMPLING FACILITIES

(1) The Permittee shall provide sampling facilities that will be accessible and that will provide representative samples of the process wastewater.

(2) The Permittee shall allow the District access to all sampling facilities according to the requirements of sub. (5.11).

5.11 RIGHT OF ENTRY

The Permittee consents to inspection and sampling by the District according to the requirements and limitations set forth in sec. 11.1 of the Sewer Use Ordinance. The Permittee shall, after reasonable notification by the District, allow the District or its representatives, exhibiting proper credentials and identification, to enter upon the premises of the Permittee at all reasonable hours, for the purposes of inspection, sampling, or records inspection. Reasonable hours in the context of inspection and sampling includes any time the Permittee is operating any process which results in a process wastewater discharge to the District sewerage system.

5.12 NO PROPERTY RIGHTS CREATED

The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any invasion of personal rights, nor any infringement of federal, state, or local laws or regulations.

5.13 NOTICE OF INTENT

If the Permittee is planning to alter or change any activity at the Permittee's facility that would significantly increase or decrease the volume or alter the content of any existing source of wastewater discharge into the District sewerage system must file a written Request to Discharge Form in accordance with Article 5 of the District Sewer Use Ordinance. A significant increase or decrease shall be defined as a 25 percent increase or decrease in the volume of industrial wastewater currently being discharged by a Permittee.

5.14 REVIEW OF PROPOSED TREATMENT FACILITIES

(1) If the Permittee is planning to install or modify treatment facilities or operations to comply with a categorical pretreatment standard, a pretreatment standard set forth in sec. 5.2.2 of the District Sewer Use Ordinance, a permit condition, or an order of the District, then the Permittee

shall provide the District with plans, specifications, and operating procedures for the proposed facilities. The District may approve, conditionally approve, or disapprove the plans, specifications, and operating procedures. The Permittee may not begin discharging from the treatment facilities until the Permittee has satisfied the requirements of the District.

(2) The Wisconsin Department of Natural Resources has separate requirements for the review of plans, specifications, and operating procedures of proposed pretreatment facilities, such as the requirements set forth in sec. 144.04, Wis. Stats., and ch. NR 108, Wis. Admin. Code. The Permittee shall comply with these requirements before commencing discharges to the sewerage system.

5.15 ADDITIONAL REPORTS

In addition to the reports required by this permit and the reports specifically required by the District Sewer Use Ordinance, the District may require other reports, management plans, or other information whenever the District finds that such a requirement is necessary to fulfill the District's responsibilities under the Sewer Use Ordinance, or any other local, state, or federal law.

5.16 HAZARDOUS WASTE NOTIFICATION

The Permittee shall notify the District, the Department of Natural Resources, and the EPA Regional Waste Management Division Director in writing of any discharge to the sanitary sewer system of a substance which, if otherwise disposed of, would be a hazardous water under 40 CFR Part 261. Such notification must include the name of the hazardous waste as set forth in 40 CFR Part 261, the EPA hazardous waste number, and the type of discharge. If the Permittee discharges to the sanitary sewer more than 100 kilograms of such waste per calendar month, the additional notification requirements of 40 CFR sec. 403.12(p) apply. In the case of any notification made under this section, the Permittee shall certify that it has a program in place to reduce the volume and toxicity of hazardous wastes generated to the degree it has determined to be economically practical.

5.17 PUBLIC INFORMATION

All written information submitted to the District shall be available upon request to any person for public inspection at the headquarters of the District, according to sec. 19.35, Wis. Stats., unless:

(1) The Permittee provides, at the time the Permittee submits the information, a written notice to the District that the Permittee claims that all or part of the information is exempt from disclosure according to sec. 19.36(5), Wis. Stats.; and

(2) The Permittee demonstrates to the District's satisfaction that the information is a trade secret according to sec. 134.90(1)(c), Wis. Stats.

APPENDIX III

BLOWER AND FLARE STATION GAS MONITORING

APPENDIX III

WISCONSIN DEPARTMENT OF NATURAL RESOURCES

REFUSE HIDEAWAY LANDFILL

MIDDLETON, WISCONSIN

BLOWER AND FLARE STATION GAS MONITORING

Location	Date	Pressure	CH_4		O_2	CO_2	Balance Gas*	Valve Position	Gas Velocity	Gas Flow**	Gas Temp
		(in. WC)	(% LEL)	(% Vol)	(% Vol)	(% Vol)	(% Vol)	(% open)	(fpm)	(scfm)	(deg F)
BLOWER	North Branch										
	7/1/2013	-28		17.5	7.2	15.6	59.7	30	2630	487	85.2
	7/11/2013	-28		19.5	8.0	13.6	58.9	25	1320	244	89.5
	7/18/2013	-28		11.0	10.6	10.0	68.4	30	1208	223	91.0
	7/20/2013	-27		21.5	6.5	15.8	56.2	50	1100	204	72.8
	7/31/2013	-27		27.0	5.6	15.8	51.6	50	1200	222	84.0
	8/5/2013	-28		15.0	7.2	16.0	61.8	50	1250	231	86.1
	8/15/2013	-30		20.5	6.8	16.0	56.7	30	1100	204	80.2
	8/21/2013	-30		15.0	5.7	17.0	62.3	30	1160	215	82.2
	8/26/2013	-28		25.0	5.9	17.4	51.7	30	1020	189	80.7
	9/3/2013	-28		23.0	4.2	18.4	54.4	30	850	157	71.2
	9/13/2013	-29		12.0	4.5	16.8	66.7	50	970	179	74.5
	9/20/2013	-29		17.0	3.6	18.8	60.6	50	1013	187	73.5
	9/24/2013	-28		10.0	4.5	16.4	69.1	30	1230	228	86.1
	10/4/2013	-30		9.0	4.1	15.6	71.3	30	1050	194	72.3
	10/11/2013	-28		14.0	3.8	16.2	66.0	30	1060	196	70.1
	10/16/2013	-30		16.0	3.6	17.0	63.4	30	980	181	59.8
	10/22/2013	-29		12.0	3.5	16.4	68.1	30	980	181	57.9
	10/29/2013	-28		16.5	11.2	12.6	59.7	30	930	172	63.8
	11/8/2013	-30		15.0	11.3	12.2	61.5	10	950	176	60.9
	11/15/2013	-30		5.5	18.4	1.6	74.5	5	600	111	67.6
	11/20/2013	-30		5.5	18.1	2.2	74.2	5	970	179	56.1
	11/26/2013	-28		43.0	2.2	22.2	32.6	100	930	172	40.6
	12/3/2013	-29		20.5	6.2	18.0	55.3	75	800	148	50.3
	12/12/2013	-31		15.0	10.7	12.0	62.3	35	989	183	40.6
	12/20/2013	-29		17.5	11.1	12.2	59.2	30	1050	194	40.9
	12/24/2013	-30		5.0	17.6	3.8	73.6	30	950	176	28.0
	1/3/2014	-29		27.0	11.0	11.4	50.6	30	1175	217	34.1
	1/10/2014	-30		18.5	14.9	7.8	58.8	10	1030	191	44.7
	1/17/2014	-29		2.2	20.2	1.4	76.3	10	950	176	35.0
	1/24/2014	-28		51.0	7.5	12.6	28.9	30	1020	189	36.4
	1/29/2014	-30		78.5	3.9	13.0	4.6	30	1077	199	38.4
	2/6/2014	-- [a]		-- [a]	-- [a]	-- [a]	-- [a]	-- [a]	-- [a]	-- [a]	-- [a]
	2/12/2014	-26		64.5	1.7	22.4	11.4	30	900	167	41.1
	2/19/2014	-26		46.5	5.6	18.4	29.5	30	1020	189	51.6
	2/27/2014	-28		26.5	9.5	13.2	50.8	5	880	163	37.5
	3/7/2014	-27		12.0	3.6	16.4	68.0	30	870	161	43.6
	3/12/2014	-30		13.0	7.1	14.6	65.3	50	940	174	43.8
	3/21/2014	-30		12.0	4.5	16.2	67.3	30	990	183	60.0
	3/28/2014	-26		23.0	2.4	17.8	56.8	100	940	174	48.9
	4/3/2014	-30		12.5	6.0	15.2	66.3	25	807	149	47.4
	4/9/2014	-29		10.5	5.2	15.4	68.9	25	850	157	66.5
	4/16/2014	-26		9.0	12.8	17.4	60.8	5	770	142	59.8
	4/25/2014	-30		9.0	6.1	14.6	70.3	30	850	157	71.9
	4/30/2014	-29		15.5	5.4	15.4	63.7	50	933	173	58.2

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MIDDLETON, WISCONSIN

BLOWER AND FLARE STATION GAS MONITORING

Location	Date	Pressure	CH_4		O_2	CO_2	Balance Gas*	Valve Position	Gas Velocity	Gas Flow**	Gas Temp
		(in. WC)	(% LEL)	(% Vol)	(% Vol)	(% Vol)	(% Vol)	(% open)	(fpm)	(scfm)	(deg F)
	5/6/2014	-28		10.0	6.1	12.4	71.5	30	970	179	70.6
	5/15/2014	-30		16.5	6.8	11.6	65.1	25	900	167	65.2
	5/22/2014	-28		9.5	6.5	12.0	72.0	30	850	157	78.2
	5/29/2014	-28		30.0	2.5	15.6	51.9	100	1200	222	83.8
	6/5/2014	-28		7.0	11.1	8.4	73.5	25	1130	209	80.2
	6/12/2014	-28		25.0	6.8	15.0	53.2	75	1170	216	75.5
	6/17/2014	-30		5.5	11.2	8.0	75.3	0	1235	228	94.9
	6/24/2014	-29		20.0	12.2	10.2	57.6	25	1550	287	83.1
	Central Branch										
	7/1/2013	-28		25.5	8.8	18.6	38.2	70	2880	533	84.0
	7/11/2013	-28		27.0	10.1	15.4	38.2	50	1580	292	88.8
	7/18/2013	-28		19.0	5.7	22.4	38.2	100	1750	324	74.7
	7/20/2013	-27		31.0	8.3	18.0	38.2	100	1300	241	69.2
	7/31/2013	-27		34.5	8.6	18.4	28.2	100	1180	218	71.6
	8/5/2013	-28		22.0	8.2	19.8	50.0	100	1520	281	83.6
	8/15/2013	-30		27.0	7.6	18.8	46.6	100	1030	191	79.3
	8/21/2013	-30		18.5	6.8	19.2	55.5	100	1300	241	82.0
	8/26/2013	-28		43.5	6.6	20.2	29.7	100	1410	261	80.4
	9/3/2013	-30		30.5	4.1	21.4	44.0	100	1060	196	70.5
	9/13/2013	-29		22.0	3.6	22.4	52.0	100	283	52	73.0
	9/20/2013	-29		24.0	3.5	22.2	50.3	100	1510	279	74.8
	9/24/2013	-28		17.5	8.0	16.0	58.5	100	1460	270	84.5
	10/4/2013	-30		19.0	6.6	7.7	66.7	100	1125	208	72.1
	10/11/2013	-28		25.0	7.3	16.0	51.7	100	1185	219	71.2
	10/16/2013	-30		24.5	8.3	15.0	52.2	70	1280	237	60.2
	10/22/2013	-29		19.0	7.1	15.8	58.1	50	1090	202	57.7
	10/29/2013	-28		35.0	0.9	26.8	37.3	50	1115	206	63.8
	11/8/2013	-30		22.0	1.2	23.6	53.2	100	1090	202	62.2
	11/15/2013	-30		28.0	0.7	24.0	47.3	100	1300	241	62.5
	11/20/2013	-30		21.5	1.7	22.2	54.6	100	950	176	57.3
	11/26/2013	-28		27.0	5.4	21.0	46.6	30	2080	385	40.1
	12/3/2013	-29		28.0	1.2	25.2	45.6	30	1000	185	49.0
	12/12/2013	-31		29.5	0.9	25.8	43.8	75	1050	194	39.1
	12/20/2013	-29		28.0	6.0	20.4	45.6	70	1160	215	39.1
	12/24/2013	-30		9.0	15.5	4.8	70.7	70	1025	190	28.2
	1/3/2014	-29		14.5	15.5	5.8	64.2	70	1000	185	31.8
	1/10/2014	-30		34.5	10.1	9.0	46.4	80	1090	202	44.2
	1/17/2014	-29		4.3	19.2	2.2	74.4	80	940	174	33.7
	1/24/2014	-28		9.0	17.3	3.0	70.7	70	1020	189	35.0
	1/29/2014	-29		9.5	17.7	3.0	69.8	30	860	159	38.6
	2/6/2014	-- [a]		-- [a]	-- [a]	-- [a]	-- [a]	-- [a]	-- [a]	-- [a]	-- [a]
	2/12/2014	-26		54.0	2.2	27.2	16.6	30	1470	272	43.3
	2/19/2014	-26		46.0	4.8	25.2	24.0	30	3600	666	51.7
	2/27/2014	-28		30.0	7.0	19.8	43.2	100	1030	191	36.4

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MIDDLETON, WISCONSIN

BLOWER AND FLARE STATION GAS MONITORING

Location	Date	Pressure	CH_4		O_2	CO_2	Balance Gas*	Valve Position	Gas Velocity	Gas Flow**	Gas Temp
		(in. WC)	(% LEL)	(% Vol)	(% Vol)	(% Vol)	(% Vol)	(% open)	(fpm)	(scfm)	(deg F)
	3/7/2014	-28		10.5	7.7	14.6	67.2	70	1115	206	44.2
	3/12/2014	-30		17.0	6.0	18.6	58.4	100	1061	196	43.5
	3/21/2014	-30		18.5	3.2	21.0	57.3	100	1100	204	57.9
	3/28/2014	-26		16.0	5.6	14.2	64.2	30	3200	592	49.9
	4/3/2014	-30		16.0	7.7	15.6	60.7	100	1050	194	46.9
	4/9/2014	-29		13.5	7.3	15.2	64.0	100	1450	268	62.9
	4/16/2014	-26		26.0	7.1	16.0	50.9	100	3900	722	61.8
	4/25/2014	-30		19.0	3.4	20.8	56.8	100	900	167	67.8
	4/30/2014	-29		35.0	3.0	22.8	39.2	100	961	178	57.1
	5/6/2014	-28		26.0	4.0	20.4	49.6	100	1100	204	67.4
	5/15/2014	-30		33.5	2.4	19.2	44.9	100	970	179	63.8
	5/22/2014	-28		20.0	2.3	19.6	58.1	100	900	167	75.5
	5/29/2014	-28		21.0	7.6	14.4	57.0	50	1175	217	80.9
	6/5/2014	-28		26.5	3.3	20.4	49.8	100	1070	198	77.5
	6/12/2014	-28		41.0	1.5	24.0	33.5	100	1240	229	73.9
	6/17/2014	-30		16.0	7.5	14.0	62.5	100	2200	407	85.8
	6/24/2014	-28		36.0	7.1	20.0	36.9	100	1507	279	80.2
	South Branch										
	7/1/2013	-28		0.0	14.8	0.0	85.2	5	2130	394	85.8
	7/11/2013	-28		0.0	20.6	0.0	79.4	5	1060	196	87.6
	7/18/2013	-28		0.7	19.8	0.0	79.5	5	400	74	95.3
	7/20/2013	-27		0.8	20.1	0.0	79.2	5	400	74	73.0
	7/31/2013	-27		1.0	20.1	0.0	79.0	5	210	39	84.3
	8/5/2013	-28		0.0	20.4	0.0	79.6	5	1040	192	84.3
	8/15/2013	-30		0.0	20.9	0.0	79.1	5	900	167	81.8
	8/21/2013	-30		0.0	20.9	0.0	79.1	5	960	178	82.0
	8/26/2013	-28		0.0	20.9	0.0	79.1	5	1200	222	88.6
	9/3/2013	-30		0.0	19.6	0.0	80.4	5	800	148	71.4
	9/13/2013	-29		0.2	19.8	2.2	77.8	5	306	57	73.2
	9/20/2013	-29		2.1	18.8	1.8	77.4	5	730	135	76.9
	9/24/2013	-28		0.6	14.5	0.8	84.1	5	930	172	85.0
	10/4/2013	-30		0.0	20.1	0.0	79.9	5	980	181	73.2
	10/11/2013	-28		0.0	20.1	0.0	79.9	5	1000	185	70.8
	10/16/2013	-30		0.6	19.9	0.6	79.0	5	850	157	59.5
	10/22/2013	-29		0.0	20.3	0.0	79.7	5	950	176	57.9
	10/29/2013	-28		0.0	20.2	0.0	79.8	5	890	165	63.6
	11/8/2013	-30		0.0	20.2	0.0	79.8	5	1100	204	58.9
	11/15/2013	-29		0.0	19.9	0.0	80.1	5	880	163	64.3
	11/20/2013	-30		0.0	20.5	0.0	79.5	5	1150	213	52.3
	11/26/2013	-30		0.9	20.9	0.6	77.6	5	830	154	31.8
	12/3/2013	-30		0.3	20.1	0.0	79.7	5	1040	192	46.9
	12/12/2013	0		0.6	19.3	2.4	77.7	5	0	0	35.7
	12/20/2013	-18		0.3	21.0	0.2	78.6	5	100	19	33.7

APPENDIX III

WISCONSIN DEPARTMENT OF NATURAL RESOURCES
REFUSE HIDEAWAY LANDFILL
MIDDLETON, WISCONSIN

BLOWER AND FLARE STATION GAS MONITORING

Location	Date	Pressure	CH_4		O_2	CO_2	Balance Gas*	Valve Position	Gas Velocity	Gas Flow**	Gas Temp
		(in. WC)	(% LEL)	(% Vol)	(% Vol)	(% Vol)	(% Vol)	(% open)	(fpm)	(scfm)	(deg F)
	12/24/2013	0		2.8	15.9	12.0	69.3	5	0	0	26.2
	1/3/2014	0		5.5	14.1	13.8	66.6	5	0	0	27.3
	1/10/2014	0		6.0	12.6	13.4	68.0	5	0	0	--
	1/17/2014	0		6.5	11.0	13.4	69.1	5	0	0	31.8
	1/24/2014	0		10.5	9.4	12.4	67.7	5	0	0	32.5
	1/29/2014	0		11.5	10.0	12.6	65.9	5	0	0	37.0
	2/6/2014	-- [a]		-- [a]	-- [a]	-- [a]	-- [a]	-- [a]	-- [a]	-- [a]	-- [a]
	2/12/2014	0		6.0	8.9	12.6	72.5		0	0	38.2
	2/19/2014	0		5.5	8.6	12.2	73.7	5	0	0	50.1
	2/27/2014	-20		1.8	17.9	2.0	78.3	5	200	37	31.2
	3/7/2014	0		1.5	15.1	4.8	78.6	5	0	0	42.4
	3/12/2014	-30		0.1	20.2	0.0	79.8	5	930	172	41.5
	3/21/2014	-30		0.1	19.4	0.0	80.5	5	1000	185	61.8
	3/28/2014	-26		0.9	18.8	1.0	79.3	5	900	167	48.7
	4/3/2014	-30		0.1	20.4	0.0	79.6	5	880	163	46.7
	4/9/2014	-28		0.1	19.6	0.2	80.1	5	940	174	70.6
	4/16/2014	-26		0.4	20.6	0.2	78.8	5	930	172	60.6
	4/25/2014	-30		0.1	18.5	0.6	80.8	5	750	139	71.6
	4/30/2014	-29		0.1	19.9	0.0	80.0	5	856	158	58.6
	5/6/2014	-30		0.0	20.6	0.0	79.4	5	980	181	71.5
	5/15/2014	-30		2.2	18.7	0.2	79.0	5	730	135	64.7
	5/22/2014	-28		9.0	20.9	0.0	70.1	5	650	120	79.1
	5/29/2014	-28		0.0	19.4	0.0	80.6	5	950	176	87.2
	6/5/2014	-28		0.3	19.9	0.0	79.9	5	970	179	83.1
	6/12/2014	-28		5.0	16.2	4.0	74.8	5	980	181	77.5
	6/17/2014	-30		1.7	7.5	14.0	76.8	5	1360	252	90.3
	6/24/2014	-28		0.0	20.0	0.0	80.0	5	1350	250	82.9
	Branches-Total Flow* **										
	7/1/2013								7,640	1,413	
	7/11/2013								3,960	733	
	7/18/2013								3,358	621	
	7/20/2013								2,800	518	
	7/31/2013								2,590	479	
	8/5/2013								3,810	705	
	8/15/2013								3,030	561	
	8/21/2013								3,420	633	
	8/26/2013								3,630	672	
	9/3/2013								2,710	501	
	9/13/2013								1,559	288	
	9/20/2013								3,253	602	
	9/24/2013								3,620	670	
	10/4/2013								3,155	584	
	10/11/2013								3,245	600	
	10/16/2013								3,110	575	

APPENDIX III

WISCONSIN DEPARTMENT OF NATURAL RESOURCES
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MIDDLETON, WISCONSIN

BLOWER AND FLARE STATION GAS MONITORING

Location	Date	Pressure	CH_4		O_2	CO_2	Balance Gas*	Valve Position	Gas Velocity	Gas Flow**	Gas Temp
		(in. WC)	(% LEL)	(% Vol)	(% Vol)	(% Vol)	(% Vol)	(% open)	(fpm)	(scfm)	(deg F)
	10/22/2013								3,020	559	
	10/29/2013								2,935	543	
	11/8/2013								3,140	581	
	11/15/2013								2,780	514	
	11/20/2013								3,070	568	
	11/20/2013								3,840	710	
	12/3/2013								2,840	525	
	12/12/2013								2,039	377	
	12/20/2013								2,310	427	
	12/24/2013								1,975	365	
	1/3/2014								2,175	402	
	1/10/2014								2,120	392	
	1/17/2014								1,890	350	
	1/24/2014								2,040	377	
	1/29/2014								1,937	358	
	2/6/2014								-- [a]	-- [a]	
	2/12/2014								2,370	438	
	2/19/2014								4,620	855	
	2/27/2014								2,110	390	
	3/7/2014								1,985	367	
	3/12/2014								2,931	542	
	3/21/2014								3,090	572	
	3/28/2014								5,040	932	
	4/3/2014								2,737	506	
	4/9/2014								3,240	599	
	4/16/2014								5,600	1,036	
	4/25/2014								2,500	463	
	4/30/2014								2,400	444	
	5/6/2014								3,050	564	
	5/15/2014								2,600	481	
	5/22/2014								2,400	444	
	5/29/2014								3,325	615	
	6/5/2014								3,170	586	
	6/12/2014								3,390	627	
	6/17/2014								4,795	887	
	6/24/2014								4,407	815	
	Inlet Sample Port A										
	7/1/2013	-28		23.5	8.3	17.4	50.8				
	7/11/2013	-28		24.0	9.4	14.4	52.2				
	7/18/2013	-28		15.0	7.5	20.5	57.0				
	7/20/2013	-27		27.0	7.7	17.0	48.3				
	7/31/2013	-27		31.0	7.7	17.8	43.5				
	8/5/2013	-28		20.0	7.8	18.8	53.4				
	8/15/2013	-30		25.0	7.3	18.2	49.5				

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REFUSE HIDEAWAY LANDFILL
MIDDLETON, WISCONSIN

BLOWER AND FLARE STATION GAS MONITORING

Location	Date	Pressure	CH_4		O_2	CO_2	Balance Gas*	Valve Position	Gas Velocity	Gas Flow**	Gas Temp
		(in. WC)	(% LEL)	(% Vol)	(% Vol)	(% Vol)	(% Vol)	(% open)	(fpm)	(scfm)	(deg F)
	8/21/2013	-30		16.0	6.5	18.4	59.1				
	8/26/2013	-28		24.5	6.2	19.4	49.9				
	9/3/2013	-30		28.0	4.1	20.8	47.1				
	9/13/2013	-30		19.0	5.0	20.6	55.4				
	9/20/2013	-29		21.0	3.6	21.4	54.0				
	9/24/2013	-28		15.0	6.8	16.0	62.2				
	10/4/2013	-29		15.5	5.8	16.6	62.1				
	10/11/2013	-30		20.5	6.3	15.8	57.4				
	10/16/2013	-30		21.0	6.8	15.8	56.4				
	10/22/2013	-30		18.0	5.9	16.0	60.1				
	10/29/2013	-28		36.5	3.3	23.8	36.4				
	11/8/2013	-30		20.5	3.7	21.2	54.6				
	11/15/2013	-31		24.0	3.6	20.8	51.6				
	11/20/2013	-30		19.0	4.2	19.6	57.2				
	11/26/2013	-30		30.0	4.8	21.4	43.8				
	12/3/2013	-30		23.0	5.0	20.2	51.8				
	12/12/2013	-31		21.0	6.3	18.6	54.1				
	12/20/2013	-30		24.5	7.8	17.6	50.1				
	12/24/2013	-30		7.0	16.2	4.2	72.6				
	1/3/2014	-30		12.0	16.3	5.2	66.5				
	1/10/2014	-28		13.0	16.0	4.8	66.2				
	1/17/2014	-30		3.6	19.2	1.8	75.4				
	1/24/2014	-30		15.0	15.7	4.4	64.9				
	1/29/2014	-29		23.5	14.5	5.4	56.6				
	2/6/2014	-- [a]		-- [a]	-- [a]	-- [a]	-- [a]				
	2/12/2014	-28		52.5	4.1	24.6	18.8				
	2/19/2014	-28		43.5	5.9	22.4	28.2				
	2/27/2014	-29		27.5	7.6	18.0	46.9				
	3/7/2014	-30		19.5	4.6	18.2	57.7				
	3/12/2014	-30		15.0	6.5	17.4	61.1				
	3/21/2014	-30		15.5	4.5	18.8	61.2				
	3/28/2014	-28		18.0	5.0	15.4	61.6				
	4/3/2014	-30		15.0	7.2	15.4	62.4				
	4/9/2014	-29		13.0	6.6	15.4	65.0				
	4/16/2014	-26		26.5	5.5	7.4	60.6				
	4/25/2014	-30		16.0	5.0	18.4	60.6				
	4/30/2014	-29		26.0	4.3	19.2	50.5				
	5/6/2014	-28		18.5	6.0	16.8	58.7				
	5/15/2014	-30		32.0	3.0	18.0	47.0				
	5/22/2014	-28		18.5	2.8	18.4	60.3				
	5/29/2014	-29		27.5	4.5	17.5	50.5				
	6/5/2014	-28		14.5	8.6	12.8	64.1				
	6/12/2014	-29		32.0	4.5	18.6	44.9				
	6/17/2014	-30		13.5	9.9	12.0	64.6				

APPENDIX III

WISCONSIN DEPARTMENT OF NATURAL RESOURCES
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MIDDLETON, WISCONSIN

BLOWER AND FLARE STATION GAS MONITORING

Location	Date	Pressure	CH_4		O_2	CO_2	Balance Gas*	Valve Position	Gas Velocity	Gas Flow**	Gas Temp
		(in. WC)	(% LEL)	(% Vol)	(% Vol)	(% Vol)	(% Vol)	(% open)	(fpm)	(scfm)	(deg F)
	6/24/2014	-29		27.5	10.2	13.8	48.5				
	Inlet Sample Port B										
	7/1/2013	-28		23.5	8.3	17.4	50.8				
	7/11/2013	-28		24.0	9.4	14.6	52.0				
	7/18/2013	-28		15.0	8.0	15.6	61.4				
	7/20/2013	-27		26.5	7.8	17.8	47.9				
	7/31/2013	-27		31.0	7.6	17.6	43.8				
	8/5/2013	-28		20.8	7.8	18.8	52.6				
	8/15/2013	-30		25.0	7.2	18.2	49.6				
	8/21/2013	-30		16.0	6.6	18.2	59.2				
	8/26/2013	-28		22.0	6.3	19.4	52.3				
	9/3/2013	-30		29.5	4.4	20.8	45.3				
	9/13/2013	-30		18.5	5.0	18.0	58.5				
	9/20/2013	-29		21.0	3.6	21.2	54.2				
	9/24/2013	-28		15.0	6.9	16.0	62.1				
	10/4/2013	-29		15.0	5.9	16.2	62.9				
	10/11/2013	-30		21.5	6.3	15.8	56.4				
	10/16/2013	-30		22.0	6.8	15.6	55.6				
	10/22/2013	-30		18.0	6.1	16.0	59.9				
	10/29/2013	-28		36.0	3.3	23.8	36.9				
	11/8/2013	-30		20.5	3.9	22.2	53.4				
	11/15/2013	-31		24.0	3.7	20.6	51.7				
	11/20/2013	-30		19.0	4.2	19.8	57.0				
	11/26/2013	-30		30.0	4.8	21.4	43.8				
	12/3/2013	-31		23.0	5.2	20.2	51.6				
	12/12/2013	-31		20.5	6.7	18.0	54.8				
	12/20/2013	-29		23.5	8.3	16.8	51.4				
	12/24/2013	-30		6.5	16.3	4.2	73.0				
	1/3/2014	-31		12.0	16.4	5.4	66.2				
	1/10/2014	-28		15.5	15.0	5.4	64.1				
	1/17/2014	-30		3.6	19.2	1.8	75.4				
	1/24/2014	-30		12.5	16.5	3.8	67.2				
	1/29/2014	-29		23.0	14.6	5.4	57.0				
	2/6/2014	-- [a]		-- [a]	-- [a]	-- [a]	-- [a]				
	2/12/2014	-29		50.0	4.0	24.6	21.4				
	2/19/2014	-28		43.0	6.0	22.2	28.8				
	2/27/2014	-29		26.5	7.6	18.0	47.9				
	3/7/2014	-30		19.5	4.7	18.0	57.8				
	3/12/2014	-30		17.5	5.2	18.8	58.5				
	3/21/2014	-31		15.0	5.0	18.2	61.8				
	3/28/2014	-28		18.0	5.6	14.4	62.0				
	4/3/2014	-30		15.0	7.2	15.8	62.0				
	4/9/2014	-30		13.0	6.6	15.4	65.0				
	4/16/2014	-26		27.5	4.7	19.0	48.8				

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WISCONSIN DEPARTMENT OF NATURAL RESOURCES
REFUSE HIDEAWAY LANDFILL
MIDDLETON, WISCONSIN

BLOWER AND FLARE STATION GAS MONITORING

Location	Date	Pressure	CH_4		O_2	CO_2	Balance Gas*	Valve Position	Gas Velocity	Gas Flow**	Gas Temp
		(in. WC)	(% LEL)	(% Vol)	(% Vol)	(% Vol)	(% Vol)	(% open)	(fpm)	(scfm)	(deg F)
	4/25/2014	-30		15.5	4.0	18.6	61.9				
	4/30/2014	-29		26.0	5.0	19.8	49.2				
	5/6/2014	-28		17.5	5.8	16.6	60.1				
	5/15/2014	-30		32.0	3.0	18.2	46.8				
	5/22/2014	-28		17.0	4.5	16.4	62.1				
	5/29/2014	-29		26.0	4.3	18.4	51.3				
	6/5/2014	-28		14.0	8.4	13.0	64.6				
	6/12/2014	-29		31.5	4.6	18.6	45.3				
	6/17/2014	-30		13.5	9.8	12.0	64.7				
	6/24/2014	-29		27.5	10.4	14.4	47.7				
	Outlet Sample Port A										
	7/1/2013	1.50		24.0	8.6	18.2	49.2				
	7/11/2013	4.00		25.0	9.7	15.6	49.7				
	7/18/2013	1.00		20.5	8.3	17.6	53.6				
	7/20/2013	0.75		27.0	8.0	18.8	46.2				
	7/31/2013	1.00		30.5	7.8	19.0	42.7				
	8/5/2013	0.95		20.5	8.1	19.6	51.8				
	8/15/2013	0.90		27.0	7.6	19.2	46.2				
	8/21/2013	0.85		16.5	6.7	19.4	57.4				
	8/26/2013	0.95		21.5	6.8	20.2	51.5				
	9/3/2013	0.95		33.5	4.4	21.6	40.5				
	9/13/2013	1.00		20.0	8.6	21.0	50.4				
	9/20/2013	1.00		21.5	3.7	22.4	52.4				
	9/24/2013	0.50		15.5	7.3	16.8	60.4				
	10/4/2013	0.45		15.0	6.2	17.2	61.6				
	10/11/2013	0.65		21.5	6.4	16.8	55.3				
	10/16/2013	0.40		23.5	7.1	16.4	53.0				
	10/22/2013	0.45		18.5	6.3	16.8	58.4				
	10/29/2013	0.50		38.0	3.9	24.8	33.3				
	11/8/2013	0.70		26.5	4.1	22.2	47.2				
	11/15/2013	0.60		25.0	3.9	21.6	49.5				
	11/20/2013	0.50		20.5	4.5	21.2	53.8				
	11/26/2013	1.00		31.5	5.1	22.4	41.0				
	12/3/2013	0.80		24.5	5.0	21.0	49.5				
	12/12/2013	1.15		22.0	6.9	18.8	52.3				
	12/20/2013	1.25		26.0	8.2	18.6	47.2				
	12/24/2013	0.25		7.0	16.7	4.4	71.9				
	1/3/2014	0.35		14.5	16.3	6.2	63.0				
	1/10/2014	0.25		15.5	15.8	5.4	63.3				
	1/17/2014	0.90		3.7	20.2	1.8	74.3				
	1/24/2014	0.50		12.5	17.2	3.8	66.5				
	1/29/2014	0.40		21.0	15.7	5.2	58.1				
	2/6/2014	-- [a]		-- [a]	-- [a]	-- [a]	-- [a]				
	2/12/2014	3.00		50.5	4.4	26.0	19.1				

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MIDDLETON, WISCONSIN

BLOWER AND FLARE STATION GAS MONITORING

Location	Date	Pressure	CH_4		O_2	CO_2	Balance Gas*	Valve Position	Gas Velocity	Gas Flow**	Gas Temp
		(in. WC)	(% LEL)	(% Vol)	(% Vol)	(% Vol)	(% Vol)	(% open)	(fpm)	(scfm)	(deg F)
	2/19/2014	1.75		43.5	6.3	23.0	27.2				
	2/27/2014	1.50		27.5	8.1	18.0	46.4				
	3/7/2014	2.50		17.5	7.1	16.2	59.2				
	3/12/2014	3.00		17.0	7.0	18.6	57.4				
	3/21/2014	1.50		16.0	4.9	19.4	59.7				
	3/28/2014	3.00		22.0	5.2	17.0	55.8				
	4/3/2014	2.00		16.0	7.4	16.4	60.2				
	4/9/2014	1.75		13.5	7.0	16.2	63.3				
	4/16/2014	3.00		27.0	5.3	18.8	48.9				
	4/25/2014	0.65		20.0	4.0	20.8	55.2				
	4/30/2014	0.60		27.5	5.1	20.6	46.8				
	5/6/2014	-10.45		15.5	9.0	14.0	61.5				
	5/15/2014	0.40		32.5	3.4	18.6	45.5				
	5/22/2014	40.45		20.0	3.7	18.6	57.7				
	5/29/2014	0.80		24.5	6.7	16.2	52.6				
	6/5/2014	0.65		15.0	8.7	13.6	62.7				
	6/12/2014	1.65		32.0	5.0	19.2	43.8				
	6/17/2014	1.25		17.5	8.2	15.6	58.7				
	6/24/2014	0.60		28.0	10.5	14.8	46.7				
June 2014 Monthly Average				23.1	8.1						

* : Balance gas calculated as 100% - ($\%CH_4+\%CO_2+\%O_2$).

** : Gas flow (cfm) calculated by multiplying gas velocity (fpm) by 0.045 (3" diameter), 0.078 (4" blower inlet), or 0.185 (6" flare inlet).

*** : Total flow is the sum of flow values from the northern, central and southern branches.

in WC : Inches of water column.

% Vol : Percent volume.

% LEL : Percent of lower explosive limit.

fpm : Feet per minute.

scfm : Standard cubic feet per minute.

a : Weekly monitoring data not available.