OPERATION AND MAINTENANCE ANNUAL REPORT - JULY 2010 THROUGH JUNE 2011

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 Annual Report (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 2010 through June 2011 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, an evaluation of landfill surface cover and drainage way conditions, and a description of equipment repair activities. 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 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, a candlestick flare (previously used as a backup combustion unit but now out of service), and associated controls and appurtenances. The LFG collection network consists of 13 extraction wells, four drip legs, and associated gas header piping. Eleven monitoring wells are located throughout the Site and an additional 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 within RHL

Leachate levels typically have been measured on a monthly basis in the gas extraction wells utilizing two different methods. For the gas extraction wells that are not actively pumped (GW1, GW2, GW3, and GW6), leachate levels are measured using an electric water level indicator. For the gas extraction wells with a leachate pump installed, the Department's remote liquid level indicator (i.e. bubbler tube system) has historically been used to obtain leachate levels. The use of the bubbler tube system reduces the risk of having an electric water level indicator becoming lodged within an extraction well with its numerous down-hole conduits.

Utilizing the bubbler tube system, the leachate head was routinely measured as being greater than 12.5 feet in the various extraction wells equipped with operating pumps. In order to determine the cause of the elevated leachate levels, an evaluation was conducted. A component of the evaluation consisted of testing the bubbler tube system to verify that the leachate measurements were accurate. During the testing, a head of approximately 60 inches of water column (inches W.C.) registered on the panel even though the bubbler tube system was not connected to any well lines. Further testing of the bubbler system revealed that the equipment was reporting a head of 90 inches W.C. in a pail when in fact the liquid level was only 10 inches. The meter was returned to the manufacturer for troubleshooting and calibrating. Fluid levels in actively pumped wells were measured on March 30, 2011 using both the bubbler tube system and a water level indicator in an attempt to validate the accuracy of the bubbler tube system

following the manufacturer's calibration. Fluid levels measured by the bubbler tube system were inconsistent with fluid levels from the electric water level indicator. Therefore, bubbler tube system readings have not been obtained following the March 2011 inspection and an electric water level indicator has been used exclusively for measuring fluid levels. The leachate head measurements in the gas extraction wells are summarized on **Table 1**. Leachate levels in the various extraction wells ranged from approximately 2.1 feet to 42 feet during the contract period. After discontinuing the use of the bubbler system, decreased leachate levels were generally reported in GW8, GW9, GW10 and GW13.

2.2 Leachate Quantity

The volume of leachate being recovered has increased significantly during the past two years. The increasing trend is apparent on the graph of annual leachate recovery volumes for the past four years, which is included as **Figure 2**. Elevated volumes of leachate were recovered from July 2009 through June 2011 compared to the period of July 2007 through June 2009 despite lower annual rainfall totals being recorded more recently. The precipitation data was obtained for the Dane County Airport weather station from the National Weather Service's Climate Data Center. The elevated leachate recovery rates are attributable to pump optimization activities being conducted persistently during this timeframe. Approximately 563,145 gallons of leachate was recovered and removed from RHL from July 2010 through June 2011 **(Table 2)**. If leachate recovery rates continue to increase at a substantial rate in the upcoming years, the Department may wish to evaluate the viability of implementing Phytoremediation as a green technology to utilize landfill leachate as a resource in lieu of disposing of it as a waste.

CONTRACT PERIOD	LEACHATE VOLUME RECOVERED (gallons)	ANNUAL RAINFALL TOTAL (inches)	PERCENTAGE OF CURRENT RECOVERY TOTAL	O&M CONTRACTOR
July 2010-June 2011	563,145	36.67	--	LBG
July 2009-June 2010	469,239	36.25	83 %	LBG
July 2008-June 2009	214,360	37.13	38 %	Other consultant
July 2007-June 2008	226,606	55.24	40 %	Other consultant

During the current contract period, monthly leachate recovery volumes ranged from approximately 13,500 to 95,845 gallons. The volume of leachate recovered 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), 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 evident during May 2011 and the lowest recovery rate was observed during September 2010. The pump in GW7, which typically recovers the greatest volume of leachate, was not operational prior to the September 2010 inspection event.

2.3 Operational Duration and Maintenance Activities

The compressed air delivery system operated consistently during the contract period; however, the operation of select leachate pumps remained sporadic. Interruptions to leachate pump operations were primarily caused by the fouling of internal pump components which prevents the pump from properly cycling, fouling of wellhead leachate discharge lines, and water vapor freezing in the compressed air supply lines at the wellhead.

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. Near the end of the contract year, pumps which had not been cleaned during the year or were operating sporadically were cleaned and adjusted as a component of the annual site inspection. Following annual maintenance activities, the pump in GW12 cycled several times before stopping. When the leachate line was disconnected, the pump again cycled regularly, which suggests that the leachate line connecting the wellhead to the underground lateral line that drains to the UST is fouled. Leachate line cleaning activities will be initiated on this short segment of piping.

During winter months, water vapor within the compressed air supply froze within the conduit at several wellheads and restricted air flow to the pneumatic pumps. The pneumatic pumps became operational when ambient air temperatures allowed the air supply lines to thaw. Water vapor within the compressed air is the result of operational issues associated with the dual tower regenerative desiccant dryers housed within the compressor building. Historical project information obtained by LBG does not indicate when the desiccant material within the towers

has been changed out. The desiccant material will be changed out before ambient air temperatures decline below freezing and additional troubleshooting activities will be conducted on the desiccant dryers as necessary.

As a component of the annual inspection, a contractor was retained to conduct jetting of the leachate lines, driplegs and cleanouts during June 2011. Approximately 1,120 feet of leachate lines were cleaned. Jetting of the Central branch and a segment of the Southern branch via satisfactory access points was completed in a fashion similar to past jetting events.

2.4 Leachate Quality

Leachate samples were collected on a quarterly basis for laboratory analysis. On September 30, 2010, December 21, 2010, March 30, 2011 and June 29, 2011, 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. 128053530) for laboratory analysis of 13 inorganic parameters. Pursuant to the MMSD Wastewater Discharge Permit NTO-5.11 (Permit) and the Department's request for proposal, the samples were analyzed for cadmium, total chromium, hexavalent chromium, copper, lead, mercury, molybdenum, nickel, selenium, silver, zinc, and 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**.

2.5 Leachate Discharge Permit Compliance

The 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. To fulfill the reporting requirements of Permit (Part 3, Section 3.01), monitoring results were submitted to the MMSD within sixty days of the end of each quarterly monitoring period. A copy of the Permit is included as **Appendix II**. As stated above, concentrations of the analyzed parameters did not exceed any discharge permit limits.

3.0 LFG COLLECTION NETWORK

3.1 Operational Duration

The telemetry system and flare controls associated with the LFG collection system were taken off-line or bypassed by a previous operator due to low flare operational temperatures and malfunctioning sensors/controls. Under this operating scenario, the landfill extraction blower can operate without interruption and directly discharge LFG to the atmosphere when the flame is out. To reduce the volume of LFG directly discharged to the atmosphere and increase the operational duration of the flare, the LFG extraction blower was taken off-line for short periods when methane concentrations were below operating levels or oxygen concentrations were elevated. Cycling the gas extraction system on and off resulted in the extraction blower operating approximately 58 percent of the contract period (**Table 4**). The blower did not experience any malfunctions during the contract period. Preventative maintenance activities (e.g. belt replacement, greasing) was completed.

3.2 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 Southern branch while leachate recovery pumps are operational in GW4 and GW5. Low points within the Southern branch and within the redundant connection between the South

branch and the Central branch extremities accumulate liquids which prevents LFG recovery from the Southern branch wells. On June 29, 2010, the GW4 and GW5 recovery pumps were taken offline and a vacuum truck was connected to the dual LFG/leachate pipe at GW5, a clean-out pipe located near GW9, and clean-out #2 along the South branch leachate conveyance header between GW1 and the UST. Approximately 450 gallons of liquid was removed from the piping network during the limited vacuum event. Following the completion of the vacuum event, the LFG extraction system was restarted and sufficient vacuum readings were noted at GW1 through GW5. Leachate pumps in wells GW4 and GW5 remained off-line temporarily following the vacuum event to prevent low spots in the shared leachate/LFG extraction line from collecting liquids. Vacuum was maintained on the Southern branch wells from July through October 2010 (**Table 5**). However, lower methane production rates became apparent in GW4 and GW5 as leachate levels rose and decreased well headspace. On October 29, leachate pumps in GW4 and GW5 were turned on to reduce the leachate head level and LFG extraction from the Southern Branch was promptly cut off.

Due to stressed vegetation and LFG emanating through the landfill cover in the GW5 area and elevated methane concentrations in property line gas probe GP-11, two lateral wells were installed and connected to the GW5 wellhead during 1993. 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. Even if vacuum is restored to the GW5 wellhead, additional efforts will be required to establish vacuum through the GW5 lateral wells.

3.3 Landfill Perimeter Gas Probe Monitoring Points

During the contract period, methane was detected in three perimeter gas probe clusters (G-1S/G-1D, G-2S/G-2D and GP-11S/GP-11D) at concentrations greater than the lower explosive limit (LEL), which is 5 percent by volume. The methane concentrations at these three clusters ranged from non-detect to 20.5 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. LFG piping network repairs are warranted in the vicinity of extraction well GW5 in order to recover methane from this area.

4.0 LFG COMBUSTION SYSTEM

4.1 Operational Duration

The LFG combustion system was not fully operational during the contract period. As indicated on **Table 4**, the LFG extraction blower operated 58 percent of the time. The flare operated within the range of 22 to 58 percent of the time. The telemetry system and select system controls were taken off-line by a previous operator so a more accurate estimate of the flare operational duration cannot be made. On numerous occasions, the LFG collection and combustion systems were taken off-line for a period of a few days in an attempt to reduce the volume of gas directly discharged to the atmosphere and to improve the operation of the flare by allowing LFG methane concentrations to rebound. Upon system restart, elevated methane concentrations were typically evident. Despite efforts to cycle the LFG recovery system, it may have been emitting LFG directly to the atmosphere up to approximately 131 days out of the contract year.

4.2 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 LFG flow rate measured at Sample Port A ranged from approximately 130 to 650 cubic feet per minute. A summary of blower and flare station flow rates and methane concentrations is attached as **Appendix III**.

4.3 Synopsis of Equipment Condition

As indicated by the low operational percentage of the flare, the enclosed flare is approaching the end of its useful life cycle. Many repairs would be necessary at this time to bring the flare back to an acceptable level of performance. These repairs could include, but are not necessarily limited to, installing an additional ultraviolet sensor, replacing a thermocouple, modifying the position of cooling dampers, adjusting the combustion air shutters, installing a

temperature monitor, replacing the pilot light assembly, and reconnecting the LFG isolation valve on the influent line. Although these repairs would assist in operating the combustion system, they would not likely increase the life of the flare significantly. Alternatives to repairing the enclosed flare were previously presented to the Department for consideration.

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 pilot light would not operate on numerous occasions because the spark rod becomes misaligned due to vibration of the flare and results in an ineffective spark gap. This requires the pilot light assembly to be dismantled, cleaned if necessary, and repositioned as accurately as possible.

5.0 LANDFILL SURFACE COVER AND DRAINAGE INSPECTION

5.1 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 of storm water collecting on the landfill surface. No areas of significant erosion or stressed vegetation were noted that need to be addressed by the Department. No small areas experiencing erosion were noted or repaired by LBG.

5.2 Sedimentation Basin

The sedimentation basin was visited during June 2011 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.

6.0 TASKS ON HOLD

6.1 Automation of Blower Shutdown

Under the current operating scenario, the landfill extraction blower is able to directly discharge LFG to the atmosphere when the flare is off line. Telemetry system/flare controls were taken off-line or bypassed by a previous operator due to low flare operational temperatures and malfunctioning sensors/controls. Furthermore, the LFG isolation valve on the influent line to the flare was bypassed by a previous operator resulting in an unsafe working environment. When the flame goes out, LFG is emitted to the flare/blower area either by the extraction blower or by positive pressure created in the landfill as gas is generated. Elevated methane concentrations could occur at the blower/flare station and result in a dangerous situation if an ignition spark is present.

During October 2009, LBG requested funding to address this situation by automating the shutdown of the blower when the flame goes out. Through subsequent conversations with combustion equipment service providers and the Department, it became evident that it was not economically justifiable to expend the resources required to upgrade the existing enclosed flare. The required upgrades would not likely extend the flare's operational life cycle for a sufficient duration to justify the expenditure. Due to the Department's interest in sustainable or "greener" cleanups and the state of deterioration of the existing enclosed flare, the Department requested a cost estimate for conducting a feasibility study/economic evaluation of potential gas to energy alternatives for RHL. To date, funding has not been allocated for the evaluation of the alternatives.

6.2 Flare Pilot Light Assembly Replacement

As stated above, the pilot light would not operate on numerous occasions because the spark rod comes out of alignment resulting in an ineffective spark gap. During the previous contract period, LBG requested funding to address this situation; however, the task is on hold until approval is granted to conduct the gas to energy alternatives evaluation.

6.3 Gas to Energy Alternatives Evaluation

Upon the allocation of funding by the Department, LBG will evaluate the energy potential of the current volume and quality of LFG being generated and identify potential LFG collection system operational configurations that would be optimal for gas to energy alternatives. Following the completion of the evaluation, potential paths forward for the Site include the implementation of a gas to energy system or the installation of a candlestick or smaller enclosed flare.

7.0 CONCLUSIONS AND RECOMMENDATIONS

7.1 Conclusions

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

- The Department's bubbler tube system does not provide fluid level readings that are consistent with an electric water level indicator. Leachate levels in the various extraction wells ranged from approximately 2.1 feet to 42 feet.
- Approximately 563,145 gallons of leachate were removed from RHL. Despite lower precipitation amounts, the volume of leachate recovered during the past two contract periods has increased significantly in comparison to the volume recovered from July 2007 to June 2009. The increase has been attributed to persistent pump optimization activities.
- Monthly leachate recovery volumes ranged from 13,500 gallons to 95,800 gallons.
- The compressed air delivery system operated consistently; however, the operation of select leachate pumps was interrupted due to the fouling of internal pump components and wellhead leachate discharge lines and water vapor freezing within the air supply.
- Concentrations of inorganic compounds in the quarterly leachate samples were less than the discharge permit effluent limitations.
- 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 58 percent of the contract period.
- Due to the telemetry system and flare controls being taken off-line by a previous operator, the landfill extraction blower can operate without interruption and directly

discharge LFG to the atmosphere when the flare is off-line. Due to flame failure within the flare, the LFG recovery system may have been emitting greenhouse gases directly to the atmosphere for up to 131 days out of the contract year.

- 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 Southern branch. The accumulation of leachate or condensate within low spot(s) blocks LFG from being extracted from the Southern branch.
- The observed pressure within the GW5 lateral extraction wells indicates that there is likely a blockage within the solid pipe that extends halfway through each trench segment.
- 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 (i.e. southwest of GW5).
- The enclosed flare is approaching the end of its useful life cycle and numerous repairs would be necessary to bring the flare back to an acceptable level of performance.
- Landfill surface inspections indicated that limited areas have experienced minimal settlement resulting in pools of storm water collecting on the landfill surface. No areas of significant erosion or stressed vegetation have been noted.
- The accumulation of sediment has not adversely diminished the allowable storm water storage volume of the sedimentation basin.
- Several system optimization tasks have been put on hold due to the lack of adequate funding.

7.2 Recommendations

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

- Request a proposal and subsequently allocate funding to restore vacuum to the GW4 and GW5 wellheads and GW5 laterals in order to:
    - Reduce elevated methane concentrations in perimeter gas probes

  - Reduce the build-up of pressure within the landfill from LFG production
  - Minimize fugitive emissions of LFG through the cover in the vicinity of GW5
- Evaluate the energy potential of the LFG being generated following the restoration of vacuum to the Southern branch wells and prioritize LFG collection system operational configurations that should be implemented in order to reduce the volume of greenhouse gases being discharged directly to the atmosphere through the flare.
- Consider the financial viability of implementing Phytoremediation as a green technology to utilize landfill leachate as a resource in lieu of disposing of it as a waste if leachate recovery rates continue to increase at a substantial rate in the upcoming years.
- Replace the desiccant in the air drier towers prior to winter in order to minimize interruptions to leachate pump operations due to water vapor freezing in the air supply lines.

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	7/29/2010	53.7	35.05	18.7								
GW1	8/27/2010	53.7	--	--								
GW1	9/3/2010	53.7	--	--								
GW1	9/22/2010	53.7	--	--								
GW1	10/29/2010	53.7	36.70	17.0								
GW1	11/15/2010	53.7	--	--								
GW1	11/19/2010	53.7	38.20	15.5								
GW1	12/21/2010	53.7	24.80	28.9								
GW1	1/27/2011	53.7	--	--								
GW1	2/28/2011	53.7	--	--								
GW1	3/30/2011	53.7	38.5	15.3								
GW1	4/27/2011	53.7	37.5	16.2								
GW1	5/24/2011	53.7	35.8	18.0								
GW1	7/1/2011	53.7	37.0	16.7								
GW2	7/29/2010	53.9	30.50	23.4								
GW2	8/27/2010	53.9	35.20	18.7								
GW2	9/3/2010	53.9	--	--								
GW2	9/22/2010	53.9	--	--								
GW2	10/29/2010	53.9	35.70	18.2								
GW2	11/15/2010	53.9	--	--								
GW2	11/19/2010	53.9	35.70	18.2								
GW2	12/21/2010	53.9	35.20	18.7								
GW2	1/27/2011	53.9	--	--								
GW2	2/28/2011	53.9	--	--								
GW2	3/30/2011	53.9	37.5	16.5								
GW2	4/27/2011	53.9	37.0	16.9								
GW2	5/24/2011	53.9	35.1	18.8								
GW2	7/1/2011	53.9	37.0	16.9								

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	7/29/2010	59.7	51.50	8.2								Well depth meter inconsistent
GW3	8/27/2010	59.7	51.20	8.5								
GW3	9/3/2010	59.7	--	--								
GW3	9/22/2010	59.7	--	--								
GW3	10/29/2010	59.7	47.60	12.1								
GW3	11/15/2010	59.7	--	--								
GW3	11/19/2010	59.7	53.65	6.1								
GW3	12/21/2010	59.7	--	--								Dry
GW3	1/27/2011	59.7	--	--								
GW3	2/28/2011	59.7	--	--								
GW3	3/30/2011	59.7	56.0	3.8								
GW3	5/3/2011	59.7	56.0	3.7								
GW3	5/24/2011	59.7	54.6	5.1								
GW3	7/1/2011	59.7	56.0	3.7								
GW4	7/29/2010	~65		>12.5	0	221,136	33	0				Turned off
GW4	8/20/2010	~65		--	0	221,136	0	--				Turned off
GW4	8/27/2010	~65		>12.5	0	--	--	--				Turned off
GW4	9/3/2010	~65		--	--	--	--	--				Turned off
GW4	9/22/2010	~65		--	0	221,136	0	0				Turned off
GW4	10/29/2010	~65		>12.5	89	221,136	0	0				Pump observed cycling
GW4	11/15/2010	~65		--	88	221,136	0	0				Pump observed cycling
GW4	11/19/2010	~65		12.1	90	221,140	4	0				Pump observed cycling
GW4	12/21/2010	~65		--	0	230,217	9,077	12				Pump not observed cycling
GW4	1/27/2011	~65		--	90	238,129	7,912	9				Pump observed cycling; counter not following cycles
GW4	2/28/2011	~65		--	--	245,429	7,300	10				Air venting, turned off
GW4	3/30/2011	~65	38.3	27	40	246,689	1,260	2				Air turned on; pump observed cycling
GW4	5/3/2011	~65	46.5	19	40	437,673	190,984	234				Pump observed cycling
GW4	5/24/2011	~65	48.3	17	45	437,673	0	0				Pump observed cycling
GW4	7/1/2011	~65	57.0	8	33	497,395	59,722	65				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	
GW5	7/29/2010	~70		11.7	0	417,219	24,670	30	894,530	0	0	Turned off
GW5	8/27/2010	~70		> 12.5	0	--	--	--	--	--	--	Turned off
GW5	9/3/2010	~70		--	--	--	--	--	--	--	--	Turned off
GW5	9/22/2010	~70		--	0	417,219	24,670	11.5	894,594	64	0.1	Turned off
GW5	10/29/2010	~70		7.5	90	435,604	18,385	20.7	966,752	72,158	81.3	Pump observed cycling
GW5	11/15/2010	~70		--	85	435,609	5	0	966,759	7	0	Pump agitated, started
GW5	11/19/2010	~70		--	90	435,609	0	0	994,251	27,492	286	Pump observed cycling
GW5	12/21/2010	~70		--	20	435,610	1	0	61,490	67,239	88	Pump observed cycling
GW5	1/27/2011	~70		--	90	435,610	0	0	84,762	23,272	26	Pump observed cycling
GW5	2/28/2011	~70		--	--	435,610	0	0	153,185	68,423	89	Air venting, turned off
GW5	3/30/2011	~70	56.3	14	40	435,610	0	0	163,972	10,787	15	Air turned on; pump observed cycling
GW5	5/3/2011	~70	55.0	15	40	435,610	0	0	349,419	185,447	227	Pump observed cycling
GW5	5/24/2011	~70	53.6	16	35	435,610	0	0	429,048	79,629	158	Pump observed cycling
GW5	7/1/2011	~70	--	--	35	435,610	0	0	499,721	70,673	77	Pump observed cycling
GW6	7/29/2010	40.0	30.70	9.3								
GW6	8/27/2010	40.0	32.50	7.5								
GW6	9/3/2010	40.0	--	--								
GW6	9/22/2010	40.0	--	--								
GW6	10/29/2010	40.0	32.80	7.2								
GW6	11/15/2010	40.0	--	--								
GW6	11/19/2010	40.0	32.20	7.8								
GW6	12/21/2010	40.0	--	--								
GW6	1/27/2011	40.0	--	--								
GW6	2/28/2011	40.0	--	--								
GW6	3/30/2011	40.0	36.0	4								
GW6	5/3/2011	40.0	35.0	5								
GW6	5/24/2011	40.0	31.6	8.4								
GW6	7/1/2011	40.0	34.0	6.0								

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	
GW7	7/29/2010	~60		>12.5	--	492404	319,367	391	843,450	0	--	Pump not observed cycling
GW7	8/20/2010	~60		--	94	492514	110	0	843,450	0	--	Pump not observed cycling
GW7	8/27/2010	~60		> 12.5	91	492515	1	0	843,450	0	--	Pump not observed cycling
GW7	9/3/2010	~60		--	--	--	--	--	--	--	--	Pump not observed cycling
GW7	9/22/2010	~60		--	90	492,516	1	0	843,450	0	0	Pump not observed cycling
GW7	10/29/2010	~60		> 12.5	92	492,525	9	0	843,450	0	0	Pump not observed cycling
GW7	11/15/2010	~60		--	95	493,740	1,215	3	843,450	0	0	Pump observed cycling
GW7	11/19/2010	~60		--	95	530,143	36,403	379	843,450	0	0	Pump observed cycling
GW7	12/21/2010	~60		--	90	745,650	215,507	281	843,450	0	0	Pump observed cycling
GW7	1/27/2011	~60		--	90	926,985	181,335	204	843,450	0	0	Pump observed cycling
GW7	2/28/2011	~60		--	80	48,445	121,460	158	66,196	222,746	290	Pump observed cycling
GW7	3/30/2011	~60	47.0	13	95	145,135	96,690	134	66,196	0	0	Pump observed cycling
GW7	5/3/2011	~60		--	95	472,567	327,432	401	843,532	777,336	953	Pump observed cycling, broken port
GW7	5/24/2011	~60	42.7	17	95	632,145	159,578	317	843,532	0	0	Pump observed cycling
GW7	7/1/2011	~60	49.0	11	87	997,936	365,791	401	843,534	2	0	Pump observed cycling
GW8	7/27/2010	~69		>12.5	93	172,975	1	0	273,656	2	0	Pump not cycling. Pulled, cleaned & adjusted.
GW8	7/29/2010	~69		11.4	91	179,841	6,866	143	278,551	4,895	102	Pump observed cycling
GW8	8/20/2010	~69		--	87	201,307	21,466	41	293,897	15,346	29	Pump observed cycling
GW8	8/27/2010	~69		10.8	85	205,888	4,581	27	296,466	2,569	15	Pump observed cycling
GW8	9/3/2010	~69		--	88	210,216	4,328	26	298,125	1,659	10	Pump observed cycling
GW8	9/22/2010	~69		--	93	221,854	11,638	26	303,886	5,761	13	Pump observed cycling
GW8	10/29/2010	~69		11.7	90	246,678	24,824	28	319,316	15,430	17	Pump observed cycling
GW8	11/15/2010	~69		--	87	253,515	6,837	17	324,435	5,119	13	Pump observed cycling
GW8	11/19/2010	~69		>12.5	80	254,807	1,292	13	325,674	1,239	13	Pump observed cycling
GW8	12/21/2010	~69		--	90	266,413	11,606	15	343,474	17,800	23	Pump not observed cycling
GW8	1/27/2011	~69		--	90	290,639	24,226	27	363,115	19,641	22	Pump observed cycling
GW8	2/28/2011	~69		--	80	307,131	16,492	21	--	--	--	Pump not observed cycling
GW8	3/30/2011	~69	43.8	25	85	326,787	19,656	27	391,053	27,938	19	Pump observed cycling
GW8	5/3/2011	~69	62.0	7	87	353,479	26,692	33	408,710	17,657	22	Pump observed cycling
GW8	5/24/2011	~69	61.9	7	85	376,632	23,153	46	418,885	10,175	20	Pump observed cycling
GW8	7/1/2011	~69	63.0	6	87	417,214	40,582	44	439,037	20,152	22	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	
GW9	7/27/2010	~66		>12.5	83	706,788	3	0	87,775	3	0	Pump not operating. Pulled, cleaned & adjusted
GW9	7/29/2010	~66		>12.5	–	715,657	8,869	185	96,627	8,852	184	Pump observed cycling
GW9	8/20/2010	~66		–	92	746,131	30,474	58	126,928	30,301	57	Pump observed cycling
GW9	8/27/2010	~66		> 12.5	91	750,958	4,827	29	131,735	4,807	29	Pump observed cycling
GW9	9/3/2010	~66		–	90	756,403	5,445	32	137,145	5,410	32	Pump observed cycling
GW9	9/22/2010	~66		–	92	771,306	14,903	33	151,979	14,834	33	Pump observed cycling
GW9	10/29/2010	~66		10	91	799,824	28,518	32	180,581	28,602	32	Pump observed cycling
GW9	11/15/2010	~66		–	86	810,850	11,026	27	191,813	11,232	28	Pump observed cycling
GW9	11/19/2010	~66		>12.5	90	813,081	2,231	23	194,439	2,626	27	Pump observed cycling
GW9	12/21/2010	~66		–	90	832,734	19,653	26	224,402	29,963	39	Pump observed cycling
GW9	1/27/2011	~66		–	90	845,689	12,955	15	243,760	19,358	22	Pump observed cycling
GW9	2/28/2011	~66		–	82	877,892	32,203	42	--	–	–	Pump observed cycling
GW9	3/30/2011	~66	61.6	4	85	895,934	18,042	25	288,291	44,531	62	Pump observed cycling
GW9	5/3/2011	~66	63.0	3	80	919,143	23,209	28	311,499	23,208	28	Pump observed cycling
GW9	5/24/2011	~66	61.1	5	85	929,833	10,690	21	322,031	10,532	21	Pump observed cycling
GW9	7/1/2011	~66	60.0	6	85	954,483	24,650	17	346,655	35,156	25	Pump observed cycling
GW10	7/29/2010	~70		>12.5	–	483,792	13,408	16				Pump observed cycling
GW10	8/20/2010	~70		–	65	494,808	11,016	21				Pump not observed cycling.
GW10	8/27/2010	~70		11.7	65	498,398	3,590	21				Pump observed cycling
GW10	9/3/2010	~70		–	65	500,599	2,201	13				Pump observed cycling
GW10	9/22/2010	~70		–	65	506,534	5,935	13				Pump observed cycling
GW10	10/29/2010	~70		11.3	65	518,242	11,708	13				Pump observed cycling
GW10	11/15/2010	~70		–	65	522,903	4,661	11				Pump observed cycling
GW10	11/19/2010	~70		2.1	60	523,259	356	4				Pump observed cycling
GW10	12/21/2010	~70		–	40	525,439	2,180	3				Pump not observed cycling
GW10	1/27/2011	~70		–	60	525,729	290	0				Pump observed cycling
GW10	2/28/2011	~70		–	65	525,746	17	0				Pump not observed cycling
GW10	3/30/2011	~70		5	85	525,750	4	0				Pump not observed cycling
GW10	5/3/2011	~70	64.0	6	65	525,756	6	0				Pump not observed cycling
GW10	5/24/2011	~70	61.6	8	65	525,756	0	0				Pump observed cycling
GW10	7/1/2011	~70	–	–	60	525,780	24	0				Pump observed cycling, but not counting

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	
GW11	7/29/2010	~65		>12.5	--	470,222	37,077	45	100,844	0	--	Pump observed cycling
GW11	8/20/2010	~65		--	87	491,727	21,505	41	100,844	0	--	Pump observed cycling
GW11	8/27/2010	~65		> 12.5	94	492,781	1,054	6	100,844	0	--	Pump observed cycling
GW11	9/3/2010	~65		--	94	492,781	0	0	100,844	0	--	Pump not observed cycling
GW11	9/22/2010	~65		--	97	492,781	0	0	100,844	0	--	Pump not observed cycling
GW11	10/29/2010	~65		11.7	97	504,990	12,209	14	100,846	2	0	Pump observed cycling
GW11	11/15/2010	~65		--	89	516,997	12,007	29	100,846	0	0	Pump observed cycling
GW11	11/19/2010	~65		>12.5	90	518,171	1,174	12	100,846	0	0	Pump observed cycling
GW11	12/21/2010	~65		--	90	526,989	8,818	11	100,849	3	0	Pump not observed cycling
GW11	1/27/2011	~65		--	90	537,379	10,390	12	100,849	0	0	Pump observed cycling
GW11	2/28/2011	~65		--	79	548,742	11,363	15	100,852	3	0	Pump observed cycling
GW11	3/30/2011	~65	61.0	4	87	561,005	12,263	17	100,852	0	0	Pump observed cycling
GW11	5/3/2011	~65	48.0	17	--	611,794	50,789	62	100,852	0	0	Pump venting to atmosphere
GW11	5/24/2011	~65	40.7	24	--	611,796	2	0	100,858	6	0	Air turned off for repair
GW11	7/1/2011	~65	46.0	19	--	611,875	79	0	100,858	0	0	Air turned off for repair
GW12	7/27/2010	~81		>12.5	83	53,846	0	--	339,841	1,029	1	Pump cycling when discharge disconnected. Discharge line is plugged.
GW12	7/29/2010	~81		>12.5	--	53,854	8	0	341,017	1,176	25	Pump not observed cycling.
GW12	8/20/2010	~81		--	80	53,855	1	0	341,019	2	0	Pump not observed cycling.
GW12	8/27/2010	~81		> 12.5	80	53,855	0	0	341,019	0	0	Pump not observed cycling.
GW12	9/3/2010	~81		--	85	53,858	3	0	344,017	2,998	18	Pump observed cycling.
GW12	9/22/2010	~81		--	84	53,858	0	0	344,017	0	0	Pump not observed cycling.
GW12	10/29/2010	~81		> 12.5	80	53,858	0	0	354,405	10,388	12	Pump not observed cycling.
GW12	11/15/2010	~81		--	80	54,380	522	1	369,118	14,713	36	Pump observed cycling.
GW12	11/19/2010	~81		> 12.5	80	54,380	0	0	373,724	4,606	48	Pump observed cycling.
GW12	12/21/2010	~81		--	90	54,380	0	0	400,381	26,657	35	Pump observed cycling
GW12	1/27/2011	~81		--	90	54,381	1	0	401,236	855	1	Pump not observed cycling
GW12	2/28/2011	~81		--	70	54,384	3	0	401,675	439	1	Pump not observed cycling
GW12	3/30/2011	~81	43.8	37	80	54,384	0	0	401,675	0	0	Pump not observed cycling
GW12	5/3/2011	~81	41.0	40	75	54,384	0	0	401,676	1	0	Pump not observed cycling
GW12	5/24/2011	~81	38.9	42	80	54,384	0	0	401,676	0	0	Pump not observed cycling
GW12	7/1/2011	~81	44.0	37	0	54,384	0	0	401,676	0	0	Offline for repairs

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	7/29/2010	~69		>12.5	--	624,819	0	0	357,601	6	0	Pump not observed cycling.
GW13	8/20/2010	~69		--	90	624,819	0	0	357,601	0	0	Pump not observed cycling.
GW13	8/27/2010	~69		> 12.5	90	624,819	0	0	357,601	0	0	Pump not observed cycling.
GW13	9/3/2010	~69		--	93	624,819	0	0	357,601	0	0	Pump not observed cycling.
GW13	9/22/2010	~69		--	90	624,829	10	0	357,700	99	0	Pump not observed cycling.
GW13	10/29/2010	~69		> 12.5	90	624,829	0	0	357,700	0	0	Pump not observed cycling.
GW13	11/15/2010	~69		--	85	624,829	0	0	357,700	0	0	Pump not observed cycling.
GW13	11/19/2010	~69		10.8	80	624,829	0	0	357,700	0	0	Pump not observed cycling.
GW13	12/21/2010	~69		--	--	624,829	0	0	357,700	0	0	Pump not observed cycling
GW13	12/30/2010	~69		--	--	624,829	0	0	358,050	350	2	Pump repaired, observed cycling
GW13	1/27/2011	~69		--	90	624,848	19	0	400,528	42,478	63	Pump not observed cycling
GW13	2/28/2011	~69		--	70	624,850	2	0	452,892	52,364	68	Pump not observed cycling
GW13	3/30/2011	~69	63.5	6	85	624,854	4	0	483,084	30,192	42	Pump observed cycling
GW13	5/3/2011	~69		--	80	624,859	5	0	--	--	--	Cycling, not counting, broken port
GW13	5/24/2011	~69		--	85	624,859	5	0	--	--	--	Cycling, not counting, broken port
GW13	7/1/2011	~69	65.0	4	82	624,859	5	0	--	--	--	Cycling, not counting

~ : Value approximated.

-- : Not measured or not calculated.

psi : Pounds per square inch.

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-10	29,860	29,860
August-10	35,565	65,425
September-10	13,499	78,924
October-10	34,531	113,455
November-10	44,962	158,417
December-10	24,870	183,287
January-11	40,474	223,761
February-11	45,586	269,347
March-11	40,571	309,918
April-11	86,132	396,050
May-11	95,845	491,895
June-11	71,250	563,145
Total	563,145	563,145

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**
9/30/2010	< 0.010	0.029 J	< 0.015	< 0.036	0.032 J	< 0.00013	< 0.020	0.110	< 0.088	< 0.0074	0.021 J	0.072
12/21/2010	< 0.010	0.029 J	< 0.015	< 0.036	< 0.032	< 0.000065	0.033 J	0.076 J	< 0.088	0.23	0.026 J	0.0050 J
3/30/2011	< 0.00025	0.023	< 0.0030	0.0017 J	< 0.0017	0.00044	< 0.0036	0.065	< 0.0024	< 0.00086	0.011 J	0.0085 J
6/29/2011	< 0.00036	0.021	0.0052 J	0.0044 Ja	< 0.0020	<0.000051	< 0.0019	0.057	< 0.0025	< 0.00071	0.010 Ja	0.0075 Ja

* : 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 Method Detection Limit (MDL). Data is of limited reliability.
Ja : Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
-- : Effluent limitation not set.
< : Less than laboratory method detection limit.

TABLE 4

WISCONSIN DEPARTMENT OF NATURAL RESOURCES
REFUSE HIDEAWAY LANDFILL
MIDDLETON, WISCONSIN

BLOWER AND FLARE STATION OPERATIONAL DURATION

Date	Blower				Flare (Worst Case)*			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 (%)	
7/6/10 3:30 PM	39,187.2	170	99%	--	173	0 *	0%	Blower operational. Flare down. Gas recovery system turned off.
7/8/10 12:00 PM	39,190.4	3	7%	7.0	44	0	0%	Blower and flare down upon arrival. Restarted and operational.
7/12/10 9:20 AM	39,284.1	94	100%	--	93	0 *	0%	Blower operational. Flare down. Gas recovery system turned off.
7/16/10 9:00 AM	39,284.1	0	0%	7.0	96	0	0%	Blower and flare down upon arrival. Restarted and operational.
7/21/10 8:50 AM	39,404.0	120	100%	7.0	120	0 *	0%	Blower and flare down upon arrival. Restarted and operational.
7/27/10 3:10 PM	39,406.4	2	2%	--	150	0	0%	Blower and flare down upon arrival. Restarted and operational.
7/29/10 11:14 AM	39,450.5	44	100%	7.0	44	44	100%	Blower and ground flare operational.
Monthly Summary		**434**	**60%**		**720**	**44**	**6%**	
8/3/10 12:15 PM	39,571.6	121	100%	--	121	0 *	0%	Blower operational. Flare down. Restarted and operational.
8/6/10 1:10 PM	39,644.8	73	100%	--	73	0 *	0%	Blower operational. Flare down. Restarted and operational.
8/13/10 8:45 AM	39,807.9	163	100%	7.0	164	0 *	0%	Blower operational. Flare down. Gas recovery system turned off.
8/17/10 3:00 PM	39,810.2	2	2%	--	102	0	0%	Blower and flare down upon arrival. Restarted and operational.
8/20/10 7:51 AM	39,875.0	65	100%	--	65	0 *	0%	Blower operational. Flare down. Restarted and operational.
8/23/10 9:52 AM	39,949.0	74	100%	--	74	0 *	0%	Blower operational. Flare down. Gas recovery system turned off.
8/27/10 9:10 AM	39,949.0	0	0%	--	95	0	0%	Blower and flare down upon arrival. Restarted and operational.
8/30/10 9:10 AM	40,021.8	73	100%	--	72	0 *	0%	Blower operational. Flare down. Gas recovery system turned off.
Monthly Summary		**571**	**75%**		**766**	**0**	**0%**	

TABLE 4

WISCONSIN DEPARTMENT OF NATURAL RESOURCES
REFUSE HIDEAWAY LANDFILL
MIDDLETON, WISCONSIN

BLOWER AND FLARE STATION OPERATIONAL DURATION

Date	Blower				Flare (Worst Case)*			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 (%)	
9/3/10 12:40 PM	40,021.8	0	0%	7.0	100	0	0%	Blower and flare down upon arrival. Temporarily restarted. Gas recovery system turned off prior to departure.
9/7/10 8:40 AM	40,025.1	3	4%	--	92	0	0%	Blower and flare down upon arrival. Gas recovery system left off.
9/21/10 8:55 AM	40,027.9	3	1%	--	336	0	0%	Blower and flare down upon arrival. Restarted and operational.
9/22/10 9:45 AM	40,052.7	25	100%	7.0	25	25	100%	Blower and ground flare operational.
9/29/10 7:30 AM	*40,219.0*	*166*	100%	--	166	0 *	0%	Blower operational. Flare down. Gas recovery system turned off.
9/30/10 11:05 AM	*40,219.0*	*0*	0%	--	28	0	0%	Blower down. Flare down. Gas recovery system remained off.
Monthly Summary		**197**	**26%**		**746**	**25**	**3%**	
10/4/10 10:30 AM	40,219.0	0	0%	–	95	0	0%	Blower and flare down upon arrival. Restarted and operational.
10/8/10 10:30 AM	40,313.5	95	98%	--	96	0 *	0%	Blower operational. Flare down. Gas recovery system turned off.
10/12/10 1:10 PM	40,315.4	2	2%	8.0	99	0	0%	Blower and flare down upon arrival. Restarted and operational.
10/15/10 9:00 AM	40,382.7	67	99%	--	68	0 *	0%	Blower operational. Flare down. Gas recovery system turned off.
10/22/10 8:55 AM	40,384.1	1	1%	7.0	168	0	0%	Blower and flare down upon arrival. Restarted and operational.
10/26/10 9:10 AM	40,480.1	96	100%	--	96	96	100%	Blower and flare operational upon arrival. Gas recovery system turned off for expected high winds.
10/29/10 8:45 AM	40,480.1	0	0%	7.0	72	0	0%	Blower and flare down upon arrival. Gas recovery system kept off.
Monthly Summary		**261**	**38%**		**694**	**96**	**14%**	

TABLE 4

WISCONSIN DEPARTMENT OF NATURAL RESOURCES
REFUSE HIDEAWAY LANDFILL
MIDDLETON, WISCONSIN

BLOWER AND FLARE STATION OPERATIONAL DURATION

Date	Blower				Flare (Worst Case)*			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 (%)	
11/4/10 8:30 AM	40,484.1	4	3%	--	144	0	0%	Blower and flare down upon arrival. Restarted and operational.
11/5/10 11:00 AM	40,510.6	27	100%	7.0	27	27	100%	Blower and flare operational upon arrival. High oxygen; gas recovery system turned off.
11/8/10 9:35 AM	40,510.6	0	0%	--	71	0	0%	Blower and flare down upon arrival. Restarted and operational.
11/15/10 10:20 AM	40,679.3	169	100%	7.0	169	169	100%	Blower and flare operational upon arrival. High oxygen; gas recovery system turned off.
11/19/10 8:55 AM	40,680.1	1	1%	7.0	95	0	0%	Blower and flare down upon arrival. Restarted and operational.
11/22/10 2:45 PM	40,757.9	78	100%	--	78	78	100%	Blower and flare operational upon arrival and departure.
11/24/10 1:09 PM	40,804.3	46	100%	--	46	46	100%	Blower and flare operational upon arrival and departure.
11/29/10 1:50 PM	40,925.3	121	24%	--	121	0 *	0%	Blower operational. Flare down. Restarted and operational.
Monthly Summary		**445**	**59%**		**749**	**320**	**43%**	
12/3/10 1:44 PM	41,020.8	96	100%	7.0	96	0 *	0%	Blower operational. Flare down. Restarted and operational.
12/9/10 1:40 PM	41,164.7	144	100%	7.0	144	0 *	0%	Blower operational. Flare down. Gas recovery system turned off.
12/17/10 12:40 PM	41,165.2	1	0%	7.0	191	0	0%	Blower and flare down upon arrival. Restarted and operational.
12/20/10 11:30 AM	41,235.7	71	100%	7.0	71	71	100%	Blower and flare operational upon arrival and departure.
12/21/10 11:00 AM	41,259.2	24	100%	7.0	24	24	102%	Blower and flare operational upon arrival. High oxygen; gas recovery system turned off.
12/28/10 12:20 PM	41,262.1	3	2%	7.0	169	0	0%	Blower and flare down upon arrival. Restarted and operational.
12/30/10 3:30 PM	41,313.4	51	100%	--	51	51	100%	Blower and flare operational upon arrival and departure.
Monthly Summary		**388**	**52%**		**746**	**146**	**20%**	

TABLE 4

WISCONSIN DEPARTMENT OF NATURAL RESOURCES
REFUSE HIDEAWAY LANDFILL
MIDDLETON, WISCONSIN

BLOWER AND FLARE STATION OPERATIONAL DURATION

Date	Blower				Flare (Worst Case)*			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 (%)	
1/4/11 9:20 AM	41,426.9	114	100%	--	114	114	100%	Blower and flare operational upon arrival and departure.
1/7/11 2:40 PM	41,504.3	77	100%	7.0	77	77	100%	Blower and flare operational upon arrival. High oxygen; gas recovery system turned off.
1/11/11 2:10 PM	41,504.7	0	0%	7.0	96	0	0%	Blower and flare down upon arrival. Restarted and operational.
1/14/11 10:30 AM	41,573.1	68	100%	--	68	68	100%	Blower and flare operational upon arrival. High oxygen; gas recovery system turned off.
1/17/11 3:10 PM	41,573.2	0	0%	7.0	77	0	0%	Blower and flare down upon arrival. Restarted and operational.
1/21/11 11:20 AM	41,665.4	92	100%	7.0	92	92	100%	Blower and flare operational upon arrival and departure.
1/24/11 2:45 PM	41,740.7	75	100%	7.0	75	0 *	0%	Blower operational upon arrival. Flare down upon arrival. High oxygen; gas recovery system turned off.
1/27/11 2:00 PM	41,740.7	0	0%	--	71	0	0%	Blower and flare down upon arrival. Restarted and operational.
1/28/11 12:10 PM	41,762.9	22	100%	--	22	22	100%	Blower and flare operational upon arrival and departure.
Monthly Summary		**450**	**65%**		**693**	**374**	**54%**	

TABLE 4

WISCONSIN DEPARTMENT OF NATURAL RESOURCES
REFUSE HIDEAWAY LANDFILL
MIDDLETON, WISCONSIN

BLOWER AND FLARE STATION OPERATIONAL DURATION

Date	Blower				Flare (Worst Case)*			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 (%)	
2/4/11 12:30 PM	41,932.0	169	100%	--	168	0 *	0%	Blower operational upon arrival. Flare down uopn arrival. Restarted and operational.
2/7/11 3:00 PM	42,006.2	74	100%	--	74	74	100%	Blower and flare operational upon arrival. High oxygen; gas recovery system turned off.
2/9/11 3:30 PM	42,006.2	0	0%	--	49	0	0%	Blower and flare down upon arrival. Restarted and operational.
2/11/11 2:30 PM	42,053.0	47	100%	--	47	47	100%	Blower and flare operational upon arrival and departure.
2/14/11 8:50 AM	42,119.1	66	100%	--	66	0 *	0%	Blower operational upon arrival. Flare down upon arrival. High oxygen; gas recovery system turned off.
2/15/11 2:00 PM	42,119.1	0	0%	7.0	29	0	0%	Blower and flare down upon arrival. Restarted and operational.
2/18/11 11:10 AM	42,188.1	69	100%	--	69	69	100%	Blower and flare operational upon arrival and departure.
2/21/11 2:40 PM	42,263.6	76	100%	--	75	0 *	0%	Blower operational upon arrival. Flare down upon arrival. Gas recovery system turned off.
2/22/11 11:10 AM	42,263.6	0	0%	--	21	0	0%	Blower and flare down upon arrival. Restarted and operational.
2/25/11 4:25 PM	42,340.8	77	100%	--	77	0 *	0%	Blower operational upon arrival. Flare down upon arrival. Gas recovery system turned off.
2/28/11 1:30 PM	42,340.8	0	0%	--	69	0	0%	Blower and flare down upon arrival. Restarted and operational.
Monthly Summary		**578**	**78%**		**1438**	**190**	**13%**	

TABLE 4

WISCONSIN DEPARTMENT OF NATURAL RESOURCES
REFUSE HIDEAWAY LANDFILL
MIDDLETON, WISCONSIN

BLOWER AND FLARE STATION OPERATIONAL DURATION

Date	Blower				Flare (Worst Case)*			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 (%)	
3/4/11 12:48 PM	42,435.8	95	100%	--	95	95	100%	Blower and flare operational upon arrival and departure.
3/7/11 1:45 PM	42,508.8	73	100%	--	73	0 *	0%	Blower operational upon arrival. Flare down upon arrival. High oxygen; gas recovery system turned off.
3/9/11 1:50 PM	42,509.4	1	1%	--	48	1	1%	Blower and flare down upon arrival. Restarted and operational.
3/11/11 11:30 AM	42,555.1	46	100%	7.0	46	0 *	0%	Blower operational upon arrival. Flare down upon arrival. High oxygen; gas recovery system turned off.
3/15/11 4:05 PM	42,555.2	0	0%	--	101	0	0%	Blower and flare down upon arrival. Restarted and operational.
3/18/11 1:20 PM	42,624.6	69	100%	--	69	0 *	0%	Blower operational upon arrival. Flare down upon arrival. High oxygen; gas recovery system turned off.
3/21/11 2:50 PM	42,625.0	0	0%	7.0	74	0	0%	Blower and flare down upon arrival. Restarted and operational.
3/23/11 2:00 PM	42,672.1	47	100%	--	47	47	100%	Blower and flare operational upon arrival. High oxygen; gas recovery system turned off.
3/25/11 4:00 PM	42,672.1	0	0%	--	50	0	0%	Blower and flare down upon arrival. Restarted and operational.
3/29/11 1:30 PM	42,765.2	93	100%	7.0	94	0 *	0%	Blower operational upon arrival. Flare down upon arrival. Restarted and operational.
3/30/11 10:00 AM	42,785.6	20	100%	--	20	0 *	0%	Blower operational upon arrival. Flare down upon arrival. High oxygen; gas recovery system turned off.
Monthly Summary		**445**	**62%**		**716**	**143**	**20%**	

TABLE 4

WISCONSIN DEPARTMENT OF NATURAL RESOURCES
REFUSE HIDEAWAY LANDFILL
MIDDLETON, WISCONSIN

BLOWER AND FLARE STATION OPERATIONAL DURATION

Date	Blower				Flare (Worst Case)*			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 (%)	
4/4/11 2:10 PM	42,785.6	0	0%	7.0	124	0	0%	Blower and flare down upon arrival. Restarted and operational.
4/5/11 1:20 PM	42,808.8	23	100%	--	23	23	100%	Blower and flare operational upon arrival. High oxygen; gas recovery system turned off.
4/6/11 3:15 PM	42,808.9	0	0%	--	26	0	0%	Blower and flare down upon arrival. Restarted and operational.
4/7/11 1:03 PM	42,830.8	22	100%	--	22	22	100%	Blower and flare operational upon arrival. High oxygen; gas recovery system turned off.
4/11/11 6:00 PM	42,830.9	0	0%	--	101	0	0%	Blower and flare down upon arrival. Restarted and operational.
4/13/11 12:10 PM	42,873.2	42	100%	--	42	42	100%	Blower and flare operational upon arrival. High oxygen; gas recovery system turned off.
4/18/11 3:30 PM	42,873.4	0	0%	--	123	0	0%	Blower and flare down upon arrival. Restarted and operational.
4/19/11 9:20 AM	42,891.2	18	100%	7.0	18	18	100%	Blower and flare operational upon arrival and departure.
4/20/11 12:00 PM	42,917.9	27	100%	--	27	27	100%	Blower and flare operational upon arrival. High oxygen; gas recovery system turned off.
4/22/11 11:50 AM	42,918.0	0	0%	--	48	0	0%	Blower and flare down upon arrival. Restarted and operational.
4/25/11 11:00 AM	42,989.0	71	100%	--	71	71	100%	Blower and flare operational upon arrival and departure.
4/26/11 11:00 AM	43,013.0	24	100%	--	24	24	100%	Blower and flare operational upon arrival and departure.
4/27/11 2:07 PM	43,040.2	27	100%	7.0	27	27	100%	Blower and flare operational upon arrival and departure.
4/29/11 3:30 PM	43,089.6	49	100%	--	49	49	100%	Blower and flare operational upon arrival and departure.
Monthly Summary		**304**	**42%**		**726**	**304**	**42%**	

TABLE 4

WISCONSIN DEPARTMENT OF NATURAL RESOURCES
REFUSE HIDEAWAY LANDFILL
MIDDLETON, WISCONSIN

BLOWER AND FLARE STATION OPERATIONAL DURATION

Date	Blower				Flare (Worst Case)*			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 (%)	
5/3/11 10:35 AM	43,180.6	91	100%	7.0	91	0 *	0%	Blower operational upon arrival. Flare down upon arrival. High oxygen; gas recovery system turned off.
5/5/11 11:30 AM	43,181.1	0.5	1%	--	49	0.5	1%	Blower and flare down upon arrival. Restarted and operational.
5/9/11 11:57 AM	43,277.5	96	100%	--	96	0 *	0%	Blower operational upon arrival. Flare down upon arrival. High oxygen; gas recovery system turned off.
5/11/11 10:15 AM	43,278.0	0.5	1%	--	46	0.5	1%	Blower and flare down upon arrival. Restarted and operational.
5/13/11 11:45 AM	43,327.5	50	100%	7.0	50	0 *	0%	Blower operational upon arrival. Flare down upon arrival. High oxygen; gas recovery system turned off.
5/16/11 10:25 AM	43,327.7	0.2	0%	7.0	71	0.2	0%	Blower and flare down upon arrival. Restarted and operational.
5/18/11 3:15 PM	43,380.5	53	100%	--	53	53	100%	Blower and flare operational upon arrival. High oxygen; gas recovery system turned off.
5/20/11 2:37 PM	43,381.0	0.5	1%	7.0	47	0.5	1%	Blower and flare down upon arrival. Restarted and operational.
5/23/11 11:30 AM	43,449.9	69	100%	--	69	69	100%	Blower and flare operational upon arrival and departure.
5/24/11 11:03 AM	43,473.4	24	100%	7.0	24	0 *	0%	Blower operational upon arrival. Flare down upon arrival. High oxygen; gas recovery system turned off.
5/26/11 6:00 PM	43,479.0	6	10%	--	55	6	10%	Blower and flare down upon arrival. Restarted and operational.
5/31/11 10:30 AM	43,591.0	112	100%	--	113	0 *	0%	Blower operational upon arrival. Flare down upon arrival. High oxygen; gas recovery system turned off.
Monthly Summary		**501**	**66%**		**763**	**129**	**17%**	

TABLE 4

WISCONSIN DEPARTMENT OF NATURAL RESOURCES
REFUSE HIDEAWAY LANDFILL
MIDDLETON, WISCONSIN

BLOWER AND FLARE STATION OPERATIONAL DURATION

Date	Blower				Flare (Worst Case)*			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 (%)	
6/2/11 2:15 PM	43,591.0	0.0	0%	--	52	0.0	0%	Blower and flare down upon arrival. Restarted and operational.
6/6/11 1:08 PM	43,685.8	95	100%	--	95	95	100%	Blower and flare operational upon arrival and departure.
6/9/11 11:37 AM	43,756.3	71	100%	7.0	70	0 *	0%	Blower operational upon arrival. Flare down upon arrival. High oxygen; gas recovery system turned off.
6/13/11 9:25 AM	43,850.0	94	100%	--	94	0	0%	Blower operational upon arrival. Flare down upon arrival. Attempted to restart. Blower and flare not operational upon departure.
6/14/11 12:45 PM	43,853.4	3.4	12%	--	27	3	12%	Blower and flare down upon arrival. Restarted and operational.
6/16/11 10:58 AM	43,899.8	46	100%	7.0	46	0 *	0%	Blower operational upon arrival. Flare down upon arrival. High oxygen; gas recovery system turned off.
6/17/11 3:20 PM	43,899.9	0	0%	--	28	0	0%	Blower and flare down upon arrival. Restarted and operational.
6/20/11 2:30 PM	43,971.0	71	100%	--	71	0 *	0%	Blower operational upon arrival. Flare down upon arrival. High oxygen; gas recovery system turned off.
6/22/11 8:47 AM	43,971.1	0	0%	--	42	0	0%	Blower and flare down upon arrival. Restarted and operational.
6/23/11 9:00 AM	43,995.4	24	100%	7.0	24	24	100%	Blower and flare operational upon arrival and departure.
6/24/11 12:00 PM	44,022.3	27	100%	--	27	27	100%	Blower and flare operational upon arrival and departure.
6/27/11 10:06 AM	44,092.3	70	100%	--	70	0 *	0%	Blower operational upon arrival. Flare down upon arrival. Gas recovery system turned off.
6/28/11 1:00 PM	44,092.7	0	1%	7.0	27	0	1%	Blower and flare down upon arrival. Restarted and operational.
6/29/11 9:10 AM	44,112.9	20	100%	--	20	20	100%	Blower and flare operational upon arrival and departure.
Monthly Summary		**522**	**75%**		**1437**	**170**	**12%**	
Annual Summary		**5096**	**58%**		**8758**	**1941**	**22%**	

* 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.

-- Not measured.

Values in italics are calculated based on field sheets.

TABLE 5

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	7/21/2010	--	--	--	--	-4.0	100	100	--	--	--
GW1	7/29/2010	13.4	1.3	26.9	58.4	-27.5	100	25	1000	45.0	70.1
GW1	8/13/2010	74.0	6.2	14.6	5.2	-22.0	25	0	--	--	--
GW1	8/23/2010	28.0	1.1	30.4	40.5	--	0	25	--	--	--
GW1	8/27/2010	24.5	1.6	27.0	46.9	-20.0	25	50	1600	72.0	67.4
GW1	9/3/2010	26.5	3.5	24.8	45.2	--	50	0	--	--	--
GW1	9/21/2010	57.0	1.5	45.0	-3.5	--	0	50	--	--	--
GW1	9/22/2010	10.5	3.0	28.6	57.9	-22.5	50	0	--	--	64.9
GW1	10/4/2010	37.5	0.0	43.8	18.7	--	0	50	--	--	--
GW1	10/8/2010	2.4	8.4	13.8	75.5	--	50	0	--	--	--
GW1	10/15/2010	24.5	0.1	22.4	53.0	0.4	0	50	--	--	--
GW1	10/29/2010	12.0	15.9	10.2	61.9	0.0	50	0	25	1.1	47.6
GW1	11/19/2010	48.5	0.0	51.6	-0.1	0.0	0	100	75	3.4	--
GW1	12/21/2010	43.5	4.0	33.2	19.3	0.05	100	100	75	3.4	33.2
GW1	1/27/2011	49.5	2.7	20.0	27.8	0.55	100	100	--	--	36.8
GW1	2/28/2011	12.5	15.0	11.0	61.5	-0.30	100	0	--	--	--
GW1	3/29/2011	4.6	20.9	1.2	73.3	-0.35	100	100	90	4.1	47.6
GW1	4/27/2011	59.5	0.5	37.6	2.4	0.10	100	100	--	--	50.1
GW1	5/24/2011	*95.0*	0.1	49.8	-44.9	0.50	100	100	--	--	76.4
GW1	6/28/2011	70.5	0.0	48.8	-19.3	0.15	100	100	--	--	--
GW2	7/21/2010	--	--	--	--	-2.0	0	0	--	--	--
GW2	7/29/2010	46.0	1.3	39.4	13.3	-25.0	0	100	850	38.3	70.3
GW2	8/13/2010	0.8	1.4	25.4	72.5	-21.0	0	0	--	--	--
GW2	8/23/2010	23.0	3.2	27.2	46.6	--	0	0	--	--	--
GW2	8/27/2010	48.0	1.9	39.6	10.5	-20.0	0	50	1250	56.3	68.1
GW2	9/3/2010	32.0	5.3	27.4	35.3	--	50	0	--	--	--
GW2	9/21/2010	57.5	2.0	42.0	-1.5	--	0	50	--	--	--
GW2	9/22/2010	51.0	2.0	38.4	8.6	-24.5	50	50	900	40.5	67.1
GW2	10/4/2010	29.0	0.7	37.8	32.5	--	50	50	--	--	--
GW2	10/8/2010	15.0	2.0	30.4	52.6	--	50	50	--	--	--
GW2	10/15/2010	42.5	0.9	44.8	11.8	0.0	50	50	--	--	--
GW2	10/29/2010	44.5	3.6	40.0	11.9	-1.1	50	0	60	2.7	38.1
GW2	11/19/2010	31.5	4.8	25.4	38.3	0.2	0	0	75	3.4	--
GW2	12/21/2010	17.5	13.0	15.8	53.7	-0.50	0	100	100	4.5	32.7
GW2	1/27/2011	47.0	0.0	20.0	33.0	0.60	100	100	--	--	35.2
GW2	2/28/2011	36.0	4.5	36.6	22.9	-0.65	100	100	--	--	--
GW2	3/29/2011	0.2	20.9	0.0	79.0	-1.35	100	100	270	12.2	48.5
GW2	4/27/2011	8.0	17.2	6.6	68.2	-1.50	100	100	--	--	49.6
GW2	5/24/2011	*0.0*	18.4	0.0	81.6	-0.10	100	100	--	--	74.6
GW2	6/28/2011	43.0	4.3	34.0	18.7	-0.25	100	100	--	--	--
GW3	7/21/2010	--	--	--	--	-22.0	0	100	--	--	--
GW3	7/29/2010	54.6	0.6	39.4	5.4	-15.0	100	100	1750	78.8	67.4
GW3	8/13/2010	25.0	1.4	20.3	53.3	-22.0	0	100	1000	45.0	--
GW3	8/23/2010	23.5	1.8	28.4	46.3	--	100	50	--	--	--
GW3	8/27/2010	35.0	1.8	31.8	31.4	-20.0	50	50	1500	67.5	67.2
GW3	9/3/2010	37.0	3.2	29.4	30.4	--	50	0	--	--	--
GW3	9/21/2010	64.5	1.5	43.0	-9.0	--	0	50	--	--	--
GW3	9/22/2010	46.5	2.1	38.4	13.0	-23.5	50	50	2300	103.5	66.5
GW3	10/4/2010	35.0	0.4	37.0	27.6	--	50	50	--	--	--
GW3	10/8/2010	20.5	1.7	30.0	47.8	--	50	50	--	--	--
GW3	10/15/2010	55.0	0.0	35.4	9.6	0.0	50	50	--	--	--
GW3	10/29/2010	42.0	2.0	33.4	22.6	-0.6	50	50	60	2.7	43.3
GW3	11/19/2010	44.5	1.7	36.0	17.8	--	50	100	100	4.5	--
GW3	12/21/2010	1.5	20.9	1.2	76.4	-1.10	0	100	125	5.6	30.3

TABLE 5

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)
GW3	1/27/2011	45.5	1.9	20.0	32.6	1.10	100	100	--	--	33.0
GW3	2/28/2011	--	--	--	--	0.00	0	0	--	--	--
GW3	3/29/2011	2.5	20.9	0.8	75.8	-0.95	0	100	150	6.8	45.6
GW3	4/27/2011	19.0	12.0	16.4	52.6	-0.60	100	100	--	--	45.8
GW3	5/24/2011	*12.5*	16.8	6.6	64.1	0.35	100	100	--	--	66.7
GW3	6/28/2011	64.5	2.8	31.2	1.5	0.05	100	100	--	--	--
GW4	7/21/2010	--	--	--	--	-28.0	100	100	--	--	--
GW4	7/29/2010	8.7	6.0	14.0	71.3	-27.0	100	0	600	--	76.4
GW4	8/13/2010	51.0	3.7	24.3	21.0	-23.0	0	100	1400	63.0	--
GW4	8/20/2010	6.5	11.3	11.8	70.4	--	100	0	--	--	--
GW4	8/23/2010	44.0	2.2	25.8	28.0	--	0	25	--	--	--
GW4	8/27/2010	19.0	10.1	14.6	56.3	-25.0	25	0	--	--	71.7
GW4	9/3/2010	14.0	13.4	9.8	62.8	--	100	0	--	--	--
GW4	9/21/2010	56.0	4.5	27.6	11.9	--	0	0	--	--	--
GW4	9/22/2010	51.5	1.8	24.2	22.5	-22.0	0	25	750	33.8	67.4
GW4	10/4/2010	24.5	6.7	22.4	46.4	--	25	0	--	--	--
GW4	10/8/2010	31.5	5.3	24.2	39.0	--	0	0	--	--	--
GW4	10/15/2010	3.3	15.3	6.8	74.7	-27.5	0	0	--	--	--
GW4	10/29/2010	23.5	5.9	29.6	41.0	0.3	0	0	90	4.1	49.4
GW4	11/19/2010	62.0	0.0	31.4	6.6	-0.6	0	50	75	3.4	--
GW4	12/21/2010	71.5	0.4	32.0	-3.9	0.30	50	100	150	6.8	32.7
GW4	1/27/2011	61.0	0.0	20.0	19.0	0.30	100	100	--	--	32.0
GW4	2/28/2011	59.5	0.7	36.0	3.8	0.45	100	100	--	--	--
GW4	3/29/2011	60.5	0.0	33.0	6.5	0.30	100	100	120	5.4	48.6
GW4	4/27/2011	68.5	0.0	39.4	-7.9	1.30	100	100	--	--	51.0
GW4	5/24/2011	*100.0*	1.1	32.8	-33.9	0.30	100	100	--	--	69.4
GW4	6/28/2011	74.0	0.0	38.0	-12.0	0.05	100	100	--	--	--
GW5	7/21/2010	--	--	--	--	-28.0	100	100	--	--	--
GW5	7/29/2010	20.6	14.0	8.9	56.5	-26.0	100	0	350	--	90.1
GW5	8/13/2010	55.9	3.8	29.2	11.1	--	0	100	--	--	--
GW5	8/20/2010	9.0	16.8	5.0	69.2	--	100	0	--	--	--
GW5	8/23/2010	50.5	5.3	27.4	16.8	--	0	0	--	--	--
GW5	8/27/2010	34.0	9.2	19.2	37.6	-25.0	0	0	--	--	86.5
GW5	9/3/2010	10.5	16.6	6.4	66.5	--	100	0	--	--	--
GW5	9/7/2010[1]	11.5	16.5	6.0	66.0	-26.0	0	100	--	--	--
GW5	9/21/2010	15.0	15.1	8.0	61.9	--	100	0	--	--	--
GW5	9/22/2010	23.0	13.5	11.8	51.7	-22.5	0	0	--	--	73.7
GW5	10/4/2010	52.0	1.7	36.0	10.3	--	0	50	--	--	--
GW5	10/8/2010	12.5	14.6	8.4	64.5	--	50	0	--	--	--
GW5	10/15/2010	31.0	11.0	22.2	35.8	-27.5	0	0	--	--	--
GW5	10/29/2010	35.5	5.8	37.2	21.5		0	0	150	6.8	51.1
GW5	11/19/2010	55.5	0.0	41.8	2.7	-0.8	0	50	150	6.8	--
GW5	12/21/2010	64.0	2.3	42.4	-8.7	0.80	50	100	100	4.5	35.7
GW5	1/27/2011	56.0	0.5	20.0	23.5	1.00	100	100	--	--	38.9
GW5	2/28/2011	57.0	0.6	39.4	3.0	0.80	100	100	--	--	--
GW5	3/29/2011	59.0	0.8	33.2	7.0	0.25	100	100	100	4.5	60.2
GW5	4/27/2011	66.0	0.0	43.4	-9.4	0.20	100	100	--	--	50.1
GW5	5/24/2011	*100.0*	0.1	41.6	-41.7	0.10	100	100	--	--	71.9
GW5	6/28/2011	71.5	2.2	35.2	-8.9	0.00	100	100	--	--	--
GW5 - Lat East	7/21/2010	--	--	--	--	0.0	--	--	--	--	--
GW5 - Lat East	7/29/2010	63.7	0.0	36.3	0.0	2.3	--	--	--	--	--
GW5 - Lat East	8/27/2010	68.5	0.6	38.2	-7.3	1.8	--	--	--	--	--
GW5 - Lat East	9/7/2010[1]	59.0	2.6	33.2	5.2	-1.6	--	--	--	--	--
GW5 - Lat East	9/22/2010	72.5	0.4	43.0	-15.9	1.0	--	--	--	--	--

TABLE 5

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)
GW5 - Lat East	10/4/2010	--	--	--	--	--	--	--	--	--	--
GW5 - Lat East	10/8/2010	--	--	--	--	--	--	--	--	--	--
GW5 - Lat East	10/15/2010	--	--	--	--	--	--	--	--	--	--
GW5 - Lat East	10/29/2010	67.5	0.0	40.4	-7.9	1.2	--	--	--	--	--
GW5 - Lat East	11/19/2010	56.5	0.0	40.0	3.5	0.8	--	--	--	--	--
GW5 - Lat East	12/21/2010	65.0	1.0	40.2	-6.2	0.30	--	--	--	--	--
GW5 - Lat East	1/27/2011	58.0	0.0	20.0	22.0	1.60	--	--	--	--	--
GW5 - Lat East	2/28/2011	56.0	1.3	38.0	4.7	0.65	--	--	--	--	--
GW5 - Lat East	3/29/2011	58.5	0.2	30.8	10.5	2.50	--	--	--	--	--
GW5 - Lat East	4/27/2011	74.5	0.1	35.0	-9.6	12.00	--	--	--	--	--
GW5 - Lat East	5/24/2011	*96.5*	0.9	40.0	-37.4	0.10	--	--	--	--	--
GW5 - Lat East	6/28/2011	84.0	0.0	37.0	-21.0	0.40	--	--	--	--	--
GW5 - Lat West	7/21/2010	--	--	--	--	0.0	--	--	--	--	--
GW5 - Lat West	7/29/2010	60.7	0.0	39.3	0.0	1.6	--	--	--	--	--
GW5 - Lat West	8/27/2010	64.5	0.6	42.6	-7.7	1.4	--	--	--	--	--
GW5 - Lat West	9/7/2010[1]	61.5	0.5	40.6	-2.6	2.0	--	--	--	--	--
GW5 - Lat West	9/22/2010	69.0	0.5	47.2	-16.7	0.8	--	--	--	--	--
GW5 - Lat West	10/4/2010	--	--	--	--	--	--	--	--	--	--
GW5 - Lat West	10/8/2010	--	--	--	--	--	--	--	--	--	--
GW5 - Lat West	10/15/2010	--	--	--	--	--	--	--	--	--	--
GW5 - Lat West	10/29/2010	65.0	0.0	44.4	-9.4	0.5	--	--	--	--	--
GW5 - Lat West	11/19/2010	55.0	0.0	42.6	2.4	0.4	--	--	--	--	--
GW5 - Lat West	12/21/2010	66.5	1.6	39.2	-7.3	0.80	--	--	--	--	--
GW5 - Lat West	1/27/2011	57.5	0.0	20.0	22.5	0.35	--	--	--	--	--
GW5 - Lat West	2/28/2011	57.5	0.8	39.2	2.5	0.65	--	--	--	--	--
GW5 - Lat West	3/29/2011	58.0	0.2	30.8	11.0	0.40	--	--	--	--	--
GW5 - Lat West	4/27/2011	71.5	0.1	37.4	-9.0	2.50	--	--	--	--	--
GW5 - Lat West	5/24/2011	*100.0*	0.4	40.4	-40.8	0.10	--	--	--	--	--
GW5 - Lat West	6/24/2011	79.0	0.0	41.6	-20.6	0.40	--	--	--	--	--
GW6	7/29/2010	46.3	0.8	36.4	16.5	-26.5	100	100	1200	54.0	61.1
GW6	8/13/2010	11.0	9.0	12.5	67.5	--	100	0	--	--	--
GW6	8/20/2010	33.5	1.4	27.4	37.7	--	0	100	--	--	--
GW6	8/23/2010	16.5	1.8	25.0	56.7	--	100	50	--	--	--
GW6	8/27/2010	29.5	3.0	26.2	41.3	-24.0	50	0	--	--	60.2
GW6	9/3/2010	34.0	4.9	24.4	36.7	--	0	0	--	--	--
GW6	9/21/2010	57.0	1.9	36.0	5.1	--	0	50	--	--	--
GW6	9/22/2010	41.5	1.9	33.0	23.6	-24.5	50	50	1550	69.8	60.2
GW6	10/4/2010	24.0	1.1	30.4	44.5	--	50	50	--	--	--
GW6	10/8/2010	9.0	3.6	22.0	65.4	--	50	0	--	--	--
GW6	10/15/2010	31.5	2.1	29.8	36.6	--	0	50	--	--	--
GW6	10/29/2010	32.5	6.1	23.8	37.6	-27.0	50	0	0	0.0	60.7
GW6	11/19/2010	39.5	1.6	38.4	20.5	-23.5	0	50	2500	112.5	--
GW6	12/21/2010	18.0	3.4	41.6	37.0	-27.00	50	0	--	--	33.4
GW6	12/28/2010	54.0	0.2	42.6	3.2	--	0	50	2500	112.5	--
GW6	1/27/2011	44.5	0.4	20.0	35.1	-26.00	50	50	2500	112.5	38.6
GW6	2/28/2011	40.5	1.6	36.6	21.3	-24.00	50	50	--	--	--
GW6	3/29/2011	44.0	1.0	37.0	18.0	-26.00	50	100	2500	112.5	53.9
GW6	4/27/2011	47.0	1.6	43.0	8.4	-26.00	100	100	2200	99.0	51.4
GW6	5/24/2011	*82.0*	0.0	42.0	-24.0	-24.00	100	100	1500	67.5	72.1
GW6	6/28/2011	47.5	1.0	36.0	15.5	-27	100	100	1600	72.0	--
GW7	7/29/2010	27.8	6.8	14.5	50.9	-26.5	0	0	600	--	83.6
GW7	8/13/2010	27.0	8.0	18.0	47.0	--	0	0	--	--	--
GW7	8/20/2010	60.5	2.4	30.2	6.9	--	0	50	--	--	--
GW7	8/23/2010	23.0	9.9	16.0	51.1	--	50	0	--	--	--

TABLE 5

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)
GW7	8/27/2010	53.0	3.9	26.8	16.3	-24.0	0	0	--	--	75.0
GW7	9/3/2010	37.5	7.9	19.4	35.2	--	0	0	--	--	--
GW7	9/21/2010	43.0	7.4	23.0	26.6	--	0	0	--	--	--
GW7	9/22/2010	40.5	8.2	21.8	29.5	-24.5	0	0	--	--	69.0
GW7	10/4/2010	38.0	4.4	25.2	32.4	--	100	0	--	--	--
GW7	10/8/2010	20.0	6.7	20.6	52.7	--	0	0	--	--	--
GW7	10/15/2010	21.0	9.0	19.0	51.0	--	0	0	--	--	--
GW7	10/29/2010	35.5	7.9	21.0	35.6	-27.0	0	0	0	0.0	53.4
GW7	11/19/2010	--	--	--	--	-22.5	0	50	1000	45.0	--
GW7	12/21/2010	12.0	7.5	23.0	57.5	-28.00	50	0	--	--	35.6
GW7	12/28/2010	59.5	0.2	28.9	11.4	-22.50	0	50	1500	67.5	--
GW7	1/27/2011	31.5	6.4	20.0	42.1	-26.00	50	0	--	--	36.2
GW7	2/28/2011	30.5	4.3	22.0	43.2	-27.00	50	50	--	--	--
GW7	3/29/2011	36.5	8.0	13.0	42.5	-28.00	50	0	--	--	44.7
GW7	4/27/2011	47.0	5.8	21.4	25.8	-26.00	0	30	1000	45.0	50.3
GW7	5/24/2011	*47.0*	4.2	26.8	22.0	-24.00	30	100	3000	135.0	76.2
GW7	6/28/2011	47.5	1.5	25.0	26.0	-27	100	50	600	27.0	--
GW8	7/29/2010	39.3	4.3	17.6	38.8	-26.0	0	0	750	--	84.0
GW8	8/13/2010	61.5	3.2	26.2	9.1	--	0	100	--	--	--
GW8	8/20/2010	6.0	17.0	3.8	73.2	--	100	0	--	--	--
GW8	8/23/2010	41.0	6.4	19.4	33.2	--	0	0	--	--	--
GW8	8/27/2010	33.5	9.8	15.6	41.1	-25.0	0	0	--	--	77.0
GW8	9/3/2010	31.5	10.5	13.6	44.4	--	0	0	--	--	--
GW8	9/21/2010	57.5	4.8	25.8	11.9	--	0	0	--	--	--
GW8	9/22/2010	35.0	11.0	15.6	38.4	-24.0	0	0	--	--	68.7
GW8	10/4/2010	32.5	8.5	18.2	40.8	--	100	0	--	--	--
GW8	10/8/2010	9.0	16.0	6.0	69.0	--	0	0	--	--	--
GW8	10/15/2010	9.0	17.6	4.0	69.4	--	0	0	--	--	--
GW8	10/29/2010	49.8	8.9	29.7	11.6	-27.0	0	0	0	0.0	52.6
GW8	11/19/2010	63.5	0.0	33.6	2.9	-20.5	0	50	1650	74.3	--
GW8	12/21/2010	20.0	6.9	25.2	47.9	-28.00	50	0	--	--	33.6
GW8	12/28/2010	63.5	0.2	32.0	4.3	--	0	50	700	31.5	--
GW8	1/27/2011	28.5	6.1	20.0	45.4	-26.00	50	0	--	--	33.8
GW8	2/28/2011	50.0	2.0	27.2	20.8	-27.00	50	100	--	--	--
GW8	3/29/2011	28.0	10.1	8.0	53.9	-28.00	50	0	--	--	42.9
GW8	4/27/2011	49.5	4.8	24.8	20.9	-24.00	0	30	1250	56.3	55.7
GW8	5/24/2011	*38.5*	5.8	23.4	32.3	-24.00	30	50	1125	50.6	74.8
GW8	6/28/2011	35.0	7.1	15.8	42.1	-27	50	0	--	--	--
GW9	7/29/2010	36.0	7.0	8.3	48.7	-26.5	0	0	2500	--	84.9
GW9	8/13/2010	12.0	15.0	3.6	69.4	--	0	0	--	--	--
GW9	8/20/2010	65.5	2.9	19.2	12.4	--	0	0	--	--	--
GW9	8/23/2010	66.0	2.7	19.4	11.9	--	0	25	--	--	--
GW9	8/27/2010	22.5	14.2	5.6	57.7	-25.0	25	0	--	--	82.5
GW9	9/3/2010	48.5	7.0	14.6	29.9	--	0	0	--	--	--
GW9	9/21/2010	64.5	2.0	18.4	15.1	--	0	25	--	--	--
GW9	9/22/2010	13.5	16.8	3.6	66.1	-23.5	25	0	--	--	71.9
GW9	10/4/2010	55.5	2.2	21.0	21.3	--	0	25	--	--	--
GW9	10/8/2010	9.5	16.6	3.2	70.7	--	25	0	--	--	--
GW9	10/15/2010	42.5	13.4	14.6	29.5	--	0	0	--	--	--
GW9	10/29/2010	29.0	12.0	7.2	51.8	-26.0	0	0	0	0.0	55.6
GW9	11/19/2010	65.5	0.0	23.0	11.5	-19.5	0	50	900	40.5	--
GW9	12/21/2010	7.0	16.5	5.2	71.3	-28.00	50	0	--	--	35.7
GW9	12/28/2010	69.5	0.2	21.8	8.5	--	0	50	1000	45.0	--
GW9	1/27/2011	48.0	0.7	20.0	31.3	-26.00	50	50	2800	126.0	35.2
GW9	2/28/2011	45.5	6.2	13.4	34.9	-27.00	50	0	--	--	--

TABLE 5

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)
GW9	3/29/2011	41.0	13.2	4.8	41.0	-28.00	50	0	--	--	46.8
GW9	4/27/2011	51.5	5.8	15.0	27.7	-24.00	0	30	1500	67.5	52.8
GW9	5/24/2011	10.5	13.5	9.0	67.0	--	30	0	--	--	72.6
GW9	6/28/2011	54.0	3.7	14.6	27.7	-26	0	50	1300	58.5	--
GW10	7/29/2010	58.7	0.5	27.4	13.4	-24.0	0	25	1100	49.5	83.6
GW10	8/13/2010	8.5	6.0	15.4	70.1	--	0	0	--	--	--
GW10	8/20/2010	33.0	1.9	22.6	42.5	--	0	25	--	--	--
GW10	8/23/2010	9.0	6.4	16.6	68.0	--	25	0	--	--	--
GW10	8/27/2010	32.5	3.4	21.8	42.3	-25.0	0	0	--	--	89.7
GW10	9/3/2010	35.0	4.9	20.0	40.1	--	0	0	--	--	--
GW10	9/21/2010	59.0	2.1	27.2	11.7	--	0	25	--	--	--
GW10	9/22/2010	26.0	1.8	26.2	46.0	-22.0	25	25	950	42.8	74.5
GW10	10/4/2010	23.0	2.0	22.0	53.0	--	25	25	--	--	--
GW10	10/8/2010	7.5	6.8	16.2	69.5	--	25	0	--	--	--
GW10	10/15/2010	--	--	--	--	--	--	--	--	--	--
GW10	10/29/2010	32.0	8.6	15.8	43.6	-27.0	0	0	0	0.0	51.2
GW10	11/19/2010	4.9	18.2	2.4	74.5	-19.5	0	0	0	0.0	--
GW10	12/21/2010	26.0	4.3	34.4	35.3	-22.00	0	0	--	--	--
GW10	12/28/2010	58.0	0.2	32.2	9.6	--	0	30	1200	54.0	--
GW10	1/27/2011	26.0	1.9	20.0	52.1	-26.00	30	30	1200	54.0	37.7
GW10	2/28/2011	29.0	1.3	24.6	45.1	-18.00	30	30	--	--	--
GW10	3/29/2011	20.5	7.0	17.0	55.5	-24.00	30	0	--	--	53.4
GW10	4/27/2011	43.0	1.1	26.0	29.9	-21.00	0	30	1800	81.0	66.5
GW10	5/24/2011	13.0	4.5	18.0	64.5	-21.00	30	0	--	--	73.5
GW10	6/28/2011	13.5	1.9	16.6	68.0	-24	0	0	--	--	--
GW11	7/29/2010	12.8	17.1	4.3	65.8	-26.0	100	0	1250	56.3	85.7
GW11	8/13/2010	32.0	10.0	13.0	45.0	--	0	0	--	--	--
GW11	8/20/2010	55.0	4.8	19.2	21.0	--	0	0	--	--	--
GW11	8/23/2010	58.5	3.9	20.2	17.4	--	0	0	--	--	--
GW11	8/27/2010	62.0	4.8	17.4	15.8	-7.5	0	0	--	--	84.0
GW11	9/3/2010	50.0	7.2	13.6	29.2	--	0	0	--	--	--
GW11	9/21/2010	58.0	5.7	15.8	20.5	--	0	0	--	--	--
GW11	9/22/2010	60.0	1.7	19.9	18.4	-11.0	0	25	550	24.8	74.4
GW11	10/4/2010	18.0	14.2	5.6	62.2	--	25	0	--	--	--
GW11	10/8/2010	51.5	1.9	19.8	26.8	--	0	25	--	--	--
GW11	10/15/2010	0.5	20.9	0.0	78.6	--	25	0	--	--	--
GW11	10/29/2010	47.0	7.6	13.0	32.4	-7.0	0	0	0	0.0	53.4
GW11	11/19/2010	--	--	--	--	-19.0	0	50	1450	65.3	--
GW11	12/21/2010	22.0	6.9	24.8	46.3	-20.00	50	0	--	--	34.8
GW11	12/28/2010	67.5	0.1	18.4	14.0	--	0	50	475	21.4	--
GW11	1/27/2011	35.0	8.3	14.5	42.2	-26.00	50	0	--	--	34.1
GW11	2/28/2011	49.5	1.3	20.4	28.8	-27.00	50	50	--	--	--
GW11	3/29/2011	56.0	5.9	9.4	28.7	-22.00	50	0	--	--	51.3
GW11	4/27/2011	61.5	1.7	20.0	16.8	-7.00	0	50	500	22.5	48.7
GW11	5/24/2011	23.0	11.6	13.4	52.0	-23.50	50	0	--	--	73.0
GW11	6/28/2011	31.0	10.1	9.8	49.1	-27	0	0	--	--	--
GW12	7/29/2010	60.7	0.2	34.4	4.7	-25.0	0	50	1400	63.0	77.5
GW12	8/13/2010	18.0	4.0	22.0	56.0	--	0	0	--	--	--
GW12	8/20/2010	5.0	9.6	8.4	77.0	--	0	0	--	--	--
GW12	8/23/2010	1.8	12.2	6.6	79.4	--	0	0	--	--	--
GW12	8/27/2010	7.0	7.2	11.4	74.4	-24.0	0	0	--	--	80.7
GW12	9/3/2010	47.5	4.8	23.6	24.1	--	0	0	--	--	--
GW12	9/21/2010	61.0	2.1	34.0	2.9	--	0	50	--	--	--
GW12	9/22/2010	53.5	1.2	35.0	10.3	-23.5	50	50	800	36.0	72.6

TABLE 5

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	10/4/2010	39.0	1.5	33.2	26.3	--	50	50	--	--	--
GW12	10/8/2010	19.0	2.0	26.4	52.6	--	50	50	--	--	--
GW12	10/15/2010	14.5	12.0	17.4	56.1	--	50	0	--	--	--
GW12	10/29/2010	48.0	5.8	29.0	17.2	-23.5	0	0	0	0.0	54.7
GW12	11/19/2010	17.0	8.0	16.8	58.2	-23.0	50	0	0	0.0	--
GW12	12/21/2010	26.5	3.8	41.0	-27.0	-27.00	0	0	--	--	33.1
GW12	12/28/2010	58.0	0.4	40.4	1.2	--	0	50	1600	72.0	--
GW12	1/27/2011	27.0	2.7	20.0	50.3	-26.00	50	50	1800	81.0	32.1
GW12	2/28/2011	54.0	0.5	32.0	13.5	-15.00	0	50	--	--	--
GW12	3/29/2011	47.0	1.2	22.6	29.2	-27.00	50	50	1200	54.0	59.1
GW12	4/27/2011	28.5	2.0	26.0	43.5	-25.00	50	50	1250	51.9	51.9
GW12	5/24/2011	*14.5*	15.0	8.0	62.5	-23.00	50	0	--	--	73.5
GW12	6/28/2011	31.0	0.2	25.4	43.4	-26	0	100	1500	51.9	--
GW13	7/29/2010	55.1	0.4	39.4	5.1	-25.0	0	50	700	31.5	82.9
GW13	8/13/2010	59.0	1.1	39.2	0.7	-24.5	50	100	800	36.0	--
GW13	8/20/2010	54.5	1.9	37.2	6.4	--	100	100	--	--	--
GW13	8/23/2010	55.5	1.9	37.8	4.8	--	100	100	--	--	--
GW13	8/27/2010	51.0	5.1	30.1	13.8	-24.0	100	0	--	--	83.6
GW13	9/3/2010	38.0	8.7	18.2	35.1	--	0	0	--	--	--
GW13	9/21/2010	52.5	1.9	26.6	19.0	--	0	50	--	--	--
GW13	9/22/2010	33.0	10.1	21.8	35.1	-23.5	50	0	--	--	70.1
GW13	10/4/2010	30.5	8.1	22.4	39.0	--	50	0	--	--	--
GW13	10/8/2010	42.5	2.2	25.0	30.3	--	0	25	--	--	--
GW13	10/15/2010	16.0	15.0	12.2	56.8	--	25	0	--	--	--
GW13	10/29/2010	31.2	2.1	21.2	45.5	-26.5	0	25	1150	51.8	55.1
GW13	11/19/2010	24.0	10.8	18.2	47.0	-23.0	25	0	0	0.0	--
GW13	12/21/2010	23.5	6.4	29.0	41.1	-27.00	0	0	--	--	32.7
GW13	12/28/2010	63.5	0.3	33.9	2.3	--	0	50	800	36.0	--
GW13	1/27/2011	14.5	14.6	9.9	61.0	-26.00	50	0	--	--	34.1
GW13	2/28/2011	42.0	3.8	31.4	22.8	-26.00	50	50	--	--	--
GW13	3/29/2011	48.0	6.2	26.2	19.6	-27.00	50	50	700	31.5	47.6
GW13	4/27/2011	31.5	8.8	23.4	36.3	-23.50	50	0	--	--	47.6
GW13	5/24/2011	*84.5*	5.0	24.0	-13.5	-23.50	0	100	175	7.9	71.9
GW13	6/28/2011	43.0	6.7	25.0	25.3	-27	0	0	--	--	--
Annual Minimum		0.0	0.0			-28.0					
Annual Maximum		100.0	20.9			12.0					
Annual Average						-13.49					

* : 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.

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	7/29/10	0.05	--	20.5	0.0	20.8	58.7	
G-1S	8/27/10	0.00	0.0	0.0	6.9	9.2	83.9	
G-1S	9/22/10	0.00	0.0	0.0	20.9	0.0	79.1	
G-1S	10/29/10	0.00	0.0	0.0	20.9	0.0	79.1	
G-1S	11/19/10	0.00	0.0	0.0	18.6	2.0	79.4	
G-1S	12/22/10	-0.05	0.0	0.0	20.9	0.0	79.1	
G-1S	1/28/11	0.00	0.0	0.0	20.9	0.0	79.1	
G-1S	3/7/11	0.00	0.0	0.0	20.9	0.0	79.1	
G-1S	3/30/11	0.00	0.0	0.0	20.7	0.2	79.1	
G-1S	5/3/11	0.00	0.0	0.0	20.9	0.0	79.1	
G-1S	5/26/11	0.00	0.0	0.0	20.9	0.0	79.1	
G-1S	7/1/11	0.00	3.0	0.2	2.5	8.4	89.0	
G-1S	7/29/11	0.05	--	*11.0*	0.0	14.8	74.2	
G-1D	7/29/10	0.03	--	9.2	0.0	18.2	72.6	
G-1D	8/27/10	0.00	26.0	1.3	0.6	15.6	82.5	
G-1D	9/22/10	0.00	0.0	0.0	20.9	0.0	79.1	
G-1D	10/29/10	0.00	0.0	0.0	20.9	0.0	79.1	
G-1D	11/19/10	0.00	0.0	0.0	20.9	0.0	79.1	
G-1D	12/22/10	-0.05	0.0	0.0	20.9	0.0	79.1	
G-1D	1/28/11	0.00	0.0	0.0	20.9	0.0	79.1	
G-1D	3/7/11	0.00	0.0	0.0	20.9	0.0	79.1	
G-1D	3/30/11	0.00	0.0	0.0	20.9	0.0	79.1	
G-1D	5/3/11	0.00	0.0	0.0	20.9	0.0	79.1	
G-1D	5/26/11	0.00	0.0	0.0	20.9	0.0	79.1	
G-1D	7/1/11	0.00	40.0	2.0	0.0	14.4	83.6	
G-1D	7/29/11	0.05	--	*7.5*	0.0	14.8	77.7	
G-2S	7/29/10	0.00	--	0.0	14.6	5.2	80.2	
G-2S	8/27/10	0.00	3.0	0.2	8.0	7.8	84.1	
G-2S	9/22/10	0.00	0.0	0.0	13.6	9.0	77.4	
G-2S	10/29/10	0.00	0.0	0.0	20.9	0.0	79.1	
G-2S	11/19/10	0.00	0.0	0.0	21.3	0.0	78.7	
G-2S	12/22/10	-0.05	0.0	0.0	20.4	0.4	79.2	
G-2S	1/28/11	0.00	0.0	0.0	20.9	0.0	79.1	
G-2S	3/7/11	0.00	0.0	0.0	20.9	0.0	79.1	
G-2S	3/30/11	0.00	0.0	0.0	10.7	5.0	84.3	
G-2S	5/3/11	0.00	0.0	0.0	20.9	0.0	79.1	
G-2S	5/26/11	0.00	0.0	0.0	19.7	1.6	78.7	
G-2S	7/1/11	0.00	--	8.5	0.0	19.8	71.7	
G-2S	7/29/11	0.00	--	*6.7*	0.0	15.6	77.7	
G-2D	7/29/10	0.00	--	9.0	0.0	20.0	71.0	
G-2D	8/27/10	0.00	--	7.0	0.5	18.8	73.7	
G-2D	9/22/10	0.00	--	5.5	2.4	16.2	75.9	
G-2D	10/29/10	0.00	17.0	0.9	2.1	13.8	83.3	

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-2D	11/19/10	0.00	0.0	0.0	21.3	0.0	78.7	
G-2D	12/22/10	0.00	0.0	0.0	20.9	0.0	79.1	
G-2D	1/28/11	0.00	0.0	0.0	20.9	0.0	79.1	
G-2D	3/7/11	0.00	0.0	0.0	20.9	0.0	79.1	
G-2D	3/30/11	0.00	0.0	0.0	20.9	0.0	79.1	
G-2D	5/3/11	0.00	0.0	0.0	20.9	0.0	79.1	
G-2D	5/26/11	0.00	0.0	0.0	19.6	1.6	78.8	
G-2D	7/1/11	0.00	0.0	0.0	15.6	4.6	79.8	
G-2D	7/29/11	0.00	0.0	0.0	16.6	2.2	81.2	
G-6	7/29/10	0.00	--	0.0	20.6	0.0	79.4	
G-6	8/27/10	0.00	0.0	0.0	18.8	2.0	79.2	
G-6	9/22/10	0.00	0.0	0.0	19.5	0.6	79.9	
G-6	10/29/10	0.00	0.0	0.0	15.1	6.2	78.7	
G-6	11/19/10	0.00	0.0	0.0	18.3	2.6	79.1	
G-6	12/22/10	0.00	0.0	0.0	20.9	0.0	79.1	
G-6	1/28/11	0.03	0.0	0.0	20.9	0.4	78.7	
G-6	3/7/11	0.00	0.0	0.0	20.9	0.4	78.7	
G-6	3/30/11	0.00	0.0	0.0	20.9	0.0	79.1	
G-6	5/3/11	0.00	0.0	0.0	20.4	0.4	79.2	
G-6	5/26/11	0.00	0.0	0.0	20.9	0.0	79.1	
G-6	7/1/11	0.00	0.0	0.0	20.9	0.0	79.1	
G-6	7/29/11	0.00	0.0	0.0	19.9	0.8	79.3	
G-8	7/29/10	0.00	--	0.0	20.9	0.0	79.1	
G-8	8/27/10	0.00	0.0	0.0	20.9	0.0	79.1	
G-8	9/22/10	0.00	0.0	0.0	20.9	0.0	79.1	
G-8	10/29/10	0.00	0.0	0.0	20.9	0.0	79.1	
G-8	11/19/10	0.00	0.0	0.0	20.9	0.0	79.1	
G-8	12/22/10	0.00	0.0	0.0	20.9	0.0	79.1	
G-8	1/28/11	0.00	0.0	0.0	20.9	0.0	79.1	
G-8	3/7/11	0.00	0.0	0.0	20.7	0.2	79.1	
G-8	3/30/11	0.00	0.0	0.0	20.9	0.0	79.1	
G-8	5/3/11	0.00	0.0	0.0	20.9	0.0	79.1	
G-8	5/26/11	0.00	0.0	0.0	20.9	0.0	79.1	
G-8	7/1/11	0.00	0.0	0.0	20.9	0.0	79.1	
G-8	7/29/11	0.00	0.0	0.0	20.9	0.0	79.1	
G-9	7/29/10	0.00	--	0.0	20.9	0.0	79.1	
G-9	8/27/10	0.00	0.0	0.0	20.9	0.0	79.1	
G-9	9/22/10	0.00	0.0	0.0	20.9	0.0	79.1	
G-9	10/29/10	0.00	0.0	0.0	20.9	0.0	79.1	
G-9	11/19/10	0.00	0.0	0.0	18.2	1.8	80.0	
G-9	12/22/10	0.00	0.0	0.0	20.9	0.0	79.1	
G-9	1/28/11	0.00	0.0	0.0	15.6	2.8	81.6	
G-9	3/7/11	0.00	0.0	0.0	13.3	4.0	82.7	

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)	
G-9	3/30/11	0.00	0.0	0.0	13.0	3.6	83.4	
G-9	5/3/11	0.00	0.0	0.0	20.8	0.0	79.2	
G-9	5/26/11	--	--	--	--	--	--	did not locate
G-9	7/1/11	0.00	0.0	0.0	20.9	0.0	79.1	
G-9	7/29/11	0.00	0.0	0.0	20.9	0.0	79.1	
G-10	7/29/10	-0.05	--	0.0	20.9	0.0	79.1	
G-10	8/27/10	0.15	0.0	0.0	20.9	0.2	78.9	
G-10	9/22/10	0.00	0.0	0.0	20.9	0.0	79.1	
G-10	10/29/10	0.00	0.0	0.0	20.9	0.0	79.1	
G-10	11/19/10	0.65	0.0	0.0	20.6	0.6	78.8	
G-10	12/22/10	-0.70	0.0	0.0	20.9	0.0	79.1	
G-10	1/28/11	0.10	0.0	0.0	18.8	1.1	80.1	
G-10	3/7/11	0.15	0.0	0.0	19.4	0.8	79.8	
G-10	3/30/11	-0.20	0.0	0.0	18.9	1.2	79.9	
G-10	5/3/11	0.00	0.0	0.0	20.9	0.0	79.1	
G-10	5/26/11	-0.20	0.0	0.0	20.9	0.0	79.1	
G-10	7/1/11	0.00	0.0	0.0	20.9	0.0	79.1	
G-10	7/29/11	0.50	0.0	0.0	19.7	0.8	79.5	
GP-11S	7/29/10	0.00	--	7.5	1.6	12.1	78.8	
GP-11S	8/27/10	0.00	--	7.5	2.0	15.6	74.9	
GP-11S	9/22/10	0.00	50.0	2.5	12.4	8.4	76.7	
GP-11S	10/29/10	0.00	0.0	0.0	17.0	4.0	79.0	
GP-11S	11/19/10	0.00	0.0	0.0	21.1	0.2	78.7	
GP-11S	12/22/10	0.00	0.0	0.0	20.9	0.0	79.1	
GP-11S	1/28/11	0.00	0.0	0.0	20.9	0.2	78.9	
GP-11S	3/7/11	0.00	0.0	0.0	20.9	0.4	78.7	
GP-11S	3/30/11	0.00	0.0	0.0	20.6	0.6	78.8	
GP-11S	5/3/11	0.00	0.0	0.0	20.5	0.4	79.1	
GP-11S	5/26/11	--	--	--	--	--	--	did not locate
GP-11S	7/1/11	0.00	--	11.0	0.0	12.2	76.8	
GP-11S	7/29/11	0.00	--	8.5	0.0	13.0	78.5	
GP-11D	7/29/10	0.00	--	10.4	2.0	17.4	70.2	
GP-11D	8/27/10	0.00	--	8.0	2.6	15.6	73.8	
GP-11D	9/22/10	0.00	--	7.5	6.6	14.0	71.9	
GP-11D	10/29/10	0.00	0.0	0.0	20.9	0.6	78.5	
GP-11D	11/19/10	0.00	0.0	0.0	21.4	0.0	78.6	
GP-11D	12/22/10	-0.05	0.0	0.0	20.9	0.0	79.1	
GP-11D	1/28/11	0.00	0.0	0.0	20.9	0.0	79.1	
GP-11D	3/7/11	0.00	0.0	0.0	20.9	0.2	78.9	
GP-11D	3/30/11	0.00	0.0	0.0	20.9	0.0	79.1	
GP-11D	5/3/11	0.00	0.0	0.0	20.4	0.4	79.2	
GP-11D	5/26/11	--	--	--	--	--	--	did not locate
GP-11D	7/1/11	0.00	--	12.0	0.0	15.4	72.6	

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)	
GP-11D	7/29/11	0.00	--	9.5	0.0	13.8	76.7	
GPW-1S	7/29/10	0.00	--	0.0	16.6	1.9	81.5	
GPW-1S	8/27/10	0.00	0.0	0.0	20.2	0.4	79.4	
GPW-1S	9/22/10	0.00	0.0	0.0	16.6	2.8	80.6	
GPW-1S	10/29/10	0.00	0.0	0.0	17.7	3.0	79.3	
GPW-1S	11/19/10	0.00	0.0	0.0	20.9	0.4	78.7	
GPW-1S	12/22/10	0.00	0.0	0.0	20.9	0.0	79.1	
GPW-1S	1/28/11	0.00	0.0	0.0	20.9	0.1	79.0	
GPW-1S	3/7/11	0.00	0.0	0.0	20.3	0.4	79.3	
GPW-1S	3/30/11	0.00	0.0	0.0	20.9	0.4	78.7	
GPW-1S	5/3/11	0.00	0.0	0.0	20.0	1.6	78.4	
GPW-1S	5/26/11	0.00	0.0	0.0	19.6	1.0	79.4	
GPW-1S	7/1/11	0.00	0.0	0.0	19.2	1.8	79.0	
GPW-1S	7/29/11	0.00	0.0	0.0	18.8	1.8	79.4	
GPW-1M	7/29/10	0.00	--	0.0	20.9	0.0	79.1	
GPW-1M	8/27/10	0.25	0.0	0.0	20.2	0.6	79.2	
GPW-1M	9/22/10	0.00	0.0	0.0	20.9	0.0	79.1	
GPW-1M	10/29/10	0.00	0.0	0.0	20.9	0.0	79.1	
GPW-1M	11/19/10	0.05	0.0	0.0	20.9	0.4	78.7	
GPW-1M	12/22/10	-1.00	0.0	0.0	20.9	0.0	79.1	
GPW-1M	1/28/11	0.20	0.0	0.0	20.9	0.2	78.9	
GPW-1M	3/7/11	0.25	0.0	0.0	20.5	0.4	79.1	
GPW-1M	3/30/11	0.00	0.0	0.0	20.9	0.4	78.7	
GPW-1M	5/3/11	-0.05	0.0	0.0	20.9	0.0	79.1	
GPW-1M	5/26/11	-0.55	0.0	0.0	20.9	0.0	79.1	
GPW-1M	7/1/11	0.00	0.0	0.0	20.9	0.0	79.1	
GPW-1M	7/29/11	1.00	0.0	0.0	19.6	0.6	79.8	
GPW-1D	7/29/10	0.00	--	0.0	20.9	0.0	79.1	
GPW-1D	8/27/10	0.30	0.0	0.0	20.2	0.4	79.4	
GPW-1D	9/22/10	0.00	0.0	0.0	20.9	0.0	79.1	
GPW-1D	10/29/10	0.00	0.0	0.0	20.9	0.2	78.9	
GPW-1D	11/19/10	0.07	0.0	0.0	20.9	0.4	78.7	
GPW-1D	12/22/10	-1.15	0.0	0.0	19.1	2.2	78.7	
GPW-1D	1/28/11	0.25	0.0	0.0	20.9	0.2	78.9	
GPW-1D	3/7/11	0.30	0.0	0.0	20.3	0.4	79.3	
GPW-1D	3/30/11	0.00	0.0	0.0	20.6	0.4	79.0	
GPW-1D	5/3/11	-0.10	0.0	0.0	20.9	0.0	79.1	
GPW-1D	5/26/11	-0.55	0.0	0.0	20.9	0.0	79.1	
GPW-1D	7/1/11	0.00	0.0	0.0	20.3	1.0	78.7	
GPW-1D	7/29/11	1.00	0.0	0.0	19.7	0.2	80.1	
Speedway Buildings	7/29/10		--	0.0	20.9	0.0	79.1	
Speedway Buildings	8/27/10		0.0	0.0	20.9	0.0	79.1	
Speedway Buildings	9/22/10		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	10/29/10		0.0	0.0	20.9	0.0	79.1	
Speedway Buildings	11/19/10		0.0	0.0	20.9	0.0	79.1	
Speedway Buildings	12/22/10		0.0	0.0	20.9	0.0	79.1	
Speedway Buildings	1/28/11		0.0	0.0	20.9	0.0	79.1	
Speedway Buildings	3/7/11		0.0	0.0	20.9	0.0	79.1	
Speedway Buildings	3/30/11		0.0	0.0	20.9	0.0	79.1	
Speedway Buildings	5/3/11		0.0	0.0	20.9	0.0	79.1	
Speedway Buildings	5/26/11		0.0	0.0	20.9	0.0	79.1	
Speedway Buildings	7/1/11		0.0	0.0	20.9	0.0	79.1	
Speedway Buildings	7/29/11		0.0	0.0	20.9	0.0	79.1	

Note: Data collected on July 1, 2011 for June 2011 reporting period.

% LEL: Percent of lower explosive limit.

% Vol: Percent volume.

*: Percent volume calculated as % LEL/20.

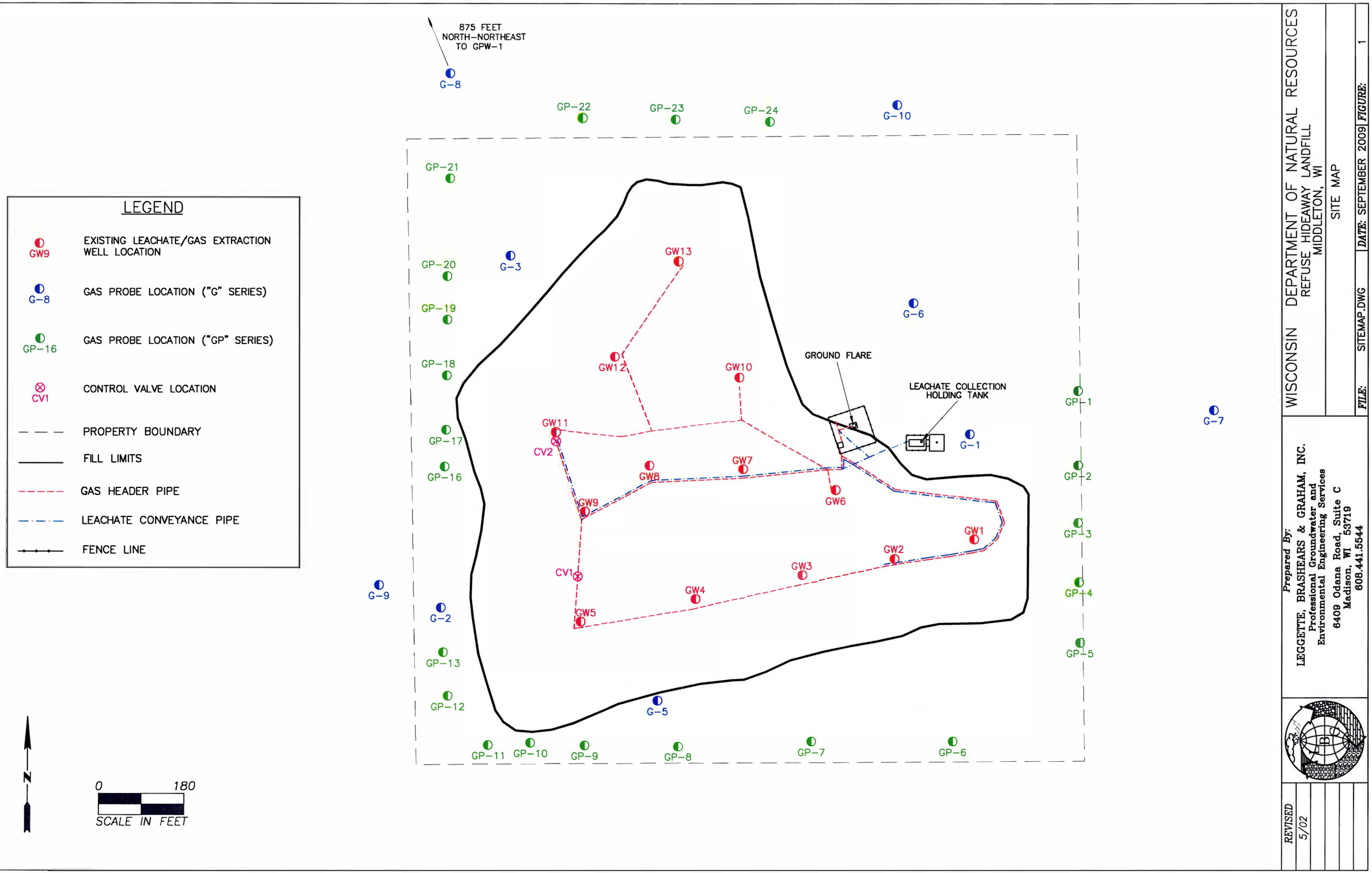
**: : Balance gas calculated as 100% - ($\%CH_4+\%CO_2+\%O_2$).

in. WC: Inches of water column.

-- Not measured.

Values in *italics* font indicate methane concentrations greater than the lower explosive limit (5% 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

Prepared By:
LEGGETTE, BRASHEARS & GRAHAM, INC.
Professional Groundwater and
Environmental Engineering Services
6409 Odana Road, Suite C
Madison, WI 53719
608.441.5544

REVISED 5/02

FIGURE 2

WISCONSIN DEPARTMENT OF NATURAL RESOURCES
REFUSE HIDEWAY LANDFILL
MIDDLETON, WISCONSIN

ANNUAL LEACHATE COLLECTION VOLUME (2007-2010)

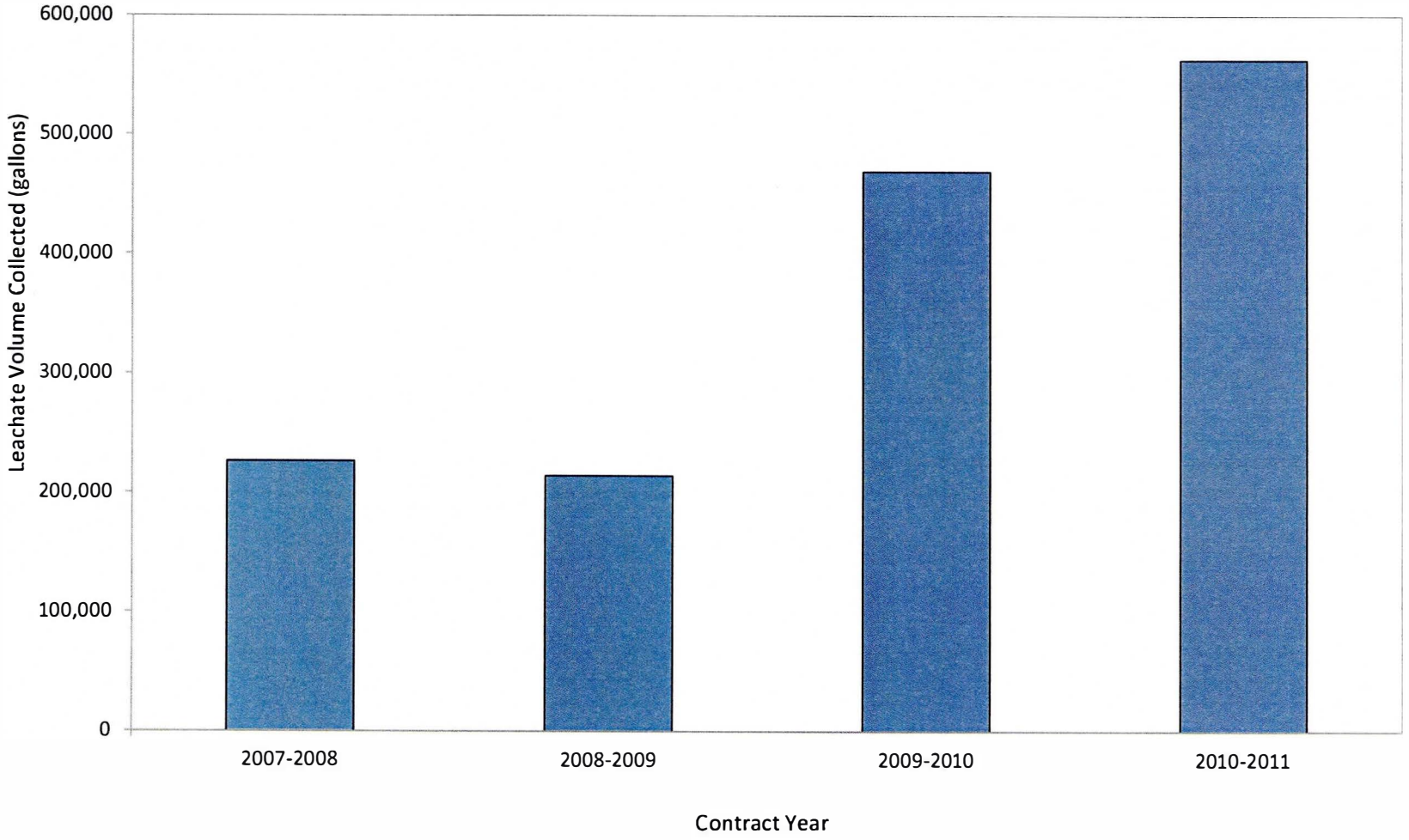
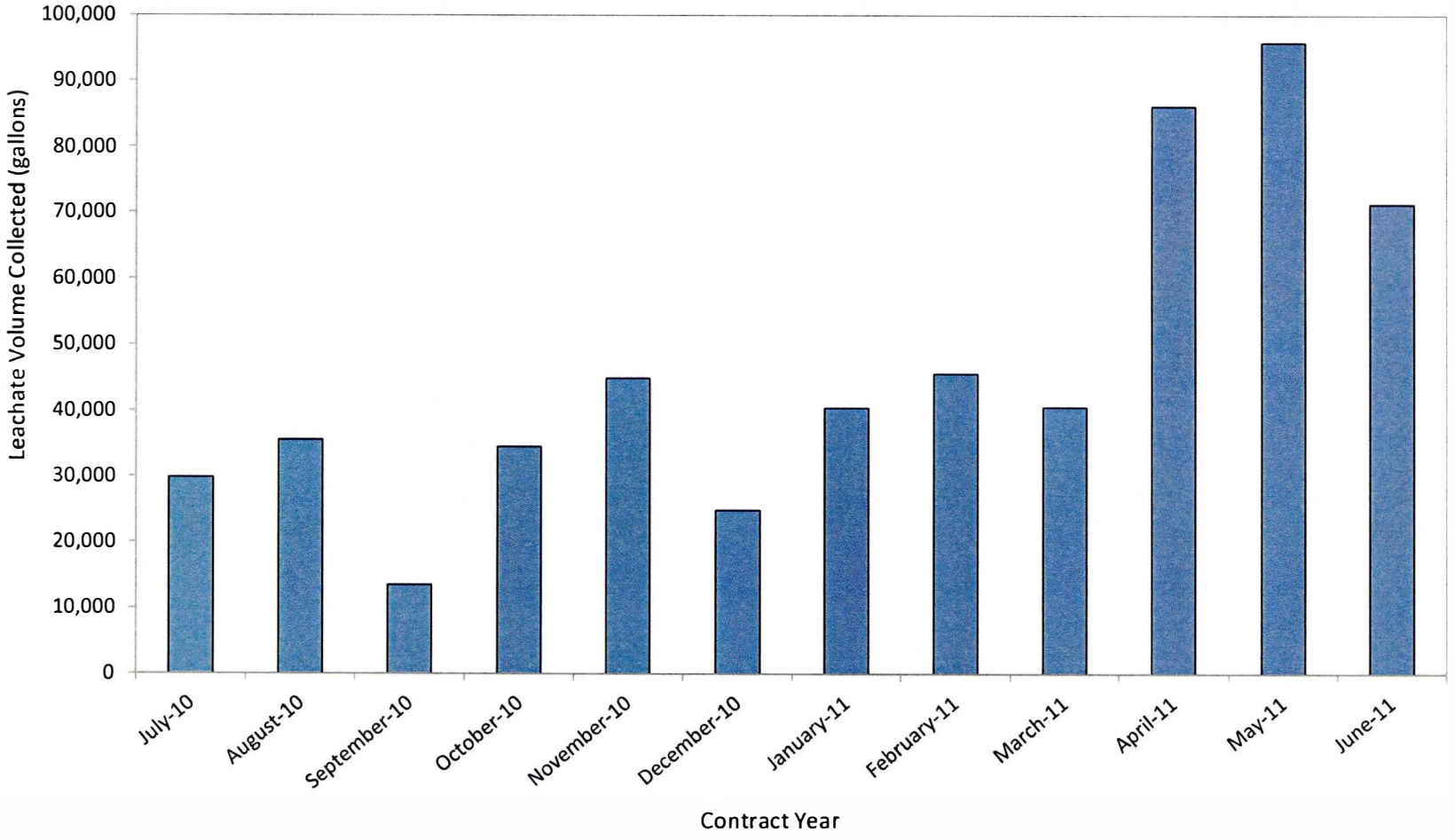


FIGURE 3

WISCONSIN DEPARTMENT OF NATURAL RESOURCES
REFUSE HIDEWAY LANDFILL
MIDDLETON, WISCONSIN

MONTHLY LEACHATE COLLECTION VOLUME (JULY 2010 -JUNE 2011)



APPENDIX I

LEACHATE LABORATORY ANALYTICAL REPORTS AND CHAIN-OF-CUSTODY DOCUMENTS

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

602 Commerce Drive Watertown, WI 53094 * 800-833-7036 * Fax 920-261-8120

October 15, 2010

Client:	LEGGETTE, BRASHEARS & GRAHAM, INC. (WI) 6409 Odana Road, Suite C Madison, WI 53719	Work Order: Project Name: Project Number:	WTJ0010 Refuse Hideaway LF Landfill Leachate
Attn:	Ms. Jennifer Shelton	Date Received:	10/01/10

An executed copy of the chain of custody is also included as an addendum to this report.

If you have any questions relating to this analytical report, please contact your Laboratory Project Manager at 1-800-833-7036

SAMPLE IDENTIFICATION	LAB NUMBER	COLLECTION DATE AND TIME
Leachate	WTJ0010-01	09/30/10 11:15

Samples were received on ice into laboratory at a temperature of 1 °C.

Wisconsin Certification Number: 128053530

The Chain(s) of Custody, 4 pages, are included and are an integral part of this report.

Unless subcontracted, volatiles analyses (including VOC, PVOC, GRO, BTEX, and TPH gasoline) performed by TestAmerica Watertown at 1101 Industrial Drive, Units 9& 10. All other analyses performed at the address shown in the heading of this report.

Approved By:

Brian DeJong

TestAmerica Watertown
Brian DeJong For Dan F. Milewsky
Project Manager

LEGGETTE, BRASHEARS & GRAHAM, INC. (WI)
6409 Odana Road, Suite C
Madison, WI 53719
Ms. Jennifer Shelton

Work Order: WTJ0010
Project: Refuse Hideaway LF
Project Number: Landfill Leachate

Received: 10/01/10
Reported: 10/15/10 12:58

ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	MDL	MRL	Dilution Factor	Date Analyzed	Analyst	Seq/ Batch	Method
Sample ID: WTJ0010-01 (Leachate - Ground Water)							**Sampled: 09/30/10 11:15**			
General Chemistry Parameters										
Chromium, Hexavalent	<0.015		mg/L	0.015	0.050	5	10/01/10 10:23	shf	10J0014	SM 3500CrD
Cyanide (total)	**0.072**	J	mg/L	0.0081	0.075	3	10/13/10 18:15	ler	10J0139	EPA 335.4
Metals										
Cadmium	<0.010		mg/L	0.010	0.10	2	10/07/10 16:16	mmm	10J0157	SW 6010B
Chromium	**0.029**	J	mg/L	0.020	0.10	2	10/07/10 16:16	mmm	10J0157	SW 6010B
Copper	<0.036		mg/L	0.036	0.10	2	10/14/10 10:35	mmm	10J0157	SW 6010B
Lead	**0.032**	J,P24	mg/L	0.032	0.10	2	10/07/10 16:16	mmm	10J0157	SW 6010B
Mercury	<0.00013	RL1,P24	mg/L	0.00013	0.00046	2	10/07/10 13:16	jej	10J0153	SW 7470A
Molybdenum	<0.020		mg/L	0.020	0.10	2	10/07/10 16:16	mmm	10J0157	SW 6010B
Nickel	**0.11**		mg/L	0.0098	0.10	2	10/07/10 16:16	mmm	10J0157	SW 6010B
Selenium	<0.088		mg/L	0.088	0.10	2	10/07/10 16:16	mmm	10J0157	SW 6010B
Silver	<0.0074		mg/L	0.0074	0.020	2	10/07/10 16:16	mmm	10J0157	SW 6010B
Zinc	**0.021**	J	mg/L	0.0040	0.10	2	10/07/10 16:16	mmm	10J0157	SW 6010B

LEGGETTE, BRASHEARS & GRAHAM, INC. (WI)
6409 Odana Road, Suite C
Madison, WI 53719
Ms. Jennifer Shelton

Work Order: WTJ0010
Project: Refuse Hideaway LF
Project Number: Landfill Leachate

Received: 10/01/10
Reported: 10/15/10 12:58

LABORATORY BLANK QC DATA

Analyte	Seq/ Batch	Source Result	Spike Level	Units	MDL	MRL	Result	Dup Result	% REC	Dup %REC	% REC Limits	RPD	RPD Limit	Q
General Chemistry Parameters														
Chromium, Hexavalent	10J0014			mg/L	0.0030	0.010	<0.0030							
Cyanide (total)	10J0139			mg/L	0.0027	0.025	<0.0027							
Metals														
Mercury	10J0153			mg/L	0.000065	0.00023	<0.000065							

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LEGGETTE, BRASHEARS & GRAHAM, INC. (WI)
6409 Odana Road, Suite C
Madison, WI 53719
Ms. Jennifer Shelton

Work Order: WTJ0010
Project: Refuse Hideaway LF
Project Number: Landfill Leachate

Received: 10/01/10
Reported: 10/15/10 12:58

LABORATORY DUPLICATE QC DATA

Analyte	Seq/ Batch	Source Result	Spike Level	Units	MDL	MRL	Result	% REC	Dup %REC	% REC Limits	RPD	RPD Limit	Q
General Chemistry Parameters													
QC Source Sample: WTJ0002-02													
Chromium, Hexavalent	10J0014	<0.0030		mg/L	0.0030	0.010	<0.0030					8	

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LEGGETTE, BRASHEARS & GRAHAM, INC. (WI)
6409 Odana Road, Suite C
Madison, WI 53719
Ms. Jennifer Shelton

Work Order: WTJ0010
Project: Refuse Hideaway LF
Project Number: Landfill Leachate

Received: 10/01/10
Reported: 10/15/10 12:58

LCS/LCS DUPLICATE QC DATA

Analyte	Seq/ Batch	Source Result	Spike Level	Units	MDL	MRL	Result	Dup Result	% REC	Dup %REC	% REC Limits	RPD	RPD Limit	Q
General Chemistry Parameters														
Cyanide (total)	10J0139		0.20	mg/L	0.0027	0.025	0.194		97		90-110			
Metals														
Mercury	10J0153		0.0025	mg/L	0.000065	0.00023	0.00209		84		78-131			

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LEGGETTE, BRASHEARS & GRAHAM, INC. (WI)
6409 Odana Road, Suite C
Madison, WI 53719
Ms. Jennifer Shelton

Work Order: WTJ0010
Project: Refuse Hideaway LF
Project Number: Landfill Leachate

Received: 10/01/10
Reported: 10/15/10 12:58

MATRIX SPIKE/MATRIX SPIKE DUPLICATE QC DATA

Analyte	Seq/ Batch	Source Result	Spike Level	Units	MDL	MRL	Result	Dup Result	% REC	Dup %REC	% REC Limits	RPD	RPD Limit	Q
General Chemistry Parameters														
QC Source Sample: WT11048-01														
Cyanide (total)	10J0139	<0.0027	0.20	mg/L	0.0027	0.025	0.200	0.195	100	97	70-130	3	20	
Metals														
QC Source Sample: WTJ0161-02														
Mercury	10J0153	<0.000065	0.0025	mg/L	0.000065	0.00023	0.00228	0.00244	91	97	67-141	7	13	
QC Source Sample: WTJ0073-01														
Cadmium	10J0157	0.0250	1.0	mg/L	0.0050	0.050	0.946	0.956	92	93	75-125	1	20	
Chromium	10J0157	0.136	1.0	mg/L	0.010	0.050	1.01	1.01	87	88	75-125	1	20	
Lead	10J0157	<0.016	2.0	mg/L	0.016	0.050	1.82	1.83	91	91	75-125	1	20	
Molybdenum	10J0157	0.0179	2.0	mg/L	0.010	0.050	1.78	1.81	88	90	75-125	2	20	
Nickel	10J0157	0.00754	2.0	mg/L	0.0049	0.050	1.75	1.77	87	88	75-125	1	20	
Selenium	10J0157	<0.044	4.0	mg/L	0.044	0.050	3.62	3.71	90	93	75-125	2	20	
Silver	10J0157	<0.0037	1.0	mg/L	0.0037	0.010	0.870	0.869	87	87	75-125	0	20	
Zinc	10J0157	0.0291	1.0	mg/L	0.0020	0.050	0.962	0.971	93	94	75-125	1	20	

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LEGGETTE, BRASHEARS & GRAHAM, INC. (WI)	Work Order:	WTJ0010	Received:	10/01/10
6409 Odana Road, Suite C	Project:	Refuse Hideaway LF	Reported:	10/15/10 12:58
Madison, WI 53719	Project Number:	Landfill Leachate		
Ms. Jennifer Shelton				

CERTIFICATION SUMMARY

TestAmerica Watertown

Method	Matrix	Nelac	Wisconsin
EPA 335.4	Water - NonPotable	X	X
SM 3500CrD	Water - NonPotable	X	X
SW 6010B	Water - NonPotable	X	X
SW 7470A	Water - NonPotable		X

TestAmerica Watertown
Brian DeJong For Dan F. Milewsky
Project Manager

LEGGETTE, BRASHEARS & GRAHAM, INC. (WI)
6409 Odana Road, Suite C
Madison, WI 53719
Ms. Jennifer Shelton

Work Order:	WTJ0010	Received:	10/01/10
Project:	Refuse Hideaway LF	Reported:	10/15/10 12:58
Project Number:	Landfill Leachate		

DATA QUALIFIERS AND DEFINITIONS

J	Results reported between the Method Detection Limit (MDL) and Limit of Quantitation (LOQ) are less certain than results at or above the LOQ.
P24	The sample pH was adjusted to < 2 and was held for at least 24 hours prior to analysis.
RL1	Reporting limit raised due to sample matrix effects.

WTJ0010

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Watertown Division
602 Commerce Drive
Watertown, WI 53094

Phone 920-261-1660 or 800-833-7036
Fax 920-261-8120

To assist us in using the proper analytical methods, is this work being conducted for regulatory purposes?
Compliance Monitoring: ____

Client Name: LBG | Client #: ____
Address: 6409 ODANA RD. STE C
City/State/Zip Code: MADISON WI 53719
Project Manager: JEN SHELTON jshelton@lbgmad.com
Telephone Number: 608-310-7672 | Fax: 608-441-5545
Sampler Name: (Print Name) RICHARD STOCK
Sampler Signature:

Project Name: WONR - RHL
Project #: ____
Site/Location ID: MIDDLETON | State: WI
Report To: LBG - MADISON
Invoice To: "
Quote #: ____ | PO#: ____

E-mail address: ____

TAT
X Standard
___ Rush (surcharges may apply)
Date Needed: ____
Fax Results: Y N
E-mail: Y N

SAMPLE ID	Date Sampled	Time Sampled	G = Grab, C = Composite	Field Filtered	Matrix: SL - Sludge DW - Drinking Water GW - Groundwater S - Soil/Solid WW - Wastewater Specify Other	Preservation & # of Containers: HNO_3	HCl	NaOH	H_2SO_4	Methanol	None	Other (Specify)	Analyze For: SEE ATTACHED TABLE	REMARKS
LEACHATE	9/30/10	11:15	G		GW	1		1			1		X	

QC Deliverables
___ None
___ Level 2 *(Batch QC)*
___ Level 3
___ Level 4
Other: ____

Special Instructions:

Relinquished By:	Date: 9/30/10	Time: 13:50	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date: 10/1/10	Time: 932
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

LABORATORY COMMENTS:
Init Lab Temp:
Rec Lab Temp: /
Custody Seals: Y (N) N/A
Bottles Supplied by TestAmerica: (Y) N
Method of Shipment:

Cooler Receipt Log

Work Order(s): WTJ0010 Client Name/Project: UBG # of Coolers: 1

1. How did samples arrive? ☐ Fed-Ex ☐ UPS ☐ TestAmerica ☐ Client ☒ Dunham ☐ Speedy ☐ _____

Date/time cooler was opened: 10/6/10 **By:** [signature] **TEMP.** 1

2. Were custody seals intact, signed and dated correctly? ..... ☐ Intact ☐ Broken ☒ NA
3. Were samples on ice? ..... ☒ Yes ☐ No
4. Does this Project require quick turn around analysis? ..... ☒ No ☐ Yes
5. Are there any short hold time tests? (48hrs or less) ..... ☐ No ☒ Yes

Past Hold? ..... ☒ No ☐ Yes

48 hours or less	7 days
Coliform Bacteria ..... 8/30 hours	Aqueous Organic Prep
Chlorine, Hex Cr ..... 24 hours	TS
BOD	TDS
Nitrate/Nitrite ..... (DW is 14 days)	TSS
Sulfite	Sulfide
Orthophosphate	Volatile Solids
Surfactants (MBAS)	

6. Ops Mgr, PM or Analyst informed of short hold? .....Who_____When_____
7. Other than short hold test , were any samples within 2 days of their hold date ..... ☒ No ☐ Yes

Or past their expiration of hold time ..... ☒ No ☐ Yes

8. Is the date and time of collection recorded? Date ..... ☒ Yes ☐ No

Time..... ☒ Yes ☐ No

9. Were all sample containers listed on the COC received and intact? ..... ☒ Yes ☐ No
10. Do sample containers received and COC match? ..... ☒ Yes ☐ No
11. Are dissolved parameters field filtered or being filtered in the lab? ..... ☐ Field ☐ Lab ☒ NA
12. Are sample volumes adequate and preservatives correct for test requested? Vol..... ☒ Yes ☐ No

Pres.... ☒ Yes ☐ No

13. Do VOC samples have air bubbles >6mm? ..... ☐ No ☐ Yes ☒ NA
14. Is an aqueous Trip Blank included? ..... ☐ Yes ☐ No ☒ NA
15. Are any samples on hold? ..... ☒ No ☐ Yes
16. Are there samples to be subcontracted? ..... ☒ No ☐ Yes
17. Is a Methanol Trip Blank included? ..... ☐ Yes ☐ No ☒ NA
18. How were VOC soils received? ☐ Methanol ☐ Sodium Bisulfate ☐ Packed Jar ☐ Encore ☐ Other ☐ Water (see options*)

* ☐ Within 48hrs of sampling ☐ Past 48hrs of sampling ☐ Frozen ☐ Not Frozen

If any changes are made to this Work Order after Login, or if comments must be made regarding this cooler, explain them below:

6mm = ------

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
602 Commerce Drive Watertown, WI 53094 * 800-833-7036 * Fax 920-261-8120

January 03, 2011

Client:	LEGGETTE, BRASHEARS & GRAHAM, INC. (WI) 6409 Odana Road, Suite C Madison, WI 53719	Work Order: Project Name: Project Number:	WTL0640 Refuse Hideaway LF WI DNR-Refuse Hideaway -Leachate
Attn:	Ms. Jennifer Shelton	Date Received:	12/22/10

An executed copy of the chain of custody is also included as an addendum to this report.

If you have any questions relating to this analytical report, please contact your Laboratory Project Manager at 1-800-833-7036

SAMPLE IDENTIFICATION	LAB NUMBER	COLLECTION DATE AND TIME
Leachate	WTL0640-01	12/21/10 14:20

Samples were received on ice into laboratory at a temperature of 1 °C.

Wisconsin Certification Number: 128053530

The Chain(s) of Custody, 2 pages, are included and are an integral part of this report.

Unless subcontracted, volatiles analyses (including VOC, PVOC, GRO, BTEX, and TPH gasoline) performed by TestAmerica Watertown at 1101 Industrial Drive, Units 9& 10. All other analyses performed at the address shown in the heading of this report.

Approved By:

Brian DeJong

TestAmerica Watertown
Brian DeJong For Dan F. Milewsky
Project Manager

LEGGETTE, BRASHEARS & GRAHAM, INC. (WI)
6409 Odana Road, Suite C
Madison, WI 53719
Ms. Jennifer Shelton

Work Order: WTL0640
Project: Refuse Hideaway LF
Project Number: WI DNR-Refuse Hideaway -Leach

Received: 12/22/10
Reported: 01/03/11 13:09

ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	MDL	MRL	Dilution Factor	Date Analyzed	Analyst	Seq/ Batch	Method
Sample ID: WTL0640-01 (Leachate - Ground Water)							**Sampled: 12/21/10 14:20**			
General Chemistry Parameters										
Chromium, Hexavalent	<0.015		mg/L	0.015	0.050	5	12/22/10 14:00	tds	10L0604	SM 3500CrD
Cyanide (total)	**0.0050**	J	mg/L	0.0027	0.025	1	12/23/10 13:33	tds	10L0596	EPA 335.4
Metals										
Cadmium	<0.010	P24	mg/L	0.010	0.10	2	01/03/11 12:08	mmm	10L0703	SW 6010B
Chromium	**0.029**	J,P24	mg/L	0.020	0.10	2	01/03/11 12:08	mmm	10L0703	SW 6010B
Copper	<0.036	P24	mg/L	0.036	0.10	2	01/03/11 12:08	mmm	10L0703	SW 6010B
Lead	<0.032	P24	mg/L	0.032	0.10	2	01/03/11 12:08	mmm	10L0703	SW 6010B
Mercury	<0.000065		mg/L	0.000065	0.00023	1	12/30/10 10:30	jej	10L0701	SW 7470A
Molybdenum	**0.033**	J,P24	mg/L	0.020	0.10	2	01/03/11 12:08	mmm	10L0703	SW 6010B
Nickel	**0.076**	J,P24	mg/L	0.0098	0.10	2	01/03/11 12:08	mmm	10L0703	SW 6010B
Selenium	<0.088	P24	mg/L	0.088	0.10	2	01/03/11 12:08	mmm	10L0703	SW 6010B
Silver	**0.23**	P24	mg/L	0.0074	0.020	2	01/03/11 12:08	mmm	10L0703	SW 6010B
Zinc	**0.026**	J,P24	mg/L	0.0040	0.10	2	01/03/11 12:08	mmm	10L0703	SW 6010B

TestAmerica Watertown
Brian DeJong For Dan F. Milewsky
Project Manager

LEGGETTE, BRASHEARS & GRAHAM, INC. (WI)
6409 Odana Road, Suite C
Madison, WI 53719
Ms. Jennifer Shelton

Work Order: WTL0640
Project: Refuse Hideaway LF
Project Number: WI DNR-Refuse Hideaway -Leach

Received: 12/22/10
Reported: 01/03/11 13:09

LABORATORY BLANK QC DATA

Analyte	Seq/ Batch	Source Result	Spike Level	Units	MDL	MRL	Result	Dup Result	% REC	Dup %REC	% REC Limits	RPD	RPD Limit	Q
General Chemistry Parameters														
Cyanide (total)	101.0596			mg/L	0.0027	0.025	<0.0027							
Chromium, Hexavalent	101.0604			mg/L	0.0030	0.010	<0.0030							
Metals														
Mercury	101.0701			mg/L	0.000065	0.00023	<0.000065							
Cadmium	101.0703			mg/L	0.0050	0.050	<0.0050							
Chromium	101.0703			mg/L	0.010	0.050	<0.010							
Copper	101.0703			mg/L	0.018	0.050	<0.018							
Lead	101.0703			mg/L	0.016	0.050	<0.016							
Molybdenum	101.0703			mg/L	0.010	0.050	<0.010							
Nickel	101.0703			mg/L	0.0049	0.050	<0.0049							
Selenium	101.0703			mg/L	0.044	0.050	<0.044							
Silver	101.0703			mg/L	0.0037	0.010	<0.0037							
Zinc	101.0703			mg/L	0.0020	0.050	<0.0020							

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LEGGETTE, BRASHEARS & GRAHAM, INC. (WI)
6409 Odana Road, Suite C
Madison, WI 53719
Ms. Jennifer Shelton

Work Order: WTL0640
Project: Refuse Hideaway LF
Project Number: WI DNR-Refuse Hideaway -Leach

Received: 12/22/10
Reported: 01/03/11 13:09

LCS/LCS DUPLICATE QC DATA

Analyte	Seq/ Batch	Source Result	Spike Level	Units	MDL	MRL	Result	Dup Result	% REC	Dup %REC	% REC Limits	RPD	RPD Limit	Q
General Chemistry Parameters														
Cyanide (total)	10L0596		0.20	mg/L	0.0027	0.025	0.197		99		90-110			
Metals														
Mercury	10L0701		0.0025	mg/L	0.000065	0.00023	0.00251		100		78-131			
Cadmium	10L0703		1.0	mg/L	0.0050	0.050	0.964		96		85-115			
Chromium	10L0703		1.0	mg/L	0.010	0.050	0.971		97		85-115			
Copper	10L0703		2.0	mg/L	0.018	0.050	1.97		98		85-115			
Lead	10L0703		2.0	mg/L	0.016	0.050	1.98		99		85-115			
Molybdenum	10L0703		2.0	mg/L	0.010	0.050	1.95		97		85-115			
Nickel	10L0703		2.0	mg/L	0.0049	0.050	1.94		97		85-115			
Selenium	10L0703		4.0	mg/L	0.044	0.050	3.87		97		85-115			
Silver	10L0703		1.0	mg/L	0.0037	0.010	1.01		101		85-115			
Zinc	10L0703		1.0	mg/L	0.0020	0.050	0.977		98		85-115			

LEGGETTE, BRASHEARS & GRAHAM, INC. (WI)
6409 Odana Road, Suite C
Madison, WI 53719
Ms. Jennifer Shelton

Work Order: WTL0640
Project: Refuse Hideaway LF
Project Number: WI DNR-Refuse Hideaway -Leach

Received: 12/22/10
Reported: 01/03/11 13:09

MATRIX SPIKE/MATRIX SPIKE DUPLICATE QC DATA

Analyte	Seq/ Batch	Source Result	Spike Level	Units	MDL	MRL	Result	Dup Result	% REC	Dup %REC	% REC Limits	RPD	RPD Limit	Q
General Chemistry Parameters														
QC Source Sample: WTL0400-01														
Cyanide (total)	10L0596	<0.0027	0.20	mg/L	0.0027	0.025	0.192	0.210	96	105	70-130	9	20	
QC Source Sample: WTL0667-02														
Chromium, Hexavalent	10L0604	<0.0030	0.25	mg/L	0.0030	0.010	0.236	0.240	94	96	73-120	2	8	
Metals														
QC Source Sample: WTL0720-01														
Mercury	10L0701	<0.000065	0.0025	mg/L	0.000065	0.00023	0.00240	0.00237	96	95	67-141	1	13	
QC Source Sample: WTL0724-02														
Cadmium	10L0703	<0.0050	1.0	mg/L	0.0050	0.050	0.873	0.876	87	88	75-125	0	20	
Chromium	10L0703	<0.0100	1.0	mg/L	0.010	0.050	0.881	0.895	88	89	75-125	2	20	
Copper	10L0703	0.0378	2.0	mg/L	0.018	0.050	1.84	1.87	90	91	75-125	1	20	
Lead	10L0703	0.0434	2.0	mg/L	0.016	0.050	1.80	1.80	88	88	75-125	0	20	
Molybdenum	10L0703	0.0849	2.0	mg/L	0.010	0.050	1.88	1.92	90	92	75-125	2	20	
Nickel	10L0703	0.369	2.0	mg/L	0.0049	0.050	2.11	2.13	87	88	75-125	1	20	
Selenium	10L0703	<0.044	4.0	mg/L	0.044	0.050	3.68	3.62	92	91	75-125	2	20	
Silver	10L0703	<0.0037	1.0	mg/L	0.0037	0.010	0.903	0.912	90	91	75-125	1	20	
Zinc	10L0703	0.0278	1.0	mg/L	0.0020	0.050	0.930	0.942	90	91	75-125	1	20	

TestAmerica Watertown
Brian DeJong For Dan F. Milewsky
Project Manager

602 Commerce Drive Watertown, WI 53094 * 800-833-7036 * Fax 920-261-8120

LEGGETTE, BRASHEARS & GRAHAM, INC. (WI)
6409 Odana Road, Suite C
Madison, WI 53719
Ms. Jennifer Shelton

Work Order: WTL0640
Project: Refuse Hideaway LF
Project Number: WI DNR-Refuse Hideaway -Leach

Received: 12/22/10
Reported: 01/03/11 13:09

CERTIFICATION SUMMARY

TestAmerica Watertown

Method	Matrix	Nelac	Wisconsin
EPA 335.4	Water - NonPotable	X	X
SM 3500CrD	Water - NonPotable	X	X
SW 6010B	Water - NonPotable	X	X
SW 7470A	Water - NonPotable		X

TestAmerica Watertown
Brian DeJong For Dan F. Milewsky
Project Manager

602 Commerce Drive Watertown, WI 53094 * 800-833-7036 * Fax 920-261-8120

LEGGETTE, BRASHEARS & GRAHAM, INC. (WI)	Work Order:	WTL0640	Received:	12/22/10
6409 Odana Road, Suite C	Project:	Refuse Hideaway LF	Reported:	01/03/11 13:09
Madison, WI 53719	Project Number:	WI DNR-Refuse Hideaway -Leach		
Ms. Jennifer Shelton				

DATA QUALIFIERS AND DEFINITIONS

J	Estimated value. Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDL). The user of this data should be aware that this data is of limited reliability.
P24	The sample pH was adjusted to <2 and was held for at least 24 hours prior to analysis.

WTL0640

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Watertown Division
602 Commerce Drive
Watertown, WI 53094

Phone 920-261-1660 or 800-833-7036
Fax 920-261-8120

To assist us in using the proper analytical methods, is this work being conducted for regulatory purposes?
Compliance Monitoring: ____

Client Name: LBG, Inc. Client #: ____
Address: 6409 Odana Rd Suite C
City/State/Zip Code: Madison WI 53719
Project Manager: Jennifer Shelton
Telephone Number: 608-310-7672 Fax: ____
Sampler Name: (Print Name) Adam Both
Sampler Signature:
E-mail address: JSheltone@LBGMAD.com

Project Name: WI DNR - Refuse Hideaway
Project #: ____
Site/Location ID: Refuse Hideaway State: WI
Report To: Jennifer Shelton
Invoice To: Jennifer Shelton
Quote #: ____ PO#: ____

TAT: X Standard; ___ Rush (surcharges may apply)
Date Needed: ____
Fax Results: Y (N)
E-mail: (Y) N

SAMPLE ID	Date Sampled	Time Sampled	G = Grab, C = Composite	Field Filtered	Matrix: SL - Sludge DW - Drinking Water GW - Groundwater S - Soil/Solid WW - Wastewater Specify Other	Preservation & # of Containers: HNO_3	HCl	NaOH	H_2SO_4	Methanol	None	Other (Specify)	Analyze For: Cadmium, Chromium	Copper, Lead	Nickel, Selenium	Silver, Zinc	Molybdenum	Mercury	Hexavalent Chromium	Cyanide			REMARKS
						500		125			250												
Leachate	12/21/10	1420	G	N	GW	1		1			1		X	X	X	X	X	X	X	X			Per email

QC Deliverables: ___ None; ___ Level 2 (Batch QC); ___ Level 3; ___ Level 4; Other: ____

Special Instructions:

LABORATORY COMMENTS:
Init Lab Temp:
Rec Lab Temp: 1°
Custody Seals: Y N
Bottles Supplied by TestAmerica: Y N
Method of Shipment: driven

Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Relinquished By:	12/21	1530	D. Herrity	12/22	9:05
Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

TAL-0020 (1207)

Cooler Receipt Log

Work Order(s): WTL0640 Client Name/Project: LBG, Inc. # of Coolers: 1

1. How did samples arrive? ☐ Fed-Ex ☐ UPS ☐ TestAmerica ☐ Client ☒ Dunham ☐ Speedy ☐ _____

Date/time cooler was opened: 12/22/10 9:05 **By:** D. Herrity TEMP. 1°

2. Were custody seals intact, signed and dated correctly? ..... ☐ Intact ☐ Broken ☒ NA
3. Were samples on ice? ..... ☒ Yes ☐ No
4. Does this Project require quick turn around analysis? ..... ☒ No ☐ Yes
5. Are there any short hold time tests? (48hrs or less) ..... ☐ No ☒ Yes

Past Hold? ..... ☒ No ☐ Yes

48 hours or less	7 days
Coliform Bacteria .....8/30 hours	Aqueous Organic Prep
Chlorine/Free Cr .....24 hours	TS
BOD	TDS
Nitrate/Nitrite.....(DW is 14 days)	TSS
Sulfite	Sulfide
Orthophosphate	Volatile Solids
Surfactants (MBAS)	

6. Ops Mgr, PM or Analyst informed of short hold?.....Who Traci When 9:05
7. Other than short hold test , were any samples within 2 days of their hold date ..... ☒ No ☐ Yes

Or past their expiration of hold time ..... ☒ No ☐ Yes

8. Is the date and time of collection recorded? Date ..... ☒ Yes ☐ No

Time..... ☒ Yes ☐ No

9. Were all sample containers listed on the COC received and intact? ..... ☒ Yes ☐ No
10. Do sample containers received and COC match? ..... ☐ Yes ☒ No
11. Are dissolved parameters field filtered or being filtered in the lab? ..... ☐ Field ☐ Lab ☒ NA
12. Are sample volumes adequate and preservatives correct for test requested? Vol..... ☒ Yes ☐ No

Pres.... ☒ Yes ☐ No

13. Do VOC samples have air bubbles >6mm? ..... ☐ No ☐ Yes ☒ NA
14. Is an aqueous Trip Blank included? ..... ☐ Yes ☐ No ☒ NA
15. Are any samples on hold? ..... ☒ No ☐ Yes
16. Are there samples to be subcontracted? ..... ☒ No ☐ Yes
17. Is a Methanol Trip Blank included? ..... ☐ Yes ☐ No ☒ NA
18. How were VOC soils received? ☐ Methanol ☐ Sodium Bisulfate ☐ Packed Jar ☐ Encore ☐ Other ☐ Water (see options*)

* ☐ Within 48hrs of sampling ☐ Past 48hrs of sampling ☐ Frozen ☐ Not Frozen

If any changes are made to this Work Order after Login, or if comments must be made regarding this cooler, explain them below:

HNO3 sample container label time states 1430, COC states 12/21/10 1420

6mm = ----

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April 08, 2011

Client:	LEGGETTE, BRASHEARS & GRAHAM, INC. (WI) 6409 Odana Road, Suite C Madison, WI 53719	Work Order: Project Name: Project Number:	WUC0819 Refuse Hideaway LF Landfill Leachate
Attn:	Ms. Jennifer Shelton	Date Received:	03/31/11

An executed copy of the chain of custody is also included as an addendum to this report.

If you have any questions relating to this analytical report, please contact your Laboratory Project Manager at 1-800-833-7036

SAMPLE IDENTIFICATION	LAB NUMBER	COLLECTION DATE AND TIME
Leachate	WUC0819-01	03/30/11 15:05

SW 6010B, EPA 335.4, SW 7470A analysis performed at TestAmerica Chicago - Lab ID: 999580010

Samples were received on ice into laboratory at a temperature of 2 °C.

Wisconsin Certification Number: 128053530

The Chain(s) of Custody, 2 pages, are included and are an integral part of this report.

Unless subcontracted, volatiles analyses (including VOC, PVOC, GRO, BTEX, and TPH gasoline) performed by TestAmerica Watertown at 1101 Industrial Drive, Units 9&10. All other analyses performed at the address shown in the heading of this report.

Approved By:

Brian DeJong

TestAmerica Watertown
Brian DeJong For Dan F. Milewsky
Project Manager

LEGGETTE, BRASHEARS & GRAHAM, INC. (WI)
6409 Odana Road, Suite C
Madison, WI 53719
Ms. Jennifer Shelton

Work Order: WUC0819
Project: Refuse Hideaway LF
Project Number: Landfill Leachate

Received: 03/31/11
Reported: 04/08/11 17:52

ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	MDL	MRL	Dilution Factor	Date Analyzed	Analyst	Seq/ Batch	Method
Sample ID: WUC0819-01 (Leachate - Ground Water)							**Sampled: 03/30/11 15:05**			
General Chemistry Parameters										
Chromium, Hexavalent	<0.0030		mg/L	0.0030	0.010	1	03/31/11 12:47	tds	11D0024	SM 3500CrD
Cyanide, Total										
Cyanide, Total	**0.0085**	J	mg/L	0.0011	0.010	1	04/07/11 14:23	AAD	109734	335.2
Mercury (CVAA)										
Mercury	**0.00044**		mg/L	0.000051	0.00020	1	04/04/11 14:41	JR	109406	7470A
Metals (ICP)										
Cadmium	<0.00025		mg/L	0.00025	0.0020	1	04/07/11 03:09	TDS	109665	6010B
Chromium	**0.023**		mg/L	0.0014	0.010	1	04/07/11 03:09	TDS	109665	6010B
Copper	**0.0017**	J	mg/L	0.0015	0.010	1	04/07/11 03:09	TDS	109665	6010B
Lead	<0.0017		mg/L	0.0017	0.0050	1	04/07/11 03:09	TDS	109665	6010B
Molybdenum	<0.0036		mg/L	0.0036	0.010	1	04/07/11 03:09	TDS	109665	6010B
Nickel	**0.065**		mg/L	0.0016	0.010	1	04/07/11 03:09	TDS	109665	6010B
Selenium	<0.0024		mg/L	0.0024	0.010	1	04/07/11 03:09	TDS	109665	6010B
Silver	<0.00086		mg/L	0.00086	0.0050	1	04/07/11 03:09	TDS	109665	6010B
Zinc	**0.011**	J	mg/L	0.0035	0.020	1	04/07/11 03:09	TDS	109665	6010B

LEGGETTE, BRASHEARS & GRAHAM, INC. (WI)
6409 Odana Road, Suite C
Madison, WI 53719
Ms. Jennifer Shelton

Work Order: WUC0819
Project: Refuse Hideaway LF
Project Number: Landfill Leachate

Received: 03/31/11
Reported: 04/08/11 17:52

LABORATORY BLANK QC DATA

Analyte	Seq/ Batch	Source Result	Spike Level	Units	MDL	MRL	Result	Dup Result	% REC	Dup %REC	% REC Limits	RPD	RPD Limit	Q
General Chemistry Parameters														
Chromium, Hexavalent	11D0024			mg/L	0.0030	0.010	<0.0030							
Cyanide, Total														
Cyanide, Total	109734			mg/L	0.0011	0.010	<0.0011				-			
Mercury (CVAA)														
Mercury	109406			mg/L	0.000051	0.00020	<0.000051				-			
Metals (ICP)														
Cadmium	109665			mg/L	0.00025	0.0020	<0.00025				-			
Chromium	109665			mg/L	0.0014	0.010	<0.0014				-			
Copper	109665			mg/L	0.0015	0.010	<0.0015				-			
Lead	109665			mg/L	0.0017	0.0050	<0.0017				-			
Molybdenum	109665			mg/L	0.0036	0.010	<0.0036				-			
Nickel	109665			mg/L	0.0016	0.010	<0.0016				-			
Selenium	109665			mg/L	0.0024	0.010	<0.0024				-			
Silver	109665			mg/L	0.00086	0.0050	<0.00086				-			
Zinc	109665			mg/L	0.0035	0.020	<0.0035				-			

LEGGETTE, BRASHEARS & GRAHAM, INC. (WI)
6409 Odana Road, Suite C
Madison, WI 53719
Ms. Jennifer Shelton

Work Order: WUC0819
Project: Refuse Hideaway LF
Project Number: Landfill Leachate

Received: 03/31/11
Reported: 04/08/11 17:52

CCV QC DATA

Analyte	Seq/ Batch	Source Result	Spike Level	Units	MDL	MRL	Result	Dup Result	% REC	Dup %REC	% REC Limits	RPD	RPD Limit	Q
General Chemistry Parameters														
Chromium, Hexavalent	1100024		0.10	mg/L	N/A	N/A	0.0950		95		90-110			

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LEGGETTE, BRASHEARS & GRAHAM, INC. (WI)
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Ms. Jennifer Shelton

Work Order: WUC0819
Project: Refuse Hideaway LF
Project Number: Landfill Leachate

Received: 03/31/11
Reported: 04/08/11 17:52

LABORATORY DUPLICATE QC DATA

Analyte	Seq/ Batch	Source Result	Spike Level	Units	MDL	MRL	Result	% REC	Dup %REC	% REC Limits	RPD	RPD Limit	Q
General Chemistry Parameters													
QC Source Sample: WUC0819-01													
Chromium, Hexavalent	HD0024	<0.0030		mg/L	0.0030	0.010	<0.0030					8	

LEGGETTE, BRASHEARS & GRAHAM, INC. (WI)
6409 Odana Road, Suite C
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Ms. Jennifer Shelton

Work Order: WUC0819
Project: Refuse Hideaway LF
Project Number: Landfill Leachate

Received: 03/31/11
Reported: 04/08/11 17:52

LCS/LCS DUPLICATE QC DATA

Analyte	Seq/ Batch	Source Result	Spike Level	Units	MDL	MRL	Result	Dup Result	% REC	Dup %REC	% REC Limits	RPD	RPD Limit	Q
Cyanide, Total														
Cyanide, Total	109734			mg/L	0.0011	0.010	0.104		104		80-120			
Cyanide, Total	109734			mg/L	0.0011	0.010	0.401		100		90-110			
Cyanide, Total	109734			mg/L	0.0011	0.010	0.0422		106		75-125			
Mercury (CVAA)														
Mercury	109406			mg/L	0.000051	0.00020	0.00206		103		80-120			
Metals (ICP)														
Cadmium	109665			mg/L	0.00025	0.0020	0.0474		95		80-120			
Chromium	109665			mg/L	0.0014	0.010	0.192		96		80-120			
Copper	109665			mg/L	0.0015	0.010	0.245		98		80-120			
Lead	109665			mg/L	0.0017	0.0050	0.0970		97		80-120			
Molybdenum	109665			mg/L	0.0036	0.010	0.940		94		80-120			
Nickel	109665			mg/L	0.0016	0.010	0.478		96		80-120			
Selenium	109665			mg/L	0.0024	0.010	0.0842		84		80-120			
Silver	109665			mg/L	0.00086	0.0050	0.0450		90		80-120			
Zinc	109665			mg/L	0.0035	0.020	0.462		92		80-120			

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LEGGETTE, BRASHEARS & GRAHAM, INC. (WI)
6409 Odana Road, Suite C
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Ms. Jennifer Shelton

Work Order: WUC0819
Project: Refuse Hideaway LF
Project Number: Landfill Leachate

Received: 03/31/11
Reported: 04/08/11 17:52

CERTIFICATION SUMMARY

TestAmerica Watertown

Method	Matrix	Nelac	Wisconsin
SM 3500CrD	Water - NonPotable	X	X

Subcontracted Laboratories

TestAmerica Chicago NELAC Cert #100201, Wisconsin Cert #999580010, Illinois Cert #100201, Minnesota Cert #017-999-101, Iowa Cert #82
2417 Bond Street - University Park, IL 60484

Method Performed: 335.2
Samples: WUC0819-01

Method Performed: 6010B
Samples: WUC0819-01

Method Performed: 7470A
Samples: WUC0819-01

TestAmerica Watertown
Brian DeJong For Dan F. Milewsky
Project Manager

LEGGETTE, BRASHEARS & GRAHAM, INC. (WI)	Work Order:	WUC0819	Received:	03/31/11
6409 Odana Road, Suite C	Project:	Refuse Hideaway LF	Reported:	04/08/11 17:52
Madison, WI 53719	Project Number:	Landfill Leachate		
Ms. Jennifer Shelton				

DATA QUALIFIERS AND DEFINITIONS

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

WUCO 819

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Watertown Division
602 Commerce Drive
Watertown, WI 53094

Phone 920-261-1660 or 800-833-7036
Fax 920-261-8120

To assist us in using the proper analytical methods, is this work being conducted for regulatory purposes?
Compliance Monitoring: ____

Client Name: LBG, Inc. | Client #:
Address: 6709 Odana Rd Suite L
City/State/Zip Code: Madison WI 53719
Project Manager: Jennifer Shelton
Telephone Number: 608-310-7672 | Fax:
Sampler Name: (Print Name) Adam Both
Sampler Signature:
E-mail address: jshelton@LBGMAD.COM

Project Name: WIDNR-Refuse Hideaway
Project #:
Site/Location ID: Refuse Hideaway | State: WI
Report To: Jennifer Shelton
Invoice To: Jennifer Shelton
Quote #: | PO#:

TAT: (X) Standard; ( ) Rush (surcharges may apply)
Date Needed:
Fax Results: Y (N)
E-mail: (Y) N

QC Deliverables: ( ) None; ( ) Level 2 (Batch QC); ( ) Level 3; ( ) Level 4; ( ) Other:

SAMPLE ID	Date Sampled	Time Sampled	G = Grab, C = Composite	Field Filtered	Matrix: SL - Sludge DW - Drinking Water GW - Groundwater S - Soil/Solid WW - Wastewater Specify Other	Preservation & # of Containers: HNO_3	HCl	NaOH	H_2SO_4	Methanol	None	Other (Specify)	Analyze For: Cadmium, Chromium	Copper, Lead	Nickel, Selenium	Silver, Zinc	Molybdenum	Mercury	Hexavalent Chromium	Cyanide			REMARKS
Leachate	3/30/11	1505	G	N	GW	1		1			1		X	X	X	X	X	X	X	X			Per email

Special Instructions:

LABORATORY COMMENTS:
Init Lab Temp: 2.6°C
Rec Lab Temp:
Custody Seals: (Y) N N/A
Bottles Supplied by TestAmerica: (Y) N
Method of Shipment: Dunham Exp

	Date	Time		Date	Time
Relinquished By: Adam Both	3/30	1530	Received By: COURIER-Dunham		
Relinquished By:			Received By: Lucy Larsen	3/31/11	630
Relinquished By:			Received By:		

TAL-0020 (1207)

Cooler Receipt Log

Work Order(s): WUC0819 Client Name/Project: LBG, Inc. # of Coolers: 1

1. How did samples arrive? ☒ Gunham ☐ Fed-Ex ☐ UPS ☐ TestAmerica ☐ Client ☐ USPS ☐ Speedy ☐ _____

Date/time cooler was opened: 3/31/11 830 By: Roy W TEMP. 2.6°

2. Were custody seals intact, signed and dated correctly? ☐ Intact ☐ Broken ☒ NA
3. TAT (Turn Around Time) ☐ SUBCONTRACTED ☐ HOLD ☒ STANDARD ☐ RUSH
4. Were samples on ice? ☒ Yes ☐ No ☐ Water ☐ Ice & Water
5. Bottles supplied by Test America? ☒ Yes ☐ No
6. Number of containers are noted on COC (Chain of Custody) ? ☒ Yes ☐ No
7. Matrix is identified on COC ? ☒ Yes ☐ No
8. Did all sample containers arrive in good condition? ☒ OK ☐ Broken ☐ Frozen ☐ Slushy

☐ BOD ☐ Bacteria ☐ _____

9. Are there any short hold time tests? (48hrs or less) ☐ No ☒ Yes

Past Hold? ☒ No ☐ Yes

24 hours or less	48 hours		7 days	
Coliform Bacteria			Aqueous Organic Prep	
Fecal (orange)	BOD	CBOD	BNA 8270	DRO (HCL amber)
Total Bacteria (blue)			Herbs	PAH (NT amber)
MPN Bacteria (black)	Nitrite NO2	Nitrate NO3	PCBs	Pest/PCBs
SPC (Standard Plate Count – yellow)	OrthoPhosphate or		PNA	
HPC (Hydrophilic Plate Count - yellow)	OrthoPhosphorus		TS (Total Solids)	TDS
T. Residual Chlorine (NT bottle)	Surfactants (MBAS)		TSS (Total Suspended Solids)	
CR3 or CR6 (Hex Chromium VI - NT bottle)	Sulfite		Sulfide	
Dissolved Oxygen (DO)	Turbidity		Volatile Solids	

10. Ops Mgr, PM or Analyst informed of short hold? ..... Who Traci When 9:23
11. Other than short hold test , were any samples within 2 days of their hold date ☒ No ☐ Yes

Or past their expiration of hold time ☒ No ☐ Yes

12. Is the date and time of collection recorded on COC? Date ☒ Yes ☐ No on the containers ☐ Yes ☐ No

Time ☒ Yes ☐ No on the containers ☐ Yes ☐ No

13. Are dissolved parameters field filtered or being filtered in the lab? ☐ Field ☐ Lab ☒ NA
14. Are sample volumes adequate and preservatives correct for test requested? Vol. ☒ Yes ☐ No

Preservatives ☒ Yes ☐ No

15. Were correct containers used for the analysis requested? ☒ Yes ☐ No
16. Do VOC samples have air bubbles >6mm? ☐ No ☐ Yes ☒ NA
17. Is an aqueous Trip Blank included? ☐ Yes ☐ No ☒ NA
18. If received, how were DRO soil samples received? ☐ Weighed glass jar ☐ Packed jar
19. Is a Methanol Trip Blank included? ☐ Yes ☐ glass jar ☐ vial ☐ No ☒ NA
20. How were VOC soils received? ☐ Methanol ☐ Sodium Bisulfate ☐ Packed Jar ☐ Encore ☐ Other ☐ Water (see options*)

* ☐ Within 48hrs of sampling ☐ Past 48hrs of sampling ☐ Frozen ☐ Not Frozen

21. Were all sample containers received and match the Sample IDs listed on COC? ☒ Yes ☐ No

If any changes are made to this Work Order after Login, or if comments must be made regarding this cooler, explain them below:

6mm = ------

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Watertown
1101 Industrial Drive, Suites 9 & 10
Watertown, WI 53094
Tel: 800-833-7036

TestAmerica Job ID: WUF0940
Client Project/Site: Landfill Leachate
Client Project Description: Refuse Hideaway LF

For:
LEGGETTE, BRASHEARS & GRAHAM, INC. (WI)
6409 Odana Road, Suite C
Madison, WI 53719

Attn: Ms. Jennifer Shelton

Authorized for release by:
07/12/2011 05:45:46 PM

Dan F. Milewsky
Project Manager
Dan.Milewsky@testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Table of Contents

Qualifiers

WetChem

Qualifier	Qualifier Description
J	Estimated value Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDL). The user of this data should be aware that this data is of limited reliability.
M12	The MS and/or MSD were below the acceptance limits. See calibration verification (CCV)

TCHI

Qualifier	Qualifier Description
Ja	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.
EPA	United States Environmental Protection Agency
ND	Not Detected above the reporting level.
MDL	Method Detection Limit
RL	Reporting Limit
RE, RE1 (etc.)	Indicates a Re-extraction or Reanalysis of the sample.
%R	Percent Recovery
RPD	Relative Percent Difference, a measure of the relative difference between two points.

Detection Summary

Client: LEGGETTE, BRASHEARS & GRAHAM, INC. (WI)
Project/Site: Landfill Leachate

TestAmerica Job ID: WUF0940

Client Sample ID: Leachate

Lab Sample ID: WUF0940-01

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chromium, Hexavalent	0.0052	J	0.010	0.0030	mg/L	1.0		SM 3500CrD	Total
Cyanide, Total	0.0075	Ja	0.010	0.0011	mg/L	1		335.2	Total
Chromium	0.021		0.010	0.0015	mg/L	1		6010B	Total
Copper	0.0044	Ja	0.010	0.0014	mg/L	1		6010B	Total
Nickel	0.057		0.010	0.00081	mg/L	1		6010B	Total
Zinc	0.010	Ja	0.020	0.0066	mg/L	1		6010B	Total

Client Sample ID: Leachate
Date Collected: 06/29/11 14:00
Date Received: 06/30/11 08:25

Lab Sample ID: WUF0940-01
Matrix: Ground Water

Method: SM 3500CrD - General Chemistry Parameters

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium, Hexavalent	0.0052	J	0.010	0.0030	mg/L		06/30/11 13:00	06/30/11 13:00	1.0

Method: 335.2 - Cyanide, Total

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	0.0075	Ja	0.010	0.0011	mg/L		07/05/11 16:15	07/05/11 20:09	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	<0.00036		0.0020	0.00036	mg/L		07/01/11 15:45	07/05/11 17:15	1
Chromium	0.021		0.010	0.0015	mg/L		07/01/11 15:45	07/05/11 17:15	1
Copper	0.0044	Ja	0.010	0.0014	mg/L		07/01/11 15:45	07/05/11 17:15	1
Lead	<0.0020		0.0050	0.0020	mg/L		07/01/11 15:45	07/05/11 17:15	1
Molybdenum	<0.0019		0.010	0.0019	mg/L		07/01/11 15:45	07/05/11 17:15	1
Nickel	0.057		0.010	0.00081	mg/L		07/01/11 15:45	07/05/11 17:15	1
Selenium	<0.0025		0.010	0.0025	mg/L		07/01/11 15:45	07/05/11 17:15	1
Silver	<0.00071		0.0050	0.00071	mg/L		07/01/11 15:45	07/05/11 17:15	1
Zinc	0.010	Ja	0.020	0.0066	mg/L		07/01/11 15:45	07/05/11 17:15	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000051		0.00020	0.000051	mg/L		07/06/11 07:25	07/06/11 14:24	1

Method: SM 3500CrD - General Chemistry Parameters

Lab Sample ID: 11G0094-BLK1
Matrix: Water - NonPotable
Analysis Batch: 11G0094

Client Sample ID: Method Blank
Prep Type: Total
Prep Batch: 11G0094_P

Analyte	Blank Result	Blank Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium, Hexavalent	<0.0030		0.010	0.0030	mg/L		06/30/11 13:00	06/30/11 13:00	1.00

Lab Sample ID: 11G0094-BLK2
Matrix: Water - NonPotable
Analysis Batch: 11G0094

Client Sample ID: Method Blank
Prep Type: Total
Prep Batch: 11G0094_P

Analyte	Blank Result	Blank Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium, Hexavalent	<0.0030		0.010	0.0030	mg/L		07/01/11 16:00	07/01/11 16:00	1.00

Lab Sample ID: 11G0094-BLK3
Matrix: Water - NonPotable
Analysis Batch: 11G0094

Client Sample ID: Method Blank
Prep Type: Total
Prep Batch: 11G0094_P

Analyte	Blank Result	Blank Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium, Hexavalent	<0.0030		0.010	0.0030	mg/L		07/06/11 13:00	07/06/11 13:00	1.00

Lab Sample ID: 11G0094-MS1
Matrix: Water - NonPotable
Analysis Batch: 11G0094

Client Sample ID: Leachate
Prep Type: Total
Prep Batch: 11G0094_P

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Result	Matrix Spike Qualifier	Unit	D	% Rec	% Rec. Limits
Chromium, Hexavalent	0.0052	J	0.10000	0.0639	M12	mg/L		59	73 - 120

Lab Sample ID: 11G0094-MSD1
Matrix: Water - NonPotable
Analysis Batch: 11G0094

Client Sample ID: Leachate
Prep Type: Total
Prep Batch: 11G0094_P

Analyte	Sample Result	Sample Qualifier	Spike Added	Matrix Spike Dup Result	Matrix Spike Dup Qualifier	Unit	D	% Rec	% Rec. Limits	RPD	RPD Limit
Chromium, Hexavalent	0.0052	J	0.10000	0.0591	M12	mg/L		54	73 - 120	8	8

Method: 335.2 - Cyanide, Total

Lab Sample ID: 118508-3
Matrix: Water
Analysis Batch: 118498

Client Sample ID: Method Blank
Prep Type: Total
Prep Batch: 118498_P

Analyte	Blank Result	Blank Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.0011		0.010	0.0011	mg/L		07/05/11 16:15	07/05/11 20:06	1

Lab Sample ID: 118508-4
Matrix: Water
Analysis Batch: 118498

Client Sample ID: Lab Control Sample
Prep Type: Total
Prep Batch: 118498_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	% Rec	% Rec. Limits
Cyanide, Total	0.100	0.0968		mg/L		97	80 - 120

Method: 335.2 - Cyanide, Total (Continued)

Lab Sample ID: 118508-5
Matrix: Water
Analysis Batch: 118498

Client Sample ID: Lab Control Sample
Prep Type: Total
Prep Batch: 118498_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	% Rec	% Rec. Limits
Cyanide, Total	0.400	0.385		mg/L		96	90 - 110

Lab Sample ID: 118508-6
Matrix: Water
Analysis Batch: 118498

Client Sample ID: Lab Control Sample
Prep Type: Total
Prep Batch: 118498_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	% Rec	% Rec. Limits
Cyanide, Total	0.0400	0.0424		mg/L		106	75 - 125

Method: 6010B - Metals (ICP)

Lab Sample ID: 118540-17
Matrix: Water
Analysis Batch: 118369

Client Sample ID: Method Blank
Prep Type: Total
Prep Batch: 118369_P

Analyte	Blank Result	Blank Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	<0.00036		0.0020	0.00036	mg/L		07/01/11 15:45	07/05/11 16:50	1
Chromium	<0.0015		0.010	0.0015	mg/L		07/01/11 15:45	07/05/11 16:50	1
Copper	<0.0014		0.010	0.0014	mg/L		07/01/11 15:45	07/05/11 16:50	1
Lead	<0.0020		0.0050	0.0020	mg/L		07/01/11 15:45	07/05/11 16:50	1
Molybdenum	<0.0019		0.010	0.0019	mg/L		07/01/11 15:45	07/05/11 16:50	1
Nickel	<0.00081		0.010	0.00081	mg/L		07/01/11 15:45	07/05/11 16:50	1
Selenium	<0.0025		0.010	0.0025	mg/L		07/01/11 15:45	07/05/11 16:50	1
Silver	<0.00071		0.0050	0.00071	mg/L		07/01/11 15:45	07/05/11 16:50	1
Zinc	<0.0066		0.020	0.0066	mg/L		07/01/11 15:45	07/05/11 16:50	1

Lab Sample ID: 118540-18
Matrix: Water
Analysis Batch: 118369

Client Sample ID: Lab Control Sample
Prep Type: Total
Prep Batch: 118369_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	% Rec	% Rec. Limits
Cadmium	0.0500	0.0508		mg/L		102	80 - 120
Chromium	0.200	0.210		mg/L		105	80 - 120
Copper	0.250	0.265		mg/L		106	80 - 120
Lead	0.100	0.105		mg/L		105	80 - 120
Molybdenum	1.00	1.02		mg/L		102	80 - 120
Nickel	0.500	0.515		mg/L		103	80 - 120
Selenium	0.100	0.0925		mg/L		93	80 - 120
Silver	0.0500	0.0488		mg/L		98	80 - 120
Zinc	0.500	0.504		mg/L		101	80 - 120

Method: 7470A - Mercury (CVAA)

Lab Sample ID: 118584-39
Matrix: Water
Analysis Batch: 118525

Client Sample ID: Method Blank
Prep Type: Total
Prep Batch: 118525_P

Analyte	Blank Result	Blank Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000051		0.00020	0.000051	mg/L		07/06/11 07:25	07/06/11 13:10	1

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

Lab Sample ID: 118584-40
Matrix: Water
Analysis Batch: 118525

Client Sample ID: Lab Control Sample
Prep Type: Total
Prep Batch: 118525_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	% Rec	% Rec. Limits
Mercury	0.00200	0.00194		mg/L		97	80 - 120

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WetChem

Analysis Batch: 11G0094

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11G0094-BLK1	Method Blank	Total	Water - NonPotable	SM 3500CrD	11G0094_P
11G0094-MS1	Leachate	Total	Water - NonPotable	SM 3500CrD	11G0094_P
11G0094-MSD1	Leachate	Total	Water - NonPotable	SM 3500CrD	11G0094_P
WUF0940-01	Leachate	Total	Ground Water	SM 3500CrD	11G0094_P
11G0094-BLK2	Method Blank	Total	Water - NonPotable	SM 3500CrD	11G0094_P
11G0094-BLK3	Method Blank	Total	Water - NonPotable	SM 3500CrD	11G0094_P

Prep Batch: 11G0094_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
11G0094-BLK1	Method Blank	Total	Water - NonPotable	NO PREP - WET CHEM	
11G0094-MS1	Leachate	Total	Water - NonPotable	NO PREP - WET CHEM	
11G0094-MSD1	Leachate	Total	Water - NonPotable	NO PREP - WET CHEM	
WUF0940-01	Leachate	Total	Ground Water	NO PREP - WET CHEM	
11G0094-BLK2	Method Blank	Total	Water - NonPotable	NO PREP - WET CHEM	
11G0094-BLK3	Method Blank	Total	Water - NonPotable	NO PREP - WET CHEM	

TCHI

Analysis Batch: 118369

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
118540-17	Method Blank	Total	Water	6010B	118369_P
118540-18	Lab Control Sample	Total	Water	6010B	118369_P
WUF0940-01	Leachate	Total	Ground Water	6010B	118369_P

Analysis Batch: 118498

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
118508-3	Method Blank	Total	Water	335.2	118498_P
118508-4	Lab Control Sample	Total	Water	335.2	118498_P
118508-5	Lab Control Sample	Total	Water	335.2	118498_P
118508-6	Lab Control Sample	Total	Water	335.2	118498_P
WUF0940-01	Leachate	Total	Ground Water	335.2	118498_P

Analysis Batch: 118525

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
118584-39	Method Blank	Total	Water	7470A	118525_P
118584-40	Lab Control Sample	Total	Water	7470A	118525_P
WUF0940-01	Leachate	Total	Ground Water	7470A	118525_P

Prep Batch: 118369_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
118540-17	Method Blank	Total	Water	3010A	
118540-18	Lab Control Sample	Total	Water	3010A	
WUF0940-01	Leachate	Total	Ground Water	3010A	

TCHI (Continued)

Prep Batch: 118498_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
118508-3	Method Blank	Total	Water	Distill/CN	
118508-4	Lab Control Sample	Total	Water	Distill/CN	
118508-5	Lab Control Sample	Total	Water	Distill/CN	
118508-6	Lab Control Sample	Total	Water	Distill/CN	
WUF0940-01	Leachate	Total	Ground Water	Distill/CN	

Prep Batch: 118525_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
118584-39	Method Blank	Total	Water	7470A	
118584-40	Lab Control Sample	Total	Water	7470A	
WUF0940-01	Leachate	Total	Ground Water	7470A	

Lab Chronicle

Client: LEGGETTE, BRASHEARS & GRAHAM, INC. (WI)
Project/Site: Landfill Leachate

TestAmerica Job ID: WUF0940

Client Sample ID: Leachate
Date Collected: 06/29/11 14:00
Date Received: 06/30/11 08:25

Lab Sample ID: WUF0940-01
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total	Analysis	SM 3500CrD		1.0	11G0094	06/30/11 13:00	BSB	TAL WT
Total	Prep	NO PREP - WET CHEM		1.0	11G0094_P	06/30/11 13:00	TDS	TAL WT
Total	Prep	Distill/CN			118498_P	07/05/11 16:15		TAL CHI
Total	Analysis	335.2		1	118498	07/05/11 20:09	MRW	TAL CHI
Total	Prep	3010A			118369_P	07/01/11 15:45		TAL CHI
Total	Analysis	6010B		1	118369	07/05/11 17:15	PFK	TAL CHI
Total	Prep	7470A			118525_P	07/06/11 07:25		TAL CHI
Total	Analysis	7470A		1	118525	07/06/11 14:24	JR	TAL CHI

Laboratory References:

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

TAL WT = TestAmerica Watertown, 1101 Industrial Drive, Suites 9 & 10, Watertown, WI 53094, TEL 800-833-7036

Certification Summary

Client: LEGGETTE, BRASHEARS & GRAHAM, INC. (WI) TestAmerica Job ID: WUF0940
Project/Site: Landfill Leachate

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica Watertown		WI Dept of Agriculture (Micro)		105-266
TestAmerica Watertown	Illinois	NELAC	5	100453
TestAmerica Watertown	Iowa	State Program	7	294
TestAmerica Watertown	Minnesota	NELAC	5	055-999-366
TestAmerica Watertown	Wisconsin	State Program	5	128053530
TestAmerica Chicago	ACLASS	DoD ELAP		ADE-1429
TestAmerica Chicago	ACLASS	ISO/IEC 17025		AT-1428
TestAmerica Chicago	Alabama	State Program	4	40461
TestAmerica Chicago	California	NELAC	9	01132CA
TestAmerica Chicago	Florida	NELAC	4	E871072
TestAmerica Chicago	Georgia	Georgia EPD	4	N/A
TestAmerica Chicago	Georgia	State Program	4	939
TestAmerica Chicago	Hawaii	State Program	9	N/A
TestAmerica Chicago	Illinois	NELAC	5	100201
TestAmerica Chicago	Indiana	State Program	5	C-IL-02
TestAmerica Chicago	Iowa	State Program	7	82
TestAmerica Chicago	Kansas	NELAC	7	E-10161
TestAmerica Chicago	Kentucky	Kentucky UST	4	66
TestAmerica Chicago	Kentucky	State Program	4	90023
TestAmerica Chicago	Louisiana	NELAC	6	30720
TestAmerica Chicago	Massachusetts	State Program	1	M-IL035
TestAmerica Chicago	Mississippi	State Program	4	N/A
TestAmerica Chicago	North Carolina	North Carolina DENR	4	291
TestAmerica Chicago	Oklahoma	State Program	6	8908
TestAmerica Chicago	South Carolina	State Program	4	77001
TestAmerica Chicago	Texas	NELAC	6	T104704252-09-TX
TestAmerica Chicago	USDA	USDA		P330-09-00027
TestAmerica Chicago	Virginia	NELAC Secondary AB	3	460142
TestAmerica Chicago	Wisconsin	State Program	5	999580010
TestAmerica Chicago	Wyoming	State Program	8	8TMS-Q

Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.

Method Summary

Client: LEGGETTE, BRASHEARS & GRAHAM, INC. (WI)
Project/Site: Landfill Leachate

TestAmerica Job ID: WUF0940

Method	Method Description	Protocol	Laboratory
SM 3500CrD	General Chemistry Parameters		TAL WT
335.2	Cyanide, Total		TAL CHI
6010B	Metals (ICP)		TAL CHI
7470A	Mercury (CVAA)		TAL CHI

Protocol References:

Laboratory References:

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

TAL WT = TestAmerica Watertown, 1101 Industrial Drive, Suites 9 & 10, Watertown, WI 53094, TEL 800-833-7036

Sample Summary

Client: LEGGETTE, BRASHEARS & GRAHAM, INC. (WI)
Project/Site: Landfill Leachate

TestAmerica Job ID: WUF0940

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
WUF0940-01	Leachate	Ground Water	06/29/11 14:00	06/30/11 08:25

WUF0940

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Watertown Division
602 Commerce Drive
Watertown, WI 53094

Phone 920-261-1660 or 800-833-7036
Fax 920-261-8120

To assist us in using the proper analytical methods, is this work being conducted for regulatory purposes?
Compliance Monitoring: _____

Client Name: LBG, Inc Client #: _____
Address: 6709 Odana Rd Ste C
City/State/Zip Code: Madison WI 53719
Project Manager: Jennifer Skelton
Telephone Number: 608-310-7672 Fax: _____
Sampler Name: (Print Name) Adam Roth
Sampler Signature: _____
E-mail address: jskelton@LBGMAD.com

Project Name: WDNR - Refuse Hideaway
Project #: _____
Site/Location ID: Refuse Hideaway Landfill State: WI
Report To: Jennifer Skelton
Invoice To: Jennifer Skelton
Quote #: _____ PO#: _____

TAT: X Standard; ___ Rush (surcharges may apply)
Date Needed: _____
Fax Results: Y ⊘
E-mail: ⊘ N

QC Deliverables: ___ None; ___ Level 2 (Batch QC); ___ Level 3; ___ Level 4; Other: _____

SAMPLE ID	Date Sampled	Time Sampled	G = Grab, C = Composite	Field Filtered	Matrix: SL - Sludge DW - Drinking Water GW - Groundwater S - Soil/Solid WW - Wastewater Specify Other	Preservation & # of Containers: HNO_3	HCl	NaOH	H_2SO_4	Methanol	None	Other (Specify)	Analyze For: Cadmium, chromium	Copper, lead	Nickel	Selenium	Silver	Zinc	Molybdenum	Mercury	Hexavalent chromium	Cyanide	REMARKS
Leachate	6/29/11	1400	G	N	GW	1		1	1		1		X	X	X	X	X	X	X	X	X	X	

Special Instructions:

LABORATORY COMMENTS:
Init Lab Temp:
Rec Lab Temp: Ice
Custody Seals: Y N N/A
Bottles Supplied by TestAmerica: Y N
Method of Shipment: Drive

Relinquished By:	Date: 6/29/11	Time: 1430	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date: 6/30/11	Time: 825
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

TAL-0020 (1207)

07/12/2011

Cooler Receipt Log

Work Order(s): WUF0940 Client Name/Project: LBG # of Coolers: 1

1. How did samples arrive? ☒ Dunham ☐ Fed-Ex ☐ UPS ☐ TestAmerica ☐ Client ☐ USPS ☐ Speedy ☐ _____

Date/time cooler was opened: 6/30/11 By: [signature] TEMP: 1

2. Were custody seals intact, signed and dated correctly? ..... ☒ Intact ☐ Broken ~~☐ NA~~
3. TAT (Turn Around Time) ..... ☒ SUBCONTRACTED ☐ HOLD ☒ STANDARD ☐ **RUSH**
4. Were samples on ice? ..... ☒ Yes ☐ No ☐ Water ☐ Ice & Water
5. Bottles supplied by Test America? ..... ☒ Yes ☐ No
6. Number of containers are noted on COC (Chain of Custody) ? ..... ☒ Yes ☐ No
7. Matrix is identified on COC ? ..... ☒ Yes ☐ No
8. Did all sample containers arrive in good condition? ..... ☒ OK ☐ Broken ☐ Frozen ☐ Slushy

☐ BOD ☐ Bacteria ☐ _____

9. Are there any short hold time tests? (48hrs or less) ..... ☐ No ☒ Yes

Past Hold? ..... ☒ No ☐ Yes

24 hours or less	48 hours	7 days
Coliform Bacteria		Aqueous Organic Prep
Fecal (orange)	BOD CBOD	BNA 8270 DRO (HCL amber)
Total Bacteria (blue)		Herbs PAH (NT amber)
MPN Bacteria (black)	Nitrite NO2 Nitrate NO3	PCBs Pest/PCBs
SPC (Standard Plate Count – yellow)	OrthoPhosphate or	PNA
HPC (Hydrophilic Plate Count - yellow)	OrthoPhosphorus	TS (Total Solids) TDS
T. Residual Chlorine (NT bottle)	Surfactants (MBAS)	TSS (Total Suspended Solids)
CR3 or CR6 (Hex Chromium VI - NT bottle)	Sulfite	Sulfide
Dissolved Oxygen (DO)	Turbidity	Volatile Solids

10. Ops Mgr, PM or Analyst informed of short hold? ..... Who Maci/Brad When 8:30
11. Other than short hold test , were any samples within 2 days of their hold date ..... ☒ No ☐ Yes

Or past their expiration of hold time ..... ☒ No ☐ Yes

12. Is the date and time of collection recorded on COC? Date ..... ☒ Yes ☐ No on the containers ☒ Yes ☐ No

Time ..... ☒ Yes ☐ No on the containers ☒ Yes ☐ No

13. Are dissolved parameters field filtered or being filtered in the lab? ..... ☐ Field ☐ Lab ~~☐ NA~~
14. Are sample volumes adequate and preservatives correct for test requested? Vol... ☒ Yes ☐ No

Preservatives.... ☒ Yes ☐ No

15. Were correct containers used for the analysis requested? ..... ☒ Yes ☐ No
16. Do VOC samples have air bubbles >6mm? ..... ☐ No ☐ Yes ~~☐ NA~~
17. Is an aqueous Trip Blank included? ..... ☐ Yes ☐ No ☐ NA
18. If received, how were DRO soil samples received? ..... ☐ Weighed glass jar ☐ Packed jar
19. Is a Methanol Trip Blank included? ..... ☐ Yes ☐ glass jar ☐ vial ..... ☐ No ~~☐ NA~~
20. How were VOC soils received? ☐ Methanol ☐ Sodium Bisulfate ☐ Packed Jar ☐ Encore ☐ Other ☐ Water (see options*)

* ☐ Within 48hrs of sampling ☐ Past 48hrs of sampling ☐ Frozen ☐ Not Frozen

21. Were all sample containers received and match the Sample IDs listed on COC? ..... ☒ Yes ☐ No

If any changes are made to this Work Order after Login, or if comments must be made regarding this cooler, explain them below:

_____

_____

_____

_____

6mm = ------

APPENDIX II

MADISON METROPOLITAN SEWERAGE DISTRICT
WASTEWATER DISCHARGE PERMIT NTO-5.11

MADISON METROPOLITAN SEWERAGE DISTRICT

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

Jon W. Schellpfeiler
Chief Engineer & Director

Protecting Public Health and the Environment

June 30, 2009

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

Mr. Pagels:

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. Two changes from the previous permit (issued to Liesch Environmental) are noteworthy. We have removed the BTEX sampling parameters. Also, we have lengthened the reporting period from 30-days to 60-days from the end of each calendar quarter. Please include a report of your records of hauling volumes where this data is available for the quarterly reports. 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

metrogro

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, 2009 and shall expire at midnight, June 30, 2014. 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 30 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 _____
Jon W. Schellpfeffer
Chief Engineer and Director

Dated this 26th day of June, 2009.

Permit: NTO-5.11 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 February 26, 2007). 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 ●FFICER

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. Corey Pagels
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 180-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 180-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

TABLE A

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)	(cfm)	(deg F)
GROUND FLARE	Sample Port A										
	7/8/2010	0.40		--	--	--	--	50	750	139	96.4
	7/16/2010	1.00		--	--	--	--	50	800	148	--
	7/29/2010	0.90		29.7	2.3	27.5	40.5	50	700	130	99.6
	8/6/2010	4.00		17.6	2.8	23.8	55.8	50	1,000	185	99.6
	8/13/2010 a	4.00		15.0	3.4	21.6	60.0	50	1,100	204	94.4
	8/20/2010 a	1.00		25.0	5.7	23.4	45.9	50	750	139	95.1
	8/27/2010 a	3.50		35.0	2.7	28.2	34.1	50	1,300	241	84.3
	9/3/2010	2.50		43.5	2.6	30.0	23.9	50	1,250	231	79.8
	9/21/2010 a	--		--	--	--	--	--	--	--	--
	9/22/2010	6.00		38.0	2.8	36.0	23.2	50	1,450	268	85.4
	10/8/2010	4.50		13.5	3.7	24.0	58.8	50	1,250	231	86.7
	10/12/2010	1.25		35.5	1.5	30.4	32.6	50	1,000	185	89.0
	10/22/2010	0.60		36.5	4.8	27.2	31.5	50	750	139	61.3
	10/29/2010	0.75		30.5	6.8	24.0	38.7	50	750	139	69.6
	11/5/2010	1.05		36.5	6.2	26.8	30.5		900	167	66.2
	11/15/2010	2.00		23.5	4.9	24.8	46.8		1,250	231	76.4
	11/19/2010	2.50		46.0	1.9	34.0	18.1		1,550	287	--
	12/3/2010	0.75		61.0	1.8	35.4	1.8		800	148	62.5
	12/9/2010	24.00		--	--	--	--		--	--	--
	12/17/2010	1.00		59.0	0.3	35.4	5.3		1,100	204	50.3
	12/21/2010	0.40		33.5	3.7	32.6	30.2		700	130	63.8
	12/28/2010	2.50		53.5	1.6	37.0	7.9		1,700	315	56.4
	1/7/2011	1.00		23.5	7.2	24.3	45.0		--	--	--
	1/11/2011	2.00		44.5	1.1	36.2	18.2		2,500	463	49.2
	1/17/2011	--		--	--	--	--		--	--	--
	1/21/2011	1.25		--	--	--	--		1,200	222	59.3
	1/27/2011	1.50		43.5	1.0	20.0	35.5		1,800	333	--
	2/15/2011	2.00		--	--	--	--		1,900	352	55.9
	2/25/2011	1.10		21.0	5.4	23.4	50.2		--	--	52.4
	2/28/2011	1.90		40.5	2.8	30.0	26.7		--	--	--
	3/11/2011	0.25		53.0	2.5	31.8	12.7		750	139	66.0
	3/21/2011	1.85		61.0	2.0	28.2	8.8		1,500	278	62.9
	3/29/2011	0.30		49.0	1.7	35.0	14.3		700	130	66.5
	4/4/2011	1.50		57.0	3.5	31.8	7.7		1,500	278	52.8
	4/13/2011	--		--	--	--	--		--	--	--
	4/19/2011	0.25		45.0	5.8	31.2	18.0		800	148	59.0
	4/27/2011	0.75		45.0	3.3	30.2	21.5		1,000	185	65.0
	5/3/2011	0.45		32.5	6.0	25.2	36.3		1,250	231	69.5
	5/13/2011	--		--	--	--	--		--	--	--
	5/16/2011	1.40		63.0	1.1	36.8	-0.9		2,500	463	71.6
	5/24/2011	0.70		49.5	3.6	28.2	18.7		3,500	648	84.3

TABLE A

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)	(cfm)	(deg F)
	5/31/2011	0.70		--	--	--	--		1,750	324	88.1
	6/9/2011	0.70		85.5	3.2	27.6	-16.3		900	167	86.3
	6/16/2011	0.85		100	3.3	25.2	-28.5		800	148	92.1
	6/23/2011	0.80		86.5	3.1	28.8	-18.4		700	130	87.8
	6/28/2011	0.45		48.5	0.0	33.4	18.1		650	120	--
	Sample Port B										
	7/8/2010	0.10		--	--	--	--		500	93	98.9
	7/16/2010	0.80		--	--	--	--		700	130	--
	7/29/2010	0.65		29.4	2.3	27.4	40.9		550	102	100
	8/6/2010	3.00		17.0	2.9	23.8	56.3		800	148	99.8
	8/13/2010 a	2.50		15.0	3.2	21.6	60.2		750	139	94.4
	8/17/2010	--		37.5	3.8	27.4	31.3		--	--	--
	8/20/2010 a	0.50		23.0	6.6	21.4	49.0		600	111	93.5
	8/20/2010 b	--		30.5	2.9	25.6	41.0		--	--	--
	8/23/2010 a	--		20.0	3.2	24.4	52.4		--	--	--
	8/23/2010 b	--		23.5	2.0	26.6	47.9		--	--	--
	8/27/2010 a	2.50		35.0	2.6	28.2	34.2		1,000	185	83.4
	8/27/2010 b	--		32.0	2.0	29.8	36.2		--	--	--
	8/30/2010	--		20.5	4.8	23.5	51.2		--	--	--
	9/3/2010	2.00		43.5	2.7	30.6	23.2		1,100	204	78.2
	9/21/2010 a	--		48.5	6.4	25.6	19.5		--	--	--
	9/22/2010	4.00		38.5	2.7	35.8	23.0		1,200	222	84.2
	10/8/2010	3.50		13.5	3.6	24.1	58.8		1,000	185	8.56
	10/12/2010	0.95		35.5	2.2	30.2	32.1		700	130	87.8
	10/22/2010	0.40		36.5	4.6	27.8	31.1		600	111	59.5
	10/29/2010	0.65		30.5	6.8	23.8	38.9		500	93	65.6
	11/5/2010	0.75		36.0	6.3	26.0	31.7		750	139	66.9
	11/15/2010	1.75		23.5	4.8	25.0	46.7		1,000	185	73.5
	11/19/2010	2.00		46.0	2.2	33.6	18.2		1,450	268	--
	12/3/2010	0.50		61.0	1.9	35.3	1.8		1,100	204	56.4
	12/9/2010	24.00		--	--	--	--		--	--	--
	12/17/2010	0.75		57.5	0.3	35.4	6.8		1,100	204	49.2
	12/21/2010	0.30		33.5	3.7	32.2	30.6		750	139	58.4
	12/28/2010	2.00		53.5	1.6	36.8	8.1		1,500	278	56.4
	1/7/2011	0.75		26.0	4.2	30.4	39.4		--	--	--
	1/11/2011	1.80		44.5	1.0	36.2	18.3		--	--	--
	1/17/2011	--		--	--	--	--		--	--	--
	1/21/2011	0.80		--	--	--	--		--	--	--
	1/27/2011	1.10		43.5	1.8	20.0	34.7		--	--	--
	2/15/2011	1.75		--	--	--	--		--	--	--
	2/25/2011	0.80		21.0	5.3	23.4	50.3		--	--	52.6
	2/28/2011	1.45		40.5	2.7	30.0	26.8		--	--	--

TABLE A

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)	(cfm)	(deg F)
	3/11/2011	0.15		53.5	2.5	31.8	12.2		--	--	--
	3/21/2011	1.40		62.0	1.9	28.2	7.9		--	--	--
	3/29/2011	0.25		49.5	1.6	35.4	13.5		--	--	--
	4/4/2011	1.25		57.5	3.3	32.0	7.2		1,500	278	53.8
	4/13/2011	--		--	--	--	--		--	--	--
	4/19/2011	0.20		45.0	9.8	31.0	14.2		700	130	51.6
	4/27/2011	0.50		45.5	3.2	30.0	21.3		750	139	65.3
	5/3/2011	0.30		32.0	6.1	24.6	37.3		1,700	315	68.5
	5/13/2011	--		--	--	--	--		--	--	--
	5/16/2011	1.15		62.5	1.4	36.6	-0.5		1,500	278	72.6
	5/24/2011	0.55		49.5	3.5	28.2	18.8		3,250	601	83.3
	5/31/2011	0.60		98.5	3.8	26.0	-28.3		1,500	278	87.4
	6/9/2011	0.50		86.0	3.3	27.6	-16.9		700	130	82.7
	6/16/2011	0.65		95.0	3.0	25.0	-23.0		700	130	91.5
	6/23/2011	0.55		86.0	2.6	29.4	-18.0		600	111	84.8
	6/28/2011	0.35		48.5	0.0	33.4	18.1		600	111	--
	Sample Port C										
	7/8/2010	--		--	--	--	--				
	7/16/2010	0.70		--	--	--	--				
	7/29/2010	0.05		29.4	3.0	26.4	41.2				
	8/6/2010	2.00		17.0	2.9	23.8	56.3				
	8/13/2010 a	1.50		15.0	3.3	21.6	60.1				
	8/20/2010 a	0.10		25.0	5.8	23.3	45.9				
	8/27/2010 a	2.00		35.0	2.6	28.1	34.3				
	9/3/2010	1.75		43.0	2.7	30.5	23.8				
	9/21/2010 a	--		--	--	--	--				
	9/22/2010	2.50		38.5	2.7	36.0	22.8				
	10/8/2010	3.00		13.5	3.6	24.1	58.8				
	10/12/2010	0.80		34.5	1.9	30.2	33.4				
	10/22/2010	0.25		36.5	4.6	27.9	31.0				
	10/29/2010	0.50		30.5	6.8	23.8	38.9				
	11/5/2010	--		36.5	6.0	26.4	31.1				
	11/15/2010	1.30		23.5	4.8	25.1	46.6				
	11/19/2010	1.50		46.5	2.2	34.0	17.3				
	12/3/2010	--		--	--	--	--				
	12/9/2010	--		--	--	--	--				
	12/17/2010	--		--	--	--	--				
	12/21/2010	--		--	--	--	--				
	12/28/2010	--		--	--	--	--				
	1/7/2011	0.50		25.0	3.8	29.0	42.2				
	1/11/2011	1.50		44.0	1.0	36.0	19.0				
	1/17/2011	--		--	--	--	--				

TABLE A

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)	(cfm)	(deg F)
	1/21/2011	0.40		--	--	--	--				
	1/27/2011	0.80		43.5	0.7	20.0	35.8				
	2/15/2011	1.50		--	--	--	--				
	2/25/2011	0.60		21.0	5.3	23.4	50.3				
	2/28/2011	1.20		41.0	2.7	30.2	26.1				
	3/11/2011	0.05		53.5	2.5	32.2	11.8				
	3/21/2011	1.15		61.5	2.0	28.0	8.5				
	3/29/2011	0.15		50.0	1.4	35.2	13.4				
	4/4/2011	1.00		57.5	3.5	32.2	6.8				
	4/13/2011	--		--	--	--	--				
	4/19/2011	0.10		45.0	5.7	31.0	18.3				
	4/27/2011	0.40		45.5	3.1	30.0	21.4				
	5/3/2011	0.20		32.5	6.1	24.4	37.0				
	5/13/2011	--		--	--	--	--				
	5/16/2011	0.90		61.0	1.5	36.6	0.9				
	5/24/2011	0.40		49.5	3.5	29.0	18.0				
	5/31/2011	0.50		--	--	--	--				
	6/9/2011	0.35		86.5	3.2	27.6	-17.3				
	6/16/2011	0.55		74.0	3.6	25.2	-2.8				
	6/23/2011	0.45		70.5	3.3	27.0	-0.8				
	6/28/2011	0.25		48.5	0.0	31.8	19.7				
BLOWER					**North Branch**						
	7/8/2010	-26.5		--	--	--	--	100	800	62	80.2
	7/16/2010	-26.0		--	--	--	--	100	1,100	86	--
	7/29/2010	-27.5		14.8	11.4	12.4	61.4	100	650	51	77.5
	8/6/2010	-27.0		15.0	5.5	18.8	60.7	100	700	55	76.0
	8/13/2010 a	-26.0		12.0	5.9	16.2	65.9	100	750	59	71.5
	8/13/2010 b	--		29.0	9.1	17.4	44.5	100	600	47	--
	8/20/2010 a	-27.0		14.0	12.2	12.6	61.2	100	600	47	75.7
	8/23/2010 a	--		15.5	6.1	19.2	59.2	100	--	--	--
	8/27/2010 a	-25.0		36.5	3.8	27.0	32.7	100	900	70	72.3
	9/3/2010	-26.0		33.5	7.9	21.2	37.4	100	1,000	78	55.8
	9/21/2010 a	--		24.0	13.1	11.6	51.3	100	--	--	--
	9/22/2010	-24.5		33.5	5.0	27.0	34.5	100	1,500	117	65.4
	10/8/2010	-25.0		12.5	6.7	19.4	61.4	100	1,400	109	64.7
	10/12/2010	-23.0		35.0	4.3	21.4	39.3	100	1,250	98	69.6
	10/22/2010	-28.0		--	--	--	--	100	750	59	55.5
	10/29/2010	-27.5		10.5	16.6	6.0	66.9	100	700	55	51.4
	11/5/2010	-27.0		4.3	19.3	2.2	74.3	100	1,600	125	50.5
	11/15/2010	-26.0		--	--	--	--	100	1,500	117	54.7
	11/19/2010	-23.5		--	--	--	--	100	1,650	129	--
	12/3/2010	-26.0		25.0	11.5	11.6	51.9	5	1,200	94	34.1

TABLE A

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)	(cfm)	(deg F)
	12/9/2010	-4.0		--	--	--	--	100	250	20	30.9
	12/17/2010	-24.0		60.5	1.6	24.4	13.5	100	1,200	94	36.1
	12/21/2010	-28.0		23.0	8.5	18.4	50.1	100	1,000	78	41.1
	12/28/2010	-23.0		59.5	1.7	31.0	7.8	50	1,800	140	40.2
	1/7/2011	-26.0		16.5	4.9	21.6	57.0	0	0	0	27.5
	1/11/2011	-26.0		45.5	1.8	30.2	22.5	50	2,000	156	36.8
	1/17/2011	--		31.0	1.2	26.4	41.4	50	--	--	--
	1/21/2011	-26.0		--	--	--	--	50	1,700	133	59.3
	1/27/2011	-27.0		--	--	--	--	50	2,000	156	33.0
	2/15/2011	-26.0		--	--	--	--	100	2,500	195	40.1
	2/25/2011	-28.0		11.0	9.2	13.6	66.2	100	2,800	218	43.4
	2/28/2011	-27.0		33.0	5.5	22.2	39.3	100	--	--	--
	3/11/2011	-28.0		52.5	6.7	17.8	23.0	50	750	59	54.8
	3/21/2011	-25.0		50.0	2.5	24.4	23.1	100	1,700	133	47.3
	3/29/2011	-28.0		37.0	4.3	22.2	36.5	50	1,800	140	54.3
	4/4/2011	-27.0		45.5	5.5	21.8	27.2	--	1,300	101	45.8
	4/13/2011	--		34.0	5.4	21.4	39.2	--	--	--	--
	4/19/2011	-27.0		33.0	7.6	20.6	38.8	10	1,000	78	37.7
	4/27/2011	-26.0		39.0	3.0	24.0	34.0	50	800	62	47.0
	5/3/2011	-28.0		18.5	8.5	15.2	57.8	30	800	62	48.5
	5/13/2011	--		11.0	13.3	9.6	66.1	30	--	--	--
	5/16/2011	-24.0		53.5	1.7	32.4	12.4	100	2,250	176	57.5
	5/24/2011	-25.0		20.0	7.3	16.8	55.9	50	3,500	273	62.4
	5/31/2011	-24.5		38.5	7.2	14.6	39.7	15	3,500	273	77.5
	6/9/2011	-24.0		41.0	6.2	17.0	35.8	100	3,000	234	60.8
	6/16/2011	-24.0		36.0	6.0	16.6	41.4	100	1,500	117	74.5
	6/23/2011	-24.0		42.0	5.2	17.6	35.2	100	500	39	68.1
	6/28/2011	-27.0		36.5	5.0	17.2	41.3	30	750	59	--
	Central Branch										
	7/8/2010	-26.5		--	--	--	--	100	800	62	74.6
	7/16/2010	-26.0		--	--	--	--	100	1,250	98	--
	7/29/2010	-27.5		45.0	1.2	34.0	19.8	100	750	59	73.9
	8/6/2010	-27.0		17.0	3.8	20.9	58.3	100	850	66	73.7
	8/13/2010 a	-26.0		14.5	4.2	19.8	61.5	100	800	62	73.0
	8/13/2010 b	--		38.0	6.7	19.6	35.7	100	750	59	--
	8/20/2010 a	-27.0		24.5	7.6	19.2	48.7	100	900	70	74.8
	8/23/2010 a	--		18.5	4.2	22.2	55.1	100	--	--	--
	8/27/2010 a	-25.0		33.5	3.6	24.4	38.5	100	1,300	101	70.1
	9/3/2010	-26.0		36.0	7.0	22.4	34.6	100	900	70	65.6
	9/21/2010 a	--		47.5	6.7	24.6	21.2	100	--	--	--
	9/22/2010	-24.5		40.5	5.2	31.2	23.1	100	1,400	109	65.8
	10/8/2010	-25.0		12.5	6.2	20.4	60.9	100	1,250	98	63.4

TABLE A

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)	(cfm)	(deg F)
	10/12/2010	-23.0		26.0	5.0	24.0	45.0	100	1,225	96	66.3
	10/22/2010	-28.0		--	--	--	--	100	1,250	98	55.4
	10/29/2010	-27.5		31.0	5.1	26.4	37.5	100	1,250	98	52.1
	11/5/2010	-27.0		16.0	14.7	9.0	60.3	100	1,500	117	49.4
	11/15/2010	-26.0		--	--	--	--	100	1,700	133	51.3
	11/19/2010	-23.5		--	--	--	--	100	1,900	148	--
	12/3/2010	-29.0		62.0	0.7	41.6	-4.3	100	2,500	195	45.2
	12/9/2010	-4.0		58.0	3.4	32.4	6.2	100	475	37	37.5
	12/17/2010	-24.0		56.0	1.3	37.2	5.5	100	1,600	125	37.0
	12/21/2010	-28.0		40.0	1.9	41.0	17.1	100	800	62	41.3
	12/28/2010	-23.0		51.0	1.0	38.8	9.2	100	1,800	140	41.1
	1/7/2011	-26.0		29.5	2.4	33.0	35.1	100	2,000	156	31.0
	1/11/2011	-26.0		42.0	1.0	39.0	18.0	50	2,000	156	38.3
	1/17/2011	--		41.0	1.9	34.4	22.7	50	--	--	--
	1/21/2011	-26.0		--	--	--	--	50	1,500	117	35.0
	1/27/2011	-27.0		--	--	--	--	50	1,500	117	36.6
	2/15/2011	-26.0		--	--	--	--	100	1,900	148	41.3
	2/25/2011	-28.0		26.4	3.9	28.0	41.7	100	1,600	125	43.3
	2/28/2011	-27.0		37.5	2.7	32.0	27.8	100	--	--	--
	3/11/2011	-28.0		48.5	2.3	34.2	15.0	100	1,100	86	45.8
	3/21/2011	-25.0		64.0	3.1	29.0	3.9	100	2,000	156	45.6
	3/29/2011	-28.0		60.0	1.3	40.0	-1.3	100	1,400	109	47.0
	4/4/2011	-27.0		59.5	3.2	35.4	1.9	--	2,000	156	42.4
	4/13/2011	--		46.5	5.6	28.2	19.7	--	--	--	--
	4/19/2011	-27.0		53.0	4.0	38.0	5.0	50	1,800	140	42.0
	4/27/2011	-26.0		46.5	4.3	33.2	16.0	50	1,500	117	49.0
	5/3/2011	-28.0		43.2	3.7	32.4	20.7	50	1,800	140	48.7
	5/13/2011	--		43.0	7.1	30.8	19.1	50	--	--	--
	5/16/2011	-24.0		62.5	1.7	39.0	-3.2	100	2,500	195	56.4
	5/24/2011	-25.0		64.0	2.7	34.4	-1.1	100	3,500	273	59.5
	5/31/2011	-25.0		98.5	4.9	25.4	-28.8	100	--	--	60.9
	6/9/2011	-24.0		100	3.0	33.2	-36.2	100	2,250	176	59.5
	6/16/2011	-24.0		90.0	3.4	30.4	-23.8	100	1,500	117	66.6
	6/23/2011	-27.0		100	2.7	31.2	-33.9	100	1,600	125	63.6
	6/28/2011	-27.0		51.5	0.0	38.8	9.7	100	900	70	--
	South Branch										
	7/8/2010	-21.0		--	--	--	--	5	350	27	81.7
	7/16/2010	-20.0		--	--	--	--	5	300	23	--
	7/29/2010	-27.5		3.8	14.4	7.4	74.4	100	525	41	73.4
	8/6/2010	-27.0		9.0	10.4	12.2	68.4	100	1,200	94	69.6
	8/13/2010 a	-26.0		9.5	8.8	14.4	67.3	100	1,200	94	69
	8/13/2010 b	--		13.5	9.2	16.2	61.1	100	1,000	78	--

TABLE A

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)	(cfm)	(deg F)
	8/20/2010 a	-27.0		16.0	9.3	16.8	57.9	100	1,000	78	71.6
	8/23/2010 a	--		9.5	12.6	11.2	66.7	100	--	--	--
	8/27/2010 a	-25.0		11.0	13.1	10.0	65.9	100	1,000	78	70.5
	9/3/2010	-26.0		1.5	20.8	0.8	77.0	100	1,500	117	64.9
	9/21/2010 a	--		--	--	--	--	--	--	--	--
	9/22/2010	-24.5		16.5	5.3	27.0	51.2	100	1,150	90	64.7
	10/8/2010	-25.0		9.0	7.2	19.1	64.7	100	1,000	78	63.6
	10/12/2010	-23.0		0.0	20.2	0.0	79.8	100	400	31	78.4
	10/22/2010	-27.5		--	--	--	--	5	500	39	46.5
	10/29/2010	-27.5		0.1	20.9	0.0	79.1	5	400	31	48.7
	11/5/2010	-27.0		--	--	--	--	5	700	55	50.1
	11/15/2010	-26.0		--	--	--	--	5	550	43	47.9
	11/19/2010	-23.0		--	--	--	--	5	600	47	--
	12/3/2010	-29.0		29.5	9.2	21.2	40.1	5	550	43	33.2
	12/9/2010	-4.0		23.0	10.6	19.0	47.4	5	150	12	30.5
	12/17/2010	-24.0		10.5	15.2	6.0	68.3	5	300	23	28.6
	12/21/2010	-28.0		7.0	15.4	5.8	71.8	5	500	39	36.8
	12/28/2010	-23.0		18.0	13.7	12.4	55.9	5	600	47	37.9
	1/7/2011	-26.0		18.0	19.4	0.8	61.8	5	1,000	78	29.3
	1/11/2011	-26.0		10.0	13.6	8.0	68.4	5	750	59	32.1
	1/17/2011	--		--	--	--	--	--	--	--	--
	1/21/2011	-26.0		--	--	--	--	5.0	800	62	30.7
	1/27/2011	-27.0		--	--	--	--	5.0	750	59	33.0
	2/15/2011	-26.0		--	--	--	--	5.0	600	47	43.1
	2/25/2011	-28.0		0.6	20.5	0.6	78.3	5.0	300	23	43.0
	2/28/2011	-27.0		11.5	15.7	7.4	65.4	5.0	--	--	--
	3/11/2011	-28.0		9.0	15.3	6.0	69.7	5.0	500	39	52.8
	3/21/2011	-25.0		12.0	15.8	6.0	66.2	5.0	600	47	55.5
	3/29/2011	-28.0		7.5	18.4	3.0	71.1	5.0	500	39	51.2
	4/4/2011	-27.0		13.5	15.4	6.6	64.5	--	450	35	48.2
	4/13/2011	--		--	--	--	--	--	--	--	--
	4/19/2011	-27.0		5.5	17.9	3.4	73.2	5.0	550	43	37.2
	4/27/2011	-26.0		13.5	15.1	8.8	62.6	5.0	400	31	56.1
	5/3/2011	-28.0		1.3	20.6	0.8	77.3	5.0	1,200	94	49.5
	5/13/2011	--		6.5	16.5	4.8	72.2	5.0	--	--	--
	5/16/2011	-24.0		19.0	13.0	11.8	56.2	5.0	2,500	195	58.6
	5/24/2011	-22.0		3.9	16.9	1.8	77.5	5.0	1,250	98	66.0
	5/31/2011	-24.0		1.4	19.6	0.5	78.6	5.0	400	31	76.1
	6/9/2011	-23.0		16.5	17.5	4.6	61.4	5.0	350	27	60.4
	6/16/2011	-24.0		9.5	17.6	3.0	69.9	5.0	400	31	76.6
	6/23/2011	-20.0		5.5	18.8	1.8	73.9	5.0	400	31	69.0
	6/28/2011	0.0		8.0	16.9	4.6	70.5	0.0	0	0	--

TABLE A

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)	(cfm)	(deg F)
	Branches-Total Flow***										
	7/8/2010									152	
	7/16/2010									207	
	7/29/2010									150	
	8/6/2010									215	
	8/13/2010 a									215	
	8/13/2010 b									183	
	8/20/2010 a									195	
	8/23/2010 a									--	
	8/27/2010 a									250	
	9/3/2010									250	
	9/21/2010 a									--	
	9/22/2010									316	
	10/8/2010									285	
	10/12/2010									224	
	10/22/2010									195	
	10/29/2010									183	
	11/5/2010									296	
	11/15/2010									293	
	11/19/2010									324	
	12/3/2010									332	
	12/9/2010									68	
	12/17/2010									242	
	12/21/2010									179	
	12/28/2010									328	
	1/7/2011									234	
	1/11/2011									371	
	1/17/2011									--	
	1/21/2011									312	
	1/27/2011									332	
	2/15/2011									390	
	2/25/2011									367	
	2/28/2011									--	
	3/11/2011									183	
	3/21/2011									335	
	3/29/2011									289	
	4/4/2011									293	
	4/13/2011									--	
	4/19/2011									261	
	4/27/2011									211	
	5/3/2011									296	
	5/13/2011									--	

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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)	(cfm)	(deg F)
	5/16/2011									566	
	5/24/2011									644	
	5/31/2011									--	
	6/9/2011									437	
	6/16/2011									265	
	6/23/2011									195	
	6/28/2011									129	
	Inlet Sample Port A										
	7/8/2010	-26.5		--	--	--	--				
	7/16/2010	-26.0		--	--	--	--				
	7/29/2010	-27.5		27.8	3.2	25.7	43.3				
	8/6/2010	-27.0		16.5	4.0	21.4	58.1				
	8/13/2010 a	-26.0		14.0	4.6	20.4	61.0				
	8/13/2010 b	--		29.5	4.8	24.0	41.7				
	8/20/2010 a	-27.0		24.5	7.8	21.0	46.7				
	8/27/2010 a	-25.0		32.0	3.5	25.8	38.7				
	9/3/2010	-26.0		33.5	5.9	23.2	37.4				
	9/21/2010 a	--		--	--	--	--				
	9/22/2010	-24.5		33.5	4.1	31.0	31.4				
	10/8/2010	-25.0		11.5	6.0	19.8	62.7				
	10/12/2010	-24.0		30.5	4.4	24.0	41.1				
	10/22/2010	-28.0		--	--	--	--				
	10/29/2010	-27.5		23.0	8.9	18.2	49.9				
	11/5/2010	-27.0		18.0	16.6	13.0	52.4				
	11/15/2010	-26.0		--	--	--	--				
	11/19/2010	-26.0		--	--	--	--				
	12/3/2010	-29.0		--	--	--	--				
	12/9/2010	-4.0		59.0	3.2	32.6	5.2				
	12/17/2010	-24.0		58.5	1.4	33.4	6.7				
	12/21/2010	-28.0		33.5	4.0	32.4	30.1				
	12/28/2010	-23.5		52.5	2.1	35.4	10.0				
	1/7/2011	-28.0		27.0	4.5	25.0	43.5				
	1/11/2011	-26.0		43.0	1.7	34.8	20.5				
	1/17/2011	--		--	--	--	--				
	1/21/2011	-26.0		--	--	--	--				
	1/27/2011	-27.0		--	--	--	--				
	2/15/2011	-26.0		--	--	--	--				
	2/25/2011	-28.0		19.5	6.2	21.6	52.7				
	2/28/2011	-27.0		35.5	3.9	27.4	33.2				
	3/11/2011	-28.0		49.5	3.5	29.6	17.4				
	3/21/2011	-25.0		57.0	3.1	26.4	13.5				
	3/29/2011	-28.0		46.0	2.5	33.0	18.5				

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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)	(cfm)	(deg F)
	4/4/2011	-27.0		54.0	4.3	30.0	11.7				
	4/13/2011	--		--	--	--	--				
	4/19/2011	-27.0		43.0	6.3	29.6	21.1				
	4/27/2011	-26.0		43.0	4.0	28.0	25.0				
	5/3/2011	-28.0		34.5	6.0	24.8	34.7				
	5/13/2011	--		--	--	--	--				
	5/16/2011	-24.0		58.0	1.9	34.4	5.7				
	5/24/2011	-25.0		45.5	4.5	26.0	24.0				
	5/31/2011	-25.0		98.5	3.8	26.8	-29.1				
	6/9/2011	-24.0		80.0	4.4	25.6	-10.0				
	6/16/2011	-24.0		64.5	4.5	24.2	6.8				
	6/23/2011	-27.0		80.5	5.4	24.4	-10.3				
	6/28/2011	-27.0		47.0	1.0	31.2	20.8				
	Inlet Sample Port B										
	7/8/2010	-26.5		--	--	--	--				
	7/16/2010	-26.0		--	--	--	--				
	7/29/2010	-27.0		27.6	3.2	25.6	43.6				
	8/6/2010	-27.0		16.0	4.0	22.4	57.6				
	8/13/2010 a	-26.0		14.0	4.5	20.4	61.1				
	8/13/2010 b	--		28.0	5.0	23.6	43.4				
	8/20/2010 a	-27.0		24.5	6.2	21.6	47.7				
	8/27/2010 a	-25.0		32.0	3.9	25.8	38.3				
	9/3/2010	-26.0		33.0	6.0	23.2	37.8				
	9/21/2010 a	--		--	--	--	--				
	9/22/2010	-24.5		33.0	4.7	30.6	31.7				
	10/8/2010	-25.0		11.5	6.0	19.8	62.7				
	10/8/2010 a	-25.0		22.5	2.4	28.4	46.7				
	10/12/2010	-24.0		30.0	4.6	24.4	41.0				
	10/22/2010	-28.0		--	--	--	--				
	10/29/2010	-27.5		23.0	8.8	18.3	49.9				
	11/5/2010	-27.0		--	--	--	--				
	11/15/2010	-26.0		--	--	--	--				
	11/19/2010	-26.0		--	--	--	--				
	12/3/2010	-27.0		--	--	--	--				
	12/9/2010	-3.0		58.5	3.6	32.6	5.3				
	12/17/2010	-24.0		58.5	1.0	33.0	7.5				
	12/21/2010	-28.0		33.5	4.1	32.2	30.2				
	12/28/2010	-24.0		52.5	2.1	35.4	10.0				
	1/7/2011	-28.0		28.5	6.0	24.4	41.1				
	1/11/2011	-26.0		43.0	1.5	35.2	20.3				
	1/17/2011	--		--	--	--	--				
	1/21/2011	-26.0		--	--	--	--				

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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)	(cfm)	(deg F)
	1/27/2011	-27.0		--	--	--	--				
	2/15/2011	-26.0		--	--	--	--				
	2/25/2011	-28.0		19.5	6.1	21.8	52.6				
	2/28/2011	-28.0		35.5	3.9	27.2	33.4				
	3/11/2011	-28.0		49.5	3.5	29.6	17.4				
	3/21/2011	-25.0		56.5	3.1	26.4	14.0				
	3/29/2011	-28.0		46.0	2.5	33.0	18.5				
	4/4/2011	-27.0		53.5	4.4	29.8	12.3				
	4/13/2011	--		--	--	--	--				
	4/19/2011	-27.0		41.5	6.6	28.4	23.5				
	4/27/2011	-26.0		43.0	3.9	28.4	24.7				
	5/3/2011	-28.0		33.0	6.2	24.0	36.8				
	5/13/2011	--		--	--	--	--				
	5/16/2011	-24.0		58.0	1.9	34.2	5.9				
	5/24/2011	-25.0		44.0	4.3	26.2	25.5				
	5/31/2011	-25.0		89.0	4.0	25.0	-18.0				
	6/9/2011	-24.0		81.0	4.2	25.8	-11.0				
	6/16/2011	-24.0		64.0	4.3	24.0	7.7				
	6/23/2011	-27.0		76.5	6.0	23.0	-5.5				
	6/28/2011	-27.0		47.0	1.0	30.8	21.2				
	Outlet Sample Port A										
	7/8/2010	0.8		--	--	--	--				
	7/16/2010	1.3		--	--	--	--				
	7/29/2010	1.1		30.1	2.2	28.3	39.4				
	8/6/2010	4.0		17.0	3.1	24.2	55.7				
	8/13/2010 a	3.0		15.0	3.6	22.2	59.2				
	8/20/2010 a	1.5		25.0	5.6	24.2	45.2				
	8/27/2010 a	3.5		35.0	2.8	28.2	34.0				
	9/3/2010	3.0		41.0	2.9	30.2	25.9				
	9/21/2010 a	--		--	--	--	--				
	9/22/2010	7.0		38.0	3.2	36.0	22.8				
	10/8/2010	5.0		14.0	3.6	24.3	58.1				
	10/12/2010	1.5		35.5	1.6	30.2	32.7				
	10/22/2010	0.8		34.5	5.7	26.2	33.6				
	10/29/2010	1.0		31.5	5.6	25.4	37.5				
	11/5/2010	1.2		36.5	5.9	28.0	29.6				
	11/15/2010	3.0		25.0	4.4	26.4	44.2				
	11/19/2010	3.0		47.0	1.9	34.0	17.1				
	12/3/2010	1.0		58.5	2.4	33.2	5.9				
	12/9/2010	23.0		47.0	7.8	25.6	19.6				
	12/17/2010	2.5		59.0	0.6	32.0	8.4				
	12/21/2010	0.5		34.0	4.1	32.6	29.3				

TABLE A

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)	(cfm)	(deg F)
	12/28/2010	3.0		54.0	1.9	36.3	7.8				
	1/7/2011	1.2		22.0	7.7	21.1	49.2				
	1/11/2011	2.3		44.5	1.2	26.4	27.9				
	1/17/2011	--		--	--	--	--				
	1/21/2011	2.5		--	--	--	--				
	1/27/2011	1.9		43.0	0.8	20.2	36.0				
	2/15/2011	2.2		--	--	--	--				
	2/25/2011	1.3		21.0	5.2	23.4	50.4				
	2/28/2011	1.9		38.0	2.9	29.6	29.5				
	3/11/2011	0.3		53.0	2.5	32.0	12.5				
	3/21/2011	2.0		61.0	2.0	28.6	8.4				
	3/21/2011	0.5		49.0	1.7	35.0	14.3				
	4/4/2011	2.0		58.0	3.3	32.0	6.7				
	4/13/2011	--		44.0	5.5	28.4	22.1				
	4/19/2011	0.3		44.5	5.9	31.0	18.6				
	4/27/2011	1.0		45.5	3.2	30.0	21.3				
	5/3/2011	0.6		35.0	5.8	25.6	33.6				
	5/13/2011	--		32.5	7.4	25.8	34.3				
	5/16/2011	1.8		62.0	1.1	37.0	-0.1				
	5/24/2011	0.9		48.0	3.5	28.4	20.1				
	5/31/2011	0.8		89.0	3.8	26.0	-18.8				
	6/9/2011	0.75		85.5	3.2	27.4	-16.1				
	6/16/2011	1.0		66.0	3.4	25.6	5.0				
	6/23/2011	1.0		79.0	5.0	25.2	-9.2				
	6/28/2011	0.55		41.0	0.0	33.6	25.4				
July 2010 Monthly Average				30.1	2.2						
August 2010 Monthly Average				24.4	3.5						
September 2010 Monthly Averag				39.5	3.1						
November 2010 Monthly Average				35.0	4.5						
December 2010 Monthly Average				50.5	3.4						
January 2011 Monthly Average				40.9	2.9						
February 2011 Monthly Average				44.2	2.5						
March 2011 Monthly Average				54.3	2.1						
April 2011 Monthly Average				48.0	4.5						
May 2011 Monthly Average				52.0	4.1						
June 2011 Monthly Average				67.9	2.9						

* : 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. -- : Not measured or not applicable.

TABLE A

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)	(cfm)	(deg F)

% Vol : Percent volume. fpm : Feet per minute. deg F : Degrees Fahrenheit.
% LEL : Percent of lower explosive limit. cfm : Cubic feet per minute.