

## SCS ENGINEERS

May 2, 2017  
File No. 25216022.00

Mr. Jason Lowery  
Wisconsin Department of Natural Resources  
101 S. Webster St.  
P.O. Box 7921  
Madison, WI 53707-7921

Subject:       Semiannual Facility Inspection Report  
                  Stoughton City Landfill  
                  FID #113005950 – License #133  
                  USEPA ID #WID980901219  
                  WDNR Purchase Order #37000-0000000548

Dear Mr. Lowery:

This letter provides the semiannual facility inspection report information for the Stoughton City Landfill site. We have included two copies for you and an electronic copy on a compact disk. One copy has been mailed to the USEPA.

SCS Engineers (SCS) performed the gas probes monitoring on December 8, February 14, and April 17, 2017. SCS performed the semiannual facility inspection at the site on April 17, 2017. The semiannual facility inspection reports are included in **Attachment B**. The following inspection items were noted:

**Bimonthly Gas Monitoring** – The bimonthly monitoring of the three perimeter gas probes was conducted on December 8, February 14, and April 17, 2017. Based on the monitoring results from these three events, it does not appear that any landfill gas is migrating to the south of the landfill towards occupied homes. The completed bimonthly gas monitoring report forms are included in **Attachment A**.

**Landfill Cover** – The quality of the vegetative cover across the landfill was in very good condition. The annual cover mowing of the facility is scheduled to occur in August or September 2017. No bare spots, signs of erosion, or sparse vegetation were found (photographs in **Attachment C**). No drainage gullies were apparent on the cover. The cover was heavily saturated due to recent rainfall events, but no excessive ponding was discovered. Some minor rutting, at depths less than 0.5 feet, was observed on the cover. Areas with minor rutting will be monitored in the future to ensure they don't worsen.

**Storm Water Management System** – No visible erosion was found in the drainage channels. The culverts were undamaged. Dense vegetation was present near many of the culverts restricting flow. A map depicting these culvert locations is included in **Attachment D**. Best management



practices would be to clear this vegetation and debris in front of the culverts to allow for unrestricted storm water flow.

**Landfill Gas Venting System** – Gas vent eight (GV-8) was discovered unconnected, lying on the ground. SCS returned it back into the correct position. GV-8 will be checked during the next site visit to ensure it is in a fixed upright position. No damage was found at any of the remaining gas venting wells, and no stressed vegetation was found near any of the wells. Gas vent well screens were clear, and no further maintenance is needed at this time.

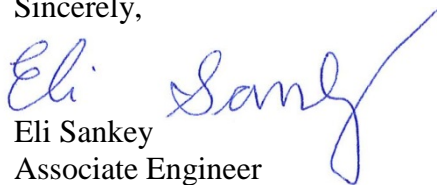
**Perimeter Security Fencing** – No broken perimeter fence boards were found. The chain-link fencing on the north and east sides of the site were in good condition. Both access gates are in good condition, and the padlocks operated properly. The sign on the front gate was still attached to the gate.

**Monitoring Wells and Wellhead Covers** – No signs of tampering or damage were found at any of the site monitoring wells. All monitoring wells were properly covered and locked.

**Access Road** – The site access road was in good condition with no ruts, or erosion noted. Some minor ponding was present on the access road to the south of the west gate entrance, see photo 3 of **Attachment C**. The ponded water is shallow and only in a small isolated area; therefore, immediate maintenance is not required. If access road conditions change, yielding a larger area of ponding or the ponding becomes deeper, the road will need to be regraded.

If you have any questions about this report or any other aspect of the project, please call us at 608.224.2830.

Sincerely,



Eli Sankey  
Associate Engineer  
**SCS ENGINEERS**



Leslie A. Busse, PE  
Senior Project Manager  
**SCS ENGINEERS**

ES/lmh/LAB

cc: Ms. Giang Van Nguyen, USEPA Region V

Enclosures: Attachment A – Bimonthly Gas Monitoring Report Forms  
Attachment B – Semiannual Facility Inspection Form  
Attachment C – Photograph Log  
Attachment D – Culvert Maintenance Locations  
CD Containing Electronic Copy of Report

**ATTACHMENT A**

Bimonthly Gas Monitoring Report Forms

**Gas Probe Monitoring Report**  
**Stoughton City Landfill**  
**Stoughton, Wisconsin**

<b>Probe</b>	<b>%LEL (as methane)</b>	<b>% Oxygen</b>	<b>% CO<sub>2</sub></b>	<b>PID (ppm)</b>	<b>Pressure (inches of water)</b>
GMP-1	0.0	21.0	0.4	0.0	0.03
GMP-2	0.0	21.3	0.3	0.1	-0.01
GMP-3	0.0	21.6	0.2	0.0	-0.03

Instruments Used: Landtec GEM 5000, ppm RAE PID

Operator: Eli Sankey

Date: 12/8/2016

Weather Conditions:

Barometric Pressure (inches of Hg): 30.38 Temperature (Degrees F): 23

Relative Humidity (%): 74 Dewpoint (Degrees F): 16 Wind: 10 WNW

Sky Conditions: Cloudy

Ground Conditions:

Snow     No Snow     Frozen Ground/Frost

**Gas Probe Monitoring Report  
Stoughton City Landfill  
Stoughton, Wisconsin**

<b>Probe</b>	<b>%LEL (as methane)</b>	<b>% Oxygen</b>	<b>% CO<sub>2</sub></b>	<b>PID (ppm)</b>	<b>Pressure (inches of water)</b>
GMP-1	0.0	21.0	0.2	0.1	-0.03
GMP-2	0.0	21.2	0.1	0.0	-0.02
GMP-3	0.0	20.7	0.1	0.3	-0.01

Instruments Used: Landtec GEM 5000, ppm RAE PID

Operator: Eli Sankey

Date: 2/14/2017

Weather Conditions:

Barometric Pressure (inches of Hg): 29.81 Temperature (Degrees F): 40.0

Relative Humidity (%): 74 Dewpoint (Degrees F): 33 Wind: 3 N

Sky Conditions: Clear (some clouds)

Ground Conditions:

Snow  No Snow  Frozen Ground/Frost

**Gas Probe Monitoring Report**  
**Stoughton City Landfill**  
**Stoughton, Wisconsin**

<b>Probe</b>	<b>%LEL (as methane)</b>	<b>% Oxygen</b>	<b>% CO<sub>2</sub></b>	<b>PID (ppm)</b>	<b>Pressure (inches of water)</b>
GMP-1	0.0	20.6	0.2	0.1	-0.01
GMP-2	0.0	20.8	0.2	0.0	0.00
GMP-3	0.0	20.6	0.2	0.0	0.01

Instruments Used: Landtec GEM 5000, ppm RAE PID

Operator: Eli Sankey

Date: 4/17/2017

Weather Conditions:

Barometric Pressure (inches of Hg): 30.16 Temperature (Degrees F): 67

Relative Humidity (%): 41 Dewpoint (Degrees F): 36.0 Wind: 4 NNW

Sky Conditions: Partially Cloudy

Ground Conditions:

Snow  No Snow  Frozen Ground/Frost

**ATTACHMENT B**

Semiannual Facility Inspection Form

**Operation and Maintenance Semi Annual Inspection Report  
Stoughton City Landfill  
Stoughton, Wisconsin**

Inspector Eli Sankey  
 Company SCS Engineers  
 Project Stoughton City LF  
 Location Stoughton, WI  
 Date/Time 04/17/2017  
 Project No. 25216022

Weather	Clear	<b>P. Cloudy</b>	Cloudy	Fog	
Temperature	High	F 67	---	---	
Wind	Calm	<b>Medium</b>	High	---	
Precipitation	Rain	Light	Moderate	Heavy	
	<b>None</b>	Snow	Light	Moderate	Heavy

Type of Inspection Routine  Special

Persons/Equipment Present: Eli Sankey, Landtec GEM 5000, PID

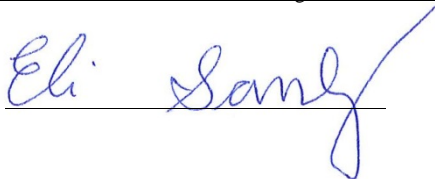
General Description of Site Conditions: Wet due to recent rainfall events, otherwise the site is in good condition.

Specific Inspection Items	Potential Problem Areas	Status *	Notes
Perimeter Security Fencing	Broken or missing wood slats, torn chain link fabric.	1	
Entrance Gate and Locking Mechanism	Lock broken/missing, mechanism inoperative.	1	Vegetation in front of west gate, hard to open
Monitoring Wells and Wellhead Covers	Signs of tampering, casing damaged, lock missing.	1	
Final Cover Vegetation	Bare spots, stressed vegetation, deep-rooted vegetation.	1	Some minor rutting on cap < 0.5 feet
Final Cover Slope (explain below)	Gullies, lack of vegetation, subsidence, ponding.	1	Some isolated minor ponding due to recent rainfall events
Evidence of Burrowing Animals	Damage to final cover, evidence of waste.	2	2 Animal burrows located near MW-2D
Storm Water Drainage Channels	Gullies, erosion, debris, culvert blocked.	2	Vegetation and organic debris in front of several culverts
Landfill Gas Venting System	Damaged or blocked vent risers, stressed vegetation.	1	GV-8 had fallen over; placed back in the upright position
Access Road	Ponding, rutting, erosion.	1	Minor ponding on access road adjacent to the MW-3 nest of wells
Cover Mowing and Tall Vegetation Removal (October Inspection Only)	Mowing and tall vegetation removal done to specified vegetation height, any missed areas.	1	

\* (1) Acceptable - No Maintenance Required. (2) Not Acceptable - Identify Required Maintenance.

Summary of Deficiencies and/or Corrective Actions: GV-8 was reconnected, trim/remove vegetation in front of culverts (locations shown on attached sheet, look into/resolve animal burrows, trim vegetation in front of west gate.

Signature of Inspector



Date 4/17/2017



## **ATTACHMENT C**

Photograph Log

**Semiannual Facility Inspection Report  
Stoughton City Landfill – April 17, 2017**



**Photo 1:** Photo facing east just inside the west access gate. Final cover was damp but in good condition.



**Photo 2:** Photo facing northeast just inside the south access gate. Final cover was damp but in good condition.

**Semiannual Facility Inspection Report  
Stoughton City Landfill – April 17, 2017**



**Photo 3:** Photo facing south just outside the west access gate. Gravel drive around the west side of the landfill.



**Photo 4:** Photo facing northwest. Photo taken of GV-8.



**Semiannual Facility Inspection Report  
Stoughton City Landfill – April 17, 2017**



**Photo 5:** Photo facing east near MW-2D. One of the several animal burrows present near MW-2D.



**Photo 6:** Photo facing east near the south access gate. Dense vegetation in front of the culvert near the south gas entrance.



**Semiannual Facility Inspection Report  
Stoughton City Landfill – April 17, 2017**



**Photo 7:** Photo facing east on the gravel drive south of the landfill. Site fence, storm water swale, and access road depicted above.



**Photo 8:** Photo facing east just outside the west access gate. Vegetation present in front of west access gate.



**Semiannual Facility Inspection Report  
Stoughton City Landfill – April 17, 2017**



**Photo 9:** Photo facing southeast. Debris restricting flow in a culvert on the north side of the property near the MW-13 cluster.



**Photo 10:** Photo facing north just inside the west gate. Final cover and fence depicted above.

## **ATTACHMENT D**

Culvert Maintenance Locations



Culverts locations to cleared of vegetation and debris.

