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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

Probe	%LEL (as methane)	% Oxygen	% CO_2	PID (ppm)	Pressure (inches of water)
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:

X Snow _____No Snow ____Frozen Ground/Frost

Gas Probe Monitoring Report
Stoughton City Landfill
Stoughton, Wisconsin

Probe	%LEL (as methane)	% Oxygen	% CO_2	PID (ppm)	Pressure (inches of water)
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 __X__No Snow ____Frozen Ground/Frost

Gas Probe Monitoring Report
Stoughton City Landfill
Stoughton, Wisconsin

Probe	%LEL (as methane)	% Oxygen	% CO_2	PID (ppm)	Pressure (inches of water)
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 __X__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	**P. Cloudy**	Cloudy	Fog
Temperature	High	__F 67	---	---
Wind	Calm	**Medium**	High	---
Precipitation	Rain	Light	Moderate	Heavy
None	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 infront 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 infront of several culverts
Landfill Gas Venting System	Damaged or blocked vent risers, stressed vegetation.	1	GV-8 had fallen over; placed back in the up-right postion
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 hight, 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 infront of culverts (locations shown on attached sheet, look into/resolve animal burrows, trim vegetation in front of west gate.

Signature of Inspector Eli Sankey 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.

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.

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.

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.

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.