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August 19, 2022

Ms. Cindy Koepke
Hydrogeologist
Wisconsin Department of Natural Resources
3911 Fish Hatchery Road
Fitchburg, WI 53711

Subject: Refuse Hideaway Landfill
July 2022 Operation Monitoring and Maintenance Activities

Dear Cindy:

TRC completed the following operation, monitoring, and maintenance activities at the Refuse Hideaway Landfill in Middleton, WI in July 2022.

- July 18, 2022 – Monthly Site Inspection
- July 19, 2022 - Gas Probe Monitoring

Gas Extraction System

The gas extraction system (GES) remained shutdown during the month of July due to an issue with the electrical service. Van Ert Electrical (Van Ert) confirmed that a new transformer(s) is needed to repair the electrical service. Van Ert is working to provide the WDNR/TRC a cost estimate for replacing the transformer(s) and TRC will continue to provide updates to the WDNR.

Perimeter gas probe monitoring was conducted at the site on July 19, 2022, and the monitoring data is included in the attachments.

Leachate Extraction System

The leachate extraction system remained off during the month of July. A new pump head was installed on the air compressor system in June 2022, however due to the site electrical issue, the system could not be restarted. The leachate tank level was gauged during the Monthly Site Inspection and contained 48 inches of leachate.

Cap Inspection

TRC conducted a monthly inspection of the landfill cap and stormwater conveyance features on July 18, 2022. An inspection form and photo log are attached with further details.

Monitoring results collected during the site visits completed in July 2022 are attached.

If you have any questions, please contact me at astehn@trccompanies.com or 608-807-8112.

Sincerely,

TRC

Andrew M. Stehn

Andrew Stehn, PE
Project Manager

Attachments: July 2022 Monitoring Results

July 2022 Monitoring Results

REFUSE HIDEAWAY LANDFILL
GAS PROBE MONITORING FORM

TECHNICIAN(S): J. Roelke

DATE: 7/18/2022

START TIME: 7:45AM

END TIME: 12:45 PM

GAS/INSTRUMENT TYPE: **GEM 2000**

SERIAL NO.: 11668

DATE LAST CALIBRATED: 7/18/2022

METHOD: Standard Calibration Gases

PRESS INSTRUMENT : Manometer

WEATHER CONDITIONS: sunny

TEMPERATURE: 69°F

BAROMETRIC PRESSURE & TREND: 29.92 in. Hg, rising

GROUND CONDITIONS: moist

GAS PROBE NAME	Time	PRESSURE (in. WC)	METHANE (% LEL)	METHANE (%, by vol.)	CARBON DIOXIDE (%, by vol.)	OXYGEN (%, by vol.)	COMMENTS
GP-1D	8:14	0.0	0.0	0.0	11.8	4.4	(2)
GP-1S	8:16	0.0	0.0	0.0	9.2	3.1	(2)
GP-2D	8:19	-0.19	0.0	0.0	7.3	11.1	(1)
GP-2S	8:21	0.0	0.0	0.0	14.9	3.1	(1)
GP-3	8:24	0.0	>5	7.3	11.4	8.9	(1)
GP-4	8:30	0.0	0.0	0.0	6.2	14.4	(1)
GP-5	8:33	0.0	0.0	0.0	4.8	16.4	(2)
GP-6	8:38	0.0	0.0	0.0	3.5	17.1	(1)
GP-7	8:44	0.0	0.0	0.0	2.8	17.3	(2)
GP-8	8:52	0.0	0.0	0.0	4.2	15.7	(2)
GP-9	8:58	0.0	0.0	0.0	4.8	16.0	(1)
GP-10	9:05	-0.05	78.0	3.9	15.8	0.3	(1)
GP-11D	9:11	0.0	50.0	2.5	6.9	12.5	(2)
GP-11S	9:13	0.0	0.0	0.0	7.2	11.1	(2)
GP-12D	9:16	0.0	5.0	0.2	7.4	10.3	(1)
GP-12S	9:18	0.0	0.0	0.0	7.3	9.4	(1)
GP-13D	9:19	0.0	0.0	0.0	6.8	14.1	(2)
GP-13S	9:20	0.0	0.0	0.0	7.5	13.7	(2)

GAS PROBE NAME	Time	PRESSURE (in. WC)	METHANE (% LEL)	METHANE (%, by vol.)	CARBON DIOXIDE (%, by vol.)	OXYGEN (%, by vol.)	COMMENTS
GP-16D	9:35	0.0	0.0	0.0	1.5	19.1	(2)
GP-16S	9:37	0.0	0.0	0.0	3.4	17.9	(2)
GP-17D	9:31	0.0	0.0	0.0	4.3	15.9	(1)
GP-17M	9:33	0.0	0.0	0.0	3.6	17.4	(1)
GP-17S	9:35	0.0	0.0	0.0	4.5	16.6	(1)
GP-18D	9:44	0.0	0.0	0.0	3.3	16.2	(2)
GP-18M	9:46	0.0	0.0	0.0	4.4	16.0	(2)
GP-18S	9:48	0.0	0.0	0.0	5.2	14.0	(2)
GP-19$^{85-100}$	10:33	0.0	0.0	0.0	0.0	20.8	(1)
GP-19$^{50-70}$	10:35	0.0	0.0	0.0	0.7	20.0	(1)
GP-19$^{25-40}$	10:37	0.0	0.0	0.0	0.2	20.4	(1)
GP19$^{2-15}$	10:39	0.0	0.0	0.0	0.0	20.8	(1)
GP-20$^{85-100}$	10:25	0.0	0.0	0.0	0.1	20.6	(2)
GP-20$^{50-70}$	10:27	0.0	0.0	0.0	0.1	20.7	(2)
GP-20$^{25-40}$	10:29	0.0	0.0	0.0	0.2	20.5	(2)
GP-20$^{2-15}$	10:31	0.0	0.0	0.0	0.5	20.3	(2)
GP-21$^{85-100}$	10:16	0.0	0.0	0.0	0.2	20.6	(2)
GP-21$^{50-70}$	10:18	0.0	0.0	0.0	0.0	20.8	(2)
GP-21$^{25-40}$	10:20	0.0	0.0	0.0	0.0	20.8	(2)
GP-21$^{2-15}$	10:22	0.0	0.0	0.0	0.5	20.4	(2)
GP-22$^{85-100}$	10:44	0.0	0.0	0.0	2.8	18.1	(2)
GP-22$^{50-70}$	10:46	0.0	0.0	0.0	0.6	20.0	(2)
GP-22$^{25-40}$	10:48	0.0	0.0	0.0	0.2	20.4	(2)
GP-22$^{2-15}$	10:50	0.0	0.0	0.0	2.5	18.3	(2)

GAS PROBE NAME	Time	PRESSURE (in. WC)	METHANE (% LEL)	METHANE (%, by vol.)	CARBON DIOXIDE (%, by vol.)	OXYGEN (%, by vol.)	COMMENTS
GP-23$^{85-100}$	10:53	0.0	0.0	0.0	0.7	20.0	(2)
GP-23$^{50-70}$	10:55	0.0	0.0	0.0	0.3	20.4	(2)
GP-23$^{25-40}$	10:57	0.0	0.0	0.0	0.1	20.6	(2)
GP-23$^{2-15}$	10:59	0.0	0.0	0.0	1.5	19.5	(2)
GP-24$^{85-100}$	11:03	0.0	0.0	0.0	0.2	20.6	(2)
GP-24$^{50-70}$	11:05	0.0	0.0	0.0	1.1	19.6	(2)
GP-24$^{25-40}$	11:07	0.0	0.0	0.0	0.3	20.5	(2)
GP-24$^{2-15}$	11:09	0.0	0.0	0.0	1.6	19.4	(2)
GPW-1D	12:32	-0.23	0.0	0.0	1.9	18.1	(1)
GPW-1M	12:34	-0.20	0.0	0.0	0.2	20.2	(1)
GPW-1S	12:36	-0.03	0.0	0.0	0.9	19.4	(1)
G-1D	8:06	0.0	55.0	2.7	17.4	0.1	(1)
G-1S	8:08	0.0	24	1.2	14.1	0.0	(1)
G-2D	9:22	0.0	0	0.0	1.3	19.4	(1)
G-2S	9:24	0.0	>5	5.5	18.8	0.0	(1)
G-5	8:49	0.0	0.0	0.0	7.8	14.1	(1)
G-6	8:00	0.0	0.0	0.0	0.5	20.0	(1)
G-8	10:10	0.0	0.0	0.0	0.0	20.8	(1)
G-9	9:57	0.0	0.0	0.0	0.0	20.8	(1)
G-10	11:17	-0.09	0.0	0.0	0.2	20.4	(1)
Speedway Office	8:10	0.0	0.0	0.0	0.0	20.8	Open to ATM

NOTES:

(1); Locked probe casing.
(2): Probe is above casing and cannot be locked.
(3): No cap for probe casing and cannot be locked.

Entered by: J. Roelke
Checked by: A. Ruetten 7/21/22

Key:

Shallow or 2'-15'
Medium or 25'-40'
Deep or 50'-70'
85'-100'

Cap Inspection

Inspection Details		Site Conditions	
Inspector :	John Roelke	**Weather Conditions:**	Sunny
Date:	7/19/2022	**Ground Condition:**	Moist
Time:	9:15	**Temperature:**	78 F

Note: Photograph all issues encountered during inspection

Note: Keep vehicle traffic to gravel roadways, avoid driving on the landfill surface

Is the landfill surface covered in snow (Y/N)? No

Inspect the landfill surface when not covered in snow. Describe the condition and any issues observed for each category below:

Cap integrity: Cap integrity is acceptable, with no changes from previous condition.

Condition of drainage ways:

West Drainage Ditch - As noted in June 2022, the north portion shows signs of ponding or slow drainage, see Photo 1. No standing water in this area during the inspection but vegetation regrowth was sparing indicating water may be ponding at times. This area was identified as having less positive slope than its surroundings and regraded several times during 2020-2021 grading work at the Site. Final survey showed positive slope.

East Drainage Ditch -. TRC has continues to monitor the rip rap along west embankment of the northern culvert and riprap appears to be stable and has remained in place. Some vegetation die-off and light erosion was observed along a north portion of the drainage ditch, see Photo 2.

Beyond the above noted issues, drainage ways are acceptable, with minimal to no changes from previous conditions.

Extent of vegetation cover: The cap has been mowed since the previous inspection. Vegetation cover is acceptable over the majority of the Site. Some areas that were seeded post-construction in 2021 are not showing signs of growth as shown in Photos 1, 3 and 4. No erosion is evident however, re-seeding may be required at various locations throughout the Site, TRC will continue to monitor.

Significant erosion: No evidence of significant erosion at the Site observed.

Repeated erosion: No evidence repeated erosion at the Site observed.

Vegetation die-off:

West Drainage Ditch - The north portion shows signs of ponding or slow drainage, see Photo 1. No standing water in this area during the inspection but vegetation regrowth was sparing indicating water may be ponding at times.

East Drainage Ditch - Some vegetation die-off and light erosion was observed along a north portion of the drainage ditch, see Photo 2. TRC will continue to monitor.

Maintain surface water conveyances and the sedimentation basin by completing the following:

Inspect drainage ditches for erosion, blockages, and vegetation, describe and note any issues:

East Drainage Ditch - Some light erosion to the north end of the north-to-south portion observed, see Photo 2.

Inspect sedimentation basin banks and outfalls for erosion, describe and note any issues: No erosion or other issues at sedimentation basin banks and outfalls.

Measure the distance between the invert of the sedimentation basin outlet and the top of the sediments accumulated in the basin (June Only): No sediment accumulation.

Data Entered By: J. Roelke 7/19/2022

Checked By: A. Stehn 8/16/22

Photographic Log

Client Name:	Site Location:	Project No.:
Wisconsin Department of Natural Resources (WDNR)	Refuse Hideaway Landfill Middleton, WI	TRC # 457573

Photo No.	Date
1	7/19/2022

Description

Western Drainage Ditch: North portion contained vegetation die-off and wet soil conditions which may indicate that the area contains standing water at times. No standing water was observed at the time of the inspection.

Photo No.	Date
2	7/19/2022

Description

Eastern Drainage Ditch: Some vegetation die-off and light erosion observed along the drainage pathway at the north portion of the drainage ditch.

Photographic Log

Client Name:	Site Location:	Project No.:
Wisconsin Department of Natural Resources (WDNR)	Refuse Hideaway Landfill Middleton, WI	TRC # 457573

Photo No.	Date
3	7/19/2022

Description

Northeastern Landfill Extents: Following mowing, it was apparent that select areas that were seeded following the 2021 construction event contained bare soil. Additional seeding may be needed in Fall 2022.

Photo No.	Date
4	7/19/2022

Description

Central Landfill Extents: Following mowing, it was apparent that select areas that were seeded following the 2021 construction event contained bare soil. Additional seeding may be needed in Fall 2022.