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February 28, 2020

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

Subject: Refuse Hideaway Landfill
February 2020 Landfill Gas Monitoring Results

Dear Cindy:

TRC completed the monthly gas probe monitoring at the Refuse Hideaway Landfill in Middleton, Wisconsin on February 24, 2020. Attached are the monitoring results for February 2020. Pressure, methane, carbon dioxide, oxygen, and methane (% LEL) are measured during the monthly event.

In January 2020, TRC observed clearing on the property owned by William L Kahl, LLC south of the Refuse Hideaway Landfill. A wide area of clearing had been completed on the northern side of that property and GP-9 appears to have been hit during the activities. The protective casing was loose, and the top 5-feet of the PVC well was also loose. On February 24, 2020, TRC put the PVC well back and secured it with bentonite. TRC also placed bentonite around the protective casing to secure it.

The next monthly gas probe monitoring event will take place in March 2020.

If you have any questions, please contact me at kvater@trccompanies.com or 608-826-3663.

Sincerely,

TRC

A handwritten signature in black ink, appearing to read "Katherine Vater".

Katherine Vater, PE
Project Manager

Attachments

**REFUSE HIDEAWAY LANDFILL
GAS PROBE MONITORING FORM**

TECHNICIAN(S): J. Roelke

DATE: 2/24/2020
START TIME: 8:19 AM
END TIME: 2:35 PM

GAS/INSTRUMENT TYPE: GEM 2000
SERIAL NO.: 11668
DATE LAST CALIBRATED: 2/24/2020

WEATHER CONDITIONS: partly cloudy
TEMPERATURE: 50°F

METHOD: Standard Calibration Gases
PRESS INSTRUMENT : Manometer

BAROMETRIC PRESSURE & TREND: 29.02in. Hg falling
GROUND CONDITIONS: frozen/snow covered

GAS PROBE NAME	Time	PRESSURE (in. WC)	METHANE (% LEL)	METHANE (%, by vol.)	CARBON DIOXIDE (%, by vol.)	OXYGEN (%, by vol.)	COMMENTS
GP-1D	8:53	0.0	0.0	0.0	3.6	18.6	(2)
GP-1S	8:55	0.0	0.0	0.0	0.0	20.8	(2)
GP-2D	9:33	0.10	28	1.4	2.1	18.3	(1)
GP-2S	9:35	0.0	6	0.3	0.5	20.3	(1)
GP-3	9:39	0.0	14	0.7	1.8	12.2	(1)
GP-4	9:44	0.0	0.0	0.0	1.1	20.1	(1)
GP-5	9:47	0.0	0.0	0.0	0.8	20.3	(2)
GP-6	9:53	0.0	0.0	0.0	0.0	20.9	(1)
GP-7	10:00	0.07	0.0	0.0	0.6	20.3	(2) Water in probe, 45 sec. sampling time
GP-8	10:06	0.0	0.0	0.0	2.4	14.1	(2) Water in probe ,55 sec. sampling time
GP-9	10:19	0.0	0.0	0.0	1.2	19.3	(1) Casing was reset
GP-10	10:34	0.0	0.0	0.0	2.2	17.7	(1)
GP-11D	10:29	0.0	0.0	0.0	0.3	20.5	(2)
GP-11S	10:31	0.0	0.0	0.0	0.2	20.6	(2)
GP-12D	10:40	0.0	>5	5.9	5.4	15.3	(1)
GP-12S	10:42	0.0	0.0	0.0	0.2	20.6	(1) 120 sec. sampling time
GP-13D	10:47	0.0	0.0	0.0	0.0	20.7	(2)
GP-13S	10:49	0.0	0.0	0.0	0.4	20.4	(2)

GAS PROBE NAME	Time	PRESSURE (in. WC)	METHANE (% LEL)	METHANE (%, by vol.)	CARBON DIOXIDE (%, by vol.)	OXYGEN (%, by vol.)	COMMENTS
GP-16D	11:19	0.0	0.0	0	0.7	19.8	(2)
GP-16M	NM	NM	NM	NM	NM	NM	Cracked Probe, No Measurements Taken
GP-16S	11:21	0.0	0.0	0.0	0.9	18.2	(2)
GP-17D	11:11	0.0	0.0	0.0	0.6	19.6	(1)
GP-17M	11:13	0.0	0.0	0.0	0.2	20.2	(1)
GP-17S	11:15	0.0	0.0	0.0	0.8	19.4	(1)
GP-18D	11:26	0.0	24.0	1.2	1.7	18.2	(3)
GP-18M	11:28	0.0	60.0	3.0	5.1	13.5	(3)
GP-18S	11:30	0.0	0.0	0.0	0.2	20.6	(3)
GP-19 ⁸⁵⁻¹⁰⁰	12:16	0.06	0.0	0.0	6.3	12.6	(1)
GP-19 ⁵⁰⁻⁷⁰	12:18	0.08	0.0	0.0	4.1	15.3	(1)
GP-19 ²⁵⁻⁴⁰	12:20	0.09	0.0	0.0	4.9	14.5	(1)
GP19 ²⁻¹⁵	12:22	0.05	0.0	0.0	3.9	13.5	(1)
GP-20 ⁸⁵⁻¹⁰⁰	12:09	0.0	0.0	0.0	2.3	16.9	(2)
GP-20 ⁵⁰⁻⁷⁰	12:11	0.0	0.0	0.0	2.7	17.6	(2)
GP-20 ²⁵⁻⁴⁰	12:13	0.0	0.0	0.0	2.5	17.6	(2)
GP-20 ²⁻¹⁵	12:15	0.0	0.0	0.0	2.7	17.3	(2)
GP-21 ⁸⁵⁻¹⁰⁰	12:00	0.11	0.0	0.0	0.6	19.8	(2)
GP-21 ⁵⁰⁻⁷⁰	12:02	0.03	0.0	0.0	1.4	18.6	(2)
GP-21 ²⁵⁻⁴⁰	12:04	0.03	0.0	0.0	2.7	16.3	(2)
GP-21 ²⁻¹⁵	12:06	0.0	0.0	0.0	1.2	19.4	(2)
GP-22 ⁸⁵⁻¹⁰⁰	12:35	0.08	0.0	0.0	5.1	10.1	(2)
GP-22 ⁵⁰⁻⁷⁰	12:37	0.09	0.0	0.0	2.6	17.3	(2)
GP-22 ²⁵⁻⁴⁰	12:39	0.0	0.0	0.0	1.6	19.0	(2)
GP-22 ²⁻¹⁵	12:41	0.0	0.0	0.0	2.8	18.8	(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	12:46	0.06	51	2.6	11.2	2	(2)
GP-23 ⁵⁰⁻⁷⁰	12:48	0.04	>5	5.5	13.1	0.1	(2)
GP-23 ²⁵⁻⁴⁰	12:50	0.04	0.0	0.0	0.4	20.5	(2)
GP-23 ²⁻¹⁵	12:52	0.0	83	4.1	16.6	1.6	(2) 120 sec. sampling time
GP-24 ⁸⁵⁻¹⁰⁰	12:58	0.0	0.0	0.0	1.3	19.6	(2)
GP-24 ⁵⁰⁻⁷⁰	13:00	0.06	4.0	0.2	4.6	15.6	(2)
GP-24 ²⁵⁻⁴⁰	13:02	0.05	0.0	0.0	0.8	20.0	(2)
GP-24 ²⁻¹⁵	13:04	0.03	0.0	0.0	12.6	3.8	(2)
GPW-1D	14:21	0.42	0.0	0.0	1.1	18.4	(1)
GPW-1M	14:23	0.40	0.0	0.0	1.6	18.2	(1)
GPW-1S	14:25	0.03	0.0	0.0	1.2	19.2	(1)
G-1D	8:31	0.0	0.0	0.0	0.0	20.8	(1)
G-1S	8:33	0.0	0.0	0.0	0.2	20.7	(1)
G-2D	11:02	0.0	0.0	0.0	0.2	20.5	(1)
G-2S	11:04	0.0	0.0	0.0	0.1	20.7	(1)
G-5	10:11	0.0	0.0	0.0	1.2	20.2	(1)
G-6	8:41	0.0	0.0	0.0	0.0	20.9	(1)
G-8	12:29	0.0	0.0	0.0	0.1	17.1	(1)
G-9	11:45	0.0	0.0	0.0	1.1	15.9	(1)
G-10	13:13	0.52	0.0	0.0	0.6	19.2	(1)
Speedway Office	8:47	Open to ATM	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.

Key:

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

Entered by: J. Roelke 2/25/2020
Checked by: K. Vater 2/25/2020