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March 21, 2024

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

Subject: Refuse Hideaway Landfill
February 2024 Operation Monitoring and Maintenance Activities

Dear Cindy:

TRC completed the following operation, monitoring, and maintenance activities at the Refuse Hideaway Landfill (the Site) in Middleton, WI in February 2024.

- February 1, 2024 – Gas Probe Monitoring
- February 1, 2024 – Bi-weekly Site Inspection
- February 12, 2024 – Monthly Site Inspections
- February 26, 2024 – Bi-weekly Site Inspection

Gas Extraction System

The gas extraction system (GES) was operated through the month of February 2024.

Field data from the gas extraction well and gas probe monitoring conducted in February 2024, are included in Attachment 1.

Leachate Extraction System

The leachate extraction system was restarted on October 25, 2023 following repair of the compressor system. However, based on exterior temperatures the system was kept off during the month of February. Winter operation conditions have been evaluated and TRC has coordinated and discussed options for cold weather operation with subcontractors. Recommendations have been provided to the WDNR.

The leachate tank level was gauged during each Site visit and the following measurements were recorded:

- February 1, 2024 – 52.25 Inches
- February 12, 2024 – 67 Inches
- February 26, 2024 – 73 Inches

Cap Inspection

TRC conducted a monthly inspection of the landfill cap and stormwater conveyance features on February 12, 2024. The landfill cap and stormwater conveyance features are operational. TRC will

continue to observe the condition of the features. An inspection form with further details is provided in Attachment 1 and a photographic log is provided in Attachment 2.

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

Sincerely,

TRC

Molly Wagler, EIT
Project Engineer

Andrew Stehn, PE
Project Manager

Attachments: 1. February 2024 Monitoring Results
2. Photographic Log

Attachment 1

February 2024 Monitoring Results

REFUSE HIDEAWAY LANDFILL
GAS PROBE MONITORING FORM

TECHNICIAN(S): J. Roelke

DATE: 2/ 1 /2024

START TIME: 7:55AM

END TIME: 1:45 PM

GAS/INSTRUMENT TYPE: **GEM 2000**

SERIAL NO.: 11668

DATE LAST CALIBRATED: 2/1/2024

METHOD: Standard Calibration Gases

PRESS INSTRUMENT : Manometer

WEATHER CONDITIONS: sunny

TEMPERATURE: 33 °F

BAROMETRIC PRESSURE & TREND: 29.94 in. Hg, rising

GROUND CONDITIONS: snow covered

GAS PROBE NAME	Time	PRESSURE (in. WC)	METHANE (% LEL)	METHANE (%, by vol.)	CARBON DIOXIDE (%, by vol.)	OXYGEN (%, by vol.)	COMMENTS
GP-1D	8:25	0.0	0.0	0.0	1.7	19.2	(2)
GP-1S	8:27	0.0	0.0	0.0	0.1	20.7	(2)
GP-2D	8:30	0.03	0.0	0.0	0.7	20.0	(1)
GP-2S	8:32	0.00	0.0	0.0	1.2	19.5	(1)
GP-3	8:35	0.0	34	1.7	11.4	7.1	(1)
GP-4	8:40	0.07	0.0	0.0	1.2	19.9	(1)
GP-5	8:45	0.12	0.0	0.0	0.3	20.4	(2)
GP-6	8:52	0.07	0.0	0.0	0.2	20.5	(1)
GP-7	9:04	0.19	0.0	0.0	2.0	18.8	(2)
GP-8	9:12	0.0	0.0	0.0	3.8	17.6	(2)
GP-9	9:16	0.0	0.0	0.0	1.6	18.9	(1)
GP-10	9:21	0.0	0.0	0.0	4.4	15.2	(1) Stable readings at 2 minutes
GP-11D	9:25	0.0	0.0	0.0	0.2	20.6	(2)
GP-11S	9:27	0.0	0.0	0.0	0.8	19.8	(2)
GP-12D	9:31	0.0	60	3	6.2	14	(1)
GP-12S	9:34	0.0	0.0	0.0	0.2	20.7	(1)
GP-13D	9:38	0.0	0.0	0.0	0.5	20.2	(2)
GP-13S	9:40	0.0	0.0	0.0	0.8	20.0	(2)

GAS PROBE NAME	Time	PRESSURE (in. WC)	METHANE (% LEL)	METHANE (%, by vol.)	CARBON DIOXIDE (%, by vol.)	OXYGEN (%, by vol.)	COMMENTS
GP-16D	9:59	0.0	0.0	0.0	7.5	8.7	(2)
GP-16S	10:01	0.0	0.0	0.0	0.6	19.5	(2)
GP-17D	9:52	0.0	0.0	0.0	1.8	18.5	(1)
GP-17M	9:54	0.0	0.0	0.0	0.3	20.3	(1)
GP-17S	9:56	0.0	0.0	0.0	0.3	20.4	(1)
GP-18D	10:03	0.0	0.0	0.0	1.0	19.6	(2)
GP-18M	10:05	0.0	16.0	0.8	3.5	14.3	(2) Stable readings at 2 minutes.
GP-18S	10:08	0.0	0.0	0.0	0.2	20.6	(2)
GP-19$^{85-100}$	10:58	0.0	0.0	0.0	2.8	17.2	(1)
GP-19$^{50-70}$	11:00	0.0	0.0	0.0	2.0	18.6	(1)
GP-19$^{25-40}$	11:02	0.0	0.0	0.0	2.3	18.5	(1)
GP19$^{2-15}$	11:04	0.0	0.0	0.0	1.2	18.9	(1)
GP-20$^{85-100}$	10:51	0.0	0.0	0.0	1.5	18.9	(2)
GP-20$^{50-70}$	10:53	0.0	0.0	0.0	1.9	18.6	(2)
GP-20$^{25-40}$	10:55	0.0	0.0	0.0	1.3	19.2	(2)
GP-20$^{2-15}$	10:57	0.0	0.0	0.0	1.4	19.4	(2)
GP-21$^{85-100}$	10:42	0.0	0.0	0.0	0.7	19.9	(2)
GP-21$^{50-70}$	10:44	0.0	0.0	0.0	0.3	20.5	(2)
GP-21$^{25-40}$	10:46	0.0	0.0	0.0	1.8	19.1	(2)
GP-21$^{2-15}$	10:48	0.0	0.0	0.0	1.1	19.9	(2)
GP-22$^{85-100}$	11:10	0.0	0.0	0.0	1.9	19.1	(2)
GP-22$^{50-70}$	11:12	0.0	0.0	0.0	2.0	18.3	(2)
GP-22$^{25-40}$	11:14	0.0	0.0	0.0	1.7	19.4	(2)
GP-22$^{2-15}$	11:16	0.0	0.0	0.0	1.4	19.7	(2)

GAS PROBE NAME	Time	PRESSURE (in. WC)	METHANE (% LEL)	METHANE (%, by vol.)	CARBON DIOXIDE (%, by vol.)	OXYGEN (%, by vol.)	COMMENTS
GP-23$^{85-100}$	11:21	0.0	0.0	0.0	2.3	17	(2)
GP-23$^{50-70}$	11:23	0.0	0.0	0.0	1.5	18.2	(2)
GP-23$^{25-40}$	11:25	0.0	0.0	0.0	0.5	20.0	(2)
GP-23$^{2-15}$	11:27	0.0	0.0	0.0	2.8	17.1	(2)
GP-24$^{85-100}$	11:31	0.0	0.0	0.0	3.9	16.1	(2)
GP-24$^{50-70}$	11:33	0.0	0.0	0.0	3.4	16.3	(2)
GP-24$^{25-40}$	11:35	0.0	0.0	0.0	2.7	17.9	(2)
GP-24$^{2-15}$	11:37	0.0	0.0	0.0	2.8	18.1	(2)
GPW-1D	13:30	0.0	0.0	0.0	2.1	18.7	(1)
GPW-1M	13:32	0.0	0.0	0.0	1.1	19.4	(1)
GPW-1S	13:34	0.0	0.0	0.0	1.5	19.5	(1)
G-1D	8:16	0.0	0.0	0.0	0.0	20.8	(1)
G-1S	8:18	0.0	0.0	0.0	0.1	20.7	(1)
G-2D	9:42	0.0	0.0	0.0	0.2	20.6	(1)
G-2S	9:44	0.0	100.0	7.4	18.6	0.0	(1) Stable readings at 2 minutes.
G-5	9:08	0.09	0.0	0.0	2.4	16.7	(1)
G-6	8:07	0.0	0.0	0.0	0.1	20.7	(1)
G-8	10:36	0.0	0.0	0.0	0.1	20.6	(1)
G-9	10:20	0.0	0.0	0.0	2.6	16.2	(1)
G-10	11:44	0.21	0.0	0.0	0.4	19.6	(1)
Speedway Office	8:22	0.0	0.0	0.0	0.2	20.6	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/ 1 /2024
Checked by: M. Wagler 3/2/2024

Bi-weekly - System Inspection Log
Landfill Gas Extraction and Leachate Pump System
WDNR - Refuse Hideaway Landfill
Middleton, Wisconsin

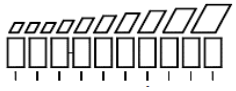
TRC Operator Name: J. Roelke
Date: 2/1/2024 Arrival Time: 11:58 AM Departure Time: 12:42 PM

Site Conditions		Equipment	
Weather Conditions:	sunny	Gas/Instrument Type:	GEMS 2000
Ground Condition:	snow covered	Serial Number:	11668
Barometric Pressure:	29.93 in Hg	Date Last Calibrated:	2/1/2024
Barometric Pressure Trend:	falling	Method:	standard field calibration gas
Temperature:	42 °F	Pressure Instrument:	Dwyer Manometer

Landfill Gas Extraction System[1]

System	*Location*	*Tag #*	*Equipment Description*	*Set Point*	*Typical Range*	*Field Reading*
Blower Motor	Remote	GHS-BLR-301	Amperage	-	3 - 4 amps	3.2
			Speed	-	1800 - 1900 rpm	954.11
			Frequency	-	30 - 35 Hz	15.96
	HMI		Amperage	-	3 -4 amps	3.1
	HMI		Speed	-		18
	HMI		Hours	-	-	11457
Blower Operating (yes/no). Note excessive noise or issues observed.						
Blower Inlet	HMI	PT-301	Blower Inlet Vacuum	7 in. w.c.	7 in. w.c.	-7.0
	HMI	TE-301	Blower Inlet Temperature	-	50 - 90 °F	49
	Local	GHS-PI-301	Blower Inlet Vacuum	7 in. w.c.	7 in. w.c.	0.02
	Local	GHS-TI-301	Blower Inlet Temperature	-	50 - 90 °F	52
	Local	Sample Port	Gas Composition - % Methane	-		14.6
			Gas Composition - % CO2	-		15
			Gas Composition - % Oxygen	-		10
			Gas Composition - % Balance	-		60.0%
Demister	Local	GHS-PDI-301	Demister Differential Pressure	-	1-2 in w.c	0.4
	Local		Slight Glass: Liquid Present	-	-	no
	HMI	LS-701	Level Indication	-	-	-
Blower Outlet	HMI	PT-302	Blower Outlet Flow Pressure	-	-	0.1
	HMI	TE-302	Blower Outlet Temperature	-	50 - 90 °F	55
	HMI	PDT-301	Blower Outlet Flow Differential Pressure	-	1-2 in w.c	0.26
	HMI	-	Blower Outlet Flow Rate	-	180 - 190 scfm	76
	Local	GHS-PI-302	Blower Outlet Flow Pressure	-	-	0.02
	Local	GHS-TI-302	Blower Outlet Temperature	-	50 - 90 °F	46
	Local	Sample Port	Gas Composition - % Methane	-		14.5
			Gas Composition - % CO2	-		14.9
			Gas Composition - % Oxygen	-		10.1
			Gas Composition - % Balance	-		60.5%
Branch Headers	Local	North	North Branch Vacuum	-	6 - 7 in w.c.	-6.7
	Local	North	Valve Position	6 turns open /6	6 turns open	6
	Local	North Sample Port	Gas Composition - % Methane	-		25.8
			Gas Composition - % CO2	-		18.3
			Gas Composition - % Oxygen	-		6.4
			Gas Composition - % Balance	-		49.0%
	Local	Central	Central Branch Vacuum	-	6 - 7 in w.c.	-6.65
	Local	Central	Valve Position	-	6 turns open	6
	Local	Central Sample Port	Gas Composition - % Methane	-		8.1
			Gas Composition - % CO2	-		8
			Gas Composition - % Oxygen	-		15
			Gas Composition - % Balance	-		68.9%
	Local	South	South Branch Vacuum	-	6 - 7 in w.c.	-6.71
	Local	South	Valve Position	-	6 turns open	6
	Local	South Sample Port	Gas Composition - % Methane	-		20
			Gas Composition - % CO2	-		21.5
			Gas Composition - % Oxygen	-		5.4
			Gas Composition - % Balance	-		53.1%

Air Compressor System[1,3,4] (Off Line)								
Operational Settings	Pressure Set Points					Condensate Set Points		
	Tank Low (psi)	Tank High (psi)	Well Field (psi)	On (min.)	Off (min.)	Open (sec.)	Closed (min.)	Test Operation

Air Dryer System[2] (Off Line)		Electrical Status		HMI Heater/Air Conditioner	
System Operational:	YES	3-Phase Power Indicator:	3 of 3	Operational	Yes
Condensate Drain Operational:	YES	GFI 1 Status:	(Green)	Temperature	58 °F
Alarm Indictor:	OFF	GFI 2 Status:	(Green)	Filter Cleaned	no
Condenser Cleaned[2]:	NO	**Leachate Tank/Loadout**			
Dew Point Indicator:		Liquid Level (inches):	52.25	Visual Check:	
	Indicate which bars are green(G) or red (R) and note (F) if flashing.	***Contact WDNR if level is above***	**71**	· Evidence of Tank Overflow:	no
		Leak Detection Test Completed:	no	· Inspect concrete pad and storm sewer for damage or backup	
		Overfill Float Functional[5]:	Yes		
		Exhaust Stack			
		Drain Stack Sump (vol. removed)	0.5 gallons	Stack Condition[4]: good	

1. Check all air lines and gas extraction lines for leaks during each site visit. Drain inline air filters and replace as needed.

2. Air Dryer - Clean the condenser monthly using an air jet (max. 2 bar / 30 psig) inside out. Make sure not to damage the aluminum lamellae of the cooling package.

3. On a quarterly basis change the oil and check/clean the air filters and intercoolers for the air compressor.

4. Inspect mounting brackets and bolts for the air compressor and effluent stack for tightness.

5. Test overfill float operation on a monthly basis.

Comments/Notes: Heat tape is in working order, warm to the touch. Stack sump drained, 0.5 gallons.

Data Entered By: J. Roelke 2/1/2024
Checked By: M. Wagler 3/2/2024

LANDFILL GAS MONITORING FORM
REFUSE HIDEAWAY GAS MONITORING PROGRAM (EPA ID: WID980610604, Facility ID: 113112010)

			STARTING	ENDING
TECHNICIAN(S):	J. Roelke	DATE:	2/12/24	2/12/24
GAS/INSTRUMENT TYPE:	GEM 2000	TIME:	8:30 AM	11:00 PM
SERIAL NO.:	11668	BAROMETRIC PRESSURE [25]	29.95 in. Hg	29.90 in. Hg
DATE LAST CALIBRATED:	2/12/2024	BAROMETRIC TREND [46381]	falling	falling
METHOD:	Standard Calibration Gases	WEATHER CONDITIONS:	sunny	sunny
PRESSURE INSTRUMENT:	Dwyer Digital Manometer	TEMPERATURE [21]	32 °F	43 °F
		GROUND CONDITIONS [No DNR ID]:	frozen	frozen

Well No.	Time	Well Temp. (°F)	Available Header Pressure (in. W.C.)	Applied Well Pressure (in. W.C.)	Differential Pressure (in. W.C.)	Final Well Pressure (in. W.C.)	Final Deferential Pressure (in. W.C.)	Estimated Gas Flow[3] (scfm)	Methane (%, by vol.)	Carbon Dioxide (%, by vol.)	Oxygen (%, by vol.)	Initial Valve Setting (% open)	Final Valve Setting (% open)	Pump Counter
GW-1	9:10	38	-6.41	-0.80	0.02	-0.8	0.02	9.0	8.6	24.0	0.4	0.75 / 12	0.75 / 12	Counter #: NM
GW-2	9:16	44	-6.28	-0.60	0.01	-0.6	0.01	6.4	0.0	0.2	20.7	0.00 / 12	0.00 / 12	Counter #: NM
GW-3	9:22	50	-6.16	-5.80	0.07	-5.8	0.07	17.0	30.2	30.5	0.00	5 / 12	5.0 / 12	Counter #: NM
GW-4	9:30	46	-6.18	-0.30	0.01	-0.7	0.01	6.4	33.2	21.9	2.6	0.5 / 12	0.8 / 12	Counter #: NM
GW-5	9:40	52	-6.21	1.00	0.01	-3.30	0.02	9.0	66.1	32.9	0.0	0.125 / 12	0.50 / 12	Counter #: NM
GW-6	10:59	44	-6.35	-3.30	0.11	-2.80	0.01	6.4	23.9	30.7	0.0	1.0 / 12	0.50 / 12	Counter #: NM
GW-7	10:53	44	-6.28	-6.10	0.01	-6.10	0.01	6.4	28.0	24.5	1.1	7.0 / 12	7.0 / 12	Counter #: NM
GW-8	10:42	44	-6.27	-6.10	0.02	-6.10	0.15	25.0	45.2	14.7	7.8	7.0 / 12	9.0 / 12	Counter #: NM
GW-9	10:36	42	-6.18	-0.10	0.01	-0.10	0.01	6.4	14.0	6.4	9.4	0.125 / 12	0.125 / 12	Counter #: NM
GW-10	10:28	42	-6.47	-0.80	0.01	-0.80	0.01	6.4	28.2	23.7	0.3	0.50 / 12	0.50 / 12	Counter #: NM
GW-11	9:54	68	-6.46	0.20	0.01	-0.40	0.01	6.4	79.0	20.7	0.0	0.25 / 12	0.75 / 12	Counter #: NM
GW-12	10:04	44	-6.48	-0.6	0.01	-0.60	0.01	6.4	26.5	16.1	9.5	0.25 / 12	0.25 / 12	Counter #: NM
GW-13	10:15	52	-6.56	0.5	0.01	-0.10	0.01	6.4	71.8	28.0	0.0	0.25 / 12	0.75 / 12	Counter #: NM

Notes:

(1): Sample port frozen and no measurement taken.

(2): Air compressor system was down and no counter numbers were reported.

(3): Flowrate calculated using LANDTEC's Flow Charts provided in the ACCU-Flo Wellhead Installation and Operation Manual.

"NA" = Data Not Available
"NM" = Not Monitored

Data Entered By: J. Roelke 2/12/2024
Checked By: M. Wagler 3/2/2024

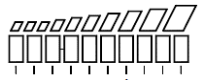
Monthly System Inspection Log
Landfill Gas Extraction and Leachate Pump System
WDNR - Refuse Hideaway Landfill
Middleton, Wisconsin

TRC Operator Name: John Roelke/Maddie Holicky
Date: 2/12 /2024 **Arrival Time:** 8:30 AM **Departure Time:** 12:15 PM

Site Conditions	Initial[1]	Final[2]	Equipment	
Weather Conditions:	sunny	sunny	Gas/Instrument Type:	GEMS 2000
Ground Condition:	frozen	frozen	Serial Number:	11668
Barometric Pressure:	29.95 in. Hg	29.90 in. Hg	Date Last Calibrated:	2/12/2024
Barometric Pressure Trend:	falling	falling	Method:	Standard field calibration
Temperature:	32 °F	43 °F	Pressure Instrument:	Dwyer Series 475 Manometer

Landfill Gas Extraction System[3]							
	Location	*Tag #*	*Equipment Description*	*Set Point*	*Typical Range*	*Initial Field Reading [1]*	*Final Field Reading [2]*
Blower Motor	Remote	GHS-BLR-301	Amperage	-	3 - 4 amps	3.21	--
			Speed	-	1800 - 1900 rpm	1067.84	--
			Frequency	-	30 - 35 Hz	17.91	--
	HMI		Amperage	-	3 -4 amps	3.2	--
	HMI		Speed	-		21	--
	HMI		Hours	-	-	11717	--
Blower Operating (YES). Note excessive noise or issues observed.							
Blower Inlet	HMI	PT-301	Blower Inlet Vacuum	7 in. w.c.	7 in. w.c.	-7	-7
	HMI	TE-301	Blower Inlet Temperature	-	50 - 90 °F	42	46
	Local	GHS-PI-301	Blower Inlet Vacuum	7 in. w.c.	7 in. w.c.	-6.94	-6.75
	Local	GHS-TI-301	Blower Inlet Temperature	-	50 - 90 °F	36	40
	Local	Sample Port	Gas Composition - % Methane	-		11.3	11.6
			Gas Composition - % CO2	-		12.1	11.6
			Gas Composition - % Oxygen	-		12.4	12.1
			Gas Composition - % Balance	-		64.2%	64.7%
Demister	Local	GHS-PDI-301	Demister Differential Pressure	-	1-2 in w.c	0.04	--
	Local		Slight Glass: Liquid Present	-	-	no	--
	HMI	LS-701	Level Indication	-	-	--	--
Blower Outlet	HMI	PT-302	Blower Outlet Flow Pressure	-	-	0.1	0.1
	HMI	TE-302	Blower Outlet Temperature	-	50 - 90 °F	48	53
	HMI	PDT-301	Blower Outlet Flow Differential Pressure	-	1-2 in w.c	0.38	0.4
	HMI	-	Blower Outlet Flow Rate	-	180 - 190 scfm	93	94
	Local	GHS-PI-302	Blower Outlet Flow Pressure	-	-	0.04	0.05
	Local	GHS-TI-302	Blower Outlet Temperature	-	50 - 90 °F	42	50
	Local	Sample Port	Gas Composition - % Methane	-		11.3	11.9
			Gas Composition - % CO2	-		12.1	11.8
			Gas Composition - % Oxygen	-		12.3	12
			Gas Composition - % Balance	-		64.3%	64.3%
Branch Headers	Local	North	North Branch Vacuum	-	6 - 7 in w.c.	-6.68	-6.67
	Local	North	Valve Position	6 turns open /6	6 turns open	6	6
	Local	North Sample Port	Gas Composition - % Methane	-		25.1	32.3
			Gas Composition - % CO2	-		18	17.3
			Gas Composition - % Oxygen	-		6.7	6.2
			Gas Composition - % Balance	-		50.2%	44.2%
	Local	Central	Central Branch Vacuum	-	6 - 7 in w.c.	-6.63	-6.67
	Local	Central	Valve Position	-	6 turns open	6	6
	Local	Central Sample Port	Gas Composition - % Methane	-		5.7	5.6
			Gas Composition - % CO2	-		6.1	4.9
			Gas Composition - % Oxygen	-		16.9	16.8
			Gas Composition - % Balance	-		71.3%	72.7%
	Local	South	South Branch Vacuum	-	6 - 7 in w.c.	-6.67	-6.61
	Local	South	Valve Position	-	6 turns open	6	6
	Local	South Sample Port	Gas Composition - % Methane	-		15.7	16.7
			Gas Composition - % CO2	-		17.7	18.3
			Gas Composition - % Oxygen	-		8.4	7.5
			Gas Composition - % Balance	-		58.2%	57.5%

Air Compressor System[3,5,6] (Off Line)								
Operational Settings	Pressure Set Points					Condensate Set Points		
	Tank Low (psi)	Tank High (psi)	Well Field (psi)	On (min.)	Off (min.)	Open (sec.)	Closed (min.)	Test Operation (yes/**no**)

Air Dryer System[4] (Off Line)		Electrical Status		HMI Heater/Air Conditioner	
System Operational:	YES	3-Phase Power Indicator:	3 of 3	Operational	Yes
Condensate Drain Operational:	--	GFI 1 Status:	GREEN	Temperature	51 °F
Alarm Indictor:	--	GFI 2 Status:	GREEN	Filter Cleaned	NO
Condenser Cleaned[2]:	NO	**Leachate Tank/Loadout**			
Dew Point Indicator:		Liquid Level (inches):	67 inches	Visual Check:	
	Indicate which bars are green(G) or red (R) and note (F) if flashing.	***Contact WDNR if level is above***	71 inches	· Evidence of Tank Overflow:	No
		Leak Detection Test Completed:	no	· Inspect concrete pad and storm sewer for damage or backup. Good	
		Overfill Float Functional[7]	Yes		
		Exhaust Stack			
		Drain Stack Sump (vol. removed)	0.5 gallons	Stack Condition[6]: good	

1. Initial site conditions represents readings collected upon arrival to the site and initial field readings are collected prior to the landfill balancing.

2. Final site conditions represents readings collected upon departure from the site and final field readings are collected following the landfill balancing.

3. Check all air lines and gas extraction lines for leaks during each site visit. Drain inline air filters and replace as needed.

4. Air Dryer - Clean the condenser monthly using an air jet (max. 2 bar / 30 psig) inside out. Make sure not to damage the aluminum lamellae of the cooling package.

5. On a quarterly basis change the oil and check/clean the air filters and intercoolers for the air compressor.

6. Inspect mounting brackets and bolts for the air compressor and effluent stack for tightness.

7. Test overfill float operation on a monthly basis.

Comments/Notes: Heat tape is warm to the touch. Cap inspection was completed.

Data Entered By: J. Roelke 2/12/2024
Checked By: M. Wagler 3/2/2024

Bi-weekly - System Inspection Log
Landfill Gas Extraction and Leachate Pump System
WDNR - Refuse Hideaway Landfill
Middleton, Wisconsin

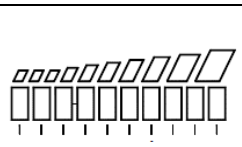
TRC Operator Name: J. Roelke
Date: 2/26/2024 Arrival Time: 10:03 AM Departure Time: 11:05 PM

Site Conditions		Equipment	
Weather Conditions:	cloudy	Gas/Instrument Type:	GEMS 2000
Ground Condition:	frozen	Serial Number:	11668
Barometric Pressure:	29.79 in Hg	Date Last Calibrated:	2/26/2024
Barometric Pressure Trend:	falling	Method:	standard field calibration gas
Temperature:	44 °F	Pressure Instrument:	Dwyer Manometer

Landfill Gas Extraction System[1]

System	*Location*	*Tag #*	*Equipment Description*	*Set Point*	*Typical Range*	*Field Reading*
Blower Motor	Remote	GHS-BLR-301	Amperage	-	3 - 4 amps	3.22
			Speed	-	1800 - 1900 rpm	1132.00
			Frequency	-	30 - 35 Hz	18.96
	HMI		Amperage	-	3 -4 amps	3.2
	HMI		Speed	-		23
	HMI		Hours	-	-	12055
Blower Operating (yes/no). Note excessive noise or issues observed.						
Blower Inlet	HMI	PT-301	Blower Inlet Vacuum	7 in. w.c.	7 in. w.c.	-7.0
	HMI	TE-301	Blower Inlet Temperature	-	50 - 90 °F	47
	Local	GHS-PI-301	Blower Inlet Vacuum	7 in. w.c.	7 in. w.c.	-6.85
	Local	GHS-TI-301	Blower Inlet Temperature	-	50 - 90 °F	42
	Local	Sample Port	Gas Composition - % Methane	-		10.4
			Gas Composition - % CO2	-		11.1
			Gas Composition - % Oxygen	-		12.7
			Gas Composition - % Balance	-		65.8%
Demister	Local	GHS-PDI-301	Demister Differential Pressure	-	1-2 in w.c	0.6
	Local		Slight Glass: Liquid Present	-	-	no
	HMI	LS-701	Level Indication	-	-	-
Blower Outlet	HMI	PT-302	Blower Outlet Flow Pressure	-	-	0.1
	HMI	TE-302	Blower Outlet Temperature	-	50 - 90 °F	54
	HMI	PDT-301	Blower Outlet Flow Differential Pressure	-	1-2 in w.c	0.45
	HMI	-	Blower Outlet Flow Rate	-	180 - 190 scfm	100
	Local	GHS-PI-302	Blower Outlet Flow Pressure	-	-	0.05
	Local	GHS-TI-302	Blower Outlet Temperature	-	50 - 90 °F	54
	Local	Sample Port	Gas Composition - % Methane	-		10.5
			Gas Composition - % CO2	-		11.1
			Gas Composition - % Oxygen	-		12.6
			Gas Composition - % Balance	-		65.8%
Branch Headers	Local	North	North Branch Vacuum	-	6 - 7 in w.c.	-6.59
	Local	North	Valve Position	6 turns open /6	6 turns open	6
	Local	North Sample Port	Gas Composition - % Methane	-		22.8
			Gas Composition - % CO2	-		14.9
			Gas Composition - % Oxygen	-		8.7
			Gas Composition - % Balance	-		53.6%
	Local	Central	Central Branch Vacuum	-	6 - 7 in w.c.	-6.51
	Local	Central	Valve Position	-	6 turns open	6
	Local	Central Sample Port	Gas Composition - % Methane	-		3.6
			Gas Composition - % CO2	-		3.7
			Gas Composition - % Oxygen	-		17.9
			Gas Composition - % Balance	-		74.8%
	Local	South	South Branch Vacuum	-	6 - 7 in w.c.	-6.55
	Local	South	Valve Position	-	6 turns open	6
	Local	South Sample Port	Gas Composition - % Methane	-		15.4
			Gas Composition - % CO2	-		17.4
			Gas Composition - % Oxygen	-		8.2
			Gas Composition - % Balance	-		59.0%

Air Compressor System[1,3,4] (Off Line)								
Operational Settings	Pressure Set Points					Condensate Set Points		
	Tank Low (psi)	Tank High (psi)	Well Field (psi)	On (min.)	Off (min.)	Open (sec.)	Closed (min.)	Test Operation

Air Dryer System[2] (Off Line)		Electrical Status		HMI Heater/Air Conditioner	
System Operational:	YES	3-Phase Power Indicator:	3 of 3	Operational	Yes
Condensate Drain Operational:	YES	GFI 1 Status:	(Green)	Temperature	47 °F
Alarm Indictor:	OFF	GFI 2 Status:	(Green)	Filter Cleaned	no
Condenser Cleaned[2]:	NO	**Leachate Tank/Loadout**			
Dew Point Indicator:		Liquid Level (inches):	73	Visual Check:	
	Indicate which bars are green(G) or red (R) and note (F) if flashing.	***Contact WDNR if level is above***	**71**	· Evidence of Tank Overflow:	no
		Leak Detection Test Completed:	no	· Inspect concrete pad and storm sewer for damage or backup	
		Overfill Float Functional[5]:	Yes		
		Exhaust Stack			
		Drain Stack Sump (vol. removed)	0.25 gallons	Stack Condition[4]: good	

1. Check all air lines and gas extraction lines for leaks during each site visit. Drain inline air filters and replace as needed.

2. Air Dryer - Clean the condenser monthly using an air jet (max. 2 bar / 30 psig) inside out. Make sure not to damage the aluminum lamellae of the cooling package.

3. On a quarterly basis change the oil and check/clean the air filters and intercoolers for the air compressor.

4. Inspect mounting brackets and bolts for the air compressor and effluent stack for tightness.

5. Test overfill float operation on a monthly basis.

Comments/Notes: Heat tape is in working order, warm to the touch. Stack sump drained, 0.25 gallons.

Data Entered By: J. Roelke 2/ 26 /2024
Checked By: M. Wagler 3/ 2 /2024

Cap Inspection
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 -Fencing around GW-1 and GW-2 is damaged but still provides well protection from mowing operations (see photo #6). -GW-2 and GW-4 on the south side have wildlife burrowing inside the fencing. GW-13 on the north side has burrowing outside the fencing. (see photo #5) - Snow fencing was installed to protect the airlines for the Gas Extraction Wells during mowing events at GW-2, GW-4, GW-7, GW-8, GW-9, GW-10, GW-11, GW-12, GW-13 (see photo #6). Protective fencing remains in place.
Condition of drainage ways: West Drainage Ditch - During the previous inspections, areas of vegetation die off were observed at the drainage path to the north. This area was previously regraded during the 2020-2021 grading work at the site. Currently, the area showed improvement but will still be monitored moving forward. East Drainage Ditch - Drainage ways are acceptable with minimal to no changes from previous conditions aside from those described below.
Extent of vegetation cover: Vegetation cover is acceptable over the majority of the site (see photo #7). Various areas were reseeded and ground cover was applied in the fall of 2022. Some bare spots were observed (see photo #3 and #4). Per discussion with the WDNR, TRC will evaluate the areas in Spring of 2024 and apply seed as needed at that time.
Significant erosion: No evidence of significant erosion was observed at the site.
Repeated erosion: No evidence of significant erosion was observed at the site.
Vegetation die-off: Areas at the west drainage ditch and east drainage ditch previously showed signs of vegetation die-off and were reseeded in the fall of 2022. Ground cover in these areas remains and TRC will continue to monitor and apply seed as needed in 2024. (see photo #1).
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: Evidence of erosion at the eastern drainage ditch above the sediment basin was observed. Vegetation is in place, but ruts are starting to form (See photo #2). TRC will continue to monitor the area.
Inspect sedimentation basin banks and outfalls for erosion, describe and note any issues: No erosion or other issues at sedimentation basin banks or outfalls.
Measure the distance between the invert of the sedimentation basin outlet and the top of the sediments accumulated in the basin **(June Only!)**: NM

Data Entered By: J. Roelke 2/12/2024
Checked By: M. Wagler 3/2/2024

Attachment 2

Photographic Log

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	2/12/2024

Description

Eastern Drainage Ditch:
Bare spots are present to the north, above the drainage way and will likely require reseeding.

Photo No.	Date
2	2/12/2024

Description

Eastern Drainage Ditch:
Evidence of erosion starting to occur was observed at the north portion of the eastern drainage ditch leading to the sediment basin. Vegetation is still intact but ruts are starting to form.

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	2/12/2024

Description
Eastern Landfill Extents
Reseeding and ground cover was previously applied in the Fall of 2022. Some bare spots remain and will likely require reseeding.

Photo No.	Date
4	2/12/2024

Description
Eastern Landfill Extents
Reseeding and ground cover was previously applied in the Fall of 2022. Some bare spots remain and will likely require reseeding.

Photographic Log

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

Photo No.	Date
5	2/12/2024

Description

Southern Landfill Extents

GW-2 and GW-4 have burrowing from wildlife inside fencing. GW-13 has burrowing from wildlife outside fencing.

Photo No.	Date
6	2/12/2024

Description

Southern Landfill Extents:

GW-1 protective fencing is falling apart. Fencing still provides protection during mowing operations. GW-1 protective fencing is in the same condition as GW-2.

Photographic Log

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

Photo No.	Date
7	2/12/2024

Description

Northern Landfill Extents:
Cap remains in good condition with full vegetation cover.