

December 16, 2022

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

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

Dear Cindy:

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

- November 15, 2022 Monthly Site Inspection
- November 16, 2022 Gas Probe Monitoring
- November 29, 2022 Bi-Weekly Site Inspection

Electrical Upgrades

Based on the initial system start up and output voltage, the system electrical repairs are being evaluated by a TRC electrical engineer. A summary of the system upgrades and the electrical evaluation was further completed during the month of November 2022 and the evaluation was provided to the WDNR in a separate deliverable.

Gas Extraction System

The gas extraction system (GES) was restarted in October 2022 and was operated throughout November 2022. TRC conducted one balancing event on November 15, 2022 and made adjustments to the system as needed based on methane concentrations observed.

Perimeter gas probe monitoring was conducted at the site on November 16, 2022.

Field data from system and gas probe monitoring is included in the attachments.

Leachate Extraction System

The leachate extraction system remained off during the month of November. A new pump head was installed on the air compressor system in June 2022, and the air compressor system was restarted in October 2022. The electrical contactor for the motor starter failed during the start-up and will need be replaced. Based on the issues with the system to date and the electrical upgrades, the compressor system was further evaluated by TRC's electrical engineer, and a summary of the evaluation was provided to the WDNR in a separate deliverable.

The leachate tank level was gauged during the November 15, and November 29, 2022 inspections and the tank contained 32.75 inches and 35.25 inches of leachate, respectively.

Ms. Cindy Koepke Wisconsin Department of Natural Resources December 16, 2022 Page 2

Cap Inspection

TRC conducted a monthly inspection of the landfill cap and stormwater conveyance features on November 15, 2022. TRC personnel observed areas of bare soil throughout the landfill cap that were previously seeded in 2021. TRC reseeded select areas on October 20, 2022, to re-establish vegetation. The areas will be monitored for regrowth in Spring of 2023. An inspection form and photo log are attached with further details.

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

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

Sincerely,

TRC

Anoken M. Steh

Andrew Stehn, PE Project Manager

Attachments: November 2022 Monitoring Results



November 2022 Monitoring Results

REFUSE HIDEAWAY LANDFILL GAS PROBE MONITORING FORM

TECHNICIAN(S): J. Roelke

DATE: <u>11/16/2022</u> START TIME: <u>7:28 AM</u> END TIME: 1:30 PM

GAS/INSTRUMENT TYPE: GEM 2000

SERIAL NO.: 11668

DATE LAST CALIBRATED: 11/16/2022

METHOD: Standard Calibration Gases

PRESS INSTRUMENT : GEM 2000

WEATHER CONDITIONS: light snow, cloudy TEMPERATURE: <u>30 deg F</u> BAROMETRIC PRESSURE & TREND: <u>30.16 in. Hg, rising</u> 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	8:01	0.03	0.0	0.0	5.4	13.9	(2)
GP-1S	8:03	0.0	0.0	0.0	0.1	20.7	(2)
GP-2D	8:08	0.12	0.0	0.0	1.6	19.3	(1)
GP-2S	8:10	0.0	0.0	0.0	0.6	20.1	(1)
GP-3	8:15	0.0	20	1.0	4.7	16.1	(1)
GP-4	8:22	0.0	0.0	0.0	2.6	17.8	(1)
GP-5	8:26	0.0	0.0	0.0	2.2	18.6	(2)
GP-6	8:33	0.0	0.0	0.0	0.2	20.5	(1)
GP-7	8:41	0.0	0.0	0.0	3.2	16.6	(2)
GP-8	8:49	0.0	0.0	0.0	5.1	16.2	(2) Stable readings at 2 minutes.
GP-9	8:54	0.0	0.0	0.0	3.3	17.2	(1)
GP-10	8:59	0.0	0.0	0.0	5.1	15.6	(1)
GP-11D	9:04	0.0	0	0.0	0.3	20.4	(2)
GP-11S	9:06	0.0	0.0	0.0	0.0	20.7	(2)
GP-12D	9:11	0.0	36	1.8	3.4	17.2	(1) Stable readings at 2 minutes.
GP-12S	9:14	0.0	0.0	0.0	1.1	19.7	(1)
GP-13D	9:16	0.0	2	0.1	1.2	19.1	(2) Stable readings at 2 minutes.
GP-13S	9:19	0.0	0.0	0.0	0.5	20.2	(2)

GAS PROBE NAME	Time	PRESSURE (in. WC)	METHANE (% LEL)	METHANE (%, by vol.)	CARBON DIOXIDE (%, by vol.)	OXYGEN (%, by vol.)	COMMENTS
GP-16D	9:34	0.0	0.0	0.0	4.7	14.5	(2)
GP-16S	9:36	0.0	0.0	0.0	0.5	20.2	(2)
GP-17D	9:29	0.0	0.0	0.0	2.2	18.3	(1)
GP-17M	9:31	0.0	0.0	0.0	0.3	20.2	(1)
GP-17S	9:33	0.0	0.0	0.0	0.1	20.6	(1)
GP-18D	9:41	0.0	0.0	0.0	0.2	20.6	(2)
GP-18M	9:43	0.0	0.0	0.0	0.1	20.7	(2)
GP-18S	9:45	0.0	0.0	0.0	0.0	20.8	(2)
GP-19 ⁸⁵⁻¹⁰⁰	10:39	0.0	0.0	0.0	0.6	19.8	(1)
GP-19 ⁵⁰⁻⁷⁰	10:41	0.0	0.0	0.0	0.4	19.7	(1)
GP-19 ²⁵⁻⁴⁰	10:43	0.0	0.0	0.0	1.3	19.1	(1)
GP19 ²⁻¹⁵	10:45	0.0	0.0	0.0	1.7	18.7	(1)
GP-20 ⁸⁵⁻¹⁰⁰	10:28	0.0	0.0	0.0	0.0	20.8	(2)
GP-20 ⁵⁰⁻⁷⁰	10:31	0.0	0.0	0.0	0.4	20.4	(2)
GP-20 ²⁵⁻⁴⁰	10:33	0.0	0.0	0.0	0.9	20.0	(2)
GP-20 ²⁻¹⁵	10:35	0.0	0.0	0.0	2.3	18.5	(2)
GP-21 ⁸⁵⁻¹⁰⁰	10:19	0.0	0.0	0.0	0.2	20.5	(2)
GP-21 ⁵⁰⁻⁷⁰	10:21	0.0	0.0	0.0	0.3	20.5	(2)
GP-21 ²⁵⁻⁴⁰	10:23	0.0	0.0	0.0	0.4	20.4	(2)
GP-21 ²⁻¹⁵	10:25	0.0	0.0	0.0	0.8	20.1	(2)
GP-22 ⁸⁵⁻¹⁰⁰	10:55	0.0	0.0	0.0	3.1	17.8	(2)
GP-22 ⁵⁰⁻⁷⁰	10:57	0.0	0.0	0.0	0.4	20.2	(2)
GP-22 ²⁵⁻⁴⁰	10:59	0.0	0.0	0.0	1.7	18.8	(2)
GP-22 ²⁻¹⁵	11:01	0.0	0.0	0.0	4.2	17.0	(2) Stable readings at 2 minutes.

GAS PROBE NAME	Time	PRESSURE (in. WC)	METHANE (% LEL)	METHANE (%, by vol.)	CARBON DIOXIDE (%, by vol.)	OXYGEN (%, by vol.)	COMMENTS
GP-23 ⁸⁵⁻¹⁰⁰	11:15	0.0	0.0	0.0	0.4	20.3	(2)
GP-23 ⁵⁰⁻⁷⁰	11:17	0.0	0.0	0.0	0.6	20.1	(2)
GP-23 ²⁵⁻⁴⁰	11:19	0.0	0.0	0.0	0.2	20.6	(2)
GP-23 ²⁻¹⁵	11:21	0.0	0.0	0.0	0.4	20.4	(2)
GP-24 ⁸⁵⁻¹⁰⁰	11:27	0.0	0.0	0.0	3.7	16.5	(2) Stable readings at 2 minutes.
GP-24 ⁵⁰⁻⁷⁰	11:29	0.0	0.0	0.0	0.8	19.7	(2)
GP-24 ²⁵⁻⁴⁰	11:31	0.0	0.0	0.0	0.3	20.4	(2)
GP-24 ²⁻¹⁵	11:33	0.0	0.0	0.0	2.3	18.7	(2)
GPW-1D	13:09	0.23	0.0	0.0	2.1	18.1	(1)
GPW-1M	13:11	0.24	0.0	0.0	1.8	18.0	(1)
GPW-1S	13:13	0.0	0.0	0.0	1.3	19.5	(1)
G-1D	7:52	0.02	0.0	0.0	0.0	20.8	(1)
G-1S	7:54	0.03	0.0	0.0	0.3	20.6	(1)
G-2D	9:22	0.0	0.0	0.0	0.3	20.4	(1)
G-2S	9:24	0.0	0.0	0.0	0.0	20.8	(1)
G-5	8:46	0.0	0.0	0.0	5.1	16.4	(1)
G-6	7:44	0.0	0.0	0.0	0.0	20.8	(1)
G-8	10:11	0.0	0.0	0.0	0.0	20.8	(1)
G-9	9:58	0.0	0.0	0.0	1.1	17.0	(1)
G-10	11:40	0.0	0.0	0.0	0.5	20.2	(1)
Speedway Office	7:57	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.
Key:

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

Entered by: J. Roelke 11/16/2022 Checked by: A. Ruetten 11/23/2022

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

TRC Operator Name: John Roelke							
Date: 11/15/2022	Arrival Time: 11:09	Departure Ti	Departure Time: 14:10				
Site Conditions	Initial ¹	Final ²		Equipment			
Weather Conditions:	light snow	light snow	Gas/Instrument Type:	GEMS 2000			
Ground Condition:	moist	moist	Serial Number:	11668			
Barometric Pressure:	30.26	30.21	Date Last Calibrated:	11/15/2022			
Barometric Pressure Trend:	falling	falling	Method:	Standard field calibration			
Temperature:	32	32	Pressure Instrument:	GEMS 2000			

			Landfill Gas Extrac	ction System ³			
System	Location	Tag #	Equipment Description	Set Point	Typical Range	Initial Field Reading ¹	Final Field Reading ²
			Amperage	-	3 - 4 amps	3.29	
	Remote		Speed	-	1800 - 1900 rpm	1265.78	
			Frequency	-	30 - 35 Hz	21.23	
Blower Motor	HMI	GHS-BLR-301	Amperage	-	3 -4 amps	3.2	
ľ	HMI	1 1	Speed	-		27	
ľ	HMI		Hours	-	-	7312	
lower Operating (YES). Note ex	cessive noise or is	sues observed.		•		
	HMI	PT-301	Blower Inlet Vacuum	7 in. w.c.	7 in. w.c.	-7.0	-7
	HMI	TE-301	Blower Inlet Temperature		50 - 90 °F	48	
	Local	GHS-PI-301	Blower Inlet Vacuum	7 in. w.c.	7 in. w.c.	-6.74	-6.94
	Local	GHS-TI-301	Blower Inlet Temperature		50 - 90 °F	42	42
Blower Inlet	LOCAI	0113-11-301	Gas Composition - % Methane	-	50-50 1	11.0%	11.4%
			Gas Composition - % CO2	-		11.3%	11.4%
	Local	Sample Port	Gas Composition - % Oxygen	-		12.9%	12.6%
			Gas Composition - % Balance	-		64.8%	64.1%
	Local	GHS-PDI-301	Demister Differential Pressure	-	1-2 in w.c	0.6	
Demister	Local	0115-1 01-501	Slight Glass: Liquid Present	-	1-2 m w.c		
Definister	HMI	LS-701	Level Indication	-	_		
	HMI	PT-302	Blower Outlet Flow Pressure	-	-	0.1	0.1
-	HMI	TE-302	Blower Outlet Temperature	-	50 - 90 °F	49	49
-	HMI	PDT-301	Blower Outlet Flow Differential Pressure	-	1-2 in w.c	0.62	0.62
-	HMI	PD1-501	Blower Outlet Flow Biterential Pressure	-	180 - 190 scfm	117	117
-	Local	- GHS-PI-302	Blower Outlet Flow Pressure	-	190 - 190 SCIIII	0.19	
Blower Outlet	Local	GHS-TI-302	Blower Outlet Temperature	-	50 - 90 °F	46	
-	LUCAI	0113-11-302	Gas Composition - % Methane	-	30-30 P	11.0%	
			Gas Composition - % CO2	-		11.0%	
	Local	Sample Port	Gas Composition - % Oxygen	-		12.9%	
			Gas Composition - % Balance	-		64.7%	
	Local	North	North Branch Vacuum	-	6 - 7 in w.c.	-6.28	-5.60
-	Local	North	Valve Position	6 turns open /6	6 turns open	-0.28	-5.80
-	LUCAI	NOTUT		o turns open /o	o turns open		22.2%
		North Comple	Gas Composition - % Methane	-		19.4%	22.2%
	Local	North Sample Port	Gas Composition - % CO2	-		17.9% 6.4%	4.2%
		Port	Gas Composition - % Oxygen Gas Composition - % Balance	-		56.3%	4.2%
	Lasal	Control		-	6 - 7 in w.c.		-5.4
	Local	Central	Central Branch Vacuum			-6.28	-5.4
-	Local	Central	Valve Position Gas Composition - % Methane		6 turns open	7.3%	7.3%
Branch Headers		Central	Gas Composition - % Methane Gas Composition - % CO2	-		7.5%	7.3%
	Local	Sample Port		-		15.1%	15.0%
		Sample Port	Gas Composition - % Oxygen Gas Composition - % Balance	-		70.1%	70.1%
	Local	South			6 7 in w.c	-6.30	-5.80
-	Local	South	South Branch Vacuum Valve Position	-	6 - 7 in w.c.	-6.30	-5.80
-	Local	South		-	6 turns open	13.7%	6 14.5%
		South Samela	Gas Composition - % Methane	-		13.7%	
	Local	South Sample	Gas Composition - % CO2 Gas Composition - % Oxygen	-		14.5%	15.3% 11.1%
		Port	Gas Composition - % Oxygen			11.3%	11.1%

	A	ir Compress	or System ^{3,}	^{5,6} - AIR CC	MPRESSOR	R SYSTEM OFFLI	NE		
		Pres	sure Set Poin	ts		Condensate Set Points			
Operational Settings	Tank Low (psi)	Tank High (psi)	Well Field (psi)	On (min.)	Off (min.)	Open (sec.)	Closed (min.)	Test O	peration
				NOT OPER			(yes	s/no)	
Air Dryer System ⁴ - AIR DRYER OFFLINE				Electr	ical Status		HMI Hea	ter/Air Condit	ioner
System Operation	nal:	NO	3-Phas	e Power Indi	cator:	<u>3</u> of 3	Operational		
Condensate Drain Ope	erational:	NO	GFI 1 Status:		GREEN	Temperature			
Alarm Indictor	:	NO	GFI 2 Status:		GREEN	Filter Cleaned			
Condenser Clean	ed²:	NO	Leachate Tank/Loadout						
Dew Point Inc	licator: N/A		Liquid Level (inches):			32.75 inches	Visual Check:		
			Contact W	DNR if level	is above	71 inches	Evidence of Tank Overflow: no		no
			Leak Dete	ction Test Co	ompleted:	NO	 Inspect concrete pad and storm sewer 		orm sewer
	Indicate which bars red (R) and note		Overfill Float Functional			YES for damage or backup			
니니니니니니니니	rea (it) and note	(r) ir nasning.				Exhaust S	tack		
			Drain Stac	k Sump (vol.	removed)	NONE	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:

Air compressor and air dryer offline, leachate tank is @ 32.75"

NA - Not Applicable

NM - Not Measured

Data Entered By: J. Roelke 11/15/2022 Checked By: A. Ruetten 11/23/2022

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

				REF	USE HIDEAW	AY GAS MONI	TORING PROG	GRAM (EPA	ID: WID98061	0604, Facility	1D: 1131120 STARTING	10)	ENDING	
TECHNI	CIAN(S):		J. Roelke							DATE:	11/15/22		11/15/22	
GAS/INS	TRUMENT	TYPE:	GEM 2000							TIME:	11:09 AM	-	2:10:00 PM	
SERIAL	NO.:		11668					BAR	DMETRIC PRI	ESSURE [25]	30.26	-	30.21	
DATE LA	AST CALIBR	RATED:	11/15/2022			BAROMETRIC TREND [46381] falling				-	falling			
NETHO	D:		Standard Cali	bration Gases		WEATHER CONDITIONS: light snow				-	light snow			
PRESSU	IRE INSTRU	JMENT:	GEM 2000			TEMPERATURE [21] 32				-	32			
Project #					GROUND CONDITIONS [No DNR ID]: moist moist									
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 Differential Pressure (in. W.C.)	Estimated Gas Flow (scfm)	Methane	Carbon Dioxide (%, by vol.)	Oxygen (%, by vol.)	Initial Valve Setting (% open)	Final Valve Setting (% open)	Pump Counter
GW-1	11:59	44	-4.20	-0.50	0.01	-0.5	0.01	NA	12.4	28.1	0.1	0.50 / 12	0.50 / 12	Counter #: (2)
GW-2	12:05	32	-5.90	-0.30	0.01	-0.3	0.01	NA	15.8	13.0	14.3	0.25 / 12	0.25 / 12	Counter #: (2)
GW-3	12:11	52	-5.90	-4.70	0.04	-5.3	0.05	NA	35.6	35.1	0.0	3.00 / 12	5.00 / 12	Counter #: (2)
GW-4	12:25	32	-5.80	-0.05	0.01	-0.05	0.01	NA	22.5	19.5	7.2	0.125 / 12	0.125 / 12	Counter #: (2)
GW-5	12:29	34	-5.80	-0.20	0.01	-2.9	0.01	NA	34.1	22.2	6.0	0.125 / 12	0.500 / 12	Counter #: (2)
GW-6	13:11	40	-6.00	-0.10	0.01	-0.10	0.01	NA	25.6	32.3	0.4	0.75 / 12	0.75 / 12	Counter #: (2)
GW-7	12:39	42	-5.90	-5.80	0.01	-5.90	0.01	NA	37.6	30.7	0.5	4.500 / 12	6.00 / 12	Counter #: (2)
GW-8	12:44	38	-5.80	-5.80	0.01	-5.80	0.01	NA	53.3	19.1	3.1	3.00 / 12	4.00 / 12	Counter #: (2)
GW-9	12:49	36	-5.70	-0.10	0.01	-0.1	0.01	NA	20.9	10.9	3.3	0.250 / 12	0.250 / 12	Counter #: (2)
GW-10	13:19	48	-5.70	-0.90	0.01	-0.90	0.01	NA	26.5	21.5	1.7	0.66 / 12	0.66 / 12	Counter #: (2)
GW-11	12:57	42	-4.30	-3.50	0.01	-3.50	0.01	NA	11.4	4.6	15.5	1.00 / 12	0.75 / 12	Counter #: (2)
GW-12	13:27	42	-5.30	-2.4	0.01	-2.4	0.01	NA	26.2	16.7	10.1	2.500 / 12	2.500 / 12	Counter #: (2)
GW-13	13:05	40	-6.20	-0.5	0.01	-0.50	0.01	NA	22.0	25.5	0.3	0.330 / 12	0.330 / 12	Counter #: (2)

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

(2): Air compressor system was down and no counter numbers were reported. "NA" = Data Not Available

"NM" = Not Monitored

Data Entered By: J. Roelke 11/21/22 Checked By: A. Ruetten 11/23/2022

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

RC Operator Nam Date: 11/29/2022		NC					
			Arrival Time: 9:05	Departure Time:	10:00		
		Site Conditio			Equipment		
Weat	her Conditior	IS:	cloudy, light mist Gas/Ins	strument Type:	GEM 2000		
Ground Condition:			moist Seri	al Number:	11668		
Baron	netric Pressui	e:	29.61 in. Hg. Date La	ast Calibrated:	11/29/2022		
Barometr	ric Pressure T	rend:	falling	Aethod:	standard field calibra	ation gas	
Te	emperature:		42 Pressu	re Instrument:	GEM 2000		
				1			
System	Location	Tag #	Landfill Gas Extraction System Equipment Description	n ¹ Set Point	Typical Range	Field Reading	
System	Location	Tug #	· · · · ·	Jetroint	3 - 4 amps	3.28	
	Domoto		Amperage Speed	-		1304.16	
	Remote			-	1800 - 1900 rpm		
Blower Motor		GHS-BLR-301	Frequency	-	30 - 35 Hz	21.87	
	HMI	4	Amperage	-	3 -4 amps	3.2	
	HMI	-	Speed	-		28	
	HMI		Hours	-	-	7646	
lower Operating	(yes/no). Not	e excessive nois	e or issues observed.		no	ne	
	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	46	
	Local	GHS-PI-301	Blower Inlet Vacuum	7 in. w.c.	7 in. w.c.	-6.8	
Diaman Inlat	Local	GHS-TI-301	Blower Inlet Temperature	-	50 - 90 °F	40	
Blower Inlet			Gas Composition - % Methane	-		11.2%	
			Gas Composition - % CO2	-		11.4%	
	Local	Sample Port	Gas Composition - % Oxygen	-		12.8%	
			Gas Composition - % Balance	-		64.6%	
	Local	GHS-PDI-301	Demister Differential Pressure	-	1-2 in w.c	0.6	
Demister	Local	0.10 1 0 001	Slight Glass: Liquid Present	-	-	no	
Dernister	HMI	LS-701	Level Indication	-	-	none	
	HMI	PT-302	Blower Outlet Flow Pressure	-		0.1	
	HMI	TE-302	Blower Outlet Temperature		50 - 90 °F	51	
	HMI	PDT-301	Blower Outlet Flow Differential Pressure	-	1-2 in w.c	0.67	
	HMI	FD1-301	Blower Outlet Flow Rate	-	180 - 190 scfm	122	
		- GHS-PI-302			160 - 190 SCIIII		
Blower Outlet	Local		Blower Outlet Flow Pressure	-	-	0.09	
	Local	GHS-TI-302	Blower Outlet Temperature	-	50 - 90 °F	48	
			Gas Composition - % Methane	-		11.2%	
	Local	Sample Port	Gas Composition - % CO2	-		11.4%	
			Gas Composition - % Oxygen	-		13.2%	
			Gas Composition - % Balance	-		64.2%	
	Local	North	North Branch Vacuum	-	6 - 7 in w.c.	-6.2	
	Local	North	Valve Position	6 turns open /6	6 turns open	6	
			Gas Composition - % Methane	-		24.0%	
	Local	North Sample	Gas Composition - % CO2	-		21.3%	
	Local	Port	Gas Composition - % Oxygen	-		4.2%	
			Gas Composition - % Balance	-		50.5%	
	Local	Central	Central Branch Vacuum	-	6 - 7 in w.c.	-6.2	
	Local	Central	Valve Position	-	6 turns open	6	
			Gas Composition - % Methane	-		7.0%	
ranch Headers		Central	Gas Composition - % CO2	-		7.0%	
	Local	Sample Port	Gas Composition - % Oxygen	-		15.7%	
			Gas Composition - % Balance	-		70.3%	
	Local	South	South Branch Vacuum	-	6 - 7 in w.c.	-6.2	
		South	Valve Position	-	6 turns open	6	
Local		5000	Gas Composition - % Methane	-	o turno open	13.7%	
			Gua composition - /o Methane				
		South Sample	Gas Composition - % CO2	_		14 6%	
	Local	South Sample Port	Gas Composition - % CO2 Gas Composition - % Oxygen	-		14.6% 11.4%	

1

	Ai	r Compress	or System ¹	^{,3,4} - AIR CO	MPRESSO	R SYSTEM OFFLI	NE	
		Pres	sure Set Poin	ts		Condensate Set Points		
Operational Settings	Tank Low (psi)	Tank High (psi)	Well Field (psi) On (min.) Off (min.)		Open (sec.)	Closed (min.)	Test Operation	
		0	ff Line - NM			NM	NM	NM
Air Dryer Syst	Air Dryer System ² Off Line			Electr	ical Status		HMI Heat	er/Air Conditioner
System Operatio	nal:	YES	3-Phase	e Power Ind	cator:	of 3	Operational	on
Condensate Drain Ope	erational:	YES	GFI 1 Status:			(Green / Red)	Temperature	44
Alarm Indictor	:	OFF	GFI 2 Status:		(Green / Red)	Filter Cleaned	n0	
Condenser Clean	ed ² :	NO	Leachate Tank/Loadout					
Dew Point I	ndicator:		Liquid Level (inches):			35.25"	Visual Check:	
			Contact W	/DNR if level	is above	71	Evidence of Tank Overflow: none	
			Leak Dete	ction Test Co	ompleted:	No	 Inspect concrete pad and storm sewer 	
	Indicate which bars or red (R) and note		Overfill	Overfill Float Functional ⁵ :			for damage or backup	
		- (, <i>,</i> , , , , , , , , , , , , , , , , ,				Exhaust St	ack	
			Drain Stac	Drain Stack Sump (vol. removed)			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: All heat trace wiring is on and warm to the touch. Drained 0.25 gallons from flare stack.

NM - Not Measured

2

Data Entered By:J. Roelke 11/29/2022Checked By:A. Ruetten 12/6/2022

Page 2 of 2

		Cap Inspection	
	nspection Details		Site Conditions
Inspector :	John Roelke	Weather Conditions:	light snow
Date:	11/15/2022	Ground Condition:	moist
Time:	14:15	Temperature:	32 F
√ote: Photograph all issues e	ncountered during inspection		
Note: Keep vehicle traffic to	gravel roadways, avoid driving on the lar	ndfill surface	
s the landfill surface covered	d in snow (Y/N)? Yes, light snow cover -	Inspection conducted	
nspect the landfill surface w	hen not covered in snow. Describe the	condition and any issues observed for each o	category below:
Cap integrity: Cap integrity is	s acceptable, with no changes from prev	ious condition.	
Condition of drainage ways:			
	rth portion shows signs of vegetation die	e-off. see Photo 1. During November's inspecti	on standing/slow to drain water was observed at the surface.
			es during 2020-2021 grading work at the Site. The final post-
construction survey showed			
East Drainage Ditch - TRC cor	tinues to monitor the riprap along the w	vest embankment of the northern culvert and	some riprap appears to be eroding and beginning to fail, see
Photo 2. At the north portion	n of the drainage ditch, exposed soil was	re-seeded and ground cover was laid down at	in October 2022, see Photo 3 and 4. Natural flow of the surface
water is draining into the sed	iment pond.		
Beyond the above noted issu	es, drainage ways are acceptable, with n	ninimal to no changes from previous condition	S.
•			
Extent of vegetation cover:	Vegetation cover is acceptable over the		eded and ground cover was applied, as shown in photos 3-5.
Extent of vegetation cover: Burrowing areas were filled in	Vegetation cover is acceptable over the n with soil at gas extraction wells GW-2,	majority of the Site. Various areas were rese GW-4, and GW-12, see photos 6-8. No additic	eded and ground cover was applied, as shown in photos 3-5.
Extent of vegetation cover: Burrowing areas were filled in	Vegetation cover is acceptable over the	majority of the Site. Various areas were rese GW-4, and GW-12, see photos 6-8. No additic	eded and ground cover was applied, as shown in photos 3-5.
Extent of vegetation cover: Burrowing areas were filled in Significant erosion: No evide	Vegetation cover is acceptable over the n with soil at gas extraction wells GW-2,	majority of the Site. Various areas were rese GW-4, and GW-12, see photos 6-8. No additic erved.	eded and ground cover was applied, as shown in photos 3-5.
Extent of vegetation cover: Burrowing areas were filled in Significant erosion: No evide	Vegetation cover is acceptable over the n with soil at gas extraction wells GW-2, ence of significant erosion at the Site obs	majority of the Site. Various areas were rese GW-4, and GW-12, see photos 6-8. No additic erved.	eded and ground cover was applied, as shown in photos 3-5.
Extent of vegetation cover: Burrowing areas were filled in Significant erosion: No evide Repeated erosion: No evider Vegetation die-off:	Vegetation cover is acceptable over the n with soil at gas extraction wells GW-2, ence of significant erosion at the Site obs nce repeated erosion at the Site observe	majority of the Site. Various areas were rese GW-4, and GW-12, see photos 6-8. No additic erved. d.	eded and ground cover was applied, as shown in photos 3-5.
Extent of vegetation cover: Burrowing areas were filled in Significant erosion: No evide Repeated erosion: No evide Vegetation die-off: West Drainage Ditch - The no	Vegetation cover is acceptable over the n with soil at gas extraction wells GW-2, ence of significant erosion at the Site observe nce repeated erosion at the Site observe orth portion shows signs of vegetation d	majority of the Site. Various areas were rese GW-4, and GW-12, see photos 6-8. No additio erved. d. ie off, see Photo 1. Ponding/slow-draining war	eded and ground cover was applied, as shown in photos 3-5. onal burrowing was observed. ter was observed in this area during the inspection.
Extent of vegetation cover: Burrowing areas were filled in Significant erosion: No evide Repeated erosion: No evide Vegetation die-off: West Drainage Ditch - The no	Vegetation cover is acceptable over the n with soil at gas extraction wells GW-2, ence of significant erosion at the Site observe nce repeated erosion at the Site observe orth portion shows signs of vegetation d	majority of the Site. Various areas were rese GW-4, and GW-12, see photos 6-8. No additic erved. d.	eded and ground cover was applied, as shown in photos 3-5. onal burrowing was observed. ter was observed in this area during the inspection.
Extent of vegetation cover: Burrowing areas were filled in Significant erosion: No evide Repeated erosion: No evide Vegetation die-off: West Drainage Ditch - The no East Drainage Ditch - Light e	Vegetation cover is acceptable over the n with soil at gas extraction wells GW-2, ence of significant erosion at the Site observe nce repeated erosion at the Site observe orth portion shows signs of vegetation d rosion was previously observed along a r	majority of the Site. Various areas were rese GW-4, and GW-12, see photos 6-8. No additio erved. d. ie off, see Photo 1. Ponding/slow-draining war north portion of the drainage ditch. TRC resee	eded and ground cover was applied, as shown in photos 3-5. onal burrowing was observed. ter was observed in this area during the inspection.
Extent of vegetation cover: Burrowing areas were filled in Significant erosion: No evide Repeated erosion: No evide Vegetation die-off: West Drainage Ditch - The no East Drainage Ditch - Light e Maintain surface water conv	Vegetation cover is acceptable over the n with soil at gas extraction wells GW-2, ence of significant erosion at the Site observe nce repeated erosion at the Site observe orth portion shows signs of vegetation d rosion was previously observed along a r	majority of the Site. Various areas were rese GW-4, and GW-12, see photos 6-8. No additio erved. d. ie off, see Photo 1. Ponding/slow-draining war north portion of the drainage ditch. TRC resee y completing the following:	eded and ground cover was applied, as shown in photos 3-5. onal burrowing was observed. ter was observed in this area during the inspection.
Extent of vegetation cover: Burrowing areas were filled in Significant erosion: No evide Repeated erosion: No evide Vegetation die-off: West Drainage Ditch - The no East Drainage Ditch - Light e Maintain surface water conv Inspect drainage ditches for	Vegetation cover is acceptable over the n with soil at gas extraction wells GW-2, ence of significant erosion at the Site observe nce repeated erosion at the Site observe orth portion shows signs of vegetation d rosion was previously observed along a r reyances and the sedimentation basin b erosion, blockages, and vegetation, des	majority of the Site. Various areas were rese GW-4, and GW-12, see photos 6-8. No additio erved. d. ie off, see Photo 1. Ponding/slow-draining war north portion of the drainage ditch. TRC resee y completing the following: cribe and note any issues:	eded and ground cover was applied, as shown in photos 3-5. onal burrowing was observed. ter was observed in this area during the inspection. ded the area in October 2022.
Extent of vegetation cover: Burrowing areas were filled in Significant erosion: No evide Repeated erosion: No evide Vegetation die-off: West Drainage Ditch - The no East Drainage Ditch - Light e Maintain surface water conv Inspect drainage ditches for	Vegetation cover is acceptable over the n with soil at gas extraction wells GW-2, ence of significant erosion at the Site observe nce repeated erosion at the Site observe orth portion shows signs of vegetation d rosion was previously observed along a r reyances and the sedimentation basin b erosion, blockages, and vegetation, des	majority of the Site. Various areas were rese GW-4, and GW-12, see photos 6-8. No additio erved. d. ie off, see Photo 1. Ponding/slow-draining war north portion of the drainage ditch. TRC resee y completing the following:	eded and ground cover was applied, as shown in photos 3-5. onal burrowing was observed. ter was observed in this area during the inspection. ded the area in October 2022.
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Site Location: Project No.: **Client Name:** Wisconsin Department of Natural Refuse Hideaway Landfill TRC # 457573 Resources (WDNR) Middleton, WI Photo No. Date 11/15/2022 1 Description Western Drainage Ditch: North portion shows signs of vegetation die off as well as standing/slow to drain water at the surface at the time of the inspection. TRC reseeded the area in October 2022. The ground surface was partially obscured by light snow cover during inspection. Date 2 11/15/2022





Wisconsin	lient Name: Department of Natura purces (WDNR)	Site Location: Refuse Hideaway Landfill Middleton, WI	Project No.: TRC # 457573	
Photo No. 3 Description	Date 11/15/2022 <u>e Ditch</u> : Select seeded 21 construction bare soil. ground cover FRC in October shows natural ce water into nd. The was partially t snow cover			
			the second	





	Client Name:		Site Location:	Project No.:
Wisconsin Department of Natur Resources (WDNR)			Refuse Hideaway Landfill Middleton, WI	TRC # 457573
Photo No.	Date			
5	11/15/2022			
Description			AND DESCRIPTION	
Central Landfill: Select areas			I I	
that were seeded following the				
2021 construction event contained bare soil. TRC				Alt all all starting
	reseeded the areas in October		and the second second	
2022. The ground surface was				CALCORD STREET
partially obscured by light snow				and the second sec
cover during inspection.				
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				4
Photo No.	Date		XXX - XXX	
6	11/15/2022			
Description				
Southern Landfi	ill Extents:		THE AVEN	KANA
Burrowing filled GW-2. Ground	IN WITH SOIL AT		THANK 22	
obscured by light	nt snow cover.		The second second	
				B TRAN
			A Mike J.	C MARKEN S
			La a march	
				AC AN
				The second second
			all the second	
			P. A.L.	
L			A CONTRACTOR OF THE OWNER OF THE OWNER OF	



	Client Nome		Site Location:	Droject No.	
Client Name:			Project No.:		
Wisconsin Department of Natural Resources (WDNR)		Refuse Hideaway Landfill Middleton, Wl	TRC # 457573		
Photo No. 7	Date 11/15/2022				
Description				XXXXXX	
Southern Landfill Extents:					
Burrowing filled with soil at			DE HINE WE DIVE		
GW-4. Ground obscured by lig	partially				
Photo No.	Date				
8	11/15/2022				
Description			A State of the second second		
Northern Landf	ill Extents:		President President		
Burrowing filled	in with soil at		- encourter		
GW-12. Ground partially			A DE LAND AND A LAND		
obscured by light snow cover.				HA WAY	
			Star Aller		
			E. HALL		
			A Constant	A CLASS CONTRACTOR	
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