708 Heartland Trl.
Suite 3000
Madison, WI 53717

T 608.826.3600
TRCcompanies.com

July 22, 2022

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

Subject: Refuse Hideaway Landfill
June 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 June 2022.

- June 8, 2022 – Biweekly/Monthly Site Visit
- June 9, 2022 – Gas Probe Monitoring
- June 20, 2022 – Biweekly Site Visit and Monthly Cap Inspection

Gas Extraction System

The gas extraction system (GES) was operational through June 29, 2022 when it was shutdown due to an issue with the electrical service. Van Ert electrical was contacted and completed a site visit on June 30, 2022 and confirmed that one or all three of the onsite transformers are not functioning and the service is not able to provide 480 volts three-phase as designed. Van Ert is looking into options for replacing the transformer(s) and TRC will continue to provide updates to the WDNR.

Perennial Energy (PEI) was onsite and completed the installation of heat trace and insulation on the GES between June 28 and June 30, 2022. A documentation letter of the work will be provided to the WDNR as a separate submittal.

Perimeter gas probe monitoring was conducted at the site on June 9, 2022, and the monitoring data is included in the attachments.

Leachate Extraction System

The leachate extraction system remained off during the month of June. System repair was completed by PEI, in conjunction with the GES heat trace and insulation work. A new pump head was installed on the compressor system, however due to the site electrical issue, the system could not be restarted.

Cap Inspection

TRC conducted a monthly inspection of the landfill cap and stormwater conveyance features on June 20, 2022. An inspection form and photo log are attached with further details.

Monitoring results collected during the biweekly/monthly site visits completed in June 2022 are attached.

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

Sincerely,

TRC

Andrew Stehn, PE
Project Manager

Attachments: June 2022 Monitoring Results

June 2022 Monitoring Results

June 2022 Monitoring Results

REFUSE HIDEAWAY LANDFILL
GAS PROBE MONITORING FORM

TECHNICIAN(S): J. Roelke

DATE: 6/9/2022

START TIME: 7:18 AM

END TIME: 11:50 AM

GAS/INSTRUMENT TYPE: **GEM 2000**

SERIAL NO.: 11668

WEATHER CONDITIONS: clear

DATE LAST CALIBRATED: 6/8/2022

TEMPERATURE: 53

METHOD: Standard Calibration Gases

BAROMETRIC PRESSURE & TREND: 29.96 in. Hg, rising

PRESS INSTRUMENT : Manometer

GROUND CONDITIONS: saturated

GAS PROBE NAME	Time	PRESSURE (in. WC)	METHANE (% LEL)	METHANE (%, by vol.)	CARBON DIOXIDE (%, by vol.)	OXYGEN (%, by vol.)	COMMENTS
GP-1D	7:49	0.0	0	0.0	2.4	17.5	(2)
GP-1S	7:51	0.0	0.0	0.0	0.0	20.8	(2)
GP-2D	7:53	0.00	0	0.0	0.8	19.9	(1)
GP-2S	7:56	0.0	0.0	0.0	2.2	18.0	(1)
GP-3	8:00	0.0	>5	6.3	7.5	0.0	(1) Stable readings at 2 minutes.
GP-4	8:06	0.0	0.0	0.0	1.2	18.3	(1)
GP-5	8:10	0.0	0.0	0.0	1.8	18.7	(2)
GP-6	8:14	0.0	0.0	0.0	0.2	20.5	(1)
GP-7	8:20	0.0	0.0	0.0	1.0	18.1	(2)
GP-8	8:28	0.0	0.0	0.0	3.2	17.6	(2)
GP-9	8:31	0.0	0.0	0.0	1.7	18.8	(1)
GP-10	8:34	0.0	0.0	0.0	2.3	17.0	(1)
GP-11D	8:38	0.0	0	0.0	1.1	18.5	(2)
GP-11S	8:40	0.0	0.0	0.0	1.5	18.9	(2)
GP-12D	8:44	0.0	0.8	0.4	1.9	17.3	(1)
GP-12S	8:46	0.0	0	0.0	0.4	20.3	(1)
GP-13D	8:49	0.0	0	0.0	0.6	20.1	(2)
GP-13S	8:51	0.0	0.0	0.0	1.1	18.9	(2)
GP-16D	9:08	0.0	0.0	0.0	0.9	20.0	(2)
GP-16S	9:10	0.0	0.0	0.0	0.4	20.2	(2)

GAS PROBE NAME	Time	PRESSURE (in. WC)	METHANE (% LEL)	METHANE (%, by vol.)	CARBON DIOXIDE (%, by vol.)	OXYGEN (%, by vol.)	COMMENTS
GP-17D	9:01	0.0	0	0.0	2.9	16.9	(1)
GP-17M	9:03	0.0	0.0	0.0	0.2	20.6	(1)
GP-17S	9:05	0.0	0.0	0.0	0.8	20.1	(1)
GP-18D	9:14	0.0	0.0	0.0	0.0	20.8	(2)
GP-18M	9:16	0.0	0.0	0.0	0.0	20.8	(2)
GP-18S	9:18	0.0	0.0	0.0	0.3	20.4	(2)
GP-19$^{85-100}$	10:01	0.0	0.0	0.0	0.2	20.5	(1)
GP-19$^{50-70}$	10:03	0.0	0.0	0.0	1.9	18.7	(1)
GP-19$^{25-40}$	10:05	0.0	0.0	0.0	1.0	19.8	(1)
GP19$^{2-15}$	10:07	0.0	0.0	0.0	0.5	20.2	(1)
GP-20$^{85-100}$	9:50	0.0	0.0	0.0	0.5	20.1	(2)
GP-20$^{50-70}$	9:52	0.0	0.0	0.0	0.4	20.3	(2)
GP-20$^{25-40}$	9:54	0.0	0.0	0.0	0.8	20.0	(2)
GP-20$^{2-15}$	9:56	0.0	0.0	0.0	1.1	19.7	(2)
GP-21$^{85-100}$	9:41	0.09	0.0	0.0	0.5	20.2	(2)
GP-21$^{50-70}$	9:43	0.0	0.0	0.0	0.4	20.4	(2)
GP-21$^{25-40}$	9:45	0.0	0.0	0.0	0.1	20.7	(2)
GP-21$^{2-15}$	9:47	0.0	0.0	0.0	0.6	20.0	(2)
GP-22$^{85-100}$	10:12	0.0	0.0	0.0	1.8	18.7	(2)
GP-22$^{50-70}$	10:14	0.0	0.0	0.0	0.6	20.1	(2)
GP-22$^{25-40}$	10:16	0.0	0.0	0.0	0.9	19.8	(2)
GP-22$^{2-15}$	10:18	0.0	0.0	0.0	1.4	19.1	(2)
GP-23$^{85-100}$	10:30	0.0	0.0	0.0	0.2	20.7	(2)
GP-23$^{50-70}$	10:32	0.0	0.0	0.0	0.3	20.5	(2)
GP-23$^{25-40}$	10:34	0.0	0.0	0.0	0.0	20.8	(2)
GP-23$^{2-15}$	10:36	0.0	0.0	0.0	0.1	20.7	(2)
GP-24$^{85-100}$	10:42	0.0	0.0	0.0	0.2	20.6	(2)
GP-24$^{50-70}$	10:44	0.0	0.0	0.0	1.3	19.7	(2)
GP-24$^{25-40}$	10:46	0.0	0.0	0.0	0.3	20.4	(2)
GP-24$^{2-15}$	10:48	0.0	0.0	0.0	1.5	19.4	(2)

GAS PROBE NAME	Time	PRESSURE (in. WC)	METHANE (% LEL)	METHANE (%, by vol.)	CARBON DIOXIDE (%, by vol.)	OXYGEN (%, by vol.)	COMMENTS
GPW-1D	11:37	0.37	0.0	0.0	1.3	19.4	(1)
GPW-1M	11:39	0.35	0.0	0.0	1.6	19.1	(1)
GPW-1S	11:41	0.10	0.0	0.0	1.1	19.7	(1)
G-1D	7:41	0.00	0.0	0.0	0.0	20.8	(1)
G-1S	7:43	0.00	0.0	0.0	0.8	20.0	(1)
G-2D	8:56	0.00	0.0	0.0	1.1	19.7	(1)
G-2S	8:58	0.0	0.0	0.0	0.3	20.5	(1)
G-5	8:24	0.0	0.0	0.0	2.4	18.1	(1)
G-6	7:26	0.0	0.0	0.0	0.0	20.8	(1)
G-8	9:38	0.0	0.0	0.0	0.0	20.8	(1)
G-9	9:29	0.0	0.0	0.0	0.7	20.4	(1)
G-10	10:57	0.40	0.0	0.0	0.0	20.8	(1)
Speedway Office	7:46	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 6/9/2022
Checked by: A. Ruetten 6/15/22

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

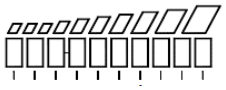
TRC Operator Name: John Roelke		
Date: 6/20 /2022	Arrival Time: 8:50	Departure Time: 10:45

Site Conditions		Equipment	
Weather Conditions:	Clear	Gas/Instrument Type:	GEM 2000
Ground Condition:	Moist	Serial Number:	11668
Barometric Pressure:	30.05	Date Last Calibrated:	6/20/2022
Barometric Pressure Trend:	Steady	Method:	Standard field calibration gas
Temperature:	75	Pressure Instrument:	GEM 2000

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	3.25
			Speed	-	1800 - 1900 rpm	1293.79
			Frequency	-	30 - 35 Hz	21.69
	HMI		Amperage	-	3 -4 amps	3.2
	HMI		Speed	-		28
	HMI		Hours	-	-	6138
Blower Operating (yes/no). Note excessive noise or issues observed.						none
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	73
	Local	GHS-PI-301	Blower Inlet Vacuum	7 in. w.c.	7 in. w.c.	-6.8
	Local	GHS-TI-301	Blower Inlet Temperature	-	50 - 90 °F	68
	Local	Sample Port	Gas Composition - % Methane	-		9.8%
			Gas Composition - % CO2	-		10.3%
			Gas Composition - % Oxygen	-		13.0%
			Gas Composition - % Balance	-		66.9%
Demister	Local	GHS-PDI-301	Demister Differential Pressure	-	1-2 in w.c	0.65
	Local		Slight Glass: Liquid Present	-	-	0
	HMI	LS-701	Level Indication	-	-	--
Blower Outlet	HMI	PT-302	Blower Outlet Flow Pressure	-	-	0.0
	HMI	TE-302	Blower Outlet Temperature	-	50 - 90 °F	88
	HMI	PDT-301	Blower Outlet Flow Differential Pressure	-	1-2 in w.c	0.62
	HMI	-	Blower Outlet Flow Rate	-	180 - 190 scfm	114
	Local	GHS-PI-302	Blower Outlet Flow Pressure	-	-	0.08
	Local	GHS-TI-302	Blower Outlet Temperature	-	50 - 90 °F	86
	Local	Sample Port	Gas Composition - % Methane	-		9.8%
			Gas Composition - % CO2	-		10.3%
			Gas Composition - % Oxygen	-		12.7%
			Gas Composition - % Balance	-		67.2%
Branch Headers	Local	North	North Branch Vacuum	-	6 - 7 in w.c.	-6.4
	Local	North	Valve Position	6 turns open /6	6 turns open	6
	Local	North Sample Port	Gas Composition - % Methane	-		29.8%
			Gas Composition - % CO2	-		21.4%
			Gas Composition - % Oxygen	-		4.6%
			Gas Composition - % Balance	-		44.2%
	Local	Central	Central Branch Vacuum	-	6 - 7 in w.c.	-6.3
	Local	Central	Valve Position	-	6 turns open	6
	Local	Central Sample Port	Gas Composition - % Methane	-		5.0%
			Gas Composition - % CO2	-		5.9%
			Gas Composition - % Oxygen	-		15.3%
			Gas Composition - % Balance	-		73.8%
	Local	South	South Branch Vacuum	-	6 - 7 in w.c.	-6.4
	Local	South	Valve Position	-	6 turns open	6
	Local	South Sample Port	Gas Composition - % Methane	-		12.6%
			Gas Composition - % CO2	-		13.9%
			Gas Composition - % Oxygen	-		10.7%
			Gas Composition - % Balance	-		62.8%

Air Compressor System[1,3,4] - AIR COMPRESSOR SYSTEM OFFLINE								
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
	Off Line - NM					NM	NM	NM

Air Dryer System[2] Off Line		Electrical Status		HMI Heater/Air Conditioner	
System Operational:	YES	3-Phase Power Indicator:	_____ of 3	Operational	
Condensate Drain Operational:	YES	GFI 1 Status:	(Green / Red)	Temperature	
Alarm Indictor:	OFF	GFI 2 Status:	(Green / Red)	Filter Cleaned	
Condenser Cleaned[2]:	NO	**Leachate Tank/Loadout**			
Dew Point Indicator:		Liquid Level (inches):	42.75	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:	none
		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)	.5 gallon	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:
NM - Not Measured

Data Entered By: J. Roelke 6/20/22
Checked By: A. Stehn 7/21/2022

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

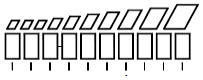
TRC Operator Name: John Roelke
Date: 6/8/2022 **Arrival Time: 13:03** **Departure Time: 15:30**

Site Conditions	Initial[1]	Final[2]	Equipment	
Weather Conditions:	cloudy, rain stopped	cloudy	Gas/Instrument Type:	GEMS 2000
Ground Condition:	saturated	saturated	Serial Number:	11668
Barometric Pressure:	29.88	29.87	Date Last Calibrated:	6/8/2022
Barometric Pressure Trend:	steady	falling	Method:	Standard field calibration
Temperature:	60	61	Pressure Instrument:	Dwyer Series 475 Manometer

Landfill Gas Extraction System[3]

System	*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	3.25	--
			Speed	-	1800 - 1900 rpm	1169	--
			Frequency	-	30 - 35 Hz	19.6	--
	HMI		Amperage	-	3 -4 amps	3.2	--
	HMI		Speed	-		24	--
	HMI		Hours	-	-	5855	--
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.	7.0	7
	HMI	TE-301	Blower Inlet Temperature	-	50 - 90 °F	63	--
	Local	GHS-PI-301	Blower Inlet Vacuum	7 in. w.c.	7 in. w.c.	-6.7	-6.7
	Local	GHS-TI-301	Blower Inlet Temperature	-	50 - 90 °F	58	60
	Local	Sample Port	Gas Composition - % Methane	-		11.9%	12.0%
			Gas Composition - % CO2	-		12.3%	11.9%
			Gas Composition - % Oxygen	-		12.2%	12.1%
			Gas Composition - % Balance	-		63.6%	64.0%
Demister	Local	GHS-PDI-301	Demister Differential Pressure	-	1-2 in w.c	4	--
	Local		Slight Glass: Liquid Present	-	-	--	--
	HMI	LS-701	Level Indication	-	-	--	--
Blower Outlet	HMI	PT-302	Blower Outlet Flow Pressure	-	-	0	0
	HMI	TE-302	Blower Outlet Temperature	-	50 - 90 °F	67	68
	HMI	PDT-301	Blower Outlet Flow Differential Pressure	-	1-2 in w.c	0.47	0.48
	HMI	-	Blower Outlet Flow Rate	-	180 - 190 scfm	101	101
	Local	GHS-PI-302	Blower Outlet Flow Pressure	-	-	-6.7	--
	Local	GHS-TI-302	Blower Outlet Temperature	-	50 - 90 °F	64	64
	Local	Sample Port	Gas Composition - % Methane	-		11.9%	12.0%
			Gas Composition - % CO2	-		12.3%	12.2%
			Gas Composition - % Oxygen	-		12.4%	12.3%
			Gas Composition - % Balance	-		63.4%	63.5%
Branch Headers	Local	North	North Branch Vacuum	-	6 - 7 in w.c.	-6.50	-6.40
	Local	North	Valve Position	6 turns open /6	6 turns open	6	6
	Local	North Sample Port	Gas Composition - % Methane	-		28.2%	33.8%
			Gas Composition - % CO2	-		15.8%	20.3%
			Gas Composition - % Oxygen	-		9.7%	4.4%
			Gas Composition - % Balance	-		56.3%	41.5%
	Local	Central	Central Branch Vacuum	-	6 - 7 in w.c.	-6.4	-6.4
	Local	Central	Valve Position	-	6 turns open	6	6
	Local	Central Sample Port	Gas Composition - % Methane	-		5.8%	16.0%
			Gas Composition - % CO2	-		6.9%	6.9%
			Gas Composition - % Oxygen	-		15.5%	5.4%
			Gas Composition - % Balance	-		71.8%	71.7%
	Local	South	South Branch Vacuum	-	6 - 7 in w.c.	-6.50	-6.50
	Local	South	Valve Position	-	6 turns open	6	6
	Local	South Sample Port	Gas Composition - % Methane	-		15.3%	15.9%
			Gas Composition - % CO2	-		16.7%	16.7%
			Gas Composition - % Oxygen	-		9.7%	9.8%
			Gas Composition - % Balance	-		67.3%	58.1%

Air Compressor System[3,5,6] - AIR COMPRESSOR SYSTEM OFFLINE								
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
	NOT OPERATING							(yes/no)

Air Dryer System[4] - AIR DRYER OFFLINE		Electrical Status		HMI Heater/Air Conditioner	
System Operational:	NO	3-Phase Power Indicator:	3 of 3	Operational	
Condensate Drain Operational:	NO	GFI 1 Status:	GREEN	Temperature	
Alarm Indictor:	NO	GFI 2 Status:	GREEN	Filter Cleaned	
Condenser Cleaned[2]:	NO	**Leachate Tank/Loadout**			
Dew Point Indicator: N/A		Liquid Level (inches):	35.5	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	
		Overfill Float Functional[7]	YES		
		Exhaust Stack			
		Drain Stack 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 @ 67.75"
NA - Not Applicable
NM - Not Measured

Data Entered By: J. Roelke 6/13/22
Checked By: A. Ruetten 6/15/22

LANDFILL GAS MONITORING FORM

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

			STARTING	ENDING
TECHNICIAN(S):	J. Roelke	DATE:	6/8/22	6/8/22
GAS/INSTRUMENT TYPE:	GEM 2000	TIME:	1:03PM	3:25PM
SERIAL NO.:	11668	BAROMETRIC PRESSURE [25]	29.88	29.87
DATE LAST CALIBRATED:	6/8/2022	BAROMETRIC TREND [46381]	steady	falling
METHOD:	Standard Calibration Gases	WEATHER CONDITIONS:	cloudy, rain stopped	cloudy
PRESSURE INSTRUMENT:	GEM 2000	TEMPERATURE [21]	60	61
Project #		GROUND CONDITIONS [No DNR ID]:	saturated	saturated

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 (%, by vol.)	Carbon Dioxide (%, by vol.)	Oxygen (%, by vol.)	Initial Valve Setting (% open)	Final Valve Setting (% open)	Pump Counter
GW-1	13:52	58	-5.90	-0.70	0.52	NM	NM	NA	11.6	25.9	0.1	0.75 / 12	0.75 / 12	Counter #: (2)
GW-2	13:58	60	-6.10	-5.90	0.04	NM	NM	NA	29.4	34.5	0.7	1.50 / 12	1.50 / 12	Counter #: (2)
GW-3	14:03	58	-6.10	-5.40	0.02	-5.6	0.04	NA	32.3	32.7	0.0	5.50 / 12	7.50 / 12	Counter #: (2)
GW-4	14:09	60	-6.00	-2.30	0.04	-1.9	0.03	NA	14.9	19.9	5.2	0.25 / 12	0.125 / 12	Counter #: (2)
GW-5	14:14	62	-5.90	-2.40	0.02	NM	NM	NA	16.8	11.8	12.3	0.125 / 12	0.125 / 12	Counter #: (2)
GW-6	15:01	56	-6.30	-4.10	0.05	NM	NM	NA	22.0	29.3	0.0	2.00 / 12	2.00 / 12	Counter #: (2)
GW-7	14:20	58	-6.20	-6.20	0.03	NM	NM	NA	31.5	26.1	0.3	5.750 / 12	5.75 / 12	Counter #: (2)
GW-8	14:25	64	-6.10	-6.10	0.02	-6.10	0.02	NA	59.9	19.3	4.3	4.00 / 12	6.00 / 12	Counter #: (2)
GW-9	14:32	62	-6.10	-1.00	0.01	-0.04	0.01	NA	2.7	2.1	18.1	0.500 / 12	0.125 / 12	Counter #: (2)
GW-10	14:55	68	-6.40	-0.20	0.01	-2.60	0.02	NA	40.2	23.9	0.0	0.50 / 12	1 / 12	Counter #: (2)
GW-11	14:38	64	-6.40	-6.20	0.03	-5.70	0.02	NA	9.0	3.5	16.7	2.00 / 12	0.75 / 12	Counter #: (2)
GW-12	14:43	64	-6.20	-0.8	0.01	-0.05	0.01	NA	25.0	13.7	11.2	0.350 / 12	0.250 / 12	Counter #: (2)
GW-13	14:50	64	-6.00	-6	0.03	-6.00	-0.04	NA	46.9	26.9	4.5	1.500 / 12	3.000 / 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 6/13/22
Checked By: A. Ruetten 6/15/22

Cap Inspection

Inspection Details		Site Conditions	
Inspector :	John Roelke	**Weather Conditions:**	Sunny
Date:	6/20/2022	**Ground Condition:**	Moist
Time:	9:30	**Temperature:**	75F

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 May 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 noted in May of 2022 that riprap had previously fallen from the west embankment of the northern culvert. Riprap was placed back on the embankment. TRC has continued to monitor the west embankment of the northern culvert and riprap appears to be stable and has remained in place, Photo 2. Some vegetation die-off and light erosion was observed along a north portion of the drainage ditch, see Photo 3.

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

Extent of vegetation cover: 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. 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 3. 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 3.

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 6/20/2022

Checked By: T. Perkins 7/21/2022

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	6/20/2022

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	6/20/2022

Description

Eastern Drainage Ditch:
Riprap has remained in place at the west side of the western culvert. In May of 2022, TRC had observed a small amount of riprap that had fallen from the embankment and collected in the drainage pathway. TRC had placed the fallen riprap back to the embankment.

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	6/20/2022

Description

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

Photo No.	Date
4	6/20/2022

Description

Sediment Basin: No sediment accumulation at outfall.