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Madison, WI 53717

T 608.826.3600
TRCcompanies.com

October 20, 2023

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

Subject: Refuse Hideaway Landfill
September 2023 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 September 2023.

- September 6, 2023 – Gas Extraction System Restart
- September 7, 2023 – Gas Probe Monitoring and Bi-weekly Site Inspection
- September 14, 2023 – Bi-weekly Site Inspection
- September 21,2023 – Cap Inspection
- September 28, 2023 – Biweekly and Monthly Site Inspection and Leachate Sample Collection

Electrical Upgrades

The onsite transformer was replaced in August 2023 and the electrical service to onsite equipment was reestablished. The motor starter contactor for the air compressor system was replaced in August 2023, and Van Ert is awaiting an overload contactor for the compressor system. Following the installation of the overload contactor, the leachate extraction system will be restarted.

Gas Extraction System

The gas extraction system (GES) was restarted by TRC on September 6, 2023 following the electrical service repairs. The system was operated for the remainder of the month of September.

Perimeter gas probe monitoring was conducted at the site on September 7, 2023.

Field data from system operation, gas extraction well monitoring, and gas probe monitoring is included in Attachment 1.

Leachate Extraction System

The leachate extraction system remained off during the month of September until a new overload contactor for the air compressor motor was available for installation. The high-level float for the leachate tank was noted to be in alarm conduction even though the tank level was below high-level conditions. Van Ert will plan to evaluate the alarm when the overload contactor is replaced.

The leachate tank level was gauged on September 7 and September 28, 2023, and contained 59.25 inches and 63.5 inches of leachate, respectively.

A leachate sample was collected on September 28, 2023, from the extraction system storage tank and analyzed by Eurofins for ICP Metals and Mercury per the Section 2.01 of the Wastewater Discharge Permit NTO-5.11. The laboratory analytical report is provided in Attachment 2.

Cap Inspection

TRC conducted a monthly inspection of the landfill cap and stormwater conveyance features on September 21, 2023. 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 3.

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

Sincerely,

TRC

Molly Wagler

Molly Wagler, EIT
Project Engineer

Andrew M. Stehn

Andrew Stehn, PE
Project Manager

Attachments:
1. September 2023 Monitoring Results
2. Laboratory Analytical Report – Leachate Sample
3. Photographic Log

Attachment 1

September 2023 Monitoring Results

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

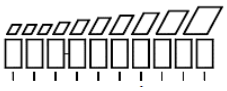
TRC Operator Name:	John Roelke		
Date:	9/7/2023	Arrival Time: 12:54 AM	Departure Time: 2:15 PM

Site Conditions		Equipment	
Weather Conditions:	cloudy	Gas/Instrument Type:	GEMS 2000
Ground Condition:	dry	Serial Number:	11668
Barometric Pressure:	29.95 in Hg	Date Last Calibrated:	9/7/2023
Barometric Pressure Trend:	steady	Method:	standard field calibration gas
Temperature:	60 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	3.3
			Speed	-	1800 - 1900 rpm	1529
			Frequency	-	30 - 35 Hz	25.68
	HMI		Amperage	-	3 -4 amps	3.36
	HMI		Speed	-		35
	HMI		Hours	-	-	8056
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	73
	Local	GHS-PI-301	Blower Inlet Vacuum	7 in. w.c.	7 in. w.c.	7.01
	Local	GHS-TI-301	Blower Inlet Temperature	-	50 - 90 °F	68
	Local	Sample Port	Gas Composition - % Methane	-		15.9
			Gas Composition - % CO2	-		11.6
			Gas Composition - % Oxygen	-		13.8
			Gas Composition - % Balance	-		58.7%
Demister	Local	GHS-PDI-301	Demister Differential Pressure	-	1-2 in w.c	0.8
	Local		Slight Glass: Liquid Present	-	-	no
	HMI	LS-701	Level Indication	-	-	none
Blower Outlet	HMI	PT-302	Blower Outlet Flow Pressure	-	-	0.1
	HMI	TE-302	Blower Outlet Temperature	-	50 - 90 °F	80
	HMI	PDT-301	Blower Outlet Flow Differential Pressure	-	1-2 in w.c	0.94
	HMI	-	Blower Outlet Flow Rate	-	180 - 190 scfm	141
	Local	GHS-PI-302	Blower Outlet Flow Pressure	-	-	-0.02
	Local	GHS-TI-302	Blower Outlet Temperature	-	50 - 90 °F	74
	Local	Sample Port	Gas Composition - % Methane	-		15.9
			Gas Composition - % CO2	-		11.5
			Gas Composition - % Oxygen	-		13.9
			Gas Composition - % Balance	-		58.8%
Branch Headers	Local	North	North Branch Vacuum	-	6 - 7 in w.c.	-6.32
	Local	North	Valve Position	6 turns open /6	6 turns open	6
	Local	North Sample Port	Gas Composition - % Methane	-		32.1
			Gas Composition - % CO2	-		14.5
			Gas Composition - % Oxygen	-		9
			Gas Composition - % Balance	-		44.4%
	Local	Central	Central Branch Vacuum	-	6 - 7 in w.c.	-6.22
	Local	Central	Valve Position	-	6 turns open	6
	Local	Central Sample Port	Gas Composition - % Methane	-		9.6
			Gas Composition - % CO2	-		8.2
			Gas Composition - % Oxygen	-		15.5
			Gas Composition - % Balance	-		66.6%
	Local	South	South Branch Vacuum	-	6 - 7 in w.c.	-6.27
	Local	South	Valve Position	-	6 turns open	6
	Local	South Sample Port	Gas Composition - % Methane	-		19.7
			Gas Composition - % CO2	-		14.4
			Gas Composition - % Oxygen	-		12.7
			Gas Composition - % Balance	-		53.2%

Air Compressor System[1,3,4] Air Compressor System 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]		Electrical Status		HMI Heater/Air Conditioner	
System Operational:	NO Comment 1	3-Phase Power Indicator:	3 of 3	Operational	YES Comment 2
Condensate Drain Operational:	YES	GFI 1 Status:	(**Green** / Red)	Temperature	72 F
Alarm Indictor:	OFF	GFI 2 Status:	(**Green** / Red)	Filter Cleaned	NO
Condenser Cleaned[2]:	NO	**Leachate Tank/Loadout**			
Dew Point Indicator:		Liquid Level (inches):	59.25	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 - None observed	
		Overfill Float Functional[5]:	NO Comment 3		
		Exhaust Stack			
		Drain Stack Sump (vol. removed)	0	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
1. Air Dryer System remains off until further repairs to the air compressor system are completed.
2. Air conditioner observed to turn on and operational during Site visit.
3. The light bulb for the high level indicator for the leachate tank was not functional.

Data Entered By: J. Roelke 09/11/2023
Checked By: M. Wagler 10/2/2023

LANDFILL GAS MONITORING FORM

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

			STARTING	ENDING
TECHNICIAN(S):	J. Roelke	DATE:	9/7/23	9/7/23
GAS/INSTRUMENT TYPE:	GEM 2000	TIME:	12:50 PM	2:15 PM
SERIAL NO.:	11668	BAROMETRIC PRESSURE [25]	29.95	NM
DATE LAST CALIBRATED:	9/7/2023	BAROMETRIC TREND [46381]	steady	NM
METHOD:	Standard Calibration Gases	WEATHER CONDITIONS:	cloudy	NM
PRESSURE INSTRUMENT:	Dwyer Digital Manometer	TEMPERATURE [21]	60	NM
Project #		GROUND CONDITIONS [No DNR ID]:	dry	NM

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 (scfm)	Methane (%, by vol.)	Carbon Dioxide (%, by vol.)	Oxygen (%, by vol.)	Initial Valve Setting (% open)	Final Valve Setting (% open)	Pump Counter
GW-1	13:29	64	-5.99	-0.06	0.02	-	-	-	54.1	40.2	0.2	/ 12	/ 12	Counter #: (2)
GW-2	13:36	70	-5.82	-0.44	0.01	0	0.00	-	0.0	0.1	20.6	/ 12	0.00 / 12	Counter #: (2)
GW-3	13:41	62	-5.75	-5.39	0.06	-	-	-	61.8	38.1	0.1	/ 12	/ 12	Counter #: (2)
GW-4	13:46	72	-5.73	-0.90	0.01	-0.72	0.01	-	28.9	21.5	5.5	/ 12	0.25 / 12	Counter #: (2)
GW-5	13:52	68	-5.67	-5.16	0.07	-3.01	0.24	-	15.5	8.8	14.3	/ 12	0.50 / 12	Counter #: (2)
GW-6	14:35	62	-6.05	-3.92	0.01	-	-	-	61.1	38.8	0.0	/ 12	/ 12	Counter #: (2)
GW-7	14:31	72	-5.94	-5.87	0.02	-	-	-	60.2	24.9	3.1	/ 12	/ 12	Counter #: (2)
GW-8	14:27	72	-5.85	-5.81	0.01	-	-	-	46.1	14.8	7.8	/ 12	/ 12	Counter #: (2)
GW-9	14:20	70	-5.97	-0.67	0.01	-0.13	0.01	-	6.3	2.0	17.8	/ 12	0.25 / 12	Counter #: (2)
GW-10	14:15	68	-6.31	-2.34	0.01	-	-	-	52.6	21.3	3.0	/ 12	/ 12	Counter #: (2)
GW-11	14:00	72	-6.23	-2.54	0.01	-0.32	0.01	-	7.0	3.1	17.1	/ 12	0.25 / 12	Counter #: (2)
GW-12	14:06	70	-6.24	-1.06	0.01	-	-	-	27.3	13.5	11.4	/ 12	/ 12	Counter #: (2)
GW-13	14:10	72	-6.46	-1.06	0.01	-	-	-	*27.6*	17.4	6.2	/ 12	/ 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

Entered By: John Roelke 9/7/2023

Checked By: M. Wagler 10/2/2023

REFUSE HIDEAWAY LANDFILL
GAS PROBE MONITORING FORM

TECHNICIAN(S): J. Roelke

DATE: 9/7/2023

START TIME: 8:05 AM

END TIME: 1:15 PM

GAS/INSTRUMENT TYPE: **GEM 2000**

SERIAL NO.: 11668

WEATHER CONDITIONS: cloudy

DATE LAST CALIBRATED: 9/7/2023

TEMPERATURE: 60 °F

METHOD: Standard Calibration Gases

BAROMETRIC PRESSURE & TREND: 29.95 in. Hg., rising

PRESS INSTRUMENT : Manometer

GROUND CONDITIONS: dry

GAS PROBE NAME	Time	PRESSURE (in. WC)	METHANE (% LEL)	METHANE (%, by vol.)	CARBON DIOXIDE (%, by vol.)	OXYGEN (%, by vol.)	COMMENTS
GP-1D	8:34	0.02	22	1.1	12.2	4.5	(2)
GP-1S	8:36	0.0	>100	5.4	18.4	0.0	(2) spiked CH4% at 5.7.
GP-2D	8:41	0.17	29	1.4	9.9	9.5	(1)
PG-2S	8:43	0.0	2	0.1	6.2	15.5	(1)
GP-3	8:46	0.0	0.0	0.0	2.3	19.0	(1)
GP-4	8:53	0.0	0.0	0.0	9.5	13.5	(1)
GP-5	8:56	0.0	0.0	0.0	6.3	15.3	(2)
GP-6	9:00	0.0	0.0	0.0	4.9	17.1	(1)
GP-7	9:07	0.0	0.0	0.0	4.1	17.6	(2)
GP-8	9:14	0.0	0.0	0.0	4.7	17.2	(2)
GP-9	9:18	0.0	0.0	0.0	3.9	17.8	(1)
GP-10	9:22	0.0	0.0	0.0	6.8	14.3	(1)
GP-11D	9:27	0.0	72	3.6	13.5	4.1	(2)
GP-11S	9:29	0.0	0.0	0.0	10.1	9.8	(2)
GP-12D	9:33	0.00	>100	6.7	13.9	6.7	(1) Stable readings at 2 minutes.
GP-12S	9:35	0.02	0.0	0.0	2.6	19.0	(1)
GP-13D	9:40	0.03	15	0.8	7.2	12.7	(2) Stable readings at 2 minutes.
GP-13S	9:42	0.0	0.0	0.0	4.3	17.8	(2)

GAS PROBE NAME	Time	PRESSURE (in. WC)	METHANE (% LEL)	METHANE (%, by vol.)	CARBON DIOXIDE (%, by vol.)	OXYGEN (%, by vol.)	COMMENTS
GP-16D	9:58	0.0	0.0	0.0	2.1	18.9	(2)
GP-16S	10:00	0.0	0.0	0.0	3.1	18.5	(2)
GP-17D	9:54	0.0	0.0	0.0	4.4	16.3	(1)
GP-17M	9:56	0.0	0.0	0.0	3.1	18.0	(1)
GP-17S	9:58	0.0	0.0	0.0	3.4	17.9	(1)
GP-18D	10:05	0.0	0.0	0.0	1.1	19.3	(2)
GP-18M	10:07	0.0	0.0	0.0	1.8	18.6	(2)
GP-18S	10:09	0.0	0.0	0.0	3.3	18.2	(2)
GP-19$^{85-100}$	10:55	0.0	0.0	0.0	0.0	20.8	(1)
GP-19$^{50-70}$	10:57	0.0	0.0	0.0	0.8	20.1	(1)
GP-19$^{25-40}$	10:59	0.0	0.0	0.0	0.4	20.4	(1)
GP19$^{2-15}$	11:01	0.0	0.0	0.0	0.2	20.6	(1)
GP-20$^{85-100}$	10:46	0.0	0.0	0.0	0.0	20.8	(2)
GP-20$^{50-70}$	10:48	0.0	0.0	0.0	0.0	20.8	(2)
GP-20$^{25-40}$	10:50	0.0	0.0	0.0	0.0	20.8	(2)
GP-20$^{2-15}$	10:52	0.0	0.0	0.0	0.0	20.8	(2)
GP-21$^{85-100}$	10:37	0.0	0.0	0.0	0.4	20.5	(2)
GP-21$^{50-70}$	10:39	0.0	0.0	0.0	0.0	20.8	(2)
GP-21$^{25-40}$	10:41	0.0	0.0	0.0	0.0	20.8	(2)
GP-21$^{2-15}$	10:43	0.0	0.0	0.0	0.7	20.1	(2)
GP-22$^{85-100}$	11:05	0.0	0.0	0.0	2.2	19.2	(2)
GP-22$^{50-70}$	11:07	0.0	0.0	0.0	0.6	20.2	(2)
GP-22$^{25-40}$	11:09	0.0	0.0	0.0	1.3	19.7	(2)
GP-22$^{2-15}$	11:11	0.0	0.0	0.0	1.7	19.5	(2)

GAS PROBE NAME	Time	PRESSURE (in. WC)	METHANE (% LEL)	METHANE (%, by vol.)	CARBON DIOXIDE (%, by vol.)	OXYGEN (%, by vol.)	COMMENTS
GP-23$^{85-100}$	11:16	0.0	0.0	0.0	0.2	20.5	(2)
GP-23$^{50-70}$	11:18	0.0	0.0	0.0	0.1	20.7	(2)
GP-23$^{25-40}$	11:20	0.0	0.0	0.0	0.1	20.7	(2)
GP-23$^{2-15}$	11:22	0.0	0.0	0.0	0.4	20.5	(2)
GP-24$^{85-100}$	11:26	0.0	0.0	0.0	0.0	20.8	(2)
GP-24$^{50-70}$	11:28	0.0	0.0	0.0	1.0	20.0	(2)
GP-24$^{25-40}$	11:30	0.0	0.0	0.0	0.0	20.8	(2)
GP-24$^{2-15}$	11:32	0.0	0.0	0.0	0.7	20.4	(2)
GPW-1D	13:00	0.0	0.0	0.0	1.8	18.9	(1)
GPW-1M	13:02	0.0	0.0	0.0	0.3	20.5	(1)
GPW-1S	13:04	0.0	0.0	0.0	1.9	18.7	(1)
G-1D	8:24	0.01	87.0	4.3	17.6	0.0	(1) Stable readings at 2 minutes.
G-1S	8:27	0.03	>100	12.2	21.3	0.0	(1)
G-2D	9:47	0.0	0.0	0.0	1.5	19.6	(1)
G-2S	9:49	0.0	0.0	0.0	0.1	20.7	(1)
G-5	9:11	0.16	0.0	0.0	6.2	15.5	(1)
G-6	8:15	0.0	0.0	0.0	0.4	20.6	(1)
G-8	10:32	0.0	0.0	0.0	0.6	20.0	(1)
G-9	10:16	0.0	0.0	0.0	0.2	20.2	(1)
G-10	11:39	0.00	0.0	0.0	0.1	20.7	(1)
Speedway Office	8:31	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 9/11/2023
Checked by: M. Wagler 10/5/2023

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

TRC Operator Name:	John Roelke/Andy Stehn		
Date:	9/14/2023	Arrival Time: 8:53 AM	Departure Time: 12:30 PM

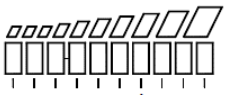
Site Conditions		Equipment	
Weather Conditions:	sunny	Gas/Instrument Type:	GEMS 2000
Ground Condition:	dry	Serial Number:	11668
Barometric Pressure:	30.20 in Hg	Date Last Calibrated:	9/14/2023
Barometric Pressure Trend:	rising	Method:	standard field calibration gas
Temperature:	55 F	Pressure Instrument:	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	3.39
			Speed	-	1800 - 1900 rpm	1563
			Frequency	-	30 - 35 Hz	26.25
	HMI		Amperage	-	3 -4 amps	3.3
	HMI		Speed	-		37
	HMI		Hours	-	-	8215
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	71
	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	64
	Local	Sample Port	Gas Composition - % Methane	-		9.2
			Gas Composition - % CO2	-		9
			Gas Composition - % Oxygen	-		14.7
			Gas Composition - % Balance	-		67.1%
Demister	Local	GHS-PDI-301	Demister Differential Pressure	-	1-2 in w.c	1.2
	Local		Slight Glass: Liquid Present	-	-	None
	HMI	LS-701	Level Indication	-	-	No alarm present
Blower Outlet	HMI	PT-302	Blower Outlet Flow Pressure	-	-	0.1
	HMI	TE-302	Blower Outlet Temperature	-	50 - 90 °F	79
	HMI	PDT-301	Blower Outlet Flow Differential Pressure	-	1-2 in w.c	1.01
	HMI	-	Blower Outlet Flow Rate	-	180 - 190 scfm	147
	Local	GHS-PI-302	Blower Outlet Flow Pressure	-	-	0.1
	Local	GHS-TI-302	Blower Outlet Temperature	-	50 - 90 °F	77
	Local	Sample Port	Gas Composition - % Methane	-		9.1
			Gas Composition - % CO2	-		8.9
			Gas Composition - % Oxygen	-		14.8
			Gas Composition - % Balance	-		67.2%
Branch Headers	Local	North	North Branch Vacuum	-	6 - 7 in w.c.	-6.15
	Local	North	Valve Position	6 turns open /6	6 turns open	6/6
	Local	North Sample Port	Gas Composition - % Methane	-		22.7
			Gas Composition - % CO2	-		15.5
			Gas Composition - % Oxygen	-		7.9
			Gas Composition - % Balance	-		53.8%
	Local	Central	Central Branch Vacuum	-	6 - 7 in w.c.	-6.08
	Local	Central	Valve Position	-	6 turns open	6/6
	Local	Central Sample Port	Gas Composition - % Methane	-		5.9
			Gas Composition - % CO2	-		6.6
			Gas Composition - % Oxygen	-		15.9
			Gas Composition - % Balance	-		71.6%
	Local	South	South Branch Vacuum	-	6 - 7 in w.c.	-6.16
	Local	South	Valve Position	-	6 turns open	6/6
	Local	South Sample Port	Gas Composition - % Methane	-		10.8
			Gas Composition - % CO2	-		10.4
			Gas Composition - % Oxygen	-		14.4
			Gas Composition - % Balance	-		64.4%

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

Air Compressor System[1,3,4] Air Compressor System 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]		**Electrical Status**		**HMI Heater/Air Conditioner**	
System Operational:	NO Comment 1	3-Phase Power Indicator:	3 of 3	Operational	YES Comment 2
Condensate Drain Operational:	YES	GFI 1 Status:	(**Green** / Red)	Temperature	71 F
Alarm Indictor:	OFF	GFI 2 Status:	(**Green** / Red)	Filter Cleaned	NO
Condenser Cleaned[2]:	NO	**Leachate Tank/Loadout**			
Dew Point Indicator:		Liquid Level (inches):	59.25	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 - None observed	
		Overfill Float Functional[5]:	NO Comment 3		
		Exhaust Stack			
		Drain Stack Sump (vol. removed)	0	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
1. Air Dryer System remains off until further repairs to the air compressor system are completed.
2. Air conditioner observed to turn on and operational during Site visit.
3. The light bulb for the high level indicator for the leachate tank was not functional.

Data Entered By: J. Roelke 09/14/2023
Checked By: M. Wagler 10/2/2023

LANDFILL GAS MONITORING FORM

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

			STARTING	ENDING
TECHNICIAN(S):	J. Roelke	DATE:	9/14/23	9/14/23
GAS/INSTRUMENT TYPE:	GEM 2000	TIME:	8:50 PM	12:00 PM
SERIAL NO.:	11668	BAROMETRIC PRESSURE [25]	30.20	30.21
DATE LAST CALIBRATED:	9/14/2023	BAROMETRIC TREND [46381]	rising	rising
METHOD:	Standard Calibration Gases	WEATHER CONDITIONS:	sunny	sunny
PRESSURE INSTRUMENT:	Dwyer Digital Manometer	TEMPERATURE [21]	55	72
Project #		GROUND CONDITIONS [No DNR ID]:	dry	dry

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 (scfm)	Methane (%, by vol.)	Carbon Dioxide (%, by vol.)	Oxygen (%, by vol.)	Initial Valve Setting (% open)	Final Valve Setting (% open)	Pump Counter
GW-1	9:35	54	-5.75	-0.43	0.01	-	-	-	32.6	38.4	0.0	/ 12	/ 12	Counter #: (2)
GW-2	9:40	72	-5.58	-0.52	0.01	-	-	-	0.0	0.0	20.8	0.00 / 12	0.00 / 12	Counter #: (2)
GW-3	9:43	60	-5.50	-5.15	0.06	-	-	-	42.2	36.7	0.0	/ 12	/ 12	Counter #: (2)
GW-4	9:48	74	-5.47	-0.45	0.01	-0.4	-	-	0.0	0.0	20.8	0.250 / 12	0.00 / 12	Counter #: (2)
GW-5	9:55	74	-5.39	-3.98	0.01	-0.6	0.02	-	17.8	11.6	12.0	0.50 / 12	0.250 / 12	Counter #: (2)
GW-6	10:57	62	-5.81	-3.63	0.05	-	-	-	42.4	37.5	0.0	/ 12	/ 12	Counter #: (2)
GW-7	11:00	72	-5.73	-5.72	0.02	-	-	-	56.2	27.4	3.0	/ 12	/ 12	Counter #: (2)
GW-8	11:03	70	-5.98	-5.62	0.03	-	-	-	40.1	13.0	9.6	/ 12	/ 12	Counter #: (2)
GW-9	11:06	72	-5.57	-0.12	0.01	-	-	-	10.9	6.2	10.6	0.250 / 12	0.250 / 12	Counter #: (2)
GW-10	10:46	84	-6.14	-2.26	0.02	-	-	-	30.5	20.8	3.3	/ 12	/ 12	Counter #: (2)
GW-11	10:50	80	-6.10	0.00	0.01	-3.45	0.08		79.9	20.0	0.0	0.25 / 12	1.50 / 12	Counter #: (2)
GW-12	10:35	72	-6.09	-0.65	0.29	-	-	-	18.9	10.7	13.1	/ 12	/ 12	Counter #: (2)
GW-13	10:41	70	-6.02	-1.16	0.01	-	-	-	*25.3*	16.9	6.6	/ 12	/ 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

Entered By: John Roelke 9/14/2023

Checked By: M. Wagler 10/2/2023

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

TRC Operator Name: John Roelke		
Date: 9/28 /2023	**Arrival Time: 12:05 PM**	**Departure Time: 1:25 PM**

Site Conditions	Initial	Final	Equipment	
Weather Conditions:	Cloudy	NM	Gas/Instrument Type:	GEMS 2000
Ground Condition:	Moist	NM	Serial Number:	11668
Barometric Pressure:	30.1	NM	Date Last Calibrated:	9/28/2023
Barometric Pressure Trend:	Falling	NM	Method:	Standard field calibration
Temperature:	66	NM	Pressure Instrument:	Dwyer Series 475 Manometer

Landfill Gas Extraction System[1]							
System	***Location***	***Tag #***	***Equipment Description***	***Set Point***	***Typical Range***	***Initial Field Reading***	***Final Field Reading***
Blower Motor	Remote	GHS-BLR-301	Amperage	-	3 - 4 amps	3.34	NM
			Speed	-	1800 - 1900 rpm	1476	NM
			Frequency	-	30 - 35 Hz	24.76	NM
	HMI		Amperage	-	3 -4 amps	3.3	NM
	HMI		Speed	-		34	NM
	HMI		Hours	-	-	8554	NM
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	NM
	HMI	TE-301	Blower Inlet Temperature	-	50 - 90 °F	69	NM
	Local	GHS-PI-301	Blower Inlet Vacuum	7 in. w.c.	7 in. w.c.	-7.95	NM
	Local	GHS-TI-301	Blower Inlet Temperature	-	50 - 90 °F	64	NM
	Local	Sample Port	Gas Composition - % Methane	-		8.3%	NM
			Gas Composition - % CO2	-		9.4%	NM
			Gas Composition - % Oxygen	-		14.8%	NM
			Gas Composition - % Balance	-		67.4%	NM
Demister	Local	GHS-PDI-301	Demister Differential Pressure	-	1-2 in w.c	4	NM
	Local		Slight Glass: Liquid Present	-	-	--	
	HMI	LS-701	Level Indication	-	-	--	
Blower Outlet	HMI	PT-302	Blower Outlet Flow Pressure	-	-	0.1	NM
	HMI	TE-302	Blower Outlet Temperature	-	50 - 90 °F	76	NM
	HMI	PDT-301	Blower Outlet Flow Differential Pressure	-	1-2 in w.c	0.89	NM
	HMI	-	Blower Outlet Flow Rate	-	180 - 190 scfm	137	NM
	Local	GHS-PI-302	Blower Outlet Flow Pressure	-	-	0.12	NM
	Local	GHS-TI-302	Blower Outlet Temperature	-	50 - 90 °F	73	NM
	Local	Sample Port	Gas Composition - % Methane	-		8.4%	NM
			Gas Composition - % CO2	-		9.4%	NM
			Gas Composition - % Oxygen	-		14.8%	NM
			Gas Composition - % Balance	-		67.4%	NM
Branch Headers	Local	North	North Branch Vacuum	-	6 - 7 in w.c.	-6.24	NM
	Local	North	Valve Position	6 turns open /6	6 turns open	6/6	NM
	Local	North Sample Port	Gas Composition - % Methane	-		18.3%	NM
			Gas Composition - % CO2	-		15.1%	NM
			Gas Composition - % Oxygen	-		8.6%	NM
			Gas Composition - % Balance	-		58.0%	NM
	Local	Central	Central Branch Vacuum	-	6 - 7 in w.c.	-6.18	NM
	Local	Central	Valve Position	-	6 turns open	6/6	NM
	Local	Central Sample Port	Gas Composition - % Methane	-		5.3%	NM
			Gas Composition - % CO2	-		7.1%	NM
			Gas Composition - % Oxygen	-		16.0%	NM
			Gas Composition - % Balance	-		71.6%	NM
	Local	South	South Branch Vacuum	-	6 - 7 in w.c.	-6.23	NM
	Local	South	Valve Position	-	6 turns open	6/6	NM
	Local	South Sample Port	Gas Composition - % Methane	-		9.8%	NM
			Gas Composition - % CO2	-		10.7%	NM
			Gas Composition - % Oxygen	-		14.4%	NM
			Gas Composition - % Balance	-		65.1%	NM

Air Compressor System[1,3,4,5] Air Compressor System 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
	NOT OPERATING							(yes/no)

Air Dryer System[2]		Electrical Status		HMI Heater/Air Conditioner	
System Operational:	NO Comment 1	3-Phase Power Indicator:	3 of 3	Operational	Yes
Condensate Drain Operational:	Yes	GFI 1 Status:	GREEN	Temperature	73
Alarm Indictor:	Off	GFI 2 Status:	GREEN	Filter Cleaned	No
Condenser Cleaned[2]:	No	**Leachate Tank/Loadout**			
Dew Point Indicator:		Liquid Level (inches):	63.5	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]	No*		
		Exhaust Stack			
		Drain Stack Sump (vol. removed)		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:
NM - Not Measured
1. Air Dryer System remains off until further repairs to the air compressor system are completed.
2. Leachate Sample collected.

Data Entered By: M. Wagler 10/3/2023
Checked By: A. Stehn 10/19/2023

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 (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).
Condition of drainage ways: West Drainage Ditch - During the May inspection, areas of vegetation die off were observed at the drainage path to the north. This area was previously identified as having less positive slope than its surrounding and was regraded during 2020-2021 grading work at the site. The final post construction survey showed positive slope. 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. Various areas were reseeded and ground cover was applied in the fall of 2022 and remains in place (see photo #3 and #4).
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 regrowth. (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 from (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

Attachment 2

Laboratory Analytical Report – Leachate Sample

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

October 11, 2023

Andrew Stehn
TRC Madison
708 Heartland Trail
Madison, WI 53717

RE: Project: REFUSE LANDFILL-LEACHATE
Pace Project No.: 40268811

Dear Andrew Stehn:

Enclosed are the analytical results for sample(s) received by the laboratory on September 29, 2023. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Green Bay

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Tod Noltemeyer

Tod Noltemeyer
tod.noltemeyer@pacelabs.com
(920)469-2436
Project Manager

Enclosures

cc: Peggy Popp, TRC - Madison

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

CERTIFICATIONS

Project: REFUSE LANDFILL-LEACHATE
Pace Project No.: 40268811

Pace Analytical Services Green Bay
1241 Bellevue Street, Green Bay, WI 54302
Florida/NELAP Certification #: E87948
Illinois Certification #: 200050
Kentucky UST Certification #: 82
Louisiana Certification #: 04168
Minnesota Certification #: 055-999-334
New York Certification #: 12064
North Dakota Certification #: R-150
South Carolina Certification #: 83006001
Texas Certification #: T104704529-21-8
Virginia VELAP Certification ID: 11873
Wisconsin Certification #: 405132750
Wisconsin DATCP Certification #: 105-444
USDA Soil Permit #: P330-21-00008
Federal Fish & Wildlife Permit #: 51774A

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

SAMPLE SUMMARY

Project: REFUSE LANDFILL-LEACHATE
Pace Project No.: 40268811

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40268811001	**LEACHATE TANK**	Water	09/28/23 12:55	09/29/23 09:10

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

SAMPLE ANALYTE COUNT

Project: REFUSE LANDFILL-LEACHATE
Pace Project No.: 40268811

Lab ID	Sample ID	Method	Analysts	Analytes Reported
40268811001	**LEACHATE TANK**	EPA 6010D	SIS	9
		EPA 7470	AJT	1

PASI-G = Pace Analytical Services - Green Bay

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

SUMMARY OF DETECTION

Project: REFUSE LANDFILL-LEACHATE
Pace Project No.: 40268811

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
40268811001	**LEACHATE TANK**					
EPA 6010D	Chromium	3.1J	ug/L	10.0	10/03/23 14:19	
EPA 6010D	Copper	6.7J	ug/L	10.0	10/03/23 14:19	
EPA 6010D	Nickel	4.2J	ug/L	10.0	10/03/23 14:19	
EPA 6010D	Zinc	67.7	ug/L	40.0	10/03/23 14:19	

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

PROJECT NARRATIVE

Project: REFUSE LANDFILL-LEACHATE
Pace Project No.: 40268811

Method: **EPA 6010D**
Description: 6010D MET ICP
Client: TRC - MADISON
Date: October 11, 2023

General Information:
1 sample was analyzed for EPA 6010D by Pace Analytical Services Green Bay. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 3010A with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

PROJECT NARRATIVE

Project: REFUSE LANDFILL-LEACHATE
Pace Project No.: 40268811

Method: **EPA 7470**
Description: 7470 Mercury
Client: TRC - MADISON
Date: October 11, 2023

General Information:
1 sample was analyzed for EPA 7470 by Pace Analytical Services Green Bay. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 7470 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: REFUSE LANDFILL-LEACHATE
Pace Project No.: 40268811

Sample: LEACHATE TANK **Lab ID: 40268811001** Collected: 09/28/23 12:55 Received: 09/29/23 09:10 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Green Bay								
Cadmium	**<1.3**	ug/L	5.0	1.3	1	10/02/23 13:22	10/03/23 14:19	7440-43-9	
Chromium	**3.1J**	ug/L	10.0	2.5	1	10/02/23 13:22	10/03/23 14:19	7440-47-3	
Copper	**6.7J**	ug/L	10.0	3.4	1	10/02/23 13:22	10/03/23 14:19	7440-50-8	
Lead	**<5.9**	ug/L	20.0	5.9	1	10/02/23 13:22	10/03/23 14:19	7439-92-1	
Molybdenum	**<2.4**	ug/L	10.0	2.4	1	10/02/23 13:22	10/03/23 14:19	7439-98-7	
Nickel	**4.2J**	ug/L	10.0	2.6	1	10/02/23 13:22	10/03/23 14:19	7440-02-0	
Selenium	**<12.2**	ug/L	40.0	12.2	1	10/02/23 13:22	10/03/23 14:19	7782-49-2	
Silver	**<3.2**	ug/L	10.0	3.2	1	10/02/23 13:22	10/03/23 14:19	7440-22-4	
Zinc	**67.7**	ug/L	40.0	11.6	1	10/02/23 13:22	10/03/23 14:19	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Green Bay								
Mercury	**<0.066**	ug/L	0.20	0.066	1	10/10/23 07:20	10/10/23 13:44	7439-97-6	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: REFUSE LANDFILL-LEACHATE
Pace Project No.: 40268811

QC Batch: 457014
QC Batch Method: EPA 7470
Analysis Method: EPA 7470
Analysis Description: 7470 Mercury
Laboratory: Pace Analytical Services - Green Bay
Associated Lab Samples: 40268811001

METHOD BLANK: 2624286 Matrix: Water
Associated Lab Samples: 40268811001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	<0.066	0.20	10/10/23 12:51	

LABORATORY CONTROL SAMPLE: 2624287

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	5.6	112	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2624288 2624289

Parameter	Units	40268716021 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	<0.066	5	5	5.4	5.4	108	108	85-115	0	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: REFUSE LANDFILL-LEACHATE
Pace Project No.: 40268811

QC Batch: 456321
QC Batch Method: EPA 3010A
Analysis Method: EPA 6010D
Analysis Description: 6010D MET
Laboratory: Pace Analytical Services - Green Bay
Associated Lab Samples: 40268811001

METHOD BLANK: 2620542 Matrix: Water
Associated Lab Samples: 40268811001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Cadmium	ug/L	<1.3	5.0	10/03/23 13:45	
Chromium	ug/L	<2.5	10.0	10/03/23 13:45	
Copper	ug/L	<3.4	10.0	10/03/23 13:45	
Lead	ug/L	<5.9	20.0	10/03/23 13:45	
Molybdenum	ug/L	<2.4	10.0	10/03/23 13:45	
Nickel	ug/L	<2.6	10.0	10/03/23 13:45	
Selenium	ug/L	<12.2	40.0	10/03/23 13:45	
Silver	ug/L	<3.2	10.0	10/03/23 13:45	
Zinc	ug/L	<11.6	40.0	10/03/23 13:45	

LABORATORY CONTROL SAMPLE: 2620543

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Cadmium	ug/L	250	257	103	80-120	
Chromium	ug/L	250	255	102	80-120	
Copper	ug/L	250	261	104	80-120	
Lead	ug/L	250	263	105	80-120	
Molybdenum	ug/L	250	258	103	80-120	
Nickel	ug/L	250	260	104	80-120	
Selenium	ug/L	250	259	103	80-120	
Silver	ug/L	125	130	104	80-120	
Zinc	ug/L	250	258	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2620544 2620545

Parameter	Units	40268786034 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Cadmium	ug/L	<2.7	250	250	264	257	105	102	75-125	3	20	
Chromium	ug/L	28.4	250	250	290	283	105	102	75-125	2	20	
Copper	ug/L	9.0J	250	250	277	272	107	105	75-125	2	20	
Lead	ug/L	<11.8	250	250	262	256	105	103	75-125	2	20	
Molybdenum	ug/L	6.1J	250	250	271	265	106	103	75-125	3	20	
Nickel	ug/L	121	250	250	388	381	107	104	75-125	2	20	
Selenium	ug/L	<24.5	250	250	277	250	111	100	75-125	10	20	
Silver	ug/L	<6.4	125	125	134	132	107	105	75-125	1	20	
Zinc	ug/L	<23.1	250	250	271	264	101	99	75-125	2	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALIFIERS

Project: REFUSE LANDFILL-LEACHATE
Pace Project No.: 40268811

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above LOD.

J - Estimated concentration at or above the LOD and below the LOQ.

LOD - Limit of Detection adjusted for dilution factor, percent moisture, initial weight and final volume.

LOQ - Limit of Quantitation adjusted for dilution factor, percent moisture, initial weight and final volume.

DL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: REFUSE LANDFILL-LEACHATE
Pace Project No.: 40268811

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40268811001	**LEACHATE TANK**	EPA 3010A	456321	EPA 6010D	456432
40268811001	**LEACHATE TANK**	EPA 7470	457014	EPA 7470	457058

CHAIN-OF-CUSTODY Analytical Request Document

Pace Analytical®

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevent fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-In Number Here: 40268811

ALL SHADED AREAS are for LAB USE ONLY

Company: TRC	Billing Information: 457573
Address: 999 Fourier Dr Suite 101	
Report To: Andy Stehn	Email To: astehn@trccompanies.com
Copy To:	Site Collection Info/Address:
Customer Project Name/Number: Refuse Landfill	State: WI County/City: Dane/Middleton Time Zone Collected: [ ] PT [ ] MT [ ] CT [ ] ET
Phone: / Email:	Site/Facility ID #:
Collected By (print): John Roelfs	Purchase Order #: / Quote #:
Collected By (signature):	Turnaround Date Required:
Sample Disposal: [X] Dispose as appropriate [ ] Return [ ] Archive: _____ [ ] Hold._____	Rush: [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day (Expedite Charges Apply)

Compliance Monitoring? [ ] Yes [ ] No

DW PWS ID #: / DW Location Code:

Immediately Packed on Ice: [ ] Yes [ ] No

Field Filtered (if applicable): [ ] Yes [ ] No

Analysis: _____

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Container Preservative Type **: 1

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other _____

Lab Project Manager:

Analyses: metals

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	Analyses	Lab Profile/Line
Leachate Tank	OT	G	9/28/23	12:55	—	—		1	X	001

Lab Sample Receipt Checklist:

Custody Seals Present/Intact	Y	N	NA
Custody Signatures Present	Y	N	NA
Collector Signature Present	Y	N	NA
Bottles Intact	Y	N	NA
Correct Bottles	Y	N	NA
Sufficient Volume	Y	N	NA
Samples Received on Ice	Y	N	NA
VOA - Headspace Acceptable	Y	N	NA
USDA Regulated Soils	Y	N	NA
Samples in Holding Time	Y	N	NA
Residual Chlorine Present	Y	N	NA
Cl Strips:			
Sample pH Acceptable	Y	N	NA
pH Strips:			
Sulfide Present	Y	N	NA
Lead Acetate Strips:			

LAB USE ONLY: Lab Sample # / Comments:

SCURF 9/29/23 NL

Customer Remarks / Special Conditions / Possible Hazards: Leachate Sample

Type of Ice Used: Wet Blue Dry None

Packing Material Used:

Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y N N/A

Lab Tracking #: 2881765

Samples received via: FEDEX UPS Client Courier Pace Courier

Lab Sample Temperature Info:
Temp Blank Received: Y N NA
Therm ID#: _____
Cooler 1 Temp Upon Receipt: ____oC
Cooler 1 Therm Corr. Factor: ____oC
Cooler 1 Corrected Temp: ____oC
Comments: 1

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
TRC	9/28/23		
Fedex	9/29/23 0910	Pace	9/29/23 0910

MTJL LAB USE ONLY
Table #:
Acctnum:
Template:
Prelogin:
PM:
PB:

Trip Blank Received: Y N NA
HCL MeOH TSP Other

Non Conformance(s): YES / NO

Sample Preservation Receipt Form

Client Name: TRC Project # 402688 11

All containers needing preservation have been checked and noted below. ☒Yes ☐No ☐N/A Initial when completed NK Date/ Time

Lab Lot# of pH paper 1002723 Lab Std #ID of preservation (if pH adjusted)

Pace Lab #	Glass							Plastic						Vials						Jars				General				VOA Vials (>6mm) *	H2SO4 pH ≤2	NaOH+Zn Act pH ≥9	NaOH pH ≥12	HNO3 pH ≤2	pH after adjusted	Volume (mL)
	AG1U	BG1U	AG1H	AG4S	AG5U	AG2S	BG3U	BP1U	BP3U	BP3B	BP3N	BP3S	BP2Z	VG9C	DG9T	VG9U	VG9H	VG9M	VG9D	JGFU	JG9U	WGFU	WPFU	SP5T	ZPLC	GN 1	GN 2							
001																																X		2.5 / 5
002																																		2.5 / 5
003																																		2.5 / 5
004																																		2.5 / 5
005																																		2.5 / 5
006																																		2.5 / 5
007																																		2.5 / 5
008																																		2.5 / 5
009																																		2.5 / 5
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016																																		2.5 / 5
017																																		2.5 / 5
018																																		2.5 / 5
019																																		2.5 / 5
020																																		2.5 / 5

9/29/23 NK

Exceptions to preservation check VOA, Coliform, TOC, TOX, TOH, O&G, WI DRO, Phenolics, Other_____ Headspace in VOA Vials (>6mm) . ☐Yes ☐No ☒N/A ***If yes look in headspace column**

AG1U	1 liter amber glass	BP1U	1 liter plastic unpres	VG9C	40 mL clear ascorbic w/ HCl	JGFU	4 oz amber jar unpres
BG1U	1 liter clear glass	BP3U	250 mL plastic unpres	DG9T	40 mL amber Na Thio	JG9U	9 oz amber jar unpres
AG1H	1 liter amber glass HCL	BP3B	250 mL plastic NaOH	VG9U	40 mL clear vial unpres	WGFU	4 oz clear jar unpres
AG4S	125 mL amber glass H2SO4	BP3N	250 mL plastic HNO3	VG9H	40 mL clear vial HCL	WPFU	4 oz plastic jar unpres
AG5U	100 mL amber glass unpres	BP3S	250 mL plastic H2SO4	VG9M	40 mL clear vial MeOH	SP5T	120 mL plastic Na Thiosulfate
AG2S	500 mL amber glass H2SO4	BP2Z	500 mL plastic NaOH + Zn	VG9D	40 mL clear vial DI	ZPLC	ziploc bag
BG3U	250 mL clear glass unpres					GN 1	
						GN 2	

Page 1 of 2

Sample Condition Upon Receipt Form (SCUR)

Project #:

WO# : 40268811

40268811

Client Name: TRC

Courier: ☐ CS Logistics ☒ Fed Ex ☐ Speedee ☐ UPS ☐ Waltco
☐ Client ☐ Pace Other:

Tracking #: 773576928721

Custody Seal on Cooler/Box Present: ☒ yes ☐ no Seals intact: ☒ yes ☐ no

Custody Seal on Samples Present: ☐ yes ☒ no Seals intact: ☐ yes ☐ no

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☒ None ☐ Other

Thermometer Used SR - 134 **Type of Ice:** (Wet) Blue Dry None ☐ Meltwater Only

Cooler Temperature Uncorr. 1.0 /Corr: 1.0

Temp Blank Present: ☒ yes ☐ no **Biological Tissue is Frozen:** ☐ yes ☐ no

Person examining contents:
Date: 9/29/23 /Initials: NK

Labeled By Initials: MA

Temp should be above freezing to 6°C.
Biota Samples may be received at ≤ 0°C if shipped on Dry Ice.

Chain of Custody Present:	☒Yes ☐No ☐N/A	1. + CC 9/29/23 NK
Chain of Custody Filled Out:	☒Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☒Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☒Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☒Yes ☐No	5.
- DI VOA Samples frozen upon receipt	☐Yes ☐No	Date/Time:
Short Hold Time Analysis (<72hr):	☐Yes ☒No	6.
Rush Turn Around Time Requested:	☐Yes ☒No	7.
Sufficient Volume:		8.
For Analysis: ☒Yes ☐No MS/MSD:	☐Yes ☒No ☐N/A	
Correct Containers Used:	☒Yes ☐No	9.
Correct Type: ~~Pace Green Bay,~~ Pace IR, Non-Pace		
Containers Intact:	☒Yes ☐No	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☒N/A	11.
Sample Labels match COC:	☒Yes ☐No ☐N/A	12.
-Includes date/time/ID/Analysis Matrix: W		
Trip Blank Present:	☐Yes ☐No ☒N/A	13.
Trip Blank Custody Seals Present	☐Yes ☐No ☒N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution: If checked, see attached form for additional comments ☐

Person Contacted: Date/Time:

Comments/ Resolution:

PM Review is documented electronically in LIMs. By releasing the project, the PM acknowledges they have reviewed the sample logi

Attachment 3

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	9/21/2023

Description

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

Photo No.	Date
2	9/21//2023

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	9/21/2023

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	9/21/2023

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	9/21/2023

Description

Southern Landfill Extents

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

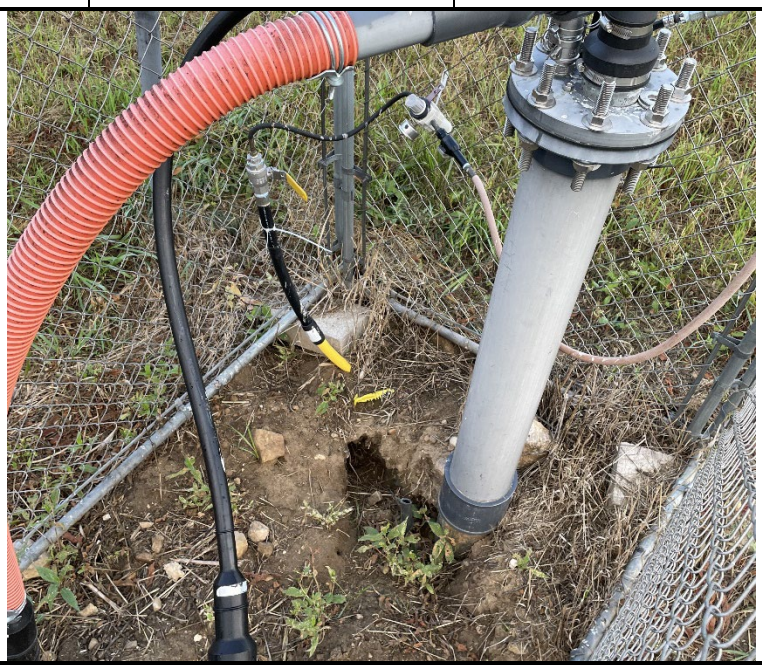

Photo No.	Date
6	9/21/2023

Description

Southern Landfill Extents:

GW-2 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	9/21/2023

Description

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