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March 29, 2019

Ms. Sally Hronek Wisconsin Department of Natural Resources Waste Management Engineer 3911 Fish Hatchery Road Fitchburg, WI 53711

Re: Marathon County Solid Waste Landfill – Area B Landfill 2018 Annual Solid Waste Report WDNR License No. 3338, FID No. 737092730

Dear Ms. Hronek:

On behalf of the Marathon County Solid Waste Department (Marathon County) Cornerstone Environmental Group, LLC, a Tetra Tech company (Tetra Tech) is submitting one hard copy of the 2018 Annual Solid Waste Report for the Area B Landfill (Area B) of Marathon County. This Annual Solid Waste Report is being submitted in accordance with the approved plan of operation for Area B.

In accordance with your request, two (2) additional hard copies and emailed PDF copies are being distributed to the WDNR staff as noted below.

Should you have any questions or comments regarding this Annual Solid Waste Report do not hesitate to contact me at (608) 410-5849 or Ms. Meleesa Johnson at (715) 466-3101 ext 104.

Sincerely,

Cornerstone Environmental Group, LLC, a Tetra Tech company

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Lee Daigle, P.E. Project Manager

Enclosure: Marathon County Area B Landfill – 2018 Annual Solid Waste Report

Marathon County Solid Waste Landfill (File Copies)
 Nathan Coller – WDNR Spooner Service Center (1 hard copy and 1 electronic copy)
 John Morris – WDNR Eau Claire Service Center (1 hard copy and 1 electronic copy)



Marathon County Solid Waste Department <u>Area B Landfill</u> 2018 ANNUAL REPORT

WDNR License No. 3338 FID 737092730

Marathon County Solid Waste Management Department 172900 State Hwy 29 Ringle, WI 54471

Solid Waste & Recycling Information Line: 877-270-3989

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marathoncountysolidwaste

Staff, Consultants & Contractors

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- Meleesa Johnson Director
- David Hagenbucher Solid Waste Manager
- Jessica Kubichek Solid Waste Technician/Scale Operator
- Ron Smith Solid Waste Technician/Gas System
- Julie Groshek Accountant/Scale Alternate
- Chris Wickman Solid Waste Specialist/Mechanic
- Eric Olson Solid Waste Operator/Scale Alternate
- Dave Vitt Solid Waste Specialist/Mechanic
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Introduction

This report provides a summary of site conditions, work conducted at and other activities related to the active Area B Landfill (Area B) during 2018. This report is intended to meet the intent and spirit of the annual reporting requirements found in approved documents for Area B. This document meets the annual reporting requirements of the Wisconsin Department of Natural Resources (WDNR) Plan of Operation Approval dated March 22, 2002, the 2006 plan modification for the expansion of Phase IV and the 2013 Modification to the Monitoring Plan (for Groundwater, Lysimeters and Leachate Collection).

Area B Background

Marathon County Solid Waste Department (MCSWD) owns, operates and manages the Area B Landfill (Area B). The 32 acre facility opened in 1993 and has an amended design capacity of 2,508,000 cubic yards. Approximately 5 acres has final cover. The site is located along the north side of Hwy 29, in the town of Ringle, Wisconsin and north of the closed Area A Landfill.



Summary of Landfill Activities in 2018

From 1994 to early 2014, MCSWD retained an independent contractor to conduct operations. MCSWD began internal operations of the landfill with its own staff and equipment in May 2014. Operational duties typically include, but are not limited to full-time administrative management, active fill area management and scale operations (when accepting wastes), site operational oversight and trouble-shooting and other maintenance and conditionally regulated duties such as:

- Monthly visual inspections of the final cover surface
- Inspections of storm water management pathways
- Removal of obstructions or repair to storm water pathways
- Mowing pathways for surface emission monitoring work
- General mowing to control for woody herbaceous growth
- Snow plowing of access roads
- Grading and dust management of access roads using calcium chloride was applied to both interior landfill roads and gravel site roads
- Preventative maintenance on gas system and leachate pumping system
- Cover maintenance including repair of leachate seeps

As needed, MCSWD hired various contractors and/or consultants to perform specific tasks beyond the capabilities of the site staff such as air permit compliance and reporting, and contracted leachate hauling.

Waste Disposal Activities

During 2018, approximately 8,046 tons of waste was accepted in Area B that was disposed in the top of Phase IV area. The tonnage received was categorized as Category 6-All other wastes. There were no issues or problems in handling the wastes delivered.

Special Wastes

Area B is licensed to accept waste that would be considered non-hazardous special wastes. This includes contaminated soils. Special waste tonnages disposed at the site, provided in the tons reported to the state as identified above, included approximately 8,046 tons of contaminated soil (C-Soil). Special wastes were placed in Area B during 2018 primarily to prepare the site for closure which is anticipated to occur in 2019.

MCSWD pre-screens all special wastes via a Special Waste Profile form. Customers desiring to deliver non-standard wastes must complete the form and provide to it MCSWD staff for review and approval. The generator of waste, or their agent, must complete the form and also have a variety of select laboratory tests conducted on the special waste prior to a decision being made on acceptance. The MCSWD Special Waste Analytical Protocol and Acceptance Criteria delineates parameter thresholds the waste material must meet in order to qualify as a non-hazardous special waste. No special wastes are accepted without first completing this process. Records are retained on site. In 2018, the site had no non- approved wastes.

Settlement Monitoring

Very little settlement occurred in Area B during 2018 at the location of the Settlement Points. The below tables summarize the Area B settlement monitoring points for the period of October 31, 2017 to December 6, 2018.

Settlement Points 10-31-17					
		Elevation			
Hub	North	East	Ground Top		
North	8000.9	15699.5	1402.38	1404.93	
South	7598	15499.8	1400.89	1403.92	

Settlement Points 12-6-18					
Elevation					
SP	North	East	Ground	Тор	
North	8000.93	15699.57	1402.47	1404.90	
South	7597.61	15500.40	1400.96	1403.83	

Landfill Maintenance

MCSWD noticed a reduction in the GCCS vacuum along Area B's main landfill gas header line on the south side of the final cover area. The cause was thought to be from a partial blockage of the drain line to the condensate sump CS-1. The solution to this problem was to install two access risers along the condensate drain line leading to CS-1 to facilitate future cleaning of this line. This involved disturbing the final cover in this area. After discussions with WDNR on October 8, 2018, it was determined that construction associated with implementing this solution would be considered repair and maintenance. The risers were installed and repairs to the final cover were completed in October 2018. A letter detailing and documenting the riser installations and final cover repairs was submitted to the WDNR on March 11, 2019.

New pumps and level sensors were installed in side slope risers SSR1, SSR3 and SSR4.

Gas Collection System

Area B, located on the northern portion of the entire 574 acre facility (and north of the closed Area A Landfill), has an active landfill gas extraction system consisting of gas collectors and transfer piping, blower to move the gas collected and end-use equipment (described below). The landfill gas extraction system has been operational since the late 1990s. Landfill gas emissions from the entire MCSWD property, including Area B, are regulated in accordance with Air Pollution Control Operation Permit No. 737092730-P20 dated November 2, 2015.

The gas wells located in Area B consist of vertical and horizontal gas extraction wells, connected via a sub-header system within the footprint of the landfill. The landfill gas extracted from the landfill is transferred to the on-site landfill gas recovery building (located south of the Area A Landfill) via a header pipe to a landfill gas to energy plant or to a flare. Vacuum applied to the wellfield is regulated by the variable frequency drive (VFD) blower station that controls the gas collection and control system (GCCS). A map of the Area B GCCS, following improvements made in 2015, is provided in Attachment A.

Existing sensing devices measure gas flow rates, pressure, vacuum and methane and oxygen concentrations. These sensors are located on the main header line pipe leading into the gas recovery building and includes gas collected from Area A, Area B and BRRDF landfills. Data is recorded and stored on a computerized data collection system. This data is used for operating and reporting purposes.

The Marathon County GCCS operated 99% of the year and approximately 8,650 hours of operation. The average aggregated flow rate for the site GCCS was approximately 490 standard cubic feet per minute (scfm). Methane and oxygen concentrations of landfill gas averaged, by volume, 49.9% for methane and 0.7% oxygen. Total gas collected from the site in 2018 was 258,045,329 standard

cubic feet (scf). From the total gas collected at the site, 131,866,305 scf was used for production of electricity and 126,179,024 scf was sent to the flare. The table below summarizes the aggregated flow, combustion location, and vacuum of the GCCS at the site.

2018	Average Flow (scfm)	Monthly Total Volume (scf)	To Electrical Production (scf)	To Flare (scf)
January	324.86	14,501,585	6,154,160	8,347,425
February	291.42	11,749,865	11,666,240	83,625
March	281.84	12,581,355	12,540,843	40,512
April	277.58	11,991,261	11,904,119	87,142
May	407.86	18,206,658	11,842,982	6,363,676
June	497.35	21,485,659	10,270,493	11,215,167
July	526.36	23,496,765	11,744,160	11,752,606
August	582.15	25,986,958	11,921,026	14,065,932
September	681.91	29,458,402	10,730,532	18,727,870
October	652.04	29,107,085	11,033,330	18,073,755
November	671.58	29,012,273	10,926,138	18,086,135
December	682.51	30,467,462	11,132,283	19,335,179
2018 Total	489.79	258,045,329	131,866,305	126,179,024

MARATHON COUNTY GCCS DATA (INCLUDES AREA A, AREA B & BRRDF)

Below is a chart listing average monthly methane (CH4), oxygen (O2) and hydrogen sulfide (H2S) concentrations of the site GCCS (combined Area A, Area B and BRRDF landfill gas).

2018	Average Vacuum to Wellfield (Inches W.C.)	Average CH4%	Average O ₂ %	H ₂ S vpm
January	-26.7	45.5	1.2	6.26
February	-26.7	47.1	1.2	6.18
March	-27.6	48.2	0.9	12.52
April	-26.9	49.0	0.8	11.34
Мау	-29.5	48.1	1.0	4.27
June	-24.6	51.1	0.5	8.09
July	-25.4	50.8	0.5	9.42
August	-24.8	50.9	0.5	8.68
September	-28.9	50.9	0.4	13.69
October	-28.2	53.1	0.4	11.26
November	-27.6	52.6	0.4	10.71
December	-26.6	51.0	0.7	4.39

Gas System Outages

As indicated previously, the gas extraction system operated nearly continuously. Any shutdowns, whether for planned maintenance or unplanned events were reported to the WDNR Air Management staff. The January to June 2018 Semi-annual Report and July to December 2018 Semi-annual Report for the facility include descriptions of the startup, shutdown and malfunction events associated with the GCCS, single control device and the continuous monitoring system.

Surface Emission Monitoring

Surface emission monitoring (SEM) of Area B was conducted on February 27, 2018, June 1, 2018, August 8, 2018 and November 1, 2018. No (0) exceedances were detected during any of these quarterly SEM events.

For all SEM events, a flame ionization detector (FID) is used while MCSWD's environmental technician walked a serpentine pattern across the surface of the landfill. Results of the monitoring are provided in Attachment B.

Soil Gas Monitoring

During 2018, the soil gas probes were monitored quarterly for relative pressure, methane (CH4), oxygen (02), and soil gas pressure. In 2018, these monitoring results indicated no gas migration.

Gas Probe	Location	Methane	Oxygen	Pressure	Notos
[Depth in feet]		(%CH4 by Vol.)	(%02 by Vol.)	(inch W.C.)	Notes:
Lic. 3338	WDNR Parm #	85547	85550	46389	WDNR ID No.
Area B Probes					
G-5 [26']	S Area B	0	22.2	-0.02	710
G-6 [30']	W Area B	0	21.1	0	712
G-7 [20']	N Area B	0	21.9	0	714
G-8 [15']	E Area B	0	21.2	0.02	716

First Quarter Probe Data (February 22, 2018):

Second Quarter Probe Data (May 15, 2018):

Gas Probe	Location	Methane	Oxygen	Pressure	Notos
[Depth in feet]		(%CH4 by Vol.)	(%02 by Vol.)	(inch W.C.)	Notes:
Lic. 3338	WDNR Parm #	85547	85550	46389	WDNR ID No.
Area B Probes					
G-5 [26']	S Area B	0	21.7	-0.03	710
G-6 [30']	W Area B	0	21.6	-0.01	712
G-7 [20']	N Area B	0	21.8	-0.01	714
G-8 [15']	E Area B	0	21.8	-0.02	716

Third Quarter Probe Data (August 7, 2018):

Gas Probe	Location	Methane	Oxygen	Pressure	Notos
[Depth in feet]		(%CH4 by Vol.)	(%02 by Vol.)	(inch W.C.)	Notes:
Lic. 3338	WDNR Parm #	85547	85550	46389	WDNR ID No.
Area B Probes					
G-5 [26']	S Area B	0	21.4	-0.07	710
G-6 [30']	W Area B	0	20.3	0	712
G-7 [20']	N Area B	0	21.0	0	714
G-8 [15']	E Area B	0	20.9	0	716

Fourth Quarter Probe Data (November 27, 2018):

Gas Probe	Location	Methane	Oxygen	Pressure	Notos
[Depth in feet]		(%CH4 by Vol.)	(%02 by Vol.)	(inch W.C.)	Notes:
Lic. 3338	WDNR Parm #	85547	85550	46389	WDNR ID No.
Area B Probes					
G-5 [26']	S Area B	0	19.8	-0.01	710
G-6 [30']	W Area B	0	18.4	0	712
G-7 [20']	N Area B	0	20.9	0	714
G-8 [15']	E Area B	0	18.7	0.02	716

Gas Condensate Sampling Data

In accordance with the monitoring plan, gas condensate was sampled and analyzed in April and October 2018. A summary of the tested analytes are provided in the table below and include inorganic constituents and detected volatile organic compounds (VOC's).

2018 Gas Condensate Detection Results					
Parameter	Units	April	October		
Conductivity	umho/cm @25C	6,460	1,220		
рН	S.U.	7.54	8.26		
TSS	mg/L	270	2.3		
COD	mg/L	330	38		
VOCs					
Acetone	ug/L	5,100	ND		
Ethylbenzene	ug/L	100	ND		
Methyl Ethyl Ketone	ug/L	2,900	ND		
Naphthalene	ug/L	160	ND		
Tetrahydrofuran	ug/L	3,600	ND		
Toluene	ug/L	200	ND		
Xylene, o-	ug/L	110	ND		
Xylene, m- & p-	ug/L	210	ND		

Gas Condensate Volumes

Gas condensate volumes were monitored and tabulated on a monthly basis. The 2018 gas condensate volumes are summarized below:

2018 Area B Gas Condensate Volume Pumped (gallons)						
Month	СКО-1	СКО-2	GC Manhole	GC-1	CS-1	
January	4,536	3,444	1,092	0	2,268	
February	5,124	3,108	1,260	0	2,100	
March	4,452	2,772	1,008	0	1,932	
April	5,124	2,940	1,428	84	2,604	
May	5,124	2,688	1,344	0	2,352	
June	5,796	2,604	1,260	0	5,292	
July	6,216	3,192	1,428	0	2,436	
August	6,048	2,688	1,260	84	2,100	
September	3,108	1,680	588	0	1,428	
October	3,192	1,764	1,092	0	6,132	
November	2,016	1,596	588	0	4,368	
December	2,520	1,680	504	0	3,444	
Totals	53,256	30,156	12,852	168	36,456	

Gas Sampling Data

On August 22, 2018 MCSWD's environmental technician used a summa canister to collect a sample of landfill gas. The full canister was shipped via express mail services to Air Technology Labs, Inc. (ATL) in City of Industry, California for analyses of volatile organic compounds. The test method used was United States Environmental Protection Agency (EPA) test method TO-15, Determination of Volatile Organic Compounds (VOCs) In Air Collected In Specially-Prepared Canisters and Analyzed by Gas Chromatography/ Mass Spectrometry (GC/MS). Results of the testing performed by ATL is provided as Attachment C to this annual report.

Leachate System Information

Leachate is collected throughout the Area B landfill with a leachate collection system at the base of the landfill. This includes an aggregate leachate drainage layer and a series of leachate collection trenches and pipes that drain to leachate collection sumps. Leachate gathers in the sumps and is pumped out of the landfill through a side slope riser forcemain to storage tanks. There are four (4) sumps, riser pipes and three (3) storage tanks associated with Area B. A fifth sump is located in the ash area on the North side of Area B. Pumping from the side slope risers stops when a sensor system inside the storage tank indicates the liquid has reached a certain level. The contracted leachate hauler pumps the stored leachate into a 6,600 gallon tanker truck and delivers the material to one of two waste water treatment facilities (WWTF) for disposal.

Leachate collected in 2018 was transported to either the Domtar, Inc. WWTF in Rothschild, Wisconsin or the Stevens Point Wastewater Utility in Stevens Point, Wisconsin. Leachate is pumped into the WWTF and treated to ensure all effluent meets Wisconsin Pollutant Discharge Elimination System (WPDES) standards.

Preventative maintenance of the leachate storage and pumping system was conducted, as needed, by on-site operations contractor or other tank and pump specialists when required.

2018	Tank 3	Tank 4	Tank 5
January	99,000	112,200	125,400
February	85,800	79,200	105,600
March	99,000	118,800	105,600
April	151,800	382,800	158,400
Мау	132,000	244,200	277,200
June	92,400	231,000	244,200
July	52,800	264,000	231,000
August	46,200	191,400	204,600
September	145,200	310,200	250,800
October	211,200	488,400	402,600
November	184,800	382,800	376,200
December	158,400	204,600	283,800
Total	1,458,600	3,009,600	2,765,400

Total volume (gallons) of leachate collected/transported/treated in 2018 is as follows:



Precipitation:

2018 Precipitation Totals						
	Snow	Rain	Precipitation*			
Month	(inches)	(inches)	(inches)			
January	9.00		0.90			
February	7.00		0.70			
March	12.00	0.60	1.80			
April	32.00	0.50	3.70			
May		3.30	3.30			
June		3.92	3.92			
July		3.25	3.25			
August		7.75	7.75			
September		6.00	6.00			
October		7.00	7.00			
November		1.50	1.50			
December	2.00	1.00	1.20			
Total			41.02			

* Snow converted to liquid precipitation by dividing by 10



Leachate Line Jetting

On June 11 and June 12, 2018 Northern Pipe, Inc. of Green Bay, Wisconsin, water jetted the leachate lines of Area B. Jetting was accomplished by accessing each pipe at one end and jetting the full length of pipe. Each line was then televised after cleaning. No issues were reported. The jetting required the use of 5,500 gallons of water. The report for Area B jetting and televising is provided as Attachment D.

Leachate Sampling

Leachate sampling and analytical analysis Area B Tanks 3, 4 and 5 was conducted in April and October 2018 by Northern Lakes Services (NLS). VOCs and metals were sampled semi-annually and semi-volatile organics were sampled and tested in October only. Sampling results show a variety of compounds present that are consistent with previous sampling results. Full results are available on the WDNR Groundwater and Environmental Monitoring System (GEMS) database and are maintained in site files. Conductivity and pH values reported in 2018 are summarized below.

		Conductivity	рН
Leachate	2018	umho/cm	S.U.
Tank 3	April	8,850	7.30
	October	8,300	7.27
Tank 4	April	7,290	7.05
	October	7,380	7.02
Tank 5	April	10,440	7.67
	October	10,000	7.57

Leachate Level Monitoring Leachate level monitors were evaluated on a monthly basis by the MCSWD's environmental technician. Data from those monitoring events is as follows:

Area	B-2018	LLM-2	LLM-3	LLM-4	LLM-5	LLM-6	LLM-7	LLM-8
Pipe Length to	Elbow (feet)	100	102	95	100	119	115.9	116.8
1/17/2010	Depth to Liquid	Dry	Dry	Dry	Dry	Dry	Dry	Dry
1/1//2018	Leachate Head	0	0	0	0	0	0	0
2/12/2010	Depth to Liquid	Dry	Dry	Dry	Dry	Dry	Dry	Dry
2/13/2018	Leachate Head	0	0	0	0	0	0	0
2/27/2010	Depth to Liquid	Dry	Dry	Dry	Dry	Dry	Dry	Dry
3/2//2018	Leachate Head	0	0	0	0	0	0	0
4/12/2010	Depth to Liquid	Dry	Dry	Dry	Dry	Dry	Dry	Dry
4/12/2018	Leachate Head	0	0	0	0	0	0	0
F /20 /2010	Depth to Liquid	Dry	Dry	Dry	Dry	Dry	Dry	Dry
5/30/2018	Leachate Head	0	0	0	0	0	0	0
6 16 12010	Depth to Liquid	Dry	Dry	Dry	Dry	Dry	Dry	Dry
6/6/2018	Leachate Head	0	0	0	0	0	0	0
7/10/2010	Depth to Liquid	Dry	Dry	Dry	Dry	Dry	Dry	Dry
//10/2010	Leachate Head	0	0	0	0	0	0	0
0/22/2010	Depth to Liquid	Dry	Dry	Dry	Dry	Dry	Dry	Dry
8/23/2018	Leachate Head	0	0	0	0	0	0	0
0/12/2010	Depth to Liquid	Dry	Dry	Dry	Dry	Dry	Dry	Dry
9/13/2018	Leachate Head	0	0	0	0	0	0	0
10/22/2010	Depth to Liquid	Dry	Dry	Dry	Dry	Dry	Dry	Dry
10/22/2018	Leachate Head	0	0	0	0	0	0	0
11/26/2010	Depth to Liquid	Dry	Dry	Dry	Dry	Dry	Dry	Dry
11/20/2018	Leachate Head	0	0	0	0	0	0	0
12/5/2010	Depth to Liquid	Dry	Dry	Dry	Dry	Dry	Dry	Dry
12/5/2018	Leachate Head	0	0	0	0	0	0	0
LLM - Leachate	Level Monitor							
Notes: If dry at	landfill base, reported	as "Dry" wit	h 0 feet of he	ad and nothin	ng for leachat	e elevation		

Lysimeters

Northern Lakes Services, Inc. monitored Lysimeter 7 in April and October 2018 with additional monitoring for VOCs in October. There were no VOC detections; therefore, no VOCs results are shown. Sampling results were submitted electronically to the WDNR GEMS database and are consistent with previous sampling results. A summary table of inorganic constituents from the lysimeter sampling event is provided below:

2018 Lysimeter Detection Results					
		Lysimeter 7			
Parameter	Units	April	October		
Conductivity	umho/cm @25C	775	623		
рН	S.U.	7.39	7.35		
Alkalinity	mg/L	320	280		
Boron	mg/L	0.099	0.15		
COD	mg/L	13	24		
Chloride (as Cl)	mg/L	58	26		
Hardness	mg/L	260	240		
Nitrite + Nitrate	mg/L	2.3	1.7		
Sodium (as Na)	mg/L	60	34		
Sulfate (as SO4)	mg/L	28	18		

<u>Final Cover</u>

There are approximately 5 acres of final cover constructed at the Area B Landfill. The existing final cover areas remain in excellent condition. As required by the site's plan of operation, and to ensure the investment in final cover is not compromised, the following activities are conducted throughout the year:

- Monthly visual inspections of the final cap surface
- Inspections of storm water management pathways
- Removal of obstructions or repair to storm water pathways
- Mowing pathways for surface emission monitoring work
- General mowing to control for woody herbaceous growth
- Snow plowing of access roads
- Grading and dust management of access roads
- Preventative maintenance of gas system and leachate pumping system

Storm Water Management

There are four storm water management diversion and collection areas associated with Area B. Storm water is channeled away from the closed and intermediate cover areas of the landfill and away from exterior roads and flows to one of the sedimentation and retention ponds identified as SR-1 through SR-4. Storm water and retention pond SR-3 is used as a source of water for operational dust control; a tanker truck is filled with water and then applied to the various roadways. An annual stormwater inspection was performed on June 15, 2018. This included the general inspection of ditches associated with Area B. This inspection is provided as Attachment E.

The basins are observed as a general course of site inspections by MCSWD. Water height, clarity, and turbidity are noted. There has been no need to conduct maintenance on the basins. Storm water grates are also observed with this routine and cleared of materials that may impede the proper flow of storm water.

Groundwater Monitoring & Analysis

At the beginning of 2018, MCSWD had a total of 91 groundwater monitoring wells, with 25 designated for Area B. The groundwater monitoring regimen was conducted according to the February 7, 2013 approved modification to the groundwater and leachate monitoring plan.

Per the approved monitoring plan, the groundwater wells within the plan were sampled semiannually in April and October. Sampling and laboratory analysis was conducted by qualified personnel from Northern Lake Service (NLS) of Crandon, Wisconsin. The groundwater samples were analyzed to very low chemical concentrations with many found to be below the laboratory's limit of quantification (LOQ). The groundwater quality measurements were compared to NR 140 Groundwater Preventive Action Limits (PALs) and Enforcement Standards (ESs) and site specific indicator PALs and Alternate Concentration Limits (ACLs) provided in the approved monitoring plan. Results revealed that most of the monitoring wells do not exceed these limits and even meet safe drinking water standards.

Reporting values higher than these limits are reported as exceedances. As in past monitoring events at the Area B site, results at some wells exceeded the PAL and ES standards. The exceedances noted in the tables below include nitrate + nitrite as nitrogen at two downgradient wells which may be attributable to area agricultural practices or runoff from erosion control efforts that include seeding, fertilizing and mulching at and near the Area B landfill. No corrective action is planned or required at this time. Groundwater monitoring results and any exceedances were submitted electronically by NLS to the WDNR's GEMS database. Below is a summary of the exceedances from each semi-annual monitoring period. The exceedance reports submitted to the WDNR for the April and October 2018 monitoring event are provided in Attachment F.

Area B Groundwater Well Exceedance Table April 2018

Marathon County Solid Waste: Area B Groundwater Monitoring Wells									
	Area B	Facility #3338	Exceedances						
Project #	Date	Well #	Parameter	Units	Result	PAL	ES	ACL	Comments
298029	April 17&18 2018	R27	Nitrate+Nitrite	mg/L	2.20	2.00	10.00		NR140
298029	Trip Blank	Trip Blank	Methylene Chloride	ug/L	0.84	0.50	5.00		NR140

Area B Groundwater Well Exceedance Table October 2018

Marathon County Solid Waste: Area B Groundwater Monitoring Wells									
	Area B	Facility #3338	Exceedances						
Project #	Date	Well #	Parameter	Units	Result	PAL	ES	ACL	Comments
310612	Oct 23 2018	Dup 10231802	Nitrate+Nitrite, dis.	mg/L	2.00	2.00	10.00		NR140
310612	Oct 23 2018	R27	Nitrate+Nitrite, dis.	mg/L	3.60	2.00	10.00		NR140
310612	Oct 23 2018	R45	Nitrate+Nitrite, dis.	mg/L	2.10	2.00	10.00		NR140

Private Well Water Sampling

There are no private wells monitored as part of Area B landfill environmental monitoring.

Landfill Gas Monitoring

Landfill Gas monitoring was conducted on a monthly basis in accordance with the sites Air Pollution Control Operation Permit 737092730-P20. The results of each monthly monitoring event are provided to both the solid waste and air departments of the WDNR on a monthly basis.

ATTACHMENT A

AREA B GAS COLLECTION AND CONTROL SYSTEM MAP



ATTACHMENT B

2018 AREA B QUARTERLY SURFACE EMISSION MONITORING REPORTS

SEM Calibration Precision Test Record

Landfill Name: Marathon County LF					
Monitoring Date: 2/27/18 Performed By Row Smith					
Expiration Date: $6/2018$ Time 0800					
Instrument Make: <u>Thermo Fisher Scientific</u> Model: <u>TVA1000B</u>					
S/N:0115248137					
Measurement #1:					
Meter Reading for Zero Air: 0.15 ppm(1)					
Meter Reading for Calibration Gas: 494 pmm (2)					
Measurement #2:					
Meter Reading for Zero Air: $O.47$ ppm (3)					
Meter Reading for Calibration Gas: 491 ppm (4)					
Measurement #3:					
Meter Reading for Zero Air: 0.28 ppm (5)					
Meter Reading for Calibration Gas: <u>41</u> ppm (6)					
Calculate Precision:					

(.002) [500-(2)]+[500-(4)]+[500-(6)] 3 х <u>1</u> 500 x <u>100</u> 1 = 1.60 % (must be less than 10%)

N. 16. 50

Instrument Response Time Test Record
Landfill Name: <u>Marathon County LF</u> Monitoring Date: <u>2/27//8</u>
Time: Instrument Make: Thermo Fisher Scientific
Model:TVA1000BS/N:0115248137
Measurement #1:
Stabilize Reading Using Calibration Gas: 494 ppm
90% of the Stabilized Reading = 444.60 ppm
Time to reach 90% of stabilized reading after switching from zero air to calibration gas: $\underline{3}$ seconds (1)
Measurement #2:
Stabilize Reading Using Calibration Gas: 491 ppm
90% of the Stabilized Reading = $\frac{44/.98}{2}$ ppm
Time to reach 90% of stabilized reading after switching from zero air to seconds (2)
Measurement #3:
Stabilize Reading Using Calibration Gas: 411 ppm
90% of the Stabilized Reading = $\frac{44.90}{2}$ ppm
Time to reach 90% of stabilized reading after switching from zero air to calibration gas: 3 seconds (3)
Calculate Response Time:
(1)+(2)+(3) = 3.3.3 seconds (must be less than 30 sec)

3 Performed By: <u>RON SMAR</u>

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Daily Surface Monitoring Log

Landfill Name: <u>N</u>	<u>larathon Cou</u>	unty Landfill			
Performed By: R	N.Smith	Date: 2/27/18	_ Time: _	OPOU	
Temperature: <u>3</u>	<u>4</u>	rtly Sunny Ground:	5901	N covored	
Barometric Pressu	e: <u>30.16</u>	Barometric Pres	sure en	13 <u>603</u>	
Barometric Trend:	<u> La lling</u>	Wind: SW		30.03	
Location of Leak: _	No	Detects			
Time:	Concen	tration of leak:		(ppm)	
Location of leak:					
Time:	Concen	tration of leak:		(ppm)	
Location of leak:					
Time:	Concent	tration of leak:		(ppm)	

Surface Emissions Monitoring

Calibration Procedure and Background Determination Report

Landfill name: Marathon County Landfill

Instrument make: Thermo Fisher Scientific, Model: TVA1000B,

S/N: <u>0115248137</u>

Calibration Procedure

- 1. Install filled hydrogen tank, attach probe/readout device; turn on analyzer and hydrogen supply valve.
- 2. Wait 4-5 minutes for proper hydrogen flow, then press; 1 = run. The unit will ignite and display readings. If flame out message appears, clear the message, (press exit) wait another minute and repeat step 2. If unit has not been properly calibrated a bad calibration parameter appears – go to step 3 below.
- 3. Press (exit) until the main menu appears. Calibration can now be performed. For best results, allow unit to warm up for 20 minutes, then press (2=setup).
- 4. Press (1=calibration), choose manual mode.
- 5. Press (2=span concentration) Select the FID detector that the span concentration is for, then press the up or down arrows to select the correct unit of measure for the span gas. Enter the span calibration value; 500%CH, and press the enter key.
- 6. Next Zero the instrument. Press (3=zero) to start this process. Press enter for single detector units. Zero the instrument by using; Air Zero grade. Introduce zero gas into the analyzer through the probe, utilize plastic T bypass pressure valve. Press (enter) to start.
- 7. Wait for minimal change in values (about 15 seconds). Typically, the sample is stable when the first two digits of the reading do not change for 4-5 seconds. Press (enter) to except, press (1) to save.

- 8. Next calibrate with span gas. Press (4=span) Select the detector to be calibrated and press (enter) to start. Follow screen prompts. Wait for readings to stabilize (typically 10-15 seconds). Enter (1) to save.
 - 9. Press (5=RF) to verify proper response factor. Confirm that response factor says RFO: default if not set to this value.
 - 10. Press (EXIT) twice to return to main menu
 - 11. Press (1= Run)

Background Determination Procedure

Upwind Reading (highest in 30 seconds): <u>1208</u> ppm (1)
 Downwind Reading (highest in 30 seconds): <u>13.16</u> ppm (2)
 Calculate Background Value: <u>(1)+(2)</u> = <u>7.2</u>

2

Performed By: Row Smith Time: OPOD Date: 2/27/18



h 2017 Air.pdf - Adobe Reader

SEM Calibration Precision Test Record

Landfill Name: Marathon County LF			
Monitoring Date: <u>6/1/18</u> Performed	By RONSMIL		
Expiration Date: $\underline{9/20/8}$ Time	0800		
Instrument Make: <u>Thermo Fisher Scientif</u>	ic_ Model: <u>_TVA1000B</u>		
S/N:0115248137			
Measurement #1:	,		
Meter Reading for Zero Air:	0.16 ppm(1)		
Meter Reading for Calibration Gas: 492 pmm (2)			
Measurement #2:			
Meter Reading for Zero Air:	0,3 2 ppm (3)		
Meter Reading for Calibration Gas:	<u>496</u> ppm (4)		
Measurement #3:			
Meter Reading for Zero Air:	<u>).56</u> ppm (5)		
Meter Reading for Calibration Gas:	<u>494</u> ppm (6)		
Calculate Precision:			
	(.002)		

 $\frac{[500-(2)]+[500-(4)]+[500-(6)]}{3} \times \frac{1}{500} \times \frac{1}{1}$ $= \underbrace{0}, \underbrace{0$

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	Instrument Response Time	e Test Record
Landfill Name: _	Marathon County LF	Monitoring Date:
Time:	Instrument Make:	Thermo Fisher Scientific

Measurement #1:

<u>1/98</u> ppm Stabilize Reading Using Calibration Gas:

90% of the Stabilized Reading =

Time to reach 90% of stabilized reading after switching from zero air to <u>______</u> seconds (1) calibration gas:

Measurement #2:

Stabilize Reading Using Calibration Gas:

496 ppm 446.4 ppm

448.2 ppm

90% of the Stabilized Reading =

Time to reach 90% of stabilized reading after switching from zero air to **Figure 4** seconds (2) calibration gas:

Measurement #3:

4

Stabilize Reading Using Calibration Gas: $\frac{494}{2}$ ppm

90% of the Stabilized Reading =

444.6 ppm

Time to reach 90% of stabilized reading after switching from zero air to <u>_____</u> seconds (3) calibration gas:

Calculate Response Time:

(1)+ (2) + (3) = <u>3.33</u> seconds (must be less than 30 sec)

3 Performed By: <u>RONSMIK</u>

....

Daily Surface Monitoring Log

	ratnon County Landfill	
Performed By: <u>Ro</u> ~	Smith Date: 6/1/18	Time:
Temperature: <u>6</u> /	Sky: <u>0000 cast</u> Ground:	_damp
Barometric Pressure	: <u>29.95</u> Barometric Pre	ssure end: <u>29.9/</u>
Barometric Trend:	falling Wind: 9	NE
Location of Leak:	No peterts	
Time:	Concentration of leak:	(ppm)
Location of leak:		
Time:	Concentration of leak:	(ppm)
Location of leak:		·
Time:	Concentration of leak:	(ppm)

Surface Emissions Monitoring

Calibration Procedure and Background Determination Report

Landfill name: Marathon County Landfill

Instrument make: Thermo Fisher Scientific, Model: TVA1000B,

S/N: 0115248137

Calibration Procedure

- 1. Install filled hydrogen tank, attach probe/readout device; turn on analyzer and hydrogen supply valve.
- 2. Wait 4-5 minutes for proper hydrogen flow, then press; 1 = run. The unit will ignite and display readings. If flame out message appears, clear the message, (press exit) wait another minute and repeat step 2. If unit has not been properly calibrated a bad calibration parameter appears – go to step 3 below.
- 3. Press (exit) until the main menu appears. Calibration can now be performed. For best results, allow unit to warm up for 20 minutes, then press (2=setup).
- 4. Press (1=calibration), choose manual mode.
- 5. Press (2=span concentration) Select the FID detector that the span concentration is for, then press the up or down arrows to select the correct unit of measure for the span gas. Enter the span calibration value; 500%CH, and press the enter key.
- 6. Next Zero the instrument. Press (3=zero) to start this process. Press enter for single detector units. Zero the instrument by using; Air Zero grade. Introduce zero gas into the analyzer through the probe, utilize plastic T bypass pressure valve. Press (enter) to start.
- 7. Wait for minimal change in values (about 15 seconds). Typically, the sample is stable when the first two digits of the reading do not change for 4-5 seconds. Press (enter) to except, press (1) to save.

- 8. Next calibrate with span gas. Press (4=span) Select the detector to be calibrated and press (enter) to start. Follow screen prompts. Wait for readings to stabilize (typically 10-15 seconds). Enter (1) to save.
- 9. Press (5=RF) to verify proper response factor. Confirm that response factor says RFO: default if not set to this value.
- 10. Press (EXIT) twice to return to main menu
- 11. Press (1= Run)

Background Determination Procedure

- 1. Upwind Reading (highest in 30 seconds):
- 2. Downwind Reading (highest in 30 seconds): 9,63 ppm (2) Calculate Background Value: (1)+(2) = 5.61

2

Performed By: <u><u>Run Smith</u> Time: <u>0800</u> Date: <u>6/1/18</u></u>



BBK +B

SEM Calibration Precision Test Record

Landfill Name: Marathon County LF
Monitoring Date: <u>SISIN</u> Performed By Row S
Expiration Date: $\frac{1}{1} \int \frac{2 \sigma \delta}{2}$ Time $\frac{\sigma \delta}{\delta}$
Instrument Make: <u>Thermo Fisher Scientific</u> Model: <u>TVA1000B</u>
S/N:0115248137

Measurement #1:

Meter Reading for Zero Air:

Meter Reading for Calibration Gas:

Measurement #2:

Meter Reading for Zero Air:

Meter Reading for Calibration Gas:

Measurement #3:

Meter Reading for Zero Air:

Meter Reading for Calibration Gas:

Calculate Precision:

(.002)

- 0.13 ____ ppm(1)

- 0.23ppm (3)

- 0.46 ppm (5)

4<u>66</u> ppm (6)

49 ⁰ppm (4)

4<u>9</u>2 pmm (2)

<u>[500-(2)]+[500-(4)]+[500-(6)]</u> 3 Х <u>1</u> 500 x <u>100</u> 1 = 2.13 (must be less than 10%)

BBR +B

Instrument Response Time Test Record

Landfill Name: <u>Marathon County LF</u> Monitoring Date: _

Model: _____TVA1000B_____S/N: ___0115248137_

Measurement #1:

Stabilize Reading Using Calibration Gas:

90% of the Stabilized Reading =

Time to reach 90% of stabilized reading after switching from zero air to <u>4</u> seconds (1) calibration gas:

Measurement #2:

Stabilize Reading Using Calibration Gas:

90% of the Stabilized Reading =

Time to reach 90% of stabilized reading after switching from zero air to $\underline{-}$ seconds (2) calibration gas:

Measurement #3:

Stabilize Reading Using Calibration Gas:

90% of the Stabilized Reading =

Time to reach 90% of stabilized reading after switching from zero air to $\underline{-\underline{+}}$ seconds (3) calibration gas:

Calculate Response Time:

3 Performed By: Row St Juhn P

492.ppm 2<u>79,8</u> ppm

490 ppm <u>Y4</u> ppm

geo ppm 374 ppm

BBR +B

Daily Surface Monitoring Log

	Concentr	ration of leak:	(mgg)
Location of leak:			
Time: Concentration of lea		ation of leak:	(ppm)
Location of leak:			
Time:	Concentra	ation of leak:	(ppm)
Location of Leak:	No	Detects	
Barometric Trend:	rising	Wind: $W - 5mph$	
Barometric Pressure:	29.92	Barometric Pressure end:	29.94
Temperature: <u>64</u>	Sky:	nny Ground: dry	
Performed By: R_{2}	South Da	ate: <u>8/8/6</u>	0801
Lanumi Name: <u>mai</u>	ation sound		



Surface Emissions Monitoring

Calibration Procedure and Background Determination Report

Landfill name: Marathon County Landfill

Instrument make: Thermo Fisher Scientific, Model: TVA1000B,

S/N: 0115248137

Calibration Procedure

- 1. Install filled hydrogen tank, attach probe/readout device; turn on analyzer and hydrogen supply valve.
- 2. Wait 4-5 minutes for proper hydrogen flow, then press; 1 = run. The unit will ignite and display readings. If flame out message appears, clear the message, (press exit) wait another minute and repeat step 2. If unit has not been properly calibrated a bad calibration parameter appears – go to step 3 below.
- 3. Press (exit) until the main menu appears. Calibration can now be performed. For best results, allow unit to warm up for 20 minutes, then press (2=setup).
- 4. Press (1=calibration), choose manual mode.
- 5. Press (2=span concentration) Select the FID detector that the span concentration is for, then press the up or down arrows to select the correct unit of measure for the span gas. Enter the span calibration value; 500%CH, and press the enter key.
- 6. Next Zero the instrument. Press (3=zero) to start this process. Press enter for single detector units. Zero the instrument by using; Air Zero grade. Introduce zero gas into the analyzer through the probe, utilize plastic T bypass pressure valve. Press (enter) to start.
- 7. Wait for minimal change in values (about 15 seconds). Typically, the sample is stable when the first two digits of the reading do not change for 4-5 seconds. Press (enter) to except, press (1) to save.

BBR

- 8. Next calibrate with span gas. Press (4=span) Select the detector to be calibrated and press (enter) to start. Follow screen prompts. Wait for readings to stabilize (typically 10-15 seconds). Enter (1) to save.
- 9. Press (5=RF) to verify proper response factor. Confirm that response factor says RFO: default if not set to this value.
- 10. Press (EXIT) twice to return to main menu
- 11. **Press (1= Run)**

 Background Determination Procedure

 1. Upwind Reading (highest in 30 seconds):
 2.82
 ppm (1)

 2. Downwind Reading (highest in 30 seconds):
 1464
 ppm (2)

 Calculate Background Value:
 (1)+(2)
 =
 8.83

2

Performed By: RON SMITH Time: 0800 Date: 8/8/18


4th Qtr.

SEM Calibration Precision Test Record

Landfill Name: Marathon County LF
Monitoring Date: 11/1/18 Performed By Ron Smith
Expiration Date: March 2019 Time 0800
Instrument Make: <u>Thermo Fisher Scientific</u> Model: <u>TVA1000B</u>
S/N:0115248137

Measurement #1:

Meter Reading for Zero Air:

Meter Reading for Calibration Gas:

Measurement #2:

Meter Reading for Zero Air:

Meter Reading for Calibration Gas:

Measurement #3:

Meter Reading for Zero Air:

Meter Reading for Calibration Gas:

Calculate Precision:

(.002)

0.67 ppm(1)

494 pmm (2)

0.77 ppm (3)

<u>493</u> ppm (4)

0.50 ppm (5)

[500-(2)]+[500-(4)]+[500-(6)] 3 <u>1</u> 500 Х x <u>100</u> 1 = <u>1.4</u> % (must be less than 10%)

4th Qtr

Instrument Response Time Test Record
Landfill Name: <u>Marathon County LF</u> Monitoring Date: <u>/////8</u>
Time: Instrument Make: Thermo Fisher Scientific
Model: <u>TVA1000B</u> S/N: <u>0115248137</u>
Measurement #1:
Stabilize Reading Using Calibration Gas: 494 ppm
90% of the Stabilized Reading = 444.6 ppm
Time to reach 90% of stabilized reading after switching from zero air to calibration gas: 3 seconds (1)
Measurement #2:
Stabilize Reading Using Calibration Gas: 493 ppm
90% of the Stabilized Reading = 443.70 ppm
Time to reach 90% of stabilized reading after switching from zero air to calibration gas: -4 seconds (2)
Measurement #3:
Stabilize Reading Using Calibration Gas: $-\frac{2492}{2}$ ppm
90% of the Stabilized Reading = 443.8° ppm
Time to reach 90% of stabilized reading after switching from zero air to
calibration gas: $\underline{\prec}$ seconds (3)

Calculate Response Time:

<u>(1)+ (2) + (3)</u> = <u>3,</u> seconds (must be less than 30 sec) 3 Performed By: <u>Ron Smith</u>

HK Qtr

Daily Surface Monitoring Log

Landfill Name: <u>Mara</u>	thon County Landfill	
Performed By: <u>Ron</u>	<u> Date: 11/1/18</u> Time: 080°	
Temperature: 30°		
Barometric Pressure: _	30.02 Barometric Pressure end: 30.06	
Barometric Trend: $\underline{\gamma}$	Wind: <u>ESE4</u>	
Location of Leak:	Vo Detects	
Time:	Concentration of leak:	(ppm)
Location of leak:		
Time:	Concentration of leak:	_ (ppm)
Location of leak:		
Time:	Concentration of leak:	(ppm)

4th ati

Surface Emissions Monitoring

Calibration Procedure and Background Determination Report

Landfill name: Marathon County Landfill

Instrument make: Thermo Fisher Scientific, Model: TVA1000B,

S/N: 0115248137

Calibration Procedure

- 1. Install filled hydrogen tank, attach probe/readout device; turn on analyzer and hydrogen supply valve.
- 2. Wait 4-5 minutes for proper hydrogen flow, then press; 1 = run. The unit will ignite and display readings. If flame out message appears, clear the message, (press exit) wait another minute and repeat step 2. If unit has not been properly calibrated a bad calibration parameter appears – go to step 3 below.
- 3. Press (exit) until the main menu appears. Calibration can now be performed. For best results, allow unit to warm up for 20 minutes, then press (2=setup).
- 4. Press (1=calibration), choose manual mode.
- 5. Press (2=span concentration) Select the FID detector that the span concentration is for, then press the up or down arrows to select the correct unit of measure for the span gas. Enter the span calibration value; 500%CH, and press the enter key.
- 6. Next Zero the instrument. Press (3=zero) to start this process. Press enter for single detector units. Zero the instrument by using; Air Zero grade. Introduce zero gas into the analyzer through the probe, utilize plastic T bypass pressure valve. Press (enter) to start.
- 7. Wait for minimal change in values (about 15 seconds). Typically, the sample is stable when the first two digits of the reading do not change for 4-5 seconds. Press (enter) to except, press (1) to save.

8. Next calibrate with span gas. Press (4=span) Select the detector to be calibrated and press (enter) to start. Follow screen prompts. Wait for readings to stabilize (typically 10-15 seconds). Enter (1) to save.

4th Qtr.

- 9. Press (5=RF) to verify proper response factor. Confirm that response factor says RFO: default if not set to this value.
- 10. Press (EXIT) twice to return to main menu
- 11. Press (1= Run)

Background Determination Procedure

Upwind Reading (highest in 30 seconds): <a>/, 83 ppm (1)
Downwind Reading (highest in 30 seconds): <a>28, 86 ppm (2)
Calculate Background Value: <a>(1)+(2) = <a>/5,345
S

Performed By: <u>RON SMITH</u> Time: <u>0800</u> Date: <u>11/1/18</u>



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ATTACHMENT C

2018 LANDFILL GAS MAINLINE TO-15 LAB REPORT

1 of 8 J082804



September 11, 2018



LA Cert #04140 EPA Methods TO3, TO14A, TO15, 25C/3C, RSK-175

TX Cert T104704450-14-6 EPA Methods T014A, T015 UT Cert CA0133332015-3 EPA Methods T03, T014A, T015, RSK-175

Marathon County Solid Waste ATTN: Ron Smith R18500 E. Highway 29 Ringle, WI 54471

LABORATORY TEST RESULTS

Project Reference: Mainline VOC Sampling; MCLF 369 Lab Number: J082804-01

Enclosed are results for sample(s) received 9/28/18 by Air Technology Laboratories. Analyses were performed according to specifications on the chain of custody provided with the sample(s).

Report Narrative:

- Unless otherwise noted in the report, sample analyses were performed within method performance criteria and meet all requirements of the TNI Standards.
- The enclosed results relate only to the sample(s).

Preliminary results were e-mailed to Ron Smith on 9/10/18.

ATL appreciates the opportunity to provide testing services to your company. If you have any questions regarding these results, please call me at (626) 964-4032.

Sincerely,

Mark Johnson Operations Manager MJohnson@AirTechLabs.com

Note: The cover letter is an integral part of this analytical report.

		19601 E Colo Aug. Suite 12			CHAIN O	F CUSTOD	Y REC	ORD	
	INOLOGY	City of Industry. CA 91748	TUI	RNAROUN	ID TIME	DELIVERABI	LES PAG	ie: of	
Labor	ratories, Inc.	Ph: 626-964-4032	Standard	4	8 hours	EDD	Condit	tion upon receipt:	
		Fx: 626-964-5832	Same Day		2 hours	EDF		Sealed Yes	D oN
Project No.: MCL	F 364		24 hours	°	6 hours	LEVEL 3		Intact Yes	D ov
Project Name: Mainlin	w VOC Semplim		Other:		7	LEVEL 4		Chilled	deg C
Report To: RUN	Smith "			BILLIN	g		ANALY	SIS REQUEST	Γ
Company: Ma va	thon County Soli	d Wast +	P.O. No.:	SWO	80318		_		
Street: 172900	State Highw	ay 29	Bill to: 5	SAME		-			
City/State/Zip: R . N.u.	L. W. "	1		1 & a		91	0		
Phone& Fax: 715	216-3913					2	7-		
e-mail: ^0∩,5h	nithe co. maratho	A.W. U.S				2	2 4		
LAB USE ONLY	SAMPLE	DENTIFICATION	ajamaz Tad	ajamaz amit	XIATAM ABNIATNO: AGYT	EPA	20		
J082804-01	Mainline UOL	Sample I	8/22/18	9540	E C	×			
					-		_		
							-		
AUTHORIZATION TO PERFORM WORK	MCSW	8	DATETIME		COMMENTS			110/1	
RAMPLED BY Row Smith	M CS W	S/3	DATE/TIME	5	10/2	report.	N IN	2	
RUN SWAL	8/22/ 1321 DATE/TIME	Gen Prov	RDRU1 321	ñ					30020
	DATE/TIME		48/18 11	2					
METHOD OF TRANSPORT (c	ircle one): Walk-In Fed	Ex UPS Courier ATLI	Other						
DISTRIBUTION: White & Yello	w - Lab Copies / Pink - Cust	omer Copy	Preservation:	H=HCI N	-None / Cont	ainer: B-Rad C-	Can V-V	OA 0-Other Rail	32 517100

2 of 8

3 of 8 J082804

Marathon County Solid Waste
Ron Smith
Mainline VOC Sampling
MCLF 369
8/28/2018
Air

	Lab No.:	J08280	04-01					
Clien	t Sample I.D.:	Mainlin Samp	e VOC de I					
Date/T	ime Sampled:	8/22/18	9:39					
Date/Ti	me Analyzed:	8/29/18	12:13					
Q	C Batch No.:	180829G	C8A1					
An	AS	5						
Dil	ution Factor:	8.4						
ANALYTE	(Units)	Result	RL		1.2	1.1		
Nitrogen	(% v/v)	67	8.4				() · · · · · ·	
Dxygen	(% v/v)	19	4.2					
Carbon Dioxide	(% v/v)	4.3	0.084					
Aethane	(% v/v)	5.8	0.0084		1			
Carbon Monoxide	(% v/v)	ND	0.0084					

Results are normalized

RL = Reporting Limit

ND = Not detected at or above the RL.

Reviewed/Approved By: 6 De

Mark Johnson Operations Manager

Date 9-6-18

The cover letter is an integral part of this analytical report

Client:Marathon County Solid WasteAttn:Ron SmithProject Name:Mainline VOC SamplingProject No.:MCLF 369Date Received:08/28/18Matrix:Air

Reporting Units: ug/L

]	EPA Me	thod TO	15				
Lab No.:	J08280	04-01			1			
Client Sample I.D.:	Mainlin Samp	e VOC ble 1						
Date/Time Sampled:	8/22/18	8 9:39						
Date/Time Analyzed:	8/31/18	3 0:21						
QC Batch No.:	180830N	MS2A1						
Analyst Initials:	D	Г					-	
Dilution Factor:	8.4	4						
ANALYTE	Result ug/L	RL ug/L						
Dichlorodifluoromethane (12)	0.23	0.042						
Chloromethane	ND	0.035	-					
1,2-Cl-1,1,2,2-F ethane (114)	ND	0.059					-	
Vinyl Chloride	0.36	0.022						
Bromomethane	ND	0.033				1		_
Chloroethane	ND	0.022		101				
Trichlorofluoromethane (11)	0.15	0.047						
1,1-Dichloroethene	ND	0.033		1 1 1 1				
Carbon Disulfide	0.23	0.13						
1,1,2-Cl 1,2,2-F ethane (113)	ND	0.065						
Acetone	0.55	0.10						
Methylene Chloride	ND	0.029		1.	-	_		11
t-1,2-Dichloroethene	ND	0.033		2 G				
1,1-Dichloroethane	ND	0.034				-		
Vinyl Acetate	ND	0.15						1
c-1,2-Dichloroethene	ND	0.033						
2-Butanone	0.16	0.025						
t-Butyl Methyl Ether (MTBE)	ND	0.030		4				· · · · · · · · · · · · · · · · · · ·
Chloroform	ND	0.041	-	-	-			- L
1,1,1-Trichloroethane	ND	0.046						
Carbon Tetrachloride	ND	0.053		-				
Benzene	ND	0.027	1.11	1.1	1			1
1,2-Dichloroethane	ND	0.034						
Trichloroethene	ND	0.045		11				-
1,2-Dichloropropane	ND	0.039		-				
Bromodichloromethane	ND	0.056						-
c-1,3-Dichloropropene	ND	0.038				14 1000		h la mar (1
4-Methyl-2-Pentanone	ND	0.035			-		-	1.
Toluene	0.056	0.032				24 mm	-	1
t-1,3-Dichloropropene	ND	0.038						

AITTECHNOLOGY Laboratories, Inc.

18501 E. Gale Avenue, Suite 130 • City of Industry, CA 91748 • Ph: (626) 964-4032 • Fx: (626) 964-5832

4 of 8 J082804 Client:Marathon County Solid WasteAttn:Ron SmithProject Name:Mainline VOC SamplingProject No.:MCLF 369Date Received:08/28/18Matrix:AirReporting Units:ug/L

]	EPA Met	hod TC	015			
Lab No.:	J08280	04-01					
Client Sample I.D.:	Mainlin Samp	e VOC ble 1					
Date/Time Sampled:	8/22/18	3 9:39					
Date/Time Analyzed:	8/31/18	3 0:21					
QC Batch No.:	180830	MS2A1					
Analyst Initials:	D	r	-				
Dilution Factor:	8.	4					
ANALYTE	Result ug/L	RL ug/L					
1,1,2-Trichloroethane	ND	0.046					
Tetrachloroethene	ND	0.057		11/1			
2-Hexanone	ND	0.035					
Dibromochloromethane	ND	0.072		_			
1,2-Dibromoethane	ND	0.065					
Chlorobenzene	ND	0.039	1				
Ethylbenzene	ND	0.037					
p,&m-Xylene	ND	0.037					11 11 11
o-Xylene	ND	0.037					
Styrene	ND	0.036					
Bromoform	ND	0.087					
1,1,2,2-Tetrachloroethane	ND	0.12		1			
Benzyl Chloride	ND	0.044		11.		_	Contraction of the
4-Ethyl Toluene	ND	0.041				1	
1,3,5-Trimethylbenzene	ND	0.083	-				
1,2,4-Trimethylbenzene	ND	0.083		2			
1,3-Dichlorobenzene	ND	0.051		-	1		
1,4-Dichlorobenzene	ND	0.051		1.0			
1,2-Dichlorobenzene	ND	0.051					
1,2,4-Trichlorobenzene	ND	0.13					
Hexachlorobutadiene	ND	0.090				 _	

ND = Not Detected (below RL)

RL = Reporting Limit

Reviewed/Approved By:

Mark Johnson Operations Manager

The cover letter is an integral part of this analytical report

AITTECHNOLOGY Laboratories, Inc.

090501 xisx

Date 9-10-18

18501 E. Gale Avenue, Suite 130 • City of Industry, CA 91748 • Ph: (626) 964-4032 • Fx: (626) 964-5832

Client:Marathon County Solid WasteAttn:Ron SmithProject Name:Mainline VOC SamplingProject No.:MCLF 369Date Received:08/28/18Matrix:AirReporting Units:ug/L

		EPA Meth	od TOI	15			
Lab No.:	METHO	D BLANK				 	
Client Sample I.D.:		-	16				
Date/Time Sampled:	1	+	1				
Date/Time Analyzed:	8/30/1	18 8:39					
QC Batch No.:	180830	MS2A1			1		
Analyst Initials:	I	DT	ñ				Constraints (
Dilution Factor:	0.	.20					- 2
ANALYTE	Result ug/L	RL ug/L					
Dichlorodifluoromethane (12)	ND	0.00099					
Chloromethane	ND	0.00083					
1,2-Cl-1,1,2,2-F ethane (114)	ND	0.0014					
Vinyl Chloride	ND	0.00051				- 1	
Bromomethane	ND	0.00078					
Chloroethane	ND	0.00053	-				
Trichlorofluoromethane (11)	ND	0.0011					
1,1-Dichloroethene	ND	0.00079					
Carbon Disulfide	ND	0.0031					
1,1,2-Cl 1,2,2-F ethane (113)	ND	0.0015	-				
Acetone	ND	0.0024					
Methylene Chloride	ND	0.00069		1		 _	
t-1,2-Dichloroethene	ND	0.00079		1.	_	1	
1,1-Dichloroethane	ND	0.00081				_	
Vinyl Acetate	ND	0.0035		1.		 -	
c-1,2-Dichloroethene	ND	0.00079			_	 	
2-Butanone	ND	0.00059		1			
t-Butyl Methyl Ether (MTBE)	ND	0.00072				 _	
Chloroform	ND	0.00098					
1,1,1-Trichloroethane	ND	0.0011				_	
Carbon Tetrachloride	ND	0.0013				_	
Benzene	ND	0.00064		1		 -	1
1,2-Dichloroethane	ND	0.00081				 	
Trichloroethene	ND	0.0011					
1,2-Dichloropropane	ND	0.00092	_				-
Bromodichloromethane	ND	0.0013		-		 	
c-1,3-Dichloropropene	ND	0.00091		-	_	 	
4-Methyl-2-Pentanone	ND	0.00082		1		 _	1
Toluene	ND	0.00075				 _	
t-1,3-Dichloropropene	ND	0.00091		1.0			10.00

6 of 8 J082804

AITTECHNOLOGY Laboratories, Inc.

1090501 xiss

18501 E. Gale Avenue, Suite 130 + City of Industry, CA 91748 + Ph: (626) 964-4032 + Fx: (626) 964-5832

Client:Marathon County Solid WasteAttn:Ron SmithProject Name:Mainline VOC SamplingProject No.:MCLF 369Date Received:08/28/18Matrix:AirReporting Units:ug/L

		EPA Meth	od TO15					
Lab No.:	МЕТНО	D BLANK						
Client Sample I.D.:		-						
Date/Time Sampled:		-						
Date/Time Analyzed:	8/30/1	8 8:39		_	1			
QC Batch No.:	180830	MS2A1						
Analyst Initials:	1	DT						
Dilution Factor:	0.	.20						
ANALYTE	Result ug/L	RL ug/L						
1,1,2-Trichloroethane	ND	0.0011						
Tetrachloroethene	ND	0.0014		1				
2-Hexanone	ND	0.00082						1.1.1
Dibromochloromethane	ND	0.0017		· · · · · · · · · · · · · · · · · · ·	-	1		
1,2-Dibromoethane	ND	0.0015				1		
Chlorobenzene	ND	0.00092						
Ethylbenzene	ND	0.00087						
p,&m-Xylene	ND	0.00087						
o-Xylene	ND	0.00087						
Styrene	ND	0.00085				1		
Bromoform	ND	0.0021						
1,1,2,2-Tetrachloroethane	ND	0.0027						
Benzyl Chloride	ND	0.0010		-				
4-Ethyl Toluene	ND	0.00098	_	1. Th		_		
1,3,5-Trimethylbenzene	ND	0.0020		1		1		
1,2,4-Trimethylbenzene	ND	0.0020		1				
1,3-Dichlorobenzene	ND	0.0012						-
1,4-Dichlorobenzene	ND	0.0012						
1,2-Dichlorobenzene	ND	0.0012		1			-	
1,2,4-Trichlorobenzene	ND	0.0030						
Hexachlorobutadiene	ND	0.0021		2		-		-
								1

ND = Not Detected (below RL)

RL = Reporting Limit

Reviewed/Approved By:

Mark Johnson Operations Manager Date 9-16-18

The cover letter is an integral part of this analytical report

AirTECHNOLOGY Laboratories, Inc. 18501 E. Gale Avenue, Suite 130 + City of Industry, CA 91748 + Ph: (626) 964-4032 + Fx: (626) 964-5832 1090501 xlsx

LCS/LCSD Recovery and RPD Summary Report

QC Batch #: 180830MS2A1

Matrix: Air

		EPA	Metho	d TO-1	4/TO-1	5					
Lab No:	Method Blank		L	CS	LC	SD					
Date/Time Analyzed:	8/30/18 8:39		8/30/1	8 7:16	8/30/1	8 7:56					
Data File ID:	30AUG007.D		30AU	G005.D	30AU	G006.D					
Analyst Initials:	DT		D	т	E	т		_		-	
Dilution Factor:	0.2	· · · · · · ·	1	.0	1	.0			Limits		
ANALYTE	Result ppbv	Spike Amount	Result ppbv	% Rec	Result ppbv	% Rec	RPD	Low %Rec	High %Rec	Max. RPD	Pass/ Fail
1,1-Dichloroethene	0.0	10.0	9.5	95	9,4	94	1.2	70	130	30	Pass
Methylene Chloride	0.0	10.0	10.0	100	9.7	97	2.8	70	130	30	Pass
Trichloroethene	0.0	10.0	10.0	100	9.6	96	3.8	70	130	30	Pass
Toluene	0.1	10.0	9.7	96	9.8	97	0.9	70	130	30	Pass
1,1,2,2-Tetrachloroethane	0.0	10.0	8.5	85	8.6	86	0.5	70	130	30	Pass

RPD = Relative Percent Difference

Reviewed/Approved By:

Mark Johnson Operations Manager

The cover letter is an integral part of this analytical report

AITTECHNOLOGY Laboratories, Inc. -

18501 E. Gale Avenue, Suite 130 + City of Industry, CA 91748 + Ph: (626) 964-4032 + Fx: (626) 964-5832

Date: 9-10-18

ATTACHMENT D

2018 AREA B LEACHATE LINE JETTING AND TELEVISING REPORT



.

2018

TOWN OF RINGLE

Marathon County Landfill Leachate Inspections

1772 S Vandenberg Road Green Bay, Wisconsin 54311

> O 920-468-7074 F 920-468-7204

www.northernpipeinc.com

20 J. - 19



1772 S Vandenberg Road Green Bay, Wisconsin 54311 920-468-7074 | info@northernpipeinc.com

ı.

Marathon County Landfill Leachate Cleaning 6/11/2018 - 6/12/2018 Vactor w/ 1,200' of 3/4" hose

					ARE	AA	
CLEANOUT		PIPE	TOTAL	FT JETTED	FT JETTED	TOTAL	
ACCESS POINT		SIZE	LENGTH (FT)	(S)	(N)	JETTED	COMMENTS
	1	8	1,180	285	540	825	Stops at 285' from South and 540' from North
	2	6	1,040	750	340	1,090	Overlap achieved - line is good
	3	6	1,040	1,040	-	1,040	Jetted from south, line is good
	4	8	1,180	170	1,100	1,270	Stops at 170' from South, overlap achieved from North
	5	6	1,040	825	315	1,140	Overlap achieved - line is good
	6	6	1,040	600	540	1,140	Overlap achieved - line is good
	7	8	460	330	-	330	Stops at 330' from West
Gas Condensate	Lin	e	280	-	-	280	Line is good
			7,260			7,115	

3,000 gallons of water used

AREA B									
CLEANOUT	1	PIPE	TOTAL	FT JETTED	FT JETTED	TOTAL			
ACCESS POINT		SIZE	LENGTH (FT)	(E/S)	(W/N)	JETTED	COMMENTS		
	1	12	660	660	-	660	From B1E - line is good		
	2	12	500	500	-	500	From B2S - line is good		
	3	12	505	505	-	505	From B3S - line is good		
	4	12	S10	510	-	510	From B4S - line is good		
	5	12	660	660	-	660	From B5S - line is good		
	6	12	280	280	-	280	From B6E - line is good		
	7	12	850	850	-	850	From B7S - line is good		
	8	12	875	875	-	875	From B8S - line is good		
	9	12	305	305	-	305	From B9E - line is good		
	10	12	840	840	-	840	From B10S - line is good		
	11	12	795	795	-	795	From B11S - line is good		
	12	12	270	270	-	270	From B12S - line is good		
	13	12	750	750	-	750	From B13S - line is good		
	14	12	725	725	-	725	From B14S - line is good		
			8,525			8,525			

5,500 gallons of water used

BLUE BIRD RIDGE

CLEANOUT	PIPE		FT JETTED	FT JETTED	
ACCESS POINT	JIZE	LENGTH (FI)	(ia)	(3)	
LCR 12 TO LCR 11	6	1,180	600	600	1,200 Overlap achieved - line is good
LCR 8 TO LCR 9	6	1,144	600	600	1,200 Overlap achieved - line is good
LCR 10 TO LOOP 7	6	650	404	276	680 Overlap achieved - line is good
LCR 4 TO LCR 6	6	1,070	600	600	1,200 Overlap achieved - line is good
LCR 2 TO LCR 3	6	1,020	600	600	1,200 Overlap achieved - line is good
LCR 5 TO LOOP 1	6	395	395	-	395 Overlap achieved - line is good
		5,459			5,875

2,500 gallons of water used

1	#	Upstream MH	Downstream MH	TV Length	Customer	Page
1	1	B10N	B10S	416.2	Area B	2
	2	B10N	B10S	317.8	Area B	2
	3	B11N	B11S	454	Area B	3
	4	B11N	B11S	304.8	Area B	4
	5	B12E	B12W	289.1	Area B	5
	6	B12E	B12W	241.2	Area B	6
	7	B13N	B13S	482.4	Area B	7
	8	B13N	B13S	351.3	Area B	8
	9	B14N	B14S	455.2	Area B	9
34 2	10	B14N	B14S	403.1	Area B	10
4.	11	B1E	B1w	417.9	Area B	11
1	12	B1E	B1W	373.1	Area B	12
1	13	B2N	B2S	484.2	Area B	13
2	14	B2N	B2S	302	Area B	14
	15	B3N	B3S	460.8	Area B	15
1	16	B3N	B3S	464	Area B	16
÷.,	17	B4N	B4S	429.3	Area B	17
	18	B4N	B4S	344.8	Area B	18
	19	B5N	B5S	419.1	Area B	19
	20	B5N	B5S	337.2	Area B	20
- fr	21	B6E	B6W	286.5	Area B	21
	22	B6E	B6W	208.3	Area B	22
i. T	23	B7N	B7S	430.7	Area B	23
	24	B7N	B7S	331.6	Area B	24
	25	B8N	B8S	407.7	Area B	25
	26	B8N	B8S	367.4	Area B	26
	27	B9E	B9W	307.4	Area B	27
	28	B9E	B9W	172.5	Area B	. 28

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ATTACHMENT E

2018 AREA B STORM WATER INSPECTION REPORT

Annual Facility Site Compliance Inspection Report (AFSCI)

For Storm Water Discharges Associated With Industrial Activity Under Wisconsin Pollutant Discharge Elimination System (WPDES) Permit Form 3400-176 (R 5/14) Page 1 of 5

Notice: This form is authorized by s. NR 216.29(2), Wis. Adm. Code. Submittal of a completed form to the Department is mandatory for industrial facilities covered under a Tier 1 storm water general permit. Facilities covered under a Tier 1 permit are not required to submit AFSCI reports after submittal of the second AFSCI report, unless so directed by the Department. However, these inspections and quarterly visual inspections shall still be conducted and results shall be kept on site for Department inspection. Facilities covered under a Tier 2 storm water general, industry-specific general or individual permit shall keep the results of their AFSCI and quarterly visual inspections on site for Department inspection. Facilities covered under a Tier 2 storm water general, industry-specific general or individual permit shall keep the results of their AFSCI and quarterly visual inspections on site for Department inspection. Facilities covered under a to comply with these regulations may result in fines up to \$25,000 per day pursuant to s. 283.91, Wis. Stats.

Personally identifiable information on this form may be used for other water quality program purposes.

Please type or clearly print your answers to all questions.

Section I: Facility/Site Information				and a second
Facility/Site Name (As Appears on Permit Authorization)		0	County	
AREA B LANDFILL 3338		1	Marathon	
Location Address/Description (if different from mailing address belo	ow)		State	ZIP Code
172900 State Highway 29			WI	54471
◯ City	Facility Identification	ion Num	iber (FID) and	d/or FIN Number if known:
of Ringle	FID 33	370056	80 FI	N
Section II: Facility/Site Contact Person				
Local Contact Person	Mailing Address (if	f differer	nt than site lo	cation address)
Meleesa Johnson				
Title	Municipality (if diffe	erent tha	an above)	
Director				
Telephone (include area code)	State	ZIP C	ode (if differe	nt from above)
(715) 446-3101	WI			,
E-mail address or Website (if applicable)	-A	Fax (ii	nclude area c	code)
Meleesa.Johnson@co.marathon.wi.us			(71	5) 446-2906
Section III: Certification & Signature (Person attesting to the accuracy and completeness of Annu	ual Facility Site Co	omplian	ce Inspectio	on Report.)

This form must be signed by an official representative of the permitted facility in accordance with s. NR 216.22(7), Wis. Adm. Code. See instructions on page 4. If this form is not signed, or is found to be incomplete, it will be returned.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature of Authorized Representative	Telephone Number (include area code)		
IV CAR	(715) 446-3101	l	
Type or Print Name	Company Name		
Meleesa Johnson	Marathon County Solid Waste		
Position Title	Mailing Address		
Director	172900 East Highway 29		
Date Signed	Municipality	State	ZIP Code
2/24/19	Ringle	WI	54471

How to Use this Form:

The first level of storm water monitoring consists of a comprehensive annual facility site compliance inspection (AFSCI) to determine if your facility is operating in compliance with your Storm Water Pollution Prevention Plan (SWPPP). You should use the results of this inspection to determine the extent to which your SWPPP needs to be updated to prevent pollution from new source areas, as well as to correct any inadequacies that the plan may have in handling existing source areas. This first level of monitoring is addressed in Section IV of this Annual Report on page 2.

The second level of storm water monitoring consists of quarterly visual observations of storm water leaving the site during runoff events caused by snow-melt or rainfall. This is a practical, low cost tool for identifying obvious contamination of storm water discharges, and can also help identify which practices are ineffective. The goal of quarterly inspections is to obtain results from a set of four inspections that are distributed as evenly as possible throughout the year and which depict runoff quality during each of the four seasons. This second level of monitoring is addressed in Section V of this Annual Report on page 3.

Form 3400-176 (R 5/14)

Section IV: Annual Facility Site Compliance Inspection

The Annual Facility Site Compliance Inspection shall be adequate to verify that: your Storm Water Pollution Prevention Plan (SWPPP) remains current; potential pollution sources at your facility are identified; the facility site map and drainage map remain accurate; and that the Best Management Practices prescribed in your SWPPP are being implemented, properly operated, and adequately maintained.

Name of Person Conducting Inspection	Inspection Date	
David Hagenbucher	06/15/2018	}
Employer	Telephone Number	
Marathon County Solid Waste	(715) 446-31	01
Your inspection should start with a review of your written SWP these inspections, you find that the provisions in your SWPPP discharged from your facility.	PP kept at your facility. The SWPPP should be are ineffective in controlling contaminated store	be amended if, through orm water from being
1. Has your SWPPP been updated to include current Non-S	torm Water Discharge Evaluation results?	OYes ONo ⊙N/A
2. Has your SWPPP been amended for any new constructio conditions at the facility?	n that would affect the site map or drainage	⊖Yes ●No ⊖N/A
3. Has your SWPPP been amended for any changes in facil new source, areas for contamination of storm water?	ity operations that could be identified as	⊖Yes ●No ⊖N/A
4. Are there any materials at the facility that are handled, store exposure to storm water that are not currently addressed	ored, or disposed in a manner to allow in your SWPPP?	⊖Yes ●No ⊖N/A
5. Are there any maintenance or material handling activities addressed in your SWPPP?	conducted outdoors that have not been	OYes ONo ON/A
6. Are outside areas kept in a neat and orderly condition?		●Yes ○No ○N/A
7. Are regular housekeeping inspections made?		●Yes ONo ON/A
8. Do you see spots, pools, puddles, or other traces of oils,	grease, or other chemicals on the ground?	⊖Yes
9. Are particulates on the ground from industrial operations	or processes being controlled?	●Yes ONo ON/A
10. Do you see leaking equipment, pipes or containers?		⊖Yes
11. Do drips, spills, or leaks occur when materials are being t	ransferred from one source to another?	
12. Are drips or leaks from equipment or machinery being cor	ntrolled?	⊙Yes ○No ○N/A
13. Are cleanup procedures used for spilled solids?		●Yes ONo ON/A
14. Are absorbent materials (floor dry, kitty litter, etc.) regular	ly used in certain areas to absorb spills?	●Yes ○No ○N/A
15. Can you find discoloration, residue, or corrosion on the ro drain work areas?	of or around vents or pipes that ventilate or	OYes ⊙No ON/A
16. Are Best Management Practices implemented to reduce of from source areas at the facility?	or eliminate contamination of storm water	●Yes ○No ○N/A
17. Are Best Management Practices adequately maintained?		●Yes ○No ○N/A
 Are there significant changes to your SWPPP needed to control a discharge of contaminated storm water from your 	correct plan inadequacies to effectively ur facility?	⊖Yes

Comments:

A storm water inspection was conducted during a significant rainfall. June of 2018 saw a few heavy precipitation events in Central Wisconsin. On 06/15/18, the site received approximately 2.7" of rain within a 24 hour period. Ground conditions were relatively dry. Area B has four storm water retention/sedimentation basins and multiple culverts and drainage ditches. The storm water infrastructure handled the precipitation without any issues. Ditches, sediment fences, culverts, and sedimentation ponds all functioned as intended. The water flowing into the sediment ponds contained little to no soil since all intermediate slopes had been vegetated during 2016. Therefore, water was not contaminated. The infiltration ponds allowed quick infiltration into the groundwater, and they did not experience any overflow.

Section V: Quarterly Visual Inspection Reports

Quarterly Visual Inspections at each storm water discharge outfall on your site can be a valuable assessment tool and are required by the Tier 1, Tier 2, and Nonmetallic Mining Industrial Storm Water General Permits. These inspections should be performed when sufficient runoff occurs during daylight hours. Try to make observations within the first 30 minutes after runoff begins discharging from the outfall or soon thereafter as practical, but no later than 60 minutes. If you find visible pollution, note the probable source and list any possible Best Management Practices that could be used to reduce or eliminate the problem. Make any necessary changes to your Storm Water Pollution Prevention Plan as needed. If you were unable to evaluate an outfall during a specific quarter, this should be indicated along with a reason as to why this could not be done.

		Date of	Inspection	
Outfall Number	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
Area B SR-1	03/26/2018	06/15/2018	09/05/2018	12/27/2018
Area B SR-2	03/26/2018	06/15/2018	09/05/2018	12/27/2018
Area B SR-3	03/26/2018	06/15/2018	09/05/2018	12/27/2018
Area B SR-4	03/26/2018	06/15/2018	09/05/2018	12/27/2018
				1
				-

Briefly summarize what you found when conducting your Quarterly Visual Inspections. (Include any observations of color, odor, turbidity, floating solids, foam, oil sheen, or any other indications of storm water pollution and the probable sources of any observed storm water contamination.)

March - Water was frozen.

June - The sediment pond and infiltration basin appeared to be slightly green because of algae. Seeding and vegetation management was conducted on all intermediate slopes around the Area B landfill during 2016, so there was no discoloration from sediment. There was no odor, floating solids, foam, or oil sheen. The outfalls all remained dry during this inspection.

September - A storm water inspection was conducted during a significant rain event in which 4 inches of rain fell within a 24 hour period. All storm water infrastructure handled the precipitation without any issues. Since this was a heavy rain, some temporary ponding occurred, but only lasted a short amount of time.

December- Water was frozen.

Form 3400-176 (R 5/14)

Page 5 of 5

Instructions

Section I: Facility/Site Information

Provide the name of the facility as it appears on the permit application or permit cover letter and location address. If known, provide the Facility Identification (FID) and/or FIN Number assigned by the WDNR.

Section II: Facility/Site Contact Person

Provide the local contact person information for the facility. The mailing address should be given for the facility contact person if it is different from the facility site location address information.

Section III: Certification & Signature

State Statutes provide for severe penalties for submitting false information on this AFSCI form. State regulations require this form be signed as follows:

- 1. For a corporation, by a principal executive officer of at least the level of Vice President, or a duly authorized representative having overall responsibility for the operation covered by this permit.
- 2. For a unit of government, a principal executive officer, a ranking elected official, or other duly authorized representative.
- 3. For a partnership, by a general partner; for a sole proprietorship, by the proprietor.
- 4. For a limited liability company, by member or manager.

Section IV: Annual Facility Site Compliance Inspection

Provide the name of the person conducting the inspection, inspection date, name of employer, and telephone number. Check the appropriate box for each of the listed questions and provide explanations in the comment box as needed.

Section V: Quarterly Visual Inspection Reports

Provide the outfall number in the table and the dates of each quarterly visual inspection. Summarize the findings of your visual inspections below the table. Attach additional sheets if needed.

Mailing Address

Unless otherwise directed, mail this completed form to the Wisconsin Department of Natural Resources (WDNR) office associated with the county of the facility site location as follows:

		NOR I HERN REG	GION (NOR)
Ashland Barron Bayfield Burnett Douglas Florence	Forest Iron Langlade Lincoln Oneida Polk	Price Rusk Sawyer Taylor Vilas Washburn NORTHEAST RE	WDNR Baldwin Service Center 890 Spruce Street Baldwin, WI 54002 715-684-2914 ext. 109 GION (NER)
Brown Calumet Door Fond du Lac Green Lake Kewaunee	Manitowoc Marinette Marquette Menominee Oconto Outagamie	Shawano Waupaca Waushara Winnebago	WDNR Northeast Regional Headquarters 2984 Shawano Avenue Green Bay, WI 54313-6727 (920) 662-5100
		WESTCENTRALF	REGION (WCR)
Adams Buffalo Chippewa Clark Crawford Dunn Eau Claire	Jackson Juneau La Crosse Marathon Monroe Pepin	Pierce Portage St. Croix Trempealeau Vernon Wood	WDNR Baldwin Service Center 890 Spruce Street Baldwin, WI 54002 715-684-2914 ext. 109
		SOUTH CENTRAL	REGION (SCR)
Columbia Dane Dodge Grant	Green Iowa Jefferson LaFayette	Richland Rock Sauk	WDNR South Central Regional Headquarters 3911 Fish Hatchery Road Fitchburg, WI 53711 (608) 275-3266
		SOUTHEAST RE	GION (SER)
Kenosha Milwaukee Ozaukee	Racine Sheboygan Walworth	Washington Waukesha	WDNR Waukesha Service Center 141 N.W. Barstow Street, Room 180 Waukesha, WI 53188 (262) 574-2100

ATTACHMENT F

EXCEEDANCE REPORTS FOR AREA B GROUNDWATER MONITORING APRIL AND OCTOBER 2018



Marathon County Solid Waste Department R18500 E. Hwy 29

Ringle, WI 54471

Director: Site Supervisor: Administrative Office: Scale Master Solid Waste & Recycling Info Line 715-446-3101 X104 715-446-3101 X102 715-446-3101 X100 715-446-3101 X103 877-270-3989 toll-free

May 22, 2018

Wisconsin Department of Natural Resources Bureau of Solid Waste Management GEMS Data Submittal Contact, WA/3 P.O. Box 7921 Madison, WI 53707-7921

RE: Exceedance of Groundwater Standards for Marathon County Landfill, License No. 3338 Area B.

In accordance with NR 140, please accept this notification of groundwater monitoring results for the reporting period of April 2018. An exceedance table has been attached for the Area B landfill and can be found on the following page.

If you have any questions, please contact me.

Thank you,

David Hagenbucher **Operations Manager** Marathon County Solid Waste

C.c: Nathan Coller, Amanda Dehmlow, Valerie Joosten, Meleesa Johnson, Mark Torresani.

Area B Groundwater Well Exceedance Table April 2018

		Marathon Co	unty Solid Waste: Area	B Groundwa	ter Monitoring	Wells			
	Area B	Facility #3338	Exceedances						
Project #	Date	Well #	Parameter	Units	Result	PAL	ES	ACL	Comments
298029	April 17&18 2018	R27	Nitrate+Nitrite	mg/L	2.20	2.00	10.00		NR140
298029	Trip Blank	Trip Blank	Methylene Chloride	ug/L	0.84	0.50	5.00		NR140

The Area B Nitrate/Nitrite levels at well R27 can be a result of improper farming practices. Throughout the past few years, Area B has had ongoing vegetation management to establish growth on slopes. Seed, fertilizer, and mulch have all been applied in an effort to control erosion. R27 has shown a significant decrease in concentration since the previous sampling event. The well will continue to be monitored closely to ensure that levels continue to decrease.

,

State of Wisconsin

ENVIRONMENTAL MONITORING DATA CERTIFICATION Form 4400-231(R 1/04)

Department of Natural Resources Notice: Personally identifiable information collected will be used for program administration and enforcement purposes. The department may also provide this information to requesters as required under Wisconsin's Open Records law, ss. 19.31 to 19.39, Wis. Stats. When submitting monitoring data, the owner or operator of the facility, practice or activity is required to notify the Department in writing that a groundwater standard or an explosive gas level has been attained or exceeded, as specified in ss. NR 140.24(1)(a); NR 140.26(1)(a); NR 507.30; NR635.14(9)(a); NR 635.18(20) and NR 507.30, Wis. Adm. Code. Failure to report may result in fines, forfeitures or other penalties resulting from enforcement under ss. 289.97, 291.97 or 299.95, Wis. Stats.

Instructions:

- Prepare one form for each license or monitoring ID. *
- Please type or print legibly.
- Attach a notification of any values that attain or exceed groundwater standards (that is, preventive action limits, enforcement standards or alternative concentration limits). The notification must include a preliminary analysis of the cause and significance of each value.
- Attach a notification of any gas values that attain or exceed explosive gas levels.
- Send the original signed form, any notification, and Electronic Data Deliverable [EDD] to:

GEMS Data Submittal Contact - WA/5 Wisconsin Department of Natural Resources P.O. Box 7921 Madison, WI 53707 - 7921

Monitoring Data Submittal Information	

Name of entity submitting data (laboratory, consultant, facility owner): Northern Lake Service, Inc.

Contact for questions about data formatting. Include data preparer's name, telephone number and E-mail address: Phone: 715-478-2777

Chris Geske Name:

E-mail: lims@nisiab.com				
Facility Name	License No. / Monitoring ID	Facility ID [FID]	Actual sampling dates (e.g., .	July 2-6, 2003
Marathon County Landfill - Area B	03338	737092730	APRIL -17-2018 through APRIL -18-2018	
The enclosed results are for sampling required in the n APRIL -2018	nonth(s) of: (e.g., June 2003)			- I
Type of Data Submitted (Check all that apply) Groundwater monitoring data from monitoring well Groundwater monitoring data from private water st Leachate monitoring data	s Gas mo upply wells Air mor Other (onitoring data nitoring data specify)		
Notification attached? No. No groundwater standards or explosive gas limits were exceed Yes, a notification of values exceeding a groundwater standard is a groundwater standard and preliminary analysis of the cause and Yes, a notification of values exceeding an explosive gas limit is attached explosive gas limits.	ed. Itached. It includes a list of monitoring poi significance of eny concentration. Iched. It includes the monitoring points, da	ints, dates, sample values, ates, sample values and		,
Certification				i i i i i i i i i i i i i i i i i i i
To the best of my knowledge, the information report are true and correct. Furthermore, I have attached groundwater standards or explosive gas levels, and concentrations exceeding groundwater standards.	rted and statements made on complete notification of any s d a preliminary analysis of the	this data submittal and ampling values meetir cause and significant	l attachements ng or exceeding of	
David Hanabucher	Munager		715-551-5864	
Facility Representative Name (Print)	Title		(Area Code) Telephone No.	
David Hong him	05/72/18			
Signature	Date			

Signature

..... -d krithen fels fall ECC fortwiel.

Marathon County Solid Waste Mgmnt Dept Area B 04-01-2018

> Lab ID: 721026460 NLS Project: 298029 Collected: 04-01-2018 License: 03338 FID: 737092730

EXCEEDANCES:

Comments	NR140	NR140
ES	10	5
PAL / ACL	2	5.
Result	2.2	0.84
Units	mg/L	ug/L
Parameter	Nitrate+Nitrite, dis.	Methylene chloride
Well ID	R27	Trip Blank



Marathon County Solid Waste Department R18500 E. Hwy 29 Ringle, WI 54471

Director: Site Supervisor: Administrative Office: Scale Master Solid Waste & Recycling Info Line 715-446-3101 X104 715-446-3101 X102 715-446-3101 X100 715-446-3101 X103 877-270-3989 toll-free

Dec 7, 2018

Wisconsin Department of Natural Resources Bureau of Solid Waste Management GEMS Data Submittal Contact, WA/3 P.O. Box 7921 Madison, WI 53707-7921

RE: Exceedance of Groundwater Standards for Marathon County Landfill, License No. 3338 Area B.

In accordance with NR 140, please accept this notification of groundwater monitoring results for the reporting period of October 2018. An exceedance table has been attached for the Area B landfill and can be found on the following page.

If you have any questions, please contact me.

Thank you,

David Hagenbucher Operations Manager Marathon County Solid Waste

C.c: Nathan Coller, Amanda Dehmlow, Valerie Joosten, Meleesa Johnson, Mark Torresani.

Area B Groundwater Well Exceedance Table October 2018

		Marathon Cour	nty Solid Waste: Area	B Groundw	ater Monitori	ng Wells			
	Area B	Facility #3338	Exceedances						
Project #	Date	Well #	Parameter	Units	Result	PAL	ES	ACL	Comments
310612	Oct 23 2018	Dup 10231802	Nitrate+Nitrite, dis.	mg/L	2,00	2.00	10.00		NR140
310612	Oct 23 2018	R27	Nitrate+Nitrite, dis.	mg/L	3.60	2.00	10.00		NR140
310612	Oct 23 2018	R45	Nitrate+Nitrite, dis.	mg/L	2.10	2.00	10.00		NR140

The Area B Nitrate/Nitrite levels at well R27 can be a result of improper farming practices. Throughout the past few years, Area B has had ongoing vegetation management to establish growth on landfill slopes. Seed, fertilizer, and mulch have all been applied in an effort to control erosion. R27 has shown a significant decrease in concentration since the previous October sampling event. The well will continue to be monitored closely to ensure that levels continue to decrease. R45 is relatively close to R27, and therefore the cause of the Nitrate/Nitrite levels may be from a related source. In effort to ensure that levels decrease, Marathon County will evaluate their erosion control methods in addition to continued observation of well R45.

ENVIRONMENTAL MONITORING DATA CERTIFICATION

State of Wisconsin Department of Natural Resources

Form 4400-231(R 1/04)

Notice: Personally identifiable information collected will be used for program administration and enforcement purposes. The department may also provide this information to requesters as required under Wisconsin's Open Records law, ss. 19.31 to 19.39, Wis. Stats. When submitting monitoring data, the owner or operator of the facility, practice or activity is required to notify the Department in writing that a groundwater standard or an explosive gas level has been attained or exceeded, as specified in ss. NR 140.24(1)(a); NR 140.26(1)(a); NR 507.30; NR635.14(9)(a); NR 635.18(20) and NR 507.30, Wis. Adm. Code. Failure to report may result in fines, forfeitures or other penalties resulting from enforcement under ss. 289.97, 291.97 or 299.95, Wis. Stats.

Instructions:

- Prepare one form for each license or monitoring ID.
- * Please type or print legibly.
- Attach a notification of any values that attain or exceed groundwater standards (that is, preventive action limits, enforcement standards or alternative concentration limits). The notification must include a preliminary analysis of the cause and significance of each value.
- Attach a notification of any gas values that attain or exceed explosive gas levels.
- Send the original signed form, any notification, and Electronic Data Deliverable [EDD] to: GEMS Data Submittal Contact WA/5 *

Wisconsin Department of Natural Resources P.O. Box 7921 Madison, WI 53707 - 7921

Monitoring Data Submittal Information		The Left In	and the second second
Name of entity submitting data (laboratory, consulta	nt, facility owner):		
Contact for questions about data formatting. Includ	e data preparer's name, telephone n	umber and E-mail addr	ess:
Name: Chris Geske	Phone: 715-4	78-2777	
E-mail: lims@nlslab.com			
Eacility Name	License No. / Monitoring ID	Facility ID (FID)	Actual sampling dates (e.g., July 2-6, 200)
Marathon County Landfill - Area B	03338	737092730	OCTOBER -22-2018 through OCTOBER -23-2018
The enclosed results are for sampling required in th OCTOBER -2018	e month(s) of: (e.g., June 2003)		
Type of Data Submitted (Check all that apply) Groundwater monitoring data from monitoring v Groundwater monitoring data from private wate Leachate monitoring data	vells Gas mor r supply wells Air monit Other (sp	nitoring data toring data pecify)	
 No. No groundwater standards or explosive gas limits were exceeding a groundwater standard and preliminary analysis of the cause groundwater standard and preliminary analysis of the cause Yes, a notification of values exceeding an explosive gas limit is explosive gas limits. 	eeded. is attached. It includes a list of monitoring point and significance of any concentration. attached. It includes the monitoring points, date	s, dates, sample values, as, sample values and	
Certification		Section - Marian -	
To the best of my knowledge, the information re are true and correct. Furthermore, I have attach groundwater standards or explosive gas levels, concentrations exceeding groundwater standard Darred Hagenbucher	ported and statements made on the ed complete notification of any sa and a preliminary analysis of the o ds. Manegar	his data submittal and mpling values meetin cause and significant	l attachements og or exceeding of 715 - 55 1 - 5864
Facility Representative Name (Print)	Title		(Area Code) Telephone No.
Daniel Hayas John	12/07/18		
Signature	Date		
FOR DNR USE ONLY. Check action to Found uploading problems on	taken, and record date and your in Initials Upload initial submittal and follow-up)	itials. Describe on ba ed data successfully Email (follow-up on	on ly) Other

Marathon County Solid Waste Mgmnt Dept Area B 10-01-2018

Lab ID: 721026460 NLS Project: 310612 Collected: 10-01-2018 License: 03338 FID: 737092730

EXCEEDANCES:

Well ID	Parameter	Units	Result	PAL / ACL	BS	Comment
Dup 10231802	Nitrate+Nitrite, dis.	mg/L	2.0	2	10	NR140
R27	Nitrate+Nitrite, dis.	mg/L	3.6	2	10	NR140
R45	Nitrate+Nitrite, dis.	ma/L	2.1	2	10	NR140