

Marathon County Solid Waste Department

172900 State Highway 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

March 25, 2021

Ms. Sally Hronek Wisconsin Department of Natural Resources Waste Management Engineer 2984 Shawano Avenue Green Bay, WI 54313-6727

Re: Marathon County Solid Waste - Area A Landfill #2892 FID 737054890

Dear Ms. Hronek:

Please accept this submittal of the 2020 Annual Solid Waste Report for the Area A landfill of Marathon County. This Annual Solid Waste Report is being submitted in accordance with the approved Plan of Operation for Area A.

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, please do not hesitate to contact me at (715) 445- 3101.

Thank you,

David Hagenbucher

Solid Waste Operations Manager Marathon County Solid Waste Dept 172900 State Highway 29 Ringle, Wisconsin 54471 C: 715-551-5864 O: 715-446-3101x102

CC: C. Lee Daigle, PE – Tetra Tech Senior Project Manager 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 A Landfill</u> 2020 ANNUAL REPORT

WDNR License No. 2892 FID 737054890

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

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

www.marathoncountysolidwaste.org



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- Cynthia Neitzel Geo-Logic Associates 15020 N. Hayden Rd., Ste 205 Scottsdale, AZ 85260

Introduction

This report provides information about site conditions on, work conducted at, and other activities related to, the closed Area A Landfill (Area A). This report is intended to meet the intent and focus of the annual reporting and monitoring requirements, found in all approved documentation for Area A, and the modified monitoring requirements found in the 2013 Plan Modification to the Monitoring Plan (for Groundwater, Lysimeters, and Leachate Collection).

Area A Background

Area A is a 27.3-acre closed landfill and is owned and operated by Marathon County Solid Waste Department (MCSWD). This facility accepted and disposed of waste from December 1980 until December 1993. In 1994 closure was conducted according to approved methods. During active fill operations, a variety of waste materials were accepted, including residential and commercial waste, high-volume industrial wastes, and other miscellaneous materials.

MCSWD and various contracted firms have worked, and will continue to work, collaboratively to ensure post-operation/post-closure activities are conducted in accordance with all required long-term care approvals. This includes, but is not limited to, operation of and maintenance of the following systems: final cover, storm water, landfill gas and condensate, leachate collection, and groundwater monitoring.



Summary of Landfill Activities in 2020

Area A is a closed landfill and, as such, did not accept waste during 2020. However, as is required by the approved permit, general maintenance and management of the post-closure facility were conducted. This included:

- 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
- Preventative maintenance on gas system and leachate pumping system

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 reporting and support, seeding and fertilizing duties, leachate pump maintenance and repairs, and contracted leachate hauling.

The surface area and final cover are in good condition. There is no damage or compromising of the final cover. There are no slumps or subsidence, other than the normal gradual undulations. No leachate seeps exist. Vegetation consists of dense mixed grasses including rye, fescues, and sedges. Some wildflowers, both native and invasive, are evident, but not abundant. The plant growth continues to look acceptable and no bare spots or other problems were noted. Wildlife species such as deer, fox, coyote, rabbits, and many types of birds use the ecosystem of Area A for cover and as a source of food. The cover is inspected regularly for damage caused by wildlife and corrected, if needed.

Landfill Maintenance

Leachate line jetting was conducted in June of 2020. Jetting on this landfill has been challenging due to the fact that much of the existing infrastructure has been impacted by waste settlement, age, and deterioration. PVC was initially used for leachate collection piping at the bottom of Area A; we now use HDPE on all leachate piping. Regardless of the challenges, Northern Pipe out of Green Bay has successfully worked with this site to meet all the necessary requirements to keep these lines open and functioning as intended.



Area A – Looking South

Gas Collection System

Area A is situated near the center of the 574-acre facility boundaries. The landfill is located north of the facility's gas recovery building. An active gas system, consisting of blowers, valves, and multiple controls, has been extracting landfill gas from this landfill since 1989. Most of the Area A landfill gas piping was installed during a ten-year period from 1984 through 1993, with additions made in 2003, 2004, and 2009. Landfill gas extracted from the Area A landfill is transferred to the gas recovery building via a large header pipe. Vacuum to the wellfield is regulated by the variable frequency drive (VFD) at the blower station, located at the Gas Recovery Building to the south of the site that controls the gas collection and control system (GCCS) at the site. Condensate from Area A flows by gravity through the gas header pipe and into a condensate knockout just outside the gas building. This condensate then drains by gravity to Area A Tank 1 to the east of the gas building.

Landfill gas emissions from the entire MCSWD property, including Area A, are regulated under, and in accordance with, renewed Air Pollution Control Operation Permit 737092730-P20 dated November 2, 2015. Existing sensing devices measure gas flow rates, pressures, and vacuums, as well as methane and oxygen concentrations. These sensors are located on the main header line pipe, leading into the gas recovery building, and include gas collected from Area A, Area B, and BRRDF landfills. Data is recorded and stored on a computerized system. This data is used for reporting and operating purposes.

The Marathon County GCCS operated 99.72% of the year with approximately 8,784 hours of operation. The average aggregated flow rate for the site GCCS was approximately 731.57 standard cubic feet per minute (scfm). Methane and oxygen concentrations of landfill gas averaged, by volume, 51.5% for methane and 1.0% oxygen. Total gas collected from the site in 2020 was 363,949,881 standard cubic feet (scf). From the total gas collected at the site, 261,386,062 scf was used for production of electricity, and 102,563,819 scf was sent to the flare. The table below summarizes the aggregated flow, combustion location, and vacuum of the GCCS at the site.

Month	Total CFM	CFM Electric	CFM Flare
Jan	31,509,949.28	7,745,557.87	23,764,391.41
Feb	28,472,692.45	14,763,515.72	13,709,176.73
Mar	30,880,317.67	17,944,305.72	12,936,011.94
Apr	27,885,997.04	21,321,711.59	6,564,285.46
May	28,122,989.47	23,045,208.46	5,077,781.01
Jun	27,339,353.00	26,764,558.43	574,794.56
Jul	27,760,427.74	26,223,813.71	1,536,614.03
Aug	32,867,781.51	29,228,326.80	3,639,454.71
Sep	32,287,005.31	27,760,473.23	4,526,532.08
Oct	28,307,301.00	23,171,291.00	5,136,010.00
Nov	27,740,540.00	15,300,511.00	12,440,029.00
Dec	40,775,526.18	28116788.3	12,658,737.88
Totals	363,949,880.65	261,386,061.83	102,563,818.82

2020 MARATHON COUNTY GCCS DATA (INCLUDES AREA A, AREA B & BRRDF)

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

2020 GCCS Vacuum and Concentrations	Ave Vacuum (negative inches water column)	Ave CH4%	Ave O2%
January	26.99	51.1	1.1
February	27.14	50.5	1.0
March	26.96	51.0	0.8
April	26.97	50.9	1.0
May	26.87	51.1	1.1
June	26.67	53.4	0.3
July	26.43	52.6	1.0
August	26.88	50.5	0.9
September	26.83	50.3	1.1
October	26.7	49.1	1.5
November	26.02	54.0	0.8
December	25.65	53.7	0.9
Average	26.68	51.5	1.0

Gas System Outages

As indicated previously, the gas system operated nearly continuously. Any shutdowns, whether for planned maintenance or unplanned events, resulted in proper and lawful notification to the Wisconsin Department of Natural Resources (WDNR) Air Management staff. The January to June 2020 Semi-annual Report and July to December 2020 Semi-annual Report for the facility include descriptions of GCCS and control device shutdown events, GCCS and control device malfunctions, and continuous monitoring device malfunctions.

Surface Emission Monitoring

Surface emission monitoring (SEM) of Area A was conducted on June 25, 2020. No exceedances were detected. Permit compliance condition I.A.9.e allows for annual SEM once "any closed landfill…has no monitored exceedances of the operational standard in three consecutive quarterly monitoring periods…" Because MCSWD is allowed to conduct annual SEM monitoring on Area A, a SEM was only conducted in one quarter.

For the SEM annual event, a flame ionization detector (FID) is used while the MCSWD's environmental technician walks a serpentine pattern across the surface of the landfill. Documentation of the annual SEM of Area A is provided in Attachment B.

Soil Gas Monitoring

During 2020, the soil gas probes were monitored quarterly for relative pressure, methane (CH4), oxygen (02), and soil gas pressure. In 2020, these monitoring results indicated no gas migration.

<u>i ii si Quarter i i</u>	obe Data [March	<u>1, 2020</u> .			
Gas Probe	Location	Methane	Oxygen	Pressure	Notes:
[Depth in feet]		(%CH4 by Vol.)	(%02 by Vol.)	(inch W.C.)	
Lic. 2892	WDNR Parm Code #	85547	85550	46389	
Area A Probe IDs	5				WDNR ID No.
G-1R [10']	E Area A	0	17.8	-1.32	700
G-3R [15']	N Area A	0	22.2	0.05	704
G-4R [5']	W Area A	0	21.1	-0.01	709
G-9 [9']	W Area A	0	21.7	0	720
G-11 [10']	S Area A	0	18.6	0.28	724
G-12 [10']	S Area A	0	20.7	0.02	726
Second Quarter	Probe Data (May	29, 2020):			
Gas Probe	Location	Methane	Oxygen	Pressure	
[Depth in feet]		(%CH4 by Vol.)	(%02 by Vol.)	(inch W.C.)	Notes:
Lic. 2892	WDNR Parm Code #	85547	85550	46389	
Area A Probe IDs	5				WDNR ID No.
G-1R [10']	E Area A	0	16.2	-5.73	700
G-3R [15']	N Area A	0	21	-0.02	704
G-4R [5']	W Area A	0	20.3	0	709
G-9 [9']	W Area A	0	21.1	0	720
G-11 [10']	S Area A	0	21.8	-0.04	724
G-12 [10']	S Area A	0	18.8	0.01	726
Third Ouarter P	robe Data (Augus	st 12, 2020):			
Gas Probe	Location	Methane	Oxygen	Pressure	NT .
[Depth in feet]		(%CH4 by Vol.)	(%02 by Vol.)	(inch W.C.)	Notes:
Lic. 2892	WDNR Parm Code #	85547	85550	46389	
Area A Probe IDs	5				WDNR ID No.
G-1R [10']	E Area A	0	2.3	-0.02	700
G-3R [15']	N Area A	0	20	-0.01	704
G-4R [5']	W Area A	0	19.9	0	709
G-9 [9']	W Area A	0	20.1	0	720
G-11 [10']	S Area A	0	20.9	-0.04	724
G-12 [10']	S Area A	0	19.6	0	726
<u>Fourth Quarter</u>	<u> Probe Data (Octo</u>	<u>ber 5, 2020):</u>			
Gas Probe	Location	Methane	Oxygen	Pressure	Notes:
[Depth in feet]		(%CH4 by Vol.)	(%02 by Vol.)	(inch W.C.)	
Lic. 2892	WDNR Parm Code #	85547	85550	46389	
Area A Probe					WDNR ID No
G-1R [10']	E Area A	0	18	NR	700
G-3R [15']	N Area A	0	21.2	NR	704
G-4R [5']	W Area A	0	20.8	0	709
G-9 [9']	W Area A	0	20.5	NR	720
G-11 [10']	S Area A	0	16.2	NR	724
G-12 [10']	S Area A	0	193	NR	726

First Quarter Probe Data (March 19, 2020):

Gas Sampling Data

On December 28, 2020, MCSWD's environmental technician, with assistance from Tetra Tech, used a summa canister to collect a sample of landfill gas for VOC analysis. 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 are provided as Attachment C to this report.

Landfill Gas Monitoring

Landfill gas monitoring was conducted on a monthly basis in accordance with the site's 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.

Area A Landfill Gas Wellfield Map:



Leachate Management:

The Area A leachate collection system captures all liquids entering the site and directs them to the holding tank system. Leachate is collected through a series of perforated pipes within the landfill and is delivered to one of two, double-walled steel, underground storage tanks. Tank 1 has a 20,000-gallon capacity and Tank 2 has a 25,000-gallon capacity.

Leachate tank levels are checked daily by the contract leachate hauler and throughout the week by the site facility supervisor and environmental technicians. When needed, the contract hauler pumps the stored leachate into a 6,600-gallon tanker truck and delivers the material to one of four waste water treatment facilities (WWTF).

Leachate collected in 2020 was transported to the following facilities: Domtar, Inc. WWTF in Rothschild, Wisconsin; Stevens Point Wastewater Utility in Stevens Point, Wisconsin; the Plover Wastewater Treatment Facility; or the Wausau Wastewater Treatment Facility at the Dept. of Public Works in Wausau, Wisconsin. Leachate is pumped into the WWTF and treated to ensure all effluent meets Wisconsin Pollutant Discharge Elimination System (WPDES) standards prior to discharge into the Wisconsin River.

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

Leachate Volume:

Total volume (gallons) of leachate collected/transported/treated are as follows:

2020	Tank 1	Tank 2
January	105600	46200
February	85800	39600
March	92400	52800
April	59400	46200
Мау	231000	46200
June	66000	46200
July	52800	39600
August	125400	33000
September	13200	26400
October	13200	26400
November	33000	26400
December	13200	26400
Total	891,000	455,400



Precipitation:

Month	Inches
January	1.45
February	1.2
March	5.1
April	1.8
May	10
June	3
July	1.5
August	4.75
September	3.1
October	2
November	3
December	0
Total	36.9

* Snow converted to liquid precipitation by dividing by 10



Leachate Collection Piping

On June 22nd and 23rd, 2020 Northern Pipe, Inc. of Green Bay, Wisconsin, water jetted the Area A leachate lines with a total of 3,000 gallons of water. Jetting was accomplished by accessing pipes from both ends for cleaning to overlap in the center or jetting the full length from one access point. Northern Pipe televised the Area A leachate lines in June of 2018 after jetting was completed. Hard deposits were encountered midway from both ends of cleanout access point 1, which prevented the entire pipe from being jetted. An obstruction was noted for cleanout access point 7, which prevented the entire pipe from being jetted as well. There were additional challenges at these same locations again in 2020 as jetting was conducted. No other issues were noted. Attachment D includes the jetting report from Northern Pipe for Area A.

The condition of manhole 1S is poor, was identified more than ten years ago, and has been periodically discussed with the WDNR since that time. Possible solutions to making improvements to this manhole have been evaluated, but implementation could pose a higher risk of environmental contamination over no action. Accessing this manhole would require exposing and puncturing the final cover as well as the base liner. It has been determined that since liquid levels in the landfill have not changed over time, the condition of manhole 1S does not pose a serious risk to the functionality of the leachate collection system in Area A landfill. Additional information on this issue has been included in previous annual reports since it was first identified.

Leachate Sampling

Leachate sampling and analytical analysis from Area A, Tanks 1 and 2, was conducted in April and October 2020 by Northern Lake 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 2020 are summarized below.

Loochato	2020	Conductivity	pН
Leathate	2020	umho/cm	S.U.
Taula 1	April	3290	6.88
	October	6920	8.21
Tauls 2	April	4870	7.11
Tank Z	October	6280	7.12

Lysimeters

Four lysimeters (LS-2, LS-3, LS-5, and LS-6) were constructed within the unsaturated zone under the Area A landfill. NLS monitored the lysimeters in October 2020 and found LS-2 and LS-3 were dry. LS-5, and LS-6 were sampled as well. Sampling results were submitted electronically to the WDNR GEMS database and are consistent with previous sampling results. A summary table of inorganic constituents and detected VOCs from the lysimeter sampling event is provided below:

October 2020 Detection Results:

Project:	Marathon County Landfill - Area A	October 2020

Lysimeter L-2 NLS ID: 1223593								
Matrix: WW								
Collected: 10/20/20 14:58 Received: 10/20/20	Deput	Unito	Dilution	100	100	Analyzed	Mothod	Lab
Parameter	Result	Units	Dilution	LOD	LUQ	Analyzed	Field Method	Lap 724026460
DIY	μιγ					10/20/20	Field Wethou	721020400
Lysimeter L-3 NLS ID: 1223594								
Matrix: WW								
Collected: 10/20/20 15:37 Received: 10/20/20								
Parameter	Result	Units	Dilution	LOD	LOQ	Analyzed	Method	Lab
Dry	dry					10/20/20	Field Method	721026460
Lysimeter L-5 NLS ID: 1223595 Matrix: WW								
Collected: 10/20/20 15:21 Received: 10/20/20								
Parameter	Result	Units	Dilution	LOD	LOQ	Analyzed	Method	Lab
Field color	natural					10/20/20	NA	721026460
Field conductivity	844	umho/cm@25C	1			10/20/20	EPA 120.1	721026460
Field odor	none detected					10/20/20	NA	721026460
Field pH	6.96	s.u.	1			10/20/20	4500-H+B-2000	721026460
Field turbidity	moderate, mixed, b	rþwn				10/20/20	NA	721026460
Field volume pumped	1.00	gallon	1	0.0*		10/20/20	NA	721026460
Alkalinity, tot. as CaCO3 (unfiltered)	400	mg/L	5	5.0	10	10/25/20	2320 B-1997	721026460
C.O.D. (unfiltered)	44	mg/L	1	1.6	5.2	10/30/20	5220 C-1997	721026460
Chloride, as CI (unfiltered)	23	mg/L	10	1.7	5.8	10/28/20	EPA 300.0, Rev 2.1	721026460
Hardness, tot. recoverable, (calc/unfilt/icp)	460	mg/L	1	0.67	2.2	10/22/20	EPA 200.7, Rev 4.4	721026460
Nitrogen, ammonia as N (unfiltered)	1.3	mg/L	1	0.027	0.090	10/28/20	4500-NH3 G-1997	721026460
Sodium, tot. recoverable as Na by ICP	12	mg/L	1	0.12	0.41	10/22/20	EPA 200.7, Rev 4.4	721026460
Sulfate, as SO4 (unfiltered)	ND	mg/L	10	1.4	5.0	10/28/20	EPA 300.0, Rev 2.1	721026460
Metals digestion - tot. recov.ICP	yes					10/21/20	EPA 200.7	721026460
VOCs (water) by GC/MS	see attached					10/28/20	EPA 624	721026460
Lysimeter L-6 NLS ID: 1223596								
Matrix: WW								
Collected: 10/20/20 15:24 Received: 10/20/20								
Parameter	Result	Units	Dilution	LOD	100	Analyzed	Method	Lab
Field color	natural					10/20/20	NA	721026460
Field conductivity	865	umho/cm@25C	1			10/20/20	FPA 120 1	721026460
Field odor	none detected		1			10/20/20	NA	721026460
Field pH	7.00	s.u.	1			10/20/20	4500-H+B-2000	721026460
Field turbidity	moderate fine brow	vn				10/20/20	NA	721026460
Field volume numped	1 00	nallon	1	0.0*		10/20/20	NA	721026460
Alkalinity tot as CaCO3 (unfiltered)	420	ma/l	5	5.0	10	10/25/20	2320 B-1997	721026460
C O D (unfiltered)	27	mg/l	1	1.6	5.2	10/30/20	5220 C-1997	721026460
Chloride as Cl (unfiltered)	28	ma/l	10	17	5.8	10/28/20	EPA 300.0 Rev 2.1	721026460
Hardness tot recoverable (calc/unfilt/icp)	470	mg/l	1	0.67	22	10/22/20	EPA 200 7 Rev 4 4	721026460
Nitrogen ammonia as N (unfiltered)	22	mg/l	1	0.027	0.090	10/28/20	4500-NH3 G-1997	721026460
Sodium tot recoverable as Na by ICP	13	mg/l	1	0.12	0.41	10/22/20	EPA 200 7 Rev 4 4	721026460
Sulfate as SO4 (unfiltered)	ND	ma/l	10	14	50	10/28/20	EPA 300.0 Rev 2.1	721026460
Metals direction - tot recov ICP	Ves					10/21/20	EPA 200 7	721026460
VOCs (water) by GC/MS	see attached			-		10/28/20	EPA 624	721026460
	see attached	1		1		- STEDIED	ALC: 1 V 42-1	121020400

Leachate Level Monitoring

The reported quarterly leachate levels are provided below:

Leachate Head Well Monitoring													
Area A	LHW 1	LHW 2	LHW 3	LHW 4 D	LHW 4M	LHW 4S	P5	P6	P7	P8			
Pipe Length to Elbow (ft.)	56.53	58.53	63.7	67.5	47.65	33.6	67.7	52.25	68.8	59.8			
Date	Depth to Liquid												
March	28.5	33.4	41.15	44.2	39.5	30.15	Dry	50.25	65.8	Dry			
June	27.5	33	41	44.15	39.25	29.75	Dry	Dry	67.8	59.8			
September	30.3	32	40.5	43	38.2	29	Dry	Dry	Dry	Dry			
December	31	33.5	40	44	38.5	29	Dry	Dry	Dry	Dry			

Hydrogeological Conditions

The near-surface geology at this site consists of glacial sediments that were deposited in an ice marginal environment that led to the formation of an end moraine. Consequently, these deposits vary widely in terms of their grain-size distributions and sorting. On-site borings penetrated mostly gravelly, silty sands (classified as SM and SP-SM type soils), but zones of well-sorted sands (SP) and sandy, clayey silts (CL or CL-ML type soils) were also encountered. The thickness of glacial drift also

varies widely, partly because the sediments were deposited in a moraine with hummocky topography, and partly because the underlying bedrock has more than 80 feet of local relief to its upper surface. Depth to bedrock (granitic gneiss, granite, and quartz monzonite) ranges from 35 to nearly 100 feet. (Sand Creek Consultant Report-Groundwater Flow and Plume Dynamics, 12/09)

Groundwater at the Area A locale occurs under water table conditions and is recharged by excess rainfall that infiltrates the land surface. Estimates of recharge near the site are on the order of 10 inches per year. The water table is generally less than 50 feet below grade, occurring within the glacial deposits. (Sand Creek Consultant Report-Groundwater Flow and Plume Dynamics, 12/09)

Groundwater Monitoring & Analysis

Tetra Tech will be preparing a thorough groundwater assessment to provide more detailed information about site groundwater conditions and status that will be completed in 2021. At the beginning of 2020, MCSWD had a total of 91 groundwater monitoring wells, with 42 designated for Area A. The groundwater monitoring regimen was conducted according to the February 7, 2013, approved groundwater, lysimeter, and leachate monitoring plan.





Groundwater wells were conditioned in November 2019. This included sloping of the ground around them, clear labeling, and lock replacement.

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. Results revealed that most of the monitoring wells show no impacts from contaminants and even meet safe drinking water standards. 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.

Detections with concentrations higher than these limits are reported as exceedances. As in past monitoring events at the Area A site, results of some wells exceeded the PAL and ES standards, particularly for volatile organic compounds (VOCs). Wells that have historically reported VOC concentrations above these limits include: R12R, R13R, R38, R47, and R50P. Continued monitoring and trending will be necessary to track this. No action is planned or required at this time.

Groundwater monitoring results and any exceedances were submitted electronically by NLS to the WDNR's Groundwater Environmental Monitoring System (GEMS). Below is a summary of the exceedances from each semi-annual monitoring period. The groundwater monitoring well exceedance reports submitted to the WDNR for sampling events in April and October 2020 are provided in Attachment F.

Indicator parameters hardness, alkalinity, and specific conductance concentrations are exhibiting increasing trends at the BRRDF upgradient well nest R59WT/P. Wells upgradient of R59WT/P include the Area A Landfill wells R13R and R35. Well R35 has also reported well-specific exceedances for specific conductance with an increasing trend in specific conductance concentrations. Well R13R has recorded specific conductance between 1,310 to 1,410 umho/cm during the three-year period from 2017 to 2020. The increase in concentrations at the R59WT/P well nest may be associated with the elevated readings for these parameters, occurring upgradient of this well nest in the VOC plume.

April 2020

	Marathon County Solid Waste Mgmt Dept: Area A Groundwater Monitoring Wells													
	Exceedances													
Lab ID	NLS Project	Date	License #	FID	Well Desc (Point ID)	Parameter	Units	Result	PAL/ACL	ES	Comments			
721026460	342969	April 1 2020	02892	737054890	Dup-042120 (074)	Tetrachloroethylene	ug/L	0.76	0.5	5	NR140.10			
721026460	342969	April 1 2020	02892	737054890	Dup-042120 (074)	Trichloroethylene	ug/L	6.5	0.5	5	NR140.10			
721026460	342969	April 1 2020	02892	737054890	Dup-042120 (074)	Vinyl Chloride	ug/L	0.77	0.02	0.2	NR140.10			
721026460	342969	April 1 2020	02892	737054890	R13R (074)	Tetrachloroethylene	ug/L	0.69	0.5	5	NR140.10			
721026460	342969	April 1 2020	02892	737054890	R13R (074)	Trichloroethylene	ug/L	6.2	0.5	5	NR140.10			
721026460	342969	April 1 2020	02892	737054890	R13R (074)	Vinyl Chloride	ug/L	0.86	0.02	0.2	NR140.10			
721026460	342969	April 1 2020	02892	737054890	R38 (053)	Tetrachloroethylene	ug/L	0.68	0.5	5	NR140.10			
721026460	342969	April 1 2020	02892	737054890	R38 (053)	Trichloroethylene	ug/L	1.1	0.5	5	NR140.10			
721026460	342969	April 1 2020	02892	737054890	R50P (068)	Tetrachloroethylene	ug/L	0.56	0.5	5	NR140.10			
721026460	342969	April 1 2020	02892	737054890	R35 (050)	Conductivity	umho@25C	900	510	-	well			
721026460	342969	April 1 2020	02892	737054890	R41 (057)	Conductivity	umho@25C	780	770	-	well			
721026460	342969	April 1 2020	02892	737054890	R5R (046)	Conductivity	umho@25C	740	700	-	well			

October 2020

	Marathon County Solid Waste Mgmt Dept: Area A Groundwater Monitoring Wells													
	Exceedances													
Lab ID	NLS Project	Date	License #	FID	Well Desc (Point ID)	Parameter	Units	Result	PAL/ACL	ES	Comments			
721026460	355865	Oct 1 2020	02892	737054890	Dup- (074)	Tetrachloroethylene	ug/L	0.5	0.5	5	NR140.10			
721026460	355865	Oct 1 2020	02892	737054890	Dup- (074)	Trichloroethylene	ug/L	5	0.5	5	NR140.10			
721026460	355865	Oct 1 2020	02892	737054890	Dup- (074)	Vinyl Chloride	ug/L	0.3	0.02	0.2	NR140.10			
721026460	355865	Oct 1 2020	02892	737054890	R13R (074)	Tetrachloroethylene	ug/L	0.72	0.5	5	NR140.10			
721026460	355865	Oct 1 2020	02892	737054890	R13R (074)	Trichloroethylene	ug/L	4.8	0.5	5	NR140.10			
721026460	355865	Oct 1 2020	02892	737054890	R13R (074)	Vinyl Chloride	ug/L	0.44	0.02	0.2	NR140.10			
721026460	355865	Oct 1 2020	02892	737054890	R38 (053)	Tetrachloroethylene	ug/L	0.72	0.5	5	NR140.10			
721026460	355865	Oct 1 2020	02892	737054890	R38 (053)	Trichloroethylene	ug/L	1	0.5	5	NR140.10			
721026460	355865	Oct 1 2020	02892	737054890	R38A (054)	1,2-Dichloropropane	ug/L	0.63	0.5	5	NR140.10			
721026460	355865	Oct 1 2020	02892	737054890	R38A (054)	Tetrachloroethylene	ug/L	0.55	0.5	5	NR140.10			
721026460	355865	Oct 1 2020	02892	737054890	R38A (054)	Trichloroethylene	ug/L	1.9	0.5	5	NR140.10			
721026460	355865	Oct 1 2020	02892	737054890	R38A (054)	Vinyl Chloride	ug/L	0.16	0.02	0.2	NR140.10			
721026460	355865	Oct 1 2020	02892	737054890	R 47	Trichloroethylene	ug/L	0.85	0.5	5	NR140.10			
721026460	355865	Oct 1 2020	02892	737054890	R50P (068)	Tetrachloroethylene	ug/L	0.63	0.5	5	NR140.10			
721026460	355865	Oct 1 2020	02892	737054890	R35 (050)	Conductivity	umho@25C	690	510	-	well			
721026460	355865	Oct 1 2020	02892	737054890	R41 (057)	Conductivity	umho@25C	810	770	-	well			

Private Well Water Sampling

The private wells identified in the monitoring plan include nine wells monitored semi-annually (April and October) and seven monitored annually (October) for specified parameters. Analytical results and explanations, where necessary, were reported to the private well owners. Results of the downgradient wells having WDNR well ID numbers were submitted electronically to the WDNR's GEMS. The private well exceedance reports submitted to the WDNR for sampling events in April and October 2020 are provided in Attachment G.

The private water supply well samples analyzed in 2020 met the parameters identified in the site's monitoring plan for safe drinking water standards, and no exceedances were recorded. During 2018, a low-level (estimated between the limit of quantitation and the limit of detection) detection of tetrachloroethene and acetone were reported in a sample collected from private well PW-68. This parameter was not detected in 2020 in either sampling month. Additionally, in 2018, a low-level detection of dichlorofluoromethane was reported in a sample collected from private well PW-27. PW-27 did not have any detects in 2020, in either sampling month.

Since 1993, MCSWD has monitored private wells adjacent to, and generally within about one mile to the southeast of, the landfill property limits. MCSWD annually sends letters to approximately fifty landowners and nearby residents, offering to monitor their private water supply wells in autumn of each year. MCSWD notifies all eligible residents in advance of the monitoring event and schedules private well testing based on owner requests on a first-come, first-served basis. Not all residents accept the offer.

MCSWD's July 2004 "Private Well Monitoring Program and Contingency Plan for Alternative Water Supplies" explained that water supply wells located south to southeast of Area A will be sampled and tested for VOCs. MCSWD outlined a plan to take precautionary measures and to ensure safe drinking water is provided to homeowners in this group if, in the future, impacted groundwater from the landfill would cause a well's water to have total contaminants at a concentration half of the allowable drinking water maximum contaminant level. The maximum contaminant levels are allowed in drinking water for public water supply systems, so the county's contingency plan is even more protective of human health.

ATTACHMENT A

AREA A MAP



ATTACHMENT B

AREA A 2020 ANNUAL SURFACE EMISSION MONITORING REPORT

		B
performed by: <u>Co</u> time: <u>8</u> :	$\frac{2}{3}$ DATE: $\frac{3}{18}$	<u>1/2</u> 0
INSTRUMENT RESPONSE	TIME TEST RECORD	
LANDFILL NAME: MCSW		
INSTRUMENT MAKE:MODEL:	S/N:	
MEASUREMENT #1:		
Stabilized Reading Using Calibration Gas:	<u>ysk</u> ppm	
90% of the Stabilized Reading:	429,4 ppm	
Time to Reach 90% of Stabilized reading After switching from Zero Air to Calibration Gas	seconds (1)	1 + 4 + 3 = 11
MEASUREMENT #2:		3
Stabilized Reading Using Calibration Gas:	<u>4 87</u> ppm	
90% of the Stabilized Reading:	<u>438,3</u> ppm	
Time Reach 90% of Stabilized Reading After switching from Zero Air to Calibration Gas	seconds (2)	
MEASUREMENT #3:		
Stabilized Reading Using Calibration Gas:	<u>484</u> ppm	
90% of the Stabilized Reading:	435.6 ppm	
Time to Reach 90% of Stabilized Reading After switching from Zero Air to Calibration Gas	<u>3, 5</u> seconds (3)	
CALCULATE RESPONSE TIME: $\frac{(1) + (2) + 3}{3}$	<u>- (3)</u>	· .
= <u>3,66</u> seconds (must be	E LESS THAN 30 SECONDS)	

CALIBRATION PROCEDURE AND BACKGROUND DETERMINATION REPORT

MCSW LANDFILL NAME: INSTRUMENT MAKE: Gold MODEL: 1000 S/N: OUS 248137

Calibration Procedure

1. Allow instrument to internally zero itself while introducing zero air.

2. Introduce the calibration gas into the probe. Stable reading = $\frac{499}{2}$ ppm

3. Adjust meter to read 500 ppm.

Background Determination Procedure

1. Upwind Reading (highest in 30 seconds):

2. Downwind Reading (highest in 30 seconds):

2

Calculate Background Value:

$$\frac{(1)+(2)}{2}$$

Background = ____ppm

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Cyf 1 C(m) BBR Flow XdW/22 Area A Cyf 5 C(m) Total Flow through Plant (GFM4 + GFM3) AdW-24 Area A 2Cyf 2 C(m) Area B & BBR Header Flow (GFM2B) AdW-24 Area A 1 C(m) Area B & BBR Header Flow (GFM2B) AdW-24 Area A 1 C(m) Vacuum Gauge (Cond. Tank) (VC1) AdW-24 Area A 1 C(m) Vacuum Gauge (Cond. Tank) (VC1) AdW-24 Area A 1 C(m) Vacuum Gauge (Cond. Tank) (VC1) AdW-24 Area A 1 C(m) Vacuum Gauge (Cond. Tank) (VC1) AdW-24 Area A 1 C (% v01) Methane comb. A, B, BBR X AdW-24 Area B 1 C (m) Diver #4 Flow, Main HIS - MW/R, (GFM3) B6W-101 Area B 2 C(m) Flow to Flare.(GFM4) Time of readings B6W-103 Area B 1 C/O (n wc) Time of readings B6W-103 Area B 2 C(2) Wethane	#151pm	- A Alatha A Saturna an Anna -	Time of readings					AGW-20	Area A
Log S. C. (cfm) Total Flow through Plant (GFM4 + GFM3) Agea A -26,72 (in wc) Vacuum Gauge (Cond Tank) (VG1) Adew 26 Ad	<u>697</u>	(cfm)	BBR Flow				194.25	AGW-22	Area A
24_2 (in wc) Vacuum Gauge (Cond. Tank) (VG1) AdW/28 Ada A 73/1,2 (cm) Area B & BBR Header Flow (GFM2B) AdW/28 Area A 1 (m wc) Vacuum Header B (VG-A) Mathematic Area A Mathematic Area A 52, 4/ (% vol) Methane comb. A, B, BBR Methane Comb. A, B, BBR X ALINE Area A (% vol) Oxygen comb. A, B, BBR X ALINE Area A (% vol) Oxygen comb. A, B, BBR X ALINE Area A (m wc) Flow to Flare (GFM4) Bow-104 Area B Bow-104 Area B (m wc) Time of readings Relative Pressure Bow-104 Area B Bow-107 Area B (m wc) Time of readings Relative Pressure Bow-111 Area B Bow-112 Area B (m wc) Relative Pressure Bow-114 Area B Bow-114 Area B (m wc) (m wc) Time of readings Bow-11	695,6	(cfm)	Total Flow through Plant (GFM4 + GFN	/13)	V 64 (5404-611 <u>-656</u>	and a second state of the second states	ΔG\M-24P	Aron A
73-7.2 (cfm) Area B & BBR Header Flow (GFM2B) Area A 73-7.2 (in wc) Vacuum Header B, (VG-A) MaR223 Area A 72.7.4 (% vol) Methane comb. A, B, BBR MAR233 Area A 72.7.4 (% vol) Oxygen comb. A, B, BBR Mara A APE2-33 Area A 72.7 (m) Oxygen comb. A, B, BBR X ALINE Area B 72.7 (cfm) Flow to Flare (GFM4) Flow to Flare (GFM4) BGW-101 Area B 72.7 (in wc) (in wc) Time of readings BGW-102 Area B 72.7 (in wc) Time of readings BGW-104 Area B 72.7 (in wc) Time of readings BGW-104 Area B 72.7 (in wc) (in wc) Time of readings BGW-104 Area B 72.6 (in wc) Time of readings BGW-104 Area B BGW-1104 Area B 72.6 (in wc) Co2 Time of readings BGW-1114 Area B BGW-1114 Area B </td <td>-2473</td> <td>(in wc)</td> <td>Vacuum Gauge (Cond, Ta</td> <td>ink) (VG1)</td> <td></td> <td></td> <td>N. A. C. See</td> <td>A0W-24K</td> <td>Alea A</td>	-2473	(in wc)	Vacuum Gauge (Cond, Ta	ink) (VG1)			N. A. C. See	A0W-24K	Alea A
Image: Second	734.2	(cfm)	Area B & BBR Header Flor	w (GFM2B)	CAN DO AL ANY AN	A STATE	<u> Na Angala</u> ta	AGW-26	Area A
32.4 (% vol) (% vol) Methane comb. A,B,BBR Oxygen comb. A,B,BBR Blower #4 Flow, Main HIS - MWR, (GFM3) APE2.3 (Area A Area A G ~ 5, C (cfm) Blower #4 Flow, Main HIS - MWR, (GFM3) BGW-101 Area B G ~ 7, C (cfm) Flow to Flare, (GFM4) BGW-101 Area B A Header (20") by Envision Time of readings Relative Pressure Methane BGW-102 Area B C ~ 7, C (%) CO2 BGW-103 Area B C ~ 7, C (%) Time of readings Relative Pressure Methane BGW-102 Area B S ~ 7, C (%) CO2 BGW-108 Area B S ~ 7, C (%) CO2 BGW-108 Area B S ~ 7, C (%) CO2 BGW-108 Area B S ~ 7, C (%) CO2 BGW-108 Area B S ~ 7, C (%) CO2 BGW-108 Area B S ~ 7, C (%) CO2 BGW-108 Area B S ~ 7, C (%) CO2 BGW-112 Area B S ~ 7, C (%)<	and the second		Vacuum Header B (VG-A)		的小点的。 1995年的小孩们的服务	830-KB <mark>1</mark> 2	Sector Stand	NAPEZ-2	Area A
Area A Area A 1 (18 '00') Oxygen comb. AB, BBR 1 (cfm) (cfm) Blower #4 Flow, Main HIS - MWR, (GFM3) 1 (cfm) Flow to Flare, (GFM4) BBW-102 2 (cfm) Flow to Flare, (GFM4) BBW-102 A Header (20") by Envision Time of readings BBW-102 Area B 2 (f%) Co2 BBW-106 Area B 3 (%) Co2 BBW-106 Area B 3 (%) Co2 BBW-106 Area B 3 (%) Co2 BBW-108 Area B 3 (%) Co2 BBW-108 Area B 3 (%) Co2 BBW-108 Area B 3 (%) Co2 BBW-111 Area B 3 (%) <td>67 11</td> <td></td> <td>Mothene semb A B BBB</td> <td></td> <td></td> <td></td> <td></td> <td>APEZ-3</td> <td>Area A</td>	67 11		Mothene semb A B BBB					APEZ-3	Area A
X A-LINE Area A G 75, C (cfm) Blower #4 Flow, Main HIS - MWR, (GFM3) Bow 101 Area B A Header (20") by Envision (cfm) Flow to Flare, (GFM4) Bow 102 Area B A Header (20") by Envision Time of readings Bow 102 Area B Bow 106 Area B A Header (20") by Envision Time of readings Relative Pressure Bow 106 Area B A Header (20") by Envision Time of readings Relative Pressure Bow 108 Area B Bew 100 (%) CO2 Bow 108 Area B Bew 108 Relative Pressure Bow 108 Area B Bow 108 Area B Bow 108 Area B Bow 108 CO2 Bow 108 Area B Bow 108 Relative Pressure Bow 118 Area B Bow 114 Area B Bow 118 Area B Bow 114 Area B Bow 114 Area B Bow 114 Area B Bow 117 Area B Bow 118 Area B Bow 111				salinen teatra sonteara	State A Martinette Chara			' AUL-2	Area A
Bit Composition Bit Wer #4 Flow, Main HIS - MWR, (GFM3) Bow 101 Area B A Header (20") by Envision Flow to Flare. (GFM4) Bow 101 Area B 3-477- (In wc) Time of readings Relative Pressure Methane Bow 101 Area B 3/470- (In wc) Time of readings Relative Pressure Methane Bow 100 Area B 3/470- (%) Oxygen Bow 100 Area B 3/470- (%) CO2 Bow 100 Area B 3/470- (%) CO2 Bow 101 Area B 3/470- (%) CO2 Bow 101 Area B 3/470- (%) CO2 Bow 111 Area B 3/		-(% VOI)	Oxygen comb. A,B,BBR				X	A-LINE	Area A
Image: Constraint of the	10 (), 0	(cfm)	Blower #4 Flow, Main HIS	- MWR, (G F	M3)			BGW-101	Area B
A Header (20") by Envision Imme of readings BGW-103 Area B 3-4-7 (in wc) Time of readings BGW-104 Area B 3-1070 (in wc) Methane BGW-107 Area B 3-1070 (%) Oxygen BGW-107 Area B 3-1071 (%) Oxygen BGW-107 Area B 3-1072 (%) Time of readings BGW-112 Area B 3-11 (%) Time of readings BGW-112 Area B 3-11 (%) Time of readings BGW-112 Area B 3-11 (%) CO2 BGW-114 Area B 3-11 (%) CO2 BBR	\underline{O}	(cfm)	Flow to Flare (GFM4)				1.11	BGW-102	Area B
A Header (20") by Envision BGW-104 Area B -4-7-7 (in wc) Relative Pressure BGW-104 Area B -(-7-0) (in wc) (in wc) Methane BGW-104 Area B -(-7-0) (in wc) (%) Oxygen BGW-104 Area B -(-7-0) (%) Oxygen BGW-107 Area B -(-7-0) (%) CO2 BGW-108 Area B -(-7-0) (%) CO2 BGW-108 Area B -(-7-0) (%) CO2 BGW-108 Area B -(-7-0) (%) CO2 BGW-117 Area B -(-7-0) (%) CO2 BGW-113 Area B -(-7-0) (%) CO2 BGW-114 Area B -(-7-0) (%) Oxygen BGW-116 Area B -(-7-0) (%) Oxygen BGW-116 Area B -(-7-0) (%) Oxygen CO2 BGW-116 Area B -(-7-0) (%) Oxygen CO2 BGW-116 Area B -(-7-0) (%)	en e				• • • • • • • • • • • • • • • • • • •			BGW-103	Aroa R
3477 Bow-104 Area B 1070 (in wc) Relative Pressure BGW-106 Area B 1070 (in wc) (%) Relative Pressure BGW-106 Area B 1070 (%) (%) Cocygen BGW-108 Area B 1070 (%) Cocygen BGW-108 Area B 1071 (%) Cocygen BGW-108 Area B 1072 (%) Cocygen BGW-108 Area B 1072 (%) Cocygen BGW-111 Area B 1172 (%) Time of readings BGW-113 Area B 1172 (%) Cocygen BGW-114 Area B 1172 (%) Cocygen BGW-113 Area B 1174 (%) Cocygen BGW-114 Area B 1174 (%) Cocygen BGW-114 Area B 1174 (%) Cocygen BGW-114 Area B 1174 (%) C	A Header (20") by Envis	ion .							
IC IC IC IC IC IC IC Area B BGW-106 Area B BGW-107 Area B BGW-108 Area B BGW-111 Area B BGW-114 Area B CO2 BGW-114 Area B BGW-114	2:72-1		Time of readings	enne Alminister (1997).	anas distanta	et dag <u>ta</u>	ચહાર છે. તેલે છે.	BGW-104	Area B
1/2 IC 1/6 Area B 1/2 IC (%) Methane BGW-100 Area B 1/2 IC (%) CO2 BGW-108 Area B 1/2 IC (in wc) Time of readings BGW-112 Area B 1/2 IC (%) CO2 BGW-114 Area B 1/2 IC (%) CO2 BGW-111 Area B 1/2 IC (%) CO2 BGW-114 Area B 1/2 IC (%) CO2 BGW-114 Area B 1/2 IC (%) CO2 BGW-114 Area B 1/2 IC (%) CO2 BGW-117 Area B 1/2 IC (%) CO2 BGW-117 Area B 1/2 IC (%) CO2 EBR-LINE BBR A BGW-118 Area B 1/2 IC (%) CO2 Time of readings ICCR12 BBR <t< td=""><td>JA40</td><td>(in we)</td><td>Relative Pressure</td><td>a sanan ar</td><td></td><td>192603</td><td>n National Property of the</td><td>BGW-105</td><td>Area B</td></t<>	JA40	(in we)	Relative Pressure	a sanan ar		192603	n National Property of the	BGW-105	Area B
Y Interfaction Bow-107 Area B 0	512.12	1 (%)	Mothono				30722. S	BGW-106	Area B
3 C. 4// (%) COxygen CO2 BGW-109R Area B B Header (20'') by Envision BGW-110R Area B BGW-110R Area B 3 C. 4// (in wc) Time of readings BGW-111R Area B 3 C. 4// (in wc) Relative Pressure BGW-111R Area B 3 C. 4// (%) Oxygen BGW-111R Area B 3 C. 4// (%) Methane BGW-111R Area B 3 C. 4// (%) Oxygen BGW-111R Area B 3 C. 4// (%) CO2 BGW-111R Area B 3 C. 4// (%) CO2 BGW-113 Area B 3 C. 4// (%) CO2 BGW-113 Area B 3 C. 4// (%) CO2 X BGW-113 Area B 3 C. 4// (%) CO2 X BGW-114 Area B 3 C. 4// (%) CO2 X BGW-114 Area B 3 C. 4// (%) CO2 X BGW-112 <t< td=""><td></td><td></td><td></td><td>やっぱいゆくすうみさん</td><td>and a foregraph to see the</td><td>an an a</td><td></td><td>BGW-107</td><td>Area B</td></t<>				やっぱいゆくすうみさん	and a foregraph to see the	an a		BGW-107	Area B
$3 \\ 1 \\ 2 \\ 2 \\ 3 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1$	20.4	- (70)	Oxygen	이 집에서 물었다.				BGW-108	Area B
B Header (20") by Envision Time of readings. 24:72 (in wc) Relative Pressure 35:71 (%) Methane 57:71 (%) Oxygen 600:113 Area B 86W-112 Area B 86W-113 Area B 95:71 (%) (%) Oxygen (%) CO2 86W-118 Area B 86W-116 Area B 86W-117 Area B 0xygen CO2 86W-118 Area B 100:11 Area B 110:11 Area B 110:11 Area B 111:11 Area B	<u></u>	_(%) ~-	CO2					BGW-109R	Area B
B Header (20") by Envision BGW-111R Area B -26,25 (in wc) Relative Pressure BGW-112 Area B 92,7 (%) Relative Pressure BGW-114 Area B 92,7 (%) Oxygen BGW-114 Area B 92,7 (%) CO2 BGW-116 Area B 93,7 (%) CO2 BBR BGW-118 Area B 94,7 CO2 X BGW-116 Area B 7 LCR12 BBR X BGW-118 Area B 7 LCR2 BBR X BGW-119 Area B 7 LCR6 BBR X BGW-120 Area B 7 CV2 Methane X BGW-121 Area B 7 GW201 BBR X </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>BGW-110R</td> <td>Area B</td>								BGW-110R	Area B
X BBR-LINE BBR BGW-112 Area B 14 (%) CO2 BGW-113 Area B 14 (%) Oxygen BGW-114 Area B 14 (%) CO2 BGW-114 Area B 14 (%) CO2 BGW-114 Area B 14 (%) CO2 BGW-115 Area B 14 CO2 BGW-116 Area B 14 CO2 BGW-114 Area B 14 CO2 BGW-115 Area B 14 CO2 BGW-114 Area B 14 CO2 BBR BGW-114 Area B 14 CO2 BBR BGW-114 Area B 14 CO2 CO2 BBR BGW-114 Area B 14 CO2 CO2 CO2 BBR BGW-124 Area B 14 CO2 CO2 CO2 BBR BGW-124 Area	B Header (20") by Envis	on				Γ		BGW-111P	Aroo P
Image: State stat	2140	منيم 👘	Time of readings				. Andrewski	DOW-ITIK	Area D
SolutionBGW-113Area BSolutionMethaneBGW-114Area BSolutionCO2BGW-115Area BSolutionCO2BGW-116Area BSolutionCO2BGW-117Area BSolutionCO2SegmentBGW-118SolutionTime of readings Relative Pressure (%)SegmentBBR-LINESolutionTime of readings Relative Pressure Methane (%)SegmentBGW-119SolutionTime of readings Relative Pressure Methane CO2LCR8BBRBGW-120SolutionCO2CO2Segment CO2Area BSolutionCO2CO2Segment CO2Area BSolutionCO2CO2Segment CO2Area BSolutionCO2Segment CO2Segment CO2Segment CO2SolutionSegment CO2CO2Segment CO2Area BSolutionSegment CO2Segment CO2Segment CO2Segment CO2SolutionSegment CO2Segment CO2Segment CO2Segment CO2Segment CO2SolutionSegment CO2Segment CO2Segment CO2Segment CO2Segment CO2SolutionSegment CO2Segment CO2Segment CO2Segment CO2Segment CO2SolutionSegment CO2Segment CO2Segment CO2Segment CO2Segment CO2SolutionSegment CO2Segment CO2	-26, 25	(in wc)	Relative Pressure	uninini de de d	liter and the second	983-98 <u>19</u>	REGION DE	BGW-112	Area B
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	Cil	70/5000000	Methono			25.5°% 70	0140490535	BGW-113	Area B
$\begin{array}{c c c c c c c c c c c c c c c c c c c $			Miemane			1992 <u>a</u>		BGW-114	Area B
Start (%) CO2 BGW-116 Area B X BGW-117 Area B X BGW-117 Area B X BBR-LINE BBR BGW-118 Area B X BBR-LINE BBR X BGW-118 Area B X LCR12 BBR X BGW-119 Area B X LCR8 BBR X BGW-120 Area B X LCR6 BBR X BGW-121 Area B X LCR2 BBR X BGW-121 Area B X LCR2 BBR X BGW-121 Area B X LCR2 BBR X BGW-121 Area B X GW207 BBR BGW-123 Area B X GW205 BBR X BGW-124 Area B X GW203 BBR X HGW-3 Area B X GW201 BBR X BLINE Area B		(70)	Oxygen	annann carno a sua star a	an an a chuir an an Air an			BGW-115	Area B
X BGW-117 Area B BRRDR Header (20") by Envision X BBR-LINE BBR BGW-118 Area B	30.71	(%)	CO2					BGW-116	Area B
X BBR-LINE BBR BGW-118 Area B BRRDR Header (20") by Envision Time of readings Image: Construction of the constr							X	BGW-117	Area B
BRRDR Header (20") by Envision Time of readings ICR12 BBR X BGW-119 Area B	FB14			X	BBR-LINE B	BR		BGW-118	Area B
Image: Construction Time of readings -75734 Time of readings -75734 Relative Pressure 515 Relative Pressure (in wc) Relative Pressure (%) Methane (%) Oxygen (%) CO2 Y Gw207 BBR X BGW-121 Area B X CO2 Y Gw205 BBR X BGW-124 Area B Y Gw203 BBR X BBR X BBR X HGW-3 Area B	BRRDR Header (20") by	Envision		<u>کر</u>	LCR12 B	BD	X	DOW 440	
Inite of reducings LCR8 BBR X BGW-120 Area B -7-57/34 (in wc) Relative Pressure Image: LCR6 BBR X BGW-121 Area B -7-57/34 (%) Methane X LCR6 BBR X BGW-122 Area B -7-57/34 (%) Oxygen X LCR2 BBR X BGW-122 Area B -7-2 (%) Oxygen Oxygen X GW207 BBR BGW-123 Area B -7-2 (%) CO2 -7-2 GW205 BBR X BGW-124 Area B -7-2 GW203 BBR X HGW-3 Area B -7-2 GW201 BBR X BJ INE Area B	Add	1	Time of readings	28 27 8 2 38				BGW-119	Area B
Sile Nit word Relative Pressure X LCR6 BBR X BGW-121 Area B 12 (%) Methane X LCR2 BBR X BGW-122 Area B 12 (%) Oxygen X Gw207 BBR BGW-123 Area B 14 (%) CO2 Gw205 BBR X BGW-124 Area B 14 Gw203 BBR X HGW-3 Area B 15 GW201 BBR X BJ INF Area B	- 25, 7 Le	1(in we)	Relativo Procesura	3 <u> 24 3-0</u>		BK	_ <u>X</u>	BGW-120	Area B
Y LCR2 BBR X BGW-122 Area B Y GW207 BBR BGW-123 Area B Y GW205 BBR X BGW-124 Area B Y GW205 BBR X BGW-124 Area B Y GW203 BBR X HGW-3 Area B Y GW201 BBR X BJ INF Area B	MAC C				LCR6 B	BR	<u> </u>	BGW-121	Area B
(%) Oxygen X Gw207 BBR BGW-123 Area B %) CO2 % Gw205 BBR X BGW-124 Area B % Gw203 BBR X HGW-3 Area B % Gw201 BBR X BJ INF Area B	7/13	-(%)	wethane	<u>x</u>	LCR2 B	BR	<u> X </u>	BGW-122	Area B
(%) CO2 / GW205 BBR X BGW-124 Area B / GW203 BBR X HGW-3 Area B / GW201 BBR X BJ INF Area B	a contraction of the second se	(%)	Oxygen	X	GW207 B	BR		BGW-123	Area B
X GW203 BBR X HGW-3 Area B X GW201 BBR X BJ INIE Area B	- <u>+</u> <u></u>	J(%)	CO2	4	GW205 B	BR	X	BGW-124	Aréa B
GW201 BBR X RJ ING Area D				X	GW203 B	BR	X	HGW-3	Area R
				×	GW201 B	BR	X		Aros D



PERFORMED BY: _____ TIME: _____ DATE: _____

DAILY SURFACE MONITORING LOG

PERFORMED BY:	60	
START TIME: 8:3	>	
DATE: $3/18/20$	H 	
LANDFILL NAME:	Ara	B

Location Identifier of Leak GW 107 GW 109 GW 115 35R 4 VM4	Location and Time <u>7:07 an</u> <u>10:04 an</u> <u>10:77 an</u> <u>10:73 an</u>	Concentration of Leak (ppm) <u>827 pife</u> 1503 pife 1015 between Pipes
SSR3 Umit All covert	10:14 cm	1279 NGV corner automitic and reclected
	+ pased 500	ppm fest.
	60 1/18	120

PERFORMED BY: $\underbrace{\bigcirc}$ TIME: $\underbrace{11:22}$	5an DATE: 3/17/2	88R- 30
INSTRUMENT RESPONSE	TIME TEST RECORD	
LANDFILL NAME: MLSW		•
INSTRUMENT MAKE:MODEL:	S/N:	
MEASUREMENT #1:		
Stabilized Reading Using Calibration Gas:	<u>480</u> ppm	
90% of the Stabilized Reading:	<u>439.</u> 2 ppm	
Time to Reach 90% of Stabilized reading After switching from Zero Air to Calibration Gas	7.5 seconds (1)	Λ
MEASUREMENT #2:		18 Aug
Stabilized Reading Using Calibration Gas:	<u>456</u> ppm	
90% of the Stabilized Reading:	<u>437,4</u> ppm	10 Jan
Time Reach 90% of Stabilized Reading After switching from Zero Air to Calibration Gas	<u>3.5</u> seconds (2)	
MEASUREMENT #3:		
Stabilized Reading Using Calibration Gas:	<u>453</u> ppm	
90% of the Stabilized Reading:	<u>434.7</u> ррт	
Time to Reach 90% of Stabilized Reading After switching from Zero Air to Calibration Gas	7.5 seconds (3)	
CALCULATE RESPONSE TIME: $\frac{(1) + (2)}{3}$	<u>+ (3)</u>	
= 3.5 seconds (must b)	E LESS THAN 30 SECONDS)	11:26AM

•

,

PERFORMED BY: _____ TIME: _____

DATE: _____

DAILY SURFACE MONITORING LOG

PERFORMED BY: _____ START TIME: _______ 20 3 DATE: 500 ppm + LANDFILL NAME: **Location Identifier** Location and Time **Concentration of** of Leak, Leak (ppm) on Landfoll! hat Ø



Questerly

PERFORMED BY:

TIME: 11:25an

DATE: 3/17/20

CALIBRATION PRECISION TEST RECORD

	a strange of the
LANDFILL NAME: MCSW	TVA 106B
INSTRUMENT MAKE:MODEL:	81020 S/N: 0118 248197
MEASUREMENT #1:	
Meter Reading for Zero Air:	ppm (1)
Meter Reading for Calibration Gas:	<u>500</u> ppm (2)
MEASUREMENT #2:	•
Meter Reading for Zero Air:	<u>()</u> ppm (3)

Meter Reading for Calibration Gas:

501_ppm (4)

MEASUREMENT #3:

Meter Reading for Zero Air:

Meter Reading for Calibration Gas:

CALCULATE PRECISION:

ppm (5) ;<u>)0</u> ppm (6)

 $\frac{500 - (2)}{3} + \frac{500 - (4)}{3} + \frac{500 - (6)}{500} \times \frac{1}{500} \times \frac{100}{10} \times \frac{100}{500} - \frac{500}{500} + \frac{500}{500} \frac{50}{500} + \frac{50$

= <u>...</u> % (must be less than 10%)

-1 x/ 3 500

-. 237X - ,000blab - 0.06



PERFORMED BY: _	Es	TIME:	12:30
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BQIR DATE: <u>4/16/20</u>

DAILY SURFACE MONITORING LOG

PERFORMED BY: $\underline{4}$ START TIME: $\underline{7}$ DATE: $\underline{4}$	2 2	
LANDFILL NAME:	ra D	and a second
Location Identifier of Leak	Location and Time	Concentration of Leak (ppm)
Reach	107 109R	+ /15
No	Schects for	
30	Day Kedek	1
	0	
	· · · · · · · · · · · · · · · · · · ·	

Checklist for Weekly, Monthly, and Quarterly Gas Monit

by Elkins Envision

	4/6/20	Date
Site Co	onditions	■ Charlen Charlen (1997)
	2:18	Time of Readings
	51	Air Temperature (oF)
	28,83	Barometric Pressure (inch Hg) Barometric Trend
	5um	Ground Cond. (dry, damp, satur., ice, snow)
	Summy	Sky and Weather
	N3	Wind Speed and Direction

	Gas	System	Conditions	
--	-----	--------	------------	--

	2:68	
		(cfm)
	686	(cfm)
	-212	(in wc)
	725	(cfm)
	and the second se	(% vol)
	Arrestor .	(% vol)
	250	(cfm)
	and a	(cfm)
A Head	434 der (10'')	

		(in wc)
	X	(%)
-		(%)
	I = 1	(%)

B Header (20")

	$ \land / $	(in wc)
教育的教育主要的 主要的人	\mathbf{V}	(%)
		(%)
	I = I	(%)

1	
 BBR Hea	ader (18'')

\wedge	
	(in wc)
\wedge	(%)
	(%)
	(%)

Time of re	adings
Relative P	ressure
Methane	
Oxygen	
CO2	

Time of re Relative F	adings Pressure
Methane	
Oxygen	
CO2	

ithly, and Quarterl	y Gas Monitoring			AGW-01	Area A
Elkins Envision				AGW-02	Area A
				AGW-03	Area A
				AGW-03R	Area A
				AGW-04	Area A
				AGW-05	Area A
dings				AGW-05R	Area A
ture (oF)				AGW-08	Area A
ressure (inch Hg)				AGW-07	Area A
rend				AGW-081	Area A
d. (dry, damp, satur., ice, s	snow)			AGW-10	Area A
ather				AGW-12	Area A
and Direction				AGW-14	Area A
				/A/G/W-116	Area A
	· · · · · · · · · · · · · · · · · · ·			AGW-18	Area A
Time of readings	434 80			AGW-20	Area A
BBR Flow				AGW-22	Area A
i otal ⊢low through Plant ((GFM4 + GFM3)			AGW-24R	Area A
vacuum Gauge (Cond. Ta	ank) (VG1)			AGW-26	Area A
Area B & BBR Header Flo	ow (GFM2B)			AREZ-2	Area A
Methane comb. A,B,BBR				APEZ-3	Area A
Oxygen comb. A,B,BBR				AUL-2	Area A
Blower #4 Flow, Main HIS	3 - MWR, (GFM3)			A-LINE	Area A
Flow to Flare (GFM4)				BGW-101	Area B
				BGW-102	Area B
1. Buddin ten - Antonio Share - 186 etter us wu			/	BGW-103	Area B
Time of readings			and at the speed of the Marine and States	BGW-104	Area B
Relative Pressure				BGW-105	Area B
Methane				BGW-106	Area B
Oxygen				BGW-107	Area B
CO2			67.4999	BGW-108	Area B
				BGW-109R	Area B
<u>aan kana kana kana ka</u>				BGW-110R	Area B
Time of readings				BGW-111R	Area B
Relative Pressure				BGW-112	Area B
Methane				BGW-113	Area B
Oxygen				BGW-114	Area B
CO2				BGW-115	Area B
				BGW-116	Area B
	The second se			BGW-117	Area B
La ser a ser a su como	BBR-LINE	BBR		BGW-118	Area B
Time of readings	LCR12	BBR		BGW-119	Area B
Relative Pressure	LCR8	BBR		BGW-120	Area B
Methane	LCR6	BBR		BGW-121	Area B
Oxygen	LCR2	BBR		BGW-122	Area B
CO2	GW207	BBR		BGW-123	Area B
	GW205	BBR		BGW-124	Area B
	GW203	BBR		HGW-3	Area B
	GW201	BBR	L	B-LINE	Area B

BBP Q2

PERFORMED BY: <u>60</u> TIME: <u>12:0</u>	M DATE: <u>4/16/20</u>			
INSTRUMENT RESPONSE	TIME TEST RECORD			
LANDFILL NAME: $\underline{MCS}_{\underline{B}} + \underline{B}_{\underline{A}}$	BR			
INSTRUMENT MAKE: Fishen MODEL: (00	B_S/N: 0115248137			
MEASUREMENT #1:	2			
Stabilized Reading Using Calibration Gas:	<u>483</u> ppm			
90% of the Stabilized Reading:	<u>4347</u> ppm			
Time to Reach 90% of Stabilized reading After switching from Zero Air to Calibration Gas	7,8 seconds (1)			
MEASUREMENT #2:				
Stabilized Reading Using Calibration Gas:	<u>451</u> ppm			
90% of the Stabilized Reading:	<u> </u>			
Time Reach 90% of Stabilized Reading After switching from Zero Air to Calibration Gas	<u>3</u> , <u>75</u> seconds (2)			
MEASUREMENT #3:				
Stabilized Reading Using Calibration Gas:	<u>453</u> ppm			
90% of the Stabilized Reading:	<u> </u>			
Time to Reach 90% of Stabilized Reading After switching from Zero Air to Calibration Gas	7 r9 seconds (3)			
CALCULATE RESPONSE TIME: $\frac{(1) + (2) + (3)}{3}$				
= <u>3,8166</u> seconds (must be less than 30 seconds)				

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PERFORMED BY: E^{D} TIME: $13:3^{C}$ DATE: 4/16/100 DO

CALIBRATION PRECISION TEST RECORD

LANDFILL NAME:			
INSTRUMENT MAKE:MODEL:	S/N:		
MEASUREMENT #1:			
Meter Reading for Zero Air:	ppm (1)	500-478 2 22	
Meter Reading for Calibration Gas:	<u>475</u> ppm (2)		
MEASUREMENT #2:			
Meter Reading for Zero Air:	ppm (3)	- in 1807 - a 1 th	
Meter Reading for Calibration Gas:	<u>455</u> ppm (4)	700-75 -1.	
MEASUREMENT #3:			
Meter Reading for Zero Air:	ppm (5)	510 - 410 = 20	
Meter Reading for Calibration Gas:	<u>45</u> ^D ppm (6)		
CALCULATE PRECISION:			
$\frac{[500 - (2)] + [500 - (4)] + [500 - (6)]}{3} \times \frac{1}{500} \times \frac{1}{1} \frac{57}{3} = \frac{19}{3} = \frac{37}{3}$			
= <u>3.8</u> % (must be less than 10%)			
CALIBRATION PROCEDURE AND BACKGROUND DETERMINATION REPORT

LANDFILL NAME; _____

INSTRUMENT MAKE: _____MODEL: _____S/N: ____

Calibration Procedure

- 1. Allow instrument to internally zero itself while introducing zero air.
- 2. Introduce the calibration gas into the probe. Stable reading = $\frac{487}{\text{ppm}}$
- 3. Adjust meter to read 500 ppm.

Background Determination Procedure

1. Upwind Reading (highest in 30 seconds): _____ppm (1)

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

Calculate Background Value:

$$\frac{(1)+(2)}{2}$$

Background = 7.5 ppm



H 18 MA 2601 5106/7/8 geb.th 5108 sunt modistak BE/bu8/0108/secageth/sabit britsofs/finno) modistak/ki-osk/aisd instat/is

senses newcar

PERFORMED BY: $\underline{\leftarrow}0$ time: $\underline{10.40}$

DATE: <u>5/21/2</u>0

CALIBRATION PRECISION TEST RECORD

LANDFILL NAME: <u>Aven B</u> MC INSTRUMENT MAKE: <u>Guver</u> MODEL: <u>T</u>	5 L~ 1& 1005B S/N:
MEASUREMENT #1: Meter Reading for Zero Air: Meter Reading for Calibration Gas:	$\frac{1}{503} \text{ ppm (1)} \\ \frac{503}{503} \text{ ppm (2)} \\ 503 - 493 = -3 \\ 503 - 493 = -3 \\ 503 - 493 = -3 \\ 503 - 493 = -3 \\ 503 - 493 = -3 \\ 503 - 493 = -3 \\ 503 - 493 = -3 \\ 503 - 493 = -3 \\ 503 - 493 = -3 \\ 503 - 493 = -3 \\ 503 - 493 = -3 \\ 503 - 493 = -3 \\ 503 - 493 = -3 \\ 503 - 493 = -3 \\ 503 - 493 = -3 \\ 503 - 503 = -5 \\ 503 - 503 = -5 \\ 503 - 503 = -5 \\ 503 -$
MEASUREMENT #2: Meter Reading for Zero Air: Meter Reading for Calibration Gas:	$\frac{D}{499} \text{ ppm (3)} = -7$
MEASUREMENT #3: Meter Reading for Zero Air: Meter Reading for Calibration Gas:	<u>ррт (5)</u> <u>Ч9Ч</u> ррт (6)

CALCULATE PRECISION:

 $\frac{[500 - (2)] + [500 - (4)] + [500 - (6)]}{3} \times \frac{1}{500} \times \frac{1}{1}$ -3 -190 x -140.000 x -.006 = <u>-.</u> % (must be less than 10%)

PERFORMED BY: _____ TIME: _____ DATE: _____

INSTRUMENT RESPONSE TIME TEST RECORD

LANDFIL	L NAME:			
INSTRUM	IENT MAKE:	MODEL:	S/N: _	• .
MEASUR	EMENT #1:			
Stal	bilized Reading Using (Calibration Gas:	499	ppm
90%	6 of the Stabilized Read	ding:	4649,1	ppm
Tin Afte Cal	ie to Reach 90% of Sta er switching from Zero ibration Gas	bilized reading Air to	3,1	seconds (1)
MEASUR	EMENT #2:			
Stal	bilized Reading Using (Calibration Gas:	498	ppm
90%	% of the Stabilized Read	ding:	448.0	ррт
Tin Afte Cal	ie Reach 90% of Stabil er switching from Zero ibration Gas	ized Reading Air to	3,0	seconds (2)
MEASUR	EMENT #3:			
Stal	bilized Reading Using	Calibration Gas:	497	ppm
90%	% of the Stabilized Read	ding:	4.17.3	ppm
Tin Aft Cal	ie to Reach 90% of Sta er switching from Zero ibration Gas	bilized Reading Air to	3.7	seconds (3)

CALCULATE RESPONSE TIME:

 $\frac{(1)+(2)+(3)}{3}$

 $= \underbrace{3}_{,,}$ SECONDS (MUST BE LESS THAN 30 SECONDS)



PERFORMED BY: 60 TIME: 10.57

DATE: 6/25/20

CALIBRATION PRECISION TEST RECORD

LANDFILL NAME: MCSW ARGA K	
INSTRUMENT MAKE: The MODEL: TV BOB S/N: 0118 245137	
MEASUREMENT #1:	
Meter Reading for Zero Air: ppm (1)	
Meter Reading for Calibration Gas: <u>SO/</u> ppm (2)	
MEASUREMENT #2:	
Meter Reading for Zero Air: ppm (3)	
Meter Reading for Calibration Gas: <u>568</u> ppm (4)	
MEASUREMENT #3:	
Meter Reading for Zero Air: ppm (5)	
Meter Reading for Calibration Gas: <u>497</u> ppm (6)	
CALCULATE PRECISION:	2
$\frac{[500 - (2)] + [500 - (4)] + [500 - (6)]}{3} \times \frac{1}{500} \times \frac{1}{1}$	
160 ,00137	
$=$ $\frac{3}{3}$ % (must be less than 10%)	

PERFORMED BY: TIME: DATE:

INSTRUMENT RESPONSE TIME TEST RECORD

LANDFILL NAME: _____

INSTRUMENT MAKE: _____MODEL: _____S/N: _____

MEASUREMENT #1:

Stabilized Reading Using Calibration Gas:

441.9_ ppm 90% of the Stabilized Reading:

Time to Reach 90% of Stabilized reading After switching from Zero Air to **Calibration Gas**

3, 5_____ seconds (1)

MEASUREMENT #2:

Stabilized Reading Using Calibration Gas:

90% of the Stabilized Reading:

Time Reach 90% of Stabilized Reading After switching from Zero Air to **Calibration Gas**

ppm 442. 8_ ppm

4<u>9/</u>_ ppm

seconds (2)

MEASUREMENT #3:

Stabilized Reading Using Calibration Gas: 10 ppm 4 736 5_ ppm

90% of the Stabilized Reading:

Time to Reach 90% of Stabilized Reading After switching from Zero Air to **Calibration Gas**

seconds (3)

CALCULATE RESPONSE TIME:

(1) + (2) + (3)3

= $\frac{387}{587}$ SECONDS (MUST BE LESS THAN 30 SECONDS)

CALIBRATION PROCEDURE AND BACKGROUND DETERMINATION REPORT

LANDFILL NAME: _____

INSTRUMENT MAKE: _____MODEL: _____S/N:

Calibration Procedure

1: Allow instrument to internally zero itself while introducing zero air.

2. Introduce the calibration gas into the probe. Stable reading = <u>Jaw</u> ppm

3. Adjust meter to read 500 ppm.

Background Determination Procedure

1. Upwind Reading (highest in 30 seconds):

2. Downwind Reading (highest in 30 seconds): _____ppm (2)

Calculate Background Value:

$$\frac{(1)+(2)}{2}$$

07

ppm (1)

Background = $\frac{15}{5}$ ppm

PERFORMED BY: _____ TIME: _____ DATE: **DAILY SURFACE MONITORING LOG** PERFORMED BY: START TIME: _____ DATE: _____ LANDFILL NAME: _____ **Location Identifier** Location and Time **Concentration** of of Leak Leak (ppm)

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Weekly, Monthly, & Quarterly Gas Monitoring

with Elkins Envision - also fill out cover integrity sheet during well monitoring

6/28	120	Date Tech.
Site Co	nditions	
10170-		Time of Readings
709		Air Temperature (oF)
00:67		Barometric Pressure (inch Hg)
AN I		Barometric Trend
dino		Ground Cond. (dry, damp, satur., ice, snow)
Firm		Sky and Weather
129 1		Wind Speed and Direction

Gas System Conditions

10:55	Time
540	(cfm)
	(cfm)
-2LAT	(in wc)
589.6	(cfm)
	(% vol)
harrison	(% vol)
519,9	(cfm)
53,53	(cfm)

Mainport pressure (in WC)

in out

n	0	ŧ.	Δ	c	•
11	υ	L,	С	э	4

BBR Flow

Total Flow thru Plant (GFM4 + GFM3) Vacuum Gauge (Cond. Tank) (VG1) Area B & BBR Header Flow (GFM2B)

Blower #4 Flow, to Fiber Rec. (GFM3)

Methane comb. A,B,BBR Oxygen comb. A,B,BBR

Flow to Flare (GFM4)

A Header (10")

	Time
	press.(in wc)
	CH4(%)
	O2(%)
	CO2(%)

B Header (20")

	Time
	press.(in wc)
	CH4(%)
	O2(%)
	CO2(%)

BBR Header (18")

	Time
	press.(in wc)
	CH4(%)
	O2(%)
	CO2(%)

				BGW-116	Area B
				 BGW-117	Area B
ADJ. %	 BBR-LINE	BBR		BGW-118	Area B
	LCR12	BBR		BGW-119	Area B
	LCR8	BBR		BGW-120	Area B
	LCR6	BBR		BGW-121	Area B
	LCR2	BBR		BGW-122	Area B
	GW207	BBR		BGW-123	Area B
	GW205	BBR		BGW-124	Area B
	 GW203	BBR		HGW-3	Area B
	GW201	BBR	ADJ. %	B-LINE	Area B

·····		AGW-01	Area A
		AGW-02	Area A
	· ·	AGW-03	Area A
		AGW-03R	Area A
		AGW-04	Area A
		AGW-05	Area A
		AGW-05R	Area A
		AGW-06	Area A
		AGW-07	Area A
		AGW-08	Area A
		AGW-10	Area A
		AGW-12	Area A
		AGW-14	Area A
		AGW-16	Area A
	<u> </u>	AGW-18	Area A
	<u> </u>	AGW-20	Area A
		AGW-22	Area A
		AGW-24R	Area A
	 	AGW-26	Area A
		APEZ-2	Area A
		APEZ-3	Area A
	 	AUL 2	Area A
ниј. %	£		
	 ,	A-LINE	Area A
		A-LINE BGW-101	Area A Area B
		A-LINE BGW-101 BGW-102	Area A Area B Area B
		A-LINE BGW-101 BGW-102 BGW-103	Area A Area B Area B Area B
		A-LINE BGW-101 BGW-102 BGW-103 BGW-104	Area A Area B Area B Area B Area B
		A-LINE BGW-101 BGW-102 BGW-103 BGW-104 BGW-105	Area A Area B Area B Area B Area B Area B
		A-LINE BGW-101 BGW-102 BGW-103 BGW-104 BGW-105 BGW-106	Area A Area B Area B Area B Area B Area B Area B
		A-LINE BGW-101 BGW-102 BGW-103 BGW-104 BGW-105 BGW-106 BGW-107	Area A Area B Area B Area B Area B Area B Area B Area B
		A-LINE BGW-101 BGW-102 BGW-103 BGW-104 BGW-105 BGW-106 BGW-107 BGW-108	Area A Area B Area B Area B Area B Area B Area B Area B Area B
		A-LINE BGW-101 BGW-102 BGW-103 BGW-104 BGW-106 BGW-106 BGW-107 BGW-108 BGW-109R	Area A Area B Area B Area B Area B Area B Area B Area B Area B
		A-LINE BGW-101 BGW-102 BGW-103 BGW-104 BGW-105 BGW-106 BGW-107 BGW-107 BGW-108 BGW-109R	Area A Area B Area B Area B Area B Area B Area B Area B Area B Area B Area B
		A-LINE BGW-101 BGW-102 BGW-103 BGW-104 BGW-105 BGW-106 BGW-106 BGW-107 BGW-108 BGW-109R BGW-110R	Area A Area B Area B
		A-LINE BGW-101 BGW-102 BGW-103 BGW-104 BGW-106 BGW-106 BGW-107 BGW-107 BGW-109R BGW-109R BGW-110R BGW-111R	Area A Area B Area B
		A-LINE BGW-101 BGW-102 BGW-103 BGW-104 BGW-105 BGW-105 BGW-106 BGW-108 BGW-109R BGW-110R BGW-111R BGW-1112 BGW-113	Area A Area B Area B
		A-LINE BGW-101 BGW-102 BGW-103 BGW-104 BGW-105 BGW-106 BGW-106 BGW-108 BGW-108 BGW-109R BGW-1108 BGW-1117 BGW-1112 BGW-1113	Area A Area B Area B
		A-LINE BGW-101 BGW-102 BGW-103 BGW-104 BGW-106 BGW-106 BGW-107 BGW-109R BGW-109R BGW-109R BGW-110R BGW-111R BGW-1112 BGW-1113 BGW-1114	Area A Area B Area B
		A-LINE BGW-101 BGW-102 BGW-103 BGW-104 BGW-106 BGW-106 BGW-107 BGW-108 BGW-109R BGW-109R BGW-110R BGW-111R BGW-1112 BGW-1113 BGW-114 BGW-115	Area B Area B
		A-LINE BGW-101 BGW-102 BGW-103 BGW-104 BGW-105 BGW-106 BGW-106 BGW-108 BGW-108 BGW-108 BGW-108 BGW-1108 BGW-1117 BGW-1113 BGW-1115 BGW-116 BGW-117	Area A Area B Area B
		A-LINE BGW-101 BGW-102 BGW-103 BGW-104 BGW-105 BGW-106 BGW-106 BGW-107 BGW-108 BGW-109R BGW-109R BGW-109R BGW-1108 BGW-1117 BGW-1113 BGW-1115 BGW-1116 BGW-1117 BGW-1118	Area A Area B Area B
		A-LINE BGW-101 BGW-102 BGW-103 BGW-104 BGW-106 BGW-106 BGW-107 BGW-107 BGW-108 BGW-109R BGW-109R BGW-109R BGW-110R BGW-1118 BGW-1113 BGW-1115 BGW-1118 BGW-1119	Area B Area B
		A-LINE BGW-101 BGW-102 BGW-103 BGW-104 BGW-105 BGW-106 BGW-106 BGW-107 BGW-108 BGW-108 BGW-109R BGW-109R BGW-110R BGW-1117 BGW-1113 BGW-1115 BGW-1117 BGW-1118 BGW-1119 BGW-1120	Area B Area B
		A-LINE BGW-101 BGW-102 BGW-103 BGW-104 BGW-105 BGW-106 BGW-107 BGW-108 BGW-108 BGW-109R BGW-109R BGW-109R BGW-1108 BGW-1117 BGW-1113 BGW-1115 BGW-1115 BGW-1116 BGW-1117 BGW-1118 BGW-1119 BGW-120 BGW-121	Area A Area B Area B
		A-LINE BGW-101 BGW-102 BGW-103 BGW-104 BGW-106 BGW-106 BGW-107 BGW-108 BGW-109R BGW-109R BGW-109R BGW-109R BGW-109R BGW-110 BGW-1112 BGW-1113 BGW-1115 BGW-1115 BGW-1116 BGW-1117 BGW-1118 BGW-1120 BGW-121 BGW-122	Area A Area B Area B
	AD.1. %		AGW-02 AGW-03 AGW-03R AGW-04 AGW-05 AGW-07 AGW-08 AGW-07 AGW-08 AGW-10 AGW-10 AGW-12 AGW-12 AGW-14 AGW-14 AGW-14 AGW-18 AGW-20 AGW-22 AGW-24R AGW-26 APEZ-3 AUI-2



3Q Sen 860

Weekly, Monthly, & Quarterly Gas Monitoring

with Elkins Envision - also fill out cover integrity sheet during well monitoring

7/-31	1/20	Date GO Tech.
Site Co	nditions	
(gp)	10:41	Time of Readings
680	70-	Air Temperature (oF)
28.72	28.71	Barometric Pressure (inch Hg)
N/	J	Barometric Trend
	/2004	Ground Cond. (dry, damp, satur., ice, snow)
far	Jards	Sky and Weather
SUS.	5 NNE	Wind Speed and Direction

Gas System Conditions

92.6	1038	Time
1041	617	(cfm)
		(cfm)
-7-7.4	-27.13	(in wc)
1937	GAULIS	(cfm)
		(% vol)
		(% vol)
681.5	576,10	(cfm)
Ő	10	(cfm)

BBR Flow

notes:

Total Flow thru Plant (**GFM4 + GFM3**) Vacuum Gauge (Cond. Tank) (**VG1**) Area B & BBR Header Flow (**GFM2B**) Methane comb. A,B,BBR Oxygen comb. A,B,BBR Blower #4 Flow, to Fiber Rec. (**GFM3**) Flow to Flare (**GFM4**)

Mainport pressure (in WC)

in _____out

out			
•			

A Header (10")			
		Time	
		press.(in wc)	
		CH4(%)	
,,		02(%)	
		CO2(%)	

B Header (20")

	Time
	press.(in wc)
	CH4(%)
	O2(%)
	CO2(%)

BBR Header (18")

	Time
	press.(in wc)
	CH4(%)
<i>y</i>	O2(%)
	CO2(%)

			the second se
ADJ %	BBR-LINE	RBP	
			·
	LCR12	BBR	
	LCR8	BBR	
	LCR6	BBR	ι
	LCR2	BBR	
	GW207	BBR	
	GW205	BBR	
	GW203	BBR	
	GW201	BBR	ADJ. %

- 1				
			AGW-01	Area A
			AGW-02	Area A
	,		AGW-03	Area A
	******	······	AGW-03R	Area A
		·	AGW-04	Area A
			AGW-05	Area A
			AGW-05R	Area A
			AGW-06	Area A
			AGW-07	Area A
			AGW-08	Area A
			AGW-10	Area A
	,,		AGW-12	Area A
		·	AGW-14	Area A
			AGW-16	Area A
	· · · · · · · · · · · · · · · · · · ·		AGW-18	Area A
	······································		AGW-20	Area A
			AGW-22	Area A
			AGW-24R	Area A
	·		AGW-26	Area A
	· ···		APEZ-2	Area A
			APEZ-3	Area A
		·	AUL-2	Area A
I	ADJ. %		A-LINE	Area A
	,	······································	BGW-101	Area B
			BGW-102	Area B
	*	·····	BGW-103	Area B
	······	·	BGW-104	
	****		DOW-105	
			BGW-100	Area B
	• • •		BGW-107	Area D
			BGW-100	Area B
			BGW-110R	Area B
		· · · · · · · · · · · · · · · · · · ·	BGW-111P	
			BGW-112	
	. <u></u>		BGW_442	
	· · · · · · · · · · · · · · · · · · ·		BGW-114	
			BGW-115	Area R
	· · · · · · · · · · · · · · · · · · ·		BGW-116	Area R
		·	BGW-117	Area B
-	· · · · ·		BGW-118	Area R
-			BGW-119	Area B
-	·····	·	BGW-120	Area B
-	. <u> </u>		BGW-121	Area B
-			BGW-122	Area B
			BGW-123	Area R
	······································		BGW-124	Area B
-	·····		HGW-3	Area B
	ADJ. %	·	B-LINE	Area B

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6BR (23

TIME: <u>9:10</u> **PERFORMED BY:**

DATE: 7/31

INSTRUMENT RESPONSE TIME TEST RECORD

LANDFILL NAME: MS(1 BBR INSTRUMENT MAKE: MODEL: THE 100B S/N: 0115 248 (37

MEASUREMENT #1:

Stabilized Reading Using Calibration Gas:

90% of the Stabilized Reading:

Time to Reach 90% of Stabilized reading After switching from Zero Air to **Calibration Gas**

MEASUREMENT #2:

Stabilized Reading Using Calibration Gas:

90% of the Stabilized Reading:

Time Reach 90% of Stabilized Reading After switching from Zero Air to **Calibration Gas**

MEASUREMENT #3:

Stabilized Reading Using Calibration Gas:

90% of the Stabilized Reading:

Time to Reach 90% of Stabilized Reading After switching from Zero Air to **Calibration Gas**

CALCULATE RESPONSE TIME:

 4_{10} seconds (3)

 $\frac{(1)+(2)+(3)}{3}$

= $\frac{7}{55}$ Seconds (must be less than 30 seconds)

412 ppm 424.8 ppm

3,15 seconds (1)

<u>46</u>}____ppm 47(,2_ ppm

3,80 _ seconds (2)

<u>467</u> ppm 12013_ ppm

PERFORMED BY:	TIME:	DATE:
	DAILY SURFACE	MONITORING LOG
PEDEODMED DV.)	
TERFORMED BY:		
START TIME: $\underline{9}$		
DATE:	л	
LANDFILL NAME:		
Location Identifier of Leak	Location and Time	Concentration of Leak (npm)
East Stope	9.50	<u> </u>
Jes Pipig-s	trink era, on	· · · · · · · · · · · · · · · · · · ·
End Spe	955	560
From / The	$\frac{SR}{2} = \frac{1}{2} \frac$	
		· · · · · · · · · · · · · · · · · · ·
	-	
· · · ·		
	· · · · · · · · · · · · · · · · · · ·	
		· · · · · · · · · · · · · · · · · · ·
······································		

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BBR SEN TRAIL 000G

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PERFORMED BY: _____ TIME: ____ DATE: ____

INSTRUMENT RESPONSE TIME TEST RECORD

LANDFILL NAME: MUSIN INSTRUMENT MAKE: The Calm MODEL: TVA 1003 S/N: 015 2

MEASUREMENT #1:

Stabilized Reading Using Calibration Gas:

90% of the Stabilized Reading:

Time to Reach 90% of Stabilized reading After switching from Zero Air to Calibration Gas

427<u>, 5</u> ppm

475__ ppm

425.7 ppm

ppm

seconds (2)

MEASUREMENT #2:

Stabilized Reading Using Calibration Gas:

90% of the Stabilized Reading:

Time Reach 90% of Stabilized Reading After switching from Zero Air to Calibration Gas

MEASUREMENT #3:

Stabilized Reading Using Calibration Gas:

90% of the Stabilized Reading:

Time to Reach 90% of Stabilized Reading After switching from Zero Air to Calibration Gas

CALCULATE RESPONSE TIME:

ppm

3,75

422, | ppm

380 seconds (3)

 $\frac{(1)+(2)+(3)}{3}$

 $= \underline{378}$ SECONDS (MUST BE LESS THAN 30 SECONDS)

Weekly, Monthly, & Quarterly Gas Monitoring

with Elkins Envision - also fill out cover integrity sheet during well monitoring

	an de person	Date Tech.
Site Co	nditions	
130	201	Time of Readings
79	1	Air Temperature (oF)
Ý		Barometric Pressure (inch Hg)
2.8 Jon		Barometric Trend
dry		Ground Cond. (dry, damp, satur., ice, snow)
Such		Sky and Weather
1213	k	Wind Speed and Direction

Gas System Conditions

135	254	Time
678	640	(cfm)
A BACTOR AND A DESCRIPTION OF A DESCRIPR	NA SPORT ALL AND	(cfm)
48812	-25.9	(in wc)
-26.9	690.3	(cfm)
-	Film the grant of	(% vol)
		(% vol)
(9h, 5	650.5	(cfm)
- A	6	(cfm)

Mainport pressure (in WC)

in out

ļ

A Header (10")

	Time
	press.(in wc)
	CH4(%)
	O2(%)
	CO2(%)

B Header (20")

	Time
	press.(in wc)
	CH4(%)
	O2(%)
	CO2(%)

BBR Header (18")

	Time
	press.(in wc)
· · · ·	CH4(%)
	O2(%)
	CO2(%)

				BGW-116	Area B
				BGW-117	Area B
ADJ. %	BBR-LINE	BBR		BGW-118	Area B
	LCR12	BBR		BGW-119	Area B
	LCR8	BBR		BGW-120	Area B
	LCR6	BBR		BGW-121	Area B
	LCR2	BBR		BGW-122	Area B
	GW207	BBR		BGW-123	Area B
	GW205	BBR		BGW-124	Area B
	GW203	BBR		HGW-3	Area B
	GW201	BBR	ADJ. %	B-LINE	Area B

ADJ. %

AGW-01

AGW-02

AGW-03

AGW-03R

AGW-04

AGW-05

AGW-05R

AGW-06

AGW-07

AGW-08

AGW-10

AGW-12

AGW-14

AGW-16

AGW-18

AGW-20

AGW-22

AGW-24R

AGW-26

APEZ-2

APEZ-3

AUL-2

A-LINE

BGW-101

BGW-102

BGW-103

BGW-104

BGW-105

BGW-106

BGW-107

BGW-108

BGW-109R

BGW-110R

BGW-111R

BGW-112

BGW-113

BGW-114

BGW-115

Area A

Area B

luie (or)
Pressure (inch Hg)
rend
d. (dry, damp, satur., ice, snow)
ather
and Direction
BBR Flow
Total Flow thru Plant (GFM4 + GFM3)
Vacuum Gauge (Cond. Tank) (VG1)
Area B & BBR Header Flow (GEM2B)
Mothana comb A P PPP
Oxygen comp. A,B,BBR
Blower #4 Flow, to Floer Rec. (GFN3)

Flow to Flare (GFM4)

Qx Blo

Tota Va



BOR JOKE 3Q

PERFORMED BY: $\underline{\leftarrow}$ TIME: $\underline{\leftarrow}$

DATE: <u>8/27/22</u>

INSTRUMENT RESPONSE TIME TEST RECORD

LANDFILL NAME: Ava B+ (BBR Roelala))
INSTRUMENT MAKE: MODEL: S/N:	•

MEASUREMENT #1:

Stabilized Reading Using Calibration Gas:

90% of the Stabilized Reading:

Time to Reach 90% of Stabilized reading After switching from Zero Air to **Calibration Gas**

ppm

507

156,3

586_ ppm

3.8 seconds (1)

__ ppm

ppm

ppm

<3 🖗 ppm

seconds (2)

seconds (3)

MEASUREMENT #2:

Stabilized Reading Using Calibration Gas:

90% of the Stabilized Reading:

Time Reach 90% of Stabilized Reading After switching from Zero Air to **Calibration Gas**

MEASUREMENT #3:

Stabilized Reading Using Calibration Gas:

90% of the Stabilized Reading:

Time to Reach 90% of Stabilized Reading After switching from Zero Air to **Calibration Gas**

CALCULATE RESPONSE TIME:

$$\frac{(1)+(2)+(3)}{3}$$

3.15

 $= \underbrace{3}_{1} \underbrace{}_{1} \underbrace{}_{2} \underbrace$

11.55



 $(x_1, \dots, x_n) \in \mathbb{R}^n \times \mathbb{R}^n \oplus \mathbb{R}^n$

2.5

a substrate in the second

 $z = (z_{i}, z_{i})$

100 C

1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 -1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 -1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 -

DAILY SURFACE MONITORING LOG

PERFORMED BY: <u>ED</u>
START TIME:
DATE: 8/9/20 LANDFILL NAME: B + BBR 30 day
Location Identifier Location and Time Concentration of of Leak Leak (ppm) Bby 30 Dry Rechercle Ano Sected &
B no detects
· · · · · · · · · · · · · · · · · · ·

Weekly, Monthly, & Quarterly Gas Moni

with Elkins Envision - also fill out cover integrity sheet during well i

GW203

GW201

BBR

BBR

ADJ. %

HGW-3

B-LINE

Area B

Area B

SIA	190	Date Tech.
Site Co	nditions	
645	11:01	Time of Readings
700	71	Air Temperature (oF)
2849	26.52	Barometric Pressure (inch Hg)
4.	个	Barometric Trend
day	Ons	Ground Cond. (dry, damp, satur., ice, snow)
12 Wardys	Summe	Sky and Weather
101	°O'	Wind Speed and Direction

Gas System Conditions

651	10:39	Time
653	657	(cfm)
	the second s	(cfm)
-26.9	-27,0	(in wc)
719.2	717,1	(cfm)
	"	(% vol)
	- and a second second	(% vol)
699.1	728.1	(cfm)
0	Ø	(cfm)

Mainport pressure (in WC) -.29

o'	in
	out

	notes:
Ìh	Hos

A Header (10")

	Time
	press.(in wc)
	CH4(%)
	O2(%)
y -1	CO2(%)

B Header (20")

• · · · · · · · · · · · · · · · · · · ·	Time
	press.(in wc)
	CH4(%)
	O2(%)
	CO2(%)

BBR Header (18")

	Time
	press.(in wc)
	CH4(%)
	O2(%)
	CO2(%)

Quarterly Gas Monitoring	3			· · · · ·	AGW-01	Area A
over integrity sheet during well monitorir	ıg				AGW-02	Area A
					AGW-03	Area A
Tech.					AGW-03R	Area A
					AGW-04	Area A
dings					AGW-05	Area A
ture (oF)				·····	AGW-05R	Area A
Pressure (inch Hg)					AGW-06	Area A
rend				,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	AGW-07	Area A
d. (dry, damp, satur., ice, snow)					AGW-08	Area A
ather				······································	AGW-10	Area A
and Direction				*** ** ,****,*****	AGW-12	Area A
· · · ·				1.5	AGW-14	Area A
					AGW-16	Area A
					AGW-18	Area A
BBR Flow				·······	AGW-20	Area A
Total Flow thru Plant (GFM4 + GF	FM3	5)		······	AGW-22	Area A
Vacuum Gauge (Cond. Tank) (VC	¥1)			,	AGW-24R	Area A
Area B & BBR Header Flow (GFN	12B)		,	AGW-26	Area A
Methane comb. A,B,BBR					APEZ-2	Area A
Oxygen comb. A,B,BBR					APEZ-3	Area A
Blower #4 Flow, to Fiber Rec. (GF	-МЗ	5)		·····	AUL-2	Area A
Flow to Flare (GFM4)			ADJ. %		A-LINE	Area A
					BGW-101	Area B
notes:				······	BGW-102	Area B
ha					BGW-103	Area B
· • • • • • • • • • • • • • • • • • • •			· · · · · · · · · · · · · · · · · · ·		BGW-104	Area B
					BGW-105	Area B
					BGW-106	Area B
			-		BGW-107	Area B
)					BGW-108	Area B
			*******		BGW-109R	Area B
				1.1.1	BGW-110R	Area B
					BGW-111R	Area B
					BGW-112	Area B
					BGW-113	Area B
					BGW-114	
					BGW-115	
				1 - 1 1	BGW-116	
					BGW-117	Area B
ADJ %	VE	BBR	-	·	BGW-118	Area B
	,	BBR			BGW-119	
		BBB	· ·	· .	BGW 420	Area B
		BBB		·	BGW 404	
		BBD	-		BGW-121	
		BBB			BGW-122	Area B
GW20	5				BOW 404	Area D
GVV20		700	1	1	1 0077-124	н нгеа Б

PERFORMED BY: Continue:	13 DATE: 11/13/22
INSTRUMENT DECO	ONSE TIME TEST DECODD
INSTROMENT RESI	UNSE TIME TEST RECORD
LANDFILL NAME:	
INSTRUMENT MAKE:MODEL:	x0-B s/N: 0115 248 137
MEASUREMENT #1:	
Stabilized Reading Using Calibration Gas:	<u>499</u> ppm
90% of the Stabilized Reading:	<u>449.</u> ppm
Time to Reach 90% of Stabilized reading After switching from Zero Air to Calibration Gas	<u>7,76</u> seconds (1)
MEASUREMENT #2:	
Stabilized Reading Using Calibration Gas:	<u>498</u> ppm
90% of the Stabilized Reading:	<u> 448,7</u> ррт
Time Reach 90% of Stabilized Reading After switching from Zero Air to Calibration Gas	<u>7,64</u> seconds (2)
MEASUREMENT #3:	
Stabilized Reading Using Calibration Gas:	<u>497</u> ppm
90% of the Stabilized Reading:	<u> </u>
Time to Reach 90% of Stabilized Reading After switching from Zero Air to Calibration Gas	$\underline{\chi}(\underline{c})$ seconds (3)
CALCULATE RESPONSE TIME: (1	$\frac{(2)+(2)+(3)}{3}$
= <u>353</u> seconds (mi	UST BE LESS THAN 30 SECONDS)

4Q

DAILY, SURFACE MONITORING LOG

PERFORMED BY: ENL. O	×	
START TIME:		
DATE: 11/13/20		
LANDFILL NAME: Am	B	
Location Identifier of Leak	Location and Time	Concentration of Leak (ppm)
	· · · · · · · · · · · · · · · · · · ·	
10	DETECTS	
		· · · · · · · · · · · · · · · · · · ·
		· · · · · · · · · · · · · · · · · · ·

GHECKIISTIO	r weekly, Monthly, and Quarterly Gas Monitoring		AGW-01	Area A
	by Elkins Envision		AGW-02	Area A
			AGW-03	Area A
Commenter Maria Maria Commentaria			AGW-03R	Area A
11/13/22	Date		AGW-04	Area A
Site Conditions			AGW-05	Area A
12:18	Time of Readings		AGW-05R	Area A
9.20	Air Temperature (oF)		AGW-06	Area A
28,19	Barometric Pressure (inch Hg)		AGW-07	Area A
1	Barometric Trend		AGW-08	Area A
	Ground Cond. (dry, damp, satur., ice, snow)		AGW-10	Area A
(clardy	Sky and Weather		AGW-12	Area A
1 45W	Wind Speed and Direction		AGW-14	Area A
			.AGW-16	Area A
Gas System Conditio	ons		AGW-18	Area A
12104	Time of readings		AGW-20	Area A
808	(cfm) BBR Flow	<u> 18 19 19 18 18 18 18 18 18 18 18 18 18 18 18 18 </u>	AGW-22	Area A
	(cfm) I otal Flow through Plant (GFM4 + GFM3)		AGW-24R	Area A
-2-518			AGW-26	Area A
K129			APEZ,2	Area A
	(% voi) Methane comb. A,B,BBR		APEZ-3	Area A
			AUL 2	Area A
7621-	(crm) Blower #4 Flow, Wain HIS - MVVR, (GFW3)		A-LINE	Area A
			1 DOWLARD	

A Header (10")

		Time of readings
	(in wc)	Relative Pressure
	(%)	Methane
	(%)	Oxygen
	(%)	CO2

B Header (20")

÷.	B Head	ler (20")	
л. Зу			Time of readings
	1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 -		(in wc) Relative Pressure
			(%) Methane
	:		(%) Oxygen
			(%) CO2

BBR Header (18")

	Time of readings
· .	(in wc) Relative Pressure
	(%) Methane
	(%) Oxygen
	(%) CO2

EBI 2861

BBR-LINE LCR12 LCR8 LCR6 LCR2 GW207 GW205 GW203 GW201

AGW-04AreaAGW-05RAreaAGW-05RAreaAGW-05RAreaAGW-07AreaAGW-07AreaAGW-10AreaAGW-11AreaAGW-12AreaAGW-13AreaAGW-14AreaAGW-15AreaAGW-16AreaAGW-17AreaAGW-18AreaAGW-19AreaAGW-20AreaAGW-22AreaAGW-23AreaAGW-24RAreaAGW-26AreaAGW-27AreaAGW-28AreaAGW-29AreaBGW-101AreaBGW-102AreaBGW-103AreaBGW-104AreaBGW-105AreaBGW-108AreaBGW-109RAreaBGW-110RAreaBGW-110RAreaBGW-111RAreaBGW-111RAreaBGW-111RAreaBGW-1113AreaBGW-114AreaBGW-115AreaBGW-116AreaBGW-117AreaBGW-118AreaBGW-114AreaBGW-115AreaBGW-116AreaBGW-116AreaBGW-116AreaBGW-116AreaBGW-116AreaBGW-116AreaBGW-116AreaBGW-116AreaBGW-116Area	
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BGW-105 Area BGW-106 Area BGW-107 Area BGW-108 Area BGW-108 Area BGW-109 Area BGW-110R Area BGW-111 Area BGW-112 Area BGW-113 Area BGW-114 Area BGW-115 Area	В
BGW-106 Area BGW-107 Area BGW-108 Area BGW-109R Area BGW-110R Area BGW-111R Area BGW-112 Area BGW-113 Area BGW-114 Area BGW-115 Area BGW-116 Area	B
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BGW-108 Area BGW-109R Area BGW-110R Area BGW-111R Area BGW-112 Area BGW-113 Area BGW-114 Area BGW-115 Area BGW-116 Area	B
BGW-109R Area BGW-110R Area BGW-111R Area BGW-1112 Area BGW-113 Area BGW-114 Area BGW-115 Area BGW-116 Area	B .,
BGW-110R Area BGW-111R Area BGW-112 Area BGW-113 Area BGW-114 Area BGW-115 Area BGW-116 Area	. B
BGW-111R Area BGW-112 Area BGW-113 Area BGW-114 Area BGW-115 Area BGW-116 Area	В
BGW-112 Area BGW-113 Area BGW-114 Area BGW-115 Area BGW-116 Area	B
BGW-113 Area BGW-114 Area BGW-115 Area BGW-116 Area	B
BGW-114 Area BGW-115 Area BGW-116 Area	B
BGW-115 Area BGW-116 Area	B
BGW-116 Area	B
	B
BGW-117 Area	B
BBR BGW-118 Area	B
BBR BGW-119 Area	B
BBR BGW-120 Area	B
BBR BGW-121 Area	ι Β
BBR BGW-122 Area	B
BBR BGW-123 Area	I B
BBR BGW-124 Area	B.
BBR HGW-3 Area	

DAILY SURFACE MONITORING LOG

PERFORMED BY: En Olso	م	
START TIME: 11:00		
DATE: $10/29/20$		
LANDFILL NAME:	7	·
Location Identifier of Leak	Location and Time	Concentration of Leak (ppm)
NO	RETECTS	·····
· · · · · · · · · · · · · · · · · · ·		
	· · · ·	
· · · · · · · · · · · · · · · · · · ·		

CALIBRATION & BACKGROUND DETERMINATION REPORT

LANDFILL NAME: MCSW BBK-
INSTRUMENT MAKE: $\forall \forall $
Calibration Procedure
1. Allow instrument to internally zero itself while introducing zero air.
2. Introduce the calibration gas into the probe. Stable reading = 499 ppm
3. Adjust meter to read 500 ppm.
Background Determination Procedure
1. Upwind Reading (highest in 30 seconds):ppm (1)
2. Downwind Reading (highest in 30 seconds): $\frac{105}{100}$ ppm (2)
Calculate Background Value: $\frac{(1) + (2)}{2}$
MEASUREMENT #1:
Meter Reading for Zero Air: O_{l} / ppm (1)
Meter Reading for Calibration Gas: 502 ppm (2) $+2$
MEASUREMENT #2:
Meter Reading for Zero Air: ppm (3)
Meter Reading for Calibration Gas: 589 ppm (4) 427
MEASUREMENT #3:
Meter Reading for Zero Air: $100 \frac{\sqrt{54}}{100}$ ppm (5)
Meter Reading for Calibration Gas: <u>501</u> ppm (6)
CALCULATE PRECISION:
$\frac{[500 - (2)] + [500 - (4)] + [500 - (6)]}{3} \times \frac{1}{500} \times \frac{100}{1}$
$= \sqrt{6}$ % (must be less than 10%)

Weekly, Monthly, & Quarterly Gas Monitorin

with Elkins Envision - also fill out cover integrity sheet during well monitor

10/2	1/20	Date <u>60</u> Tech.
Site Co	nditions	_
1221		Time of Readings
. 64		Air Temperature (oF)
28.75		Barometric Pressure (inch Hg)
		Barometric Trend
damo		Ground Cond. (dry, damp, satur., ice, snow)
Sugar		Sky and Weather
E 5mph		Wind Speed and Direction

Gas System Conditions

.

1225	Time
750	(cfm)
	(cfm)
2har 5	(in wc)
785 1	(cfm)
	(% vol)
	(% vol)
4TC2	(cfm)
364,5	(cfm)

Mainport pressure (in WC)

			in
ŀ			out

notes:

A Header (10")

	an a		Time
			press.(in wc)
		111	CH4(%)
)		O2(%)
			CO2(%)

B Header (20")

					Time
В	в	R Hea	ader (1	8")	. .
					CO2(%)
					02(%)
					CH4(%)
					press.(in wc)
					Time

		press.(in wc)
		CH4(%)
1		O2(%)
	/	CO2(%)

Quarterly Gas Monitoring	ſ			AGW. 04	Aron A
over integrity sheet during well monitoring	╞				
and a strong strong warms were more thanks				AGW-02	
FQ Tech.	-	·····	······	AGW-03R	
dinas	ŀ	·····		AGW-04	Area A
ture (oF)	ŀ		122.4	AGW-U5	Area A
Pressure (inch Ha)	ŀ	<u></u>		AGW-05R	Area A
rend	-	······		AGW 07	Area A
d (dry damn satur ice snow)	-		<u></u>	AGW-07	Area A
ather	ŀ			AGW 40	
and Direction	ŀ			AGW-10	Area A
	-	and the second	an dana	AGW-12	
	ŀ		<u>1976 (sec. 4</u>	AGW-14	
	ŀ		1940 - 1946	AGW-18	
BBR Flow	ŀ	<u>1 </u>	<u> - </u>	AGW-10	
Total Flow thru Plant (GFM4 + GFM3)	Ī			AGW-20	
Vacuum Gauge (Cond. Tank) (VG1)	F	in the little		AGW-24R	
Area B & BBR Header Flow (GFM2B)	ŀ		<u>.</u> 19. 19. 18	AGW-26	
Methane comb. A.B.BBR			<u>Andrian (</u>	APE722	
Oxygen comb. A.B.BBR	ľ		jard 197	APEZ-3	
Blower #4 Flow, to Fiber Rec. (GFM3)	.			AU11-22	Δrea Δ
Flow to Flare (GFM4)	L	ADJ. %		A-LINE	Area A
	Γ			BGW-101	Area B
notes:	ŀ			BGW-102	Area B
	ľ			BGW-103	Area B
				BGW-104	Area B
	F	,		BGW-105	Area B
	Ì			BGW-106	Area B
	ľ			BGW-107	Area B
				BGW-108	Area B
			<u></u>	BGW-109R	Area B
	ľ		74094	BGW-110 R	Area B
	ľ	·	<u> </u>	BGW-111R	Area B
				BGW-112	Area B
	Í			BGW-113	Area B
· · · · · · · · · · · · · · · · · · ·			<u>.</u> 1913 - 1	BGW-114	Area B
				BGW-115	Area B
				BGW-116	Area B
				BGW-117	Area B
ADJ. % BBR-LINE BI	BR			BGW-118	Area B
LCR12 BI	BR		<u> </u>	BGW-119	Area B
LCR8 BI	BR			BGW-120	Area B
LCR6 BI	BR			BGW-121	Area B
) LCR2 Bi	BR			BGW-122	Area B
GW207 B	BR			BGW-123	Area B
GW205 BI	BR			BGW-124	Area B
GW203 BI	BR	·····	<u> </u>	HGW-3	Area B
GW201 BI	BR	ADJ. %		B-LINE	Area B

CALIBRATION & BACKGROUND DETERMINATION REPORT

Andrea (Construction) Andrea (Construction)

LANDFILL NAME:	C who have ?
INSTRUMENT MAKE:MODEL:S/N: _	
Calibration Procedure	
1. Allow instrument to internally zero itself while introdu-	cing zero air.
2. Introduce the calibration gas into the probe. Stable reading = <u>497</u> ppm	
3. Adjust meter to read 500 ppm.	
Background Determination Procedure	
1. Upwind Reading (highest in 30 seconds):poppn	n (1) 99
2. Downwind Reading (highest in 30 seconds): <u>-,14</u> pp	m (2)
Calculate Background Value: (1) + (2)	
2	
MEASUREMENT #1:	
Meter Reading for Zero Air: <u>/36</u> ppn	n (1)
Meter Reading for Calibration Gas: <u>506</u> ppn	n (2)
MEASUREMENT #2:	
Meter Reading for Zero Air: <u>(53</u> ppn	n (3) -10/
Meter Reading for Calibration Gas: 50-1_ppn	n (4)
MEASUREMENT #3:	1777
Meter Reading for Zero Air:	n (5)
Meter Reading for Calibration Gas: 500 ppm	ц (6)
CALCULATE PRECISION:	-; 00%0
[500 - (2)] + [500 - (4)] + [500 - (6)]	x <u>1</u> x <u>100</u>
3	500 1

= $-\frac{1}{100}$ % (must be less than 10%)

ATTACHMENT C

2020 LANDFILL GAS MAINLINE VOC TO-15 LAB REPORT

MCSWD Area A Annual Report March 2019

terror and the		Freedom and the second second			CHA	IN OF	CUST	ODY I	RECOR	D	
AINTECH	INOLOGY	18501 E. Gale Ave., Suite 130 City of Industry, CA 91748	TU	RNAROL	IND TIME		DELIVE	RABLES	PAGE:	OF	
LALA Labo	ratories, Inc.	Ph: 626-964-4032 Fx: 626-964-5832	Standard Same Day		48 hours 72 hours		EDD EDF		Condition u	pon receipt: Sealed Yes	No 🗌
Project No: MILF	-7.016 - VOC		24 hours		96 hours		LEVEL 3			Intact Yes	No 🗌
Project Name: Massil	a (to Var		Other:				LEVEL 4			Chilled	deg C
Report To: LFF	DATGIE			BILLI	NG			A	NALYSIS	REQUEST	
Company: <u>TETR</u> Street: <u>8413</u> City/State/Zip: <u>Mad.'s</u> Phone& Fax: <u>951</u> e-mail: <u>LEE</u>	A TECH EXCELSFOR DR WF \$3717 236-2526 DAIGLE @TET	SUIT 160 RATECH.COM	P.O. No.: Bill to: M 172900 R:zzle	Stole WI	Co. Sola Histoway	d Wash , 29	10-15	ć e			
LAB USE ONLY	SAMPLE	DENTIFICATION	SAMPLE DATE	SAMPLE TIME	MATRIX	CONTAINER TYPE	E#4	36+			
MOIN 15-01	Mainline VOC	#1 (5461)	12/28/2	12:50	LFG	C	X	۲			
1 -27	it	#2 (1368)	12/28/20	13:02	"	ii .	×	X			
SAMPLED BY Jaken Thomas RELINQUISHED BY NAME/COMPANY Jaken Thomas/ NAME/COMPANY	COMPA Teta DATE/TIM Teta Tech 10:00 1/5/21	INY Tech 12 E RECEIVED BY NAME/COMPANY NAME/COMPANY NAME/COMPANY	DA /2.8/2020 DA / 2 :	те/тіме 13:23 те/тіме	СОММЕ 546 {368	ENTS (#	<u>CH4</u> 50 37, 50.37	<u>Co</u> 26.3 26.4	2 Co.p 02 74 1.1 40 1.0	Bal 7. 12.3 % 7. 12.3 %	Ting 13702 12150 13102

DISTRIBUTION: White & Yellow - Lab Copies / Pink - Customer Copy

Client:	Tetra Tech
Attn:	Lee Daigle
Project Name:	Marathon County VOC
Project No.:	MCLF-2020-VOC
Date Received:	1/6/2021
Matrix:	Air

		Fixed Ga	ses by E	PA METH	HOD 3C		
	Lab No.:	M0106	605-01	M0106	605-02		
Clien	Client Sample I.D.:		Mainline VOC #1		VOC #2		
Date/Time Sampled:		12/28/20 12:50		12/28/20 13:02			
Date/Ti	me Analyzed:	1/13/21 12:25		1/13/21 12:54			
(QC Batch No.:	210113GC8A1 CM		210113GC8A1 CM			
A	nalyst Initials:						
Di	lution Factor:	4.2		4.4			
ANALYTE	(Units)	Result	RL	Result	RL		
Nitrogen	(% v/v)	14	4.2	14	4.4		
Oxygen/Argon	(% v/v)	ND	2.1	ND	2.2	16	
Carbon Dioxide	(% v/v)	33	0.042	35	0.044		
Methane	(% v/v)	46	0.0042	48	0.0044		
Carbon Monoxide	(% v/v)	ND	0.0042	ND	0.0044		
					A	the second se	and a second

RL = Reporting Limit

ND = Not detected at or above the RL.

Reviewed/Approved By:

Mark Johnson

Operations Manager

19/21 Date

The cover letter is an integral part of this analytical report

Client:	Tetra Tech
Attn:	Lee Daigle
Project Name:	Marathon County VOC
Project No.:	MCLF-2020-VOC
Date Received:	01/06/21
Matrix:	Air
Reporting Units:	ppbv

T

	ŀ	EPA Me	thod TO1	5		
Lab No.:	M01060	05-01	M0106	05-02		
Client Sample I.D.:	Mainline	VOC #1	Mainline VOC #2			
Date/Time Sampled:	12/28/20	12:50	12/28/20) 13:02		
Date/Time Analyzed:	1/19/21	7:43	1/19/21	8:18		
QC Batch No.:	210119N	IS2A1	210119N	AS2A1		
Analyst Initials:	DT	•	D	Г	·	
Dilution Factor:	25		20	5		
ANALYTE	Result ppbv	RL ppbv	Result ppbv	RL ppbv		
Dichlorodifluoromethane (12)	190	25	190	26		and the second second
Chloromethane	ND	51	ND	53		
1,2-Cl-1,1,2,2-F ethane (114)	ND	25	ND	26		
Vinyl Chloride	1,100	25	1,100	26		
Bromomethane	ND	25	ND	26		
Chloroethane	ND	51	87	53	[
Trichlorofluoromethane (11)	170	25	160	26		
1,1-Dichloroethene	ND	25	ND	26		
Carbon Disulfide	380	51	360	53		
1,1,2-Cl 1,2,2-F ethane (113)	ND	25	ND	26		
Acetone	4,800	51	4,900	53		
Methylene Chloride	160	25	170	26		
t-1,2-Dichloroethene	44	25	52	26		
1,1-Dichloroethane	75	25	79	26		
Vinyl Acetate	ND	25	ND	26		the second finance
c-1,2-Dichloroethene	250	25	240	26		
2-Butanone	7,800 d	25	7,200 d	26		
t-Butyl Methyl Ether (MTBE)	ND	25	ND	26		
Chloroform	ND	25	ND	26		
1,1,1-Trichloroethane	ND	25	ND	26	1	
Carbon Tetrachloride	ND	25	ND	26		
Benzene	730	25	720	26		
1,2-Dichloroethane	270	25	270	26		
Trichloroethene	96	25	96	26		
1,2-Dichloropropane	ND	25	ND	26		
Bromodichloromethane	ND	25	ND	26		
c-1,3-Dichloropropene	ND	25	ND	26		
4-Methyl-2-Pentanone	710	25	770	26		
Toluene	8,200 d	25	8,400 d	26		

AITTECHNOLOGY Laboratories, Inc. -

M010605 alex

Client:	Tetra Tech
Attn:	Lee Daigle
Project Name:	Marathon County VOC
Project No.:	MCLF-2020-VOC
Date Received:	01/06/21
Matrix:	Air
Reporting Units:	ppbv

		EPA Me	thod TO1	5		
Lab No.:	M010605-01		M010605-02			
Client Sample I.D.:	Mainline VOC #1		Mainline VOC #2		· 1	
Date/Time Sampled:	12/28/20	12/28/20 12:50		0 13:02		
Date/Time Analyzed:	1/19/21	1/19/21 7:43		1 8:18		
QC Batch No.:	210119MS2A1		210119MS2A1			
Analyst Initials:	DT		DT			
Dilution Factor:	25		26			
ANALYTE	Result ppbv	RL ppbv	Result ppbv	RL ppbv		
t-1,3-Dichloropropene	ND	51	ND	53		2
1,1,2-Trichloroethane	ND	25	ND	26		
Tetrachloroethene	190	25	230	26		
2-Hexanone	ND	25	ND	26		
Dibromochloromethane	ND	25	ND	26		
1,2-Dibromoethane	ND	25	ND	26		
Chlorobenzene	28	25	32	26		
Ethylbenzene	1,800	25	2,100	26		
p,&m-Xylene	3,500	25	4,100	26		
o-Xylene	1,100	25	1,300	26		
Styrene	99	25	120	26	1	
Bromoform	ND	25	ND	26		
1,1,2,2-Tetrachloroethane	ND	25	ND	26		
Benzyl Chloride	ND	63	ND	66	1 I I	· · · · · · · · · · · · · · · · · · ·
4-Ethyl Toluene	180	25	250	26		
1,3,5-Trimethylbenzene	68	25	94	26		
1,2,4-Trimethylbenzene	92	25	130	26		
1,3-Dichlorobenzene	ND	25	ND	26		
1,4-Dichlorobenzene	ND	25	ND	26		
1,2-Dichlorobenzene	ND	25	ND	26		
1,2,4-Trichlorobenzene	ND	25	ND	26		
Hexachlorobutadiene	ND	25	ND	26		

ND = Not Detected (below RL)

RL = Reporting Limit

Reviewed/Approved By:

Mark Johnson

Operations Manager

1/27/21 Date

The cover letter is an integral part of this analytical report



AITTECHNOLOGY Laboratories, Inc. -

Client: **Tetra Tech** Attn: Lee Daigle Project Name: Marathon County VOC Project No.: MCLF-2020-VOC Date Received: 01/06/21 Matrix: Air Reporting Units: ppbv

		a province t		r			
Lab No.:	METHOD BLANK					_	_
Client Sample 1.D.:						-	
Date/Time Sampled:	-		 				
Date/Time Analyzed:	1/19/21 2:55						
QC Batch No.:	210119MS2A1			1			
Analyst Initials:	DT					1	
Dilution Factor:	(0.20			1.00		-
ANALYTE	Result ppbv	RL ppbv					
Dichlorodifluoromethane (12)	ND	0.20	L				
Chloromethane	ND	0.40		1 <u></u>	-	</td <td></td>	
1,2-Cl-1,1,2,2-F ethane (114)	ND	0.20					
Vinyl Chloride	ND	0.20	1.00		1		
Bromomethane	ND	0.20					
Chloroethane	ND	0.40					
Frichlorofluoromethane (11)	ND	0.20					
,1-Dichloroethene	ND	0.20					
Carbon Disulfide	ND	0.40					×
1,1,2-Cl 1,2,2-F ethane (113)	ND	0.20		-			
Acetone	ND	0.40					
Methylene Chloride	ND	0.20		1.2	-		
-1,2-Dichloroethene	ND	0.20		1.4			
I,I-Dichloroethane	ND	0.20					
Vinyl Acetate	ND	0.20					
-1,2-Dichloroethene	ND	0.20					1
2-Butanone	ND	0.20	J		-		-
-Butyl Methyl Ether (MTBE)	ND	0.20					
Chloroform	ND	0.20					
1,1,1-Trichloroethane	ND	0.20					
Carbon Tetrachloride	ND	0.20					
Benzene	ND	0.20	1.			1	0
1,2-Dichloroethane	ND	0.20	1	1		-	100
Frichloroethene	ND	0.20	1		1		1
1,2-Dichloropropane	ND	0.20			12		
Bromodichloromethane	ND	0.20					
-1,3-Dichloropropene	ND	0.20			1	1	
4-Methyl-2-Pentanone	ND	0.20					- 1
Foluene	ND	0.20	1				
t-1, -Dichloropropene	ND	0.40	1			50-	

AITTECHNOLOGY Laboratories, Inc. .

TO15 REPORT 202

Client: Tetra Tech Attn: Lee Daigle **Project Name:** Marathon County VOC Project No.: MCLF-2020-VOC Date Received: 01/06/21 Matrix: Air Reporting Units: ppbv

		EPA Meth	od TO15	5				
Lab No.:	METHOD BLANK							
Client Sample I.D.:	1						r	
Date/Time Sampled:								
Date/Time Analyzed:	1/19/	21 2:55					-	
QC Batch No.:	21011	9MS2A1	1					
Analyst Initials:		DT			-			
Dilution Factor:	0.20 Result						10.00	
ANALYTE	Result ppbv	RL ppbv						
1,1,2-Trichloroethane	ND	0.20				1.2		
Tetrachloroethene	ND	0.20						
2-Hexanone	ND	0.20	-	-	12		- T	1
Dibromochloromethane	ND	0.20	1.0	1				
1,2-Dibromoethane	ND	0.20						
Chlorobenzene	ND	0.20						
Ethylbenzene	ND	0.20			1			4
p,&m-Xylene	ND	0.20					1	
0-Xylene	ND	0.20		1.0			1	1
Styrene	ND	0.20						1
Bromoform	ND	0.20						THE STREET
1,1,2,2-Tetrachloroethane	ND	0.20						
Benzyl Chloride	ND	0.50						-
4-Ethyl Toluene	ND	0.20	-	1				
1,3,5-Trimethylbenzene	ND	0.20						1
1,2,4-Trimethylbenzene	ND	0.20	-					
1,3-Dichlorobenzene	ND	0.20						1.2
1,4-Dichlorobenzene	ND	0.20	-		1			1
1.2-Dichlorobenzene	ND	0.20			1			
1,2,4-Trichlorobenzene	ND	0.20		-				
Hexachlorobutadiene	ND	0.20	· · · · ·					1

ND = Not Detected (below RL) RL = Reporting Limit

Reviewed/Approved By:

Mark Johnson

Operations Manager

Date

The cover letter is an integral part of this analytical report



TO15 REPORT 2020_3 kisk
QC Batch #: 210119MS2A1

Matrix: Air Reporting Units: ppbv

		LABORA	EPA FORY CO	Method T	O15 AMPLE SU	MMARY					
Lab No.:	МЕТНО	D BLANK		L	CS	LO	CSD		T	_	
Date/Time Analyzed:	1/19/	21 2:55		1/19/2	21 1:40	1/19/2	21 2:16				
Analyst Initials:		DT	1.1	1	DT	1	DT				
Dilution Factor:	0	.20		1	.0		1.0	1			
ANALYTE	Result ppbv	RL ppbv	AMT. ppbv	Result ppbv	% Rec.	Result ppbv	% Rec.	RPD	Low %Rec	High %Rec	Max. RPD
t,1-Dichloroethene	ND	0.20	10	10.4	104	10.2	102	1.3	70	130	30.0
Methylene Chloride	ND	0.20	10	10.3	103	10.2	102	1.0	70	130	30.0
Frichloroethene	ND	0.20	10	10.4	104	10.0	100	3.1	70	130	30.0
Toluene	ND	0.20	10	9.56	95.6	9.69	96.9	1.3	70	130	30.0
1,1,2,2-Tetrachloroethane	ND	0.20	10	9,70	97.0	9,50	95.0	2.0	70	130	30.0

Adt. 1

ND = Not Detected (below RL)

RL = Reporting Limit

Reviewed/Approved By: Mark Johnson

Operations Manage

1/27/21 Date:

The cover letter is an integral part of this analytical report

AITTECHNOLOGY Laboratories, Inc. -

ATTACHMENT D

AREA A 2020 LEACHATE LINE JETTING REPORT

MCSWD Area A Annual Report March 2019



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

Leachate Cleaning 6/22/2020 - 6/23/2020 Vactor w/ 1,200' of 3/4'' hose

AREA A

CLEANOUT	PI	IPE	TOTAL	FT JETTED	FT JETTED	TOTAL	
ACCESS POINT	SI	ZE	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	320	1,145	Overlap achieved - line is good
	6	6	1,040	600	550	1,150	Overlap achieved - line is good
	7	8	460	330	-	330	Stops at 330' from West
Gas Condensate L	ine		280	-	-	280	Line is good
			7,260			7,130	

3,000 gallons of water used

					ARE	A B	
CLEANOUT		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	510	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 B12E - 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	

5,900 gallons of water used

BLUE BIRD RIDGE

CLEANOUT ACCESS POINT	PIPE SIZE	TOTAL LENGTH (FT)	FT JETTED (N)	FT JETTED (S)	TOTAL JETTED	COMMENTS	
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	405	276	681	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	
LCR 14 TO LCR 15		1,200	600	650	1,250	Overlap achieved - line is good	
		6,659			7,126		

3,000 gallons of water used

ATTACHMENT F

EXCEEDANCE REPORTS FOR AREA A GROUNDWATER MONITORING APRIL AND OCTOBER 2020



Marathon County Solid Waste Department 172900 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

June 23, 2020

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. 2892 Area A

In accordance with NR 140, please accept this notification of groundwater monitoring results for the reporting period of April 2020. An exceedance table has been attached for the Area A 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, Sally Hronek, Meleesa Johnson, Lee Daigle, Mark Torresani.

		Maratho	on Count	y Solid W	aste Mgmt Dept:	Area A Groundw	ater Moni	toring V	/ells		
					Exceeda	inces					
Lab ID	NLS Project	Date	License #	FID	Well Desc (Point ID)	Parameter	Units	Result	PAL/ACL	ES	Comments
721026460	342969	April 1 2020	02892	737054890	Dup-042120 (074)	Tetrachloroethylene	ug/L	0.76	0.5	5	NR140.10
721026460	342969	April 1 2020	02892	737054890	Dup-042120 (074)	Trichloroethylene	ug/L	6,5	0.5	5	NR140.10
721026460	342969	April 1 2020	02892	737054890	Dup-042120 (074)	Vinyl Chloride	ug/L	0.77	0.02	0.2	NR140.10
721026460	342969	April 1 2020	02892	737054890	R13R (074)	Tetrachloroethylene	ug/L	0.69	0,5	5	NR140.10
721026460	342969	April 1 2020	02892	737054890	R13R (074)	Trichloroethylene	ug/L	6.2	0.5	5	NR140.10
721026460	342969	April 1 2020	02892	737054890	R13R (074)	Vinyl Chloride	ug/L	0.86	0.02	0.2	NR140.10
721026460	342969	April 1 2020	02892	737054890	R38 (053)	Tetrachloroethylene	ug/L	0.68	0.5	5	NR140.10
721026460	342969	April 1 2020	02892	737054890	R38 (053)	Trichloroethylene	ug/L	1.1	0.5	5	NR140.10
721026460	342969	April 1 2020	02892	737054890	R50P (068)	Tetrachloroethylene	ug/L	0.56	0.5	5	NR140.10
721026460	342969	April 1 2020	02892	737054890	R35 (050)	Conductivity	umho@25C	900	510	-	well
721026460	342969	April 1 2020	02892	737054890	R41 (057)	Conductivity	umho@25C	780	770	-	well
721026460	342969	April 1 2020	02892	737054890	R5R (046)	Conductivity	umho@25C	740	700	-	well

Area A Groundwater Well Exceedance Table April 2020

The Area A exceedances that were detected during the April 2020 sampling event are consistent with the exceedances that were detected in previous sampling events.

Groundwater contamination was detected southeast of Area A during the late 1980s. By May of 1993, Marathon County completed a groundwater quality investigation and submitted a report to WDNR titled "Marathon County, Area A Landfill – Environmental Contamination Assessment (ECA) report". The ECA report suggested that contaminants may have been released to the environment from one or more of the leachate collection basins and other source locations. Consequently, several improvements were made and both leachate collection basins were removed in 1995. The identified groundwater contaminants of primary concern at this facility are VOCs, specifically the chlorinated aliphatic hydrocarbons (CAHs) and vinyl chloride. Since the remedial work from 1993 to 1996, significant reductions of CAH concentration have been measured near the suspected source zone.

It is the opinion of Marathon County that the exceedances are related to the leachate basins that were removed in 1995. The overall general concentrations reported at wells within the core of the plume are stable to decreasing. Marathon County will continue to monitor these wells for exceedances as required, and report any anomalies to the WDNR. Marathon County has installed groundwater monitoring wells along State Highway 29, just southeast of the site. If these particular wells begin showing signs of contamination, the County has a contingency plan in place and will respond to protect residents.

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

State of Wisconsin 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			式10月10日1月1日1日(19月1日) 1月1日日日日日(19月1日日) 1月1日日日日日日(19月1日日)
Name of entity submitting data (laboratory, consultant, fac	cility owner):		
Northern Lake Service, Inc.	preparer's name, telephone nu	mber and E-mail add	ress:
Contact for questions about data formatting. Include data	Phone: 715-47	78-2777	
	<u>- 10000 738 7</u>		
	License No. / Monitoring ID	Facility ID (FID)	Actual sampling dates (e.g., July 2-6, 200
Marathon County Landfill - Area A	02892	737054890	APRIL -20-2020 through
Some Area A wells are linked to BRRDF site (Lic. 04228) but reported here.			APRIL -21-2020
The enclosed results are for sampling required in the mon APRIL -2020	nth(s) of: (e.g., June 2003)		
Type of Data Submitted (Check all that apply) Groundwater monitoring data from monitoring wells Groundwater monitoring data from private water supple Leachate monitoring data	Dly wells Gas mon Dly wells Air monit	itoring data oring data becify)	
Yes, a notification of values exceeding a groundwater standard is attac groundwater standard and preliminary analysis of the cause and sig Yes, a notification of values exceeding an explosive gas limit is attache explosive gas limits.	thed. It includes a list of monitoring point nificance of any concentration. ad. It includes the monitoring points, date	s, dates, sample values, s, sample values and	
Codification			$\mathcal{D}_{\mathcal{D}}$, as the set of the set of the \mathbf{D}^{2}
To the best of my knowledge, the information reporter are true and correct. Furthermore, I have attached co groundwater standards or explosive gas levels, and a concentrations exceeding groundwater standards.	d and statements made on the mplete notification of any sa preliminary analysis of the c	nis data submittal an mpling values meeti cause and significan	d attachements ing or exceeding t of
David Hagen Sucher	Operations Ma.	- ger	715 551 5864
Facility Representative Name (Brint)	Title	<i>y</i>	(Area Code) Telephone No.
DHA	06/23/20		*
Signature	Date		
FOR DNR USE ONLY. Check action taken Found uploading problems on Notified contact of problems on EDD format(s): Diskette DD (initia	, and record date and your in Initials Upload I submittal and follow-up)	itials. Describe on t ed data successfully [E]mail (follow-up o	on

Marathon County Solid Waste Mgmnt Dept Marathon County Landfill - Area A 04-01-2020

> Lab ID: 721026460 NLS Project: 342969 Collected: 04-01-2020 License: 02892 FID: 737054890

EXCEEDANCES:

t ID)	Parameter	Units	Result	PAL / ACL	ES	Comments
	Tetrachloroethylene	ng/L	0.76	5	5	NR140.10
	Trichloroethylene	ng/L	6.5	5	5	NR140.10
	Vinyl Chloride	ng/L	0.77	.02	9	NR140.10
	Tetrachloroethylene	ng/L	0.69	ż	5	NR140.10
	Trichloroethylene	ng/L	6.2	.5	5	NR140.10
	Vinyl Chloride	ng/L	0.86	,02	5	NR140.10
	Tetrachloroethylene	ng/L	0.68	.5	5	NR140.10
	Trichloroethylene	ng/L	1.1	.5	5	NR140.10
	Tetrachloroethylene	ng/L	0.56	5	5	NR140.10
	Conductivity	umho@25C	906	510		well
	Conductivity	umho@25C	780	770		well
	Conductivity	umho@25C	740	200		well

Notes: site = site assigned PAL/ES : well assigned PAL/ES : NR140.10 = NR140 Public Health PAL/ES : NR140.12 = NR140 Public Welfare PAL/ES



Marathon County Solid Waste Department 172900 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

June 23, 2020

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 2020. 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, Sally Hronek, Meleesa Johnson, Lee Daigle, Mark Torresani.

Area B Groundwater Well Exceedance Table April 2020

	Ma	rathon Co	unty Soli	id Waste I	Vigmt De	ept: Area B Grou	ndwater	Monito	ring Well	s	
					Exce	edances					
Lab ID	NLS Project	Date	License #	FID	Point iD	Parameter	Units	Result	PAL/ACL	ES	Comments
721026460	342885	April 1 2020	03338	737092730	R27 (156)	Nitrate+Nitrite, dis.	mg/L	2.9	2	10	NR140.10

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. Well R27 has indicated a very slight increase in concentration since the previous sampling event in October. The well will continue to be monitored closely to ensure that levels decrease. In effort to ensure that levels decrease, Marathon County will evaluate their erosion control methods in addition to continued observation of well R27. Current site plans include the installation of a final cap on the Area B landfill within the next few years; this will also control erosion and potential runoff issues at the wells around the landfill.

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

State of Wisconsin 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

中国市场中国市场中国市场中国市场 法法公司 经济的 网络马克斯斯斯 Monitoring Data Submittal Information

Phone: 715-478-2777

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:

Name: Chris Geske

lims@nlslab.com F-mail:

	License No. / Monitoring ID	Facility ID [FID]	Actual sampling dates (e.g., July 2-6, 2003
Marathon County Landfill - Area B	03338	737092730	APRIL -20-2020
The enclosed results are for sampling required in the r	nonth(s) of: (e.g., June 2003)		
Type of Data Submitted (Check all that apply) Groundwater monitoring data from monitoring well Groundwater monitoring data from private water s Leachate monitoring data	upply wells Gas mon Other (s	nitoring data toring data pecify)	
No. No groundwater standards or explosive gas limits were exceed Yes, a notification of values exceeding a groundwater standard is a groundwater standard and proliminary analysis of the cause and Yes, a notification of values exceeding an explosive gas limit is att explosive gas limits.	fed. attached. It includes a list of monitoring poin I significance of any concentration. ached. It includes the monitoring points, dat	ts, dates, sample values, es, sample values and	n
Certification To the best of my knowledge, the information repor- are true and correct. Furthermore, I have attached groundwater standards or explosive gas levels, and concentrations exceeding groundwater standards. David Harmow Cher	orted and statements made on the complete notification of any said a preliminary analysis of the operations Man	his data submittal and ampling values meeting cause and significant o	attachements or exceeding of 715 - 551 - 5864
Facility Representative Name (Print)	Title 06 /23 /20	<i>•</i> 0	Area Code) Telephone No.
Signature	Date		
FOR DNR USE ONLY. Check action tak Found uploading problems on Notified contact of problems on EDD format(s): Diskette CD (in	en, and record date and your in Initials Upload	nitials: Describe on ba led data successfully o E-mail (follow-up only	x side if necessary n y) Other

Marathon County Solid Waste Mgmnt Dept Marathon County Landfill - Area B 04-01-2020

A.

Lab ID: 721026460 NLS Project: 342885 Collected: 04-01-2020 License: 03338 FID: 737092730

EXCEEDANCES:

Well Desc (Point ID)	Parameter	Units	Result	FALIAUL	3	
R27 (156)	Nitrate+Nitrite, dis.	mg/L	2.9	2	10	NR140.10

Notes: site = site assigned PAL/ES : well = well assigned PAL/ES : NR140.10 = NR140 Public Health PAL/ES : NR140.12 = NR140 Public Welfare PAL/ES



marathoncountysolidwaste.org

Marathon County Solid Waste Department 172900 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

June 23, 2020

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.4228 BRRDF.

In accordance with NR 140, please accept this notification of groundwater monitoring results for the reporting period of April 2020. An exceedance table has been attached for the Bluebird Ridge 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, Sally Hronek, Meleesa Johnson, Lee Daigle, Mark Torresani.

Bluebird Ridge Recycling	and Disposal Facility	Groundwater	Well Exceedance	<u>Table</u>
<u>April 2020</u>				

		Marath	on Coun	ty Solid W	aste Mgmt Dept:	BRRDF Ground	water Monit	oring W	ells		
					Exceedar	ices					
Lab ID	NLS Project	Date	License #	FID	Well Desc (Point ID)	Parameter	Units	Result	PAL/ACL	ES	Comments
721026460	342970	Aprll 1 2020	04228	337005680	R59P (237)	Alkalinity	mg/L	430	230	-	well
721026460	342970	April 1 2020	04228	337005680	R59P (237)	Conductivity	umhos@25C	730	470	-	weil
721026460	342970	April 1 2020	04228	337005680	R59P (237)	Hardness	mg/L	430	230	-	well
721026460	342970	April 1 2020	04228	337005680	R59WT (234)	Alkalinity	mg/L	440	230	-	well
721026460	342970	April 1 2020	04228	337005680	R59WT (234)	Conductivity	umhos@25C	780	470	-	well
721026460	342970	April 1 2020	04228	337005680	R59WT (234)	Hardness	mg/L	460	230	-	weli

Groundwater hardness can exhibit natural fluctuation over time. In addition, a typical indicator of hard water can be increased levels of calcium. Over the past few years, Marathon County has utilized liquid Calcium Chloride solution for dust control on main haul roads. It is a possibility that small amounts of Calcium Chloride may have leached into groundwater due to runoff from haul roads. This solution may be contributing to slight increases in conductivity. In addition to the Calcium Chloride application, this particular well is located within 50 feet of a major soil stockpile. During 2016, this stockpile received over 250,000 cubic yards of soil from the 10 acre cell expansion of the Bluebird Ridge Landfill. R59WT and R59P are directly at the toe of the slope of a 500,000+ cubic yard soil stockpile. The stockpile has been properly vegetated; however, the construction activity may be a contributing factor. The levels have not changed significantly since the last monitoring event, but this well will continue to be monitored to evaluate the source of the exceedances.

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

State of Wisconsin Department of Natural Resources

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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 Informatio	n in the second s	活动成为生活的高	
Name of entity submitting data (laboratory, co	onsultant, facility owner):		
Contact for questions about data formatting.	Include data preparer's name, telephone nu	mber and E-mail add	ress:
Name: Chris Geske	Phone: 715-47	78-2777	
E-mail: lims@nlslab.com		and the second second	
Facility Name	License No. / Monitoring ID	Facility ID [FID]	Actual sampling dates (e.g., July 2-6, 200
Marathon County - BRRDF	04228	337005680	APRIL -21-2020
The enclosed results are for sampling require APRIL -2020	ed in the month(s) of: (e.g., June 2003)		
Type of Data Submitted (Check all that apply Groundwater monitoring data from monit Groundwater monitoring data from privat Leachate monitoring data) coring wells Gas mor e water supply wells Air monit Other (sp	itoring data oring data pecify)	
 No. No groundwater standards or explosive gas limits Yes, a notification of values exceeding a groundwater groundwater standard and preliminary analysis of the Yes, a notification of values exceeding an explosive gas explosive gas limits. 	were exceeded. standard is attached. It includes a list of monitoring point re cause and significance of any concentration. as limit is attached. It includes the monitoring points, date	s, dales, sample values, s, sample values and	
Certification			\mathbf{n}_{i}
To the best of my knowledge, the informa are true and correct. Furthermore, I have groundwater standards or explosive gas concentrations exceeding groundwater st David Hagen bidher	tion reported and statements made on th attached complete notification of any sa evels, and a preliminary analysis of the o andards. Opendens Manag	nis data submittal an mpling values meeti cause and significan	d attachements ng or exceeding t of 715-551-5864
Facility Representative Name (Print)	Title		(Area Code) Telephone No.
Part Hach	06/23/20		
Signature	Date		
FOR DNR USE ONLY. Check a Found uploading problems Notified contact of problem EDD format(s); Diskette	ction taken, and record date and your in conInitials nsionUpload CD (Initial submittal and follow-up)	itials. Describe on t ed data successfully E-mail (follow-up o	on

Marathon County Solid Waste Mgmnt Dept Marathon County - BRRDF 04-01-2020

> Lab ID: 721026460 NLS Project: 342970 Collected: 04-01-2020 License: 04228 FID: 337005680

EXCEEDANCES:

Well Desc (Point ID)	Parameter	Units	Result	PAL / ACL	ES	Comments
R59P (237)	Alkalinity	mg/L	430	230		well
R59P (237)	Conductivity	umhos@25C	730	470		well
R59P (237)	Hardness	mg/L	430	230		well
R59WT (234)	Alkalinity	mg/L	440	230		well
R59WT (234)	Conductivity	umhos@25C	780	470		well
R59WT (234)	Hardness	mg/L	460	230		well

Notes: site = site assigned PAL/ES : well assigned PAL/ES : NR140.10 = NR140 Public Health PAL/ES : NR140.12 = NR140 Public Welfare PAL/ES



Marathon County Solid Waste Department 172900 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

November 16, 2020

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. 2892 Area A

In accordance with NR 140, please accept this notification of groundwater monitoring results for the reporting period of October 2020. An exceedance table has been attached for the Area A 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, Aaron Kent, Megan Ballweg, Sally Hronek, Meleesa Johnson, Lee Daigle, Mark Torresani.

		Maratho	on Count	y Solid W	aste Mgmt Dept:	Area A Groundw	ater Moni	toring W	/ells		
					Exceeda	inces					
Lab ID	NLS Project	Date	License #	FID	Well Desc (Point ID)	Parameter	Units	Result	PAL/ACL	ES	Comments
721026460	355865	Oct 1 2020	02892	737054890	Dup- (074)	Tetrachloroethylene	ug/L	0.5	0.5	5	NR140.10
721026460	355865	Oct 1 2020	02892	737054890	Dup- (074)	Trichloroethylene	ug/L	5	0.5	5	NR140.10
721026460	355865	Oct 1 2020	02892	737054890	Dup- (074)	Vinyl Chloride	ug/L	0.3	0.02	0.2	NR140.10
721026460	355865	Oct 1 2020	02892	737054890	R13R (074)	Tetrachloroethylene	ug/L	0.72	0.5	5	NR140.10
721026460	355865	Oct 1 2020	02892	737054890	R13R (074)	Trichloroethylene	ug/L	4.8	0.5	5	NR140.10
721026460	355865	Oct 1 2020	02892	737054890	R13R (074)	Vinyl Chloride	ug/L	0.44	0.02	0.2	NR140.10
721026460	355865	Oct 1 2020	02892	737054890	R38 (053)	Tetrachloroethylene	ug/L	0.72	0.5	5	NR140.10
721026460	355865	Oct 1 2020	02892	737054890	R38 (053)	Trichloroethylene	ug/L	1	0.5	5	NR140.10
721026460	355865	Oct 1 2020	02892	737054890	R38A (054)	1,2-Dichloropropane	ug/L	0.63	0.5	5	NR140.10
721026460	355865	Oct 1 2020	02892	737054890	R38A (054)	Tetrachloroethylene	ug/L	0.55	0.5	5	NR140.10
721026460	355865	Oct 1 2020	02892	737054890	R38A (054)	Trichloroethylene	ug/L	1.9	0.5	5	NR140.10
721026460	355865	Oct 1 2020	02892	737054890	R38A (054)	Vinyl Chloride	ug/L	0.16	0.02	0.2	NR140.10
721026460	355865	Oct 1 2020	02892	737054890	R 47	Trichloroethylene	ug/L	0.85	0.5	5	NR140.10
721026460	355865	Oct 1 2020	02892	737054890	R50P (068)	Tetrachloroethylene	ug/L	0.63	0.5	5	NR140.10
721026460	355865	Oct 1 2020	02892	737054890	R35 (050)	Conductivity	umho@25C	690	510	-	well
721026460	355865	Oct 1 2020	02892	737054890	R41 (057)	Conductivity	umho@25C	810	770	-	well

Area A Groundwater Well Exceedance Table October 2020

The Area A exceedances that were detected during the October 2020 sampling event are consistent with the exceedances that were detected in previous sampling events.

Groundwater contamination was detected southeast of Area A during the late 1980s. By May of 1993, Marathon County completed a groundwater quality investigation and submitted a report to WDNR titled "Marathon County, Area A Landfill – Environmental Contamination Assessment (ECA) report". The ECA report suggested that contaminants may have been released to the environment from one or more of the leachate collection basins and other source locations. Consequently, several improvements were made and both leachate collection basins were removed in 1995. The identified groundwater contaminants of primary concern at this facility are VOCs, specifically the chlorinated aliphatic hydrocarbons (CAHs) and vinyl chloride. Since the remedial work from 1993 to 1996, significant reductions of CAH concentration have been measured near the suspected source zone.

It is the opinion of Marathon County that the exceedances are related to the leachate basins that were removed in 1995. The overall general concentrations reported at wells within the core of the plume are stable to decreasing. Marathon County will continue to monitor these wells for exceedances as required, and report any anomalies to the WDNR. Marathon County has installed groundwater monitoring wells along State Highway 29, just southeast of the site. If these particular wells begin showing signs of contamination, the County has a contingency plan in place and will respond to protect residents.

State of Wisconsin Department of Natural Resources

ENVIRONMENTAL MONITORING DATA CERTIFICATION

Form 4400-231(R 1/04)

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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

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

Madison, WI 53707 - 7921

Northern Lake Service, Inc.			
Contact for questions about data formatting. Inclu	ide data preparer's name, telephone ni	Imber and E-mail addr	ress:
Name: Chris Geske	Phone: 715-47	3-2777	
E-mail: lims@nlslab.com		-	
Facility Name	License No. / Monitoring ID	Facility ID [FID]	Actual sampling dates (e.g., July 2-6, 200
Marathon County Landfill - Area A	02892	737054890	OCTOBER -19-2020 through OCTOBER -20-2020
Some Area A wells are linked to BRRDF site (Lic 04228) but reported here.			
The enclosed results are for sampling required in OCTOBER -2020	the month(s) of: (e.g., June 2003)		
Type of Data Submitted (Check all that apply		10 × 11	
Groundwater monitoring data from monitoring Groundwater monitoring data from private wa Leachate monitoring data	g wells	itoring pring data	
Notification attached?			
No. No groundwater standards or explosive gas limits were 4 Yes, a notification of values exceeding a groundwater stands groundwater standard and preliminary analysis of the cau Yes, a notification of values exceeding an explosive gas limit explosive gas limits	ixceeded, ard is attached. It includes a list of monitoring points e and significance of any concentration. is attached. It includes the monitoring points, date:	, dates, sample values, s, sample values and	
Certification			-Ti
To the best of my knowledge, the information are true and correct. Furthermore, I have attac groundwater standards or explosive gas level concentrations exceeding groundwater stand	reported and statements made on th shed complete notification of any sai s, and a preliminary analysis of the c ards.	is data submittal and npling values meetin ause and significant	l attachements Ig or exceeding of
David Hagenbucher	Manager		715-551-5864
Facility Representative Name (Print)	Title November 16	(/ 2020	Area Code) Telephone No.
Signature 0	Date		
FOR DNR USE ONLY. Check action	n taken, and record date and your ini Initials Uploade	tials. Describe on ba	nck side if necessary.

Marathon County Solid Waste Mgmnt Dept Marathon County Landfill - Area A 10-01-2020

Lab ID: 721026460 NLS Project: 355865 Collected: 10-01-2020 License: 02892 FID: 737054890

EXCEEDANCES:

Well Desc (Point ID)	Parameter	Units	Result	PAL / ACL	ES	Comments
Dup- (074)	Tetrachloroethylene	ug/L	0.56	.5	5	NR140.10
Dup- (074)	Trichloroethylene	ug/L	5.0	.5	5	NR140.10
Dup- (074)	Vinyl Chloride	ug/L	0.30	.02	.2	NR140.10
R13R (074)	Tetrachloroethylene	ug/L	0.72	.5	5	NR140.10
R13R (074)	Trichloroethylene	ug/L	4.8	.5	5	NR140.10
R13R (074)	Vinyl Chloride	ug/L	0.44	.02	.2	NR140.10
R38 (053)	Tetrachloroethylene	ug/L	0.72	.5	5	NR140.10
R38 (053)	Trichloroethylene	ug/L	1.0	.5	5	NR140.10
R38A (054)	1,2-Dichloropropane	ug/L	0.63	.5	5	NR140.10
R38A (054)	Tetrachloroethylene	ug/L	0.55	.5	5	NR140.10
R38A (054)	Trichloroethylene	ug/L	1.9	.5	5	NR140.10
R38A (054)	Vinyl Chloride	ug/L	0.16	.02	.2	NR140.10
R47 (062)	Trichloroethylene	ug/L	0.85	.5	5	NR140.10
R50P (068)	Tetrachloroethylene	ug/L	0.63	.5	5	NR140.10
R35 (050)	Conductivity	umho@25C	690	510		well
R41 (057)	Conductivity	umho@25C	810	770		well

Notes: site = site assigned PAL/ES : well = well assigned PAL/ES : NR140.10 = NR140 Public Health PAL/ES : NR140.12 = NR140 Public Welfare PAL/ES



Marathon County Solid Waste Department 172900 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

November 16, 2020

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 2020. 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, Aaron Kent, Megan Ballweg, Sally Hronek, Meleesa Johnson, Lee Daigle, Mark Torresani.

Area B Groundwater Well Exceedance Table October 2020

	Marathon County Solid Waste Mgmt Dept: Area B Groundwater Monitoring Wells										
	Exceedances										
Lab ID	NLS Project	Date	License #	FID	Desc (Poin	Parameter	Units	Result	PAL/ACL	ES	Comments
721026460	355773	Oct 1 2020	03338	737092730	R27 (156)	Nitrate+Nitrite, dis.	mg/L	2.5	2	10	NR140.10

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. Well R27 has indicated a decrease in concentration since the previous sampling event in April. The well will continue to be monitored closely to ensure that levels decrease. In effort to ensure that levels decrease, Marathon County will evaluate their erosion control methods in addition to continued observation of well R27. Current site plans include the installation of a final cap on the Area B landfill within the next few years; this will also control erosion and potential runoff issues at the wells around the landfill.

State of Wisconsin Department of Natural Resources

ENVIRONMENTAL MONITORING DATA CERTIFICATION

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Instructions:

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- * 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

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

Madison, WI 53707 - 7921

Monitoring Data Submittal Information	5 . A. P		
Name of entity submitting data (laboratory, cons	ultant, facility owner):		
Contact for questions about data formatting. Inc	lude data preparer's name, telephone n	umber and E-mail add	dress:
Name: Chris Geske	Phone: 715-47	8-2777	
E-mail: lims@nlslab.com			
Facility 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 -19-2020
The enclosed results are for sampling required in	n the month(s) of: (e.g., June 2003)	-	
Type of Data Submitted (Check all that apply			
Groundwater monitoring data from private w Leachate monitoring data	rater supply wells	toring data	
No. No groundwater standards or explosive gas limits were Yes, a notification of values exceeding a groundwater stan groundwater standard and preliminary analysis of the ca Yes, a notification of values exceeding an explosive gas lim explosive gas limits	exceeded. dard is attached. It includes a list of monitoring points use and significance of any concentration. in is attached. It includes the monitoring points, date	s, dates, sample values, is, sample values and	
Certification			<11
To the best of my knowledge, the information are true and correct. Furthermore, I have atta groundwater standards or explosive gas leve concentrations exceeding groundwater stand	n reported and statements made on th ached complete notification of any sa Is, and a preliminary analysis of the c lards.	his data submittal an mpling values meet cause and significan	nd attachements ing or exceeding it of
David Hagenbucher	Manager		715-551-5864
Facility Representative Name (Print)	Title	3	(Area Code) Telephone No.
D. Handy	November 16	2020	
Signature Hart	Date		
FOR DNR USE ONLY. Check action	on taken, and record date and your ini	itials. Describe on b	oack side if necessary.
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Notified contact of problems of	nUpload	ed data successfully	/ on
EDD format(s): Diskette	D (initial submittal and follow-up)	E-mail (follow-up or	niv) Other

Marathon County Solid Waste Mgmnt Dept Marathon County Landfill - Area B 10-01-2020

Lab ID: 721026460 NLS Project: 355773 Collected: 10-01-2020 License: 03338 FID: 737092730

EXCEEDANCES:

Well Desc (Point ID)	Parameter	Units	Result	PAL / ACL	ES	Comments
R27 (156)	Nitrate+Nitrite, dis.	mg/L	2.5	2	10	NR140.10



Marathon County Solid Waste Department 172900 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

November 16, 2020

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.4228 BRRDF.

In accordance with NR 140, please accept this notification of groundwater monitoring results for the reporting period of October 2020. An exceedance table has been attached for the Bluebird Ridge 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, Aaron Kent, Megan Ballweg, Sally Hronek, Meleesa Johnson, Lee Daigle, Mark Torresani.

Bluebird Ridg	e Recycling and	Disposal Facility	Groundwater	Well Exceedance	<u> Table</u>
October 2020					

		Marath	on Coun	ty Solid W	aste Mgmt Dept:	BRRDF Groundv	vater Monit	oring W	ells		
					Exceedar	nces					
Lab ID	NLS Project	Date	License #	FID	Well Desc (Point ID)	Parameter	Units	Result	PAL/ACL	ES	Comments
721026460	355864	Oct 1 2020	04228	337005680	R54 (213)	Hardness	mg/L	310	290		well
721026460	355864	Oct 1 2020	04228	337005680	R59P (237)	Alkalinity	mg/L	380	230	-	well
721026460	355864	Oct 1 2020	04228	337005680	R59P (237)	Conductivity	umhos@25C	710	470	-	well
721026460	355864	Oct 1 2020	04228	337005680	R59P (237)	Hardness	mg/L	450	230	-	well
721026460	355864	Oct 1 2020	04228	337005680	R59WT (234)	Alkalinity	mg/L	440	230	-	well
721026460	355864	Oct 1 2020	04228	337005680	R59WT (234)	Conductivity	umhos@25C	800	470	-	well
721026460	355864	Oct 1 2020	04228	337005680	R59WT (234)	Hardness	mg/L	510	230	-	well
721026460	355864	Oct 1 2020	04228	337005680	R60WT	Hardness	mg/L	290	290		well

Groundwater hardness can exhibit natural fluctuation over time. In addition, a typical indicator of hard water can be increased levels of calcium. Over the past few years, Marathon County has utilized liquid Calcium Chloride solution for dust control on main haul roads. It is a possibility that small amounts of Calcium Chloride may have leached into groundwater due to runoff from haul roads. This solution may be contributing to slight increases in conductivity. In addition to the Calcium Chloride application, this particular well is located within 50 feet of a major soil stockpile. During 2016, this stockpile received over 250,000 cubic yards of soil from the 10 acre cell expansion of the Bluebird Ridge Landfill. R59WT and R59P are directly at the toe of the slope of a 500,000+ cubic yard soil stockpile. The stockpile has been properly vegetated; however, the construction activity may be a contributing factor. The levels have not changed significantly since the last monitoring event but this well will continue to be monitored to evaluate the source of the exceedances. A 3 year groundwater assessment for the entire site has been included in the 2019 Annual Report.

State of Wisconsin Department of Natural Resources

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Instructions:

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- Please type or print legibly.
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- 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

Madison, WI 53707 - 7921

Monitoring Data Submittal Information	Itant facility owner):		
Northern Lake Service, Inc.	itant, idenity owner).		
Contact for questions about data formatting. Inclu	ude data preparer's name, telephone ni	umber and E-mail add	dress:
Name: Chris Geske	Phone: 715-47	8-2777	
E-mail: lims@nlslab.com			
Facility Name	License No. / Monitoring ID	Facility ID [FID]	Actual sampling dates (e.g., July 2-6, 200
Marathon County - BRRDF	04228	337005680	OCTOBER -20-2020
The enclosed results are for sampling required in OCTOBER -2020	the month(s) of: (e.g., June 2003)		
Type of Data Submitted (Check all that apply			
Groundwater monitoring data from monitoring Groundwater monitoring data from private wa Leachate monitoring data	g wells Gas mon ater supply wells data Air monit	itoring oring data	
Notification attached?			
No. No groundwater standards or explosive gas limits were or Yes, a notification of values exceeding a groundwater stand groundwater standard and preliminary analysis of the cau Yes, a notification of values exceeding an explosive gas limit explosive gas limits	exceeded and is attached. It includes a list of monitoring points es and significance of any concentration. t is attached. It includes the monitoring points, date	s, dates, sample values, s, sample values and	
Certification			4 <u>11</u>
To the best of my knowledge, the information are true and correct. Furthermore, I have attac groundwater standards or explosive gas level concentrations exceeding groundwater stand	reported and statements made on th ched complete notification of any sa s, and a preliminary analysis of the c ards.	is data submittal an mpling values meeti ause and significan	d attachements ng or exceeding t of
David Hagenbucher	Manager		715-551-5864
Facility Representative Name (Print)	Title	((Area Code) Telephone No.
Doill Hamble	November 16 20	20	
Signature	Date		
FOR DNR USE ONLY. Check action	n taken, and record date and your ini	tials. Describe on b	ack side if necessary.
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Notified contact of problems or	u Uploade	ed data successfully	on
EDD format(s): Diskette	(initial submittal and follow-up)	E-mail (follow-up on	iv) Other

P.O. Box 7921

Marathon County Solid Waste Mgmnt Dept Marathon County - BRRDF 10-01-2020

Lab ID: 721026460 NLS Project: 355864 Collected: 10-01-2020 License: 04228 FID: 337005680

EXCEEDANCES:

Well Desc (Point ID)	Parameter	Units	Result	PAL / ACL	ES	Comments
		· · · · · · · · · · · · · · · · · · ·				
R54 (213)	Hardness	mg/L	310	290		well
R59P (237)	Alkalinity	mg/L	380	230		well
R59P (237)	Conductivity	umhos@25C	710	470		well
R59P (237)	Hardness	mg/L	450	230		well
R59WT (234)	Alkalinity	mg/L	440	230		well
R59WT (234)	Conductivity	umhos@25C	800	470		well
R59WT (234)	Hardness	mg/L	510	230		well
R60WT (240)	Hardness	mg/L	290	290		well

ATTACHMENT G

EXCEEDANCE REPORTS FOR AREA A & BRRDF PRIVATE WELL MONITORING APRIL AND OCTOBER 2020



Marathon County Solid Waste Department 172900 E. Hwy 29 Bingle Will 54471

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

June 23, 2020

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. 2892, 3338 & 4228 (Private Wells)

In accordance with NR 140, please accept this notification of groundwater monitoring results for the reporting period of April 2020. There were no exceedances in the private groundwater wells, and therefore an exceedance table has not been provided.

If you have any questions, please contact me.

Thank you,

David Hagenbucher Operations Manager Marathon County Solid Waste

C.c: Nathan Coller, Amanda Dehmlow, Sally Hronek, Meleesa Johnson, Lee Daigle, Mark Torresani.

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

State of Wisconsin

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- 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

Name of entity submitting data (laboratory, consultant	t, facility owner):		
Northern Lake Service, Inc.	data preparer's name, telephone nu	umber and E-mail add	ress:
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, 2003
Marathon County Area A Private Wells	02892		APRIL -22-2020
The enclosed results are for sampling required in the APRIL -2020	month(s) of: (e.g., June 2003)		
Type of Data Submitted (Check all that apply) Groundwater monitoring data from monitoring we Groundwater monitoring data from private water Leachate monitoring data	ells 🔤 Gas mor supply wells 🔤 Air moni 🔲 Other (sj	nitoring data toring data pecify)	
 No. No groundwater standards or explosive gas limits were exceeding a groundwater standard is groundwater standard and preliminary analysis of the cause an Yes, a notification of values exceeding an explosive gas limit is a explosive gas limits. 	eded. a attached. It includes a list of monitoring point ad significance of any concentration ttached. It includes the monitoring points, date	ts, dates, sample values, es, sample values and	-
Certification			$\mathbf{n}_{i} \in \mathbf{n}$
To the best of my knowledge, the information rep are true and correct. Furthermore, I have attache groundwater standards or explosive gas levels, a concentrations exceeding groundwater standards	orted and statements made on the d complete notification of any sa nd a preliminary analysis of the s. Operations Man	his data submittal an Impling values meeti cause and significan	d attachements ng or exceeding t of 715 551 5869
Facility Representative/Name/Print/	Title	0	(Area Code) Telephone No.
DIH L	06/23/20		
Signature	Date		
FOR DNR USE ONLY. Check action to Found uploading problems on Notified contact of problems on EDD format(s): Diskette CD (In	ken, and record date and your Ir Initials Upload hitial submittal and follow-up)	nitials: Describe on t led data successfully [E]mail (follow-up o	vack side if necessary.

Marathon County Solid Waste Mgmnt Dept Marathon County Area A Private Wells (Semi-annual) 04-01-2020

> Lab ID: 721026460 NLS Project: 343087 Collected: 04-01-2020 License: 02892 FID:

EXCEEDANCES:

Comments	
ES	
PAL / ACL	
Result	
Units	
Parameter	
Well Desc (Point ID)	

Notes: site = site assigned PAL/ES : well = well assigned PAL/ES : NR140.10 = NR140 Public Health PAL/ES : NR140.12 = NR140 Public Welfare PAL/ES

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- 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

Name of entity submitting data (labora	atory, consultant, facility owner):		
Contact for questions about data form	atting. Include data preparer's name, telephone r	number and E-mail addr	ess:
Name: Chris Geske	Phone: 715-4	178-2777	
E-mail: lims@nlslab.com		1	
Facility Name	License No. / Monitoring ID	Facility ID [FID]	Actual sampling dates (e.g., July 2-6, 200
Marathon County BRRDF Pr	vate Wells 04228	337005680	APRIL -22-2020
The enclosed results are for sampling APRIL -2020	required in the month(s) of: (e.g., June 2003)	_	
Type of Data Submitted (Check all the Groundwater monitoring data from Groundwater monitoring data from Leachate monitoring data	at apply) n monitoring wells Gas mo n private water supply wells Air mon Other (s	onitoring data hitoring data specify)	
No. No groundwater standards or explosive Yes, a notification of values exceeding a gro groundwater standard and preliminary an Yes, a notification of values exceeding an ex explosive gas limits.	gas limits were exceeded. undwater standard is attached. It includes a list of monitoring poin alysis of the cause and significance of any concentration. plosive gas limit is attached. It includes the monitoring points, da	nts, dates, sample values, tes, sample values and	
Certification			
To the best of my knowledge, the is are true and correct. Furthermore, groundwater standards or explosiv concentrations exceeding groundw	nformation reported and statements made on a I have attached complete notification of any s re gas levels, and a preliminary analysis of the vater standards.	this data submittal and ampling values meetin cause and significant	d attachements ng or exceeding t of
David Hagen Stok	al Openstans / r	n fri	(Area Code) Telephone No.
Facility Representative Name (Print)			any of the second s
and that	86/23/20		
Signature	Date		
FOR DNR USE ONLY.	Check action taken, and record date and your i oblems on Initial problems on Uploa	nitials. Describe on b s ded data successfully	on Other

Marathon County Solid Waste Mgmnt Dept BRRDF Semi-Annual Private Wells 04-01-2020

> Lab ID: 721026460 NLS Project: 343086 Collected: 04-01-2020 License: 04228 FID: 337005680

EXCEEDANCES:

Notes: site = site assigned PAL/ES : well = well assigned PAL/ES : NR140.10 = NR140 Public Health PAL/ES : NR140.12 = NR140 Public Welfare PAL/ES

NORTHERN LAKE SERVICE, INC. Analytical Laboratory and Environmental Services 400 North Lake Avenue - Crandon, WI 54520 Ph: (715)-478-2777 Fax: (715)-478-3060	ANALYTICAL RE	PORT	IM	WDNR Laboratory ID No DATCP Laboratory Certification EPA Laboratory ID Printed: 05/19/20	o. 721026460 No. 105-330 No. W100034 Page 1 of 4
Client: Marathon County Solid Waste Mgmnt Dept Attn: Meleesa Johnson Marathon County Landfill R18500 East Highway 29 Ringle, WI 54471 9754		,		NLS Project: NLS Custome Fax: 715 446 2906 Phone:	343086 r: 20080 715 446 3339
Project: BRRDF Semi-Annual Private Wells PW11 NLS ID: 1184592 Matrix: GW Collected: 04/22/20 08:34 Received: 04/22/20					
Parameter Field depth to water Field depth to bottom Values in brackets represent results greater than or equal to the LOD	Result Units 16.11 ft. 36.60 ft. 0 but less than the LOQ and are within a	Dilution 1 1 region of "Less-Cei	LOD LOQ/M tain Quantitation".	ICL Analyzed Method 04/22/20 NA 04/22/20 NA Results greater than or equal to the L	Lab 721026460 721026460 00 are considered
to be in the region of "Certain Quantitation". LOD and LOQ tagged wi ND = Not Detected (< LOD) LOD = Limit of Detection DWB = Dry Weight Basis %DWB = (mg/kg DWB) / 10000 MCL = Maximum Contaminant Levels for Drinking Water Samples.	ith an asterisk(*) are considered Reporti LOQ = Limit of Quantitation NA = 1000 ug/L = 1 mg/L Shaded results indicate >MCL.	ng Limits. All LOD/ Not Applicable	LOQs adjusted to re Reviewed by:	eflect dlution and/or solids content.	Authorized by: R. T. Krueger President
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NORTHERN LAKE SERVICE, INC. Analytical Laboratory and Environmental Services 400 North Lake Avenue - Crandon, WI 54520 Ph: (715)-478-2777 Fax: (715)-478-3060

Marathon County Solid Waste Mgmnt Dept Attn: Meleesa Johnson Marathon County Landfill R18500 East Highway 29 Ringle, WI 54471 9754 Client:

BRRDF Semi-Annual Private Wells Project:

PW26 NLS ID: 1184593 Matrix: GW

Collected: 04/22/20 08:42 Received: 04/22/20

721026460 721026460 721026460 721026460 Lab 04/29/20 SW846 8260C Analyzed Method ¥ AN 04/22/20 04/22/20 04/22/20 LOQ/MCL D L O Dilution Units none detected none detected none detected see attached Result /OCs (water) by GC/MS ield turbidity Parameter Field color ield odor

Values in brackets represent results greater than or equal to the LOD but less than the LOQ and are within a region of "Less-Certain Quantitation". Results greater than or equal to the LOQ are considered to be in the region of "Certain Quantitation" LOD and LOQ tagged with an asterisk(*) are considered Reporting Limits. All LOD/LOQs adjusted to reflect dlution and/or solids content

ND = Not Detected (< LOD) LOD = Limit of Detection DWB = Dry Weight Basis %DWB = (mg/kg DWB) / 10000 MCL = Maximum Contaminant Levels for Drinking Water Samples.

Shaded results indicate >MCL LOQ = Limit of Quantitation 1000 ug/L = 1 mg/L

NA = Not Applicable

Reviewed by:

Authorized by: R. T. Krueger President

ANALYTICAL REPORT

WDNR Laboratory ID No. 721026460 WDATCP Laboratory Certification No. 105-330 EPA Laboratory ID No. WI00034 Page 2 of 4 343086 NLS Project: Printed: 05/19/20

20080 NLS Customer:
Marathon County Solid Waste Mgmnt Dept Marathon County Landfill R18500 East Highway 29 Ringle, WI 54471 9754 Attn: Meleesa Johnson Client:

BRRDF Semi-Annual Private Wells Project:

PW8575 NLS ID: 1184594 Matrix: GW

Collected: 04/22/20 09:00 Received: 04/22/20

Darameter	and the Result of Varian of Units of the Control Dilution of the COD Lo	Q/MCL Analyzed Method	Lab
Field color	none detected	04/22/20 NA	721026460
Field odor	none detected	04/22/20 NA	721026460
Field turbidity	none detected	04/22/20 NA	721026460
VOCs (water) by GC/MS	see attached	04/29/20 SW846 8260C	721026460
			The state of the s

Values in brackets represent results greater than or equal to the LOD but less than the LOQ and are within a region of "Less-Certain Quantitation". Results greater than or equal to the LOQ are considered to be in the region of "Certain Quantitation". LOD and LOQ tagged with an asterisk(*) are considered Reporting Limits. All LOD/LOQs adjusted to reflect dution and/or solids content.

ND = Not Detected (< LOD)</th>LOD = Limit of DetectionDWB = Dry Weight Basis%DWB = (mg/kg DWB) / 10000MCL = Maximum Contaminant Levels for Drinking Water Samples.

Shaded results indicate >MCL. LOQ = Limit of Quantitation 1000 ug/L = 1 mg/L

NA = Not Applicable

Reviewed by:

Authorized by: R. T. Krueger President

ANALYTICAL REPORT

EPA Laboratory ID No. WI00034 WDNR Laboratory ID No. 721026460 WDATCP Laboratory Certification No. 105-330 Page 3 of 4 343086 NLS Project: Printed: 05/19/20

D No. 721026460 tion No. 105-330 1D No. W100034 0 Page 4 of 4	ct: 343086 mer: 20080 ne: 715 446 3339		Lab 721026460	he LOQ are considered t. Authorized by: R. T. Krueger President				
WDNR Laboratory II ATCP Laboratory Certifica EPA Laboratory Printed: 05/19/2	NLS Proje NLS Custu Fax: 715 446 2906 Pho		tL Analyzed Method 04/29/20 NA	esuits greater than or equal to the flect dlution and/or solids conter				
MD				Certain Quantitation". Re DD/LOQs adjusted to reft Reviewed by:				
REPORT			Dilution	within a region of "Less-(Reporting Limits. All LC NA = Not Applicable		•		
ANALYTICAL			Result Units see attached	D but less than the LOQ and are vith an asterisk(*) are considered LOQ = Limit of Quantitation 1000 ug/L = 1 mg/L Shaded results indicate >MCL.	•			
JAKE SERVICE, INC. bratory and Environmental Services Avenue - Crandon, WI 54520 1777 Fax: (715)-478-3060	rathon County Solid Waste Mgmnt Dept n: Meleesa Johnson rathon County Landfill 8500 East Highway 29 ngle, WI 54471 9754	RDF Semi-Annual Private Wells S ID: 1184595 20 00:00 Received: 04/22/20	GC/MS	is represent results greater than or equal to the LOD n of "Certain Quantitation". LOD and LOQ tagged w ed (< LOD) LOD = Limit of Detection tht Basis %DWB = (mg/kg DWB) / 10000 Contaminant Levels for Drinking Water Samples.	· ·		· · · · · ·	
NORTHERN L, Analytical Labor 400 North Lake , Ph: (715)-478-27	Client: Mar Attr Mar R18 R18	Project: BRI Trip Blank NL5 Matrix: TB Collected: 04/22/2	Parameter VOCs (water) by C	Values in brackets to be in the region ND = Not Detecter DWB = Dry Weigh MCL = Maximum (

ANALYTICAL RESULTS: VOC's by P&T/GCMS - Wate Customer: Marathon County Solid Waste Mgmnt Dep	r ot NLS Project:	343086				Page 1 of 3	·
Project Description: BRRDF Semi-Annual Private We Project Title:	Printed: 05/19/202	0 05:10					
Sample: 1184593 PW26 Collected: 04/22/20 Analyzed: 04/29/20	- Analytes: 43						
ANALYTE NAME	RESULT	UNITS	DIL	гор	LOQ	MCL Note	
Benzene	QN	ug/L	-	0.25	0.84	5	
Bromodichloromethane	Q	ng/L	~ ~	0.20	0.67	80	
Bromoform		ug/L		0.87	60	00	
Divitionmente Carbon Tetrachloride	QN	ug/L		0.17	0.55	5	
Chlorobenzene	QN	ng/L	1	0.34	1.1	100	
Chloroethane	QN	ng/L	۳-	1.5	5.0		
Chloroform	Q	ng/L		0.24	0.81	80	
Chloromethane		ng/L		0.81	2.1	Co	T
Dibromochloromethane	N	ng/L		0.20	1.0/	00	Τ
1,2-Dibromo-3-Chloropropane		1/0/1	- -	0.20	0 71		
1,z-Ulouiloeularie Dihromomethane	QN	ud/L		0.17	0.55		
20010000000000000000000000000000000000	QN	na/L		0.28	0.92	600	
1.3-Dichlorobenzene	QN	ng/L	1	0.28	0.93		
1.4-Dichlorobenzene	DN	ng/L	~	0.30	0.99	75	
Dichlorodifluoromethane	QN	ng/L	~-	0.59	2.0		
1,1-Dichloroethane	Q	ng/L	.	0.20	0.66	L	
1,2-Dichloroethane	Q	ng/L		0.43	4.1	0 1	
1,1-Dichloroethene		ng/L		0.13	0.03	- V2	T
cis-1,2-Dichloroethene		ng/L		0.40	0.64	100	-
Irans-1,2-Uichiotoetherie		10/1		0.16	0.54	5	
1,2-Ulcinoroproparte	QN	ua/L		0.16	0.53		
trans.1.3-Dichloronronene	QN	ng/L	-	0.24	0.81		
Ethvlbenzene	QN	ng/L	1	0.33	1.1	200	
Methylene chloride	DN	ng/L	-	0.61	2.0	5	
Naphthalene	QN	ng/L	~	0.66	2.2		
Styrene	Q	ng/L		0.40	5.0	100	
ortho-Xylene		ng/L	- -	0.38		Ľ	T
l etrachloroethene		ug/L	-	1 20 P	0.98	1000	
1 0luene 1 1 1 Trichlornathana	QN	ua/L		0.11	0.35	200	
1, 1, 1-1 inclusioculation 1, 1, 2-Trichloroethane	Q	ng/L	F	0.21	0.72	5	
Trichloroethene	QN	ng/L	┯	0.35	1.2	Q	T
Trichlorofluoromethane	Q	ng/L		0.22	0.75		
Vinyl chloride	QN	ug/L		0.14	0.47		T
meta,para-Xylene	Q	ug/L		0.70	2.3	10000	
MTBE	Q	ng/L		7.0	4.00		
Acetone		ng/L	- -	0.7	0.67		
Carbon Disulfide		ng/L		1.0	0.0		
Methyl Ethyl Ketone		ng/L		1.7	2 2 2 2		
Tetrahydrofuran	UN 1100/1	ug/L		1.1	0.0	S	
Dibromotiuoromethane (SUKK)	112%) S	
1 Diuerre-uo (SUNN) 1 Bromo 1-Elinorohenzene (SLIRR)	107%					S	
NOTES ADDI ICARI E TO THIS ANAL YSIS.							

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ANALYTICAL RESULTS: VOC's by P&T/GCMS - Water	MI C Droioct.	242086					Page 2 of 3
Project Description: BRRDF Semi-Annual Private Wells	NLO FIOJECI.						
Project Title: Template: APP3 Prin	Ited: 05/19/202	0 05:10					
Sample: 1184594 PW8575 Collected: 04/22/20 Analyzed: 04/29/20 - A	nalytes: 43						
ANALYTE NAME	RESULT	UNITS	DIL	ГОД	LOQ	MCL	Note
Benzene	QN	ug/L	-	0.25	0.84	5	
Bromodichloromethane	QN	ug/L	<u></u> ا	0.20	0.67	80	
Bromoform	QN	ng/L		0.27	0.91 2.0	80	
bromomentarie Cerhon Tetrachloride	QN	ug/L		0.17	0.55	5	
	QN	ug/L		0.34	1.1	100	
Chloroethane	QN	ng/L	1	1.5	5.0		
Chloroform	DN	ug/L	1	0.24	0.81	80	
Chloromethane	QN	ng/L	-	0.81	2.7		
Dibromochloromethane	2	ug/L	.	0.20	0.67	80	
1,2-Dibromo-3-Chloropropane	Q	ng/L	-	0.36	7.1.2		
1,2-Dibromoethane	ON CA	ng/L		12.0	0./1		
Dibromomethane		ng/L	+	0.17	0.00	SOO.	
1, 2-Dicniorobenzene		ng/l	- +	0.28	0.92	000	
1,3-Dicniorobenzene		- I'd'i		0.30	0000	75	
1,4-Dicitioubelizette Dicklossatificssmathana		10/1		0.50	0.0	2	
Dictitoroutituorottieurarie	2 CZ	1/01		0.20	0.66		
1, I-Diulio deutarie 1 2 Diukloroathane	CN	10/1	•	0.43	14	5	
1.1-Dichloroethene	QN	na/L		0.19	0.63	7	
cis-1.2-Dichloroethene	QN	ng/L	-	0.20	0.66	70	
trans-1.2-Dichloroethene	QN	ng/L		0.19	0.64	100	
1,2-Dichloropropane	ND	ng/L	.	0.16	0.54	5	
cis-1,3-Dichloropropene	DN	ug/L	-	0.16	0.53		
trans-1,3-Dichloropropene	QN	ug/L		0.24	0.81		
Ethylbenzene	Q	ug/L		0.33		/00	
Methylene chloride	<u>ON</u>	ug/L		0.61	7.0	n	
Naphthalene		ng/L	- -	0.00	777	100	
Styrene		ng/L		0.40		001	
ortho-Xylene		ug/L		0.30	- - 5 -	Ľ	
		ng/L	-	40.0 0.20	0.98	1000	
101uerie 111_Trichlanoethane	QN	ua/L	-	0.11	0.35	200	
112-Trichloroethane	QN	ng/L	-	0.21	0.72	5	
Trichloroethene	QN	ng/L	1	0.35	1.2	ъ	
Trichlorofluoromethane	DN	ug/L	.	0.22	0.75		
Vinyl chloride	Q	ug/L	~- -	0.14	0.47	5	
meta,para-Xylene	QN	ug/L	~	0.70	2.3	10000	
MTBE	Q	ng/L	~- ·	0.41	1.4		
Acetone	Q	ug/L	·	7.0	23		
Carbon Disulfide	ON .	ug/L	-	0.17	/0.0		
Methyl Ethyl Ketone		ug/L	-	7.7	а. С		
Tetrahydrofuran	UN 1120/	ng/L	- -	1./	0.0		v
Dibromofluoromethane (SURK)	110%0						p v
1 Diuene-dő (SUKK)	10207		-				, vv
	2 22		-				
NULES APPLICABLE TO THIS ANALTSIS. S = This compound is a surrogate used to evaluate the quality control of a m	ethod.						

ANALYTICAL RESULTS: VOC's by P&T/GCMS - Water		0000					Page 3 of 3
Customer: Marathon County Solid Waste Mgmnt Dept NL Project Description: BRRDF Semi-Annual Private Wells	-> Project: 3	43U80	ŝ				
Project Title: Template: APP3 Printed:	: 02/18/2020 (05:10					
Sample: 1184595 Trip Blank Collected: 04/22/20 Analyzed: 04/29/20 - Analy	ytes: 43						
ANALYTE NAME	RESULT	UNITS	DIL	ĹOD	Loq	MCL	Note
Benzene	QN	ug/L		0.25	0.84	S	
Bromodichloromethane		ng/L		0.20	0.67	80	
Bromoform	N	1/0/F		0.27	0.81	αU	
		ug/L		0.07	2.3 0.55	Ľ	
Carpon letracnionde		ug/L 11G/I		0.34	11	100	
Otiloi operizerie Chloroathana	CN	ua/E		1.5	5.0		
Chloroform	Q	ng/L	~	0.24	0.81	80	
Chloromethane	ND	ug/L	1	0.81	2.7		
Dibromochloromethane	QN	ug/L	~-	0,20	0.67	80	
1,2-Dibromo-3-Chloropropane	QN	ug/L	~	0.36	1.2		
1,2-Dibromoethane	QN	ug/L		0.21	0./1		
Dibromomethane	QN	ug/L	-	0.17	0.55	000	
1,2-Dichlorobenzene	Q	ug/L	, ·	0.28	0.92	600	
1,3-Dichlorobenzene		ng/L	- •	0.28	0.93	75	
1,4-Dichlorobenzene	ON CN	ng/L		0.30	0.39	ç/	
Dichlorodifluoromethane		ng/L	- -	0.09	2.0		
1,1-Dichloroethane		ug/L		0.20	0.00	6	
1,2-Dichloroethane		ng/L		0.40	0.63	0 -	
1,1-Dichloroethene		ug/L		0.00	0.00	02	
cis-1, 2-Dichioroethene		1/17		010	0.00	101	
trans-1, 2-Dichloroethene		ug/L		0,10	10.0	2	
1, 2-Dichloropropane		ug/L		0.0	0.04		
cis-1, 3-Uichioropropene		ug/L	-	0.0	100		
trans-1,3-Dichloropropene		ug/F		0.24	10.0	200	
		I/U		0.50	00	202	
		10/I		0.66	0.0	>	
Napritialerie		10/1		0.40	17	100	
	CIN	ug/L	- -	0.38	13	22	
		10/1		0.34	2	2	
Tolizario delitere	CN	10/1		0.29	0.98	1000	
1 0 Udelie 1 1 1 Tricklornathana	QN	ua/L	•	0.11	0.35	200	
1, 1, 1-1 Induitocutance 1, 1, 2-Trichlornethane	QN	ua/L		0.21	0.72	5	
Trichloroethene	QN	ng/L	- -	0.35	1.2	5	
Trichlorofluoromethane	DN	ng/L	-	0.22	0.75		
Vinvl chloride	QN	ng/L	~	0.14	0.47	.2	
meta para-Xvlene	QN	ng/L	~	0.70	2.3	10000	
MTBE	DN	ug/L		0.41	1.4	-	
Acetone	QN	ug/L		7.0	23		
Carbon Disulfide	QN	ug/L	-	0.17	0.57		
Methyl Ethyl Ketone	Q	ug/L	~-	2.7	<u>9.0</u>		
Tetrahydrofuran	DN	ug/L	~	1.7	5.5		
Dibromofluoromethane (SURR)	110%						ν ν
Toluene-d8 (SURR)	112%						٥
1-Bromo-4-Fluorobenzene (SURR)	108%						0
NOTES APPLICARLE TO THIS ANALYSIS:							

NLS Private Well Sampling Form and Chain Of Custody

SITE: Marathon Co. Solid Waste Management Dept. / BRRDF – Private Wells 1A

		b Midd	DNR ID #:	Time Purged:	Color:	Odor:	Turbidity (quant,text,color):
1/84/592	Point Name / Homeo William	Kasten	027				
Date Sampled:	Time Sampled:	Sample Location:	I	1	<u> </u>		Treated (Y/N):
4.22.20	0834	MAKE JURI	= 400 T	AKE DEPTH.	OF WATER	FOR BIG.	PIPE : 1
Comments:							
DEPTH OF WATE	2 16.11	· .					
DEPTH OF BOTTO	м_ 36.6						
4/13: South house fat	icet			SHOULD BE	AROUND	36 Feet To	BOTTO M.

NLSLah#:	Point Name / Homeou	weer: PW26	DNR ID #:	Time Purged:	Color:	Odor:	Turbidity (q	uant,text,color):
593	James Glo R222470 Dunca	dowski n Road, Hatley	029	Simi	NR	PD.	U,U	D.
Date Sampled:	Time Sampled:	Sample Location:		/		~		Treated (Y/N):
4.22 20	0842	WEST	SIDE	OLD House	E OUTSI	DE FRUIE	<i>7</i>	~ ·
Comments:								
			UEL Pump	Spurt	ERED. H	LL Dupin	og Pa	RGE
As of 11/06: K	itchen Sink (hand	d dug well, owne	r may want	us to purge little	or no water l	pefore samplin	ng)	

NLS Lab #: ,	Point Name / Home	waer: PW8575	DNR ID #:	Time Purged:	Color:	Odor:	Turbidity (quant,text,color):
594	Jerry and F	Krista Bates	367	5 mins	DU	00	ND
Date Sampled:	Time Sampled:	Sample Location:			A	1	Treated (Y/N):
4.22-20	0900	OUTS	IDE FR	HCAT FRO	ent of	House .	- W
Comments:	.						
-						•	
		OK.					
Outside faucet side o	f house						

NLS Lab #:	Point Name / Home Trip B	owner: lank	DNR ID #: 999	Time Purged:	Color:	Odor:	Turbidity (quant,text,color):
Date Sampled:	Time Sampled:	Sample Location:					
Comments:							
Rev 10/	18			and a subscription of the	See	reverse side for sample	custody information

Marathon County Solid Waste Mgmnt Dept Marathon County Landfill Attn: Meleesa Johnson Client:

R18500 East Highway 29 Ringle, WI 54471 9754

Marathon County Area A Private Wells (Semi-annual) Project:

PW25 NLS ID: 1184596

Matrix: GW

Collected: 04/22/20 07:58 Received: 04/22/20

Parameter	Result	Units	Dilution	гор	LOQ/MCL	Analyzed Method	Lab
	none detected	or enterements of other of the prior prior press of the press of the other of the second				04/22/20 NA	721026460
Field odor	none detected					04/22/20 NA	721026460
Field furbidity	none detected	a na mana na mana na - An Andrik Mana na mana m				04/22/20 NA	721026460
VOCs (water) by GC/MS	see attached					04/29/20 SW846 8260C	721026460
Visities in brackets represent results preater than or equal to t	the LOD but less than the LO	DQ and are within a re	aion of "Less-Cert	ain Quantit	ation". Result	s greater than or equal to the L(OQ are considered

3 Values in brackets represent results greater than or equal to the LOD but less than the LOQ and are within a region of "Less-Certain Quantitation". Results greater than or equal to the LOQ and end of the region of "Certain Quantitation". LOD and LOQ tagged with an asterisk(*) are considered Reporting Limits. All LOD/LOQs adjusted to reflect duition and/or solids content.

MCL = Maximum Contaminant Levels for Drinking Water Samples. %DWB = (mg/kg DWB) / 10000 LOD = Limit of Detection ND = Not Detected (< LOD) DWB = Dry Weight Basis

Shaded results indicate >MCL. LOQ = Limit of Quantitation 1000 ug/L = 1 mg/L

NA = Not Applicable

Reviewed by:

R. T. Krueger President Authorized by:

ANALYTICAL REPORT

20080 WDNR Laboratory ID No. 721026460 WDATCP Laboratory Certification No. 105-330 EPA Laboratory ID No. WI00034 Page 1 of 10 343087 NLS Customer: NLS Project: Printed: 05/13/20

Marathon County Solid Waste Mgmnt Dept Marathon County Landfill Attn: Meleesa Johnson Client:

R18500 East Highway 29 Ringle, WI 54471 9754 Marathon County Area A Private Wells (Semi-annual) Project:

PW68 NLS ID: 1184597 Matrix: GW

Collected: 04/22/20 07:43 Received: 04/22/20

Parameter	Result	Units	Dilution	LOD	LOQ/MCL	Analyzed Method	Lab
Field color	none detected	o na na a faranana falananana fana fana da baharifarananan kualakini kuala angela da a tananana				04/22/20. NA	721026460
Field odor	none detected					04/22/20 NA	721026460
Field turbidity	none detected					04/22/20 NA	721026460
VOCs (water) by GC/MS	see attached					04/29/20 SW846 8260C	721026460

Values in brackets represent results greater than or equal to the LOD but less than the LOQ and are within a region of "Less-Certain Quantitation". Results greater than or equal to the LOQ are considered to be in the region of "Certain Quantitation". Results greater than or equal to the LOQ are considered to be in the region of "Certain Quantitation". Results greater than or equal to the LOQ are considered

ND = Not Detected (< LOD) LOD = Limit of Detection DWB = Dry Weight Basis %DWB = (mg/kg DWB) / 10000 MCL = Maximum Contaminant Levels for Drinking Water Samples.

1000 ug/L = 1 mg/L Shaded results indicate >MCL. LOQ = Limit of Quantitation

NA = Not Applicable

Reviewed by:

Authorized by: R. T. Krueger President

ANALYTICAL REPORT

20080 WDATCP Laboratory Certification No. 105-330 EPA Laboratory ID No. WI00034 Page 2 of 10 WDNR Laboratory ID No. 721026460 343087 NLS Customer: NLS Project: Printed: 05/13/20

721026460 Io. 105-330 o. W100034 Page 3 of 10	343087 20080 15 446 3339		Lab 721026460 Q are considered	Authorized by: R. T. Krueger President			• •	
WDNR Laboratory ID No. Laboratory Certification N EPA Laboratory ID N Printed: 05/13/20	NLS Project: NLS Customer: : 715 446 2906 Phone: 7		Analyzed Method 34/22/20 Field Method greater than or equal to the LO	tion and/or solids content.				- - -
WDATCP	Fax		LOD LOQ/MCL A ((tain Quantitation" Results	Reviewed by:				
REPORT			Dilution ot turned on vithin a region of "Less-Cer	Reporting Limits. All LOD/ NA = Not Applicable				
ANALYTICAL		1)	Result Units no one home - outside faucet n hint less than the LOO and are w	ith an asterisk(*) are considered it LOQ = Limit of Quantitation 1000 ug/L = 1 mg/L Shaded results indicate >MCL.			•	
CE, INC. vironmental Services ndon, WI 54520)-478-3060	· Solid Waste Mgmnt Dept hnson · Landfill wwy 29 9754	/ Area A Private Wells (Semi-annus eived: 04/22/20	. The creater than or equal to the $ $ OD	utics greater train or equal to the COL lamittation". LOD and LOQ tagged w LOD = Limit of Detection %DWB = (mg/kg DWB) / 10000 .evels for Drinking Water Samples.				
NORTHERN LAKE SERVIC Analytical Laboratory and Env 400 North Lake Avenue - Cran Ph: (715)-478-2777 Fax: (715)	Client: Marathon County Attn: Meleesa Jot Marathon County R18500 East High Ringle, WI 54471	Project: Marathon County PW18 NLS ID: 1184598 Matrix: GW Collected: 04/22/20 07:50 Rece	Parameter Could not sample Molition in brooker intracent race	values in brackets represent res to be in the region of "Certain Qt ND = Not Detected (< LOD) 1 DWB = Dry Weight Basis 9 MCL = Maximum Contaminant L				

ANALYTICAL REPORT

Marathon County Solid Waste Mgmnt Dept Marathon County Landfill R18500 East Highway 29 Attn: Meleesa Johnson Client:

Ringle, WI 54471 9754

Page 4 of 10 WDNR Laboratory ID No. 721026460 WDATCP Laboratory Certification No. 105-330 EPA Laboratory ID No. WI00034 20080 343087 NLS Customer: NLS Project: Printed: 05/13/20

Marathon County Area A Private Wells (Semi-annual) Project:

PW19 NLS ID: 1184599 Matrix: GW

Collected: 04/22/20 07:35 Received: 04/22/20

	Result LOD LOO/MCL	Analyzed Method	Lab
rarameter Eiola volor	none defected	04/22/20 NA	721026460
Ficial adar	none defected	04/22/20 NA	721026460
	none detected	04/22/20 NA	721026460
Fleia turbiaity	rourd dereview	04/29/20 SW846 8260C	721026460
VOUS (water) by GUINIS		1	Corocidoroo

Values in brackets represent results greater than or equal to the LOD but less than the LOQ and are within a region of "Less-Certain Quantitation". Results greater than or equal to the LOQ are considered to be in the region of "Certain Quantitation". Results greater than or equal to the LOQ are considered to be in the region of "Certain Quantitation". LOD and LOQ tagged with an asterisk(*) are considered Reporting Limits. All LOD/LOQs adjusted to reflect dution and/or solids content.

MCL = Maximum Contaminant Levels for Drinking Water Samples. LOD = Limit of Detection %DWB = (mg/kg DWB) / 10000 ND = Not Detected (< LOD) DWB = Dry Weight Basis

Shaded results indicate >MCL. LOQ = Limit of Quantitation 1000 ug/L = 1 mg/L

NA = Not Applicable

Reviewed by:

Client: Marathon County Solid Waste Mgmnt Dept Attn: Meleesa Johnson Marathon County Landfill R18500 East Highway 29

Ringle, WI 54471 9754

ANALYTICAL REPORT WDATCP Laborator EPA I

WDNR Laboratory ID No. 721026460 WDATCP Laboratory Certification No. 105-330 EPA Laboratory ID No. W100034 Printed: 05/13/20 Page 5 of 10 NLS Project: 343087 NLS Customer: 20080

Project: Marathon County Area A Private Wells (Semi-annual)

PW24 NLS ID: 1184600 Matrix: GW

Collected: 04/22/20 08:08 Received: 04/22/20

	Result Units Dilution LOD	LOQ/MCL Analyzed Method	Lab
rarametei Giald color	none defected	04/22/20 NA	721026460
r reiu voivi Eicila odor	none detected	04/22/20 NA	721026460
riela audi	none defected	04/22/20 NA	721026460
	see attached	04/29/20 SW846 8260C	721026460
VOCS (Water) by GO/MS			A CONTRACT OF A

Values in brackets represent results greater than or equal to the LOD but less than the LOQ and are within a region of "Less-Certain Quantitation". Results greater than or equal to the LOQ are considered to be in the region of "Certain Quantitation". Results greater than or equal to the LOQ are considered to be in the region of "Certain Quantitation". Results greater than or equal to the LOQ are considered to be in the region of "Certain Quantitation".

ND = Not Detected (< LOD)</th>LOD = Limit of DetectionDWB = Dry Weight Basis%DWB = (mg/kg DWB) / 10000MCL = Maximum Contaminant Levels for Drinking Water Samples.

LOQ = Limit of Quantitation N 1000 ug/L = 1 mg/L Shaded results indicate >MCL.

NA = Not Applicable

Reviewed by:

Authorized by: R. T. Krueger President

Marathon County Solid Waste Mgmnt Dept Marathon County Landfill Attn: Meleesa Johnson Client:

R18500 East Highway 29 Ringle, WI 54471 9754 Marathon County Area A Private Wells (Semi-annual) Project:

PW17 NLS ID: 1184601 Matrix: GW

Collected: 04/22/20 08:26 Received: 04/22/20

	Doent	linite	Dilution	LOD	LOQ/MCL	Analvzed Method	Lab
Parameter	none detected	SHO				04/22/20 NA	721026460
Field color						04/22/20 NA	721026460
Field odor	lioile delected						701006460
Field turbidity	none detected					U4/ZZ/ZU NA	004070171
	see attached					04/29/20 SW846 8260C	/21026460
VOCS (water) by GOVING		And the second			And the second se		

Values in brackets represent results greater than or equal to the LOD but less than the LOQ and are within a region of "Less-Certain Quantitation". Results greater than or equal to the LOQ are considered to be in the region of "Certain Quantitation". LOD and LOQ tagged with an asterisk(*) are considered Reporting Limits. All LOD/LOQs adjusted to reflect dlution and/or solids content.

ND = Not Detected (< LOD) LOD = Limit of Detection DWB = Dry Weight Basis %DWB = (mg/kg DWB) / 10000 MCL = Maximum Contaminant Levels for Drinking Water Samples.

Shaded results indicate >MCL. LOQ = Limit of Quantitation 1000 ug/L = 1 mg/L

NA = Not Applicable

h Reviewed by:

Authorized by: R. T. Krueger President

ANALYTICAL REPORT

WDNR Laboratory ID No. 721026460 WDATCP Laboratory Certification No. 105-330 EPA Laboratory ID No. WI00034 Page 6 of 10 20080 343087 NLS Project: Printed: 05/13/20

NLS Customer:

WDNR Laboratory ID No. 721026460 WDATCP Laboratory Certification No. 105-330 EPA Laboratory ID No. W100034 Printed: 05/13/20 Page 7 of 10 NLS Project: 343087 NLS Customer: 20080 Fax: 715 446 2906 Phone: 715 446 3339	Dilution LOD LOQ/MCL Analyzed Method Lab 04/22/20 Field Method 721026460 1 of "Less-Certain Quantitation". Results greater than or equal to the LOQ are considered	if: All LOD/LOOs adjusted to reflect dlution and/or solids content. pplicable Reviewed by: Reviewed by: R.T. Krueger President President
ANALYTICAL REPO	Result Vot collected due to social distancing ut less than the LOQ and are within a region	an asterisk(*) are considered Reporting Limi OQ = Limit of Quantitation NA = Not Ap 00 ug/L = 1 mg/L naded results indicate >MCL.
NORTHERN LAKE SERVICE, INC. Analytical Laboratory and Environmental Services 400 North Lake Avenue - Crandon, WI 54520 Ph: (715)-478-2777 Fax: (715)-478-3060 Ph: (715)-478-2777 Fax: (715)-478-3060 Client: Marathon County Solid Waste Mgmnt Dept Attn: Meleesa Johnson Marathon County Landfill R18500 East Highway 29 Ringle, WI 54471 9754	Project: Marathon County Area A Private Wells (Semi-annual) PW64 NLS ID: 1184502 Matrix: GW Collected: 04/22/20 Collected: 04/22/20 07:20 Parameter I I Could not sample I I	Values in process represent results growth with a value of the region of "Certain Quantitation". LOD and LOQ tagged with ND = Not Detected (< LOD) LOD = Limit of Detection L DWB = Dry Weight Basis %DWB = (mg/kg DWB) / 10000 11 MCL = Maximum Contaminant Levels for Drinking Water Samples. S

Marathon County Solid Waste Mgmnt Dept Marathon County Landfill Attn: Meleesa Johnson Client:

R18500 East Highway 29 Ringle, WI 54471 9754

Marathon County Area A Private Wells (Semi-annual) Project:

PW88 NLS ID: 1184603 Matrix: GW

Collected: 04/22/20 08:15 Received: 04/22/20

	Result of the full its for a feel Dilution of LOD of LOOMCL.	Analyzed Method	Lab
rarameter	none detected	04/22/20 NA	721026460
		04/22/20 NA	721026460
Field odor			701076460
	none detected	U4/ZZ/ZU NA	121020400
	saa attachad	04/29/20 SW846 8260C	721026460
		a na sa ana ana ang ana ana ang ang ang ang an	And the second se

Values in brackets represent results greater than or equal to the LOD but less than the LOQ and are within a region of "Less-Certain Quantitation". Results greater than or equal to the LOQ are considered to be in the region of "Certain Quantitation". LOD and LOQ tagged with an asterisk(*) are considered Reporting Limits. All LOD/LOQs adjusted to reflect dlution and/or solids content.

MCL = Maximum Contaminant Levels for Drinking Water Samples. %DWB = (mg/kg DWB) / 10000 LOD = Limit of Detection ND = Not Detected (< LOD) DWB = Dry Weight Basis

Shaded results indicate >MCL. LOQ = Limit of Quantitation 1000 ug/L = 1 mg/L

NA = Not Applicable

4 Reviewed by:

Authorized by: R. T. Krueger President

ANALYTICAL REPORT

20080 Page 8 of 10 WDNR Laboratory ID No. 721026460 WDATCP Laboratory Certification No. 105-330 EPA Laboratory ID No. WI00034 343087 NLS Project: Printed: 05/13/20

NLS Customer:

WDNR Laboratory ID No. 721026460 WDATCP Laboratory Certification No. 105-330 EPA Laboratory ID No. W100034 Printed: 05/13/20 Page 9 of 10 NLS Project: 343087 NLS Customer: 20080 Fax: 715 446 2906 Phone: 715 446 3339	LOD LOQ/MCL Analyzed Method Lab 04/22/20 Field Method 721026460 Sertain Quantitation". Results greater than or equal to the LOQ are considered	D/LOQs adjusted to reflect dution and/or solids content. R. T. Krueger President		
ANALYTICAL REPORT	nual) Result Units Dilution no one in building OD but less than the LOQ and are within a region of "Less-C	 d with an asterisk(*) are considered Reporting Limits. All LOI LOQ = Limit of Quantitation NA = Not Applicable 1000 ug/L = 1 mg/L Shaded results indicate >MCL. 		·
NORTHERN LAKE SERVICE, INC. Analytical Laboratory and Environmental Services 400 North Lake Avenue - Crandon, WI 54520 Ph: (715)-478-2777 Fax: (715)-478-3060 Ph: (715)-478-2777 Fax: (715)-478-3060 Client: Marathon County Solid Waste Mgmnt Dept Attn: Meleesa Johnson Marathon County Landfill R18500 East Highway 29 Ringle, WI 54471 9754	Project: Marathon County Area A Private Wells (Semi-an PW48 NLS ID: 1184604 Matrix: GW Collected: 04/22/20 07:25 Received: 04/22/20 Parameter Could not sample Values in brackets represent results greater than or equal to the L	to be in the region of "Certain Quantifation". LOD and LOQ tagge ND = Not Detected (< LOD) LOD = Limit of Detection DWB = Dry Weight Basis %DWB = (mg/kg DWB) / 10000 MCL = Maximum Contaminant Levels for Drinking Water Samples		

NORTHERN LAKE SERVICE, INC. Analytical Laboratory and Environmental Services 400 North Lake Avenue - Crandon, WI 54520 Ph: (715)-478-2777 Fax: (715)-478-3060	ANALYTICAL F	REPORT	WDNR Laboratory ID No. 721026460 WDATCP Laboratory Certification No. 105-330 EPA Laboratory ID No. W100034 Printed: 05/13/20 Page 10 of 10
Client: Marathon County Solid Waste Mgmnt Dept Attn: Meleesa Johnson Marathon County Landfil			NLS Project: 343087 NLS Customer: 20080
Ringle, WI 54471 9754			Fax: 715 446 2906 Phone: 715 446 3339
Project: Marathon County Area A Private Wells (Semi-annu: Trip Blank NLS ID: 1184605 Matrix: TB Collected: 04/22/20 00:00 Received: 04/22/20	al		
Parameter VOCs (water) by GC/MS	Result Units see attached	Dilution Sector CD Sector	OQ/MCL Analyzed Method Lab 04/29/20 NA 721026460
Values in brackets represent results greater than or equal to the LOC to be in the region of "Certain Quantitation". LOD and LOQ tagged w ND = Not Detected (< LOD) LOD = Limit of Detection DWB = Dry Weight Basis %DWB = (mg/kg DWB) / 10000 MCL = Maximum Contaminant Levels for Drinking Water Samples.	Dut less than the LOQ and are within with an asterisk(*) are considered Rep LOQ = Limit of Quantitation NJ 1000 ug/L = 1 mg/L Shaded results indicate >MCL.	n a region of "Less-Certain Quantitat iorting Limits. All LOD/LOQs adjuste A = Not Applicable Reviewed b	tion". Results greater than or equal to the LOQ are considere ed to reflect dlution and/or solids content. Authorized by: Dy: <i>Dorder & Content</i> , R. T. Krueger President

ANALYTICAL RESULTS: VOC's by P&T/GCMS - Water					×		Page 1 of 7
Customer: Marathon County Solid Waste Mgmnt Dept Project Description: Marathon County Area A Private W	NLS Project: ells (Semi-annua	343087 11) 08-07					
Project little: letter letter and the provide the providet the provide the provide the provide the pro	100 100 100 100 100 100 100 100 100 100						
Sample: 1184596 HW25 Collected: U4/ZZ/ZU Analyzed: U4/Z9/ZU- An							
ANALYTE NAME	RESULT	UNITS		LOU COF	LOU 0	MICL	NOIG
Benzene		ng/L		07.0	0.84	c	
Bromodichloromethane	CIN CIN	ug/L	-	0.27	0.91	80	
Bromomethane	QN	ug/L		0.87	2.9		
Carbon Tetrachloride	QN	ug/L	-	0.17	0.55	ъ	
Chlorobenzene	QN	ng/L	~ -	0.34	1.1	100	
Chloroethane	QN	ng/L	~	1.5	5.0		
Chloroform	Q	ng/L		0.24	0.81	80	
Chloromethane	2	ug/L		0.81	2.1	Co	
Dibromochloromethane		ng/L		0.20	10.0	00	
1,2-Dibromo-3-Chloropropane		ng/L		0.30	1.2		
1,2-Dibromoethane		ug/L		0.47	0.55		
Dibromomethane		ug/L	-	0.78	600	600	
1,2-Uichlorobenzene		10/L		0.28	0.93	000	
1,3-Dicrioroberizerie	QN	10/1		0.30	0.99	75	
1,4-Discriptionserie	QN	ua/L		0.59	2.0		
	QN	na/L		0.20	0.66		
1, 1-Dictributionaria	Q	ng/L		0.43	4.1	5	
1.1-Dichloroethene	QN	ng/L	~	0.19	0.63	7	
cis-1.2-Dichloroethene	QN	ug/L	۲	0.20	0.66	20	
trans-1.2-Dichloroethene	QN	ng/L	،	0.19	0.64	00	
1,2-Dichloropropane	Q	ug/L	~- ,	0.16	0.54	Q	
cis-1,3-Dichloropropene	QN	ug/L	,	0.16	0.53		
trans-1,3-Dichloropropene	QN	ng/L		0.24	0.81	100	
Ethylbenzene	Q	ng/L		0.33		/00	
Methylene chloride		ug/L		10.0	0.2	0	
Naphthalene		ng/L	-	0.00	7.v 7	100	
Styrene		ug/L	-	0.40	5 (r	001	
ortho-Xylene		ug/L	-	0.30	<u>, -</u>	5	
		10/1	-	0.29	0.98	1000	
1 oluene	QN	ua/L	•	0.11	0.35	200	
1, 1, 1-11ththlocathane	QN	na/L	Ļ	0.21	0.72	5	
1, 1, 2-1110110000114116 Trickhornathena	QN	ng/L	-	0.35	1.2	5	
Trichloroflinromethane	QN	ng/L	٢	0.22	0.75		
	ΟN	ng/L	.	0.14	0.47	.2	
meta para-Xvlene	QN	ng/L	-	0.70	2.3	10000	
MTBE	QN	ug/L	~	0.41	4.6		
Acetone	Q	ug/L	~	0.7	23		
Carbon Disulfide	<u>NN</u>	ng/L	-	1.0	10.0		
Methyl Ethyl Ketone		ng/L		2.1	2. A		
Tetrahydrofuran	ND 14 40/	ng/L	-	1.1	0.0		v.
Dibromofluoromethane (SURR)	114%		_				ν w
1 oluene-d8 (SUKK)	105%						S
1-Bromo-4-Fiuoropenzerie (SUNK)	0/ 001						
NOIES APPLICABLE TO INIS ANALISIS.							

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ANALYTICAL RESULTS: VOC's by P&T/GCMS - Water							Page 2 of 7
Customer: Marathon County Solid Waste Mgmnt Dept Project Description: Marathon County Area A Private We	NLS Project: lls (Semi-annua ded: 05/13/202	343087 al) 0.08-07					
Sample: 11 84597 PW68 Collected: 04/22/20 Analyzed: 04/29/20 - Ani	ilytes: 43						
ANALYTE NAME	RESULT	UNITS	DIL	гор	LOQ	MCL	Note
Benzene	Q	ng/L		0.25	0.84	5 00	
Bromodichloromethane	ON ON	ng/L		0.20	0.07	80 SO	
Bromotorm		ng/L		0.87	2.9	2	
Diomonteurane	QN	na/L		0.17	0.55	5	
	QN	ug/L	1	0.34	1.1	100	
Chloroethane	DN	ug/L	۲-	1.5	5.0		
Chloroform	ΩN	ug/L	-	0.24	0.81	80	
Chloromethane	Q	ng/L		0.81	2.1	Vo	
Dibromochloromethane	ON CN	ng/L		0.20	10.0	00	
1,2-Dibromo-3-Chloropropane		ng/L	-	0.00	1.4		
1,2-Dibromoethane		ng/F		0.47	0.71		
Dibromomethane		ug/L	- -	0.08	0.00	ROD	
1,2-Dicniorobenzene		10/L	- -	0.28	0.93	200	
1, 3-UICINIOTODENZERIE	UN	10/1		0.30	0.99	75	
1,4-Dicitiorouterie	UN	ua/L		0.59	2.0		
Uctilioroutituoroniteurarie	QN	ua/L		0.20	0.66		
1, 1-Dichloroethaue	QN	ng/L	-	0.43	1.4	5	
1,2-Dichloroethane	QN	ng/L	-	0.19	0.63	7	
cis-1 2-Dichloroethene	DN	ng/L	τ-	0.20	0.66	70	
trans-1.2-Dichloroethene	QN	ug/L	÷	0.19	0.64	100	
1,2-Dichloropropane	DN	ng/L	-	0.16	0.54	5	-
cis-1,3-Dichloropropene	QN	ng/L		0.16	0.53		
trans-1,3-Dichloropropene	QN	ng/L		0.24	10.0	002	
Ethylbenzene	ON .	ug/L		0.53	- c	00/	
Methylene chloride	ON .	ng/L		10.0	0 0	C	
Naphthalene	ON CI	ng/L	-	0.00	7.7	007	
Styrene	ON .	ng/L	-	0.40		001	
ortho-Xylene		ng/L	- -	0.00	- <u>-</u> 	ч	
Tetrachloroethene		ng/L	- 14-	0.04	0.98	1000	
1 oluene	CN CN	- 101 1/01		0.11	0.35	200	
1, 1, 1-1 richioroeurarie	QN	ua/L	-	0.21	0.72	5	
1, 1,2-1110100011010 Trichloroethene	QN	na/L		0.35	1.2	5	
Trichloroftuoromethane	QN	ng/L	٢	0.22	0.75		
Vinvl chloride	QN	ng/L	₹	0.14	0.47	.2	
meta para-Xvlene	DN	ug/L	-	0.70	2.3	10000	
MTBE	DN	ng/L	~	0.41	1.4		
Acetone	Q	ng/L	~	7.0	23		
Carbon Disulfide	QN	ng/L		0.1/	/0.0		
Methyl Ethyl Ketone	QN	ng/L		7.7	<u>8.0</u>		
Tetrahydrofuran	ON NO.	ng/L	- -	1.7	0.0		v
Dibromofluoromethane (SURR)	110%		- -				o vo
Toluene-d8 (SURR)	101%		-				S
1-Bromo-4-Fluoropenzene (JUKK)	N 101		-				
NOTES APPLICABLE 10 THIS ANALYSIS: S – This commund is a surrorate used to evaluate the rulality control of a r	nethod.						
S = 1 חוצ כסוום למשווע וצ א צמוו טקאה מאפת וט בעשומשום וום למשווע עלוויעי עי עי							

3 Collected: 04/22/20 Analyzed: 04/29/20Ana	Wies: 43	1 MITC	1				
	ND		- - -	0.25	0.84	2 12	
	CIN	10/1	-	0.20	0.67	80	
	Q	ng/L		0.27	0.91	80	
	QN	ug/L	-	0.87	2.9		
	DN	ug/L	-	0.17	0.55	5	
	QN	ug/L	~	0.34	1.1	100	
	QN	ug/L	~	1.5	5.0	00	
	QN	ug/L		0.24	0.81	ßU	
	QN	ng/L	-	0.81	2.7		
	QN	ug/L	•	0.20	0.67	80	
boane	QN	ug/L	۴.,	0.36	1.2		
	QN	ng/L	-	0.21	0.71		
	QN	ng/L	1	0.17	0.55		
	QN	ng/L	t	0.28	0.92	600	
	QN	ng/L	÷	0.28	0.93		
	CN	ua/L		0.30	0.99	75	
	CIN	ua/L		0.59	2.0		
	GN	na/L	1	0.20	0.66		
	QN	ua/L	~	0.43	1.4	5	
	QN	na/L	-	0.19	0.63	7	
	QN	ng/L	1	0.20	0.66	70	
	QN	ug/L	٣	0.19	0.64	100	
	DN	ug/L	-	0.16	0.54	D.	
	QN	ng/L	-	0.16	0.53		
a	QN	ng/L	τ	0.24	0.81		
	QN	ng/L	٢	0.33	1.1	200	
	QN	ng/L	~	0.61	2.0	5	
	QN	ng/L	۲-	0.66	2.2		
	QN	ng/L	٢	0.40	1.3	100	
	QN	ng/L	t	0.38	1.3		
	ND	ng/L	~	0.34	1.1	5	
	QN	ng/L	~	0.29	0.98	1000	
	DN	ng/L	-	0.11	0.35	200	
	Q	ng/L	-	0.21	0.72	£	
	QN	ng/L		0.35	1.2	Q.	
	QN	ng/L	~	0.22	0.75		
	QN	ng/L	1	0.14	0.47	.2	
	QN	ng/L	~	0.70	2.3	10000	
	QN	ng/L	Ļ	0.41	1.4		
	QN	ng/L	Ł	7.0	23		
	QN	ng/L	1	0.17	0.57		
	QN	ng/L		2.7	9.0		
	QN	ug/L		1.7	5.5		
SURR)	106%		-				ν N
	70110		~ ~				<i>~</i>
	0/ 1 1		-) (

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NOTES APPLICABLE TO THIS ANALYSIS: S = This compound is a surrogate used to evaluate the quality control of a method.

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ANALYTICAL RESULTS: VOC's by P&T/GCMS - Water				Page 4 of 7	
Customer: Marathon County Solid Waste Mgmnt Dept NLS F Project Description: Marathon County Area A Private Wells (Sem	roject: 343087 ii-annual) 14212020 08-07				
Project 11116: 11000000000000000000000000000000					
anditate and the name	SULT UNITS	DIL LOD	LÕQ	MCL Note	
Renzene N	D ng/L	1 0.25	0.84	5	
Bromodichloromethane	D ug/L	1 0.20	0.67	80	Τ
Bromoform	D ug/L	1 0.27	0.91	80	
Bromomethane	D ng/L	1 0.87	2.9	Ŀ	1
Carbon Tetrachloride	D ng/L	1 0.1/	CC.0	ი 700	
Chlorobenzene	D ng/L	1 0.34	1.1	001.	Τ
Chloroethane	D ng/L		0.0	Vα	
Chloroform	D ng/L		10.0	00	Т
Chloromethane	D ng/L		0.67	80	
Dibromochloromethane	D ng/L		10.0	00	
1,2-Dibromo-3-Chloropropane	n ng/L		0.74		Τ
1,2-Dibromoethane	D ng/L	1 0.21	0.44		
		1 0.08	0 07	600	1
1,2-Dichlorobenzene		1 0.20	0.02	2000	T
1,3-Dichlorobenzene			000	75	T
1,4-Dichlorobenzene		1 0.50	0.00		1
		1 0 00	0.66		Τ
		1 0.43	14	5	[
1,2-Dichlorocthono		1 0.19	0.63	<u> </u>	
1, r-Dichinototitate ris-1 2 Dichinothene	D na/L	1 0.20	0.66	20	
trans_1,2-Dichlornethene	D ug/L	1 0.19	0.64	100	
1 2-Dichloropropane	D ng/L	1 0.16	0.54	Ω.	
ris-1 3-Dichloropropene	D ng/L	1 0.16	0.53		
trans-1.3-Dichloropropene	D ng/L	1 0.24	0.81		
Fthulbenzene	D ng/L	1 0.33	1.1	700	Τ
Mathvlane chloride	D ng/L	1 0.61	2.0	S	
Nanhthalene	D ng/L	1 0.66	2.2		
Styrene	D ng/L	1 0.40	1.3	100	
ortho-Xvlene N	D ug/L	1 0.38	1.3		
Tetrachloroethene	D ng/L	1 0.34	1.1	Q	T
Toluene	D ug/L	1 0.29	0.98	1000	T
1.1.1-Trichloroethane	D ug/L	1 0.11	0.35	200	
1.1.2-Trichloroethane	D ug/L	1 0.21	0.72	5	T
Trichloroethene	D ug/L	1 0.35	1.2	5	T
Trichlorofluoromethane	D	1 0.22	0.75		
Vinvi chloride	ID ug/L	1 0.14	0.47	2	Τ
meta nara-Xviene	ID ng/L	1 0.70	2.3	10000	
MTRE	ID ng/L	1 0.41	1.4		
	ID ng/L	1 7.0	23		1
Carbon Disulfide	ID ng/L	1 0.17	0.57		
Mathvil Ethvil Ketnue	D ng/L	1 2.7	9.0		
Tetrahvdroftiran	ID ng/L	1 1.7	5.5		
Dihromofluoromethane (SURR) 10	8%	~		S	Τ
Tolitene-d8 (SURR) 10	8%	£-		S	
1-Brown-4-Fluorohenzene (SURR)	6%	-		S	-
NOTES ADDI ICARI E TO THIS ANALYSIS.					

ANALYTICAL RESULTS: VOC's by P&T/GCMS - Water	NI S Drojact.	243087					Page 5 of 7	
Project Description: Marathon County Sond Waste migning Dept Project Description: Marathon County Area A Private Wells Project Title:	(Semi-annua d: 05/13/2020	08:07						
Sample: 1184601 PW17 Collected: 04/22/20 Analyzed: 04/29/20 - Analyt	es: 43							Sec. No.
ANALYTE NAME	RESULT	UNITS	DIL	гор	LOQ	MCL	Note	
Benzene	QN	ng/L		0.25	0.84	5		
Bromodichloromethane		ng/L	+-	0.20	0.07	80		
Bromomotherno		ug/F		0.87	2.9	20		
Diomonteutane Carhon Tatrachlonide		ua/L		0.17	0.55	5		
	Q	ng/L		0.34	1.1	100		
Chloroethane	QN	ng/L	1	1.5	5.0			
Chloroform	QN	ug/L	۲-	0.24	0.81	80		
Chloromethane	DN	ug/L		0.81	2.7			
Dibromochloromethane	QN	ug/L	~	0.20	0.67	80		
1,2-Dibromo-3-Chloropropane	Q	ug/L	+	0.36	1.2			
1,2-Dibromoethane	QN	ug/L	-	0.21	0.71			
Dibromomethane	DN	ug/L		0.17	0.55			
1.2-Dichlorobenzene	DN	ug/L	۲	0.28	0.92	600		
1.3-Dichlorobenzene	QN	ug/L		0.28	0.93			
1.4-Dichlorobenzene	DN	ug/L	-	0.30	0.99	75		
Dichlorodifluoromethane	DN	ug/L		0.59	2.0			
1,1-Dichloroethane	DN	ug/L	-	0.20	0.66			
1,2-Dichloroethane	Q	ng/L		0.43	1.4	ى م		
1,1-Dichloroethene	Q	ug/L	-	0.19	0.63	7		
cis-1,2-Dichloroethene	QN	ng/L	-	0.20	0.66	70		
trans-1,2-Dichloroethene	Q	ng/L	~ .	0.19	0.64	100		
1,2-Dichloropropane.	QN	ug/L	,	0.16	0.54	G	·	
cis-1,3-Dichloropropene	ON S	ug/L		0.10	0.03			
trans-1, 3-Dichloropropene	Q	ug/L	 - 	0.24	0.81	001		
Ethylbenzene	QN	ng/L	 .	0.33	1.1	/00		
Methylene chloride	QN	ug/L	-	0.61	2.0	£		
Naphthalene	DN	ug/L	, - 1	0.66	2.2			
Styrene	DN	ng/L		0.40	1.3	100		
ortho-Xylene	Q	ug/L	,	0.38	1.3		-	
Tetrachloroethene	QN	ug/L	-	0.34	1.1	G		
Toluene	DN	ug/L		0.29	0.98	1000		
1 1 1-Trichloroethane	Q	ug/L	-	0.11	0.35	200		
1 1 2-Trichloroethane	ΟN	ng/L	٢	0.21	0.72	5		
Trichloroethene	DN	ng/L	-	0.35	1.2	5		
Trichlorofluoromethane	QN	ug/L	~	0.22	0.75			
Vinvl chloride	QN	ug/L		0.14	0.47	2		
meta nara-Xviene	QN	ng/L	-	0.70	2.3	10000		
MTRF	QN	ng/L	1	0.41	1.4			
Acetone	DN	ng/L	1	7.0	23			
Carbon Disulfide	QN	ug/L		0.17	0.57			
Methvi Ethvi Ketone	DN	ug/L	-	2.7	0.6			
Tetrahvdrofuran	QN	ug/L	~	1.7	5.5			
Dibromofluoromethane (SURR)	110%		-				ν ν	
Toluene-d8 (SURR)	113%						n	
1-Bromo-4-Fluorobenzene (SURR)	106%		-				0	
NOTES APPLICARLE TO THIS ANALYSIS:								

NOTES APPLICABLE TO THIS ANALYSIS: S = This compound is a surrogate used to evaluate the quality control of a method.

ANALYTICAL RESULTS: VOC's by P&T/GCMS - Water						Ċ.	age 6 of 7
Customer: Marathon County Solid Waste Mgmnt Dept Project Description: Marathon County Area A Private Well	NLS Project: s (Semi-annua	343087 al)					
Project Title: Template: APP3 Print	ted: 05/13/202	0 08:07					
Sample: 1184603 PW88 Collected: 04/22/20 Analyzed: 04/29/20 - Anal	ytes: 43						
ANALYTE NAME	RESULT	UNITS	DIL	LOD	LOQ	MCL	Note
Benzene	Q	ng/L		0.25	0.84	5	
Bromodichloromethane	Q	ng/L	~- ·	0.20	0.67	80	
Bromoform	ON CA	ng/L		0.27	0.91	QQ	
Bromomethane	GN	ug/L		0.17	0.55	5	
	2	na/L		0.34	1.1	100	
Chloroethane	QN	ng/L	1	1.5	5.0		
Chloroform	QN	ng/L	۰.	0.24	0.81	80	
Chloromethane	QN	ng/L	~-	0.81	2.7		
Dibromochloromethane	QN	ng/L		0.20	0.67	80	
1,2-Dibromo-3-Chloropropane	Q	ng/L		0.36	1.2		
1,2-Dibromoethane		ng/L	,	17.0	0.71		
Dibromomethane		ng/L		0.17	0.00	ROD	
1,2-Dichlorobenzene		1/0/1		0.20	0.02	000	
1, 3-Dichlorobenzene		10/1	- -	0.30	000	75	
1,4-DICNIODENZENE				0.59	2.0	2	
Utitioi outituoi ottieduarie 1.1. Dichlornathane	QN	ua/L		0.20	0.66		
1,1-Dichloroethane	QN	ng/L	-	0.43	1.4	5	
1 1-Dichloroethene	QN	ng/L	+	0.19	0.63	7	
cis-1 2-Dichloroethene	QN	ng/L	-	0.20	0.66	70	
trans-1.2-Dichloroethene	DN	ug/L	-	0.19	0.64	100	
1.2-Dichloropropane	QN	ng/L		0.16	0.54	£	
cis-1,3-Dichloropropene	Q	ug/L	~ ~~	0.16	0.53		
trans-1, 3-Dichloropropene	Q	ug/L	+	0.24	0.81		
Ethylbenzene	Q	ng/L	~-	0.33	1.1	700	
Methylene chloride	Q	ng/L		0.61	2.0	G	
Naphthalene	2	ng/L	- ,	0.00	77		
Styrene		ng/L		0.40	<u>.</u> ,	001	
ortho-Xylene		ng/L	- +	0.34	-	ч	
Tetrachloroethene			- -	40°C	0.98	1000	
1 oluene		10/J		0.11	0.35	200	
1, 1, 1-1 Incluoroeularie 4-4-5 Trichlaroethane	Q	ua/L		0.21	0.72	5	
1, 1,2-1 Hornothana Trichloroethana	2	na/L	1	0.35	1.2	5	
Trichloroftionomethane	Q	ng/L	-	0.22	0.75		
Vinvi chloride	QN	ng/L	t	0.14	0.47	.2	
meta nara-Xvlene	Q	ng/L	+	0.70	2.3	10000	
MTBE	QN	ug/L	÷	0.41	1.4		
Acetone	Q	ug/L	~	7.0	23		
Carbon Disulfide	QN	ng/L	<u>-</u>	0.17	0.57		
Methyl Ethyl Ketone	Q	ng/L	~- ,	2.7	0.0		
Tetrahydrofuran	ON .	ng/L	-	1./	0.0		v
Dibromofluoromethane (SURR)	109%		- -				5 V.
Toluene-d8 (SURK)	0/011						N (C
1-Bromo-4-Fluorobenzene (SUKK)	0/ 001		-				
NOTES APPLICABLE 10 1HIS ANALYSIS:							

ANALVTICAL RESULTS: VOC's by P&T/GCMS - Water				Page 7 of 7	
Customer: Marathon County Solid Waste Mgmut Dept NLS P Project Description: Marathon County Area A Private Wells (Sem	roject: 343087 i-annual)	·		1	
Project Title: Template: APP3 Printed: 05/	13/2020 08:07				1.000 million
Sample: 1184605 Trip Blank Collected 04/22/20 Analyzed 04/29/20 Analytes	43 15 15 15 15 15 15 15 15 15 15 15 15 15				
ANALYTE NAME RES	ULT UNITS	DIL LOD	LOQ	MCL Note	r
Benzene	D ng/L	1 0.25	0.84	ۍ ۵	r
Bromodichloromethane		1 0.20	0.0	80	_
Bromomethane		1 0.87	2.9		—
	D ug/L	1 0.17	0.55	5	
Chlorobenzene	D ug/L	1 0.34	1.1	100	
Chloroethane	D ug/L	1 1.5	5.0		- 1
Chloroform	D ug/L	1 0.24	0.81	80	
Chloromethane	D ug/L	1 0.81	2.7	~~~	-
Dibromochloromethane	ng/L	1 0.20	0.6/	80	-
1,2-Dibromo-3-Chloropropane	D ng/L	1 0.36	1.2		- T -
1,2-Dibromoethane	ng/L	17.0	0.71		
Dibromomethane	n ng/r		0.00		
1,2-Dichlorobenzene	D ng/L	07.0	0.02	000	
1,3-Dichlorobenzene	n ng/F	0.20	0.90	75	
1,4-Dichlorobenzene	n ng/L	1 0.50	0.23	61	
Dichlorodifluoromethane	0 ng/r		0.66		-1
1,1-Dichloroethane	n ng/L	1 0.20	1 4	ĸ	-T
1,2-Dichloroethane			1.0	, r	-1
1,1-Dichloroethene		1 0.0	0.66	70	-
cis-1,2-Dichloroethene		1 0.50	0.00	100	-
trans-1,2-Dichloroethene		1 0.19	10.0	201	1
1,2-Dichloropropane		1 0.10	0.53	2	-
cis-1,3-Dichloropropene			0.00		1
trans-1,3-Dichloropropene	0 10 10 10 10			200	1
Ethylbenzene		4 0.33	000	00 K	1
Methylene chloride		1 0.0	0.2	2	—
Naphthalene		0.00	1.6	100	1
Styrene		1 0.38	1.0		1
		1 0.34		5	1
		1 0.29	0.98	1000	1
	D ua/L	1 0.11	0.35	200	
	D na/L	1 0.21	0.72	5	
	D ug/L	1 0.35	1.2	5	T
	D ug/L	1 0.22	0.75		r
	D ug/L	1 0.14	0.47	.2	—r
Willyl Unionac mata nara-Xvilana	D ng/L	1 0.70	2.3	10000	ŀ
MTRF	D ng/L	1 0.41	1.4		r
Acetone	D ug/L	1 7.0	23		•••••r
Carbon Disulfide	D ug/L	1 0.17	0.57		
Methyl Ethyl Ketone	D ug/L	1 2.7	<u>9.0</u>		-
. Tetrahvdrofuran	D ug/L	1 1.7	5.5		-
Dibromofluoromethane (SURR) 110	%	.			-r
Toluene-d8 (SURR)				000	
1-Bromo-4-Fluorobenzene (SURR)	3%			2	-1
NOTES APPLICABLE TO THIS ANALYSIS:					

NLS Private Well Sampling Form and Chain Of Custody (pg 1 of 3)

SITE: Marathon Co. Solid Waste Management Dept. / Area A - Private Wells

<u>1A</u>									
NLS Lab #:	Point Name / Hor	ncowner: PW25	DNR ID #:	Time Purged:	Color:	Odor:	Turbidity (quant,text,color):		
1184596	Levano R221828 Di	loski, Mike Incan Road, Hatley	353	5 Min	ND.	РЪ	ND		
Date Sampled:	Time Sampled:	Sample Location:		¢			Treated (Y/N)		
4.22-20	0758	1758 OWESIDE FAUCRET NO SIDE of House							
Comments:				×					
				-					
•		·		•					
Softener - no Collec	:t from - outside fau	icet, north side of house		- 14					

NLS Lab #:	Point Name / Hon	neowner: PW68	DNR ID #:	Time Purged:	Color:	Odor:	Turbidity (q	uant,text,color):
597	Andras R221630 Du	chko, Anthony ncan Road, Hatley	361	5 MIN	ND.	VD	NP	•
Date Sampled:	Time Sampled:	Sample Location:						Treated (Y/N)
4-22-20	0243	NO.	SIDE	ONTSIDE SI	44ci=7			N
Comments:								I
		• • · · · · · • • · · · • • · · · • • • · · · • • • · · · • • • • · · • • • • · · •						
Softener - yes but no	t in use Collect from	om – kitchen sink or Nort	n outside faucei					

NLS Lab #: 598	Point Name / Hor Falkov R221765 Du	neowner: PW18 vski, Janet ncan Road, Hatley	DNR ID #: 350	Time Purged:	Color:	Odor:	Turbidity (1	quant,text,color):
Date Sampled: 4.22-20	Time Sampled: 0750	Sample Location:						Treated (Y/N)
Comments: Softener – no Coll	0945_ NO	ME HoM	Ē	WATER AT	NOT DUTSIDE	TURNEN BACIL FAUC	ON.	

NLS Lab #:	Point Name / Hon	neowner: PW19	DNR ID #:	Time Purged:	Color:	Odor:	Turbidity (q	uant,text,color):
599	Jozwiak R221561 Du	-Popp, Rose Incan Road, Hatley	351	5 mid	NP	D4	JU 1	›.
Date Sampled:	Time Sampled:	Sample Location:						Treated (Y/N)
4.12 . 20	0735.	OUTSIDE	FAUG	FT FRONT	THARD			N
Comments:								
Softerer - Yes. Collec	ct from – outside fa	ucet across driveway fron	1 house (not sof	tened – should be on ye	ear round)			
Rev 3/19					See re	verse side for sample o	custody informatio	n

NLS Private Well Sampling Form and Chain Of Custody (052 of 3)

SITE: Marathon Co. Solid Waste Management Dept. / Area A - Private Wells

2A							
NLS Lab #:	Point Name / Hon	neowner: PW24	DNR ID #:	Time Purged:	Color:	Odor:	Turbidity (quant,text,color):
600	Kluck	r, Mark	352	SMIN	ND	NO.	NO
000	R221950 Du	incan Road, Hatley		J			Treated (V/N)
Date Sampled:	Time Sampled:	Sample Location:		ALL TALL	· · · · · · ·		<u> </u>
4.22.20	0808	04751	DG FR	chi - hoci	= /		<u>17</u> .
Comments:							
Softener-no Colle	ct from - front outs	ide faucet (4/21/10 – own	ner said front fa	ucet now works and	is closer to the wel	I)	

NLS Lab #:	Point Name / Hon	icowner: PW17	DNR ID #:	Time Purged:	Color:	Odor:	Turbidity (quant,text,color):
601	Lieb R174825 Wi	e, Neal llow Lane, Hatley	028	5 mil	ND.	ND	סט
Date Sampled:	Time Sampled:	Sample Location:	,				Treated (Y/N)
4-22.20	0826	E45T	SIDIE	HUUSE	OUT SIDE	FAUGET	N
Comments:							
,							
Softener-no Colle	ct from – East side (of house near driveway					

NLS Lab #:	Point Name / Hon	neowner: PW64	DNR ID #:	Time Purged:	Color:	Odor:	Turbidity (qu	nnt,text,color):
602	Sheeha R221524 Dur	an, Carol Ican Road, Hatley	359					
Date Sampled:	Time Sampled:	Sample Location:						Treated (Y/N)
4.12.20.	0720.							
Comments:	DID No	T SAMPLE	. (mu	st 90 i	UTO HOU	1515		~
			Solu	AL DISTAN	KEING 1	PRIVERTS	COLLECT	
Softener - yes Colle	ect from – faucet in	basement before softener	•		•			

NLS Lab #:	Point Name / Hon	1cowner: PW88	DNR ID #:	Time Purged:	Color:	Odor:	Turbidity (qu:	ant,text,color):
603	Zogata R222036 Du	1, Aaron Incan Road, Hatley	365	5 . Men	NO	ND	ND	
Date Sampled:	Time Sampled:	Sample Location:						Treated (Y/N)
4.22.20 0815 OUTSIDE FALLET FRONT of Hauss N.								<u>Ч.</u>
Comments:								
		WATE	2 High	PAESSURE	Cours	NOT 9ET	Hize	
Softener – yes Colle	ect from – outside fa	>1 G ucct, front of house	HP4 5	TREAD LU	ka (A sp	RAM)!		
Rev 3/19		والمرابقة والمرابقة والمرابعة والمرابع والمرابعة والمرابعة والمرابعة والمرابعة والمرابعة والمرابعة والمرابعة و			Sce re	verse side for sample c	ustody information	1

NLS Private Well Sampling Form and Chain Of Custody (953 of 3)

SITE: Marathon Co. Solid Waste Management Dept. / Area A – Private Wells

NLS Lab#:	Point Name / Hor Marathor R222005 Do	neowner: PW48 1 Co. Hwy Dept. Incan Road, Hatley	DNR ID #: 356	Time Purged:	Color:	Odor;	Turbidity (q	iant,text,color):
Date Sampled:	Time Sampled:	Sample Location:	<u> </u>					Treated (Y/N)
4.22-20	8125							<u> </u>
Comments:								
		No oN		BHILDING	,		·•	
Softener - No. Collec	t from - bathroom/	locker room sink						

NLS Lab #:	Point Name / Hom	eowner:	DNR ID #:	Time Purged:	Color:	Odor:	Turbidity (quant,text,color):	:
	Tri	p Blank	999	N/A	N/A	N/A	N/A	
Date Sampled:	Time Sampled:	Sample Location:	J	L		L	Treated (X	?/N)
	N/A			N/A			N/A	
Comments:								

NLS Lab #:	Point Name / Hom	cowner:	DNR ID #:	Time Purged:	Color:	Odor:	Turbidity (qu	ant,text,color):
Date Sampled:	Time Sampled:	Sample Location:	·		<u> </u>			Treated (Y/N)
Comments:								
				,		1.1		
				<u>``</u>	·	N		* *.

NLS Lab #:	Point Name / Homeowner: DNR ID #: Time Purged: Color: Odor: Turbidity (quinting the second						ant,text,color):	
Date Sampled:	Time Sampled:	Sample Location:				L	<u> </u>	Treated (Y/N)
				· · · · · · · · · · · · · · · · · · ·				
Comments:								
Rev 3/19					See re	verse side for sample o	sustedy information	antin Brandense de La Constantin 1



Marathon County Solid Waste Department 172900 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

November 16, 2020

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. 2892, 3338 & 4228 (Private Wells)

In accordance with NR 140, please accept this notification of groundwater monitoring results for the reporting period of October 2020. There were no exceedances in the private groundwater wells, and therefore an exceedance table has not been provided.

If you have any questions, please contact me.

Thank you,

David Hagenbucher Operations Manager Marathon County Solid Waste

C.c: Nathan Coller, Aaron Kent, Megan Ballweg, Sally Hronek, Meleesa Johnson, Lee Daigle, Mark Torresani.

State of Wisconsin Department of Natural Resources

ENVIRONMENTAL MONITORING DATA CERTIFICATION

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

 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, consultar Northern Lake Service, Inc.	nt, facility owner):		
Contact for questions about data formatting. Include Name: Chris Geske E-mail: lims@nlslab.com	data preparer's name, telephone n Phone: 715-47	umber and E-mail add 8-2777	lress:
Facility Name Marathon County Area A Private Wells	License No. / Monitoring ID 02892	Facility ID [FID]	Actual sampling dates (e.g., July 2-6, 200 OCTOBER -21-2020
The enclosed results are for sampling required in the OCTOBER -2020	e month(s) of: (e.g., June 2003)	-	
Groundwater monitoring data from monitoring w Groundwater monitoring data from private water Leachate monitoring data Notification attached? No. No groundwater standards or explosive gas limits were excee Yes, a notification of values exceeding a groundwater standard i groundwater standard and preliminary analysis of the cause a Yes, a notification of values exceeding an explosive gas limit is a explosive gas limits.	ells Gas mon supply wells data Air monit eded. s attached. It includes a list of monitoring points nd significance of any concentration. attached. It includes the monitoring points, date	oring data	
Certification			<11
To the best of my knowledge, the information rep are true and correct. Furthermore, I have attache groundwater standards or explosive gas levels, a concentrations exceeding groundwater standard	ported and statements made on the d complete notification of any sa and a preliminary analysis of the c s.	is data submittal an mpling values meeti ause and significan	d attachements ng or exceeding t of
David Hagenbucher	Manager		715-551-5864
Facility Representative Name (Print)	Title November 16 2 Date	((Area Code) Telephone No.
FOR DNR USE ONLY. Check action ta Found uploading problems on Notified contact of problems on	iken, and record date and your ini Initials Upload	tials. Describe on b ed data successfully	ack side if necessary.

Marathon County Solid Waste Mgmnt Dept Marathon County Area A Private Wells 10-01-2020

Lab ID: 721026460 NLS Project: 355944 Collected: 10-01-2020 License: 02892 FID:

EXCEEDANCES:

Well Desc (Point ID)	Parameter	Units	Result	PAL / ACL	ES	Comments

ANALYTICAL REPORT

WDNR Laboratory ID No. 721026460 WDATCP Laboratory Certification No. 105-330 EPA Laboratory ID No. W100034

Printed: 11/16/20 Page 1 of 17

NLS Project: 355944

NLS Customer: 20080

Fax: 715 446 2906 Phone: 715 446 3339

Client: Marathon County Solid Waste Mgmnt Dept Attn: Dave Hagenbucher Marathon County Landfill R18500 East Highway 29 Ringle, WI 54471 9754

Project: Marathon County Area A Private Wells October 2020

PW48 NLS ID: 1223772 Matrix: GW Collected: 10/21/20 09:03 Received: 10/21/20

Parameter	Result	Units	Dilution	LOD	LOQ/MCL	Analyzed	Method	Lab
Field color	none detected					10/21/20	NA	721026460
Field odor	none detected					10/21/20	NA	721026460
Field turbidity	none detected					10/21/20	NA	721026460
VOCs (water) by GC/MS	see attached					10/28/20	SW846 8260C	721026460

Values in brackets represent results greater than or equal to the LOD but less than the LOQ and are within a region of "Less-Certain Quantitation". Results greater than or equal to the LOQ are considered to be in the region of "Certain Quantitation". LOD and LOQ tagged with an asterisk(*) are considered Reporting Limits. All LOD/LOQs adjusted to reflect dlution and/or solids content.

ND = Not Detected (< LOD)</th>LOD = Limit of DetectionDWB = Dry Weight Basis%DWB = (mg/kg DWB) / 10000MCL = Maximum Contaminant Levels for Drinking Water Samples.

LOQ = Limit of Quantitation 1000 ug/L = 1 mg/L Shaded results indicate >MCL.

NA = Not Applicable

Maliz Reviewed by:

ANALYTICAL REPORT

WDNR Laboratory ID No. 721026460 WDATCP Laboratory Certification No. 105-330 EPA Laboratory ID No. WI00034 Printed: 11/16/20 Page 2 of 17

NLS Project: 355944

NLS Customer: 20080

Fax: 715 446 2906 Phone: 715 446 3339

Client: Marathon County Solid Waste Mgmnt Dept Attn: Dave Hagenbucher Marathon County Landfill R18500 East Highway 29 Ringle, WI 54471 9754

Project: Marathon County Area A Private Wells October 2020

PW88 NLS ID: 1223773 Matrix: GW Collected: 10/21/20 00:00 Received: 10/21/20

Parameter	Result	Units	Dilution	LOD	LOQ/MCL	Analyzed	Method	Lab
Field color	none detected					10/21/20	NA	721026460
Field odor	none detected					10/21/20	NA	721026460
Field turbidity	none detected					10/21/20	NA	721026460
VOCs (water) by GC/MS	see attached					10/28/20	SW846 8260C	721026460

Values in brackets represent results greater than or equal to the LOD but less than the LOQ and are within a region of "Less-Certain Quantitation". Results greater than or equal to the LOQ are considered to be in the region of "Certain Quantitation". LOD and LOQ tagged with an asterisk(*) are considered Reporting Limits. All LOD/LOQs adjusted to reflect dlution and/or solids content.

ND = Not Detected (< LOD)</th>LOD = Limit of DetectionDWB = Dry Weight Basis%DWB = (mg/kg DWB) / 10000MCL = Maximum Contaminant Levels for Drinking Water Samples.

LOQ = Limit of Quantitation 1000 ug/L = 1 mg/L Shaded results indicate >MCL.

NA = Not Applicable

Maliz Reviewed by:

ANALYTICAL REPORT

WDNR Laboratory ID No. 721026460 WDATCP Laboratory Certification No. 105-330 EPA Laboratory ID No. WI00034 Printed: 11/16/20 Page 3 of 17

NLS Project: 355944

NLS Customer: 20080

Fax: 715 446 2906 Phone: 715 446 3339

Client: Marathon County Solid Waste Mgmnt Dept Attn: Dave Hagenbucher Marathon County Landfill R18500 East Highway 29 Ringle, WI 54471 9754

Project: Marathon County Area A Private Wells October 2020

PW24 NLS ID: 1223774 Matrix: GW Collected: 10/21/20 08:55 Received: 10/21/20

Parameter	Result	Units	Dilution	LOD	LOQ/MCL	Analyzed	Method	Lab
Field color	none detected					10/21/20	NA	721026460
Field odor	none detected					10/21/20	NA	721026460
Field turbidity	none detected					10/21/20	NA	721026460
VOCs (water) by GC/MS	see attached					10/28/20	SW846 8260C	721026460

Values in brackets represent results greater than or equal to the LOD but less than the LOQ and are within a region of "Less-Certain Quantitation". Results greater than or equal to the LOQ are considered to be in the region of "Certain Quantitation". LOD and LOQ tagged with an asterisk(*) are considered Reporting Limits. All LOD/LOQs adjusted to reflect dlution and/or solids content.

ND = Not Detected (< LOD)</th>LOD = Limit of DetectionDWB = Dry Weight Basis%DWB = (mg/kg DWB) / 10000MCL = Maximum Contaminant Levels for Drinking Water Samples.

LOQ = Limit of Quantitation 1000 ug/L = 1 mg/L Shaded results indicate >MCL.

NA = Not Applicable

Walkz Reviewed by:

ANALYTICAL REPORT

WDNR Laboratory ID No. 721026460 WDATCP Laboratory Certification No. 105-330 EPA Laboratory ID No. WI00034 Printed: 11/16/20 Page 4 of 17

NLS Project: 355944

NLS Customer: 20080

Fax: 715 446 2906 Phone: 715 446 3339

Client: Marathon County Solid Waste Mgmnt Dept Attn: Dave Hagenbucher Marathon County Landfill R18500 East Highway 29 Ringle, WI 54471 9754

Project: Marathon County Area A Private Wells October 2020

PW25 NLS ID: 1223775 Matrix: GW Collected: 10/21/20 08:45 Received: 10/21/20

Parameter	Result	Units	Dilution	LOD	LOQ/MCL	Analyzed	Method	Lab
Field color	none detected					10/21/20	NA	721026460
Field odor	none detected					10/21/20	NA	721026460
Field turbidity	none detected					10/21/20	NA	721026460
VOCs (water) by GC/MS	see attached					10/28/20	SW846 8260C	721026460

Values in brackets represent results greater than or equal to the LOD but less than the LOQ and are within a region of "Less-Certain Quantitation". Results greater than or equal to the LOQ are considered to be in the region of "Certain Quantitation". LOD and LOQ tagged with an asterisk(*) are considered Reporting Limits. All LOD/LOQs adjusted to reflect dlution and/or solids content.

ND = Not Detected (< LOD)</th>LOD = Limit of DetectionDWB = Dry Weight Basis%DWB = (mg/kg DWB) / 10000MCL = Maximum Contaminant Levels for Drinking Water Samples.

LOQ = Limit of Quantitation 1000 ug/L = 1 mg/L Shaded results indicate >MCL.

NA = Not Applicable

Walkz Reviewed by:

ANALYTICAL REPORT

WDNR Laboratory ID No. 721026460 WDATCP Laboratory Certification No. 105-330 EPA Laboratory ID No. WI00034 Printed: 11/16/20 Page 5 of 17

NLS Project: 355944

NLS Customer: 20080

Fax: 715 446 2906 Phone: 715 446 3339

Client: Marathon County Solid Waste Mgmnt Dept Attn: Dave Hagenbucher Marathon County Landfill R18500 East Highway 29 Ringle, WI 54471 9754

Project: Marathon County Area A Private Wells October 2020

PW18 NLS ID: 1223776 Matrix: GW Collected: 10/21/20 08:37 Received: 10/21/20

Parameter	Result	Units	Dilution	LOD	LOQ/MCL	Analyzed	Method	Lab
Field color	none detected					10/21/20	NA	721026460
Field odor	none detected					10/21/20	NA	721026460
Field turbidity	none detected					10/21/20	NA	721026460
VOCs (water) by GC/MS	see attached					10/28/20	SW846 8260C	721026460

Values in brackets represent results greater than or equal to the LOD but less than the LOQ and are within a region of "Less-Certain Quantitation". Results greater than or equal to the LOQ are considered to be in the region of "Certain Quantitation". LOD and LOQ tagged with an asterisk(*) are considered Reporting Limits. All LOD/LOQs adjusted to reflect dlution and/or solids content.

ND = Not Detected (< LOD)</th>LOD = Limit of DetectionDWB = Dry Weight Basis%DWB = (mg/kg DWB) / 10000MCL = Maximum Contaminant Levels for Drinking Water Samples.

LOQ = Limit of Quantitation 1000 ug/L = 1 mg/L Shaded results indicate >MCL.

NA = Not Applicable

Walkz Reviewed by:

ANALYTICAL REPORT

WDNR Laboratory ID No. 721026460 WDATCP Laboratory Certification No. 105-330 EPA Laboratory ID No. WI00034 Printed: 11/16/20 Page 6 of 17

NLS Project: 355944

NLS Customer: 20080

Fax: 715 446 2906 Phone: 715 446 3339

Client: Marathon County Solid Waste Mgmnt Dept Attn: Dave Hagenbucher Marathon County Landfill R18500 East Highway 29 Ringle, WI 54471 9754

Project: Marathon County Area A Private Wells October 2020

PW68 NLS ID: 1223777 Matrix: GW Collected: 10/21/20 08:30 Received: 10/21/20

Parameter	Result	Units	Dilution	LOD	LOQ/MCL	Analyzed	Method	Lab
Field color	none detected					10/21/20	NA	721026460
Field odor	none detected					10/21/20	NA	721026460
Field turbidity	none detected					10/21/20	NA	721026460
VOCs (water) by GC/MS	see attached					10/28/20	SW846 8260C	721026460

Values in brackets represent results greater than or equal to the LOD but less than the LOQ and are within a region of "Less-Certain Quantitation". Results greater than or equal to the LOQ are considered to be in the region of "Certain Quantitation". LOD and LOQ tagged with an asterisk(*) are considered Reporting Limits. All LOD/LOQs adjusted to reflect dlution and/or solids content.

ND = Not Detected (< LOD)</th>LOD = Limit of DetectionDWB = Dry Weight Basis%DWB = (mg/kg DWB) / 10000MCL = Maximum Contaminant Levels for Drinking Water Samples.

LOQ = Limit of Quantitation 1000 ug/L = 1 mg/L Shaded results indicate >MCL.

NA = Not Applicable

Maliz Reviewed by:

ANALYTICAL REPORT

WDNR Laboratory ID No. 721026460 WDATCP Laboratory Certification No. 105-330 EPA Laboratory ID No. W100034 Printed: 11/16/20 Page 7 of 17

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NLS Project: 355944

NLS Customer: 20080

Fax: 715 446 2906 Phone: 715 446 3339

Client: Marathon County Solid Waste Mgmnt Dept Attn: Dave Hagenbucher Marathon County Landfill R18500 East Highway 29 Ringle, WI 54471 9754

Project: Marathon County Area A Private Wells October 2020

PW19 NLS ID: 1223778 Matrix: GW Collected: 10/21/20 08:20 Received: 10/21/20

Parameter	Result	Units	Dilution	LOD	LOQ/MCL	Analyzed	Method	Lab
Field color	none detected					10/21/20	NA	721026460
Field odor	none detected					10/21/20	NA	721026460
Field turbidity	none detected					10/21/20	NA	721026460
VOCs (water) by GC/MS	see attached					10/28/20	SW846 8260C	721026460

Values in brackets represent results greater than or equal to the LOD but less than the LOQ and are within a region of "Less-Certain Quantitation". Results greater than or equal to the LOQ are considered to be in the region of "Certain Quantitation". LOD and LOQ tagged with an asterisk(*) are considered Reporting Limits. All LOD/LOQs adjusted to reflect dlution and/or solids content.

ND = Not Detected (< LOD)</th>LOD = Limit of DetectionDWB = Dry Weight Basis%DWB = (mg/kg DWB) / 10000MCL = Maximum Contaminant Levels for Drinking Water Samples.

LOQ = Limit of Quantitation 1000 ug/L = 1 mg/L Shaded results indicate >MCL.

NA = Not Applicable

Walkz Reviewed by:
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WDNR Laboratory ID No. 721026460 WDATCP Laboratory Certification No. 105-330 EPA Laboratory ID No. WI00034 Printed: 11/16/20 Page 8 of 17

NLS Project: 355944

NLS Customer: 20080

Fax: 715 446 2906 Phone: 715 446 3339

Client: Marathon County Solid Waste Mgmnt Dept Attn: Dave Hagenbucher Marathon County Landfill R18500 East Highway 29 Ringle, WI 54471 9754

Project: Marathon County Area A Private Wells October 2020

PW64 NLS ID: 1223779 Matrix: GW Collected: 10/21/20 08:10 Received: 10/21/20

Parameter	Result	Units	Dilution	LOD	LOQ/MCL	Analyzed	Method	Lab
Field color	none detected					10/21/20	NA	721026460
Field odor	none detected					10/21/20	NA	721026460
Field turbidity	none detected					10/21/20	NA	721026460
VOCs (water) by GC/MS	see attached					10/28/20	SW846 8260C	721026460

Values in brackets represent results greater than or equal to the LOD but less than the LOQ and are within a region of "Less-Certain Quantitation". Results greater than or equal to the LOQ are considered to be in the region of "Certain Quantitation". LOD and LOQ tagged with an asterisk(*) are considered Reporting Limits. All LOD/LOQs adjusted to reflect dlution and/or solids content.

ND = Not Detected (< LOD)</th>LOD = Limit of DetectionDWB = Dry Weight Basis%DWB = (mg/kg DWB) / 10000MCL = Maximum Contaminant Levels for Drinking Water Samples.

LOQ = Limit of Quantitation 1000 ug/L = 1 mg/L Shaded results indicate >MCL.

NA = Not Applicable

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ANALYTICAL REPORT

WDNR Laboratory ID No. 721026460 WDATCP Laboratory Certification No. 105-330 EPA Laboratory ID No. WI00034 Printed: 11/16/20 Page 9 of 17

NLS Project: 355944

NLS Customer: 20080

Fax: 715 446 2906 Phone: 715 446 3339

Client: Marathon County Solid Waste Mgmnt Dept Attn: Dave Hagenbucher Marathon County Landfill R18500 East Highway 29 Ringle, WI 54471 9754

Project: Marathon County Area A Private Wells October 2020

PW27 NLS ID: 1223780 Matrix: GW Collected: 10/21/20 10:25 Received: 10/21/20

Parameter	Result	Units	Dilution	LOD	LOQ/MCL	Analyzed	Method	Lab
Field color	none detected					10/21/20	NA	721026460
Field odor	none detected					10/21/20	NA	721026460
Field turbidity	none detected					10/21/20	NA	721026460
VOCs (water) by GC/MS	see attached					10/29/20	SW846 8260C	721026460

Values in brackets represent results greater than or equal to the LOD but less than the LOQ and are within a region of "Less-Certain Quantitation". Results greater than or equal to the LOQ are considered to be in the region of "Certain Quantitation". LOD and LOQ tagged with an asterisk(*) are considered Reporting Limits. All LOD/LOQs adjusted to reflect dlution and/or solids content.

ND = Not Detected (< LOD)</th>LOD = Limit of DetectionDWB = Dry Weight Basis%DWB = (mg/kg DWB) / 10000MCL = Maximum Contaminant Levels for Drinking Water Samples.

LOQ = Limit of Quantitation 1000 ug/L = 1 mg/L Shaded results indicate >MCL.

NA = Not Applicable

Maliz Reviewed by:

ANALYTICAL REPORT

WDNR Laboratory ID No. 721026460 WDATCP Laboratory Certification No. 105-330 EPA Laboratory ID No. WI00034

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NLS Project: 355944 NLS Customer: 20080

Fax: 715 446 2906 Phone: 715 446 3339

Client: Marathon County Solid Waste Mgmnt Dept Attn: Dave Hagenbucher Marathon County Landfill R18500 East Highway 29 Ringle, WI 54471 9754

Project: Marathon County Area A Private Wells October 2020

PW65 NLS ID: 1223781 Matrix: GW Collected: 10/21/20 10:16 Received: 10/21/20

Parameter	Result	Units	Dilution	LOD	LOQ/MCL	Analyzed	Method	Lab
Field color	none detected					10/21/20	NA	721026460
Field odor	none detected					10/21/20	NA	721026460
Field turbidity	none detected					10/21/20	NA	721026460
VOCs (water) by GC/MS	see attached					10/29/20	SW846 8260C	721026460

Values in brackets represent results greater than or equal to the LOD but less than the LOQ and are within a region of "Less-Certain Quantitation". Results greater than or equal to the LOQ are considered to be in the region of "Certain Quantitation". LOD and LOQ tagged with an asterisk(*) are considered Reporting Limits. All LOD/LOQs adjusted to reflect dlution and/or solids content.

ND = Not Detected (< LOD)</th>LOD = Limit of DetectionDWB = Dry Weight Basis%DWB = (mg/kg DWB) / 10000MCL = Maximum Contaminant Levels for Drinking Water Samples.

LOQ = Limit of Quantitation 1000 ug/L = 1 mg/L Shaded results indicate >MCL.

NA = Not Applicable

Maliz Reviewed by:

ANALYTICAL REPORT

WDNR Laboratory ID No. 721026460 WDATCP Laboratory Certification No. 105-330 EPA Laboratory ID No. WI00034

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NLS Project: 355944 NLS Customer: 20080

Fax: 715 446 2906 Phone: 715 446 3339

Client: Marathon County Solid Waste Mgmnt Dept Attn: Dave Hagenbucher Marathon County Landfill R18500 East Highway 29 Ringle, WI 54471 9754

Project: Marathon County Area A Private Wells October 2020

PW100 NLS ID: 1223782 Matrix: GW Collected: 10/21/20 10:07 Received: 10/21/20

Parameter	Result	Units	Dilution	LOD	LOQ/MCL	Analyzed	Method	Lab
Field color	none detected					10/21/20	NA	721026460
Field odor	none detected					10/21/20	NA	721026460
Field turbidity	none detected					10/21/20	NA	721026460
VOCs (water) by GC/MS	see attached					10/29/20	SW846 8260C	721026460

Values in brackets represent results greater than or equal to the LOD but less than the LOQ and are within a region of "Less-Certain Quantitation". Results greater than or equal to the LOQ are considered to be in the region of "Certain Quantitation". LOD and LOQ tagged with an asterisk(*) are considered Reporting Limits. All LOD/LOQs adjusted to reflect dlution and/or solids content.

ND = Not Detected (< LOD)</th>LOD = Limit of DetectionDWB = Dry Weight Basis%DWB = (mg/kg DWB) / 10000MCL = Maximum Contaminant Levels for Drinking Water Samples.

LOQ = Limit of Quantitation 1000 ug/L = 1 mg/L Shaded results indicate >MCL.

NA = Not Applicable

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ANALYTICAL REPORT

WDNR Laboratory ID No. 721026460 WDATCP Laboratory Certification No. 105-330 EPA Laboratory ID No. WI00034

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NLS Project: 355944 NLS Customer: 20080

Fax: 715 446 2906 Phone: 715 446 3339

Client: Marathon County Solid Waste Mgmnt Dept Attn: Dave Hagenbucher Marathon County Landfill R18500 East Highway 29 Ringle, WI 54471 9754

Project: Marathon County Area A Private Wells October 2020

PW80 NLS ID: 1223783 Matrix: GW Collected: 10/21/20 09:53 Received: 10/21/20

Parameter	Result	Units	Dilution	LOD	LOQ/MCL	Analyzed	Method	Lab
Field color	none detected					10/21/20	NA	721026460
Field odor	none detected					10/21/20	NA	721026460
Field turbidity	none detected					10/21/20	NA	721026460
VOCs (water) by GC/MS	see attached					10/29/20	SW846 8260C	721026460

Values in brackets represent results greater than or equal to the LOD but less than the LOQ and are within a region of "Less-Certain Quantitation". Results greater than or equal to the LOQ are considered to be in the region of "Certain Quantitation". LOD and LOQ tagged with an asterisk(*) are considered Reporting Limits. All LOD/LOQs adjusted to reflect dlution and/or solids content.

ND = Not Detected (< LOD)</th>LOD = Limit of DetectionDWB = Dry Weight Basis%DWB = (mg/kg DWB) / 10000MCL = Maximum Contaminant Levels for Drinking Water Samples.

LOQ = Limit of Quantitation 1000 ug/L = 1 mg/L Shaded results indicate >MCL.

NA = Not Applicable

Maliz Reviewed by:

ANALYTICAL REPORT

WDNR Laboratory ID No. 721026460 WDATCP Laboratory Certification No. 105-330 EPA Laboratory ID No. WI00034

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NLS Project: 355944 NLS Customer: 20080

Fax: 715 446 2906 Phone: 715 446 3339

Client: Marathon County Solid Waste Mgmnt Dept Attn: Dave Hagenbucher Marathon County Landfill R18500 East Highway 29 Ringle, WI 54471 9754

Project: Marathon County Area A Private Wells October 2020

PW53 NLS ID: 1223784 Matrix: GW Collected: 10/21/20 10:00 Received: 10/21/20

Parameter	Result	Units	Dilution	LOD	LOQ/MCL	Analyzed	Method	Lab
Field color	none detected					10/21/20	NA	721026460
Field odor	none detected					10/21/20	NA	721026460
Field turbidity	none detected					10/21/20	NA	721026460
VOCs (water) by GC/MS	see attached					10/29/20	SW846 8260C	721026460

Values in brackets represent results greater than or equal to the LOD but less than the LOQ and are within a region of "Less-Certain Quantitation". Results greater than or equal to the LOQ are considered to be in the region of "Certain Quantitation". LOD and LOQ tagged with an asterisk(*) are considered Reporting Limits. All LOD/LOQs adjusted to reflect dlution and/or solids content.

ND = Not Detected (< LOD)</th>LOD = Limit of DetectionDWB = Dry Weight Basis%DWB = (mg/kg DWB) / 10000MCL = Maximum Contaminant Levels for Drinking Water Samples.

LOQ = Limit of Quantitation 1000 ug/L = 1 mg/L Shaded results indicate >MCL.

NA = Not Applicable

Maliz Reviewed by:

ANALYTICAL REPORT

WDNR Laboratory ID No. 721026460 WDATCP Laboratory Certification No. 105-330 EPA Laboratory ID No. WI00034

Printed: 11/16/20 Page 14 of 17

NLS Project: 355944 NLS Customer: 20080

Fax: 715 446 2906 Phone: 715 446 3339

Client: Marathon County Solid Waste Mgmnt Dept Attn: Dave Hagenbucher Marathon County Landfill R18500 East Highway 29 Ringle, WI 54471 9754

Project: Marathon County Area A Private Wells October 2020

PW29 NLS ID: 1223785 Matrix: GW Collected: 10/21/20 09:48 Received: 10/21/20

Parameter	Result	Units	Dilution	LOD	LOQ/MCL	Analyzed	Method	Lab
Field color	none detected					10/21/20	NA	721026460
Field odor	none detected					10/21/20	NA	721026460
Field turbidity	none detected					10/21/20	NA	721026460
VOCs (water) by GC/MS	see attached					10/29/20	SW846 8260C	721026460

Values in brackets represent results greater than or equal to the LOD but less than the LOQ and are within a region of "Less-Certain Quantitation". Results greater than or equal to the LOQ are considered to be in the region of "Certain Quantitation". LOD and LOQ tagged with an asterisk(*) are considered Reporting Limits. All LOD/LOQs adjusted to reflect dlution and/or solids content.

ND = Not Detected (< LOD)</th>LOD = Limit of DetectionDWB = Dry Weight Basis%DWB = (mg/kg DWB) / 10000MCL = Maximum Contaminant Levels for Drinking Water Samples.

LOQ = Limit of Quantitation 1000 ug/L = 1 mg/L Shaded results indicate >MCL.

NA = Not Applicable

Maliz Reviewed by:

ANALYTICAL REPORT

WDNR Laboratory ID No. 721026460 WDATCP Laboratory Certification No. 105-330 EPA Laboratory ID No. WI00034 Printed: 11/16/20 Page 15 of 17

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NLS Project: 355944

NLS Customer: 20080

Fax: 715 446 2906 Phone: 715 446 3339

Client: Marathon County Solid Waste Mgmnt Dept Attn: Dave Hagenbucher Marathon County Landfill R18500 East Highway 29 Ringle, WI 54471 9754

Project: Marathon County Area A Private Wells October 2020

PW54 NLS ID: 1223786 Matrix: GW

Collected: 10/21/20 09:40 Received: 10/21/20

Parameter	Result	Units	Dilution	LOD	LOQ/MCL	Analyzed	Method	Lab
Could not sample	could not sample					10/21/20	Field Method	721026460
Values in brackets represent results greater than or equal to the LOD	but less than the LOC	and are within a region	n of "Less-Certa	in Quanti	tation". Result	s greater th	an or equal to the LOC	are considered
to be in the region of "Certain Quantitation". LOD and LOQ tagged with	th an asterisk(*) are c	onsidered Reporting Lin	mits. All LOD/LO	DQs adju	sted to reflect of	dlution and/	or solids content.	

 ND = Not Detected (< LOD)</td>
 LOD = Limit of Detection

 DWB = Dry Weight Basis
 %DWB = (mg/kg DWB) / 10000

 MCL = Maximum Contaminant Levels for Drinking Water Samples.

LOQ = Limit of Quantitation 1000 ug/L = 1 mg/L Shaded results indicate >MCL.

NA = Not Applicable

Reviewed by: Malrz

ANALYTICAL REPORT

WDNR Laboratory ID No. 721026460 WDATCP Laboratory Certification No. 105-330 EPA Laboratory ID No. WI00034

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NLS Project: 355944 NLS Customer: 20080

Fax: 715 446 2906 Phone: 715 446 3339

Client: Marathon County Solid Waste Mgmnt Dept Attn: Dave Hagenbucher Marathon County Landfill R18500 East Highway 29 Ringle, WI 54471 9754

Project: Marathon County Area A Private Wells October 2020

PW17 NLS ID: 1223787 Matrix: GW Collected: 10/21/20 10:55 Received: 10/21/20

Parameter	Result	Units	Dilution	LOD	LOQ/MCL	Analyzed	Method	Lab
Field color	none detected					10/21/20	NA	721026460
Field odor	none detected					10/21/20	NA	721026460
Field turbidity	none detected					10/21/20	NA	721026460
VOCs (water) by GC/MS	see attached					10/29/20	SW846 8260C	721026460

Values in brackets represent results greater than or equal to the LOD but less than the LOQ and are within a region of "Less-Certain Quantitation". Results greater than or equal to the LOQ are considered to be in the region of "Certain Quantitation". LOD and LOQ tagged with an asterisk(*) are considered Reporting Limits. All LOD/LOQs adjusted to reflect dlution and/or solids content.

ND = Not Detected (< LOD)</th>LOD = Limit of DetectionDWB = Dry Weight Basis%DWB = (mg/kg DWB) / 10000MCL = Maximum Contaminant Levels for Drinking Water Samples.

LOQ = Limit of Quantitation 1000 ug/L = 1 mg/L Shaded results indicate >MCL.

NA = Not Applicable

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ANALYTICAL REPORT

WDNR Laboratory ID No. 721026460 WDATCP Laboratory Certification No. 105-330 EPA Laboratory ID No. WI00034

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Marathon County Solid Waste Mgmnt Dept Attn: Dave Hagenbucher Marathon County Landfill R18500 East Highway 29

NLS Project: 355944 NLS Customer: 20080

Fax: 715 446 2906 Phone: 715 446 3339

Project: Marathon County Area A Private Wells October 2020

Trip Blank NLS ID: 1223788 Matrix: TB

Client:

Collected: 10/21/20 00:00 Received: 10/21/20

Ringle, WI 54471 9754

Parameter	Result	Units	Dilution	LOD	LOQ/MCL	Analyzed	Method	Lab
VOCs (water) by GC/MS	see attached					10/29/20	NA	721026460
Values in brackets represent results greater than or equal to the LOD	but less than the LOC	and are within a region	n of "Less-Certa	in Quanti	tation". Result	s greater th	nan or equal to the LOC	are considered
to be in the region of "Certain Quantitation". LOD and LOQ tagged w	ith an asterisk(*) are c	onsidered Reporting Lir	mits. All LOD/LO	DQs adju	sted to reflect of	dlution and/	or solids content.	

 ND = Not Detected (< LOD)</td>
 LOD = Limit of Detection

 DWB = Dry Weight Basis
 %DWB = (mg/kg DWB) / 10000

 MCL = Maximum Contaminant Levels for Drinking Water Samples.

LOQ = Limit of Quantitation 1000 ug/L = 1 mg/L Shaded results indicate >MCL.

NA = Not Applicable

Walky Reviewed by:

Sample: 1223772 PW48 Collected: 10/21/20 Analyzed: 10/28/20 - Analytes: 43

ANALYTE NAME	RESULT	UNITS	DIL	LOD	LOQ	MCL	Note
Benzene	ND	ug/L	1	0.25	0.84	5	
Bromodichloromethane	ND	ug/L	1	0.20	0.67	80	
Bromoform	ND	ug/L	1	0.27	0.91	80	
Bromomethane	ND	ug/L	1	0.87	2.9		4
Carbon Tetrachloride	ND	ug/L	1	0.17	0.55	5	
Chlorobenzene	ND	ug/L	1	0.34	1.1	100	1
Chloroethane	ND	ug/L	1	1.5	5.0		
Chloroform	ND	ug/L	1	0.24	0.81	80	
Chloromethane	ND	ug/L	1	0.81	2.7		
Dibromochloromethane	ND	ug/L	1	0.20	0.67	80	
1,2-Dibromo-3-Chloropropane	ND	ug/L	1	0.36	1.2		
1,2-Dibromoethane	ND	ug/L	1	0.21	0.71		
Dibromomethane	ND	ug/L	1	0.17	0.55		
1,2-Dichlorobenzene	ND	ug/L	1	0.28	0.92	600	
1,3-Dichlorobenzene	ND	ug/L	1	0.28	0.93		1
1,4-Dichlorobenzene	ND	ug/L	1	0.30	0.99	75	
Dichlorodifluoromethane	ND	ug/L	1	0.59	2.0		
1,1-Dichloroethane	ND	ug/L	1	0.20	0.66		
1,2-Dichloroethane	ND	ug/L	1	0.43	1.4	5	1
1,1-Dichloroethene	ND	ug/L	1	0.19	0.63	7	
cis-1.2-Dichloroethene	ND	ua/L	1	0.20	0.66	70	
trans-1.2-Dichloroethene	ND	ua/L	1	0.19	0.64	100	
1.2-Dichloropropane	ND	ua/L	1	0.16	0.54	5	
cis-1.3-Dichloropropene	ND	ua/L	1	0.16	0.53		
trans-1.3-Dichloropropene	ND	ua/L	1	0.24	0.81		
Ethylbenzene	ND	ug/L	1	0.33	1.1	700	
Methylene chloride	ND	ua/L	1	0.61	2.0	5	
Naphthalene	ND	ua/L	1	0.66	2.2		
Styrene	ND	ug/L	1	0.40	1.3	100	
ortho-Xvlene	ND	ug/L	Ť	0.38	1.3		
Tetrachloroethene	ND	ug/L	1	0.34	1.1	5	
Toluene	ND	ug/l	1	0.29	0.98	1000	
1.1.1-Trichloroethane	ND	ug/L	1	0.11	0.35	200	
1.1.2-Trichloroethane	ND	ug/l	1	0.21	0.72	5	1
Trichloroethene	ND	ug/L	1	0.35	1.2	5	
Trichlorofluoromethane	ND	ug/L	î	0.22	0.75		
Vinvl chloride	ND	ug/l	1	0.14	0.47	2	1
meta para-Xvlene	ND	ug/L	1	0.70	23	10000	
MTRE	ND	ug/L	1	0.41	1.0	10000	
Acetone	[7.5]	ug/L	- Ý	7.0	23		1
Carbon Disulfide	ND	ug/L	- À	0.17	0.57		•
Methyl Ethyl Ketone	ND	ug/L	1	27	9.0		
Tetrahydrofuran	ND	ug/L	Ŷ	17	5.5		
Dibromofluoromethane (SLIRR)	118%	ugit	Ť	1.1	0.0		S
Toluene-d8 (SLIRR)	110%		1				0
1-Bromo A-Eluorobenzene (SLIPR)	115%		1				9
	11370						0

NOTES APPLICABLE TO THIS ANALYSIS:

J = Result enclosed in brackets is between LOD and LOQ, a region of less certain quantitation.

Sample: 1223773 PW88 Collected: 10/21/20 Analyzed: 10/28/20 - Analytes: 43

ANALYTE NAME	RESULT	UNITS	DIL	LOD	LOQ	MCL	Note
Benzene	ND	ug/L	1	0.25	0.84	5	
Bromodichloromethane	ND	ug/L	1	0.20	0.67	80	
Bromoform	ND	ug/L	1	0.27	0.91	80	
Bromomethane	ND	ug/L	1	0.87	2.9		
Carbon Tetrachloride	ND	ug/L	1	0.17	0.55	5	
Chlorobenzene	ND	ug/L	1	0.34	1.1	100	
Chloroethane	ND	ug/L	1	1.5	5.0		
Chloroform	ND	ug/L	1	0.24	0.81	80	
Chloromethane	ND	ug/L	1	0.81	2.7	71.	
Dibromochloromethane	ND	ug/L	1	0.20	0.67	80	
1,2-Dibromo-3-Chloropropane	ND	ug/L	1	0.36	1.2		
1,2-Dibromoethane	ND	ug/L	1	0.21	0.71		
Dibromomethane	ND	ug/L	1	0.17	0.55		
1,2-Dichlorobenzene	ND	ug/L	1	0.28	0.92	600	
1,3-Dichlorobenzene	ND	ug/L	1	0.28	0.93		
1,4-Dichlorobenzene	ND	ug/L	1	0.30	0.99	75	
Dichlorodifluoromethane	ND	ug/L	1	0.59	2.0		
1,1-Dichloroethane	ND	ug/L	1	0.20	0.66		
1,2-Dichloroethane	ND	ug/L	1	0.43	1.4	5	
1,1-Dichloroethene	ND	ug/L	1	0.19	0.63	7	
cis-1,2-Dichloroethene	ND	ug/L	1	0.20	0.66	70	
trans-1,2-Dichloroethene	ND	ug/L	1	0.19	0.64	100	
1,2-Dichloropropane	ND	ug/L	1	0.16	0.54	5	
cis-1,3-Dichloropropene	ND	ug/L	1	0.16	0.53		
trans-1,3-Dichloropropene	ND	ug/L	1	0.24	0.81		
Ethylbenzene	ND	ug/L	1	0.33	1.1	700	
Methylene chloride	ND	ug/L	1	0.61	2.0	5	
Naphthalene	ND	ug/L	1	0.66	2.2	1000	
Styrene	ND	ug/L	1	0.40	1.3	100	
ortho-Xylene	ND	ug/L	1	0.38	1.3		
Tetrachloroethene	ND	ug/L	1	0.34	1.1	5	
Toluene	ND	ug/L	1	0.29	0.98	1000	
1,1,1-Trichloroethane	ND	ug/L	1	0,11	0.35	200	
1,1,2-Trichloroethane	ND	ug/L	1	0.21	0.72	5	
Trichloroethene	ND	ug/L	1	0.35	1.2	5	
Trichlorofluoromethane	ND	ug/L	1	0.22	0.75		
Vinyl chloride	ND	ug/L	1	0.14	0.47	.2	
meta,para-Xylene	ND	ug/L	1	0.70	2.3	10000	
MTBE	ND	ug/L	1	0.41	1.4		
Acetone	[14]	ug/L	1	7.0	23		J
Carbon Disulfide	ND	ug/L	1	0.17	0.57		
Methyl Ethyl Ketone	ND	ug/L	1	2.7	9.0		
Tetrahydrofuran	ND	ug/L	1	1.7	5.5		
Dibromofluoromethane (SURR)	113%	124	1				S
Toluene-d8 (SURR)	108%		1				S
1-Bromo-4-Fluorobenzene (SURR)	107%		1				S

NOTES APPLICABLE TO THIS ANALYSIS:

J = Result enclosed in brackets is between LOD and LOQ, a region of less certain quantitation.

Sample: 1223774 PW24 Collected: 10/21/20 Analyzed: 10/28/20 - Analytes: 43

ANALYTE NAME	RESULT	UNITS	DIL	LOD	LOQ	MCL	Note
Benzene	ND	ug/L	1	0.25	0.84	5	
Bromodichloromethane	ND	ug/L	1	0.20	0.67	80	
Bromoform	ND	ug/L	1	0.27	0.91	80	
Bromomethane	ND	ug/L	1	0.87	2.9		
Carbon Tetrachloride	ND	ug/L	1	0.17	0.55	5	1
Chlorobenzene	ND	ug/L	1	0.34	1.1	100	1
Chloroethane	ND	ug/L	1	1.5	5.0		
Chloroform	ND	ug/L	1	0.24	0.81	80	
Chloromethane	ND	ug/L	1	0.81	2.7	111	
Dibromochloromethane	ND	ug/L	1	0.20	0.67	80	
1,2-Dibromo-3-Chloropropane	ND	ug/L	1	0.36	1.2		
1,2-Dibromoethane	ND	ug/L	1	0.21	0.71		
Dibromomethane	ND	ug/L	1	0.17	0.55		
1,2-Dichlorobenzene	ND	ug/L	1	0.28	0.92	600	
1,3-Dichlorobenzene	ND	ug/L	1	0.28	0.93		
1,4-Dichlorobenzene	ND	ug/L	1	0.30	0.99	75	
Dichlorodifluoromethane	ND	ug/L	1	0.59	2.0		
1,1-Dichloroethane	ND	ug/L	1	0.20	0.66		
1,2-Dichloroethane	ND	ug/L	1	0.43	1.4	5	
1,1-Dichloroethene	ND	ug/L	1	0.19	0.63	7	
cis-1,2-Dichloroethene	ND	ug/L	1	0.20	0.66	70	
trans-1,2-Dichloroethene	ND	ug/L	1	0.19	0.64	100	
1,2-Dichloropropane	ND	ug/L	1	0.16	0.54	5	
cis-1,3-Dichloropropene	ND	ug/L	1	0.16	0.53		
trans-1,3-Dichloropropene	ND	ug/L	1	0.24	0.81		
Ethylbenzene	ND	ug/L	1	0.33	1.1	700	
Methylene chloride	ND	ug/L	1	0.61	2.0	5	
Naphthalene	ND	ug/L	1	0.66	2.2	20.42	
Styrene	ND	ug/L	1	0.40	1.3	100	
ortho-Xylene	ND	ug/L	1	0.38	1.3		
Tetrachloroethene	ND	ug/L	1	0.34	1.1	5	
Toluene	ND	ug/L	1	0.29	0.98	1000	
1,1,1-Trichloroethane	ND	ug/L	1	0,11	0.35	200	
1,1,2-Trichloroethane	ND	ug/L	1	0.21	0.72	5	
Trichloroethene	ND	ug/L	1	0.35	1.2	5	
Trichlorofluoromethane	ND	ug/L	1	0.22	0.75	-	
Vinyl chloride	ND	ug/L	1	0.14	0.47	.2	
meta,para-Xylene	ND	ug/L	1	0.70	2.3	10000	
MTBE	ND	ug/L	1	0.41	1.4		
Acetone	31	ug/L	1	7.0	23		
Carbon Disulfide	ND	ug/L	1	0.17	0.57		
Methyl Ethyl Ketone	ND	ug/L	1	2.7	9.0		
Tetrahydrofuran	ND	ug/L	1	1.7	5.5		
Dibromofluoromethane (SURR)	110%		1		100000, 40, 900		S
Toluene-d8 (SURR)	103%		1				S
1-Bromo-4-Fluorobenzene (SURR)	107%		1				S

NOTES APPLICABLE TO THIS ANALYSIS:

Sample: 1223775 PW25 Collected: 10/21/20 Analyzed: 10/28/20 - Analytes: 43

ANALYTE NAME	RESULT	UNITS	DIL	LOD	LOQ	MCL	Note
Benzene	ND	ug/L	1	0.25	0.84	5	
Bromodichloromethane	ND	ug/L	1	0.20	0.67	80	
Bromoform	ND	ug/L	1	0.27	0.91	80	
Bromomethane	ND	ug/L	1	0.87	2.9		4
Carbon Tetrachloride	ND	ug/L	1	0.17	0.55	5	
Chlorobenzene	ND	ug/L	1	0.34	1.1	100	
Chloroethane	ND	ug/L	1	1.5	5.0		
Chloroform	ND	ug/L	1	0.24	0.81	80	
Chloromethane	ND	ug/L	1	0.81	2.7	111	
Dibromochloromethane	ND	ug/L	1	0.20	0.67	80	
1,2-Dibromo-3-Chloropropane	ND	ug/L	1	0.36	1.2		
1,2-Dibromoethane	ND	ug/L	1	0.21	0.71		
Dibromomethane	ND	ug/L	1	0.17	0.55		
1,2-Dichlorobenzene	ND	ug/L	1	0.28	0.92	600	
1,3-Dichlorobenzene	ND	ug/L	1	0.28	0.93		
1,4-Dichlorobenzene	ND	ug/L	1	0.30	0.99	75	
Dichlorodifluoromethane	ND	ug/L	1	0.59	2.0		
1,1-Dichloroethane	ND	ug/L	1	0.20	0.66		
1,2-Dichloroethane	ND	ug/L	1	0.43	1.4	5	
1,1-Dichloroethene	ND	ug/L	1	0.19	0.63	7	
cis-1,2-Dichloroethene	ND	ug/L	1	0.20	0.66	70	
trans-1,2-Dichloroethene	ND	ug/L	1	0.19	0.64	100	
1,2-Dichloropropane	ND	ug/L	1	0.16	0.54	5	
cis-1,3-Dichloropropene	ND	ug/L	1	0.16	0.53		
trans-1,3-Dichloropropene	ND	ug/L	1	0.24	0.81		
Ethylbenzene	ND	ug/L	1	0.33	1.1	700	
Methylene chloride	ND	ug/L	1	0.61	2.0	5	
Naphthalene	ND	ug/L	1	0.66	2.2	100.00	
Styrene	ND	ug/L	1	0.40	1.3	100	
ortho-Xylene	ND	ug/L	1	0.38	1.3		
Tetrachloroethene	ND	ug/L	1	0.34	1.1	5	
Toluene	ND	ug/L	1	0.29	0.98	1000	
1,1,1-Trichloroethane	ND	ug/L	1	0,11	0.35	200	
1,1,2-Trichloroethane	ND	ug/L	1	0.21	0.72	5	1
Trichloroethene	ND	ug/L	1	0.35	1.2	5	
Trichlorofluoromethane	ND	ug/L	1	0.22	0.75		
Vinyl chloride	ND	ug/L	1	0.14	0.47	.2	
meta,para-Xylene	ND	ug/L	1	0.70	2.3	10000	
MTBE	ND	ug/L	1	0.41	1.4		
Acetone	[9.4]	ug/L	1	7.0	23		J
Carbon Disulfide	ND	ug/L	1	0.17	0.57		
Methyl Ethyl Ketone	ND	ug/L	1	2.7	9.0		
Tetrahydrofuran	ND	ug/L	1	1.7	5.5		
Dibromofluoromethane (SURR)	117%		1		Contraction of the second		S
Toluene-d8 (SURR)	110%		1				S
1-Bromo-4-Fluorobenzene (SURR)	110%		1				S

NOTES APPLICABLE TO THIS ANALYSIS:

J = Result enclosed in brackets is between LOD and LOQ, a region of less certain quantitation.

Sample: 1223776 PW18 Collected: 10/21/20 Analyzed: 10/28/20 - Analytes: 43

ANALYTE NAME	RESULT	UNITS	DIL	LOD	LOQ	MCL	Note
Benzene	ND	ug/L	1	0.25	0.84	5	
Bromodichloromethane	ND	ug/L	1	0.20	0.67	80	
Bromoform	ND	ug/L	1	0.27	0.91	80	
Bromomethane	ND	ug/L	1	0.87	2.9		
Carbon Tetrachloride	ND	ug/L	1	0.17	0.55	5	
Chlorobenzene	ND	ug/L	1	0.34	1.1	100	1
Chloroethane	ND	ug/L	1	1.5	5.0		G
Chloroform	ND	ug/L	1	0.24	0.81	80	
Chloromethane	ND	ug/L	1	0.81	2.7		
Dibromochloromethane	ND	ug/L	1	0.20	0.67	80	
1,2-Dibromo-3-Chloropropane	ND	ug/L	1	0.36	1.2		
1,2-Dibromoethane	ND	ug/L	1	0.21	0.71		
Dibromomethane	ND	ug/L	1	0.17	0.55		
1,2-Dichlorobenzene	ND	ug/L	1	0.28	0.92	600	
1,3-Dichlorobenzene	ND	ug/L	1	0.28	0.93		r
1,4-Dichlorobenzene	ND	ug/L	1	0.30	0.99	75	
Dichlorodifluoromethane	ND	ug/L	1	0.59	2.0		
1,1-Dichloroethane	ND	ug/L	1	0.20	0.66		
1.2-Dichloroethane	ND	ug/L	1	0.43	1.4	5	(
1,1-Dichloroethene	ND	ug/L	1	0.19	0.63	7	
cis-1,2-Dichloroethene	ND	ug/L	1	0.20	0.66	70	
trans-1,2-Dichloroethene	ND	ug/L	1	0.19	0.64	100	
1,2-Dichloropropane	ND	ug/L	1	0.16	0.54	5	
cis-1,3-Dichloropropene	ND	ug/L	1	0.16	0.53		
trans-1,3-Dichloropropene	ND	ug/L	1	0.24	0.81	4.05	
Ethylbenzene	ND	ug/L	1	0.33	1.1	700	
Methylene chloride	ND	ug/L	1	0.61	2.0	5	1
Naphthalene	ND	ug/L	1	0.66	2.2		
Styrene	ND	ug/L	1	0.40	1.3	100	
ortho-Xylene	ND	ug/L	1	0.38	1.3		
Tetrachloroethene	ND	ug/L	1	0.34	1.1	5	
Toluene	ND	ug/L	1	0.29	0.98	1000	
1,1,1-Trichloroethane	ND	ug/L	1	0.11	0.35	200	
1,1,2-Trichloroethane	ND	ug/L	1	0.21	0.72	5	1
Trichloroethene	ND	ug/L	1	0.35	1.2	5	
Trichlorofluoromethane	ND	ug/L	1	0.22	0.75		
Vinyl chloride	ND	ug/L	1	0.14	0.47	.2	1
meta,para-Xylene	ND	ug/L	1	0.70	2.3	10000	
MTBE	ND	ug/L	1	0.41	1.4		
Acetone	[18]	ug/L	1	7.0	23		J
Carbon Disulfide	ND	ug/L	1	0.17	0.57		
Methyl Ethyl Ketone	ND	ug/L	1	2.7	9.0		
Tetrahydrofuran	ND	ug/L	1	1.7	5.5		
Dibromofluoromethane (SURR)	117%		1				S
Toluene-d8 (SURR)	109%		1				S
1-Bromo-4-Fluorobenzene (SURR)	112%		1				S

NOTES APPLICABLE TO THIS ANALYSIS:

J = Result enclosed in brackets is between LOD and LOQ, a region of less certain quantitation.

Sample: 1223777 PW68 Collected: 10/21/20 Analyzed: 10/28/20 - Analytes: 43

ANALYTE NAME	RESULT	UNITS	DIL	LOD	LOQ	MCL	Note
Benzene	ND	ug/L	1	0.25	0.84	5	
Bromodichloromethane	ND	ug/L	1	0.20	0.67	80	
Bromoform	ND	ug/L	1	0.27	0.91	80	
Bromomethane	ND	ug/L	1	0.87	2.9		
Carbon Tetrachloride	ND	ug/L	1	0.17	0.55	5	
Chlorobenzene	ND	ug/L	1	0.34	1.1	100	
Chloroethane	ND	ug/L	1	1.5	5.0		
Chloroform	ND	ug/L	1	0.24	0.81	80	
Chloromethane	ND	ug/L	1	0.81	2.7	T 1	
Dibromochloromethane	ND	ug/L	1	0.20	0.67	80	
1,2-Dibromo-3-Chloropropane	ND	ug/L	1	0.36	1.2		
1,2-Dibromoethane	ND	ug/L	1	0.21	0.71		
Dibromomethane	ND	ug/L	1	0.17	0.55		
1,2-Dichlorobenzene	ND	ug/L	1	0.28	0.92	600	
1,3-Dichlorobenzene	ND	ug/L	1	0.28	0.93		
1,4-Dichlorobenzene	ND	ug/L	1	0.30	0.99	75	
Dichlorodifluoromethane	ND	ug/L	1	0.59	2.0		
1,1-Dichloroethane	ND	ug/L	1	0.20	0.66		
1,2-Dichloroethane	ND	ug/L	1	0.43	1.4	5	
1,1-Dichloroethene	ND	ug/L	1	0.19	0.63	7	
cis-1,2-Dichloroethene	ND	ug/L	1	0.20	0.66	70	
trans-1,2-Dichloroethene	ND	ug/L	1	0.19	0.64	100	
1,2-Dichloropropane	ND	ug/L	1	0.16	0.54	5	
cis-1,3-Dichloropropene	ND	ug/L	1	0.16	0.53		
trans-1,3-Dichloropropene	ND	ug/L	1	0.24	0.81	1.16	
Ethylbenzene	ND	ug/L	1	0.33	1.1	700	
Methylene chloride	ND	ug/L	1	0.61	2.0	5	
Naphthalene	ND	ug/L	1	0.66	2.2	200.00	
Styrene	ND	ug/L	1	0.40	1.3	100	
ortho-Xylene	ND	ug/L	1	0.38	1.3		
Tetrachloroethene	ND	ug/L	1	0.34	1.1	5	
Toluene	ND	ug/L	1	0.29	0.98	1000	
1,1,1-Trichloroethane	ND	ug/L	1	0,11	0.35	200	
1,1,2-Trichloroethane	ND	ug/L	1	0.21	0.72	5	
Trichloroethene	ND	ug/L	1	0.35	1.2	5	
Trichlorofluoromethane	ND	ug/L	1	0.22	0.75		
Vinyl chloride	ND	ug/L	1	0.14	0.47	.2	
meta,para-Xylene	ND	ug/L	1	0.70	2.3	10000	
MTBE	ND	ug/L	1	0.41	1.4		
Acetone	ND	ug/L	1	7.0	23		
Carbon Disulfide	ND	ug/L	1	0.17	0.57		
Methyl Ethyl Ketone	ND	ug/L	1	2.7	9.0		
Tetrahydrofuran	ND	ug/L	1	1.7	5.5		
Dibromofluoromethane (SURR)	113%	1204	1				S
Toluene-d8 (SURR)	108%		1				S
1-Bromo-4-Fluorobenzene (SURR)	106%		1				S

NOTES APPLICABLE TO THIS ANALYSIS:

Sample: 1223778 PW19 Collected: 10/21/20 Analyzed: 10/28/20 - Analytes: 43

ANALYTENAME	RESULT	UNITS	DIL	LOD	LOQ	MCL	Note
Benzene	ND	ug/L	1	0.25	0.84	5	
Bromodichloromethane	ND	ug/L	1	0.20	0.67	80	
Bromoform	ND	ug/L	1	0.27	0.91	80	
Bromomethane	ND	ug/L	1	0.87	2.9		
Carbon Tetrachloride	ND	ug/L	1	0.17	0.55	5	
Chlorobenzene	ND	ug/L	1	0.34	1.1	100	
Chloroethane	ND	ug/L	1	1.5	5.0		
Chloroform	ND	ug/L	1	0.24	0.81	80	
Chloromethane	ND	ug/L	1	0.81	2.7	7 L .	
Dibromochloromethane	ND	ug/L	1	0.20	0.67	80	
1,2-Dibromo-3-Chloropropane	ND	ug/L	1	0.36	1.2		
1,2-Dibromoethane	ND	ug/L	1	0.21	0.71		
Dibromomethane	ND	ug/L	1	0.17	0.55		
1,2-Dichlorobenzene	ND	ug/L	1	0.28	0.92	600	
1,3-Dichlorobenzene	ND	ug/L	1	0.28	0.93		
1,4-Dichlorobenzene	ND	ug/L	1	0.30	0.99	75	
Dichlorodifluoromethane	ND	ug/L	1	0.59	2.0		
1,1-Dichloroethane	ND	ug/L	1	0.20	0.66		
1,2-Dichloroethane	ND	ug/L	1	0.43	1.4	5	
1,1-Dichloroethene	ND	ug/L	1	0.19	0.63	7	
cis-1,2-Dichloroethene	ND	ug/L	1	0.20	0.66	70	
trans-1,2-Dichloroethene	ND	ug/L	1	0.19	0.64	100	
1,2-Dichloropropane	ND	ug/L	1	0.16	0.54	5	
cis-1,3-Dichloropropene	ND	ug/L	1	0.16	0.53		
trans-1,3-Dichloropropene	ND	ug/L	1	0.24	0.81		
Ethylbenzene	ND	ug/L	1	0.33	1.1	700	
Methylene chloride	ND	ug/L	1	0.61	2.0	5	
Naphthalene	ND	ug/L	1	0.66	2.2	71.18	
Styrene	ND	ug/L	1	0.40	1.3	100	
ortho-Xylene	ND	ug/L	1	0.38	1.3		
Tetrachloroethene	ND	ug/L	1	0.34	1.1	5	
Toluene	ND	ug/L	1	0.29	0.98	1000	
1,1,1-Trichloroethane	ND	ug/L	1	0.11	0.35	200	
1,1,2-Trichloroethane	ND	ug/L	1	0.21	0.72	5	
Trichloroethene	ND	ug/L	1	0.35	1.2	5	
Trichlorofluoromethane	ND	ug/L	1	0.22	0.75	-	
Vinyl chloride	ND	ug/L	1	0.14	0.47	.2	
meta,para-Xylene	ND	ug/L	1	0.70	2.3	10000	
MTBE	ND	ug/L	1	0.41	1.4		
Acetone	26	ug/L	1	7.0	23		
Carbon Disulfide	ND	ug/L	1	0.17	0.57		
Methyl Ethyl Ketone	ND	ug/L	1	2.7	9.0		
Tetrahydrofuran	ND	ug/L	1	1.7	5.5		1
Dibromofluoromethane (SURR)	119%		1		The local sectors of the local		S
Toluene-d8 (SURR)	106%		1				S
1-Bromo-4-Fluorobenzene (SURR)	109%	_	1				S

NOTES APPLICABLE TO THIS ANALYSIS:

Sample: 1223779 PW64 Collected: 10/21/20 Analyzed: 10/28/20 - Analytes: 43

ANALYTE NAME	RESULT	UNITS	DIL	LOD	LOQ	MCL	Note
Benzene	ND	ua/L	1	0.25	0.84	5	11/21
Bromodichloromethane	ND	ug/L	1	0.20	0.67	80	
Bromoform	ND	ug/L	1	0.27	0.91	80	
Bromomethane	ND	ug/L	1	0.87	2.9		
Carbon Tetrachloride	ND	ug/L	1	0.17	0.55	5	
Chlorobenzene	ND	ug/L	1	0.34	1.1	100	
Chloroethane	ND	ug/L	1	1.5	5.0		
Chloroform	ND	ug/L	1	0.24	0.81	80	
Chloromethane	ND	ug/L	1	0.81	2.7	T1	
Dibromochloromethane	ND	ug/L	1	0.20	0.67	80	
1,2-Dibromo-3-Chloropropane	ND	ug/L	1	0.36	1.2		
1,2-Dibromoethane	ND	ug/L	1	0.21	0.71		
Dibromomethane	ND	ug/L	1	0.17	0.55		
1,2-Dichlorobenzene	ND	ug/L	1	0.28	0.92	600	
1,3-Dichlorobenzene	ND	ug/L	1	0.28	0.93		
1,4-Dichlorobenzene	ND	ug/L	1	0.30	0.99	75	
Dichlorodifluoromethane	ND	ug/L	1	0.59	2.0		
1,1-Dichloroethane	ND	ug/L	1	0.20	0.66		
1,2-Dichloroethane	ND	ug/L	1	0.43	1.4	5	
1,1-Dichloroethene	ND	ug/L	1	0.19	0.63	7	
cis-1,2-Dichloroethene	ND	ug/L	1	0.20	0.66	70	
trans-1,2-Dichloroethene	ND	ug/L	1	0.19	0.64	100	
1,2-Dichloropropane	ND	ug/L	1	0.16	0.54	5	
cis-1,3-Dichloropropene	ND	ug/L	1	0.16	0.53		
trans-1,3-Dichloropropene	ND	ug/L	1	0.24	0.81		
Ethylbenzene	ND	ug/L	1	0.33	1.1	700	
Methylene chloride	ND	ug/L	1	0.61	2.0	5	
Naphthalene	ND	ug/L	1	0.66	2.2	10.41	
Styrene	ND	ug/L	1	0.40	1.3	100	
ortho-Xylene	ND	ug/L	1	0.38	1.3		
Tetrachloroethene	ND	ug/L	1	0.34	1.1	5	
Toluene	ND	ug/L	1	0.29	0.98	1000	
1,1,1-Trichloroethane	ND	ug/L	1	0.11	0.35	200	
1,1,2-Trichloroethane	ND	ug/L	1	0.21	0.72	5	
Trichloroethene	ND	ug/L	1	0.35	1.2	5	
Trichlorofluoromethane	ND	ug/L	1	0.22	0.75		
Vinyl chloride	ND	ug/L	1	0.14	0.47	.2	
meta,para-Xylene	ND	ug/L	1	0.70	2.3	10000	
MTBE	ND	ug/L	1	0.41	1.4		
Acetone	[8.4]	ug/L	1	7.0	23		J
Carbon Disulfide	ND	ug/L	1	0.17	0.57		
Methyl Ethyl Ketone	ND	ug/L	1	2.7	9.0		
Tetrahydrofuran	ND	ug/L	1	1.7	5.5		
Dibromofluoromethane (SURR)	119%	1444	1		Contraction of the American		S
Toluene-d8 (SURR)	102%		1				S
1-Bromo-4-Fluorobenzene (SURR)	110%		1				S

NOTES APPLICABLE TO THIS ANALYSIS:

J = Result enclosed in brackets is between LOD and LOQ, a region of less certain quantitation.

Sample: 1223780 PW27 Collected: 10/21/20 Analyzed: 10/29/20 - Analytes: 43

ANALYTE NAME	RESULT	UNITS	DIL	LOD	LOQ	MCL	Note
Benzene	ND	ug/L	1	0.25	0.84	5	4.121
Bromodichloromethane	ND	ug/L	1	0.20	0.67	80	
Bromoform	ND	ug/L	1	0.27	0.91	80	
Bromomethane	ND	ug/L	1	0.87	2.9		
Carbon Tetrachloride	ND	ug/L	1	0.17	0.55	5	
Chlorobenzene	ND	ug/L	1	0.34	1.1	100	
Chloroethane	ND	ug/L	1	1.5	5.0		
Chloroform	ND	ug/L	1	0.24	0.81	80	
Chloromethane	ND	ug/L	1	0.81	2.7	11	
Dibromochloromethane	ND	ug/L	1	0.20	0.67	80	
1,2-Dibromo-3-Chloropropane	ND	ug/L	1	0.36	1.2		
1,2-Dibromoethane	ND	ug/L	1	0.21	0.71		
Dibromomethane	ND	ug/L	1	0.17	0.55		
1,2-Dichlorobenzene	ND	ug/L	1	0.28	0.92	600	
1,3-Dichlorobenzene	ND	ug/L	1	0.28	0.93		
1,4-Dichlorobenzene	ND	ug/L	1	0.30	0.99	75	
Dichlorodifluoromethane	ND	ug/L	1	0.59	2.0		
1,1-Dichloroethane	ND	ug/L	1	0.20	0.66		
1,2-Dichloroethane	ND	ug/L	1	0.43	1.4	5	
1,1-Dichloroethene	ND	ug/L	1	0.19	0.63	7	
cis-1,2-Dichloroethene	ND	ug/L	1	0.20	0.66	70	
trans-1,2-Dichloroethene	ND	ug/L	1	0.19	0.64	100	
1,2-Dichloropropane	ND	ug/L	1	0.16	0.54	5	
cis-1,3-Dichloropropene	ND	ug/L	1	0.16	0.53		
trans-1,3-Dichloropropene	ND	ug/L	1	0.24	0.81	1.00	
Ethylbenzene	ND	ug/L	1	0.33	1.1	700	
Methylene chloride	ND	ug/L	1	0.61	2.0	5	
Naphthalene	ND	ug/L	1	0.66	2.2	100 M	
Styrene	ND	ug/L	1	0.40	1.3	100	
ortho-Xylene	ND	ug/L	1	0.38	1.3		
Tetrachloroethene	ND	ug/L	1	0.34	1.1	5	
Toluene	ND	ug/L	1	0.29	0.98	1000	
1,1,1-Trichloroethane	ND	ug/L	1	0,11	0.35	200	
1,1,2-Trichloroethane	ND	ug/L	1	0.21	0.72	5	
Trichloroethene	ND	ug/L	1	0.35	1.2	5	
Trichlorofluoromethane	ND	ug/L	1	0.22	0.75		
Vinyl chloride	ND	ug/L	1	0.14	0.47	.2	
meta,para-Xylene	ND	ug/L	1	0.70	2.3	10000	
MTBE	ND	ug/L	1	0.41	1.4		
Acetone	28	ug/L	1	7.0	23		
Carbon Disulfide	ND	ug/L	1	0.17	0.57		
Methyl Ethyl Ketone	ND	ug/L	1	2.7	9.0		
Tetrahydrofuran	ND	ug/L	1	1.7	5.5		
Dibromofluoromethane (SURR)	121%	1.4.5	1				S
Toluene-d8 (SURR)	114%		1				S
1-Bromo-4-Fluorobenzene (SURR)	107%		1				S

NOTES APPLICABLE TO THIS ANALYSIS:

Sample: 1223781 PW65 Collected: 10/21/20 Analyzed: 10/29/20 - Analytes: 43

ANALYTE NAME	RESULT	UNITS	DIL	LOD	LOQ	MCL	Note
Benzene	ND	ug/L	1	0.25	0.84	5	
Bromodichloromethane	ND	ug/L	1	0.20	0.67	80	
Bromoform	ND	ug/L	1	0.27	0.91	80	
Bromomethane	ND	ug/L	1	0.87	2.9		
Carbon Tetrachloride	ND	ug/L	1	0.17	0.55	5	
Chlorobenzene	ND	ug/L	1	0.34	1.1	100	
Chloroethane	ND	ug/L	1	1.5	5.0		
Chloroform	ND	ug/L	1	0.24	0.81	80	
Chloromethane	ND	ug/L	1	0.81	2.7	71.	
Dibromochloromethane	ND	ug/L	1	0.20	0.67	80	
1,2-Dibromo-3-Chloropropane	ND	ug/L	1	0.36	1.2		
1,2-Dibromoethane	ND	ug/L	1	0.21	0.71		
Dibromomethane	ND	ug/L	1	0.17	0.55		
1,2-Dichlorobenzene	ND	ug/L	1	0.28	0.92	600	
1,3-Dichlorobenzene	ND	ug/L	1	0.28	0.93		
1,4-Dichlorobenzene	ND	ug/L	1	0.30	0.99	75	
Dichlorodifluoromethane	ND	ug/L	1	0.59	2.0		
1,1-Dichloroethane	ND	ug/L	1	0.20	0.66		
1,2-Dichloroethane	ND	ug/L	1	0.43	1.4	5	
1,1-Dichloroethene	ND	ug/L	1	0.19	0.63	7	
cis-1,2-Dichloroethene	ND	ug/L	1	0.20	0.66	70	
trans-1,2-Dichloroethene	ND	ug/L	1	0.19	0.64	100	
1,2-Dichloropropane	ND	ug/L	1	0.16	0.54	5	
cis-1,3-Dichloropropene	ND	ug/L	1	0.16	0.53		
trans-1,3-Dichloropropene	ND	ug/L	1	0.24	0.81		
Ethylbenzene	ND	ug/L	1	0.33	1.1	700	
Methylene chloride	ND	ug/L	1	0.61	2.0	5	
Naphthalene	ND	ug/L	1	0.66	2.2	10.42	
Styrene	ND	ug/L	1	0.40	1.3	100	
ortho-Xylene	ND	ug/L	1	0.38	1.3		
Tetrachloroethene	ND	ug/L	1	0.34	1.1	5	
Toluene	ND	ug/L	1	0.29	0.98	1000	
1,1,1-Trichloroethane	ND	ug/L	1	0,11	0.35	200	
1,1,2-Trichloroethane	ND	ug/L	1	0.21	0.72	5	
Trichloroethene	ND	ug/L	1	0.35	1.2	5	
Trichlorofluoromethane	ND	ug/L	1	0.22	0.75		
Vinyl chloride	ND	ug/L	1	0.14	0.47	.2	
meta,para-Xylene	ND	ug/L	1	0.70	2.3	10000	
MTBE	ND	ug/L	1	0.41	1.4		
Acetone	ND	ug/L	1	7.0	23		
Carbon Disulfide	ND	ug/L	1	0.17	0.57		
Methyl Ethyl Ketone	ND	ug/L	1	2.7	9.0		
Tetrahydrofuran	ND	ug/L	1	1.7	5.5		
Dibromofluoromethane (SURR)	87.23%		1		CONTRACTOR AND AND		S
Toluene-d8 (SURR)	97.19%		1				S
1-Bromo-4-Fluorobenzene (SURR)	98.75%		1				S

NOTES APPLICABLE TO THIS ANALYSIS:

Sample: 1223782 PW100 Collected: 10/21/20 Analyzed: 10/29/20 - Analytes: 43

Benzene ND ug/L 1 0.25 0.84 5 Bromodichloromethane ND ug/L 1 0.20 0.67 80 Bromoform ND ug/L 1 0.27 0.91 80 Bromothane ND ug/L 1 0.27 0.91 80 Bromothane ND ug/L 1 0.87 2.9 29 Carbon Tetrachloride ND ug/L 1 0.17 0.55 5 Chlorobenzene ND ug/L 1 0.34 1.1 100 Chlorobentane ND ug/L 1 0.34 1.1 100 Chloroform ND ug/L 1 0.24 0.81 80 Chloromethane ND ug/L 1 0.81 2.7 Dibromochloromethane ND ug/L 1 0.86 1.2 1.2-Dibromo-3-Chloropropane ND ug/L 1 0.20 0.67	Note
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1,3-Dichlorobenzene ND ug/L 1 0.28 0.93	
14 Diablarahanana ND us/ 1 0.00 75	
1,4-Dichlorobenzene ND ug/L 1 0.30 0.99 75	
Dichlorodifluoromethane ND ug/L 1 0.59 2.0	
1,1-Dichloroethane ND ug/L 1 0.20 0.66	
1,2-Dichloroethane ND ug/L 1 0.43 1.4 5	
1,1-Dichloroethene ND ug/L 1 0.19 0.63 7	
cis-1,2-Dichloroethene ND ug/L 1 0.20 0.66 70	
trans-1,2-Dichloroethene ND ug/L 1 0.19 0.64 100	
1,2-Dichloropropane ND ug/L 1 0.16 0.54 5	
cis-1,3-Dichloropropene ND ug/L 1 0.16 0.53	
trans-1,3-Dichloropropene ND ug/L 1 0.24 0.81	
Ethylbenzene ND ug/L 1 0.33 1.1 700	
Methylene chloride ND ug/L 1 0.61 2.0 5	
Naphthalene ND ug/L 1 0.66 2.2	
Styrene ND ug/L 1 0.40 1.3 100	
ortho-Xylene ND ug/L 1 0.38 1.3	
Tetrachloroethene ND ug/L 1 0.34 1.1 5	
Toluene ND ug/L 1 0.29 0.98 1000	
1,1,1-Trichloroethane ND ug/L 1 0.11 0.35 200	
1,1,2-Trichloroethane ND ug/L 1 0.21 0.72 5	
Trichloroethene ND ug/L 1 0.35 1.2 5	
Trichlorofluoromethane ND ug/L 1 0.22 0.75	
Vinyl chloride ND ug/L 1 0.14 0.47 .2	
meta,para-Xylene ND ug/L 1 0.70 2.3 10000	
MTBE ND ug/L 1 0.41 1.4	
Acetone ND ug/L 1 7.0 23	
Carbon Disulfide ND ug/L 1 0.17 0.57	
Methyl Ethyl Ketone ND ug/L 1 2.7 9.0	
Tetrahydrofuran ND ug/L 1 1.7 5.5	
Dibromofluoromethane (SURR) 88% 1	S
Toluene-d8 (SURR) 97% 1	S
1-Bromo-4-Fluorobenzene (SURR) 101% 1	S

NOTES APPLICABLE TO THIS ANALYSIS:

Sample: 1223783 PW80 Collected: 10/21/20 Analyzed: 10/29/20 - Analytes: 43

ANALYTE NAME	RESULT	UNITS	DIL	LOD	LOQ	MCL	Note
Benzene	ND	ug/L	1	0.25	0.84	5	4.171
Bromodichloromethane	ND	ug/L	1	0.20	0.67	80	
Bromoform	ND	ug/L	1	0.27	0.91	80	
Bromomethane	ND	ug/L	1	0.87	2.9		
Carbon Tetrachloride	ND	ug/L	1	0.17	0.55	5	
Chlorobenzene	ND	ug/L	1	0.34	1.1	100	
Chloroethane	ND	ug/L	1	1.5	5.0		
Chloroform	ND	ug/L	1	0.24	0.81	80	
Chloromethane	ND	ug/L	1	0.81	2.7	11	
Dibromochloromethane	ND	ug/L	1	0.20	0.67	80	
1,2-Dibromo-3-Chloropropane	ND	ug/L	1	0.36	1.2	. 3.2	
1,2-Dibromoethane	ND	ug/L	1	0.21	0.71		
Dibromomethane	ND	ug/L	1	0.17	0.55		
1,2-Dichlorobenzene	ND	ug/L	1	0.28	0.92	600	
1,3-Dichlorobenzene	ND	ug/L	1	0.28	0.93		
1,4-Dichlorobenzene	ND	ug/L	1	0.30	0.99	75	
Dichlorodifluoromethane	ND	ug/L	1	0.59	2.0		
1,1-Dichloroethane	ND	ug/L	1	0.20	0.66		
1,2-Dichloroethane	ND	ug/L	1	0.43	1.4	5	
1,1-Dichloroethene	ND	ug/L	1	0.19	0.63	7	
cis-1,2-Dichloroethene	ND	ug/L	1	0.20	0.66	70	
trans-1,2-Dichloroethene	ND	ug/L	1	0.19	0.64	100	
1,2-Dichloropropane	ND	ug/L	1	0.16	0.54	5	
cis-1,3-Dichloropropene	ND	ug/L	1	0.16	0.53		
trans-1,3-Dichloropropene	ND	ug/L	1	0.24	0.81	The second second	
Ethylbenzene	ND	ug/L	1	0.33	1.1	700	
Methylene chloride	ND	ug/L	1	0.61	2.0	5	
Naphthalene	ND	ug/L	1	0.66	2.2		
Styrene	ND	ug/L	1	0.40	1.3	100	
ortho-Xylene	ND	ug/L	1	0.38	1.3		
Tetrachloroethene	ND	ug/L	1	0.34	1.1	5	
Toluene	ND	ug/L	1	0.29	0.98	1000	
1,1,1-Trichloroethane	ND	ug/L	1	0.11	0.35	200	
1,1,2-Trichloroethane	ND	ug/L	1	0.21	0.72	5	
Irichloroethene	ND	ug/L	1	0.35	1.2	5	
Irichlorofluoromethane	ND	ug/L	1	0.22	0.75		
Vinyl chloride	ND	ug/L	1	0.14	0.47	.2	
meta,para-Xylene	ND	ug/L	1	0.70	2.3	10000	
MTBE	ND	ug/L	1	0.41	1.4		
Acetone	ND	ug/L	1	/.0	23		
Carbon Disulfide	ND	ug/L	1	0.17	0.57		
Methyl Ethyl Ketone	ND	ug/L	1	2.7	9.0		
l etranydroturan	ND	ug/L	1	1./	5.5		
Dibromotiuoromethane (SURR)	87%		1				S
Toluene-d8 (SURR)	100%		1				S
1-Bromo-4-Fluorobenzene (SURR)	102%		1				8

NOTES APPLICABLE TO THIS ANALYSIS:

Sample: 1223784 PW53 Collected: 10/21/20 Analyzed: 10/29/20 - Analytes: 43

ANALYTE NAME	RESULT	UNITS	DIL	LOD	LOQ	MCL	Note
Benzene	ND	ug/L	1	0.25	0.84	5	
Bromodichloromethane	ND	ug/L	1	0.20	0.67	80	
Bromoform	ND	ug/L	1	0.27	0.91	80	
Bromomethane	ND	ug/L	1	0.87	2.9		1
Carbon Tetrachloride	ND	ug/L	1	0.17	0.55	5	
Chlorobenzene	ND	ug/L	1	0.34	1.1	100	1
Chloroethane	ND	ug/L	1	1.5	5.0		
Chloroform	ND	ug/L	1	0.24	0.81	80	
Chloromethane	ND	ug/L	1	0.81	2.7	T12	
Dibromochloromethane	ND	ug/L	1	0.20	0.67	80	
1,2-Dibromo-3-Chloropropane	ND	ug/L	1	0.36	1.2		
1,2-Dibromoethane	ND	ug/L	1	0.21	0.71		
Dibromomethane	ND	ug/L	1	0.17	0.55		
1,2-Dichlorobenzene	ND	ug/L	1	0.28	0.92	600	
1,3-Dichlorobenzene	ND	ug/L	1	0.28	0.93		
1,4-Dichlorobenzene	ND	ug/L	1	0.30	0.99	75	
Dichlorodifluoromethane	ND	ug/L	1	0.59	2.0		
1,1-Dichloroethane	ND	ug/L	1	0.20	0.66		
1,2-Dichloroethane	ND	ug/L	1	0.43	1.4	5	
1,1-Dichloroethene	ND	ug/L	1	0.19	0.63	7	
cis-1.2-Dichloroethene	ND	ug/L	1	0.20	0.66	70	
trans-1,2-Dichloroethene	ND	ug/L	1	0.19	0.64	100	
1.2-Dichloropropane	ND	ua/L	1	0.16	0.54	5	
cis-1.3-Dichloropropene	ND	ug/L	1	0.16	0.53		
trans-1.3-Dichloropropene	ND	ua/L	1	0.24	0.81	7.4	
Ethylbenzene	ND	ug/L	1	0.33	1.1	700	
Methylene chloride	ND	ug/L	1	0.61	2.0	5	
Naphthalene	ND	ug/L	1	0.66	2.2	and the second second	
Styrene	ND	ug/L	1	0.40	1.3	100	
ortho-Xylene	ND	ug/L	1	0.38	1.3		
Tetrachloroethene	ND	ug/L	1	0.34	1.1	5	
Toluene	ND	ug/L	1	0.29	0.98	1000	
1,1,1-Trichloroethane	ND	ug/L	1	0.11	0.35	200	
1,1,2-Trichloroethane	ND	ug/L	1	0.21	0.72	5	
Trichloroethene	ND	ug/L	1	0.35	1.2	5	
Trichlorofluoromethane	ND	ug/L	1	0.22	0.75		
Vinyl chloride	ND	ug/L	1	0.14	0.47	.2	
meta.para-Xvlene	ND	ua/L	1	0.70	2.3	10000	
МТВЕ	ND	ug/L	1	0.41	1.4	3-1-1-1-1-1-	
Acetone	ND	ug/L	4	7.0	23		
Carbon Disulfide	ND	ug/L	1	0.17	0.57		
Methyl Ethyl Ketone	ND	ug/L	1	2.7	9.0		
Tetrahydrofuran	ND	ug/L	î	1.7	5.5		
Dibromofluoromethane (SURR)	85%	7.917	1	Pro-C-			S
Toluene-d8 (SURR)	99%		Î				S
1-Bromo-4-Fluorobenzene (SURR)	91%		1				S

NOTES APPLICABLE TO THIS ANALYSIS:

Sample: 1223785 PW29 Collected: 10/21/20 Analyzed: 10/29/20 - Analytes: 43

ANALYTE NAME	RESULT	UNITS	DIL	LOD	LOQ	MCL	Note
Benzene	ND	ug/L	1	0.25	0.84	5	
Bromodichloromethane	ND	ug/L	1	0.20	0.67	80	
Bromoform	ND	ug/L	1	0.27	0.91	80	
Bromomethane	ND	ug/L	1	0.87	2.9		
Carbon Tetrachloride	ND	ug/L	1	0.17	0.55	5	
Chlorobenzene	ND	ug/L	1	0.34	1.1	100	
Chloroethane	ND	ug/L	1	1.5	5.0		
Chloroform	ND	ug/L	1	0.24	0.81	80	
Chloromethane	ND	ug/L	1	0.81	2.7	T12	
Dibromochloromethane	ND	ug/L	1	0.20	0.67	80	
1,2-Dibromo-3-Chloropropane	ND	ug/L	1	0.36	1.2		
1,2-Dibromoethane	ND	ug/L	1	0.21	0.71		
Dibromomethane	ND	ug/L	1	0.17	0.55		
1,2-Dichlorobenzene	ND	ug/L	1	0.28	0.92	600	
1,3-Dichlorobenzene	ND	ug/L	1	0.28	0.93		
1,4-Dichlorobenzene	ND	ug/L	1	0.30	0.99	75	
Dichlorodifluoromethane	ND	ug/L	1	0.59	2.0		
1,1-Dichloroethane	ND	ug/L	1	0.20	0.66		
1,2-Dichloroethane	ND	ug/L	1	0.43	1.4	5	
1,1-Dichloroethene	ND	ug/L	1	0.19	0.63	7	
cis-1,2-Dichloroethene	ND	ug/L	1	0.20	0.66	70	
trans-1,2-Dichloroethene	ND	ug/L	1	0.19	0.64	100	
1,2-Dichloropropane	ND	ug/L	1	0.16	0.54	5	
cis-1,3-Dichloropropene	ND	ug/L	1	0.16	0.53		
trans-1,3-Dichloropropene	ND	ug/L	1	0.24	0.81		
Ethylbenzene	ND	ug/L	1	0.33	1.1	700	
Methylene chloride	ND	ug/L	1	0.61	2.0	5	
Naphthalene	ND	ug/L	1	0.66	2.2	10.41	
Styrene	ND	ug/L	1	0.40	1.3	100	
ortho-Xylene	ND	ug/L	1	0.38	1.3		
Tetrachloroethene	ND	ug/L	1	0.34	1.1	5	
Toluene	ND	ug/L	1	0.29	0.98	1000	
1,1,1-Trichloroethane	ND	ug/L	1	0,11	0.35	200	
1,1,2-Trichloroethane	ND	ug/L	1	0.21	0.72	5	
Trichloroethene	ND	ug/L	1	0.35	1.2	5	
Trichlorofluoromethane	ND	ug/L	1	0.22	0.75		
Vinyl chloride	ND	ug/L	1	0.14	0.47	.2	
meta,para-Xylene	ND	ug/L	1	0.70	2.3	10000	
MTBE	ND	ug/L	1	0.41	1.4		
Acetone	ND	ug/L	1	7.0	23		
Carbon Disulfide	ND	ug/L	1	0.17	0.57		
Methyl Ethyl Ketone	ND	ug/L	1	2.7	9.0		
Tetrahydrofuran	ND	ug/L	1	1.7	5.5		
Dibromofluoromethane (SURR)	86%	1.4.4.4	1		Contraction of the second		S
Toluene-d8 (SURR)	96%		1				S
1-Bromo-4-Fluorobenzene (SURR)	96%		1				S
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NOTES APPLICABLE TO THIS ANALYSIS:

Sample: 1223787 PW17 Collected: 10/21/20 Analyzed: 10/29/20 - Analytes: 43

ANALYTE NAME	RESULT	UNITS	DIL	LOD	LOQ	MCL	Note
Benzene	ND	ug/L	1	0.25	0.84	5	
Bromodichloromethane	ND	ug/L	1	0.20	0.67	80	
Bromoform	ND	ug/L	1	0.27	0.91	80	
Bromomethane	ND	ug/L	1	0.87	2.9		
Carbon Tetrachloride	ND	ug/L	1	0.17	0.55	5	
Chlorobenzene	ND	ug/L	1	0.34	1.1	100	
Chloroethane	ND	ug/L	1	1.5	5.0		
Chloroform	ND	ug/L	1	0.24	0.81	80	
Chloromethane	ND	ug/L	1	0.81	2.7	111	
Dibromochloromethane	ND	ug/L	1	0.20	0.67	80	
1,2-Dibromo-3-Chloropropane	ND	ug/L	1	0.36	1.2		
1,2-Dibromoethane	ND	ug/L	1	0.21	0.71		
Dibromomethane	ND	ug/L	1	0.17	0.55		
1,2-Dichlorobenzene	ND	ug/L	1	0.28	0.92	600	
1,3-Dichlorobenzene	ND	ug/L	1	0.28	0.93		
1,4-Dichlorobenzene	ND	ug/L	1	0.30	0.99	75	
Dichlorodifluoromethane	ND	ug/L	1	0.59	2.0		
1,1-Dichloroethane	ND	ug/L	1	0.20	0.66		
1,2-Dichloroethane	ND	ug/L	1	0.43	1.4	5	
1,1-Dichloroethene	ND	ug/L	1	0.19	0.63	7	
cis-1,2-Dichloroethene	ND	ug/L	1	0.20	0.66	70	
trans-1,2-Dichloroethene	ND	ug/L	1	0.19	0.64	100	
1,2-Dichloropropane	ND	ug/L	1	0.16	0.54	5	
cis-1,3-Dichloropropene	ND	ug/L	1	0.16	0.53		
trans-1,3-Dichloropropene	ND	ug/L	1	0.24	0.81	and the second second	
Ethylbenzene	ND	ug/L	1	0.33	1.1	700	
Methylene chloride	ND	ug/L	1	0.61	2.0	5	
Naphthalene	ND	ug/L	1	0.66	2.2	77.42	
Styrene	ND	ug/L	1	0.40	1.3	100	
ortho-Xylene	ND	ug/L	1	0.38	1.3		
Tetrachloroethene	ND	ug/L	1	0.34	1.1	5	
Toluene	ND	ug/L	1	0.29	0.98	1000	
1,1,1-Trichloroethane	ND	ug/L	1	0,11	0.35	200	
1,1,2-Trichloroethane	ND	ug/L	1	0.21	0.72	5	
Trichloroethene	ND	ug/L	1	0.35	1.2	5	
Trichlorofluoromethane	ND	ug/L	1	0.22	0.75	-	
Vinyl chloride	ND	ug/L	1	0.14	0.47	.2	
meta,para-Xylene	ND	ug/L	1	0.70	2.3	10000	
MTBE	ND	ug/L	1	0.41	1.4		
Acetone	ND	ug/L	1	7.0	23		
Carbon Disulfide	ND	ug/L	1	0.17	0.57		
Methyl Ethyl Ketone	ND	ug/L	1	2.7	9.0		
Tetrahydrofuran	ND	ug/L	1	1.7	5.5		
Dibromofluoromethane (SURR)	92%		1		CONTRACT, AND PRODUCT		S
Toluene-d8 (SURR)	101%	_	1				S
1-Bromo-4-Fluorobenzene (SURR)	98%		1				S

NOTES APPLICABLE TO THIS ANALYSIS:

Sample: 1223788 Trip Blank Collected: 10/21/20 Analyzed: 10/29/20 - Analytes: 43

Benzene ND ug/L 1 0.25 0.84 5 Brondchinomethane ND ug/L 1 0.27 0.91 80 Brondchinomethane ND ug/L 1 0.27 0.91 80 Carbon Fitzalionide ND ug/L 1 0.17 0.57 80 Carbon Fitzalionide ND ug/L 1 0.17 0.51 1 0.0 Carbon Fitzalionide ND ug/L 1 0.17 0.51 1 0.0 Chirorothane ND ug/L 1 0.51 2.7 - - Disromochane ND ug/L 1 0.56 1.2 -	ANALYTE NAME	RESULT	UNITS	DIL	LOD	LOQ	MCL	Note
Bromotion ND ug/L 1 0.20 0.67 80 Bromotom ND ug/L 1 0.37 2.9	Benzene	ND	ug/L	1	0.25	0.84	5	
Bromordm ND ug/L 1 0.27 0.91 80 Carton Tetrachioride ND ug/L 1 0.87 2.9 Carton Tetrachioride ND ug/L 1 0.17 0.55 5 Chiorobenzene ND ug/L 1 0.54 1.1 100 Chiorobenzene ND ug/L 1 0.51 5.0	Bromodichloromethane	ND	ug/L	1	0.20	0.67	80	
Bromorehane ND ug/L 1 0.87 2.9 Cathor Tetsholinde ND ug/L 1 0.17 0.55 5 Chirobenzene ND ug/L 1 0.54 1.1 100 Chirobenzene ND ug/L 1 0.55 5 Chirobentane ND ug/L 1 0.51 2.7 Disconcentane ND ug/L 1 0.61 2.7 Disconcentane ND ug/L 1 0.71 0.7 1.2 biorno-5. Chickporpane ND ug/L 1 0.71 0.7 1.2 biorno-5. Chickporpane ND ug/L 1 0.7 0.7 1.2 biorno-6. Chickporpane ND ug/L 1 0.7 0.7 1.2 biorno-6. Chickporpane ND ug/L 1 0.7 0.7 1.2 biorno-6. Chickporpane ND ug/L 1 0.7 0.7 1.3 biorno-6. Chickporpane ND ug/L	Bromoform	ND	ug/L	1	0.27	0.91	80	
Carbon Petrashloride ND ug/L 1 0.17 0.55 5 Chloroberane ND ug/L 1 1.5 5.0	Bromomethane	ND	ug/L	1	0.87	2.9		
Chicobenzene ND ug/L 1 0.34 1.1 100 Chicotena ND ug/L 1 5 5.0 Chicotena ND ug/L 1 0.24 0.81 80 Chicotentane ND ug/L 1 0.24 0.81 80 Libromosthane ND ug/L 1 0.20 0.67 80 Libromosthane ND ug/L 1 0.26 0.62 600 Libromosthane ND ug/L 1 0.28 0.83 600 Libromosthane ND ug/L 1 0.58 2.0 1 Libromosthane ND ug/L 1 0.59 2.0 1 Libromosthane ND ug/L 1 0.43 1.4 5 Libromosthane ND ug/L 1 0.43 1.4 5 Libromosthane ND ug/L 1 0.43 1.4 5 </td <td>Carbon Tetrachloride</td> <td>ND</td> <td>ug/L</td> <td>1</td> <td>0.17</td> <td>0.55</td> <td>5</td> <td></td>	Carbon Tetrachloride	ND	ug/L	1	0.17	0.55	5	
	Chlorobenzene	ND	ug/L	1	0.34	1.1	100	
Chloroftm ND ug/L 1 0.24 0.81 80 Chloromethane ND ug/L 1 0.81 2.7 Dbromoethare ND ug/L 1 0.86 1.2 1.2-Ditromost-Chloropropane ND ug/L 1 0.21 0.71 1.2-Ditromosthane ND ug/L 1 0.23 0.92 600 1.2-Dichlorobenzene ND ug/L 1 0.28 0.93	Chloroethane	ND	ug/L	1	1.5	5.0		
Chloromethane ND ug/L 1 0.81 2.7 Dibrome-Shoremethane ND ug/L 1 0.20 0.67 80 1.2-Distrome-S-Chloroppane ND ug/L 1 0.36 1.2 Distrome-Shoremethane ND ug/L 1 0.26 0.92 600 1.3-Dichoroberane ND ug/L 1 0.28 0.93 - 1.3-Dichoroberane ND ug/L 1 0.28 0.93 - 1.4-Dichoroberane ND ug/L 1 0.28 0.60 - 1.4-Dichoroberane ND ug/L 1 0.23 0.60 - 1.2-Dichoroberane ND ug/L 1 0.30 0.89 75 1.2-Dichoroberane ND ug/L 1 0.63 7 1.2-Dichorophane ND ug/L 1 0.64 5 1.2-Dichorophane ND ug/L 1 0.64 5	Chloroform	ND	ug/L	1	0.24	0.81	80	
Dibronchloromethane ND ug/L 1 0.20 0.67 80 1_2-Dibrono-S-Chloropropane ND ug/L 1 0.21 0.71	Chloromethane	ND	ug/L	1	0.81	2.7		
1.2-Ditromo-3-Chlorographe ND ugA 1 0.36 1.2 1.2-Ditromo-thane ND ugA 1 0.71	Dibromochloromethane	ND	ug/L	1	0.20	0.67	80	
1,2-Dibromoethane ND ug/L 1 0.21 0.71 Dibromoethane ND ug/L 1 0.17 0.55 1,2-Dichorobenzene ND ug/L 1 0.28 0.93 1,4-Dichorobenzene ND ug/L 1 0.28 0.93 1,4-Dichorobenzene ND ug/L 1 0.26 0.66 1,1-Dichorobenzene ND ug/L 1 0.26 0.66 1,1-Dichorobethane ND ug/L 1 0.43 1.4 5 1,1-Dichorobethane ND ug/L 1 0.43 1.4 5 1,1-Dichorobethane ND ug/L 1 0.43 1.4 5 1,1-Dichoroptropene ND ug/L 1 0.16 0.54 5 1,2-Dichoroptroppane ND ug/L 1 0.16 0.54 5 1,2-Dichoroptroppane ND ug/L 1 0.16 0.54 5 1,2-Dichoroptroppane ND ug/L 1 0.16 2.5 5	1,2-Dibromo-3-Chloropropane	ND	ug/L	1	0.36	1.2		
Dibromethane ND ugA 1 0.17 0.55 1.2-Dichloroberzene ND ugA 1 0.28 0.93 600 1.3-Dichloroberzene ND ugA 1 0.28 0.93 600 1.4-Dichloroberzene ND ugA 1 0.30 0.99 75 Dichloroethane ND ugA 1 0.59 2.0	1,2-Dibromoethane	ND	ug/L	1	0.21	0.71		
1,2-Dichlorobenzene ND ug/L 1 0.28 0.92 600 1,3-Dichlorobenzene ND ug/L 1 0.28 0.93 - 1,4-Dichlorobenzene ND ug/L 1 0.28 0.93 - 1,3-Dichlorobenzene ND ug/L 1 0.20 0.66 - 1,1-Dichlorobethane ND ug/L 1 0.43 1.4 5 1,1-Dichlorobethane ND ug/L 1 0.19 0.66 70 1,1-Dichlorobethene ND ug/L 1 0.19 0.64 100 1,2-Dichloropropane ND ug/L 1 0.19 0.64 100 1,2-Dichloropropane ND ug/L 1 0.16 0.53 - 1,2-Dichloropropane ND ug/L 1 0.66 2.2 - 1,2-Dichloropropane ND ug/L 1 0.81 1 0.00 1,2-Dichloropropane ND ug/L 1 0.81 1 0.00 0.01 <t< td=""><td>Dibromomethane</td><td>ND</td><td>ug/L</td><td>1</td><td>0.17</td><td>0.55</td><td></td><td></td></t<>	Dibromomethane	ND	ug/L	1	0.17	0.55		
1.3-Dichlorobenzene ND ug/L 1 0.28 0.93 J4-Dichloroethane ND ug/L 1 0.59 2.0 J1-Dichloroethane ND ug/L 1 0.59 2.0 1.2-Dichloroethane ND ug/L 1 0.63 7 1.2-Dichloroethane ND ug/L 1 0.43 1.4 5 1.5-Dichloroethane ND ug/L 1 0.43 1.4 5 1.5-Dichloroethene ND ug/L 1 0.43 7 6 1.5-Dichloroethene ND ug/L 1 0.43 1.6 6 1.2-Dichloropropane ND ug/L 1 0.16 0.53 1 1 Itans -1, 3-Dichloropropane ND ug/L 1 0.66 2.2 1	1,2-Dichlorobenzene	ND	ug/L	1	0.28	0.92	600	
1.4-Dichlorobenzene ND ug/L 1 0.50 0.99 75 1.1-Dichloroethane ND ug/L 1 0.59 2.0 1.1-Dichloroethane ND ug/L 1 0.43 1.4 5 1.2-Dichloroethane ND ug/L 1 0.43 1.4 5 1.1-Dichloroethane ND ug/L 1 0.19 0.66 70 cis-1.2-Dichloroethane ND ug/L 1 0.16 0.53 7 cis-1.2-Dichloroethane ND ug/L 1 0.16 0.54 5 cis-1.3-Dichloroethoroethane ND ug/L 1 0.16 0.53 5 cis-1.3-Dichloroethoroethane ND ug/L 1 0.66 2.2 5 cis-1.3-Dichloroethane ND ug/L 1 0.66 2.2 5 Styrene ND ug/L 1 0.66 2.2 5 Stylene ND ug/L 1 0.34 1.1 5 Totexolaroethane ND	1,3-Dichlorobenzene	ND	ug/L	1	0.28	0.93		
Dickhordfluoromethane ND ug/L 1 0.59 2.0 1.1-Dickhordethane ND ug/L 1 0.20 0.66 1.2-Dichloroethane ND ug/L 1 0.43 1.4 5 1.1-Dickhordethane ND ug/L 1 0.43 7 - cis-1.2-Dichloroethane ND ug/L 1 0.19 0.63 7 cis-1.2-Dichloroethane ND ug/L 1 0.16 0.54 5 trans-1.2-Dichloroethane ND ug/L 1 0.16 0.54 5 trans-1.2-Dichloroethane ND ug/L 1 0.16 0.54 5 trans-1.3-Dichloroethane ND ug/L 1 0.16 0.54 5 trans-1.3-Dichloroethane ND ug/L 1 0.33 1.1 700 trans-1.2-Dichloroethane ND ug/L 1 0.66 2.2 5 Stytene ND ug/L	1,4-Dichlorobenzene	ND	ug/L	1	0.30	0.99	75	
1,1-Dichloroethane ND ug/L 1 0.20 0.66 1,2-Dichloroethane ND ug/L 1 0.43 1.4 5 1,1-Dichloroethane ND ug/L 1 0.19 0.66 70 cis-1,2-Dichloroethane ND ug/L 1 0.19 0.66 70 1,2-Dichloroethane ND ug/L 1 0.16 0.53 1 1,2-Dichloroethane ND ug/L 1 0.16 0.53 1 cis-1,3-Dichloroerpopene ND ug/L 1 0.66 2.2 1 Ethylbenzene ND ug/L 1 0.61 2.0 5 Methylene chloride ND ug/L 1 0.61 2.0 5 Styrene ND ug/L 1 0.66 2.2 2 5 Styrene ND ug/L 1 0.41 1.6 3 1.1 Toluene ND ug/L 1 0.38 1.3 1 1 Tetrachloroethane <td< td=""><td>Dichlorodifluoromethane</td><td>ND</td><td>ug/L</td><td>1</td><td>0.59</td><td>2.0</td><td></td><td></td></td<>	Dichlorodifluoromethane	ND	ug/L	1	0.59	2.0		
1,2-Dichloroethane ND ug/L 1 0.43 1.4 5 cis-1,2-Dichloroethane ND ug/L 1 0.19 0.63 7 cis-1,2-Dichloroethane ND ug/L 1 0.19 0.64 100 trans-1,2-Dichloroethane ND ug/L 1 0.19 0.64 100 1,2-Dichloropropane ND ug/L 1 0.16 0.53 - trans-1,3-Dichloropropane ND ug/L 1 0.66 2.2 - Ethylbenzene ND ug/L 1 0.66 2.2 - - Naphthalene ND ug/L 1 0.66 2.2 - - Styrene ND ug/L 1 0.66 2.2 - - - Otho-Xylene ND ug/L 1 0.33 1.3 - - Toluone ND ug/L 1 0.44 1.5 - - - Toluone ND ug/L 1 0.34 1.1 <td>1,1-Dichloroethane</td> <td>ND</td> <td>ug/L</td> <td>1</td> <td>0.20</td> <td>0.66</td> <td></td> <td></td>	1,1-Dichloroethane	ND	ug/L	1	0.20	0.66		
1,1-Dichloroethene ND ug/L 1 0.19 0.63 7 cis1,2-Dichloroethene ND ug/L 1 0.20 0.66 70 1,2-Dichloroethene ND ug/L 1 0.19 0.64 100 1,2-Dichloropropane ND ug/L 1 0.16 0.54 5 cis1,3-Dichloropropene ND ug/L 1 0.16 0.53 - trans-1,3-Dichloropropene ND ug/L 1 0.24 0.81 - Ethylbenzene ND ug/L 1 0.66 2.2 - Naphthalene ND ug/L 1 0.86 2.2 - Styrene ND ug/L 1 0.38 1.3 - Tetrachoroethene ND ug/L 1 0.38 1.3 - Toluene ND ug/L 1 0.29 0.98 1000 - 1,1,2-Trichoroethene ND <	1,2-Dichloroethane	ND	ug/L	1	0.43	1.4	5	
ois-1.2-Dichloroethene ND ug/L 1 0.20 0.66 70 trans-1.2-Dichloroethene ND ug/L 1 0.19 0.64 100 1,2-Dichloropropene ND ug/L 1 0.16 0.54 5 cis-1.3-Dichloropropene ND ug/L 1 0.16 0.53	1,1-Dichloroethene	ND	ug/L	1	0.19	0.63	7	
trans-12-Dichlorosphene ND ug/L 1 0.19 0.64 100 1.2-Dichloropropane ND ug/L 1 0.16 0.54 5 1.2-Dichloropropene ND ug/L 1 0.16 0.53 5 trans-1,3-Dichloropropene ND ug/L 1 0.24 0.81	cis-1,2-Dichloroethene	ND	ug/L	1	0.20	0.66	70	
1.2-Dichloropropane ND ug/L 1 0.16 0.54 5 cis-1,3-Dichloropropene ND ug/L 1 0.16 0.53	trans-1,2-Dichloroethene	ND	ug/L	1	0.19	0.64	100	
cis-1.3-Dichloropropene ND ug/L 1 0.16 0.53 trans-1.3-Dichloropropene ND ug/L 1 0.24 0.81 Ethylenezne ND ug/L 1 0.33 1.1 700 Methylene chloride ND ug/L 1 0.61 2.0 5 Mathylene chloride ND ug/L 1 0.66 2.2 Styrene ND ug/L 1 0.40 1.3 100 ortho-Xylene ND ug/L 1 0.34 1.1 5 Totarchloroethene ND ug/L 1 0.34 1.1 5 Totarchloroethane ND ug/L 1 0.11 0.35 200 1,1,1-Trichloroethane ND ug/L 1 0.21 0.72 5 Trichloroftane ND ug/L 1 0.35 1.2 5 Trichloroethane ND ug/L 1 0.70	1,2-Dichloropropane	ND	ug/L	1	0.16	0.54	5	
trans-1,3-Dichloropropene ND ug/L 1 0.24 0.81 Ethylbenzene ND ug/L 1 0.33 1.1 700 Methylene chloride ND ug/L 1 0.66 2.2	cis-1,3-Dichloropropene	ND	ug/L	1	0.16	0.53		
Ethylbenzene ND ug/L 1 0.33 1.1 700 Methylene chloride ND ug/L 1 0.61 2.0 5 Maphthalene ND ug/L 1 0.66 2.2	trans-1,3-Dichloropropene	ND	ug/L	1	0.24	0.81	1.05	
Methylene chloride ND ug/L 1 0.61 2.0 5 Naphthalene ND ug/L 1 0.66 2.2	Ethylbenzene	ND	ug/L	1	0.33	1.1	700	
Naphthalene ND ug/L 1 0.66 2.2 Styrene ND ug/L 1 0.40 1.3 100 ortho-Xylene ND ug/L 1 0.40 1.3 100 Tetrachloroethene ND ug/L 1 0.34 1.1 5 Toluene ND ug/L 1 0.34 1.1 5 Toluene ND ug/L 1 0.29 0.98 1000 1,1.1-Trichloroethane ND ug/L 1 0.21 0.72 5 Trichlorofluoromethane ND ug/L 1 0.35 1.2 5 Trichlorofluoromethane ND ug/L 1 0.35 1.2 5 Vinyl chloride ND ug/L 1 0.47 .2 .2 Vinyl chloride ND ug/L 1 0.70 2.3 10000 MTBE ND ug/L 1 0.70 2.3	Methylene chloride	ND	ug/L	1	0.61	2.0	5	
Styrene ND ug/L 1 0.40 1.3 100 ortho-Xylene ND ug/L 1 0.38 1.3	Naphthalene	ND	ug/L	1	0.66	2.2		
ortho-Xylene ND ug/L 1 0.38 1.3 Tetrachloroethene ND ug/L 1 0.34 1.1 5 Toluene ND ug/L 1 0.34 1.1 5 1,1-Trichloroethane ND ug/L 1 0.11 0.35 200 1,1.2-Trichloroethane ND ug/L 1 0.21 0.72 5 Trichloroethene ND ug/L 1 0.22 0.75 5 Trichloroethene ND ug/L 1 0.70 2.3 10000 Wipt chloride ND ug/L 1 0.70 2.3 10000 MTBE ND ug/L 1 0.70 2.3 10000 Acetone ND ug/L 1 0.70 2.3 10000 Carbon Disulfide ND ug/L 1 0.17 0.57 10000 Tetrahydrofuran ND ug/L 1 0.17	Styrene	ND	ug/L	1	0.40	1.3	100	
Tetrachloroethene ND ug/L 1 0.34 1.1 5 Toluene ND ug/L 1 0.29 0.98 1000 1,1-Trichloroethane ND ug/L 1 0.11 0.35 200 1,1,2-Trichloroethane ND ug/L 1 0.11 0.35 200 Trichloroethane ND ug/L 1 0.35 1.2 5 Trichloroethane ND ug/L 1 0.35 1.2 5 Trichlorofluoromethane ND ug/L 1 0.14 0.47 .2 meta, para-Xylene ND ug/L 1 0.41 0.47 .2 MTBE ND ug/L 1 0.41 1.4 Acetone ND ug/L 1 0.41 1.4 Carbon Disulfide ND ug/L 1 0.17 0.57 Methyl Ethyl Ketone ND ug/L 1 </td <td>ortho-Xylene</td> <td>ND</td> <td>ug/L</td> <td>1</td> <td>0.38</td> <td>1.3</td> <td></td> <td></td>	ortho-Xylene	ND	ug/L	1	0.38	1.3		
Toluene ND ug/L 1 0.29 0.98 1000 1,1-Trichloroethane ND ug/L 1 0.11 0.35 200 1,1.2-Trichloroethane ND ug/L 1 0.21 0.72 5 Trichloroethane ND ug/L 1 0.25 1.2 5 Trichloroethane ND ug/L 1 0.22 0.75 Vinyl chloride ND ug/L 1 0.70 2.3 10000 MTBE ND ug/L 1 0.41 0.47 .2 Carbon P ND ug/L 1 0.70 2.3 10000 MTBE ND ug/L 1 0.41 1.4 .4 Carbon Disulfide ND ug/L 1 0.17 0.57 Methyl Ethyl Ketone ND ug/L 1 1.7 5.5 Dibromofluoromethane (SURR) 86% 1 S S Olserone4(SURR)<	Tetrachloroethene	ND	ug/L	1	0.34	1.1	5	
1,1.1-Trichloroethane ND ug/L 1 0.11 0.35 200 1,1.2-Trichloroethane ND ug/L 1 0.21 0.72 5 Trichloroethane ND ug/L 1 0.35 1.2 5 Trichloroethane ND ug/L 1 0.35 1.2 5 Vinyl chloride ND ug/L 1 0.14 0.47 .2 Vinyl chloride ND ug/L 1 0.70 2.3 10000 MTBE ND ug/L 1 0.41 1.4 4 Acetone ND ug/L 1 0.41 1.4 Carbon Disulfide ND ug/L 1 0.17 0.57 Methyl Ethyl Ketone ND ug/L 1 0.17 0.57 Tetrahydrofuran ND ug/L 1 1.7 5.5 Dibromofluoromethane (SURR) 86% 1 1 5 5 1 -Bromo-4-Fluorobenzene (SURR) 96% 1 5 5 5	Toluene	ND	ug/L	1	0.29	0.98	1000	
1,1,2-Trichloroethane ND ug/L 1 0.21 0.72 5 Trichloroethane ND ug/L 1 0.35 1.2 5 Trichloroethane ND ug/L 1 0.22 0.75 Vinyl chloride ND ug/L 1 0.14 0.47 .2 meta, para-Xylene ND ug/L 1 0.41 0.47 .2 MTBE ND ug/L 1 0.41 1.4 .2 Carbon Disulfide ND ug/L 1 0.41 1.4 Acetone ND ug/L 1 0.41 1.4 Carbon Disulfide ND ug/L 1 0.17 0.57 Methyl Ethyl Ketone ND ug/L 1 0.17 0.57 Dibromofluoromethane (SURR) 86% 1 S Dibromofluorobenzene (SURR) 96% 1 S	1,1,1-Trichloroethane	ND	ug/L	1	0,11	0.35	200	
Trichloroethene ND ug/L 1 0.35 1.2 5 Trichlorofluoromethane ND ug/L 1 0.22 0.75 Vinyl chloride ND ug/L 1 0.14 0.47 .2 meta.para-Xylene ND ug/L 1 0.70 2.3 10000 MTBE ND ug/L 1 0.41 1.4 .4 Acetone ND ug/L 1 0.41 1.4 Carbon Disulfide ND ug/L 1 7.0 23 Methyl Ethyl Ketone ND ug/L 1 7.0 23 Dibromofluoromethane (SURR) ND ug/L 1 0.17 0.57 Dibromofluoromethane (SURR) ND ug/L 1 2.7 9.0 Toluene-d8 (SURR) 86% 1 S 1-Bromo-4-Fluorobenzene (SURR)	1,1,2-Trichloroethane	ND	ug/L	1	0.21	0.72	5	1
Trichlorofluoromethane ND ug/L 1 0.22 0.75 Vinyl chloride ND ug/L 1 0.14 0.47 .2 meta,para-Xylene ND ug/L 1 0.70 2.3 10000 MTBE ND ug/L 1 0.41 1.4 .2 Acetone ND ug/L 1 0.41 1.4 .2 Carbon Disulfide ND ug/L 1 0.41 1.4 .2 Methyl Ethyl Ketone ND ug/L 1 0.17 0.57	Trichloroethene	ND	ug/L	1	0.35	1.2	5	
Vinyl chloride ND ug/L 1 0.14 0.47 .2 meta,para-Xylene ND ug/L 1 0.70 2.3 10000 MTBE ND ug/L 1 0.41 1.4 .2 Acetone ND ug/L 1 0.41 1.4 .2 Carbon Disulfide ND ug/L 1 7.0 23	Trichlorofluoromethane	ND	ug/L	1	0.22	0.75		
meta,para-Xylene ND ug/L 1 0.70 2.3 10000 MTBE ND ug/L 1 0.41 1.4	Vinyl chloride	ND	ug/L	1	0.14	0.47	.2	
MTBE ND ug/L 1 0.41 1.4 Acetone ND ug/L 1 7.0 23 Carbon Disulfide ND ug/L 1 0.17 0.57 Methyl Ethyl Ketone ND ug/L 1 2.7 9.0 Tetrahydrofuran ND ug/L 1 1.7 5.5 Dibromofluoromethane (SURR) 86% 1 S S Toluene-d8 (SURR) 96% 1 S S 1-Bromo-4-Fluorobenzene (SURR) 94% 1 S S	meta,para-Xylene	ND	ug/L	1	0.70	2.3	10000	
Acetone ND ug/L 1 7.0 23 Carbon Disulfide ND ug/L 1 0.17 0.57 Methyl Ethyl Ketone ND ug/L 1 2.7 9.0 Tetrahydrofuran ND ug/L 1 1.7 5.5 Dibromofluoromethane (SURR) 86% 1 S S Toluene-d8 (SURR) 96% 1 S S 1-Bromo-4-Fluorobenzene (SURR) 94% 1 S S	MTBE	ND	ug/L	1	0.41	1.4		
Carbon Disulfide ND ug/L 1 0.17 0.57 Methyl Ethyl Ketone ND ug/L 1 2.7 9.0 Tetrahydrofuran ND ug/L 1 1.7 5.5 Dibromofluoromethane (SURR) 86% 1 S 5 Toluene-d8 (SURR) 96% 1 S 5 1-Bromo-4-Fluorobenzene (SURR) 94% 1 S S	Acetone	ND	ug/L	1	7.0	23		
Methyl Ethyl Ketone ND ug/L 1 2.7 9.0 Tetrahydrofuran ND ug/L 1 1.7 5.5 Dibromofluoromethane (SURR) 86% 1 S Toluene-d8 (SURR) 96% 1 S 1-Bromo-4-Fluorobenzene (SURR) 94% 1 S	Carbon Disulfide	ND	ug/L	1	0.17	0.57		
Tetrahydrofuran ND ug/L 1 1.7 5.5 Dibromofluoromethane (SURR) 86% 1 S Toluene-d8 (SURR) 96% 1 S 1-Bromo-4-Fluorobenzene (SURR) 94% 1 S	Methyl Ethyl Ketone	ND	ug/L	1	2.7	9.0		4
Dibromofluoromethane (SURR) 86% 1 S Toluene-d8 (SURR) 96% 1 S 1-Bromo-4-Fluorobenzene (SURR) 94% 1 S	Tetrahydrofuran	ND	ug/L	1	1.7	5.5		
Toluene-d8 (SURR) 96% 1 S 1-Bromo-4-Fluorobenzene (SURR) 94% 1 S	Dibromofluoromethane (SURR)	86%	1.414.5	1				S
1-Bromo-4-Fluorobenzene (SURR) 94% 1 S	Toluene-d8 (SURR)	96%		1				S
	1-Bromo-4-Fluorobenzene (SURR)	94%		1				S

NOTES APPLICABLE TO THIS ANALYSIS:

State of Wisconsin Department of Natural Resources

ENVIRONMENTAL MONITORING DATA CERTIFICATION

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

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

Madison, WI 53707 - 7921

Monitoring Data Submittal Informatio	n		
Name of entity submitting data (laboratory, co Northern Lake Service Inc	onsultant, facility owner):		
Contact for questions about data formatting.	Include data preparer's name, telephone n	umber and E-mail add	dress:
Name: Chris Geske	Phone: 715-47	78-2777	
E-mail: lims@nlslab.com			
Facility Name	License No. / Monitoring ID	Facility ID [FID]	Actual sampling dates (e.g., July 2-6, 200
Marathon County BRRDF Private W	ells 04228	337005680	OCTOBER -21-2020
The enclosed results are for sampling require	d in the month(s) of: (e.g., June 2003)	_	
OCTOBER -2020			
Type of Data Submitted (Check all that apply	1		
Groundwater monitoring data from monit Groundwater monitoring data from privat Leachate monitoring data	oring wells Gas more than the supply wells data Air moni	nitoring toring data	
Notification attached?			
 No. No groundwater standards or explosive gas limits Yes, a notification of values exceeding a groundwater groundwater standard and preliminary analysis of th Yes, a notification of values exceeding an explosive gas explosive gas limits. 	were exceeded. standard is attached. It includes a list of monitoring point e cause and significance of any concentration. s limit is attached. It includes the monitoring points, date	s, dates, sample values, s, sample values and	
Certification			+TI
To the best of my knowledge, the informat are true and correct. Furthermore, I have groundwater standards or explosive gas I concentrations exceeding groundwater st	ion reported and statements made on the attached complete notification of any sa evels, and a preliminary analysis of the andards.	his data submittal an impling values meeti cause and significan	d attachements ing or exceeding t of
David Hagenbucher	Manager		715-551-5864
Facility Representative Name (Print)	Title		(Area Code) Telephone No.
D. Halle	November 16.2	020	
Signature	Date	.020	
FOR DNR USE ONLY. Check a	ction taken, and record date and your in	itials. Describe on b	ack side if necessary.
Found uploading problems	on Initials		
Notified contact of problem	s on Upload	ed data successfully	on
EDD format(s): Diskette	CD (initial submittal and follow-up)	E-mail (follow-up or	lv) Other

Marathon County Solid Waste Mgmnt Dept Marathon County BRRDF Private Wells (semi-annual) 10-01-2020

Lab ID: 721026460 NLS Project: 355948 Collected: 10-01-2020 License: 04228 FID: 337005680

EXCEEDANCES:

Well Desc (Point ID)	Parameter	Units	Result	PAL / ACL	ES	Comments

ANALYTICAL REPORT

WDNR Laboratory ID No. 721026460 WDATCP Laboratory Certification No. 105-330 EPA Laboratory ID No. WI00034

Printed: 11/16/20 Page 1 of 4

NLS Project: 355948

NLS Customer: 20080

Fax: 715 446 2906 Phone: 715 446 3339

Client: Marathon County Solid Waste Mgmnt Dept Attn: Dave Hagenbucher Marathon County Landfill R18500 East Highway 29 Ringle, WI 54471 9754

Project: Marathon County BRRDF Private Wells (semi-annual) October 2020

PW11 NLS ID: 1223791 Matrix: GW

Collected: 10/21/20 10:55 Received: 10/21/20

Parameter	Result	Units	Dilution	LOD	LOQ/MCL	Analyzed	Method	Lab
Field color	none detected					10/21/20	NA	721026460
Field odor	none detected					10/21/20	NA	721026460
Field turbidity	none detected					10/21/20	NA	721026460
VOCs (water) by GC/MS	see attached					10/29/20	SW846 8260C	721026460

Values in brackets represent results greater than or equal to the LOD but less than the LOQ and are within a region of "Less-Certain Quantitation". Results greater than or equal to the LOQ are considered to be in the region of "Certain Quantitation". LOD and LOQ tagged with an asterisk(*) are considered Reporting Limits. All LOD/LOQs adjusted to reflect dlution and/or solids content.

ND = Not Detected (< LOD)</th>LOD = Limit of DetectionDWB = Dry Weight Basis%DWB = (mg/kg DWB) / 10000MCL = Maximum Contaminant Levels for Drinking Water Samples.

LOQ = Limit of Quantitation 1000 ug/L = 1 mg/L Shaded results indicate >MCL.

NA = Not Applicable

Walky Reviewed by:

ANALYTICAL REPORT

WDNR Laboratory ID No. 721026460 WDATCP Laboratory Certification No. 105-330 EPA Laboratory ID No. WI00034 Printed: 11/16/20 Page 2 of 4

NLS Project: 355948

NLS Customer: 20080

Fax: 715 446 2906 Phone: 715 446 3339

Client: Marathon County Solid Waste Mgmnt Dept Attn: Dave Hagenbucher Marathon County Landfill R18500 East Highway 29 Ringle, WI 54471 9754

Project: Marathon County BRRDF Private Wells (semi-annual) October 2020

PW26 NLS ID: 1223792 Matrix: GW Collected: 10/21/20 10:46 Received: 10/21/20

Parameter	Result	Units	Dilution	LOD	LOQ/MCL	Analyzed	Method	Lab
Field color	none detected					10/21/20	NA	721026460
Field odor	none detected					10/21/20	NA	721026460
Field turbidity	none detected					10/21/20	NA	721026460
VOCs (water) by GC/MS	see attached					10/29/20	SW846 8260C	721026460

Values in brackets represent results greater than or equal to the LOD but less than the LOQ and are within a region of "Less-Certain Quantitation". Results greater than or equal to the LOQ are considered to be in the region of "Certain Quantitation". LOD and LOQ tagged with an asterisk(*) are considered Reporting Limits. All LOD/LOQs adjusted to reflect dlution and/or solids content.

ND = Not Detected (< LOD)</th>LOD = Limit of DetectionDWB = Dry Weight Basis%DWB = (mg/kg DWB) / 10000MCL = Maximum Contaminant Levels for Drinking Water Samples.

LOQ = Limit of Quantitation 1000 ug/L = 1 mg/L Shaded results indicate >MCL.

NA = Not Applicable

Maliz Reviewed by:

ANALYTICAL REPORT

WDNR Laboratory ID No. 721026460 WDATCP Laboratory Certification No. 105-330 EPA Laboratory ID No. WI00034 Printed: 11/16/20 Page 3 of 4

> NLS Project: 355948 NLS Customer: 20080

Fax: 715 446 2906 Phone: 715 446 3339

Client: Marathon County Solid Waste Mgmnt Dept Attn: Dave Hagenbucher Marathon County Landfill R18500 East Highway 29 Ringle, WI 54471 9754

Project: Marathon County BRRDF Private Wells (semi-annual) October 2020

PW8575 NLS ID: 1223793

Matrix: GW

Collected: 10/21/20 09:20 Received: 10/21/20

Parameter	Result	Units	Dilution	LOD	LOQ/MCL	Analyzed	Method	Lab
Field color	none detected					10/21/20	NA	721026460
Field odor	none detected					10/21/20	NA	721026460
Field turbidity	none detected					10/21/20	NA	721026460
VOCs (water) by GC/MS	see attached					10/29/20	SW846 8260C	721026460

Values in brackets represent results greater than or equal to the LOD but less than the LOQ and are within a region of "Less-Certain Quantitation". Results greater than or equal to the LOQ are considered to be in the region of "Certain Quantitation". LOD and LOQ tagged with an asterisk(*) are considered Reporting Limits. All LOD/LOQs adjusted to reflect dlution and/or solids content.

ND = Not Detected (< LOD)</th>LOD = Limit of DetectionDWB = Dry Weight Basis%DWB = (mg/kg DWB) / 10000MCL = Maximum Contaminant Levels for Drinking Water Samples.

LOQ = Limit of Quantitation 1000 ug/L = 1 mg/L Shaded results indicate >MCL.

NA = Not Applicable

Maliz Reviewed by:

NORTHERN LAKE SERVICE, INC. Analytical Laboratory and Environmental Services 400 North Lake Avenue - Crandon, WI 54520 Ph: (715)-478-2777 Fax: (715)-478-3060 Client: Marathon County Solid Waste Mgmnt Dept Attn: Dave Hagenbucher Marathon County Landfill WDNR Laboratory ID No. 721026460 WDATCP Laboratory Certification No. 105-330 EPA Laboratory ID No. WI00034

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NLS Project: 355948

NLS Customer: 20080

Fax: 715 446 2906 Phone: 715 446 3339

Project: Marathon County BRRDF Private Wells (semi-annual) October 2020

Trip Blank NLS ID: 1223794

Matrix: TB

Collected: 10/21/20 00:00 Received: 10/21/20

R18500 East Highway 29

Ringle, WI 54471 9754

Parameter	Result	Units	Dilution	LOD	LOQ/MCL	Analyzed	Method	Lab
VOCs (water) by GC/MS	see attached					10/29/20	NA	721026460
Values in brackets represent results greater than or equal to the LOD	but less than the LOC	and are within a regior	n of "Less-Certa	in Quanti	tation". Result	s greater th	an or equal to the LOC	are considered
to be in the region of "Certain Quantitation". LOD and LOQ tagged wi	th an asterisk(*) are c	onsidered Reporting Lir	mits. All LOD/LO)Qs adju	sted to reflect of	dlution and/	or solids content.	

ND = Not Detected (< LOD)</th>LOD = Limit of DetectionDWB = Dry Weight Basis%DWB = (mg/kg DWB) / 10000MCL = Maximum Contaminant Levels for Drinking Water Samples.

LOQ = Limit of Quantitation 1000 ug/L = 1 mg/L Shaded results indicate >MCL.

NA = Not Applicable

Walky Reviewed by:

Sample: 1223791 PW11 Collected: 10/21/20 Analyzed: 10/29/20 - Analytes: 43

ANALYTE NAME	RESULT	UNITS	DIL	LOD	LOQ	MCL	Note
Benzene	ND	ug/L	1	0.25	0.84	5	
Bromodichloromethane	ND	ug/L	1	0.20	0.67	80	
Bromoform	ND	ug/L	1	0.27	0.91	80	
Bromomethane	ND	ug/L	1	0.87	2.9		
Carbon Tetrachloride	ND	ug/L	1	0.17	0.55	5	
Chlorobenzene	ND	ug/L	1	0.34	1.1	100	
Chloroethane	ND	ug/L	1	1.5	5.0		
Chloroform	ND	ug/L	1	0.24	0.81	80	
Chloromethane	ND	ug/L	1	0.81	2.7		
Dibromochloromethane	ND	ug/L	1	0.20	0.67	80	
1,2-Dibromo-3-Chloropropane	ND	ug/L	1	0.36	1.2		
1,2-Dibromoethane	ND	ug/L	1	0.21	0.71		
Dibromomethane	ND	ug/L	1	0.17	0.55		
1,2-Dichlorobenzene	ND	ug/L	1	0.28	0.92	600	
1.3-Dichlorobenzene	ND	ua/L	1	0.28	0.93		
1.4-Dichlorobenzene	ND	ua/L	1	0.30	0.99	75	
Dichlorodifluoromethane	ND	ug/L	1	0.59	2.0		
1.1-Dichloroethane	ND	ug/L	1	0.20	0.66		
1.2-Dichloroethane	ND	ug/L	1	0.43	1.4	5	
1.1-Dichloroethene	ND	ug/L	1	0.19	0.63	7	
cis-1 2-Dichloroethene	ND	ug/L	1	0.20	0.66	70	
trans-1 2-Dichloroethene	ND	ug/L		0.19	0.64	100	
1.2-Dichloropropane	ND	ug/L	i i	0.16	0.54	5	
cis-1 3-Dichloropropene	ND	ug/L	1	0.16	0.53		
trans-1.3-Dichloronronene	ND	ug/L	1	0.24	0.81		
Ethylbenzene	ND	ug/L	1	0.33	11	700	
Methylene chloride	ND	ug/L	1	0.61	20	5	
Nanhthalene	ND	ug/L		0.66	22		
Styrene	ND	ug/L	1 I	0.40	13	100	
ortho-Xvlene	ND	ug/L	1	0.38	13	100	
Tetrachloroethene	ND	ug/L	1	0.34	1.1	5	
Toluene	ND	ug/L	1	0.29	0.98	1000	
1 1 1-Trichloroethane	ND	ug/L	ń	0.11	0.35	200	
1.1.2-Trichloroethane	ND	ug/L	- i	0.21	0.72	5	
Trichloroethene	ND	ug/L	1	0.35	12	5	
Trichlorofluoromethane	ND	ug/L	4	0.22	0.75	0	
Vinvl chloride	ND	ug/L	1	0.14	0.47	2	
meta para Vulene	ND	ug/L	1	0.70	23	10000	
MTRE	ND	ug/L	1	0.10	1.0	10000	
Acetope	ND	ug/L	4	7.0	23		
Carbon Disulfide	ND	ug/L	4	0.17	0.57		
Methyl Ethyl Ketone	ND			27	9.0		
Tetrahydrofuran	ND	ug/L	4	17	5.0		
Dibromofluoromothana (CLIDD)	0.00	uy/L	4	4.1	0.0		0
	00%		1				0
1 Brome 4 Elusrohanzene (EUBB)	94%						3
1-Bromo-4-Fluorobenzene (SURK)	94%		1				3

NOTES APPLICABLE TO THIS ANALYSIS:

Sample: 1223792 PW26 Collected: 10/21/20 Analyzed: 10/29/20 - Analytes: 43

ANALYTE NAME	RESULT	UNITS	DIL	LOD	LOQ	MCL	Note
Benzene	ND	ug/L	1	0.25	0.84	5	
Bromodichloromethane	ND	ug/L	1	0.20	0.67	80	
Bromoform	ND	ug/L	1	0.27	0.91	80	
Bromomethane	ND	ug/L	1	0.87	2.9		
Carbon Tetrachloride	ND	ug/L	1	0.17	0.55	5	
Chlorobenzene	ND	ug/L	1	0.34	1.1	100	
Chloroethane	ND	ug/L	1	1.5	5.0		
Chloroform	ND	ug/L	1	0.24	0.81	80	
Chloromethane	ND	ug/L	1	0.81	2.7		
Dibromochloromethane	ND	ug/L	1	0.20	0.67	80	
1,2-Dibromo-3-Chloropropane	ND	ug/L	1	0.36	1.2		
1,2-Dibromoethane	ND	ug/L	1	0.21	0.71		
Dibromomethane	ND	ug/L	1	0.17	0.55		
1,2-Dichlorobenzene	ND	ug/L	1	0.28	0.92	600	
1,3-Dichlorobenzene	ND	ug/L	1	0.28	0.93		
1.4-Dichlorobenzene	ND	ug/L	1	0.30	0.99	75	
Dichlorodifluoromethane	ND	ug/L	1	0.59	2.0	1.2	
1.1-Dichloroethane	ND	ug/L	1	0.20	0.66		
1,2-Dichloroethane	ND	ug/L	1	0.43	1.4	5	
1,1-Dichloroethene	ND	ug/L	1	0.19	0.63	7	
cis-1,2-Dichloroethene	ND	ug/L	1	0.20	0.66	70	
trans-1,2-Dichloroethene	ND	ug/L	1	0.19	0.64	100	
1,2-Dichloropropane	ND	ug/L	1	0.16	0.54	5	
cis-1,3-Dichloropropene	ND	ug/L	1	0.16	0.53		
trans-1,3-Dichloropropene	ND	ug/L	1	0.24	0.81	7.0	
Ethylbenzene	ND	ug/L	1	0.33	1.1	700	
Methylene chloride	ND	ug/L	1	0.61	2.0	5	
Naphthalene	ND	ug/L	1	0.66	2.2	and a second second	
Styrene	ND	ug/L	1	0.40	1.3	100	
ortho-Xylene	ND	ug/L	1	0.38	1.3		
Tetrachloroethene	ND	ug/L	1	0.34	1.1	5	
Toluene	ND	ug/L	1	0.29	0.98	1000	
1,1,1-Trichloroethane	ND	ug/L	1	0.11	0.35	200	
1.1.2-Trichloroethane	ND	ug/L	1	0.21	0.72	5	
Trichloroethene	ND	ug/L	1	0.35	1.2	5	
Trichlorofluoromethane	ND	ug/L	1	0.22	0.75		
Vinyl chloride	ND	ug/L	1	0.14	0.47	.2	
meta.para-Xvlene	ND	ua/L	1	0.70	2.3	10000	
MTBE	ND	ug/L	1	0.41	1.4	2.0.1712	
Acetone	ND	ua/L	1	7.0	23		
Carbon Disulfide	ND	ug/L	1	0.17	0.57		
Methyl Ethyl Ketone	ND	ug/L	1	2.7	9.0		
Tetrahydrofuran	ND	ug/L	î	1.7	5.5		
Dibromofluoromethane (SURR)	96%	2:-	1				S
Toluene-d8 (SURR)	103%		1				S
1-Bromo-4-Fluorobenzene (SURR)	99%		1				S

NOTES APPLICABLE TO THIS ANALYSIS:

Sample: 1223793 PW8575 Collected: 10/21/20 Analyzed: 10/29/20 - Analytes: 43

ND ND ND ND ND ND ND	ug/L ug/L ug/L ug/L	1	0.25 0.20 0.27	0.84 0.67	5 80	
ND ND ND ND ND ND	ug/L ug/L ug/L ug/L	1	0.20	0.67	80	
ND ND ND ND	ug/L ug/L	1	0.27			
ND ND ND	ug/L		V. 21	0.91	80	
ND ND	ug/l	1	0.87	2.9		
ND	uu/L	1	0.17	0.55	5	
ND	ug/L	1	0.34	1.1	100	1
ND	ug/L	1	1.5	5.0		
ND	ug/L	1	0.24	0.81	80	
ND	ug/L	1	0.81	2.7		
ND	ug/L	1	0.20	0.67	80	
ND	ug/L	1	0.36	1.2		
ND	ug/L	1	0.21	0.71		
ND	ug/L	1	0.17	0.55		
ND	ug/L	1	0.28	0.92	600	
ND	ug/L	1	0.28	0.93		1
ND	ug/L	1	0.30	0.99	75	
ND	ug/L	1	0.59	2.0		
ND	ug/L	1	0.20	0.66		
ND	ug/L	1	0.43	1.4	5	
ND	ug/L	1	0.19	0.63	7	
ND	ug/L	1	0.20	0.66	70	
ND	ug/L	1	0.19	0.64	100	
ND	ug/L	1	0.16	0.54	5	
ND	ug/L	1	0.16	0.53		
ND	ug/L	1	0.24	0.81	100	
ND	ug/L	1	0.33	1.1	700	
ND	ug/L	1	0.61	2.0	5	1
ND	ug/L	1	0.66	2.2		
ND	ug/L	1	0.40	1.3	100	
ND	ug/L	1	0.38	1.3		
ND	ug/L	1	0.34	1.1	5	
ND	ug/L	1	0.29	0.98	1000	
ND	ug/L	1	0.11	0.35	200	
ND	ug/L	1	0.21	0.72	5	
ND	ug/L	1	0.35	1.2	5	
ND	ug/L	1	0.22	0.75		
ND	ug/L	1	0.14	0.47	.2	
ND	ug/L	1	0.70	2.3	10000	
ND	ug/L	1	0.41	1.4		
ND	ug/L	1	7.0	23		
ND	ug/L	1	0.17	0.57		
ND	ug/L	1	2.7	9.0		
ND	ug/L	1	1.7	5.5		
88%		1		Contract of the second		S
98%		1				S
94%		1				S
	ND ND	ND Ug/L ND	ND ug/L 1 ND ug/	ND ug/L 1 0.17 ND ug/L 1 0.34 ND ug/L 1 0.34 ND ug/L 1 0.24 ND ug/L 1 0.24 ND ug/L 1 0.24 ND ug/L 1 0.26 ND ug/L 1 0.21 ND ug/L 1 0.21 ND ug/L 1 0.236 ND ug/L 1 0.28 ND ug/L 1 0.28 ND ug/L 1 0.28 ND ug/L 1 0.43 ND ug/L 1 0.43 ND ug/L 1 0.19 ND ug/L 1 0.16 ND ug/L 1 0.16 ND ug/L 1 0.66 ND ug/L 1 0.34	ND ug/L 1 0.17 0.55 ND ug/L 1 0.34 1.1 ND ug/L 1 0.84 0.81 ND ug/L 1 0.81 2.7 ND ug/L 1 0.24 0.81 ND ug/L 1 0.21 0.71 ND ug/L 1 0.21 0.71 ND ug/L 1 0.28 0.93 ND ug/L 1 0.28 0.93 ND ug/L 1 0.30 0.99 ND ug/L 1 0.30 0.99 ND ug/L 1 0.43 1.4 ND ug/L 1 0.43 1.4 ND ug/L 1 0.19 0.63 ND ug/L 1 0.16 0.54 ND ug/L 1 0.16 0.54 ND ug/L	ND ug/L 1 0.17 0.55 5 ND ug/L 1 0.34 1.1 100 ND ug/L 1 0.24 0.81 80 ND ug/L 1 0.26 0.92 600 ND ug/L 1 0.28 0.92 600 ND ug/L 1 0.28 0.93 1 ND ug/L 1 0.28 0.93 1 ND ug/L 1 0.30 0.99 75 ND ug/L 1 0.33 1.4 5 ND ug/L 1 0.43 1.4 5 ND

NOTES APPLICABLE TO THIS ANALYSIS:

Sampla: 1223794 Trip Blank Collected: 10/21/20 Analyzed: 10/29/20 - Analytes: 43

ANALYTE NAME	RESULT	UNITS	DIL	LOD	LOQ	MCL	Note
Benzene	ND	ug/L	1	0.25	0.84	5	
Bromodichloromethane	ND	ug/L	1	0.20	0.67	80	
Bromoform	ND	ug/L	1	0.27	0.91	80	
Bromomethane	ND	ug/L	1	0.87	2.9		1
Carbon Tetrachloride	ND	ug/L	1	0.17	0.55	5	1
Chlorobenzene	ND	ug/L	1	0.34	1.1	100	1
Chloroethane	ND	ug/L	1	1.5	5.0		
Chloroform	ND	ug/L	1	0.24	0.81	80	
Chloromethane	ND	ug/L	1	0.81	2.7	T 1	
Dibromochloromethane	ND	ug/L	1	0.20	0.67	80	
1,2-Dibromo-3-Chloropropane	ND	ug/L	1	0.36	1.2		
1,2-Dibromoethane	ND	ug/L	1	0.21	0.71		
Dibromomethane	ND	ug/L	1	0.17	0.55		
1,2-Dichlorobenzene	ND	ug/L	1	0.28	0.92	600	1.
1,3-Dichlorobenzene	ND	ug/L	1	0.28	0.93		
1,4-Dichlorobenzene	ND	ug/L	1	0.30	0.99	75	
Dichlorodifluoromethane	ND	ug/L	1	0.59	2.0		
1,1-Dichloroethane	ND	ug/L	1	0.20	0.66		
1,2-Dichloroethane	ND	ug/L	1	0.43	1.4	5	1
1,1-Dichloroethene	ND	ug/L	1	0.19	0.63	7	
cis-1,2-Dichloroethene	ND	ug/L	1	0.20	0.66	70	1
trans-1,2-Dichloroethene	ND	ug/L	1	0.19	0.64	100	
1,2-Dichloropropane	ND	ug/L	1	0.16	0.54	5	
cis-1,3-Dichloropropene	ND	ug/L	1	0.16	0.53		
trans-1,3-Dichloropropene	ND	ug/L	1	0.24	0.81		
Ethylbenzene	ND	ug/L	1	0.33	1.1	700	
Methylene chloride	ND	ug/L	1	0.61	2.0	5	1
Naphthalene	ND	ug/L	1	0.66	2.2	20.48	1
Styrene	ND	ug/L	1	0.40	1.3	100	T
ortho-Xylene	ND	ug/L	1	0.38	1.3		
Tetrachloroethene	ND	ug/L	1	0.34	1.1	5	
Toluene	ND	ug/L	1	0.29	0.98	1000	
1,1,1-Trichloroethane	ND	ug/L	1	0,11	0.35	200	
1,1,2-Trichloroethane	ND	ug/L	1	0.21	0.72	5	
Trichloroethene	ND	ug/L	1	0.35	1.2	5	
Trichlorofluoromethane	ND	ug/L	1	0.22	0.75		
Vinyl chloride	ND	ug/L	1	0.14	0.47	.2	
meta,para-Xylene	ND	ug/L	1	0.70	2.3	10000	
MTBE	ND	ug/L	1	0.41	1.4		
Acetone	ND	ug/L	1	7.0	23		
Carbon Disulfide	ND	ug/L	1	0.17	0.57		
Methyl Ethyl Ketone	ND	ug/L	1	2.7	9.0		
Tetrahydrofuran	ND	ug/L	1	1.7	5.5		
Dibromofluoromethane (SURR)	91%	1.4.6.4	1		and the second second		S
Toluene-d8 (SURR)	93%		1				S
1-Bromo-4-Fluorobenzene (SURR)	94%		1				S
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NOTES APPLICABLE TO THIS ANALYSIS: