Marathon County Solid Waste Department

2021 ANNUAL REPORT – AREA A

WDNR License No. 4228, 3338, 2892
FID 337005680

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

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

March 31, 2022

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 2021 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)

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Area A Landfill
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Staff, Consultants & Contractors

Marathon County Solid Waste Department Staff:

Director	Meleesa Johnson
Solid Waste Manager	Dave Hagenbucher
Environmental Resource Specialist	Eric Olson
Solid Waste Scale Master	Allison Birr
EHS & Compliance Specialist	John Peralta
Accounting and Business Specialist	Julie Groshek
Waste Specialist	Justin Brooks
Waste Specialist	Jeffery Woodward
Waste Specialist	Ryan Miller
Waste Specialist	Dustin Ziereis
SW Specialist / Mechanic	Chris Wickman
LTE	Amberlea Kaiser
Intern	Ian Munger

Engineering Consultants:

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  Cornerstone Environmental Group, a Tetra Tech company
  8413 Excelsior Drive, Suite 160
  Madison, WI 53717

- Lee Daigle, P.E.
  Cornerstone Environmental Group, a Tetra Tech company
  8413 Excelsior Drive, Suite 160
  Madison, WI 53717

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

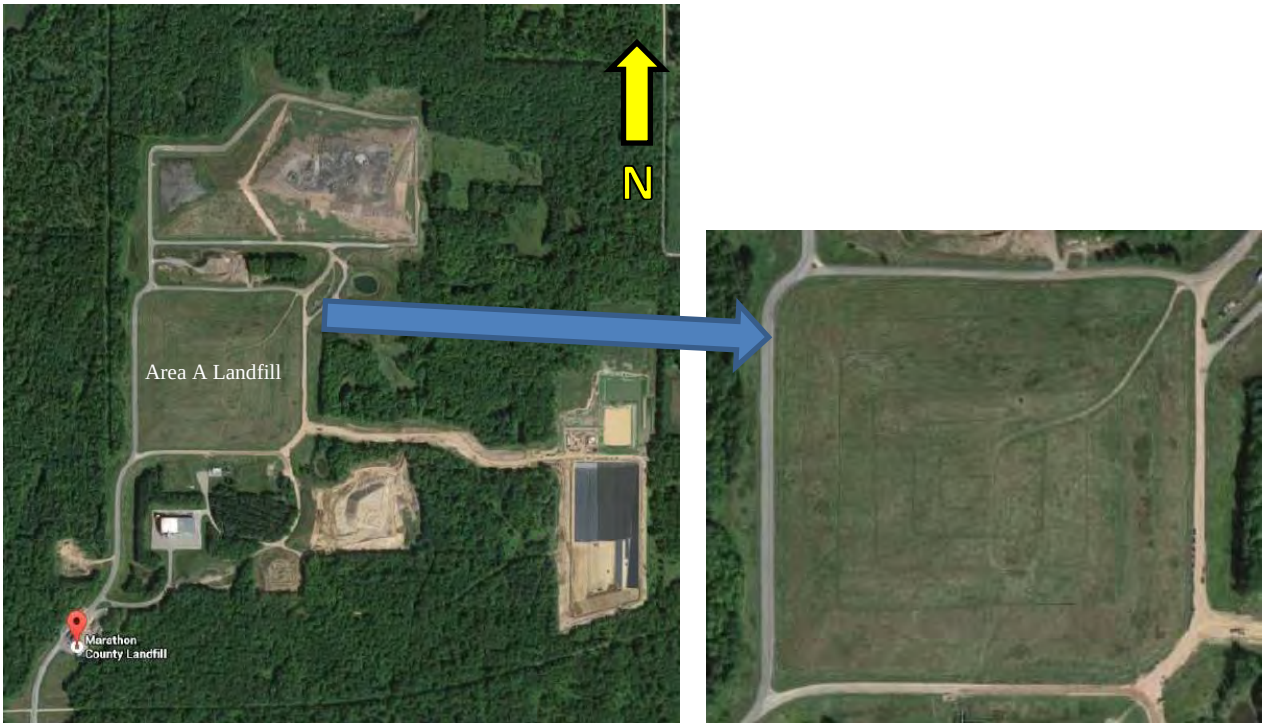
Introduction

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 2021

Area A is a closed landfill and, as such, did not accept waste during 2021. 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 2021. 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.

Leachate line jetting truck

In addition to the jetting work, some grading work was conducted on the top portion of the cell. Due to settlement, a few areas began to collect water during heavy precipitation events. A few loads of topsoil were applied and seeded as a means of diverting stormwater off the cell rather than ponding and entering the landfill.

Lastly, in fall of 2021, a gas condensate discharge line was intalled on the south side of the landfill to pump condensate into a nearby leachate tank. This consisted of approximately 250 feet of dual contained HDPE piping from a sump on Area A, to Tank 1 on the south side of Area A. The pump and discharge line allows condensate to be removed from the hill, rather than flowing by gravity through the gas collection system. Historically, the liquid was drained through the main gas header and into the condensate knockout before the blower. This old draining method was slow and inefficient with aging valve infrastructure. The new setup allows for quick removal of liquids and better performance of the gas collection system.

Area A – South side looking West

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. Most 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 97.39% of the year with approximately 8,531 hours of operation. The average aggregated flow rate for the site GCCS was approximately 991.32 standard cubic feet per minute (scfm). Methane and oxygen concentrations of landfill gas averaged, by volume, 51.2% for methane and 1.0% oxygen. Total gas collected from the site in 2021 was 521,423,435 standard cubic feet (scf). From the total gas collected at the site330,757,367 scf was used for production of electricity, and 190,666,065 scf was sent to the flare. The table below summarizes the aggregated flow, combustion location, and vacuum of the GCCS at the site.

2021 MARATHON COUNTY GCCS DATA (INCLUDES AREA A, AREA B & BRRDF)

Month	Total CFM	CFM Electric	CFM Flare
Jan	35,959,532	27,938,094	8,021,438
Feb	35,825,333	25,732,988	10,092,346
Mar	43,580,196	33,750,304	9,829,892
Apr	40,717,387	24,682,637	16,034,749
May	42,083,634	33,843,475	8,240,159
Jun	40,450,546	29,496,315	10,954,231
Jul	41,807,723	29,290,360	12,517,363
Aug	44,903,303	30,591,052	14,312,251
Sep	44,014,624	30,770,976	13,243,647
Oct	51,063,231	29,774,114	21,289,117
Nov	47,783,789	32,177,269	15,606,519
Dec	53,234,137	2,709,783	50,524,353
Totals	521,423,435	330,757,367	190,666,065

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).

2021 GCCS Vacuum and Concentrations	Ave Vacuum (negative inches water column)	Ave CH4%	Ave O2%
January	26.25	50.3	1.1
February	26.50	49.6	1.3
March	25.80	50.8	1.1
April	26.40	51.9	1.0
May	25.90	51.6	1.1
June	26.40	52.4	0.9
July	24.50	53.7	0.5
August	24.30	52.5	0.8
September	24.90	50.5	0.8
October	25.00	48.7	0.9
November	26.10	51.5	1.0
December	26.00	50.5	1.0
Average	25.67	51.2	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 2021 Semi-annual Report and July to December 2021 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, 2021. 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.

Area A – north slope looking south

Soil Gas Monitoring

During 2021, the soil gas probes were monitored quarterly for relative pressure, methane (CH4), oxygen (02), and soil gas pressure. In 2021, these monitoring results indicated no gas migration.

First Quarter Probe Data (January 20, 2021):

Gas Probe [Depth in feet]	Location	Methane (%CH4 by Vol.)	Oxygen (%O2 by Vol.)	Pressure (inch W.C.)	Notes:
Lic. 2892	**WDNR Parm Code #**	**85547**	**85550**	**46389**	
Area A Probe IDs					**WDNR ID No.**
G-1R [10']	E Area A	0	20.8	0.05	700
G-3R [15']	N Area A	0	22.2	0.05	704
G-4R [5']	W Area A	0	21.6	-0.01	709
G-9 [9']	W Area A	0	22	-0.01	720
G-11 [10']	S Area A	0	18.8	0.02	724
G-12 [10']	S Area A	0	21.9	-0.08	726

Second Quarter Probe Data (Apil 23, 2021):

Gas Probe [Depth in feet]	Location	Methane (%CH4 by Vol.)	Oxygen (%O2 by Vol.)	Pressure (inch W.C.)	Notes:
Lic. 2892	**WDNR Parm Code #**	**85547**	**85550**	**46389**	
Area A Probe IDs					**WDNR ID No.**
G-1R [10']	E Area A	0	19.3	0	700
G-3R [15']	N Area A	0	19.4	0.02	704
G-4R [5']	W Area A	0	19.1	0.01	709
G-9 [9']	W Area A	0	19.4	-2.75	720
G-11 [10']	S Area A	0	17.5	0.04	724
G-12 [10']	S Area A	0	18	NR	726

Third Quarter Probe Data (July 22, 2021):

Gas Probe [Depth in feet]	Location	Methane (%CH4 by Vol.)	Oxygen (%O2 by Vol.)	Pressure (inch W.C.)	Notes:
Lic. 2892	**WDNR Parm Code #**	**85547**	**85550**	**46389**	
Area A Probe IDs					**WDNR ID No.**
G-1R [10']	E Area A	0	11.5	-0.02	700
G-3R [15']	N Area A	0	19.4	0	704
G-4R [5']	W Area A	0	18.9	-0.01	709
G-9 [9']	W Area A	0	18.7	0	720
G-11 [10']	S Area A	0	14.7	0.01	724
G-12 [10']	S Area A	0	18.1	-0.01	726

Fourth Quarter Probe Data (November 18, 2021):

Gas Probe [Depth in feet]	Location	Methane (%CH4 by Vol.)	Oxygen (%O2 by Vol.)	Pressure (inch W.C.)	Notes:
Lic. 2892	**WDNR Parm Code #**	**85547**	**85550**	**46389**	
Area A Probe					**WDNR ID No**
G-1R [10']	E Area A	0	20.5	-0.02	700
G-3R [15']	N Area A	0	20.9	-0.03	704
G-4R [5']	W Area A	0	19.9	-0.01	709
G-9 [9']	W Area A	0	20.2	-0.01	720
G-11 [10']	S Area A	0	21.6	-0.03	724
G-12 [10']	S Area A	0	19.7	-0.01	726

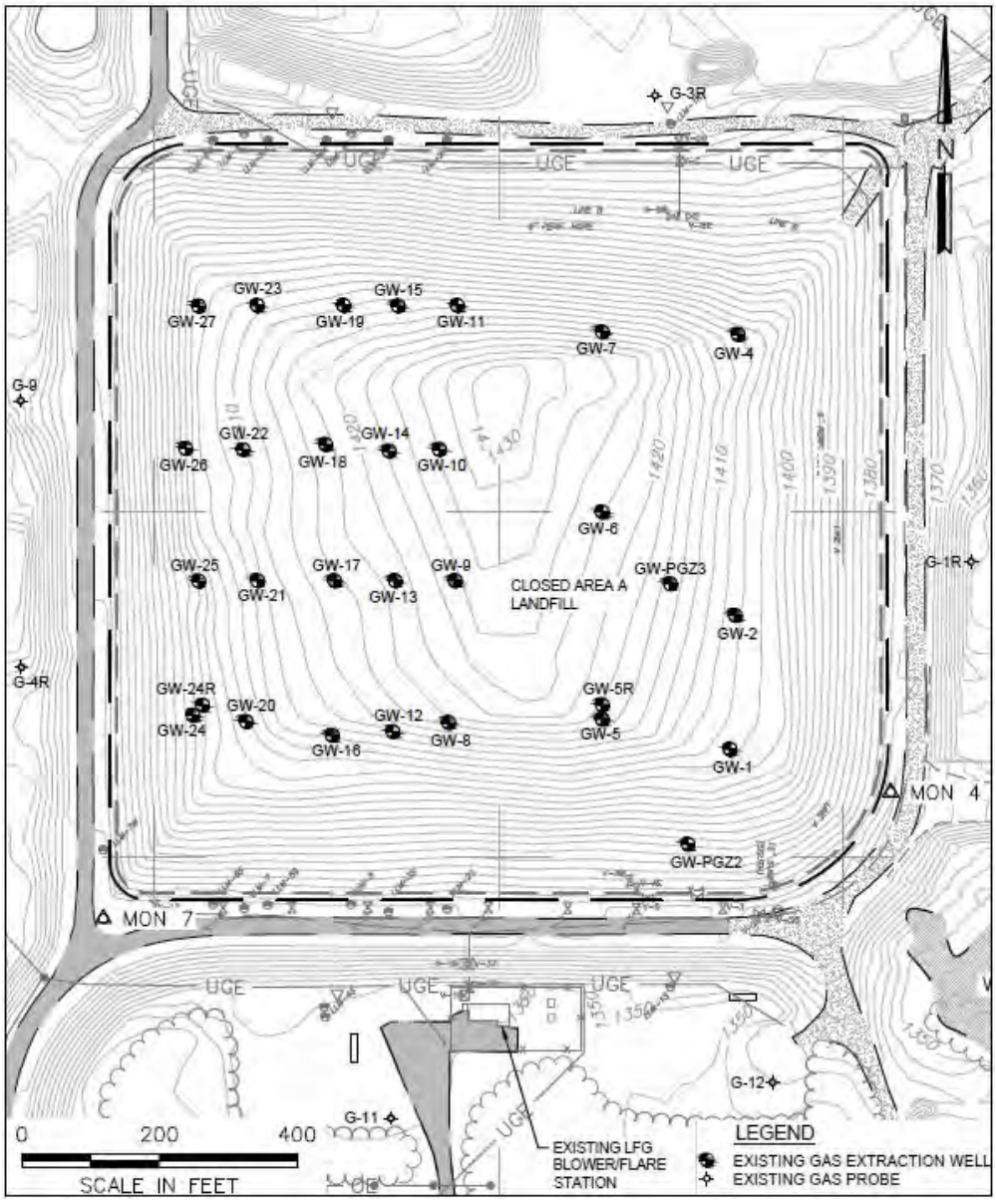
Gas Sampling Data

On October 25 2021, 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.

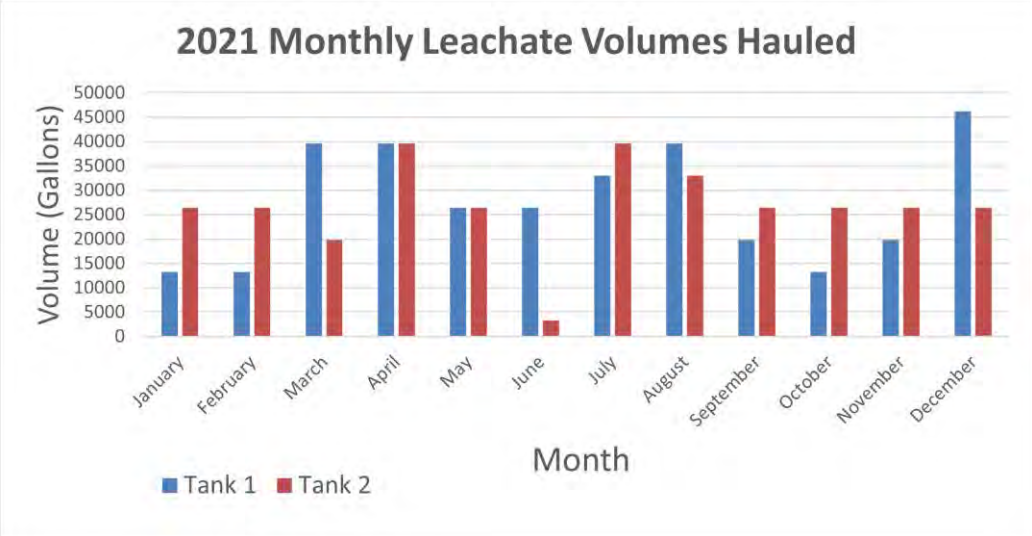
Leachate tank levels are checked daily by the contract leachate hauler and throughout the week by the site facility supervisor and environmental technicians. When needed, the contract hauler pumps the stored leachate into a 6,600-gallon tanker truck and delivers the material to one of four waste water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

Leachate collected in 2021 was transported to the following facilities: 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:

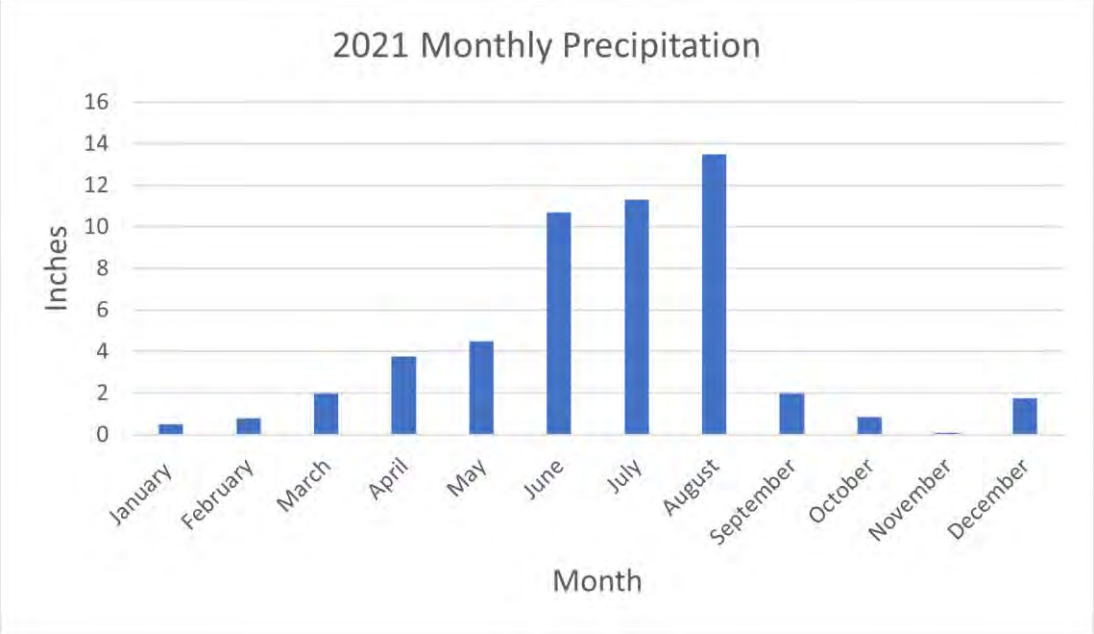
2021	Tank 1	Tank 2
January	13200	26400
February	13200	26400
March	39600	19800
April	39600	39600
May	26400	26400
June	26400	33000
July	33000	39600
August	39600	33000
September	19800	26400
October	13200	26400
November	19800	26400
December	46200	26400
Total	330,000	349,800



Precipitation:

Month	Inches
January	0.5
February	0.8
March	2
April	3.75
May	4.5
June	10.7
July	11.3
August	13.5
September	2.6
October	0.85
November	0.1
December	1.75
Total	51.75

** Snow converted to liquid precipitation by dividing by 10*



Leachate Collection Piping

On June 29th and 30th, 2021 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 2021 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 2021 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 2021 are summarized below.

Leachate	2021	Conductivity	pH
		umho/cm	S.U.
Tank 1	April	2130	6.61
	October	6590	7.9
Tank 2	April	5380	7.02
	October	6070	7.22

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 2021 and found LS- 3 was dry. LS-2, 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 2021 Detection Results:

Project: Marathon County Landfill - Area A October 2021

Lysimeter L-2 NLS ID: 1286069

Matrix: WW

Collected: 10/26/21 14:36 Received: 10/26/21

Parameter	Result	Units	Dilution	LOD	LOQ	Analyzed	Method	Lab
Field color	none detected					10/26/21	NA	721026460
Field conductivity	653	umho/cm@25C	1			10/26/21	EPA 120.1	721026460
Field odor	none detected					10/26/21	NA	721026460
Field pH	7.45	s.u.	1			10/26/21	4500-H+B-2000	721026460
Field turbidity	slight, fine, tan					10/26/21	NA	721026460
Field volume pumped	1.00	gallon	1	0.0*		10/26/21	NA	721026460
Alkalinity, tot. as CaCO3 (unfiltered)	150	mg/L	1	1.0	2.0	10/28/21	2320 B-1997	721026460
C.O.D. (unfiltered)	15	mg/L	1	1.6	5.2	11/07/21	5220 C-1997	721026460
Chloride, as Cl (unfiltered)	110	mg/L	5	1.6	10	11/03/21	EPA 300.0, Rev 2.1	721026460
Hardness, tot. recoverable, (calc/unfilt/icp)	200	mg/L	1	0.47	1.6	11/01/21	EPA 200.7, Rev 4.4	721026460
Nitrogen, ammonia as N (unfiltered)	[0.031]	mg/L	1	0.027	0.090	10/28/21	4500-NH3 G-1997	721026460
Sodium, tot. recoverable as Na by ICP	72	mg/L	1	0.12	0.41	11/01/21	EPA 200.7, Rev 4.4	721026460
Sulfate, as SO4 (unfiltered)	7.7	mg/L	1	0.28	2.0	11/01/21	EPA 300.0, Rev 2.1	721026460
Metals digestion - tot. recov.ICP	yes					10/29/21	EPA 200.7	721026460
VOCs (water) by GC/MS	see attached					11/03/21	EPA 624	721026460

Lysimeter L-3 NLS ID: 1286070

Matrix: WW

Collected: 10/26/21 13:53 Received: 10/26/21

Parameter	Result	Units	Dilution	LOD	LOQ	Analyzed	Method	Lab
Dry	dry					10/26/21	Field Method	721026460

Lysimeter L-5 NLS ID: 1286071

Matrix: WW

Collected: 10/26/21 14:41 Received: 10/26/21

Parameter	Result	Units	Dilution	LOD	LOQ	Analyzed	Method	Lab
Field color	natural					10/26/21	NA	721026460
Field conductivity	781	umho/cm@25C	1			10/26/21	EPA 120.1	721026460
Field odor	none detected					10/26/21	NA	721026460
Field pH	6.99	s.u.	1			10/26/21	4500-H+B-2000	721026460
Field turbidity	moderate, fine, brown					10/26/21	NA	721026460
Field volume pumped	1.00	gallon	1	0.0*		10/26/21	NA	721026460
Alkalinity, tot. as CaCO3 (unfiltered)	430	mg/L	1	1.0	2.0	11/03/21	2320 B-1997	721026460
C.O.D. (unfiltered)	37	mg/L	1	1.6	5.2	11/07/21	5220 C-1997	721026460
Chloride, as Cl (unfiltered)	22	mg/L	1	0.32	2.0	11/01/21	EPA 300.0, Rev 2.1	721026460
Hardness, tot. recoverable, (calc/unfilt/icp)	450	mg/L	1	0.47	1.6	11/01/21	EPA 200.7, Rev 4.4	721026460
Nitrogen, ammonia as N (unfiltered)	1.2	mg/L	1	0.027	0.090	10/28/21	4500-NH3 G-1997	721026460
Sodium, tot. recoverable as Na by ICP	13	mg/L	1	0.12	0.41	11/01/21	EPA 200.7, Rev 4.4	721026460
Sulfate, as SO4 (unfiltered)	ND	mg/L	1	0.28	2.0	11/01/21	EPA 300.0, Rev 2.1	721026460
Metals digestion - tot. recov.ICP	yes					10/29/21	EPA 200.7	721026460
VOCs (water) by GC/MS	see attached					11/03/21	EPA 624	721026460

Project: Marathon County Landfill - Area A October 2021

Lysimeter L-6 NLS ID: 1286072

Matrix: WW

Collected: 10/26/21 14:46 Received: 10/26/21

Parameter	Result	Units	Dilution	LOD	LOQ	Analyzed	Method	Lab
Field color	natural					10/26/21	NA	721026460
Field conductivity	825	umho/cm@25C	1			10/26/21	EPA 120.1	721026460
Field odor	none detected					10/26/21	NA	721026460
Field pH	6.93	s.u.	1			10/26/21	4500-H+B-2000	721026460
Field turbidity	moderate, fine, brown					10/26/21	NA	721026460
Field volume pumped	1.00	gallon	1	0.0*		10/26/21	NA	721026460
Alkalinity, tot. as CaCO3 (unfiltered)	440	mg/L	1	1.0	2.0	11/03/21	2320 B-1997	721026460
C.O.D. (unfiltered)	15	mg/L	1	1.6	5.2	11/07/21	5220 C-1997	721026460
Chloride, as Cl (unfiltered)	28	mg/L	1	0.32	2.0	11/01/21	EPA 300.0, Rev 2.1	721026460
Hardness, tot. recoverable, (calc/unfilt/icp)	470	mg/L	1	0.47	1.6	11/01/21	EPA 200.7, Rev 4.4	721026460
Nitrogen, ammonia as N (unfiltered)	2.2	mg/L	1	0.027	0.090	10/28/21	4500-NH3 G-1997	721026460
Sodium, tot. recoverable as Na by ICP	14	mg/L	1	0.12	0.41	11/01/21	EPA 200.7, Rev 4.4	721026460
Sulfate, as SO4 (unfiltered)	[0.40]	mg/L	1	0.28	2.0	11/01/21	EPA 300.0, Rev 2.1	721026460
Metals digestion - tot. recov.ICP	yes					10/29/21	EPA 200.7	721026460
VOCs (water) by GC/MS	see attached					11/03/21	EPA 624	721026460

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	Depth to Liquid	Depth to Liquid	Depth to Liquid	Depth to Liquid	Depth to Liquid	Depth to Liquid	Depth to Liquid	Depth to Liquid	Depth to Liquid
March	32.5	34	40.5	45	30	38.5	Dry	Broken	Dry	Broken
June	31.6	35.9	41.8	45.5	39.9	30.3	Dry	Broken	Dry	Broken
September	38	34.5	45.2	44.6	35.2	29.5	Dry	Broken	Dry	Broken
December	33.7	34.4	46.2	45.5	32.1	31.6	Broken	Broken	Dry	Broken

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 semi-annually 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. 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 2021 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.

Marathon County Solid Waste and Tetra Tech Environmental have been working with WDNR to identify the levels at R59WT/P. Tetra Tech has implemented a monitoring plan working with hydrogeologist staff to better asses the increased levels of conductivity and hardness. This evaluation will be completed in 2022.

April 2021

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	364342	April 1 2021	02892	737054890	Dup- (074)	Tetrachloroethylene	ug/L	1.4	0.5	5	NR140.10
721026460	364342	April 1 2021	02892	737054890	Dup- (074)	Trichloroethylene	ug/L	3.5	0.5	5	NR140.10
721026460	364342	April 1 2021	02892	737054890	Dup- (074)	Vinyl Chloride	ug/L	0.21	0.02	0.2	NR140.10
721026460	364342	April 1 2021	02892	737054890	R13R (074)	Tetrachloroethylene	ug/L	1.2	0.5	5	NR140.10
721026460	364342	April 1 2021	02892	737054890	R13R (074)	Trichloroethylene	ug/L	3.2	0.5	5	NR140.10
721026460	364342	April 1 2021	02892	737054890	R13R (074)	Vinyl Chloride	ug/L	0.2	0.02	0.2	NR140.10
721026460	364342	April 1 2021	02892	737054890	R38 (053)	Tetrachloroethylene	ug/L	0.62	0.5	5	NR140.10
721026460	364342	April 1 2021	02892	737054890	R38 (053)	Trichloroethylene	ug/L	1.4	0.5	5	NR140.10
721026460	364342	April 1 2021	02892	737054890	R38 (053)	Vinyl Chloride	ug/L	0.19	0.02	0.2	NR140.10
721026460	364342	April 1 2021	02892	737054890	R35 (050)	Conductivity	umho@25C	1100	510	-	well

October 2021

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	375600	Oct 1 2021	2892	737054890	Dup- (074)	Tetrachloroethylene	ug/L	1.3	0.5	5	NR140.10
721026460	375600	Oct 1 2021	2892	737054890	Dup- (074)	Trichloroethylene	ug/L	2	0.5	5	NR140.10
721026460	375600	Oct 1 2021	2892	737054890	R12 (049)	Tetrachloroethylene	ug/L	0.7	0.5	5	NR140.10
721026460	375600	Oct 1 2021	2892	737054890	R12 (049)	Trichloroethylene	ug/L	1.5	0.5	5	NR140.10
721026460	375600	Oct 1 2021	2892	737054890	R13R (074)	Tetrachloroethylene	ug/L	1.1	0.5	5	NR140.10
721026460	375600	Oct 1 2021	2892	737054890	R13R (074)	Trichloroethylene	ug/L	1.8	0.5	5	NR140.10
721026460	375600	Oct 1 2021	2892	737054890	R38 (053)	Trichloroethylene	ug/L	0.79	0.5	5	NR140.10
721026460	375600	Oct 1 2021	2892	737054890	R35 (050)	Conductivity	umho@25C	780	510	-	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 2021 are provided in Attachment G.

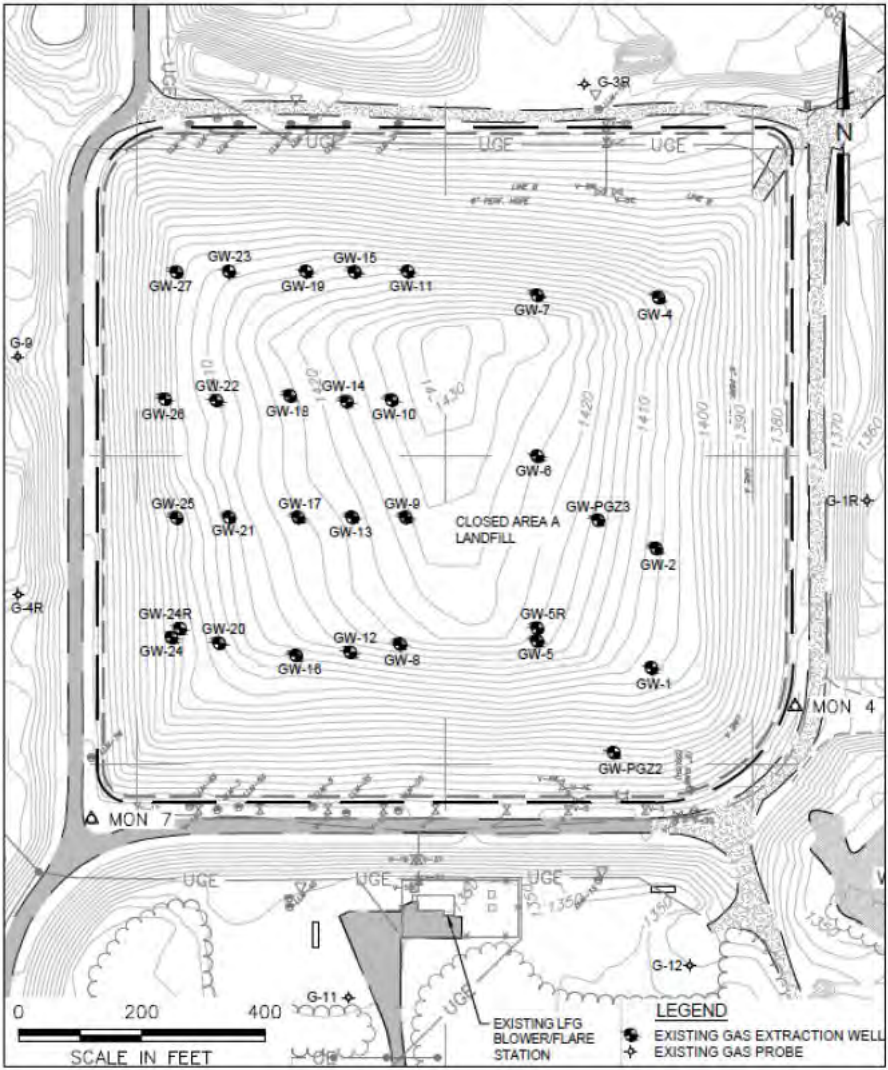
The private water supply well samples analyzed in 2021 met the parameters identified in the site's monitoring plan for safe drinking water standards, and no exceedances were recorded. During 2018, a low-level (estimated between the limit of quantitation and the limit of detection) detection of tetrachloroethene and acetone were reported in a sample collected from private well PW-68. This parameter was not detected in 2021 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 2021, 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


G-3R
N
GW-23
GW-15
GW-27
GW-19
GW-11
GW-7
GW-4
G-9
GW-22
GW-14
GW-26
GW-18
GW-10
GW-6
GW-25
GW-17
GW-9
GW-PGZ3
G-1R
GW-21
GW-13
CLOSED AREA A
LANDFILL
GW-2
G-4R
GW-24R
GW-20
GW-5R
GW-12
GW-24
GW-8
GW-5
GW-16
GW-1
MON 4
GW-PGZ2
MON 7
UGE
G-12
G-11
0
200
400
SCALE IN FEET
EXISTING LFG
BLOWER/FLARE
STATION
LEGEND
EXISTING GAS EXTRACTION WELL
EXISTING GAS PROBE

ATTACHMENT B

AREA A 2021 ANNUAL SURFACE EMISSION MONITORING REPORT

B Q1

PERFORMED BY: EO TIME: 8:31 am DATE: 3/18

CALIBRATION PRECISION TEST RECORD

LANDFILL NAME: Area B Q1

INSTRUMENT MAKE: ~ MODEL: ~ S/N: ~

MEASUREMENT #1:

Meter Reading for Zero Air: 0 ppm (1)

Meter Reading for Calibration Gas: 497 ppm (2)

500 - 497 = 3

MEASUREMENT #2:

Meter Reading for Zero Air: 0 ppm (3)

Meter Reading for Calibration Gas: 496 ppm (4)

500 - 496 = 4

MEASUREMENT #3:

Meter Reading for Zero Air: 0 ppm (5)

Meter Reading for Calibration Gas: 498 ppm (6)

500 - 498 = 2

0

3 = 3

CALCULATE PRECISION:

.006 = /500

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

.006 x 100 = .6

= .6 % (must be less than 10%)

BQ1

CALIBRATION PROCEDURE AND BACKGROUND DETERMINATION REPORT

LANDFILL NAME: MCSW

INSTRUMENT MAKE: Thermo Fisher MODEL: TVA 1000B / 1020 S/N: 0115248137

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): 3 ppm (1)

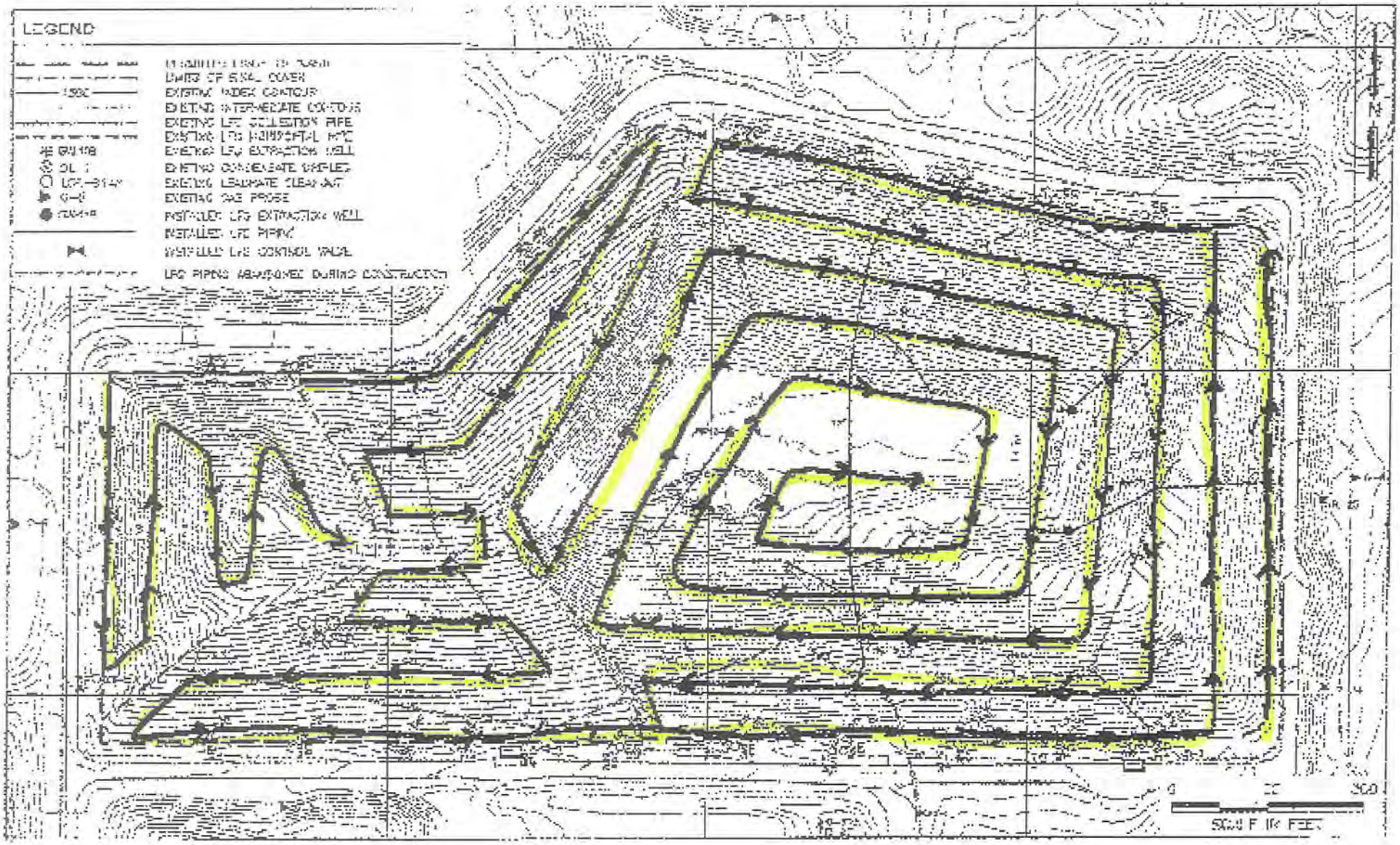
2. Downwind Reading (highest in 30 seconds): 0 ppm (2)

Calculate Background Value:

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

Background = 1 ppm

BQ1


LEGEND
EXISTING INDEX CONTOUR
EXISTING INTERMEDIATE CONTOUR
EXISTING GAS PROBE
INSTALLED LFG PIPING
INSTALLED LFG CONTROL VALVE
0
300
SCALE IN FEET

B Q1

DAILY SURFACE MONITORING LOG

PERFORMED BY: CD

START TIME: 9:12 am

DATE: 3/18/21

LANDFILL NAME: MCSW AREA B

Location Identifier of Leak	Location and Time	Concentration of Leak (ppm)
	No Detects	

BBR Q1

PERFORMED BY: GD TIME: 12:05 DATE: 1/28/21

INSTRUMENT RESPONSE TIME TEST RECORD

LANDFILL NAME: MCSW BBR Q1

INSTRUMENT MAKE: TES MODEL: TVA 1000B S/N: 0115248177

MEASUREMENT #1:

Stabilized Reading Using Calibration Gas: 504 ppm

90% of the Stabilized Reading: 453.6 ~~[illegible]~~ ppm

Time to Reach 90% of Stabilized reading After switching from Zero Air to Calibration Gas: 3.75 seconds (1)

MEASUREMENT #2:

Stabilized Reading Using Calibration Gas: 506 ppm

90% of the Stabilized Reading: 455.4 ~~[illegible]~~ ppm

Time Reach 90% of Stabilized Reading After switching from Zero Air to Calibration Gas: 3.5 seconds (2)

MEASUREMENT #3:

Stabilized Reading Using Calibration Gas: 501 ppm

90% of the Stabilized Reading: 450.9 ppm

Time to Reach 90% of Stabilized Reading After switching from Zero Air to Calibration Gas: 3.75 seconds (3)

CALCULATE RESPONSE TIME:

$$\frac{(1) + (2) + (3)}{3} \qquad \frac{11}{3}$$

= 3.66 SECONDS (MUST BE LESS THAN 30 SECONDS)

BBR Q1

CALIBRATION & BACKGROUND DETERMINATION REPORT

LANDFILL NAME: MCSW · BBR Q1 1/28/01

INSTRUMENT MAKE: Thermo Scientific **MODEL:** TVA 1000 B **S/N:** 0115248137

Calibration Procedure

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

2. **Introduce the calibration gas into the probe.**
Stable reading = 489 **ppm**

3. **Adjust meter to read 500 ppm.**

Background Determination Procedure

1. **Upwind Reading (highest in 30 seconds):** .20 **ppm (1)**

2. **Downwind Reading (highest in 30 seconds):** .18 **ppm (2)**

Calculate Background Value:

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

MEASUREMENT #1:

Meter Reading for Zero Air: .35 **ppm (1)**

Meter Reading for Calibration Gas: 504 **ppm (2)**

MEASUREMENT #2:

Meter Reading for Zero Air: .50 **ppm (3)**

Meter Reading for Calibration Gas: 501 **ppm (4)**

MEASUREMENT #3:

Meter Reading for Zero Air: .27 **ppm (5)**

Meter Reading for Calibration Gas: 499 **ppm (6)**

CALCULATE PRECISION:

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

÷4 −1 1

−1.333

−0.002666

= .26 **% (must be less than 10%)**

BBL Q1

DAILY SURFACE MONITORING LOG

PERFORMED BY: ED

START TIME: 12:05

DATE: 1/28/21

LANDFILL NAME: MSW BBL Q1

Location Identifier of Leak	Location and Time	Concentration of Leak (ppm)
NO		
Detect.		

BBR Q1

BBR SEM TRAIL 2020 Q1

BBL Q2

PERFORMED BY: CO TIME: 12:30 pm DATE: 4/27/21

INSTRUMENT RESPONSE TIME TEST RECORD

LANDFILL NAME: MLSW BBL Q2

INSTRUMENT MAKE: — MODEL: — S/N: —

MEASUREMENT #1:

Stabilized Reading Using Calibration Gas:	492	ppm
90% of the Stabilized Reading:	442.8	ppm
Time to Reach 90% of Stabilized reading After switching from Zero Air to Calibration Gas	4.1	seconds (1)

MEASUREMENT #2:

Stabilized Reading Using Calibration Gas:	493	ppm
90% of the Stabilized Reading:	443.7	ppm
Time Reach 90% of Stabilized Reading After switching from Zero Air to Calibration Gas	4.25	seconds (2)

MEASUREMENT #3:

Stabilized Reading Using Calibration Gas:	496	ppm
90% of the Stabilized Reading:	446.4	ppm
Time to Reach 90% of Stabilized Reading After switching from Zero Air to Calibration Gas	4.0	seconds (3)

CALCULATE RESPONSE TIME:

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

= $\overline{4.1166}$ SECONDS (MUST BE LESS THAN 30 SECONDS)

BBR 07

CALIBRATION & 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 = 492 **ppm**

3. **Adjust meter to read 500 ppm.**

Background Determination Procedure

1. **Upwind Reading (highest in 30 seconds):** -.06 **ppm (1)**

2. **Downwind Reading (highest in 30 seconds):** .01 **ppm (2)**

Calculate Background Value:

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

MEASUREMENT #1:

Meter Reading for Zero Air: .36 **ppm (1)**

Meter Reading for Calibration Gas: 480 **ppm (2)**

MEASUREMENT #2:

Meter Reading for Zero Air: .30 **ppm (3)**

Meter Reading for Calibration Gas: 491 **ppm (4)**

MEASUREMENT #3:

Meter Reading for Zero Air: .29 **ppm (5)**

Meter Reading for Calibration Gas: 492 **ppm (6)**

CALCULATE PRECISION:

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

= 26 **% (must be less than 10%)**

BBR Q2

BBR SEM TRAIL 2020

BBR Q2

DAILY SURFACE MONITORING LOG

PERFORMED BY: Emm Ovm

START TIME: 1:05 pm

DATE: 4/27/21

LANDFILL NAME: MCSW BBR

Location Identifier of Leak	Location and Time	Concentration of Leak (ppm)
	NO DETECTS	

B Q2

PERFORMED BY: Ed TIME: 12:15 DATE: 5/24/21

INSTRUMENT RESPONSE TIME TEST RECORD

LANDFILL NAME: MCSW Area B Q2

INSTRUMENT MAKE: TVA 100B MODEL: TF S/N: —

MEASUREMENT #1:

Stabilized Reading Using Calibration Gas:	504	ppm
90% of the Stabilized Reading:	453.4	ppm
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:	504	ppm
90% of the Stabilized Reading:	453.6	ppm
Time Reach 90% of Stabilized Reading After switching from Zero Air to Calibration Gas	3.35	seconds (2)

MEASUREMENT #3:

Stabilized Reading Using Calibration Gas:	501	ppm
90% of the Stabilized Reading:	450.9	ppm
Time to Reach 90% of Stabilized Reading After switching from Zero Air to Calibration Gas	3.40	seconds (3)

1
3.5
3.35
3.40
10.25
3.416

CALCULATE RESPONSE TIME:

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

= 3.41 SECONDS (MUST BE LESS THAN 30 SECONDS)

BQ2

CALIBRATION & 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 = 501 ppm

3. Adjust meter to read 500 ppm.

Background Determination Procedure

1. Upwind Reading (highest in 30 seconds): 1.51 ppm (1)

2. Downwind Reading (highest in 30 seconds): 1.66 ppm (2)

3.17 / 2

Calculate Background Value:

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

1.58

MEASUREMENT #1:

Meter Reading for Zero Air: 2.65 ppm (1)

Meter Reading for Calibration Gas: 505 ppm (2)

MEASUREMENT #2:

Meter Reading for Zero Air: 2.60 ppm (3)

Meter Reading for Calibration Gas: 503 ppm (4)

MEASUREMENT #3:

Meter Reading for Zero Air: 1.77 [illegible] ppm (5)

Meter Reading for Calibration Gas: 503 [illegible] ppm (6)

CALCULATE PRECISION:

-5-3-3

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

= .77 % (must be less than 10%)

BQ2

DAILY SURFACE MONITORING LOG

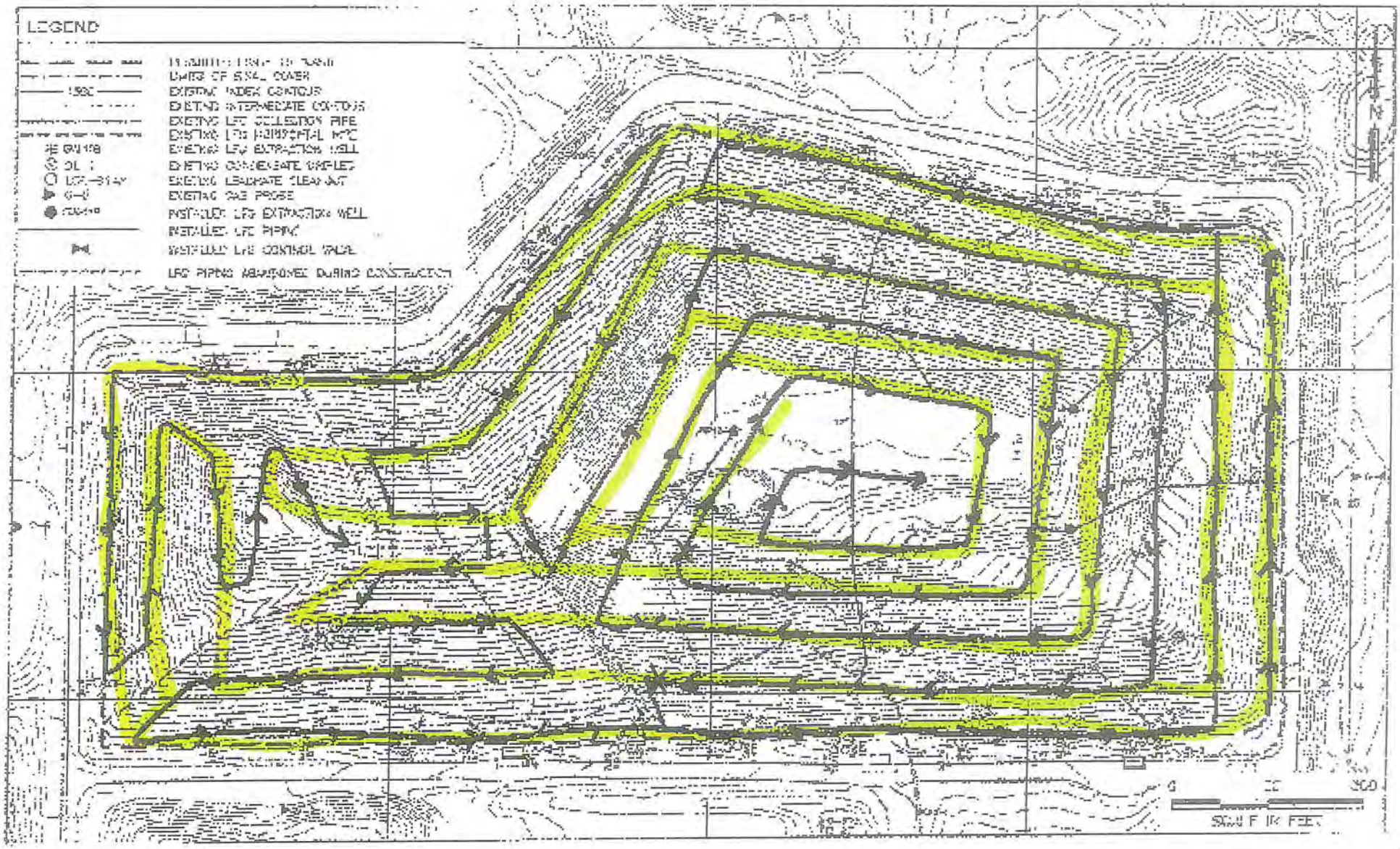
PERFORMED BY: _____

START TIME: 12:35 pm

DATE: 5/24/21

LANDFILL NAME: _____

	Location Identifier of Leak	Location and Time	Concentration of Leak (ppm)
1	South Transition Area	1:35 pm	1680
2	Bedroom 110 + 111	2:42 pm	525



BQ2

B 10 DAY

PERFORMED BY: CO **TIME:** 11:30 am **DATE:** 5/27/21

INSTRUMENT RESPONSE TIME TEST RECORD

LANDFILL NAME: Area B 10 day Period

INSTRUMENT MAKE: TVA **MODEL:** 1000B **S/N:** —

MEASUREMENT #1:

Stabilized Reading Using Calibration Gas: 497 ~~501~~ **ppm**

90% of the Stabilized Reading: 447.3 ~~451~~ **ppm**

Time to Reach 90% of Stabilized reading After switching from Zero Air to Calibration Gas 3.75 **seconds (1)**

MEASUREMENT #2:

Stabilized Reading Using Calibration Gas: 496 ~~497~~ **ppm**

90% of the Stabilized Reading: 446.4 **ppm**

Time Reach 90% of Stabilized Reading After switching from Zero Air to Calibration Gas 3.50 **seconds (2)**

MEASUREMENT #3:

Stabilized Reading Using Calibration Gas: 493 **ppm**

90% of the Stabilized Reading: 443.7 **ppm**

Time to Reach 90% of Stabilized Reading After switching from Zero Air to Calibration Gas 3.50 **seconds (3)**

CALCULATE RESPONSE TIME:

$$\frac{(1) + (2) + (3)}{3} = \frac{3.58}{} = \text{[illegible]}$$ **SECONDS (MUST BE LESS THAN 30 SECONDS)**

CALIBRATION & BACKGROUND DETERMINATION REPORT B10DAY

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 = 491 ppm

3. Adjust meter to read 500 ppm.

Background Determination Procedure

1. Upwind Reading (highest in 30 seconds): 1.98 ppm (1)

2. Downwind Reading (highest in 30 seconds): 1.03 ppm (2)

Calculate Background Value:

$$\frac{(1) + (2)}{2} \quad 1.50$$

MEASUREMENT #1:

Meter Reading for Zero Air: 1.92 ppm (1)

Meter Reading for Calibration Gas: 494 ppm (2)

MEASUREMENT #2:

Meter Reading for Zero Air: 1.76 ppm (3)

Meter Reading for Calibration Gas: 492 ppm (4)

MEASUREMENT #3:

Meter Reading for Zero Air: 1.66 ppm (5)

Meter Reading for Calibration Gas: 490 ppm (6)

CALCULATE PRECISION:

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

= 1.6 % (must be less than 10%)

B 10 Day

DAILY SURFACE MONITORING LOG

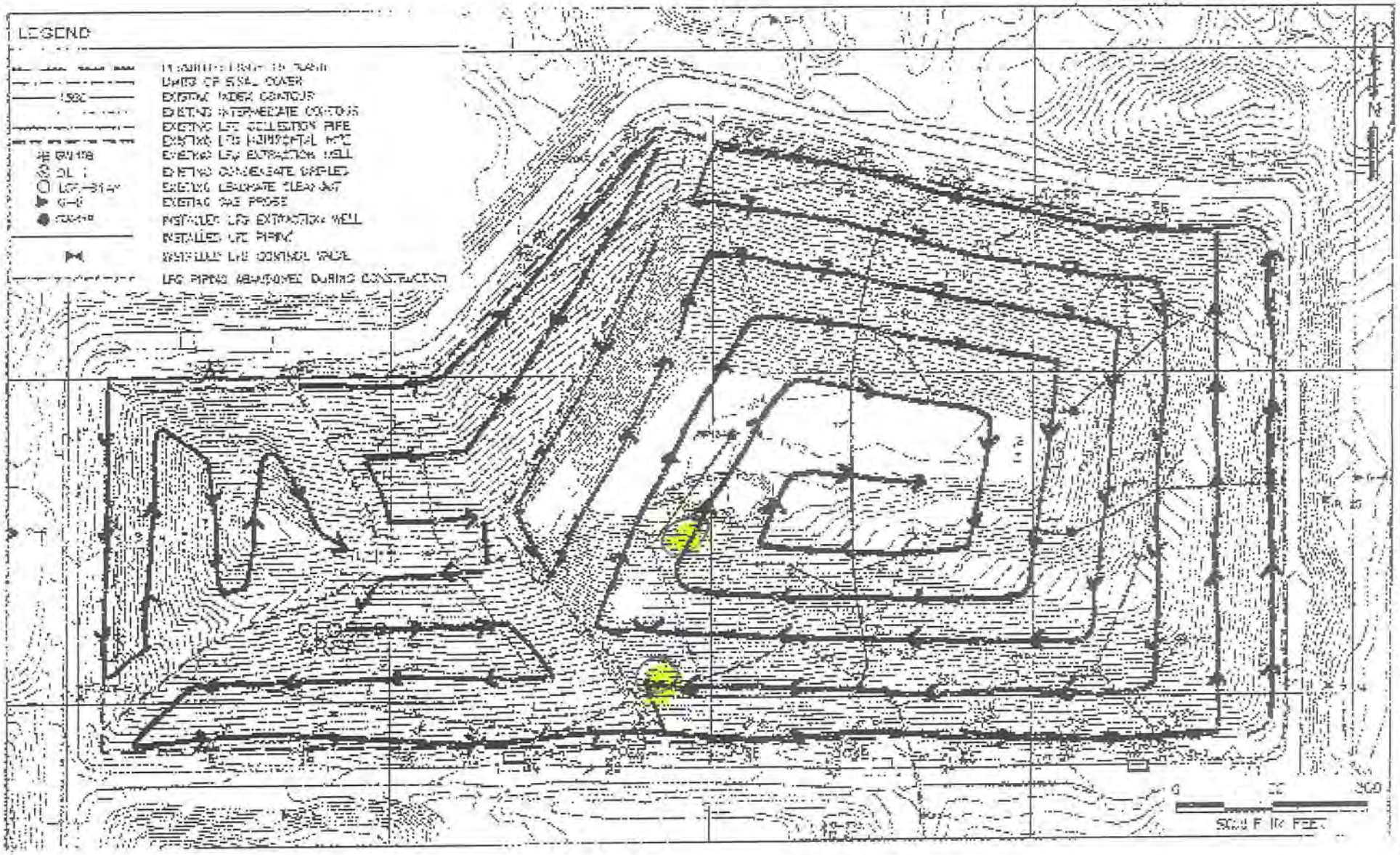
PERFORMED BY: Co

START TIME: 11:30 am

DATE: 5/27/21

LANDFILL NAME: AREA B 10 Day Recheck

Location Identifier of Leak	Location and Time	Concentration of Leak (ppm)
NO DETECTS		


LEGEND
LIMITS OF FINAL COVER
EXISTING INDEX CONTOUR
EXISTING INTERMEDIATE CONTOUR
EXISTING LFG COLLECTION PIPE
EXISTING LFG EXTRACTION WELL
EXISTING CONDENSATE DRAINED
EXISTING LEACHATE CLEAN OUT
EXISTING GAS PROBE
INSTALLED LFG EXTRACTION WELL
INSTALLED LFG PIPING
INSTALLED LFG CONTROL VALVE
LFG PIPING ABANDONED DURING CONSTRUCTION
SCALE IN FEET

B 10 DAY

A Annual
B 30 DAY

PERFORMED BY: GO TIME: 1371 DATE: 6/23/21

CALIBRATION PRECISION TEST RECORD

LANDFILL NAME: Area A & AREA B 30 Day Recheck

INSTRUMENT MAKE: — MODEL: — S/N: —

MEASUREMENT #1:

Meter Reading for Zero Air: 50 ~~500~~ ppm (1)

Meter Reading for Calibration Gas: 500 ppm (2)

MEASUREMENT #2:

Meter Reading for Zero Air: 4.77 ppm (3)

Meter Reading for Calibration Gas: 501 ppm (4)

MEASUREMENT #3:

Meter Reading for Zero Air: 2.97 ppm (5)

Meter Reading for Calibration Gas: 498 ppm (6)

CALCULATE PRECISION:

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

= .06 % (must be less than 10%)

A Annual
B 30 Day

PERFORMED BY: G TIME: 1:37 pm DATE: 6/23/21

INSTRUMENT RESPONSE TIME TEST RECORD

LANDFILL NAME: MSW Area A

INSTRUMENT MAKE: VA MODEL: 1000B S/N: _____

MEASUREMENT #1:

Stabilized Reading Using Calibration Gas:	498	ppm
90% of the Stabilized Reading:	448.2	ppm
Time to Reach 90% of Stabilized reading After switching from Zero Air to Calibration Gas	3.65	seconds (1)

MEASUREMENT #2:

Stabilized Reading Using Calibration Gas:	497	ppm
90% of the Stabilized Reading:	447.3	ppm
Time Reach 90% of Stabilized Reading After switching from Zero Air to Calibration Gas	3.5	seconds (2)

MEASUREMENT #3:

Stabilized Reading Using Calibration Gas:	494	ppm
90% of the Stabilized Reading:	444.6	ppm
Time to Reach 90% of Stabilized Reading After switching from Zero Air to Calibration Gas	3.5	seconds (3)

CALCULATE RESPONSE TIME:

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

= 3.55 SECONDS (MUST BE LESS THAN 30 SECONDS)

A Annual
B 30 DAY

PERFORMED BY: ED TIME: 1:37pm DATE: 6/23/21

DAILY SURFACE MONITORING LOG

PERFORMED BY: ED

START TIME: 1:37pm

DATE: 6/23/21

LANDFILL NAME: Area A

Location Identifier of Leak	Location and Time	Concentration of Leak (ppm)
NO DETECTS		

A Annual

B 30 Day

CALIBRATION PROCEDURE AND BACKGROUND DETERMINATION REPORT

LANDFILL NAME: MCSW Area A 1 Annual

INSTRUMENT MAKE: TVA 1000B TE **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 = 492 **ppm**

3. **Adjust meter to read 500 ppm.**

Background Determination Procedure

1. **Upwind Reading (highest in 30 seconds):** 1.97 **ppm (1)**

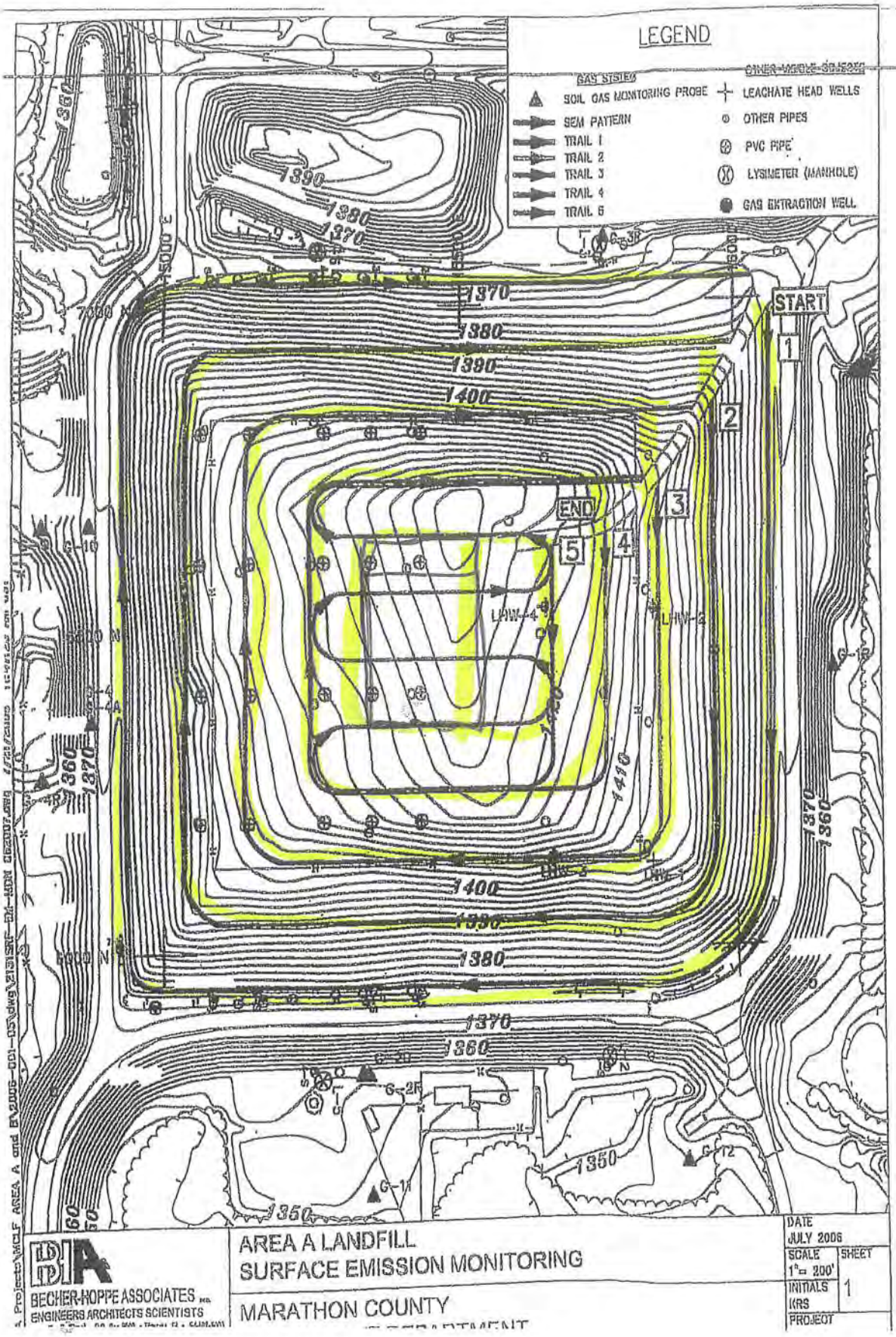
2. **Downwind Reading (highest in 30 seconds):** .1987 **ppm (2)**

Calculate Background Value:

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

1.08 / 2

Background = .54 **ppm**



BECHER-HOPPE ASSOCIATES INC.
ENGINEERS ARCHITECTS SCIENTISTS

AREA A LANDFILL
SURFACE EMISSION MONITORING

MARATHON COUNTY

DATE	JULY 2006
SCALE	1"= 200'
SHEET	1
INITIALS	KRS
PROJECT	

A Method
B 30 Day

6/1/18
No
Detects

BBR Q3

PERFORMED BY: ED TIME: 8:15 am DATE: 7/22/21

INSTRUMENT RESPONSE TIME TEST RECORD

LANDFILL NAME: MCSW BBR

INSTRUMENT MAKE: TVA 1000B MODEL: TE S/N: _____

MEASUREMENT #1:

Stabilized Reading Using Calibration Gas:	501	ppm
90% of the Stabilized Reading:	450.9	ppm
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:	502	ppm
90% of the Stabilized Reading:	451.8	ppm
Time Reach 90% of Stabilized Reading After switching from Zero Air to Calibration Gas	3.6	seconds (2)

MEASUREMENT #3:

Stabilized Reading Using Calibration Gas:	505	ppm
90% of the Stabilized Reading:	454.5	ppm
Time to Reach 90% of Stabilized Reading After switching from Zero Air to Calibration Gas	3.6	seconds (3)

CALCULATE RESPONSE TIME:

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

= 3.56 SECONDS (MUST BE LESS THAN 30 SECONDS)

BBL Q3

DAILY SURFACE MONITORING LOG

PERFORMED BY: ED

START TIME: 8:10 am

DATE: 7/20/21

LANDFILL NAME: MCSW BBL

Location Identifier of Leak	Location and Time	Concentration of Leak (ppm)
	NO DETECTS	

BDL Q3

CALIBRATION & BACKGROUND DETERMINATION REPORT

LANDFILL NAME: MCSL BDL

INSTRUMENT MAKE: TVA Thermo Env MODEL: 1000B 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 = 504 ppm

3. Adjust meter to read 500 ppm.

Background Determination Procedure

1. Upwind Reading (highest in 30 seconds): 1.17 ppm (1)

2. Downwind Reading (highest in 30 seconds): -.93 ppm (2)

Calculate Background Value:

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

-

MEASUREMENT #1:

Meter Reading for Zero Air: 0 ppm (1)

Meter Reading for Calibration Gas: 502 ppm (2)

MEASUREMENT #2:

Meter Reading for Zero Air: 0 ppm (3)

Meter Reading for Calibration Gas: 504 ppm (4)

MEASUREMENT #3:

Meter Reading for Zero Air: 0 ppm (5)

Meter Reading for Calibration Gas: 507 ppm (6)

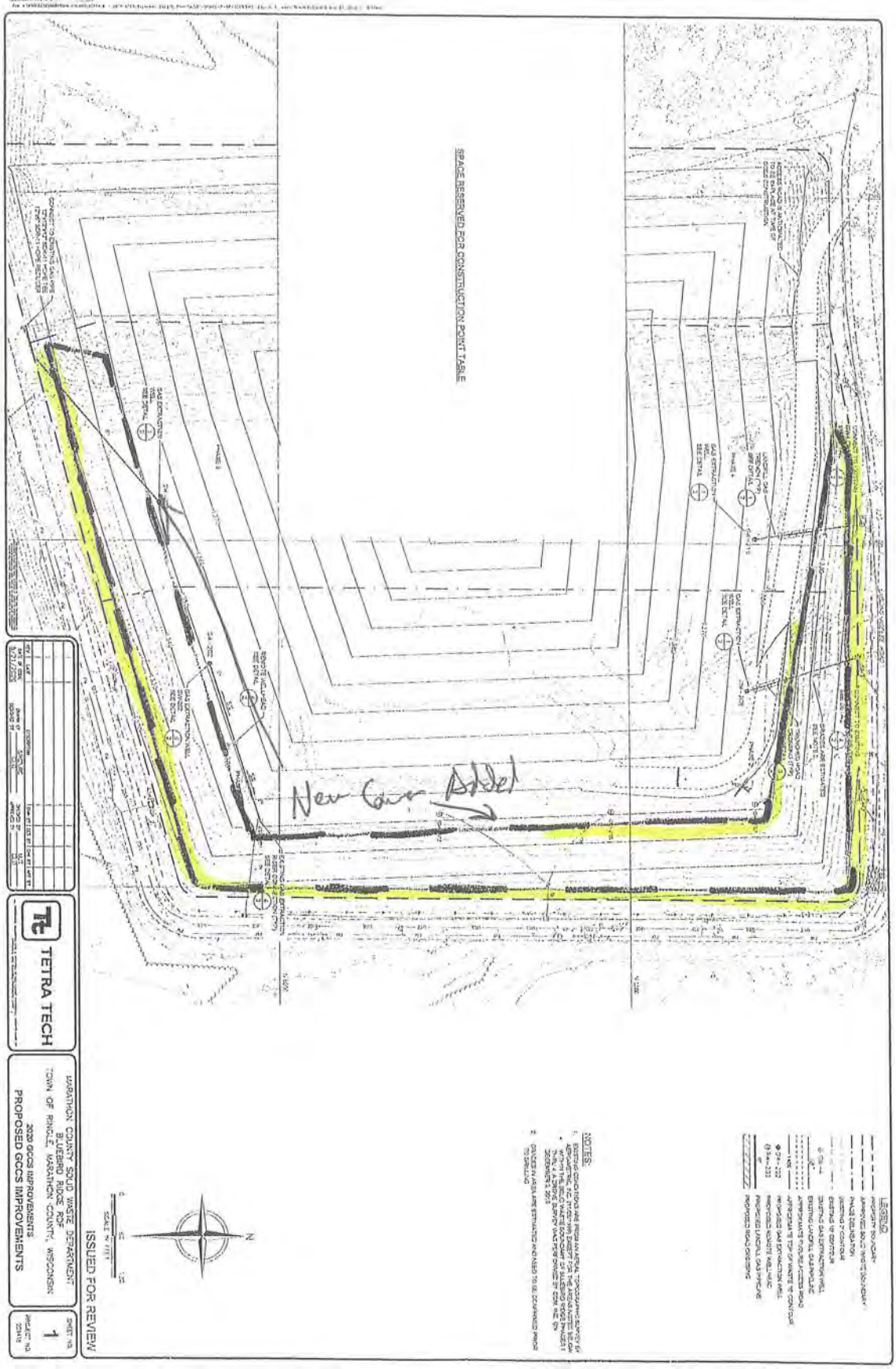
CALCULATE PRECISION:

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

=_____ % (must be less than 10%)

BBR Q3

BBR SEM TRAIL 2020



BQ3

CALIBRATION PROCEDURE AND BACKGROUND DETERMINATION REPORT

LANDFILL NAME: MCSW B

INSTRUMENT MAKE: TE **MODEL:** 1100B **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 = 495 **ppm**

3. **Adjust meter to read 500 ppm.**

Background Determination Procedure

1. **Upwind Reading (highest in 30 seconds):** 1.10 **ppm (1)**

2. **Downwind Reading (highest in 30 seconds):** 1.23 **ppm (2)**

Calculate Background Value:

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

Background = 1.43 **ppm**

BQ3

PERFORMED BY: EO TIME: 9:11 DATE: 8/18

CALIBRATION PRECISION TEST RECORD

LANDFILL NAME: McSwain Area B

INSTRUMENT MAKE: — MODEL: — S/N: —

MEASUREMENT #1:

Meter Reading for Zero Air: 0 ppm (1)

Meter Reading for Calibration Gas: 498 ppm (2) 2

MEASUREMENT #2:

Meter Reading for Zero Air: 0 ppm (3) 3

Meter Reading for Calibration Gas: 497 ppm (4)

MEASUREMENT #3:

Meter Reading for Zero Air: 0 ppm (5) 7

Meter Reading for Calibration Gas: 493 ppm (6)

CALCULATE PRECISION:

12/3 = 4

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

4/500 = .008

= .18 % (must be less than 10%) .18

BQ3

PERFORMED BY: GO TIME: 9:11 DATE: 8/18

INSTRUMENT RESPONSE TIME TEST RECORD

LANDFILL NAME: MSW Area B

INSTRUMENT MAKE: ~~MODEL:~~ S/N:

MEASUREMENT #1:

Stabilized Reading Using Calibration Gas: 494 ppm

90% of the Stabilized Reading: 444.6 ppm

Time to Reach 90% of Stabilized reading After switching from Zero Air to Calibration Gas: 7.80 seconds (1)

MEASUREMENT #2:

Stabilized Reading Using Calibration Gas: 492 ppm

90% of the Stabilized Reading: 442.8 ppm

Time Reach 90% of Stabilized Reading After switching from Zero Air to Calibration Gas: 3.75 seconds (2)

MEASUREMENT #3:

Stabilized Reading Using Calibration Gas: 490 ppm

90% of the Stabilized Reading: 441 ppm

Time to Reach 90% of Stabilized Reading After switching from Zero Air to Calibration Gas: 3.78 seconds (3)

CALCULATE RESPONSE TIME:

$$\frac{(1) + (2) + (3)}{3} \qquad 11.53/3$$

= 3.76 SECONDS (MUST BE LESS THAN 30 SECONDS)

PERFORMED BY: EO TIME: 9:27 DATE: 8/18

DAILY SURFACE MONITORING LOG

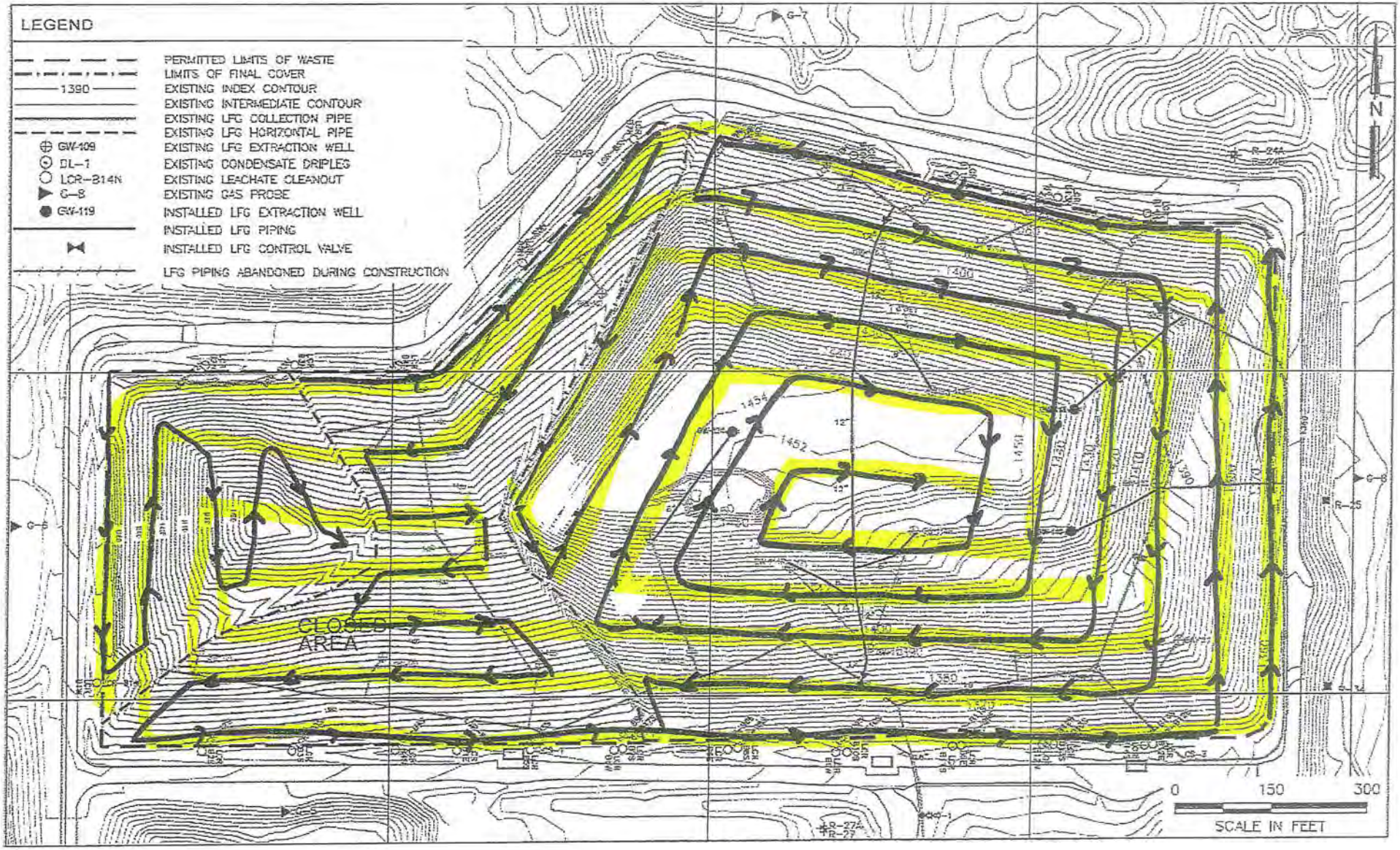
PERFORMED BY: EO

START TIME: 9:27

DATE: 8/18

LANDFILL NAME: MSW Area B

Location Identifier of Leak	Location and Time	Concentration of Leak (ppm)
NO DETECTS		


LEGEND
PERMITTED LIMITS OF WASTE
LIMITS OF FINAL COVER
1390
EXISTING INDEX CONTOUR
EXISTING INTERMEDIATE CONTOUR
EXISTING LFG COLLECTION PIPE
EXISTING LFG HORIZONTAL PIPE
GW-109
EXISTING LFG EXTRACTION WELL
DL-1
EXISTING CONDENSATE DRIPLEG
LCR-B14N
EXISTING LEACHATE CLEANOUT
G-8
EXISTING GAS PROBE
GW-119
INSTALLED LFG EXTRACTION WELL
INSTALLED LFG PIPING
INSTALLED LFG CONTROL VALVE
LFG PIPING ABANDONED DURING CONSTRUCTION
CLOSED AREA
N
0
150
300
SCALE IN FEET

BBL 4Q

CALIBRATION PROCEDURE & BACKGROUND DETERMINATION

LANDFILL NAME: BBL

INSTRUMENT MAKE: Thermo Fisher MODEL: TVA-1000B S/N: _____

PERFORMED BY: ED TIME: 10/29/21 DATE: 1:18pm

Calibration Procedure

1. Allow instrument to internally zero itself while introducing zero air.
2. Introduce the calibration gas into the probe.

Stable reading = 507 ppm

3. Adjust meter to read 500 ppm.

Background Determination Procedure

1. Upwind Reading (highest in 30 seconds): -1.17 ppm (1)
2. Downwind Reading (highest in 30 seconds): .38 ppm (2)

Calculate Background Value: $\frac{(1)+(2)}{2}$

Background = -.395 ppm

DAILY SURFACE MONITORING LOG

LANDFILL NAME: MLSW BBL

Location Identifier of Leak	Location and Time	Concentration of Leak (ppm)
SE new Vault 1	1:37pm	608

[redacted]

SEM Hit Coordinates
Northing: 4899.27
Easting: 18355.98
Elevation: 1338.73

CALIBRATION PRECISION TEST RECORD

MEASUREMENT #1:

Meter Reading for Zero Air: 0 **ppm (1)**

Meter Reading for Calibration Gas: 501 **ppm (2)**

MEASUREMENT #2:

Meter Reading for Zero Air: 0 **ppm (3)**

Meter Reading for Calibration Gas: 498 **ppm (4)**

MEASUREMENT #3:

Meter Reading for Zero Air: 0 **ppm (5)**

Meter Reading for Calibration Gas: 497 **ppm (6)**

CALCULATE PRECISION:

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

-1
$+2$
$+3$

$= .\overline{26}\%$ **(must be less than 10%)**

$1.33 \; ; .00266\overline{7}$

INSTRUMENT RESPONSE TIME TEST RECORD

MEASUREMENT #1:

Stabilized Reading Using Calibration Gas: 496 ppm

90% of the Stabilized Reading: 446.4 ppm

Time to Reach 90% of Stabilized reading After switching from Zero Air to Calibration Gas 3.7 seconds (1)

MEASUREMENT #2:

Stabilized Reading Using Calibration Gas: 495 ppm

90% of the Stabilized Reading: 445.5 ppm

Time Reach 90% of Stabilized Reading After switching from Zero Air to Calibration Gas 3.5 seconds (2)

MEASUREMENT #3:

Stabilized Reading Using Calibration Gas: 493 ppm

90% of the Stabilized Reading: 443.7 ppm

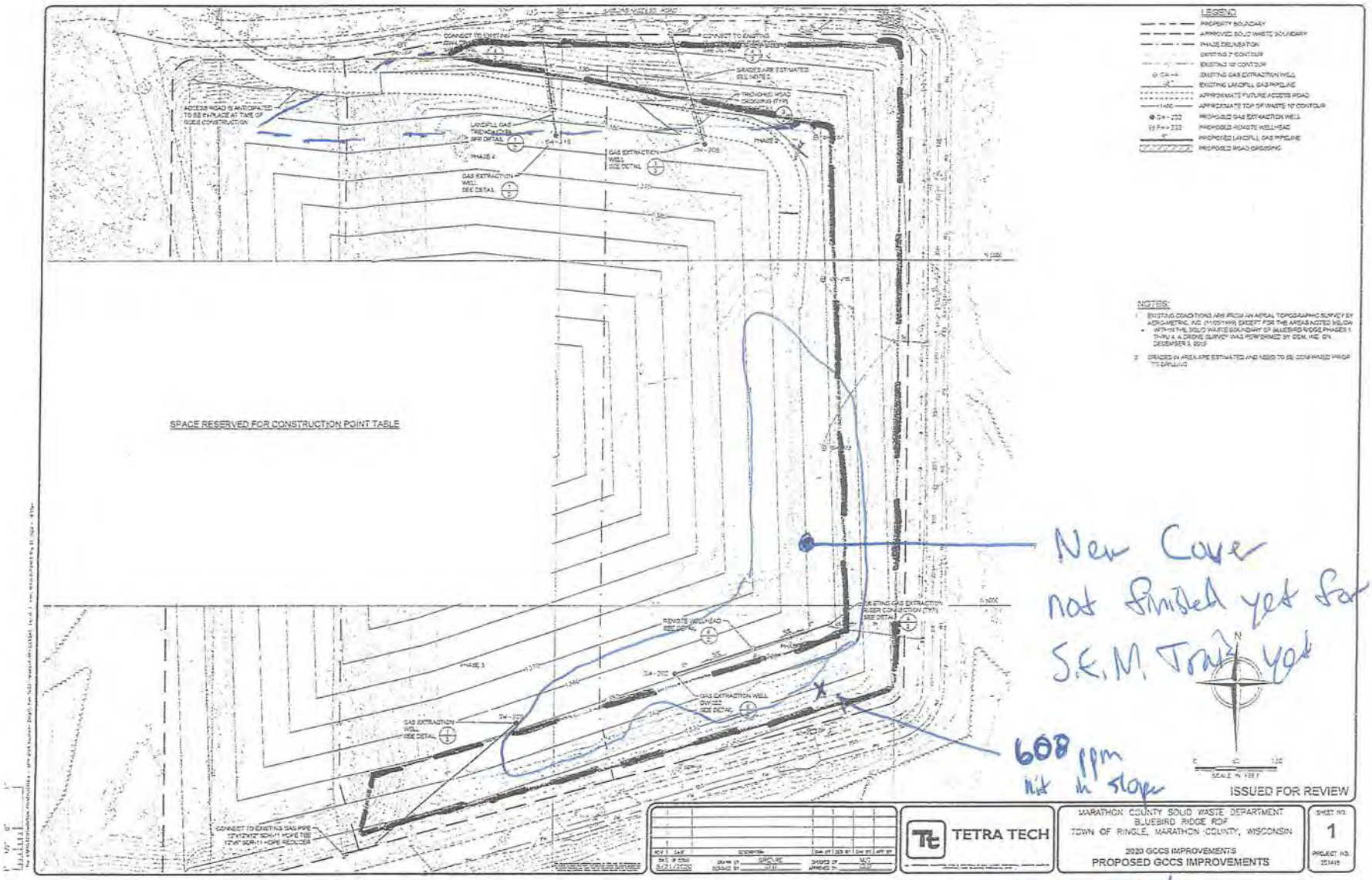
Time to Reach 90% of Stabilized Reading After switching from Zero Air to Calibration Gas 3.5 seconds (3)

CALCULATE RESPONSE TIME:

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

$= \overline{3.583}$ SECONDS (MUST BE LESS THAN 30 SECONDS)

BBR SEM TRAIL 2020



New Cover not finished yet for S.E.M. Trail yet

608 ppm Nit in slope

D −.16 U −.20

repeat project (seed)

BBK 10 Day Q4

CALIBRATION & BACKGROUND DETERMINATION REPORT

LANDFILL NAME: BBK 10-DAY Redux

INSTRUMENT MAKE: TE MODEL: 1000B 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 = 503 ppm

3. Adjust meter to read 500 ppm.

Background Determination Procedure

1. Upwind Reading (highest in 30 seconds): .47 ppm (1)

2. Downwind Reading (highest in 30 seconds): .28 ppm (2)

.375

Calculate Background Value:

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

MEASUREMENT #1:

Meter Reading for Zero Air: 0 ppm (1)

Meter Reading for Calibration Gas: 507 ppm (2)

MEASUREMENT #2:

Meter Reading for Zero Air: 0 ppm (3)

Meter Reading for Calibration Gas: 503 ppm (4)

MEASUREMENT #3:

Meter Reading for Zero Air: 0 ppm (5)

Meter Reading for Calibration Gas: 501 ppm (6)

CALCULATE PRECISION:

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

–.022

= –2.2 % (must be less than 10%)

PERFORMED BY: CD TIME: 11:47 DATE: 10/4

INSTRUMENT RESPONSE TIME TEST RECORD

LANDFILL NAME: BBR (O-Day Rental

INSTRUMENT MAKE: TE MODEL: 10AB S/N: —

MEASUREMENT #1:

Stabilized Reading Using Calibration Gas: 503 ppm

90% of the Stabilized Reading: 452.7 ppm

Time to Reach 90% of Stabilized reading After switching from Zero Air to Calibration Gas: 3.70 seconds (1)

MEASUREMENT #2:

Stabilized Reading Using Calibration Gas: 500 ppm

90% of the Stabilized Reading: 450 ppm

Time Reach 90% of Stabilized Reading After switching from Zero Air to Calibration Gas: 3.80 seconds (2)

MEASUREMENT #3:

Stabilized Reading Using Calibration Gas: 498 ppm

90% of the Stabilized Reading: 448.2 ppm

Time to Reach 90% of Stabilized Reading After switching from Zero Air to Calibration Gas: 3.65 seconds (3)

CALCULATE RESPONSE TIME:

$$\frac{(1) + (2) + (3)}{3}$$ 11.15/3 =

= 3.7166 SECONDS (MUST BE LESS THAN 30 SECONDS)

DAILY SURFACE MONITORING LOG

PERFORMED BY: CO

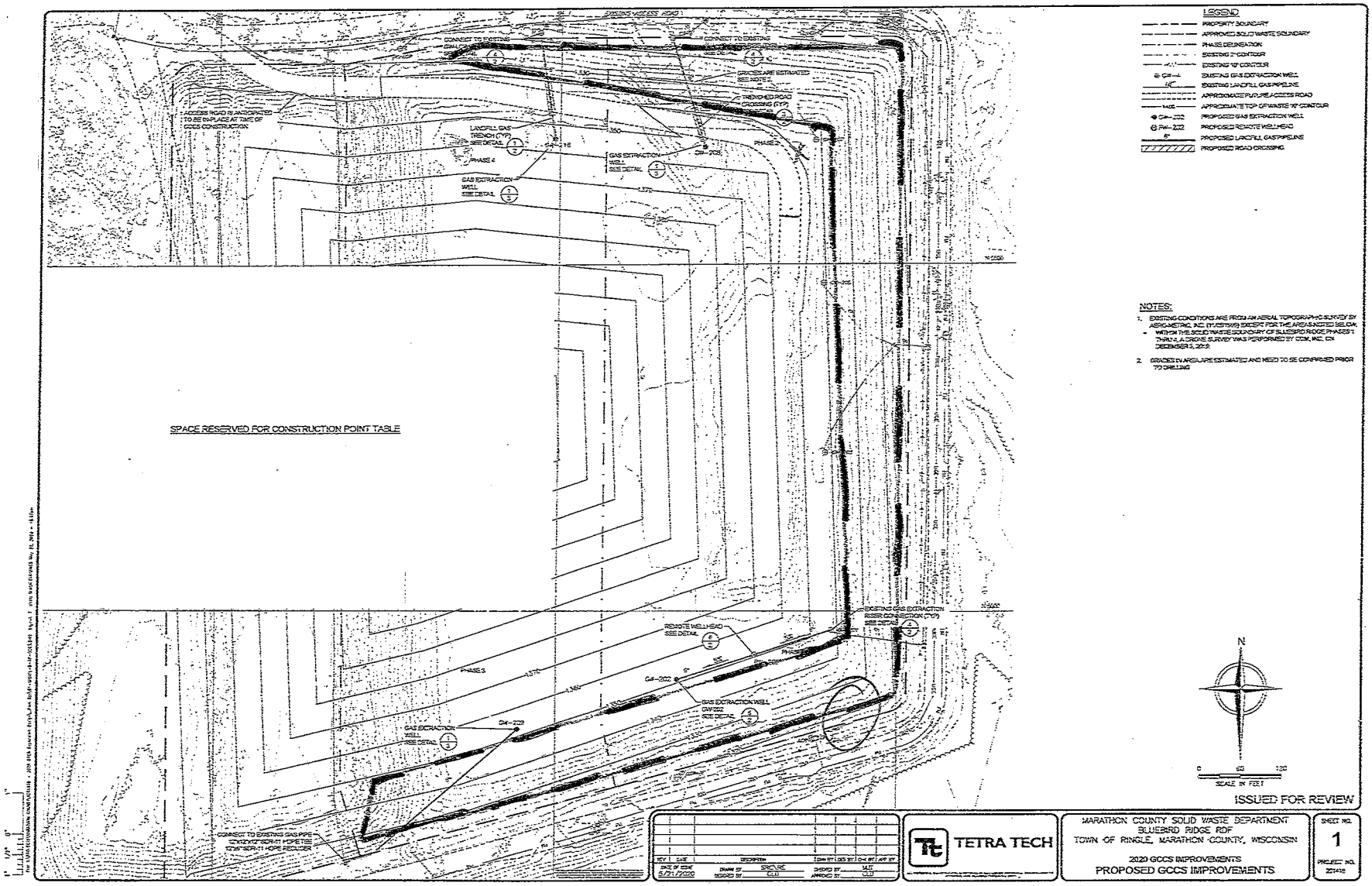
START TIME: 11:53

DATE: 10/4/21

LANDFILL NAME: BBR

Location Identifier of Leak	Location and Time	Concentration of Leak (ppm)
SEM HIT was found w/ liner and 1' fine grained soil.		
HIT was a Slope excavator / Repair. Backer / Ag Plaster removed.		
NO DETECT		

BBR SEM TRAIL 2020



BQ4

CALIBRATION & BACKGROUND DETERMINATION REPORT

LANDFILL NAME: MCSW BQ4 + BBR 30DAY Redirect BBR 30 DAY

INSTRUMENT MAKE: Thermo Fisher MODEL: TVA1000B 81020 S/N: 0115248137

SNOW!

Calibration Procedure

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

2. Introduce the calibration gas into the probe.
Stable reading = 498 ppm

3. Adjust meter to read 500 ppm.

Background Determination Procedure

1. Upwind Reading (highest in 30 seconds): .41 ppm (1)

2. Downwind Reading (highest in 30 seconds): .33 ppm (2)

Calculate Background Value:

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

MEASUREMENT #1:

Meter Reading for Zero Air: 0 ppm (1)

Meter Reading for Calibration Gas: 501 ppm (2)

MEASUREMENT #2:

Meter Reading for Zero Air: 0 ppm (3)

Meter Reading for Calibration Gas: 497 ppm (4)

MEASUREMENT #3:

Meter Reading for Zero Air: 0 ppm (5)

Meter Reading for Calibration Gas: 496 ppm (6)

$$\frac{-1 + 3 + 4}{3} \quad \frac{6}{3}$$

2/500 = 0

CALCULATE PRECISION:

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

= .4 % (must be less than 10%)

PERFORMED BY: ED TIME: 12:39 DATE: 11/25

INSTRUMENT RESPONSE TIME TEST RECORD

LANDFILL NAME: MCSW B

INSTRUMENT MAKE: — MODEL: — S/N: —

MEASUREMENT #1:

Stabilized Reading Using Calibration Gas: 503 ppm

90% of the Stabilized Reading: 452.7 ppm

Time to Reach 90% of Stabilized reading After switching from Zero Air to Calibration Gas: 3.75 seconds (1)

MEASUREMENT #2:

Stabilized Reading Using Calibration Gas: 501 ppm

90% of the Stabilized Reading: 450.9 ppm

Time Reach 90% of Stabilized Reading After switching from Zero Air to Calibration Gas: 3.75 seconds (2)

MEASUREMENT #3:

Stabilized Reading Using Calibration Gas: 497 ppm

90% of the Stabilized Reading: 447.3 ppm

Time to Reach 90% of Stabilized Reading After switching from Zero Air to Calibration Gas: 3.75 seconds (3)

CALCULATE RESPONSE TIME:

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

= 3.75 SECONDS (MUST BE LESS THAN 30 SECONDS)

DAILY SURFACE MONITORING LOG

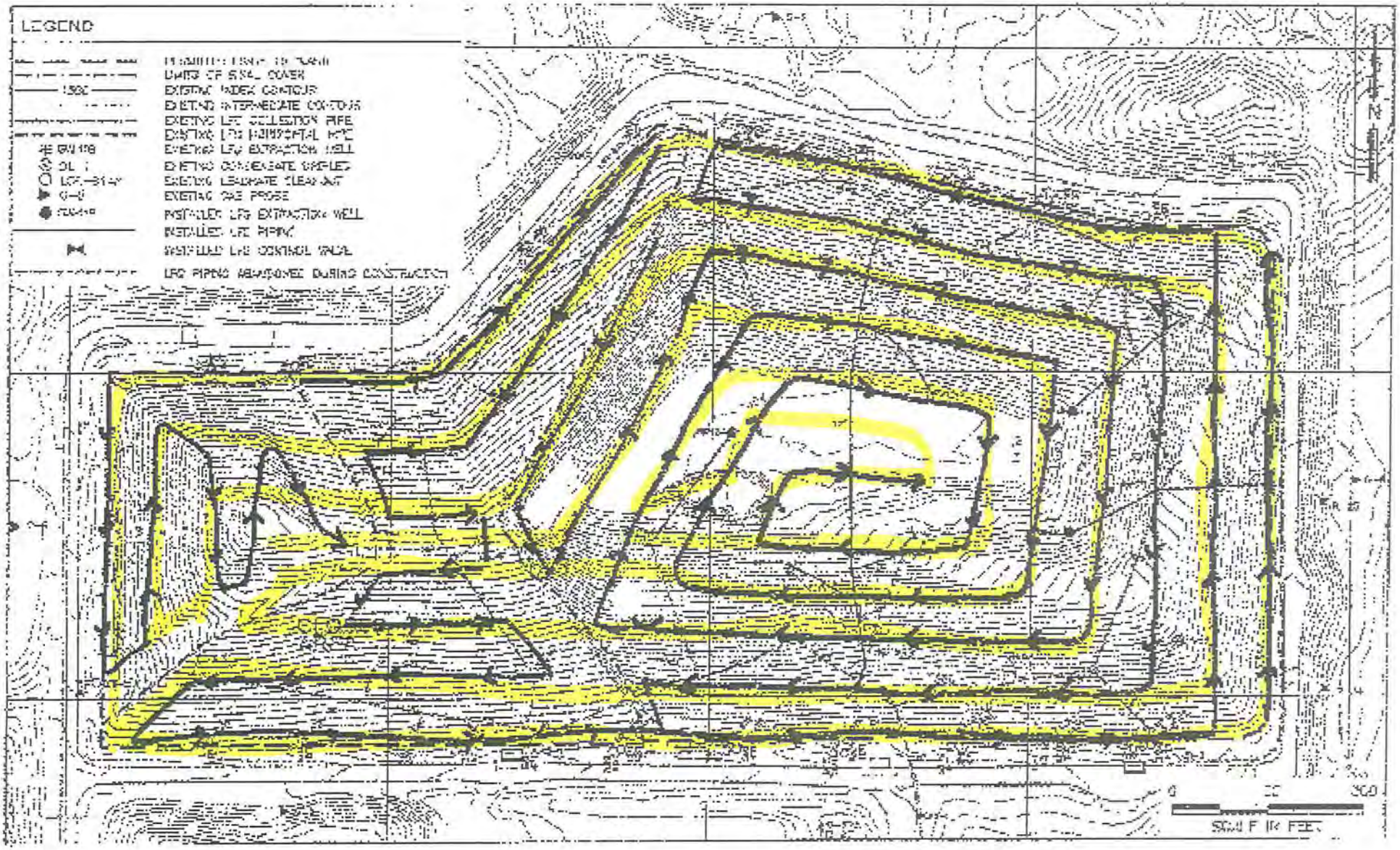
PERFORMED BY: ED

START TIME: 12:

DATE: 12:39

LANDFILL NAME: B+ BBR 30 Bm

Location Identifier of Leak	Location and Time	Concentration of Leak (ppm)
NO DETECTS!		


LEGEND
LIMITS OF FINAL COVER
EXISTING INDEX CONTOUR
EXISTING INTERMEDIATE CONTOUR
EXISTING LFG COLLECTION PIPE
EXISTING LFG EXTRACTION WELL
EXISTING CONDENSATE SAMPLER
EXISTING LEACHATE CLEAN OUT
EXISTING GAS PROBE
INSTALLED LFG EXTRACTION WELL
INSTALLED LFG PIPING
INSTALLED LFG CONTROL VALVE
LFG PIPING ABANDONED DURING CONSTRUCTION
0
300
SCALE IN FEET

ATTACHMENT C

2021 LANDFILL GAS MAINLINE VOC TO-15 LAB REPORT

Air TECHNOLOGY
Laboratories, Inc.

November 24, 2021

LA Cert #04140
EPA Methods TO3, TO14A, TO15, 25C/3C, RSK-175
TX Cert T104704450-14-6
EPA Methods TO14A, TO15
UT Cert CA0133332015-3
EPA Methods TO3, TO14A, TO15, RSK-175

Tetra Tech
ATTN: Lee Daigle
8413 Excelsior Dr., Suite 160
Madison, WI 53717

LABORATORY TEST RESULTS

Project Reference: Marathon County VOC
Project Number: MCLF-2021-VOC
Lab Number: M102904-01/02

Enclosed are results for sample(s) received 10/29/21 by Air Technology Laboratories. Samples were received intact. Analyses were performed according to specifications on the chain of custody provided with the sample(s).

Report Narrative:

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

Preliminary results were e-mailed to Lee Daigle on 11/23/21.

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

Sincerely,

Mark Johnson
Operations Manager
MJohnson@AirTechLabs.com

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

AirTECHNOLOGY Laboratories, Inc.
18501 E. Gale Ave., Suite 130
City of Industry, CA 91748
Ph: 626-964-4032
Fx: 626-964-5832

CHAIN OF CUSTODY RECORD

TURNAROUND TIME
Standard ☒ 48 hours ☐
Same Day ☐ 72 hours ☐
24 hours ☐ 96 hours ☐
Other:

DELIVERABLES
EDD ☐
EDF ☐
LEVEL 3 ☐
LEVEL 4 ☐

PAGE: OF

Condition upon receipt:
Sealed Yes ☐ No ☐
Intact Yes ☐ No ☐
Chilled _____ deg C

Project No.: MCLF-2021-VOC
Project Name: Marathon City VOC
Report To: LEE DAIGLE
Company: TETRA TECH
Street: 8413 EXCELSIOR DR SUIT 160
City/State/Zip: MADISON WI 53717
Phone& Fax: 951-236-2526
e-mail: LEE.DAIGLE@TETRATECH.COM

BILLING
P.O. No.:
Bill to: Marathon City Solid Waste
172900 State Highway 29
Ringle WI

ANALYSIS REQUEST

LAB USE ONLY	SAMPLE IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	MATRIX	CONTAINER TYPE	EPA TO-15	3C +CO				
M102904-01	Mainline VOC #1 (3670)	10/25/21	10:40am	LFG	C	1	1				
↓ -02	" #2 (1421)	↓	11:16am	↓	↓	1	1				

SAMPLED BY	COMPANY	DATE/TIME
Jalen Thomas	Tetra Tech	

RELINQUISHED BY	DATE/TIME	RECEIVED BY	DATE/TIME
NAME/COMPANY: Jalen Thomas/Tetra Tech	10/25/21 7:00am	NAME/COMPANY:	
NAME/COMPANY: WPS	10/29/21	NAME/COMPANY:	10/29/21 1135
NAME/COMPANY:		NAME/COMPANY:	

COMMENTS

Serial #	CH4	CO2	O2	Bal	Time
3670	49.8%	36.0%	1.4%	13.8%	10:40am
1421	49.1%	35.8%	0.9%	14.2%	11:16am

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

Client: Tetra Tech
Attn: Lee Daigle
Project Name: Marathon County VOC
Project No.: MCLF-2021-VOC
Date Received: 10/29/2021
Matrix: Air

Fixed Gases by EPA METHOD 3C

Lab No.:	M102904-01		M102904-02					
Client Sample I.D.:	Mainline VOC #1		Mainline VOC #2					
Date/Time Sampled:	10/25/21 10:40		10/25/21 11:16					
Date/Time Analyzed:	11/9/21 7:59		11/9/21 8:44					
QC Batch No.:	211109GC8A1		211109GC8A1					
Analyst Initials:	CM		CM					
Dilution Factor:	3.4		4.6					
ANALYTE (Units)	**Result**	**RL**	**Result**	**RL**				
Nitrogen (% v/v)	16	3.4	16	4.6				
Oxygen/Argon (% v/v)	1.9	1.7	ND	2.3				
Carbon Dioxide (% v/v)	35	0.034	35	0.046				
Methane (% v/v)	48	0.0034	48	0.0046				
Carbon Monoxide (% v/v)	ND	0.0034	ND	0.0046				

RL = Reporting Limit
ND = Not detected at or above the RL.

Reviewed/Approved By: _____ Date 11-22-21
Mark Johnson
Operations Manager

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-2021-VOC
Date Received: 10/29/21
Matrix: Air
Reporting Units: ppbv

EPA Method TO15

Lab No.:	M102904-01		M102904-02					
Client Sample I.D.:	Mainline VOC #1		Mainline VOC #2					
Date/Time Sampled:	10/25/21 10:40		10/25/21 11:16					
Date/Time Analyzed:	11/15/21 9:30		11/15/21 10:06					
QC Batch No.:	211114MS2A1		211114MS2A1					
Analyst Initials:	DT		DT					
Dilution Factor:	10		14					
ANALYTE	**Result ppbv**	**RL ppbv**	**Result ppbv**	**RL ppbv**				
Dichlorodifluoromethane (12)	ND	10	180	14				
Chloromethane	33	20	ND	28				
1,2-Cl-1,1,2,2-F ethane (114)	ND	10	ND	14				
Vinyl Chloride	1,100	10	1,200	14				
Bromomethane	ND	10	ND	14				
Chloroethane	100	20	130	28				
Trichlorofluoromethane (11)	340	10	360	14				
1,1-Dichloroethene	ND	10	ND	14				
Carbon Disulfide	290	20	280	28				
1,1,2-Cl 1,2,2-F ethane (113)	ND	10	ND	14				
Acetone	5,600 d	20	4,900 d	28				
Methylene Chloride	64	10	58	14				
t-1,2-Dichloroethene	28	10	24	14				
1,1-Dichloroethane	56	10	53	14				
Vinyl Acetate	ND	10	ND	14				
c-1,2-Dichloroethene	130	10	150	14				
2-Butanone	3,700 d	10	2,000	14				
t-Butyl Methyl Ether (MTBE)	ND	10	ND	14				
Chloroform	ND	10	ND	14				
1,1,1-Trichloroethane	ND	10	ND	14				
Carbon Tetrachloride	ND	10	ND	14				
Benzene	360	10	230	14				
1,2-Dichloroethane	120	10	94	14				
Trichloroethene	31	10	ND	14				
1,2-Dichloropropane	ND	10	ND	14				
Bromodichloromethane	ND	10	ND	14				
c-1,3-Dichloropropene	ND	10	ND	14				
4-Methyl-2-Pentanone	ND	10	ND	14				
Toluene	1,400	10	390	14				
t-1,3-Dichloropropene	21	20	ND	28				

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

Client: Tetra Tech
Attn: Lee Daigle
Project Name: Marathon County VOC
Project No.: MCLF-2021-VOC
Date Received: 10/29/21
Matrix: Air
Reporting Units: ppbv

EPA Method TO15

Lab No.:	M102904-01		M102904-02					
Client Sample I.D.:	Mainline VOC #1		Mainline VOC #2					
Date/Time Sampled:	10/25/21 10:40		10/25/21 11:16					
Date/Time Analyzed:	11/15/21 9:30		11/15/21 10:06					
QC Batch No.:	211114MS2A1		211114MS2A1					
Analyst Initials:	DT		DT					
Dilution Factor:	10		14					
ANALYTE	**Result ppbv**	**RL ppbv**	**Result ppbv**	**RL ppbv**				
1,1,2-Trichloroethane	ND	10	ND	14				
Tetrachloroethene	30	10	ND	14				
2-Hexanone	ND	10	ND	14				
Dibromochloromethane	ND	10	ND	14				
1,2-Dibromoethane	ND	10	ND	14				
Chlorobenzene	ND	10	ND	14				
Ethylbenzene	260	10	27	14				
p,&m-Xylene	330	10	38	14				
o-Xylene	140	10	15	14				
Styrene	ND	10	ND	14				
Bromoform	ND	10	ND	14				
1,1,2,2-Tetrachloroethane	ND	10	ND	14				
Benzyl Chloride	ND	25	ND	34				
4-Ethyl Toluene	41	10	ND	14				
1,3,5-Trimethylbenzene	14	10	ND	14				
1,2,4-Trimethylbenzene	37	10	ND	14				
1,3-Dichlorobenzene	ND	10	ND	14				
1,4-Dichlorobenzene	ND	10	ND	14				
1,2-Dichlorobenzene	ND	10	ND	14				
1,2,4-Trichlorobenzene	ND	10	ND	14				
Hexachlorobutadiene	ND	10	ND	14				

ND = Not Detected (below RL)
RL = Reporting Limit
d = Result obtained from secondary dilution. Batch No.: 211115MS2A1

Reviewed/Approved By: _____ Date 11-21-21

Mark Johnson
Operations Manager

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-2021-VOC
Date Received: 10/29/21
Matrix: Air
Reporting Units: ppbv

EPA Method TO15

Lab No.:	Method Blank		Method Blank					
Client Sample I.D.:	-		-					
Date/Time Sampled:	-		-					
Date/Time Analyzed:	11/15/21 2:31		11/15/21 18:08					
QC Batch No.:	211114MS2A1		211115MS2A1					
Analyst Initials:	DT		DT					
Dilution Factor:	0.20		0.20					
ANALYTE	Result ppbv	RL ppbv	Result ppbv	RL ppbv				
Dichlorodifluoromethane (12)	ND	0.20	ND	0.20				
Chloromethane	ND	0.40	ND	0.40				
1,2-Cl-1,1,2,2-F ethane (114)	ND	0.20	ND	0.20				
Vinyl Chloride	ND	0.20	ND	0.20				
Bromomethane	ND	0.20	ND	0.20				
Chloroethane	ND	0.40	ND	0.40				
Trichlorofluoromethane (11)	ND	0.20	ND	0.20				
1,1-Dichloroethene	ND	0.20	ND	0.20				
Carbon Disulfide	ND	0.40	ND	0.40				
1,1,2-Cl 1,2,2-F ethane (113)	ND	0.20	ND	0.20				
Acetone	ND	0.40	ND	0.40				
Methylene Chloride	ND	0.20	ND	0.20				
t-1,2-Dichloroethene	ND	0.20	ND	0.20				
1,1-Dichloroethane	ND	0.20	ND	0.20				
Vinyl Acetate	ND	0.20	ND	0.20				
c-1,2-Dichloroethene	ND	0.20	ND	0.20				
2-Butanone	ND	0.20	ND	0.20				
t-Butyl Methyl Ether (MTBE)	ND	0.20	ND	0.20				
Chloroform	ND	0.20	ND	0.20				
1,1,1-Trichloroethane	ND	0.20	ND	0.20				
Carbon Tetrachloride	ND	0.20	ND	0.20				
Benzene	ND	0.20	ND	0.20				
1,2-Dichloroethane	ND	0.20	ND	0.20				
Trichloroethene	ND	0.20	ND	0.20				
1,2-Dichloropropane	ND	0.20	ND	0.20				
Bromodichloromethane	ND	0.20	ND	0.20				
c-1,3-Dichloropropene	ND	0.20	ND	0.20				
4-Methyl-2-Pentanone	ND	0.20	ND	0.20				
Toluene	ND	0.20	ND	0.20				

Client: Tetra Tech
Attn: Lee Daigle
Project Name: Marathon County VOC
Project No.: MCLF-2021-VOC
Date Received: 10/29/21
Matrix: Air
Reporting Units: ppbv

EPA Method TO15

Lab No.:	Method Blank		Method Blank					
Client Sample I.D.:	-		-					
Date/Time Sampled:	-		-					
Date/Time Analyzed:	11/15/21 2:31		11/15/21 18:08					
QC Batch No.:	211114MS2A1		211115MS2A1					
Analyst Initials:	DT		DT					
Dilution Factor:	0.20		0.20					
ANALYTE	**Result ppbv**	**RL ppbv**	**Result ppbv**	**RL ppbv**				
t-1,3-Dichloropropene	ND	0.40	ND	0.40				
1,1,2-Trichloroethane	ND	0.20	ND	0.20				
Tetrachloroethene	ND	0.20	ND	0.20				
2-Hexanone	ND	0.20	ND	0.20				
Dibromochloromethane	ND	0.20	ND	0.20				
1,2-Dibromoethane	ND	0.20	ND	0.20				
Chlorobenzene	ND	0.20	ND	0.20				
Ethylbenzene	ND	0.20	ND	0.20				
p,&m-Xylene	ND	0.20	ND	0.20				
o-Xylene	ND	0.20	ND	0.20				
Styrene	ND	0.20	ND	0.20				
Bromoform	ND	0.20	ND	0.20				
1,1,2,2-Tetrachloroethane	ND	0.20	ND	0.20				
Benzyl Chloride	ND	0.50	ND	0.50				
4-Ethyl Toluene	ND	0.20	ND	0.20				
1,3,5-Trimethylbenzene	ND	0.20	ND	0.20				
1,2,4-Trimethylbenzene	ND	0.20	ND	0.20				
1,3-Dichlorobenzene	ND	0.20	ND	0.20				
1,4-Dichlorobenzene	ND	0.20	ND	0.20				
1,2-Dichlorobenzene	ND	0.20	ND	0.20				
1,2,4-Trichlorobenzene	ND	0.20	ND	0.20				
Hexachlorobutadiene	ND	0.20	ND	0.20				

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

Reviewed/Approved By: _____ Date 11-21-21

Mark Johnson
Operations Manager

The cover letter is an integral part of this analytical report

LCS/LCSD Recovery and RPD Summary Report

QC Batch #: 211114MS2A1

Matrix: Air

Reporting Units: ppbv

EPA Method TO15
LABORATORY CONTROL SAMPLE SUMMARY

Lab No.:	METHOD BLANK			ICV/LCS		ICV/LCSD					
Date/Time Analyzed:	11/15/21 2:31			11/15/21 1:19		11/15/21 1:54					
Analyst Initials:	DT			DT		DT					
Dilution Factor:	0.20			1.0		1.0					
ANALYTE	**Result ppbv**	**RL ppbv**	**AMT. ppbv**	**Result ppbv**	**% Rec.**	**Result ppbv**	**% Rec.**	**RPD**	**Low %Rec**	**High %Rec**	**Max. RPD**
1,1-Dichloroethene	ND	0.20	10	10.6	106	9.55	95.5	10.6	70	130	30.0
Methylene Chloride	ND	0.20	10	11.3	113	10.2	102	9.8	70	130	30.0
Trichloroethene	ND	0.20	10	9.04	90.4	8.97	89.7	0.8	70	130	30.0
Toluene	ND	0.20	10	8.78	87.8	8.79	87.9	0.2	70	130	30.0
1,1,2,2-Tetrachloroethane	ND	0.20	10	9.13	91.3	9.18	91.8	0.5	70	130	30.0

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

Reviewed/Approved By: _____ Date: 11-21-21

Mark Johnson
Operations Manager

The cover letter is an integral part of this analytical report

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

LCS/LCSD Recovery and RPD Summary Report

QC Batch #: 211115MS2A1

Matrix: Air

Reporting Units: ppbv

EPA Method TO15
LABORATORY CONTROL SAMPLE SUMMARY

Lab No.:	METHOD BLANK			LCS		LCSD					
Date/Time Analyzed:	11/15/21 18:08			11/15/21 16:54		11/15/21 17:30					
Analyst Initials:	DT			DT		DT					
Dilution Factor:	0.20			1.0		1.0					
ANALYTE	**Result ppbv**	**RL ppbv**	**AMT. ppbv**	**Result ppbv**	**% Rec.**	**Result ppbv**	**% Rec.**	**RPD**	**Low %Rec**	**High %Rec**	**Max. RPD**
1,1-Dichloroethene	ND	0.20	10	9.86	98.6	9.54	95.4	3.3	70	130	30.0
Methylene Chloride	ND	0.20	10	10.0	100	10.1	101	0.6	70	130	30.0
Trichloroethene	ND	0.20	10	9.20	92.0	9.01	90.1	2.0	70	130	30.0
Toluene	ND	0.20	10	8.81	88.1	8.62	86.2	2.2	70	130	30.0
1,1,2,2-Tetrachloroethane	ND	0.20	10	9.14	91.4	9.09	90.9	0.5	70	130	30.0

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

Reviewed/Approved By: _____ Date: 11-21-21

Mark Johnson
Operations Manager

The cover letter is an integral part of this analytical report

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

ATTACHMENT D

AREA A 2021 LEACHATE LINE JETTING REPORT

NORTHERN PIPE, INC.
CLEAN - INSPECT - REPAIR
1772 S Vandenberg Road
Green Bay, Wisconsin 54311
920-468-7074 | info@northernpipeinc.com

Marathon County Landfill
Leachate Cleaning
6/29/2021 - 6/30/2021
Vactor w/ 1,200' of 3/4" hose

AREA A

CLEANOUT ACCESS POINT	PIPE SIZE	TOTAL LENGTH (FT)	FT JETTED (S)	FT JETTED (N)	TOTAL 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 Line		280	-	-	280	Line is good
		7,260			7,130	

3,000 gallons of water used

AREA B

CLEANOUT ACCESS POINT	PIPE SIZE	TOTAL LENGTH (FT)	FT JETTED (E/S)	FT JETTED (W/N)	TOTAL 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	

6,000 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	800	430	1,230	Overlap achieved - line is good
LCR 8 TO LCR 9	6	1,144	800	400	1,200	Overlap achieved - line is good
LCR 10 TO LOOP 7	6	650	250	450	700	Overlap achieved - line is good
LCR 6 TO LCR 4	6	1,070	800	350	1,150	Overlap achieved - line is good
LCR 2 TO LCR 3	6	1,020	900	200	1,100	Overlap achieved - line is good
LCR 5 TO LOOP 1	6	395		395	395	Overlap achieved - line is good
LCR 14 TO LCR 15	6	1,200	600	650	1,250	Overlap achieved - line is good
LCR 16 to Unknown	6	Unknown		200	200	Not all in yet - line is good
		6,659			7,225	

3,500 gallons of water used

ATTACHMENT F

EXCEEDANCE REPORTS FOR AREA A GROUNDWATER MONITORING APRIL AND OCTOBER 2021

marathoncountysolidwaste.org
marathoncountysolidwaste

Marathon County Solid Waste Department
172900 E. Hwy 29
Ringle, WI 54471

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

May 14, 2021

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 2021. 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.

Area A Groundwater Well Exceedance Table April 2021

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	364342	April 1 2021	02892	737054890	Dup- (074)	Tetrachloroethylene	ug/L	1.4	0.5	5	NR140.10
721026460	364342	April 1 2021	02892	737054890	Dup- (074)	Trichloroethylene	ug/L	3.5	0.5	5	NR140.10
721026460	364342	April 1 2021	02892	737054890	Dup- (074)	Vinyl Chloride	ug/L	0.21	0.02	0.2	NR140.10
721026460	364342	April 1 2021	02892	737054890	R13R (074)	Tetrachloroethylene	ug/L	1.2	0.5	5	NR140.10
721026460	364342	April 1 2021	02892	737054890	R13R (074)	Trichloroethylene	ug/L	3.2	0.5	5	NR140.10
721026460	364342	April 1 2021	02892	737054890	R13R (074)	Vinyl Chloride	ug/L	0.2	0.02	0.2	NR140.10
721026460	364342	April 1 2021	02892	737054890	R38 (053)	Tetrachloroethylene	ug/L	0.62	0.5	5	NR140.10
721026460	364342	April 1 2021	02892	737054890	R38 (053)	Trichloroethylene	ug/L	1.4	0.5	5	NR140.10
721026460	364342	April 1 2021	02892	737054890	R38 (053)	Vinyl Chloride	ug/L	0.19	0.02	0.2	NR140.10
721026460	364342	April 1 2021	02892	737054890	R35 (050)	Conductivity	umho@25C	1100	510	-	well

The Area A exceedances that were detected during the April 2021 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)

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

Instructions:

* **Prepare one form for each license or monitoring ID.**
* **Please type or print legibly.**
* Attach a notification of any values that attain or exceed groundwater standards (that is, preventive action limits, enforcement standards or alternative concentration limits). The notification must include a preliminary analysis of the cause and significance of each value.
* Attach a notification of any gas values that attain or exceed explosive gas levels.
* Send the original signed form, any notification, and Electronic Data Deliverable [EDD] to: GEMS Data Submittal Contact - WA/5
  Wisconsin Department of Natural Resources
  P.O. Box 7921
  Madison, WI 53707 - 7921

Monitoring Data Submittal Information

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

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

Name: Chris Geske Phone: 715-478-2777
E-mail: lims@nlslab.com

Facility Name	License No. / Monitoring ID	Facility ID [FID]	Actual sampling dates (e.g., July 2-6, 2003
Marathon County Landfill - Area A	02892	737054890	APRIL -13-2021
Some Area A wells are linked to BRRDF site (Lic. 04228) but reported here.			

The enclosed results are for sampling required in the month(s) of: (e.g., June 2003)
APRIL -2021

Type of Data Submitted (Check all that apply)

- [x] Groundwater monitoring data from monitoring wells
- [ ] Groundwater monitoring data from private water supply wells
- [ ] Leachate monitoring data
- [ ] Gas monitoring data
- [ ] Air monitoring data
- [ ] Other (specify)

Notification attached?

- [ ] No. No groundwater standards or explosive gas limits were exceeded.
- [x] Yes, a notification of values exceeding a groundwater standard is attached. It includes a list of monitoring points, dates, sample values, groundwater standard and preliminary analysis of the cause and significance of any concentration.
- [ ] Yes, a notification of values exceeding an explosive gas limit is attached. It includes the monitoring points, dates, sample values and explosive gas limits.

Certification

To the best of my knowledge, the information reported and statements made on this data submittal and attachements are true and correct. Furthermore, I have attached complete notification of any sampling values meeting or exceeding groundwater standards or explosive gas levels, and a preliminary analysis of the cause and significant of concentrations exceeding groundwater standards.

David Hagenbucher	Manager	715 551 5864
Facility Representative Name (Print)	Title	(Area Code) Telephone No.
Dave Hagenbucher	05/14/21	
Signature	Date	

FOR DNR USE ONLY. Check action taken, and record date and your initials. Describe on back side if necessary.

- [ ] Found uploading problems on _____ Initials _____
- [ ] Notified contact of problems on _____ Uploaded data successfully on _____
- EDD format(s): [ ] Diskette [ ] CD (initial submittal and follow-up) [E-mail (follow-up only) Other _____

Marathon County Solid Waste Mgmnt Dept
Marathon County Landfill - Area A
04-01-2021

Lab ID: 721026460
NLS Project: 364342
Collected: 04-01-2021
License: 02892
FID: 737054890

EXCEEDANCES:

Well Desc (Point ID)	Parameter	Units	Result	PAL / ACL	ES	Comments
Dup-041321 (074)	Tetrachloroethylene	ug/L	1.4	.5	5	NR140.10
Dup-041321 (074)	Trichloroethylene	ug/L	3.5	.5	5	NR140.10
Dup-041321 (074)	Vinyl Chloride	ug/L	0.21	.02	.2	NR140.10
R13R (074)	Tetrachloroethylene	ug/L	1.2	.5	5	NR140.10
R13R (074)	Trichloroethylene	ug/L	3.2	.5	5	NR140.10
R13R (074)	Vinyl Chloride	ug/L	0.20	.02	.2	NR140.10
R38 (053)	Tetrachloroethylene	ug/L	0.62	.5	5	NR140.10
R38 (053)	Trichloroethylene	ug/L	1.4	.5	5	NR140.10
R38 (053)	Vinyl Chloride	ug/L	0.19	.02	.2	NR140.10
R35 (050)	Conductivity	umho@25C	1100	510		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:	715-446-3101 X104
Site Supervisor:	715-446-3101 X102
Administrative Office:	715-446-3101 X100
Scale Master	715-446-3101 X103
Solid Waste & Recycling Info Line	877-270-3989 toll-free

marathoncountysolidwaste.org
marathoncountysolidwaste

May 14, 2021

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 2021. No exceedances were present for Area B.

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 April 2021

No table for April 2021 as no exceedances were present.

R27 on the south side of Area B has historically had increased Nitrate/Nitrite levels. The levels continue to decrease over time, and they may have been 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

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

Monitoring Data Submittal Information

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

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

Name: Chris Geske Phone: 715-478-2777
E-mail: lims@nlslab.com

Facility Name	License No. / Monitoring ID	Facility ID [FID]	Actual sampling dates (e.g., July 2-6, 2003
Marathon County Landfill - Area B	03338	737092730	APRIL -12-2021

The enclosed results are for sampling required in the month(s) of: (e.g., June 2003)
APRIL -2021

Type of Data Submitted (Check all that apply

- [x] Groundwater monitoring data from monitoring wells
- [ ] Groundwater monitoring data from private water supply wells
- [ ] Leachate monitoring data
- [ ] Gas monitoring data
- [ ] Air monitoring data

Notification attached?

- [x] No. No groundwater standards or explosive gas limits were exceeded.
- [ ] Yes, a notification of values exceeding a groundwater standard is attached. It includes a list of monitoring points, dates, sample values, groundwater standard and preliminary analysis of the cause and significance of any concentration.
- [ ] Yes, a notification of values exceeding an explosive gas limit is attached. It includes the monitoring points, dates, sample values and explosive gas limits.

Certification

To the best of my knowledge, the information reported and statements made on this data submittal and attachements are true and correct. Furthermore, I have attached complete notification of any sampling values meeting or exceeding groundwater standards or explosive gas levels, and a preliminary analysis of the cause and significant of concentrations exceeding groundwater standards.

David Hagenbucher	Manager	715 551 5864
Facility Representative Name (Print)	Title	(Area Code) Telephone No.
David Hagenbucher	05/14/21	
Signature	Date	

FOR DNR USE ONLY. Check action taken, and record date and your initials. Describe on back side if necessary.

- [ ] Found uploading problems on _____ Initials _____
- [ ] Notified contact of problems on _____ Uploaded data successfully on _____

EDD format(s): [ ] Diskette [ ] CD (initial submittal and follow-up) [x] E-mail (follow-up only) Other _____

Marathon County Solid Waste Mgmnt Dept
Marathon County Landfill - Area B
04-01-2021

Lab ID: 721026460
NLS Project: 364248
Collected: 04-01-2021
License: 03338
FID: 737092730

EXCEEDANCES:

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

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
marathoncountysolidwaste

Marathon County Solid Waste Department
172900 E. Hwy 29
Ringle, WI 54471

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

May 14, 2021

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 2021. 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 Ridge Recycling and Disposal Facility Groundwater Well Exceedance Table April 2021

Marathon County Solid Waste Mgmt Dept: BRRDF Groundwater Monitoring Wells											
Exceedances											
Lab ID	NLS Project	Date	License #	FID	Well Desc (Point ID)	Parameter	Units	Result	PAL/ACL	ES	Comments
721026460	364341	April 1 2021	04228	337005680	R59P (237)	Alkalinity	mg/L	420	230	-	well
721026460	364341	April 1 2021	04228	337005680	R59P (237)	Conductivity	umhos@25C	710	470	-	well
721026460	364341	April 1 2021	04228	337005680	R59P (237)	Hardness	mg/L	450	230	-	well
721026460	364341	April 1 2021	04228	337005680	R59WT (234)	Alkalinity	mg/L	470	230	-	well
721026460	364341	April 1 2021	04228	337005680	R59WT (234)	Conductivity	umhos@25C	790	470	-	well
721026460	364341	April 1 2021	04228	337005680	R59WT (234)	Hardness	mg/L	500	230	-	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. Excavation of this stockpile is ongoing as a soil borrow source for waste cover purposes. 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, and another groundwater assessment will be conducted in 2021 to better evaluate these results.

State of Wisconsin
Department of Natural Resources

ENVIRONMENTAL MONITORING DATA CERTIFICATION

Form 4400-231(R 1/04)

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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
  P.O. Box 7921
  Madison, WI 53707 - 7921

Monitoring Data Submittal Information

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

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

Name: Chris Geske Phone: 715-478-2777
E-mail: lims@nlslab.com

Facility Name	License No. / Monitoring ID	Facility ID [FID]	Actual sampling dates (e.g., July 2-6, 2003
Marathon County - BRRDF	04228	337005680	APRIL -13-2021

The enclosed results are for sampling required in the month(s) of: (e.g., June 2003)
APRIL -2021

Type of Data Submitted (Check all that apply)

- [x] Groundwater monitoring data from monitoring wells
- [ ] Groundwater monitoring data from private water supply wells
- [ ] Leachate monitoring data
- [ ] Gas monitoring data
- [ ] Air monitoring data
- [ ] Other (specify) _____

Notification attached?

- [ ] No. No groundwater standards or explosive gas limits were exceeded.
- [x] Yes, a notification of values exceeding a groundwater standard is attached. It includes a list of monitoring points, dates, sample values, groundwater standard and preliminary analysis of the cause and significance of any concentration.
- [ ] Yes, a notification of values exceeding an explosive gas limit is attached. It includes the monitoring points, dates, sample values and explosive gas limits.

Certification

To the best of my knowledge, the information reported and statements made on this data submittal and attachements are true and correct. Furthermore, I have attached complete notification of any sampling values meeting or exceeding groundwater standards or explosive gas levels, and a preliminary analysis of the cause and significant of concentrations exceeding groundwater standards.

David Hagenbucher	Manager	715 551 5864
Facility Representative Name (Print)	Title	(Area Code) Telephone No.
David Hagenbucher	05/14/21	
Signature	Date	

FOR DNR USE ONLY. Check action taken, and record date and your initials. Describe on back side if necessary.

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Marathon County Solid Waste Mgmnt Dept
Marathon County - BRRDF
04-01-2021

Lab ID: 721026460
NLS Project: 364341
Collected: 04-01-2021
License: 04228
FID: 337005680

EXCEEDANCES:

Well Desc (Point ID)	Parameter	Units	Result	PAL / ACL	ES	Comments
R59P (237)	Alkalinity	mg/L	420	230		well
R59P (237)	Conductivity	umhos@25C	710	470		well
R59P (237)	Hardness	mg/L	450	230		well
R59WT (234)	Alkalinity	mg/L	470	230		well
R59WT (234)	Conductivity	umhos@25C	790	470		well
R59WT (234)	Hardness	mg/L	500	230		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:	715-446-3101 X104
Site Supervisor:	715-446-3101 X102
Administrative Office:	715-446-3101 X100
Scale Master	715-446-3101 X103
Solid Waste & Recycling Info Line	877-270-3989 toll-free

marathoncountysolidwaste.org
marathoncountysolidwaste

December 20, 2021

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 2021. 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.

Area A Groundwater Well Exceedance Table October 2021

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	375600	Oct 1 2021	2892	737054890	Dup- (074)	Tetrachloroethylene	ug/L	1.3	0.5	5	NR140.10
721026460	375600	Oct 1 2021	2892	737054890	Dup- (074)	Trichloroethylene	ug/L	2	0.5	5	NR140.10
721026460	375600	Oct 1 2021	2892	737054890	R12 (049)	Tetrachloroethylene	ug/L	0.7	0.5	5	NR140.10
721026460	375600	Oct 1 2021	2892	737054890	R12 (049)	Trichloroethylene	ug/L	1.5	0.5	5	NR140.10
721026460	375600	Oct 1 2021	2892	737054890	R13R (074)	Tetrachloroethylene	ug/L	1.1	0.5	5	NR140.10
721026460	375600	Oct 1 2021	2892	737054890	R13R (074)	Trichloroethylene	ug/L	1.8	0.5	5	NR140.10
721026460	375600	Oct 1 2021	2892	737054890	R38 (053)	Trichloroethylene	ug/L	0.79	0.5	5	NR140.10
721026460	375600	Oct 1 2021	2892	737054890	R35 (050)	Conductivity	umho@25C	780	510	-	well

The Area A exceedances that were detected during the October 2021 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

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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
  P.O. Box 7921
  Madison, WI 53707 - 7921

Monitoring Data Submittal Information

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

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

Name: Chris Geske Phone: 715-478-2777
E-mail: lims@nlslab.com

Facility Name	License No. / Monitoring ID	Facility ID [FID]	Actual sampling dates (e.g., July 2-6, 2003
Marathon County Landfill - Area A	02892	737054890	OCTOBER -25-2021 through OCTOBER -26-2021
Some Area A wells are linked to BRRDF site (Lic. 04228) but reported here.			

The enclosed results are for sampling required in the month(s) of: (e.g., June 2003)
OCTOBER -2021

Type of Data Submitted (Check all that apply)

- [x] Groundwater monitoring data from monitoring wells
- [ ] Groundwater monitoring data from private water supply wells
- [ ] Leachate monitoring data
- [ ] Gas monitoring data
- [ ] Air monitoring data
- [ ] Other (specify)

Notification attached?

- [ ] No. No groundwater standards or explosive gas limits were exceeded.
- [x] Yes, a notification of values exceeding a groundwater standard is attached. It includes a list of monitoring points, dates, sample values, groundwater standard and preliminary analysis of the cause and significance of any concentration.
- [ ] Yes, a notification of values exceeding an explosive gas limit is attached. It includes the monitoring points, dates, sample values and explosive gas limits.

Certification

To the best of my knowledge, the information reported and statements made on this data submittal and attachements are true and correct. Furthermore, I have attached complete notification of any sampling values meeting or exceeding groundwater standards or explosive gas levels, and a preliminary analysis of the cause and significant of concentrations exceeding groundwater standards.

David Hagenbucker	Manager	715-551-5864
Facility Representative Name (Print)	Title	(Area Code) Telephone No.
David Hagenbucker	12/31/21	
Signature	Date	

FOR DNR USE ONLY. Check action taken, and record date and your initials. Describe on back side if necessary.

- [ ] Found uploading problems on _____ Initials _____
- [ ] Notified contact of problems on _____ Uploaded data successfully on _____

EDD format(s): [ ] Diskette [ ] CD (initial submittal and follow-up) [E] E-mail (follow-up only) Other _____

Marathon County Solid Waste Mgmnt Dept
Marathon County Landfill - Area A
10-01-2021

Lab ID: 721026460
NLS Project: 375600
Collected: 10-01-2021
License: 02892
FID: 737054890

EXCEEDANCES:

Well Desc (Point ID)	Parameter	Units	Result	PAL / ACL	ES	Comments
Dup-102621 (074)	Tetrachloroethylene	ug/L	1.3	.5	5	NR140.10
Dup-102621 (074)	Trichloroethylene	ug/L	2.0	.5	5	NR140.10
R12R (049)	Tetrachloroethylene	ug/L	0.70	.5	5	NR140.10
R12R (049)	Trichloroethylene	ug/L	1.5	.5	5	NR140.10
R13R (074)	Tetrachloroethylene	ug/L	1.1	.5	5	NR140.10
R13R (074)	Trichloroethylene	ug/L	1.8	.5	5	NR140.10
R38 (053)	Trichloroethylene	ug/L	0.79	.5	5	NR140.10
R35 (050)	Conductivity	umho@25C	780	510		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

marathoncountysolidwaste.org
marathoncountysolidwaste

Marathon County Solid Waste Department
172900 E. Hwy 29
Ringle, WI 54471

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

December 20, 2021

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 2021. 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 2021

Marathon County Solid Waste Mgmt Dept: Area B Groundwater Monitoring Wells											
Exceedances											
Lab ID	NLS Project	Date	License #	FID	Well Desc (Point ID)	Parameter	Units	Result	PAL/ACL	ES	Comments
721026460	375514	Oct 1 2021	3338	737092730	Dup-102502 (208)	Nitrate+Nitrite, dis.	mg/L	2.7	2	10	NR140.10
721026460	375514	Oct 1 2021	3338	737092730	Field Blank (997)	Methylene chloride	ug/L	1.3	0.5	5	NR140.10
721026460	375514	Oct 1 2021	3338	737092730	R26A (152)	Methylene chloride	ug/L	0.74	0.5	5	NR140.10
721026460	375514	Oct 1 2021	3338	737092730	R27 (156)	Nitrate+Nitrite, dis.	mg/L	2.7	2	10	NR140.10
721026460	375514	Oct 1 2021	3338	737092730	R27A (157)	Methylene chloride	ug/L	1.5	0.5	5	NR140.10
721026460	375514	Oct 1 2021	3338	737092730	R31A (176)	Methylene chloride	ug/L	0.79	0.5	5	NR140.10
721026460	375514	Oct 1 2021	3338	737092730	R45 (208)	Methylene chloride	ug/L	0.75	0.5	5	NR140.10
721026460	375514	Oct 1 2021	3338	737092730	R45 (208)	Nitrate+Nitrite, dis.	mg/L	2.7	2	10	NR140.10
721026460	375514	Oct 1 2021	3338	737092730	R52 (215)	Hardness, tot. rec as CaCO3	mg/L	310	290		ACL_well

Methylene Chloride has been identified as a lab contaminant through Northern Lake's Service.

R27 and R45 on the south side of Area B have historically had increased Nitrate/Nitrite levels. The levels continue to decrease over time, and they may have been 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 and R45 have indicated a decrease in concentration since the sampling event in October 2020. 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 each well. 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

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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
  Wisconsin Department of Natural Resources
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Monitoring Data Submittal Information

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

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

Name: Chris Geske Phone: 715-478-2777
E-mail: lims@nlslab.com

Facility Name	License No. / Monitoring ID	Facility ID [FID]	Actual sampling dates (e.g., July 2-6, 2003
Marathon County Landfill - Area B	03338	737092730	OCTOBER -25-2021

The enclosed results are for sampling required in the month(s) of: (e.g., June 2003)
OCTOBER -2021

Type of Data Submitted (Check all that apply)

- [x] Groundwater monitoring data from monitoring wells
- [ ] Groundwater monitoring data from private water supply wells
- [ ] Leachate monitoring data
- [ ] Gas monitoring data
- [ ] Air monitoring data
- [ ] Other (specify) _____

Notification attached?

- [ ] No. No groundwater standards or explosive gas limits were exceeded.
- [x] Yes, a notification of values exceeding a groundwater standard is attached. It includes a list of monitoring points, dates, sample values, groundwater standard and preliminary analysis of the cause and significance of any concentration.
- [ ] Yes, a notification of values exceeding an explosive gas limit is attached. It includes the monitoring points, dates, sample values and explosive gas limits.

Certification

To the best of my knowledge, the information reported and statements made on this data submittal and attachements are true and correct. Furthermore, I have attached complete notification of any sampling values meeting or exceeding groundwater standards or explosive gas levels, and a preliminary analysis of the cause and significant of concentrations exceeding groundwater standards.

David Hagenbucher	Manager	715-551-5864
Facility Representative Name (Print)	Title	(Area Code) Telephone No.
David Hagenbucher	12/31/21	
Signature	Date	

FOR DNR USE ONLY. Check action taken, and record date and your initials. Describe on back side if necessary.

- [ ] Found uploading problems on _____ Initials _____
- [ ] Notified contact of problems on _____ Uploaded data successfully on _____

EDD format(s): [ ] Diskette [ ] CD (initial submittal and follow-up) [E] E-mail (follow-up only) Other _____

Marathon County Solid Waste Mgmnt Dept
Marathon County Landfill - Area B
10-01-2021

Lab ID: 721026460
NLS Project: 375514
Collected: 10-01-2021
License: 03338
FID: 737092730

EXCEEDANCES:

Well Desc (Point ID)	Parameter	Units	Result	PAL / ACL	ES	Comments
Dup-102502 (208)	Nitrate+Nitrite, dis.	mg/L	2.7	2	10	NR140.10
Field Blank (997)	Methylene chloride	ug/L	1.3	.5	5	NR140.10
R26A (152)	Methylene chloride	ug/L	0.74	.5	5	NR140.10
R27 (156)	Nitrate+Nitrite, dis.	mg/L	2.7	2	10	NR140.10
R27A (157)	Methylene chloride	ug/L	1.5	.5	5	NR140.10
R31A (176)	Methylene chloride	ug/L	0.79	.5	5	NR140.10
R45 (208)	Methylene chloride	ug/L	0.75	.5	5	NR140.10
R45 (208)	Nitrate+Nitrite, dis.	mg/L	2.7	2	10	NR140.10
R52 (215)	Hardness, tot. recoverable as CaCO3 (calc/filt/trace)	mg/L	310	290		ACL_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

marathoncountysolidwaste.org
marathoncountysolidwaste

Marathon County Solid Waste Department
172900 E. Hwy 29
Ringle, WI 54471

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

December 20, 2021

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 2021. 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 Ridge Recycling and Disposal Facility Groundwater Well Exceedance Table October 2021

Marathon County Solid Waste Mgmt Dept: BRRDF Groundwater Monitoring Wells											
Exceedances											
Lab ID	NLS Project	Date	License #	FID	Well Desc (Point ID)	Parameter	Units	Result	PAL/ACL	ES	Comments
721026460	375599	October 1 2021	4228	337005680	R54	Hardness	mg/L	310	290		well
721026460	375599	October 1 2021	4228	337005680	R59P (237)	Alkalinity	mg/L	400	230	-	well
721026460	375599	October 1 2021	4228	337005680	R59P (237)	Conductivity	umhos@25C	700	470	-	well
721026460	375599	October 1 2021	4228	337005680	R59P (237)	Hardness	mg/L	460	230	-	well
721026460	375599	October 1 2021	4228	337005680	R59WT (234)	Alkalinity	mg/L	430	230	-	well
721026460	375599	October 1 2021	4228	337005680	R59WT (234)	Conductivity	umhos@25C	750	470	-	well
721026460	375599	October 1 2021	4228	337005680	R59WT (234)	Hardness	mg/L	490	230	-	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. Excavation of this stockpile is ongoing as a soil borrow source for waste cover purposes. 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, and another groundwater assessment was conducted in 2021 to better evaluate these results.

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

Monitoring Data Submittal Information

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

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

Name: Chris Geske Phone: 715-478-2777
E-mail: lims@nlslab.com

Facility Name	License No. / Monitoring ID	Facility ID [FID]	Actual sampling dates (e.g., July 2-6, 2003
Marathon County - BRRDF	04228	337005680	OCTOBER -26-2021

The enclosed results are for sampling required in the month(s) of: (e.g., June 2003)
OCTOBER -2021

Type of Data Submitted (Check all that apply)

- [X] Groundwater monitoring data from monitoring wells
- [ ] Groundwater monitoring data from private water supply wells
- [ ] Leachate monitoring data
- [ ] Gas monitoring data
- [ ] Air monitoring data
- [ ] Other (specify) _____

Notification attached?

- [ ] No. No groundwater standards or explosive gas limits were exceeded.
- [X] Yes, a notification of values exceeding a groundwater standard is attached. It includes a list of monitoring points, dates, sample values, groundwater standard and preliminary analysis of the cause and significance of any concentration.
- [ ] Yes, a notification of values exceeding an explosive gas limit is attached. It includes the monitoring points, dates, sample values and explosive gas limits.

Certification

To the best of my knowledge, the information reported and statements made on this data submittal and attachements are true and correct. Furthermore, I have attached complete notification of any sampling values meeting or exceeding groundwater standards or explosive gas levels, and a preliminary analysis of the cause and significant of concentrations exceeding groundwater standards.

David Hagenbucher	Manager	715-551-5864
Facility Representative Name (Print)	Title	(Area Code) Telephone No.
David Hagenbucher	12/31/21	
Signature	Date	

FOR DNR USE ONLY. Check action taken, and record date and your initials. Describe on back side if necessary.

- [ ] Found uploading problems on _____ Initials _____
- [ ] Notified contact of problems on _____ Uploaded data successfully on _____

EDD format(s): [ ] Diskette [ ] CD (initial submittal and follow-up) [E] mail (follow-up only) Other _____

Marathon County Solid Waste Mgmnt Dept
Marathon County - BRRDF
10-01-2021

Lab ID: 721026460
NLS Project: 375599
Collected: 10-01-2021
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	400	230		well
R59P (237)	Conductivity	umhos@25C	700	470		well
R59P (237)	Hardness	mg/L	460	230		well
R59WT (234)	Alkalinity	mg/L	430	230		well
R59WT (234)	Conductivity	umhos@25C	750	470		well
R59WT (234)	Hardness	mg/L	490	230		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

ATTACHMENT G

EXCEEDANCE REPORTS FOR AREA A & BRRDF PRIVATE WELL MONITORING APRIL AND OCTOBER 2021

marathoncountysolidwaste.org
marathoncountysolidwaste

Marathon County Solid Waste Department
172900 E. Hwy 29
Ringle, WI 54471

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

May 14, 2021

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 2021. 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
  Wisconsin Department of Natural Resources
  P.O. Box 7921
  Madison, WI 53707 - 7921

Monitoring Data Submittal Information

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

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

Name: Chris Geske Phone: 715-478-2777
E-mail: lims@nlslab.com

Facility Name	License No. / Monitoring ID	Facility ID [FID]	Actual sampling dates (e.g., July 2-6, 2003
Marathon County BRRDF Private Wells	04228	337005680	APRIL -14-2021

The enclosed results are for sampling required in the month(s) of: (e.g., June 2003)
APRIL -2021

Type of Data Submitted (Check all that apply)

- ☐ Groundwater monitoring data from monitoring wells
- ☒ Groundwater monitoring data from private water supply wells
- ☐ Leachate monitoring data
- ☐ Gas monitoring data
- ☐ Air monitoring data
- ☐ Other (specify) _____

Notification attached?

- ☒ No. No groundwater standards or explosive gas limits were exceeded.
- ☐ Yes, a notification of values exceeding a groundwater standard is attached. It includes a list of monitoring points, dates, sample values, groundwater standard and preliminary analysis of the cause and significance of any concentration.
- ☐ Yes, a notification of values exceeding an explosive gas limit is attached. It includes the monitoring points, dates, sample values and explosive gas limits.

Certification

To the best of my knowledge, the information reported and statements made on this data submittal and attachements are true and correct. Furthermore, I have attached complete notification of any sampling values meeting or exceeding groundwater standards or explosive gas levels, and a preliminary analysis of the cause and significant of concentrations exceeding groundwater standards.

David Hagenbucher — Facility Representative Name (Print)
Manager — Title
715 551 5864 — (Area Code) Telephone No.
David Hagenbucher — Signature
5/14/21 — Date

FOR DNR USE ONLY. Check action taken, and record date and your initials. Describe on back side if necessary.

- ☐ Found uploading problems on _____ Initials _____
- ☐ Notified contact of problems on _____ Uploaded data successfully on _____
- EDD format(s): ☐ Diskette ☐ CD (initial submittal and follow-up) ☒ E-mail (follow-up only) Other _____

Marathon County Solid Waste Mgmnt Dept
Marathon County BRRDF Private Wells
04-01-2021

Lab ID: 721026460
NLS Project: 364443
Collected: 04-01-2021
License: 04228
FID: 337005680

EXCEEDANCES:

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

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 REPORT

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

NLS Project: 364443
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 April 2021

PW11 NLS ID: 1248807
Matrix: GW
Collected: 04/14/21 09:20 Received: 04/14/21

Parameter	Result	Units	Dilution	LOD	LOQ/MCL	Analyzed	Method	Lab
Field depth to water	23.55	ft.	1			04/14/21	NA	721026460
Field depth to bottom	27.50	ft.	1			04/14/21	NA	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) LOD = Limit of Detection LOQ = Limit of Quantitation NA = Not Applicable
DWB = Dry Weight Basis %DWB = (mg/kg DWB) / 10000 1000 ug/L = 1 mg/L
MCL = Maximum Contaminant Levels for Drinking Water Samples. Shaded results indicate >MCL.

Reviewed by:

Authorized by:
R. T. Krueger
President

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 REPORT

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

NLS Project: 364443
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 April 2021

PW26 NLS ID: 1248808
Matrix: GW
Collected: 04/14/21 09:50 Received: 04/14/21

Parameter	Result	Units	Dilution	LOD	LOQ/MCL	Analyzed	Method	Lab
Field color	none detected					04/14/21	NA	721026460
Field odor	none detected					04/14/21	NA	721026460
Field turbidity	none detected					04/14/21	NA	721026460
VOCs (water) by GC/MS	see attached					04/19/21	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) LOD = Limit of Detection LOQ = Limit of Quantitation NA = Not Applicable
DWB = Dry Weight Basis %DWB = (mg/kg DWB) / 10000 1000 ug/L = 1 mg/L
MCL = Maximum Contaminant Levels for Drinking Water Samples. Shaded results indicate >MCL.

Reviewed by:

Authorized by:
R. T. Krueger
President

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 REPORT

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

NLS Project: 364443
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 April 2021

PW8575 NLS ID: 1248809
Matrix: GW
Collected: 04/14/21 10:05 Received: 04/14/21

Parameter	Result	Units	Dilution	LOD	LOQ/MCL	Analyzed	Method	Lab
Field color	none detected					04/14/21	NA	721026460
Field odor	none detected					04/14/21	NA	721026460
Field turbidity	none detected					04/14/21	NA	721026460
VOCs (water) by GC/MS	see attached					04/19/21	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) LOD = Limit of Detection LOQ = Limit of Quantitation NA = Not Applicable
DWB = Dry Weight Basis %DWB = (mg/kg DWB) / 10000 1000 ug/L = 1 mg/L
MCL = Maximum Contaminant Levels for Drinking Water Samples. Shaded results indicate >MCL.

Reviewed by:

Authorized by:
R. T. Krueger
President

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 REPORT

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

NLS Project: 364443
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 April 2021

Trip Blank NLS ID: 1248810
Matrix: TB
Collected: 04/14/21 00:00 Received: 04/14/21

Parameter	Result	Units	Dilution	LOD	LOQ/MCL	Analyzed	Method	Lab
VOCs (water) by GC/MS	see attached					04/19/21	NA	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) LOD = Limit of Detection LOQ = Limit of Quantitation NA = Not Applicable
DWB = Dry Weight Basis %DWB = (mg/kg DWB) / 10000 1000 ug/L = 1 mg/L
MCL = Maximum Contaminant Levels for Drinking Water Samples. Shaded results indicate >MCL.

Reviewed by:

Authorized by:
R. T. Krueger
President

ANALYTICAL RESULTS: VOC's by P&T/GCMS - Water

Customer: Marathon County Solid Waste Mgmnt Dept NLS Project: 364443

Project Description: Marathon County BRRDF Private Wells

Project Title: April 2021 Template: APP3 Printed: 04/28/2021 10:31

Sample: 1248808 PW26 Collected: 04/14/21 Analyzed: 04/19/21 - 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		
1,1-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	0.16	0.52	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	13	44		
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)	104%		1				S
Toluene-d8 (SURR)	96%		1				S
1-Bromo-4-Fluorobenzene (SURR)	96%		1				S

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

Customer: Marathon County Solid Waste Mgmnt Dept **NLS Project: 364443**
Project Description: Marathon County BRRDF Private Wells
Project Title: April 2021 **Template: APP3 Printed: 04/28/2021 10:31**

Sample: 1248809 PW8575 Collected: 04/14/21 Analyzed: 04/19/21 - 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		
1,1-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	0.16	0.52	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	[17]	ug/L	1	13	44		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)	104%		1				S
Toluene-d8 (SURR)	98%		1				S
1-Bromo-4-Fluorobenzene (SURR)	102%		1				S

NOTES APPLICABLE TO THIS ANALYSIS:

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

S = This compound is a surrogate used to evaluate the quality control of a method.

ANALYTICAL RESULTS: VOC's by P&T/GCMS - Water
Customer: Marathon County Solid Waste Mgmnt Dept NLS Project: 364443
Project Description: Marathon County BRRDF Private Wells
Project Title: April 2021 Template: APP3 Printed: 04/28/2021 10:31

Sample: 1248810 Trip Blank Collected: 04/14/21 Analyzed: 04/19/21 - 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		
1,1-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	0.16	0.52	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	13	44		
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)	108%		1				S
Toluene-d8 (SURR)	98%		1				S
1-Bromo-4-Fluorobenzene (SURR)	95%		1				S

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

NLS Private Well Sampling Form and Chain Of Custody

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

NLS Lab #:	Point Name / Homeowner:	DNR ID #:	Time Purged:	Color:	Odor:	Turbidity (quant,text,color):
1218807	PW11 William Kasten R222780 Duncan Road, Hatley	027	—	—	—	—
Date Sampled:	**Time Sampled:**	**Sample Location:**				**Treated (Y/N):**
4-14-21	0920	Well in Back of House				—

Comments:

DEPTH OF WATER 23.55

DEPTH OF BOTTOM 27.50

Could not collect Sample Water Supply Shut off

4/13: South house faucet

NLS Lab #:	Point Name / Homeowner:	DNR ID #:	Time Purged:	Color:	Odor:	Turbidity (quant,text,color):
8808	PW26 James Glodowski R222470 Duncan Road, Hatley	029	5 min	ND	ND	ND
Date Sampled:	**Time Sampled:**	**Sample Location:**				**Treated (Y/N):**
4.14.21	0950	OUTSIDE FAUCET WEST SIDE of HOUSE				N

Comments:

As of 11/06: Kitchen Sink (hand dug well, owner may want us to purge little or no water before sampling)

NLS Lab #:	Point Name / Homeowner:	DNR ID #:	Time Purged:	Color:	Odor:	Turbidity (quant,text,color):
8809	PW8575 Jerry and Krista Bates R221615 Silk, Ringle	367	5 min	ND	ND	ND
Date Sampled:	**Time Sampled:**	**Sample Location:**				**Treated (Y/N):**
4.14.21	1005	Front of House OUTSIDE FAUCET				N

Comments:

Outside faucet side of house

NLS Lab #:	Point Name / Homeowner:	DNR ID #:	Time Purged:	Color:	Odor:	Turbidity (quant,text,color):
810	Trip Blank	999				
Date Sampled:	**Time Sampled:**	**Sample Location:**				

Comments:

See reverse side for sample custody information

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

Monitoring Data Submittal Information

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

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

Name: Chris Geske Phone: 715-478-2777
E-mail: lims@nlslab.com

Facility 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 -14-2021

The enclosed results are for sampling required in the month(s) of: (e.g., June 2003)
APRIL -2021

Type of Data Submitted (Check all that apply)

- ☐ Groundwater monitoring data from monitoring wells
- ☒ Groundwater monitoring data from private water supply wells
- ☐ Leachate monitoring data
- ☐ Gas monitoring data
- ☐ Air monitoring data
- ☐ Other (specify)

Notification attached?

- ☒ No. No groundwater standards or explosive gas limits were exceeded.
- ☐ Yes, a notification of values exceeding a groundwater standard is attached. It includes a list of monitoring points, dates, sample values, groundwater standard and preliminary analysis of the cause and significance of any concentration.
- ☐ Yes, a notification of values exceeding an explosive gas limit is attached. It includes the monitoring points, dates, sample values and explosive gas limits.

Certification

To the best of my knowledge, the information reported and statements made on this data submittal and attachements are true and correct. Furthermore, I have attached complete notification of any sampling values meeting or exceeding groundwater standards or explosive gas levels, and a preliminary analysis of the cause and significant of concentrations exceeding groundwater standards.

David Hagenbucher	Manager	715 551 5864
Facility Representative Name (Print)	Title	(Area Code) Telephone No.
David Hagenbucher	5/14/21	
Signature	Date	

FOR DNR USE ONLY. Check action taken, and record date and your initials. Describe on back side if necessary.

- ☐ Found uploading problems on _____ Initials _____
- ☐ Notified contact of problems on _____ Uploaded data successfully on _____
- EDD format(s): ☐ Diskette ☐ CD (initial submittal and follow-up) ☒ E-mail (follow-up only) Other _____

Marathon County Solid Waste Mgmnt Dept
Marathon County Area A Private Wells
04-01-2021

Lab ID: 721026460
NLS Project: 364445
Collected: 04-01-2021
License: 02892
FID:

EXCEEDANCES:

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

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 REPORT

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

NLS Project: 364445
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 April 2021

PW25 NLS ID: 1248814
Matrix: GW
Collected: 04/14/21 08:42 Received: 04/14/21

Parameter	Result	Units	Dilution	LOD	LOQ/MCL	Analyzed	Method	Lab
Field color	none detected					04/14/21	NA	721026460
Field odor	none detected					04/14/21	NA	721026460
Field turbidity	none detected					04/14/21	NA	721026460
VOCs (water) by GC/MS	see attached					04/19/21	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) LOD = Limit of Detection LOQ = Limit of Quantitation NA = Not Applicable
DWB = Dry Weight Basis %DWB = (mg/kg DWB) / 10000 1000 ug/L = 1 mg/L
MCL = Maximum Contaminant Levels for Drinking Water Samples. Shaded results indicate >MCL.

Reviewed by:

Authorized by:
R. T. Krueger
President

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Analytical Laboratory and Environmental Services
400 North Lake Avenue - Crandon, WI 54520
Ph: (715)-478-2777 Fax: (715)-478-3060

ANALYTICAL REPORT

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

NLS Project: 364445
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 April 2021

PW68 NLS ID: 1248815
Matrix: GW
Collected: 04/14/21 08:20 Received: 04/14/21

Parameter	Result	Units	Dilution	LOD	LOQ/MCL	Analyzed	Method	Lab
Field color	none detected					04/14/21	NA	721026460
Field odor	none detected					04/14/21	NA	721026460
Field turbidity	none detected					04/14/21	NA	721026460
VOCs (water) by GC/MS	see attached					04/19/21	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.

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

NLS Project: 364445
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 April 2021

PW18 NLS ID: 1248816
Matrix: GW
Collected: 04/14/21 08:30 Received: 04/14/21

Parameter	Result	Units	Dilution	LOD	LOQ/MCL	Analyzed	Method	Lab
Field color	none detected					04/14/21	NA	721026460
Field odor	none detected					04/14/21	NA	721026460
Field turbidity	none detected					04/14/21	NA	721026460
VOCs (water) by GC/MS	see attached					04/19/21	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.

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DWB = Dry Weight Basis %DWB = (mg/kg DWB) / 10000 1000 ug/L = 1 mg/L
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Authorized by:
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ANALYTICAL REPORT

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

NLS Project: 364445
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 April 2021

PW19 NLS ID: 1248817
Matrix: GW
Collected: 04/14/21 07:55 Received: 04/14/21

Parameter	Result	Units	Dilution	LOD	LOQ/MCL	Analyzed	Method	Lab
Field color	none detected					04/14/21	NA	721026460
Field odor	none detected					04/14/21	NA	721026460
Field turbidity	none detected					04/14/21	NA	721026460
VOCs (water) by GC/MS	see attached					04/19/21	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.

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ANALYTICAL REPORT

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

NLS Project: 364445
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 April 2021

PW24 NLS ID: 1248818
Matrix: GW
Collected: 04/14/21 08:55 Received: 04/14/21

Parameter	Result	Units	Dilution	LOD	LOQ/MCL	Analyzed	Method	Lab
Field color	none detected					04/14/21	NA	721026460
Field odor	none detected					04/14/21	NA	721026460
Field turbidity	none detected					04/14/21	NA	721026460
VOCs (water) by GC/MS	see attached					04/19/21	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 dilution and/or solids content.

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Reviewed by:

Authorized by:
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ANALYTICAL REPORT

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

NLS Project: 364445
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 April 2021

PW17 NLS ID: 1248819
Matrix: GW
Collected: 04/14/21 09:35 Received: 04/14/21

Parameter	Result	Units	Dilution	LOD	LOQ/MCL	Analyzed	Method	Lab
Field color	none detected					04/14/21	NA	721026460
Field odor	none detected					04/14/21	NA	721026460
Field turbidity	none detected					04/14/21	NA	721026460
VOCs (water) by GC/MS	see attached					04/19/21	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) LOD = Limit of Detection LOQ = Limit of Quantitation NA = Not Applicable
DWB = Dry Weight Basis %DWB = (mg/kg DWB) / 10000 1000 ug/L = 1 mg/L
MCL = Maximum Contaminant Levels for Drinking Water Samples. Shaded results indicate >MCL.

Reviewed by:

Authorized by:
R. T. Krueger
President

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ANALYTICAL REPORT

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

NLS Project: 364445
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 April 2021

PW64 NLS ID: 1248820
Matrix: GW
Collected: 04/14/21 08:10 Received: 04/14/21

Parameter	Result	Units	Dilution	LOD	LOQ/MCL	Analyzed	Method	Lab
Field color	none detected					04/14/21	NA	721026460
Field odor	none detected					04/14/21	NA	721026460
Field turbidity	none detected					04/14/21	NA	721026460
VOCs (water) by GC/MS	see attached					04/19/21	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.

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DWB = Dry Weight Basis %DWB = (mg/kg DWB) / 10000 1000 ug/L = 1 mg/L
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Reviewed by:

Authorized by:
R. T. Krueger
President

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Analytical Laboratory and Environmental Services
400 North Lake Avenue - Crandon, WI 54520
Ph: (715)-478-2777 Fax: (715)-478-3060

ANALYTICAL REPORT

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

NLS Project: 364445
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 April 2021

PW88 NLS ID: 1248821
Matrix: GW
Collected: 04/14/21 09:10 Received: 04/14/21

Parameter	Result	Units	Dilution	LOD	LOQ/MCL	Analyzed	Method	Lab
Field color	none detected					04/14/21	NA	721026460
Field odor	none detected					04/14/21	NA	721026460
Field turbidity	none detected					04/14/21	NA	721026460
VOCs (water) by GC/MS	see attached					04/19/21	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) LOD = Limit of Detection LOQ = Limit of Quantitation NA = Not Applicable
DWB = Dry Weight Basis %DWB = (mg/kg DWB) / 10000 1000 ug/L = 1 mg/L
MCL = Maximum Contaminant Levels for Drinking Water Samples. Shaded results indicate >MCL.

Reviewed by:

Authorized by:
R. T. Krueger
President

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 REPORT

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

NLS Project: 364445
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 April 2021

PW48 NLS ID: 1248822
Matrix: GW
Collected: 04/14/21 07:45 Received: 04/14/21

Parameter	Result	Units	Dilution	LOD	LOQ/MCL	Analyzed	Method	Lab
Field color	none detected					04/14/21	NA	721026460
Field odor	none detected					04/14/21	NA	721026460
Field turbidity	none detected					04/14/21	NA	721026460
VOCs (water) by GC/MS	see attached					04/19/21	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) LOD = Limit of Detection LOQ = Limit of Quantitation NA = Not Applicable
DWB = Dry Weight Basis %DWB = (mg/kg DWB) / 10000 1000 ug/L = 1 mg/L
MCL = Maximum Contaminant Levels for Drinking Water Samples. Shaded results indicate >MCL.

Reviewed by:

Authorized by:
R. T. Krueger
President

ANALYTICAL RESULTS: VOC's by P&T/GCMS - Water
Customer: Marathon County Solid Waste Mgmnt Dept NLS Project: 364445
Project Description: Marathon County Area A Private Wells
Project Title: April 2021 Template: APP3 Printed: 04/22/2021 08:13

Sample: 1248814 PW25 Collected: 04/14/21 Analyzed: 04/19/21 - Analytes: 43

ANALYTE NAME	RESULT	UNITS	DIL	LOD	LOQ	Note
Benzene	ND	ug/L	1	0.25	0.84	
Bromodichloromethane	ND	ug/L	1	0.20	0.67	
Bromoform	ND	ug/L	1	0.27	0.91	
Bromomethane	ND	ug/L	1	0.87	2.9	
Carbon Tetrachloride	ND	ug/L	1	0.17	0.55	
Chlorobenzene	ND	ug/L	1	0.34	1.1	
Chloroethane	ND	ug/L	1	1.5	5.0	
Chloroform	ND	ug/L	1	0.24	0.81	
Chloromethane	ND	ug/L	1	0.81	2.7	
Dibromochloromethane	ND	ug/L	1	0.20	0.67	
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	
1,3-Dichlorobenzene	ND	ug/L	1	0.28	0.93	
1,4-Dichlorobenzene	ND	ug/L	1	0.30	0.99	
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	
1,1-Dichloroethene	ND	ug/L	1	0.19	0.63	
cis-1,2-Dichloroethene	ND	ug/L	1	0.20	0.66	
trans-1,2-Dichloroethene	ND	ug/L	1	0.19	0.64	
1,2-Dichloropropane	ND	ug/L	1	0.16	0.54	
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	
Methylene chloride	ND	ug/L	1	0.61	2.0	
Naphthalene	ND	ug/L	1	0.66	2.2	
Styrene	ND	ug/L	1	0.40	1.3	
ortho-Xylene	ND	ug/L	1	0.38	1.3	
Tetrachloroethene	ND	ug/L	1	0.34	1.1	
Toluene	ND	ug/L	1	0.29	0.98	
1,1,1-Trichloroethane	ND	ug/L	1	0.11	0.35	
1,1,2-Trichloroethane	ND	ug/L	1	0.16	0.52	
Trichloroethene	ND	ug/L	1	0.35	1.2	
Trichlorofluoromethane	ND	ug/L	1	0.22	0.75	
Vinyl chloride	ND	ug/L	1	0.14	0.47	
meta,para-Xylene	ND	ug/L	1	0.70	2.3	
MTBE	ND	ug/L	1	0.41	1.4	
Acetone	[36]	ug/L	1	13	44	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)	105%		1			S
Toluene-d8 (SURR)	100%		1			S
1-Bromo-4-Fluorobenzene (SURR)	93%		1			S

NOTES APPLICABLE TO THIS ANALYSIS:
J = Result enclosed in brackets is between LOD and LOQ, a region of less certain quantitation.
S = This compound is a surrogate used to evaluate the quality control of a method.

ANALYTICAL RESULTS: VOC's by P&T/GCMS - Water
Customer: Marathon County Solid Waste Mgmnt Dept NLS Project: 364445
Project Description: Marathon County Area A Private Wells
Project Title: April 2021 Template: APP3 Printed: 04/22/2021 08:13

Sample: 1248815 PW68 Collected: 04/14/21 Analyzed: 04/19/21 - Analytes: 43

ANALYTE NAME	RESULT	UNITS	DIL	LOD	LOQ	Note
Benzene	ND	ug/L	1	0.25	0.84	
Bromodichloromethane	ND	ug/L	1	0.20	0.67	
Bromoform	ND	ug/L	1	0.27	0.91	
Bromomethane	ND	ug/L	1	0.87	2.9	
Carbon Tetrachloride	ND	ug/L	1	0.17	0.55	
Chlorobenzene	ND	ug/L	1	0.34	1.1	
Chloroethane	ND	ug/L	1	1.5	5.0	
Chloroform	ND	ug/L	1	0.24	0.81	
Chloromethane	ND	ug/L	1	0.81	2.7	
Dibromochloromethane	ND	ug/L	1	0.20	0.67	
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	
1,3-Dichlorobenzene	ND	ug/L	1	0.28	0.93	
1,4-Dichlorobenzene	ND	ug/L	1	0.30	0.99	
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	
1,1-Dichloroethene	ND	ug/L	1	0.19	0.63	
cis-1,2-Dichloroethene	ND	ug/L	1	0.20	0.66	
trans-1,2-Dichloroethene	ND	ug/L	1	0.19	0.64	
1,2-Dichloropropane	ND	ug/L	1	0.16	0.54	
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	
Methylene chloride	ND	ug/L	1	0.61	2.0	
Naphthalene	ND	ug/L	1	0.66	2.2	
Styrene	ND	ug/L	1	0.40	1.3	
ortho-Xylene	ND	ug/L	1	0.38	1.3	
Tetrachloroethene	ND	ug/L	1	0.34	1.1	
Toluene	ND	ug/L	1	0.29	0.98	
1,1,1-Trichloroethane	ND	ug/L	1	0.11	0.35	
1,1,2-Trichloroethane	ND	ug/L	1	0.16	0.52	
Trichloroethene	ND	ug/L	1	0.35	1.2	
Trichlorofluoromethane	ND	ug/L	1	0.22	0.75	
Vinyl chloride	ND	ug/L	1	0.14	0.47	
meta,para-Xylene	ND	ug/L	1	0.70	2.3	
MTBE	ND	ug/L	1	0.41	1.4	
Acetone	ND	ug/L	1	13	44	
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)	107%		1			S
Toluene-d8 (SURR)	94%		1			S
1-Bromo-4-Fluorobenzene (SURR)	96%		1			S

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
Customer: Marathon County Solid Waste Mgmnt Dept NLS Project: 364445
Project Description: Marathon County Area A Private Wells
Project Title: April 2021 Template: APP3 Printed: 04/22/2021 08:13

Sample: 1248816 PW18 Collected: 04/14/21 Analyzed: 04/19/21 - Analytes: 43

ANALYTE NAME	RESULT	UNITS	DIL	LOD	LOQ	Note
Benzene	ND	ug/L	1	0.25	0.84	
Bromodichloromethane	ND	ug/L	1	0.20	0.67	
Bromoform	ND	ug/L	1	0.27	0.91	
Bromomethane	ND	ug/L	1	0.87	2.9	
Carbon Tetrachloride	ND	ug/L	1	0.17	0.55	
Chlorobenzene	ND	ug/L	1	0.34	1.1	
Chloroethane	ND	ug/L	1	1.5	5.0	
Chloroform	ND	ug/L	1	0.24	0.81	
Chloromethane	ND	ug/L	1	0.81	2.7	
Dibromochloromethane	ND	ug/L	1	0.20	0.67	
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	
1,3-Dichlorobenzene	ND	ug/L	1	0.28	0.93	
1,4-Dichlorobenzene	ND	ug/L	1	0.30	0.99	
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	
1,1-Dichloroethene	ND	ug/L	1	0.19	0.63	
cis-1,2-Dichloroethene	ND	ug/L	1	0.20	0.66	
trans-1,2-Dichloroethene	ND	ug/L	1	0.19	0.64	
1,2-Dichloropropane	ND	ug/L	1	0.16	0.54	
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	
Methylene chloride	ND	ug/L	1	0.61	2.0	
Naphthalene	ND	ug/L	1	0.66	2.2	
Styrene	ND	ug/L	1	0.40	1.3	
ortho-Xylene	ND	ug/L	1	0.38	1.3	
Tetrachloroethene	ND	ug/L	1	0.34	1.1	
Toluene	ND	ug/L	1	0.29	0.98	
1,1,1-Trichloroethane	ND	ug/L	1	0.11	0.35	
1,1,2-Trichloroethane	ND	ug/L	1	0.16	0.52	
Trichloroethene	ND	ug/L	1	0.35	1.2	
Trichlorofluoromethane	ND	ug/L	1	0.22	0.75	
Vinyl chloride	ND	ug/L	1	0.14	0.47	
meta,para-Xylene	ND	ug/L	1	0.70	2.3	
MTBE	ND	ug/L	1	0.41	1.4	
Acetone	ND	ug/L	1	13	44	
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)	108%		1			S
Toluene-d8 (SURR)	99%		1			S
1-Bromo-4-Fluorobenzene (SURR)	96%		1			S

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

Customer: Marathon County Solid Waste Mgmnt Dept NLS Project: 364445

Project Description: Marathon County Area A Private Wells

Project Title: April 2021 Template: APP3 Printed: 04/22/2021 08:13

Sample: 1248817 PW19 Collected: 04/14/21 Analyzed: 04/19/21 - Analytes: 43

ANALYTE NAME	RESULT	UNITS	DIL	LOD	LOQ	Note
Benzene	ND	ug/L	1	0.25	0.84	
Bromodichloromethane	ND	ug/L	1	0.20	0.67	
Bromoform	ND	ug/L	1	0.27	0.91	
Bromomethane	ND	ug/L	1	0.87	2.9	
Carbon Tetrachloride	ND	ug/L	1	0.17	0.55	
Chlorobenzene	ND	ug/L	1	0.34	1.1	
Chloroethane	ND	ug/L	1	1.5	5.0	
Chloroform	ND	ug/L	1	0.24	0.81	
Chloromethane	ND	ug/L	1	0.81	2.7	
Dibromochloromethane	ND	ug/L	1	0.20	0.67	
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	
1,3-Dichlorobenzene	ND	ug/L	1	0.28	0.93	
1,4-Dichlorobenzene	ND	ug/L	1	0.30	0.99	
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	
1,1-Dichloroethene	ND	ug/L	1	0.19	0.63	
cis-1,2-Dichloroethene	ND	ug/L	1	0.20	0.66	
trans-1,2-Dichloroethene	ND	ug/L	1	0.19	0.64	
1,2-Dichloropropane	ND	ug/L	1	0.16	0.54	
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	
Methylene chloride	ND	ug/L	1	0.61	2.0	
Naphthalene	ND	ug/L	1	0.66	2.2	
Styrene	ND	ug/L	1	0.40	1.3	
ortho-Xylene	ND	ug/L	1	0.38	1.3	
Tetrachloroethene	ND	ug/L	1	0.34	1.1	
Toluene	ND	ug/L	1	0.29	0.98	
1,1,1-Trichloroethane	ND	ug/L	1	0.11	0.35	
1,1,2-Trichloroethane	ND	ug/L	1	0.16	0.52	
Trichloroethene	ND	ug/L	1	0.35	1.2	
Trichlorofluoromethane	ND	ug/L	1	0.22	0.75	
Vinyl chloride	ND	ug/L	1	0.14	0.47	
meta,para-Xylene	ND	ug/L	1	0.70	2.3	
MTBE	ND	ug/L	1	0.41	1.4	
Acetone	[14]	ug/L	1	13	44	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)	112%		1			S
Toluene-d8 (SURR)	98%		1			S
1-Bromo-4-Fluorobenzene (SURR)	96%		1			S

NOTES APPLICABLE TO THIS ANALYSIS:

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

S = This compound is a surrogate used to evaluate the quality control of a method.

ANALYTICAL RESULTS: VOC's by P&T/GCMS - Water

Customer: Marathon County Solid Waste Mgmnt Dept NLS Project: 364445

Project Description: Marathon County Area A Private Wells

Project Title: April 2021 Template: APP3 Printed: 04/22/2021 08:13

Sample: 1248818 PW24 Collected: 04/14/21 Analyzed: 04/19/21 - Analytes: 43

ANALYTE NAME	RESULT	UNITS	DIL	LOD	LOQ	Note
Benzene	ND	ug/L	1	0.25	0.84	
Bromodichloromethane	ND	ug/L	1	0.20	0.67	
Bromoform	ND	ug/L	1	0.27	0.91	
Bromomethane	ND	ug/L	1	0.87	2.9	
Carbon Tetrachloride	ND	ug/L	1	0.17	0.55	
Chlorobenzene	ND	ug/L	1	0.34	1.1	
Chloroethane	ND	ug/L	1	1.5	5.0	
Chloroform	ND	ug/L	1	0.24	0.81	
Chloromethane	ND	ug/L	1	0.81	2.7	
Dibromochloromethane	ND	ug/L	1	0.20	0.67	
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	
1,3-Dichlorobenzene	ND	ug/L	1	0.28	0.93	
1,4-Dichlorobenzene	ND	ug/L	1	0.30	0.99	
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	
1,1-Dichloroethene	ND	ug/L	1	0.19	0.63	
cis-1,2-Dichloroethene	ND	ug/L	1	0.20	0.66	
trans-1,2-Dichloroethene	ND	ug/L	1	0.19	0.64	
1,2-Dichloropropane	ND	ug/L	1	0.16	0.54	
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	
Methylene chloride	ND	ug/L	1	0.61	2.0	
Naphthalene	ND	ug/L	1	0.66	2.2	
Styrene	ND	ug/L	1	0.40	1.3	
ortho-Xylene	ND	ug/L	1	0.38	1.3	
Tetrachloroethene	ND	ug/L	1	0.34	1.1	
Toluene	ND	ug/L	1	0.29	0.98	
1,1,1-Trichloroethane	ND	ug/L	1	0.11	0.35	
1,1,2-Trichloroethane	ND	ug/L	1	0.16	0.52	
Trichloroethene	ND	ug/L	1	0.35	1.2	
Trichlorofluoromethane	ND	ug/L	1	0.22	0.75	
Vinyl chloride	ND	ug/L	1	0.14	0.47	
meta,para-Xylene	ND	ug/L	1	0.70	2.3	
MTBE	ND	ug/L	1	0.41	1.4	
Acetone	47	ug/L	1	13	44	
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)	101%		1			S
Toluene-d8 (SURR)	94%		1			S
1-Bromo-4-Fluorobenzene (SURR)	93%		1			S

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

Customer: Marathon County Solid Waste Mgmnt Dept **NLS Project: 364445**
Project Description: Marathon County Area A Private Wells
Project Title: April 2021 **Template: APP3 Printed: 04/22/2021 08:13**

Sample: 1248819 PW17 Collected: 04/14/21 Analyzed: 04/19/21 - Analytes: 43

ANALYTE NAME	RESULT	UNITS	DIL	LOD	LOQ	Note
Benzene	ND	ug/L	1	0.25	0.84	
Bromodichloromethane	ND	ug/L	1	0.20	0.67	
Bromoform	ND	ug/L	1	0.27	0.91	
Bromomethane	ND	ug/L	1	0.87	2.9	
Carbon Tetrachloride	ND	ug/L	1	0.17	0.55	
Chlorobenzene	ND	ug/L	1	0.34	1.1	
Chloroethane	ND	ug/L	1	1.5	5.0	
Chloroform	ND	ug/L	1	0.24	0.81	
Chloromethane	ND	ug/L	1	0.81	2.7	
Dibromochloromethane	ND	ug/L	1	0.20	0.67	
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	
1,3-Dichlorobenzene	ND	ug/L	1	0.28	0.93	
1,4-Dichlorobenzene	ND	ug/L	1	0.30	0.99	
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	
1,1-Dichloroethene	ND	ug/L	1	0.19	0.63	
cis-1,2-Dichloroethene	ND	ug/L	1	0.20	0.66	
trans-1,2-Dichloroethene	ND	ug/L	1	0.19	0.64	
1,2-Dichloropropane	ND	ug/L	1	0.16	0.54	
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	
Methylene chloride	ND	ug/L	1	0.61	2.0	
Naphthalene	ND	ug/L	1	0.66	2.2	
Styrene	ND	ug/L	1	0.40	1.3	
ortho-Xylene	ND	ug/L	1	0.38	1.3	
Tetrachloroethene	ND	ug/L	1	0.34	1.1	
Toluene	ND	ug/L	1	0.29	0.98	
1,1,1-Trichloroethane	ND	ug/L	1	0.11	0.35	
1,1,2-Trichloroethane	ND	ug/L	1	0.16	0.52	
Trichloroethene	ND	ug/L	1	0.35	1.2	
Trichlorofluoromethane	ND	ug/L	1	0.22	0.75	
Vinyl chloride	ND	ug/L	1	0.14	0.47	
meta,para-Xylene	ND	ug/L	1	0.70	2.3	
MTBE	ND	ug/L	1	0.41	1.4	
Acetone	[22]	ug/L	1	13	44	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)	104%		1			S
Toluene-d8 (SURR)	96%		1			S
1-Bromo-4-Fluorobenzene (SURR)	90%		1			S

NOTES APPLICABLE TO THIS ANALYSIS:

J = Result enclosed in brackets is between LOD and LOQ, a region of less certain quantitation.
S = This compound is a surrogate used to evaluate the quality control of a method.

ANALYTICAL RESULTS: VOC's by P&T/GCMS - Water

Customer: Marathon County Solid Waste Mgmnt Dept **NLS Project: 364445**
Project Description: Marathon County Area A Private Wells
Project Title: April 2021 **Template: APP3** **Printed: 04/22/2021 08:13**

Sample: 1248820 PW64 Collected: 04/14/21 Analyzed: 04/19/21 - Analytes: 43

ANALYTE NAME	RESULT	UNITS	DIL	LOD	LOQ	Note
Benzene	ND	ug/L	1	0.25	0.84	
Bromodichloromethane	ND	ug/L	1	0.20	0.67	
Bromoform	ND	ug/L	1	0.27	0.91	
Bromomethane	ND	ug/L	1	0.87	2.9	
Carbon Tetrachloride	ND	ug/L	1	0.17	0.55	
Chlorobenzene	ND	ug/L	1	0.34	1.1	
Chloroethane	ND	ug/L	1	1.5	5.0	
Chloroform	ND	ug/L	1	0.24	0.81	
Chloromethane	ND	ug/L	1	0.81	2.7	
Dibromochloromethane	ND	ug/L	1	0.20	0.67	
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	
1,3-Dichlorobenzene	ND	ug/L	1	0.28	0.93	
1,4-Dichlorobenzene	ND	ug/L	1	0.30	0.99	
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	
1,1-Dichloroethene	ND	ug/L	1	0.19	0.63	
cis-1,2-Dichloroethene	ND	ug/L	1	0.20	0.66	
trans-1,2-Dichloroethene	ND	ug/L	1	0.19	0.64	
1,2-Dichloropropane	ND	ug/L	1	0.16	0.54	
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	
Methylene chloride	ND	ug/L	1	0.61	2.0	
Naphthalene	ND	ug/L	1	0.66	2.2	
Styrene	ND	ug/L	1	0.40	1.3	
ortho-Xylene	ND	ug/L	1	0.38	1.3	
Tetrachloroethene	ND	ug/L	1	0.34	1.1	
Toluene	ND	ug/L	1	0.29	0.98	
1,1,1-Trichloroethane	ND	ug/L	1	0.11	0.35	
1,1,2-Trichloroethane	ND	ug/L	1	0.16	0.52	
Trichloroethene	ND	ug/L	1	0.35	1.2	
Trichlorofluoromethane	ND	ug/L	1	0.22	0.75	
Vinyl chloride	ND	ug/L	1	0.14	0.47	
meta,para-Xylene	ND	ug/L	1	0.70	2.3	
MTBE	ND	ug/L	1	0.41	1.4	
Acetone	ND	ug/L	1	13	44	
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)	114%		1			S
1-Bromo-4-Fluorobenzene (SURR)	111%		1			S

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

Customer: Marathon County Solid Waste Mgmnt Dept **NLS Project: 364445**
Project Description: Marathon County Area A Private Wells
Project Title: April 2021 **Template: APP3 Printed: 04/22/2021 08:13**

Sample: 1248821 PW88 Collected: 04/14/21 Analyzed: 04/19/21 - Analytes: 43

ANALYTE NAME	RESULT	UNITS	DIL	LOD	LOQ	Note
Benzene	ND	ug/L	1	0.25	0.84	
Bromodichloromethane	ND	ug/L	1	0.20	0.67	
Bromoform	ND	ug/L	1	0.27	0.91	
Bromomethane	ND	ug/L	1	0.87	2.9	
Carbon Tetrachloride	ND	ug/L	1	0.17	0.55	
Chlorobenzene	ND	ug/L	1	0.34	1.1	
Chloroethane	ND	ug/L	1	1.5	5.0	
Chloroform	ND	ug/L	1	0.24	0.81	
Chloromethane	ND	ug/L	1	0.81	2.7	
Dibromochloromethane	ND	ug/L	1	0.20	0.67	
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	
1,3-Dichlorobenzene	ND	ug/L	1	0.28	0.93	
1,4-Dichlorobenzene	ND	ug/L	1	0.30	0.99	
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	
1,1-Dichloroethene	ND	ug/L	1	0.19	0.63	
cis-1,2-Dichloroethene	ND	ug/L	1	0.20	0.66	
trans-1,2-Dichloroethene	ND	ug/L	1	0.19	0.64	
1,2-Dichloropropane	ND	ug/L	1	0.16	0.54	
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	
Methylene chloride	ND	ug/L	1	0.61	2.0	
Naphthalene	ND	ug/L	1	0.66	2.2	
Styrene	ND	ug/L	1	0.40	1.3	
ortho-Xylene	ND	ug/L	1	0.38	1.3	
Tetrachloroethene	ND	ug/L	1	0.34	1.1	
Toluene	ND	ug/L	1	0.29	0.98	
1,1,1-Trichloroethane	ND	ug/L	1	0.11	0.35	
1,1,2-Trichloroethane	ND	ug/L	1	0.16	0.52	
Trichloroethene	ND	ug/L	1	0.35	1.2	
Trichlorofluoromethane	ND	ug/L	1	0.22	0.75	
Vinyl chloride	ND	ug/L	1	0.14	0.47	
meta,para-Xylene	ND	ug/L	1	0.70	2.3	
MTBE	ND	ug/L	1	0.41	1.4	
Acetone	ND	ug/L	1	13	44	
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)	114%		1			S
Toluene-d8 (SURR)	110%		1			S
1-Bromo-4-Fluorobenzene (SURR)	109%		1			S

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

Customer: Marathon County Solid Waste Mgmnt Dept NLS Project: 364445

Project Description: Marathon County Area A Private Wells

Project Title: April 2021 Template: APP3 Printed: 04/22/2021 08:13

Sample: 1248822 PW48 Collected: 04/14/21 Analyzed: 04/19/21 - Analytes: 43

ANALYTE NAME	RESULT	UNITS	DIL	LOD	LOQ	Note
Benzene	ND	ug/L	1	0.25	0.84	
Bromodichloromethane	ND	ug/L	1	0.20	0.67	
Bromoform	ND	ug/L	1	0.27	0.91	
Bromomethane	ND	ug/L	1	0.87	2.9	
Carbon Tetrachloride	ND	ug/L	1	0.17	0.55	
Chlorobenzene	ND	ug/L	1	0.34	1.1	
Chloroethane	ND	ug/L	1	1.5	5.0	
Chloroform	ND	ug/L	1	0.24	0.81	
Chloromethane	ND	ug/L	1	0.81	2.7	
Dibromochloromethane	ND	ug/L	1	0.20	0.67	
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	
1,3-Dichlorobenzene	ND	ug/L	1	0.28	0.93	
1,4-Dichlorobenzene	ND	ug/L	1	0.30	0.99	
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	
1,1-Dichloroethene	ND	ug/L	1	0.19	0.63	
cis-1,2-Dichloroethene	ND	ug/L	1	0.20	0.66	
trans-1,2-Dichloroethene	ND	ug/L	1	0.19	0.64	
1,2-Dichloropropane	ND	ug/L	1	0.16	0.54	
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	
Methylene chloride	ND	ug/L	1	0.61	2.0	
Naphthalene	ND	ug/L	1	0.66	2.2	
Styrene	ND	ug/L	1	0.40	1.3	
ortho-Xylene	ND	ug/L	1	0.38	1.3	
Tetrachloroethene	ND	ug/L	1	0.34	1.1	
Toluene	ND	ug/L	1	0.29	0.98	
1,1,1-Trichloroethane	ND	ug/L	1	0.11	0.35	
1,1,2-Trichloroethane	ND	ug/L	1	0.16	0.52	
Trichloroethene	ND	ug/L	1	0.35	1.2	
Trichlorofluoromethane	ND	ug/L	1	0.22	0.75	
Vinyl chloride	ND	ug/L	1	0.14	0.47	
meta,para-Xylene	ND	ug/L	1	0.70	2.3	
MTBE	ND	ug/L	1	0.41	1.4	
Acetone	ND	ug/L	1	13	44	
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)	128%		1			S
Toluene-d8 (SURR)	118%		1			S
1-Bromo-4-Fluorobenzene (SURR)	115%		1			S

NOTES APPLICABLE TO THIS ANALYSIS:

S = This compound is a surrogate used to evaluate the quality control of a method.

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

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

1A

NLS Lab #:	Point Name / Homeowner: PW25 Levandoski, Mike R221828 Duncan Road, Hatley	DNR ID #:	Time Purged:	Color:	Odor:	Turbidity (quant,text,color):
248814		353	5 min	ND	ND	ND

Date Sampled:	Time Sampled:	Sample Location:	Treated (Y/N)
4-14-21	0842	OUTSIDE FAUCET N. SIDE of HOUSE	N

Comments:

NEW. OWNER

Softener – no Collect from – outside faucet, north side of house

NLS Lab #:	Point Name / Homeowner: PW68 Andraschko, Anthony R221630 Duncan Road, Hatley	DNR ID #:	Time Purged:	Color:	Odor:	Turbidity (quant,text,color):
815		361	5min	ND	ND	ND

Date Sampled:	Time Sampled:	Sample Location:	Treated (Y/N)
4-14-21	0820	SEE BELOW	N

Comments:

PIONKE, DEREK (NEW OWNERS)
BASEMENT BY PRESSURE TANK

Softener – yes but not in use Collect from – kitchen sink or North outside faucet

NLS Lab #:	Point Name / Homeowner: PW18 Falkowski, Janet R221765 Duncan Road, Hatley	DNR ID #:	Time Purged:	Color:	Odor:	Turbidity (quant,text,color):
816		350	5 min	ND	ND	ND

Date Sampled:	Time Sampled:	Sample Location:	Treated (Y/N)
4-14-21	0830	BACK of HOUSE. OUTSIDE FAUCET	N

Comments:

WATER FROM FAUCET NEVER GOT COLD. STAYED WARM

Softener – no Collect from - kitchen sink or outside back faucet

NLS Lab #:	Point Name / Homeowner: PW19 Jozwiak-Popp, Rose R221561 Duncan Road, Hatley	DNR ID #:	Time Purged:	Color:	Odor:	Turbidity (quant,text,color):
817		351	5 min	ND	ND.	ND

Date Sampled:	Time Sampled:	Sample Location:	Treated (Y/N)
4-14-21	0755	FAUCET ACROSS DRIVEWAY	N

Comments:

Softerer – Yes. Collect from – outside faucet across driveway from house (not softened – should be on year round)

See reverse side for sample custody information

NLS Private Well Sampling Form and Chain Of Custody (pg 2 of 3)

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

2A

NLS Lab #:	Point Name / Homeowner:	DNR ID #:	Time Purged:	Color:	Odor:	Turbidity (quant,text,color):
818	PW24 Kluck, Mark R221950 Duncan Road, Hatley	352	5 MIN	ND	ND	ND

Date Sampled:	Time Sampled:	Sample Location:	Treated (Y/N)
4-14-21	0855	Front of House Faucet	N

Comments:

Softener – no Collect from – front outside faucet (4/21/10 – owner said front faucet now works and is closer to the well)

NLS Lab #:	Point Name / Homeowner:	DNR ID #:	Time Purged:	Color:	Odor:	Turbidity (quant,text,color):
819	PW17 Liebe, Neal R174825 Willow Lane, Hatley	028	5 min	ND.	ND	ND

Date Sampled:	Time Sampled:	Sample Location:	Treated (Y/N)
4-14-21	0935	Front of House outside Faucet	N

Comments:

Softener – no Collect from – East side of house near driveway

NLS Lab #:	Point Name / Homeowner:	DNR ID #:	Time Purged:	Color:	Odor:	Turbidity (quant,text,color):
820	PW64 Sheehan, Carol R221524 Duncan Road, Hatley	359	5 min	ND	ND	ND

Date Sampled:	Time Sampled:	Sample Location:	Treated (Y/N)
4-14-21	0810	Basement By Pressure Tank	N

Comments:

Softener – yes Collect from – faucet in basement before softener

NLS Lab #:	Point Name / Homeowner:	DNR ID #:	Time Purged:	Color:	Odor:	Turbidity (quant,text,color):
821	PW88 Zogata, Aaron R222036 Duncan Road, Hatley	365	5 MIN	ND	ND	ND

Date Sampled:	Time Sampled:	Sample Location:	Treated (Y/N)
4-14-21	0910	Front of House outside Faucet	N

Comments:

Softener – yes Collect from – outside faucet, front of house

See reverse side for sample custody information

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

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

3A

NLS Lab #:	Point Name / Homeowner: PW48 Marathon Co. Hwy Dept. R222005 Duncan Road, Hatley	DNR ID #:	Time Purged:	Color:	Odor:	Turbidity (quant,text,color):
822		356	5 min	ND	ND	ND

Date Sampled:	Time Sampled:	Sample Location:	Treated (Y/N)
4-14-21	0745	BATHROOM SINK	N

Comments:

THEY INSTALLED. NO TOUCH SINK I CYCLED (10 TIMES)

Softener – No. Collect from – bathroom/locker room sink

NLS Lab #:	Point Name / Homeowner:	DNR ID #:	Time Purged:	Color:	Odor:	Turbidity (quant,text,color):
NoSample	Trip Blank	999	N/A	N/A	N/A	N/A

Date Sampled:	Time Sampled:	Sample Location:	Treated (Y/N)
	N/A	N/A	N/A

Comments:

NLS Lab #:	Point Name / Homeowner:	DNR ID #:	Time Purged:	Color:	Odor:	Turbidity (quant,text,color):

Date Sampled:	Time Sampled:	Sample Location:	Treated (Y/N)

Comments:

NLS Lab #:	Point Name / Homeowner:	DNR ID #:	Time Purged:	Color:	Odor:	Turbidity (quant,text,color):

Date Sampled:	Time Sampled:	Sample Location:	Treated (Y/N)

Comments:

See reverse side for sample custody information

marathoncountysolidwaste.org
marathoncountysolidwaste

Marathon County Solid Waste Department
172900 E. Hwy 29
Ringle, WI 54471

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

December 20, 2021

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 2021. 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
  Wisconsin Department of Natural Resources
  P.O. Box 7921
  Madison, WI 53707 - 7921

Monitoring Data Submittal Information

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

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

Name: Chris Geske Phone: 715-478-2777
E-mail: lims@nlslab.com

Facility Name	License No. / Monitoring ID	Facility ID [FID]	Actual sampling dates (e.g., July 2-6, 2003
Marathon County Area A Private Wells	02892		OCTOBER -27-2021

The enclosed results are for sampling required in the month(s) of: (e.g., June 2003)
OCTOBER -2021

Type of Data Submitted (Check all that apply)

- ☐ Groundwater monitoring data from monitoring wells
- ☒ Groundwater monitoring data from private water supply wells
- ☐ Leachate monitoring data
- ☐ Gas monitoring data
- ☐ Air monitoring data
- ☐ Other (specify) _____

Notification attached?

- ☒ No. No groundwater standards or explosive gas limits were exceeded.
- ☐ Yes, a notification of values exceeding a groundwater standard is attached. It includes a list of monitoring points, dates, sample values, groundwater standard and preliminary analysis of the cause and significance of any concentration.
- ☐ Yes, a notification of values exceeding an explosive gas limit is attached. It includes the monitoring points, dates, sample values and explosive gas limits.

Certification

To the best of my knowledge, the information reported and statements made on this data submittal and attachements are true and correct. Furthermore, I have attached complete notification of any sampling values meeting or exceeding groundwater standards or explosive gas levels, and a preliminary analysis of the cause and significant of concentrations exceeding groundwater standards.

David Hagenbucher	Manager	715 55 15864
Facility Representative Name (Print)	Title	(Area Code) Telephone No.
David Hagenbucher	12/31/21	
Signature	Date	

FOR DNR USE ONLY: Check action taken, and record date and your initials. Describe on back side if necessary.
☐ Found uploading problems on _____ Initials _____
☐ Notified contact of problems on _____ Uploaded data successfully on _____
EDD format(s): ☐ Diskette ☒ CD (initial submittal and follow-up) ☐ E-mail (follow-up only) ☐ Other _____

Marathon County Solid Waste Mgmnt Dept
Marathon County Area A Private Wells
10-01-2021

Lab ID: 721026460
NLS Project: 375696
Collected: 10-01-2021
License: 02892
FID:

EXCEEDANCES:

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

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

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

Monitoring Data Submittal Information

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

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

Name: Chris Geske Phone: 715-478-2777
E-mail: lims@nlslab.com

Facility Name	License No. / Monitoring ID	Facility ID [FID]	Actual sampling dates (e.g., July 2-6, 2003
Marathon County BRRDF Private Wells	04228	337005680	OCTOBER -27-2021

The enclosed results are for sampling required in the month(s) of: (e.g., June 2003)
OCTOBER -2021

Type of Data Submitted (Check all that apply)

- ☐ Groundwater monitoring data from monitoring wells
- ☒ Groundwater monitoring data from private water supply wells
- ☐ Leachate monitoring data
- ☐ Gas monitoring data
- ☐ Air monitoring data
- ☐ Other (specify) _____

Notification attached?

- ☒ No. No groundwater standards or explosive gas limits were exceeded.
- ☐ Yes, a notification of values exceeding a groundwater standard is attached. It includes a list of monitoring points, dates, sample values, groundwater standard and preliminary analysis of the cause and significance of any concentration.
- ☐ Yes, a notification of values exceeding an explosive gas limit is attached. It includes the monitoring points, dates, sample values and explosive gas limits.

Certification

To the best of my knowledge, the information reported and statements made on this data submittal and attachements are true and correct. Furthermore, I have attached complete notification of any sampling values meeting or exceeding groundwater standards or explosive gas levels, and a preliminary analysis of the cause and significant of concentrations exceeding groundwater standards.

David Hagenbucher	Manager	715-551-5864
Facility Representative Name (Print)	Title	(Area Code) Telephone No.
David Hagenbuch	12/31/21	
Signature	Date	

FOR DNR USE ONLY. Check action taken, and record date and your initials. Describe on back side if necessary.
☐ Found uploading problems on _____ Initials _____
☐ Notified contact of problems on _____ Uploaded data successfully on _____
EDD format(s): ☐ Diskette ☐ CD (initial submittal and follow-up) ☐ E-mail (follow-up only) Other _____

Marathon County Solid Waste Mgmnt Dept
Marathon County BRRDF Private Wells (semi-annual)
10-01-2021

Lab ID: 721026460
NLS Project: 375695
Collected: 10-01-2021
License: 04228
FID: 337005680

EXCEEDANCES:

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

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 REPORT

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

NLS Project: 375696
NLS Customer: 20080

Fax: 715 446 2906 Phone: 715 446 3339

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 October 2021

For Terms and Conditions please see www.nlslab.com

PW48 NLS ID: 1286312
Matrix: GW
Collected: 10/27/21 11:15 Received: 10/27/21

Parameter	Result	Units	Dilution	LOD	LOQ/MCL	Analyzed	Method	Lab
Field color	none detected					10/27/21	NA	721026460
Field odor	none detected					10/27/21	NA	721026460
Field turbidity	none detected					10/27/21	NA	721026460
VOCs (water) by GC/MS	see attached					11/04/21	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.

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DWB = Dry Weight Basis %DWB = (mg/kg DWB) / 10000 1000 ug/L = 1 mg/L
MCL = Maximum Contaminant Levels for Drinking Water Samples. Shaded results indicate >MCL.

Reviewed by:

Authorized by:
R. T. Krueger
President

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ANALYTICAL REPORT

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

NLS Project: 375696
NLS Customer: 20080

Fax: 715 446 2906 Phone: 715 446 3339

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 October 2021

PWSS NLS ID: 1286313
Matrix: GW
Collected: 10/27/21 08:36 Received: 10/27/21

Parameter	Result	Units	Dilution	LOD	LOQ/MCL	Analyzed	Method	Lab
Field color	none detected					10/27/21	NA	721026460
Field odor	none detected					10/27/21	NA	721026460
Field turbidity	none detected					10/27/21	NA	721026460
VOCs (water) by GC/MS	see attached					11/04/21	SW846 8260C	721026460

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Reviewed by:

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R. T. Krueger
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EPA Laboratory ID No. WI00034

NLS Project: 375696
NLS Customer: 20080

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

Fax: 715 446 2906 Phone: 715 446 3339

Project: Marathon County Area A Private Wells October 2021

PW24 NLS ID: 1286314
Matrix: GW
Collected: 10/27/21 08:45 Received: 10/27/21

Parameter	Result	Units	Dilution	LOD	LOQ/MCL	Analyzed	Method	Lab
Field color	none detected					10/27/21	NA	721026460
Field odor	none detected					10/27/21	NA	721026460
Field turbidity	none detected					10/27/21	NA	721026460
VOCs (water) by GC/MS	see attached					11/04/21	SW846 8260C	721026460

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Reviewed by:

Authorized by:
R. T. Krueger
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WDNR Laboratory ID No. 721026460
WDATCP Laboratory Certification No. 105-330
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NLS Project: 375696
NLS Customer: 20080

Fax: 715 446 2906 Phone: 715 446 3339

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 October 2021

PW25 NLS ID: 1286315
Matrix: GW
Collected: 10/27/21 08:55 Received: 10/27/21

Parameter	Result	Units	Dilution	LOD	LOQ/MCL	Analyzed	Method	Lab
Field color	none detected					10/27/21	NA	721026460
Field odor	none detected					10/27/21	NA	721026460
Field turbidity	none detected					10/27/21	NA	721026460
VOCs (water) by GC/MS	see attached					11/04/21	SW846 8260C	721026460

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EPA Laboratory ID No. WI00034

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

NLS Project: 375696
NLS Customer: 20080
Fax: 715 446 2906 Phone: 715 446 3339

Project: Marathon County Area A Private Wells October 2021

PW18 NLS ID: 1286316
Matrix: GW
Collected: 10/27/21 09:12 Received: 10/27/21

Parameter	Result	Units	Dilution	LOD	LOQ/MCL	Analyzed	Method	Lab
Field color	none detected					10/27/21	NA	721026460
Field odor	none detected					10/27/21	NA	721026460
Field turbidity	none detected					10/27/21	NA	721026460
VOCs (water) by GC/MS	see attached					11/04/21	SW846 8260C	721026460

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Reviewed by:

Authorized by:
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President

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NLS Project: 375696
NLS Customer: 20080

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

Fax: 715 446 2906 Phone: 715 446 3339

Project: Marathon County Area A Private Wells October 2021

PW68 NLS ID: 1286317
Matrix: GW
Collected: 10/27/21 08:25 Received: 10/27/21

Parameter	Result	Units	Dilution	LOD	LOQ/MCL	Analyzed	Method	Lab
Field color	none detected					10/27/21	NA	721026460
Field odor	none detected					10/27/21	NA	721026460
Field turbidity	none detected					10/27/21	NA	721026460
VOCs (water) by GC/MS	see attached					11/04/21	SW846 8260C	721026460

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Reviewed by:

Authorized by:
R. T. Krueger
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NLS Project: 375696
NLS Customer: 20080

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

Fax: 715 446 2906 Phone: 715 446 3339

Project: Marathon County Area A Private Wells October 2021

PW19 NLS ID: 1286318
Matrix: GW
Collected: 10/27/21 07:35 Received: 10/27/21

Parameter	Result	Units	Dilution	LOD	LOQ/MCL	Analyzed	Method	Lab
Field color	none detected					10/27/21	NA	721026460
Field odor	none detected					10/27/21	NA	721026460
Field turbidity	none detected					10/27/21	NA	721026460
VOCs (water) by GC/MS	see attached					11/04/21	SW846 8260C	721026460

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Reviewed by:

Authorized by:
R. T. Krueger
President

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ANALYTICAL REPORT

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

NLS Project: 375696
NLS Customer: 20080

Fax: 715 446 2906 Phone: 715 446 3339

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 October 2021

PW64 NLS ID: 1286319
Matrix: GW
Collected: 10/27/21 08:10 Received: 10/27/21

Parameter	Result	Units	Dilution	LOD	LOQ/MCL	Analyzed	Method	Lab
Field color	none detected					10/27/21	NA	721026460
Field odor	none detected					10/27/21	NA	721026460
Field turbidity	none detected					10/27/21	NA	721026460
VOCs (water) by GC/MS	see attached					11/04/21	SW846 8260C	721026460

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Reviewed by:

Authorized by:
R. T. Krueger
President

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ANALYTICAL REPORT

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

NLS Project: 375696
NLS Customer: 20080

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

Fax: 715 446 2906 Phone: 715 446 3339

Project: Marathon County Area A Private Wells October 2021

PW27 NLS ID: 1286320
Matrix: GW
Collected: 10/27/21 10:42 Received: 10/27/21

Parameter	Result	Units	Dilution	LOD	LOQ/MCL	Analyzed	Method	Lab
Field color	none detected					10/27/21	NA	721026460
Field odor	none detected					10/27/21	NA	721026460
Field turbidity	none detected					10/27/21	NA	721026460
VOCs (water) by GC/MS	see attached					11/04/21	SW846 8260C	721026460

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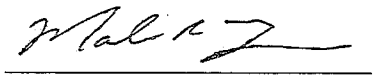
Reviewed by: 

Authorized by:
R. T. Krueger
President

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

NLS Project: 375696
NLS Customer: 20080

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

Fax: 715 446 2906 Phone: 715 446 3339

Project: Marathon County Area A Private Wells October 2021

PW65 NLS ID: 1286321
Matrix: GW
Collected: 10/27/21 10:35 Received: 10/27/21

Parameter	Result	Units	Dilution	LOD	LOQ/MCL	Analyzed	Method	Lab
Field color	none detected					10/27/21	NA	721026460
Field odor	none detected					10/27/21	NA	721026460
Field turbidity	none detected					10/27/21	NA	721026460
VOCs (water) by GC/MS	see attached					11/04/21	SW846 8260C	721026460

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Reviewed by:

Authorized by:
R. T. Krueger
President

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ANALYTICAL REPORT

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

NLS Project: 375696
NLS Customer: 20080

Fax: 715 446 2906 Phone: 715 446 3339

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 October 2021

PW100 NLS ID: 1286322
Matrix: GW
Collected: 10/27/21 10:28 Received: 10/27/21

Parameter	Result	Units	Dilution	LOD	LOQ/MCL	Analyzed	Method	Lab
Field color	none detected					10/27/21	NA	721026460
Field odor	none detected					10/27/21	NA	721026460
Field turbidity	none detected					10/27/21	NA	721026460
VOCs (water) by GC/MS	see attached					11/04/21	SW846 8260C	721026460

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Authorized by:
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NLS Project: 375696
NLS Customer: 20080

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

Fax: 715 446 2906 Phone: 715 446 3339

Project: Marathon County Area A Private Wells October 2021

PW80 NLS ID: 1286323
Matrix: GW
Collected: 10/27/21 10:10 Received: 10/27/21

Parameter	Result	Units	Dilution	LOD	LOQ/MCL	Analyzed	Method	Lab
Field color	none detected					10/27/21	NA	721026460
Field odor	none detected					10/27/21	NA	721026460
Field turbidity	none detected					10/27/21	NA	721026460
VOCs (water) by GC/MS	see attached					11/04/21	SW846 8260C	721026460

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Reviewed by:

Authorized by:
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NLS Project: 375696
NLS Customer: 20080

Fax: 715 446 2906 Phone: 715 446 3339

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 October 2021

PW53 NLS ID: 1286324
Matrix: GW
Collected: 10/27/21 10:20 Received: 10/27/21

Parameter	Result	Units	Dilution	LOD	LOQ/MCL	Analyzed	Method	Lab
Field color	none detected					10/27/21	NA	721026460
Field odor	none detected					10/27/21	NA	721026460
Field turbidity	none detected					10/27/21	NA	721026460
VOCs (water) by GC/MS	see attached					11/04/21	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) LOD = Limit of Detection LOQ = Limit of Quantitation NA = Not Applicable
DWB = Dry Weight Basis %DWB = (mg/kg DWB) / 10000 1000 ug/L = 1 mg/L
MCL = Maximum Contaminant Levels for Drinking Water Samples. Shaded results indicate >MCL.

Reviewed by:

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

ANALYTICAL REPORT

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

NLS Project: 375696
NLS Customer: 20080

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

Fax: 715 446 2906 Phone: 715 446 3339

Project: Marathon County Area A Private Wells October 2021

PW29 NLS ID: 1286325
Matrix: GW
Collected: 10/27/21 10:04 Received: 10/27/21

Parameter	Result	Units	Dilution	LOD	LOQ/MCL	Analyzed	Method	Lab
Field color	none detected					10/27/21	NA	721026460
Field odor	none detected					10/27/21	NA	721026460
Field turbidity	none detected					10/27/21	NA	721026460
VOCs (water) by GC/MS	see attached					11/04/21	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) LOD = Limit of Detection LOQ = Limit of Quantitation NA = Not Applicable
DWB = Dry Weight Basis %DWB = (mg/kg DWB) / 10000 1000 ug/L = 1 mg/L
MCL = Maximum Contaminant Levels for Drinking Water Samples. Shaded results indicate >MCL.

Reviewed by:

Authorized by:
R. T. Krueger
President

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Analytical Laboratory and Environmental Services
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ANALYTICAL REPORT

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

NLS Project: 375696
NLS Customer: 20080

Fax: 715 446 2906 Phone: 715 446 3339

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 October 2021

PW54 NLS ID: 1286326
Matrix: GW
Collected: 10/27/21 09:50 Received: 10/27/21

Parameter	Result	Units	Dilution	LOD	LOQ/MCL	Analyzed	Method	Lab
Field color	none detected					10/27/21	NA	721026460
Field odor	none detected					10/27/21	NA	721026460
Field turbidity	none detected					10/27/21	NA	721026460
VOCs (water) by GC/MS	see attached					11/08/21	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) LOD = Limit of Detection LOQ = Limit of Quantitation NA = Not Applicable
DWB = Dry Weight Basis %DWB = (mg/kg DWB) / 10000 1000 ug/L = 1 mg/L
MCL = Maximum Contaminant Levels for Drinking Water Samples. Shaded results indicate >MCL.

Reviewed by:

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

ANALYTICAL REPORT

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

NLS Project: 375696
NLS Customer: 20080

Fax: 715 446 2906 Phone: 715 446 3339

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 October 2021

PW17 NLS ID: 1286327
Matrix: GW
Collected: 10/27/21 07:55 Received: 10/27/21

Parameter	Result	Units	Dilution	LOD	LOQ/MCL	Analyzed	Method	Lab
Field color	none detected					10/27/21	NA	721026460
Field odor	none detected					10/27/21	NA	721026460
Field turbidity	none detected					10/27/21	NA	721026460
VOCs (water) by GC/MS	see attached					11/08/21	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) LOD = Limit of Detection LOQ = Limit of Quantitation NA = Not Applicable
DWB = Dry Weight Basis %DWB = (mg/kg DWB) / 10000 1000 ug/L = 1 mg/L
MCL = Maximum Contaminant Levels for Drinking Water Samples. Shaded results indicate >MCL.

Reviewed by:

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

ANALYTICAL REPORT

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

NLS Project: 375696
NLS Customer: 20080

Fax: 715 446 2906 Phone: 715 446 3339

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 October 2021

Trip Blank NLS ID: 1286328

Matrix: TB
Collected: 10/27/21 00:00 Received: 10/27/21

Parameter	Result	Units	Dilution	LOD	LOQ/MCL	Analyzed	Method	Lab
VOCs (water) by GC/MS	see attached					11/08/21	NA	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 dilution and/or solids content.

ND = Not Detected (< LOD) LOD = Limit of Detection LOQ = Limit of Quantitation NA = Not Applicable
DWB = Dry Weight Basis %DWB = (mg/kg DWB) / 10000 1000 ug/L = 1 mg/L
MCL = Maximum Contaminant Levels for Drinking Water Samples. Shaded results indicate >MCL.

Reviewed by:

Authorized by:
R. T. Krueger
President

For Terms and Conditions please see www.nlslab.com

ANALYTICAL RESULTS: VOC's by P&T/GCMS - Water

Customer: Marathon County Solid Waste Mgmnt Dept NLS Project: 375696

Project Description: Marathon County Area A Private Wells

Project Title: October 2021 Template: APP3 Printed: 11/23/2021 06:58

Sample: 1286312 PW48 Collected: 10/27/21 Analyzed: 11/04/21 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		
1,1-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	0.16	0.52	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	[19]	ug/L	1	13	44		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)	104%		1				S
1-Bromo-4-Fluorobenzene (SURR)	98%		1				S

NOTES APPLICABLE TO THIS ANALYSIS:

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

S = This compound is a surrogate used to evaluate the quality control of a method.

ANALYTICAL RESULTS: VOC's by P&T/GCMS - Water
Customer: Marathon County Solid Waste Mgmnt Dept NLS Project: 375696
Project Description: Marathon County Area A Private Wells
Project Title: October 2021 Template: APP3 Printed: 11/23/2021 06:58

Sample: 1286313 PW88 Collected: 10/27/21 Analyzed: 11/04/21 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		
1,1-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	0.16	0.52	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	[35]	ug/L	1	13	44		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)	125%		1				S
Toluene-d8 (SURR)	110%		1				S
1-Bromo-4-Fluorobenzene (SURR)	105%		1				S

NOTES APPLICABLE TO THIS ANALYSIS:
J = Result enclosed in brackets is between LOD and LOQ, a region of less certain quantitation.
S = This compound is a surrogate used to evaluate the quality control of a method.

ANALYTICAL RESULTS: VOC's by P&T/GCMS - Water
Customer: Marathon County Solid Waste Mgmnt Dept NLS Project: 375696
Project Description: Marathon County Area A Private Wells
Project Title: October 2021 Template: APP3 Printed: 11/23/2021 06:58

Sample: 1286314 PW24 Collected: 10/27/21 Analyzed: 11/04/21 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	MD
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		
1,1-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	MSH
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		MD
Tetrachloroethene	ND	ug/L	1	0.34	1.1	5	MD
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	0.16	0.52	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	13	44		
Carbon Disulfide	ND	ug/L	1	0.17	0.57		MSH
Methyl Ethyl Ketone	ND	ug/L	1	2.7	9.0		
Tetrahydrofuran	ND	ug/L	1	1.7	5.5		
Dibromofluoromethane (SURR)	98%		1				S
Toluene-d8 (SURR)	99%		1				S
1-Bromo-4-Fluorobenzene (SURR)	94%		1				S

NOTES APPLICABLE TO THIS ANALYSIS:
S = This compound is a surrogate used to evaluate the quality control of a method.
MSH = Matrix spike recovered above QC limits.
MD = Matrix spike and matrix spike duplicate relative percent difference exceeded QC limits.

ANALYTICAL RESULTS: VOC's by P&T/GCMS - Water
Customer: Marathon County Solid Waste Mgmnt Dept NLS Project: 375696
Project Description: Marathon County Area A Private Wells
Project Title: October 2021 Template: APP3 Printed: 11/23/2021 06:58

Sample: 1286315 PW25 Collected: 10/27/21 Analyzed: 11/04/21 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		
1,1-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	0.16	0.52	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	13	44		
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)	98%		1				S
Toluene-d8 (SURR)	98%		1				S
1-Bromo-4-Fluorobenzene (SURR)	89%		1				S

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
Customer: Marathon County Solid Waste Mgmnt Dept NLS Project: 375696
Project Description: Marathon County Area A Private Wells
Project Title: October 2021 Template: APP3 Printed: 11/23/2021 06:58

Sample: 1286316 PW18 Collected: 10/27/21 Analyzed: 11/04/21 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		
1,1-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	0.16	0.52	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	13	44		
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)	100%		1				S
Toluene-d8 (SURR)	100%		1				S
1-Bromo-4-Fluorobenzene (SURR)	90%		1				S

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
Customer: Marathon County Solid Waste Mgmnt Dept NLS Project: 375696
Project Description: Marathon County Area A Private Wells
Project Title: October 2021 Template: APP3 Printed: 11/23/2021 06:58

Sample: 1286317 PW68 Collected: 10/27/21 Analyzed: 11/04/21 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		
1,1-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	0.16	0.52	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	13	44		
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)	99%		1				S
Toluene-d8 (SURR)	102%		1				S
1-Bromo-4-Fluorobenzene (SURR)	94%		1				S

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
Customer: Marathon County Solid Waste Mgmnt Dept NLS Project: 375696
Project Description: Marathon County Area A Private Wells
Project Title: October 2021 Template: APP3 Printed: 11/23/2021 06:58

Sample: 1286318 PW19 Collected: 10/27/21 Analyzed: 11/04/21 - 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		
1,1-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	0.16	0.52	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	13	44		
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)	98%		1				S
Toluene-d8 (SURR)	95%		1				S
1-Bromo-4-Fluorobenzene (SURR)	93%		1				S

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
Customer: Marathon County Solid Waste Mgmnt Dept NLS Project: 375696
Project Description: Marathon County Area A Private Wells
Project Title: October 2021 Template: APP3 Printed: 11/23/2021 06:58

Sample: 1286319 PW64 Collected: 10/27/21 Analyzed: 11/04/21 - 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		
1,1-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	0.16	0.52	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	13	44		
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)	99%		1				S
Toluene-d8 (SURR)	96%		1				S
1-Bromo-4-Fluorobenzene (SURR)	93%		1				S

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
Customer: Marathon County Solid Waste Mgmnt Dept NLS Project: 375696
Project Description: Marathon County Area A Private Wells
Project Title: October 2021 Template: APP3 Printed: 11/23/2021 06:58

Sample: 1286320 PW27 Collected: 10/27/21 Analyzed: 11/04/21 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		
1,1-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	0.16	0.52	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	13	44		
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)	101%		1				S
Toluene-d8 (SURR)	100%		1				S
1-Bromo-4-Fluorobenzene (SURR)	92%		1				S

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
Customer: Marathon County Solid Waste Mgmnt Dept NLS Project: 375696
Project Description: Marathon County Area A Private Wells
Project Title: October 2021 Template: APP3 Printed: 11/23/2021 06:58

Sample: 1286321 PW65 Collected: 10/27/21 Analyzed: 11/04/21 - 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		
1,1-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	0.16	0.52	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	13	44		
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)	95%		1				S
Toluene-d8 (SURR)	100%		1				S
1-Bromo-4-Fluorobenzene (SURR)	96%		1				S

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
Customer: Marathon County Solid Waste Mgmnt Dept NLS Project: 375696
Project Description: Marathon County Area A Private Wells
Project Title: October 2021 Template: APP3 Printed: 11/23/2021 06:58

Sample: 1286322 PW100 Collected: 10/27/21 Analyzed: 11/04/21 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		
1,1-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	0.16	0.52	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	[16]	ug/L	1	13	44		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)	97%		1				S
Toluene-d8 (SURR)	100%		1				S
1-Bromo-4-Fluorobenzene (SURR)	100%		1				S

NOTES APPLICABLE TO THIS ANALYSIS:
J = Result enclosed in brackets is between LOD and LOQ, a region of less certain quantitation.
S = This compound is a surrogate used to evaluate the quality control of a method.

ANALYTICAL RESULTS: VOC's by P&T/GCMS - Water
Customer: Marathon County Solid Waste Mgmnt Dept NLS Project: 375696
Project Description: Marathon County Area A Private Wells
Project Title: October 2021 Template: APP3 Printed: 11/23/2021 06:58

Sample: 1286323 PW80 Collected: 10/27/21 Analyzed: 11/04/21 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		
1,1-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	0.16	0.52	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	50	ug/L	1	13	44		
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)	95%		1				S
Toluene-d8 (SURR)	110%		1				S
1-Bromo-4-Fluorobenzene (SURR)	86%		1				S

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
Customer: Marathon County Solid Waste Mgmnt Dept NLS Project: 375696
Project Description: Marathon County Area A Private Wells
Project Title: October 2021 Template: APP3 Printed: 11/23/2021 06:58

Sample: 1286324 PW53 Collected: 10/27/21 Analyzed: 11/04/21 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		
1,1-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	0.16	0.52	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	[41]	ug/L	1	13	44		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)	114%		1				S
Toluene-d8 (SURR)	109%		1				S
1-Bromo-4-Fluorobenzene (SURR)	90%		1				S

NOTES APPLICABLE TO THIS ANALYSIS:
J = Result enclosed in brackets is between LOD and LOQ, a region of less certain quantitation.
S = This compound is a surrogate used to evaluate the quality control of a method.

ANALYTICAL RESULTS: VOC's by P&T/GCMS - Water
Customer: Marathon County Solid Waste Mgmnt Dept NLS Project: 375696
Project Description: Marathon County Area A Private Wells
Project Title: October 2021 Template: APP3 Printed: 11/23/2021 06:58

Sample: 1286325 PW29 Collected: 10/27/21 Analyzed: 11/04/21 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		
1,1-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	0.16	0.52	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	[24]	ug/L	1	13	44		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)	114%		1				S
Toluene-d8 (SURR)	119%		1				S
1-Bromo-4-Fluorobenzene (SURR)	100%		1				S

NOTES APPLICABLE TO THIS ANALYSIS:
J = Result enclosed in brackets is between LOD and LOQ, a region of less certain quantitation.
S = This compound is a surrogate used to evaluate the quality control of a method.

ANALYTICAL RESULTS: VOC's by P&T/GCMS - Water
Customer: Marathon County Solid Waste Mgmnt Dept NLS Project: 375696
Project Description: Marathon County Area A Private Wells
Project Title: October 2021 Template: APP3 Printed: 11/23/2021 06:58

Sample: 1286326 PW54 Collected: 10/27/21 Analyzed: 11/08/21 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		
1,1-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	0.16	0.52	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	13	44		
Carbon Disulfide	ND	ug/L	1	0.17	0.57		MD
Methyl Ethyl Ketone	ND	ug/L	1	2.7	9.0		
Tetrahydrofuran	ND	ug/L	1	1.7	5.5		
Dibromofluoromethane (SURR)	94%		1				S
Toluene-d8 (SURR)	107%		1				S
1-Bromo-4-Fluorobenzene (SURR)	98%		1				S

NOTES APPLICABLE TO THIS ANALYSIS:
S = This compound is a surrogate used to evaluate the quality control of a method.
MD = Matrix spike and matrix spike duplicate relative percent difference exceeded QC limits.

ANALYTICAL RESULTS: VOC's by P&T/GCMS - Water
Customer: Marathon County Solid Waste Mgmnt Dept NLS Project: 375696
Project Description: Marathon County Area A Private Wells
Project Title: October 2021 Template: APP3 Printed: 11/23/2021 06:58

Sample: 1286327 PW17 Collected: 10/27/21 Analyzed: 11/08/21 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		
1,1-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	0.16	0.52	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	[30]	ug/L	1	13	44		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)	101%		1				S
Toluene-d8 (SURR)	111%		1				S
1-Bromo-4-Fluorobenzene (SURR)	108%		1				S

NOTES APPLICABLE TO THIS ANALYSIS:
J = Result enclosed in brackets is between LOD and LOQ, a region of less certain quantitation.
S = This compound is a surrogate used to evaluate the quality control of a method.

ANALYTICAL RESULTS: VOC's by P&T/GCMS - Water
Customer: Marathon County Solid Waste Mgmnt Dept NLS Project: 375696
Project Description: Marathon County Area A Private Wells
Project Title: October 2021 Template: APP3 Printed: 11/23/2021 06:58

Sample: 1286328 Trip Blank Collected: 10/27/21 Analyzed: 11/08/21 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		
1,1-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	0.16	0.52	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	13	44		
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)	114%		1				S
Toluene-d8 (SURR)	100%		1				S
1-Bromo-4-Fluorobenzene (SURR)	98%		1				S

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

NLS Private Well Sampling Form and Chain Of Custody

SITE: Marathon Co. Solid Waste Management Dept. / Area A – Private Wells (page 1 of 5)

1A

NLS Lab #:	Point Name / Homeowner:	DNR ID #:	Time Purged:	Color:	Odor:	Turbidity (quant,text,color):
128632	PW48 Marathon Co. Highway Dept. 222005 Duncan Road, Hayley	356	5 min	ND	ND	ND

Date Sampled:	Time Sampled:	Sample Location:	Treated (Y/N):
10-27-21	1115	Bathroom Sink	N

Comments:
0730
0756
0830

Softener – no Collect from – bathroom/locker room sink

NLS Lab #:	Point Name / Homeowner:	DNR ID #:	Time Purged:	Color:	Odor:	Turbidity (quant,text,color):
313	PW88 Christensen Troy R222036 Duncan Road, Hatley	365	5 min	ND	ND	ND

Date Sampled:	Time Sampled:	Sample Location:	Treated (Y/N):
10-27-21	0836	Front of House	N

Comments:

Softener – yes Collect from – outside faucet, front of house

NLS Lab #:	Point Name / Homeowner:	DNR ID #:	Time Purged:	Color:	Odor:	Turbidity (quant,text,color):
314	PW24 Kluck, Mark R221950 Duncan Road, Hatley	352	5 min	ND	ND	ND

Date Sampled:	Time Sampled:	Sample Location:	Treated (Y/N):
10-27-21	0845	Front of House	N

Comments:

Softener – no Collect from – front outside faucet (4/21/10 – owner said front faucet now works and is closer to the well)

NLS Lab #:	Point Name / Homeowner:	DNR ID #:	Time Purged:	Color:	Odor:	Turbidity (quant,text,color):
315	PW25 Levandoski, Mike R221828 Duncan Road, Hatley	353	5 min	ND	ND	ND

Date Sampled:	Time Sampled:	Sample Location:	Treated (Y/N):
10-27-21	0855	Back of House	N

Comments:

Softener – no Collect from – outside faucet, north side of house

See reverse side for sample custody information

NLS Private Well Sampling Form and Chain Of Custody

SITE: Marathon Co. Solid Waste Management Dept. / Area A – Private Wells (page 2 of 5)

2A

NLS Lab #:	Point Name / Homeowner: PW18	DNR ID #:	Time Purged:	Color:	Odor:	Turbidity (quant,text,color):
316	Falkowski, Janet R221765 Duncan Road, Hatley	350	5 MIN	ND	ND	ND

Date Sampled:	Time Sampled:	Sample Location:	Treated (Y/N):
10-27-21	0912	BACK of HOUSE	~~YES~~ N

Comments:

Softener – no Collect from - kitchen sink or outside back faucet

NLS Lab #:	Point Name / Homeowner: PW68	DNR ID #:	Time Purged:	Color:	Odor:	Turbidity (quant,text,color):
317	Pionke, Derek R221630 Duncan Road, Hatley	361	5min	ND	ND	ND

Date Sampled:	Time Sampled:	Sample Location:	Treated (Y/N):
10-27-21	0825	BASEMENT.	No

Comments:

Softener – yes but not in use Collect from – kitchen sink or North outside faucet

NLS Lab #:	Point Name / Homeowner: PW19	DNR ID #:	Time Purged:	Color:	Odor:	Turbidity (quant,text,color):
318	Jozwiak-Popp, Rose R221561 Duncan Road, Hatley	351	5min	ND	ND	ND

Date Sampled:	Time Sampled:	Sample Location:	Treated (Y/N):
10.27.21	0735	OUTSIDE FAUCET ACCROS DRIVEWAY	N

Comments:

Softerer – Yes. Collect from – outside faucet across driveway from house (not softened – should be on year round

NLS Lab #:	Point Name / Homeowner: PW64	DNR ID #:	Time Purged:	Color:	Odor:	Turbidity (quant,text,color):
319	Sheehan, Carol R221524 Duncan Road, Hatley	359	5min	ND	ND	ND

Date Sampled:	Time Sampled:	Sample Location:	Treated (Y/N):
10	0810	BASEMENT.	N

Comments:

Softener – yes Collect from – faucet in basement before softener

Rev 10/18

See reverse side for sample custody information

NLS Private Well Sampling Form and Chain Of Custody

SITE: Marathon Co. Solid Waste Management Dept. / Area A – Private Wells (page 3 of 5)

3A

NLS Lab #:	Point Name / Homeowner:	DNR ID #:	Time Purged:	Color:	Odor:	Turbidity (quant,text,color):
320	PW27 Fraaza, Ivan R222050 Silk Road, Ringle	354	5 MIN	ND	ND	ND

Date Sampled:	Time Sampled:	Sample Location:	Treated (Y/N):
10-27-21	1042	SO SIDE of House FAUCET	N

Comments:

Softener – no Collect from – outside faucet, south side of house

NLS Lab #:	Point Name / Homeowner:	DNR ID #:	Time Purged:	Color:	Odor:	Turbidity (quant,text,color):
321	PW65 Finlan, Andy R221978 Silk Road, Ringle	360	5 MIN	ND	ND	ND

Date Sampled:	Time Sampled:	Sample Location:	Treated (Y/N):
10-27-21	1035	FAUCET Front of House	N

Comments:

Softener – no Collect from – outside front faucet

NLS Lab #:	Point Name / Homeowner:	DNR ID #:	Time Purged:	Color:	Odor:	Turbidity (quant,text,color):
322	PW100 Fraaza, Brandon R221915 & R221917 Silk Road, Ringle	366	5 MIN	ND	ND	ND

Date Sampled:	Time Sampled:	Sample Location:	Treated (Y/N):
10-27-21	1028	BACK of Duplex	N

Comments:

Softener – No Collect from – outside faucet, back west side of apartments (1 well shared by both apartments in duplex)

NLS Lab #:	Point Name / Homeowner:	DNR ID #:	Time Purged:	Color:	Odor:	Turbidity (quant,text,color):
323	PW80 Gaedtke, Heath R221760 Silk Road, Ringle	364	5 MIN	ND	ND	ND

Date Sampled:	Time Sampled:	Sample Location:	Treated (Y/N):
10-27-21	1010	Front of House FAUCET	N

Comments:

Softener – no Collect from – outside faucet, west side of house

See reverse side for sample custody information

NLS Private Well Sampling Form and Chain Of Custody

SITE: Marathon Co. Solid Waste Management Dept. / Area A – Private Wells (page 4 of 5)

4A

NLS Lab #:	Point Name / Homeowner:	DNR ID #:	Time Purged:	Color:	Odor:	Turbidity (quant,text,color):
324	PW53 Buchkowski, Michael SR R221771 Silk Road, Ringle	357	5 min	ND	ND	ND

Date Sampled:	Time Sampled:	Sample Location:	Treated (Y/N):
10-27-21	1020	SIDE of House Facing Rd.	N

Comments: "NEVER RECIEVED REPORT"

Softener – yes Collect from – basement well entry (only unsoftened point)

NLS Lab #:	Point Name / Homeowner:	DNR ID #:	Time Purged:	Color:	Odor:	Turbidity (quant,text,color):
325	PW29 Porter, James R221704 Silk Road, Ringle	355	5 min	ND	NO	ND

Date Sampled:	Time Sampled:	Sample Location:	Treated (Y/N):
10-27-21	1004	BACK of House	N

Comments: FRONT FAUCET DOES NOT WORK

Softener – yes Collect from – outside faucet, south side of house

NLS Lab #:	Point Name / Homeowner:	DNR ID #:	Time Purged:	Color:	Odor:	Turbidity (quant,text,color):
326	PW54 Baur, Daniel R221657 Silk, Ringle	358	5 min	ND	ND	ND

Date Sampled:	Time Sampled:	Sample Location:	Treated (Y/N):
10-27-21	0950	SIDE of House	N

Comments: TURN FAUCET ON WAIT 5 min if No FLOW. TAP ON FAUCET (SELF SIPHON FAUCET) SOME TIME STICKS

Softener – no Collect from – faucet in garage, on year round or outside/south faucet

NLS Lab #:	Point Name / Homeowner:	DNR ID #:	Time Purged:	Color:	Odor:	Turbidity (quant,text,color):
327	PW17 Liebe, Neal R174825 Willow Lane, Hatley	028	5 min	ND	ND	ND

Date Sampled:	Time Sampled:	Sample Location:	Treated (Y/N):
10-27-21	0755	FRONT of House.	No

Comments:

Softener – no Collect from – back outside faucet (front faucet by brick deck broken – per owner 4/21/10)

See reverse side for sample custody information

328

NLS Private Well Sampling Form and Chain Of Custody

SITE: Marathon Co. Solid Waste Management Dept. / Area A – Private Wells (page 5 od 5)

5A

NLS Lab #:	Point Name / Homeowner: Trip Blank	DNR ID #: 999	Time Purged:	Color:	Odor:	Turbidity (quant,text,color):
Date Sampled:	Time Sampled:	Sample Location:				Treated (Y/N):
Comments:						

NLS Lab #:	Point Name / Homeowner:	DNR ID #:	Time Purged:	Color:	Odor:	Turbidity (quant,text,color):
Date Sampled:	Time Sampled:	Sample Location:				Treated (Y/N):
Comments:						

NLS Lab #:	Point Name / Homeowner:	DNR ID #:	Time Purged:	Color:	Odor:	Turbidity (quant,text,color):
Date Sampled:	Time Sampled:	Sample Location:				Treated (Y/N):
Comments:						

NLS Lab #:	Point Name / Homeowner:	DNR ID #:	Time Purged:	Color:	Odor:	Turbidity (quant,text,color):
Date Sampled:	Time Sampled:	Sample Location:				Treated (Y/N):
Comments:						

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 REPORT

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

NLS Project: 375695
NLS Customer: 20080

Fax: 715 446 2906 Phone: 715 446 3339

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

Project: Marathon County BRRDF Private Wells (semi-annual) October 2021

For Terms and Conditions please see www.nlslab.com

PW11 NLS ID: 1286308
Matrix: GW
Collected: 10/27/21 07:50 Received: 10/27/21

Parameter	Result	Units	Dilution	LOD	LOQ/MCL	Analyzed	Method	Lab
Field color	none detected					10/27/21	NA	721026460
Field odor	none detected					10/27/21	NA	721026460
Field turbidity	none detected					10/27/21	NA	721026460
Field depth to water	23.82	ft.	1			10/27/21	NA	721026460
Field depth to bottom	36.80	ft.	1			10/27/21	NA	721026460
VOCs (water) by GC/MS	see attached					11/03/21	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) LOD = Limit of Detection LOQ = Limit of Quantitation NA = Not Applicable
DWB = Dry Weight Basis %DWB = (mg/kg DWB) / 10000 1000 ug/L = 1 mg/L
MCL = Maximum Contaminant Levels for Drinking Water Samples. Shaded results indicate >MCL.

Reviewed by:

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

ANALYTICAL REPORT

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

NLS Project: 375695
NLS Customer: 20080

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

Fax: 715 446 2906 Phone: 715 446 3339

Project: Marathon County BRRDF Private Wells (semi-annual) October 2021

PW26 NLS ID: 1286309
Matrix: GW
Collected: 10/27/21 09:25 Received: 10/27/21

Parameter	Result	Units	Dilution	LOD	LOQ/MCL	Analyzed	Method	Lab
Field color	none detected					10/27/21	NA	721026460
Field odor	none detected					10/27/21	NA	721026460
Field turbidity	none detected					10/27/21	NA	721026460
VOCs (water) by GC/MS	see attached					11/04/21	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) LOD = Limit of Detection LOQ = Limit of Quantitation NA = Not Applicable
DWB = Dry Weight Basis %DWB = (mg/kg DWB) / 10000 1000 ug/L = 1 mg/L
MCL = Maximum Contaminant Levels for Drinking Water Samples. Shaded results indicate >MCL.

Reviewed by:

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

ANALYTICAL REPORT

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

NLS Project: 375695
NLS Customer: 20080

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

Fax: 715 446 2906 Phone: 715 446 3339

Project: Marathon County BRRDF Private Wells (semi-annual) October 2021

PW8575 NLS ID: 1286310
Matrix: GW
Collected: 10/27/21 09:40 Received: 10/27/21

Parameter	Result	Units	Dilution	LOD	LOQ/MCL	Analyzed	Method	Lab
Field color	none detected					10/27/21	NA	721026460
Field odor	none detected					10/27/21	NA	721026460
Field turbidity	none detected					10/27/21	NA	721026460
VOCs (water) by GC/MS	see attached					11/04/21	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) LOD = Limit of Detection LOQ = Limit of Quantitation NA = Not Applicable
DWB = Dry Weight Basis %DWB = (mg/kg DWB) / 10000 1000 ug/L = 1 mg/L
MCL = Maximum Contaminant Levels for Drinking Water Samples. Shaded results indicate >MCL.

Reviewed by:

Authorized by:
R. T. Krueger
President

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Analytical Laboratory and Environmental Services
400 North Lake Avenue - Crandon, WI 54520
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ANALYTICAL REPORT

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

NLS Project: 375695
NLS Customer: 20080

Fax: 715 446 2906 Phone: 715 446 3339

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

Project: Marathon County BRRDF Private Wells (semi-annual) October 2021

Trip Blank NLS ID: 1286311
Matrix: TB
Collected: 10/27/21 00:00 Received: 10/27/21

Parameter	Result	Units	Dilution	LOD	LOQ/MCL	Analyzed	Method	Lab
VOCs (water) by GC/MS	see attached					11/04/21	NA	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) LOD = Limit of Detection LOQ = Limit of Quantitation NA = Not Applicable
DWB = Dry Weight Basis %DWB = (mg/kg DWB) / 10000 1000 ug/L = 1 mg/L
MCL = Maximum Contaminant Levels for Drinking Water Samples. Shaded results indicate >MCL.

Reviewed by:

Authorized by:
R. T. Krueger
President

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ANALYTICAL RESULTS: VOC's by P&T/GCMS - Water
Customer: Marathon County Solid Waste Mgmnt Dept NLS Project: 375695
Project Description: Marathon County BRRDF Private Wells (semi-annual)
Project Title: October 2021 Template: APP3 Printed: 11/22/2021 08:11

Sample: 1286308 PW11 Collected: 10/27/21 Analyzed: 11/03/21 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		
1,1-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	0.16	0.52	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	[29]	ug/L	1	13	44		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)	96%		1				S
Toluene-d8 (SURR)	100%		1				S
1-Bromo-4-Fluorobenzene (SURR)	94%		1				S

NOTES APPLICABLE TO THIS ANALYSIS:
J = Result enclosed in brackets is between LOD and LOQ, a region of less certain quantitation.
S = This compound is a surrogate used to evaluate the quality control of a method.

ANALYTICAL RESULTS: VOC's by P&T/GCMS - Water
Customer: Marathon County Solid Waste Mgmnt Dept NLS Project: 375695
Project Description: Marathon County BRRDF Private Wells (semi-annual)
Project Title: October 2021 Template: APP3 Printed: 11/22/2021 08:11

Sample: 1286309 PW26 Collected: 10/27/21 Analyzed: 11/04/21 - 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		
1,1-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	0.16	0.52	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	13	44		
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)	108%		1				S
Toluene-d8 (SURR)	115%		1				S
1-Bromo-4-Fluorobenzene (SURR)	101%		1				S

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
Customer: Marathon County Solid Waste Mgmnt Dept NLS Project: 375695
Project Description: Marathon County BRRDF Private Wells (semi-annual)
Project Title: October 2021 Template: APP3 Printed: 11/22/2021 08:11

Sample: 1286310 PW8575 Collected: 10/27/21 Analyzed: 11/04/21 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		
1,1-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	0.16	0.52	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	13	44		
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)	105%		1				S
Toluene-d8 (SURR)	112%		1				S
1-Bromo-4-Fluorobenzene (SURR)	99%		1				S

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
Customer: Marathon County Solid Waste Mgmnt Dept NLS Project: 375695
Project Description: Marathon County BRRDF Private Wells (semi-annual)
Project Title: October 2021 Template: APP3 Printed: 11/22/2021 08:11

Sample: 1286311 Trip Blank Collected: 10/27/21 Analyzed: 11/04/21 - 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		
1,1-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	0.16	0.52	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	13	44		
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)	104%		1				S
Toluene-d8 (SURR)	109%		1				S
1-Bromo-4-Fluorobenzene (SURR)	108%		1				S

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

NLS Private Well Sampling Form and Chain Of Custody

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

NLS Lab #:	Point Name / Homeowner: PW11	DNR ID #:	Time Purged:	Color:	Odor:	Turbidity (quant,text,color):
1280308	William Kasten R222780 Duncan Road, Hatley	027	5' min	ND	ND	ND.

Date Sampled:	Time Sampled:	Sample Location:	Treated (Y/N):
10-27-21	0750	Front of House	N

Comments:

DEPTH OF WATER 23.82

DEPTH OF BOTTOM 36.80

4/13: South house faucet

NLS Lab #:	Point Name / Homeowner: PW26	DNR ID #:	Time Purged:	Color:	Odor:	Turbidity (quant,text,color):
309	James Glodowski R222470 Duncan Road, Hatley	029	5 min	ND	ND	ND

Date Sampled:	Time Sampled:	Sample Location:	Treated (Y/N):
10.27.21	0925	Side of old House	N

Comments:

As of 11/06: Kitchen Sink (hand dug well, owner may want us to purge little or no water before sampling)

NLS Lab #:	Point Name / Homeowner: PW8575	DNR ID #:	Time Purged:	Color:	Odor:	Turbidity (quant,text,color):
310	Jerry and Krista Bates R221615 Silk, Ringle	367	5 min	ND	ND	ND

Date Sampled:	Time Sampled:	Sample Location:	Treated (Y/N):
10.27.21	0940	Front of House FAUCET	N

Comments:

Outside faucet side of house

TB: 311

NLS Lab #:	Point Name / Homeowner:	DNR ID #:	Time Purged:	Color:	Odor:	Turbidity (quant,text,color):
	Trip Blank	999				

Date Sampled:	Time Sampled:	Sample Location:

Comments:

See reverse side for sample custody information

1B

The following information applies to samples on the reverse side of this sheet.

Date 10-27-21 Date

Crew Chief VICTOR C. FLORES Crew Chief

Crew Crew

Weather/Comments: OVERCAST 40°

SAMPLE COLLECTION COMMENTS

SAMPLE CUSTODY

RELINQUISHED BY (signature) RECEIVED BY (signature) DATE/TIME

RECEIVED AT NLS BY (signature) DATE/TIME CONDITION TEMP.

REMARKS & OTHER INFORMATION