2022 Annual Report

Land & Gas Reclamation Landfill
WDNR License No. 01118
Dodge County, Wisconsin

Prepared For:

Glacier Ridge Landfill
N7296 Highway V
Horicon, WI 53032

Prepared By:
Environmental Sampling Corporation
P.O. Box 12
Muskego, WI 53150-0012

April 2023

April 13, 2023

Mr. Trevor Bannister
Wisconsin Dept. of Natural Resources
3911 Fish Hatchery Road
Fitchburg, WI 53711

RE: 2022 Annual Report
Land & Gas Reclamation Landfill, WDNR Lic. #01118
Dodge County, WI

Dear Mr. Bannister:

Pursuant to Condition #3 of the May 19, 2000, Plan of Operation Approval Modification for the facility, Glacier Ridge Landfill is providing one copy of the 2022 Annual Report for the closed Land & Gas Reclamation Landfill. An electronic copy was also provided via e-mail. If you have any questions regarding this report, please contact Frank Perugini of Environmental Sampling Corporation (ESC) at (414) 427-5033 or the undersigned at (920) 210-9311.

Sincerely,

Jacob Margelofsky
Operations Manager

Attachment

cc: Ann Bekta, WDNR-SCR Janesville
Sheila Desai, USEPA Region 5 (electronic copy)
WDNR Waste Management (electronic copy)
Glacier Ridge Landfill, File Copy
Lonn Walter, Glacier Ridge Landfill (electronic copy)
Tim Curry, GFL Environmental (electronic copy)
Kari Rabideau, GFL Environmental (electronic copy)
Mark Torresani, Tetra Tech (electronic copy)
Sherren Clark, SCS Engineers (electronic copy)
Frank Perugini, ESC

2022 ANNUAL REPORT
LAND & GAS RECLAMATION LANDFILL
LICENSE #01118
DODGE COUNTY, WISCONSIN

2022 ANNUAL REPORT
LAND & GAS RECLAMATION LANDFILL, LICENSE #01118
DODGE COUNTY, WISCONSIN

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2022 ANNUAL REPORT
LAND & GAS RECLAMATION LANDFILL, LICENSE #01118
DODGE COUNTY, WISCONSIN

Section 1. Introduction

This annual report addresses the 2022 annual report requirements for the former Land and Gas Reclamation Landfill (LGRL) facility. LGRL was a closed landfill located in the W ½ of Section 35, Township 12-North, Range 16-East, in the Town of Williamstown, Dodge County, Wisconsin. Beginning in 2014, in accordance with the WDNR approved LGRL Waste Relocation Project, the waste from LGRL was removed and relocated to the adjacent Glacier Ridge Landfill (GRL).

The LGRL Waste Relocation Project began during first quarter 2014. Phase A of removal began on March 3, 2014 and was completed on July 21, 2014. A total of 625,784 cubic yards of waste was relocated during Phase A of the project. Phase B of the waste relocation project began on February 3, 2015 and was completed on May 21, 2015; a total of 523,244 cubic yards of waste were relocated. Phase C of the waste relocation project started on January 4, 2016 and was completed on March 23, 2016; an estimated 388,550 cubic yards of waste were relocated.

Since all waste from LGRL has been removed and relocated to the active GRL, the Department determined that several annual report requirements listed in the May 19, 2000 Plan of Operation Approval Modification were no longer necessary. The current reporting requirements were outlined in the May 2, 2017 correspondence regarding Annual Reports for the Glacier Ridge Landfill, (Lic. #3068), Biopile (Lic. #3792) and Land and Gas Reclamation Landfill (Lic. #1118).

The format of this 2022 annual report restates the relevant annual report requirements for LGRL. The approval references are presented below in bold italic font followed by GRL's response in normal font.

Section 2. Annual Report Requirements

Approval Reference
May 19, 2000
Plan of Operation Approval Modification, Superior Glacier Ridge Landfill (Lic. No. 3068), Biopile (Lic. No. 3792), Land and Gas Reclamation Landfill (Lic. No. 1118), and Demolition Landfill (Lic. No. 3568)

3. Superior shall submit an annual report to the Department by April 15th of each year which contains the following information about the Land and Gas Reclamation Landfill:

Response
To meet this requirement, GFL Environmental is providing the WDNR with this annual report for Land and Gas Reclamation Landfill (LGRL), which discusses the results of the 2022 environmental monitoring program for the facility. As indicated in the May 2, 2017 correspondence regarding Annual Reports for the Glacier Ridge Landfill, (Lic. #3068), Biopile (Lic. #3792) and Land and Gas Reclamation Landfill (Lic. #1118), some of the annual report requirements are no longer necessary and have been modified as indicated below.

Approval Reference
May 2, 2017
Annual Reports for the Advanced Disposal Services Glacier Ridge Landfill, (Lic. #3068), Biopile (Lic. #3792) and Land and Gas Reclamation Landfill (Lic. #1118)

> **…As approved by the October 13, 2013 southeast expansion plan of operation approval, the waste from LGRL was removed and relocated to the adjacent Glacier Ridge Landfill. The waste relocation project began in 2014 and was completed in 2016. All the waste has been removed and relocated; therefore some of the LGRL annual reporting requirements in the May 19, 2000 approval will not be needed in future annual reports. Reporting requirements for the LGRL final cover (conditions 3a and 3d) and gas extraction system (conditions 3c, e, f and g) are no longer necessary. However, the evaluation of the groundwater monitoring data (condition 3b), the list of monitoring points (condition 3h), and the evaluation of the effectiveness of the remedy (condition 3i) will continue to be required in annual reports to the Department.**

Annual report requirements provided as Conditions 3.b., 3 h., and 3.i. of the May 19, 2000 Approval Modification are discussed below. As indicated above, the remaining annual report requirements are no longer necessary.

Approval Reference

May 19, 2000

Plan of Operation Approval Modification, Superior Glacier Ridge Landfill (Lic. No. 3068), Biopile (Lic. No. 3792), Land and Gas Reclamation Landfill (Lic. No. 1118), and Demolition Landfill (Lic. No. 3568)

b. ***An evaluation of the monitoring data generated for the facility, including groundwater gradients and quality, leachate head and quality data, gas quality and extraction rate data, condensate volume data, and settlement data.***

Response

An evaluation of the groundwater monitoring data for the facility is summarized below. Due to the completion of the LGRL Waste Relocation Project, there was no leachate head, leachate quality, gas extraction, gas condensate, or settlement monitoring during 2022.

Groundwater Monitoring Program

The groundwater monitoring program is performed in accordance with the WDNR Plan Modification approval for monitoring at Land and Gas Reclamation Landfill dated April 14, 1995 and the WDNR Expedited Plan Modification, Land and Gas Reclamation Landfill, dated February 22, 2002. Additional groundwater monitoring was conducted, beyond the scope of the permit, in accordance with the WDNR approved Off-Site Investigation of Chlorinated VOC Plume in Bedrock, Land and Gas Reclamation Landfill, dated April 11, 2012.

The routine semi-annual monitoring is conducted in April and October. Routine annual monitoring is conducted in October. During 2022, the additional investigation monitoring was conducted in conjunction with the routine monitoring events. The LGRL groundwater monitoring network is outlined below.

- Fifteen monitoring wells are monitored semi-annually for inorganics (hardness, alkalinity, chloride, and arsenic) in addition to water elevations and field parameters (i.e. specific conductance, pH, and temperature).
- VOC analyses are conducted semi-annually at seven of these monitoring wells (MW-1RR, MW-1AR, W-3R, W-3AR, MW-210, MW-210A, and MW-210B) and annually in October at four of these monitoring wells (W-163, W-163A, W-214, and W-214A). No VOC analysis is required at the remaining four wells (MW-6R, MW-7R, MW-8R, and MW-203A).
- Three additional monitoring wells (MW-201, MW-201A, and MW-201B) are monitored semi-annually for water elevation and field parameters only.
- Investigation groundwater monitoring includes semi-annual monitoring at eleven monitoring wells and piezometers (MW-1B, P-401D, P-402E, P-422B, P-423D, P-424D, P424SS, P-426D, P-426SS, P-429SS, and P-430D) for inorganics (hardness, alkalinity, and chloride), VOCs, water elevations, and field parameters.

- Investigation private well monitoring includes monthly monitoring for VOCs at one private well (PW-21RR), semi-annual monitoring for VOCs and inorganics (hardness, alkalinity, and chloride) at seven private wells (PW-19, PW-20, PW-21RR, PW-23, PW-28, PW-32, and PW-38), and annual monitoring for VOCs and inorganics at three additional private wells (PW-42, PW-43, and PW-44). Field parameters are also recorded during each sampling event.

During 2022, groundwater monitoring was conducted by Environmental Sampling Corporation (ESC) of Muskego, Wisconsin. Samples were analyzed by Pace Analytical Services of Green Bay, Wisconsin (Wisconsin Laboratory Certification No. 999407970).

SCS Engineers prepared and submitted a summary of the groundwater monitoring results and an electronic data submission for each semi-annual monitoring event. The semi-annual monitoring reports of the groundwater monitoring events and a summary of the April 2022 investigation private well monitoring results are provided as **Appendix A, Attachment A-1**. Individual private well letters including the laboratory analytical results were also provided to the homeowners and the WDNR throughout the reporting period.

Additionally, SCS Engineers prepared the following documents related to the off-site investigation during 2022. These reports provide a summary of the monitoring conducted, sample results, and other information relevant to the off-site investigation.

- Additional Investigation Update: Chlorinated Volatile Organic Compounds in Bedrock Aquifer, Land & Gas Reclamation Landfill, March 23, 2022.
- 2021 Annual Report, Land & Gas Reclamation Landfill/Hechimovich Sanitary Landfill Site, June 1, 2022.

Historic VOC Monitoring Results and Concentrations vs. Time Plots for cis-1,2-DCE, TCE and vinyl chloride for selected routine monitoring wells were prepared by SCS Engineers and are included as **Appendix A, Attachment A-2**. Additional discussion regarding the groundwater quality trends is provided below in response to approval condition 3.i.

In general, the groundwater flow direction trends to the north-northeast across the site with gradients ranging from 0.003 ft/ft to 0.005 ft/ft in the area of the former LGRL facility as shown on the Groundwater Table Map (**Appendix A, Figure 1**).

Approval Reference

May 19, 2000

Plan of Operation Approval Modification, Superior Glacier Ridge Landfill (Lic. No. 3068), Biopile (Lic. No. 3792), Land and Gas Reclamation Landfill (Lic. No. 1118), and Demolition Landfill (Lic. No. 3568)

h. ***A listing of all monitoring points or monitoring periods where sampling was not conducted as required. The annual report shall propose a schedule to supplement the approved monitoring program to compensate for the missing monitoring points or periods.***

Response

In accordance with the WDNR approved Waste Relocation Project, the LGRL gas collection system components, leachate head monitoring points, gas probes, and settlement hubs were abandoned prior to 2022. Groundwater monitoring wells and staff gauges are the only remaining monitoring points referenced in the solid waste permit.

During the April 2022 event, there was flooding in the vicinity of MW-214 and MW214A that prevented access for sampling. Samples were collected from these wells in May 2022 when the high water had subsided and the wells were accessible. Due to an inadvertent oversight, chloride and alkalinity were not included in the analysis for MW-214A. An additional sample was collected from MW-214A in June 2022. All groundwater wells were monitored as required during the October 2022 event; no schedule modifications were required.

Private well monitoring was conducted during 2022 as required by the WDNR approved off-site investigation workplan. All private well monitoring was conducted as required by the workplan; no schedule modifications were required.

Approval Reference

May 19, 2000

Plan of Operation Approval Modification, Superior Glacier Ridge Landfill (Lic. No. 3068), Biopile (Lic. No. 3792), Land and Gas Reclamation Landfill (Lic. No. 1118), and Demolition Landfill (Lic. No. 3568)

i. ***An overall evaluation of the effectiveness of the remedy in reducing environmental impacts of the site.***

Response

As of March 23, 2016, and the completion of the WDNR approved Waste Relocation Project, all of the LGRL waste has been exhumed and disposed of in the active Glacier Ridge Landfill thus removing the source of the environmental impacts.

An assessment of environmental impacts over time is presented in the Historic VOC Monitoring Results and Concentrations vs. Time Plots prepared by SCS Engineers (**Appendix A, Attachment A-2**). Plots for total cis-1,2-DCE, TCE and Vinyl Chloride show concentrations to be stable or trending downward in the samples collected from MW-1AR, MW-1RR, W-3AR, MW-210, MW-210A, and MW-214. Concentrations of 1,2-DCE and TCE in the samples collected from W-3R have been stable or not detected; concentrations of vinyl chloride displayed an increasing trend from 2019-2021 but were decreased during the semi-annual events in 2022. Concentrations of 1,2-DCE and TCE in the samples collected from MW-210B and MW-214A have been stable or not detected, but concentrations of vinyl chloride displayed an increasing trend.

The Groundwater Monitoring Results (April and October 2022) in **Appendix A, Attachment A-1** prepared by SCS Engineers provides further data interpretation related to the April and October 2022 groundwater monitoring events. Additional evaluations were also provided by SCS Engineers during 2022 in the Additional Investigation Update, Chlorinated Volatile Organic Compounds in Bedrock Aquifer, Land & Gas Reclamation Landfill, dated March 23, 2022, and the 2021 Annual Report for the off-site investigation of chlorinated volatile organic compounds in bedrock at LGRL dated June 1, 2022.

APPENDIX A

2022 Groundwater Data Assessment (SCS Engineers)

Attachment A-1

Groundwater Monitoring Results: April 2022
Water Supply Well Monitoring Results: April 2022
Groundwater Monitoring Results: June 2022
Groundwater Monitoring Results: October 2022

June 30, 2022
File No. 25222008.00

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

Subject: Groundwater Monitoring Results – April 2022
Land & Gas Reclamation Landfill – Horicon, Wisconsin
WDNR License #1118
FID #114052290

Dear GEMS Data Submittal Contact:

Enclosed are the electronic data file, NR 140 exceedance summary, and monitoring data certification form for monitoring performed in April 2022 at the former Land & Gas Reclamation Landfill (LGRL) site. Monitoring data in this submittal include laboratory results and associated field data from the following monitoring points in the required LGRL monitoring program:

- Monitoring wells (MW1AR through MW214A)
- Surface water staff gauges (SW2 through SW5)

The groundwater samples were collected by Environmental Sampling Corporation (ESC). Laboratory analysis was performed by Pace Analytical Services.

The data CD also includes monitoring data for some of the wells that were installed for the ongoing investigation of volatile organic compounds (VOCs) in the bedrock aquifer. Investigation wells that have been assigned Wisconsin Department of Natural Resources (WDNR) IDs are included on the data CD, including bedrock monitoring wells P-401D, P-402E, and P-423D, and deep unconsolidated aquifer monitoring wells MW-1B and P-422B. These wells are not part of the routine LGRL monitoring program. Additional investigation wells P-424D, P-424SS, P-426D, P-426SS, P-429SS, and P-430D have not been assigned WDNR IDs and are not included on the data CD. Results for all groundwater monitoring associated with the VOC investigation will be provided to the WDNR in the next investigation update report.

This letter provides a preliminary analysis of the cause and significance of the NR 140 groundwater standard exceedances for monitoring data included in the data CD. An explanation of any deviations from the approved sampling plan is also included in the Monitoring Program Comments section of this letter.

NR 140 EXCEEDANCES

NR 140 standard exceedances for the April 2022 sampling round are listed in the attached NR 140 Exceedance Summary table. The following discussion addresses the NR 140 enforcement standard (ES) and preventive action limit (PAL) exceedances for this event.

Public Health Parameters

Arsenic was reported at concentrations less than the ES, but above the PAL of 1 microgram per liter (µg/L), in samples from the following wells: MW-1AR, MW-1RR, MW-7R, MW-8R, MW-203A, MW-210, MW-210A, MW-214, MW-214A, W-3AR, W-3R, and W-163A. Arsenic concentrations within this range have been detected in samples collected from many wells around the former LGRL site and the adjacent Glacier Ridge Landfill, and are likely attributable to naturally occurring arsenic.

VOCs including benzene, cis-1,2 dichloroethene (DCE), and vinyl chloride were detected at concentrations exceeding the PAL or ES, and the Limit of Quantitation (LOQ), in samples collected from the following wells: MW-1AR, MW-1B, MW-210A, MW-210B, P-402E, P-423D, W-3R, and W-3AR. The specific VOCs exceeding the PAL or ES at each well are shown in the attached NR 140 Exceedance Summary (**Table 1**). All of these wells are located downgradient from the former LGRL site, and the VOCs are likely due to LGRL.

In addition to the NR 140 standard exceedances described above, there were some VOC results reported at estimated concentrations above the PAL or ES, but below the LOQ ("J" flag). These results are not considered PAL or ES exceedances without additional confirmation in accordance with NR 140.14(3). VOCs reported at concentrations above the PAL, but below the LOQ, included trichloroethylene or vinyl chloride in samples from the following wells: MW-210, MW-210A, and P-423D.

These wells are located adjacent to or downgradient from the former LGRL site, and the VOCs are likely due to LGRL.

The PAL and ES exceedances and reported concentrations for VOCs were generally consistent with previous results.

Public Welfare Parameters

Chloride was reported above the NR 140 ES of 250 µg/L in the sample from MW-1AR. Chloride was reported above the PAL of 125 µg/L in the samples from MW-1B and MW-1RR. These wells are located downgradient of LGRL, and the chloride detections may be associated with LGRL.

MONITORING PROGRAM COMMENTS

The approved monitoring program was followed except that samples and/or water levels could not be collected in April due to field conditions at the following monitoring locations:

- Monitoring wells MW-214 and MW-214A could not be accessed in April 2022 due to flooding. These monitoring wells were sampled in May once flooding had subsided.

If you have any questions regarding this submittal, please call Sherren Clark at 608.216.7323.

Sincerely,

Sherren Clark, PE, PG
Project Director
SCS Engineers

Ryan Matzuk
Hydrogeologist
SCS Engineers

RM/AJR/EO/SCC

cc: Mark Peters, WDNR (without CD)
Lonn Walter, Glacier Ridge Landfill (2 copies of letter, 1 CD)
Kari Rabideau, GFL Environmental (via email)
Tim Curry, GFL Environmental (via email)
Frank Perugini, Environmental Sampling Corp. (via email)

Encl. Table 1 - NR 140 Exceedance Summary
Groundwater Monitoring Data Certification Form
GEMS Data CD

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Table 1
NR 140 Exceedance Summary

Site ID: **1118**
Site Name: **Land and Gas Reclamation Landfill**
Reporting Period: **April 2022**

Note: Includes NR 140 exceedances for wells in the LGRL monitoring plan approved by the WDNR Solid Waste program and additional wells in the off-site monitoring plan that have been assigned WDNR IDs

Groundwater Results Exceeding NR 140 Standards

Well	Parameter	Result *	PAL	ES	Exceedance Type
MW-001AR (LGRL)	Arsenic, dissolved (ug/l As)	3.2	1	10	PAL
	Chloride, dissolved (mg/l as Cl)	588	125	250	ES
	cis-1,2-Dichloroethene (ug/l)	495	7	70	ES
	Vinyl chloride (ug/l)	957	0.02	0.2	ES
MW-001B	Chloride, dissolved (mg/l as Cl)	162	125	250	PAL
	Vinyl chloride (ug/l)	5.4	0.02	0.2	ES
MW-001RR (LGRL)	Arsenic, dissolved (ug/l As)	2.6	1	10	PAL
	Chloride, dissolved (mg/l as Cl)	150	125	250	PAL
MW-007R	Arsenic, dissolved (ug/l As)	1.6	1	10	PAL
MW-008R (LGRL)	Arsenic, dissolved (ug/l As)	2.1	1	10	PAL
MW-203A	Arsenic, dissolved (ug/l As)	5.9	1	10	PAL
MW-210	Arsenic, dissolved (ug/l As)	1.1/1.1	1	10	PAL
MW-210A	Arsenic, dissolved (ug/l As)	6.1	1	10	PAL
	cis-1,2-Dichloroethene (ug/l)	105	7	70	ES
	Vinyl chloride (ug/l)	63.9	0.02	0.2	ES
MW-210B	Vinyl chloride (ug/l)	7.5	0.02	0.2	ES
MW-214	Arsenic, dissolved (ug/l As)	1.2/1.3	1	10	PAL
MW-214A	Arsenic, dissolved (ug/l As)	2.3	1	10	PAL
P-402E (LGRL)	cis-1,2-Dichloroethene (ug/l)	152	7	70	ES
	Vinyl chloride (ug/l)	28.5	0.02	0.2	ES
P-423D	cis-1,2-Dichloroethene (ug/l)	41.1	7	70	PAL
	Vinyl chloride (ug/l)	1.1	0.02	0.2	ES

Table 1
NR 140 Exceedance Summary

Site ID: **1118**
Site Name: **Land and Gas Reclamation Landfill**
Reporting Period: **April 2022**

Note: Includes NR 140 exceedances for wells in the LGRL monitoring plan approved by the WDNR Solid Waste program and additional wells in the off-site monitoring plan that have been assigned WDNR IDs

Groundwater Results Exceeding NR 140 Standards

Well	Parameter	Result *	PAL	ES	Exceedance Type
W-003AR (LGRL)	Arsenic, dissolved (ug/l As)	4.4	1	10	PAL
	Benzene (ug/l)	1.1	0.5	5	PAL
	cis-1,2-Dichloroethene (ug/l)	24.1	7	70	PAL
	Vinyl chloride (ug/l)	13	0.02	0.2	ES
W-003R (LGRL)	Arsenic, dissolved (ug/l As)	1	1	10	PAL
	Vinyl chloride (ug/l)	6.8	0.02	0.2	ES
W-163A (LGRL)	Arsenic, dissolved (ug/l As)	2.9	1	10	PAL

Groundwater Results with Estimated Concentration Above an NR 140 PAL or ES and Below the LOQ

Note: If both the result and the PAL or ES are above the limit of detection but below the limit of quantitation, the result is not considered a PAL or ES exceedance under NR 140.14(3)(c). If the PAL or ES is below the limit of detection and the result is below the limit of quantitation, the result is not considered a PAL or ES exceedance without additional confirmation as described in NR 140.14(3)(b).

Well	Parameter	Result*	LOD/LOQ	PAL	ES
MW-210	Vinyl chloride (ug/l)	0.85/0.82 J	0.17/1	0.02	0.2
MW-210A	Trichloroethylene (ug/l)	0.88 J	0.8/2.5	0.5	5
P-423D	Trichloroethylene (ug/l)	0.8 J	0.32/1	0.5	5

Notes:
PAL = Preventive Action Limit
ES = Enforcement Standard
LOQ = Limit of Quantitation
ug/l = micrograms per liter
mg/l = milligrams per liter
J = Result is an estimated value below the laboratory's limit of quantitation.
* = Two results indicate duplicate samples. Only results exceeding the PAL are shown.

Prepared by: AJR, 6/13/2022
Checked by: RM, 6/19/2022

Save... Print... Clear Data

State of Wisconsin
Department of Natural Resources
dnr.wi.gov

Environmental Monitoring Data Certification

Form 4400-231 (R 5/17)

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 507.30NR 635.14(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)
SCS Engineers

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

Name	Phone No. (include area code)
Ashley Radunzel	(608) 224-2830

Email
aradunzel@scsengineers.com

Facility Name
Land & Gas Reclamation Landfill

License # / Monitoring ID	Facility ID (FID)
1118	114052290

Actual sampling dates (e.g., July 2-6, 2003)	The enclosed results are for sampling required in the month(s) of: (e.g., June 2003)
April 1, 4, 6-8, 28, 2022; May 4, 2022	April 2022

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
- [x] Other (specify): Staff Gauge

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 attachments 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 significance of concentrations exceeding groundwater standards.

Facility Representative Name (Print)	Title	Phone No. (include area code)
Sherren Clark, SCS Engineers	Project Manager	(608) 216-7323

Signature

6/28/2022
Date Signed (mm/dd/yyyy)

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: _____

May 24, 2022
File No. 25222008.02

Mr. Trevor Bannister
Wisconsin Department of Natural Resources
3911 Fish Hatchery Road
Fitchburg, WI 53711

Mr. Mark Peters
Wisconsin Department of Natural Resources
3911 Fish Hatchery Road
Fitchburg, WI 53711

Subject: Water Supply Well Monitoring Results – April 2022
Investigation of Chlorinated Volatile Organic Compounds in Groundwater in Bedrock
Land & Gas Reclamation Landfill, Dodge County, Wisconsin
BRRTS #02-14-000906
WDNR License No. 1118

Dear Mr. Bannister and Mr. Peters:

Enclosed are the water supply well results for April 2022 monitoring for the Land & Gas Reclamation Landfill (LGRL) groundwater investigation. The samples were collected by Environmental Sampling Corporation (ESC) on April 7 and 8, 2022. The samples were analyzed for field parameters, volatile organic compounds (VOCs), alkalinity, chloride, and hardness. Laboratory analysis was performed by Pace Analytical Services, Green Bay, Wisconsin.

Water supply well monitoring in April included the following sample locations:

- PW-19
- PW-20
- PW-21RR (untreated groundwater and post-treatment water supply)
- PW-23
- PW-28
- PW-32
- PW-38

This sampling is not required under the routine monitoring plan for LGRL, but has been performed as part of the ongoing groundwater investigation in the bedrock aquifer downgradient from LGRL. The treatment system for water supply well PW-21RR at the Oechsner farm is a CLEARADON aeration system.

The April 2022 VOC detections are summarized in the attached Water Supply Well Sampling Results Summary table. The laboratory report is also attached.

The only NR 140 groundwater standard exceedances for April 2022 were in the untreated groundwater sample from PW-21RR (A. Oechsner), where vinyl chloride was detected at a concentration above the NR 140 enforcement standard and cis-1,2-dichloroethene (cis-1,2-DCE) was detected at a concentration above the NR 140 preventive action limit (PAL). In the post-treatment sample from PW-21RR, there were no VOC detections above the PALs. The reported concentrations for untreated and treated water at PW-21RR are consistent with previous results.

The only other VOC detections in the water supply well sampling were for cis-1,2-DCE in wells PW-19 (Antonioni), PW-28 (Muche), and PW-21RR post-treatment (A. Oechsner). The cis-1,2-DCE concentrations detected in samples from these three wells were generally consistent with previous results and remained well below the PAL.

If you have any questions regarding this submittal, please call Sherren Clark at (608) 216-7323.

Sincerely,

Sherren Clark, PE, PG
Project Director
SCS Engineers

Ryan Matzuk
Hydrogeologist
SCS Engineers

RM/AJR/SCC

cc: Jake Margelofsky, Glacier Ridge Landfill

cc via email: Environmental Program Associate, at DNRWasteManagement@Wisconsin.gov
Tim Curry, GFL Environmental
Kari Rabideau, GFL Environmental
Melissa Bachhuber, GFL Environmental
Lonn Walter, Glacier Ridge Landfill
Mark Torresani, Tetra Tech
Tracy Ipavec, Environmental Sampling Corporation
Melanie Gotto, Deere & Company World Headquarters
Monica Rios, Deere & Company World Headquarters
George Marek, Quarles & Brady, LLP (for Mercury Marine)
Linda Benfeld, ESG Holdings, LLC c/o Foley & Lardner LLP (for Maysteel Corp.)
Nathan Kempke, City of Mayville
Paul Rosenfeldt, Edgarton, St. Peter, Petak & Rosenfeldt (for Mayville Engineering Corp.)

Encl. Water Supply Well Sampling Results Summary
Laboratory Report for Water Supply Well Samples

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Water Supply Well Sampling Results Summary

Site Name: **Land & Gas Reclamation Landfill Offsite Investigation**
Reporting Period: **April 2022**

Groundwater Results with Volatile Organic Compound Detections

Well	Parameter	Result	PAL	ES	Exceedance Type
PW-19	cis-1,2-Dichloroethene (µg/L)	0.44 J	7	70	No exceedance
PW-21RR untreated	cis-1,2-Dichloroethene (µg/L)	22.4	7	70	PAL
	trans-1,2-Dichloroethene, total (µg/L)	0.38 J	20	100	No exceedance
	Vinyl chloride (µg/L)	0.52	0.02	0.2	ES
PW-21RR treated	cis-1,2-Dichloroethene (µg/L)	1.8	7	70	No exceedance
PW-28	cis-1,2-Dichloroethene (µg/L)	3.5	7	70	No exceedance

Notes:
PAL = NR 140 Preventive Action Limit
ES = NR 140 Enforcement Standard
µg/L = micrograms per liter
J = Estimated concentration at or above the Limit of Detection and below the Limit of Quantitation

Prepared by: AJR, 5/23/2022
Checked by: RM, 5/24/2022

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

May 17, 2022

Lonn Walter
GFL Enviromental
N7296 Hwy V
Horicon, WI 53032

RE: Project: LGRL PW APRIL
Pace Project No.: 40243151

Dear Lonn Walter:

Enclosed are the analytical results for sample(s) received by the laboratory between April 08, 2022 and April 09, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

- Pace Analytical Services - Green Bay
- Pace Analytical Services - Indianapolis

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

Sincerely,

Cindy K Varga

Cindy Varga
cindy.varga@pacelabs.com
(920)469-2436
Project Manager

Enclosures

cc: Sherren Clark, SCS Engineers
Environmental Sampling Corporation Staff, Environmental Sampling Corporation
Jake Margelofsky, GFL Enviromental
Frank Perugini, Environmental Sampling Corporation
Kari Rabideau, GFL Environmental
Ashley Radunzel, SCS ENGINEERS

Pace Analytical Services, LLC
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CERTIFICATIONS

Project: LGRL PW APRIL
Pace Project No.: 40243151

Pace Analytical Services Green Bay
1241 Bellevue Street, Green Bay, WI 54302
Florida/NELAP Certification #: E87948
Illinois Certification #: 200050
Kentucky UST Certification #: 82
Louisiana Certification #: 04168
Minnesota Certification #: 055-999-334
New York Certification #: 12064
North Dakota Certification #: R-150
Virginia VELAP ID: 460263
South Carolina Certification #: 83006001
Texas Certification #: T104704529-14-1
Wisconsin Certification #: 405132750
Wisconsin DATCP Certification #: 105-444
USDA Soil Permit #: P330-16-00157
Federal Fish & Wildlife Permit #: LE51774A-0

Pace Analytical Services Indianapolis
7726 Moller Road, Indianapolis, IN 46268
Illinois Accreditation #: 200074
Indiana Drinking Water Laboratory #: C-49-06
Kansas/TNI Certification #: E-10177
Kentucky UST Agency Interest #: 80226
Kentucky WW Laboratory ID #: 98019
Michigan Drinking Water Laboratory #9050
Ohio VAP Certified Laboratory #: CL0065
Oklahoma Laboratory #: 9204
Texas Certification #: T104704355
Wisconsin Laboratory #: 999788130
USDA Soil Permit #: P330-19-00257

REPORT OF LABORATORY ANALYSIS

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

SAMPLE SUMMARY

Project: LGRL PW APRIL
Pace Project No.: 40243151

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40243151001	**PW-21RR BEFORE**	Water	04/07/22 13:45	04/08/22 08:45
40243151002	**PW-21RR AFTER**	Water	04/07/22 13:50	04/08/22 08:45
40243151003	**PW-23**	Water	04/07/22 14:30	04/08/22 08:45
40243151004	**PW-38**	Water	04/07/22 14:10	04/08/22 08:45
40243151005	**TRIP BLANK**	Water	04/07/22 00:00	04/08/22 08:45
40243238001	**PW-19**	Water	04/08/22 10:25	04/09/22 08:40
40243238002	**PW-20**	Water	04/08/22 12:45	04/09/22 08:40
40243238003	**PW-28**	Water	04/08/22 10:55	04/09/22 08:40
40243238004	**PW-32**	Water	04/08/22 11:20	04/09/22 08:40
40243238005	**TRIP BLANK**	Water	04/08/22 00:00	04/09/22 08:40

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SAMPLE ANALYTE COUNT

Project: LGRL PW APRIL
Pace Project No.: 40243151

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40243151001	**PW-21RR BEFORE**	EPA 6010D	TXW	1	PASI-G
		EPA 524.2	BES	45	PASI-I
			CKV	6	PASI-G
		EPA 300.0	HMB	1	PASI-G
		EPA 310.2	DAW	1	PASI-G
40243151002	**PW-21RR AFTER**	EPA 524.2	BES	45	PASI-I
			CKV	6	PASI-G
40243151003	**PW-23**	EPA 6010D	TXW	1	PASI-G
		EPA 524.2	BES	45	PASI-I
			CKV	6	PASI-G
		EPA 300.0	HMB	1	PASI-G
		EPA 310.2	DAW	1	PASI-G
40243151004	**PW-38**	EPA 6010D	TXW	1	PASI-G
		EPA 524.2	BES	45	PASI-I
			CKV	6	PASI-G
		EPA 300.0	HMB	1	PASI-G
		EPA 310.2	DAW	1	PASI-G
40243151005	**TRIP BLANK**	EPA 524.2	BES	45	PASI-I
40243238001	**PW-19**	EPA 6010D	TXW	1	PASI-G
		EPA 524.2	BES	45	PASI-I
			CKV	6	PASI-G
		EPA 300.0	HMB	1	PASI-G
		EPA 310.2	DAW	1	PASI-G
40243238002	**PW-20**	EPA 6010D	TXW	1	PASI-G
		EPA 524.2	BES	45	PASI-I
			CKV	6	PASI-G
		EPA 300.0	HMB	1	PASI-G
		EPA 310.2	DAW	1	PASI-G
40243238003	**PW-28**	EPA 6010D	TXW	1	PASI-G
		EPA 524.2	BES	45	PASI-I
			CKV	6	PASI-G
		EPA 300.0	HMB	1	PASI-G
		EPA 310.2	DAW	1	PASI-G
40243238004	**PW-32**	EPA 6010D	TXW	1	PASI-G
		EPA 524.2	BES	45	PASI-I
			CKV	6	PASI-G
		EPA 300.0	HMB	1	PASI-G

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SAMPLE ANALYTE COUNT

Project: LGRL PW APRIL
Pace Project No.: 40243151

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 310.2	DAW	1	PASI-G
40243238005	**TRIP BLANK**	EPA 524.2	BES	45	PASI-I

PASI-G = Pace Analytical Services - Green Bay
PASI-I = Pace Analytical Services - Indianapolis

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

ANALYTICAL RESULTS

Project: LGRL PW APRIL
Pace Project No.: 40243151

Sample: PW-21RR BEFORE **Lab ID: 40243151001** Collected: 04/07/22 13:45 Received: 04/08/22 08:45 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Green Bay								
Total Hardness by 2340B	**395000**	ug/L	2000	150	1	04/11/22 05:57	04/13/22 00:13		
524.2 MSV	Analytical Method: EPA 524.2 Pace Analytical Services - Indianapolis								
Acetone	**<0.62**	ug/L	2.1	0.62	1		04/14/22 19:48	67-64-1	N2
Benzene	**<0.099**	ug/L	0.33	0.099	1		04/14/22 19:48	71-43-2	N2
Bromodichloromethane	**<0.17**	ug/L	0.58	0.17	1		04/14/22 19:48	75-27-4	N2
Bromoform	**<0.14**	ug/L	0.48	0.14	1		04/14/22 19:48	75-25-2	L1,N2
Bromomethane	**<0.28**	ug/L	0.94	0.28	1		04/14/22 19:48	74-83-9	L1,N2
2-Butanone (MEK)	**<0.49**	ug/L	1.6	0.49	1		04/14/22 19:48	78-93-3	N2
Carbon disulfide	**<0.11**	ug/L	0.38	0.11	1		04/14/22 19:48	75-15-0	N2
Carbon tetrachloride	**<0.14**	ug/L	0.48	0.14	1		04/14/22 19:48	56-23-5	N2
Chlorobenzene	**<0.083**	ug/L	0.28	0.083	1		04/14/22 19:48	108-90-7	N2
Chloroethane	**<0.17**	ug/L	0.58	0.17	1		04/14/22 19:48	75-00-3	N2
Chloroform	**<0.58**	ug/L	1.9	0.58	1		04/14/22 19:48	67-66-3	N2
Chloromethane	**<0.10**	ug/L	0.35	0.10	1		04/14/22 19:48	74-87-3	N2
1,2-Dibromo-3-chloropropane	**<0.18**	ug/L	0.60	0.18	1		04/14/22 19:48	96-12-8	N2
Dibromochloromethane	**<0.12**	ug/L	0.38	0.12	1		04/14/22 19:48	124-48-1	N2
1,2-Dibromoethane (EDB)	**<0.088**	ug/L	0.29	0.088	1		04/14/22 19:48	106-93-4	N2
Dibromomethane	**<0.24**	ug/L	0.79	0.24	1		04/14/22 19:48	74-95-3	N2
1,2-Dichlorobenzene	**<0.043**	ug/L	0.14	0.043	1		04/14/22 19:48	95-50-1	N2
1,3-Dichlorobenzene	**<0.076**	ug/L	0.25	0.076	1		04/14/22 19:48	541-73-1	N2
1,4-Dichlorobenzene	**<0.059**	ug/L	0.20	0.059	1		04/14/22 19:48	106-46-7	N2
Dichlorodifluoromethane	**<0.31**	ug/L	1.0	0.31	1		04/14/22 19:48	75-71-8	N2
1,1-Dichloroethane	**<0.15**	ug/L	0.49	0.15	1		04/14/22 19:48	75-34-3	N2
1,2-Dichloroethane	**<0.085**	ug/L	0.28	0.085	1		04/14/22 19:48	107-06-2	N2
1,1-Dichloroethene	**<0.23**	ug/L	0.77	0.23	1		04/14/22 19:48	75-35-4	N2
cis-1,2-Dichloroethene	**22.4**	ug/L	0.83	0.25	1		04/14/22 19:48	156-59-2	N2
trans-1,2-Dichloroethene	**0.38J**	ug/L	1.1	0.32	1		04/14/22 19:48	156-60-5	N2
1,2-Dichloropropane	**<0.20**	ug/L	0.66	0.20	1		04/14/22 19:48	78-87-5	N2
cis-1,3-Dichloropropene	**<0.088**	ug/L	0.29	0.088	1		04/14/22 19:48	10061-01-5	N2
trans-1,3-Dichloropropene	**<0.093**	ug/L	0.31	0.093	1		04/14/22 19:48	10061-02-6	N2
Ethylbenzene	**<0.11**	ug/L	0.35	0.11	1		04/14/22 19:48	100-41-4	N2
Methylene Chloride	**<2.1**	ug/L	6.9	2.1	1		04/14/22 19:48	75-09-2	N2
Methyl-tert-butyl ether	**<0.11**	ug/L	0.37	0.11	1		04/14/22 19:48	1634-04-4	N2
Naphthalene	**<0.073**	ug/L	0.24	0.073	1		04/14/22 19:48	91-20-3	N2
Styrene	**<0.13**	ug/L	0.42	0.13	1		04/14/22 19:48	100-42-5	N2
Tetrachloroethene	**<0.094**	ug/L	0.31	0.094	1		04/14/22 19:48	127-18-4	N2
Tetrahydrofuran	**<0.38**	ug/L	1.3	0.38	1		04/14/22 19:48	109-99-9	N2
Toluene	**<0.12**	ug/L	0.39	0.12	1		04/14/22 19:48	108-88-3	N2
1,1,1-Trichloroethane	**<0.22**	ug/L	0.72	0.22	1		04/14/22 19:48	71-55-6	N2
1,1,2-Trichloroethane	**<0.15**	ug/L	0.51	0.15	1		04/14/22 19:48	79-00-5	N2
Trichloroethene	**<0.17**	ug/L	0.56	0.17	1		04/14/22 19:48	79-01-6	N2
Trichlorofluoromethane	**<0.20**	ug/L	0.67	0.20	1		04/14/22 19:48	75-69-4	N2
Vinyl chloride	**0.52**	ug/L	0.29	0.087	1		04/14/22 19:48	75-01-4	N2

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: LGRL PW APRIL
Pace Project No.: 40243151

Sample: PW-21RR BEFORE **Lab ID: 40243151001** Collected: 04/07/22 13:45 Received: 04/08/22 08:45 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
524.2 MSV	Analytical Method: EPA 524.2								
	Pace Analytical Services - Indianapolis								
Xylene (Total)	**<0.11**	ug/L	0.36	0.11	1		04/14/22 19:48	1330-20-7	N2
Surrogates									
4-Bromofluorobenzene (S)	96	%.	70-130		1		04/14/22 19:48	460-00-4	
Dibromofluoromethane (S)	95	%.	70-130		1		04/14/22 19:48	1868-53-7	
Toluene-d8 (S)	106	%.	70-130		1		04/14/22 19:48	2037-26-5	
Field Data	Analytical Method:								
	Pace Analytical Services - Green Bay								
Field pH	**7.32**	Std. Units			1		04/07/22 13:45		
Field Specific Conductance	**563**	umhos/cm			1		04/07/22 13:45		
Turbidity	**N**	NTU			1		04/07/22 13:45		
Apparent Color	**N**	no units			1		04/07/22 13:45		
Odor	**N**	no units			1		04/07/22 13:45		
Temperature, Water (C)	**10.9**	deg C			1		04/07/22 13:45		
300.0 IC Anions	Analytical Method: EPA 300.0								
	Pace Analytical Services - Green Bay								
Chloride	**20.0**	mg/L	2.0	0.43	1		04/19/22 18:57	16887-00-6	
310.2 Alkalinity	Analytical Method: EPA 310.2								
	Pace Analytical Services - Green Bay								
Alkalinity, Total as CaCO3	**362**	mg/L	50.0	10.4	2		04/15/22 11:06		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
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ANALYTICAL RESULTS

Project: LGRL PW APRIL
Pace Project No.: 40243151

Sample: PW-21RR AFTER **Lab ID: 40243151002** Collected: 04/07/22 13:50 Received: 04/08/22 08:45 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
524.2 MSV	Analytical Method: EPA 524.2								
	Pace Analytical Services - Indianapolis								
Acetone	**<0.62**	ug/L	2.1	0.62	1		04/14/22 20:13	67-64-1	N2
Benzene	**<0.099**	ug/L	0.33	0.099	1		04/14/22 20:13	71-43-2	N2
Bromodichloromethane	**<0.17**	ug/L	0.58	0.17	1		04/14/22 20:13	75-27-4	N2
Bromoform	**<0.14**	ug/L	0.48	0.14	1		04/14/22 20:13	75-25-2	L1,N2
Bromomethane	**<0.28**	ug/L	0.94	0.28	1		04/14/22 20:13	74-83-9	L1,N2
2-Butanone (MEK)	**<0.49**	ug/L	1.6	0.49	1		04/14/22 20:13	78-93-3	N2
Carbon disulfide	**<0.11**	ug/L	0.38	0.11	1		04/14/22 20:13	75-15-0	N2
Carbon tetrachloride	**<0.14**	ug/L	0.48	0.14	1		04/14/22 20:13	56-23-5	N2
Chlorobenzene	**<0.083**	ug/L	0.28	0.083	1		04/14/22 20:13	108-90-7	N2
Chloroethane	**<0.17**	ug/L	0.58	0.17	1		04/14/22 20:13	75-00-3	N2
Chloroform	**<0.58**	ug/L	1.9	0.58	1		04/14/22 20:13	67-66-3	N2
Chloromethane	**<0.10**	ug/L	0.35	0.10	1		04/14/22 20:13	74-87-3	N2
1,2-Dibromo-3-chloropropane	**<0.18**	ug/L	0.60	0.18	1		04/14/22 20:13	96-12-8	N2
Dibromochloromethane	**<0.12**	ug/L	0.38	0.12	1		04/14/22 20:13	124-48-1	N2
1,2-Dibromoethane (EDB)	**<0.088**	ug/L	0.29	0.088	1		04/14/22 20:13	106-93-4	N2
Dibromomethane	**<0.24**	ug/L	0.79	0.24	1		04/14/22 20:13	74-95-3	N2
1,2-Dichlorobenzene	**<0.043**	ug/L	0.14	0.043	1		04/14/22 20:13	95-50-1	N2
1,3-Dichlorobenzene	**<0.076**	ug/L	0.25	0.076	1		04/14/22 20:13	541-73-1	N2
1,4-Dichlorobenzene	**<0.059**	ug/L	0.20	0.059	1		04/14/22 20:13	106-46-7	N2
Dichlorodifluoromethane	**<0.31**	ug/L	1.0	0.31	1		04/14/22 20:13	75-71-8	N2
1,1-Dichloroethane	**<0.15**	ug/L	0.49	0.15	1		04/14/22 20:13	75-34-3	N2
1,2-Dichloroethane	**<0.085**	ug/L	0.28	0.085	1		04/14/22 20:13	107-06-2	N2
1,1-Dichloroethene	**<0.23**	ug/L	0.77	0.23	1		04/14/22 20:13	75-35-4	N2
cis-1,2-Dichloroethene	**1.8**	ug/L	0.83	0.25	1		04/14/22 20:13	156-59-2	N2
trans-1,2-Dichloroethene	**<0.32**	ug/L	1.1	0.32	1		04/14/22 20:13	156-60-5	N2
1,2-Dichloropropane	**<0.20**	ug/L	0.66	0.20	1		04/14/22 20:13	78-87-5	N2
cis-1,3-Dichloropropene	**<0.088**	ug/L	0.29	0.088	1		04/14/22 20:13	10061-01-5	N2
trans-1,3-Dichloropropene	**<0.093**	ug/L	0.31	0.093	1		04/14/22 20:13	10061-02-6	N2
Ethylbenzene	**<0.11**	ug/L	0.35	0.11	1		04/14/22 20:13	100-41-4	N2
Methylene Chloride	**<2.1**	ug/L	6.9	2.1	1		04/14/22 20:13	75-09-2	N2
Methyl-tert-butyl ether	**<0.11**	ug/L	0.37	0.11	1		04/14/22 20:13	1634-04-4	N2
Naphthalene	**<0.073**	ug/L	0.24	0.073	1		04/14/22 20:13	91-20-3	N2
Styrene	**<0.13**	ug/L	0.42	0.13	1		04/14/22 20:13	100-42-5	N2
Tetrachloroethene	**<0.094**	ug/L	0.31	0.094	1		04/14/22 20:13	127-18-4	N2
Tetrahydrofuran	**<0.38**	ug/L	1.3	0.38	1		04/14/22 20:13	109-99-9	N2
Toluene	**<0.12**	ug/L	0.39	0.12	1		04/14/22 20:13	108-88-3	N2
1,1,1-Trichloroethane	**<0.22**	ug/L	0.72	0.22	1		04/14/22 20:13	71-55-6	N2
1,1,2-Trichloroethane	**<0.15**	ug/L	0.51	0.15	1		04/14/22 20:13	79-00-5	N2
Trichloroethene	**<0.17**	ug/L	0.56	0.17	1		04/14/22 20:13	79-01-6	N2
Trichlorofluoromethane	**<0.20**	ug/L	0.67	0.20	1		04/14/22 20:13	75-69-4	N2
Vinyl chloride	**<0.087**	ug/L	0.29	0.087	1		04/14/22 20:13	75-01-4	N2
Xylene (Total)	**<0.11**	ug/L	0.36	0.11	1		04/14/22 20:13	1330-20-7	N2
Surrogates									
4-Bromofluorobenzene (S)	94	%.	70-130		1		04/14/22 20:13	460-00-4	
Dibromofluoromethane (S)	93	%.	70-130		1		04/14/22 20:13	1868-53-7	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: LGRL PW APRIL
Pace Project No.: 40243151

Sample: PW-21RR AFTER **Lab ID: 40243151002** Collected: 04/07/22 13:50 Received: 04/08/22 08:45 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
524.2 MSV	Analytical Method: EPA 524.2								
	Pace Analytical Services - Indianapolis								
Surrogates									
Toluene-d8 (S)	106	%.	70-130		1		04/14/22 20:13	2037-26-5	
Field Data	Analytical Method:								
	Pace Analytical Services - Green Bay								
Field pH	**7.80**	Std. Units			1		04/07/22 13:50		
Field Specific Conductance	**555**	umhos/cm			1		04/07/22 13:50		
Turbidity	**N**	NTU			1		04/07/22 13:50		
Apparent Color	**N**	no units			1		04/07/22 13:50		
Odor	**N**	no units			1		04/07/22 13:50		
Temperature, Water (C)	**12.0**	deg C			1		04/07/22 13:50		

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: LGRL PW APRIL
Pace Project No.: 40243151

Sample: PW-23 **Lab ID: 40243151003** Collected: 04/07/22 14:30 Received: 04/08/22 08:45 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Green Bay								
Total Hardness by 2340B	**437000**	ug/L	2000	150	1	04/11/22 05:57	04/13/22 00:15		
524.2 MSV	Analytical Method: EPA 524.2 Pace Analytical Services - Indianapolis								
Acetone	**<0.62**	ug/L	2.1	0.62	1		04/14/22 20:38	67-64-1	N2
Benzene	**<0.099**	ug/L	0.33	0.099	1		04/14/22 20:38	71-43-2	N2
Bromodichloromethane	**<0.17**	ug/L	0.58	0.17	1		04/14/22 20:38	75-27-4	N2
Bromoform	**<0.14**	ug/L	0.48	0.14	1		04/14/22 20:38	75-25-2	L1,N2
Bromomethane	**<0.28**	ug/L	0.94	0.28	1		04/14/22 20:38	74-83-9	L1,N2
2-Butanone (MEK)	**<0.49**	ug/L	1.6	0.49	1		04/14/22 20:38	78-93-3	N2
Carbon disulfide	**<0.11**	ug/L	0.38	0.11	1		04/14/22 20:38	75-15-0	N2
Carbon tetrachloride	**<0.14**	ug/L	0.48	0.14	1		04/14/22 20:38	56-23-5	N2
Chlorobenzene	**<0.083**	ug/L	0.28	0.083	1		04/14/22 20:38	108-90-7	N2
Chloroethane	**<0.17**	ug/L	0.58	0.17	1		04/14/22 20:38	75-00-3	N2
Chloroform	**<0.58**	ug/L	1.9	0.58	1		04/14/22 20:38	67-66-3	N2
Chloromethane	**<0.10**	ug/L	0.35	0.10	1		04/14/22 20:38	74-87-3	N2
1,2-Dibromo-3-chloropropane	**<0.18**	ug/L	0.60	0.18	1		04/14/22 20:38	96-12-8	N2
Dibromochloromethane	**<0.12**	ug/L	0.38	0.12	1		04/14/22 20:38	124-48-1	N2
1,2-Dibromoethane (EDB)	**<0.088**	ug/L	0.29	0.088	1		04/14/22 20:38	106-93-4	N2
Dibromomethane	**<0.24**	ug/L	0.79	0.24	1		04/14/22 20:38	74-95-3	N2
1,2-Dichlorobenzene	**<0.043**	ug/L	0.14	0.043	1		04/14/22 20:38	95-50-1	N2
1,3-Dichlorobenzene	**<0.076**	ug/L	0.25	0.076	1		04/14/22 20:38	541-73-1	N2
1,4-Dichlorobenzene	**<0.059**	ug/L	0.20	0.059	1		04/14/22 20:38	106-46-7	N2
Dichlorodifluoromethane	**<0.31**	ug/L	1.0	0.31	1		04/14/22 20:38	75-71-8	N2
1,1-Dichloroethane	**<0.15**	ug/L	0.49	0.15	1		04/14/22 20:38	75-34-3	N2
1,2-Dichloroethane	**<0.085**	ug/L	0.28	0.085	1		04/14/22 20:38	107-06-2	N2
1,1-Dichloroethene	**<0.23**	ug/L	0.77	0.23	1		04/14/22 20:38	75-35-4	N2
cis-1,2-Dichloroethene	**<0.25**	ug/L	0.83	0.25	1		04/14/22 20:38	156-59-2	N2
trans-1,2-Dichloroethene	**<0.32**	ug/L	1.1	0.32	1		04/14/22 20:38	156-60-5	N2
1,2-Dichloropropane	**<0.20**	ug/L	0.66	0.20	1		04/14/22 20:38	78-87-5	N2
cis-1,3-Dichloropropene	**<0.088**	ug/L	0.29	0.088	1		04/14/22 20:38	10061-01-5	N2
trans-1,3-Dichloropropene	**<0.093**	ug/L	0.31	0.093	1		04/14/22 20:38	10061-02-6	N2
Ethylbenzene	**<0.11**	ug/L	0.35	0.11	1		04/14/22 20:38	100-41-4	N2
Methylene Chloride	**<2.1**	ug/L	6.9	2.1	1		04/14/22 20:38	75-09-2	N2
Methyl-tert-butyl ether	**<0.11**	ug/L	0.37	0.11	1		04/14/22 20:38	1634-04-4	N2
Naphthalene	**<0.073**	ug/L	0.24	0.073	1		04/14/22 20:38	91-20-3	N2
Styrene	**<0.13**	ug/L	0.42	0.13	1		04/14/22 20:38	100-42-5	N2
Tetrachloroethene	**<0.094**	ug/L	0.31	0.094	1		04/14/22 20:38	127-18-4	N2
Tetrahydrofuran	**<0.38**	ug/L	1.3	0.38	1		04/14/22 20:38	109-99-9	N2
Toluene	**<0.12**	ug/L	0.39	0.12	1		04/14/22 20:38	108-88-3	N2
1,1,1-Trichloroethane	**<0.22**	ug/L	0.72	0.22	1		04/14/22 20:38	71-55-6	N2
1,1,2-Trichloroethane	**<0.15**	ug/L	0.51	0.15	1		04/14/22 20:38	79-00-5	N2
Trichloroethene	**<0.17**	ug/L	0.56	0.17	1		04/14/22 20:38	79-01-6	N2
Trichlorofluoromethane	**<0.20**	ug/L	0.67	0.20	1		04/14/22 20:38	75-69-4	N2
Vinyl chloride	**<0.087**	ug/L	0.29	0.087	1		04/14/22 20:38	75-01-4	N2

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: LGRL PW APRIL
Pace Project No.: 40243151

Sample: PW-23 **Lab ID: 40243151003** Collected: 04/07/22 14:30 Received: 04/08/22 08:45 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
524.2 MSV	Analytical Method: EPA 524.2								
	Pace Analytical Services - Indianapolis								
Xylene (Total)	**<0.11**	ug/L	0.36	0.11	1		04/14/22 20:38	1330-20-7	N2
Surrogates									
4-Bromofluorobenzene (S)	95	%.	70-130		1		04/14/22 20:38	460-00-4	
Dibromofluoromethane (S)	93	%.	70-130		1		04/14/22 20:38	1868-53-7	
Toluene-d8 (S)	107	%.	70-130		1		04/14/22 20:38	2037-26-5	
Field Data	Analytical Method:								
	Pace Analytical Services - Green Bay								
Field pH	**7.35**	Std. Units			1		04/07/22 14:30		
Field Specific Conductance	**846**	umhos/cm			1		04/07/22 14:30		
Turbidity	**N**	NTU			1		04/07/22 14:30		
Apparent Color	**N**	no units			1		04/07/22 14:30		
Odor	**N**	no units			1		04/07/22 14:30		
Temperature, Water (C)	**7.9**	deg C			1		04/07/22 14:30		
300.0 IC Anions	Analytical Method: EPA 300.0								
	Pace Analytical Services - Green Bay								
Chloride	**107**	mg/L	10.0	2.2	5		04/19/22 20:12	16887-00-6	
310.2 Alkalinity	Analytical Method: EPA 310.2								
	Pace Analytical Services - Green Bay								
Alkalinity, Total as CaCO3	**407**	mg/L	50.0	10.4	2		04/15/22 11:07		

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: LGRL PW APRIL
Pace Project No.: 40243151

Sample: PW-38 **Lab ID: 40243151004** Collected: 04/07/22 14:10 Received: 04/08/22 08:45 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Green Bay								
Total Hardness by 2340B	**385000**	ug/L	2000	150	1	04/11/22 05:57	04/13/22 00:18		
524.2 MSV	Analytical Method: EPA 524.2 Pace Analytical Services - Indianapolis								
Acetone	**<0.62**	ug/L	2.1	0.62	1		04/14/22 21:02	67-64-1	N2
Benzene	**<0.099**	ug/L	0.33	0.099	1		04/14/22 21:02	71-43-2	N2
Bromodichloromethane	**<0.17**	ug/L	0.58	0.17	1		04/14/22 21:02	75-27-4	N2
Bromoform	**<0.14**	ug/L	0.48	0.14	1		04/14/22 21:02	75-25-2	L1,N2
Bromomethane	**<0.28**	ug/L	0.94	0.28	1		04/14/22 21:02	74-83-9	L1,N2
2-Butanone (MEK)	**<0.49**	ug/L	1.6	0.49	1		04/14/22 21:02	78-93-3	N2
Carbon disulfide	**<0.11**	ug/L	0.38	0.11	1		04/14/22 21:02	75-15-0	N2
Carbon tetrachloride	**<0.14**	ug/L	0.48	0.14	1		04/14/22 21:02	56-23-5	N2
Chlorobenzene	**<0.083**	ug/L	0.28	0.083	1		04/14/22 21:02	108-90-7	N2
Chloroethane	**<0.17**	ug/L	0.58	0.17	1		04/14/22 21:02	75-00-3	N2
Chloroform	**<0.58**	ug/L	1.9	0.58	1		04/14/22 21:02	67-66-3	N2
Chloromethane	**<0.10**	ug/L	0.35	0.10	1		04/14/22 21:02	74-87-3	N2
1,2-Dibromo-3-chloropropane	**<0.18**	ug/L	0.60	0.18	1		04/14/22 21:02	96-12-8	N2
Dibromochloromethane	**<0.12**	ug/L	0.38	0.12	1		04/14/22 21:02	124-48-1	N2
1,2-Dibromoethane (EDB)	**<0.088**	ug/L	0.29	0.088	1		04/14/22 21:02	106-93-4	N2
Dibromomethane	**<0.24**	ug/L	0.79	0.24	1		04/14/22 21:02	74-95-3	N2
1,2-Dichlorobenzene	**<0.043**	ug/L	0.14	0.043	1		04/14/22 21:02	95-50-1	N2
1,3-Dichlorobenzene	**<0.076**	ug/L	0.25	0.076	1		04/14/22 21:02	541-73-1	N2
1,4-Dichlorobenzene	**<0.059**	ug/L	0.20	0.059	1		04/14/22 21:02	106-46-7	N2
Dichlorodifluoromethane	**<0.31**	ug/L	1.0	0.31	1		04/14/22 21:02	75-71-8	N2
1,1-Dichloroethane	**<0.15**	ug/L	0.49	0.15	1		04/14/22 21:02	75-34-3	N2
1,2-Dichloroethane	**<0.085**	ug/L	0.28	0.085	1		04/14/22 21:02	107-06-2	N2
1,1-Dichloroethene	**<0.23**	ug/L	0.77	0.23	1		04/14/22 21:02	75-35-4	N2
cis-1,2-Dichloroethene	**<0.25**	ug/L	0.83	0.25	1		04/14/22 21:02	156-59-2	N2
trans-1,2-Dichloroethene	**<0.32**	ug/L	1.1	0.32	1		04/14/22 21:02	156-60-5	N2
1,2-Dichloropropane	**<0.20**	ug/L	0.66	0.20	1		04/14/22 21:02	78-87-5	N2
cis-1,3-Dichloropropene	**<0.088**	ug/L	0.29	0.088	1		04/14/22 21:02	10061-01-5	N2
trans-1,3-Dichloropropene	**<0.093**	ug/L	0.31	0.093	1		04/14/22 21:02	10061-02-6	N2
Ethylbenzene	**<0.11**	ug/L	0.35	0.11	1		04/14/22 21:02	100-41-4	N2
Methylene Chloride	**<2.1**	ug/L	6.9	2.1	1		04/14/22 21:02	75-09-2	N2
Methyl-tert-butyl ether	**<0.11**	ug/L	0.37	0.11	1		04/14/22 21:02	1634-04-4	N2
Naphthalene	**<0.073**	ug/L	0.24	0.073	1		04/14/22 21:02	91-20-3	N2
Styrene	**<0.13**	ug/L	0.42	0.13	1		04/14/22 21:02	100-42-5	N2
Tetrachloroethene	**<0.094**	ug/L	0.31	0.094	1		04/14/22 21:02	127-18-4	N2
Tetrahydrofuran	**<0.38**	ug/L	1.3	0.38	1		04/14/22 21:02	109-99-9	N2
Toluene	**<0.12**	ug/L	0.39	0.12	1		04/14/22 21:02	108-88-3	N2
1,1,1-Trichloroethane	**<0.22**	ug/L	0.72	0.22	1		04/14/22 21:02	71-55-6	N2
1,1,2-Trichloroethane	**<0.15**	ug/L	0.51	0.15	1		04/14/22 21:02	79-00-5	N2
Trichloroethene	**<0.17**	ug/L	0.56	0.17	1		04/14/22 21:02	79-01-6	N2
Trichlorofluoromethane	**<0.20**	ug/L	0.67	0.20	1		04/14/22 21:02	75-69-4	N2
Vinyl chloride	**<0.087**	ug/L	0.29	0.087	1		04/14/22 21:02	75-01-4	N2

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: LGRL PW APRIL
Pace Project No.: 40243151

Sample: PW-38 **Lab ID: 40243151004** Collected: 04/07/22 14:10 Received: 04/08/22 08:45 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
524.2 MSV	Analytical Method: EPA 524.2								
	Pace Analytical Services - Indianapolis								
Xylene (Total)	**<0.11**	ug/L	0.36	0.11	1		04/14/22 21:02	1330-20-7	N2
Surrogates									
4-Bromofluorobenzene (S)	95	%.	70-130		1		04/14/22 21:02	460-00-4	
Dibromofluoromethane (S)	93	%.	70-130		1		04/14/22 21:02	1868-53-7	
Toluene-d8 (S)	106	%.	70-130		1		04/14/22 21:02	2037-26-5	
Field Data	Analytical Method:								
	Pace Analytical Services - Green Bay								
Field pH	**7.51**	Std. Units			1		04/07/22 14:10		
Field Specific Conductance	**609**	umhos/cm			1		04/07/22 14:10		
Turbidity	**N**	NTU			1		04/07/22 14:10		
Apparent Color	**N**	no units			1		04/07/22 14:10		
Odor	**N**	no units			1		04/07/22 14:10		
Temperature, Water (C)	**10.1**	deg C			1		04/07/22 14:10		
300.0 IC Anions	Analytical Method: EPA 300.0								
	Pace Analytical Services - Green Bay								
Chloride	**1.6J**	mg/L	2.0	0.43	1		04/19/22 20:27	16887-00-6	
310.2 Alkalinity	Analytical Method: EPA 310.2								
	Pace Analytical Services - Green Bay								
Alkalinity, Total as CaCO3	**360**	mg/L	50.0	10.4	2		04/15/22 11:11		

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: LGRL PW APRIL
Pace Project No.: 40243151

Sample: TRIP BLANK **Lab ID: 40243151005** Collected: 04/07/22 00:00 Received: 04/08/22 08:45 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
524.2 MSV	Analytical Method: EPA 524.2 Pace Analytical Services - Indianapolis								
Acetone	**<0.62**	ug/L	2.1	0.62	1		04/14/22 21:27	67-64-1	N2
Benzene	**<0.099**	ug/L	0.33	0.099	1		04/14/22 21:27	71-43-2	N2
Bromodichloromethane	**<0.17**	ug/L	0.58	0.17	1		04/14/22 21:27	75-27-4	N2
Bromoform	**<0.14**	ug/L	0.48	0.14	1		04/14/22 21:27	75-25-2	L1,N2
Bromomethane	**<0.28**	ug/L	0.94	0.28	1		04/14/22 21:27	74-83-9	L1,N2
2-Butanone (MEK)	**<0.49**	ug/L	1.6	0.49	1		04/14/22 21:27	78-93-3	N2
Carbon disulfide	**<0.11**	ug/L	0.38	0.11	1		04/14/22 21:27	75-15-0	N2
Carbon tetrachloride	**<0.14**	ug/L	0.48	0.14	1		04/14/22 21:27	56-23-5	N2
Chlorobenzene	**<0.083**	ug/L	0.28	0.083	1		04/14/22 21:27	108-90-7	N2
Chloroethane	**<0.17**	ug/L	0.58	0.17	1		04/14/22 21:27	75-00-3	N2
Chloroform	**<0.58**	ug/L	1.9	0.58	1		04/14/22 21:27	67-66-3	N2
Chloromethane	**<0.10**	ug/L	0.35	0.10	1		04/14/22 21:27	74-87-3	N2
1,2-Dibromo-3-chloropropane	**<0.18**	ug/L	0.60	0.18	1		04/14/22 21:27	96-12-8	N2
Dibromochloromethane	**<0.12**	ug/L	0.38	0.12	1		04/14/22 21:27	124-48-1	N2
1,2-Dibromoethane (EDB)	**<0.088**	ug/L	0.29	0.088	1		04/14/22 21:27	106-93-4	N2
Dibromomethane	**<0.24**	ug/L	0.79	0.24	1		04/14/22 21:27	74-95-3	N2
1,2-Dichlorobenzene	**<0.043**	ug/L	0.14	0.043	1		04/14/22 21:27	95-50-1	N2
1,3-Dichlorobenzene	**<0.076**	ug/L	0.25	0.076	1		04/14/22 21:27	541-73-1	N2
1,4-Dichlorobenzene	**<0.059**	ug/L	0.20	0.059	1		04/14/22 21:27	106-46-7	N2
Dichlorodifluoromethane	**<0.31**	ug/L	1.0	0.31	1		04/14/22 21:27	75-71-8	N2
1,1-Dichloroethane	**<0.15**	ug/L	0.49	0.15	1		04/14/22 21:27	75-34-3	N2
1,2-Dichloroethane	**<0.085**	ug/L	0.28	0.085	1		04/14/22 21:27	107-06-2	N2
1,1-Dichloroethene	**<0.23**	ug/L	0.77	0.23	1		04/14/22 21:27	75-35-4	N2
cis-1,2-Dichloroethene	**<0.25**	ug/L	0.83	0.25	1		04/14/22 21:27	156-59-2	N2
trans-1,2-Dichloroethene	**<0.32**	ug/L	1.1	0.32	1		04/14/22 21:27	156-60-5	N2
1,2-Dichloropropane	**<0.20**	ug/L	0.66	0.20	1		04/14/22 21:27	78-87-5	N2
cis-1,3-Dichloropropene	**<0.088**	ug/L	0.29	0.088	1		04/14/22 21:27	10061-01-5	N2
trans-1,3-Dichloropropene	**<0.093**	ug/L	0.31	0.093	1		04/14/22 21:27	10061-02-6	N2
Ethylbenzene	**<0.11**	ug/L	0.35	0.11	1		04/14/22 21:27	100-41-4	N2
Methylene Chloride	**<2.1**	ug/L	6.9	2.1	1		04/14/22 21:27	75-09-2	N2
Methyl-tert-butyl ether	**<0.11**	ug/L	0.37	0.11	1		04/14/22 21:27	1634-04-4	N2
Naphthalene	**<0.073**	ug/L	0.24	0.073	1		04/14/22 21:27	91-20-3	N2
Styrene	**<0.13**	ug/L	0.42	0.13	1		04/14/22 21:27	100-42-5	N2
Tetrachloroethene	**<0.094**	ug/L	0.31	0.094	1		04/14/22 21:27	127-18-4	N2
Tetrahydrofuran	**<0.38**	ug/L	1.3	0.38	1		04/14/22 21:27	109-99-9	N2
Toluene	**<0.12**	ug/L	0.39	0.12	1		04/14/22 21:27	108-88-3	N2
1,1,1-Trichloroethane	**<0.22**	ug/L	0.72	0.22	1		04/14/22 21:27	71-55-6	N2
1,1,2-Trichloroethane	**<0.15**	ug/L	0.51	0.15	1		04/14/22 21:27	79-00-5	N2
Trichloroethene	**<0.17**	ug/L	0.56	0.17	1		04/14/22 21:27	79-01-6	N2
Trichlorofluoromethane	**<0.20**	ug/L	0.67	0.20	1		04/14/22 21:27	75-69-4	N2
Vinyl chloride	**<0.087**	ug/L	0.29	0.087	1		04/14/22 21:27	75-01-4	N2
Xylene (Total)	**<0.11**	ug/L	0.36	0.11	1		04/14/22 21:27	1330-20-7	N2
Surrogates									
4-Bromofluorobenzene (S)	95	%.	70-130		1		04/14/22 21:27	460-00-4	
Dibromofluoromethane (S)	94	%.	70-130		1		04/14/22 21:27	1868-53-7	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: LGRL PW APRIL
Pace Project No.: 40243151

Sample: TRIP BLANK **Lab ID: 40243151005** Collected: 04/07/22 00:00 Received: 04/08/22 08:45 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
524.2 MSV	Analytical Method: EPA 524.2 Pace Analytical Services - Indianapolis								
Surrogates									
Toluene-d8 (S)	106	%.	70-130		1		04/14/22 21:27	2037-26-5	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: LGRL PW APRIL
Pace Project No.: 40243151

Sample: PW-19 **Lab ID: 40243238001** Collected: 04/08/22 10:25 Received: 04/09/22 08:40 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Green Bay								
Total Hardness by 2340B	**469000**	ug/L	2000	150	1	04/12/22 06:28	04/13/22 12:41		
524.2 MSV	Analytical Method: EPA 524.2 Pace Analytical Services - Indianapolis								
Acetone	**<0.62**	ug/L	2.1	0.62	1		04/14/22 21:52	67-64-1	N2
Benzene	**<0.099**	ug/L	0.33	0.099	1		04/14/22 21:52	71-43-2	N2
Bromodichloromethane	**<0.17**	ug/L	0.58	0.17	1		04/14/22 21:52	75-27-4	N2
Bromoform	**<0.14**	ug/L	0.48	0.14	1		04/14/22 21:52	75-25-2	L1,N2
Bromomethane	**<0.28**	ug/L	0.94	0.28	1		04/14/22 21:52	74-83-9	L1,N2
2-Butanone (MEK)	**<0.49**	ug/L	1.6	0.49	1		04/14/22 21:52	78-93-3	N2
Carbon disulfide	**<0.11**	ug/L	0.38	0.11	1		04/14/22 21:52	75-15-0	N2
Carbon tetrachloride	**<0.14**	ug/L	0.48	0.14	1		04/14/22 21:52	56-23-5	N2
Chlorobenzene	**<0.083**	ug/L	0.28	0.083	1		04/14/22 21:52	108-90-7	N2
Chloroethane	**<0.17**	ug/L	0.58	0.17	1		04/14/22 21:52	75-00-3	N2
Chloroform	**<0.58**	ug/L	1.9	0.58	1		04/14/22 21:52	67-66-3	N2
Chloromethane	**<0.10**	ug/L	0.35	0.10	1		04/14/22 21:52	74-87-3	N2
1,2-Dibromo-3-chloropropane	**<0.18**	ug/L	0.60	0.18	1		04/14/22 21:52	96-12-8	N2
Dibromochloromethane	**<0.12**	ug/L	0.38	0.12	1		04/14/22 21:52	124-48-1	N2
1,2-Dibromoethane (EDB)	**<0.088**	ug/L	0.29	0.088	1		04/14/22 21:52	106-93-4	N2
Dibromomethane	**<0.24**	ug/L	0.79	0.24	1		04/14/22 21:52	74-95-3	N2
1,2-Dichlorobenzene	**<0.043**	ug/L	0.14	0.043	1		04/14/22 21:52	95-50-1	N2
1,3-Dichlorobenzene	**<0.076**	ug/L	0.25	0.076	1		04/14/22 21:52	541-73-1	N2
1,4-Dichlorobenzene	**<0.059**	ug/L	0.20	0.059	1		04/14/22 21:52	106-46-7	N2
Dichlorodifluoromethane	**<0.31**	ug/L	1.0	0.31	1		04/14/22 21:52	75-71-8	N2
1,1-Dichloroethane	**<0.15**	ug/L	0.49	0.15	1		04/14/22 21:52	75-34-3	N2
1,2-Dichloroethane	**<0.085**	ug/L	0.28	0.085	1		04/14/22 21:52	107-06-2	N2
1,1-Dichloroethene	**<0.23**	ug/L	0.77	0.23	1		04/14/22 21:52	75-35-4	N2
cis-1,2-Dichloroethene	**0.44J**	ug/L	0.83	0.25	1		04/14/22 21:52	156-59-2	N2
trans-1,2-Dichloroethene	**<0.32**	ug/L	1.1	0.32	1		04/14/22 21:52	156-60-5	N2
1,2-Dichloropropane	**<0.20**	ug/L	0.66	0.20	1		04/14/22 21:52	78-87-5	N2
cis-1,3-Dichloropropene	**<0.088**	ug/L	0.29	0.088	1		04/14/22 21:52	10061-01-5	N2
trans-1,3-Dichloropropene	**<0.093**	ug/L	0.31	0.093	1		04/14/22 21:52	10061-02-6	N2
Ethylbenzene	**<0.11**	ug/L	0.35	0.11	1		04/14/22 21:52	100-41-4	N2
Methylene Chloride	**<2.1**	ug/L	6.9	2.1	1		04/14/22 21:52	75-09-2	N2
Methyl-tert-butyl ether	**<0.11**	ug/L	0.37	0.11	1		04/14/22 21:52	1634-04-4	N2
Naphthalene	**<0.073**	ug/L	0.24	0.073	1		04/14/22 21:52	91-20-3	N2
Styrene	**<0.13**	ug/L	0.42	0.13	1		04/14/22 21:52	100-42-5	N2
Tetrachloroethene	**<0.094**	ug/L	0.31	0.094	1		04/14/22 21:52	127-18-4	N2
Tetrahydrofuran	**<0.38**	ug/L	1.3	0.38	1		04/14/22 21:52	109-99-9	N2
Toluene	**<0.12**	ug/L	0.39	0.12	1		04/14/22 21:52	108-88-3	N2
1,1,1-Trichloroethane	**<0.22**	ug/L	0.72	0.22	1		04/14/22 21:52	71-55-6	N2
1,1,2-Trichloroethane	**<0.15**	ug/L	0.51	0.15	1		04/14/22 21:52	79-00-5	N2
Trichloroethene	**<0.17**	ug/L	0.56	0.17	1		04/14/22 21:52	79-01-6	N2
Trichlorofluoromethane	**<0.20**	ug/L	0.67	0.20	1		04/14/22 21:52	75-69-4	N2
Vinyl chloride	**<0.087**	ug/L	0.29	0.087	1		04/14/22 21:52	75-01-4	N2

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: LGRL PW APRIL
Pace Project No.: 40243151

Sample: PW-19 **Lab ID: 40243238001** Collected: 04/08/22 10:25 Received: 04/09/22 08:40 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
524.2 MSV	Analytical Method: EPA 524.2								
	Pace Analytical Services - Indianapolis								
Xylene (Total)	**<0.11**	ug/L	0.36	0.11	1		04/14/22 21:52	1330-20-7	N2
Surrogates									
4-Bromofluorobenzene (S)	94	%.	70-130		1		04/14/22 21:52	460-00-4	
Dibromofluoromethane (S)	94	%.	70-130		1		04/14/22 21:52	1868-53-7	
Toluene-d8 (S)	108	%.	70-130		1		04/14/22 21:52	2037-26-5	
Field Data	Analytical Method:								
	Pace Analytical Services - Green Bay								
Field pH	**7.50**	Std. Units			1		04/08/22 10:25		
Field Specific Conductance	**697**	umhos/cm			1		04/08/22 10:25		
Turbidity	**N**	NTU			1		04/08/22 10:25		
Apparent Color	**N**	no units			1		04/08/22 10:25		
Odor	**N**	no units			1		04/08/22 10:25		
Temperature, Water (C)	**10.4**	deg C			1		04/08/22 10:25		
300.0 IC Anions	Analytical Method: EPA 300.0								
	Pace Analytical Services - Green Bay								
Chloride	**39.8**	mg/L	2.0	0.43	1		04/18/22 21:03	16887-00-6	
310.2 Alkalinity	Analytical Method: EPA 310.2								
	Pace Analytical Services - Green Bay								
Alkalinity, Total as CaCO3	**382**	mg/L	50.0	10.4	2		04/15/22 11:13		

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: LGRL PW APRIL
Pace Project No.: 40243151

Sample: PW-20 **Lab ID: 40243238002** Collected: 04/08/22 12:45 Received: 04/09/22 08:40 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Green Bay								
Total Hardness by 2340B	**418000**	ug/L	2000	150	1	04/12/22 06:28	04/13/22 12:43		
524.2 MSV	Analytical Method: EPA 524.2 Pace Analytical Services - Indianapolis								
Acetone	**<0.62**	ug/L	2.1	0.62	1		04/14/22 22:17	67-64-1	N2
Benzene	**<0.099**	ug/L	0.33	0.099	1		04/14/22 22:17	71-43-2	N2
Bromodichloromethane	**<0.17**	ug/L	0.58	0.17	1		04/14/22 22:17	75-27-4	N2
Bromoform	**<0.14**	ug/L	0.48	0.14	1		04/14/22 22:17	75-25-2	L1,N2
Bromomethane	**<0.28**	ug/L	0.94	0.28	1		04/14/22 22:17	74-83-9	L1,N2
2-Butanone (MEK)	**<0.49**	ug/L	1.6	0.49	1		04/14/22 22:17	78-93-3	N2
Carbon disulfide	**<0.11**	ug/L	0.38	0.11	1		04/14/22 22:17	75-15-0	N2
Carbon tetrachloride	**<0.14**	ug/L	0.48	0.14	1		04/14/22 22:17	56-23-5	N2
Chlorobenzene	**<0.083**	ug/L	0.28	0.083	1		04/14/22 22:17	108-90-7	N2
Chloroethane	**<0.17**	ug/L	0.58	0.17	1		04/14/22 22:17	75-00-3	N2
Chloroform	**<0.58**	ug/L	1.9	0.58	1		04/14/22 22:17	67-66-3	N2
Chloromethane	**<0.10**	ug/L	0.35	0.10	1		04/14/22 22:17	74-87-3	N2
1,2-Dibromo-3-chloropropane	**<0.18**	ug/L	0.60	0.18	1		04/14/22 22:17	96-12-8	N2
Dibromochloromethane	**<0.12**	ug/L	0.38	0.12	1		04/14/22 22:17	124-48-1	N2
1,2-Dibromoethane (EDB)	**<0.088**	ug/L	0.29	0.088	1		04/14/22 22:17	106-93-4	N2
Dibromomethane	**<0.24**	ug/L	0.79	0.24	1		04/14/22 22:17	74-95-3	N2
1,2-Dichlorobenzene	**<0.043**	ug/L	0.14	0.043	1		04/14/22 22:17	95-50-1	N2
1,3-Dichlorobenzene	**<0.076**	ug/L	0.25	0.076	1		04/14/22 22:17	541-73-1	N2
1,4-Dichlorobenzene	**<0.059**	ug/L	0.20	0.059	1		04/14/22 22:17	106-46-7	N2
Dichlorodifluoromethane	**<0.31**	ug/L	1.0	0.31	1		04/14/22 22:17	75-71-8	N2
1,1-Dichloroethane	**<0.15**	ug/L	0.49	0.15	1		04/14/22 22:17	75-34-3	N2
1,2-Dichloroethane	**<0.085**	ug/L	0.28	0.085	1		04/14/22 22:17	107-06-2	N2
1,1-Dichloroethene	**<0.23**	ug/L	0.77	0.23	1		04/14/22 22:17	75-35-4	N2
cis-1,2-Dichloroethene	**<0.25**	ug/L	0.83	0.25	1		04/14/22 22:17	156-59-2	N2
trans-1,2-Dichloroethene	**<0.32**	ug/L	1.1	0.32	1		04/14/22 22:17	156-60-5	N2
1,2-Dichloropropane	**<0.20**	ug/L	0.66	0.20	1		04/14/22 22:17	78-87-5	N2
cis-1,3-Dichloropropene	**<0.088**	ug/L	0.29	0.088	1		04/14/22 22:17	10061-01-5	N2
trans-1,3-Dichloropropene	**<0.093**	ug/L	0.31	0.093	1		04/14/22 22:17	10061-02-6	N2
Ethylbenzene	**<0.11**	ug/L	0.35	0.11	1		04/14/22 22:17	100-41-4	N2
Methylene Chloride	**<2.1**	ug/L	6.9	2.1	1		04/14/22 22:17	75-09-2	N2
Methyl-tert-butyl ether	**<0.11**	ug/L	0.37	0.11	1		04/14/22 22:17	1634-04-4	N2
Naphthalene	**<0.073**	ug/L	0.24	0.073	1		04/14/22 22:17	91-20-3	N2
Styrene	**<0.13**	ug/L	0.42	0.13	1		04/14/22 22:17	100-42-5	N2
Tetrachloroethene	**<0.094**	ug/L	0.31	0.094	1		04/14/22 22:17	127-18-4	N2
Tetrahydrofuran	**<0.38**	ug/L	1.3	0.38	1		04/14/22 22:17	109-99-9	N2
Toluene	**<0.12**	ug/L	0.39	0.12	1		04/14/22 22:17	108-88-3	N2
1,1,1-Trichloroethane	**<0.22**	ug/L	0.72	0.22	1		04/14/22 22:17	71-55-6	N2
1,1,2-Trichloroethane	**<0.15**	ug/L	0.51	0.15	1		04/14/22 22:17	79-00-5	N2
Trichloroethene	**<0.17**	ug/L	0.56	0.17	1		04/14/22 22:17	79-01-6	N2
Trichlorofluoromethane	**<0.20**	ug/L	0.67	0.20	1		04/14/22 22:17	75-69-4	N2
Vinyl chloride	**<0.087**	ug/L	0.29	0.087	1		04/14/22 22:17	75-01-4	N2

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: LGRL PW APRIL
Pace Project No.: 40243151

Sample: PW-20 **Lab ID: 40243238002** Collected: 04/08/22 12:45 Received: 04/09/22 08:40 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
524.2 MSV	Analytical Method: EPA 524.2								
	Pace Analytical Services - Indianapolis								
Xylene (Total)	**<0.11**	ug/L	0.36	0.11	1		04/14/22 22:17	1330-20-7	N2
Surrogates									
4-Bromofluorobenzene (S)	94	%.	70-130		1		04/14/22 22:17	460-00-4	
Dibromofluoromethane (S)	94	%.	70-130		1		04/14/22 22:17	1868-53-7	
Toluene-d8 (S)	107	%.	70-130		1		04/14/22 22:17	2037-26-5	
Field Data	Analytical Method:								
	Pace Analytical Services - Green Bay								
Field pH	**7.50**	Std. Units			1		04/08/22 12:45		
Field Specific Conductance	**538**	umhos/cm			1		04/08/22 12:45		
Turbidity	**N**	NTU			1		04/08/22 12:45		
Apparent Color	**N**	no units			1		04/08/22 12:45		
Odor	**N**	no units			1		04/08/22 12:45		
Temperature, Water (C)	**10.8**	deg C			1		04/08/22 12:45		
300.0 IC Anions	Analytical Method: EPA 300.0								
	Pace Analytical Services - Green Bay								
Chloride	**15.0**	mg/L	2.0	0.43	1		04/18/22 21:17	16887-00-6	
310.2 Alkalinity	Analytical Method: EPA 310.2								
	Pace Analytical Services - Green Bay								
Alkalinity, Total as CaCO3	**360**	mg/L	50.0	10.4	2		04/15/22 11:14		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: LGRL PW APRIL
Pace Project No.: 40243151

Sample: PW-28 **Lab ID: 40243238003** Collected: 04/08/22 10:55 Received: 04/09/22 08:40 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Green Bay								
Total Hardness by 2340B	**481000**	ug/L	2000	150	1	04/12/22 06:28	04/13/22 12:50		
524.2 MSV	Analytical Method: EPA 524.2 Pace Analytical Services - Indianapolis								
Acetone	**<0.62**	ug/L	2.1	0.62	1		04/14/22 22:42	67-64-1	N2
Benzene	**<0.099**	ug/L	0.33	0.099	1		04/14/22 22:42	71-43-2	N2
Bromodichloromethane	**<0.17**	ug/L	0.58	0.17	1		04/14/22 22:42	75-27-4	N2
Bromoform	**<0.14**	ug/L	0.48	0.14	1		04/14/22 22:42	75-25-2	L1,N2
Bromomethane	**<0.28**	ug/L	0.94	0.28	1		04/14/22 22:42	74-83-9	L1,N2
2-Butanone (MEK)	**<0.49**	ug/L	1.6	0.49	1		04/14/22 22:42	78-93-3	N2
Carbon disulfide	**<0.11**	ug/L	0.38	0.11	1		04/14/22 22:42	75-15-0	N2
Carbon tetrachloride	**<0.14**	ug/L	0.48	0.14	1		04/14/22 22:42	56-23-5	N2
Chlorobenzene	**<0.083**	ug/L	0.28	0.083	1		04/14/22 22:42	108-90-7	N2
Chloroethane	**<0.17**	ug/L	0.58	0.17	1		04/14/22 22:42	75-00-3	N2
Chloroform	**<0.58**	ug/L	1.9	0.58	1		04/14/22 22:42	67-66-3	N2
Chloromethane	**<0.10**	ug/L	0.35	0.10	1		04/14/22 22:42	74-87-3	N2
1,2-Dibromo-3-chloropropane	**<0.18**	ug/L	0.60	0.18	1		04/14/22 22:42	96-12-8	N2
Dibromochloromethane	**<0.12**	ug/L	0.38	0.12	1		04/14/22 22:42	124-48-1	N2
1,2-Dibromoethane (EDB)	**<0.088**	ug/L	0.29	0.088	1		04/14/22 22:42	106-93-4	N2
Dibromomethane	**<0.24**	ug/L	0.79	0.24	1		04/14/22 22:42	74-95-3	N2
1,2-Dichlorobenzene	**<0.043**	ug/L	0.14	0.043	1		04/14/22 22:42	95-50-1	N2
1,3-Dichlorobenzene	**<0.076**	ug/L	0.25	0.076	1		04/14/22 22:42	541-73-1	N2
1,4-Dichlorobenzene	**<0.059**	ug/L	0.20	0.059	1		04/14/22 22:42	106-46-7	N2
Dichlorodifluoromethane	**<0.31**	ug/L	1.0	0.31	1		04/14/22 22:42	75-71-8	N2
1,1-Dichloroethane	**<0.15**	ug/L	0.49	0.15	1		04/14/22 22:42	75-34-3	N2
1,2-Dichloroethane	**<0.085**	ug/L	0.28	0.085	1		04/14/22 22:42	107-06-2	N2
1,1-Dichloroethene	**<0.23**	ug/L	0.77	0.23	1		04/14/22 22:42	75-35-4	N2
cis-1,2-Dichloroethene	**3.5**	ug/L	0.83	0.25	1		04/14/22 22:42	156-59-2	N2
trans-1,2-Dichloroethene	**<0.32**	ug/L	1.1	0.32	1		04/14/22 22:42	156-60-5	N2
1,2-Dichloropropane	**<0.20**	ug/L	0.66	0.20	1		04/14/22 22:42	78-87-5	N2
cis-1,3-Dichloropropene	**<0.088**	ug/L	0.29	0.088	1		04/14/22 22:42	10061-01-5	N2
trans-1,3-Dichloropropene	**<0.093**	ug/L	0.31	0.093	1		04/14/22 22:42	10061-02-6	N2
Ethylbenzene	**<0.11**	ug/L	0.35	0.11	1		04/14/22 22:42	100-41-4	N2
Methylene Chloride	**<2.1**	ug/L	6.9	2.1	1		04/14/22 22:42	75-09-2	N2
Methyl-tert-butyl ether	**<0.11**	ug/L	0.37	0.11	1		04/14/22 22:42	1634-04-4	N2
Naphthalene	**<0.073**	ug/L	0.24	0.073	1		04/14/22 22:42	91-20-3	N2
Styrene	**<0.13**	ug/L	0.42	0.13	1		04/14/22 22:42	100-42-5	N2
Tetrachloroethene	**<0.094**	ug/L	0.31	0.094	1		04/14/22 22:42	127-18-4	N2
Tetrahydrofuran	**<0.38**	ug/L	1.3	0.38	1		04/14/22 22:42	109-99-9	N2
Toluene	**<0.12**	ug/L	0.39	0.12	1		04/14/22 22:42	108-88-3	N2
1,1,1-Trichloroethane	**<0.22**	ug/L	0.72	0.22	1		04/14/22 22:42	71-55-6	N2
1,1,2-Trichloroethane	**<0.15**	ug/L	0.51	0.15	1		04/14/22 22:42	79-00-5	N2
Trichloroethene	**<0.17**	ug/L	0.56	0.17	1		04/14/22 22:42	79-01-6	N2
Trichlorofluoromethane	**<0.20**	ug/L	0.67	0.20	1		04/14/22 22:42	75-69-4	N2
Vinyl chloride	**<0.087**	ug/L	0.29	0.087	1		04/14/22 22:42	75-01-4	N2

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: LGRL PW APRIL
Pace Project No.: 40243151

Sample: PW-28 **Lab ID: 40243238003** Collected: 04/08/22 10:55 Received: 04/09/22 08:40 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
524.2 MSV	Analytical Method: EPA 524.2								
	Pace Analytical Services - Indianapolis								
Xylene (Total)	**<0.11**	ug/L	0.36	0.11	1		04/14/22 22:42	1330-20-7	N2
Surrogates									
4-Bromofluorobenzene (S)	93	%.	70-130		1		04/14/22 22:42	460-00-4	
Dibromofluoromethane (S)	95	%.	70-130		1		04/14/22 22:42	1868-53-7	
Toluene-d8 (S)	105	%.	70-130		1		04/14/22 22:42	2037-26-5	
Field Data	Analytical Method:								
	Pace Analytical Services - Green Bay								
Field pH	**7.53**	Std. Units			1		04/08/22 10:55		
Field Specific Conductance	**651**	umhos/cm			1		04/08/22 10:55		
Turbidity	**N**	NTU			1		04/08/22 10:55		
Apparent Color	**N**	no units			1		04/08/22 10:55		
Odor	**N**	no units			1		04/08/22 10:55		
Temperature, Water (C)	**9.8**	deg C			1		04/08/22 10:55		
300.0 IC Anions	Analytical Method: EPA 300.0								
	Pace Analytical Services - Green Bay								
Chloride	**36.0**	mg/L	2.0	0.43	1		04/18/22 22:17	16887-00-6	
310.2 Alkalinity	Analytical Method: EPA 310.2								
	Pace Analytical Services - Green Bay								
Alkalinity, Total as CaCO3	**395**	mg/L	50.0	10.4	2		04/15/22 11:15		

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: LGRL PW APRIL
Pace Project No.: 40243151

Sample: PW-32 **Lab ID: 40243238004** Collected: 04/08/22 11:20 Received: 04/09/22 08:40 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Green Bay								
Total Hardness by 2340B	**467000**	ug/L	2000	150	1	04/12/22 06:28	04/13/22 12:53		
524.2 MSV	Analytical Method: EPA 524.2 Pace Analytical Services - Indianapolis								
Acetone	**<0.62**	ug/L	2.1	0.62	1		04/14/22 23:07	67-64-1	N2
Benzene	**<0.099**	ug/L	0.33	0.099	1		04/14/22 23:07	71-43-2	N2
Bromodichloromethane	**<0.17**	ug/L	0.58	0.17	1		04/14/22 23:07	75-27-4	N2
Bromoform	**<0.14**	ug/L	0.48	0.14	1		04/14/22 23:07	75-25-2	L1,N2
Bromomethane	**<0.28**	ug/L	0.94	0.28	1		04/14/22 23:07	74-83-9	L1,N2
2-Butanone (MEK)	**<0.49**	ug/L	1.6	0.49	1		04/14/22 23:07	78-93-3	N2
Carbon disulfide	**<0.11**	ug/L	0.38	0.11	1		04/14/22 23:07	75-15-0	N2
Carbon tetrachloride	**<0.14**	ug/L	0.48	0.14	1		04/14/22 23:07	56-23-5	N2
Chlorobenzene	**<0.083**	ug/L	0.28	0.083	1		04/14/22 23:07	108-90-7	N2
Chloroethane	**<0.17**	ug/L	0.58	0.17	1		04/14/22 23:07	75-00-3	N2
Chloroform	**<0.58**	ug/L	1.9	0.58	1		04/14/22 23:07	67-66-3	N2
Chloromethane	**<0.10**	ug/L	0.35	0.10	1		04/14/22 23:07	74-87-3	N2
1,2-Dibromo-3-chloropropane	**<0.18**	ug/L	0.60	0.18	1		04/14/22 23:07	96-12-8	N2
Dibromochloromethane	**<0.12**	ug/L	0.38	0.12	1		04/14/22 23:07	124-48-1	N2
1,2-Dibromoethane (EDB)	**<0.088**	ug/L	0.29	0.088	1		04/14/22 23:07	106-93-4	N2
Dibromomethane	**<0.24**	ug/L	0.79	0.24	1		04/14/22 23:07	74-95-3	N2
1,2-Dichlorobenzene	**<0.043**	ug/L	0.14	0.043	1		04/14/22 23:07	95-50-1	N2
1,3-Dichlorobenzene	**<0.076**	ug/L	0.25	0.076	1		04/14/22 23:07	541-73-1	N2
1,4-Dichlorobenzene	**<0.059**	ug/L	0.20	0.059	1		04/14/22 23:07	106-46-7	N2
Dichlorodifluoromethane	**<0.31**	ug/L	1.0	0.31	1		04/14/22 23:07	75-71-8	N2
1,1-Dichloroethane	**<0.15**	ug/L	0.49	0.15	1		04/14/22 23:07	75-34-3	N2
1,2-Dichloroethane	**<0.085**	ug/L	0.28	0.085	1		04/14/22 23:07	107-06-2	N2
1,1-Dichloroethene	**<0.23**	ug/L	0.77	0.23	1		04/14/22 23:07	75-35-4	N2
cis-1,2-Dichloroethene	**<0.25**	ug/L	0.83	0.25	1		04/14/22 23:07	156-59-2	N2
trans-1,2-Dichloroethene	**<0.32**	ug/L	1.1	0.32	1		04/14/22 23:07	156-60-5	N2
1,2-Dichloropropane	**<0.20**	ug/L	0.66	0.20	1		04/14/22 23:07	78-87-5	N2
cis-1,3-Dichloropropene	**<0.088**	ug/L	0.29	0.088	1		04/14/22 23:07	10061-01-5	N2
trans-1,3-Dichloropropene	**<0.093**	ug/L	0.31	0.093	1		04/14/22 23:07	10061-02-6	N2
Ethylbenzene	**<0.11**	ug/L	0.35	0.11	1		04/14/22 23:07	100-41-4	N2
Methylene Chloride	**<2.1**	ug/L	6.9	2.1	1		04/14/22 23:07	75-09-2	N2
Methyl-tert-butyl ether	**<0.11**	ug/L	0.37	0.11	1		04/14/22 23:07	1634-04-4	N2
Naphthalene	**<0.073**	ug/L	0.24	0.073	1		04/14/22 23:07	91-20-3	N2
Styrene	**<0.13**	ug/L	0.42	0.13	1		04/14/22 23:07	100-42-5	N2
Tetrachloroethene	**<0.094**	ug/L	0.31	0.094	1		04/14/22 23:07	127-18-4	N2
Tetrahydrofuran	**<0.38**	ug/L	1.3	0.38	1		04/14/22 23:07	109-99-9	N2
Toluene	**<0.12**	ug/L	0.39	0.12	1		04/14/22 23:07	108-88-3	N2
1,1,1-Trichloroethane	**<0.22**	ug/L	0.72	0.22	1		04/14/22 23:07	71-55-6	N2
1,1,2-Trichloroethane	**<0.15**	ug/L	0.51	0.15	1		04/14/22 23:07	79-00-5	N2
Trichloroethene	**<0.17**	ug/L	0.56	0.17	1		04/14/22 23:07	79-01-6	N2
Trichlorofluoromethane	**<0.20**	ug/L	0.67	0.20	1		04/14/22 23:07	75-69-4	N2
Vinyl chloride	**<0.087**	ug/L	0.29	0.087	1		04/14/22 23:07	75-01-4	N2

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: LGRL PW APRIL
Pace Project No.: 40243151

Sample: PW-32 **Lab ID: 40243238004** Collected: 04/08/22 11:20 Received: 04/09/22 08:40 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
524.2 MSV	Analytical Method: EPA 524.2								
	Pace Analytical Services - Indianapolis								
Xylene (Total)	**<0.11**	ug/L	0.36	0.11	1		04/14/22 23:07	1330-20-7	N2
Surrogates									
4-Bromofluorobenzene (S)	93	%.	70-130		1		04/14/22 23:07	460-00-4	
Dibromofluoromethane (S)	93	%.	70-130		1		04/14/22 23:07	1868-53-7	
Toluene-d8 (S)	106	%.	70-130		1		04/14/22 23:07	2037-26-5	
Field Data	Analytical Method:								
	Pace Analytical Services - Green Bay								
Field pH	**7.46**	Std. Units			1		04/08/22 11:20		
Field Specific Conductance	**658**	umhos/cm			1		04/08/22 11:20		
Turbidity	**N**	NTU			1		04/08/22 11:20		
Apparent Color	**N**	no units			1		04/08/22 11:20		
Odor	**N**	no units			1		04/08/22 11:20		
Temperature, Water (C)	**10.9**	deg C			1		04/08/22 11:20		
300.0 IC Anions	Analytical Method: EPA 300.0								
	Pace Analytical Services - Green Bay								
Chloride	**41.1**	mg/L	2.0	0.43	1		04/18/22 22:32	16887-00-6	
310.2 Alkalinity	Analytical Method: EPA 310.2								
	Pace Analytical Services - Green Bay								
Alkalinity, Total as CaCO3	**374**	mg/L	50.0	10.4	2		04/15/22 11:16		M0

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ANALYTICAL RESULTS

Project: LGRL PW APRIL
Pace Project No.: 40243151

Sample: TRIP BLANK **Lab ID: 40243238005** Collected: 04/08/22 00:00 Received: 04/09/22 08:40 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
524.2 MSV	Analytical Method: EPA 524.2								
	Pace Analytical Services - Indianapolis								
Acetone	**<0.62**	ug/L	2.1	0.62	1		04/14/22 23:32	67-64-1	N2
Benzene	**<0.099**	ug/L	0.33	0.099	1		04/14/22 23:32	71-43-2	N2
Bromodichloromethane	**<0.17**	ug/L	0.58	0.17	1		04/14/22 23:32	75-27-4	N2
Bromoform	**<0.14**	ug/L	0.48	0.14	1		04/14/22 23:32	75-25-2	L1,N2
Bromomethane	**<0.28**	ug/L	0.94	0.28	1		04/14/22 23:32	74-83-9	L1,N2
2-Butanone (MEK)	**<0.49**	ug/L	1.6	0.49	1		04/14/22 23:32	78-93-3	N2
Carbon disulfide	**<0.11**	ug/L	0.38	0.11	1		04/14/22 23:32	75-15-0	N2
Carbon tetrachloride	**<0.14**	ug/L	0.48	0.14	1		04/14/22 23:32	56-23-5	N2
Chlorobenzene	**<0.083**	ug/L	0.28	0.083	1		04/14/22 23:32	108-90-7	N2
Chloroethane	**<0.17**	ug/L	0.58	0.17	1		04/14/22 23:32	75-00-3	N2
Chloroform	**<0.58**	ug/L	1.9	0.58	1		04/14/22 23:32	67-66-3	N2
Chloromethane	**<0.10**	ug/L	0.35	0.10	1		04/14/22 23:32	74-87-3	N2
1,2-Dibromo-3-chloropropane	**<0.18**	ug/L	0.60	0.18	1		04/14/22 23:32	96-12-8	N2
Dibromochloromethane	**<0.12**	ug/L	0.38	0.12	1		04/14/22 23:32	124-48-1	N2
1,2-Dibromoethane (EDB)	**<0.088**	ug/L	0.29	0.088	1		04/14/22 23:32	106-93-4	N2
Dibromomethane	**<0.24**	ug/L	0.79	0.24	1		04/14/22 23:32	74-95-3	N2
1,2-Dichlorobenzene	**<0.043**	ug/L	0.14	0.043	1		04/14/22 23:32	95-50-1	N2
1,3-Dichlorobenzene	**<0.076**	ug/L	0.25	0.076	1		04/14/22 23:32	541-73-1	N2
1,4-Dichlorobenzene	**<0.059**	ug/L	0.20	0.059	1		04/14/22 23:32	106-46-7	N2
Dichlorodifluoromethane	**<0.31**	ug/L	1.0	0.31	1		04/14/22 23:32	75-71-8	N2
1,1-Dichloroethane	**<0.15**	ug/L	0.49	0.15	1		04/14/22 23:32	75-34-3	N2
1,2-Dichloroethane	**<0.085**	ug/L	0.28	0.085	1		04/14/22 23:32	107-06-2	N2
1,1-Dichloroethene	**<0.23**	ug/L	0.77	0.23	1		04/14/22 23:32	75-35-4	N2
cis-1,2-Dichloroethene	**<0.25**	ug/L	0.83	0.25	1		04/14/22 23:32	156-59-2	N2
trans-1,2-Dichloroethene	**<0.32**	ug/L	1.1	0.32	1		04/14/22 23:32	156-60-5	N2
1,2-Dichloropropane	**<0.20**	ug/L	0.66	0.20	1		04/14/22 23:32	78-87-5	N2
cis-1,3-Dichloropropene	**<0.088**	ug/L	0.29	0.088	1		04/14/22 23:32	10061-01-5	N2
trans-1,3-Dichloropropene	**<0.093**	ug/L	0.31	0.093	1		04/14/22 23:32	10061-02-6	N2
Ethylbenzene	**<0.11**	ug/L	0.35	0.11	1		04/14/22 23:32	100-41-4	N2
Methylene Chloride	**<2.1**	ug/L	6.9	2.1	1		04/14/22 23:32	75-09-2	N2
Methyl-tert-butyl ether	**<0.11**	ug/L	0.37	0.11	1		04/14/22 23:32	1634-04-4	N2
Naphthalene	**<0.073**	ug/L	0.24	0.073	1		04/14/22 23:32	91-20-3	N2
Styrene	**<0.13**	ug/L	0.42	0.13	1		04/14/22 23:32	100-42-5	N2
Tetrachloroethene	**<0.094**	ug/L	0.31	0.094	1		04/14/22 23:32	127-18-4	N2
Tetrahydrofuran	**<0.38**	ug/L	1.3	0.38	1		04/14/22 23:32	109-99-9	N2
Toluene	**<0.12**	ug/L	0.39	0.12	1		04/14/22 23:32	108-88-3	N2
1,1,1-Trichloroethane	**<0.22**	ug/L	0.72	0.22	1		04/14/22 23:32	71-55-6	N2
1,1,2-Trichloroethane	**<0.15**	ug/L	0.51	0.15	1		04/14/22 23:32	79-00-5	N2
Trichloroethene	**<0.17**	ug/L	0.56	0.17	1		04/14/22 23:32	79-01-6	N2
Trichlorofluoromethane	**<0.20**	ug/L	0.67	0.20	1		04/14/22 23:32	75-69-4	N2
Vinyl chloride	**<0.087**	ug/L	0.29	0.087	1		04/14/22 23:32	75-01-4	N2
Xylene (Total)	**<0.11**	ug/L	0.36	0.11	1		04/14/22 23:32	1330-20-7	N2
Surrogates									
4-Bromofluorobenzene (S)	93	%.	70-130		1		04/14/22 23:32	460-00-4	
Dibromofluoromethane (S)	94	%.	70-130		1		04/14/22 23:32	1868-53-7	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: LGRL PW APRIL
Pace Project No.: 40243151

Sample: TRIP BLANK **Lab ID: 40243238005** Collected: 04/08/22 00:00 Received: 04/09/22 08:40 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
524.2 MSV	Analytical Method: EPA 524.2 Pace Analytical Services - Indianapolis								
Surrogates									
Toluene-d8 (S)	107	%.	70-130		1		04/14/22 23:32	2037-26-5	

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: LGRL PW APRIL
Pace Project No.: 40243151

QC Batch: 412681 | Analysis Method: EPA 6010D
QC Batch Method: EPA 3010A | Analysis Description: 6010D MET
Laboratory: Pace Analytical Services - Green Bay
Associated Lab Samples: 40243151001, 40243151003, 40243151004

METHOD BLANK: 2376893 Matrix: Water
Associated Lab Samples: 40243151001, 40243151003, 40243151004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Hardness by 2340B	ug/L	<150	2000	04/13/22 18:44	

LABORATORY CONTROL SAMPLE: 2376894

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Hardness by 2340B	ug/L		67800			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2376895 2376896

Parameter	Units	40243149001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Total Hardness by 2340B	ug/L	894000			998000	988000				1	20	

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

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL DATA

Project: LGRL PW APRIL
Pace Project No.: 40243151

QC Batch: 412836 | Analysis Method: EPA 6010D
QC Batch Method: EPA 3010A | Analysis Description: 6010D MET
Laboratory: Pace Analytical Services - Green Bay
Associated Lab Samples: 40243238001, 40243238002, 40243238003, 40243238004

METHOD BLANK: 2377302 Matrix: Water
Associated Lab Samples: 40243238001, 40243238002, 40243238003, 40243238004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Hardness by 2340B	ug/L	<150	2000	04/13/22 12:21	

LABORATORY CONTROL SAMPLE: 2377303

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Hardness by 2340B	ug/L		66000			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2377304 2377305

Parameter	Units	40243209001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Total Hardness by 2340B	ug/L	130 mg/L			197000	196000				1	20	

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

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(920)469-2436

QUALITY CONTROL DATA

Project: LGRL PW APRIL
Pace Project No.: 40243151

QC Batch: 671276
QC Batch Method: EPA 524.2
Analysis Method: EPA 524.2
Analysis Description: 524.2 MSV
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 40243151001, 40243151002, 40243151003, 40243151004, 40243151005, 40243238001, 40243238002, 40243238003, 40243238004, 40243238005

METHOD BLANK: 3091257
Matrix: Water
Associated Lab Samples: 40243151001, 40243151002, 40243151003, 40243151004, 40243151005, 40243238001, 40243238002, 40243238003, 40243238004, 40243238005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	<0.22	0.72	04/14/22 17:43	N2
1,1,2-Trichloroethane	ug/L	<0.15	0.51	04/14/22 17:43	N2
1,1-Dichloroethane	ug/L	<0.15	0.49	04/14/22 17:43	N2
1,1-Dichloroethene	ug/L	<0.23	0.77	04/14/22 17:43	N2
1,2-Dibromo-3-chloropropane	ug/L	<0.18	0.60	04/14/22 17:43	N2
1,2-Dibromoethane (EDB)	ug/L	<0.088	0.29	04/14/22 17:43	N2
1,2-Dichlorobenzene	ug/L	<0.043	0.14	04/14/22 17:43	N2
1,2-Dichloroethane	ug/L	<0.085	0.28	04/14/22 17:43	N2
1,2-Dichloropropane	ug/L	<0.20	0.66	04/14/22 17:43	N2
1,3-Dichlorobenzene	ug/L	<0.076	0.25	04/14/22 17:43	N2
1,4-Dichlorobenzene	ug/L	<0.059	0.20	04/14/22 17:43	N2
2-Butanone (MEK)	ug/L	<0.49	1.6	04/14/22 17:43	N2
Acetone	ug/L	<0.62	2.1	04/14/22 17:43	N2
Benzene	ug/L	<0.099	0.33	04/14/22 17:43	N2
Bromodichloromethane	ug/L	<0.17	0.58	04/14/22 17:43	N2
Bromoform	ug/L	<0.14	0.48	04/14/22 17:43	N2
Bromomethane	ug/L	<0.28	0.94	04/14/22 17:43	N2
Carbon disulfide	ug/L	<0.11	0.38	04/14/22 17:43	N2
Carbon tetrachloride	ug/L	<0.14	0.48	04/14/22 17:43	N2
Chlorobenzene	ug/L	<0.083	0.28	04/14/22 17:43	N2
Chloroethane	ug/L	<0.17	0.58	04/14/22 17:43	N2
Chloroform	ug/L	0.63J	1.9	04/14/22 17:43	N2
Chloromethane	ug/L	<0.10	0.35	04/14/22 17:43	N2
cis-1,2-Dichloroethene	ug/L	<0.25	0.83	04/14/22 17:43	N2
cis-1,3-Dichloropropene	ug/L	<0.088	0.29	04/14/22 17:43	N2
Dibromochloromethane	ug/L	<0.12	0.38	04/14/22 17:43	N2
Dibromomethane	ug/L	<0.24	0.79	04/14/22 17:43	N2
Dichlorodifluoromethane	ug/L	<0.31	1.0	04/14/22 17:43	N2
Ethylbenzene	ug/L	<0.11	0.35	04/14/22 17:43	N2
Methyl-tert-butyl ether	ug/L	<0.11	0.37	04/14/22 17:43	N2
Methylene Chloride	ug/L	<2.1	6.9	04/14/22 17:43	N2
Naphthalene	ug/L	<0.073	0.24	04/14/22 17:43	N2
Styrene	ug/L	<0.13	0.42	04/14/22 17:43	N2
Tetrachloroethene	ug/L	<0.094	0.31	04/14/22 17:43	N2
Tetrahydrofuran	ug/L	<0.38	1.3	04/14/22 17:43	N2
Toluene	ug/L	<0.12	0.39	04/14/22 17:43	N2
trans-1,2-Dichloroethene	ug/L	<0.32	1.1	04/14/22 17:43	N2
trans-1,3-Dichloropropene	ug/L	<0.093	0.31	04/14/22 17:43	N2
Trichloroethene	ug/L	<0.17	0.56	04/14/22 17:43	N2

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: LGRL PW APRIL
Pace Project No.: 40243151

METHOD BLANK: 3091257 Matrix: Water

Associated Lab Samples: 40243151001, 40243151002, 40243151003, 40243151004, 40243151005, 40243238001, 40243238002, 40243238003, 40243238004, 40243238005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Trichlorofluoromethane	ug/L	<0.20	0.67	04/14/22 17:43	N2
Vinyl chloride	ug/L	<0.087	0.29	04/14/22 17:43	N2
Xylene (Total)	ug/L	<0.11	0.36	04/14/22 17:43	N2
4-Bromofluorobenzene (S)	%.	96	70-130	04/14/22 17:43	
Dibromofluoromethane (S)	%.	95	70-130	04/14/22 17:43	
Toluene-d8 (S)	%.	107	70-130	04/14/22 17:43	

LABORATORY CONTROL SAMPLE: 3091258

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	21.6	108	70-130	N2
1,1,2-Trichloroethane	ug/L	20	22.8	114	70-130	N2
1,1-Dichloroethane	ug/L	20	19.8	99	70-130	N2
1,1-Dichloroethene	ug/L	20	20.0	100	70-130	N2
1,2-Dibromo-3-chloropropane	ug/L	20	25.1	126	70-130	N2
1,2-Dibromoethane (EDB)	ug/L	20	22.7	113	70-130	N2
1,2-Dichlorobenzene	ug/L	20	24.0	120	70-130	N2
1,2-Dichloroethane	ug/L	20	19.7	99	70-130	N2
1,2-Dichloropropane	ug/L	20	20.4	102	70-130	N2
1,3-Dichlorobenzene	ug/L	20	23.8	119	70-130	N2
1,4-Dichlorobenzene	ug/L	20	22.9	115	70-130	N2
2-Butanone (MEK)	ug/L	100	99.9	100	70-130	N2
Acetone	ug/L	100	98.2	98	70-130	N2
Benzene	ug/L	20	19.4	97	70-130	N2
Bromodichloromethane	ug/L	20	20.6	103	70-130	N2
Bromoform	ug/L	20	26.2	131	70-130	L1,N2
Bromomethane	ug/L	20	29.0	145	70-130	L1,N2
Carbon disulfide	ug/L	20	19.1	95	70-130	N2
Carbon tetrachloride	ug/L	20	21.8	109	70-130	N2
Chlorobenzene	ug/L	20	22.6	113	70-130	N2
Chloroethane	ug/L	20	23.3	117	70-130	N2
Chloroform	ug/L	20	18.6	93	70-130	N2
Chloromethane	ug/L	20	15.8	79	70-130	N2
cis-1,2-Dichloroethene	ug/L	20	20.8	104	70-130	N2
cis-1,3-Dichloropropene	ug/L	20	22.8	114	70-130	N2
Dibromochloromethane	ug/L	20	23.8	119	70-130	N2
Dibromomethane	ug/L	20	19.2	96	70-130	N2
Dichlorodifluoromethane	ug/L	20	24.7	123	70-130	N2
Ethylbenzene	ug/L	20	22.8	114	70-130	N2
Methyl-tert-butyl ether	ug/L	20	19.9	100	70-130	N2
Methylene Chloride	ug/L	20	18.7	93	70-130	N2
Naphthalene	ug/L	20	24.5	123	70-130	N2
Styrene	ug/L	20	23.2	116	70-130	N2

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: LGRL PW APRIL
Pace Project No.: 40243151

LABORATORY CONTROL SAMPLE: 3091258

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Tetrachloroethene	ug/L	20	23.6	118	70-130	N2
Tetrahydrofuran	ug/L	100	102	102	70-130	N2
Toluene	ug/L	20	22.3	112	70-130	N2
trans-1,2-Dichloroethene	ug/L	20	21.4	107	70-130	N2
trans-1,3-Dichloropropene	ug/L	20	23.2	116	70-130	N2
Trichloroethene	ug/L	20	21.5	108	70-130	N2
Trichlorofluoromethane	ug/L	20	21.6	108	70-130	N2
Vinyl chloride	ug/L	20	22.4	112	70-130	N2
Xylene (Total)	ug/L	40	45.7	114	70-130	N2
4-Bromofluorobenzene (S)	%.			97	70-130	
Dibromofluoromethane (S)	%.			95	70-130	
Toluene-d8 (S)	%.			103	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3091259 3091260

Parameter	Units	50313426001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1-Trichloroethane	ug/L	ND	20	20	25.7	23.2	128	116	70-130	10	20	N2
1,1,2-Trichloroethane	ug/L	ND	20	20	28.8	25.3	144	126	70-130	13	20	M1,N2
1,1-Dichloroethane	ug/L	ND	20	20	23.9	21.2	119	106	70-130	12	20	N2
1,1-Dichloroethene	ug/L	ND	20	20	24.8	22.3	124	111	70-130	11	20	N2
1,2-Dibromo-3-chloropropane	ug/L	ND	20	20	31.9	28.2	159	141	70-130	12	20	M1,N2
1,2-Dibromoethane (EDB)	ug/L	ND	20	20	28.1	24.1	141	121	70-130	15	20	M1,N2
1,2-Dichlorobenzene	ug/L	ND	20	20	29.4	25.8	147	129	70-130	13	20	M1,N2
1,2-Dichloroethane	ug/L	ND	20	20	23.5	20.7	118	104	70-130	13	20	N2
1,2-Dichloropropane	ug/L	ND	20	20	25.6	21.8	128	109	70-130	16	20	N2
1,3-Dichlorobenzene	ug/L	ND	20	20	29.1	25.8	145	129	70-130	12	20	M1,N2
1,4-Dichlorobenzene	ug/L	ND	20	20	28.7	25.2	144	126	70-130	13	20	M1,N2
2-Butanone (MEK)	ug/L	ND	100	100	125	110	125	110	70-130	12	20	N2
Acetone	ug/L	ND	100	100	119	103	119	103	70-130	14	20	N2
Benzene	ug/L	ND	20	20	24.4	21.4	122	107	70-130	13	20	N2
Bromodichloromethane	ug/L	ND	20	20	25.5	21.6	128	108	70-130	17	20	N2
Bromoform	ug/L	ND	20	20	30.1	26.3	150	131	70-130	13	20	M0,N2
Bromomethane	ug/L	ND	20	20	28.2	23.2	141	116	70-130	20	20	M0,N2
Carbon disulfide	ug/L	ND	20	20	22.2	20.0	111	100	70-130	10	20	N2
Carbon tetrachloride	ug/L	ND	20	20	27.7	24.5	138	122	70-130	12	20	M1,N2
Chlorobenzene	ug/L	ND	20	20	28.3	24.7	141	123	70-130	14	20	M1,N2
Chloroethane	ug/L	ND	20	20	27.4	23.3	137	116	70-130	16	20	M1,N2
Chloroform	ug/L	ND	20	20	22.1	18.9	111	95	70-130	16	20	N2
Chloromethane	ug/L	ND	20	20	16.1	14.8	81	74	70-130	9	20	N2
cis-1,2-Dichloroethene	ug/L	ND	20	20	25.4	22.0	127	110	70-130	14	20	N2
cis-1,3-Dichloropropene	ug/L	ND	20	20	28.5	24.1	142	121	70-130	17	20	M1,N2
Dibromochloromethane	ug/L	ND	20	20	29.4	25.5	147	128	70-130	14	20	M1,N2
Dibromomethane	ug/L	ND	20	20	23.8	20.3	119	102	70-130	16	20	N2

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: LGRL PW APRIL
Pace Project No.: 40243151

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3091259 3091260

Parameter	Units	50313426001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Dichlorodifluoromethane	ug/L	ND	20	20	13.1	12.4	65	62	70-130	6	20	M1,N2
Ethylbenzene	ug/L	ND	20	20	28.2	25.0	141	125	70-130	12	20	M1,N2
Methyl-tert-butyl ether	ug/L	ND	20	20	24.1	21.5	120	108	70-130	11	20	N2
Methylene Chloride	ug/L	ND	20	20	20.7	18.6	104	93	70-130	11	20	N2
Naphthalene	ug/L	ND	20	20	30.6	27.3	153	136	70-130	11	20	M1,N2
Styrene	ug/L	ND	20	20	28.8	24.7	144	124	70-130	15	20	M1,N2
Tetrachloroethene	ug/L	ND	20	20	29.1	25.8	146	129	70-130	12	20	M1,N2
Tetrahydrofuran	ug/L	ND	100	100	123	111	123	111	70-130	11	20	N2
Toluene	ug/L	ND	20	20	27.9	24.5	140	123	70-130	13	20	M1,N2
trans-1,2-Dichloroethene	ug/L	ND	20	20	25.7	22.9	128	115	70-130	11	20	N2
trans-1,3-Dichloropropene	ug/L	ND	20	20	27.6	24.5	138	123	70-130	12	20	M1,N2
Trichloroethene	ug/L	ND	20	20	26.1	23.2	130	116	70-130	12	20	N2
Trichlorofluoromethane	ug/L	ND	20	20	21.2	18.3	106	91	70-130	15	20	N2
Vinyl chloride	ug/L	ND	20	20	21.0	18.7	105	94	70-130	12	20	N2
Xylene (Total)	ug/L	ND	40	40	87.2	75.7	218	189	70-130	14	20	MS,N2
4-Bromofluorobenzene (S)	%.						95	96	70-130			
Dibromofluoromethane (S)	%.						92	93	70-130			
Toluene-d8 (S)	%.						103	104	70-130			

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: LGRL PW APRIL
Pace Project No.: 40243151

QC Batch: 413337
QC Batch Method: EPA 300.0
Analysis Method: EPA 300.0
Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Green Bay
Associated Lab Samples: 40243151001, 40243151003, 40243151004

METHOD BLANK: 2380136 Matrix: Water
Associated Lab Samples: 40243151001, 40243151003, 40243151004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	<0.43	2.0	04/19/22 17:28	

LABORATORY CONTROL SAMPLE: 2380137

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	20	21.0	105	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2380138 2380139

Parameter	Units	40243150011 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	243	400	400	644	653	100	103	90-110	1	15	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2380140 2380141

Parameter	Units	40243175004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	565	400	400	926	935	90	92	90-110	1	15	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: LGRL PW APRIL
Pace Project No.: 40243151

QC Batch: 413338 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Green Bay
Associated Lab Samples: 40243238001, 40243238002, 40243238003, 40243238004

METHOD BLANK: 2380160 Matrix: Water
Associated Lab Samples: 40243238001, 40243238002, 40243238003, 40243238004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	<0.43	2.0	04/18/22 12:34	

LABORATORY CONTROL SAMPLE: 2380161

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	20	19.8	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2380162 2380163

Parameter	Units	40243175005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	514	400	400	940	936	107	105	90-110	0	15	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2380164 2380165

Parameter	Units	40243510005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	912	1000	1000	1980	2020	107	111	90-110	2	15	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: LGRL PW APRIL
Pace Project No.: 40243151

QC Batch: 413179 — Analysis Method: EPA 310.2
QC Batch Method: EPA 310.2 — Analysis Description: 310.2 Alkalinity
Laboratory: Pace Analytical Services - Green Bay
Associated Lab Samples: 40243151001, 40243151003, 40243151004, 40243238001, 40243238002, 40243238003, 40243238004

METHOD BLANK: 2378920 — Matrix: Water
Associated Lab Samples: 40243151001, 40243151003, 40243151004, 40243238001, 40243238002, 40243238003, 40243238004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	<5.2	25.0	04/15/22 10:47	

LABORATORY CONTROL SAMPLE: 2378921

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	100	102	102	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2378922 2378923

Parameter	Units	40243149004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	290	500	500	837	832	109	109	90-110	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2378924 2378925

Parameter	Units	40243238004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	374	200	200	605	601	115	113	90-110	1	20	M0

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REPORT OF LABORATORY ANALYSIS

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

QUALIFIERS

Project: LGRL PW APRIL
Pace Project No.: 40243151

DEFINITIONS

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

ND - Not Detected at or above LOD.

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

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

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

L1	Analyte recovery in the laboratory control sample (LCS) was above QC limits. Results for this analyte in associated samples may be biased high.
M0	Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
MS	Analyte recovery in the matrix spike was outside QC limits for one or more of the constituent analytes used in the calculated result.
N2	The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: LGRL PW APRIL
Pace Project No.: 40243151

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40243151001	**PW-21RR BEFORE**	EPA 3010A	412681	EPA 6010D	412891
40243151003	**PW-23**	EPA 3010A	412681	EPA 6010D	412891
40243151004	**PW-38**	EPA 3010A	412681	EPA 6010D	412891
40243238001	**PW-19**	EPA 3010A	412836	EPA 6010D	412945
40243238002	**PW-20**	EPA 3010A	412836	EPA 6010D	412945
40243238003	**PW-28**	EPA 3010A	412836	EPA 6010D	412945
40243238004	**PW-32**	EPA 3010A	412836	EPA 6010D	412945
40243151001	**PW-21RR BEFORE**	EPA 524.2	671276		
40243151002	**PW-21RR AFTER**	EPA 524.2	671276		
40243151003	**PW-23**	EPA 524.2	671276		
40243151004	**PW-38**	EPA 524.2	671276		
40243151005	**TRIP BLANK**	EPA 524.2	671276		
40243238001	**PW-19**	EPA 524.2	671276		
40243238002	**PW-20**	EPA 524.2	671276		
40243238003	**PW-28**	EPA 524.2	671276		
40243238004	**PW-32**	EPA 524.2	671276		
40243238005	**TRIP BLANK**	EPA 524.2	671276		
40243151001	**PW-21RR BEFORE**				
40243151002	**PW-21RR AFTER**				
40243151003	**PW-23**				
40243151004	**PW-38**				
40243238001	**PW-19**				
40243238002	**PW-20**				
40243238003	**PW-28**				
40243238004	**PW-32**				
40243151001	**PW-21RR BEFORE**	EPA 300.0	413337		
40243151003	**PW-23**	EPA 300.0	413337		
40243151004	**PW-38**	EPA 300.0	413337		
40243238001	**PW-19**	EPA 300.0	413338		
40243238002	**PW-20**	EPA 300.0	413338		
40243238003	**PW-28**	EPA 300.0	413338		
40243238004	**PW-32**	EPA 300.0	413338		
40243151001	**PW-21RR BEFORE**	EPA 310.2	413179		
40243151003	**PW-23**	EPA 310.2	413179		
40243151004	**PW-38**	EPA 310.2	413179		
40243238001	**PW-19**	EPA 310.2	413179		
40243238002	**PW-20**	EPA 310.2	413179		
40243238003	**PW-28**	EPA 310.2	413179		
40243238004	**PW-32**	EPA 310.2	413179		

40243151

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www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:
GFL Glacier Ridge	Report To: Kari Rabideau	Attention: Kari Rabideau
N7296 Hwy V	Copy To: Frank Perugini - ESC, ESC Staff, Sherren Clark - SCS	Company Name: GFL Glacier Ridge
Horicon, WI 53032		Address: N7296 Hwy V, Horicon, WI 53032
Email To: Kari Rabideau - ADS	Purchase Order No.: na	Pace Quote Reference: na
Phone: na Fax: na	Project Name: LGRL PW	Pace Project Manager: Cindy Varga
Requested Due Date/TAT:	Project Number: na	Pace Profile #: 4172 line 19

REGULATORY AGENCY

__NPDES __GROUND WATER _X_DRINKING WATER

__UST __RCRA OTHER_____

SITE LOCATION __GA __IL __IN __MI __NC __OH __SC _X_WI OTHER___

Section D Required Client Information

SAMPLE ID

One Character per box.
(A-Z, 0-9 / ,-)
Samples IDs MUST BE UNIQUE

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
WIPE	WP
AIR	AR
OTHER	OT
TISSUE	TS

ITEM #	SAMPLE ID	MATRIX CODE	SAMPLE TYPE G=GRAB C=COMP	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	#OF CONTAINERS	Preservatives: Ascorbic Acid/HCL	Preservatives: HCL	Preservatives: Unpreserved	Filtered (Y/N)	Requested Analysis: EPA 524.4 VOCs	Requested Analysis: alk, cl	Requested Analysis: 6010 Hardness	Residual Chlorine (Y/N)	Pace Project Number Lab I.D.
1	PW-21RR Before	DW	G	—		4/7	1345	10.4	5	3	1	1	N	X	X	X		001
2	PW-21 RR After	DW	G	—		4/7	1350	12.0	3	3			N	X	X	X		002
3	PW-23	DW	G	—		4/7	1430	7.9	5	3	1	1	N	X	X	X		003
4	PW-38	DW	G	—		4/7	1410	10.1	5	3	1	1	N	X	X	X		004
5	Trip Blank TP 4/8/22					4/7							N	X	X	X		005
6													N					
7													N					
8													N					
9													N					
10													N					
11													N					
12													N					

Additional Comments:

PW-21RR After only needs VOCs

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
[illegible] ESC	4/7	1700			
[illegible] WalTCO	4/8/22	0845	[illegible] Pace	4/8/22	0845

SAMPLE CONDITIONS

Temp in °C	Received on Ice Y/N	Custody Sealed Cooler Y/N	Samples Intact Y/N
1.1	(Y)/N	(Y)/N	(Y)/N
	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Jacob Thomas

SIGNATURE of SAMPLER: [illegible] DATE Signed (MM/DD/YY): 04/07/22

Sample Preservation Receipt Form

Client Name: GFL Bridge Project # 410243151

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

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

Pace Lab #	Glass: AG1U	BG1U	AG1H	AG4S	AG4U	AG5U	AG2S	BG3U	Plastic: BP1U	BP3U	BP3B	BP3N	BP3S	Vials: VG9A	DG9T	VG9U	VG9H	VG9M	VG9D	Jars: JGFU	JG9U	WGFU	WPFU	General: SP5T	ZPLC	GN	VOA Vials (>6mm) *	H2SO4 pH ≤2	NaOH+Zn Act pH ≥9	NaOH pH ≥12	HNO3 pH ≤2	pH after adjusted	Volume (mL)
001										1		1		3			3																2.5 / 5 / 10
002														3			3																2.5 / 5 / 10
003										1		1		3			3																2.5 / 5 / 10
004										1		1		3			3																2.5 / 5 / 10
005																	2																2.5 / 5 / 10
006																																	2.5 / 5 / 10
007																																	2.5 / 5 / 10
008																																	2.5 / 5 / 10
009																																	2.5 / 5 / 10
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018																																	2.5 / 5 / 10
019																																	2.5 / 5 / 10
020																																	2.5 / 5 / 10

TP 4/8/22

TP 4/8/22

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

AG1U	1 liter amber glass
BG1U	1 liter clear glass
AG1H	1 liter amber glass HCL
AG4S	125 mL amber glass H2SO4
AG4U	120 mL amber glass unpres
AG5U	100 mL amber glass unpres
AG2S	500 mL amber glass H2SO4
BG3U	250 mL clear glass unpres

BP1U	1 liter plastic unpres
BP3U	250 mL plastic unpres
BP3B	250 mL plastic NaOH
BP3N	250 mL plastic HNO3
BP3S	250 mL plastic H2SO4

VG9A	40 mL clear ascorbic
DG9T	40 mL amber Na Thio
VG9U	40 mL clear vial unpres
VG9H	40 mL clear vial HCL
VG9M	40 mL clear vial MeOH
VG9D	40 mL clear vial DI

JGFU	4 oz amber jar unpres
JG9U	9 oz amber jar unpres
WGFU	4 oz clear jar unpres
WPFU	4 oz plastic jar unpres
SP5T	120 mL plastic Na Thiosulfate
ZPLC	ziploc bag
GN	

Sample Condition Upon Receipt Form (SCUR)

Project #:

WO# : 40243151

40243151

Client Name: GFL Glacier Ridge

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

Tracking #: 3184945-4

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

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

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

Thermometer Used SR - 113 **Type of Ice:** (Wet) Blue Dry None ☑ Samples on ice, cooling process has begun

Cooler Temperature Uncorr: 1 /Corr: 1.1

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

Person examining contents:
Date: 4/8/22 /Initials: TP

Labeled By Initials:

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

Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☑Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes ☐No	5.
- VOA Samples frozen upon receipt	☐Yes ☐No	Date/Time:
Short Hold Time Analysis (<72hr):	☐Yes ☑No	6.
Rush Turn Around Time Requested:	☐Yes ☑No	7.
Sufficient Volume: For Analysis: ☑Yes ☐No MS/MSD: ☐Yes ☑No ☐N/A		8.
Correct Containers Used:	☑Yes ☐No	9.
-Pace Containers Used:	☑Yes ☐No ☐N/A	
-Pace IR Containers Used:	☐Yes ☐No ☑N/A	
Containers Intact:	☑Yes ☐No	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☑N/A	11.
Sample Labels match COC: -Includes date/time/ID/Analysis Matrix: W	☐Yes ☑No ☐N/A	12.
Trip Blank Present:	☐Yes ☑No ☐N/A	13. 001 time on BP3N and 001 time on VG9H is 1350 TP 4/8/22
Trip Blank Custody Seals Present	☐Yes ☑No ☐N/A	
Pace Trip Blank Lot # (if purchased):		

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

Person Contacted: Date/Time:

Comments/ Resolution:

per JAcos (ESC) - time on COC is correct can proceed

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

40243238

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CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: 1 of 1

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:
GFL Glacier Ridge	Report To: Kari Rabideau	Attention: Kari Rabideau
N7296 Hwy V	Copy To: Frank Perugini - ESC, ESC Staff, Sherren Clark - SCS	Company Name: GFL Glacier Ridge
Horicon, WI 53032		Address: N7296 Hwy V, Horicon, WI 53032
Email To: Kari Rabideau - ADS	Purchase Order No.: na	Pace Quote Reference: na
Phone: na Fax: na	Project Name: LGRL PW	Pace Project Manager: Cindy Varga
Requested Due Date/TAT:	Project Number: na	Pace Profile #: 4172 line 19

REGULATORY AGENCY

__NPDES __GROUND WATER _X_DRINKING WATER

__UST __RCRA OTHER_____

SITE LOCATION __GA __IL __IN __MI __NC __OH __SC _X_WI OTHER___

Section D Required Client Information

SAMPLE ID

One Character per box.
(A-Z, 0-9 / ,-)
Samples IDs MUST BE UNIQUE

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
WIPE	WP
AIR	AR
OTHER	OT
TISSUE	TS

ITEM #	SAMPLE ID	MATRIX CODE	SAMPLE TYPE G=GRAB C=COMP	COLLECTED COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	#OF CONTAINERS	Preservatives: Ascorbic Acid/HCL	Preservatives: HCL	Preservatives: Unpreserved	Filtered (Y/N)	Requested Analysis: EPA 524.4 VOCs	Requested Analysis: alk, cl	Requested Analysis: 6010 Hardness	Requested Analysis: Residual Chlorine (Y/N)	Pace Project Number Lab I.D.
													N	N	N			
1	PW-19	DW	G	—		4/8	1025	10.4	5	3	1	1		X	X	X		001
2	PW-20	DW	G	—		4/8	1245	10.6	5	3	1	1		X	X	X		002
3	PW-28	DW	G	—		4/8	1055	9.8	5	3	1	1		X	X	X		003
4	PW-32	DW	G	—		4/8	1120	10.9	5	3	1	1		X	X	X		004
5	TripBlank	—	—	—		4/8	—		2		2			X				005
6																		
7																		
8																		
9																		
10																		
11																		
12																		

Additional Comments:

PW-21RR After only needs VOCs

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
						Temp in °C	Received on Ice	Custody Sealed Cooler	Samples Intact
Jnl Kw/ESC	4/8	1700				3.5	Y/N	Y/N	Y/N
Walco	4/9/22	0840	Anthony Wendel	4/9/22	0840	3.3	Y/N	Y/N	Y/N
							Y/N	Y/N	Y/N
							Y/N	Y/N	Y/N

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Jacob Thomas

SIGNATURE of SAMPLER: [signature] DATE Signed (MM / DD / YY): 04/08/22

Sample Preservation Receipt Form

Client Name: GFL Glacier Ridge 4/9/22 dh Project # 40243238

All containers needing preservation have been checked and noted below: ☒Yes ☐No ~~☐N/A~~ Initial when completed: AW Date/ Time: 4/9/22 0955

Lab Lot# of pH paper: 10D3112 Lab Std #ID of preservation (if pH adjusted): 408572

Pace Lab #	Glass: AG1U	BG1U	AG1H	AG4S	AG4U	AG5U	AG2S	BG3U	Plastic: BP1U	BP3U	BP3B	BP3N	BP3S	Vials: VG9A	DG9T	VG9U	VG9H	VG9M	VG9D	Jars: JGFU	JG9U	WGFU	WPFU	General: SP5T	ZPLC	GN	VOA Vials (>6mm) *	H2SO4 pH ≤2	NaOH+Zn Act pH ≥9	NaOH pH ≥12	HNO3 pH ≤2	pH after adjusted	Volume (mL)
001										\		\														3					7	≤2	2.5 / 5 / 10
002										\		\														3					X		2.5 / 5 / 10
003										\		\														3	\				X		2.5 / 5 / 10
004										\		\														3					X		2.5 / 5 / 10
005																	\																2.5 / 5 / 10
006																																	2.5 / 5 / 10
007																																	2.5 / 5 / 10
008																																	2.5 / 5 / 10
009																																	2.5 / 5 / 10
010																																	2.5 / 5 / 10
011															4/9/22																		2.5 / 5 / 10
012																																	2.5 / 5 / 10
013																																	2.5 / 5 / 10
014																																	2.5 / 5 / 10
015																																	2.5 / 5 / 10
016																																	2.5 / 5 / 10
017																																	2.5 / 5 / 10
018																																	2.5 / 5 / 10
019																																	2.5 / 5 / 10
020																																	2.5 / 5 / 10

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

AG1U	1 liter amber glass
BG1U	1 liter clear glass
AG1H	1 liter amber glass HCL
AG4S	125 mL amber glass H2SO4
AG4U	120 mL amber glass unpres
AG5U	100 mL amber glass unpres
AG2S	500 mL amber glass H2SO4
BG3U	250 mL clear glass unpres

BP1U	1 liter plastic unpres
BP3U	250 mL plastic unpres
BP3B	250 mL plastic NaOH
BP3N	250 mL plastic HNO3
BP3S	250 mL plastic H2SO4

VG9A	40 mL clear ascorbic
DG9T	40 mL amber Na Thio
VG9U	40 mL clear vial unpres
VG9H	40 mL clear vial HCL
VG9M	40 mL clear vial MeOH
VG9D	40 mL clear vial DI

JGFU	4 oz amber jar unpres
JG9U	9 oz amber jar unpres
WGFU	4 oz clear jar unpres
WPFU	4 oz plastic jar unpres
SP5T	120 mL plastic Na Thiosulfate
ZPLC	ziploc bag
GN	40mL clear vial HCL+ascorbic

Page 1 of 2

Sample Condition Upon Receipt Form (SCUR)

Project #:

WO# : 40243238

40243238

Client Name: GFL Glacier Ridge

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

Tracking #: 3185978-1

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

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

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

Thermometer Used SR - 107 **Type of Ice:** (Wet) Blue Dry None ☒ Samples on ice, cooling process has begun

Cooler Temperature Uncorr: 3.5 /Corr: 3.3

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

Person examining contents:
Date: 4/9/22 /Initials: AJL

Labeled By Initials: JP

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

Chain of Custody Present:	☒Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☒Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☒Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☒Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☒Yes ☐No	5.
- VOA Samples frozen upon receipt	☐Yes ☐No	Date/Time:
Short Hold Time Analysis (<72hr):	☐Yes ☒No	6.
Rush Turn Around Time Requested:	☐Yes ☒No	7.
Sufficient Volume: For Analysis: ☒Yes ☐No MS/MSD: ☐Yes ☒No ☐N/A		8.
Correct Containers Used:	☒Yes ☐No	9.
-Pace Containers Used:	☒Yes ☐No ☐N/A	
-Pace IR Containers Used:	☐Yes ☐No ☒N/A	
Containers Intact:	☒Yes ☐No	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☒N/A	11.
Sample Labels match COC: -Includes date/time/ID/Analysis Matrix: W	☒Yes ☐No ☐N/A	12.
Trip Blank Present:	☒Yes ☐No ☐N/A	13.
Trip Blank Custody Seals Present	☒Yes ☐No ☐N/A	
Pace Trip Blank Lot # (if purchased): 477		

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

Person Contacted: Date/Time:

Comments/ Resolution:

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

Page 2 of 2

August 15, 2022
File No. 25222008.00

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

Subject: Groundwater Monitoring Results – June 2022
Land & Gas Reclamation Landfill – Horicon, Wisconsin
WDNR License #1118
FID #114052290

Dear GEMS Data Submittal Contact:

Enclosed are the electronic data file, NR 140 exceedance summary, and monitoring data certification form for a resampling event performed in as part of the April 2022 sampling event at the former Land & Gas Reclamation Landfill (LGRL) site. Monitoring data in this submittal include laboratory results and associated field data from the following monitoring point in the required LGRL monitoring program:

- Monitoring well MW-214A

Monitoring well MW-214A could not be accessed in April 2022 due to flooding. This monitoring well was sampled in May once flooding had subsided; however, chloride and alkalinity were inadvertently not included in the analysis. MW-214A was subsequently sampled again in June 2022 for these parameters. Results for the initial May sample were included in the April 2022 GEMS data submittal dated June 30, 2022. This submittal is for the follow-up chloride and alkalinity sample and the associated field parameters.

The groundwater sample was collected by Environmental Sampling Corporation (ESC). Laboratory analysis was performed by Pace Analytical Services.

This letter provides a preliminary analysis of the cause and significance of the NR 140 groundwater standard exceedances for monitoring data included in the data CD. An explanation of any deviations from the approved sampling plan is also included in the Monitoring Program Comments section of this letter.

NR 140 EXCEEDANCES

NR 140 standard exceedances for the MW-214 resample are listed in the attached NR 140 Exceedance Summary table. The following discussion addresses the NR 140 enforcement standard (ES) and preventive action limit (PAL) exceedances for this event.

Public Welfare Parameters

Chloride was reported above the NR 140 PAL of 125 µg/L in the sample from MW-214A. This well is located downgradient of LGRL, and the chloride detections may be associated with LGRL. The chloride concentration in the June 2022 sample was similar to previous results.

If you have any questions regarding this submittal, please call Sherren Clark at 608.216.7323.

Sincerely,

Sherren Clark, PE, PG
Project Director
SCS Engineers

Ryan Matzuk
Hydrogeologist
SCS Engineers

RM/AJR/SCC

cc: Mark Peters, WDNR (via email)
Lonn Walter, Glacier Ridge Landfill (2 copies of letter, 1 CD)
Kari Rabideau, GFL Environmental (via email)
Tim Curry, GFL Environmental (via email)
Frank Perugini, Environmental Sampling Corp. (via email)

Encl. Table 1 - NR 140 Exceedance Summary
Groundwater Monitoring Data Certification Form
GEMS Data CD

I:\25222008.00\Deliverables\2022_GEMS_April Resample\220815_LGRL_April 2022 Resample GEMS Letter.docx

Table 1
NR 140 Exceedance Summary

Site ID: **1118**
Site Name: **Land and Gas Reclamation Landfill**
Reporting Period: **April 2022 (MW-214 resample)**

Groundwater Results Exceeding NR 140 Standards

Well	Parameter	Result *	PAL	ES	Exceedance Type
MW-214A	Chloride, dissolved (mg/l as Cl)	203	125	250	PAL

Notes:
PAL = Preventive Action Limit
ES = Enforcement Standard
ug/l = micrograms per liter
mg/l = milligrams per liter

Prepared by: AJR, 8/1/2022
Checked by: RM, 8/8/2022

Save... Print... Clear Data

State of Wisconsin
Department of Natural Resources
dnr.wi.gov

Environmental Monitoring Data Certification

Form 4400-231 (R 5/17)

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 507.30NR 635.14(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)
SCS Engineers

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

Name	Phone No. (include area code)
Ashley Radunzel	(608) 224-2830

Email
aradunzel@scsengineers.com

Facility Name
Land & Gas Reclamation Landfill

License # / Monitoring ID	Facility ID (FID)
1118	114052290

Actual sampling dates (e.g., July 2-6, 2003)	The enclosed results are for sampling required in the month(s) of: (e.g., June 2003)
June 3, 2022	April 2022

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 attachments 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 significance of concentrations exceeding groundwater standards.

Facility Representative Name (Print)	Title	Phone No. (include area code)
Sherren Clark, SCS Engineers	Project Manager	(608) 216-7323

Signature

8/10/2022
Date Signed (mm/dd/yyyy)

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: _____

December 30, 2022
File No. 25222008.00

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

Subject: Groundwater Monitoring Results – October 2022
Land & Gas Reclamation Landfill – Horicon, Wisconsin
WDNR License #1118
FID #114052290

Dear GEMS Data Submittal Contact:

Enclosed are the electronic data file, NR 140 exceedance summary, and monitoring data certification form for monitoring performed in October 2022 at the former Land & Gas Reclamation Landfill (LGRL) site. Monitoring data in this submittal include laboratory results and associated field data from the following monitoring points in the required LGRL monitoring program:

- Monitoring wells (MW1AR through MW214A)
- Surface water staff gauges (SW2 through SW5)

The groundwater samples were collected by Environmental Sampling Corporation (ESC). Laboratory analysis was performed by Pace Analytical Services.

The data CD also includes monitoring data for some of the wells that were installed for the ongoing investigation of volatile organic compounds (VOCs) in the bedrock aquifer. Investigation wells that have been assigned Wisconsin Department of Natural Resources (WDNR) IDs are included on the data CD, including bedrock monitoring wells P-401D, P-402E, and P-423D, and deep unconsolidated aquifer monitoring wells MW-1B and P-422B. These wells are not part of the routine LGRL monitoring program. Additional investigation wells P-424D, P-424SS, P-426D, and P-429SS have not been assigned WDNR IDs and are not included on the data CD. Results for all groundwater monitoring associated with the VOC investigation will be provided to the WDNR in the annual report for the investigation.

This letter provides a preliminary analysis of the cause and significance of the NR 140 groundwater standard exceedances for monitoring data included in the data CD. An explanation of any deviations from the approved sampling plan is also included in the Monitoring Program Comments section of this letter.

NR 140 EXCEEDANCES

NR 140 standard exceedances for the October 2022 sampling round are listed in the attached NR 140 Exceedance Summary table. The following discussion addresses the NR 140 enforcement standard (ES) and preventive action limit (PAL) exceedances for this event.

Public Health Parameters

Arsenic was reported at concentrations less than the ES, but at or above the PAL of 1 microgram per liter (µg/L), in samples from the following wells: MW-1AR, MW-1RR, MW-7R, MW-8R, MW-203A, MW-210, MW-210A, MW-214A, W-3AR, W-3R, W-163, and W-163A. Arsenic concentrations within this range have been detected in samples collected from many wells around the former LGRL site and the adjacent Glacier Ridge Landfill, and are likely attributable to naturally occurring arsenic.

VOCs including benzene, cis-1,2 dichloroethene (DCE) and vinyl chloride were detected at concentrations exceeding the PAL or ES, and the Limit of Quantitation (LOQ), in samples collected from the following wells: MW-1AR, MW-1B, MW-210A, MW-210B, MW-214A, P-402E, P-423D, W-3AR, and W-3R. The specific VOCs exceeding the PAL or ES at each well are shown in the attached NR 140 Exceedance Summary (**Table 1**). All of these wells are located downgradient from the former LGRL site, and the VOCs are likely due to LGRL.

In addition to the NR 140 standard exceedances described above, there were some arsenic and VOC results reported at estimated concentrations above the PAL or ES, but below the LOQ ("J" flag). These results are not considered PAL or ES exceedances without additional confirmation in accordance with NR 140.14(3). VOCs reported at concentrations above the PAL, but below the LOQ, included tetrahydrofuran, trichloroethylene, and/or vinyl chloride in samples from the following wells: MW-1RR, MW-210, P-423D, and W-3AR. These wells are located adjacent to or downgradient from the former LGRL site, and the VOCs are likely due to LGRL. Arsenic was detected in the sample from MW-214 at an estimated concentration equal to the PAL but below the LOQ. This arsenic concentration is likely due to natural background.

The PAL and ES exceedances and reported concentrations for VOCs were generally consistent with previous results. The vinyl chloride concentration for MW-1B, screened near the bottom of the unconsolidated aquifer, continued a gradual increasing trend, but the current vinyl chloride concentration for MW-1B (9.4 µg /L) is still much lower than the current and historical vinyl chloride concentrations in the adjacent mid-depth piezometer MW-1AR.

Public Welfare Parameters

Chloride was reported above the NR 140 ES of 250 µg/L in the sample from MW-1AR. Chloride was reported above the PAL of 125 mg/L in the samples from MW-1B, MW-1RR, MW-210A, MW-214A, and W-3AR. These wells are located downgradient of LGRL, and the chloride detections may be associated with LGRL.

MONITORING PROGRAM COMMENTS

The October 2022 monitoring event was completed in accordance with the approved monitoring program.

If you have any questions regarding this submittal, please call Sherren Clark at 608.216.7323.

Sincerely,

Sherren Clark, PE, PG
Project Director
SCS Engineers

Eric Oelkers, PG
Senior Project Manager
SCS Engineers

SCC/AJR/EO

cc: Lonn Walter, Glacier Ridge Landfill (2 copies of letter, 1 CD)

cc via email: Mark Peters, WDNR
Jacob Margelofsky, Glacier Ridge Landfill
Kari Rabideau, GFL
Tim Curry, GFL
Frank Perugini, Environmental Sampling Corp.

Encl. Table 1 - NR 140 Exceedance Summary
Groundwater Monitoring Data Certification Form
GEMS Data CD

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Table 1
NR 140 Exceedance Summary

Site ID: **1118**
Site Name: **Land and Gas Reclamation Landfill**
Reporting Period: **October 2022**

Note: Includes NR 140 exceedances for wells in the LGRL monitoring plan approved by the WDNR Solid Waste program and additional wells in the off-site monitoring plan that have been assigned WDNR IDs.

Groundwater Results Exceeding NR 140 Standards

Well	Parameter	Result *	PAL	ES	Exceedance Type
MW-001AR	Arsenic, dissolved (ug/l As)	3.4/3.6	1	10	PAL
	Chloride, dissolved (mg/l as Cl)	570/562	125	250	ES
	cis-1,2-Dichloroethene (ug/l)	778/852	7	70	ES
	Vinyl chloride (ug/l)	1750/1770	0.02	0.2	ES
MW-001B	Chloride, dissolved (mg/l as Cl)	150	125	250	PAL
	Vinyl chloride (ug/l)	9.4	0.02	0.2	ES
MW-001RR	Arsenic, dissolved (ug/l As)	6.2	1	10	PAL
	Chloride, dissolved (mg/l as Cl)	131	125	250	PAL
MW-007R	Arsenic, dissolved (ug/l As)	1.3/1.3	1	10	PAL
MW-008R	Arsenic, dissolved (ug/l As)	2.8	1	10	PAL
MW-203A	Arsenic, dissolved (ug/l As)	7.2	1	10	PAL
MW-210	Arsenic, dissolved (ug/l As)	2.4	1	10	PAL
MW-210A	Arsenic, dissolved (ug/l As)	5.9	1	10	PAL
	Chloride, dissolved (mg/l as Cl)	126	125	250	PAL
	cis-1,2-Dichloroethene (ug/l)	119	7	70	ES
	Vinyl chloride (ug/l)	74	0.02	0.2	ES
MW-210B	Vinyl chloride (ug/l)	5.5	0.02	0.2	ES

Table 1
NR 140 Exceedance Summary

Site ID: **1118**
Site Name: **Land and Gas Reclamation Landfill**
Reporting Period: **October 2022**

Note: Includes NR 140 exceedances for wells in the LGRL monitoring plan approved by the WDNR Solid Waste program and additional wells in the off-site monitoring plan that have been assigned WDNR IDs.

Groundwater Results Exceeding NR 140 Standards

Well	Parameter	Result *	PAL	ES	Exceedance Type
MW-214A	Arsenic, dissolved (ug/l As)	1.2	1	10	PAL
	Chloride, dissolved (mg/l as Cl)	197	125	250	PAL
	Vinyl chloride (ug/l)	36.6	0.02	0.2	ES
P-402E	cis-1,2-Dichloroethene (ug/l)	186	7	70	ES
	Vinyl chloride (ug/l)	30.3	0.02	0.2	ES
P-423D	cis-1,2-Dichloroethene (ug/l)	52.6	7	70	PAL
	Vinyl chloride (ug/l)	2.6	0.02	0.2	ES
W-003AR	Arsenic, dissolved (ug/l As)	5.4	1	10	PAL
	Benzene (ug/l)	1.4	0.5	5	PAL
	Chloride, dissolved (mg/l as Cl)	213	125	250	PAL
	cis-1,2-Dichloroethene (ug/l)	22.8	7	70	PAL
	Vinyl chloride (ug/l)	11.7	0.02	0.2	ES
W-003R	Arsenic, dissolved (ug/l As)	1.2/1.3	1	10	PAL
	Vinyl chloride (ug/l)	8.2/8.0	0.02	0.2	ES

Table 1
NR 140 Exceedance Summary

Site ID: **1118**
Site Name: **Land and Gas Reclamation Landfill**
Reporting Period: **October 2022**

Note: Includes NR 140 exceedances for wells in the LGRL monitoring plan approved by the WDNR Solid Waste program and additional wells in the off-site monitoring plan that have been assigned WDNR IDs.

Groundwater Results Exceeding NR 140 Standards

Well	Parameter	Result *	PAL	ES	Exceedance Type
W-163	Arsenic, dissolved (ug/l As)	2.5	1	10	PAL
W-163A	Arsenic, dissolved (ug/l As)	2.7	1	10	PAL

Groundwater Results with Estimated Concentration Above an NR 140 PAL or ES and Below the LOQ

Note: If both the result and the PAL or ES are above the limit of detection but below the limit of quantitation, the result is not considered a PAL or ES exceedance under NR 140.14(3)(c). If the PAL or ES is below the limit of detection and the result is below the limit of quantitation, the result is not considered a PAL or ES exceedance without additional confirmation as described in NR 140.14(3)(b).

Well	Parameter	Result	LOD/LOQ	PAL	ES
MW-001RR	Vinyl chloride (ug/l)	0.29 J	0.17/1	0.02	0.2
MW-210	Vinyl chloride (ug/l)	0.26 J	0.17/1	0.02	0.2
MW-214	Arsenic, dissolved (ug/l As)	1 J	0.28/1	1	10
P-423D	Trichloroethylene (ug/l)	0.77 J	0.32/1	0.5	5
W-003AR	Tetrahydrofuran (ug/l)	12.2 J	2.4/25	10	50

Notes:
PAL = Preventive Action Limit
ES = Enforcement Standard
LOQ = Limit of Quantitation
J = Result is an estimated value below the laboratory's limit of quantitation.
* = Two results indicate duplicate samples. Only results exceeding the PAL are shown.
ug/l = micrograms per liter
mg/l = milligrams per liter

Prepared by: AJR, 12/22/2022
Checked by: SCC, 12/27/2022

Save... Print... Clear Data

State of Wisconsin
Department of Natural Resources
dnr.wi.gov

Environmental Monitoring Data Certification

Form 4400-231 (R 5/17)

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 507.30NR 635.14(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)
SCS Engineers

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

Name	Phone No. (include area code)
Ashley Radunzel	(608) 224-2830

Email
aradunzel@scsengineers.com

Facility Name
Land & Gas Reclamation Landfill

License # / Monitoring ID	Facility ID (FID)
1118	114052290

Actual sampling dates (e.g., July 2-6, 2003)	The enclosed results are for sampling required in the month(s) of: (e.g., June 2003)
October 3, 5-7, 28, & 31, 2022	October 2022

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): Surface Water

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 attachments 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 significance of concentrations exceeding groundwater standards.

Facility Representative Name (Print)	Title	Phone No. (include area code)
Sherren Clark, SCS Engineers	Project Manager	(608) 216-7323

Signature

12/27/2022
Date Signed (mm/dd/yyyy)

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: _____

Attachment A-2

Historic VOC Monitoring Results and Concentrations vs. Time Plots

Historic VOC Monitoring Results
Land and Gas Reclamation Landfill
(concentrations in ug/L)

MW-1RR				MW-1AR			
Date	**cis-1,2-DCE**	**TCE**	**VC**	**Date**	**cis-1,2-DCE**	**TCE**	**VC**
NR 140 ES	**70**	**5**	**0.2**	**NR 140 ES**	**70**	**5**	**0.2**
11/21/1991		1,900	2,900	11/19/1991		130	3,000
5/29/1992		2,800	4,300	5/29/1992		100	2,800
6/17/1993		580	1,800	6/17/1993		30	2,200
6/21/1994		10.7	198	6/21/1994		24.9	1,160
4/14/1995	1,500	2,000	3,800	4/14/1995	7,100	200	2,900
10/4/1995	6,400	620	3,400	10/4/1995	6,100	180	2,800
4/4/1996	1,900	130	1,300	4/4/1996	6,600	150	2,600
10/12/1996	16,000	1,600	3,600	10/12/1996	8,500	200	2,300
4/10/1997	3,800	80	3,100	4/10/1997	6,000	86	2,400
10/3/1997	2,500	190	1,600	10/3/1997	6,300	0	2,700
4/10/1998	2,800	120	2,300	4/10/1998	7,200	150	2,500
10/14/1998	11,000	820	3,100	10/15/1998	6,500	95	1,900
4/6/1999	2,100	0	2,300	4/6/1999	5,500	0	2,300
10/7/1999	13,000	6,800	3,400	10/8/1999	6,100	0	2,000
4/3/2000	2,400	77	1,500	4/3/2000	5,700	54	2,200
10/4/2000	4,600	0	1,210	10/5/2000	4,920	0	1,190
4/4/2001	2,260	0	1,240	4/4/2001	5,040	0	1,300
10/3/2001	6,090	411	2,300	10/3/2001	4,910	0	2,000
4/3/2002	4,890	274	535	4/3/2002	5,320	0	795
10/1/2002	4,800	525	1,180	10/1/2002	5,660	0	1,220
4/2/2003	1,260	29.2	593	4/2/2003	4,860	17	1,100
10/9/2003	2,020	0	700	10/9/2003	4,470	0	1,200
4/5/2004	1,220	26.7	1,220	4/5/2004	4,130	16.8	1,550
10/4/2004	4,590	440	2,060	10/4/2004	3,950	0	1,800
4/1/2005	2,510	0	736	4/1/2005	3,990	0	882
10/1/2005	5,130	351	1,150	10/1/2005	4,420	0	951
4/6/2006	2,680	0	785	4/6/2006	3,820	0	659
10/5/2006	4,340	295	1,160	10/5/2006	3,590	0	1,020
4/5/2007	708	0	360	4/5/2007	2,020	0	887
10/22/2007	605	8.46	351	10/22/2007	2,280	<20	1,060
4/10/2008	265	1.92	207	4/10/2008	590	0.51	196
10/9/2008	199	<4	221	10/9/2008	2,020	<40	1,070
4/8/2009	145	<4.0	245	4/8/2009	2,260	<4.0	1,780
10/6/2009	90.2	<4	232	10/6/2009	1,610	<40	1,520
4/6/10	77.5	<4	152	4/6/10 [1]	24,000	<4.0	17,500
10/26/10	94.4	1.41	190	10/26/10	2,370	1.49	1,630
4/7/11	63.6	<4	137	4/7/11	1,700	<40	1,170
10/5/11	90.3	<4	168	10/5/11	1,400	<40	1,110
4/12/12	62.7	<4	136	4/12/12	2,090	<4	1,620

Historic VOC Monitoring Results
Land and Gas Reclamation Landfill
(concentrations in ug/L)

MW-1RR				MW-1AR			
Date	**cis-1,2-DCE**	**TCE**	**VC**	**Date**	**cis-1,2-DCE**	**TCE**	**VC**
NR 140 ES	**70**	**5**	**0.2**	**NR 140 ES**	**70**	**5**	**0.2**
10/2/12	49.9	0.68	107	10/2/12	2,090	<4.8	1,390
4/1/13	23.1	0.58	75.1	4/1/13	1,940	<12	1,310
10/3/13	29.5	0.65	85.7	10/1/13	1,620	<3.6	1,580
4/2/14	13.1	0.37	63.7	4/2/14	1,610	<3.3	1,630
10/6/14	8.4	<0.33	35.9	10/6/14	1,720	<6.6	1,400
4/16/15	14.4	0.53	56.6	4/16/15	1,450	<3.3	1,190
10/7/15	3.9	<0.33	18.3	10/8/15	808	<3.3	1,050
4/6/16	2.4	<0.33	11.6	4/6/16	1,240	<3.3	1,960
10/5/16	4.8	<0.33	24	10/5/16	1,050	<3.3	1,980
4/6/17	1.3	<0.33	5.2	4/6/17	1,140	<3.3	1,540
10/5/17	<0.26	<0.33	2.5	10/5/17	1,030	<3.3	1,480
4/5/18	1.4	<0.50	6.9	4/5/18	1,060	<3.3	1,600
10/3/18	1.4	<0.26	5.2	10/3/18	1,050	<2.6	1,670
4/3/19	0.94	<5.1	5.8	4/3/19	808	<0.33	1,500
10/10/19	0.93	<0.26	4.5	10/10/19	524	<1.3	1,280
4/23/20	<0.27	<0.26	0.68	4/23/20	673	0.32	1,630
10/7/20	18.5	<0.26	75.9	10/7/20	701	<5.1	1,000
4/8/21	<0.47	<0.47	0.99	4/8/21	926	<4.1	1,780
10/7/21	<0.47	<0.41	1.7	10/7/21	690	<8.2	1,250
4/6/22	<0.47	<0.32	<0.17	4/6/22	495	<6.4	957
10/6/22	<0.47	<0.32	0.29	10/5/22	778	<6.4	1750

Historic VOC Monitoring Results
Land and Gas Reclamation Landfill
(concentrations in ug/L)

W-3R				W-3AR			
Date	**cis-1,2-DCE**	**TCE**	**VC**	**Date**	**cis-1,2-DCE**	**TCE**	**VC**
NR 140 ES	**70**	**5**	**0.2**	**NR 140 ES**	**70**	**5**	**0.2**
11/13/1991		0	0	11/14/1991		5	770
5/29/1992		0	0	5/29/1992		78	1,000
6/17/1993		0	0.5	6/17/1993		57	1,300
6/21/1994		0	0	6/21/1994		12	720
4/14/1995	0	0	2.2	4/14/1995	1,200	6.6	110
10/4/1995	0	0	1.2	10/4/1995	1,200	12	1,400
4/4/1996	0	0	0	4/4/1996	1,000	0	550
10/12/1996	0	0	4	10/12/1996	1,800	13	1,100
4/10/1997	0	0	0.56	4/10/1997	1,100	0	740
10/3/1997	0	0	1.5	10/3/1997	1,200	0	780
4/7/1998	0.44	0	0.89	4/7/1998	1,000	0	720
10/14/1998	0	0	6.4	10/14/1998	1,200	0	660
4/6/1999	0.3	0	0.65	4/6/1999	900	0	710
10/6/1999	0.27	0	2.9	10/7/1999	1,200	0	650
4/3/2000	0.29	0	0.17	4/3/2000	1,000	0	890
10/3/2000	0	0	0.133	10/3/2000	1,100	0	404
4/3/2001	0	0	0	4/3/2001	1,050	0	554
10/2/2001	0	0	2.74	10/2/2001	1,130	0	901
4/4/2002	0	0	0	4/4/2002	1,150	0	375
10/1/2002	0	0	14.1	10/1/2002	1,230	0	446
4/1/2003	0	0	0.703	4/1/2003	674	0	601
10/8/2003	0	0	1.98	10/8/2003	712	0	407
4/7/2004	0	0	0	4/7/2004	753	0	519
10/4/2004	0	0	0	10/4/2004	685	0	626
4/1/2005	0	0	0	4/1/2005	567	0	265
10/1/2005	0	0	0	10/1/2005	628	0	258
4/6/2006	0	0	0	4/6/2006	700	1.15	352
10/5/2006	0	0	0	10/4/2006	450	0	279
4/4/2007	0	0	0	4/4/2007	418	0	402
10/22/2007	<0.2	<0.2	3.20	10/22/2007	421	<2	410
4/11/2008	<0.3	<0.4	14.30	4/11/2008	476	<4	382
10/9/2008	<0.3	<0.4	5.32	10/9/2008	322	<4	281
4/7/2009	<0.3	<0.4	2.48	4/7/2009	351	0.8	357
10/7/2009	<0.4	<0.4	<0.2	10/7/2009	339	<4.0	358
4/7/10	<0.4	<0.4	0.95	4/7/10	339	<4	334
10/27/10	<0.4	<0.4	2.46	10/27/10	257	<4	194
4/6/11	<0.4	<0.4	3.14	4/6/11	201	0.51	256
10/5/11	<0.4	<0.4	1.45	10/5/11	170	<4	181
4/11/12	<0.4	<0.4	3.18	4/11/12	190	0.51	205

Historic VOC Monitoring Results
Land and Gas Reclamation Landfill
(concentrations in ug/L)

W-3R				W-3AR			
Date	**cis-1,2-DCE**	**TCE**	**VC**	**Date**	**cis-1,2-DCE**	**TCE**	**VC**
NR 140 ES	**70**	**5**	**0.2**	**NR 140 ES**	**70**	**5**	**0.2**
10/2/12	<0.83	<0.48	18.50	10/2/12	183	0.55	190
4/1/13	<0.83	<0.48	2.90	4/4/13	164	<0.48	146
10/3/13	<0.42	<0.36	3.40	10/3/13	87.8	<0.33	99.3
1/9/14	<0.42	<0.36	3.70	1/9/14	146	<0.36	211
4/2/14	0.26	<0.33	2.00	4/2/14	145	0.39	175
10/7/14	0.35	<0.33	4.00	10/7/14	145	<0.33	196
4/17/15	<0.26	<0.33	1.50	4/17/15	111	<0.33	112
10/7/15	0.27	<0.33	1.70	10/7/15	110	<0.33	118
4/6/16	<0.26	<0.33	<0.18	4/6/16	121	<0.33	129
10/6/16	0.39	<0.33	2.5	10/6/16	125	0.5	178
4/5/17	<0.26	<0.33	5.10	4/5/17	92.6	<0.33	78.4
10/3/17	<0.26	<0.33	12.90	10/3/17	53.5	<0.33	47.7
4/5/18	<0.26	<0.33	5.60	4/5/18	88.9	<0.66	63.3
10/4/18	<0.27	<0.26	6.40	10/4/18	74.5	0.36	60.7
4/5/19	<0.27	<0.26	20.3	4/5/19	42.1	0.27	23.1
10/10/19	<0.27	<0.26	30.7	10/10/19	55.6	0.31	34.6
4/20/20	<0.27	<0.26	42.40	4/20/20	37.6	0.35	18.4
10/2/20	<0.27	<0.26	27.10	10/2/20	38.2	<0.26	18.8
4/6/21	<0.47	<0.41	28.40	4/6/21	32.4	<0.41	15.3
10/7/21	<0.47	<0.41	19.30	10/7/21	28.4	<0.41	15.3
4/4/22	<0.47	<0.32	6.8	4/4/22	24.1	<0.32	13
10/28/22	<0.47	<0.32	8.2	10/28/22	22.8	<0.32	11.7

Historic VOC Monitoring Results
Land and Gas Reclamation Landfill
(concentrations in ug/L)

MW-210				MW-210A				MW-210B			
Date	**cis-1,2-DCE**	**TCE**	**VC**	**Date**	**cis-1,2-DCE**	**TCE**	**VC**	**Date**	**cis-1,2-DCE**	**TCE**	**VC**
NR 140 ES	**70**	**5**	**0.2**	**NR 140 ES**	**70**	**5**	**0.2**	**NR 140 ES**	**70**	**5**	**0.2**
12/6/1991		0	0	12/6/1991		0	180	12/6/1991		0	0
5/28/1992		0	0	5/28/1992		0	200	5/27/1992		0	0
				6/17/1993		7	370				
7/6/1994		0	28.3	7/6/1994		8.6	220	7/6/1994		0	0
4/14/1995	41	0	27	4/14/1995	1,400	13	350	4/14/1995	0	0	0
10/4/1995	26	0	22	10/4/1995	1,600	20	600	10/4/1995	0	0	0
4/4/1996	32	0	27	4/4/1996	1,900	35	450	4/4/1996	0	0	0
10/12/1996	12	0	7.9	10/12/1996	2,300	47	670	10/12/1996	0	0	0
4/10/1997	13	0	20	4/10/1997	1,900	38	420	4/10/1997	0	0	0
10/3/1997	10	0	23	10/3/1997	1,700	66	480	10/3/1997	0	0	0
4/7/1998	6.5	0	14	4/7/1998	1,600	57	540	4/7/1998	0	0	0
10/15/1998	46	0	44	10/15/1998	1,600	47	510	10/15/1998	0	0	no data
4/6/1999	7.3	0	10	4/6/1999	1,200	40	500	4/6/1999	0	0	0
10/11/1999	98	0	240	10/11/1999	800	40	440	10/11/1999	0	0	0
4/4/2000	2.9	0	6.3	4/4/2000	820	32	440	4/4/2000	0	0	0
10/5/2000	1.61	0	5.3	10/5/2000	372	0	157	10/5/2000	0	0	0
4/5/2001	1.12	0	2.47	4/5/2001	421	0	214	4/5/2001	0	0	0
10/3/2001	1.21	0	13.2	10/3/2001	520	55.9	425	10/3/2001	0	0	0
4/4/2002	0.384	0	3.22	4/4/2002	730	0	206	4/4/2002	0	0	0
10/3/2002	1.59	0	12.8	10/3/2002	940	0	327	10/3/2002	0	0	0
4/2/2003	0	0	0.386	4/2/2003	401	0	233	4/2/2003	0	0	0.591
10/8/2003	0	0	1.02	10/8/2003	293	10	29.2	10/8/2003	0	0	0.274
4/7/2004	0	0	0.383	4/7/2004	272	0	76.3	4/7/2004	0	0	0.891
10/5/2004	0	0	1.46	10/5/2004	230	7.38	45.6	10/5/2004	0	0	1.15
4/1/2005	0	0	0	4/1/2005	220	0	52.7	4/1/2005	0	0	0.549
10/1/2005	0	0	0	10/1/2005	220	0	29.5	10/1/2005	0	0	0.706
5/6/2006	0.82	0	0	5/6/2006	252	7.32	109	5/6/2006	0	0	1.13
10/4/2006	0.49	0	0.45	10/4/2006	184	5.62	45.2	10/4/2006	0	0	1.65
5/30/2007	0.28	0	0.23	5/30/2007	198	5.66	33.7	5/30/2007	0	0	1.42
10/25/2007	0.23	<0.2	<0.2	10/25/2007	251	5.71	73.2	10/25/2007	<2	<2	<2
5/27/2008	<0.3	<0.4	<0.2	5/27/2008	237	8.1	74.1	5/27/2008	0.51	<0.4	<0.2
10/9/2008	0.41	<0.4	<0.2	10/9/2008	325	7.72	124	10/9/2008	<0.3	<0.4	2.26
10/7/2009	0.63	<0.4	0.65	10/7/2009	284	5.3	125	10/7/2009	<0.4	<0.4	2.72
4/7/10	0.56	<0.4	0.43	4/7/10	222	4.66	111	4/7/10	<0.4	<0.4	2.64
11/29/10	0.64	<0.4	<0.2	11/29/10	192	<4	87.6	11/29/10	<0.4	<0.4	2.5
4/8/11	0.66	<0.4	0.46	4/8/11	163	<4	94.7	4/8/11	<0.4	<0.4	2.76
10/6/11	0.64	<0.4	0.48	10/6/11	177	<4	120	10/6/11	<0.4	<0.4	2.52
4/11/12	0.66	<0.4	0.54	4/11/12	164	3.54	74.3	4/11/12	<0.4	<0.4	2.5

Historic VOC Monitoring Results
Land and Gas Reclamation Landfill
(concentrations in ug/L)

MW-210				MW-210A				MW-210B			
Date	**cis-1,2-DCE**	**TCE**	**VC**	**Date**	**cis-1,2-DCE**	**TCE**	**VC**	**Date**	**cis-1,2-DCE**	**TCE**	**VC**
NR 140 ES	**70**	**5**	**0.2**	**NR 140 ES**	**70**	**5**	**0.2**	**NR 140 ES**	**70**	**5**	**0.2**
10/1/12	<0.83	<0.48	1.1	10/1/12	182	3.8	28.3	10/1/12	<0.83	<0.48	2.2
4/2/13	<0.83	<0.48	0.21	4/2/13	169	2.6	102	4/2/13	<0.2	<0.48	3.5
10/2/13	<0.42	<0.36	0.19	10/2/13	221	2.2	97.4	10/2/13	<0.29	<0.36	3.4
5/20/14	0.32	<0.33	<0.18	5/20/14	215	2.1	95.3	5/20/14	<0.26	<0.33	3.6
10/8/14	0.43	<0.33	<0.18	10/8/14	235	2.3	103	10/8/14	<0.26	<0.33	3.2
4/16/15	<0.50	<0.33	<0.18	4/16/15	296	1.7	149	4/16/15	<0.26	<0.33	4.1
10/9/15	<0.26	<0.33	<0.18	10/9/15	332	1.5	124	10/9/15	<0.26	<0.33	3.3
4/7/16	0.36	<0.33	0.19	4/7/16	360	1.9	104	4/7/16	<0.26	<0.33	3.6
10/6/16	0.44	<0.33	0.23	10/6/16	542	2.4	85.5	10/6/16	<0.26	<0.33	4.4
4/5/17	<0.26	<0.33	<0.18	4/5/17	461	2	71.7	4/5/17	<0.26	<0.33	3.7
10/6/17	0.32	<0.33	0.2	10/6/17	440	2.3	64.7	10/6/17	<0.26	<0.33	3.4
4/5/18	0.39	<0.33	<0.18	4/5/18	330	1.9	86	4/5/18	<0.26	<0.33	4.3
7/26/19	0.45	<0.26	<0.17	7/26/19	239	1.5	42.2	7/26/19	<0.27	<0.26	3.9
7/31/20	0.3	<0.26	0.34	7/31/20	137	1.1	44.9	7/31/20	<0.27	<0.26	4.5
10/2/20	0.39	<0.26	0.43	10/2/20	90.3	<0.64	110	10/2/20	<0.27	<0.26	4
4/7/21	<0.27	<0.33	0.18	4/7/21	109	<0.82	37.4	4/7/21	<0.27	<0.33	4.3
10/8/21	<0.47	<0.41	0.52	10/8/21	102	<0.41	51.6	10/8/21	<0.47	<0.41	4.8
4/7/22	<0.47	<0.32	0.85	4/7/22	105	0.88	63.9	4/7/22	<0.47	<0.32	7.5
10/28/22	<0.47	<0.32	0.26	10/28/22	119	<0.8	74	10/28/22	<0.47	<0.32	5.5

Note: Monitoring wells MW-210, MW-210A, and MW-210B could not be sampled in 10/18, 4/19, 10/19, or 4/20 due to standing water around the wells, but samples were collected during 7/19 and 7/20.

Historic VOC Monitoring Results
Land and Gas Reclamation Landfill
(concentrations in ug/L)

MW-214				MW-214A			
Date	**cis-1,2-DCE**	**TCE**	**VC**	**Date**	**cis-1,2-DCE**	**TCE**	**VC**
NR 140 ES	**70**	**5**	**0.2**	**NR 140 ES**	**70**	**5**	**0.2**
6/9/1992		0	0	6/9/1992		0	0
7/6/1994		0	0	7/6/1994		0	0
10/4/1995	0	0	0	10/4/1995	0	0	0
4/4/1996	0	0	0	4/4/1996	0	0	0
10/12/1996	0	0	0	10/12/1996	0	0	0
4/10/1997	0	0	0	4/10/1997	0	0	0
4/7/1998	0	0	0	4/7/1998	0	0	0
4/6/1999	0	0	0	4/6/1999	0	0	0
4/6/2000	0	0	0	4/6/2000	0	0	0
10/4/2001	0	0	0	10/4/2001	0	0	0
10/3/2002	0	0	0	10/3/2002	0	0	0
10/8/2003	0	0	0	10/8/2003	0	0	0.225
10/6/2004	0	0	0	10/6/2004	0	0	0.912
10/1/2005	0	0	0	10/1/2005	0	0	0.488
10/5/2006	0	0	0	10/4/2006	0	0	1.67
10/24/07 [(2)]	<0.2	<0.2	2.93	10/24/07 [(2)]	<0.2	<0.2	<0.2
3/14/2008	<0.3	<0.4	<0.2	3/14/2008	<0.3	<0.4	4.74
10/9/2008	<0.3	<0.3	<0.4	10/9/2008	<0.3	<0.4	6.54
10/7/2009	<0.4	<0.4	<0.2	10/7/2009	<0.4	<0.4	15.1
10/27/10	<0.4	<0.4	<0.2	10/27/10	<0.4	<0.4	16.9
10/6/11	<0.4	<0.4	<0.2	10/3/11	<0.4	<0.4	23.4

Historic VOC Monitoring Results
Land and Gas Reclamation Landfill

(concentrations in ug/L)

MW-214				MW-214A			
Date	**cis-1,2-DCE**	**TCE**	**VC**	**Date**	**cis-1,2-DCE**	**TCE**	**VC**
NR 140 ES	**70**	**5**	**0.2**	**NR 140 ES**	**70**	**5**	**0.2**
10/1/12	<0.83	<0.48	<0.18	10/1/12	<0.83	<0.48	29.6
10/3/13	<0.42	<0.36	<0.18	10/1/13	<0.42	<0.36	19.3
10/7/14	<0.26	<0.33	<0.18	10/7/14	<0.26	<0.33	45.6
10/7/15	<0.26	<0.33	<0.18	10/7/15	<0.26	<0.33	37
10/6/16	<0.26	<0.33	<0.18	10/6/16	<0.26	<0.33	34.5
10/3/17	<0.26	<0.33	<0.18	10/3/17	<0.26	<0.33	41
10/4/18	<0.27	<0.26	<0.17	10/4/18	<0.27	<0.26	44.5
10/11/19	<0.27	<0.26	<0.17	10/11/19	<0.27	<0.26	39
10/7/20	<0.27	<0.26	<0.17	10/7/20	0.93	<0.26	40.6
10/7/21	<0.47	<0.41	<0.17	10/7/21	0.67	<0.41	46.9
10/28/22	<0.47	<0.32	<0.17	10/28/22	0.78	<0.32	36.6

Notes:
(1) Results for MW-1AR for April 2010 are suspected to be elevated 10 times due to a dilution error, but this cannot be verified.
(2) Based on sample results for MW-214 and MW-214A for October 2007, it appears that the sample vials were switched, but this cannot be confirmed.

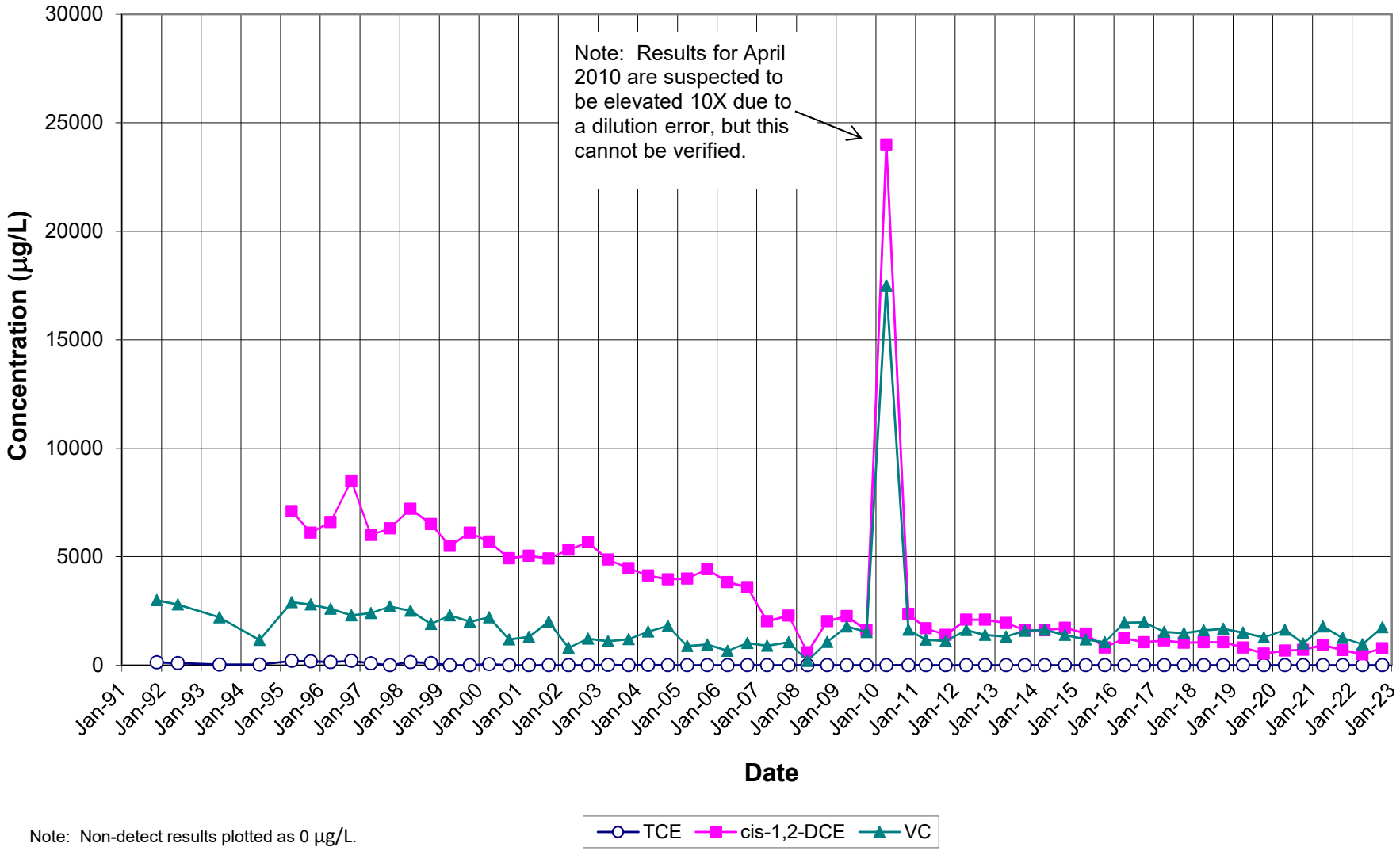
J = Estimated value below limit of quantitation

Shaded cell indicates well was not sampled on a date when one or more other wells in the table was sampled

Updated for 2022 by: RM, 4/7/2023
Checked for 2022 by: EO,4/10/2023
Reviewed for 2022 by: SCC, 4/10/2023

I:\25223008.00\Deliverables\2022 Annual Graphs and WT Map\[LGRL VOC graphs 2022.xls]Data Table for Report

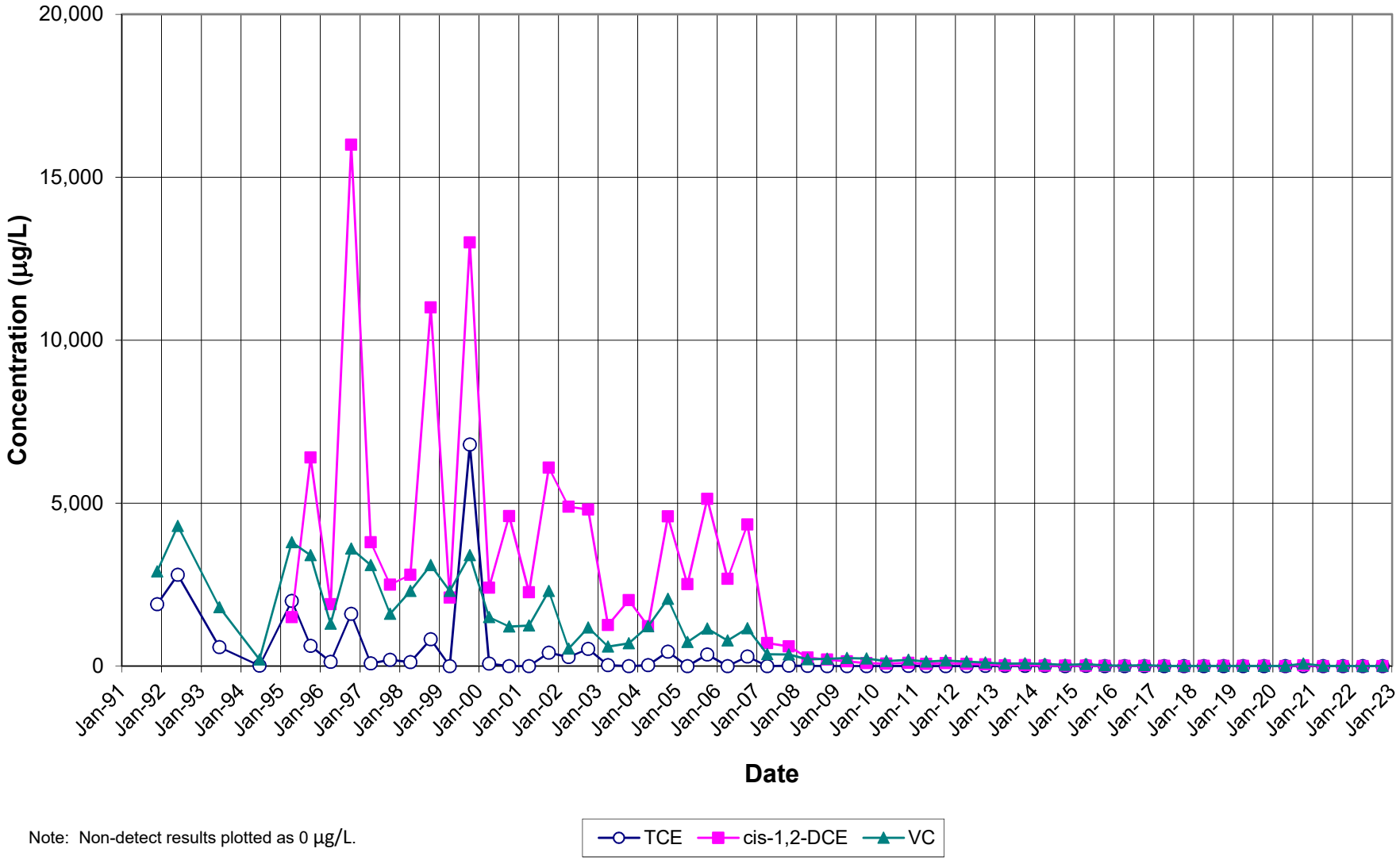
MW-1AR



Note: Non-detect results plotted as 0 µg/L.

4/10/2023

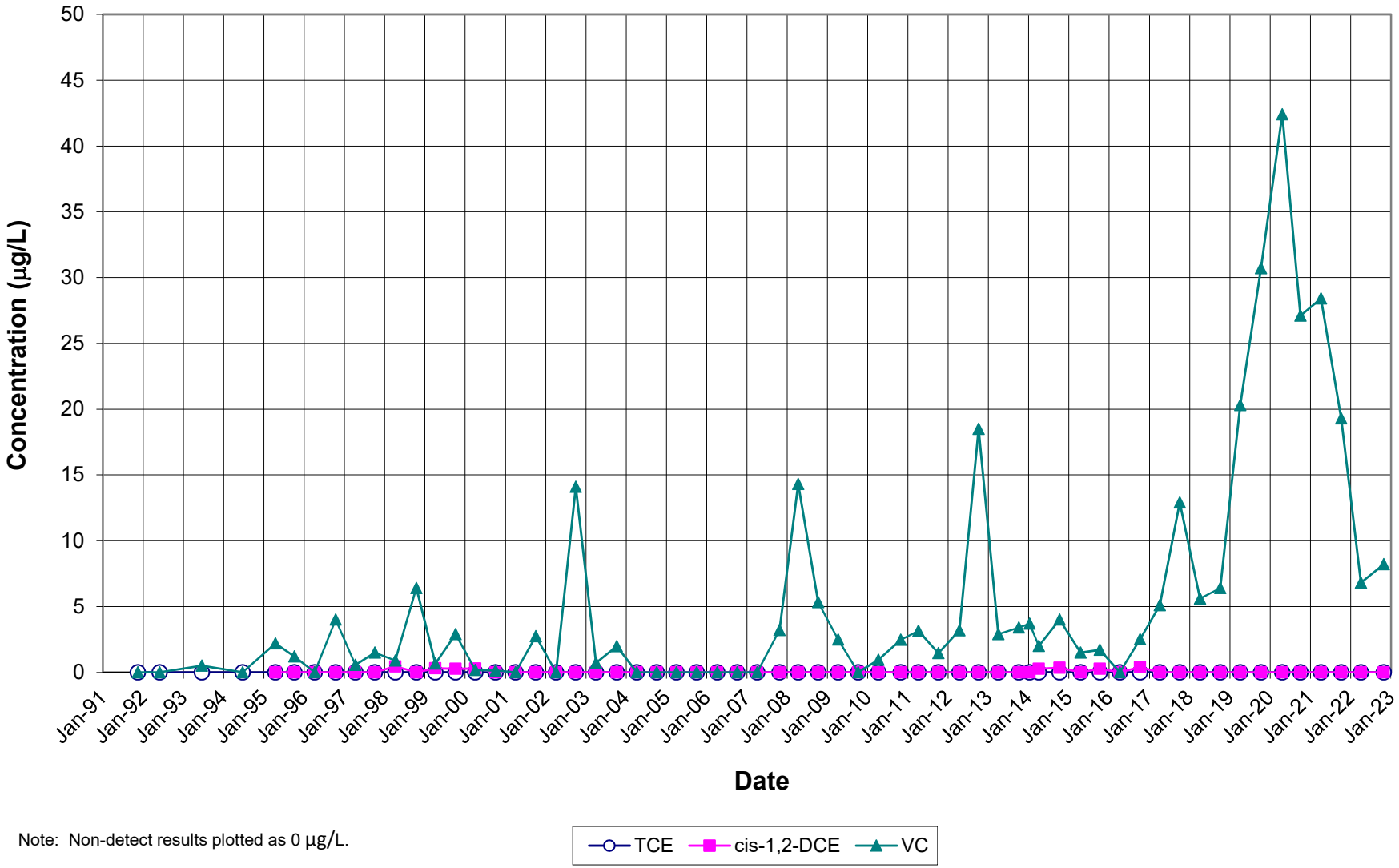
MW-1RR



Note: Non-detect results plotted as 0 µg/L.

4/10/2023

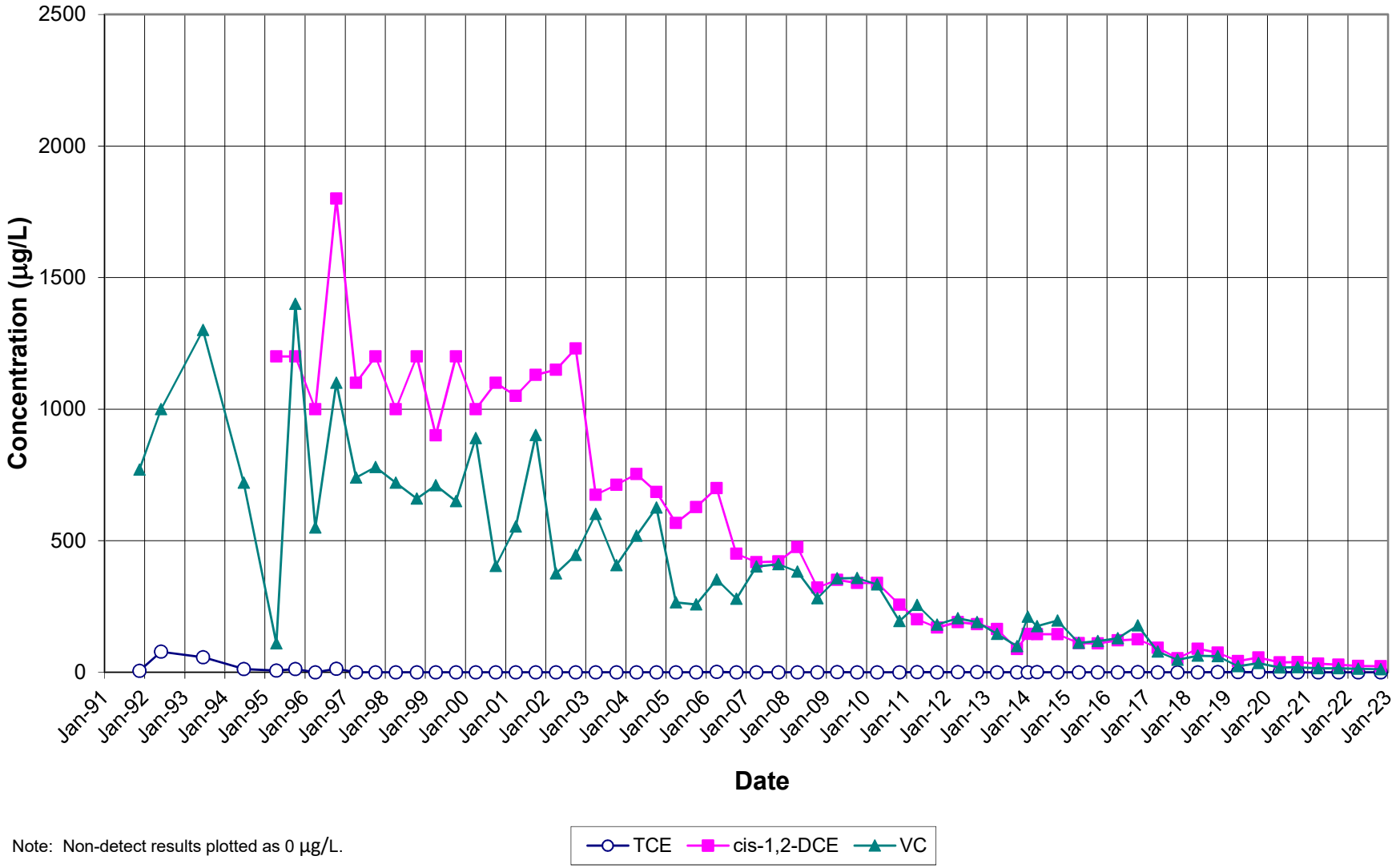
W-3R



Note: Non-detect results plotted as 0 µg/L.

4/10/2023

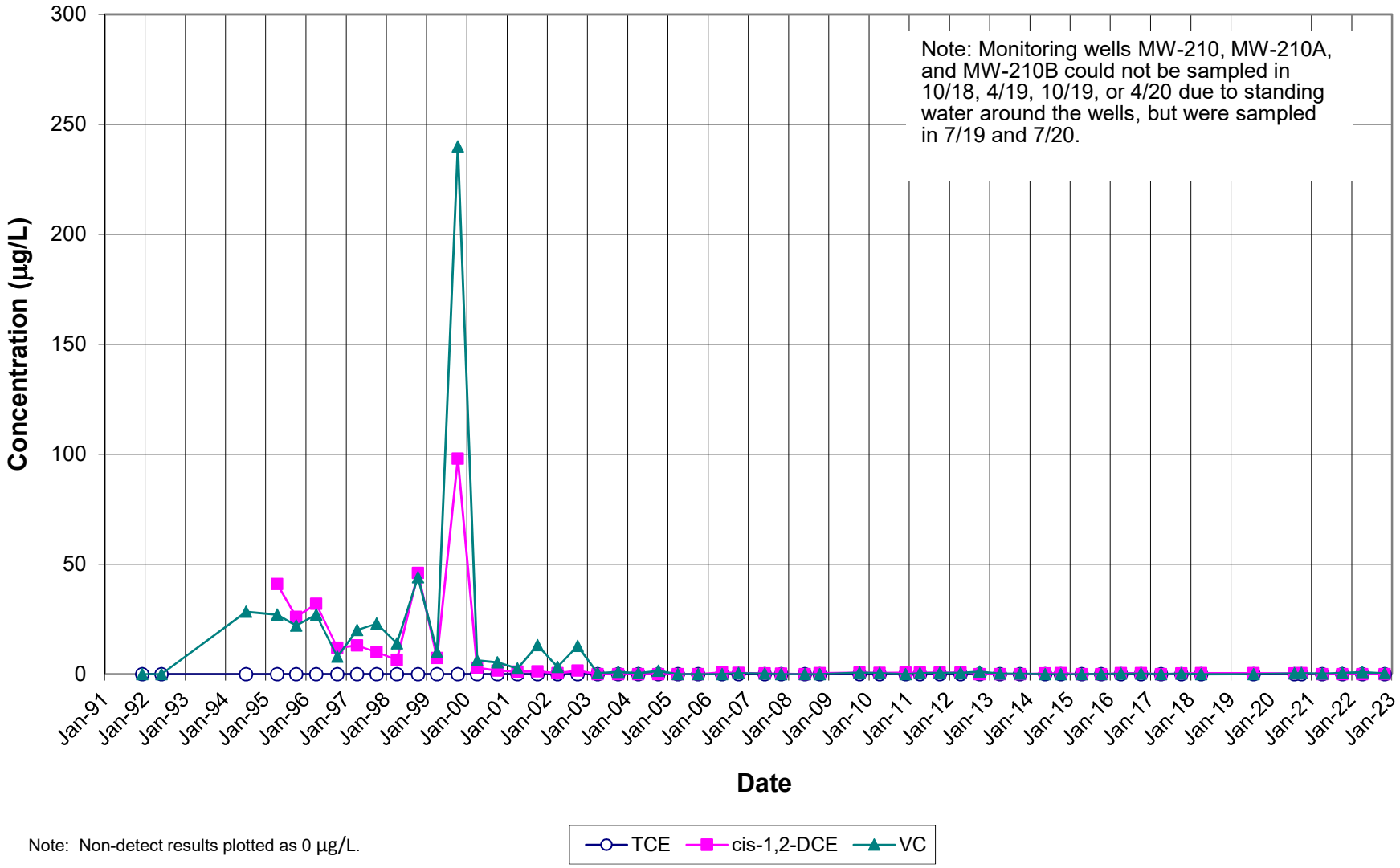
W-3AR



Note: Non-detect results plotted as 0 µg/L.

4/10/2023

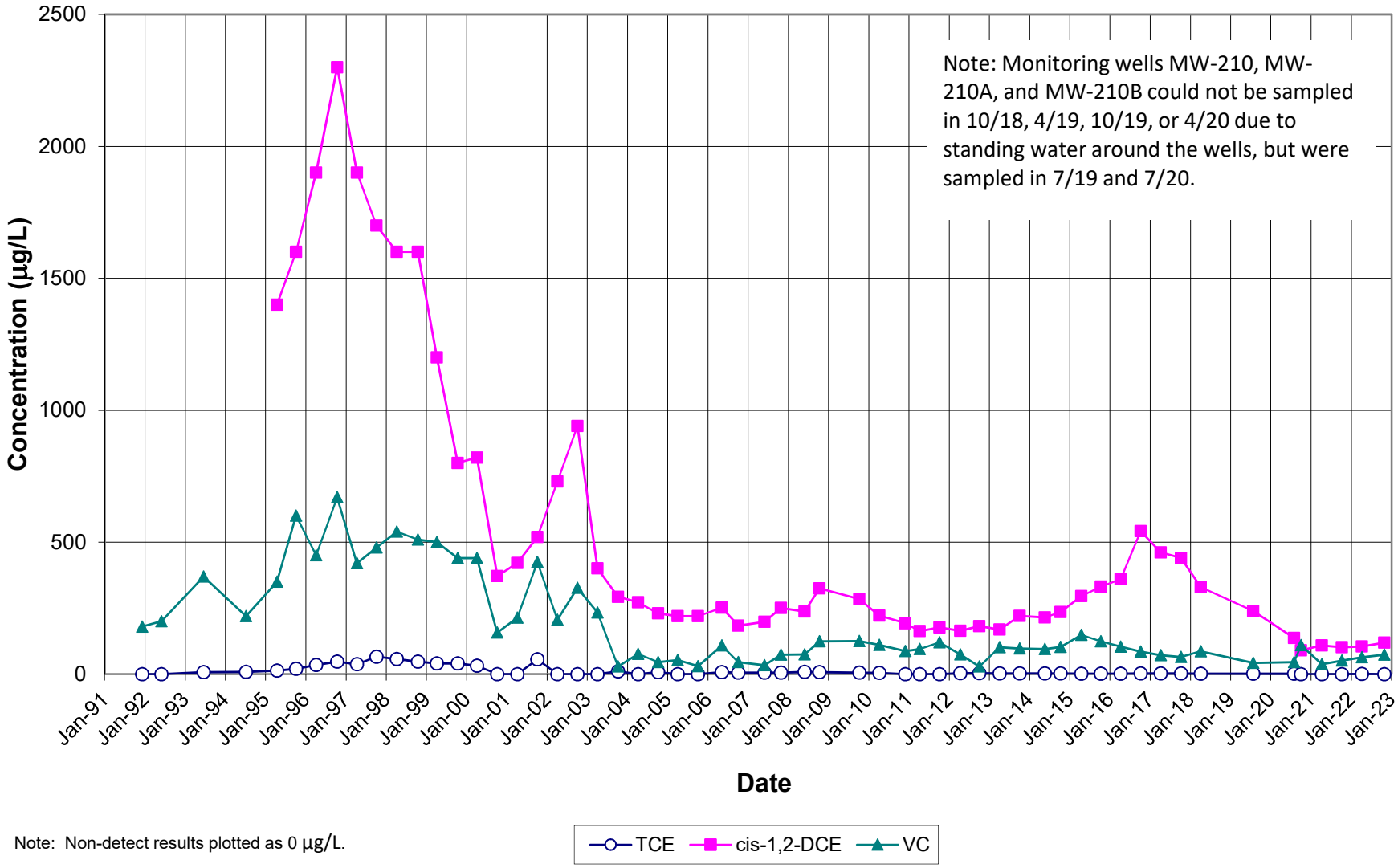
MW-210



Note: Non-detect results plotted as 0 µg/L.

4/10/2023

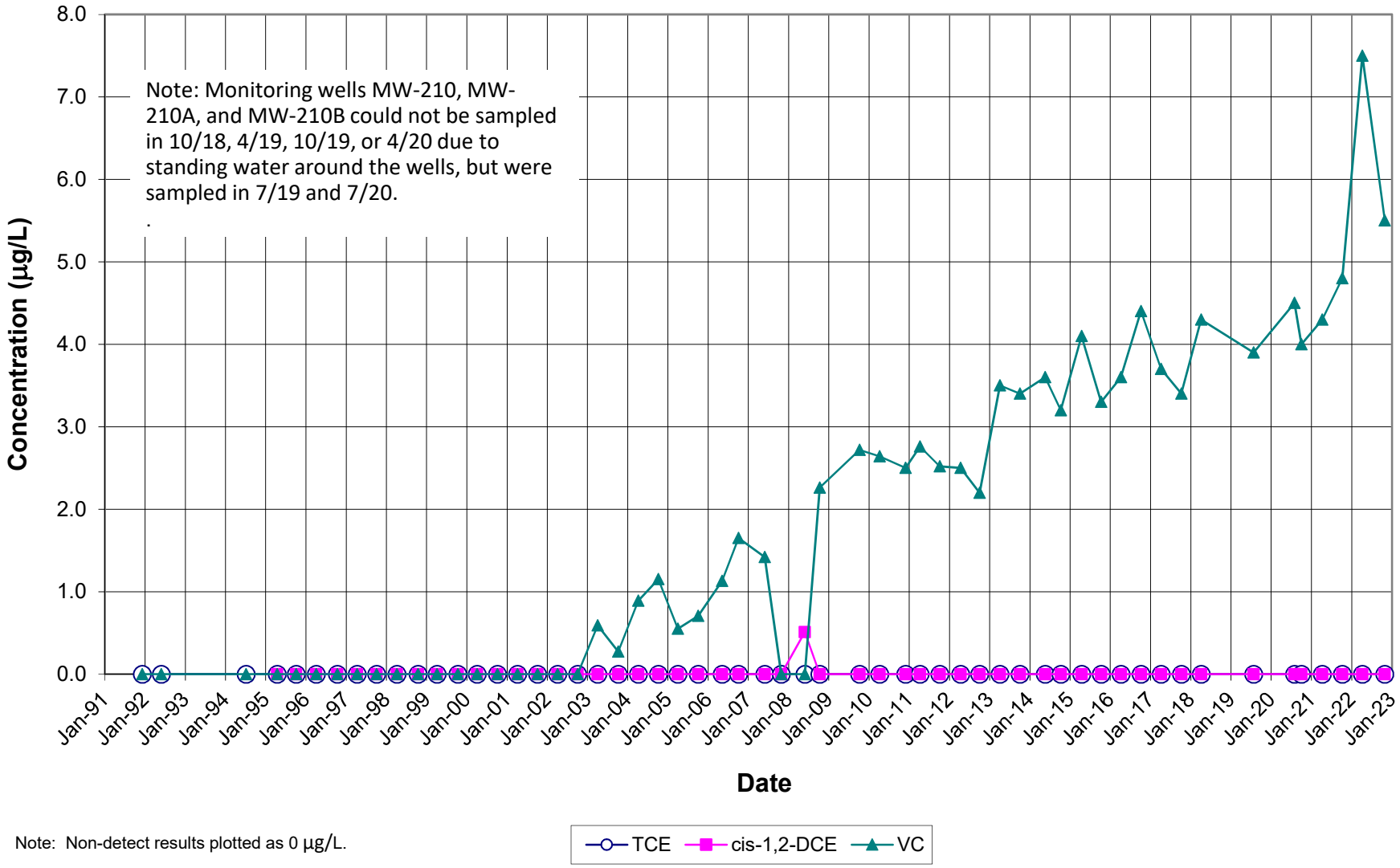
MW-210A



Note: Non-detect results plotted as 0 µg/L.

4/10/2023

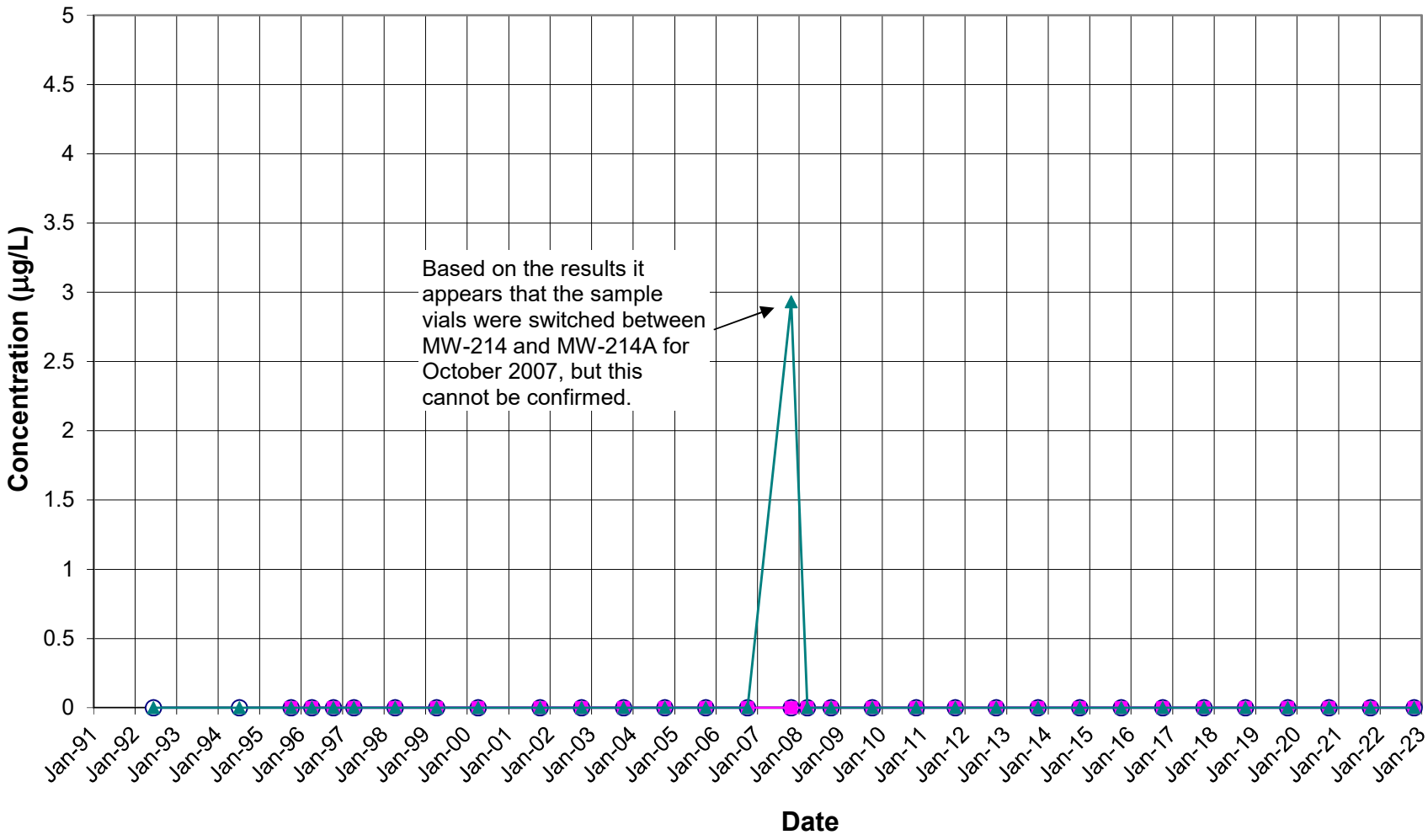
MW-210B



Note: Non-detect results plotted as 0 µg/L.

4/10/2023

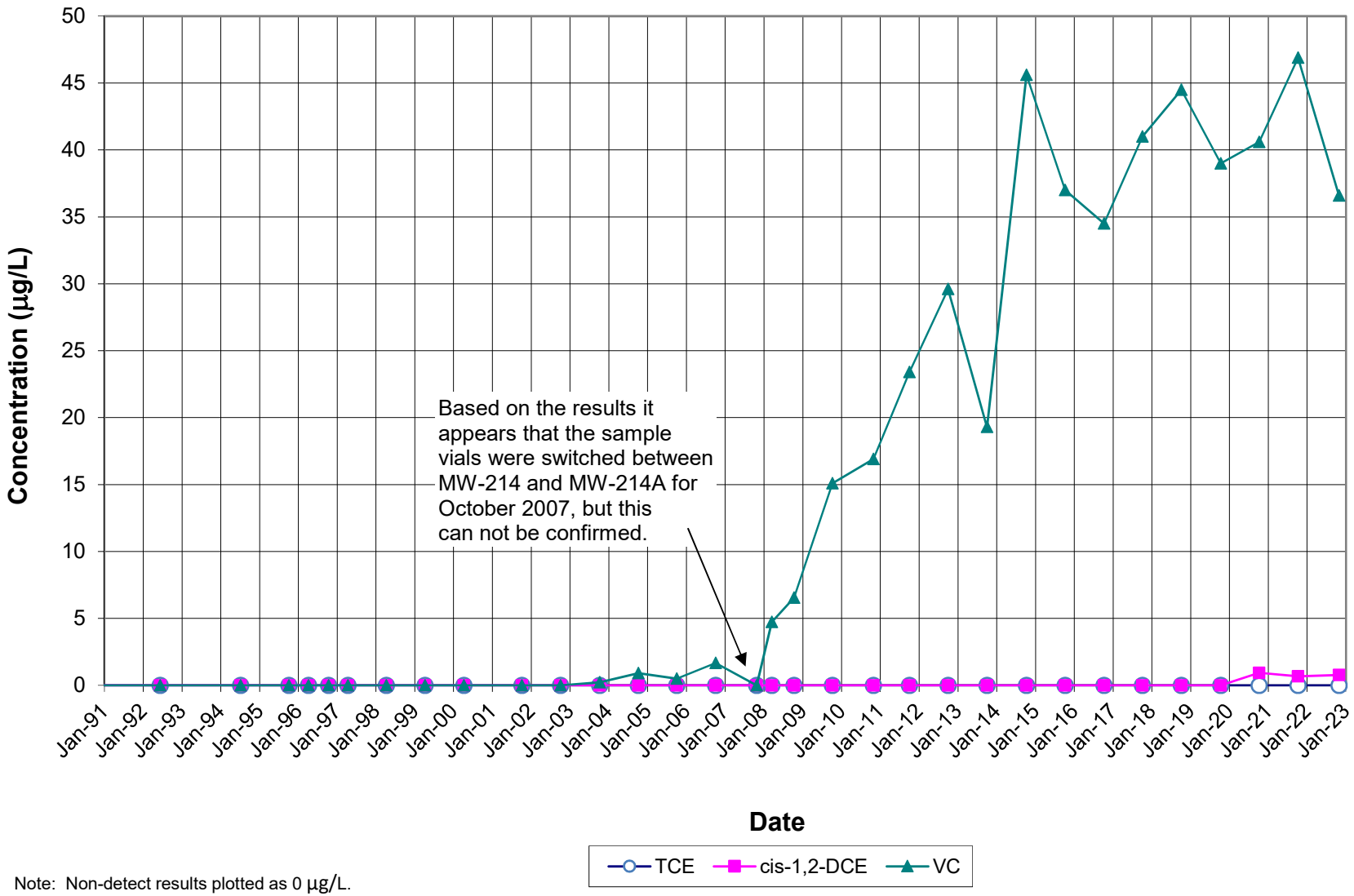
MW-214



Note: Non-detect results plotted as 0 µg/L.

4/10/2023

MW-214A



Note: Non-detect results plotted as 0 µg/L.

4/10/2023

APPENDIX A

Figure

Figure 1: Groundwater Table Map: October 2022

PW-28
(MUCHE)
CASING–185'
TD–445'

PW-21RR
(A. OECHSNER)
CASING–430'
TD–502'

P423D

P425D

P427D

P424SS

P424D

PW-27
ALL LINE–ABANDONED
CASING–162'
TD–205'

PW-20
(SELLNOW)
CASING–190'
TD–430'

P426D
P426SS

W38
(921.72)

W165/A
(922.70)

W7R/AR
(923.51)

W158
(925.26)

W159/A
(925.31)

W166
(925.46)

GH7
(923.01)

GH6
(924.45)

GH5
(924.25)

GH4
(925.40)

GH3
(923.19)

W164/W164A
(927.45

W8/W8A
(923.08)

GH2
(DRY)

W155
(934.59)

GH1
(DRY)

W154
(937.86)

W153/W153A
(934.25)

W152R
(937.53

W10R
(926.09)

W160R
(926.99)

W9RR
(926.95)

W161R
(925.01)

W2R
(929.95)

(925.06)
MW6R

(926.89)
MW201/A/B

(925.36)
MW7R

P402E

(925.62)
MW214A

MW210/A/B

W163/A
(924.80)

P422B

W3R/AR
(927.99)

MW1RR/AR/B
(931.45)

P401D

MW403/P403A
(931.03)

W8R
(930.54)

MW406/P406A/P406B
(932.63)

FORMER LAND & GAS
RECLAMATION LANDFILL

UDM-1
(929.66)

MW428/P428A
(937.20)

MW309/P309A
(ABANDONED)

(GRL)
(ABANDONED)

UDM-2
(938.76)

MW308/P308A
(938.90)

(929.89)
GCM-1

MW307/P307A
(945.06)

MW301/P301A
(933.34)

MW302/P302A
(928.63)

MW304
(935.27)

MW306/P306A
(940.58)

MW310
(945.87)

925
930
935
940
945

N

500 0 500

SCALE: 1" = 500'

LEGEND

- GLACIER RIDGE LANDFILL (GRL) PROPERTY LINE
- FORMER LGRL LIMITS OF WASTE
- APPROXIMATE PRIVATE WELL LOCATION, IN CURRENT MONITORING PROGRAM
- APPROXIMATE PRIVATE WELL LOCATION, HAS BEEN SAMPLED PREVIOUSLY
- APPROXIMATE PRIVATE WELL LOCATION, NOT SAMPLED
- PW-30 — WELL NAME ASSIGNED FOR SAMPLING PROGRAM
- (PERSHA) — WELL OWNER
- BEDROCK MONITORING WELL (LGRL INVESTIGATION)
- SHALLOW AQUIFER MONITORING WELL/NEST (LGRL MONITORING/INVESTIGATION)
- SHALLOW AQUIFER MONITORING WELL/NEST OR HORIZONTAL WELL (GRL MONITORING)
- INVESTIGATION PHASE 2 BOREHOLE (ABANDONED)
- (939.32) — WATER TABLE ELEVATION MEASURED ON OCTOBER 3–7, 2022
- WATER TABLE ELEVATION CONTOUR (5' INTERVAL)

NOTES:

1. AERIAL PHOTOGRAPH FROM THE NATIONAL AGRICULTURE IMAGERY PROGRAM AND PUBLISHED BY THE USDA FSA AERIAL PHOTOGRAPHY FIELD OFFICE. DATE OF IMAGE IS OCTOBER 30, 2015.
2. PROPERTY BOUNDARIES ARE APPROXIMATE. PROPERTY INFORMATION OBTAINED FROM DODGE COUNTY LAND INFORMATION OFFICE ON FEBRUARY 6, 2020.
3. PRIVATE WELL LOCATIONS AND DEPTHS ARE APPROXIMATE BASED ON PLAT MAPS AND WELL LOGS.

PROJECT NO.	25223008.00	DRAWN BY:	KP
DRAWN:	04/10/2023	CHECKED BY:	EO
REVISED:	04/10/2023	APPROVED BY:	SCC 04/10/2023

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CLIENT: GFL — GLACIER RIDGE LANDFILL, LLC.

SITE: 2022 ANNUAL REPORT
LAND AND GAS RECLAMATION LANDFILL
DODGE COUNTY, WISCONSIN

SHALLOW GROUNDWATER ELEVATIONS AND WATER TABLE – OCTOBER 2022

FIGURE 6

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