Prepared for
We Energies

Date
January 31, 2024

Project No.
1940102327

2023 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT

PLEASANT PRAIRIE POWER PLANT ASH LANDFILL

RAMBOLL Bright ideas. Sustainable change.

2023 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
PLEASANT PRAIRIE POWER PLANT ASH LANDFILL

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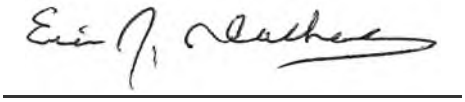

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ACRONYMS AND ABBREVIATIONS

§	Section
40 C.F.R.	Title 40 of the Code of Federal Regulations
ASD	Alternate Source Demonstration
CCR	Coal Combustion Residuals
GWPS	groundwater protection standard
NA	not applicable
P4	Pleasant Prairie Power Plant
Ramboll	Ramboll Americas Engineering Solutions, Inc.
SAP	Sampling and Analysis Plan
SSI	Statistically Significant Increase
TBD	To be Determined

EXECUTIVE SUMMARY

This report has been prepared to provide the information required by Title 40 of the Code of Federal Regulations (40 C.F.R.) Section (§) 257.90(e) for the Ash Landfill located at the Pleasant Prairie Power Plant (P4) near Pleasant Prairie, Wisconsin.

Groundwater is being monitored at the P4 Ash Landfill in accordance with the Detection Monitoring Program requirements specified in 40 C.F.R. § 257.94.

No changes were made to the monitoring system in 2023 (no wells were installed or decommissioned).

In 2023, groundwater analytical data was evaluated for statistically significant increases (SSIs) over background concentrations of 40 CFR § 257 Appendix III constituents in groundwater monitoring wells at P4 Ash Landfill. No SSIs were determined in 2023.

The P4 Ash Landfill remains in the Detection Monitoring Program in accordance with 40 C.F.R. § 257.94.

1. INTRODUCTION

This report has been prepared by Ramboll Americas Engineering Solutions, Inc. (Ramboll) on behalf of We Energies, to provide the information required by 40 C.F.R. § 257.90(e) for the P4 Ash Landfill located in Pleasant Prairie, Wisconsin.

In accordance with 40 C.F.R. § 257.90(e), the owner or operator of a coal combustion residuals (CCR) unit must prepare an Annual Groundwater Monitoring and Corrective Action Report for the preceding calendar year that documents the status of the Groundwater Monitoring and Corrective Action Program for the CCR unit (**Section 2**), summarizes key actions completed (**Section 3**), describes any problems encountered, discusses actions to resolve the problems (**Section 4**), and projects key activities for the upcoming year (**Section 5**). At a minimum, the annual report must contain the following information, to the extent available:

1. A map, aerial image, or diagram showing the CCR unit and all background (or upgradient) and downgradient monitoring wells, to include the well identification numbers, that are part of the groundwater monitoring program for the CCR unit (**Figure 1**).
2. Identification of any monitoring wells that were installed or decommissioned during the preceding year, along with a narrative description of why those actions were taken (**Section 3**).
3. In addition to all the monitoring data obtained under §§ 257.90 through 257.98 (**Tables 1 and 2**), a summary including the number of groundwater samples that were collected for analysis for each background and downgradient well, the dates the samples were collected, and whether the sample was required by the Detection Monitoring or Assessment Monitoring Programs (**Section 3 and Table A**).
4. A narrative discussion of any transition between monitoring programs (*e.g.*, the date and circumstances for transitioning from Detection Monitoring to Assessment Monitoring (**Section 2**) in addition to identifying the constituent(s) detected at an SSI relative to background levels) (**Table A**).
5. Other information required to be included in the annual report as specified in §§ 257.90 through 257.98.
6. A section at the beginning of the annual report that provides an overview of the current status of groundwater monitoring and corrective action programs for the CCR unit (**Executive Summary**). At a minimum, the summary must specify all of the following:
    i. At the start of the current annual reporting period, whether the CCR unit was operating under the Detection Monitoring Program in §257.94 or the Assessment Monitoring Program in §257.95.
    ii. At the end of the current annual reporting period, whether the CCR unit was operating under the Detection Monitoring Program in §257.94 or the Assessment Monitoring Program in §257.95.
    iii. If it was determined that there was an SSI over background for one or more constituents listed in Appendix III of §257 pursuant to §257.94(e):
        A. Identify those constituents listed in Appendix III of §257 and the names of the monitoring wells associated with such an increase.

B. Provide the date when the Assessment Monitoring Program was initiated for the CCR unit.

iv. If it was determined that there was a statistically significant level above the groundwater protection standard [GWPS] for one or more constituents listed in Appendix IV of §257 pursuant to §257.95(g) include all of the following:

A. Identify those constituents listed in Appendix IV of §257 and the names of the monitoring wells associated with such an increase.

B. Provide the date when the assessment of corrective measures was initiated for the CCR unit.

C. Provide the date when the public meeting was held for the assessment of corrective measures for the CCR unit.

D. Provide the date when the assessment of corrective measures was completed for the CCR unit.

v. Whether a remedy was selected pursuant to §257.97 during the current annual reporting period, and if so, the date of remedy selection.

vi. Whether remedial activities were initiated or are ongoing pursuant to § 257.98 during the current annual reporting period.

This report provides the required information for the P4 Ash Landfill for calendar year 2023.

2. MONITORING AND CORRECTIVE ACTION PROGRAM STATUS

No changes have occurred to the monitoring program status in calendar year 2023 and the P4 Ash Landfill remains in the Detection Monitoring Program in accordance with 40 C.F.R. § 257.94.

3. KEY ACTIONS COMPLETED IN 2023

The Detection Monitoring Program is summarized in **Table A** on the following page. The groundwater monitoring system, including the CCR unit and all background (upgradient) and downgradient monitoring wells, is presented in **Figure 1**. No changes were made to the monitoring system in 2023. In general, one groundwater sample was collected from each background and downgradient well during each monitoring event. All samples were collected and analyzed in accordance with the *Sampling and Analysis Plan* (SAP)*, Pleasant Prairie Power Plant Ash Landfill* (Natural Resource Technology, Inc., 2015). Potentiometric surface maps for the fourth quarter of 2022 and both monitoring events in 2023 are included in **Figures 2 through 4**. Water level data, collected from background and downgradient monitoring wells, are included in **Table 1**. All monitoring data and analytical results obtained under 40 C.F.R. §§ 257.90 through 257.98 (as applicable) in the fourth quarter of 2022 and both monitoring events in 2023 are presented in **Table 2**. Laboratory reports for both 2023 monitoring events are included in **Appendix A**[1].

Analytical data were evaluated in accordance with the *Statistical Analysis Plan, Pleasant Prairie Power Plant Ash Landfill* (Natural Resource Technology, Inc., an OBG Company, 2017) to determine any SSIs of 40 CFR § 257 Appendix III parameters relative to background concentrations. Statistical background values are provided in **Table 3**. A flow chart showing the statistical methodology for determination of background values is included as **Appendix B**.

Statistical evaluation, including SSI determinations, of analytical data from the Detection Monitoring Program for the October 5, 2022 (Detection Monitoring Round 11) and April 11, 2023 (Detection Monitoring Round 12) sampling events were completed in 2023 and within 90 days of receipt of the analytical data. No SSIs over background concentrations for 40 CFR § 257 Appendix III constituents were determined during Detection Monitoring Rounds 11 and 12. Additional information regarding SSI parameters and well locations is provided in **Table A**.

[1] Laboratory reports for the fourth quarter of 2022 monitoring event were provided in the 2022 annual report.

Table A. 2022-2023 Detection Monitoring Program Summary

Detection Round	Sampling Date	Analytical Data Receipt Date	Parameters Collected	SSI Wells (Parameters)	SSI(s) Determination Date	ASD Completion Date
11	October 5, 2022	December 5, 2022	Appendix III	None	March 5, 2023	NA
12	April 11, 2023	May 3, 2023	Appendix III	None	August 1, 2023	NA
13	October 26 and 30, 2023	December 1, 2023	Appendix III	TBD	TBD Before February 29, 2024	TBD

Notes: NA

NA: not applicable

TBD: to be determined

4. PROBLEMS ENCOUNTERED AND ACTIONS TO RESOLVE THE PROBLEMS

No problems were encountered with the Groundwater Monitoring Program during 2023. Groundwater samples were collected and analyzed in accordance with the SAP and all data were accepted.

5. KEY ACTIVITIES PLANNED FOR 2024

The following key activities are planned for 2024:

- Continuation of the Detection Monitoring Program with semi-annual sampling scheduled for the second and fourth quarters of 2024.
- Complete evaluation of analytical data from the downgradient wells using background data to determine whether an SSI of 40 CFR § 257 Appendix III parameters detected at concentrations greater than background concentrations has occurred.
- If an SSI is identified, potential alternate sources (*i.e.,* a source other than the P4 Ash Landfill caused the SSI or that the SSI resulted from error in sampling, analysis, statistical evaluation, or natural variation in groundwater quality) will be evaluated.
  - If an alternate source is identified to be the cause of the SSI, a written demonstration will be completed within 90 days of SSI determination and included in the 2024 Annual Groundwater Monitoring and Corrective Action Report.
  - If an alternate source(s) is not identified to be the cause of the SSI, the applicable requirements of 40 C.F.R. §§ 257.94 through 257.98 as may apply in 2024 (*e.g.,* Assessment Monitoring) will be met, including associated recordkeeping/notifications required by 40 C.F.R. §§ 257.105 through 257.108.

6. REFERENCES

Natural Resource Technology, Inc., 2015, *Sampling and Analysis Plan-Revision 1, Pleasant Prairie Power Plant Ash Landfill, Pleasant Prairie, Wisconsin, December 8, 2015.*

Natural Resource Technology, Inc., an OBG Company, 2017, *Statistical Analysis Plan, Pleasant Prairie Power Plant Ash Landfill, Pleasant Prairie, Wisconsin, October 17, 2017.*

TABLES

TABLE 1
GROUNDWATER ELEVATIONS
2023 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
PLEASANT PRAIRIE POWER PLANT ASH LANDFILL
PLEASANT PRAIRIE, WI

Well ID	Well Type	Latitude (Degrees, minutes, seconds)	Longitude (Degrees, minutes, seconds)	Date	Groundwater Elevation (ft NAVD88)
W20D	Background (Upgradient)	42°33'51.3592"	-87°54'15.0776"	10/05/2022	666.09
				4/11/2023	672.57
				10/26/2023	666.60
W77	Background (Upgradient)	42°33'45.2513"	-87°53'54.2383"	10/05/2022	666.86
				4/11/2023	671.20
				10/30/2023	666.99
W73	Compliance (Downgradient)	42°33'57.0560"	-87°53'57.3214"	10/05/2022	667.59
				4/11/2023	670.14
				10/30/2023	666.12
W74	Compliance (Downgradient)	42°33'56.9099"	-87°54'14.3343"	10/05/2022	663.50
				4/11/2023	668.92
				10/30/2023	663.83
W75	Compliance (Downgradient)	42°33'56.8116"	-87°54'08.8120"	10/05/2022	664.58
				4/11/2023	669.93
				10/30/2023	665.32
W76	Compliance (Downgradient)	42°33'56.4738"	-87°54'01.8036"	10/05/2022	665.38
				4/11/2023	669.88
				10/30/2023	665.62

Notes:
ft = foot/feet
NAVD88 = North American Vertical Datum of 1988

Pleasant Prairie Ash LF
Table 2. Analytical Results - Appendix III Parameters

Date Range: 10/01/2022 to 10/10/2022

Lab Methods:

Well Id	Date Sampled	Lab Id	Boron, total, mg/L	Calcium, total, mg/L	Chloride, total, mg/L	Fluoride, total, mg/L	pH (Field), SU	Sulfate, total, mg/L
W20D	10/5/2022	AE62999	0.403	23.7	11.9	1.10	7.1	178
W73	10/5/2022	AE62974					8.3	
		AE63007	0.437	21.2	11.6	1.10		131
W74	10/5/2022	AE63003	0.395	19.4	15.5	1.10	7.9	172
W75	10/5/2022	AE63004	0.404	18.2	9.6	1.10	8.1	133
W76	10/5/2022	AE63005	0.428	18.8	11.0	1.00	8.2	144
W77	10/5/2022	AE63008	0.414	23.4	8.8	1.20	7.6	132

Pleasant Prairie Ash LF
Table 2. Analytical Results - Appendix III Parameters

Date Range: 10/01/2022 to 10/10/2022

Lab Methods:

Well Id	Date Sampled	Lab Id	TDS, mg/L
W20D	10/5/2022	AE62999	388
W73	10/5/2022	AE63007	298
W74	10/5/2022	AE63003	332
W75	10/5/2022	AE63004	302
W76	10/5/2022	AE63005	288
W77	10/5/2022	AE63008	328

Pleasant Prairie Ash LF
Table 2. Analytical Results - Appendix III Parameters

Date Range: 04/10/2023 to 04/11/2023

Lab Methods:

Well Id	Date Sampled	Lab Id	Boron, total, mg/L	Calcium, total, mg/L	Chloride, total, mg/L	Fluoride, total, mg/L	pH (Field), SU	Sulfate, total, mg/L
W20D	4/11/2023	AE65951	0.460	24.0	11.0	1.00	7.8	170
W73	4/11/2023	AE65960	0.440	18.0	12.0	1.00		130
		AE65978					8.3	
W74	4/11/2023	AE65954	0.410	19.0	14.0	1.00	7.5	150
W75	4/11/2023	AE65955	0.430	19.0	8.9	1.00	8.1	120
W76	4/11/2023	AE65958	0.450	18.0	11.0	0.90	8.2	130
W77	4/11/2023	AE65956	0.420	24.0	8.9	1.10	7.7	130

Pleasant Prairie Ash LF
Table 2. Analytical Results - Appendix III Parameters

Date Range: 04/10/2023 to 04/11/2023

Lab Methods:

Well Id	Date Sampled	Lab Id	TDS, mg/L
W20D	4/11/2023	AE65951	380
W73	4/11/2023	AE65960	340
W74	4/11/2023	AE65954	370
W75	4/11/2023	AE65955	340
W76	4/11/2023	AE65958	350
W77	4/11/2023	AE65956	360

Pleasant Prairie Ash LF
Table 2. Analytical Results - Appendix III Parameters

Date Range: 10/25/2023 to 11/01/2023

Lab Methods:

Well Id	Date Sampled	Lab Id	Boron, total, mg/L	Calcium, total, mg/L	Chloride, total, mg/L	Fluoride, total, mg/L	pH (Field), SU	Sulfate, total, mg/L
W20D	10/26/2023	AE69710	0.451	24.2	11.6	1.10	7.5	182
W73	10/30/2023	AE69690	0.447	19.0	11.2	1.10	8.2	132
W74	10/30/2023	AE69691	0.423	19.4	13.2	1.10	8.2	162
W75	10/30/2023	AE69686	0.434	19.4	8.7	1.20	7.4	133
W76	10/30/2023	AE69688	0.450	18.9	10.6	1.10	8.3	139
W77	10/30/2023	AE69689	0.428	24.5	8.1	1.20	7.8	135

Pleasant Prairie Ash LF
Table 2. Analytical Results - Appendix III Parameters

Date Range: 10/25/2023 to 11/01/2023

Lab Methods:

Well Id	Date Sampled	Lab Id	TDS, mg/L
W20D	10/26/2023	AE69710	406
W73	10/30/2023	AE69690	338
W74	10/30/2023	AE69691	372
W75	10/30/2023	AE69686	340
W76	10/30/2023	AE69688	344
W77	10/30/2023	AE69689	366

TABLE 3

STATISTICAL BACKGROUND VALUES

2023 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT

PLEASANT PRAIRIE POWER PLANT ASH LANDFILL

PLEASANT PRAIRIE, WI

Parameter	Statistical Background Value (LPL/UPL)
40 C.F.R. Part 257 Appendix III	
Boron (mg/L)	0.455
Calcium (mg/L)	38.1
Chloride (mg/L)	21.3
Fluoride (mg/L)	1.13
pH (field) (SU)	7.2/9.6
Sulfate (mg/L)	230
Total Dissolved Solids (mg/L)	457

[O: AFH 12/23/22; C: EJT 1/21/23]

Notes:

40 C.F.R. = Title 40 of the Code of Federal Regulations

LPL = Lower Prediction Limit (applicable for pH only)

mg/L = milligrams per liter

SU = Standard Units

UPL = Upper Prediction Limit

FIGURES

UNIT BOUNDARY

CCR DOWNGRADIENT MONITORING WELL LOCATION

CCR UPGRADIENT MONITORING WELL LOCATION

IMAGERY DATE = 6/23/2022

0 150 300 Feet

MONITORING WELL LOCATION MAP

2023 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
PLEASANT PRAIRIE POWER PLANT
ASH LANDFILL
PLEASANT PRAIRIE, WISCONSIN

FIGURE 1

RAMBOLL AMERICAS ENGINEERING SOLUTIONS, INC.

RAMBOLL

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PROJECT: 169000XXXX | DATED: 1/29/2024 | DESIGNER: GALARNMC

UNIT BOUNDARY

BEDROCK UNIT (UPPERMOST AQUIFER) CCR MONITORING WELL LOCATION

GROUNDWATER ELEVATION CONTOUR (1-FT INTERVAL, NAVD 88)

INFERRED GROUNDWATER ELEVATION CONTOUR

GROUNDWATER FLOW DIRECTION

Vgw = ESTIMATED FT/YR GROUNDWATER FLOW VELOCITY
IMAGERY DATE = 6/23/2022

0 150 300 Feet

POTENTIOMETRIC SURFACE MAP
OCTOBER 5, 2022

2023 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
PLEASANT PRAIRIE POWER PLANT
ASH LANDFILL
PLEASANT PRAIRIE, WISCONSIN

FIGURE 2

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.

RAMBOLL

GROUNDWATER AVERAGE LINEAR VELOCITY CALCULATIONS
PLEASANT PRAIRIE POWER PLANT ASH LANDFILL
PLEASANT PRAIRIE, WISCONSIN

OCTOBER 2022 $V = K i / n_e$

V = Groundwater Velocity
K = Hydraulic Conductivity
i = Hydraulic Gradient (unitless value)
n_e = Effective Porosity

UPPERMOST AQUIFER

Contours	**666.0**	**to**	**665.0**	**North to Northeast Across the Landfill**	Elevation Change (ft)		Distance Change (ft)
K =	1.04E+03	ft/yr	Geometric mean				
i =	0.006		between contours identified above			1 /	180 = 0.006
n_e =	25	%					

$$V = \frac{1.04E+03 * 5.56E-03}{0.25}$$

V = 23 feet/year

[O: KLT 1/31/2023, C:NMD 1/31/2023]

Y:\GIS\Projects\161660\P4\MXD\2023Annual_GWM_CAR\Figure 3_GWE Contours 2304.mxd

PROJECT: 169000XXXX | DATED: 1/29/2024 | DESIGNER: GALARNMC

UNIT BOUNDARY

BEDROCK UNIT (UPPERMOST AQUIFER) CCR MONITORING WELL LOCATION

GROUNDWATER ELEVATION CONTOUR (1-FT INTERVAL, NAVD 88)

INFERRED GROUNDWATER ELEVATION CONTOUR

GROUNDWATER FLOW DIRECTION

Vgw = ESTIMATED FT/YR GROUNDWATER FLOW VELOCITY
IMAGERY DATE = 6/23/2022

0 150 300 Feet

POTENTIOMETRIC SURFACE MAP
APRIL 11, 2023

2023 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
PLEASANT PRAIRIE POWER PLANT
ASH LANDFILL
PLEASANT PRAIRIE, WISCONSIN

FIGURE 3

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.

RAMBOLL

GROUNDWATER AVERAGE LINEAR VELOCITY CALCULATIONS
PLEASANT PRAIRIE POWER PLANT ASH LANDFILL
PLEASANT PRAIRIE, WISCONSIN

APRIL 2023 $V = K i / n_e$

V = Groundwater Velocity
K = Hydraulic Conductivity
i = Hydraulic Gradient (unitless value)
n_e = Effective Porosity

UPPERMOST AQUIFER

Contours	**672.5**	**to**	**672.0**	**North to Northeast Across the Landfill**	Elevation Change (ft)		Distance Change (ft)
K =	1.04E+03	ft/yr	Geometric mean for Landfill 3 (all)				
i =	0.004		between contours identified above		0.5	/	137 = 0.004
n_e =	25	%					

$$V = \frac{1.04E+03 * 3.65E-03}{0.25}$$

V = 15 feet/year

[O: KJS 1/29/2024, C:EJT 1/29/2024]

Y:\GIS\Projects\161660\P4\MXD\2023Annual_GWM_CAR\Figure 4_GWE Contours 2310.mxd

PROJECT: 169000XXXX | DATED: 1/29/2024 | DESIGNER: GALARNMC

UNIT BOUNDARY

BEDROCK UNIT (UPPERMOST AQUIFER) CCR MONITORING WELL LOCATION

GROUNDWATER ELEVATION CONTOUR (1-FT INTERVAL, NAVD 88)

INFERRED GROUNDWATER ELEVATION CONTOUR

GROUNDWATER FLOW DIRECTION

Vgw = ESTIMATED FT/YR GROUNDWATER FLOW VELOCITY
IMAGERY DATE = 6/23/2022

0 150 300
Feet

POTENTIOMETRIC SURFACE MAP
OCTOBER 26 AND 30, 2023

2023 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
PLEASANT PRAIRIE POWER PLANT
ASH LANDFILL

PLEASANT PRAIRIE, WISCONSIN

FIGURE 4

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.

RAMBOLL

GROUNDWATER AVERAGE LINEAR VELOCITY CALCULATIONS
PLEASANT PRAIRIE POWER PLANT ASH LANDFILL
PLEASANT PRAIRIE, WISCONSIN

OCTOBER 2023 $V = K i / n_e$

V = Groundwater Velocity
K = Hydraulic Conductivity
i = Hydraulic Gradient (unitless value)
n_e = Effective Porosity

UPPERMOST AQUIFER

Contours	**665.5**	**to**	**665.0**	**North to Northeast Across the Landfill**	Elevation Change (ft)		Distance Change (ft)
K =	1.04E+03	ft/yr	Geometric mean for Landfill 3 (all)				
i =	0.005		between contours identified above		0.5	/	106 = 0.005
n_e =	25	%					

$$V = \frac{1.04E+03 * 4.72E-03}{0.25}$$

V = 20 feet/year

[O: KJS 1/29/2024, C:EJT 1/29/2024]

APPENDICES

APPENDIX A
LABORATORY REPORTS

To: Eric Kovatch
PSB Annex A231

From: WEC Business Services
Laboratory Services PSBA-A070
WDNR Cert # 241329000

Report Date: Wednesday, January 24, 2024

The following are the analytical results for samples received by Laboratory Services:

Sample Description: **W-20D P4 Landfill CCR Well Sample**
Sample ID: AE65951 Sample Collection Date/Time: 04/11/2023 09:09
Sample Received: 04/12/2023 Sample Collector: RAMBOLL

Parameter	Result	LOD	Units	LOQ	DIL	Result Flag	Analysis Method	Analysis Date	Analyst
Field Water Level	17.21	0.05	feet		1		H2OD	4/11/23	RAMBOLL
Field Temperature	12.0	0.1	Degrees (		1		TEMP	4/11/23	RAMBOLL
Field Conductivity	620	0	umhos		1		FCOND25	4/11/23	RAMBOLL
Field pH	7.8	0.1	Units	0.1	1		FIELDPH	4/11/23	RAMBOLL
Total Fluoride	1.0	0.6	mg/L	2.0	20	J	EPA 300.0	4/13/23	057
Total Chloride	11	1.0	mg/L	3.4	20		EPA 300.0	4/13/23	057
Total Sulfate	170	2.0	mg/L	6.8	20		EPA 300.0	4/13/23	057
Total Boron	460	10	ug/L	50	1		EPA 200.7	4/25/23	057
Total Calcium	24000	40	ug/L	100	1		EPA 200.7	4/24/23	057
Total Alkalinity as CaCO3	110	2	mg/L	6	1		SM 2320 B-1997	4/21/23	057
Total Copper	Less Than	4	ug/L	10	1		EPA 200.7	4/24/23	057
Total Hardness as CaCO3	130	1	mg/L		1		Std Mtd 2340B	4/24/23	057
Total Magnesium	16000	40	ug/L	100	1		EPA 200.7	4/24/23	057
Total Manganese	30	4	ug/L	10	1		EPA 200.7	4/24/23	057
Nitrate-Nitrite as N	Less Than	0.40	mg/L	0.72	20		EPA 300.0	4/24/23	057
Total Silver	Less Than	20	ug/L	70	1		EPA 200.7	4/17/23	057
Total Zinc	Less Than	20	ug/L	70	1		EPA 200.7	4/24/23	057
Total Dissolved Solids	380	10	mg/L	10	1	H1	Std Mtd 2540 C	4/20/23	057

Sample Comments:

Sample Description: **W-20B P4 Landfill CCR Well Sample**
Sample ID: AE65952 Sample Collection Date/Time: 04/11/2023 09:48
Sample Received: 04/12/2023 Sample Collector: RAMBOLL

Parameter	Result	LOD	Units	LOQ	DIL	Result Flag	Analysis Method	Analysis Date	Analyst
Field Water Level	5.89	0.05	feet		1		H2OD	4/11/23	RAMBOLL
Field Temperature	11.3	0.1	Degrees (		1		TEMP	4/11/23	RAMBOLL
Field Conductivity	592	0	umhos		1		FCOND25	4/11/23	RAMBOLL
Field pH	7.8	0.1	Units	0.1	1		FIELDPH	4/11/23	RAMBOLL
Total Dissolved Solids	390	10	mg/L	10	1	H1	Std Mtd 2540 C	4/20/23	AEU
Total Fluoride	1.0	0.6	mg/L	2.0	20	J	EPA 300.0	4/22/23	AEU
Total Chloride	11	1	mg/L	3.4	20		EPA 300.0	4/22/23	AEU
Total Sulfate	68	2.0	mg/L	6.8	20		EPA 300.0	4/22/23	AEU
Total Boron	320	10	ug/L	50	1		EPA 200.7	4/25/23	AEU
Total Calcium	48000	400	ug/L	1300	10		EPA 200.7	4/25/23	AEU

Report Date: Wednesday, January 24, 2024

The following are the analytical results for samples received by Laboratory Services:

Sample Comments:

Sample Description: **W-31B P4 Landfill CCR Well Sample**
Sample ID: AE65953 Sample Collection Date/Time: 04/11/2023 10:37
Sample Received: 04/12/2023 Sample Collector: RAMBOLL

Parameter	Result	LOD	Units	LOQ	DIL	Result Flag	Analysis Method	Analysis Date	Analyst
Field Water Level	1.77	0.05	feet		1		H2OD	4/11/23	RAMBOLL
Field Temperature	11.3	0.1	Degrees C		1		TEMP	4/11/23	RAMBOLL
Field Conductivity	971	0	umhos		1		FCOND25	4/11/23	RAMBOLL
Field pH	7.5	0.1	Units	0.1	1		FIELDPH	4/11/23	RAMBOLL
Total Fluoride	Less Than	0.6	mg/L	2.0	20		EPA 300.0	4/22/23	057
Total Chloride	69	1.0	mg/L	3.4	20		EPA 300.0	4/22/23	057
Total Sulfate	130	2.0	mg/L	6.8	20		EPA 300.0	4/22/23	057
Total Boron	90	10	ug/L	50	1		EPA 200.7	4/25/23	057
Total Calcium	99000	400	ug/L	1300	10		EPA 200.7	4/25/23	057
Dissolved Boron	90	8	ug/L	30	1		EPA 200.7	4/24/23	057
Dissolved Calcium	100000	200	ug/L	600	10		EPA 200.7	4/25/23	057
Dissolved Sulfate	130	1.0	mg/L	3.4	10		EPA 300.0	4/22/23	057
Dissolved Chloride	73	0.5	mg/L	1.7	10		EPA 300.0	4/22/23	057
Total Dissolved Solids	620	10	mg/L	10	1	H1	Std Mtd 2540 C	4/20/23	057

Sample Comments:

Sample Description: **W-74 P4 Landfill CCR Well Sample**
Sample ID: AE65954 Sample Collection Date/Time: 04/11/2023 11:16
Sample Received: 04/12/2023 Sample Collector: RAMBOLL

Parameter	Result	LOD	Units	LOQ	DIL	Result Flag	Analysis Method	Analysis Date	Analyst
Field Water Level	17.93	0.05	feet		1		H2OD	4/11/23	RAMBOLL
Field Temperature	18.2	0.1	Degrees C		1		TEMP	4/11/23	RAMBOLL
Field Conductivity	584	0	umhos		1		FCOND25	4/11/23	RAMBOLL
Field pH	7.5	0.1	Units	0.1	1		FIELDPH	4/11/23	RAMBOLL
Total Fluoride	1.0	0.6	mg/L	2.0	20	J	EPA 300.0	4/13/23	057
Total Chloride	14	1.0	mg/L	3.4	20		EPA 300.0	4/13/23	057
Total Sulfate	150	2.0	mg/L	6.8	20		EPA 300.0	4/13/23	057
Total Boron	410	10	ug/L	50	1		EPA 200.7	4/25/23	057
Total Calcium	19000	40	ug/L	100	1		EPA 200.7	4/24/23	057
Total Alkalinity as CaCO3	100	2	mg/L	6	1		SM 2320 B-1997	4/21/23	057
Total Copper	Less Than	4	ug/L	10	1		EPA 200.7	4/24/23	057
Total Hardness as CaCO3	110	1	mg/L		1		Std Mtd 2340B	4/24/23	057
Total Magnesium	15000	40	ug/L	100	1		EPA 200.7	4/24/23	057
Total Manganese	50	4	ug/L	10	1		EPA 200.7	4/24/23	057
Nitrate-Nitrite as N	Less Than	0.40	mg/L	0.72	20		EPA 300.0	4/13/23	057
Total Silver	Less Than	20	ug/L	70	1		EPA 200.7	4/17/23	057
Total Zinc	Less Than	20	ug/L	70	1		EPA 200.7	4/24/23	057

Report Date: Wednesday, January 24, 2024

The following are the analytical results for samples received by Laboratory Services:

Sample Description: **W-74 P4 Landfill CCR Well Sample**
Sample ID: AE65954 Sample Collection Date/Time: 04/11/2023 11:16
Sample Received: 04/12/2023 Sample Collector: RAMBOLL

Parameter	Result	LOD	Units	LOQ	DIL	Result Flag	Analysis Method	Analysis Date	Analyst
Total Dissolved Solids	370	10	mg/L	10	1	H1	Std Mtd 2540 C	4/20/23	057

Sample Comments:

Sample Description: **W-75 P4 Landfill CCR Well Sample**
Sample ID: AE65955 Sample Collection Date/Time: 04/11/2023 11:58
Sample Received: 04/12/2023 Sample Collector: RAMBOLL

Parameter	Result	LOD	Units	LOQ	DIL	Result Flag	Analysis Method	Analysis Date	Analyst
Field Water Level	20.08	0.05	feet		1		H2OD	4/11/23	RAMBOLL
Field Temperature	11.7	0.1	Degrees C		1		TEMP	4/11/23	RAMBOLL
Field Conductivity	530	0	umhos		1		FCOND25	4/11/23	RAMBOLL
Field pH	8.1	0.1	Units	0.1	1		FIELDPH	4/11/23	RAMBOLL
Total Fluoride	1.0	0.6	mg/L	2.0	20	J	EPA 300.0	4/13/23	057
Total Chloride	8.9	1.0	mg/L	3.4	20		EPA 300.0	4/13/23	057
Total Sulfate	120	2.0	mg/L	6.8	20		EPA 300.0	4/13/23	057
Total Boron	430	10	ug/L	50	1		EPA 200.7	4/25/23	057
Total Calcium	19000	40	ug/L	100	1		EPA 200.7	4/24/23	057
Total Alkalinity as CaCO3	120	2	mg/L	6	1		SM 2320 B-1997	4/21/23	057
Total Copper	Less Than	4	ug/L	10	1		EPA 200.7	4/24/23	057
Total Hardness as CaCO3	100	1	mg/L		1		Std Mtd 2340B	4/24/23	057
Total Magnesium	13000	40	ug/L	100	1		EPA 200.7	4/24/23	057
Total Manganese	10	4	ug/L	10	1		EPA 200.7	4/24/23	057
Nitrate-Nitrite as N	Less Than	0.40	mg/L	0.72	20		EPA 300.0	4/13/23	057
Total Silver	Less Than	20	ug/L	70	1		EPA 200.7	4/17/23	057
Total Zinc	Less Than	20	ug/L	70	1		EPA 200.7	4/24/23	057
Total Dissolved Solids	340	10	mg/L	10	1	H1	Std Mtd 2540 C	4/20/23	057

Sample Comments:

Sample Description: **W-77 P4 Landfill CCR Well Sample**
Sample ID: AE65956 Sample Collection Date/Time: 04/11/2023 12:46
Sample Received: 04/12/2023 Sample Collector: RAMBOLL

Parameter	Result	LOD	Units	LOQ	DIL	Result Flag	Analysis Method	Analysis Date	Analyst
Field Water Level	16.25	0.05	feet		1		H2OD	4/11/23	RAMBOLL
Field Temperature	11.5	0.1	Degrees C		1		TEMP	4/11/23	RAMBOLL
Field Conductivity	560	0	umhos		1		FCOND25	4/11/23	RAMBOLL
Field pH	7.7	0.1	Units	0.1	1		FIELDPH	4/11/23	RAMBOLL
Total Fluoride	1.1	0.6	mg/L	2.0	20	J	EPA 300.0	4/13/23	057
Total Chloride	8.9	1.0	mg/L	3.4	20		EPA 300.0	4/13/23	057
Total Sulfate	130	2.0	mg/L	6.8	20		EPA 300.0	4/13/23	057

Report Date: Wednesday, January 24, 2024

The following are the analytical results for samples received by Laboratory Services:

Sample Description: **W-77 P4 Landfill CCR Well Sample**
Sample ID: AE65956 Sample Collection Date/Time: 04/11/2023 12:46
Sample Received: 04/12/2023 Sample Collector: RAMBOLL

Parameter	Result	LOD	Units	LOQ	DIL	Result Flag	Analysis Method	Analysis Date	Analyst
Total Boron	420	10	ug/L	50	1		EPA 200.7	4/25/23	057
Total Calcium	24000	40	ug/L	100	1		EPA 200.7	4/24/23	057
Total Alkalinity as CaCO3	150	2	mg/L	6	1		SM 2320 B-1997	4/21/23	057
Total Copper	Less Than	4	ug/L	10	1		EPA 200.7	4/24/23	057
Total Hardness as CaCO3	120	1	mg/L		1		Std Mtd 2340B	4/24/23	057
Total Magnesium	13000	40	ug/L	100	1		EPA 200.7	4/24/23	057
Total Manganese	70	4	ug/L	10	1		EPA 200.7	4/24/23	057
Nitrate-Nitrite as N	Less Than	0.40	mg/L	0.72	20		EPA 300.0	4/13/23	057
Total Silver	Less Than	20	ug/L	70	1		EPA 200.7	4/17/23	057
Total Zinc	Less Than	20	ug/L	70	1		EPA 200.7	4/24/23	057
Total Dissolved Solids	360	10	mg/L	10	1	H1	Std Mtd 2540 C	4/20/23	057

Sample Comments:

Sample Description: **QAQC01 P4 Landfill CCR Well Sample**
Sample ID: AE65957 Sample Collection Date/Time: 04/11/2023 12:51
Sample Received: 04/12/2023 Sample Collector: RAMBOLL

Parameter	Result	LOD	Units	LOQ	DIL	Result Flag	Analysis Method	Analysis Date	Analyst
Total Fluoride	1.0	0.6	mg/L	2.0	20	J	EPA 300.0	4/13/23	057
Total Chloride	9.0	1.0	mg/L	3.4	20		EPA 300.0	4/13/23	057
Total Sulfate	130	2.0	mg/L	6.8	20		EPA 300.0	4/13/23	057
Total Boron	430	10	ug/L	50	1		EPA 200.7	4/25/23	057
Total Calcium	24000	40	ug/L	100	1		EPA 200.7	4/24/23	057
Total Alkalinity as CaCO3	140	2	mg/L	6	1		SM 2320 B-1997	4/21/23	057
Total Copper	Less Than	4	ug/L	10	1		EPA 200.7	4/24/23	057
Total Hardness as CaCO3	120	1	mg/L		1		Std Mtd 2340B	4/24/23	057
Total Magnesium	13000	40	ug/L	100	1		EPA 200.7	4/24/23	057
Total Manganese	70	4	ug/L	10	1		EPA 200.7	4/24/23	057
Nitrate-Nitrite as N	Less Than	0.40	mg/L	0.72	20		EPA 300.0	4/13/23	057
Total Silver	Less Than	20	ug/L	70	1		EPA 200.7	4/17/23	057
Total Zinc	Less Than	20	ug/L	70	1		EPA 200.7	4/24/23	057
Total Dissolved Solids	390	10	mg/L	10	1	H1	Std Mtd 2540 C	4/20/23	057

Sample Comments:

Sample Description: **W-76 P4 Landfill CCR Well Sample**
Sample ID: AE65958 Sample Collection Date/Time: 04/11/2023 13:45
Sample Received: 04/12/2023 Sample Collector: RAMBOLL

Parameter	Result	LOD	Units	LOQ	DIL	Result Flag	Analysis Method	Analysis Date	Analyst
Field Water Level	22.48	0.05	feet		1		H2OD	4/11/23	RAMBOLL

Report Date: Wednesday, January 24, 2024

The following are the analytical results for samples received by Laboratory Services:

Sample Description: **W-76 P4 Landfill CCR Well Sample**
Sample ID: AE65958 Sample Collection Date/Time: 04/11/2023 13:45
Sample Received: 04/12/2023 Sample Collector: RAMBOLL

Parameter	Result	LOD	Units	LOQ	DIL	Result Flag	Analysis Method	Analysis Date	Analyst
Field Temperature	12.6	0.1	Degrees (		1		TEMP	4/11/23	RAMBOLL
Field Conductivity	533	0	umhos		1		FCOND25	4/11/23	RAMBOLL
Field pH	8.2	0.1	Units	0.1	1		FIELDPH	4/11/23	RAMBOLL
Total Fluoride	0.9	0.6	mg/L	2.0	20	J	EPA 300.0	4/13/23	057
Total Chloride	11	1.0	mg/L	3.4	20		EPA 300.0	4/13/23	057
Total Sulfate	130	2.0	mg/L	6.8	20		EPA 300.0	4/13/23	057
Total Boron	450	10	ug/L	50	1		EPA 200.7	4/25/23	057
Total Calcium	18000	40	ug/L	100	1		EPA 200.7	4/24/23	057
Total Alkalinity as CaCO3	110	2	mg/L	6	1		SM 2320 B-1997	4/21/23	057
Total Copper	Less Than	4	ug/L	10	1		EPA 200.7	4/24/23	057
Total Hardness as CaCO3	95	1	mg/L		1		Std Mtd 2340B	4/24/23	057
Total Magnesium	12000	40	ug/L	100	1		EPA 200.7	4/24/23	057
Total Manganese	20	4	ug/L	10	1		EPA 200.7	4/24/23	057
Nitrate-Nitrite as N	Less Than	0.40	mg/L	0.72	20		EPA 300.0	4/13/23	057
Total Silver	Less Than	20	ug/L	70	1		EPA 200.7	4/17/23	057
Total Zinc	Less Than	20	ug/L	70	1		EPA 200.7	4/24/23	057
Total Dissolved Solids	350	10	mg/L	10	1	H1	Std Mtd 2540 C	4/20/23	057

Sample Comments:

Sample Description: **W-17BR P4 Landfill CCR Well Sample**
Sample ID: AE65959 Sample Collection Date/Time: 04/11/2023 14:14
Sample Received: 04/12/2023 Sample Collector: RAMBOLL

Parameter	Result	LOD	Units	LOQ	DIL	Result Flag	Analysis Method	Analysis Date	Analyst
Field Water Level	13.13	0.05	feet		1		H2OD	4/11/23	RAMBOLL
Field Temperature	11.5	0.1	Degrees (		1		TEMP	4/11/23	RAMBOLL
Field Conductivity	284	0	umhos		1		FCOND25	4/11/23	RAMBOLL
Field pH	8.3	0.1	Units	0.1	1		FIELDPH	4/11/23	RAMBOLL
Total Dissolved Solids	200	10	mg/L	10	1	H1	Std Mtd 2540 C	4/20/23	057
Total Fluoride	1.5	0.6	mg/L	2.0	20	J	EPA 300.0	4/13/23	057
Total Chloride	8.8	1.0	mg/L	3.4	20		EPA 300.0	4/13/23	057
Total Sulfate	18	2.0	mg/L	6.8	20		EPA 300.0	4/13/23	057
Total Boron	650	10	ug/L	50	1		EPA 200.7	4/25/23	057
Total Calcium	11000	40	ug/L	100	1		EPA 200.7	4/24/23	057

Sample Comments:

Report Date: Wednesday, January 24, 2024

The following are the analytical results for samples received by Laboratory Services:

Sample Description: **W-73 P4 Landfill CCR Well Sample**
Sample ID: AE65960 Sample Collection Date/Time: 04/11/2023 15:05
Sample Received: 04/12/2023 Sample Collector: RAMBOLL

Parameter	Result	LOD	Units	LOQ	DIL	Result Flag	Analysis Method	Analysis Date	Analyst
Field Water Level	20.68	0.05	feet		1		H2OD	4/11/23	RAMBOLL
Field Temperature	11.8	0.1	Degrees C		1		TEMP	4/11/23	RAMBOLL
Field Conductivity	522	0	umhos		1		FCOND25	4/11/23	RAMBOLL
Field pH	8.3	0.1	Units	0.1	1		FIELDPH	4/11/23	RAMBOLL
Total Fluoride	1.0	0.6	mg/L	2.0	20	J	EPA 300.0	4/13/23	057
Total Chloride	12	1.0	mg/L	3.4	20		EPA 300.0	4/13/23	057
Total Sulfate	130	2.0	mg/L	6.8	20		EPA 300.0	4/13/23	057
Total Boron	440	10	ug/L	50	1		EPA 200.7	4/25/23	057
Total Calcium	18000	40	ug/L	100	1		EPA 200.7	4/24/23	057
Total Alkalinity as CaCO3	110	2	mg/L	6	1		SM 2320 B-1997	4/21/23	057
Total Copper	Less Than	4	ug/L	10	1		EPA 200.7	4/24/23	057
Total Hardness as CaCO3	94	1	mg/L		1		Std Mtd 2340B	4/24/23	057
Total Magnesium	12000	40	ug/L	100	1		EPA 200.7	4/24/23	057
Total Manganese	7.0	4	ug/L	10	1	J	EPA 200.7	4/24/23	057
Nitrate-Nitrite as N	Less Than	0.40	mg/L	0.72	20		EPA 300.0	4/13/23	057
Total Silver	Less Than	20	ug/L	70	1		EPA 200.7	4/13/23	057
Total Zinc	Less Than	20	ug/L	70	1		EPA 200.7	4/24/23	057
Dissolved Boron	460	8	ug/L	30	1		EPA 200.7	4/24/23	057
Dissolved Calcium	18000	20	ug/L	60	1		EPA 200.7	4/24/23	057
Dissolved Sulfate	130	1.0	mg/L	3.4	10		EPA 300.0	4/24/23	057
Dissolved Chloride	15	0.5	mg/L	1.7	10		EPA 300.0	4/22/23	057
Total Dissolved Solids	340	10	mg/L	10	1	H1	Std Mtd 2540 C	4/20/23	057

Sample Comments:

Sample Description: **EB-1 P4 Landfill CCR Well Sample**
Sample ID: AE65961 Sample Collection Date/Time: 04/11/2023 16:20
Sample Received: 04/12/2023 Sample Collector: RAMBOLL

Parameter	Result	LOD	Units	LOQ	DIL	Result Flag	Analysis Method	Analysis Date	Analyst
Field Temperature	19.1	0.1	Degrees C		1		TEMP	4/11/23	RAMBOLL
Field Conductivity	16	0	umhos		1		FCOND25	4/11/23	RAMBOLL
Field pH	6.9	0.1	Units	0.1	1		FIELDPH	4/11/23	RAMBOLL
Total Fluoride	Less Than	0.6	mg/L	2.0	20		EPA 300.0	4/13/23	057
Total Chloride	Less Than	1.0	mg/L	3.4	20		EPA 300.0	4/13/23	057
Total Sulfate	Less Than	2.0	mg/L	6.8	20		EPA 300.0	4/13/23	057
Total Boron	Less Than	10	ug/L	50	1		EPA 200.7	4/25/23	057
Total Calcium	60	40	ug/L	100	1	J	EPA 200.7	4/24/23	057
Total Alkalinity as CaCO3	2	2	mg/L	6	1	J	SM 2320 B-1997	4/21/23	057
Total Copper	Less Than	4	ug/L	10	1		EPA 200.7	4/24/23	057
Total Hardness as CaCO3	Less Than	0.27	mg/L	1.0	1		Std Mtd 2340B	4/24/23	057
Total Magnesium	Less Than	40	ug/L	100	1		EPA 200.7	4/24/23	057
Total Manganese	Less Than	4	ug/L	10	1		EPA 200.7	4/24/23	057
Nitrate-Nitrite as N	Less Than	0.40	mg/L	0.72	20		EPA 300.0	4/13/23	057

Report Date: Wednesday, January 24, 2024

The following are the analytical results for samples received by Laboratory Services:

Sample Description: **EB-1 P4 Landfill CCR Well Sample**

Sample ID: AE65961 Sample Collection Date/Time: 04/11/2023 16:20

Sample Received: 04/12/2023 Sample Collector: RAMBOLL

Parameter	Result	LOD	Units	LOQ	DIL	Result Flag	Analysis Method	Analysis Date	Analyst
Total Silver	Less Than	20	ug/L	70	1		EPA 200.7	4/17/23	057
Total Zinc	Less Than	20	ug/L	70	1		EPA 200.7	4/24/23	057
Total Dissolved Solids	Less Than	10	mg/L	10	1	H1	Std Mtd 2540 C	4/20/23	057

Sample Comments:

LOD and LOQ are adjusted for dilution factor.

'J' Flag, if present indicates an estimated concentration at or above the LOD and below the LOQ.

If there are any questions concerning this report, please contact: Laboratory Services at (414) 221-4595.

To: Eric Kovatch
PSB Annex A231

From: WEC Business Services
Laboratory Services PSBA-A070
WDNR Cert # 241329000

Report Date: Friday, December 1, 2023

The following are the analytical results for samples received by Laboratory Services:

Sample Description: **W75 P4 Landfill CCR Well Sample**
Sample ID: AE69686 Sample Collection Date/Time: 10/30/2023 09:46
Sample Received: 10/31/2023 Sample Collector: RAMBOLL

Parameter	Result	LOD	Units	LOQ	DIL	Result Flag	Analysis Method	Analysis Date	Analyst
Field Water Level	25.09	0.05	feet		1		H2OD	10/30/23	RAMBOLL
Field Temperature	9.0	0.1	Degrees (		1		TEMP	10/30/23	RAMBOLL
Field Conductivity	528	0	umhos		1		FCOND25	10/30/23	RAMBOLL
Field pH	7.4	0.1	Units	0.1	1		FIELDPH	10/30/23	RAMBOLL
Total Dissolved Solids	340	8.7	mg/L	20	1		Std Mtd 2540 C	11/2/23	020
Total Fluoride	1.2	0.095	mg/L	0.32	1		EPA 300.0	11/16/23	020
Total Chloride	8.7	0.59	mg/L	2.0	1		EPA 300.0	11/16/23	020
Total Sulfate	133	4.4	mg/L	20	10		EPA 300.0	11/15/23	020
Total Boron	434	17.3	ug/L	40	1		EPA 200.7	11/2/23	020
Total Calcium	19400	114	ug/L	500	1		EPA 200.7	11/2/23	020
Dissolved Calcium	21100	114	ug/L	500	1		EPA 200.7	11/2/23	020
Dissolved Chloride	8.7	0.59	mg/L	2	1		EPA 300.0	11/14/23	020
Dissolved Magnesium	14300	182	ug/L	1000	1		EPA 200.7	11/2/23	020
Dissolved Sodium	81500	350	ug/L	500	1		EPA 200.7	11/2/23	020
Dissolved Sulfate	129	4.4	mg/L	20	10		EPA 300.0	11/14/23	020
Bicarbonate Ion	123	5.0	mg/L	10.0	1		HCO3	11/13/23	020
Carbonate Ion	Less Than	5.0	mg/L	10.0	1		CO3	11/13/23	020
Dissolved Potassium	3120	325	ug/L	1000	1		EPA 200.7	11/2/23	020
Total Alkalinity as CaCO3	124	5.0	mg/L	10.0	1		SM 2320 B-1997	11/9/23	020
Total Hardness as CaCO3	102	1.0	mg/L	5.4	1		Std Mtd 2340B	11/2/23	020
Dissolved Oxygen-Field	1.13	0.1	mg/l		1		FIELDDO	10/30/23	RAMBOLL
Turbidity	0.0	0.1	NTU'S		1		EPA 180.1	10/30/23	RAMBOLL
Redox Potential	167	1	mV		1		ASTM D1498-93	10/30/23	RAMBOLL

Sample Comments:

Sample Description: **QA/QC1 P4 Landfill CCR Well Sample**
Sample ID: AE69687 Sample Collection Date/Time: 10/30/2023 09:51
Sample Received: 10/31/2023 Sample Collector: RAMBOLL

Parameter	Result	LOD	Units	LOQ	DIL	Result Flag	Analysis Method	Analysis Date	Analyst
Total Dissolved Solids	340	8.7	mg/L	20	1		Std Mtd 2540 C	11/2/23	020
Total Fluoride	1.1	0.095	mg/L	0.32	1		EPA 300.0	11/16/23	020
Total Chloride	8.7	0.59	mg/L	2.0	1		EPA 300.0	11/16/23	020
Total Sulfate	132	4.4	mg/L	20.0	10		EPA 300.0	11/15/23	020
Total Boron	416	17.3	ug/L	40.0	1		EPA 200.7	11/2/23	020

Report Date: Friday, December 1, 2023

The following are the analytical results for samples received by Laboratory Services:

Sample Description: **QA/QC1 P4 Landfill CCR Well Sample**
Sample ID: AE69687 Sample Collection Date/Time: 10/30/2023 09:51
Sample Received: 10/31/2023 Sample Collector: RAMBOLL

Parameter	Result	LOD	Units	LOQ	DIL	Result Flag	Analysis Method	Analysis Date	Analyst
Total Calcium	18500	114	ug/L	500	1		EPA 200.7	11/2/23	020
Dissolved Calcium	19500	114	ug/L	500	1		EPA 200.7	11/2/23	020
Dissolved Chloride	8.7	0.59	mg/L	2.0	1		EPA 300.0	11/14/23	020
Dissolved Magnesium	13200	182	ug/L	1000	1		EPA 200.7	11/2/23	020
Dissolved Sodium	75400	350	ug/L	500	1		EPA 200.7	11/2/23	020
Dissolved Sulfate	133	4.4	mg/L	20	10		EPA 300.0	11/14/23	020
Bicarbonate Ion	126	5.0	mg/L	10.0	1		HCO3	11/13/23	020
Carbonate Ion	Less Than	5.0	mg/L	10.0	1		CO3	11/13/23	020
Dissolved Potassium	2820	325	ug/L	1000	1		EPA 200.7	11/2/23	020
Total Alkalinity as CaCO3	127	5.0	mg/L	10.0	1		SM 2320 B-1997	11/9/23	020
Total Hardness as CaCO3	97.5	1.0	mg/L	5.4	1		Std Mtd 2340B	11/2/23	020

Sample Comments:

Sample Description: **W76 P4 Landfill CCR Well Sample**
Sample ID: AE69688 Sample Collection Date/Time: 10/30/2023 10:54
Sample Received: 10/31/2023 Sample Collector: RAMBOLL

Parameter	Result	LOD	Units	LOQ	DIL	Result Flag	Analysis Method	Analysis Date	Analyst
Field Water Level	26.01	0.05	feet		1		H2OD	10/30/23	RAMBOLL
Field Temperature	10.1	0.1	Degrees C		1		TEMP	10/30/23	RAMBOLL
Field Conductivity	523	0	umhos		1		FCOND25	10/30/23	RAMBOLL
Field pH	8.3	0.1	Units	0.1	1		FIELDPH	10/30/23	RAMBOLL
Total Dissolved Solids	344	8.7	mg/L	20.0	1		Std Mtd 2540 C	11/2/23	020
Total Fluoride	1.1	0.095	mg/L	0.32	1		EPA 300.0	11/16/23	020
Total Chloride	10.6	0.59	mg/L	2.0	1		EPA 300.0	11/16/23	020
Total Sulfate	139	4.4	mg/L	20.0	10		EPA 300.0	11/15/23	020
Total Boron	450	17.3	ug/L	40	1		EPA 200.7	11/2/23	020
Total Calcium	18900	114	ug/L	500	1		EPA 200.7	11/2/23	020
Dissolved Calcium	19400	114	ug/L	500	1		EPA 200.7	11/2/23	020
Dissolved Chloride	10.6	0.59	mg/L	2	1		EPA 300.0	11/14/23	020
Dissolved Magnesium	12600	182	ug/L	1000	1		EPA 200.7	11/2/23	020
Dissolved Sodium	81800	350	ug/L	500	1		EPA 200.7	11/2/23	020
Dissolved Sulfate	138	4.4	mg/L	20	10		EPA 300.0	11/2/23	020
Bicarbonate Ion	121	5.0	mg/L	10.0	1		HCO3	11/13/23	020
Carbonate Ion	Less Than	5.0	mg/L	10.0	1		CO3	11/13/23	020
Dissolved Potassium	2310	325	ug/L	1000	1		EPA 200.7	11/2/23	020
Total Alkalinity as CaCO3	122	5.0	mg/L	10.0	1		SM 2320 B-1997	11/9/23	020
Total Hardness as CaCO3	96.9	1.0	mg/L	5.4	1		Std Mtd 2340B	11/2/23	020
Dissolved Oxygen-Field	1.2	0.1	mg/l		1		FIELDDO	10/30/23	RAMBOLL
Turbidity	2.1	0.1	NTU'S		1		EPA 180.1	10/30/23	RAMBOLL
Redox Potential	-81	1	mV		1		ASTM D1498-93	10/30/23	RAMBOLL

Report Date: Friday, December 1, 2023

The following are the analytical results for samples received by Laboratory Services:

Sample Comments:

Sample Description: **W77 P4 Landfill CCR Well Sample**
Sample ID: AE69689 Sample Collection Date/Time: 10/30/2023 11:49
Sample Received: 10/31/2023 Sample Collector: RAMBOLL

Parameter	Result	LOD	Units	LOQ	DIL	Result Flag	Analysis Method	Analysis Date	Analyst
Field Water Level	20.43	0.05	feet		1		H2OD	10/30/23	RAMBOLL
Field Temperature	10.4	0.1	Degrees (		1		TEMP	10/30/23	RAMBOLL
Field Conductivity	543	0	umhos		1		FCOND25	10/30/23	RAMBOLL
Field pH	7.8	0.1	Units	0.1	1		FIELDPH	10/30/23	RAMBOLL
Total Dissolved Solids	366	8.7	mg/L	20.0	1		Std Mtd 2540 C	11/2/23	020
Total Fluoride	1.2	0.095	mg/L	0.32	1		EPA 300.0	11/16/23	020
Total Chloride	8.1	0.59	mg/L	2.0	1		EPA 300.0	11/16/23	020
Total Sulfate	135	4.4	mg/L	20	10		EPA 300.0	11/15/23	020
Total Boron	428	17.3	ug/L	40.0	1		EPA 200.7	11/2/23	020
Total Calcium	24500	114	ug/L	500	1		EPA 200.7	11/2/23	020
Dissolved Calcium	25400	114	ug/L	500	1		EPA 200.7	11/2/23	020
Dissolved Chloride	8.1	0.59	mg/L	2.0	1		EPA 300.0	11/16/23	020
Dissolved Magnesium	14100	182	ug/L	1000	1		EPA 200.7	11/2/23	020
Dissolved Sodium	84300	350	ug/L	500	1		EPA 200.7	11/2/23	020
Dissolved Sulfate	135	4.4	mg/L	20.0	10		EPA 300.0	11/14/23	020
Bicarbonate Ion	147	5.0	mg/L	10.0	1		HCO3	11/13/23	020
Carbonate Ion	Less Than	5.0	mg/L	10.0	1		CO3	11/13/23	020
Dissolved Potassium	2280	325	ug/L	1000	1		EPA 200.7	11/2/23	020
Total Alkalinity as CaCO3	147	5.0	mg/L	10.0	1		SM 2320 B-1997	11/9/23	020
Total Hardness as CaCO3	117	1.0	mg/L	5.4	1		Std Mtd 2340B	11/2/23	020
Redox Potential	-63	1	mV		1		ASTM D1498-93	10/30/23	RAMBOLL
Turbidity	2.4	0.1	NTU'S		1		EPA 180.1	10/30/23	RAMBOLL
Dissolved Oxygen-Field	1.2	0.1	mg/l		1		FIELDDO	10/30/23	RAMBOLL

Sample Comments:

Sample Description: **W73 P4 Landfill CCR Well Sample**
Sample ID: AE69690 Sample Collection Date/Time: 10/30/2023 12:53
Sample Received: 10/31/2023 Sample Collector: RAMBOLL

Parameter	Result	LOD	Units	LOQ	DIL	Result Flag	Analysis Method	Analysis Date	Analyst
Field Water Level	24.96	0.05	feet		1		H2OD	10/30/23	RAMBOLL
Field Temperature	11.8	0.1	Degrees (		1		TEMP	10/30/23	RAMBOLL
Field Conductivity	459	0	umhos		1		FCOND25	10/30/23	RAMBOLL
Field pH	8.24	0.1	Units	0.1	1		FIELDPH	10/30/23	RAMBOLL
Total Dissolved Solids	338	8.7	mg/L	20.0	1		Std Mtd 2540 C	11/1/23	020
Total Fluoride	1.1	0.095	mg/L	0.32	1		EPA 300.0	11/1/23	020
Total Chloride	11.2	0.59	mg/L	2.0	1		EPA 300.0	11/1/23	020
Total Sulfate	132	4.4	mg/L	20.0	1		EPA 300.0	11/1/23	020

Report Date: Friday, December 1, 2023

The following are the analytical results for samples received by Laboratory Services:

Sample Description: **W73 P4 Landfill CCR Well Sample**
Sample ID: AE69690 Sample Collection Date/Time: 10/30/2023 12:53
Sample Received: 10/31/2023 Sample Collector: RAMBOLL

Parameter	Result	LOD	Units	LOQ	DIL	Result Flag	Analysis Method	Analysis Date	Analyst
Total Boron	447	17.3	ug/L	40.0	1		EPA 200.7	11/2/23	020
Total Calcium	19000	114	ug/L	500	1		EPA 200.7	11/2/23	020
Dissolved Calcium	18200	114	ug/L	500	1		EPA 200.7	11/2/23	020
Dissolved Chloride	11.1	0.59	mg/L	2.0	1		EPA 300.0	11/1/23	020
Dissolved Magnesium	12100	182	ug/L	1000	1		EPA 200.7	11/2/23	020
Dissolved Sodium	75800	350	ug/L	500	1		EPA 200.7	11/2/23	020
Dissolved Sulfate	134	4.4	mg/L	20.0	1		EPA 300.0	11/1/23	020
Bicarbonate Ion	117	5.0	mg/L	10.0	1		HCO3	11/8/23	020
Carbonate Ion	Less Than	5.0	mg/L	10.0	1		CO3	11/8/23	020
Dissolved Potassium	1460	325	ug/L	1000	1		EPA 200.7	11/2/23	020
Total Alkalinity as CaCO3	120	5.0	mg/L	10.0	1		SM 2320 B-1997	11/1/23	020
Total Hardness as CaCO3	98.7	1	mg/L	5.4	1		Std Mtd 2340B	11/2/23	020
Total Filtered Alkalinity as CaCO3	117	5.0	mg/l	10.0	1		Std Mtd 2320 B	11/1/23	020
Dissolved Boron	0.445	0.0173	mg/L	0.040	1		EPA 200.7	11/2/23	020
Dissolved Selenium	Less Than	0.0122	mg/L	0.04	1		EPA 200.7	11/2/23	020
Dissolved Organic Carbon	2.1	0.19	ppm	0.50	1		Std Mtd 5310C	11/1/23	020
Dissolved Molybdenum	0.105	0.0024	mg/L	0.010	1		EPA 200.7	11/2/23	020
Redox Potential	-150	1	mV		1		ASTM D1498-93	10/30/23	RAMBOLL
Turbidity	14.1	0.1	NTU'S		1		EPA 180.1	10/30/23	RAMBOLL
Dissolved Oxygen-Field	0.9	0.1	mg/l		1		FIELDDO	10/30/23	RAMBOLL

Sample Comments:

Sample Description: **W74 P4 Landfill CCR Well Sample**
Sample ID: AE69691 Sample Collection Date/Time: 10/30/2023 13:52
Sample Received: 10/31/2023 Sample Collector: RAMBOLL

Parameter	Result	LOD	Units	LOQ	DIL	Result Flag	Analysis Method	Analysis Date	Analyst
Field Water Level	23.03	0.05	feet		1		H2OD	10/30/23	RAMBOLL
Field Temperature	10.7	0.1	Degrees C		1		TEMP	10/30/23	RAMBOLL
Field Conductivity	556	0	umhos		1		FCOND25	10/30/23	RAMBOLL
Field pH	8.2	0.1	Units	0.1	1		FIELDPH	10/30/23	RAMBOLL
Total Dissolved Solids	372	8.7	mg/L	20.0	1		Std Mtd 2540 C	11/2/23	020
Total Fluoride	1.1	0.095	mg/L	0.32	1		EPA 300.0	11/1/23	020
Total Chloride	13.2	0.59	mg/L	2.0	1		EPA 300.0	11/1/23	020
Total Sulfate	162	4.4	mg/L	20.0	10		EPA 300.0	11/2/23	020
Total Boron	423	17.3	ug/L	40.0	1		EPA 200.7	11/2/23	020
Total Calcium	19400	114	ug/L	500	1		EPA 200.7	11/2/23	020
Dissolved Calcium	19700	114	ug/L	500	1		EPA 200.7	11/2/23	020
Dissolved Chloride	14.5	0.59	mg/L	2.0	1		EPA 300.0	11/14/23	020
Dissolved Magnesium	15500	182	ug/L	1000	1		EPA 200.7	11/2/23	020
Dissolved Sodium	85200	350	ug/L	500	1		EPA 200.7	11/2/23	020
Dissolved Sulfate	158	4.4	mg/L	20.0	10		EPA 300.0	11/15/23	020
Bicarbonate Ion	113	5.0	mg/L	10.0	1		HCO3	11/13/23	020

Report Date: Friday, December 1, 2023

The following are the analytical results for samples received by Laboratory Services:

Sample Description: **W74 P4 Landfill CCR Well Sample**
Sample ID: AE69691 Sample Collection Date/Time: 10/30/2023 13:52
Sample Received: 10/31/2023 Sample Collector: RAMBOLL

Parameter	Result	LOD	Units	LOQ	DIL	Result Flag	Analysis Method	Analysis Date	Analyst
Carbonate Ion	Less Than	5.0	mg/L	10.0	1		CO3	11/13/23	020
Dissolved Potassium	2180	325	ug/L	1000	1		EPA 200.7	11/2/23	020
Nitrite	Less Than	0.021	mg/L	0.10	1		EPA 300.0	11/1/23	020
Nitrate	Less Than	0.044	mg/L	0.15	1		EPA 300.0	11/1/23	020
Total Copper	Less Than	0.0034	mg/L	0.010	1		EPA 200.7	11/2/23	020
Total Manganese	0.0167	0.0015	mg/L	0.005	1		EPA 200.7	11/2/23	020
Total Silver	Less Than	0.0032	mg/L	0.010	1		EPA 200.7	11/2/23	020
Total Zinc	Less Than	0.0116	mg/L	0.040	1		EPA 200.7	11/2/23	020
Total Alkalinity as CaCO3	112	5	mg/L	10	1		SM 2320 B-1997	11/9/23	020
Total Hardness as CaCO3	111	1.0	mg/L	5.4	1		Std Mtd 2340B	11/3/23	020
Dissolved Oxygen-Field	0.2	0.1	mg/l		1		FIELDDO	10/30/23	RAMBOLL
Turbidity	0.0	0.1	NTU'S		1		EPA 180.1	10/30/23	RAMBOLL
Redox Potential	-183	1	mV		1		ASTM D1498-93	10/30/23	RAMBOLL

Sample Comments:

Sample Description: **EB-3 P4 Landfill CCR Well Sample**
Sample ID: AE69692 Sample Collection Date/Time: 10/30/2023 15:00
Sample Received: 10/31/2023 Sample Collector: RAMBOLL

Parameter	Result	LOD	Units	LOQ	DIL	Result Flag	Analysis Method	Analysis Date	Analyst
Total Dissolved Solids	26	8.7	mg/L	20	1		Std Mtd 2540 C	11/2/23	020
Total Fluoride	Less Than	0.095	mg/L	0.32	1		EPA 300.0	11/2/23	020
Total Chloride	Less Than	0.59	mg/L	2.0	1		EPA 300.0	11/2/23	020
Total Sulfate	Less Than	0.44	mg/L	2.0	1		EPA 300.0	11/2/23	020
Total Boron	Less Than	17.3	ug/L	40	1		EPA 200.7	11/2/23	020
Total Calcium	Less Than	114	ug/L	500	1		EPA 200.7	11/2/23	020
Dissolved Calcium	Less Than	114	ug/L	500	1		EPA 200.7	11/2/23	020
Dissolved Chloride	Less Than	0.59	mg/L	2.0	1		EPA 300.0	11/14/23	020
Dissolved Magnesium	Less Than	182	ug/L	1000	1		EPA 200.7	11/2/23	020
Dissolved Sodium	383	350	ug/L	500	1	J	EPA 200.7	11/2/23	020
Dissolved Sulfate	Less Than	0.44	mg/L	2.0	1		EPA 300.0	11/14/23	020
Bicarbonate Ion	Less Than	5.0	mg/L	10.0	1		HCO3	11/13/23	020
Carbonate Ion	Less Than	5.0	mg/L	10.0	1		CO3	11/13/23	020
Dissolved Potassium	Less Than	325	ug/L	1000	1		EPA 200.7	11/2/23	020
Total Copper	Less Than	0.0034	mg/L	0.010	1		EPA 200.7	11/2/23	020
Total Manganese	Less Than	0.0015	mg/L	0.005	1		EPA 200.7	11/2/23	020
Total Silver	Less Than	0.0032	mg/L	0.010	1		EPA 200.7	11/2/23	020
Total Zinc	Less Than	0.0116	mg/L	0.040	1		EPA 200.7	11/2/23	020
Total Alkalinity as CaCO3	Less Than	5	mg/L	10	1		SM 2320 B-1997	11/9/23	020
Total Hardness as CaCO3	Less Than	1.0	mg/L	5.4	1		Std Mtd 2340B	11/2/23	020
Dissolved Organic Carbon	Less Than	0.19	ppm	0.50	1		Std Mtd 5310C	11/8/23	020
Total Hardness as CaCO3	Less Than	1.0	mg/L	5.4	1		Std Mtd 2340B	11/2/23	020
Nitrite	Less Than	0.021	mg/L	0.10	1	H1	EPA 300.0	11/2/23	020

Report Date: Friday, December 1, 2023

The following are the analytical results for samples received by Laboratory Services:

Sample Description: **EB-3 P4 Landfill CCR Well Sample**

Sample ID: AE69692 Sample Collection Date/Time: 10/30/2023 15:00

Sample Received: 10/31/2023 Sample Collector: RAMBOLL

Parameter	Result	LOD	Units	LOQ	DIL	Result Flag	Analysis Method	Analysis Date	Analyst
Nitrate	Less Than	0.044	mg/L	0.15	1	H1	EPA 300.0	11/2/23	020

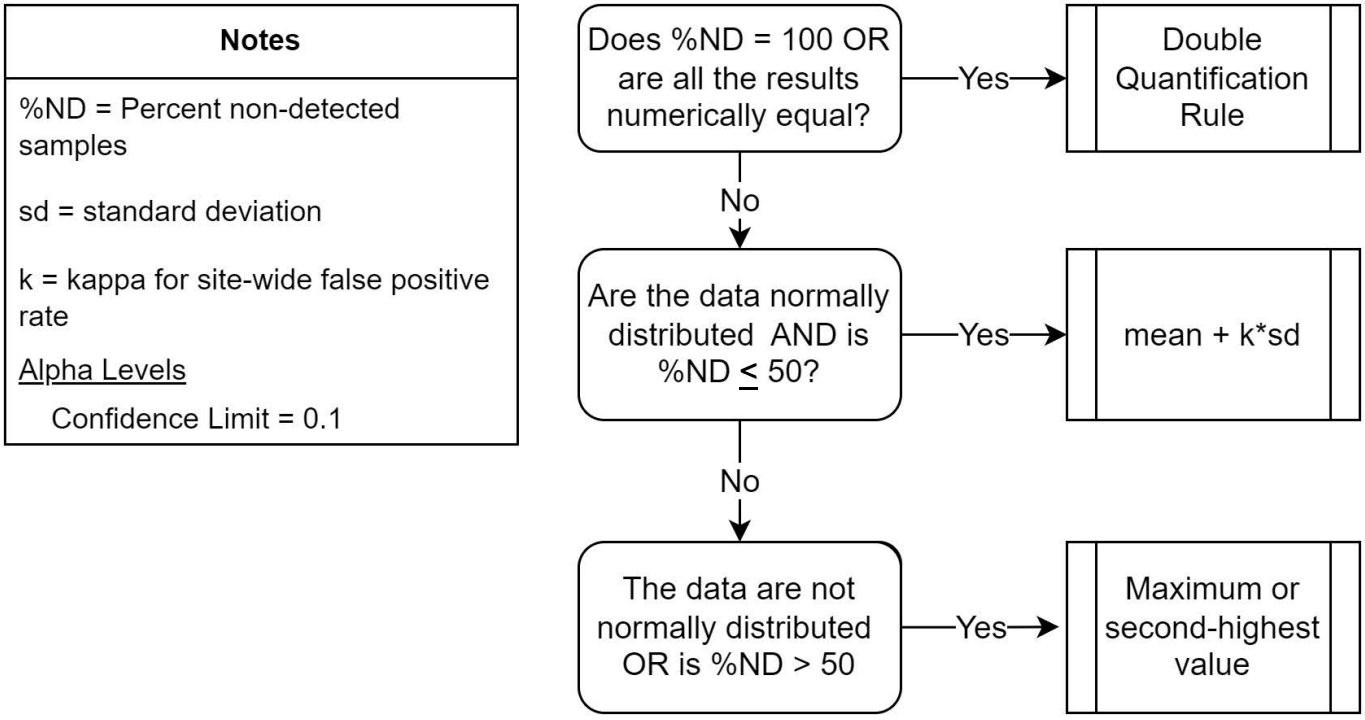
Sample Comments:

LOD and LOQ are adjusted for dilution factor.

'J' Flag, if present indicates an estimated concentration at or above the LOD and below the LOQ.

If there are any questions concerning this report, please contact: Laboratory Services at (414) 221-4595.

APPENDIX B
STATISTICAL METHODOLOGY FOR DETERMINATION OF BACKGROUND VALUES



When data are not normally distributed or %ND > 50, the maximum value is used if the background sample size is < 60. Where the background sample size is > 60, the achievable per-constituent false positive rates for the maximum and second-highest background values will be compared, and the background value with the achievable per-constituent false positive rate that is closest to, but does not exceed, the target per-constituent false positive rate of 0.015% is used.