Prepared for
We Energies

Date
January 31, 2025

Project No.
1940102327

2024 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT

CALEDONIA ASH LANDFILL

RAMBOLL Bright ideas. Sustainable change.

2024 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT CALEDONIA ASH LANDFILL

Project name	**Ash Landfill Database Management, Sampling, and Reporting**
Project no.	**1940102327**
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ACRONYMS AND ABBREVIATIONS

§	Section
40 C.F.R.	Title 40 of the Code of Federal Regulations
ASD	Alternate Source Demonstration
B	boron
Ca	calcium
CCR	coal combustion residuals
GWPS	groundwater protection standard
mg/L	milligrams per liter
NA	not applicable
NRT/OBG	Natural Resource Technology, Inc., an OBG Company
Ramboll	Ramboll Americas Engineering Solutions, Inc.
SAP	Sampling and Analysis Plan
SO_4	sulfate
SSI	statistically significant increase
TBD	to be determined
TDS	total dissolved solids

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 Caledonia Ash Landfill (CAL) located in Caledonia, Wisconsin.

Groundwater is being monitored at CAL 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 2024 (no wells were installed or decommissioned).

In 2024, groundwater analytical data was evaluated for statistically significant increases (SSIs) over background concentrations for 40 C.F.R. § 257.94 Appendix III constituents in groundwater monitoring wells at the CAL. The following constituents and wells had SSIs reported in 2024:

- Boron (B) – W08D, W10D, W49, W50
- Calcium (Ca) – W08D
- Sulfate (SO_4) – W08D, W09D, W10D, W49 and W50
- Total Dissolved Solids (TDS) – W08D and W50

Alternate Source Demonstrations (ASDs) prepared in prior years for these parameters and monitoring locations provide lines of evidence that the SSIs observed during the Detection Monitoring Program were not due to a release from CAL but were either from an error in sampling or analysis or from naturally occurring conditions (*e.g.,* natural variation in groundwater quality).

CAL 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 CAL located in Caledonia, WI.

In accordance with 40 C.F.R. § 257.90(e), the owner or operator of a 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 a statistically significant increase 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 a statistically significant increase 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 CAL for calendar year 2024.

2. MONITORING AND CORRECTIVE ACTION PROGRAM STATUS

No changes have occurred to the monitoring program status in calendar year 2024 and the CAL remains in the Detection Monitoring Program in accordance with 40 C.F.R. § 257.94.

3. KEY ACTIONS COMPLETED IN 2024

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 2024.

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; Natural Resource Technology, an OBG Company [NRT/OBG], 2017). Potentiometric surface maps for the fourth quarter of 2023 and both monitoring events in 2024 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 2023 and both monitoring events in 2024 are presented in **Tables 2**. Laboratory reports for both 2024 monitoring events are included in **Appendix A**[1]. Results for analysis of additional samples required by Ch. NR 507 Wisconsin Administrative Code are included in some reports because they were collected during the same sampling events, but are not summarized in this report.

Analytical data were evaluated in accordance with the *Statistical Analysis Plan, Caledonia Ash Landfill* (NRT/OBG, 2017) to determine any SSIs for Appendix III parameters relative to background concentrations. Statistical background values are provided in **Table 3**. A flow chart showing the statistical methodology for determining background values is included as **Appendix B**.

Statistical evaluation, including SSI determinations, of analytical data from the Detection Monitoring Program for the November 6-7, 2023 (Detection Monitoring Round 13) and May 7-8, 2024 (Detection Monitoring Round 14) sampling events were completed in 2024 and within 90 days of receipt of the analytical data. A resample was collected to confirm an SSI for chloride at W08D. The analytical result of the resample did not confirm an SSI for chloride at W08D. SSIs over background concentrations for Appendix III constituents were identified; SSI parameters and well locations are provided in **Table A**.

[1] Laboratory reports for the fourth quarter of 2023 monitoring event were provided in the 2023 annual report.

Table A. 2023-2024 Detection Monitoring Program Summary

Detection Round	Sampling Date	Analytical Data Receipt Date	Parameters Collected	SSI Wells (Parameters)	SSI(s) Determination Date	ASD Completion Date[1]
13	November 6-7, 2023	December 26, 2023	Appendix III	W08D (B, Ca, SO_4, TDS) W09D (SO_4) W10D (B, SO_4) W49 (B, SO_4) W50 (B, SO_4, TDS)	March 25, 2024	NA
14	May 7-8, 2024	July 30, 2024	Appendix III	W08D (Ca, Cl, SO_4, TDS) W09D (SO_4) W10D (SO_4) W49 (SO_4) W50 (SO_4, TDS)	October 28, 2024	NA
14R	September 4, 2024	January 9, 2025	Chloride W08D	NA	NA	NA
15	November 6, 2024	January 7, 2025	Appendix III	TBD	TBD Before April 7, 2025	TBD

Notes:

NA: not applicable

TBD: to be determined

[1]ASDs previously completed on April 15, 2018, November 23, 2020, and July 5, 2023 for the CAL provided a description, data, and pertinent information supporting an alternate source for the wells and parameters with SSIs identified during the November 6-7, 2023 and May 7-8, 2024 sampling events.

4. PROBLEMS ENCOUNTERED AND ACTIONS TO RESOLVE THE PROBLEMS

No problems were encountered with the Groundwater Monitoring Program during 2024. Groundwater samples were collected and analyzed in accordance with the SAP and all data were accepted.

5. KEY ACTIVITIES PLANNED FOR 2025

The following key activities are planned for 2025:

- Continuation of the Detection Monitoring Program with semi-annual sampling scheduled for the second and fourth quarters of 2025.
- Complete evaluation of analytical data from the downgradient wells using background data to determine whether an SSI of 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 CCR unit 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 2025 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 2025 (*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, an OBG Company (NRT/OBG), 2017, *Sampling and Analysis Plan Revision 2, Caledonia Ash Landfill, Caledonia, Wisconsin, September 29, 2017.*

Natural Resource Technology, an OBG Company (NRT/OBG), 2017, *Statistical Analysis Plan, Caledonia Ash Landfill, Caledonia, Wisconsin, October 17, 2017.*

TABLES

TABLE 1
GROUNDWATER ELEVATIONS
2024 CCR ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
CALEDONIA ASH LANDFILL
CALEDONIA, WI

Well ID	Well Type	Latitude (Decimal degrees)	Longitude (Decimal degrees)	Date	Groundwater Elevation (ft NAVD88)
W46D	Background (Upgradient/Side-gradient)	42.83840	-87.84685	5/07/2024	657.12
				11/06/2024	653.26
W48	Background (Upgradient)	42.83564	-87.84441	5/08/2024	658.44
				11/06/2024	655.13
W08D	Compliance (Downgradient)	42.83621	-87.83965	5/07/2024	655.47
				11/06/2024	653.84
W09D	Compliance (Downgradient)	42.83892	-87.83924	5/07/2024	656.21
				11/06/2024	653.32
W10D	Compliance (Downgradient)	42.83985	-87.84015	5/08/2024	655.52
				11/06/2024	652.64
W49	Compliance (Downgradient)	42.83987	-87.84187	5/08/2024	655.88
				11/06/2024	653.16
W50	Compliance (Downgradient)	42.83751	-87.83865	5/08/2024	657.23
				11/06/2024	647.50

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

Caledonia
Table 2. Analytical Results - Appendix III Parameters

Date Range: 11/01/2023 to 12/31/2024

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
W08D	11/6/2023	AE69873	0.436	45.8	11.4	1.40	7.5	214.0
	5/7/2024	40283183002	0.481					
		AE72726		51.4	16.0	1.10	7.6	200.0
	9/4/2024	40283576002			3.6			
	11/6/2024	AE75298	0.423	45.7	11.1	1.30	7.7	208.0
W09D	11/6/2023	AE69874	0.394	17.1	3.6	1.30	8.0	34.6
	5/7/2024	40283183003	0.439					
		AE72727		18.7	5.4	1.30	8.1	41.0
	11/6/2024	AE75299	0.387	17.3	4.2	1.40	8.3	39.2
W10D	11/6/2023	AE69875	0.411	19.2	3.7	1.30	7.6	42.8
	5/8/2024	40283183004	0.440					
		AE72728		21.4	4.8	1.10	8.1	37.0
	11/6/2024	AE75300	0.390	19.3	4.0	1.30	8.1	42.7
W46D	11/6/2023	AE69876	0.344	23.4	5.2	1.20	7.6	37.7
	5/7/2024	40283183005	0.358					
		AE72729		25.5	5.9	0.98	7.6	32.0
	11/6/2024	AE75301	0.337	23.9	5.4	1.20	7.7	34.8
W48	11/7/2023	AE69877	0.375	25.3	3.7	0.95	7.8	<0.4
	5/8/2024	40283183006	0.390					
		AE72730		26.2	5.1	0.92	7.9	2.1
	11/6/2024	AE75302	0.353	25.0	4.0	0.98	8.1	<0.4
W49	11/7/2023	AE69878	0.429	16.3	5.6	1.60	7.4	48.2
	5/8/2024	40283183007	0.466					
		AE72731		16.6	5.2	1.20	8.1	50.0
	11/6/2024	AE75303	0.429	15.8	4.4	1.40	8.0	51.9

Caledonia
Table 2. Analytical Results - Appendix III Parameters

Date Range: 11/01/2023 to 12/31/2024

Lab Methods:

			Boron, total, mg/L	Calcium, total, mg/L	Chloride, total, mg/L	Fluoride, total, mg/L	pH (Field), SU	Sulfate, total, mg/L
W50	11/7/2023	AE69879	0.479	26.5	13.1	2.20	7.4	86.1
	5/8/2024	40283183008	0.528					
		AE72732		28.8	5.8	0.95	7.6	73.0
	11/6/2024	AE75304	0.464	25.8	5.4	1.20	7.7	78.4

Caledonia
Table 2. Analytical Results - Appendix III Parameters

Date Range: 11/01/2023 to 12/31/2024

Lab Methods:

Well Id	Date Sampled	Lab Id	TDS, mg/L
W08D	11/6/2023	AE69873	456
	5/7/2024	AE72726	460
	11/6/2024	AE75298	890
W09D	11/6/2023	AE69874	206
	5/7/2024	AE72727	260
	11/6/2024	AE75299	260
W10D	11/6/2023	AE69875	194
	5/8/2024	AE72728	230
	11/6/2024	AE75300	480
W46D	11/6/2023	AE69876	202
	5/7/2024	AE72729	500
	11/6/2024	AE75301	520
W48	11/7/2023	AE69877	234
	5/8/2024	AE72730	310
	11/6/2024	AE75302	440
W49	11/7/2023	AE69878	200
	5/8/2024	AE72731	230
	11/6/2024	AE75303	830
W50	11/7/2023	AE69879	266
	5/8/2024	AE72732	280
	11/6/2024	AE75304	1200

Notes:

Exceedance of Background

TABLE 3

STATISTICAL BACKGROUND VALUES

2024 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT

CALEDONIA ASH LANDFILL

CALEDONIA, WI

Parameter	Statistical Background Value (LPL/UPL)
40 C.F.R. Part 257 Appendix III	
Boron (mg/L)	0.401
Calcium (mg/L)	34.4
Chloride (mg/L)	13.8
Fluoride (mg/L)	4.00
pH (field) (SU)	7.0/8.5
Sulfate (mg/L)	30.2
Total Dissolved Solids (mg/L)	260

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

Y:\GIS\Projects\161\660\CALEDONIA\MXD\GM_CAR_2023\Figure 1_GW Samp Well Loc_Caledonia.mxd

PROJECT: 71202 | DATED: 1/30/2024 | DESIGNER: GALARNMC

CCR RULE BACKGROUND MONITORING WELL LOCATION

CCR RULE DOWNGRADIENT MONITORING WELL LOCATION

CCR RULE UPGRADIENT MONITORING WELL LOCATION

UNIT BOUNDARY

NOTES

IMAGERY DATE = 5/1/2022

0 200 400 Feet

MONITORING WELL LOCATION MAP

FIGURE 1

2024 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
CALEDONIA ASH LANDFILL
CALEDONIA POWER PLANT
CALEDONIA, WISCONSIN

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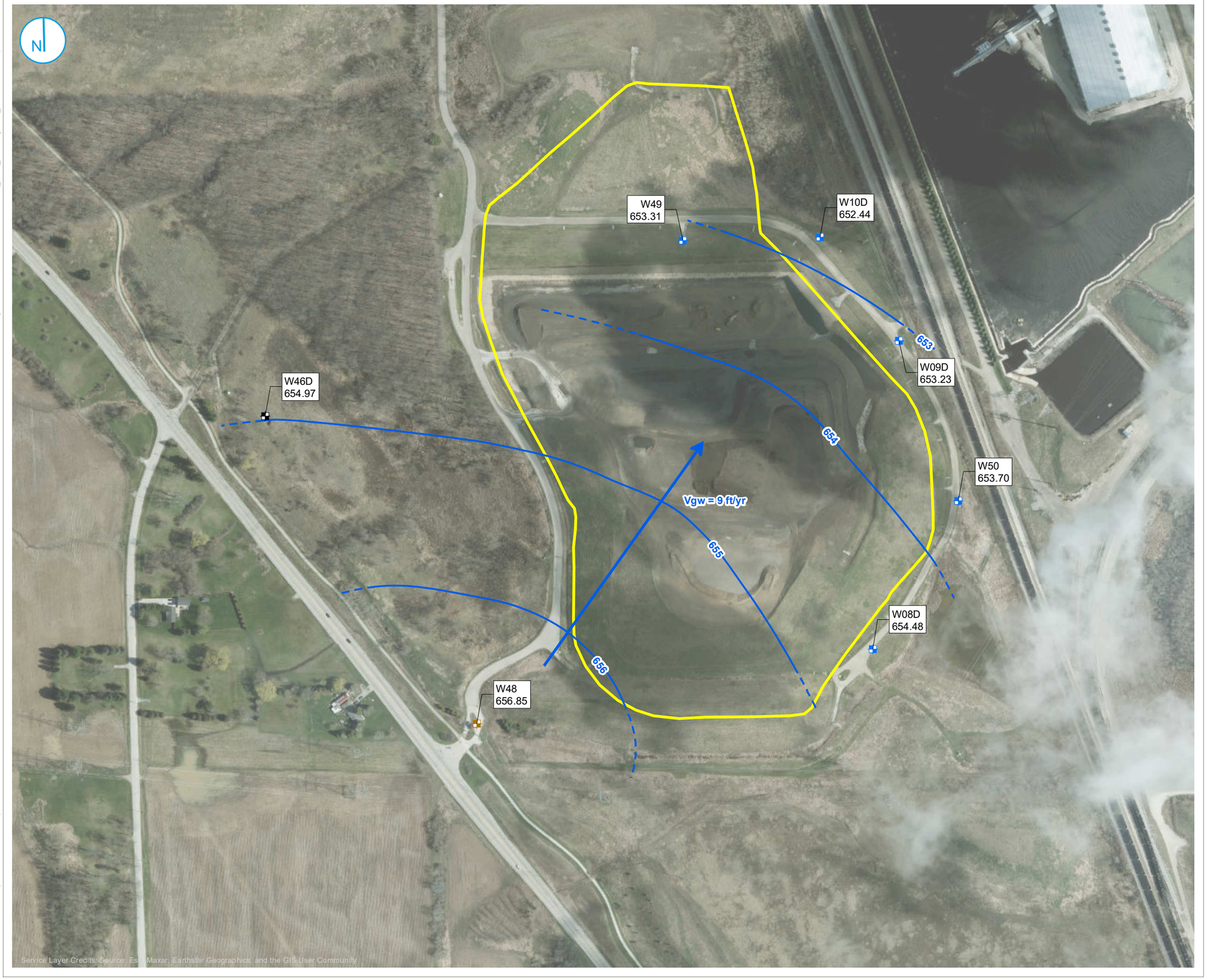

- CCR RULE BACKGROUND MONITORING WELL LOCATION
- CCR RULE DOWNGRADIENT MONITORING WELL LOCATION
- CCR RULE UPGRADIENT MONITORING WELL LOCATION
- UNIT BOUNDARY
- GROUNDWATER ELEVATION CONTOUR (1-FT CONTOUR INTERVAL, NAVD88)
- INFERRED GROUNDWATER ELEVATION CONTOUR
- GROUNDWATER FLOW DIRECTION

NOTES

Vgw = ESTIMATED FT/YR GROUNDWATER FLOW VELOCITY

IMAGERY DATE = 5/1/2022

0 150 300
Feet

POTENTIOMETRIC SURFACE MAP NOVEMBER 6-7, 2023

2024 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
CALEDONIA ASH LANDFILL
CALEDONIA POWER PLANT
CALEDONIA, WISCONSIN

FIGURE 2

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Y:\GIS\Projects\161\660\CALEDONIA\MXD\GM_CAR_2023\Figure 4_GW Contour Map Nov 2023.mxd

PROJECT: 169000XXXX | DATED: 1/30/2024 | DESIGNER: GALARNMC

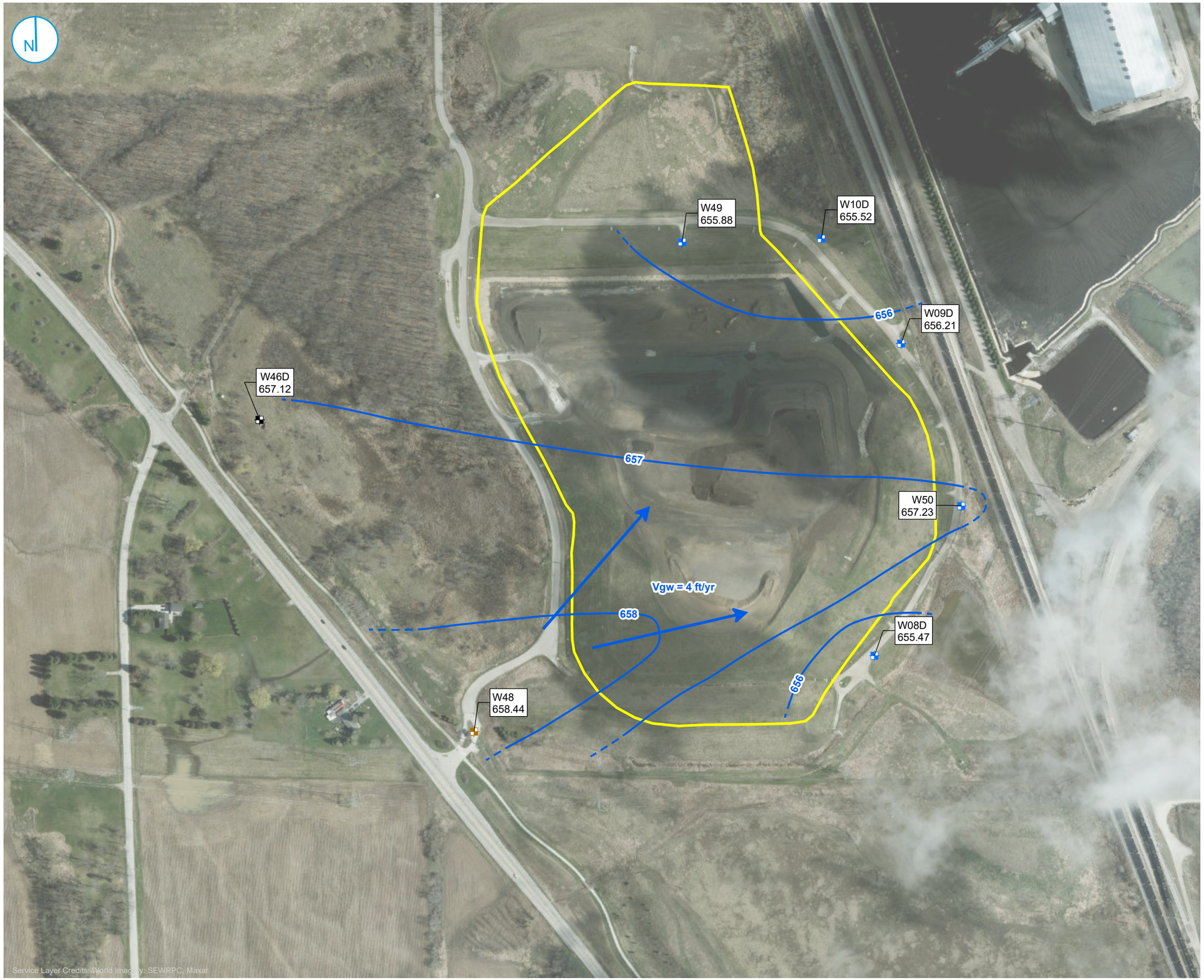
GROUNDWATER AVERAGE LINEAR VELOCITY CALCULATIONS
CALEDONIA ASH LANDFILL
CALEDONIA, WISCONSIN

November 2023		**$V = K i / n_e$**	V = Groundwater Velocity				
			K = Hydraulic Conductivity				
			i = Hydraulic Gradient (unitless value)				
UPPERMOST AQUIFER			n_e = Effective Porosity				
Contours	**656**	**to**	**653**	**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 =	0.002		between contours identified above				
n_e =	25	%			3	/	1358 0.002

$$V = \frac{1.04E+03 * 2.21E-03}{0.25}$$

V = 9 feet/year

[O: KJS 1/19/2024, C:EJT 1/29/2024]



CCR RULE BACKGROUND MONITORING WELL LOCATION

CCR RULE DOWNGRADIENT MONITORING WELL LOCATION

CCR RULE UPGRADIENT MONITORING WELL LOCATION

UNIT BOUNDARY

GROUNDWATER ELEVATION CONTOUR (1-FT CONTOUR INTERVAL, NAVD88)

INFERRED GROUNDWATER ELEVATION CONTOUR

GROUNDWATER FLOW DIRECTION

NOTES
Vgw = ESTIMATED FT/YR GROUNDWATER FLOW VELOCITY
IMAGERY DATE = 5/1/2022

0 150 300
Feet

POTENTIOMETRIC SURFACE MAP MAY 7-8, 2024

2024 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
CALEDONIA ASH LANDFILL
CALEDONIA POWER PLANT
CALEDONIA, WISCONSIN

FIGURE 3

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PROJECT: 169000XXXX | DATED: 1/27/2025 | DESIGNER: PWYSIATKO

GROUNDWATER AVERAGE LINEAR VELOCITY CALCULATIONS
CALEDONIA ASH LANDFILL
CALEDONIA, WISCONSIN

May 2024 **$V = K\,i\,/\,n_e$**

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

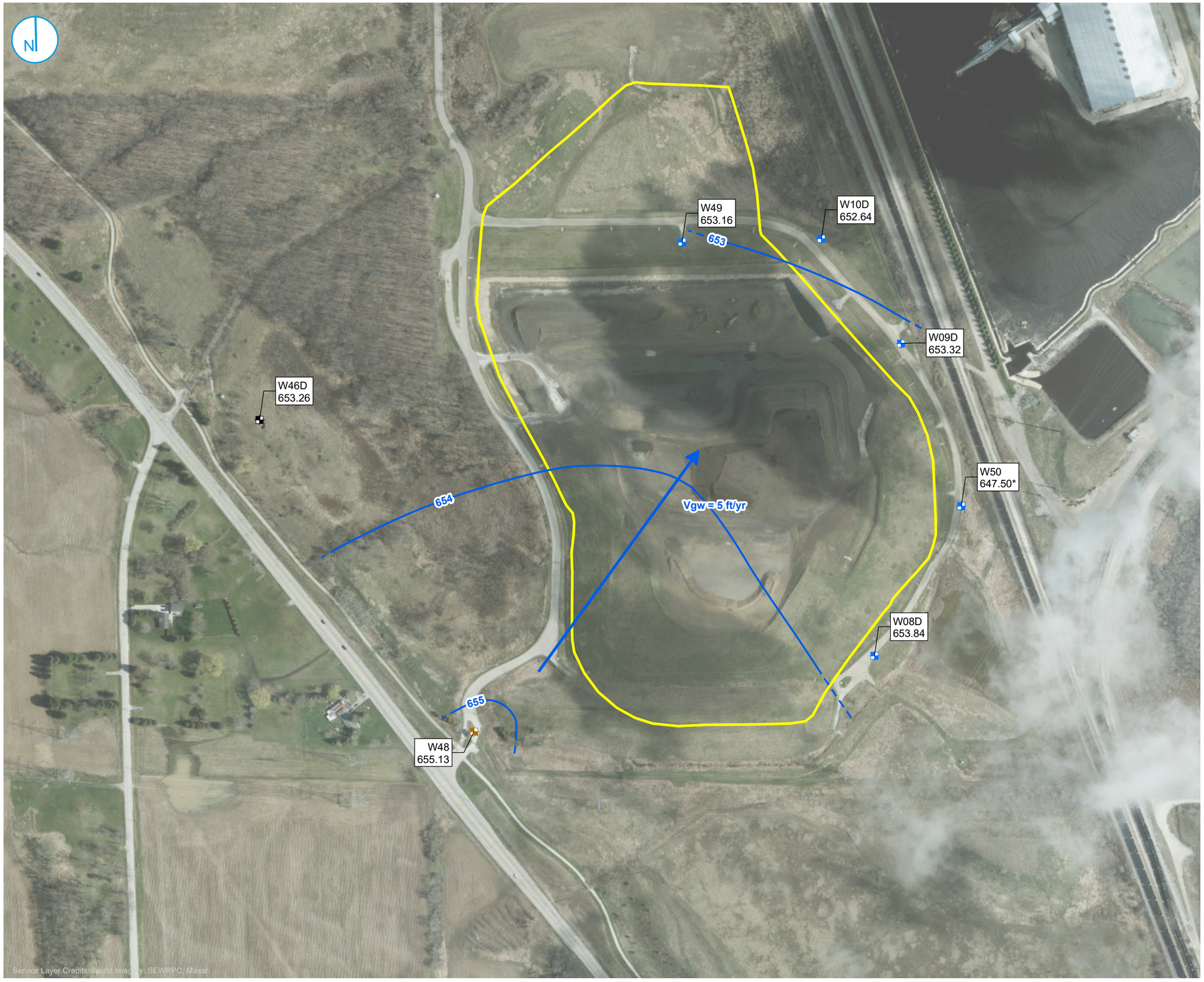
UPPERMOST AQUIFER

Contours	**658**	**to**	**657**	**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 =	0.001		between contours identified above					
n_e =	25	%			1	/	1114	0.001

$$V = \frac{1.04E+03 * 8.98E-04}{0.25}$$

V = 4 feet/year

[O: KJS 8/8/2024, C: NRK 1/28/2025]



CCR RULE BACKGROUND MONITORING WELL LOCATION

CCR RULE DOWNGRADIENT MONITORING WELL LOCATION

CCR RULE UPGRADIENT MONITORING WELL LOCATION

UNIT BOUNDARY

GROUNDWATER ELEVATION CONTOUR (1-FT CONTOUR INTERVAL, NAVD88)

INFERRED GROUNDWATER ELEVATION CONTOUR

GROUNDWATER FLOW DIRECTION

NOTES
* = ELEVATION NOT USED FOR CONTOURING
Vgw = ESTIMATED FT/YR GROUNDWATER FLOW VELOCITY
IMAGERY DATE = 5/1/2022

0 150 300
Feet

POTENTIOMETRIC SURFACE MAP NOVEMBER 6, 2024

2024 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
CALEDONIA ASH LANDFILL
CALEDONIA POWER PLANT
CALEDONIA, WISCONSIN

FIGURE 4

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PROJECT: 169000XXXX | DATED: 1/27/2025 | DESIGNER: PWYSIATKO

GROUNDWATER AVERAGE LINEAR VELOCITY CALCULATIONS
CALEDONIA ASH LANDFILL
CALEDONIA, WISCONSIN

NOVEMBER 2024 **$V = K\,i\,/\,n_e$**

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

UPPERMOST AQUIFER

Contours	**655**	**to**	**654**	**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 =	0.001		between contours identified above		1	/	890 = 0.001
n_e =	25	%					

$$V = \frac{1.04E+03 * 1.12E-03}{0.25}$$

V = 5 feet/year

[O:KJS 11/25/2024 , C: NRK 1/28/2025]

APPENDICES

APPENDIX A
LABORATORY REPORTS

To: ERIC KOVATCH
PSB Annex A231

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

Report Date: Friday, August 30, 2024

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

Sample Description: **W08D** **Caledonia Landfill Semi Annual Sample**
Sample ID: AE72726 Sample Collection Date/Time: 05/07/2024 13:00
Sample Received: 05/08/2024 Sample Collector: LAUREN ANDERSON

Parameter	Result	LOD	Units	LOQ	DIL	Result Flag	Analysis Method	Analysis Date	Analyst
Field Water Level	42.81	0.05	feet		1		H2OD	5/7/24	L ANDERSON
Field Temperature	12.1	0.1	Degrees (		1		TEMP	5/7/24	L ANDERSON
Field Conductivity	687	0	umhos		1		FCOND25	5/7/24	L ANDERSON
Field pH	7.59	0.1	Units	0.1	1		FIELDPH	5/7/24	L ANDERSON
Total Boron	481	17.3	ug/L	40.0	1		EPA 200.7	8/28/24	020
Total Calcium	51410	12.4	ug/L	170.3	1		EPA 200.7	5/21/24	EDL
Total Hardness as CaCO3	214	1	mg/L		1		Std Mtd 2340B	5/21/24	EDL
Total Fluoride	1.1	0.06	mg/L	0.195	5		EPA 300.0	5/13/24	AEU
Total Chloride	16	0.295	mg/L	0.99	5		EPA 300.0	5/14/24	AEU
Total Sulfate	200	1.2	mg/L	3.9	5		EPA 300.0	5/14/24	AEU
Total Alkalinity as CaCO3	140	20	mg/L		1		SM 2320 B-1997	5/15/24	AEU
Total Dissolved Solids	460	20	mg/L		1		Std Mtd 2540 C	5/14/24	SAA

Sample Comments:

Sample Description: **W09D** **Caledonia Landfill Semi Annual Sample**
Sample ID: AE72727 Sample Collection Date/Time: 05/07/2024 13:42
Sample Received: 05/08/2024 Sample Collector: LAUREN ANDERSON

Parameter	Result	LOD	Units	LOQ	DIL	Result Flag	Analysis Method	Analysis Date	Analyst
Field Water Level	51.14	0.05	feet		1		H2OD	5/7/24	L ANDERSON
Field Temperature	12.1	0.1	Degrees (		1		TEMP	5/7/24	L ANDERSON
Field Conductivity	346	0	umhos		1		FCOND25	5/7/24	L ANDERSON
Field pH	8.14	0.1	Units	0.1	1		FIELDPH	5/7/24	L ANDERSON
Total Boron	439	17.3	ug/L	40.0	1		EPA 200.7	8/28/24	020
Total Calcium	18730	12.4	ug/L	170.3	1		EPA 200.7	5/21/24	EDL
Total Hardness as CaCO3	87	1	mg/L		1		Std Mtd 2340B	5/21/24	EDL
Total Fluoride	1.3	0.06	mg/L	0.195	5		EPA 300.0	5/13/24	AEU
Total Chloride	5.4	0.295	mg/L	0.99	5		EPA 300.0	5/14/24	AEU
Total Sulfate	41	1.2	mg/L	3.9	5		EPA 300.0	5/14/24	AEU
Total Alkalinity as CaCO3	130	20	mg/L		1		SM 2320 B-1997	5/15/24	AEU
Total Dissolved Solids	260	20	mg/L		1		Std Mtd 2540 C	5/14/24	SAA

Report Date: Friday, August 30, 2024

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

Sample Comments:

Sample Description: **W10D Caledonia Landfill Semi Annual Sample**
Sample ID: AE72728 Sample Collection Date/Time: 05/08/2024 10:05
Sample Received: 05/08/2024 Sample Collector: LAUREN ANDERSON

Parameter	Result	LOD	Units	LOQ	DIL	Result Flag	Analysis Method	Analysis Date	Analyst
Field Water Level	47.58	0.05	feet		1		H2OD	5/8/24	L ANDERSON
Field Temperature	13.5	0.1	Degrees C		1		TEMP	5/8/24	L ANDERSON
Field Conductivity	343	0	umhos		1		FCOND25	5/8/24	L ANDERSON
Field pH	8.12	0.1	Units	0.1	1		FIELDPH	5/8/24	L ANDERSON
Total Boron	440	17.3	ug/L	40.0	1		EPA 200.7	8/28/24	020
Total Calcium	21410	12.4	ug/L	170.3	1		EPA 200.7	5/21/24	EDL
Total Hardness as CaCO3	86	1	mg/L		1		Std Mtd 2340B	5/21/24	EDL
Total Fluoride	1.1	0.06	mg/L	0.195	5		EPA 300.0	5/13/24	AEU
Total Chloride	4.8	0.295	mg/L	0.99	5		EPA 300.0	5/14/24	AEU
Total Sulfate	37	1.2	mg/L	3.9	5		EPA 300.0	5/14/24	AEU
Total Alkalinity as CaCO3	130	20	mg/L		1		SM 2320 B-1997	5/15/24	AEU
Total Dissolved Solids	230	20	mg/L		1		Std Mtd 2540 C	5/14/24	SAA

Sample Comments:

Sample Description: **W46D Caledonia Landfill Semi Annual Sample**
Sample ID: AE72729 Sample Collection Date/Time: 05/07/2024 12:25
Sample Received: 05/08/2024 Sample Collector: LAUREN ANDERSON

Parameter	Result	LOD	Units	LOQ	DIL	Result Flag	Analysis Method	Analysis Date	Analyst
Field Water Level	44.14	0.05	feet		1		H2OD	5/7/24	L ANDERSON
Field Temperature	12.3	0.1	Degrees C		1		TEMP	5/7/24	L ANDERSON
Field Conductivity	369	0	umhos		1		FCOND25	5/7/24	L ANDERSON
Field pH	7.60	0.1	Units	0.1	1		FIELDPH	5/7/24	L ANDERSON
Total Boron	358	17.3	ug/L	40.0	1		EPA 200.7	8/28/24	020
Total Calcium	25540	12.4	ug/L	170.3	1		EPA 200.7	5/21/24	EDL
Total Hardness as CaCO3	124	1	mg/L		1		Std Mtd 2340B	5/21/24	EDL
Total Fluoride	0.98	0.06	mg/L	0.195	5		EPA 300.0	5/13/24	AEU
Total Chloride	5.9	0.295	mg/L	0.99	5		EPA 300.0	5/14/24	AEU
Total Sulfate	32	1.2	mg/L	3.9	5		EPA 300.0	5/14/24	AEU
Total Alkalinity as CaCO3	150	20	mg/L		1		SM 2320 B-1997	5/15/24	AEU
Total Dissolved Solids	500	20	mg/L		1		Std Mtd 2540 C	5/14/24	SAA

Report Date: Friday, August 30, 2024

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

Sample Comments:

Sample Description: **W48 Caledonia Landfill Semi Annual Sample**
Sample ID: AE72730 Sample Collection Date/Time: 05/08/2024 10:41
Sample Received: 05/08/2024 Sample Collector: LAUREN ANDERSON

Parameter	Result	LOD	Units	LOQ	DIL	Result Flag	Analysis Method	Analysis Date	Analyst
Field Water Level	57.44	0.05	feet		1		H2OD	5/8/24	L ANDERSON
Field Temperature	13.8	0.1	Degrees C		1		TEMP	5/8/24	L ANDERSON
Field Conductivity	412	0	umhos		1		FCOND25	5/8/24	L ANDERSON
Field pH	7.89	0.1	Units	0.1	1		FIELDPH	5/8/24	L ANDERSON
Total Boron	390	17.3	ug/L	40.0	1		EPA 200.7	8/28/24	020
Total Calcium	26190	12.4	ug/L	170.3	1		EPA 200.7	5/21/24	EDL
Total Hardness as CaCO3	132	1	mg/L		1		Std Mtd 2340B	5/21/24	EDL
Total Fluoride	0.92	0.06	mg/L	0.195	5		EPA 300.0	5/13/24	AEU
Total Chloride	5.1	0.295	mg/L	0.99	5		EPA 300.0	5/14/24	AEU
Total Sulfate	2.1	1.2	mg/L	3.9	5	J	EPA 300.0	5/14/24	AEU
Total Alkalinity as CaCO3	210	20	mg/L		1		SM 2320 B-1997	5/15/24	AEU
Total Dissolved Solids	310	20	mg/L		1		Std Mtd 2540 C	5/14/24	SAA

Sample Comments:

Sample Description: **W49 Caledonia Landfill Semi Annual Sample**
Sample ID: AE72731 Sample Collection Date/Time: 05/08/2024 11:55
Sample Received: 05/08/2024 Sample Collector: LAUREN ANDERSON

Parameter	Result	LOD	Units	LOQ	DIL	Result Flag	Analysis Method	Analysis Date	Analyst
Field Water Level	61.61	0.05	feet		1		H2OD	5/8/24	L ANDERSON
Field Temperature	14.2	0.1	Degrees C		1		TEMP	5/8/24	L ANDERSON
Field Conductivity	337	0	umhos		1		FCOND25	5/8/24	L ANDERSON
Field pH	8.05	0.1	Units	0.1	1		FIELDPH	5/8/24	L ANDERSON
Total Boron	466	17.3	ug/L	40.0	1		EPA 200.7	8/28/24	020
Total Calcium	16560	12.4	ug/L	170.3	1		EPA 200.7	5/21/24	EDL
Total Hardness as CaCO3	69	1	mg/L		1		Std Mtd 2340B	5/21/24	EDL
Total Fluoride	1.2	0.06	mg/L	0.195	5		EPA 300.0	5/13/24	AEU
Total Chloride	5.2	0.295	mg/L	0.99	5		EPA 300.0	5/14/24	AEU
Total Sulfate	50	1.2	mg/L	3.9	5		EPA 300.0	5/14/24	AEU
Total Alkalinity as CaCO3	110	20	mg/L		1		SM 2320 B-1997	5/15/24	AEU
Total Dissolved Solids	230	20	mg/L		1		Std Mtd 2540 C	5/14/24	SAA

Report Date: Friday, August 30, 2024

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

Sample Comments:

Sample Description: **W50** **Caledonia Landfill Semi Annual Sample**
Sample ID: AE72732 Sample Collection Date/Time: 05/08/2024 12:45
Sample Received: 05/08/2024 Sample Collector: LAUREN ANDERSON

Parameter	Result	LOD	Units	LOQ	DIL	Result Flag	Analysis Method	Analysis Date	Analyst
Field Water Level	37.45	0.05	feet		1		H2OD	5/8/24	L ANDERSON
Field Temperature	14.0	0.1	Degrees C		1		TEMP	5/8/24	L ANDERSON
Field Conductivity	456	0	umhos		1		FCOND25	5/8/24	L ANDERSON
Field pH	7.57	0.1	Units	0.1	1		FIELDPH	5/8/24	L ANDERSON
Total Boron	528	17.3	ug/L	40.0	1		EPA 200.7	8/28/24	020
Total Calcium	28770	12.4	ug/L	170.3	1		EPA 200.7	5/21/24	EDL
Total Hardness as CaCO3	114	1	mg/L		1		Std Mtd 2340B	5/21/24	EDL
Total Fluoride	0.95	0.06	mg/L	0.195	5		EPA 300.0	5/13/24	AEU
Total Chloride	5.8	0.295	mg/L	0.99	5		EPA 300.0	5/14/24	AEU
Total Sulfate	73	1.2	mg/L	3.9	5		EPA 300.0	5/14/24	AEU
Total Alkalinity as CaCO3	150	20	mg/L		1		SM 2320 B-1997	5/15/24	AEU
Total Dissolved Solids	280	20	mg/L		1		Std Mtd 2540 C	5/14/24	SAA

Sample Comments:

Sample Description: **QC01** **Caledonia Landfill Semi Annual Sample**
Sample ID: AE72733 Sample Collection Date/Time: 05/07/2024 13:47
Sample Received: 05/08/2024 Sample Collector: LAUREN ANDERSON

Parameter	Result	LOD	Units	LOQ	DIL	Result Flag	Analysis Method	Analysis Date	Analyst
Total Boron	435	17.3	ug/L	40.0	1		EPA 200.7	8/28/24	020
Total Calcium	19030	12.4	ug/L	170.3	1		EPA 200.7	5/21/24	EDL
Total Hardness as CaCO3	88	1	mg/L		1		Std Mtd 2340B	5/21/24	EDL
Total Fluoride	1.1	0.06	mg/L	0.195	5		EPA 300.0	5/13/24	AEU
Total Chloride	5.0	0.295	mg/L	0.99	5		EPA 300.0	5/14/24	AEU
Total Sulfate	36	1.2	mg/L	3.9	5		EPA 300.0	5/14/24	AEU
Total Alkalinity as CaCO3	130	20	mg/L		1		SM 2320 B-1997	5/15/24	AEU
Total Dissolved Solids	250	20	mg/L		1		Std Mtd 2540 C	5/14/24	SAA

Sample Comments:

Report Date: Friday, August 30, 2024

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

Sample Description: **EB3** **Caledonia Landfill Semi Annual Sample**
Sample ID: AE72734 Sample Collection Date/Time: 05/07/2024 15:35
Sample Received: 05/08/2024 Sample Collector: LAUREN ANDERSON

Parameter	Result	LOD	Units	LOQ	DIL	Result Flag	Analysis Method	Analysis Date	Analyst
Field Temperature	22.3	0.1	Degrees C		1		TEMP	5/7/24	L ANDERSON
Field Conductivity	2.43	0	umhos		1		FCOND25	5/7/24	L ANDERSON
Field pH	7.61	0.1	Units	0.1	1		FIELDPH	5/7/24	L ANDERSON
Total Boron	Less Than	17.3	ug/L	40.0	1		EPA 200.7	8/28/24	020
Total Calcium	49	12.4	ug/L	170.3	1	J	EPA 200.7	5/21/24	EDL
Total Hardness as CaCO3	Less Than	1	mg/L		1		Std Mtd 2340B	5/21/24	EDL
Total Fluoride	Less Than	0.06	mg/L	0.195	5		EPA 300.0	5/13/24	AEU
Total Chloride	2.2	0.295	mg/L	0.99	5		EPA 300.0	5/14/24	AEU
Total Sulfate	7.2	1.2	mg/L	3.9	5		EPA 300.0	5/14/24	AEU
Total Alkalinity as CaCO3	Less Than	20	mg/L		1		SM 2320 B-1997	5/15/24	AEU
Total Dissolved Solids	60	20	mg/L		1		Std Mtd 2540 C	5/14/24	SAA

Sample Comments:

Sample Description: **EB4** **Caledonia Landfill Semi Annual Sample**
Sample ID: AE72735 Sample Collection Date/Time: 05/08/2024 13:00
Sample Received: 05/08/2024 Sample Collector: LAUREN ANDERSON

Parameter	Result	LOD	Units	LOQ	DIL	Result Flag	Analysis Method	Analysis Date	Analyst
Field Temperature	22.8	0.1	Degrees C		1		TEMP	5/8/24	L ANDERSON
Field Conductivity	2.96	0	umhos		1		FCOND25	5/8/24	L ANDERSON
Field pH	8.01	0.1	Units	0.1	1		FIELDPH	5/8/24	L ANDERSON
Total Boron	Less Than	17.3	ug/L	40.0	1		EPA 200.7	8/28/24	020
Total Calcium	Less Than	12.4	ug/L	170.3	1		EPA 200.7	5/21/24	EDL
Total Hardness as CaCO3	Less Than	1	mg/L		1		Std Mtd 2340B	5/21/24	EDL
Total Fluoride	Less Than	0.06	mg/L	0.195	5		EPA 300.0	5/14/24	AEU
Total Chloride	2.2	0.295	mg/L	0.99	5		EPA 300.0	5/14/24	AEU
Total Sulfate	2.1	1.2	mg/L	3.9	5	J	EPA 300.0	5/14/24	AEU
Total Alkalinity as CaCO3	Less Than	20	mg/L		1		SM 2320 B-1997	5/15/24	AEU
Total Dissolved Solids	Less Than	20	mg/L		1		Std Mtd 2540 C	5/14/24	SAA

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 Lab Services: 414-221-4595

To: Eric Kovatch
PSB Annex A231

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

Report Date: Thursday, January 9, 2025

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

Sample Description: **W50 Caledonia Landfill Semi Annual Sample**
Sample ID: AE74755 Sample Collection Date/Time: 09/04/2024 10:29
Sample Received: 09/24/2024 Sample Collector: LAUREN ANDERSON

Parameter	Result	LOD	Units	LOQ	DIL	Result Flag	Analysis Method	Analysis Date	Analyst
Total Lithium	4.5	0.22	ug/L	1.0	1		EPA 200.8	9/13/24	020

Sample Comments:

Sample Description: **W08D Caledonia Landfill Semi Annual Sample**
Sample ID: AE74756 Sample Collection Date/Time: 09/04/2024 11:00
Sample Received: 09/24/2024 Sample Collector: LAUREN ANDERSON

Parameter	Result	LOD	Units	LOQ	DIL	Result Flag	Analysis Method	Analysis Date	Analyst
Total Chloride	3.6	0.59	mg/L	2.0	1		EPA 300.0	9/6/24	020

Sample Comments:

Sample Description: **W49 Caledonia Landfill Semi Annual Sample**
Sample ID: AE74757 Sample Collection Date/Time: 09/04/2024 11:55
Sample Received: 09/24/2024 Sample Collector: LAUREN ANDERSON

Parameter	Result	LOD	Units	LOQ	DIL	Result Flag	Analysis Method	Analysis Date	Analyst
Total Lithium	2.7	0.22	ug/L	1.0	1		EPA 200.8	9/13/24	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 Lab Services: 414-221-4595

To: Eric Kovatch
PSB Annex A231

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

Report Date: Thursday, January 16, 2025

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

Sample Description: **W08D** **Caledonia CCR Well Sample**
Sample ID: AE75298 Sample Collection Date/Time: 11/06/2024 09:41
Sample Received: 11/06/2024 Sample Collector: NATE DUDA

Parameter	Result	LOD	Units	LOQ	DIL	Result Flag	Analysis Method	Analysis Date	Analyst
Field Water Level	44.44	0.05	feet		1		H2OD	11/6/24	N DUDA
Field Temperature	11.3	0.1	Degrees C		1		TEMP	11/6/24	N DUDA
Field Conductivity	807	0	umhos		1		FCOND25	11/6/24	N DUDA
Field pH	7.7	0.1	Units	0.1	1		FIELDPH	11/6/24	N DUDA
Total Alkalinity as CaCO3	148	5.0	mg/L	10.0	1		SM 2320 B-1997	11/12/24	020
Carbonate Ion	Less Than	5.0	mg/L	10.0	1		CO3	11/12/24	020
Bicarbonate Ion	148	5.0	mg/L	10.0	1		HCO3	11/12/24	020
Total Dissolved Solids	890	20	mg/L		1		Std Mtd 2540 C	11/15/24	CMW
Total Fluoride	1.3	0.095	mg/L	0.32	1		EPA 300.0	11/19/24	020
Total Chloride	11.1	0.59	mg/L	2.0	1		EPA 300.0	11/19/24	020
Total Sulfate	208	4.4	mg/L	20.0	10		EPA 300.0	11/20/24	020
Dissolved Chloride	11.1	0.59	mg/L	2.0	1		EPA 300.0	11/20/24	020
Dissolved Sulfate	190	4.4	mg/L	20.0	10		EPA 300.0	11/20/24	020
Total Boron	423	3.0	ug/L	10.0	1		EPA 200.7	11/15/24	020
Total Calcium	45700	76.2	ug/L	254	1		EPA 200.7	11/15/24	020
Total Hardness as CaCO3	200	0.32	mg/L	1.7	1		Std Mtd 2340B	11/15/24	020
Dissolved Calcium	45900	76.2	ug/L	254	1	D9	EPA 200.7	11/15/24	020
Dissolved Magnesium	21200	31.2	ug/L	250	1	D9	EPA 200.7	11/15/24	020
Dissolved Sodium	72200	42.0	ug/L	250	1		EPA 200.7	11/15/24	020
Dissolved Potassium	2770	237	ug/L	789	1		EPA 200.7	11/15/24	020

Sample Comments:

Qualifier D9: Dissolved result is greater than total. Data is within laborator
y control limits.

Sample Description: **W09D** **Caledonia CCR Well Sample**
Sample ID: AE75299 Sample Collection Date/Time: 11/06/2024 10:42
Sample Received: 11/06/2024 Sample Collector: NATE DUDA

Parameter	Result	LOD	Units	LOQ	DIL	Result Flag	Analysis Method	Analysis Date	Analyst
Field Water Level	54.03	0.05	feet		1		H2OD	11/6/24	N DUDA
Field Temperature	12.1	0.1	Degrees C		1		TEMP	11/6/24	N DUDA
Field Conductivity	344	0	umhos		1		FCOND25	11/6/24	N DUDA
Field pH	8.3	0.1	Units	0.1	1		FIELDPH	11/6/24	N DUDA
Total Alkalinity as CaCO3	143	5.0	mg/L	10.0	1		SM 2320 B-1997	11/12/24	020
Carbonate Ion	Less Than	5.0	mg/L	10.0	1		CO3	11/12/24	020

Report Date: Thursday, January 16, 2025

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

Sample Description: **W09D Caledonia CCR Well Sample**
Sample ID: AE75299 Sample Collection Date/Time: 11/06/2024 10:42
Sample Received: 11/06/2024 Sample Collector: NATE DUDA

Parameter	Result	LOD	Units	LOQ	DIL	Result Flag	Analysis Method	Analysis Date	Analyst
Bicarbonate Ion	143	5.0	mg/L	10.0	1		HCO3	11/12/24	020
Total Dissolved Solids	260	20	mg/L		1		Std Mtd 2540 C	11/15/24	CMW
Total Fluoride	1.4	0.095	mg/L	0.32	1		EPA 300.0	11/19/24	020
Total Chloride	4.2	0.59	mg/L	2.0	1		EPA 300.0	11/19/24	020
Total Sulfate	39.2	0.44	mg/L	2.0	1		EPA 300.0	11/19/24	020
Dissolved Chloride	4.3	0.59	mg/L	2.0	1		EPA 300.0	11/20/24	020
Dissolved Sulfate	39.4	0.44	mg/L	2.0	1		EPA 300.0	11/20/24	020
Total Boron	387	3.0	ug/L	10.0	1		EPA 200.7	11/15/24	020
Total Calcium	17300	76.2	ug/L	254	1		EPA 200.7	11/15/24	020
Total Hardness as CaCO3	82.9	0.32	mg/L	1.7	1		Std Mtd 2340B	11/15/24	020
Dissolved Calcium	17300	76.2	ug/L	254	1		EPA 200.7	11/15/24	020
Dissolved Magnesium	9910	31.2	ug/L	250	1	D9	EPA 200.7	11/15/24	020
Dissolved Sodium	41800	42.0	ug/L	250	1		EPA 200.7	11/15/24	020
Dissolved Potassium	904	237	ug/L	789	1		EPA 200.7	11/15/24	020

Sample Comments:

Sample Description: **W10D Caledonia CCR Well Sample**
Sample ID: AE75300 Sample Collection Date/Time: 11/06/2024 11:21
Sample Received: 11/06/2024 Sample Collector: NATE DUDA

Parameter	Result	LOD	Units	LOQ	DIL	Result Flag	Analysis Method	Analysis Date	Analyst
Field Water Level	50.46	0.05	feet		1		H2OD	11/6/24	N DUDA
Field Temperature	10.7	0.1	Degrees C		1		TEMP	11/6/24	N DUDA
Field Conductivity	405	0	umhos		1		FCOND25	11/6/24	N DUDA
Field pH	8.1	0.1	Units	0.1	1		FIELDPH	11/6/24	N DUDA
Total Alkalinity as CaCO3	138	5.0	mg/L	10.0	1		SM 2320 B-1997	11/12/24	020
Carbonate Ion	Less Than	5.0	mg/L	10.0	1		CO3	11/12/24	020
Bicarbonate Ion	138	5.0	mg/L	10.0	1		HCO3	11/12/24	020
Total Dissolved Solids	480	20	mg/L		1		Std Mtd 2540 C	11/15/24	CMW
Total Fluoride	1.3	0.095	mg/L	0.32	1		EPA 300.0	11/19/24	020
Total Chloride	4.0	0.59	mg/L	2.0	1		EPA 300.0	11/19/24	020
Total Sulfate	42.7	0.44	mg/L	2.0	1		EPA 300.0	11/19/24	020
Dissolved Chloride	4.1	0.59	mg/L	2.0	1		EPA 300.0	11/20/24	020
Dissolved Sulfate	43.2	0.44	mg/L	2.0	1		EPA 300.0	11/20/24	020
Total Boron	390	3.0	ug/L	10.0	1		EPA 200.7	11/15/24	020
Total Calcium	19300	76.2	ug/L	254	1		EPA 200.7	11/15/24	020
Total Hardness as CaCO3	80.5	0.32	mg/L	1.7	1		Std Mtd 2340B	11/15/24	020
Dissolved Calcium	19500	76.2	ug/L	254	1	D9	EPA 200.7	11/15/24	020
Dissolved Magnesium	8190	31.2	ug/L	250	1	D9	EPA 200.7	11/15/24	020
Dissolved Sodium	44500	42.0	ug/L	250	1		EPA 200.7	11/15/24	020
Dissolved Potassium	1250	237	ug/L	789	1		EPA 200.7	11/15/24	020

Report Date: Thursday, January 16, 2025

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

Sample Comments:

Sample Description: **W46D Caledonia CCR Well Sample**
Sample ID: AE75301 Sample Collection Date/Time: 11/06/2024 08:51
Sample Received: 11/06/2024 Sample Collector: NATE DUDA

Parameter	Result	LOD	Units	LOQ	DIL	Result Flag	Analysis Method	Analysis Date	Analyst
Field Water Level	48.00	0.05	feet		1		H2OD	11/6/24	N DUDA
Field Temperature	11.0	0.1	Degrees C		1		TEMP	11/6/24	N DUDA
Field Conductivity	434	0	umhos		1		FCOND25	11/6/24	N DUDA
Field pH	7.7	0.1	Units	0.1	1		FIELDPH	11/6/24	N DUDA
Total Alkalinity as CaCO3	158	5.0	mg/L	10.0	1		SM 2320 B-1997	11/12/24	020
Carbonate Ion	Less Than	5.0	mg/L	10.0	1		CO3	11/12/24	020
Bicarbonate Ion	158	5.0	mg/L	10.0	1		HCO3	11/12/24	020
Total Dissolved Solids	520	20	mg/L		1		Std Mtd 2540 C	11/15/24	CMW
Total Fluoride	1.2	0.095	mg/L	0.32	1		EPA 300.0	11/19/24	020
Total Chloride	5.4	0.59	mg/L	2.0	1		EPA 300.0	11/19/24	020
Total Sulfate	34.8	0.44	mg/L	2.0	1		EPA 300.0	11/19/24	020
Dissolved Chloride	5.6	0.59	mg/L	2.0	1		EPA 300.0	11/20/24	020
Dissolved Sulfate	36.2	0.44	mg/L	2.0	1		EPA 300.0	11/20/24	020
Total Boron	337	3.0	ug/L	10.0	1		EPA 200.7	11/15/24	020
Total Calcium	23900	76.2	ug/L	254	1		EPA 200.7	11/15/24	020
Total Hardness as CaCO3	122	0.32	mg/L	1.7	1		Std Mtd 2340B	11/15/24	020
Dissolved Calcium	22800	76.2	ug/L	254	1		EPA 200.7	11/15/24	020
Dissolved Magnesium	14900	31.2	ug/L	250	1		EPA 200.7	11/15/24	020
Dissolved Sodium	34300	420	ug/L	2500	10		EPA 200.7	11/15/24	020
Dissolved Potassium	1420	237	ug/L	789	1		EPA 200.7	11/15/24	020

Sample Comments:

Sample Description: **W48 Caledonia CCR Well Sample**
Sample ID: AE75302 Sample Collection Date/Time: 11/06/2024 11:59
Sample Received: 11/06/2024 Sample Collector: NATE DUDA

Parameter	Result	LOD	Units	LOQ	DIL	Result Flag	Analysis Method	Analysis Date	Analyst
Field Water Level	60.75	0.05	feet		1		H2OD	11/6/24	N DUDA
Field Temperature	10.9	0.1	Degrees C		1		TEMP	11/6/24	N DUDA
Field Conductivity	488	0	umhos		1		FCOND25	11/6/24	N DUDA
Field pH	8.1	0.1	Units	0.1	1		FIELDPH	11/6/24	N DUDA
Total Alkalinity as CaCO3	230	5.0	mg/L	10.0	1		SM 2320 B-1997	11/12/24	020
Carbonate Ion	Less Than	5.0	mg/L	10.0	1		CO3	11/12/24	020
Bicarbonate Ion	230	5.0	mg/L	10.0	1		HCO3	11/12/24	020

Report Date: Thursday, January 16, 2025

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

Sample Description: **W48 Caledonia CCR Well Sample**
Sample ID: AE75302 Sample Collection Date/Time: 11/06/2024 11:59
Sample Received: 11/06/2024 Sample Collector: NATE DUDA

Parameter	Result	LOD	Units	LOQ	DIL	Result Flag	Analysis Method	Analysis Date	Analyst
Total Dissolved Solids	440	20	mg/L		1		Std Mtd 2540 C	11/15/24	CMW
Total Fluoride	0.98	0.095	mg/L	0.32	1		EPA 300.0	11/19/24	020
Total Chloride	4.0	0.59	mg/L	2.0	1		EPA 300.0	11/19/24	020
Total Sulfate	Less Than	0.44	mg/L	2.0	1		EPA 300.0	11/19/24	020
Dissolved Chloride	4.0	0.59	mg/L	2.0	1	M0	EPA 300.0	11/20/24	020
Dissolved Sulfate	Less Than	0.44	mg/L	2.0	1	M0	EPA 300.0	11/20/24	020
Total Boron	353	3.0	ug/L	10.0	1		EPA 200.7	11/15/24	020
Total Calcium	25000	76.2	ug/L	254	1		EPA 200.7	11/15/24	020
Total Hardness as CaCO3	133	0.32	mg/L	1.7	1		Std Mtd 2340B	11/15/24	020
Dissolved Calcium	24400	76.2	ug/L	254	1		EPA 200.7	11/15/24	020
Dissolved Magnesium	16800	31.2	ug/L	250	1		EPA 200.7	11/15/24	020
Dissolved Sodium	44000	42.0	ug/L	250	1		EPA 200.7	11/15/24	020
Dissolved Potassium	1390	237	ug/L	789	1		EPA 200.7	11/15/24	020

Sample Comments:

Sample Description: **W49 Caledonia CCR Well Sample**
Sample ID: AE75303 Sample Collection Date/Time: 11/06/2024 12:53
Sample Received: 11/06/2024 Sample Collector: NATE DUDA

Parameter	Result	LOD	Units	LOQ	DIL	Result Flag	Analysis Method	Analysis Date	Analyst
Field Water Level	64.33	0.05	feet		1		H2OD	11/6/24	N DUDA
Field Temperature	11.2	0.1	Degrees C		1		TEMP	11/6/24	N DUDA
Field Conductivity	404	0	umhos		1		FCOND25	11/6/24	N DUDA
Field pH	8.0	0.1	Units	0.1	1		FIELDPH	11/6/24	N DUDA
Total Alkalinity as CaCO3	125	5.0	mg/L	10.0	1		SM 2320 B-1997	11/12/24	020
Carbonate Ion	Less Than	5.0	mg/L	10.0	1		CO3	11/12/24	020
Bicarbonate Ion	125	5.0	mg/L	10.0	1		HCO3	11/12/24	020
Total Dissolved Solids	830	20	mg/L		1		Std Mtd 2540 C	11/15/24	CMW
Total Fluoride	1.4	0.095	mg/L	0.32	1		EPA 300.0	11/19/24	020
Total Chloride	4.4	0.59	mg/L	2.0	1	M0	EPA 300.0	11/19/24	020
Total Sulfate	51.9	2.2	mg/L	10.0	5		EPA 300.0	11/20/24	020
Dissolved Chloride	4.4	0.59	mg/L	2.0	1		EPA 300.0	11/20/24	020
Dissolved Sulfate	53.6	0.44	mg/L	2.0	1	D9	EPA 300.0	11/20/24	020
Total Boron	429	3.0	ug/L	10.0	1		EPA 200.7	11/15/24	020
Total Calcium	15800	76.2	ug/L	254	1		EPA 200.7	11/15/24	020
Total Hardness as CaCO3	69.0	0.32	mg/L	1.7	1		Std Mtd 2340B	11/15/24	020
Dissolved Calcium	14700	76.2	ug/L	254	1		EPA 200.7	11/15/24	020
Dissolved Magnesium	6570	31.2	ug/L	250	1		EPA 200.7	11/15/24	020
Dissolved Sodium	49900	42.0	ug/L	250	1		EPA 200.7	11/15/24	020
Dissolved Potassium	699	237	ug/L	789	1	J	EPA 200.7	11/15/24	020

Report Date: Thursday, January 16, 2025

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

Sample Comments:

Sample Description: **W50 Caledonia CCR Well Sample**
Sample ID: AE75304 Sample Collection Date/Time: 11/06/2024 13:46
Sample Received: 11/06/2024 Sample Collector: NATE DUDA

Parameter	Result	LOD	Units	LOQ	DIL	Result Flag	Analysis Method	Analysis Date	Analyst
Field Water Level	47.18	0.05	feet		1		H2OD	11/6/24	N DUDA
Field Temperature	11.0	0.1	Degrees (		1		TEMP	11/6/24	N DUDA
Field Conductivity	528	0	umhos		1		FCOND25	11/6/24	N DUDA
Field pH	7.7	0.1	Units	0.1	1		FIELDPH	11/6/24	N DUDA
Total Alkalinity as CaCO3	154	5.0	mg/L	10.0	1		SM 2320 B-1997	11/12/24	020
Carbonate Ion	Less Than	5.0	mg/L	10.0	1		CO3	11/12/24	020
Bicarbonate Ion	154	5.0	mg/L	10.0	1		HCO3	11/12/24	020
Total Dissolved Solids	1200	20	mg/L		1		Std Mtd 2540 C	11/15/24	CMW
Total Fluoride	1.2	0.095	mg/L	0.32	1		EPA 300.0	11/19/24	020
Total Chloride	5.4	0.59	mg/L	2.0	1		EPA 300.0	11/19/24	020
Total Sulfate	78.4	2.2	mg/L	10.0	5		EPA 300.0	11/20/24	020
Dissolved Chloride	5.5	0.59	mg/L	2.0	1		EPA 300.0	11/20/24	020
Dissolved Sulfate	81.9	2.2	mg/L	10.0	5		EPA 300.0	11/20/24	020
Total Boron	464	3.0	ug/L	10.0	1		EPA 200.7	11/15/24	020
Total Calcium	25800	76.2	ug/L	254	1		EPA 200.7	11/15/24	020
Total Hardness as CaCO3	107	0.32	mg/L	1.7	1		Std Mtd 2340B	11/15/24	020
Dissolved Calcium	26100	76.2	ug/L	254	1	D9	EPA 200.7	11/15/24	020
Dissolved Magnesium	10300	31.2	ug/L	250	1	D9	EPA 200.7	11/15/24	020
Dissolved Sodium	57500	42.0	ug/L	250	1		EPA 200.7	11/15/24	020
Dissolved Potassium	1420	237	ug/L	789	1		EPA 200.7	11/15/24	020

Sample Comments:

Sample Description: **QC01 Caledonia CCR Well Sample**
Sample ID: AE75305 Sample Collection Date/Time: 11/06/2024 10:47
Sample Received: 11/06/2024 Sample Collector: NATE DUDA

Parameter	Result	LOD	Units	LOQ	DIL	Result Flag	Analysis Method	Analysis Date	Analyst
Total Alkalinity as CaCO3	140	5.0	mg/L	10.0	1		SM 2320 B-1997	11/12/24	020
Carbonate Ion	Less Than	5.0	mg/L	10.0	1		CO3	11/12/24	020
Bicarbonate Ion	140	5.0	mg/L	10.0	1		HCO3	11/12/24	020
Total Dissolved Solids	810	20	mg/L		1		Std Mtd 2540 C	11/15/24	CMW
Total Fluoride	1.4	0.095	mg/L	0.32	1		EPA 300.0	11/19/24	020
Total Chloride	4.2	0.59	mg/L	2.0	1		EPA 300.0	11/19/24	020
Total Sulfate	39.3	0.44	mg/L	2.0	1		EPA 300.0	11/19/24	020

Report Date: Thursday, January 16, 2025

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

Sample Description: **QC01 Caledonia CCR Well Sample**
Sample ID: AE75305 Sample Collection Date/Time: 11/06/2024 10:47
Sample Received: 11/06/2024 Sample Collector: NATE DUDA

Parameter	Result	LOD	Units	LOQ	DIL	Result Flag	Analysis Method	Analysis Date	Analyst
Dissolved Chloride	4.2	0.59	mg/L	2.0	1		EPA 300.0	11/20/24	020
Dissolved Sulfate	39.5	0.44	mg/L	2.0	1		EPA 300.0	11/20/24	020
Total Boron	389	3.0	ug/L	10.0	1		EPA 200.7	11/15/24	020
Total Calcium	17300	76.2	ug/L	254	1		EPA 200.7	11/15/24	020
Total Hardness as CaCO3	83.6	0.32	mg/L	1.7	1		Std Mtd 2340B	11/15/24	020
Dissolved Calcium	17700	76.2	ug/L	254	1	D9	EPA 200.7	11/15/24	020
Dissolved Magnesium	10000	31.2	ug/L	250	1	D9	EPA 200.7	11/15/24	020
Dissolved Sodium	42400	42.0	ug/L	250	1		EPA 200.7	11/15/24	020
Dissolved Potassium	931	237	ug/L	789	1		EPA 200.7	11/15/24	020

Sample Comments:

Sample Description: **EB Caledonia CCR Well Sample**
Sample ID: AE75306 Sample Collection Date/Time: 11/06/2024 14:15
Sample Received: 11/06/2024 Sample Collector: NATE DUDA

Parameter	Result	LOD	Units	LOQ	DIL	Result Flag	Analysis Method	Analysis Date	Analyst
Field Temperature	12.6	0.1	Degrees (		1		TEMP	11/6/24	N DUDA
Field Conductivity	20.5	0	umhos		1		FCOND25	11/6/24	N DUDA
Field pH	8.6	0.1	Units	0.1	1		FIELDPH	11/6/24	N DUDA
Total Alkalinity as CaCO3	Less Than	5.0	mg/L	10.0	1		SM 2320 B-1997	11/12/24	020
Carbonate Ion	Less Than	5.0	mg/L	10.0	1		CO3	11/12/24	020
Bicarbonate Ion	Less Than	5.0	mg/L	10.0	1		HCO3	11/12/24	020
Total Dissolved Solids	58	20	mg/L		1		Std Mtd 2540 C	11/15/24	CMW
Total Fluoride	Less Than	0.095	mg/L	0.32	1		EPA 300.0	11/19/24	020
Total Chloride	Less Than	0.59	mg/L	2.0	1		EPA 300.0	11/19/24	020
Total Sulfate	Less Than	0.44	mg/L	2.0	1		EPA 300.0	11/19/24	020
Dissolved Chloride	Less Than	0.59	mg/L	2.0	1		EPA 300.0	11/20/24	020
Dissolved Sulfate	Less Than	0.44	mg/L	2.0	1		EPA 300.0	11/20/24	020
Total Boron	Less Than	3.0	ug/L	10.0	1		EPA 200.7	11/15/24	020
Total Calcium	Less Than	76.2	ug/L	254	1		EPA 200.7	11/15/24	020
Total Hardness as CaCO3	Less Than	0.32	mg/L	1.7	1		Std Mtd 2340B	11/15/24	020
Dissolved Calcium	Less Than	76.2	ug/L	254	1		EPA 200.7	11/15/24	020
Dissolved Magnesium	Less Than	31.2	ug/L	250	1		EPA 200.7	11/15/24	020
Dissolved Sodium	Less Than	42.0	ug/L	250	1		EPA 200.7	11/15/24	020
Dissolved Potassium	Less Than	237	ug/L	789	1		EPA 200.7	11/15/24	020

Report Date: Thursday, January 16, 2025

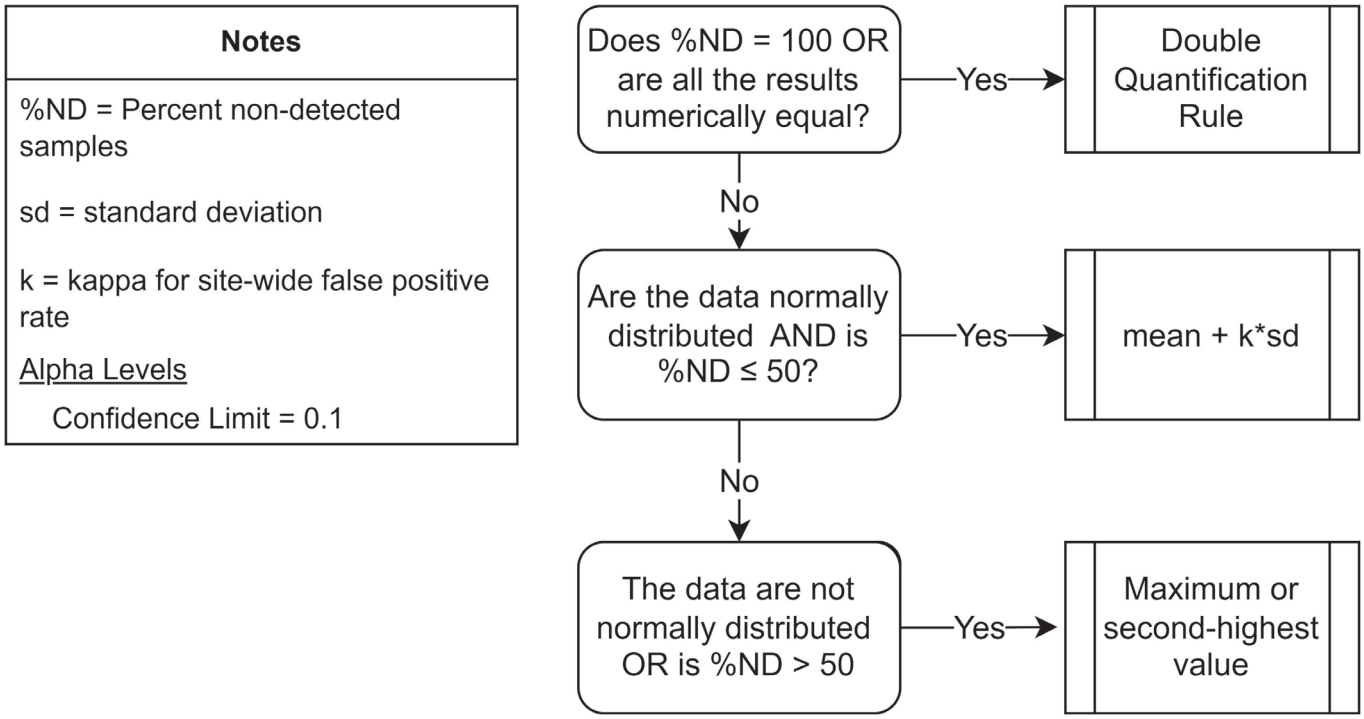
The following are the analytical results for samples received by Laboratory Services:

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 Lab Services: 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.