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Illinois Power Resources Generating, LLC

Date

January 31, 2025

Project No.

1940103649-005

2024 40 C.F.R. § 257 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT

LANDFILL

DUCK CREEK POWER PLANT

CANTON, ILLINOIS

CCR UNIT 204

RAMBOLL Bright ideas. Sustainable change.

2024 40 C.F.R. § 257 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT DUCK CREEK POWER PLANT LANDFILL

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Prepared by	**Scott S. Woods**
Checked by	**Lauren D. Cook**
Approved by	**Nicole M. Pagano, PE, PG**
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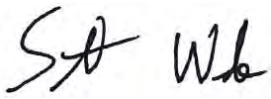
Ramboll
234 W. Florida Street
Fifth Floor
Milwaukee, WI 53204
USA

T 414-837-3607
F 414-837-3608
https://ramboll.com



Scott S. Woods
Hydrogeologist

Nicole M. Pagano, PE, PG
Senior Project Manager

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ACRONYMS AND ABBREVIATIONS

35 I.A.C.	Title 35 of the Illinois Administrative Code
40 C.F.R.	Title 40 of the Code of Federal Regulations
ASD	Alternative Source Demonstration
CCR	coal combustion residuals
D13	Quarter 3, 2023 Detection Monitoring sampling event
D13R	Quarter 4, 2023 Detection Monitoring sampling event
D14	Quarter 1, 2024 Detection Monitoring sampling event
D14R	Quarter 2, 2024 Detection Monitoring sampling event
D15	Quarter 3, 2024 Detection Monitoring sampling event
D15R	Quarter 4, 2024 Detection Monitoring sampling event
DCPP	Duck Creek Power Plant
GMP	Groundwater Monitoring Plan
GWPS	groundwater protection standard
NA	not applicable
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.) § 257.90(e) for the Landfill located at the Duck Creek Power Plant (DCPP) near Canton, Illinois.

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

The following statistically significant increases (SSIs) of 40 C.F.R. § 257 Appendix III parameters above background concentrations were reported in 2024:

- pH at monitoring wells G12S and G15S

An Alternative Source Demonstration (ASD) was completed for the SSIs referenced above and the Landfill remains in the Detection Monitoring Program.

1. INTRODUCTION

This report has been prepared by Ramboll Americas Engineering Solutions, Inc. (Ramboll) on behalf of Illinois Power Resources Generating, LLC, to provide the information required by 40 C.F.R. § 257.90(e) for the Landfill located at the DCPP near Canton, Illinois.

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 and 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**, paragraph 1)
3. In addition to all the monitoring data obtained under §§ 257.90 through 257.98, 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, 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 in addition to identifying the constituent(s) detected at a statistically significant increase relative to background levels) (**Section 2**).
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 (see **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 the Landfill 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 Landfill remains in the Detection Monitoring Program in accordance with 40 C.F.R. § 257.94.

3. KEY ACTIONS COMPLETED IN 2024

A summary of the samples collected from background and compliance monitoring wells in 2024 under the Detection Monitoring Program is included in **Table A** on the following page. The groundwater monitoring system, including the CCR unit and all background and compliance monitoring wells, is presented in **Figure 1**. No changes were made to the monitoring system (Ramboll, 2023a).

One groundwater sample was collected from each background and compliance well during each monitoring event. All samples were collected and analyzed in accordance with the Multi-Site Sampling and Analysis Plan (SAP) (Ramboll, 2023b).

Potentiometric surfaces for the semiannual sampling events are included in **Figures 2 and 3**. All available monitoring data and analytical results obtained under 40 C.F.R. § 257.90 through 257.98 in 2024 are presented in **Tables 1 and 2**. All associated laboratory reports and field data sheets are included in **Appendix A**.

Analytical data were evaluated in accordance with the Multi-Site Statistical Analysis Plan (Ramboll, 2022a), the Multi-Site Quality Assurance Project Plan (Ramboll, 2022b), and the Multi-Site Data Management Plan (Ramboll, 2022c) to determine any SSIs of Appendix III parameters greater than background values. SSIs are summarized in **Table A** and highlighted in **Table 2**. 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**.

Potential alternative sources were evaluated as outlined in the 40 C.F.R. § 257.94(e)(2). An ASD was completed in 2024 for the SSIs summarized in **Table A**. The date the ASD was completed are also provided in **Table A**. The ASD was certified by a qualified professional engineer and is included in **Appendix C**. The Landfill remains in the Detection Monitoring Program.

Table A. 2024 Detection Monitoring Program Summary

Event ID	Sampling Dates [1, 2, 3]	Analytical Data Receipt Date [4]	SSI(s) Determination Date	SSI(s)	ASD Completion Date
D13 [5]	July 18 - July 25, 2023	October 19, 2023	January 17, 2024	Calcium at well G06S; pH at well G12S	April 16, 2024
D13R [5]	October 20 and 27, 2023	January 2, 2024	NA	NA	NA
D14	January 18, 26, 29, and February 1, 2024	March 6, 2024	June 4, 2024	pH at well G06S and G15S	September 2, 2024
D14R	June 13, 2024	June 16, 2024	NA	NA	NA
D15	July 24, 30, 31, and August 1, 2024	August 29, 2024	November 27, 2024	pH at well G12S	TBD
D15R	October 16-23, 2024	December 6, 2024	NA	NA	NA

Notes:

ASD: Alternative Source Demonstration

NA: not applicable

SSI: Statistically Significant Increase

TBD: to be determined in 2025

[1] All samples were analyzed for Appendix III parameters listed in 40 C.F.R. § 257.94(e)

[2] The following background wells were sampled for each event: G02S, G04S

[3] The following compliance wells were sampled for each event: G06S, G09S, G12S, G15S

[4] All data collected for the 40 C.F.R. § 257 monitoring program and Appendix III parameters that were analyzed under the Title 35 of the Illinois Administrative Code (35 I.A.C.) § 845 program were included for background calculations in accordance with 40 C.F.R. § 257.94(e)(1).

[5] Laboratory reports for this event were included in the 2023 Annual Groundwater Monitoring and Corrective Action Report.

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 semiannual sampling scheduled for the first and third quarters of 2025.
- Complete evaluation of analytical data from the compliance wells using updated 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

Code of Federal Regulations, Title 40, Chapter I, Subchapter I, Part 257, Subpart D, Standards for the Disposal of Coal Combustion Residuals in Landfills and Surface Impoundments, effective April 17, 2015. Accessed from URL https://www.ecfr.gov/current/title-40/chapter-I/subchapter-I/part-257/subpart-D#page-top

Ramboll Americas Engineering Solutions, Inc. (Ramboll), 2022a. Multi-Site Statistical Analysis Plan, 40 C.F.R. § 257. December 28, 2022.

Ramboll Americas Engineering Solutions, Inc. (Ramboll), 2022b. Multi-Site Quality Assurance Project Plan. December 28, 2022.

Ramboll Americas Engineering Solutions, Inc. (Ramboll), 2022c. Multi-Site Data Management Plan. December 28, 2022.

Ramboll Americas Engineering Solutions, Inc. (Ramboll), 2023a. 40 C.F.R. § 257 Groundwater Monitoring Plan, Landfill, Duck Creek Power Plant, Canton, Illinois. December 31, 2023.

Ramboll Americas Engineering Solutions, Inc. (Ramboll), 2023b. Multi-Site Sampling and Analysis Plan, Revision 1. October 10, 2023.

TABLES

TABLE 1
GROUNDWATER ELEVATION DATA
2024 40 C.F.R. § 257 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
DUCK CREEK POWER PLANT
LANDFILL
CANTON, IL

Well ID	Well Type	Monitored Unit	Date	Depth to Groundwater (feet BMP)	Groundwater Elevation (feet NAVD88)
G02S	Background	UA	01/24/2024	[7.40]	[614.23]
G02S	Background	UA	02/12/2024	7.33	614.29
G02S	Background	UA	03/12/2024	7.71	613.91
G02S	Background	UA	04/12/2024	7.28	614.35
G02S	Background	UA	05/22/2024	7.39	614.23
G02S	Background	UA	06/22/2024	9.65	611.97
G02S	Background	UA	07/22/2024	7.86	613.77
G02S	Background	UA	08/14/2024	9.19	612.59
G02S	Background	UA	09/14/2024	11.87	609.91
G02S	Background	UA	10/14/2024	14.06	607.73
G02S	Background	UA	11/07/2024	13.68	608.09
G02S	Background	UA	12/03/2024	[10.81]	[610.98]
G04S	Background	UA	01/24/2024	[14.48]	[614.18]
G04S	Background	UA	04/12/2024	9.71	618.95
G04S	Background	UA	07/22/2024	14.51	614.15
G04S	Background	UA	10/14/2024	20.80	607.91
G06S	Compliance	UA	01/17/2024	20.69	606.95
G06S	Compliance	UA	04/12/2024	19.34	608.30
G06S	Compliance	UA	07/22/2024	20.00	607.64
G06S	Compliance	UA	10/14/2024	23.34	604.21
G09S	Compliance	UA	01/17/2024	20.39	604.44
G09S	Compliance	UA	04/12/2024	19.64	605.19
G09S	Compliance	UA	07/22/2024	19.43	605.40
G09S	Compliance	UA	10/14/2024	21.98	602.75
G12S	Compliance	UA	01/17/2024	23.98	605.84
G12S	Compliance	UA	04/12/2024	20.20	609.62
G12S	Compliance	UA	07/22/2024	18.69	611.13
G12S	Compliance	UA	10/14/2024	24.23	605.68
G15S	Compliance	UA	01/17/2024	32.31	601.76
G15S	Compliance	UA	04/12/2024	23.51	610.56
G15S	Compliance	UA	07/22/2024	27.00	607.07
G15S	Compliance	UA	10/14/2024	33.15	601.04

Notes:
BMP = below measuring point
Bracketing [ ] indicates that the measurement was obtained outside of the episodic depth to groundwater measurements time frame.
Depth to Groundwater/Groundwater Elevation Code (if applicable):

DM[1] = Depth to water was not measured.
DM[2] = Depth to water was not measured because water was above or below the staff gage markings.
DM[3] = Depth to water was not measured because the location was inaccessible.
DM[4] = Depth to water was not measured because water level was below the top of the pump.
DM[5] = Depth to water was not measured because water level was above the top of casing (artesian well).
DM[6] = Depth to water was not measured because of damage to the well.
DM[7] = Depth to water was not measured due to required pressure transducer maintenance.
DM[8] = Lab provided groundwater elevation data and not depth to water.

NAVD88 = North American Vertical Datum of 1988
Monitored Unit Abbreviations:

UA = uppermost aquifer

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TABLE 2
ANALYTICAL RESULTS - APPENDIX III PARAMETERS
2024 40 C.F.R. § 257 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
DUCK CREEK POWER PLANT
LANDFILL
CANTON, IL

Well ID	HSU	Well Type	Date	Event ID	Parameter	Unit	Result	Comparison Value	Background	SSI Type
G02S	UA	Background	01/29/2024	D14	Boron, total	mg/L	0.0370 J+	--	--	--
G02S	UA	Background	08/01/2024	D15	Boron, total	mg/L	0.0560	--	--	--
G02S	UA	Background	01/29/2024	D14	Calcium, total	mg/L	97.0	--	--	--
G02S	UA	Background	08/01/2024	D15	Calcium, total	mg/L	99.0	--	--	--
G02S	UA	Background	01/29/2024	D14	Chloride, total	mg/L	4.8 U	--	--	--
G02S	UA	Background	08/01/2024	D15	Chloride, total	mg/L	1.30	--	--	--
G02S	UA	Background	01/29/2024	D14	Fluoride, total	mg/L	0.257 J-	--	--	--
G02S	UA	Background	08/01/2024	D15	Fluoride, total	mg/L	0.263	--	--	--
G02S	UA	Background	01/29/2024	D14	pH (field)	SU	6.5	--	--	--
G02S	UA	Background	08/01/2024	D15	pH (field)	SU	6.6	--	--	--
G02S	UA	Background	01/29/2024	D14	Sulfate, total	mg/L	0.18 U	--	--	--
G02S	UA	Background	08/01/2024	D15	Sulfate, total	mg/L	0.33 J	--	--	--
G02S	UA	Background	01/29/2024	D14	Total Dissolved Solids	mg/L	340 J+	--	--	--
G02S	UA	Background	08/01/2024	D15	Total Dissolved Solids	mg/L	430	--	--	--
G04S	UA	Background	02/01/2024	D14	Boron, total	mg/L	0.0140 J+	--	--	--
G04S	UA	Background	07/24/2024	D15	Boron, total	mg/L	0.0310 J+	--	--	--
G04S	UA	Background	02/01/2024	D14	Calcium, total	mg/L	140	--	--	--
G04S	UA	Background	07/24/2024	D15	Calcium, total	mg/L	130	--	--	--
G04S	UA	Background	02/01/2024	D14	Chloride, total	mg/L	14.0	--	--	--
G04S	UA	Background	07/24/2024	D15	Chloride, total	mg/L	15.0	--	--	--
G04S	UA	Background	02/01/2024	D14	Fluoride, total	mg/L	0.201	--	--	--
G04S	UA	Background	07/24/2024	D15	Fluoride, total	mg/L	0.24 J	--	--	--
G04S	UA	Background	02/01/2024	D14	pH (field)	SU	7.4	--	--	--
G04S	UA	Background	07/24/2024	D15	pH (field)	SU	7.2	--	--	--
G04S	UA	Background	02/01/2024	D14	Sulfate, total	mg/L	220	--	--	--
G04S	UA	Background	07/24/2024	D15	Sulfate, total	mg/L	200	--	--	--
G04S	UA	Background	02/01/2024	D14	Total Dissolved Solids	mg/L	640	--	--	--
G04S	UA	Background	07/24/2024	D15	Total Dissolved Solids	mg/L	650	--	--	--
G06S	UA	Compliance	01/18/2024	D14	Boron, total	mg/L	0.0290	0.0290	0.157	No Exceedance
G06S	UA	Compliance	07/24/2024	D15	Boron, total	mg/L	0.0180 J+	0.0180	0.157	No Exceedance
G06S	UA	Compliance	01/18/2024	D14	Calcium, total	mg/L	140	140	160	No Exceedance
G06S	UA	Compliance	07/24/2024	D15	Calcium, total	mg/L	120	120	160	No Exceedance
G06S	UA	Compliance	01/18/2024	D14	Chloride, total	mg/L	6.40	6.40	20.0	No Exceedance
G06S	UA	Compliance	07/24/2024	D15	Chloride, total	mg/L	17.0	17.0	20.0	No Exceedance
G06S	UA	Compliance	01/18/2024	D14	Fluoride, total	mg/L	0.264	0.264	0.466	No Exceedance
G06S	UA	Compliance	07/24/2024	D15	Fluoride, total	mg/L	0.25 UJ	0.25	0.466	No Exceedance
G06S	UA	Compliance	01/18/2024	D14	pH (field)	SU	8.4	8.4	6.5/7.2	Reported
G06S	UA	Compliance	06/13/2024	D14R	pH (field)	SU	7.1	7.1	6.5/7.2	No Exceedance
G06S	UA	Compliance	07/24/2024	D15	pH (field)	SU	7.0	7.0	6.5/7.2	No Exceedance
G06S	UA	Compliance	10/23/2024	D15R	pH (field)	SU	6.9	6.9	6.5/7.2	No Exceedance
G06S	UA	Compliance	01/18/2024	D14	Sulfate, total	mg/L	110	110	330	No Exceedance
G06S	UA	Compliance	07/24/2024	D15	Sulfate, total	mg/L	350	350	330	Exceedance Not Confirmed
G06S	UA	Compliance	10/23/2024	D15R	Sulfate, total	mg/L	140	140	330	No Exceedance
G06S	UA	Compliance	01/18/2024	D14	Total Dissolved Solids	mg/L	580	580	790	No Exceedance
G06S	UA	Compliance	07/24/2024	D15	Total Dissolved Solids	mg/L	480	480	790	No Exceedance

TABLE 2
ANALYTICAL RESULTS - APPENDIX III PARAMETERS
2024 40 C.F.R. § 257 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
DUCK CREEK POWER PLANT
LANDFILL
CANTON, IL

Well ID	HSU	Well Type	Date	Event ID	Parameter	Unit	Result	Comparison Value	Background	SSI Type
G09S	UA	Compliance	01/18/2024	D14	Boron, total	mg/L	0.0550 J+	0.0550	0.157	No Exceedance
G09S	UA	Compliance	07/24/2024	D15	Boron, total	mg/L	0.0230 J+	0.0230	0.157	No Exceedance
G09S	UA	Compliance	01/18/2024	D14	Calcium, total	mg/L	120	120	160	No Exceedance
G09S	UA	Compliance	07/24/2024	D15	Calcium, total	mg/L	110	110	160	No Exceedance
G09S	UA	Compliance	01/18/2024	D14	Chloride, total	mg/L	15.0	15.0	20.0	No Exceedance
G09S	UA	Compliance	07/24/2024	D15	Chloride, total	mg/L	15.0	15.0	20.0	No Exceedance
G09S	UA	Compliance	01/18/2024	D14	Fluoride, total	mg/L	0.162	0.25	0.466	No Exceedance
G09S	UA	Compliance	07/24/2024	D15	Fluoride, total	mg/L	0.211 J	0.25	0.466	No Exceedance
G09S	UA	Compliance	01/18/2024	D14	pH (field)	SU	6.5	6.5	6.5/7.2	No Exceedance
G09S	UA	Compliance	07/24/2024	D15	pH (field)	SU	7.0	7.0	6.5/7.2	No Exceedance
G09S	UA	Compliance	01/18/2024	D14	Sulfate, total	mg/L	45.0	45.0	330	No Exceedance
G09S	UA	Compliance	07/24/2024	D15	Sulfate, total	mg/L	48.0	48.0	330	No Exceedance
G09S	UA	Compliance	01/18/2024	D14	Total Dissolved Solids	mg/L	490	490	790	No Exceedance
G09S	UA	Compliance	07/24/2024	D15	Total Dissolved Solids	mg/L	500	500	790	No Exceedance
G12S	UA	Compliance	01/26/2024	D14	Boron, total	mg/L	0.01 U	0.01	0.157	No Exceedance
G12S	UA	Compliance	07/24/2024	D15	Boron, total	mg/L	0.01 UJ	0.01	0.157	No Exceedance
G12S	UA	Compliance	01/26/2024	D14	Calcium, total	mg/L	85.0	85.0	160	No Exceedance
G12S	UA	Compliance	07/24/2024	D15	Calcium, total	mg/L	82.0	82.0	160	No Exceedance
G12S	UA	Compliance	01/26/2024	D14	Chloride, total	mg/L	16.0	16.0	20.0	No Exceedance
G12S	UA	Compliance	07/24/2024	D15	Chloride, total	mg/L	17.0	17.0	20.0	No Exceedance
G12S	UA	Compliance	01/26/2024	D14	Fluoride, total	mg/L	0.268 J-	0.268	0.466	No Exceedance
G12S	UA	Compliance	07/24/2024	D15	Fluoride, total	mg/L	0.323	0.323	0.466	No Exceedance
G12S	UA	Compliance	01/26/2024	D14	pH (field)	SU	6.6	6.6	6.5/7.2	No Exceedance
G12S	UA	Compliance	07/24/2024	D15	pH (field)	SU	7.4	7.4	6.5/7.2	Reported
G12S	UA	Compliance	10/16/2024	D15R	pH (field)	SU	7.3	7.3	6.5/7.2	Confirmed
G12S	UA	Compliance	01/26/2024	D14	Sulfate, total	mg/L	97.0	97.0	330	No Exceedance
G12S	UA	Compliance	07/24/2024	D15	Sulfate, total	mg/L	94.0	94.0	330	No Exceedance
G12S	UA	Compliance	01/26/2024	D14	Total Dissolved Solids	mg/L	440 J	440	790	No Exceedance
G12S	UA	Compliance	07/24/2024	D15	Total Dissolved Solids	mg/L	490	490	790	No Exceedance
G15S	UA	Compliance	01/26/2024	D14	Boron, total	mg/L	0.0071 U	0.01	0.157	No Exceedance
G15S	UA	Compliance	07/31/2024	D15	Boron, total	mg/L	0.0180	0.0180	0.157	No Exceedance
G15S	UA	Compliance	01/26/2024	D14	Calcium, total	mg/L	95.0	95.0	160	No Exceedance
G15S	UA	Compliance	07/31/2024	D15	Calcium, total	mg/L	89.0	89.0	160	No Exceedance
G15S	UA	Compliance	01/26/2024	D14	Chloride, total	mg/L	10.0	10.0	20.0	No Exceedance
G15S	UA	Compliance	07/31/2024	D15	Chloride, total	mg/L	10.0	10.0	20.0	No Exceedance
G15S	UA	Compliance	01/26/2024	D14	Fluoride, total	mg/L	0.226 J-	0.125	0.466	No Exceedance
G15S	UA	Compliance	07/31/2024	D15	Fluoride, total	mg/L	0.256	0.256	0.466	No Exceedance
G15S	UA	Compliance	01/26/2024	D14	pH (field)	SU	6.4	6.4	6.5/7.2	Reported
G15S	UA	Compliance	06/13/2024	D14R	pH (field)	SU	7.3	7.3	6.5/7.2	Confirmed
G15S	UA	Compliance	07/31/2024	D15	pH (field)	SU	7.0	7.0	6.5/7.2	No Exceedance
G15S	UA	Compliance	01/26/2024	D14	Sulfate, total	mg/L	39.0	39.0	330	No Exceedance
G15S	UA	Compliance	07/31/2024	D15	Sulfate, total	mg/L	42.0	42.0	330	No Exceedance
G15S	UA	Compliance	01/26/2024	D14	Total Dissolved Solids	mg/L	420 J	420	790	No Exceedance
G15S	UA	Compliance	07/31/2024	D15	Total Dissolved Solids	mg/L	440	440	790	No Exceedance

TABLE 2
ANALYTICAL RESULTS - APPENDIX III PARAMETERS
2024 40 C.F.R. § 257 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
DUCK CREEK POWER PLANT
LANDFILL
CANTON, IL

Notes:
-- = not applicable
Comparison Value is different from the Result when the Result is below the Reporting Limit (RL). The Result will not be used in statistical calculations due to the inherent uncertainty in results that are below the RL. Half of the RL will be substituted for these data. See the *Multi-Site Statistical Analysis Plan* (Ramboll, 2022a) for more information.
Event IDs:
D14 = Quarter 1, 2024 Detection Monitoring sampling event
D14R = Quarter 2, 2024 Detection Monitoring resampling event
D15 = Quarter 3, 2024 Detection Monitoring sampling event
D15R = Quarter 4, 2024 Detection Monitoring resampling event
HSU = hydrostratigraphic unit:
UA = Uppermost Aquifer
ID = identification
mg/L = milligrams per liter
Result Code (if applicable):
NR[1] = Parameter not analyzed.
NS[1] = Well has been, or will be, abandoned; therefore, a sample was not collected.
NS[2] = Well either needs or was undergoing maintenance; therefore, a sample was not collected.
NS[3] = The location was not accessible; therefore, a sample was not collected.
NS[4] = The location could not be found; therefore, a sample was not collected.
NS[5] = The location was damaged; therefore, a sample was not collected.
NS[6] = Sampling pump could not yield a sample.
NS[7] = Well was either dry or purged dry and did not recover sufficiently to yield adequate volume for a sample.
NS[8] = A sample was not collected.
PM[1] = Parameter not analyzed as the well purged dry during sample collection and did not sufficiently recover to yield adequate sample volume for analysis.
Result qualifiers as defined in the United States Environmental Protection Agency's *National Functional Guidelines for Inorganic Superfund Methods Data Review*, EPA 542-R-20-006. November 2020.:
J- = The result is an estimated quantity, but the result may be biased low.
J = The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
J+ = The result is an estimated quantity, but the result may be biased high.
U = The analyte was analyzed for, but was not detected above the level of the adjusted detection limit or quantitation limit, as appropriate.
UJ = The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
Statistically Significant Increase (SSI) Type:
No Exceedance: No exceedance of the background.
Exceedance Not Confirmed: An exceedance was determined in the parent event, a resample was collected, and the resample did not confirm the exceedance; or an exceedance was not determined in the parent event but a subsequent sample collected exhibited a concentration higher than background.
Reported: An exceedance in the parent event was observed and reported.
Confirmed: A resample confirmed an observed exceedance in the parent event.
SU = Standard Units

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TABLE 3
STATISTICAL BACKGROUND VALUES
2024 40 C.F.R. § 257 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
DUCK CREEK POWER PLANT
LANDFILL
CANTON, IL

Parameter	Date Range	Sample Count	Percent Non-Detects	Statistical Calculation	Statistical Background Value (LPL / UPL)
Boron (mg/L)	12/02/2015 - 01/31/2022	44	5	Parametric UPL (log-transformed)	0.157
Calcium (mg/L)	12/02/2015 - 01/31/2022	43	0	Non-Parametric UPL	160
Chloride (mg/L)	12/02/2015 - 01/31/2022	48	6	Non-Parametric UPL	20.0
Fluoride (mg/L)	12/02/2015 - 01/31/2022	44	16	Parametric UPL (log-transformed)	0.466
pH (field) (SU)	12/02/2015 - 01/31/2022	48	0	Parametric LPL/UPL	6.5/7.2
Sulfate (mg/L)	12/02/2015 - 01/31/2022	44	50	Non-Parametric UPL	330
Total Dissolved Solids (mg/L)	12/02/2015 - 01/31/2022	44	0	Non-Parametric UPL	790

Notes:
LPL = lower prediction limit (applicable for pH only)
mg/L = milligrams per liter
SU = standard units
UPL = upper prediction limit

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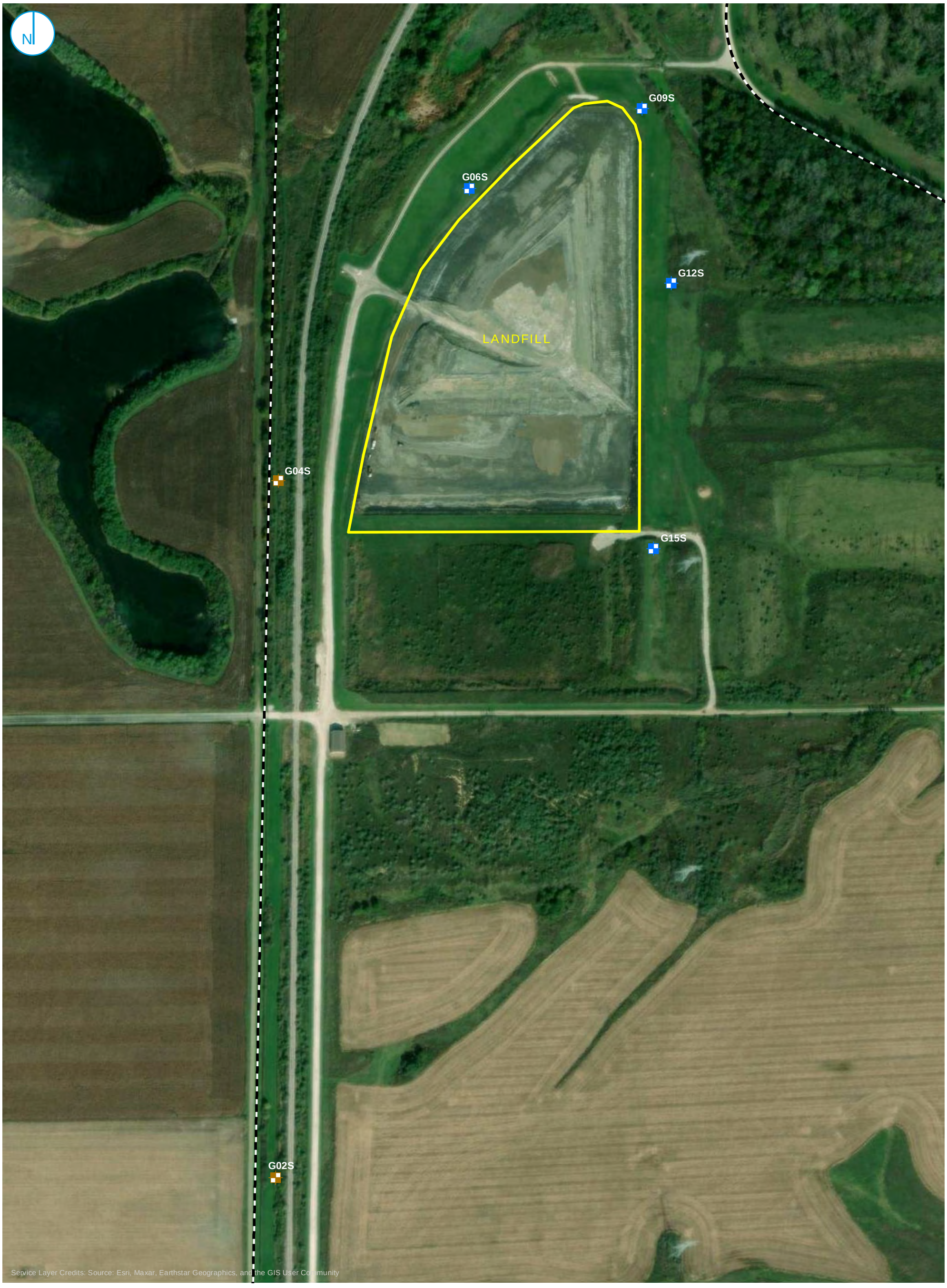
FIGURES



COMPLIANCE MONITORING WELL
BACKGROUND MONITORING WELL
REGULATED UNIT (SUBJECT UNIT)
PROPERTY BOUNDARY

0 150 300
Feet

MONITORING WELL LOCATION MAP

2024 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT LANDFILL

DUCK CREEK POWER PLANT
CANTON, ILLINOIS

FIGURE 1

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.

RAMBOLL

COMPLIANCE MONITORING WELL
BACKGROUND MONITORING WELL
PORE WATER WELL
MONITORING WELL

GROUNDWATER ELEVATION CONTOUR (5-FT CONTOUR INTERVAL, NAVD88)
INFERRED GROUNDWATER ELEVATION
GROUNDWATER FLOW DIRECTION
REGULATED UNIT (SUBJECT UNIT)
PROPERTY BOUNDARY

0 150 300 Feet

NOTES:
1. ELEVATIONS IN PARENTHESES WERE NOT USED FOR CONTOURING.
2. ELEVATIONS IN BRACKETS WERE OBTAINED OUTSIDE OF THE 24 HOUR PERIOD FROM INITIATION OF DEPTH TO GROUNDWATER MEASUREMENTS BUT WITHIN THE SAME SAMPLING EVENT.
3. ELEVATION CONTOURS SHOWN IN FEET, NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).

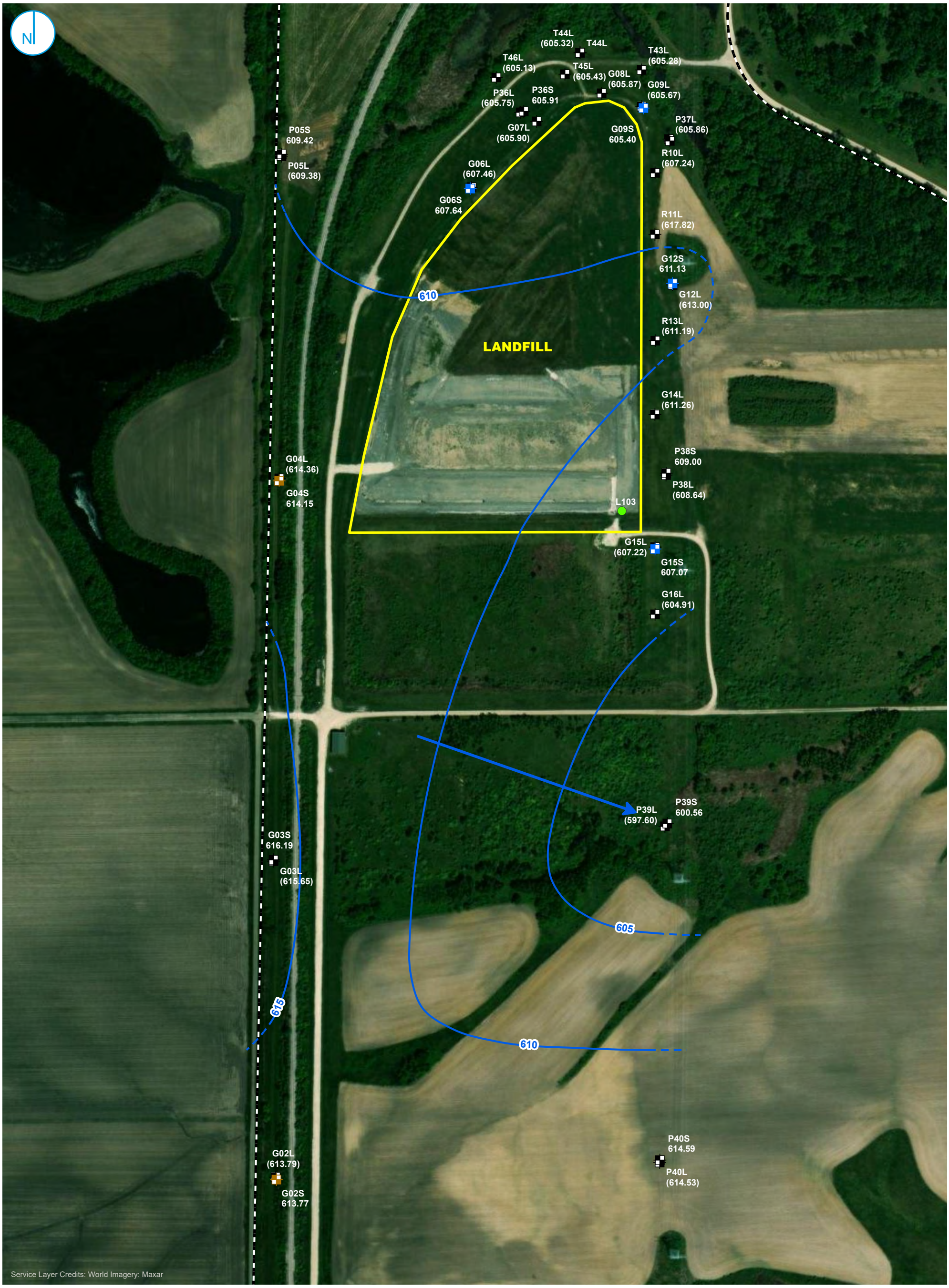
POTENTIOMETRIC SURFACE MAP JANUARY 17, 2024

2023 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT LANDFILL

DUCK CREEK POWER PLANT
CANTON, ILLINOIS

FIGURE 2

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.



COMPLIANCE MONITORING WELL
BACKGROUND MONITORING WELL
MONITORING WELL
LEACHATE

GROUNDWATER ELEVATION CONTOUR (5-FT CONTOUR INTERVAL, NAVD88)
INFERRED GROUNDWATER ELEVATION
GROUNDWATER FLOW DIRECTION
REGULATED UNIT (SUBJECT UNIT)
PROPERTY BOUNDARY

0 150 300 Feet

NOTES:
1. ELEVATIONS IN PARENTHESES WERE NOT USED FOR CONTOURING.
2. ELEVATION CONTOURS SHOWN IN FEET, NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).

POTENTIOMETRIC SURFACE MAP JULY 22, 2024

2024 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT LANDFILL

DUCK CREEK POWER PLANT
CANTON, ILLINOIS

FIGURE 3

RAMBOLL AMERICAS ENGINEERING SOLUTIONS, INC.

RAMBOLL

APPENDICES

APPENDIX A
LABORATORY REPORTS AND FIELD DATA SHEETS

Pace Analytical Services, LLC
2231 W. Altorfer Drive
Peoria, IL 61615
(800)752-6651

March 06, 2024

Daryl Johnson
Vistra - Duck Creek
17751 North Cilco Road
Canton, IL 61520-8761

Dear Daryl Johnson:

Please find enclosed the analytical results for the sample(s) the laboratory received. All testing is performed according to our current TNI accreditations unless otherwise noted. This report cannot be reproduced, except in full, without the written permission of Pace Analytical Services, LLC.

If you have any questions regarding your report, please contact your project manager. Quality and timely data is of the utmost importance to us.

Pace Analytical Services appreciates the opportunity to provide you with analytical expertise. We are always trying to improve our customer service and we welcome you to contact the General Manager, Lisa Grant, with any feedback you have about your experience with our laboratory at 309-683-1764 or lisa.grant@pacelabs.com.

Sincerely,

Diane Billings
Project Manager

Pace Analytical Services, LLC
2231 W. Altorfer Drive
Peoria, IL 61615
(800)752-6651

SAMPLE RECEIPT CHECK LIST

Items not applicable will be marked as in compliance

Work Order HA02826

YES	Samples received within temperature compliance when applicable
YES	COC present upon sample receipt
YES	COC completed & legible
YES	Sampler name & signature present
YES	Unique sample IDs assigned
YES	Sample collection location recorded
YES	Date & time collected recorded on COC
YES	Relinquished by client signature on COC
YES	COC & labels match
YES	Sample labels are legible
YES	Appropriate bottle(s) received
YES	Sufficient sample volume received
YES	Sample containers received undamaged
NO	Zero headspace, <6 mm present in VOA vials
NO	Trip blank(s) received
YES	All non-field analyses received within holding times
NO	Short hold time analysis
YES	Current PDC COC submitted
NO	Case narrative provided

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Peoria, IL 61615
(800)752-6651

Work Order HA03925

YES	Samples received within temperature compliance when applicable
YES	COC present upon sample receipt
YES	COC completed & legible
YES	Sampler name & signature present
YES	Unique sample IDs assigned
YES	Sample collection location recorded
YES	Date & time collected recorded on COC
YES	Relinquished by client signature on COC
YES	COC & labels match
YES	Sample labels are legible
YES	Appropriate bottle(s) received
YES	Sufficient sample volume received
YES	Sample containers received undamaged
NO	Zero headspace, <6 mm present in VOA vials
NO	Trip blank(s) received
YES	All non-field analyses received within holding times
YES	Short hold time analysis
YES	Current PDC COC submitted
NO	Case narrative provided

Pace Analytical Services, LLC
2231 W. Altorfer Drive
Peoria, IL 61615
(800)752-6651

Work Order HA03926

YES	Samples received within temperature compliance when applicable
YES	COC present upon sample receipt
YES	COC completed & legible
YES	Sampler name & signature present
YES	Unique sample IDs assigned
YES	Sample collection location recorded
YES	Date & time collected recorded on COC
YES	Relinquished by client signature on COC
YES	COC & labels match
YES	Sample labels are legible
YES	Appropriate bottle(s) received
YES	Sufficient sample volume received
YES	Sample containers received undamaged
NO	Zero headspace, <6 mm present in VOA vials
NO	Trip blank(s) received
YES	All non-field analyses received within holding times
YES	Short hold time analysis
YES	Current PDC COC submitted
NO	Case narrative provided

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Peoria, IL 61615
(800)752-6651

Work Order HA04058

YES	Samples received within temperature compliance when applicable
YES	COC present upon sample receipt
YES	COC completed & legible
YES	Sampler name & signature present
YES	Unique sample IDs assigned
YES	Sample collection location recorded
YES	Date & time collected recorded on COC
YES	Relinquished by client signature on COC
YES	COC & labels match
YES	Sample labels are legible
YES	Appropriate bottle(s) received
YES	Sufficient sample volume received
YES	Sample containers received undamaged
NO	Zero headspace, <6 mm present in VOA vials
NO	Trip blank(s) received
YES	All non-field analyses received within holding times
NO	Short hold time analysis
YES	Current PDC COC submitted
NO	Case narrative provided

Pace Analytical Services, LLC
2231 W. Altorfer Drive
Peoria, IL 61615
(800)752-6651

Work Order HB00169

YES	Samples received within temperature compliance when applicable
YES	COC present upon sample receipt
YES	COC completed & legible
YES	Sampler name & signature present
YES	Unique sample IDs assigned
YES	Sample collection location recorded
YES	Date & time collected recorded on COC
YES	Relinquished by client signature on COC
YES	COC & labels match
YES	Sample labels are legible
YES	Appropriate bottle(s) received
YES	Sufficient sample volume received
YES	Sample containers received undamaged
NO	Zero headspace, <6 mm present in VOA vials
NO	Trip blank(s) received
YES	All non-field analyses received within holding times
YES	Short hold time analysis
YES	Current PDC COC submitted
NO	Case narrative provided

Pace Analytical Services, LLC
2231 W. Altorfer Drive
Peoria, IL 61615
(800)752-6651

ANALYTICAL RESULTS

Sample: HA02826-02
Name: G06S
Matrix: Ground Water - Grab

Sampled: 01/18/24 14:14
Received: 01/18/24 16:57

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Anions - PIA									
Chloride	6.4	mg/L	Q3	01/19/24 12:15	5	5.0	01/19/24 12:15	CRD	EPA 300.0 REV 2.1
Sulfate	110	mg/L	Q4	01/19/24 12:33	25	25	01/19/24 12:33	CRD	EPA 300.0 REV 2.1
Field - PIA									
Depth, From Measuring Point	20.67	Feet		01/18/24 14:14	1		01/18/24 14:14	FIELD	Field*
Dissolved oxygen, Field	0.0	mg/L		01/18/24 14:14	1		01/18/24 14:14	FIELD	Field*
Oxidation Reduction Potential	247	mV		01/18/24 14:14	1	-500	01/18/24 14:14	FIELD	Field*
pH, Field Measured	8.42	pH Units		01/18/24 14:14	1		01/18/24 14:14	FIELD	Field*
Specific Conductance, Field Measured	1000	umhos/cm		01/18/24 14:14	1		01/18/24 14:14	FIELD	Field*
Temperature, Field Measured	9.4	°C		01/18/24 14:14	1		01/18/24 14:14	FIELD	Field*
Turbidity, Field Measured	< 0.00	NTU		01/18/24 14:14	1	0.00	01/18/24 14:14	FIELD	Field*
General Chemistry - PIA									
Alkalinity - bicarbonate as CaCO3	390	mg/L		01/23/24 10:16	1	10	01/23/24 10:16	CPS	SM 2320B 1997*
Alkalinity - carbonate as CaCO3	< 10	mg/L		01/23/24 10:16	1	10	01/23/24 10:16	CPS	SM 2320B 1997*
Fluoride	0.264	mg/L		01/26/24 13:51	1	0.250	01/26/24 13:51	TTH	SM 4500F C 1997
Soluble General Chemistry - PIA									
Solids - total dissolved solids (TDS)	580	mg/L		01/22/24 10:13	1	26	01/22/24 11:52	CPS	SM 2540C
Total Metals - PIA									
Boron	29	ug/L		01/22/24 08:53	5	10	01/29/24 11:31	TJJ	EPA 6020A
Calcium	140	mg/L		01/22/24 08:53	5	0.20	01/29/24 11:31	TJJ	EPA 6020A
Magnesium	67	mg/L		01/22/24 08:53	5	0.10	01/29/24 11:31	TJJ	EPA 6020A
Potassium	2.8	mg/L		01/22/24 08:53	5	0.10	01/29/24 11:31	TJJ	EPA 6020A
Sodium	6.9	mg/L		01/22/24 08:53	5	0.10	01/29/24 11:31	TJJ	EPA 6020A

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(800)752-6651

ANALYTICAL RESULTS

Sample: HA02826-03
Name: G09S
Matrix: Ground Water - Grab

Sampled: 01/18/24 14:31
Received: 01/18/24 16:57

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Anions - PIA									
Chloride	15	mg/L	Q4	01/19/24 13:46	10	10	01/19/24 13:46	CRD	EPA 300.0 REV 2.1
Fluoride	< 0.250	mg/L		01/19/24 12:51	1	0.250	01/19/24 12:51	CRD	EPA 300.0 REV 2.1
Sulfate	45	mg/L	Q4	01/19/24 13:46	10	10	01/19/24 13:46	CRD	EPA 300.0 REV 2.1
Field - PIA									
Depth, From Measuring Point	20.42	Feet		01/18/24 14:31	1		01/18/24 14:31	FIELD	Field*
Dissolved oxygen, Field	0.67	mg/L		01/18/24 14:31	1		01/18/24 14:31	FIELD	Field*
Oxidation Reduction Potential	103	mV		01/18/24 14:31	1	-500	01/18/24 14:31	FIELD	Field*
pH, Field Measured	6.50	pH Units		01/18/24 14:31	1		01/18/24 14:31	FIELD	Field*
Specific Conductance, Field Measured	829.0	umhos/cm		01/18/24 14:31	1		01/18/24 14:31	FIELD	Field*
Temperature, Field Measured	9.7	°C		01/18/24 14:31	1		01/18/24 14:31	FIELD	Field*
Turbidity, Field Measured	960	NTU		01/18/24 14:31	1	0.00	01/18/24 14:31	FIELD	Field*
General Chemistry - PIA									
Alkalinity - bicarbonate as CaCO3	390	mg/L		01/23/24 10:16	1	10	01/23/24 10:16	CPS	SM 2320B 1997*
Alkalinity - carbonate as CaCO3	< 10	mg/L		01/23/24 10:16	1	10	01/23/24 10:16	CPS	SM 2320B 1997*
Soluble General Chemistry - PIA									
Solids - total dissolved solids (TDS)	490	mg/L		01/22/24 10:13	1	26	01/22/24 11:52	CPS	SM 2540C
Total Metals - PIA									
Boron	55	ug/L		01/22/24 08:53	5	10	01/29/24 10:55	TJJ	EPA 6020A
Calcium	120	mg/L		01/22/24 08:53	5	0.20	01/29/24 10:55	TJJ	EPA 6020A
Magnesium	56	mg/L		01/22/24 08:53	5	0.10	01/29/24 10:55	TJJ	EPA 6020A
Potassium	1.8	mg/L		01/22/24 08:53	5	0.10	01/29/24 10:55	TJJ	EPA 6020A
Sodium	9.6	mg/L		01/22/24 08:53	5	0.10	01/29/24 10:55	TJJ	EPA 6020A

Pace Analytical Services, LLC
2231 W. Altorfer Drive
Peoria, IL 61615
(800)752-6651

ANALYTICAL RESULTS

Sample: HA03925-05
Name: G12S
Matrix: Ground Water - Grab

Sampled: 01/26/24 12:47
Received: 01/26/24 16:04
PO #: 1728919

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Anions - PIA									
Chloride	16	mg/L	Q4	02/06/24 16:19	10	10	02/06/24 16:19	KCS1	EPA 300.0 REV 2.1
Fluoride	0.268	mg/L	Q3	02/06/24 15:19	1	0.250	02/06/24 15:19	KCS1	EPA 300.0 REV 2.1
Sulfate	97	mg/L		02/07/24 21:32	25	25	02/07/24 21:32	CRD	EPA 300.0 REV 2.1
Field - PIA									
Depth, From Measuring Point	23.32	Feet		01/26/24 12:47	1		01/26/24 12:47	FIELD	Field*
Dissolved oxygen, Field	1.3	mg/L		01/26/24 12:47	1		01/26/24 12:47	FIELD	Field*
Oxidation Reduction Potential	-56.0	mV		01/26/24 12:47	1	-500	01/26/24 12:47	FIELD	Field*
pH, Field Measured	6.61	pH Units		01/26/24 12:47	1		01/26/24 12:47	FIELD	Field*
Specific Conductance, Field Measured	624.0	umhos/cm		01/26/24 12:47	1		01/26/24 12:47	FIELD	Field*
Temperature, Field Measured	10.6	°C		01/26/24 12:47	1		01/26/24 12:47	FIELD	Field*
Turbidity, Field Measured	138	NTU		01/26/24 12:47	1	0.00	01/26/24 12:47	FIELD	Field*
General Chemistry - PIA									
Alkalinity - bicarbonate as CaCO3	220	mg/L		02/06/24 08:25	1	10	02/06/24 08:25	TMS	SM 2320B 1997*
Alkalinity - carbonate as CaCO3	< 10	mg/L		02/06/24 08:25	1	10	02/06/24 08:25	TMS	SM 2320B 1997*
Soluble General Chemistry - PIA									
Solids - total dissolved solids (TDS)	440	mg/L		02/02/24 11:37	1	26	02/02/24 13:09	CPS	SM 2540C
Total Metals - PIA									
Boron	< 10	ug/L		01/31/24 10:11	5	10	02/08/24 12:08	TJJ	EPA 6020A
Calcium	85	mg/L		01/31/24 10:11	5	0.20	02/06/24 09:54	TJJ	EPA 6020A
Magnesium	40	mg/L		01/31/24 10:11	5	0.10	02/06/24 09:54	TJJ	EPA 6020A
Potassium	0.67	mg/L		01/31/24 10:11	5	0.10	02/06/24 09:54	TJJ	EPA 6020A
Sodium	6.6	mg/L		01/31/24 10:11	5	0.10	02/06/24 09:54	TJJ	EPA 6020A

Pace Analytical Services, LLC
2231 W. Altorfer Drive
Peoria, IL 61615
(800)752-6651

ANALYTICAL RESULTS

Sample: HA03925-06
Name: G15S
Matrix: Ground Water - Grab

Sampled: 01/26/24 11:50
Received: 01/26/24 16:04
PO #: 1728919

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Anions - PIA									
Chloride	10	mg/L		02/07/24 21:50	5	5.0	02/07/24 21:50	CRD	EPA 300.0 REV 2.1
Fluoride	< 0.250	mg/L	Q3	02/06/24 17:20	1	0.250	02/06/24 17:20	KCS1	EPA 300.0 REV 2.1
Sulfate	39	mg/L	Q4	02/06/24 18:20	10	10	02/06/24 18:20	KCS1	EPA 300.0 REV 2.1
Field - PIA									
Depth, From Measuring Point	22.4	Feet		01/26/24 11:50	1		01/26/24 11:50	FIELD	Field*
Dissolved oxygen, Field	3.8	mg/L		01/26/24 11:50	1		01/26/24 11:50	FIELD	Field*
Oxidation Reduction Potential	188	mV		01/26/24 11:50	1	-500	01/26/24 11:50	FIELD	Field*
pH, Field Measured	6.43	pH Units		01/26/24 11:50	1		01/26/24 11:50	FIELD	Field*
Specific Conductance, Field Measured	740.0	umhos/cm		01/26/24 11:50	1		01/26/24 11:50	FIELD	Field*
Temperature, Field Measured	10.0	°C		01/26/24 11:50	1		01/26/24 11:50	FIELD	Field*
Turbidity, Field Measured	383	NTU		01/26/24 11:50	1	0.00	01/26/24 11:50	FIELD	Field*
General Chemistry - PIA									
Alkalinity - bicarbonate as CaCO3	320	mg/L		02/06/24 08:25	1	10	02/06/24 08:25	TMS	SM 2320B 1997*
Alkalinity - carbonate as CaCO3	< 10	mg/L		02/06/24 08:25	1	10	02/06/24 08:25	TMS	SM 2320B 1997*
Soluble General Chemistry - PIA									
Solids - total dissolved solids (TDS)	420	mg/L		02/02/24 11:37	1	26	02/02/24 13:09	CPS	SM 2540C
Total Metals - PIA									
Boron	< 10	ug/L		01/31/24 10:11	5	10	02/08/24 12:28	TJJ	EPA 6020A
Calcium	95	mg/L		01/31/24 10:11	5	0.20	02/06/24 09:58	TJJ	EPA 6020A
Magnesium	47	mg/L		01/31/24 10:11	5	0.10	02/06/24 09:58	TJJ	EPA 6020A
Potassium	0.81	mg/L		01/31/24 10:11	5	0.10	02/06/24 09:58	TJJ	EPA 6020A
Sodium	10	mg/L		01/31/24 10:11	5	0.10	02/06/24 09:58	TJJ	EPA 6020A

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ANALYTICAL RESULTS

Sample: HA03926-01
Name: L103
Matrix: Leachate - Regular Sample

Sampled: 01/26/24 10:59
Received: 01/26/24 16:04

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Anions - PIA									
Chloride	94	mg/L		01/26/24 23:59	10	10	01/26/24 23:59	TMS	EPA 300.0 REV 2.1
Sulfate	2200	mg/L		01/27/24 00:17	500	500	01/27/24 00:17	TMS	EPA 300.0 REV 2.1
Field - PIA									
Depth, From Measuring Point	1.68	Feet		01/26/24 10:59	1		01/26/24 10:59	FIELD	Field*
Dissolved oxygen, Field	4.9	mg/L		01/26/24 10:59	1		01/26/24 10:59	FIELD	Field*
Oxidation Reduction Potential	212	mV		01/26/24 10:59	1	-500	01/26/24 10:59	FIELD	Field*
pH, Field Measured	6.11	pH Units		01/26/24 10:59	1		01/26/24 10:59	FIELD	Field*
Specific Conductance, Field Measured	4860	umhos/cm		01/26/24 10:59	1		01/26/24 10:59	FIELD	Field*
Temperature, Field Measured	12.1	°C		01/26/24 10:59	1		01/26/24 10:59	FIELD	Field*
Turbidity, Field Measured	63.3	NTU		01/26/24 10:59	1	0.00	01/26/24 10:59	FIELD	Field*
General Chemistry - PIA									
Alkalinity - bicarbonate as CaCO3	180	mg/L		02/06/24 08:25	1	10	02/06/24 08:25	TMS	SM 2320B 1997*
Alkalinity - carbonate as CaCO3	50	mg/L		02/06/24 08:25	1	10	02/06/24 08:25	TMS	SM 2320B 1997*
Fluoride	0.857	mg/L		02/02/24 14:24	1	0.250	02/02/24 16:54	ANK	SM 4500F C 1997
Solids - total dissolved solids (TDS)	3500	mg/L		02/01/24 11:01	1	34	02/01/24 13:28	OGS	SM 2540C
Total Metals - PIA									
Boron	12000	ug/L		01/31/24 10:11	100	200	02/19/24 10:29	TJJ	EPA 6020A
Calcium	100	mg/L		01/31/24 10:11	100	4.0	02/06/24 10:41	TJJ	EPA 6020A
Magnesium	38	mg/L		01/31/24 10:11	100	2.0	02/06/24 10:41	TJJ	EPA 6020A
Potassium	20	mg/L		01/31/24 10:11	100	2.0	02/06/24 10:41	TJJ	EPA 6020A
Sodium	1100	mg/L		01/31/24 10:11	100	2.0	02/06/24 10:41	TJJ	EPA 6020A

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ANALYTICAL RESULTS

Sample: HA04058-01
Name: G02S
Matrix: Ground Water - Grab

Sampled: 01/29/24 14:33
Received: 01/29/24 16:29
PO #: 1728919

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Anions - PIA									
Chloride	< 5.0	mg/L	Q3	02/09/24 16:47	5	5.0	02/09/24 16:47	CRD	EPA 300.0 REV 2.1
Fluoride	0.257	mg/L	Q1	02/07/24 00:49	1	0.250	02/07/24 00:49	KCS1	EPA 300.0 REV 2.1
Sulfate	< 1.0	mg/L		02/07/24 00:49	1	1.0	02/07/24 00:49	KCS1	EPA 300.0 REV 2.1
Field - PIA									
Depth, From Measuring Point	6.42	Feet		01/29/24 14:33	1		01/29/24 14:33	FIELD	Field*
Dissolved oxygen, Field	0.0	mg/L		01/29/24 14:33	1		01/29/24 14:33	FIELD	Field*
Oxidation Reduction Potential	-66.0	mV		01/29/24 14:33	1	-500	01/29/24 14:33	FIELD	Field*
pH, Field Measured	6.51	pH Units		01/29/24 14:33	1		01/29/24 14:33	FIELD	Field*
Specific Conductance, Field Measured	807.0	umhos/cm		01/29/24 14:33	1		01/29/24 14:33	FIELD	Field*
Temperature, Field Measured	8.4	°C		01/29/24 14:33	1		01/29/24 14:33	FIELD	Field*
Turbidity, Field Measured	52.6	NTU		01/29/24 14:33	1	0.00	01/29/24 14:33	FIELD	Field*
General Chemistry - PIA									
Alkalinity - bicarbonate as CaCO3	400	mg/L		02/06/24 08:25	1	10	02/06/24 08:25	TMS	SM 2320B 1997*
Alkalinity - carbonate as CaCO3	< 10	mg/L		02/06/24 08:25	1	10	02/06/24 08:25	TMS	SM 2320B 1997*
Soluble General Chemistry - PIA									
Solids - total dissolved solids (TDS)	340	mg/L		02/02/24 15:47	1	26	02/02/24 15:47	OGS	SM 2540C
Total Metals - PIA									
Boron	37	ug/L		02/01/24 08:15	5	10	02/08/24 13:29	TJJ	EPA 6020A
Calcium	97	mg/L		02/01/24 08:15	5	0.20	02/06/24 15:34	TJJ	EPA 6020A
Magnesium	37	mg/L		02/01/24 08:15	5	0.10	02/06/24 15:34	TJJ	EPA 6020A
Potassium	0.84	mg/L		02/01/24 08:15	5	0.10	02/06/24 15:34	TJJ	EPA 6020A
Sodium	14	mg/L		02/01/24 08:15	5	0.10	02/06/24 15:34	TJJ	EPA 6020A

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ANALYTICAL RESULTS

Sample: HB00169-01
Name: G04S
Matrix: Ground Water - Grab

Sampled: 02/01/24 12:00
Received: 02/01/24 16:38
PO #: 1728919

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Anions - PIA									
Chloride	14	mg/L		02/13/24 02:03	5	5.0	02/13/24 02:03	CRD	EPA 300.0 REV 2.1
Fluoride	< 0.250	mg/L		02/13/24 01:45	1	0.250	02/13/24 01:45	CRD	EPA 300.0 REV 2.1
Sulfate	220	mg/L		02/13/24 02:58	50	50	02/13/24 02:58	CRD	EPA 300.0 REV 2.1
Field - PIA									
Depth, From Measuring Point	11.4	Feet		02/01/24 12:00	1		02/01/24 12:00	FIELD	Field*
Dissolved oxygen, Field	0.70	mg/L		02/01/24 12:00	1		02/01/24 12:00	FIELD	Field*
Oxidation Reduction Potential	64.0	mV		02/01/24 12:00	1	-500	02/01/24 12:00	FIELD	Field*
pH, Field Measured	7.39	pH Units		02/01/24 12:00	1		02/01/24 12:00	FIELD	Field*
Specific Conductance, Field Measured	926.0	umhos/cm		02/01/24 12:00	1		02/01/24 12:00	FIELD	Field*
Temperature, Field Measured	11.8	°C		02/01/24 12:00	1		02/01/24 12:00	FIELD	Field*
Turbidity, Field Measured	34.5	NTU		02/01/24 12:00	1	0.00	02/01/24 12:00	FIELD	Field*
General Chemistry - PIA									
Alkalinity - bicarbonate as CaCO3	310	mg/L		02/13/24 10:32	1	10	02/13/24 10:32	TMS	SM 2320B 1997*
Alkalinity - carbonate as CaCO3	< 10	mg/L		02/13/24 10:32	1	10	02/13/24 10:32	TMS	SM 2320B 1997*
Soluble General Chemistry - PIA									
Solids - total dissolved solids (TDS)	640	mg/L	B2	02/08/24 08:59	1	17	02/08/24 10:08	OGS	SM 2540C
Total Metals - PIA									
Boron	14	ug/L		02/06/24 09:16	5	10	02/16/24 14:00	TJJ	EPA 6020A
Calcium	140	mg/L		02/06/24 09:16	5	0.20	02/15/24 15:20	TJJ	EPA 6020A
Magnesium	58	mg/L		02/06/24 09:16	5	0.10	02/15/24 15:20	TJJ	EPA 6020A
Potassium	0.55	mg/L		02/06/24 09:16	5	0.10	02/15/24 15:20	TJJ	EPA 6020A
Sodium	8.8	mg/L		02/06/24 09:16	5	0.10	02/15/24 15:20	TJJ	EPA 6020A

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QC SAMPLE RESULTS

Parameter	Result	Unit	Qual	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B423533 - SW 3015 - EPA 6020A									
Blank (B423533-BLK1)				Prepared: 01/22/24 Analyzed: 01/29/24					
Boron	< 10	ug/L							
Calcium	< 0.20	mg/L							
Magnesium	< 0.10	mg/L							
Potassium	< 0.10	mg/L							
Sodium	< 0.10	mg/L							
LCS (B423533-BS1)				Prepared: 01/22/24 Analyzed: 01/29/24					
Boron	506	ug/L		555.6		91	80-120		
Calcium	5.53	mg/L		5.556		99	80-120		
Magnesium	5.51	mg/L		5.556		99	80-120		
Potassium	5.47	mg/L		5.556		99	80-120		
Sodium	5.60	mg/L		5.556		101	80-120		
Batch B423537 - IC No Prep - EPA 300.0 REV 2.1									
Calibration Blank (B423537-CCB1)				Prepared & Analyzed: 01/19/24					
Chloride	0.00	mg/L							
Fluoride	0.00	mg/L							
Sulfate	0.00	mg/L							
Calibration Check (B423537-CCV1)				Prepared & Analyzed: 01/19/24					
Fluoride	5.25	mg/L		5.000		105	90-110		
Sulfate	5.11	mg/L		5.000		102	90-110		
Chloride	4.85	mg/L		5.000		97	90-110		
Matrix Spike (B423537-MS1)	**Sample: HA02826-02**			Prepared & Analyzed: 01/19/24					
Chloride	< 1.0	mg/L	Q1	1.500	6.4	NR	80-120		
Sulfate	1.00E9	mg/L	Q4	1.500	114	NR	80-120		
Matrix Spike (B423537-MS2)	**Sample: HA02826-03**			Prepared & Analyzed: 01/19/24					
Fluoride	1.63	mg/L		1.500	0.162	98	80-120		
Chloride	< 1.0	mg/L	Q4	1.500	15	NR	80-120		
Matrix Spike Dup (B423537-MSD1)	**Sample: HA02826-02**			Prepared & Analyzed: 01/19/24					
Sulfate	< 1.0	mg/L	Q4	1.500	114	NR	80-120		20
Chloride	< 1.0	mg/L	Q2	1.500	6.4	NR	80-120		20
Matrix Spike Dup (B423537-MSD2)	**Sample: HA02826-03**			Prepared & Analyzed: 01/19/24					
Fluoride	1.65	mg/L		1.500	0.162	99	80-120	1	20
Chloride	< 1.0	mg/L	Q4	1.500	15	NR	80-120		20
Sulfate	1.00E9	mg/L	Q4	1.500	45.4	NR	80-120	0	20
Batch B423547 - No Prep - SM 2540C									
Blank (B423547-BLK1)				Prepared & Analyzed: 01/22/24					
Solids - total dissolved solids (TDS)	< 17	mg/L							
LCS (B423547-BS1)				Prepared & Analyzed: 01/22/24					
Solids - total dissolved solids (TDS)	973	mg/L		1000		97	84.9-109		
Batch B423655 - No Prep - SM 2320B 1997									
Duplicate (B423655-DUP2)	**Sample: HA02826-04**			Prepared & Analyzed: 01/23/24					
Alkalinity - bicarbonate as CaCO3	438	mg/L			438			0	10

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QC SAMPLE RESULTS

Parameter	Result	Unit	Qual	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B423941 - No Prep - SM 4500F C 1997									
Calibration Blank (B423941-CCB1)				Prepared & Analyzed: 01/26/24					
Fluoride	0.0140	mg/L							
Calibration Check (B423941-CCV1)				Prepared & Analyzed: 01/26/24					
Fluoride	0.715	mg/L		0.7000		102	90-110		
Batch B424020 - IC No Prep - EPA 300.0 REV 2.1									
Calibration Blank (B424020-CCB1)				Prepared & Analyzed: 01/26/24					
Chloride	0.00	mg/L							
Sulfate	0.00	mg/L							
Calibration Check (B424020-CCV1)				Prepared & Analyzed: 01/26/24					
Chloride	5.08	mg/L		5.000		102	90-110		
Sulfate	5.12	mg/L		5.000		102	90-110		
Batch B424278 - SW 3015 - EPA 6020A									
Blank (B424278-BLK1)				Prepared: 01/31/24 Analyzed: 02/05/24					
Boron	< 10	ug/L							
Calcium	< 0.20	mg/L							
Magnesium	< 0.10	mg/L							
Potassium	< 0.10	mg/L							
Sodium	< 0.10	mg/L							
LCS (B424278-BS1)				Prepared: 01/31/24 Analyzed: 02/05/24					
Boron	594	ug/L		555.6		107	80-120		
Calcium	5.92	mg/L		5.556		106	80-120		
Magnesium	5.83	mg/L		5.556		105	80-120		
Potassium	5.82	mg/L		5.556		105	80-120		
Sodium	5.86	mg/L		5.556		105	80-120		
Matrix Spike (B424278-MS1)	**Sample: HA03925-01**			Prepared: 01/31/24 Analyzed: 02/08/24					
Boron	544	ug/L		555.6	16.3	95	75-125		
Calcium	130	mg/L		5.556	126	75	75-125		
Magnesium	64.9	mg/L		5.556	60.6	77	75-125		
Potassium	6.17	mg/L		5.556	0.782	97	75-125		
Sodium	16.3	mg/L		5.556	11.0	96	75-125		
Matrix Spike Dup (B424278-MSD1)	**Sample: HA03925-01**			Prepared: 01/31/24 Analyzed: 02/08/24					
Boron	535	ug/L		555.6	16.3	93	75-125	2	20
Calcium	130	mg/L		5.556	126	81	75-125	0.2	20
Magnesium	65.2	mg/L		5.556	60.6	83	75-125	0.5	20
Potassium	6.16	mg/L		5.556	0.782	97	75-125	0.2	20
Sodium	16.3	mg/L		5.556	11.0	97	75-125	0.2	20
Batch B424290 - No Prep - SM 2540C									
Blank (B424290-BLK1)				Prepared & Analyzed: 01/31/24					
Solids - total dissolved solids (TDS)	< 17	mg/L							
LCS (B424290-BS1)				Prepared & Analyzed: 01/31/24					
Solids - total dissolved solids (TDS)	613	mg/L	BS1	1000		61	84.9-109		
Duplicate (B424290-DUP1)	**Sample: HA03925-04**			Prepared & Analyzed: 01/31/24					
Solids - total dissolved solids (TDS)	1860	mg/L	M		2040			9	5

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QC SAMPLE RESULTS

Parameter	Result	Unit	Qual	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Duplicate (B424290-DUP2)	**Sample: HA03925-07**			Prepared & Analyzed: 01/31/24					
Solids - total dissolved solids (TDS)	875	mg/L	M		780			11	5
Batch B424357 - SW 3015 - EPA 6020A									
Blank (B424357-BLK1)				Prepared: 02/01/24 Analyzed: 02/05/24					
Boron	< 10	ug/L							
Calcium	< 0.20	mg/L							
Magnesium	< 0.10	mg/L							
Potassium	< 0.10	mg/L							
Sodium	< 0.10	mg/L							
LCS (B424357-BS1)				Prepared: 02/01/24 Analyzed: 02/05/24					
Boron	579	ug/L		555.6		104	80-120		
Calcium	5.55	mg/L		5.556		100	80-120		
Magnesium	5.77	mg/L		5.556		104	80-120		
Potassium	5.61	mg/L		5.556		101	80-120		
Sodium	5.67	mg/L		5.556		102	80-120		
Matrix Spike (B424357-MS1)	**Sample: HA04058-01**			Prepared: 02/01/24 Analyzed: 02/06/24					
Calcium	103	mg/L		5.556	97.4	94	75-125		
Magnesium	41.9	mg/L		5.556	36.7	93	75-125		
Potassium	6.34	mg/L		5.556	0.843	99	75-125		
Sodium	19.5	mg/L		5.556	13.9	100	75-125		
Matrix Spike Dup (B424357-MSD1)	**Sample: HA04058-01**			Prepared: 02/01/24 Analyzed: 02/06/24					
Calcium	102	mg/L		5.556	97.4	88	75-125	0.3	20
Magnesium	41.6	mg/L		5.556	36.7	88	75-125	0.6	20
Potassium	6.27	mg/L		5.556	0.843	98	75-125	1	20
Sodium	19.4	mg/L		5.556	13.9	98	75-125	0.7	20
Batch B424396 - No Prep - SM 2540C									
Blank (B424396-BLK1)				Prepared & Analyzed: 02/01/24					
Solids - total dissolved solids (TDS)	< 17	mg/L							
LCS (B424396-BS1)				Prepared & Analyzed: 02/01/24					
Solids - total dissolved solids (TDS)	1000	mg/L		1000		100	84.9-109		
Duplicate (B424396-DUP1)	**Sample: HA04058-06**			Prepared & Analyzed: 02/01/24					
Solids - total dissolved solids (TDS)	1780	mg/L			1730			3	5
Duplicate (B424396-DUP2)	**Sample: HA04058-07**			Prepared & Analyzed: 02/01/24					
Solids - total dissolved solids (TDS)	2000	mg/L	M		2130			6	5
Batch B424513 - No Prep - SM 2540C									
Blank (B424513-BLK1)				Prepared & Analyzed: 02/02/24					
Solids - total dissolved solids (TDS)	< 17	mg/L							
LCS (B424513-BS1)				Prepared & Analyzed: 02/02/24					
Solids - total dissolved solids (TDS)	977	mg/L		1000		98	84.9-109		
Duplicate (B424513-DUP1)	**Sample: HA03925-07RE1**			Prepared & Analyzed: 02/02/24					
Solids - total dissolved solids (TDS)	815	mg/L	M		765			6	5
Duplicate (B424513-DUP2)	**Sample: HA03925-10RE1**			Prepared & Analyzed: 02/02/24					
Solids - total dissolved solids (TDS)	710	mg/L			715			0.7	5
Batch B424514 - No Prep - SM 2540C									

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QC SAMPLE RESULTS

Parameter	Result	Unit	Qual	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Blank (B424514-BLK1)				Prepared & Analyzed: 02/02/24					
Solids - total dissolved solids (TDS)	< 17	mg/L							
LCS (B424514-BS1)				Prepared & Analyzed: 02/02/24					
Solids - total dissolved solids (TDS)	910	mg/L		1000		91	84.9-109		
Duplicate (B424514-DUP1)	**Sample: HA04058-01**			Prepared & Analyzed: 02/02/24					
Solids - total dissolved solids (TDS)	350	mg/L			345			1	5
Duplicate (B424514-DUP2)	**Sample: HA04058-04**			Prepared & Analyzed: 02/02/24					
Solids - total dissolved solids (TDS)	1300	mg/L			1260			4	5
Batch B424521 - No Prep - SM 4500F C 1997									
Calibration Blank (B424521-CCB1)				Prepared & Analyzed: 02/02/24					
Fluoride	0.0180	mg/L							
Calibration Blank (B424521-CCB2)				Prepared & Analyzed: 02/02/24					
Fluoride	0.0180	mg/L							
Calibration Check (B424521-CCV1)				Prepared & Analyzed: 02/02/24					
Fluoride	0.678	mg/L		0.7000		97	90-110		
Calibration Check (B424521-CCV2)				Prepared & Analyzed: 02/02/24					
Fluoride	0.694	mg/L		0.7000		99	90-110		
Matrix Spike (B424521-MS3)	**Sample: HA03926-01**			Prepared & Analyzed: 02/02/24					
Fluoride	1.88	mg/L		1.000	0.857	102	80-120		
Matrix Spike Dup (B424521-MSD3)	**Sample: HA03926-01**			Prepared & Analyzed: 02/02/24					
Fluoride	1.88	mg/L		1.000	0.857	102	80-120	0.3	20
Batch B424728 - SW 3015 - EPA 6020A									
Blank (B424728-BLK1)				Prepared: 02/06/24 Analyzed: 02/15/24					
Boron	< 10	ug/L							
Calcium	< 0.20	mg/L							
Magnesium	< 0.10	mg/L							
Potassium	< 0.10	mg/L							
Sodium	< 0.10	mg/L							
LCS (B424728-BS1)				Prepared: 02/06/24 Analyzed: 02/15/24					
Boron	526	ug/L		555.6		95	80-120		
Calcium	5.33	mg/L		5.556		96	80-120		
Magnesium	5.63	mg/L		5.556		101	80-120		
Potassium	5.19	mg/L		5.556		93	80-120		
Sodium	5.59	mg/L		5.556		101	80-120		
Batch B424779 - No Prep - SM 2320B 1997									
Duplicate (B424779-DUP4)	**Sample: HA03925-11**			Prepared & Analyzed: 02/06/24					
Alkalinity - carbonate as CaCO3	< 10	mg/L			ND				10
Alkalinity - bicarbonate as CaCO3	388	mg/L			388			0	10
Duplicate (B424779-DUP6)	**Sample: HA04058-01**			Prepared & Analyzed: 02/06/24					
Alkalinity - carbonate as CaCO3	< 10	mg/L			ND				10
Alkalinity - bicarbonate as CaCO3	438	mg/L			400			9	10
Duplicate (B424779-DUP7)	**Sample: HA03925-01**			Prepared & Analyzed: 02/06/24					
Alkalinity - bicarbonate as CaCO3	400	mg/L			388			3	10
Alkalinity - carbonate as CaCO3	< 10	mg/L			ND				10

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(800)752-6651

QC SAMPLE RESULTS

Parameter	Result	Unit	Qual	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B424892 - IC No Prep - EPA 300.0 REV 2.1									
Calibration Blank (B424892-CCB1)				Prepared & Analyzed: 02/06/24					
Fluoride	0.00	mg/L							
Chloride	0.00	mg/L							
Sulfate	0.00	mg/L							
Calibration Check (B424892-CCV1)				Prepared & Analyzed: 02/06/24					
Fluoride	5.21	mg/L		5.000		104	90-110		
Chloride	4.90	mg/L		5.000		98	90-110		
Sulfate	5.24	mg/L		5.000		105	90-110		
Matrix Spike (B424892-MS1)	**Sample: HA03925-01**			Prepared & Analyzed: 02/06/24					
Fluoride	1.43	mg/L		1.500	ND	95	80-120		
Sulfate	1.00E9	mg/L	Q4	1.500	153	NR	80-120		
Chloride	1.0E9	mg/L	Q4	1.500	16	NR	80-120		
Matrix Spike (B424892-MS2)	**Sample: HA03925-05**			Prepared & Analyzed: 02/06/24					
Chloride	1.0E9	mg/L	Q4	1.500	16	NR	80-120		
Fluoride	1.34	mg/L	Q1	1.500	0.268	71	80-120		
Matrix Spike (B424892-MS3)	**Sample: HA03925-06**			Prepared & Analyzed: 02/06/24					
Sulfate	1.00E9	mg/L	Q4	1.500	39.2	NR	80-120		
Fluoride	1.42	mg/L	Q1	1.500	0.226	79	80-120		
Matrix Spike Dup (B424892-MSD1)	**Sample: HA03925-01**			Prepared & Analyzed: 02/06/24					
Sulfate	1.00E9	mg/L	Q4	1.500	153	NR	80-120	0	20
Fluoride	1.45	mg/L		1.500	ND	97	80-120	1	20
Chloride	1.0E9	mg/L	Q4	1.500	16	NR	80-120	0	20
Matrix Spike Dup (B424892-MSD2)	**Sample: HA03925-05**			Prepared & Analyzed: 02/06/24					
Chloride	1.0E9	mg/L	Q4	1.500	16	NR	80-120	0	20
Fluoride	1.35	mg/L	Q2	1.500	0.268	72	80-120	0.7	20
Matrix Spike Dup (B424892-MSD3)	**Sample: HA03925-06**			Prepared & Analyzed: 02/06/24					
Fluoride	1.38	mg/L	Q2	1.500	0.226	77	80-120	3	20
Sulfate	1.00E9	mg/L	Q4	1.500	39.2	NR	80-120	0	20
Batch B424893 - IC No Prep - EPA 300.0 REV 2.1									
Calibration Blank (B424893-CCB1)				Prepared & Analyzed: 02/06/24					
Fluoride	0.00	mg/L							
Sulfate	0.00	mg/L							
Chloride	0.0683	mg/L							
Calibration Check (B424893-CCV1)				Prepared & Analyzed: 02/06/24					
Sulfate	5.31	mg/L		5.000		106	90-110		
Chloride	5.17	mg/L		5.000		103	90-110		
Fluoride	5.31	mg/L		5.000		106	90-110		
Matrix Spike (B424893-MS2)	**Sample: HA04058-01**			Prepared & Analyzed: 02/07/24					
Sulfate	1.34	mg/L		1.500	ND	89	80-120		
Fluoride	1.42	mg/L	Q1	1.500	0.257	78	80-120		
Matrix Spike Dup (B424893-MSD2)	**Sample: HA04058-01**			Prepared & Analyzed: 02/07/24					
Sulfate	1.45	mg/L		1.500	ND	96	80-120	8	20
Fluoride	1.47	mg/L		1.500	0.257	81	80-120	3	20
Batch B424981 - No Prep - SM 2540C									

Pace Analytical Services, LLC
2231 W. Altorfer Drive
Peoria, IL 61615
(800)752-6651

QC SAMPLE RESULTS

Parameter	Result	Unit	Qual	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Blank (B424981-BLK1)				Prepared & Analyzed: 02/08/24					
Solids - total dissolved solids (TDS)	20.0	mg/L	B						
LCS (B424981-BS1)				Prepared & Analyzed: 02/08/24					
Solids - total dissolved solids (TDS)	980	mg/L		1000		98	84.9-109		
Batch B424988 - IC No Prep - EPA 300.0 REV 2.1									
Calibration Blank (B424988-CCB1)				Prepared & Analyzed: 02/07/24					
Chloride	0.00	mg/L							
Sulfate	0.00	mg/L							
Calibration Check (B424988-CCV1)				Prepared & Analyzed: 02/07/24					
Chloride	4.79	mg/L		5.000		96	90-110		
Sulfate	4.95	mg/L		5.000		99	90-110		
Batch B425298 - IC No Prep - EPA 300.0 REV 2.1									
Calibration Blank (B425298-CCB1)				Prepared & Analyzed: 02/09/24					
Chloride	0.00	mg/L							
Calibration Check (B425298-CCV1)				Prepared & Analyzed: 02/09/24					
Chloride	4.85	mg/L		5.000		97	90-110		
Matrix Spike (B425298-MS1)	**Sample: HA04058-01**			Prepared & Analyzed: 02/09/24					
Chloride	< 1.0	mg/L	Q1	1.500	2.0	NR	80-120		
Matrix Spike Dup (B425298-MSD1)	**Sample: HA04058-01**			Prepared & Analyzed: 02/09/24					
Chloride	< 1.0	mg/L	Q2	1.500	2.0	NR	80-120		20
Batch B425397 - IC No Prep - EPA 300.0 REV 2.1									
Calibration Blank (B425397-CCB1)				Prepared & Analyzed: 02/12/24					
Sulfate	0.00	mg/L							
Chloride	0.00	mg/L							
Fluoride	0.00	mg/L							
Calibration Check (B425397-CCV1)				Prepared & Analyzed: 02/12/24					
Sulfate	5.17	mg/L		5.000		103	90-110		
Fluoride	5.20	mg/L		5.000		104	90-110		
Chloride	5.03	mg/L		5.000		101	90-110		

Pace Analytical Services, LLC
2231 W. Altorfer Drive
Peoria, IL 61615
(800)752-6651

NOTES

Specifications regarding method revisions, method modifications, and calculations used for analysis are available upon request. Please contact your project manager.

* Not a TNI accredited analyte

Certifications

CHI - McHenry, IL - 4314-A W. Crystal Lake Road, McHenry, IL 60050
TNI Accreditation for Drinking Water and Wastewater Fields of Testing through IL EPA Accreditation No. 100279
Illinois Department of Public Health Bacterial Analysis in Drinking Water Approved Laboratory Registry No. 17556

PIA - Peoria, IL - 2231 W. Altorfer Drive, Peoria, IL 61615
TNI Accreditation for Drinking Water, Wastewater, Solid and Hazardous Material Fields of Testing through IL EPA Accreditation No. 100230
Illinois Department of Public Health Bacterial Analysis in Drinking Water Approved Laboratory Registry No. 17553
Drinking Water Certifications/Accreditations: Iowa (240); Kansas (E-10338); Missouri (870)
Wastewater Certifications/Accreditations: Arkansas (88-0677); Iowa (240); Kansas (E-10338)
Solid and Hazardous Material Certifications/Accreditations: Arkansas (88-0677); Iowa (240); Kansas (E-10338)

SPMO - Springfield, MO - 1805 W Sunset Street, Springfield, MO 65807
USEPA DMR-QA Program

STL - Hazelwood, MO - 944 Anglum Rd, Hazelwood, MO 63042
TNI Accreditation for Wastewater, Solid and Hazardous Material Fields of Testing through KS KDHE Certification No. E-10389
TNI Accreditation for Wastewater, Solid and Hazardous Material Fields of Testing through IL EPA Accreditation No. - 200080
Illinois Department of Public Health Bacterial Analysis in Drinking Water Approved Laboratory, Registry No. 171050
Missouri Department of Natural Resources - Certificate of Approval for Microbiological Laboratory Service - No. 1050

Qualifiers

B	Present in the method blank at 20 mg/L.
B2	Contamination does not impact data since sample result is greater than ten times the contamination level found in the blank.
BS1	Blank Spike recovery exceeds the acceptance criteria. Sample result is less than the method reporting limit.
M	Analyte failed to meet the required acceptance criteria for duplicate analysis.
Q1	Matrix Spike failed % recovery acceptance limits. The associated blank spike recovery was acceptable.
Q2	Matrix Spike Duplicate failed % recovery acceptance limits. The associated blank spike recovery was acceptable.
Q3	Matrix Spike/Matrix Spike Duplicate both failed % recovery acceptance limits. The associated blank spike recovery was acceptable.
Q4	The matrix spike recovery result is unusable since the analyte concentration in the sample is greater than four times the spike level. The associated blank spike was acceptable.

Certified by: Diane Billings, Project Manager

HA02826

CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: 1 of 1

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	Vistra Corp-Duck Creek	Report To:	Brian Voelker	Attention:	Brian Voelker
Address:	17751 North Cilco Rd	Copy To:	Sam Davies: samantha.davies@vistracorp.com	Company Name:	Vistra Corp
	Canton, IL 61520		Daryl Johnson: Robert.Johnson@vistracorp.com	Address:	see Section A
Email To:	Brian.Voelker@VistraCorp.com	Purchase Order No.:		Quote Reference:	
Phone:	(217) 753-8911 Fax:	Project Name:		Project Manager:	
Requested Due Date/TAT:	10 day	Project Number:	2285	Profile #:	

REGULATORY AGENCY

NPDES GROUND WATER DRINKING WATER

UST RCRA OTHER

Site Location STATE: IL

Section D Required Client Information

SAMPLE ID
(A-Z, 0-9 / ,-)
Sample IDs MUST BE UNIQUE

Valid Matrix Codes

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

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED DATE	COLLECTED TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	DC-257-203	DC-257-204	DC-257-205	DC-811-204	DC-845-201-202	DC-845-203	DC-845-205	DC-CLOSURE-201-202	DC-SUP-000	DC-WPCP-203-206			Residual Chlorine (Y/N)	Project No./ Lab I.D.
1	GO6L	WT	G	1/18/24	1440		2	X		X																			
2	GO6S	WT	G	1/18/24	1414		3	X		X																			
3	GO9S	WT	G	1/18/24	1431		3	X		X																			
4	TH3L	WT	G	1/18/24	1408		2	X		X																			
5	TH4L	WT	G	1/18/24	1430		2	X		X																			
6	TH5L	WT	G	1/18/24	1529		2	X		X																			
7	TH6L	WT	G	1/18/24	1535		2	X		X																			
8	EB-1	WT	G	1/18/24	1540		3	X		X																			
9																													
10																													
11																													
12																													
13																													
14																													
15																													
16																													

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
DC-24Q1 Rev 0		1/18/24	1657							
					1/18/24	1657	6.0	Y	N	Y
							Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Aaron Kemberton

SIGNATURE of SAMPLER: DATE Signed (MM/DD/YY): 01/18/24

HA03925 ZC

CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: of

Section A Required Client Information:

Company:	Vistra Corp-Duck Creek
Address:	17751 North Cilco Rd
	Canton, IL 61520
Email To:	Brian.Voelker@VistraCorp.com
Phone: (217) 753-8911	Fax:
Requested Due Date/TAT:	10 day

Section B Required Project Information:

Report To:	Brian Voelker
Copy To:	Sam Davies: samantha.davies@vistracorp.com
	Daryl Johnson: Robert.Johnson@vistracorp.com
Purchase Order No.:	
Project Name:	
Project Number:	2285

Section C Invoice Information:

Attention:	Brian Voelker
Company Name:	Vistra Corp
Address:	see Section A
Quote Reference:	
Project Manager:	
Profile #:	

REGULATORY AGENCY

NPDES GROUND WATER DRINKING WATER
UST RCRA OTHER

Site Location STATE: IL

Section D Required Client Information

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Valid Matrix Codes

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

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED DATE	COLLECTED TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test (Y/N)	DC-257-203	DC-257-204	DC-257-205	DC-811-204	DC-845-201-202	DC-845-203	DC-845-205	DC-CLOSURE-201-202	DC-SUP-000	DC-WPCP-203-206			Residual Chlorine (Y/N)	Project No./ Lab I.D.
1	BA01	WT	G	1/26/24	1222		4	X		X																			
2	BA01 Dup	WT	G	1/26/24	1222		4	X		X																			
3	BA04	WT	G	1/26/24	1338		4	X		X																			
4	BA06	WT	G	1/26/24	1453		4	X		X																			
5	G125	WT	G	1/26/24	1247		3	X		X																			
6	G155	WT	G	1/26/24	1150		3	X		X																			
7	G532	WT	G	1/26/24	1140		4	X		X																			
8	G535	WT	G	1/26/24	1240		4	X		X																			
9	G575	WT	G	1/26/24	1424		5	X		X																			
10	L103	WT	G	1/26/24	1059		2	X		X																			
11	OM07	WT	G	1/26/24	1354		11	X	X	X																			
12	OR11	WT	G	1/26/24	1210		11	X	X	X																			
13	OR11 Dup	WT	G	1/26/24	1210		11	X	X	X																			
14	OR20	WT	G	1/26/24	1300		11	X	X	X																			
15	R37L	WT	G	1/26/24	1403		2	X		X																			
16	Equipment Blank	WT	G	1/26/24	1430		11	X	X	X																			

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS: Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
DC-24Q1 Rev 0		1/26/24	1604							
					1/26/24	1604	5.8	Y	N	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Aaron Pemberton

SIGNATURE of SAMPLER: DATE Signed (MM/DD/YY): 01/26/24

CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: of

Section A Required Client Information	Section B Required Project Information	Section C Invoice Information
Company: Vistra Corp-Duck Creek	Report To: Brian Voelker	Attention: Brian Voelker
Address: ~~12751 North Cilco Rd~~ Canton, IL 61520	Copy To: Sam Davies samantha.davies@vistracorp.com; Daryl Johnson Robert.Johnson@vistracorp.com	Company Name: Vistra Corp
Email To: Brian.Voelker@VistraCorp.com	Purchase Order No:	Address: see Section A
Phone: (217) 753-8911 Fax:	Project Name:	Quote Reference:
Requested Due Date/TAT: 10 day	Project Number: 2285	Project Manager:
		Profile #:

REGULATORY AGENCY: NPDES; GROUND WATER; DRINKING WATER; UST; RCRA; OTHER

Site Location STATE: IL

Section D Required Client Information

Valid Matrix Codes: DRINKING WATER DW; WATER WT; WASTE WATER WW; PRODUCT P; SOIL/SOLID SL; OIL OL; WIPE WP; AIR AR; OTHER OT; TISSUE TS

ITEM #	SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED DATE	COLLECTED TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	Project No./ Lab I.D.
	↓ Analysis Test ↓															Y/N ↓ DC-257-203; DC-257-204; DC-257-205; DC-811-204; DC-845-201-202; DC-845-203; DC-845-205; DC-CLOSURE-201-202; DC-SUP-000; DC-WPCP-203-206		
1	BA01	WT	G	1/26/24	1222		4	X		X								
2	BA01 Dup	WT	G	1/26/24	1222		4	X		X								
3	BA04	WT	G	1/26/24	1338		4	X		X								
4	BA06	WT	G	1/26/24	1453		4	X		X								
5	G125	WT	G	1/26/24	1247		3	X		X								
6	G155	WT	G	1/26/24	1150		3	X		X								
7	G532	WT	G	1/26/24	1140		4	X		X								
8	G535	WT	G	1/26/24	1240		4	X		X								
9	G575	WT	G	1/26/24	1424		5	X		X								
10	L103	WT	G	1/26/24	1059		2	X		X								
11	OM07	WT	G	1/26/24	1354		11	X	X	X								
12	OP11	WT	G	1/26/24	1210		11	X	X	X								
13	OP11 Dup	WT	G	1/26/24	1210		11	X	X	X								
14	UL20	WT	G	1/26/24	1300		11	X	X	X								
15	P371	WT	G	1/26/24	1403		2	X		X								
16	Equipment Blank	WT	G	1/26/24	1430		11	X	X	X								

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS: Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
DC-24Q1 Rev 0		1/26/24	1604		1/26/24	1601	5.8	Y	N	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Aaron Remington

SIGNATURE of SAMPLER: DATE Signed (MM/DD/YY): 01/26/24

CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: of

Section A Required Client Information:

Company:	Vistra Corp-Duck Creek
Address:	17751 North Cilco Rd
	Canton, IL 61520
Email To:	Brian.Voelker@VistraCorp.com
Phone: (217) 753-8911	Fax:
Requested Due Date/TAT:	10 day

Section B Required Project Information:

Report To:	Brian Voelker
Copy To:	Sam Davies: samantha.davies@vistracorp.com
	Daryl Johnson: Robert.Johnson@vistracorp.com
Purchase Order No.:	
Project Name:	
Project Number:	2285

Section C Invoice Information:

Attention:	Brian Voelker
Company Name:	Vistra Corp
Address:	see Section A
Quote Reference:	
Project Manager:	
Profile #:	

REGULATORY AGENCY

NPDES GROUND WATER DRINKING WATER
UST RCRA OTHER

Site Location STATE: IL

Section D Required Client Information

SAMPLE ID
(A-Z, 0-9 / ,-)
Sample IDs MUST BE UNIQUE

Valid Matrix Codes

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

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED DATE	COLLECTED TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Y/N: Analysis Test	DC-257-203	DC-257-204	DC-257-205	DC-811-204	DC-845-201-202	DC-845-203	DC-845-205	DC-CLOSURE-201-202	DC-SUP-000	DC-WPCP-203-206			Residual Chlorine (Y/N)	Project No./ Lab I.D.
1	GO25	WT	G	1/29/24	1433		4	X		X																			HA04058 JDS1
2	GSSL	WT	G	1/29/24	1117		4	X		X																			
3	G67L	WT	G	1/29/24	1305		4	X		X																			
4	OM12	WT	G	1/29/24	1300		11	X	X	X																			
5	OM16	WT	G	1/29/24	1150		11	X	X	X																			
6	~~OE15~~ OR135	WT	G	1/29/24	1500		11	X	X	X																			
7	OR19	WT	G	1/29/24	1400		11	X	X	X																			
8	EB8	WT	G	1/29/24	1515		11	X	X	X																			
9																													
10																													
11																													
12																													
13																													
14																													
15																													
16																													

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
DC-24Q1 Rev 0		1/29/24	1629							
					1/29/24	1629	5.4	Y	Y	Y
							Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Aaron Lambertson

SIGNATURE of SAMPLER: DATE Signed (MM/DD/YY): 01/29/24

COURIER

HB001609 SM - 2.1.24
HB00235

CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: 1 of 10

Section A Required Client Information:

Company:	Vistra Corp-Duck Creek
Address:	17751 North Cilco Rd
	Canton, IL 61520
Email To:	Brian.Voelker@VistraCorp.com
Phone: (217) 753-8911	Fax:
Requested Due Date/TAT:	10 day

Section B Required Project Information:

Report To:	Brian Voelker
Copy To:	Sam Davies: samantha.davies@vistracorp.com
	Daryl Johnson: Robert.Johnson@vistracorp.com
Purchase Order No.:	
Project Name:	
Project Number:	2285

Section C Invoice Information:

Attention:	Brian Voelker
Company Name:	Vistra Corp
Address:	see Section A
Quote Reference:	
Project Manager:	
Profile #:	

REGULATORY AGENCY

NPDES GROUND WATER DRINKING WATER
UST RCRA OTHER

Site Location STATE: IL

Section D Required Client Information

Valid Matrix Codes

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

SAMPLE ID
(A-Z, 0-9 / ,-)
Sample IDs MUST BE UNIQUE

ITEM #	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED DATE	COLLECTED TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	DC-257-203	DC-257-204	DC-257-205	DC-811-204	DC-845-201-202	DC-845-203	DC-845-205	DC-CLOSURE-201-202	DC-SUP-000	DC-WPCP-203-206	Residual Chlorine (Y/N)	Project No./ Lab I.D.
1	WT	G	2/1/24	1200		3	X		X																		
2	WT	G	2/1/24	1003		2	X		X																		
3	WT	G	2/1/24	1034		2	X		X																		
4	WT	G	2/1/24	1056		2	X		X																		
5	WT	G	2/1/24	1437		4	X		X																		
6	WT	G	2/1/24	1437		4	X		X																		
7	WT	G	2/1/24	1319		5	X		X																		
8	WT	G	2/1/24	1126		5	X	X	X		X																
9	WT	G	2/1/24	0938		3	X		X																		
10	WT	G	2/1/24	1456		3	X		X																		
11	WT	G	2/1/24	1534		9	X	X	X		X																
12																											
13																											
14																											
15																											
16																											

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
DC-24Q1 Rev 0		2/1/24	1038		2/1/24	1638	7.1

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Aaron Richardson

SIGNATURE of SAMPLER: DATE Signed (MM/DD/YY): 02/01/24

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

SAR-3: Episodic Depth to Groundwater Measurements
All DTWs on SAR-3 must be collected within 24 hours.
Plant: DC
Event: DC-24Q1 Rev 0

Well	Unique ID	Unit Numl	Unit Name	Date	Time	Measured Depth to Water (ft bmp)	Comments	Initials
BA01C	DC-BA01!C	205	BAB	1/17/24	1019	13.50		LR
BA01L	DC-BA01!L	205	BAB	1/17/24	1021	12.43		LR
G02D	DC-G02&D	204	LF	1/24/24	1342	22.10		LR
G02L	DC-G02!L	204	LF	1/24/24	1338	6.63		LR
G03L	DC-G03!L	204	LF	1/17/24	1227	5.05		AM
G03S	DC-G03#S	204	LF	1/17/24	1228	5.08		AM
G04L	DC-G04!L	204	LF	1/24/24	1318	15.02		BCa
G04S	DC-G04#S	204	LF	1/24/24	1319	14.48		LR
G06L	DC-G06!L	204	LF	1/17/24	1441	20.64		AM
G06S	DC-G06#S	204	LF	1/17/24	1439	20.64		AM
G07L	DC-G07!L	204	LF	1/17/24	1442	20.42		AM
G08L	DC-G08!L	204	LF	1/17/24	1445	20.07		AM
G09L	DC-G09!L	204	LF	1/17/24	1424	20.60		LR
G09S	DC-G09#S	204	LF	1/17/24	1426	20.39		LR
G12L	DC-G12!L	204	LF	1/17/24	1411	23.31		LR
G12S	DC-G12#S	204	LF	1/17/24	1409	23.98		LR
G14L	DC-G14!L	204	LF	1/17/24	1402	26.44		LR
G15L	DC-G15!L	204	LF	1/17/24	1350	32.22		LR
G15S	DC-G15#S	204	LF	1/17/24	1348	32.31		LR
G16L	DC-G16!L	204	LF	1/17/24	1344	29.65		LR
G50L	DC-G50!L	203	GMF	1/17/24	1017	10.85		JB
G51L	DC-G51!L	203	GMF	1/17/24	1005	10.48	Pump removed	JB
G52L	DC-G52!L	203	GMF	1/17/24	0951	24.78		JB
G54C	DC-G54!C	203	GMF	1/17/24	~~1505~~ APP 1/18/24 0945	37.14		JB

SAR-3: Episodic Depth to Groundwater Measurements
All DTWs on SAR-3 must be collected within 24 hours.
Plant: DC
Event: DC-24Q1 Rev 0

Well	Unique ID	Unit Numl	Unit Name	Date	Time	Measured Depth to Water (ft bmp)	Comments	Initials
G52S	DC-G52#S	203	GMF	01/17/24	09:55	29.85		JB
G53L	DC-G53!L	203	GMF	01/17/24	10:31	11.76		JB
G53S	DC-G53#S	203	GMF	01/17/24	10:31	13.35		JB
G55L	DC-G55!L	203	GMF	01/17/24	15:13	20.95		JB
G55S	DC-G55#S	203	GMF	01/17/24	15:13	21.78		JB
G56L	DC-G56!L	203	GMF	01/17/24	13:57	19.98	Not locked on arrival	JB
G56S	DC-G56#S	203	GMF	01/17/24	13:57	20.15		JB
G57L	DC-G57!L	203	GMF	01/17/24	13:48	23.8	Not locked on arrival	JB
G58L	DC-G58!L	203	GMF	01/17/24	13:39	28.3	Not locked on arrival	JB
G58S	DC-G58#S	203	GMF	01/17/24	13:39	28.06		JB
G59L	DC-G59!L	203	GMF	01/17/24	13:33	31.33	Not locked on arrival	JB
G59S	DC-G59#S	203	GMF	01/17/24	13:33	33.44		JB
G61S	DC-G61#S	203	GMF	01/17/24	11:42	22.43		JB
G62L	DC-G62!L	203	GMF	01/17/24	11:18	23.46		JB
G63L	DC-G63!L	203	GMF	01/17/24	10:55	25.32		JB
G63S	DC-G63#S	203	GMF	01/17/24	10:55	25.51		JB
G65L	DC-G65!L	203	GMF	01/17/24	14:20	19.74		JB
G65S	DC-G65#S	203	GMF	01/17/24	14:20	20.03		JB
G66L	DC-G66!L	203	GMF	01/17/24	14:09	13.79	Pump removed	JB
G66S	DC-G66#S	203	GMF	01/17/24	14:09	14.09		JB
G67L	DC-G67!L	203	GMF	01/17/24	14:05	12.41		JB
G67S	DC-G67#S	203	GMF	01/17/24	14:05	13.25		JB
G68L	DC-G68!L	203	GMF	01/17/24	15:05	12.97		JB

SAR-3: Episodic Depth to Groundwater Measurements
All DTWs on SAR-3 must be collected within 24 hours.
Plant: DC
Event: DC-24Q1 Rev 0

Well	Unique ID	Unit Numt	Unit Name	Date	Time	Measured Depth to Water (ft bmp)	Comments	Initials
G68S	DC-G68#S	203	GMF	1/17/24	1505	13.78		JB
G69L	DC-G69!L	203	GMF	1/17/24	1507	13.67		JB
G69S	DC-G69#S	203	GMF	1/17/24	1507	16.62		AW
G70L	DC-G70!L	203	GMF	1/17/24	1456	16.18		JB
G71L	DC-G71!L	203	GMF	1/17/24	1449	18.58		JB
G71S	DC-G71#S	203	GMF	1/17/24	1445	19.45		JB
G72L	DC-G72!L	203	GMF	1/17/24	1441	20.32		AW
G73L	DC-G73!L	203	GMF	1/17/24	1438	26.50		JB
L103	DC-L103	204	LF	1/18/24	1024	1.97		JR
OM05S	DC-OM05#S	201-202	AP1/2	1/18/24	1034	22.67		AP
OM08	DC-OM08	201-202	AP1/2	1/18/24	1111	14.39		LR
OM09	DC-OM09	201-202	AP1/2	1/17/24	1315	3.40		AP
OM10	DC-OM10	201-202	AP1/2	1/17/24	1125	13.15		AP
OM15	DC-OM15	201-202	AP1/2	1/18/24	1200	27.34		JR
OM22S	DC-OM22#S	201-202	AP1/2	1/17/24	1331	20.10		AP
OM23S	DC-OM23#S	201-202	AP1/2	1/17/24	1411	42.06		AP
OM25D	DC-OM25&D	201-202	AP1/2	1/17/24	1446	57.95		AP
OR03S	DC-OR03#S	201-202	AP1/2	1/18/24	1042	45.64		LR
OR05D	DC-OR05&D	201-202	AP1/2	1/18/24	1032	22.07		AP
OR14S	DC-OR14#S	201-202	AP1/2	1/18/24	1055	6.72		AP
OR18	DC-OR18	201-202	AP1/2	1/17/24	1031	20.07		AP
P01I	DC-P01$I	204	LF	1/24/24	1354	8.26		LR
P01L	DC-P01!L	204	LF	1/24/24	1353	6.89		LR

SAR-3: Episodic Depth to Groundwater Measurements
All DTWs on SAR-3 must be collected within 24 hours.
Plant: DC
Event: DC-24Q1 Rev 0

Well	Unique ID	Unit Numt	Unit Name	Date	Time	Measured Depth to Water (ft bmp)	Comments	Initials
P01S	DC-P01#S	204	LF	1/24/24	1352	6.82		LR
P02S	DC-P02#S	204	LF	1/24/24	1340	7.40		LR
P04S	DC-P04#S	204	LF	1/24/24	1319	14.48	GOLS	LR
P05D	DC-P05&D	204	LF	1/24/24	1313	5.70		LR
P05L	DC-P05!L	204	LF	1/24/24	1309	4.37		LR
P05S	DC-P05#S	204	LF	1/24/24	1311	4.53	GOSL	LR
P36D	DC-P36&D	204	LF	1/17/24	1515	11.14		LR
P36L	DC-P36!L	204	LF	1/17/24	1517	10.24		LR
P36S	DC-P36#S	204	LF	1/17/24	1519	10.45		LR
P37D	DC-P37&D	204	LF	1/17/24	1422	15.35		LR
P37L	DC-P37!L	204	LF	1/17/24	1420	13.77		LR
P38L	DC-P38!L	204	LF	1/17/24	1358	19.49		LR
P38S	DC-P38#S	204	LF	1/17/24	1356	19.11		LR
P39D	DC-P39&D	204	LF	1/17/24	1333	13.70		LR
P39L	DC-P39!L	204	LF	1/17/24	1337	4.49		LR
P39S	DC-P39#S	204	LF	1/17/24	1335	4.63		LR
P40L	DC-P40!L	204	LF	1/17/24	1138	8.50		LR
P40S	DC-P40#S	204	LF	~~1/17/24~~	~~1136~~	~~4.81~~	4.77 2/6/24 1339 AP	~~LR~~ BG 2/7/24
P41D	DC-P41&D	204	LF	1/17/24	1110	37.21		LR
P41L	DC-P41!L	204	LF	1/17/24	1114	7.08		LR
P41S	DC-P41#S	204	LF	1/17/24	1112	9.45		LR
P42D	DC-P42&D	204	LF	1/17/24	1120	38.35		LR
P42I1	DC-P42$I1	204	LF	1/17/24	1122	5.60		LR

SAR-3: Episodic Depth to Groundwater Measurements
All DTWs on SAR-3 must be collected within 24 hours.
Plant: DC
Event: DC-24Q1 Rev 0

Well	Unique ID	Unit Numl	Unit Name	Date	Time	Measured Depth to Water (ft bmp)	Comments	Initials
P42I2	DC-P42%I2	204	LF	1/17/24	1124	33.06		LR
P42L	DC-P42!L	204	LF	1/17/24	1126	4.68		LR
P42S	DC-P42#S	204	LF	1/17/24	1128	5.43		LR
P52	DC-P52	203	GMF	1/17/24	1352	15.91		JB
P57L	DC-P57!L	203	GMF	1/17/24	1424	17.26		JB
P57S	DC-P57#S	203	GMF	1/17/24	1429	16.91		JB
P60	DC-P60	203	GMF	1/17/24	1210	27.84		JB
P61	DC-P61	203	GMF	1/17/24	1144	12.34		JB
P62	DC-P62	203	GMF	1/17/24	1114	13.59		JB
P63	DC-P63	203	GMF	1/17/24	1056	16.16		JB
P64	DC-P64	203	GMF	1/17/24	1132	14.66		JB
R10L	DC-R10!L	204	LF	1/17/24	1418	22.00		LR
R11L	DC-R11!L	204	LF	1/17/24	1416	22.60		LR
R13L	DC-R13!L	204	LF	1/17/24	1406	22.96		LR
R61L	DC-R61!L	203	GMF	1/17/24	1141	22.23	lock Broke	JB
R72S	DC-R72#S	203	GMF	1/17/24	1441	20.18		JB
T43L	DC-T43!L	204	LF	1/17/24	1428	6.65		LR
T44L	DC-T44!L	204	LF	1/17/24	1451	10.01		LR
T45L	DC-T45!L	204	LF	1/17/24	1453	5.70		LR
T46L	DC-T46!L	204	LF	1/17/24	1511	6.45		LR
X301	DC-X301-leachate	203	GMF	1/18/24	1219	–	no measuring point	JB
XTPW02	DC-XTPW02-pore	203	GMF	1/18/24	1208	6.90	DRY	LR

U:6/19/23 GKJ

SAR-4: Depth to Groundwater Measurements - On-site Transducer Downloads
All DTWs on SAR-4 form may be collected at anytime during the sampling event.
Plant: DC
Event: DC-24Q1 Rev 0

Well	Unique ID	Unit Number	Unit Name	Date	Time	Measured Depth to Water (ft bmp)	On-site Transducer Data					Comments	Initials
							Data Logger Serial No.	Does Data Logger Serial No. Match?	WL Reading on Transducer (ft)	Data down-loaded?	Batt (H/M/L/R)		
BA01	DC-BA01	205	BAB	1/17/24	1017	14.07	21615533	yes	573.36	yes	H		LR
BA02	DC-BA02	205	BAB	1/17/24	1007	8.89	21615636	yes	571.85	yes	H		LR
BA02L	DC-BA02!L	205	BAB	1/17/24	1009	8.70	21615682	yes	4.63	yes	H		LR
BA03	DC-BA03	205	BAB	1/17/24	0955	5.92	21615637	yes	572.77	yes	H		LR
BA03L	DC-BA03!L	205	BAB	1/17/24	0953	5.49	21615687	yes	572.47	yes	H		LR
BA04	DC-BA04	205	BAB	1/17/24	1030	6.16	21615631	yes	572.21	yes	H		LR
BA05	DC-BA05#	205	BAB	1/17/24	1047	17.45	21615540	yes	578.28	yes	H		LR
BA06	DC-BA06	205	BAB	1/17/24	1044	20.05	21615525	yes	575.09	yes	H		LR
G02S	DC-G02#S	204	LF	1/24/24	1340	7.40	21615554	Yes	614.32	Yes	H		JR
G50S	DC-G50#S	203	GMF	1/17/24	1016	12.02	21615535	yes	611.78	yes	H		JB
G51S	DC-G51#S	203	GMF	1/17/24	1000	9.86	21615691	yes	609.78	yes	H		JB
G54L	DC-G54!L	203	GMF	1/17/24	0937	22.85	21615690	yes	600.07	yes	H		JB
G54S	DC-G54#S	203	GMF	1/17/24	0938	24.11	21615684	yes	599.18	yes	H		JB
G57S	DC-G57#S	203	GMF	1/17/24	1344	23.45	21615683	yes	599.15	yes	H		JB
G60L	DC-G60!L	203	GMF	1/17/24	1209	14.99	21615678	yes	600.23	yes	H		JB
G60S	DC-G60#S	203	GMF	1/17/24	1209	24.56	21615677	yes	590.35	yes	H		JB
G64L	DC-G64!L	203	GMF	1/17/24	1050	23.83	21615688	yes	598.56	yes	H		JB
G64S	DC-G64#S	203	GMF	1/17/24	1050	24.73	21615632	yes	598.39	yes	H		JB

SAR-4: Depth to Groundwater Measurements - On-site Transducer Downloads
All DTWs on SAR-4 form may be collected at anytime during the sampling event.
Plant: DC
Event: DC-24Q1 Rev 0

Well	Unique ID	Unit Number	Unit Name	Date	Time	Measured Depth to Water (ft bmp)	On-site Transducer Data					Comments	Initials
							Data Logger Serial No.	Does Data Logger Serial No. Match?	WL Reading on Transducer (ft)	Data down-loaded?	Batt (H/M/L/R)		
OM01	DC-OM01	201-202	AP1/2	1/17/24	1350	12.60	21615685	yes	582.62	yes	H		AP
OM04S	DC-OM04#S	201-202	AP1/2	1/18/24	1042	21.10	21615542	yes	586.08	yes	H		LR
OM07	DC-OM07	201-202	AP1/2	1/18/24	1011	13.24	21615541	-	-	-	-	No transducer	~~BR~~
OM12	DC-OM12	201-202	AP1/2	1/18/24	1107	17.73	21615527	-	-	-	-	No transducer	JR
OM16	DC-OM16	201-202	AP1/2	1/17/24	1050	28.25	21615539	yes	579.60	yes	H		AP
OM17	DC-OM17	201-202	AP1/2	1/17/24	1104	11.72	21615693	yes	580.02	yes	H		AP
OM21	DC-OM21	201-202	AP1/2	1/18/24	1103	11.88	21615593	yes	594.52	yes	H		AP
OM22D	DC-OM22&D	201-202	AP1/2	1/17/24	1332	19.94	21615592	yes	579.24	yes	H		AP
OM23D	DC-OM23&D	201-202	AP1/2	1/17/24	1413	39.30	21615591	yes	573.94	yes	H		AP
OM24D	DC-OM24&D	201-202	AP1/2	1/17/24	1459	3.63	21615522	yes	573.28	yes	H		AP
OM25S	DC-OM25#S	201-202	AP1/2	1/17/24	1449	58.19	21615681	yes	570.76	yes	H		AP
OR02	DC-OR02	201-202	AP1/2	1/17/24	1437	5.42	21615679	yes	595.83	yes	H		AP
OR03D	DC-OR03&D	201-202	AP1/2	1/18/24	1045	45.13	21615577	yes	582.76	yes	H		LR
OR04D	DC-OR04&D	201-202	AP1/2	1/18/24	1040	21.81	21615570	yes	585.80	yes	H		LR
OR06A	DC-OR06!A	201-202	AP1/2	1/18/24	1024	14.10	21615692	yes	581.30	yes	H		AP
OR11	DC-OR11	201-202	AP1/2	1/18/24	1051	31.24	21615686	yes	564.96	yes	H		SR
OR13S	DC-OR13#S	201-202	AP1/2	1/18/24	1039	12.97	21615676	yes	584.55	yes	H		AP
OR13D	DC-OR13&D	201-202	AP1/2	1/18/24	1042	13.62	21564135	yes	588.89	yes	H		AP

SAR-4: Depth to Groundwater Measurements - On-site Transducer Downloads
All DTWs on SAR-4 form may be collected at anytime during the sampling event.
Plant: DC
Event: DC-24Q1 Rev 0

Well	Unique ID	Unit Number	Unit Name	Date	Time	Measured Depth to Water (ft bmp)	On-site Transducer Data					Comments	Initials
							Data Logger Serial No.	Does Data Logger Serial No. Match?	WL Reading on Transducer (ft)	Data down-loaded?	Batt (H/M/L/R)		
OR14D	DC-OR14&D	201-202	AP1/2	1/18/24	1055	10.48	21615611	yes	556.64	yes	H		AP
OR19	DC-OR19	201-202	AP1/2	1/18/24	1123	24.66	21615634	yes	573.06	yes	H		JR
OR20	DC-OR20	201-202	AP1/2	1/18/24	1040	21.49	21615610	yes	566.01	yes	H		JR

Notes:
Batt = battery
bmp = below measuring point
ft = feet
H = high
L = low
M = medium
R = replaced

APPENDIX A.
ANNUAL GRONUDWATER MONITORING AND CORRECTIVE ACTION REPORT
DUCK CREEK, LANDFILL
DC-257-204

Duck Creek

WELL/SAMPLE POINT G02S **Purge Method:** Compressor

Date: 01/29/2024 Start Time: 13:22 Finish/Sample Time: 14:33

Well Depth (Bottom) From MP: 29.81 ft Min. Purge Volume: _____ Gal / L/ mL

Depth to Water From MP: 6.42 ft Total Purge Volume: 1000 Gal / L/ mL

Water Column Length: 23.39 ft

Well Water Volume: AW 1/29/24 14.16 Gal / L Total Drawdown: 0.80 ft
6.93

Reading	Time	Depth	Flow Rate	pH	Spec Cond	Temp	ORP	DO	Turb
(Units)		ft.	mL/min	s.u.	umhos/cm	deg C	mV	mg/L	NTU
1	1351	~~6.63~~	100	6.54	817	8.36	-61	0.00	61.2
2	1352	6.93	100	6.53	812	8.40	-62	0.00	60.3
3	1353	6.93	100	6.52	809	8.41	-64	0.00	55.3
4	1354	6.93	100	6.52	805	8.41	-65	0.00	56.0
5	1355	6.93	100	6.51	807	8.43	-66	0.00	52.6
Stabilization	NA	NA	NA	± 0.2	± 3%	± 0.2	± 20	± 10% or 0.2	NA

Field Meter: Horiba

Sample Appearance:

Odor: ☑ None ☐ Slight ☐ Mod. ☐ Strong

Color ☑ None ☐ Slight ☐ Mod. ☐ Strong

Turb: ☐ None ☑ Slight ☐ Mod ☐ Strong

Well Integrity	Yes	No
Well has ID sign	✓	
Casing locked/secure	✓	
Well cap fits securely.	✓	
Good seal/drainage	✓	
Well has weep holes	✓	

BOTTLE INFORMATION:

Unfiltered	
Qty	Bottles
	VOAs (C,V, 40mL, HCL)
	VOAS (C,V, 40mL)
	Organics (A,G,U 1000mL)
	Organics (A,G,U 500mL)
	TOC (A,V 40mL, H2SO4)
	TOX (A,G 250mL, H2SO4)
1	Metals (P,250mL, HNO3)
	Cyanide (P, 250mL, NaOH)
	Ammonia (P,250mL, H2S04)
	General (P,500mL)
1	General (P,1000mL)
1	Rad (P, 2.5L, HNO3)

(4)

Filtered	
Qty	Bottles
	Metals (P,250mL, HNO3)
	Ammonia (P,250mL, H2S04)
1	General (P,500mL)
	General (P,1000mL)
	TOC (A,V 40mL, H2SO4)

Final DTW: 7.29 ft

Comments

Sampler's Signature: JBOhanran

BG

APPENDIX A.
ANNUAL GRONUDWATER MONITORING AND CORRECTIVE ACTION REPORT
DUCK CREEK, LANDFILL
DC-257-204

Duck Creek

WELL/SAMPLE POINT G04S **Purge Method:** Bladder

Date: 2/1/2024 Start Time: 1130 Finish/Sample Time: 1200

Well Depth (Bottom) From MP: 37.00 ft Min. Purge Volume: 1000 Gal / L (mL)

Depth to Water From MP: 11.40 ft Total Purge Volume: 1000 Gal / L (mL)

Water Column Length: 25.60 ft

Well Water Volume: 15.48 Gal (L) Total Drawdown: 0.14 ft

Reading	Time	Depth	Flow Rate	pH	Spec Cond	Temp	ORP	DO	Turb
(Units)		ft.	mL/min	s.u.	umhos/cm	deg C	mV	mg/L	NTU
1	1143	11.55	200	7.43	923	11.74	120	1.00	69.3
2	1145	11.56	200	7.41	923	11.70	78	0.88	48.4
3	1147	11.56	200	7.40	924	11.73	72	0.75	35.8
4	1149	11.56	200	7.39	926	11.75	64	0.69	34.5
5									
Stabilization	NA	NA	NA	± 0.2	± 3%	± 0.2	± 20	± 10% or 0.2	NA

Field Meter: Horiba

Sample Appearance:

Odor: ☒ None ☐ Slight ☐ Mod. ☐ Strong

Color ☐ None ☒ Slight ☐ Mod. ☐ Strong

Turb: ☐ None ☒ Slight ☐ Mod ☐ Strong

Well Integrity	Yes	No
Well has ID sign	✓	
Casing locked/secure	✓	
Well cap fits securely.	✓	
Good seal/drainage	✓	
Well has weep holes	✓	

BOTTLE INFORMATION:

Unfiltered	
Qty	Bottles
	VOAs (C,V, 40mL, HCL)
	VOAS (C,V, 40mL)
	Organics (A,G,U 1000mL)
	Organics (A,G,U 500mL)
	TOC (A,V 40mL, H2SO4)
	TOX (A,G 250mL, H2SO4)
1	Metals (P,250mL, HNO3)
	Cyanide (P, 250mL, NaOH)
	Ammonia (P,250mL, H2S04)
	General (P,500mL)
1	General (P,1000mL)
	Rad (P, 2.5L, HNO3)

3

Filtered	
Qty	Bottles
	Metals (P,250mL, HNO3)
	Ammonia (P,250mL, H2S04)
1	General (P,500mL)
	General (P,1000mL)
	TOC (A,V 40mL, H2SO4)

Final DTW: 11.54 ft

Comments

Sampler's Signature:

BG

APPENDIX A.
ANNUAL GRONUDWATER MONITORING AND CORRECTIVE ACTION REPORT
DUCK CREEK, LANDFILL
DC-257-204

Duck Creek

WELL/SAMPLE POINT G06S ✓ **Purge Method:** Compressor

Date: 18-Jan-24 Start Time: 1318 Finish/Sample Time: 1414

Well Depth (Bottom) From MP: 43.79 ft Min. Purge Volume: 1000 Gal / L / mL

Depth to Water From MP: 20.67 ft Total Purge Volume: 4 Gal / L / mL

Water Column Length: 23.12 ft

Well Water Volume: 14.00 Gal / L Total Drawdown: AM 18-Jan ~~2.07~~ ft 0.12

Reading (Units)	Time	Depth ft.	Flow Rate mL/min	pH s.u.	Spec Cond umhos/cm	Temp deg C	ORP mV	DO mg/L	Turb NTU
1	1340	20.79	100	8.55	1010	9.45	248	0.0	0.0
2	1341	20.79	|	8.47	1010	9.44	247	0.0	0.0
3	1342	20.79	↓	8.42	1000	9.41	247	0.0	0.0
4									
5									
Stabilization	NA	NA	NA	± 0.2	± 3%	± 0.2	± 20	± 10% or 0.2	NA

Field Meter: Horiba

Sample Appearance:

Odor: ☑ None ☐ Slight ☐ Mod. ☐ Strong

Color ☐ None ☐ Slight ☐ Mod. ☑ Strong

Turb: ☑ None ☐ Slight ☐ Mod ☐ Strong

Well Integrity	Yes	No
Well has ID sign	/	
Casing locked/secure	/	
Well cap fits securely.	/	
Good seal/drainage	/	
Well has weep holes	/	

BOTTLE INFORMATION:

Unfiltered	
Qty	Bottles
	VOAs (C,V, 40mL, HCL)
	VOAS (C,V, 40mL)
	Organics (A,G,U 1000mL)
	Organics (A,G,U 500mL)
	TOC (A,V 40mL, H2SO4)
	TOX (A,G 250mL, H2SO4)
1	Metals (P,250mL, HNO3)
	Cyanide (P, 250mL, NaOH)
	Ammonia (P,250mL, H2S04)
	General (P,500mL)
1	General (P,1000mL)
	Rad (P, 2.5L, HNO3)

(3)

Filtered	
Qty	Bottles
	Metals (P,250mL, HNO3)
	Ammonia (P,250mL, H2S04)
1	General (P,500mL)
	General (P,1000mL)
	TOC (A,V 40mL, H2SO4)

Final DTW: 20.72 ft

Comments **Check pH if readings are below 6.5 or above 7.2** Dalton Road 7.64

Sampler's Signature: Justin M

BG

APPENDIX A.
ANNUAL GRONUDWATER MONITORING AND CORRECTIVE ACTION REPORT
DUCK CREEK, LANDFILL
DC-257-204

Duck Creek

WELL/SAMPLE POINT G09S ✓ **Purge Method:** Bladder

Date: 01/18/24 Start Time: 13:54 Finish/Sample Time: 1431

Well Depth (Bottom) From MP: pump ft Min. Purge Volume: ~~15~~ 1 Gal / (L) mL

Depth to Water From MP: 20.42 ft Total Purge Volume: ~~2~~ 1.5 Gal / (L) mL

Water Column Length: _____ ft

Well Water Volume: _____ Gal / L Total Drawdown: _____ ft

Reading (Units)	Time	Depth ft.	Flow Rate mL/min	pH s.u.	Spec Cond umhos/cm	Temp deg C	ORP mV	DO mg/L	Turb NTU
1	14:07	21.39	100	6.48	836	9.54	126	0.83	~~46.2~~ 962 HW 1/19/24
2	14:09	21.49	100	6.49	832	9.68	113	0.74	977
3	14:11	21.60	100	6.50	829	9.71	103	.67	960
4									
5									
Stabilization	NA	NA	NA	± 0.2	± 3%	± 0.2	± 20	± 10% or 0.2	NA

Field Meter: Horiba

Sample Appearance:

Odor: ☒ None ☐ Slight ☐ Mod. ☐ Strong

Color ☐ None ☐ Slight ☒ Mod. ☐ Strong

Turb: ☐ None ☐ Slight ☐ Mod ☒ Strong

Well Integrity	Yes	No
Well has ID sign	X	
Casing locked/secure	X	
Well cap fits securely.	X	
Good seal/drainage	X	
Well has weep holes	X	

BOTTLE INFORMATION:

Unfiltered	
Qty	Bottles
	VOAs (C,V, 40mL, HCL)
	VOAS (C,V, 40mL)
	Organics (A,G,U 1000mL)
	Organics (A,G,U 500mL)
	TOC (A,V 40mL, H2SO4)
	TOX (A,G 250mL, H2SO4)
1	Metals (P,250mL, HNO3)
	Cyanide (P, 250mL, NaOH)
	Ammonia (P,250mL, H2S04)
	General (P,500mL)
1	General (P,1000mL)
	Rad (P, 2.5L, HNO3)

Filtered	
Qty	Bottles
	Metals (P,250mL, HNO3)
	Ammonia (P,250mL, H2S04)
1	General (P,500mL)
	General (P,1000mL)
	TOC (A,V 40mL, H2SO4)

Final DTW: 21.88 ft

Comments **Check pH if readings are below 6.5 or above 7.2**

Sampler's Signature: Joseph R Reel

BG

Duck Creek

WELL/SAMPLE POINT G12S **Purge Method:** BLADDER

Date: 1/26/24 Start Time: 1205 Finish/Sample Time: 1247

Well Depth (Bottom) From MP: 36.65 ft

Depth to Water From MP: 23.32 ft

Water Column Length: 13.33 ft

Well Water Volume: 8.01 Gal / L

Min. Purge Volume: 1000 Gal / L / mL

Total Purge Volume: ~~1100~~ * 1/26/24 2600 Gal / L / mL

Total Drawdown: .97 ft

Reading (Units)	Time	Depth ft.	Flow Rate mL/min	pH s.u.	Spec Cond umhos/cm	Temp deg C	ORP mV	DO mg/L	Turb NTU
1	1221	24.30	100	6.66	627	10.61	-59	1.96	225
2	1224	24.36	100	6.65	624	10.61	-57	1.40	154
3	1227	24.30	100	6.56	624	10.57	-59	1.27	144
4	1230	24.36	100	6.62	624	10.57	-61	1.17	141
5	1233	24.32	100	6.61	624	10.56	-56	1.26	138
Stabilization	NA	NA	NA	± 0.2	± 3%	± 0.2	± 20	± 10% or 0.2	NA

Field Meter: HORIBA

Sample Appearance:

Odor: ☒ None ☐ Slight ☐ Mod. ☐ Strong

Color ☐ None ☒ Slight ☐ Mod. ☐ Strong

Turb: ☐ None ☒ Slight ☐ Mod ☐ Strong

Well Integrity	Yes	No
Well has ID sign	X	
Casing locked/secure	X	
Well cap fits securely.	X	
Good seal/drainage	X	
Well has weep holes	X	

BOTTLE INFORMATION:

Unfiltered Qty	Bottles
	VOAs (C,V, 40mL, HCL)
	VOAS (C,V, 40mL)
	Organics (A,G,U 1000mL)
	Organics (A,G,U 500mL)
	TOC (A,V 40mL, H2SO4)
	TOX (A,G 250mL, H2SO4)
1	Metals (P,250mL, HNO3)
	Cyanide (P, 250mL, NaOH)
	Ammonia (P,250mL, H2S04)
	General (P,500mL)
1	General (P,1000mL)
	Rad (P, 2.5L, HNO3)

Filtered Qty	Bottles
	Metals (P,250mL, HNO3)
	Ammonia (P,250mL, H2S04)
1	General (P,500mL)
	General (P,1000mL)
	TOC (A,V 40mL, H2SO4)

Final DTW: 24.29 ft

Comments **Check pH if readings are above 7.2**

Sampler's Signature:

BG

Duck Creek

WELL/SAMPLE POINT G15S **Purge Method:** BLADDER

Date: 1/26/24 Start Time: 1105 Finish/Sample Time: 1150

Well Depth (Bottom) From MP: 44.22 ft Min. Purge Volume: 1000 Gal / L/ mL

Depth to Water From MP: 22.40 ft Total Purge Volume: ~~1400~~ 2 1/26/24 2600 Gal / L/ mL

Water Column Length: 21.82 ft

Well Water Volume: 13.21 Gal / L Total Drawdown: 7.76 ft

Reading (Units)	Time	Depth ft.	Flow Rate mL/min	pH s.u.	Spec Cond umhos/cm	Temp deg C	ORP mV	DO mg/L	Turb NTU
1	1123	28.96	100	6.57	809	10.31	193	6.60	401
2	1126	28.93	100	6.54	773	10.17	191	5.57	504
3	1129	28.93	100	6.39	747	10.12	190	3.98	439
4	1132	28.93	100	6.39	743	10.09	189	3.72	420
5	1135	28.93	100	6.43	740	10.03	188	3.75	383
Stabilization	NA	NA	NA	± 0.2	± 3%	± 0.2	± 20	± 10% or 0.2	NA

Field Meter: HORIBA

Sample Appearance:

Odor: ☑ None ☐ Slight ☐ Mod. ☐ Strong

Color ☑ None ☐ Slight ☐ Mod. ☐ Strong

Turb: ☐ None ☑ Slight ☐ Mod ☐ Strong

Well Integrity	Yes	No
Well has ID sign	✓	
Casing locked/secure	✓	
Well cap fits securely.	✓	
Good seal/drainage	✓	
Well has weep holes	✓	

BOTTLE INFORMATION:

Unfiltered	
Qty	**Bottles**
	VOAs (C,V, 40mL, HCL)
	VOAS (C,V, 40mL)
	Organics (A,G,U 1000mL)
	Organics (A,G,U 500mL)
	TOC (A,V 40mL, H2SO4)
	TOX (A,G 250mL, H2SO4)
1	Metals (P,250mL, HNO3)
	Cyanide (P, 250mL, NaOH)
	Ammonia (P,250mL, H2S04)
	General (P,500mL)
1	General (P,1000mL)
	Rad (P, 2.5L, HNO3)

Filtered	
Qty	**Bottles**
	Metals (P,250mL, HNO3)
	Ammonia (P,250mL, H2S04)
1	General (P,500mL)
	General (P,1000mL)
	TOC (A,V 40mL, H2SO4)

Final DTW: 30.16 ft

Comments **Check pH if readings are below 6.2** DEPTH STABLE TURNED UP TO 200 FLOW

Sampler's Signature: [signature]

APPENDIX A.
ANNUAL GRONUDWATER MONITORING AND CORRECTIVE ACTION REPORT
DUCK CREEK, LANDFILL
DC-257-204

Duck Creek

WELL/SAMPLE POINT L103 **Purge Method:** BAILER

Date: 1/26/24 Start Time: 1055 Finish/Sample Time: 1059

Depth to Water From MP: 1.68 ft

Reading	Time	Depth	Flow Rate	pH	Spec Cond	Temp	ORP	DO	Turb
(Units)		ft.	mL/min	s.u.	umhos/cm	deg C	mV	mg/L	NTU
1	1056	1.68		6.11	4860	12.12	212	4.85	63.3

Field Meter: HORIBA

Sample Appearance:

Odor: ☐ None ☒ Slight ☐ Mod. ☐ Strong

Color ☒ None ☐ Slight ☐ Mod. ☐ Strong

Turb: ☒ None ☐ Slight ☐ Mod ☐ Strong

Well Integrity	Yes	No
Well has ID sign		X
Casing locked/secure		X
Well cap fits securely.		X
Good seal/drainage		X
Well has weep holes		X

BOTTLE INFORMATION:

Unfiltered	
Qty	Bottles
	VOAs (C,V, 40mL, HCL)
	VOAS (C,V, 40mL)
	Organics (A,G,U 1000mL)
	Organics (A,G,U 500mL)
	TOC (A,V 40mL, H2SO4)
	TOX (A,G 250mL, H2SO4)
1	Metals (P,250mL, HNO3)
	Cyanide (P, 250mL, NaOH)
	Phenols (A,G,250mL, H2SO4)
	General (P, 250 mL)
1	GENERAL P, 1000 mL

Filtered	
Qty	Bottles
	Metals (P,250mL, HNO3)
	Ammonia (P,250mL, H2S04)
	General (P,500mL)

Comments

Sampler's Signature:

Multiparameter Meter Field Calibration Checklist

Field Personnel:	AP	Location:	Duck creek
Weather:	30°F partly cloudy wind NE 5mph	Environment:	Snow, grass, mud

Multiparameter Water Meter	Make: Horiba	Model: U5000	Serial Number:	WU683C85	
Water Level Meter	Make: Heron	Model: Dipper T	Serial Number:	19FF211192HB	

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.01	s.u.	±0.1 s.u.	P	NO	—	MSI	023067-01	3/14/2025
pH 7.00a	7.02	s.u.	±0.1 s.u.			—	MSI	023051-02	2/21/2025
pH 10.00a	10.09	s.u.	±0.1 s.u.			—	MSI	022361-01	12/27/2024
SC Zero (DI)	0.0	µS/cm	0<25 µS/cm			—	Pace Labs	N/A (DI)	N/A (DI)
SC 2000	2010	µS/cm	±5%			—	Geotech	3GF1197	Jun-24
ORP	248	mV	±15 mV			—	InSitu	~~3GB927~~	~~Jan-24~~
DO (Zero pt)	0.08	mg/L	±0.1			—	Macron	#000228049	8/26/2025
DO (Saturated)	98.6	%	97-100%			—	Pace Labs	N/A (DI)	N/A (DI)
Turbidity (DI)	0.0	NTU	<2 NTU	—	—	—	Pace Labs	N/A (DI)	N/A (DI)

Exp. 6/24
Lot # 3GA1011
BG
1/23/24

Approx. every 4 hrs, unless only one well

ICV (Initial Calibration Verification)				Time: 1250				
Buffer	Check Value	Units	Range	Pass/Fail	Action Taken?	Manufacturer	Lot#	Exp.
pH 4.00b	3.99	s.u.	±0.15 s.u.	P	—	Geotech	3GB1049	Feb-25
pH 7.00b	6.87	s.u.	±0.15 s.u.		—	Geotech	2GF113	Jun-24
pH 10.00b	9.99	s.u.	±0.15 s.u.		—	Geotech	3GA1134	Jan-25
SC 1000	10.10	µS/cm	±5%		—	Ricca	4209A12	Aug-24

Approx. every 4 hrs, unless only one well

CCV (Continued Calibration Verification):				Time: 1540				
Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.03	s.u.	±0.1 s.u.	P	NO	N/A	MSI	023067-01	3/14/2025
pH 7.00a	7.05	s.u.	±0.1 s.u.				MSI	023051-02	2/21/2025
pH 10.00a	10.09	s.u.	±0.1 s.u.				MSI	022361-01	12/27/2024
SC 1000	10.10	µS/cm	±5%				Ricca	4209A12	Aug-24
DO (Zero pt)	0.07	mg/L	±0.1 mg/L				Macron	#000228049	8/26/2025
Turbidity (DI)	0.0	NTU	<2 NTU	—	—	—	Pace Labs	N/A (DI)	N/A (DI)

Approx. every 4 hrs, unless only one well

CCV (Continued Calibration Verification):				Time:				
Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
4.00a		s.u.	±0.1 s.u.				MSI	023067-01	3/14/2025
7.00a		s.u.	±0.1 s.u.				MSI	023051-02	2/21/2025
10.00a		s.u.	±0.1 s.u.				MSI	022361-01	12/27/2024
SC 1000		µS/cm	±5%				Ricca	4209A12	Aug-24
DO (Zero pt)		mg/L	±0.1 mg/L				Macron	#000228049	8/26/2025
Turbidity (DI)		NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

Comments:

Signature:	[signature]	Date:	1/18/2024

BG

Multiparameter Meter Field Calibration Checklist

Field Personnel:	Austin Moore	Location:	duck creek
Weather:	30°-12° cloudy wind NNE 5 MPH	Environment:	Snow

Multiparameter Water Meter	Make: Horriba	Model: U-5000	Serial Number:	PW2GYJD3	
Water Level Meter	Make: Heron	Model: Dipper T	Serial Number:	3717-T	

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	3.99	s.u.	±0.1 s.u.	P	N	N/A	MSI	023067-01	3/14/2025
pH 7.00a	7.05	s.u.	±0.1 s.u.				MSI	023051-02	2/21/2025
pH 10.00a	10.03	s.u.	±0.1 s.u.				MSI	022361-01	12/27/2024
SC Zero (DI)	0	µS/cm	0<25 µS/cm				Pace Labs	N/A (DI)	N/A (DI)
SC 2000	2040	µS/cm	±5%				Geotech	3GF1197	Jun-24
ORP	246	mV	±15 mV				InSitu	~~3GD937~~	~~Jan-24~~
DO (Zero pt)	0.07	mg/L	±0.1				Macron	#000228049	8/26/2025
DO (Saturated)	99.7	%	97-100%				Pace Labs	N/A (DI)	N/A (DI)
Turbidity (DI)	0	NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

Exp. 6/24 Lot # 3G11011 BG 1/23/24

Approx. every 4 hrs, unless only one well

ICV (Initial Calibration Verification)					Time: 1252			
Buffer	Check Value	Units	Range	Pass/Fail	Action Taken?	Manufacturer	Lot#	Exp.
pH 4.00b	4.01	s.u.	±0.15 s.u.	P	N	Geotech	3GB1049	Feb-25
pH 7.00b	7.08	s.u.	±0.15 s.u.			Geotech	2GF113	Jun-24
pH 10.00b	10.06	s.u.	±0.15 s.u.			Geotech	3GA1134	Jan-25
SC 1000	1020	µS/cm	±5%			Ricca	4209A12	Aug-24

Approx. every 4 hrs, unless only one well

CCV (Continued Calibration Verification):					Time: 1540				
Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	3.98	s.u.	±0.1 s.u.	P	N	N/A	MSI	023067-01	3/14/2025
pH 7.00a	7.06	s.u.	±0.1 s.u.				MSI	023051-02	2/21/2025
pH 10.00a	10.04	s.u.	±0.1 s.u.				MSI	022361-01	12/27/2024
SC 1000	998	µS/cm	±5%				Ricca	4209A12	Aug-24
DO (Zero pt)	0.06	mg/L	±0.1 mg/L				Macron	#000228049	8/26/2025
Turbidity (DI)	0	NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

Approx. every 4 hrs, unless only one well

CCV (Continued Calibration Verification):					Time:				
Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
4.00a		s.u.	±0.1 s.u.				MSI	023067-01	3/14/2025
7.00a		s.u.	±0.1 s.u.				MSI	023051-02	2/21/2025
10.00a		s.u.	±0.1 s.u.				MSI	022361-01	12/27/2024
SC 1000		µS/cm	±5%				Ricca	4209A12	Aug-24
DO (Zero pt)		mg/L	±0.1 mg/L				Macron	#000228049	8/26/2025
Turbidity (DI)		NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

Comments:

Signature:	Austin Moore	Date:	18-Jan-24

BG

Multiparameter Meter Field Calibration Checklist

Field Personnel:	Jordan Bohannan	Location:	Duck Creek
Weather:	29°F, 3mph wind, Partly Cloudy	Environment:	Snowy, Landfill

Multiparameter Water Meter	Make: Horiba	Model: U-5000	Serial Number: AGJTK4XG		
Water Level Meter	Make: Heron	Model: Dipper T	Serial Number: 11FF220930SML		

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.09	s.u.	±0.1 s.u.	P	No	N/A	MSI	023067-01	3/14/2025
pH 7.00a	6.99	s.u.	±0.1 s.u.	P	No	N/A	MSI	023051-02	2/21/2025
pH 10.00a	10.33	s.u.	±0.1 s.u.	F	Yes	10.00	MSI	022361-01	12/27/2024
SC Zero (DI)	11.4	µS/cm	0<25 µS/cm	P	No	N/A	Pace Labs	N/A (DI)	N/A (DI)
SC 2000	1950	µS/cm	±5%	P	No	N/A	Geotech	3GF1197	Jun-24
ORP	352	mV	±15 mV	P	No	NA	InSitu	~~3GB927~~	~~Jan-24~~
DO (Zero pt)	~~5.47~~ 0.00	mg/L	±0.1	~~F~~ P	~~Yes~~ No	N/A	Macron	#000228049	8/26/2025
DO (Saturated)	99.3	%	97-100%	P	No	N/A	Pace Labs	N/A (DI)	N/A (DI)
Turbidity (DI)	1.3	NTU	<2 NTU	P	No	N/A	Pace Labs	N/A (DI)	N/A (DI)

Exp. 6/24
Lot* 3G11011 BG 1/23/24

01/18 JB

Approx. every 4 hrs, unless only one well

ICV (Initial Calibration Verification)					Time: 11:59			
Buffer	Check Value	Units	Range	Pass/Fail	Action Taken?	Manufacturer	Lot#	Exp.
pH 4.00b	3.62	s.u.	±0.15 s.u.	F	Calibrated: 7.00	Geotech	3GB1049	Feb-25
pH 7.00b	6.97	s.u.	±0.15 s.u.	P	None	Geotech	2GF113	Jun-24
pH 10.00b	10.16	s.u.	±0.15 s.u.	F	Calibrated: 9.99	Geotech	3GA1134	Jan-25
SC 1000	987	µS/cm	±5%	P	None	Ricca	4209A12	Aug-24

Approx. every 4 hrs, unless only one well

CCV (Continued Calibration Verification):					Time: 15:42				
Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	3.94	s.u.	±0.1 s.u.	P	No	N/A	MSI	023067-01	3/14/2025
pH 7.00a	7.03	s.u.	±0.1 s.u.	P	No	N/A	MSI	023051-02	2/21/2025
pH 10.00a	10.15	s.u.	±0.1 s.u.	F	Yes	10.01	MSI	022361-01	12/27/2024
SC 1000	993	µS/cm	±5%	P	No	N/A	Ricca	4209A12	Aug-24
DO (Zero pt)	0.00	mg/L	±0.1 mg/L	P	No	N/A	Macron	#000228049	8/26/2025
Turbidity (DI)	1.7	NTU	<2 NTU	P	No	N/A	Pace Labs	N/A (DI)	N/A (DI)

Approx. every 4 hrs, unless only one well

CCV (Continued Calibration Verification):					Time:				
Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
4.00a		s.u.	±0.1 s.u.				MSI	023067-01	3/14/2025
7.00a		s.u.	±0.1 s.u.				MSI	023051-02	2/21/2025
10.00a		s.u.	±0.1 s.u.				MSI	022361-01	12/27/2024
SC 1000		µS/cm	±5%				Ricca	4209A12	Aug-24
DO (Zero pt)		mg/L	±0.1 mg/L				Macron	#000228049	8/26/2025
Turbidity (DI)		NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

Comments: ORP taken at 0°C

Signature:	JBohannan	Date:	01/18/2024

Multiparameter Meter Field Calibration Checklist

Field Personnel:	Jordan Bohannan	Location:	Duck Creek
Weather:	7°F, 15mph winds, mostly sunny	Environment:	Snow Drifts, Pond

Multiparameter Water Meter	Make: Horiba	Model: U-5000	Serial Number:	PW2GYJD3	
Water Level Meter	Make: Heron	Model: Dipper-T	Serial Number:	11FF2209305ML	

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	5.61	s.u.	±0.1 s.u.	F	Yes	3.99	MSI	023067-01	3/14/2025
pH 7.00a	6.79	s.u.	±0.1 s.u.	F	Yes	7.07	MSI	023051-02	2/21/2025
pH 10.00a	10.08	s.u.	±0.1 s.u.	P	No	N/A	MSI	022361-01	12/27/2024
SC Zero (DI)	14	µS/cm	0<25 µS/cm	P	No	N/A	Pace Labs	N/A (DI)	N/A (DI)
SC 2000	1989	µS/cm	±5%	P	No	N/A	Geotech	3GF1197	Jun-24
ORP	233	mV	±15 mV	P	No	N/A	InSitu	~~3GD927~~	~~Jan-24~~
DO (Zero pt)	0.03	mg/L	±0.1	P	No	N/A	Macron	#000228049	8/26/2025
DO (Saturated)	98.8	%	97-100%	P	No	N/A	Pace Labs	N/A (DI)	N/A (DI)
Turbidity (DI)	1.3	NTU	<2 NTU	P	No		Pace Labs	N/A (DI)	N/A (DI)

Exp. 6/24
lot #
3G11011
BG
1/23/24

Approx. every 4 hrs, unless only one well

ICV (Initial Calibration Verification)					Time: 10:05			
Buffer	Check Value	Units	Range	Pass/Fail	Action Taken?	Manufacturer	Lot#	Exp.
pH 4.00b	3.96	s.u.	±0.15 s.u.	P	None	Geotech	3GB1049	Feb-25
pH 7.00b	6.97	s.u.	±0.15 s.u.	P	None	Geotech	2GF113	Jun-24
pH 10.00b	10.08	s.u.	±0.15 s.u.	P	None	Geotech	3GA1134	Jan-25
SC 1000	993	µS/cm	±5%	P	None	Ricca	4209A12	Aug-24

Approx. every 4 hrs, unless only one well

CCV (Continued Calibration Verification):					Time:				
Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a		s.u.	±0.1 s.u.				MSI	023067-01	3/14/2025
pH 7.00a		s.u.	±0.1 s.u.				MSI	023051-02	2/21/2025
pH 10.00a		s.u.	±0.1 s.u.				MSI	022361-01	12/27/2024
SC 1000		µS/cm	±5%				Ricca	4209A12	Aug-24
DO (Zero pt)		mg/L	±0.1 mg/L				Macron	#000228049	8/26/2025
Turbidity (DI)		NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

Approx. every 4 hrs, unless only one well

CCV (Continued Calibration Verification):					Time:				
Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
4.00a		s.u.	±0.1 s.u.				MSI	023067-01	3/14/2025
7.00a		s.u.	±0.1 s.u.				MSI	023051-02	2/21/2025
10.00a		s.u.	±0.1 s.u.				MSI	022361-01	12/27/2024
SC 1000		µS/cm	±5%				Ricca	4209A12	Aug-24
DO (Zero pt)		mg/L	±0.1 mg/L				Macron	#000228049	8/26/2025
Turbidity (DI)		NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

Comments: Only one well done

Signature:	JBohannan	Date:	01/19/2024

Multiparameter Meter Field Calibration Checklist

Field Personnel:	Austin Moore	Location:	duck creek
Weather:	16-0° sunny wind WNW 6mph	Environment:	snow

Multiparameter Water Meter	Make: Horriba	Model: U-5000	Serial Number:	AGJTK4XG	
Water Level Meter	Make: Heron	Model: Dipper T	Serial Number:	3717-T	

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.03	s.u.	±0.1 s.u.	P	N	N/A	MSI	023067-01	3/14/2025
pH 7.00a	7.01	s.u.	±0.1 s.u.				MSI	023051-02	2/21/2025
pH 10.00a	10.08	s.u.	±0.1 s.u.				MSI	022361-01	12/27/2024
SC Zero (DI)	0	µS/cm	0<25 µS/cm				Pace Labs	N/A (DI)	N/A (DI)
SC 2000	2020	µS/cm	±5%				Geotech	3GF1197	Jun-24
ORP	236	mV	±15 mV				InSitu	~~3GD927~~	~~Jan-24~~
DO (Zero pt)	0.0	mg/L	±0.1				Macron	#000228049	8/26/2025
DO (Saturated)	99.6	%	97-100%				Pace Labs	N/A (DI)	N/A (DI)
Turbidity (DI)	0.0	NTU	<2 NTU	+		—	Pace Labs	N/A (DI)	N/A (DI)

Exp. 6/24
Lot # 3GF1197
BG 1/23/24

Approx. every 4 hrs, unless only one well

ICV (Initial Calibration Verification) Time: 1030

Buffer	Check Value	Units	Range	Pass/Fail	Action Taken?	Manufacturer	Lot#	Exp.
pH 4.00b	4.06	s.u.	±0.15 s.u.	P	N	Geotech	3GB1049	Feb-25
pH 7.00b	7.01	s.u.	±0.15 s.u.			Geotech	2GF113	Jun-24
pH 10.00b	9.92	s.u.	±0.15 s.u.			Geotech	3GA1134	Jan-25
SC 1000	1020	µS/cm	±5%			Ricca	4209A12	Aug-24

Approx. every 4 hrs, unless only one well

CCV (Continued Calibration Verification): Time: 1230

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.08	s.u.	±0.1 s.u.	P	N	N/A	MSI	023067-01	3/14/2025
pH 7.00a	6.96	s.u.	±0.1 s.u.				MSI	023051-02	2/21/2025
pH 10.00a	10.03	s.u.	±0.1 s.u.				MSI	022361-01	12/27/2024
SC 1000	1018	µS/cm	±5%				Ricca	4209A12	Aug-24
DO (Zero pt)	0.0	mg/L	±0.1 mg/L				Macron	#000228049	8/26/2025
Turbidity (DI)	0.0	NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

Approx. every 4 hrs, unless only one well

CCV (Continued Calibration Verification): Time:

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
4.00a		s.u.	±0.1 s.u.				MSI	023067-01	3/14/2025
7.00a		s.u.	±0.1 s.u.				MSI	023051-02	2/21/2025
10.00a		s.u.	±0.1 s.u.				MSI	022361-01	12/27/2024
SC 1000		µS/cm	±5%				Ricca	4209A12	Aug-24
DO (Zero pt)		mg/L	±0.1 mg/L				Macron	#000228049	8/26/2025
Turbidity (DI)		NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

Comments:

Signature: [signature] Date: 19-Jan-24

Multiparameter Meter Field Calibration Checklist

Field Personnel:	AP AW	Location:	Duck creek
Weather:	wind NW 9-18mph 8°C Sunny	Environment:	grass, snow

	Make:		Model:		Serial Number:	
Multiparameter Water Meter	Make:	Horiba	Model:	U5000	Serial Number:	WU6 83C85
Water Level Meter	Make:	Heron	Model:	Dipper-T	Serial Number:	19FF2111192HB

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.00	s.u.	±0.1 s.u.	P	NO	N/A	MSI	023067-01	3/14/2025
pH 7.00a	7.02	s.u.	±0.1 s.u.				MSI	023051-02	2/21/2025
pH 10.00a	10.02	s.u.	±0.1 s.u.				MSI	022361-01	12/27/2024
SC Zero (DI)	0.0	µS/cm	0<25 µS/cm				Pace Labs	N/A (DI)	N/A (DI)
SC 2000	1980	µS/cm	±5%				Geotech	3GF1197	Jun-24
ORP	242	mV	±15 mV				InSitu	~~3GD927~~	~~Jan-24~~
DO (Zero pt)	0.00	mg/L	±0.1				Macron	#000228049	8/26/2025
DO (Saturated)	98.22	%	97-100%				Pace Labs	N/A (DI)	N/A (DI)
Turbidity (DI)	0.0	NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

Exp. 6/24 Lot # 3G11011 BG 1/23/24

Approx. every 4 hrs, unless only one well

ICV (Initial Calibration Verification) Time: 1010

Buffer	Check Value	Units	Range	Pass/Fail	Action Taken?	Manufacturer	Lot#	Exp.
pH 4.00b	3.99	s.u.	±0.15 s.u.	P	N/A	Geotech	3GB1049	Feb-25
pH 7.00b	7.00	s.u.	±0.15 s.u.			Geotech	2GF113	Jun-24
pH 10.00b	9.96	s.u.	±0.15 s.u.			Geotech	3GA1134	Jan-25
SC 1000	1020	µS/cm	±5%			Ricca	4209A12	Aug-24

Approx. every 4 hrs, unless only one well

CCV (Continued Calibration Verification): Time: 1250

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.01	s.u.	±0.1 s.u.	P	no	NA	MSI	023067-01	3/14/2025
pH 7.00a	7.03	s.u.	±0.1 s.u.				MSI	023051-02	2/21/2025
pH 10.00a	10.04	s.u.	±0.1 s.u.				MSI	022361-01	12/27/2024
SC 1000	1030	µS/cm	±5%				Ricca	4209A12	Aug-24
DO (Zero pt)	0.01	mg/L	±0.1 mg/L				Macron	#000228049	8/26/2025
Turbidity (DI)	0.0	NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

Approx. every 4 hrs, unless only one well

CCV (Continued Calibration Verification): Time:

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
4.00a		s.u.	±0.1 s.u.				MSI	023067-01	3/14/2025
7.00a		s.u.	±0.1 s.u.				MSI	023051-02	2/21/2025
10.00a		s.u.	±0.1 s.u.				MSI	022361-01	12/27/2024
SC 1000		µS/cm	±5%				Ricca	4209A12	Aug-24
DO (Zero pt)		mg/L	±0.1 mg/L				Macron	#000228049	8/26/2025
Turbidity (DI)		NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

Comments:

Signature:	[signature]	Date:	1/19/~~2023~~ 2024

AP 1/19/24

Serial #: 19FF2111192HB

BG

Multiparameter Meter Field Calibration Checklist

Field Personnel:	Austin Moore	Location:	Duck Creek
Weather:	37°-32° cloudy/Rain wind 53mph	Environment:	Ice, mud, snow
Multiparameter Water Meter	Make: Aquatroll	Model: AV-6000	Serial Number: AW2GYJD3
Water Level Meter	Make: WT	Model: Heron	Serial Number: HFF-220905ML

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	3.92	s.u.	±0.1 s.u.	P	N	N	MSI	023067-01	3/14/2025
pH 7.00a	7.05	s.u.	±0.1 s.u.				MSI	023051-02	2/21/2025
pH 10.00a	10.01	s.u.	±0.1 s.u.				MSI	022361-01	12/27/2024
SC Zero (DI)	0.0	µS/cm	0<25 µS/cm				Pace Labs	N/A (DI)	N/A (DI)
SC 2000	1.99	µS/cm	±5%				Geotech	3GF1197	Jun-24
ORP	240	mV	±15 mV				InSitu	~~3GB927~~	~~Jan-24~~
DO (Zero pt)	0.00	mg/L	±0.1				Macron	#000228049	8/26/2025
DO (Saturated)	99.9	%	97-100%				Pace Labs	N/A (DI)	N/A (DI)
Turbidity (DI)	0	NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

Exp. 6/24
Lot # 3G11011
BG
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Approx. every 4 hrs, unless only one well

ICV (Initial Calibration Verification) Time: 0930

Buffer	Check Value	Units	Range	Pass/Fail	Action Taken?	Manufacturer	Lot#	Exp.
pH 4.00b	4.00	s.u.	±0.15 s.u.	P	N	Geotech	3GB1049	Feb-25
pH 7.00b	7.01	s.u.	±0.15 s.u.			Geotech	2GF113	Jun-24
pH 10.00b	10.03	s.u.	±0.15 s.u.			Geotech	3GA1134	Jan-25
SC 1000	1010	µS/cm	±5%			Ricca	4209A12	Aug-24

Approx. every 4 hrs, unless only one well

CCV (Continued Calibration Verification): Time: 1544

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.03	s.u.	±0.1 s.u.	P	N	N	MSI	023067-01	3/14/2025
pH 7.00a	7.06	s.u.	±0.1 s.u.				MSI	023051-02	2/21/2025
pH 10.00a	9.98	s.u.	±0.1 s.u.				MSI	022361-01	12/27/2024
SC 1000	990	µS/cm	±5%				Ricca	4209A12	Aug-24
DO (Zero pt)	0.00	mg/L	±0.1 mg/L				Macron	#000228049	8/26/2025
Turbidity (DI)	0	NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

Approx. every 4 hrs, unless only one well

CCV (Continued Calibration Verification): Time:

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
4.00a		s.u.	±0.1 s.u.				MSI	023067-01	3/14/2025
7.00a		s.u.	±0.1 s.u.				MSI	023051-02	2/21/2025
10.00a		s.u.	±0.1 s.u.				MSI	022361-01	12/27/2024
SC 1000		µS/cm	±5%				Ricca	4209A12	Aug-24
DO (Zero pt)		mg/L	±0.1 mg/L				Macron	#000228049	8/26/2025
Turbidity (DI)		NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

Comments:

Signature: Austin M Date: 23-Jan-24

BG

Multiparameter Meter Field Calibration Checklist

Field Personnel:	Jordan Bohannan	Location:	Duck Creek
Weather:	36°F, Rain, 4mph wind, Cloudy	Environment:	Icedover, Snow covered
Multiparameter Water Meter	Make: Horiba	Model: U-5000	Serial Number: WUG83C85
Water Level Meter	Make: Heron	Model: DipperT	Serial Number: 3917-T

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.07	s.u.	±0.1 s.u.	P	No	N/A	MSI	023067-01	3/14/2025
pH 7.00a	6.84	s.u.	±0.1 s.u.	F	Yes	7.00	MSI	023051-02	2/21/2025
pH 10.00a	10.02	s.u.	±0.1 s.u.	P	No	N/A	MSI	022361-01	12/27/2024
SC Zero (DI)	7.8	µS/cm	0<25 µS/cm	P	No	N/A	Pace Labs	N/A (DI)	N/A (DI)
SC 2000	2050	µS/cm	±5%	P	No	N/A	Geotech	3GF1197	Jun-24
ORP	227	mV	±15 mV	P	No	N/A	InSitu	~~3GD027~~	~~Jan-24~~
DO (Zero pt)	0.07	mg/L	±0.1	P	No	N/A	Macron	#000228049	8/26/2025
DO (Saturated)	98.3%	%	97-100%	P	NO	N/A	Pace Labs	N/A (DI)	N/A (DI)
Turbidity (DI)	0	NTU	<2 NTU	P	No	N/A	Pace Labs	N/A (DI)	N/A (DI)

Exp. 6/24 lot # 3G11011 BG 1/24/24

Approx. every 4 hrs, unless only one well

ICV (Initial Calibration Verification)					Time: 09:24			
Buffer	Check Value	Units	Range	Pass/Fail	Action Taken?	Manufacturer	Lot#	Exp.
pH 4.00b	3.93	s.u.	±0.15 s.u.	P	None	Geotech	3GB1049	Feb-25
pH 7.00b	6.86	s.u.	±0.15 s.u.	P	None	Geotech	2GF113	Jun-24
pH 10.00b	9.99	s.u.	±0.15 s.u.	P	None	Geotech	3GA1134	Jan-25
SC 1000	987	µS/cm	±5%	P	None	Ricca	4209A12	Aug-24

Approx. every 4 hrs, unless only one well

CCV (Continued Calibration Verification):					Time: 13:38			
Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	3.97	s.u.	±0.1 s.u.	P	No	N/A	MSI	023067-01	3/14/2025
pH 7.00a	7.01	s.u.	±0.1 s.u.	P	No	N/A	MSI	023051-02	2/21/2025
pH 10.00a	10.02	s.u.	±0.1 s.u.	P	No	N/A	MSI	022361-01	12/27/2024
SC 1000	987	µS/cm	±5%	P	No	N/A	Ricca	4209A12	Aug-24
DO (Zero pt)	0	mg/L	±0.1 mg/L	P	NO	N/A	Macron	#000228049	8/26/2025
Turbidity (DI)	0	NTU	<2 NTU	P	No	N/A	Pace Labs	N/A (DI)	N/A (DI)

Approx. every 4 hrs, unless only one well

CCV (Continued Calibration Verification):					Time:				
Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
4.00a		s.u.	±0.1 s.u.				MSI	023067-01	3/14/2025
7.00a		s.u.	±0.1 s.u.				MSI	023051-02	2/21/2025
10.00a		s.u.	±0.1 s.u.				MSI	022361-01	12/27/2024
SC 1000		µS/cm	±5%				Ricca	4209A12	Aug-24
DO (Zero pt)		mg/L	±0.1 mg/L				Macron	#000228049	8/26/2025
Turbidity (DI)		NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

Comments: ORP Taken at 1.67°C

Signature:	J Bohannan	Date:	01/23/2024

Multiparameter Meter Field Calibration Checklist

Field Personnel:	Andrew Wieteska, Joe Reed	Location:	Duck Creek
Weather:	35°F, Rain, 4mph wind, Cloudy	Environment:	Iced over, Snow covered
Multiparameter Water Meter	Make: Horiba	Model: U5000	Serial Number: AGJTK4KG
Water Level Meter	Make: Heron	Model: Series 1900	Serial Number: 19FF211192HB

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	3.97	s.u.	±0.1 s.u.	P	NO	N/A	MSI	023067-01	3/14/2025
pH 7.00a	6.99	s.u.	±0.1 s.u.	P	NO	N/A	MSI	023051-02	2/21/2025
pH 10.00a	10.05	s.u.	±0.1 s.u.	P	NO	N/A	MSI	022361-01	12/27/2024
SC Zero (DI)	10	µS/cm	0<25 µS/cm	P	NO	N/A	Pace Labs	N/A (DI)	N/A (DI)
SC 2000	1990	µS/cm	±5%	P	NO	N/A	Geotech	3GF1197	Jun-24
ORP	248	mV	±15 mV	P	NO	N/A	InSitu	~~3GB927~~	~~Jan-24~~
DO (Zero pt)	0.0	mg/L	±0.1	P	NO	N/A	Macron	#000228049	8/26/2025
DO (Saturated)	99.5	%	97-100%	P	NO	N/A	Pace Labs	N/A (DI)	N/A (DI)
Turbidity (DI)	0.0	NTU	<2 NTU	P	NO	N/A	Pace Labs	N/A (DI)	N/A (DI)

Exp. 6/24 Lot# 3G11011 BG 1/24/24

Approx. every 4 hrs, unless only one well

ICV (Initial Calibration Verification)

Time: 10:24

Buffer	Check Value	Units	Range	Pass/Fail	Action Taken?	Manufacturer	Lot#	Exp.
pH 4.00b	4.00	s.u.	±0.15 s.u.	P	N	Geotech	3GB1049	Feb-25
pH 7.00b	6.95	s.u.	±0.15 s.u.	P		Geotech	2GF113	Jun-24
pH 10.00b	9.99	s.u.	±0.15 s.u.	P		Geotech	3GA1134	Jan-25
SC 1000	1000	µS/cm	±5%	P		Ricca	4209A12	Aug-24

Approx. every 4 hrs, unless only one well

CCV (Continued Calibration Verification):

Time: 1550

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	3.99	s.u.	±0.1 s.u.	P	N		MSI	023067-01	3/14/2025
pH 7.00a	7.01	s.u.	±0.1 s.u.	P			MSI	023051-02	2/21/2025
pH 10.00a	10.01	s.u.	±0.1 s.u.	P			MSI	022361-01	12/27/2024
SC 1000	1020	µS/cm	±5%	P			Ricca	4209A12	Aug-24
DO (Zero pt)	0.0	mg/L	±0.1 mg/L	P			Macron	#000228049	8/26/2025
Turbidity (DI)	0.0	NTU	<2 NTU	P			Pace Labs	N/A (DI)	N/A (DI)

Approx. every 4 hrs, unless only one well

CCV (Continued Calibration Verification):

Time:

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
4.00a		s.u.	±0.1 s.u.				MSI	023067-01	3/14/2025
7.00a		s.u.	±0.1 s.u.				MSI	023051-02	2/21/2025
10.00a		s.u.	±0.1 s.u.				MSI	022361-01	12/27/2024
SC 1000		µS/cm	±5%				Ricca	4209A12	Aug-24
DO (Zero pt)		mg/L	±0.1 mg/L				Macron	#000228049	8/26/2025
Turbidity (DI)		NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

Comments:

Signature:	Joseph R Reed	Date:	1/23/24

Multiparameter Meter Field Calibration Checklist

Field Personnel:	Jordan Bohannan	Location:	Duck Creek
Weather:	36°F, Drizzle, 6mph wind	Environment:	Snow, Slush, Ice

Multiparameter Water Meter	Make: Horiba	Model: U-5000	Serial Number:	WUG83C85	
Water Level Meter	Make: Heron	Model: Dipper T	Serial Number:	19FF21111 92#B	

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.02	s.u.	±0.1 s.u.	P	No	N/A	MSI	023067-01	3/14/2025
pH 7.00a	6.86	s.u.	±0.1 s.u.	F	Yes	7.00	MSI	023051-02	2/21/2025
pH 10.00a	10.23	s.u.	±0.1 s.u.	F	Yes	10.01	MSI	022361-01	12/27/2024
SC Zero (DI)	75	µS/cm	0<25 µS/cm	F	Yes	1.7	Pace Labs	N/A (DI)	N/A (DI)
SC 2000	1950	µS/cm	±5%	P	No	N/A	Geotech	3GF1197	Jun-24
ORP	215	mV	±15 mV	P	No		InSitu	~~3GD927~~	~~Jan-24~~
DO (Zero pt)	0.00	mg/L	±0.1	P	No		Macron	#000228049	8/26/2025
DO (Saturated)	97%	%	97-100%	P	No		Pace Labs	N/A (DI)	N/A (DI)
Turbidity (DI)	0.0	NTU	<2 NTU	P	No		Pace Labs	N/A (DI)	N/A (DI)

Exp. 6/24
Lot# 3GI1021
BG
1/25/24

Approx. every 4 hrs, unless only one well

ICV (Initial Calibration Verification)					Time: 09:34			
Buffer	Check Value	Units	Range	Pass/Fail	Action Taken?	Manufacturer	Lot#	Exp.
pH 4.00b	4.04	s.u.	±0.15 s.u.	P	None	Geotech	3GB1049	Feb-25
pH 7.00b	6.84	s.u.	±0.15 s.u.	F	Calibrated → 7.00	Geotech	2GF113	Jun-24
pH 10.00b	10.03	s.u.	±0.15 s.u.	P	None	Geotech	3GA1134	Jan-25
SC 1000	974	µS/cm	±5%	P	None	Ricca	4209A12	Aug-24

Approx. every 4 hrs, unless only one well

CCV (Continued Calibration Verification):					Time: 14:38			
Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.03	s.u.	±0.1 s.u.	P	No	N/A	MSI	023067-01	3/14/2025
pH 7.00a	6.94	s.u.	±0.1 s.u.	P	No	N/A	MSI	023051-02	2/21/2025
pH 10.00a	10.07	s.u.	±0.1 s.u.	P	No	N/A	MSI	022361-01	12/27/2024
SC 1000	987	µS/cm	±5%	P	No	N/A	Ricca	4209A12	Aug-24
DO (Zero pt)	0.00	mg/L	±0.1 mg/L	P	No	N/A	Macron	#000228049	8/26/2025
Turbidity (DI)	0.0	NTU	<2 NTU	P	No	N/A	Pace Labs	N/A (DI)	N/A (DI)

Approx. every 4 hrs, unless only one well

CCV (Continued Calibration Verification):					Time:			
Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
4.00a		s.u.	±0.1 s.u.				MSI	023067-01	3/14/2025
7.00a		s.u.	±0.1 s.u.				MSI	023051-02	2/21/2025
10.00a		s.u.	±0.1 s.u.				MSI	022361-01	12/27/2024
SC 1000		µS/cm	±5%				Ricca	4209A12	Aug-24
DO (Zero pt)		mg/L	±0.1 mg/L				Macron	#000228049	8/26/2025
Turbidity (DI)		NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

Comments:

Signature:	JBohannan	Date:	07/24/24

BG

Multiparameter Meter Field Calibration Checklist

Field Personnel:	AP	Location:	Duck creek
Weather:	37°-40°F cloudy rain Wind NE 6mph	Environment:	Snow, grass, mud

Multiparameter Water Meter	Make: Horiba	Model: U5000	Serial Number:	PW26YJ03	
Water Level Meter	Make: Heron	Model: Dipper T	Serial Number:	3717-T	

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.00	s.u.	±0.1 s.u.	P	Yes	4.00	MSI	023067-01	3/14/2025
pH 7.00a	6.87	s.u.	±0.1 s.u.	P	Yes	7.00	MSI	023051-02	2/21/2025
pH 10.00a	10.07	s.u.	±0.1 s.u.	P	Yes	10.01	MSI	022361-01	12/27/2024
SC Zero (DI)	0.0	µS/cm	0<25 µS/cm	P	No	—	Pace Labs	N/A (DI)	N/A (DI)
SC 2000	2040	µS/cm	±5%	P	No	—	Geotech	3GF1197	Jun-24
ORP	300	mV	±15 mV	P	Yes	250	InSitu	~~3GB027~~	~~Jan-24~~
DO (Zero pt)	0.00	mg/L	±0.1	P	No	—	Macron	#000228049	8/26/2025
DO (Saturated)	98.7	%	97-100%	P	No	—	Pace Labs	N/A (DI)	N/A (DI)
Turbidity (DI)	0.0	NTU	<2 NTU	P	No	—	Pace Labs	N/A (DI)	N/A (DI)

Approx. every 4 hrs, unless only one well

249 @ 10°C

Exp. 6/24 Lot# 3GB1021 BG 1/25/24

ICV (Initial Calibration Verification)

Time: 1031

Buffer	Check Value	Units	Range	Pass/Fail	Action Taken?	Manufacturer	Lot#	Exp.
pH 4.00b	3.992	s.u.	±0.15 s.u.	P	—	Geotech	3GB1049	Feb-25
pH 7.00b	7.000	s.u.	±0.15 s.u.	P	—	Geotech	2GF113	Jun-24
pH 10.00b	10.005	s.u.	±0.15 s.u.	P	—	Geotech	3GA1134	Jan-25
SC 1000	1030	µS/cm	±5%	P	—	Ricca	4209A12	Aug-24

Approx. every 4 hrs, unless only one well

CCV (Continued Calibration Verification):

Time: 1509

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.04	s.u.	±0.1 s.u.	P	NO	—	MSI	023067-01	3/14/2025
pH 7.00a	7.08	s.u.	±0.1 s.u.	P	NO	—	MSI	023051-02	2/21/2025
pH 10.00a	10.06	s.u.	±0.1 s.u.	P	NO	—	MSI	022361-01	12/27/2024
SC 1000	1020	µS/cm	±5%	P	NO	—	Ricca	4209A12	Aug-24
DO (Zero pt)	0.00	mg/L	±0.1 mg/L	P	NO	—	Macron	#000228049	8/26/2025
Turbidity (DI)	0.0	NTU	<2 NTU	P	NO	—	Pace Labs	N/A (DI)	N/A (DI)

Approx. every 4 hrs, unless only one well

CCV (Continued Calibration Verification):

Time:

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
4.00a		s.u.	±0.1 s.u.				MSI	023067-01	3/14/2025
7.00a		s.u.	±0.1 s.u.				MSI	023051-02	2/21/2025
10.00a		s.u.	±0.1 s.u.				MSI	022361-01	12/27/2024
SC 1000		µS/cm	±5%				Ricca	4209A12	Aug-24
DO (Zero pt)		mg/L	±0.1 mg/L				Macron	#000228049	8/26/2025
Turbidity (DI)		NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

Comments:

Signature:		Date:	1/24/2024

BG

Multiparameter Meter Field Calibration Checklist

Field Personnel:	JR, LR	Location:	DUCK CREEK
Weather:	35-38° cloudy/rainy	Environment:	Wet snow/rain

Multiparameter Water Meter	Make: Horiba	Model: U-5000	Serial Number:	AGJTK4XG	
Water Level Meter	Make: Heron	Model: Series 1100	Serial Number:	19FF2111 92HB	

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.00	s.u.	±0.1 s.u.	P	N		MSI	023067-01	3/14/2025
pH 7.00a	6.99	s.u.	±0.1 s.u.				MSI	023051-02	2/21/2025
pH 10.00a	10.00	s.u.	±0.1 s.u.				MSI	022361-01	12/27/2024
SC Zero (DI)	0.4	µS/cm	0<25 µS/cm				Pace Labs	N/A (DI)	N/A (DI)
SC 2000	2050	µS/cm	±5%				Geotech	3GF1197	Jun-24
ORP	249	mV	±15 mV				InSitu	~~3GD927~~	~~Jan-24~~
DO (Zero pt)	0.00	mg/L	±0.1				Macron	#000228049	8/26/2025
DO (Saturated)	98.9	%	97-100%				Pace Labs	N/A (DI)	N/A (DI)
Turbidity (DI)	0.0	NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

Exp. 6/24
Lot # 3GI2011
BG 1/25/24

Approx. every 4 hrs, unless only one well

ICV (Initial Calibration Verification)					Time: 945			
Buffer	Check Value	Units	Range	Pass/Fail	Action Taken?	Manufacturer	Lot#	Exp.
pH 4.00b	3.99	s.u.	±0.15 s.u.	P	N	Geotech	3GB1049	Feb-25
pH 7.00b	7.00	s.u.	±0.15 s.u.			Geotech	2GF113	Jun-24
pH 10.00b	9.97	s.u.	±0.15 s.u.			Geotech	3GA1134	Jan-25
SC 1000		µS/cm	±5%			Ricca	4209A12	Aug-24

Approx. every 4 hrs, unless only one well

CCV (Continued Calibration Verification):					Time: 1456				
Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.03	s.u.	±0.1 s.u.	P	N	N	MSI	023067-01	3/14/2025
pH 7.00a	6.92	s.u.	±0.1 s.u.	P	N	N	MSI	023051-02	2/21/2025
pH 10.00a	10.03	s.u.	±0.1 s.u.	P	N	N	MSI	022361-01	12/27/2024
SC 1000	990	µS/cm	±5%	P	N	N	Ricca	4209A12	Aug-24
DO (Zero pt)	0	mg/L	±0.1 mg/L	P	N	N	Macron	#000228049	8/26/2025
Turbidity (DI)	0	NTU	<2 NTU	P	N	N	Pace Labs	N/A (DI)	N/A (DI)

Approx. every 4 hrs, unless only one well

CCV (Continued Calibration Verification):					Time:				
Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
4.00a		s.u.	±0.1 s.u.				MSI	023067-01	3/14/2025
7.00a		s.u.	±0.1 s.u.				MSI	023051-02	2/21/2025
10.00a		s.u.	±0.1 s.u.				MSI	022361-01	12/27/2024
SC 1000		µS/cm	±5%				Ricca	4209A12	Aug-24
DO (Zero pt)		mg/L	±0.1 mg/L				Macron	#000228049	8/26/2025
Turbidity (DI)		NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

Comments:

Signature:	Joseph R Reed	Date:	1/24/24

BG

Multiparameter Meter Field Calibration Checklist

Field Personnel:	AP	Location:	Duck Creek
Weather:	37°-40° F cloudy Wind NE 4mph	Environment:	snow, grass, mud
Multiparameter Water Meter	Make: Horiba	Model: U-5000	Serial Number: WVG83C85
Water Level Meter	Make: Heron	Model: Dipper T	Serial Number: 19FF21111492HB

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.10	s.u.	±0.1 s.u.	P	NO	N/A	MSI	023067-01	3/14/2025
pH 7.00a	6.95	s.u.	±0.1 s.u.	P	NO		MSI	023051-02	2/21/2025
pH 10.00a	10.01	s.u.	±0.1 s.u.	P	NO		MSI	022361-01	12/27/2024
SC Zero (DI)	23	µS/cm	0<25 µS/cm	P	NO		Pace Labs	N/A (DI)	N/A (DI)
SC 2000	2040	µS/cm	±5%	P	NO		Geotech	3GF1197	Jun-24
ORP	243	mV	±15 mV	P	NO		InSitu	~~3GD023~~	~~Jan-24~~
DO (Zero pt)	0.07	mg/L	±0.1	P	NO		Macron	#000228049	8/26/2025
DO (Saturated)	100%	%	97-100%	P	NO		Pace Labs	N/A (DI)	N/A (DI)
Turbidity (DI)	0.2	NTU	<2 NTU	P	NO		Pace Labs	N/A (DI)	N/A (DI)

Approx. every 4 hrs, unless only one well

Exp. 6/24
Lot # 3GA1011
BG
1/26/24

ICV (Initial Calibration Verification)					Time: 0941			
Buffer	Check Value	Units	Range	Pass/Fail	Action Taken?	Manufacturer	Lot#	Exp.
pH 4.00b	4.05	s.u.	±0.15 s.u.	P	NO	Geotech	3GB1049	Feb-25
pH 7.00b	7.01	s.u.	±0.15 s.u.	P		Geotech	2GF113	Jun-24
pH 10.00b	10.04	s.u.	±0.15 s.u.	P		Geotech	3GA1134	Jan-25
SC 1000	1030	µS/cm	±5%	P		Ricca	4209A12	Aug-24

Approx. every 4 hrs, unless only one well

CCV (Continued Calibration Verification):					Time: 1503				
Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.03	s.u.	±0.1 s.u.	P	NO	NA	MSI	023067-01	3/14/2025
pH 7.00a	7.05	s.u.	±0.1 s.u.	P	NO	NA	MSI	023051-02	2/21/2025
pH 10.00a	10.01	s.u.	±0.1 s.u.	P	NO	NA	MSI	022361-01	12/27/2024
SC 1000	1031	µS/cm	±5%	P	NO	NA	Ricca	4209A12	Aug-24
DO (Zero pt)	0.08	mg/L	±0.1 mg/L	P	NO	NA	Macron	#000228049	8/26/2025
Turbidity (DI)	0.0	NTU	<2 NTU	P	NO	NA	Pace Labs	N/A (DI)	N/A (DI)

Approx. every 4 hrs, unless only one well

CCV (Continued Calibration Verification):					Time:				
Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
4.00a		s.u.	±0.1 s.u.				MSI	023067-01	3/14/2025
7.00a		s.u.	±0.1 s.u.				MSI	023051-02	2/21/2025
10.00a		s.u.	±0.1 s.u.				MSI	022361-01	12/27/2024
SC 1000		µS/cm	±5%				Ricca	4209A12	Aug-24
DO (Zero pt)		mg/L	±0.1 mg/L				Macron	#000228049	8/26/2025
Turbidity (DI)		NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

Comments:

Signature:		Date:	1/25/2024

Multiparameter Meter Field Calibration Checklist

Field Personnel:	Joe Reed	Location:	Duck Creek (Vistra
Weather:	Cloudy/sprinkles 36-38°F wind 7mph	Environment:	Slushy / wet

Multiparameter Water Meter	Make: Horiba	Model: U5000	Serial Number:	KL9KJ9HA	
Water Level Meter	Make: Solinst	Model: model 101	Serial Number:	33459	

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.00	s.u.	±0.1 s.u.	P	N		MSI	023067-01	3/14/2025
pH 7.00a	6.99	s.u.	±0.1 s.u.				MSI	023051-02	2/21/2025
pH 10.00a	9.99	s.u.	±0.1 s.u.				MSI	022361-01	12/27/2024
SC Zero (DI)	0.10	µS/cm	0<25 µS/cm				Pace Labs	N/A (DI)	N/A (DI)
SC 2000	2050	µS/cm	±5%				Geotech	3GF1197	Jun-24
ORP	245	mV	±15 mV				InSitu	~~3GD927~~	~~Jan-24~~
DO (Zero pt)	0.0	mg/L	±0.1				Macron	#000228049	8/26/2025
DO (Saturated)	98.9	%	97-100%				Pace Labs	N/A (DI)	N/A (DI)
Turbidity (DI)	0.0	NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

Exp. 6/24 Lot # 3GI1011 BG 11/26/24

Approx. every 4 hrs, unless only one well

ICV (Initial Calibration Verification) — Time: 1015

Buffer	Check Value	Units	Range	Pass/Fail	Action Taken?	Manufacturer	Lot#	Exp.
pH 4.00b	3.99	s.u.	±0.15 s.u.	P	N	Geotech	3GB1049	Feb-25
pH 7.00b	6.98	s.u.	±0.15 s.u.			Geotech	2GF113	Jun-24
pH 10.00b	9.98	s.u.	±0.15 s.u.			Geotech	3GA1134	Jan-25
SC 1000	1010	µS/cm	±5%			Ricca	4209A12	Aug-24

Approx. every 4 hrs, unless only one well

CCV (Continued Calibration Verification): — Time: 15

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.02	s.u.	±0.1 s.u.	P	N		MSI	023067-01	3/14/2025
pH 7.00a	7.00	s.u.	±0.1 s.u.				MSI	023051-02	2/21/2025
pH 10.00a	10.01	s.u.	±0.1 s.u.				MSI	022361-01	12/27/2024
SC 1000	990	µS/cm	±5%				Ricca	4209A12	Aug-24
DO (Zero pt)	0.01	mg/L	±0.1 mg/L				Macron	#000228049	8/26/2025
Turbidity (DI)	0.0	NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

Approx. every 4 hrs, unless only one well

CCV (Continued Calibration Verification): — Time:

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
4.00a		s.u.	±0.1 s.u.				MSI	023067-01	3/14/2025
7.00a		s.u.	±0.1 s.u.				MSI	023051-02	2/21/2025
10.00a		s.u.	±0.1 s.u.				MSI	022361-01	12/27/2024
SC 1000		µS/cm	±5%				Ricca	4209A12	Aug-24
DO (Zero pt)		mg/L	±0.1 mg/L				Macron	#000228049	8/26/2025
Turbidity (DI)		NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

Comments:

Signature:	Joseph R Reed	Date:	1/25/24

BG

Multiparameter Meter Field Calibration Checklist

Field Personnel:	Jordon Bohannan	Location:	Duck Creek
Weather:	38°F, Cloudy, 5mph wind	Environment:	Slush, snow, ice

Multiparameter Water Meter	Make: Horiba	Model: U-5000	Serial Number: AGJTK4XG		
Water Level Meter	Make: Heron	Model: Dipper T	Serial Number: 3717-T		

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	3.65	s.u.	±0.1 s.u.	Fail	Yes	4.00	MSI	023067-01	3/14/2025
pH 7.00a	7.13	s.u.	±0.1 s.u.	Fail	Yes	7.01	MSI	023051-02	2/21/2025
pH 10.00a	10.18	s.u.	±0.1 s.u.	Fail	Yes	10.01	MSI	022361-01	12/27/2024
SC Zero (DI)	18	µS/cm	0<25 µS/cm	Pass	No	N/A	Pace Labs	N/A (DI)	N/A (DI)
SC 2000	2080	µS/cm	±5%	Pass	No	N/A	Geotech	3GF1197	Jun-24
ORP	335	mV	±15 mV	Pass	No	N/A	InSitu	~~3GB927~~	~~Jan-24~~
DO (Zero pt)	0.00	mg/L	±0.1	Pass	No	N/A	Macron	#000228049	8/26/2025
DO (Saturated)	100%	%	97-100%	Pass	No	N/A	Pace Labs	N/A (DI)	N/A (DI)
Turbidity (DI)	0.0	NTU	<2 NTU	Pass	No	N/A	Pace Labs	N/A (DI)	N/A (DI)

Exp. 6/24 Lot ~~A~~ 3GB1011 BG 1/26/24

Approx. every 4 hrs, unless only one well

ICV (Initial Calibration Verification)					Time: 10:15			
Buffer	Check Value	Units	Range	Pass/Fail	Action Taken?	Manufacturer	Lot#	Exp.
pH 4.00b	3.93	s.u.	±0.15 s.u.	P	None	Geotech	3GB1049	Feb-25
pH 7.00b	6.91	s.u.	±0.15 s.u.	P	None	Geotech	2GF113	Jun-24
pH 10.00b	10.13	s.u.	±0.15 s.u.	P	None	Geotech	3GA1134	Jan-25
SC 1000	1010	µS/cm	±5%	P	None	Ricca	4209A12	Aug-24

Approx. every 4 hrs, unless only one well

CCV (Continued Calibration Verification):					Time: 14:51				
Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	3.93	s.u.	±0.1 s.u.	P	No	N/A	MSI	023067-01	3/14/2025
pH 7.00a	7.01	s.u.	±0.1 s.u.	P	No	N/A	MSI	023051-02	2/21/2025
pH 10.00a	10.00	s.u.	±0.1 s.u.	P	No	N/A	MSI	022361-01	12/27/2024
SC 1000	987	µS/cm	±5%	P	No	N/A	Ricca	4209A12	Aug-24
DO (Zero pt)	0.0	mg/L	±0.1 mg/L	P	No	N/A	Macron	#000228049	8/26/2025
Turbidity (DI)	0.0	NTU	<2 NTU	P	No	N/A	Pace Labs	N/A (DI)	N/A (DI)

Approx. every 4 hrs, unless only one well

CCV (Continued Calibration Verification):					Time:				
Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
4.00a		s.u.	±0.1 s.u.				MSI	023067-01	3/14/2025
7.00a		s.u.	±0.1 s.u.				MSI	023051-02	2/21/2025
10.00a		s.u.	±0.1 s.u.				MSI	022361-01	12/27/2024
SC 1000		µS/cm	±5%				Ricca	4209A12	Aug-24
DO (Zero pt)		mg/L	±0.1 mg/L				Macron	#000228049	8/26/2025
Turbidity (DI)		NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

Comments:

Signature:	JBohannan	Date:	01/25/24

QC

Multiparameter Meter Field Calibration Checklist

Field Personnel:	Austin Moore	Location:	Duck Creek
Weather:	37°-32 cloudy, wind NE 6 mph	Environment:	Snow, mud

Multiparameter Water Meter	Make: Horriba	Model: U-5000	Serial Number: PW26YJ03		
Water Level Meter	Make: WT	Model: Heron	Serial Number: 19FF2111192HB		

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.02	s.u.	±0.1 s.u.	P	N	N/A	MSI	023067-01	3/14/2025
pH 7.00a	7.04	s.u.	±0.1 s.u.				MSI	023051-02	2/21/2025
pH 10.00a	9.94	s.u.	±0.1 s.u.				MSI	022361-01	12/27/2024
SC Zero (DI)	0.0	µS/cm	0<25 µS/cm				Pace Labs	N/A (DI)	N/A (DI)
SC 2000	2020	µS/cm	±5%				Geotech	3GF1197	Jun-24
ORP	243	mV	±15 mV				InSitu	~~3GD927~~	~~Jan-24~~
DO (Zero pt)	0.0	mg/L	±0.1				Macron	#000228049	8/26/2025
DO (Saturated)	98.7	%	97-100%				Pace Labs	N/A (DI)	N/A (DI)
Turbidity (DI)	0.0	NTU	<2 NTU		—	—	Pace Labs	N/A (DI)	N/A (DI)

Exp. 6/24
Lot # 3GI2011
3G 1126524

Approx. every 4 hrs, unless only one well

ICV (Initial Calibration Verification)					Time: 1014			
Buffer	Check Value	Units	Range	Pass/Fail	Action Taken?	Manufacturer	Lot#	Exp.
pH 4.00b	4.03	s.u.	±0.15 s.u.	P	N	Geotech	3GB1049	Feb-25
pH 7.00b	7.01	s.u.	±0.15 s.u.			Geotech	2GF113	Jun-24
pH 10.00b	10.06	s.u.	±0.15 s.u.			Geotech	3GA1134	Jan-25
SC 1000	1010	µS/cm	±5%			Ricca	4209A12	Aug-24

Approx. every 4 hrs, unless only one well

CCV (Continued Calibration Verification):					Time: 1520				
Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.06	s.u.	±0.1 s.u.	P	N	N/A	MSI	023067-01	3/14/2025
pH 7.00a	7.03	s.u.	±0.1 s.u.				MSI	023051-02	2/21/2025
pH 10.00a	10.08	s.u.	±0.1 s.u.				MSI	022361-01	12/27/2024
SC 1000	990	µS/cm	±5%				Ricca	4209A12	Aug-24
DO (Zero pt)	0.0	mg/L	±0.1 mg/L				Macron	#000228049	8/26/2025
Turbidity (DI)	0.0	NTU	<2 NTU		—	—	Pace Labs	N/A (DI)	N/A (DI)

Approx. every 4 hrs, unless only one well

CCV (Continued Calibration Verification):					Time:				
Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
4.00a		s.u.	±0.1 s.u.				MSI	023067-01	3/14/2025
7.00a		s.u.	±0.1 s.u.				MSI	023051-02	2/21/2025
10.00a		s.u.	±0.1 s.u.				MSI	022361-01	12/27/2024
SC 1000		µS/cm	±5%				Ricca	4209A12	Aug-24
DO (Zero pt)		mg/L	±0.1 mg/L				Macron	#000228049	8/26/2025
Turbidity (DI)		NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

Comments:

Signature:	Austin M	Date:	29-Jan-24

Multiparameter Meter Field Calibration Checklist

Field Personnel:	Jordan Bohannon	Location:	Duck Creek
Weather:	43°-32°F Cloudy, 4 mph wind	Environment:	mud, slush, snow, ice
Multiparameter Water Meter	Make: Horiba	Model: U-5000	Serial Number: WUG83C85
Water Level Meter	Make: Heron	Model: Dipper T	Serial Number: 19FF2111192HB

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	3.94	s.u.	±0.1 s.u.	Pass	No	N/A	MSI	023067-01	3/14/2025
pH 7.00a	6.75	s.u.	±0.1 s.u.	Fail	Yes	7.00	MSI	023051-02	2/21/2025
pH 10.00a	10.05	s.u.	±0.1 s.u.	Pass	No	N/A	MSI	022361-01	12/27/2024
SC Zero (DI)	0.00	µS/cm	0<25 µS/cm	Pass	No	N/A	Pace Labs	N/A (DI)	N/A (DI)
SC 2000	3040	µS/cm	±5%	Pass	No	N/A	Geotech	3GF1197	Jun-24
ORP	248★	mV	±15 mV	Pass	No	N/A	InSitu	3GI1011	Jun-24
DO (Zero pt)	0.00	mg/L	±0.1	Pass	No	N/A	Macron	#000228049	8/26/2025
DO (Saturated)	98.5%	%	97-100%	Pass	No	N/A	Pace Labs	N/A (DI)	N/A (DI)
Turbidity (DI)	0.0	NTU	<2 NTU	Pass	No	N/A	Pace Labs	N/A (DI)	N/A (DI)

Approx. every 4 hrs, unless only one well

ICV (Initial Calibration Verification) — Time: 09:49

Buffer	Check Value	Units	Range	Pass/Fail	Action Taken?	Manufacturer	Lot#	Exp.
pH 4.00b	3.87	s.u.	±0.15 s.u.	Pass	None	Geotech	3GB1049	Feb-25
pH 7.00b	6.85	s.u.	±0.15 s.u.	Pass	None	Geotech	2GF113	Jun-24
pH 10.00b	10.04	s.u.	±0.15 s.u.	Pass	None	Geotech	3GA1134	Jan-25
SC 1000	976	µS/cm	±5%	Pass	None	Ricca	4209A12	Aug-24

Approx. every 4 hrs, unless only one well

CCV (Continued Calibration Verification): — Time: 14:35

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	3.98	s.u.	±0.1 s.u.	P	No	N/A	MSI	023067-01	3/14/2025
pH 7.00a	6.97	s.u.	±0.1 s.u.	P	No	N/A	MSI	023051-02	2/21/2025
pH 10.00a	10.01	s.u.	±0.1 s.u.	P	No	N/A	MSI	022361-01	12/27/2024
SC 1000	992	µS/cm	±5%	P	No	N/A	Ricca	4209A12	Aug-24
DO (Zero pt)	0.0	mg/L	±0.1 mg/L	P	No	N/A	Macron	#000228049	8/26/2025
Turbidity (DI)	0.0	NTU	<2 NTU	P	No	N/A	Pace Labs	N/A (DI)	N/A (DI)

Approx. every 4 hrs, unless only one well

CCV (Continued Calibration Verification): — Time:

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
4.00a		s.u.	±0.1 s.u.				MSI	023067-01	3/14/2025
7.00a		s.u.	±0.1 s.u.				MSI	023051-02	2/21/2025
10.00a		s.u.	±0.1 s.u.				MSI	022361-01	12/27/2024
SC 1000		µS/cm	±5%				Ricca	4209A12	Aug-24
DO (Zero pt)		mg/L	±0.1 mg/L				Macron	#000228049	8/26/2025
Turbidity (DI)		NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

Comments: ★ ORP Taken at 19.05°C

Signature: JBohannon — Date: 01/26/~~2025~~ 2024

JB 1/26

BG

Multiparameter Meter Field Calibration Checklist

Field Personnel:	AP	Location:	Duck Creek
Weather:	32°-48°F [illegible]	Environment:	Snow, Wood, mud

Multiparameter Water Meter	Make:	Horiba	Model:	U-5000	Serial Number:	AGJTK4XG
Water Level Meter	Make:	Heron	Model:	[illegible]	Serial Number:	3717-T

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	3.84	s.u.	±0.1 s.u.	F	YES	4.00	MSI	023067-01	3/14/2025
pH 7.00a	7.10	s.u.	±0.1 s.u.	P	NO	N/A	MSI	023051-02	2/21/2025
pH 10.00a	10.02	s.u.	±0.1 s.u.	P	NO		MSI	022361-01	12/27/2024
SC Zero (DI)	0.0	µS/cm	0<25 µS/cm	P	NO		Pace Labs	N/A (DI)	N/A (DI)
SC 2000	2030	µS/cm	±5%	P			Geotech	3GF1197	Jun-24
ORP	242	mV	±15 mV	P			InSitu	3GI1011	Jun-24
DO (Zero pt)	0.0	mg/L	±0.1	P			Macron	#000228049	8/26/2025
DO (Saturated)	100%	%	97-100%	P			Pace Labs	N/A (DI)	N/A (DI)
Turbidity (DI)	0.0	NTU	<2 NTU	P			Pace Labs	N/A (DI)	N/A (DI)

Approx. every 4 hrs, unless only one well

ICV (Initial Calibration Verification) Time: 1030

Buffer	Check Value	Units	Range	Pass/Fail	Action Taken?	Manufacturer	Lot#	Exp.
pH 4.00b	3.99	s.u.	±0.15 s.u.	P	NO	Geotech	3GB1049	Feb-25
pH 7.00b	6.96	s.u.	±0.15 s.u.	P	NO	Geotech	2GF113	Jun-24
pH 10.00b	10.02	s.u.	±0.15 s.u.	P	NO	Geotech	3GA1134	Jan-25
SC 1000	1010	µS/cm	±5%	P	NO	Ricca	4209A12	Aug-24

Approx. every 4 hrs, unless only one well

CCV (Continued Calibration Verification): Time: 1410

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.08	s.u.	±0.1 s.u.	P	NO	—	MSI	023067-01	3/14/2025
pH 7.00a	7.06	s.u.	±0.1 s.u.		NO	—	MSI	023051-02	2/21/2025
pH 10.00a	10.03	s.u.	±0.1 s.u.		NO	—	MSI	022361-01	12/27/2024
SC 1000	1030	µS/cm	±5%		NO	—	Ricca	4209A12	Aug-24
DO (Zero pt)	0.07	mg/L	±0.1 mg/L		NO	—	Macron	#000228049	8/26/2025
Turbidity (DI)	0.0	NTU	<2 NTU		NO	—	Pace Labs	N/A (DI)	N/A (DI)

Approx. every 4 hrs, unless only one well

CCV (Continued Calibration Verification): Time:

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
4.00a		s.u.	±0.1 s.u.				MSI	023067-01	3/14/2025
7.00a		s.u.	±0.1 s.u.				MSI	023051-02	2/21/2025
10.00a		s.u.	±0.1 s.u.				MSI	022361-01	12/27/2024
SC 1000		µS/cm	±5%				Ricca	4209A12	Aug-24
DO (Zero pt)		mg/L	±0.1 mg/L				Macron	#000228049	8/26/2025
Turbidity (DI)		NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

Comments:

Signature: [signature] Date: 1/26/2024

BG

Multiparameter Meter Field Calibration Checklist

Field Personnel:	LR AM	Location:	DUCK CREEK
Weather:	FOG/CLOUDY	Environment:	SNOW/MUD/GRASSLAND
Multiparameter Water Meter	Make: HORIBA	Model: U5000	Serial Number: PW264JD3
Water Level Meter	Make: Heron	Model: Dipper-T	Serial Number: 11FE220930SML

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	3.91	s.u.	±0.1 s.u.	P	N	N	MSI	023067-01	3/14/2025
pH 7.00a	6.96	s.u.	±0.1 s.u.				MSI	023051-02	2/21/2025
pH 10.00a	9.97	s.u.	±0.1 s.u.				MSI	022361-01	12/27/2024
SC Zero (DI)	0.0	µS/cm	0<25 µS/cm				Pace Labs	N/A (DI)	N/A (DI)
SC 2000	1990	µS/cm	±5%				Geotech	3GF1197	Jun-24
ORP	254	mV	±15 mV				InSitu	~~3GD927~~	~~Jan-24~~
DO (Zero pt)	0.0	mg/L	±0.1				Macron	#000228049	8/26/2025
DO (Saturated)	98.1	%	97-100%				Pace Labs	N/A (DI)	N/A (DI)
Turbidity (DI)	0.0	NTU	<2 NTU		N	N	Pace Labs	N/A (DI)	N/A (DI)

Exp. 6/24
Lot# 3GI101 1
BG 1/29/24

Approx. every 4 hrs, unless only one well

ICV (Initial Calibration Verification)

Time: 1030

Buffer	Check Value	Units	Range	Pass/Fail	Action Taken?	Manufacturer	Lot#	Exp.
pH 4.00b	3.98	s.u.	±0.15 s.u.	P	NA	Geotech	3GB1049	Feb-25
pH 7.00b	7.01	s.u.	±0.15 s.u.			Geotech	2GF113	Jun-24
pH 10.00b	10.02	s.u.	±0.15 s.u.			Geotech	3GA1134	Jan-25
SC 1000	1010	µS/cm	±5%	P	NA	Ricca	4209A12	Aug-24

Approx. every 4 hrs, unless only one well

CCV (Continued Calibration Verification):

Time: 1400

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.03	s.u.	±0.1 s.u.	P	N	N	MSI	023067-01	3/14/2025
pH 7.00a	6.95	s.u.	±0.1 s.u.	P			MSI	023051-02	2/21/2025
pH 10.00a	10.07	s.u.	±0.1 s.u.	P			MSI	022361-01	12/27/2024
SC 1000	1010	µS/cm	±5%	P			Ricca	4209A12	Aug-24
DO (Zero pt)	0	mg/L	±0.1 mg/L	P			Macron	#000228049	8/26/2025
Turbidity (DI)	0	NTU	<2 NTU	P	N	N	Pace Labs	N/A (DI)	N/A (DI)

Approx. every 4 hrs, unless only one well

CCV (Continued Calibration Verification):

Time:

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
4.00a		s.u.	±0.1 s.u.				MSI	023067-01	3/14/2025
7.00a		s.u.	±0.1 s.u.				MSI	023051-02	2/21/2025
10.00a		s.u.	±0.1 s.u.				MSI	022361-01	12/27/2024
SC 1000		µS/cm	±5%				Ricca	4209A12	Aug-24
DO (Zero pt)		mg/L	±0.1 mg/L				Macron	#000228049	8/26/2025
Turbidity (DI)		NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

Comments:

Signature: [signature] Date: 1/26/24

BG

Multiparameter Meter Field Calibration Checklist

Field Personnel:	J Oldfield	Location:	Duck Creek
Weather:	Cloudy 35-38°F	Environment:	Foggy / Wet

Multiparameter Water Meter	Make: Horiba	Model: U-5000	Serial Number:	YLAKJ9H4	
Water Level Meter	Make: Solinst	Model: Model 101	Serial Number:	33459	

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.00	s.u.	±0.1 s.u.	P	N		MSI	023067-01	3/14/2025
pH 7.00a	7.01	s.u.	±0.1 s.u.				MSI	023051-02	2/21/2025
pH 10.00a	10.04	s.u.	±0.1 s.u.				MSI	022361-01	12/27/2024
SC Zero (DI)	0.1	µS/cm	0<25 µS/cm				Pace Labs	N/A (DI)	N/A (DI)
SC 2000	2040	µS/cm	±5%				Geotech	3GF1197	Jun-24
ORP	243	mV	±15 mV				InSitu	3GI1011	Jun-24
DO (Zero pt)	0.01	mg/L	±0.1				Macron	#000228049	8/26/2025
DO (Saturated)	98.1	%	97-100%				Pace Labs	N/A (DI)	N/A (DI)
Turbidity (DI)	0.1	NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

Approx. every 4 hrs, unless only one well

ICV (Initial Calibration Verification)					Time: 1015			
Buffer	Check Value	Units	Range	Pass/Fail	Action Taken?	Manufacturer	Lot#	Exp.
pH 4.00b	4.01	s.u.	±0.15 s.u.	P	N	Geotech	3GB1049	Feb-25
pH 7.00b	6.99	s.u.	±0.15 s.u.			Geotech	2GF113	Jun-24
pH 10.00b	9.98	s.u.	±0.15 s.u.			Geotech	3GA1134	Jan-25
SC 1000	996	µS/cm	±5%			Ricca	4209A12	Aug-24

Approx. every 4 hrs, unless only one well

CCV (Continued Calibration Verification):					Time: 1503				
Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.05	s.u.	±0.1 s.u.	P	N		MSI	023067-01	3/14/2025
pH 7.00a	7.06	s.u.	±0.1 s.u.				MSI	023051-02	2/21/2025
pH 10.00a	10.02	s.u.	±0.1 s.u.				MSI	022361-01	12/27/2024
SC 1000	1000	µS/cm	±5%				Ricca	4209A12	Aug-24
DO (Zero pt)	0.01	mg/L	±0.1 mg/L				Macron	#000228049	8/26/2025
Turbidity (DI)	0.0	NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

Approx. every 4 hrs, unless only one well

CCV (Continued Calibration Verification):					Time:				
Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
4.00a		s.u.	±0.1 s.u.				MSI	023067-01	3/14/2025
7.00a		s.u.	±0.1 s.u.				MSI	023051-02	2/21/2025
10.00a		s.u.	±0.1 s.u.				MSI	022361-01	12/27/2024
SC 1000		µS/cm	±5%				Ricca	4209A12	Aug-24
DO (Zero pt)		mg/L	±0.1 mg/L				Macron	#000228049	8/26/2025
Turbidity (DI)		NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

Comments:

Signature:	Joseph E. Reed	Date:	1/26/24

Multiparameter Meter Field Calibration Checklist

Field Personnel:	Jordan Bohannan	Location:	Duck Creek
Weather:	34°F, 7mph wind, mostly cloudy	Environment:	Fog, Mud, Snow

Multiparameter Water Meter	Make: Horiba	Model: U-5000	Serial Number: AGJTK4XG		
Water Level Meter	Make: Heron	Model: DipperT	Serial Number: 11FF2209305ML		

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	3.93	s.u.	±0.1 s.u.	P	No	N/A	MSI	023067-01	3/14/2025
pH 7.00a	7.14	s.u.	±0.1 s.u.	F	Yes	7.00	MSI	023051-02	2/21/2025
pH 10.00a	10.34	s.u.	±0.1 s.u.	F	Yes	10.07	MSI	022361-01	12/27/2024
SC Zero (DI)	0	µS/cm	0<25 µS/cm	P	No	N/A	Pace Labs	N/A (DI)	N/A (DI)
SC 2000	1992	µS/cm	±5%	P	No	N/A	Geotech	3GF1197	Jun-24
ORP	263★	mV	±15 mV	P	No	N/A	InSitu	3GI1011	Jun-24
DO (Zero pt)	0.0	mg/L	±0.1	P	No	N/A	Macron	#000228049	8/26/2025
DO (Saturated)	97%	%	97-100%	P	No	N/A	Pace Labs	N/A (DI)	N/A (DI)
Turbidity (DI)	0.0	NTU	<2 NTU	P	No	N/A	Pace Labs	N/A (DI)	N/A (DI)

Approx. every 4 hrs, unless only one well

ICV (Initial Calibration Verification)					Time: 09:47			
Buffer	Check Value	Units	Range	Pass/Fail	Action Taken?	Manufacturer	Lot#	Exp.
pH 4.00b	3.84	s.u.	±0.15 s.u.	F	Cal -> 4.00	Geotech	3GB1049	Feb-25
pH 7.00b	6.87	s.u.	±0.15 s.u.	P	None	Geotech	2GF113	Jun-24
pH 10.00b	10.10	s.u.	±0.15 s.u.	P	None	Geotech	3GA1134	Jan-25
SC 1000	994	µS/cm	±5%	P	None	Ricca	4209A12	Aug-24

Approx. every 4 hrs, unless only one well

CCV (Continued Calibration Verification):					Time: 14:49				
Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	3.96	s.u.	±0.1 s.u.	P	No	N/A	MSI	023067-01	3/14/2025
pH 7.00a	7.01	s.u.	±0.1 s.u.	P	No	N/A	MSI	023051-02	2/21/2025
pH 10.00a	10.02	s.u.	±0.1 s.u.	P	No	N/A	MSI	022361-01	12/27/2024
SC 1000	998	µS/cm	±5%	P	No	N/A	Ricca	4209A12	Aug-24
DO (Zero pt)	0.00	mg/L	±0.1 mg/L	P	No	N/A	Macron	#000228049	8/26/2025
Turbidity (DI)	0.00	NTU	<2 NTU	P	No	N/A	Pace Labs	N/A (DI)	N/A (DI)

Approx. every 4 hrs, unless only one well

CCV (Continued Calibration Verification):					Time:				
Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
4.00a		s.u.	±0.1 s.u.				MSI	023067-01	3/14/2025
7.00a		s.u.	±0.1 s.u.				MSI	023051-02	2/21/2025
10.00a		s.u.	±0.1 s.u.				MSI	022361-01	12/27/2024
SC 1000		µS/cm	±5%				Ricca	4209A12	Aug-24
DO (Zero pt)		mg/L	±0.1 mg/L				Macron	#000228049	8/26/2025
Turbidity (DI)		NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

Comments: ★ ORP Taken at ~10°C

Signature:	JBohannan	Date:	01/29/2024

Multiparameter Meter Field Calibration Checklist

Field Personnel:	AF	Location:	Duck creek
Weather:	35°-47° F windy SW 7mph	Environment:	Grass, snow, mud, weeds
Multiparameter Water Meter	Make: Horiba	Model: VS000	Serial Number: WV6830855
Water Level Meter	Make: Horn	Model: Dipper-T	Serial Number: 3717-T

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.11	s.u.	±0.1 s.u.	F	Yes	4.00	MSI	023067-01	3/14/2025
pH 7.00a	6.92	s.u.	±0.1 s.u.	P	NO	—	MSI	023051-02	2/21/2025
pH 10.00a	9.92	s.u.	±0.1 s.u.	P	NO	—	MSI	022361-01	12/27/2024
SC Zero (DI)	0.0	µS/cm	0<25 µS/cm	P	NO	—	Pace Labs	N/A (DI)	N/A (DI)
SC 2000	1940	µS/cm	±5%	P	NO	—	Geotech	3GF1197	Jun-24
ORP	242	mV	±15 mV	P	NO	—	InSitu	3GI1011	Jun-24
DO (Zero pt)	0.00	mg/L	±0.1	P	NO	—	Macron	#000228049	8/26/2025
DO (Saturated)	99.9	%	97-100%	P	NO	—	Pace Labs	N/A (DI)	N/A (DI)
Turbidity (DI)	.8	NTU	<2 NTU	P	NO	—	Pace Labs	N/A (DI)	N/A (DI)

Approx. every 4 hrs, unless only one well

ICV (Initial Calibration Verification) — Time: 0832

Buffer	Check Value	Units	Range	Pass/Fail	Action Taken?	Manufacturer	Lot#	Exp.
pH 4.00b	4.01	s.u.	±0.15 s.u.	P	—	Geotech	3GB1049	Feb-25
pH 7.00b	6.89	s.u.	±0.15 s.u.	P	—	Geotech	2GF113	Jun-24
pH 10.00b	10.03	s.u.	±0.15 s.u.	P	—	Geotech	3GA1134	Jan-25
SC 1000	1010	µS/cm	±5%	P	—	Ricca	4209A12	Aug-24

Approx. every 4 hrs, unless only one well

CCV (Continued Calibration Verification): — Time: 1530

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.03	s.u.	±0.1 s.u.	P	NO	—	MSI	023067-01	3/14/2025
pH 7.00a	7.02	s.u.	±0.1 s.u.	P	NO	—	MSI	023051-02	2/21/2025
pH 10.00a	10.08	s.u.	±0.1 s.u.	P	NO	—	MSI	022361-01	12/27/2024
SC 1000	1020	µS/cm	±5%	P	NO	—	Ricca	4209A12	Aug-24
DO (Zero pt)	0.00	mg/L	±0.1 mg/L	P	NO	—	Macron	#000228049	8/26/2025
Turbidity (DI)	0.8	NTU	<2 NTU	P	NO	—	Pace Labs	N/A (DI)	N/A (DI)

Approx. every 4 hrs, unless only one well

CCV (Continued Calibration Verification): — Time:

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
4.00a		s.u.	±0.1 s.u.				MSI	023067-01	3/14/2025
7.00a		s.u.	±0.1 s.u.				MSI	023051-02	2/21/2025
10.00a		s.u.	±0.1 s.u.				MSI	022361-01	12/27/2024
SC 1000		µS/cm	±5%				Ricca	4209A12	Aug-24
DO (Zero pt)		mg/L	±0.1 mg/L				Macron	#000228049	8/26/2025
Turbidity (DI)		NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

Comments:

Signature: [signature] Date: 1/29/2024

BG

Multiparameter Meter Field Calibration Checklist

Field Personnel:	AP	Location:	Duck creek
Weather:	37° - 42°C Cloud Wind NW 11mph	Environment:	Grass, mud, snow, woods
Multiparameter Water Meter	Make: Hor:ba	Model: U5000	Serial Number: AGJTH4X6
Water Level Meter	Make: Heron	Model: Dipper T	Serial Number: 3717-T

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	3.53	s.u.	±0.1 s.u.	F	Yes	4.00	MSI	023067-01	3/14/2025
pH 7.00a	7.06	s.u.	±0.1 s.u.	P	No	-	MSI	023051-02	2/21/2025
pH 10.00a	10.01	s.u.	±0.1 s.u.	P	No	-	MSI	022361-01	12/27/2024
SC Zero (DI)	0.0	µS/cm	0<25 µS/cm	P	No	-	Pace Labs	N/A (DI)	N/A (DI)
SC 2000	2050	µS/cm	±5%	P	No	-	Geotech	3GF1197	Jun-24
ORP	274	mV	±15 mV	P	Yes	242	InSitu	3GI1011	Jun-24
DO (Zero pt)	0.00	mg/L	±0.1	P	No	-	Macron	#000228049	8/26/2025
DO (Saturated)	74.6	%	97-100%	P	No	-	Pace Labs	N/A (DI)	N/A (DI)
Turbidity (DI)	0.0	NTU	<2 NTU	P	No	-	Pace Labs	N/A (DI)	N/A (DI)

Approx. every 4 hrs, unless only one well

242 @ 15°C

ICV (Initial Calibration Verification)					Time: 1012			
Buffer	Check Value	Units	Range	Pass/Fail	Action Taken?	Manufacturer	Lot#	Exp.
pH 4.00b	3.94	s.u.	±0.15 s.u.	P	-	Geotech	3GB1049	Feb-25
pH 7.00b	6.92	s.u.	±0.15 s.u.	P	-	Geotech	2GF113	Jun-24
pH 10.00b	10.03	s.u.	±0.15 s.u.	P	-	Geotech	3GA1134	Jan-25
SC 1000	1030	µS/cm	±5%	P	-	Ricca	4209A12	Aug-24

Approx. every 4 hrs, unless only one well

CCV (Continued Calibration Verification):					Time: 1530				
Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.03	s.u.	±0.1 s.u.	P	No	-	MSI	023067-01	3/14/2025
pH 7.00a	7.06	s.u.	±0.1 s.u.	P	No	-	MSI	023051-02	2/21/2025
pH 10.00a	10.09	s.u.	±0.1 s.u.	P	No	-	MSI	022361-01	12/27/2024
SC 1000	1000	µS/cm	±5%	P	No	-	Ricca	4209A12	Aug-24
DO (Zero pt)	0.00	mg/L	±0.1 mg/L	P	No	-	Macron	#000228049	8/26/2025
Turbidity (DI)	0.0	NTU	<2 NTU	P	No	-	Pace Labs	N/A (DI)	N/A (DI)

Approx. every 4 hrs, unless only one well

CCV (Continued Calibration Verification):					Time:				
Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
4.00a		s.u.	±0.1 s.u.				MSI	023067-01	3/14/2025
7.00a		s.u.	±0.1 s.u.				MSI	023051-02	2/21/2025
10.00a		s.u.	±0.1 s.u.				MSI	022361-01	12/27/2024
SC 1000		µS/cm	±5%				Ricca	4209A12	Aug-24
DO (Zero pt)		mg/L	±0.1 mg/L				Macron	#000228049	8/26/2025
Turbidity (DI)		NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

Comments:

Signature:		Date:	1/30/2024

BG

Multiparameter Meter Field Calibration Checklist

Field Personnel:	Austin Moore	Location:	Duck Creek
Weather:	39-32 Cloudy wind WNW 4mph	Environment:	Mud

Multiparameter Water Meter	Make: Horiba	Model: U5000	Serial Number:	WV683C85	
Water Level Meter	Make: Heron	Model: Dipper	Serial Number:	19FT-211119HB	

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	3.96	s.u.	±0.1 s.u.	P	N	NA	MSI	023067-01	3/14/2025
pH 7.00a	6.86	s.u.	±0.1 s.u.	P	Y	7.00	MSI	023051-02	2/21/2025
pH 10.00a	9.96	s.u.	±0.1 s.u.	P	N	NA	MSI	022361-01	12/27/2024
SC Zero (DI)	0	µS/cm	0<25 µS/cm				Pace Labs	N/A (DI)	N/A (DI)
SC 2000	1974	µS/cm	±5%				Geotech	3GF1197	Jun-24
ORP	252	mV	±15 mV				InSitu	3GD927	Jan-24
DO (Zero pt)	0.0	mg/L	±0.1				Macron	#000228049	8/26/2025
DO (Saturated)	98.2	%	97-100%				Pace Labs	N/A (DI)	N/A (DI)
Turbidity (DI)	0.0	NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

Approx. every 4 hrs, unless only one well

ICV (Initial Calibration Verification)					Time: 1010			
Buffer	Check Value	Units	Range	Pass/Fail	Action Taken?	Manufacturer	Lot#	Exp.
pH 4.00b	3.99	s.u.	±0.15 s.u.	P	N	Geotech	3GB1049	Feb-25
pH 7.00b	7.01	s.u.	±0.15 s.u.			Geotech	2GF113	Jun-24
pH 10.00b	10.06	s.u.	±0.15 s.u.			Geotech	3GA1134	Jan-25
SC 1000	1020	µS/cm	±5%			Ricca	4209A12	Aug-24

Approx. every 4 hrs, unless only one well

CCV (Continued Calibration Verification):					Time: 1541			
Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.03	s.u.	±0.1 s.u.	P	N	NA	MSI	023067-01	3/14/2025
pH 7.00a	7.06	s.u.	±0.1 s.u.				MSI	023051-02	2/21/2025
pH 10.00a	10.01	s.u.	±0.1 s.u.				MSI	022361-01	12/27/2024
SC 1000	1028	µS/cm	±5%				Ricca	4209A12	Aug-24
DO (Zero pt)	0.0	mg/L	±0.1 mg/L				Macron	#000228049	8/26/2025
Turbidity (DI)	0.0	NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

Approx. every 4 hrs, unless only one well

CCV (Continued Calibration Verification):					Time:			
Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
4.00a		s.u.	±0.1 s.u.				MSI	023067-01	3/14/2025
7.00a		s.u.	±0.1 s.u.				MSI	023051-02	2/21/2025
10.00a		s.u.	±0.1 s.u.				MSI	022361-01	12/27/2024
SC 1000		µS/cm	±5%				Ricca	4209A12	Aug-24
DO (Zero pt)		mg/L	±0.1 mg/L				Macron	#000228049	8/26/2025
Turbidity (DI)		NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

Comments:

Signature:	Austin Moore	Date:	30-Jan-24

Multiparameter Meter Field Calibration Checklist

Field Personnel:	AP	Location:	Duck Creek
Weather:	35°-48°F cloudy Wind W at 6mph	Environment:	grass, mud

Multiparameter Water Meter	Make:	YSI	Model:	[illegible]	Serial Number:	AGJ ThuXG
Water Level Meter	Make:	Heron	Model:	DipperT	Serial Number:	3717-T

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.06	s.u.	±0.1 s.u.	P	NO	–	MSI	023067-01	3/14/2025
pH 7.00a	7.03	s.u.	±0.1 s.u.	P	NO	–	MSI	023051-02	2/21/2025
pH 10.00a	10.02	s.u.	±0.1 s.u.	P	NO	–	MSI	022361-01	12/27/2024
SC Zero (DI)	0.0	µS/cm	0<25 µS/cm	P	NO	–	Pace Labs	N/A (DI)	N/A (DI)
SC 2000	2010	µS/cm	±5%	P	NO	–	Geotech	3GF1197	Jun-24
ORP	229	mV	±15 mV	P	NO	–	InSitu	3GI1011	Jun-24
DO (Zero pt)	0.00	mg/L	±0.1	P	NO	–	Macron	#000228049	8/26/2025
DO (Saturated)	98.7	%	97-100%	P	NO	–	Pace Labs	N/A (DI)	N/A (DI)
Turbidity (DI)	0.0	NTU	<2 NTU	P	NO	–	Pace Labs	N/A (DI)	N/A (DI)

Approx. every 4 hrs, unless only one well

242@15°C

ICV (Initial Calibration Verification)					Time: 0920			
Buffer	Check Value	Units	Range	Pass/Fail	Action Taken?	Manufacturer	Lot#	Exp.
pH 4.00b	4.06	s.u.	±0.15 s.u.	P	–	Geotech	3GB1049	Feb-25
pH 7.00b	6.91	s.u.	±0.15 s.u.	P	–	Geotech	2GF113	Jun-24
pH 10.00b	10.08	s.u.	±0.15 s.u.	P	–	Geotech	3GA1134	Jan-25
SC 1000	991	µS/cm	±5%	P	–	Ricca	4209A12	Aug-24

Approx. every 4 hrs, unless only one well

CCV (Continued Calibration Verification):					Time: 1523				
Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.07	s.u.	±0.1 s.u.	P	NO	–	MSI	023067-01	3/14/2025
pH 7.00a	7.05	s.u.	±0.1 s.u.	P	NO	–	MSI	023051-02	2/21/2025
pH 10.00a	10.04	s.u.	±0.1 s.u.	P	NO	–	MSI	022361-01	12/27/2024
SC 1000	992	µS/cm	±5%	P	NO	–	Ricca	4209A12	Aug-24
DO (Zero pt)	0.00	mg/L	±0.1 mg/L	P	NO	–	Macron	#000228049	8/26/2025
Turbidity (DI)	0.0	NTU	<2 NTU	P	NO	–	Pace Labs	N/A (DI)	N/A (DI)

Approx. every 4 hrs, unless only one well

CCV (Continued Calibration Verification):					Time:				
Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
4.00a	/	s.u.	±0.1 s.u.	/	/	/	MSI	023067-01	3/14/2025
7.00a		s.u.	±0.1 s.u.				MSI	023051-02	2/21/2025
10.00a		s.u.	±0.1 s.u.				MSI	022361-01	12/27/2024
SC 1000		µS/cm	±5%				Ricca	4209A12	Aug-24
DO (Zero pt)		mg/L	±0.1 mg/L				Macron	#000228049	8/26/2025
Turbidity (DI)		NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

Comments:

Signature:	[signature]	Date:	1/31/2024

Multiparameter Meter Field Calibration Checklist

Field Personnel:	AP	Location:	Duck creek
Weather:	41°-58° partly cloudy wind SW 6mph	Environment:	mud, grass
Multiparameter Water Meter	Make: Horiba	Model: U5000	Serial Number: AGJTK4XG
Water Level Meter	Make: Interon	Model: D-Mini T	Serial Number: 3717-T

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.05	s.u.	±0.1 s.u.	P	NO	-	MSI	023067-01	3/14/2025
pH 7.00a	7.07	s.u.	±0.1 s.u.	P	NO	-	MSI	023051-02	2/21/2025
pH 10.00a	10.09	s.u.	±0.1 s.u.	P	NO	-	MSI	022361-01	12/27/2024
SC Zero (DI)	0.0	µS/cm	0<25 µS/cm	P	NO	-	Pace Labs	N/A (DI)	N/A (DI)
SC 2000	2050	µS/cm	±5%	P	NO	-	Geotech	3GF1197	Jun-24
ORP	236	mV	±15 mV	P	NO	-	InSitu	3GI1011	Jun-24
DO (Zero pt)	0.03	mg/L	±0.1	P	NO	-	Macron	#000228049	8/26/2025
DO (Saturated)	98.6	%	97-100%	P	NO	-	Pace Labs	N/A (DI)	N/A (DI)
Turbidity (DI)	0.0	NTU	<2 NTU	P	NO	-	Pace Labs	N/A (DI)	N/A (DI)

Approx. every 4 hrs, unless only one well

242 @ 15°C

ICV (Initial Calibration Verification)					Time: 0852			
Buffer	Check Value	Units	Range	Pass/Fail	Action Taken?	Manufacturer	Lot#	Exp.
pH 4.00b	4.03	s.u.	±0.15 s.u.	P	-	Geotech	3GB1049	Feb-25
pH 7.00b	6.91	s.u.	±0.15 s.u.	P	-	Geotech	2GF113	Jun-24
pH 10.00b	10.06	s.u.	±0.15 s.u.	P	-	Geotech	3GA1134	Jan-25
SC 1000	984	µS/cm	±5%	P	-	Ricca	4209A12	Aug-24

Approx. every 4 hrs, unless only one well

CCV (Continued Calibration Verification):					Time: 1500				
Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.03	s.u.	±0.1 s.u.	P	NO	-	MSI	023067-01	3/14/2025
pH 7.00a	7.04	s.u.	±0.1 s.u.	P	NO	-	MSI	023051-02	2/21/2025
pH 10.00a	10.09	s.u.	±0.1 s.u.	P	NO	-	MSI	022361-01	12/27/2024
SC 1000	1010	µS/cm	±5%	P	NO	-	Ricca	4209A12	Aug-24
DO (Zero pt)	0.00	mg/L	±0.1 mg/L	P	NO	-	Macron	#000228049	8/26/2025
Turbidity (DI)	0.0	NTU	<2 NTU	P	NO	-	Pace Labs	N/A (DI)	N/A (DI)

Approx. every 4 hrs, unless only one well

CCV (Continued Calibration Verification):					Time:				
Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
4.00a		s.u.	±0.1 s.u.				MSI	023067-01	3/14/2025
7.00a		s.u.	±0.1 s.u.				MSI	023051-02	2/21/2025
10.00a		s.u.	±0.1 s.u.				MSI	022361-01	12/27/2024
SC 1000		µS/cm	±5%				Ricca	4209A12	Aug-24
DO (Zero pt)		mg/L	±0.1 mg/L				Macron	#000228049	8/26/2025
Turbidity (DI)		NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

Comments:

Signature:		Date:	2/1/2024

BG

Multiparameter Meter Field Calibration Checklist

Field Personnel:	AP	Location:	Duck Creek
Weather:	30-51°F Wind Sunny NE 7mph	Environment:	Woods, grass, mud

Multiparameter Water Meter	Make: Horiba	Model: U5000	Serial Number:	AGJTKHX6	
Water Level Meter	Make: Heron	Model: Dipper T	Serial Number:	3717-T	

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.06	s.u.	±0.1 s.u.	P	NO	—	MSI	023067-01	3/14/2025
pH 7.00a	7.02	s.u.	±0.1 s.u.	P	NO	—	MSI	023051-02	2/21/2025
pH 10.00a	10.01	s.u.	±0.1 s.u.	P	NO	—	MSI	022361-01	12/27/2024
SC Zero (DI)	0.0	µS/cm	0<25 µS/cm	P	NO	—	Pace Labs	N/A (DI)	N/A (DI)
SC 2000	1990	µS/cm	±5%	P	NO	—	Geotech	3GF1197	Jun-24
ORP	231	mV	±15 mV	P	NO	—	InSitu	3GI1011	Jun-24
DO (Zero pt)	0.00	mg/L	±0.1	P	NO	—	Macron	#000228049	8/26/2025
DO (Saturated)	100.0	%	97-100%	P	NO	—	Pace Labs	N/A (DI)	N/A (DI)
Turbidity (DI)	0.0	NTU	<2 NTU	P	NO	—	Pace Labs	N/A (DI)	N/A (DI)

Approx. every 4 hrs, unless only one well

238 @ 18°C

ICV (Initial Calibration Verification)					Time: 0951			
Buffer	Check Value	Units	Range	Pass/Fail	Action Taken?	Manufacturer	Lot#	Exp.
pH 4.00b	4.07	s.u.	±0.15 s.u.	P	—	Geotech	3GB1049	Feb-25
pH 7.00b	6.93	s.u.	±0.15 s.u.	P	—	Geotech	2GF113	Jun-24
pH 10.00b	10.04	s.u.	±0.15 s.u.	P	—	Geotech	3GA1134	Jan-25
SC 1000	967	µS/cm	±5%	P	—	Ricca	4209A12	Aug-24

Approx. every 4 hrs, unless only one well

CCV (Continued Calibration Verification):					Time: 1530				
Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.06	s.u.	±0.1 s.u.	P	NO	—	MSI	023067-01	3/14/2025
pH 7.00a	7.04	s.u.	±0.1 s.u.	P	NO	—	MSI	023051-02	2/21/2025
pH 10.00a	10.01	s.u.	±0.1 s.u.	P	NO	—	MSI	022361-01	12/27/2024
SC 1000	999	µS/cm	±5%	P	NO	—	Ricca	4209A12	Aug-24
DO (Zero pt)	0.00	mg/L	±0.1 mg/L	P	NO	—	Macron	#000228049	8/26/2025
Turbidity (DI)	0.0	NTU	<2 NTU	P	NO	—	Pace Labs	N/A (DI)	N/A (DI)

Approx. every 4 hrs, unless only one well

CCV (Continued Calibration Verification):					Time:				
Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
4.00a		s.u.	±0.1 s.u.				MSI	023067-01	3/14/2025
7.00a		s.u.	±0.1 s.u.				MSI	023051-02	2/21/2025
10.00a		s.u.	±0.1 s.u.				MSI	022361-01	12/27/2024
SC 1000		µS/cm	±5%				Ricca	4209A12	Aug-24
DO (Zero pt)		mg/L	±0.1 mg/L				Macron	#000228049	8/26/2025
Turbidity (DI)		NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

Comments:

Signature:		Date:	2/5/2024

Multiparameter Meter Field Calibration Checklist

Field Personnel:	AP	Location:	Duck creek
Weather:	Fog 34°-50°C wind SE3mph	Environment:	grass, mud
Multiparameter Water Meter	Make: Horiba	Model: U5000	Serial Number: PW26VJD3
Water Level Meter	Make: Heron	Model: Dipper-T	Serial Number: 3717-7

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	3.95	s.u.	±0.1 s.u.	P	NO	—	MSI	023067-01	3/14/2025
pH 7.00a	6.95	s.u.	±0.1 s.u.	P	NO	—	MSI	023051-02	2/21/2025
pH 10.00a	10.02	s.u.	±0.1 s.u.	P	NO	—	MSI	022361-01	12/27/2024
SC Zero (DI)	19	µS/cm	0<25 µS/cm	P	NO	—	Pace Labs	N/A (DI)	N/A (DI)
SC 2000	2020	µS/cm	±5%	P	NO	—	Geotech	3GF1197	Jun-24
ORP	227	mV	±15 mV	P	yes	249	InSitu	3GI1011	Jun-24
DO (Zero pt)	0.09	mg/L	±0.1	P	NO	—	Macron	#000228049	8/26/2025
DO (Saturated)	100.0	%	97-100%	P	NO	—	Pace Labs	N/A (DI)	N/A (DI)
Turbidity (DI)	6.0	NTU	<2 NTU	P	NO	—	Pace Labs	N/A (DI)	N/A (DI)

Approx. every 4 hrs, unless only one well

249 @ 10°C

ICV (Initial Calibration Verification)					Time: 1021			
Buffer	Check Value	Units	Range	Pass/Fail	Action Taken?	Manufacturer	Lot#	Exp.
pH 4.00b	3.97	s.u.	±0.15 s.u.	P	—	Geotech	3GB1049	Feb-25
pH 7.00b	6.89	s.u.	±0.15 s.u.	P	—	Geotech	2GF113	Jun-24
pH 10.00b	10.03	s.u.	±0.15 s.u.	P	—	Geotech	3GA1134	Jan-25
SC 1000	1020	µS/cm	±5%	P	—	Ricca	4209A12	Aug-24

Approx. every 4 hrs, unless only one well

CCV (Continued Calibration Verification):					Time: 1420				
Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.03	s.u.	±0.1 s.u.	P	NO	—	MSI	023067-01	3/14/2025
pH 7.00a	7.06	s.u.	±0.1 s.u.	P	NO	—	MSI	023051-02	2/21/2025
pH 10.00a	10.08	s.u.	±0.1 s.u.	P	NO	—	MSI	022361-01	12/27/2024
SC 1000	1020	µS/cm	±5%	P	NO	—	Ricca	4209A12	Aug-24
DO (Zero pt)	0.10	mg/L	±0.1 mg/L	P	NO	—	Macron	#000228049	8/26/2025
Turbidity (DI)	0.0	NTU	<2 NTU	P	NO	—	Pace Labs	N/A (DI)	N/A (DI)

Approx. every 4 hrs, unless only one well

CCV (Continued Calibration Verification):					Time:				
Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
4.00a		s.u.	±0.1 s.u.				MSI	023067-01	3/14/2025
7.00a		s.u.	±0.1 s.u.				MSI	023051-02	2/21/2025
10.00a		s.u.	±0.1 s.u.				MSI	022361-01	12/27/2024
SC 1000		µS/cm	±5%				Ricca	4209A12	Aug-24
DO (Zero pt)		mg/L	±0.1 mg/L				Macron	#000228049	8/26/2025
Turbidity (DI)		NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

Comments:

Signature:	[signature]	Date:	2/6/2024

Pace Analytical Services, LLC
2231 W. Altorfer Drive
Peoria, IL 61615
(800)752-6651

June 16, 2024

Daryl Johnson
Vistra - Duck Creek
17751 North Cilco Road
Canton, IL 61520-8761

Dear Daryl Johnson:

Please find enclosed the analytical results for the sample(s) the laboratory received. All testing is performed according to our current TNI accreditations unless otherwise noted. This report cannot be reproduced, except in full, without the written permission of Pace Analytical Services, LLC.

If you have any questions regarding your report, please contact your project manager. Quality and timely data is of the utmost importance to us.

Pace Analytical Services appreciates the opportunity to provide you with analytical expertise. We are always trying to improve our customer service and we welcome you to contact the General Manager, Lisa Grant, with any feedback you have about your experience with our laboratory at 309-683-1764 or lisa.grant@pacelabs.com.

Sincerely,

Diane Billings
Project Manager

Pace Analytical Services, LLC
2231 W. Altorfer Drive
Peoria, IL 61615
(800)752-6651

SAMPLE RECEIPT CHECK LIST

Items not applicable will be marked as in compliance

Work Order HF02709

NO	Samples received within temperature compliance when applicable
NO	COC present upon sample receipt
NO	COC completed & legible
NO	Sampler name & signature present
NO	Unique sample IDs assigned
NO	Sample collection location recorded
NO	Date & time collected recorded on COC
NO	Relinquished by client signature on COC
NO	COC & labels match
NO	Sample labels are legible
NO	Appropriate bottle(s) received
NO	Sufficient sample volume received
NO	Sample containers received undamaged
NO	Zero headspace, <6 mm present in VOA vials
NO	Trip blank(s) received
NO	All non-field analyses received within holding times
NO	Short hold time analysis
NO	Current PDC COC submitted
NO	Case narrative provided

Pace Analytical Services, LLC
2231 W. Altorfer Drive
Peoria, IL 61615
(800)752-6651

ANALYTICAL RESULTS

Sample: HF02709-01
Name: G06S
Matrix: Ground Water - Grab

Sampled: 06/13/24 10:07
Received: 06/13/24 15:08
PO #: 2438773/2438768

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Field - PIA									
Depth, From Measuring Point	21.8	Feet		06/13/24 10:07	1		06/13/24 10:07	FIELD	Field*
Dissolved oxygen, Field	0.0	mg/L		06/13/24 10:07	1		06/13/24 10:07	FIELD	Field*
Oxidation Reduction Potential	138	mV		06/13/24 10:07	1	-500	06/13/24 10:07	FIELD	Field*
pH, Field Measured	7.14	pH Units		06/13/24 10:07	1		06/13/24 10:07	FIELD	Field*
Specific Conductance, Field Measured	856.0	umhos/cm		06/13/24 10:07	1		06/13/24 10:07	FIELD	Field*
Temperature, Field Measured	16.0	°C		06/13/24 10:07	1		06/13/24 10:07	FIELD	Field*
Turbidity, Field Measured	147	NTU		06/13/24 10:07	1	0.00	06/13/24 10:07	FIELD	Field*

Sample: HF02709-02
Name: G15S
Matrix: Ground Water - Grab

Sampled: 06/13/24 10:56
Received: 06/13/24 15:08
PO #: 2438773/2438768

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Field - PIA									
Depth, From Measuring Point	27.34	Feet		06/13/24 10:56	1		06/13/24 10:56	FIELD	Field*
Dissolved oxygen, Field	0.0	mg/L		06/13/24 10:56	1		06/13/24 10:56	FIELD	Field*
Oxidation Reduction Potential	168	mV		06/13/24 10:56	1	-500	06/13/24 10:56	FIELD	Field*
pH, Field Measured	7.28	pH Units		06/13/24 10:56	1		06/13/24 10:56	FIELD	Field*
Specific Conductance, Field Measured	670.0	umhos/cm		06/13/24 10:56	1		06/13/24 10:56	FIELD	Field*
Temperature, Field Measured	17.2	°C		06/13/24 10:56	1		06/13/24 10:56	FIELD	Field*
Turbidity, Field Measured	78.5	NTU		06/13/24 10:56	1	0.00	06/13/24 10:56	FIELD	Field*

Pace Analytical Services, LLC
2231 W. Altorfer Drive
Peoria, IL 61615
(800)752-6651

NOTES

Specifications regarding method revisions and method modifications used for analysis are available upon request. Please contact your project manager.

* Not a TNI accredited analyte

Certifications

CHI - McHenry, IL - 4314-A W. Crystal Lake Road, McHenry, IL 60050
TNI Accreditation for Drinking Water and Wastewater Fields of Testing through IL EPA Accreditation No. 100279
Illinois Department of Public Health Bacterial Analysis in Drinking Water Approved Laboratory Registry No. 17556

PIA - Peoria, IL - 2231 W. Altorfer Drive, Peoria, IL 61615
TNI Accreditation for Drinking Water, Wastewater, Solid and Hazardous Material Fields of Testing through IL EPA Accreditation No. 100230
Illinois Department of Public Health Bacterial Analysis in Drinking Water Approved Laboratory Registry No. 17553
Drinking Water Certifications/Accreditations: Iowa (240); Kansas (E-10338); Missouri (870)
Wastewater Certifications/Accreditations: Arkansas (88-0677); Iowa (240); Kansas (E-10338)
Solid and Hazardous Material Certifications/Accreditations: Arkansas (88-0677); Iowa (240); Kansas (E-10338)

SPMO - Springfield, MO - 1805 W Sunset Street, Springfield, MO 65807
USEPA DMR-QA Program

STL - Hazelwood, MO - 944 Anglum Rd, Hazelwood, MO 63042
TNI Accreditation for Wastewater, Solid and Hazardous Material Fields of Testing through KS KDHE Certification No. E-10389
TNI Accreditation for Wastewater, Solid and Hazardous Material Fields of Testing through IL EPA Accreditation No. - 200080
Illinois Department of Public Health Bacterial Analysis in Drinking Water Approved Laboratory, Registry No. 171050
Missouri Department of Natural Resources - Certificate of Approval for Microbiological Laboratory Service - No. 1050

Certified by: Diane Billings, Project Manager

CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: 10 of 10

Section A Required Client Information:

Company: Vistra Corp-Duck Creek
Address: 17751 North Cilco Rd
Canton, IL 61520
Email To: Brian.Voelker@VistraCorp.com
Phone: (217) 753-8911 Fax:
Requested Due Date/TAT: 10 day

Section B Required Project Information:

Report To: Brian Voelker
Copy To: Sam Davies: samantha.davies@vistracorp.com
Daryl Johnson: Robert.Johnson@vistracorp.com
Purchase Order No.:
Project Name:
Project Number: 2285

Section C Invoice Information:

Attention: Brian Voelker
Company Name: Vistra Corp
Address: see Section A
Quote Reference:
Project Manager:
Profile #:

REGULATORY AGENCY

NPDES GROUND WATER DRINKING WATER
UST RCRA OTHER

Site Location STATE: IL

Section D Required Client Information

SAMPLE ID
(A-Z, 0-9 / ,-)
Sample IDs MUST BE UNIQUE

Valid Matrix Codes

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

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED DATE	COLLECTED TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Y/N: Analysis Test ↓ DC-257-203	DC-257-204	DC-257-205	DC-811-204	DC-845-201-202	DC-845-203	DC-845-205	DC-CLOSURE-201-202	DC-SUP-000	DC-WPCP-203-206		Residual Chlorine (Y/N)	Project No./ Lab I.D.
1	G06S			6/13/2024	1007																							
2	G15S			6/13/2024	1056																							
3																												
4																												
5																												
6																												
7																												
8																												
9																												
10																												
11																												
12																												
13																												
14																												
15																												
16																												

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
DC-24Q2 Rev 0	Field analyses only - no samples received at lab 6/13/24						N/A - no samples pulled 6/13/24

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Jordan Bohannan

SIGNATURE of SAMPLER: JBohannan

DATE Signed (MM/DD/YY): 06/13/2024

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

Confidential

Duck Creek

WELL/SAMPLE POINT G06S **Purge Method:** Compressor

Date: 6/13/24 Start Time: 9:49 Finish/Sample Time: 1007

Well Depth (Bottom) From MP: 43.13 ft Min. Purge Volume: 1000 mL

Depth to Water From MP: 21.80 ft Total Purge Volume: 2500 mL

Water Column Length: 21.33 ft

Well Water Volume: 12.92 L Total Drawdown: 0.41 ft

Reading	Time	Depth	Flow Rate	pH	Spec Cond	Temp	ORP	DO	Turb	
(Units)		ft.	mL/min	s.u.	umhos/cm	deg C	mV	mg/L	NTU	
1	1002	21.74	300	7.17	855	16.05	140	0.00	~~0.00~~	163
2	1003	21.83	300	7.15	854	16.01	138	0.00	~~0.00~~	167
3	1004	21.97	300	7.14	858	16.03	137	0.00	149	
4	1005	22.08	300	7.14	856	16.03	138	0.00	145	
5	1006	22.21	300	7.14	856	16.02	138	0.00	147	
Stabilization	NA	NA	NA	± 0.2	± 3%	± 0.2	± 20	± 10% or 0.2	NA	

Field Meter: Horiba/Oakton

Sample Appearance:

Odor: ■ None □ Slight □ Mod. □ Strong

Color ■ None □ Slight □ Mod. □ Strong

Turb: □ None ■ Slight □ Mod □ Strong

Well Integrity	Yes	No
Well has ID sign	X	
Casing locked/secure	X	
Well cap fits securely.	X	
Good seal/drainage	X	
Well has weep holes	X	

BOTTLE INFORMATION:

Unfiltered	
Qty	Bottles
	VOAs (C,V, 40mL, HCL)
	VOAS (C,V, 40mL)
	Organics (A,G,U 1000mL)
	Organics (A,G,U 500mL)
	TOC (A,V 40mL, H2SO4)
	TOX (A,G 250mL, H2SO4)
	Metals (P,250mL, HNO3)
	Cyanide (P, 250mL, NaOH)
	Ammonia (P,250mL, H2S04)
	General (P,500mL)
	General (P,1000mL)
	Rad (P, 2.5L, HNO3)

Filtered	
Qty	Bottles
	Metals (P,250mL, HNO3)
	Ammonia (P,250mL, H2S04)
	General (P,500mL)
	General (P,1000mL)
	TOC (A,V 40mL, H2SO4)

Final DTW: 22.21 ft

Comments **Check pH if readings are below 6.5 or above 7.2** ph verified with oakton

Sampler's Signature: JBohannan

Duck Creek

WELL/SAMPLE POINT G15S **Purge Method:** Compressor

Date: 6/13/2024 Start Time: 1037 Finish/Sample Time: 1056

Well Depth (Bottom) From MP: 44.21 ft Min. Purge Volume: 1500 mL

Depth to Water From MP: 27.34 ft Total Purge Volume: 2750 mL

Water Column Length: 16.87 ft

Well Water Volume: 10.22 L Total Drawdown: 2.05 ft

Reading	Time	Depth	Flow Rate	pH	Spec Cond	Temp	ORP	DO	Turb
(Units)		ft.	mL/min	s.u.	umhos/cm	deg C	mV	mg/L	NTU
1	1047	29.39	250	7.51	675	17.39	159	0.00	150
2	1049	29.39	250	7.34	670	17.21	165	0.00	118
3	1051	29.39	250	7.32	667	17.23	166	0.00	95.8
4	1053	29.39	250	7.28	668	17.25	167	0.00	87.6
5	1055	29.39	250	7.28	670	17.25	168	0.00	78.5
Stabilization	NA	NA	NA	± 0.2	± 3%	± 0.2	± 20	± 10% or 0.2	NA

Field Meter: Horiba / Oakton

Sample Appearance:

Odor: ■ None □ Slight □ Mod. □ Strong

Color ■ None □ Slight □ Mod. □ Strong

Turb: □ None ■ Slight □ Mod □ Strong

Well Integrity	Yes	No
Well has ID sign	X	
Casing locked/secure	X	
Well cap fits securely.	X	
Good seal/drainage	X	
Well has weep holes	X	

BOTTLE INFORMATION:

Unfiltered	
Qty	Bottles
	VOAs (C,V, 40mL, HCL)
	VOAS (C,V, 40mL)
	Organics (A,G,U 1000mL)
	Organics (A,G,U 500mL)
	TOC (A,V 40mL, H2SO4)
	TOX (A,G 250mL, H2SO4)
	Metals (P,250mL, HNO3)
	Cyanide (P, 250mL, NaOH)
	Ammonia (P,250mL, H2S04)
	General (P,500mL)
	General (P,1000mL)
	Rad (P, 2.5L, HNO3)

Filtered	
Qty	Bottles
	Metals (P,250mL, HNO3)
	Ammonia (P,250mL, H2S04)
	General (P,500mL)
	General (P,1000mL)
	TOC (A,V 40mL, H2SO4)

Final DTW: 29.39 ft

Comments **Check pH if readings are below 6.2** pH verified with oakton

Sampler's Signature: JBehrman

Multiparameter Meter Field Calibration Checklist

Field Personnel:	Jordan Bohannon	Location:	Duck Creek
Weather:	77°, Sunny, 12mph wind	Environment:	Tall Grass

Multiparameter Water Meter	Make: Horiba	Model: U-5000	Serial Number: AGJTK4XG		
Water Level Meter	Make:	Model:	Serial Number:		

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	3.92	s.u.	±0.1 s.u.	P	No	N/A	MSI	023067-01	3/14/2025
pH 7.00a	7.01	s.u.	±0.1 s.u.				MSI	023051-02	2/21/2025
pH 10.00a	10.04	s.u.	±0.1 s.u.				MSI	022361-01	12/27/2024
SC Zero (DI)	0.00	µS/cm	0<25 µS/cm				Pace Labs	N/A (DI)	N/A (DI)
SC 2000	2091	µS/cm	±5%				Geotech	3GJ1438 ~~3GP0197~~	Oct ~~Jun-24~~
ORP	232	mV	±15 mV				InSitu	3GI1011	Jun-24
DO (Zero pt)	0.00	mg/L	±0.1				Macron	#000228049	8/26/2025
DO (Saturated)	100	%	97-100%				Pace Labs	N/A (DI)	N/A (DI)
Turbidity (DI)	0.00	NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

BG 6/14/24

Approx. every 4 hrs, unless only one well

ICV (Initial Calibration Verification)

Time: 0930

Buffer	Check Value	Units	Range	Pass/Fail	Action Taken?	Manufacturer	Lot#	Exp.
pH 4.00b	3.85	s.u.	±0.15 s.u.	P	Calibrated: 4.00	Geotech	3GB1049	Feb-25
pH 7.00b	6.94	s.u.	±0.15 s.u.	P	None	Proactive ~~Geotech~~	3GE1252 ~~285668~~	May-25 ~~Jun-24~~
pH 10.00b	9.97	s.u.	±0.15 s.u.	P	None	Geotech	3GA1134	Jan-25
SC 1000	1013	µS/cm	±5%	P	None	Ricca	4209A12	Aug-24

BG 6/14/24

Approx. every 4 hrs, unless only one well

CCV (Continued Calibration Verification):

Time: 1058

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.03	s.u.	±0.1 s.u.	P	NO	N/A	MSI	023067-01	3/14/2025
pH 7.00a	6.98	s.u.	±0.1 s.u.				MSI	023051-02	2/21/2025
pH 10.00a	9.97	s.u.	±0.1 s.u.				MSI	022361-01	12/27/2024
SC 1000	1008	µS/cm	±5%				Ricca	4209A12	Aug-24
DO (Zero pt)	0.00	mg/L	±0.1 mg/L				Macron	#000228049	8/26/2025
Turbidity (DI)	0.00	NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

Approx. every 4 hrs, unless only one well

Comments:

Signature: JBohannon Date: 6/13/2024

Pace Analytical Services, LLC
2231 W. Altorfer Drive
Peoria, IL 61615
(800)752-6651

August 29, 2024

Daryl Johnson
Vistra - Duck Creek
17751 North Cilco Road
Canton, IL 61520-8761

Dear Daryl Johnson:

Please find enclosed the analytical results for the sample(s) the laboratory received. All testing is performed according to our current TNI accreditations unless otherwise noted. This report cannot be reproduced, except in full, without the written permission of Pace Analytical Services, LLC.

If you have any questions regarding your report, please contact your project manager. Quality and timely data is of the utmost importance to us.

Pace Analytical Services appreciates the opportunity to provide you with analytical expertise. We are always trying to improve our customer service and we welcome you to contact the General Manager, Lisa Grant, with any feedback you have about your experience with our laboratory at 309-683-1764 or lisa.grant@pacelabs.com.

Sincerely,

Diane Billings
Project Manager

Pace Analytical Services, LLC
2231 W. Altorfer Drive
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SAMPLE RECEIPT CHECK LIST

Items not applicable will be marked as in compliance

Work Order HG04591

YES	Samples received within temperature compliance when applicable
YES	COC present upon sample receipt
YES	COC completed & legible
YES	Sampler name & signature present
YES	Unique sample IDs assigned
YES	Sample collection location recorded
YES	Date & time collected recorded on COC
YES	Relinquished by client signature on COC
YES	COC & labels match
YES	Sample labels are legible
YES	Appropriate bottle(s) received
YES	Sufficient sample volume received
YES	Sample containers received undamaged
NO	Zero headspace, <6 mm present in VOA vials
NO	Trip blank(s) received
YES	All non-field analyses received within holding times
YES	Short hold time analysis
YES	Current PDC COC submitted
NO	Case narrative provided

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Work Order HG05512

YES	Samples received within temperature compliance when applicable
YES	COC present upon sample receipt
YES	COC completed & legible
YES	Sampler name & signature present
YES	Unique sample IDs assigned
YES	Sample collection location recorded
YES	Date & time collected recorded on COC
YES	Relinquished by client signature on COC
YES	COC & labels match
YES	Sample labels are legible
YES	Appropriate bottle(s) received
YES	Sufficient sample volume received
YES	Sample containers received undamaged
NO	Zero headspace, <6 mm present in VOA vials
NO	Trip blank(s) received
YES	All non-field analyses received within holding times
YES	Short hold time analysis
YES	Current PDC COC submitted
NO	Case narrative provided

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Work Order HG05733

YES	Samples received within temperature compliance when applicable
YES	COC present upon sample receipt
YES	COC completed & legible
YES	Sampler name & signature present
YES	Unique sample IDs assigned
YES	Sample collection location recorded
YES	Date & time collected recorded on COC
YES	Relinquished by client signature on COC
YES	COC & labels match
YES	Sample labels are legible
YES	Appropriate bottle(s) received
YES	Sufficient sample volume received
YES	Sample containers received undamaged
NO	Zero headspace, <6 mm present in VOA vials
NO	Trip blank(s) received
YES	All non-field analyses received within holding times
YES	Short hold time analysis
YES	Current PDC COC submitted
NO	Case narrative provided

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Work Order HH00162

YES	Samples received within temperature compliance when applicable
YES	COC present upon sample receipt
YES	COC completed & legible
YES	Sampler name & signature present
YES	Unique sample IDs assigned
YES	Sample collection location recorded
YES	Date & time collected recorded on COC
YES	Relinquished by client signature on COC
YES	COC & labels match
YES	Sample labels are legible
YES	Appropriate bottle(s) received
YES	Sufficient sample volume received
YES	Sample containers received undamaged
NO	Zero headspace, <6 mm present in VOA vials
NO	Trip blank(s) received
YES	All non-field analyses received within holding times
YES	Short hold time analysis
YES	Current PDC COC submitted
NO	Case narrative provided

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ANALYTICAL RESULTS

Sample: HG04591-11
Name: G04S
Matrix: Ground Water - Grab

Sampled: 07/24/24 10:56
Received: 07/24/24 16:47
PO #: 2438773/2438768

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Anions - PIA									
Chloride	15	mg/L	Q4	07/26/24 19:10	5	5.0	07/26/24 19:10	JSM	EPA 300.0 REV 2.1
Fluoride	< 0.250	mg/L		07/26/24 18:52	1	0.250	07/26/24 18:52	JSM	EPA 300.0 REV 2.1
Sulfate	200	mg/L	Q4	07/26/24 19:28	50	50	07/26/24 19:28	JSM	EPA 300.0 REV 2.1
Field - PIA									
Depth, From Measuring Point	14.91	Feet		07/24/24 10:56	1		07/24/24 10:56	FIELD	Field*
Dissolved oxygen, Field	2.6	mg/L		07/24/24 10:56	1		07/24/24 10:56	FIELD	Field*
Oxidation Reduction Potential	51.0	mV		07/24/24 10:56	1	-500	07/24/24 10:56	FIELD	Field*
pH, Field Measured	7.23	pH Units		07/24/24 10:56	1		07/24/24 10:56	FIELD	Field*
Specific Conductance, Field Measured	1020	umhos/cm		07/24/24 10:56	1		07/24/24 10:56	FIELD	Field*
Temperature, Field Measured	18.9	°C		07/24/24 10:56	1		07/24/24 10:56	FIELD	Field*
Turbidity, Field Measured	102	NTU		07/24/24 10:56	1	0.00	07/24/24 10:56	FIELD	Field*
General Chemistry - PIA									
Alkalinity - bicarbonate as CaCO3	320	mg/L		08/02/24 09:08	1	10	08/02/24 09:08	CFM	SM 2320 B-2011*
Alkalinity - carbonate as CaCO3	< 10	mg/L		08/02/24 09:08	1	10	08/02/24 09:08	CFM	SM 2320 B-2011*
Soluble General Chemistry - PIA									
Solids - total dissolved solids (TDS)	650	mg/L		07/30/24 09:14	1	26	07/30/24 15:06	CFM	SM 2540 C-2011
Total Metals - PIA									
Boron	31	ug/L		07/25/24 09:05	5	10	07/29/24 14:16	TJJ	EPA 6020A
Calcium	130	mg/L		07/25/24 09:05	5	0.20	07/26/24 12:23	TJJ	EPA 6020A
Magnesium	58	mg/L		07/25/24 09:05	5	0.10	07/26/24 12:23	TJJ	EPA 6020A
Potassium	0.98	mg/L		07/25/24 09:05	5	0.10	07/26/24 12:23	TJJ	EPA 6020A
Sodium	8.2	mg/L		07/25/24 09:05	5	0.10	07/26/24 12:23	TJJ	EPA 6020A

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ANALYTICAL RESULTS

Sample: HG04591-12
Name: G06S
Matrix: Ground Water - Grab

Sampled: 07/24/24 12:00
Received: 07/24/24 16:47
PO #: 2438773/2438768

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Anions - PIA									
Chloride	17	mg/L		07/26/24 21:17	5	5.0	07/26/24 21:17	JSM	EPA 300.0 REV 2.1
Sulfate	350	mg/L		07/29/24 17:37	50	50	07/29/24 17:37	JSM	EPA 300.0 REV 2.1
Field - PIA									
Depth, From Measuring Point	20.28	Feet		07/24/24 12:00	1		07/24/24 12:00	FIELD	Field*
Dissolved oxygen, Field	0.98	mg/L		07/24/24 12:00	1		07/24/24 12:00	FIELD	Field*
Oxidation Reduction Potential	127	mV		07/24/24 12:00	1	-500	07/24/24 12:00	FIELD	Field*
pH, Field Measured	6.99	pH Units		07/24/24 12:00	1		07/24/24 12:00	FIELD	Field*
Specific Conductance, Field Measured	937.0	umhos/cm		07/24/24 12:00	1		07/24/24 12:00	FIELD	Field*
Temperature, Field Measured	19.2	°C		07/24/24 12:00	1		07/24/24 12:00	FIELD	Field*
Turbidity, Field Measured	191	NTU		07/24/24 12:00	1	0.00	07/24/24 12:00	FIELD	Field*
General Chemistry - PIA									
Alkalinity - bicarbonate as CaCO3	480	mg/L		08/02/24 09:08	1	10	08/02/24 09:08	CFM	SM 2320 B-2011*
Alkalinity - carbonate as CaCO3	< 10	mg/L		08/02/24 09:08	1	10	08/02/24 09:08	CFM	SM 2320 B-2011*
Fluoride	< 0.250	mg/L		07/30/24 14:45	1	0.250	07/30/24 14:45	QTC	SM 4500-F C-2011
Soluble General Chemistry - PIA									
Solids - total dissolved solids (TDS)	480	mg/L		07/30/24 09:14	1	26	07/30/24 15:06	CFM	SM 2540 C-2011
Total Metals - PIA									
Boron	18	ug/L		07/25/24 09:05	5	10	07/29/24 14:58	TJJ	EPA 6020A
Calcium	120	mg/L		07/25/24 09:05	5	0.20	07/26/24 12:27	TJJ	EPA 6020A
Magnesium	62	mg/L		07/25/24 09:05	5	0.10	07/26/24 12:27	TJJ	EPA 6020A
Potassium	0.83	mg/L		07/25/24 09:05	5	0.10	07/26/24 12:27	TJJ	EPA 6020A
Sodium	7.4	mg/L		07/25/24 09:05	5	0.10	07/26/24 12:27	TJJ	EPA 6020A

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ANALYTICAL RESULTS

Sample: HG04591-13
Name: G12S
Matrix: Ground Water - Grab

Sampled: 07/24/24 14:00
Received: 07/24/24 16:47
PO #: 2438773/2438768

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Anions - PIA									
Chloride	17	mg/L		07/26/24 22:11	5	5.0	07/26/24 22:11	JSM	EPA 300.0 REV 2.1
Fluoride	0.323	mg/L		07/26/24 21:53	1	0.250	07/26/24 21:53	JSM	EPA 300.0 REV 2.1
Sulfate	94	mg/L		07/26/24 22:29	25	25	07/26/24 22:29	JSM	EPA 300.0 REV 2.1
Field - PIA									
Depth, From Measuring Point	19.58	Feet		07/24/24 14:00	1		07/24/24 14:00	FIELD	Field*
Dissolved oxygen, Field	0.64	mg/L		07/24/24 14:00	1		07/24/24 14:00	FIELD	Field*
Oxidation Reduction Potential	-109	mV		07/24/24 14:00	1	-500	07/24/24 14:00	FIELD	Field*
pH, Field Measured	7.39	pH Units		07/24/24 14:00	1		07/24/24 14:00	FIELD	Field*
Specific Conductance, Field Measured	686.0	umhos/cm		07/24/24 14:00	1		07/24/24 14:00	FIELD	Field*
Temperature, Field Measured	15.9	°C		07/24/24 14:00	1		07/24/24 14:00	FIELD	Field*
Turbidity, Field Measured	48.1	NTU		07/24/24 14:00	1	0.00	07/24/24 14:00	FIELD	Field*
General Chemistry - PIA									
Alkalinity - bicarbonate as CaCO3	250	mg/L		08/02/24 09:08	1	10	08/02/24 09:08	CFM	SM 2320 B-2011*
Alkalinity - carbonate as CaCO3	< 10	mg/L		08/02/24 09:08	1	10	08/02/24 09:08	CFM	SM 2320 B-2011*
Soluble General Chemistry - PIA									
Solids - total dissolved solids (TDS)	490	mg/L		07/30/24 10:17	1	26	07/31/24 00:00	CFM	SM 2540 C-2011
Total Metals - PIA									
Boron	< 10	ug/L		07/25/24 09:05	5	10	07/29/24 15:01	TJJ	EPA 6020A
Calcium	82	mg/L		07/25/24 09:05	5	0.20	07/26/24 12:31	TJJ	EPA 6020A
Magnesium	39	mg/L		07/25/24 09:05	5	0.10	07/26/24 12:31	TJJ	EPA 6020A
Potassium	0.39	mg/L		07/25/24 09:05	5	0.10	07/26/24 12:31	TJJ	EPA 6020A
Sodium	6.6	mg/L		07/25/24 09:05	5	0.10	07/26/24 12:31	TJJ	EPA 6020A

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ANALYTICAL RESULTS

Sample: HG04591-14
Name: G09S
Matrix: Ground Water - Grab

Sampled: 07/24/24 15:30
Received: 07/24/24 16:47
PO #: 2438773/2438768

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Anions - PIA									
Chloride	15	mg/L		07/26/24 23:05	5	5.0	07/26/24 23:05	JSM	EPA 300.0 REV 2.1
Fluoride	< 0.250	mg/L		07/26/24 22:47	1	0.250	07/26/24 22:47	JSM	EPA 300.0 REV 2.1
Sulfate	48	mg/L		07/26/24 23:05	5	5.0	07/26/24 23:05	JSM	EPA 300.0 REV 2.1
Field - PIA									
Depth, From Measuring Point	19.52	Feet		07/24/24 15:30	1		07/24/24 15:30	FIELD	Field*
Dissolved oxygen, Field	2.7	mg/L		07/24/24 15:30	1		07/24/24 15:30	FIELD	Field*
Oxidation Reduction Potential	144	mV		07/24/24 15:30	1	-500	07/24/24 15:30	FIELD	Field*
pH, Field Measured	6.97	pH Units		07/24/24 15:30	1		07/24/24 15:30	FIELD	Field*
Specific Conductance, Field Measured	827.0	umhos/cm		07/24/24 15:30	1		07/24/24 15:30	FIELD	Field*
Temperature, Field Measured	19.6	°C		07/24/24 15:30	1		07/24/24 15:30	FIELD	Field*
Turbidity, Field Measured	>1000	NTU		07/24/24 15:30	1	0.00	07/24/24 15:30	FIELD	Field*
General Chemistry - PIA									
Alkalinity - bicarbonate as CaCO3	390	mg/L		08/02/24 09:08	1	10	08/02/24 09:08	CFM	SM 2320 B-2011*
Alkalinity - carbonate as CaCO3	< 10	mg/L		08/02/24 09:08	1	10	08/02/24 09:08	CFM	SM 2320 B-2011*
Soluble General Chemistry - PIA									
Solids - total dissolved solids (TDS)	500	mg/L		07/30/24 10:17	1	26	07/31/24 00:00	CFM	SM 2540 C-2011
Total Metals - PIA									
Boron	23	ug/L		07/25/24 09:05	5	10	07/29/24 14:25	TJJ	EPA 6020A
Calcium	110	mg/L		07/25/24 09:05	5	0.20	07/26/24 12:35	TJJ	EPA 6020A
Magnesium	54	mg/L		07/25/24 09:05	5	0.10	07/26/24 12:35	TJJ	EPA 6020A
Potassium	2.7	mg/L		07/25/24 09:05	5	0.10	07/26/24 12:35	TJJ	EPA 6020A
Sodium	11	mg/L		07/25/24 09:05	5	0.10	07/26/24 12:35	TJJ	EPA 6020A

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ANALYTICAL RESULTS

Sample: HG05512-01
Name: L103
Alias: DUCK CREEK LANDFILL

Sampled: 07/30/24 12:36
Received: 07/30/24 15:54
Matrix: Leachate - Regular Sample
PO #: 1728919

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Anions - PIA									
Chloride	79	mg/L		08/12/24 11:40	50	50	08/12/24 11:40	JSM	EPA 300.0 REV 2.1
Sulfate	1800	mg/L		08/12/24 11:57	500	500	08/12/24 11:57	JSM	EPA 300.0 REV 2.1
Field - PIA									
Depth, From Measuring Point	0.52	Feet		07/30/24 12:36	1		07/30/24 12:36	FIELD	Field*
Dissolved oxygen, Field	0.0	mg/L		07/30/24 12:36	1		07/30/24 12:36	FIELD	Field*
Oxidation Reduction Potential	50.0	mV		07/30/24 12:36	1	-500	07/30/24 12:36	FIELD	Field*
pH, Field Measured	7.50	pH Units		07/30/24 12:36	1		07/30/24 12:36	FIELD	Field*
Specific Conductance, Field Measured	4150	umhos/cm		07/30/24 12:36	1		07/30/24 12:36	FIELD	Field*
Temperature, Field Measured	19.0	°C		07/30/24 12:36	1		07/30/24 12:36	FIELD	Field*
Turbidity, Field Measured	< 0.00	NTU		07/30/24 12:36	1	0.00	07/30/24 12:36	FIELD	Field*
General Chemistry - PIA									
Alkalinity - bicarbonate as CaCO3	150	mg/L		08/12/24 11:31	1	10	08/12/24 11:31	CFM/ TMS	SM 2320 B-2011*
Alkalinity - carbonate as CaCO3	50	mg/L		08/12/24 11:31	1	10	08/12/24 11:31	CFM/ TMS	SM 2320 B-2011*
Fluoride	0.694	mg/L		08/14/24 15:35	1	0.250	08/14/24 15:35	QTC	SM 4500-F C-2011
Solids - total dissolved solids (TDS)	3300	mg/L		08/05/24 10:28	1	34	08/06/24 15:01	LAL2	SM 2540 C-2011
Total Metals - PIA									
Boron	12000	ug/L		07/31/24 09:32	50	100	08/07/24 14:12	TJJ	EPA 6020A
Calcium	110	mg/L		07/31/24 09:32	5	0.20	08/02/24 18:30	TJJ	EPA 6020A
Magnesium	39	mg/L		07/31/24 09:32	5	0.10	08/02/24 18:30	TJJ	EPA 6020A
Potassium	17	mg/L		07/31/24 09:32	5	0.10	08/02/24 18:30	TJJ	EPA 6020A
Sodium	970	mg/L		07/31/24 09:32	50	1.0	08/07/24 14:12	TJJ	EPA 6020A

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ANALYTICAL RESULTS

Sample: HG05733-01
Name: G15S
Matrix: Ground Water - Grab

Sampled: 07/31/24 12:32
Received: 07/31/24 16:35
PO #: 2438773/2438768

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Anions - PIA									
Chloride	10	mg/L	Q4	08/09/24 12:35	5	5.0	08/09/24 12:35	JSM	EPA 300.0 REV 2.1
Fluoride	0.256	mg/L		08/09/24 12:18	1	0.250	08/09/24 12:18	JSM	EPA 300.0 REV 2.1
Sulfate	42	mg/L		08/12/24 20:22	5	5.0	08/12/24 20:22	JSM	EPA 300.0 REV 2.1
Field - PIA									
Depth, From Measuring Point	28.09	Feet		07/31/24 12:32	1		07/31/24 12:32	FIELD	Field*
Dissolved oxygen, Field	2.8	mg/L		07/31/24 12:32	1		07/31/24 12:32	FIELD	Field*
Oxidation Reduction Potential	325	mV		07/31/24 12:32	1	-500	07/31/24 12:32	FIELD	Field*
pH, Field Measured	6.99	pH Units		07/31/24 12:32	1		07/31/24 12:32	FIELD	Field*
Specific Conductance, Field Measured	743.0	umhos/cm		07/31/24 12:32	1		07/31/24 12:32	FIELD	Field*
Temperature, Field Measured	16.4	°C		07/31/24 12:32	1		07/31/24 12:32	FIELD	Field*
Turbidity, Field Measured	71.4	NTU		07/31/24 12:32	1	0.00	07/31/24 12:32	FIELD	Field*
General Chemistry - PIA									
Alkalinity - bicarbonate as CaCO3	340	mg/L		08/12/24 11:31	1	10	08/12/24 11:31	CFM/ TMS	SM 2320 B-2011*
Alkalinity - carbonate as CaCO3	< 10	mg/L		08/12/24 11:31	1	10	08/12/24 11:31	CFM/ TMS	SM 2320 B-2011*
Soluble General Chemistry - PIA									
Solids - total dissolved solids (TDS)	440	mg/L		08/06/24 08:55	1	17	08/06/24 14:00	LAL2	SM 2540 C-2011
Total Metals - PIA									
Boron	18	ug/L		08/01/24 08:51	5	10	08/01/24 15:58	TJJ	EPA 6020A
Calcium	89	mg/L		08/01/24 08:51	5	0.20	08/01/24 15:58	TJJ	EPA 6020A
Magnesium	45	mg/L		08/01/24 08:51	5	0.10	08/01/24 15:58	TJJ	EPA 6020A
Potassium	0.61	mg/L		08/01/24 08:51	5	0.10	08/01/24 15:58	TJJ	EPA 6020A
Sodium	10	mg/L		08/01/24 08:51	5	0.10	08/01/24 15:58	TJJ	EPA 6020A

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ANALYTICAL RESULTS

Sample: HH00162-05
Name: G02S
Matrix: Ground Water - Grab

Sampled: 08/01/24 10:30
Received: 08/01/24 15:06
PO #: 2438773/2438768

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Anions - PIA									
Chloride	1.3	mg/L		08/09/24 21:17	1	1.0	08/09/24 21:17	JSM	EPA 300.0 REV 2.1
Fluoride	0.263	mg/L		08/09/24 21:17	1	0.250	08/09/24 21:17	JSM	EPA 300.0 REV 2.1
Sulfate	< 1.0	mg/L		08/09/24 21:17	1	1.0	08/09/24 21:17	JSM	EPA 300.0 REV 2.1
Field - PIA									
Depth, From Measuring Point	8.51	Feet		08/01/24 10:30	1		08/01/24 10:30	FIELD	Field*
Dissolved oxygen, Field	1.4	mg/L		08/01/24 10:30	1		08/01/24 10:30	FIELD	Field*
Oxidation Reduction Potential	-89.0	mV		08/01/24 10:30	1	-500	08/01/24 10:30	FIELD	Field*
pH, Field Measured	6.63	pH Units		08/01/24 10:30	1		08/01/24 10:30	FIELD	Field*
Specific Conductance, Field Measured	818.0	umhos/cm		08/01/24 10:30	1		08/01/24 10:30	FIELD	Field*
Temperature, Field Measured	17.3	°C		08/01/24 10:30	1		08/01/24 10:30	FIELD	Field*
Turbidity, Field Measured	18.3	NTU		08/01/24 10:30	1	0.00	08/01/24 10:30	FIELD	Field*
General Chemistry - PIA									
Alkalinity - bicarbonate as CaCO3	420	mg/L		08/13/24 09:57	1	10	08/13/24 09:57	CFM	SM 2320 B-2011*
Alkalinity - carbonate as CaCO3	< 10	mg/L		08/13/24 09:57	1	10	08/13/24 09:57	CFM	SM 2320 B-2011*
Soluble General Chemistry - PIA									
Solids - total dissolved solids (TDS)	430	mg/L		08/08/24 09:21	1	26	08/08/24 13:03	CFM	SM 2540 C-2011
Total Metals - PIA									
Boron	56	ug/L		08/08/24 09:13	5	10	08/12/24 12:10	TJJ	EPA 6020A
Calcium	99	mg/L		08/08/24 09:13	5	0.20	08/09/24 16:44	TJJ	EPA 6020A
Magnesium	37	mg/L		08/08/24 09:13	5	0.10	08/09/24 16:44	TJJ	EPA 6020A
Potassium	0.84	mg/L		08/08/24 09:13	5	0.10	08/09/24 16:44	TJJ	EPA 6020A
Sodium	14	mg/L		08/08/24 09:13	5	0.10	08/09/24 16:44	TJJ	EPA 6020A

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QC SAMPLE RESULTS

Parameter	Result	Unit	Qual	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B438965 - SW 3015 - EPA 6020A									
Blank (B438965-BLK1)				Prepared: 07/25/24 Analyzed: 07/29/24					
Boron	< 10	ug/L							
Calcium	< 0.20	mg/L							
Magnesium	< 0.10	mg/L							
Potassium	< 0.10	mg/L							
Sodium	< 0.10	mg/L							
LCS (B438965-BS1)				Prepared: 07/25/24 Analyzed: 07/29/24					
Boron	545	ug/L		555.6		98	80-120		
Calcium	5.71	mg/L		5.556		103	80-120		
Magnesium	5.98	mg/L		5.556		108	80-120		
Potassium	5.64	mg/L		5.556		101	80-120		
Sodium	5.92	mg/L		5.556		106	80-120		
Matrix Spike (B438965-MS1)	**Sample: HG04591-01**			Prepared: 07/25/24 Analyzed: 07/29/24					
Boron	992	ug/L		555.6	455	97	75-125		
Calcium	140	mg/L		5.556	136	83	75-125		
Magnesium	77.5	mg/L	Q4	5.556	73.6	70	75-125		
Potassium	6.67	mg/L		5.556	1.20	98	75-125		
Sodium	62.5	mg/L		5.556	58.4	73	75-125		
Matrix Spike Dup (B438965-MSD1)	**Sample: HG04591-01**			Prepared: 07/25/24 Analyzed: 07/29/24					
Boron	1030	ug/L		555.6	455	103	75-125	4	20
Calcium	143	mg/L	Q4	5.556	136	129	75-125	2	20
Magnesium	78.0	mg/L		5.556	73.6	79	75-125	0.6	20
Potassium	6.75	mg/L		5.556	1.20	100	75-125	1	20
Sodium	62.7	mg/L		5.556	58.4	78	75-125	0.4	20
Batch B439262 - IC No Prep - EPA 300.0 REV 2.1									
Calibration Blank (B439262-CCB1)				Prepared & Analyzed: 07/26/24					
Chloride	0.00	mg/L							
Fluoride	0.00	mg/L							
Sulfate	0.00	mg/L							
Calibration Check (B439262-CCV1)				Prepared & Analyzed: 07/26/24					
Sulfate	4.81	mg/L		5.000		96	90-110		
Chloride	4.98	mg/L		5.000		100	90-110		
Fluoride	5.13	mg/L		5.000		103	90-110		
Matrix Spike (B439262-MS1)	**Sample: HG04591-01**			Prepared & Analyzed: 07/26/24					
Sulfate	1.00E9	mg/L	Q4	1.500	214	NR	80-120		
Chloride	1.0E9	mg/L	Q4	1.500	10	NR	80-120		
Fluoride	1.95	mg/L		1.500	0.232	115	80-120		
Matrix Spike (B439262-MS2)	**Sample: HG04591-11**			Prepared & Analyzed: 07/26/24					
Fluoride	1.90	mg/L		1.500	0.240	110	80-120		
Chloride	1.0E9	mg/L	Q4	1.500	15	NR	80-120		
Sulfate	1.00E9	mg/L	Q4	1.500	204	NR	80-120		
Matrix Spike Dup (B439262-MSD1)	**Sample: HG04591-01**			Prepared & Analyzed: 07/26/24					
Chloride	1.0E9	mg/L	Q4	1.500	10	NR	80-120	0	20
Sulfate	1.00E9	mg/L	Q4	1.500	214	NR	80-120	0	20

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QC SAMPLE RESULTS

Parameter	Result	Unit	Qual	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Matrix Spike Dup (B439262-MSD1)	**Sample: HG04591-01**			Prepared & Analyzed: 07/26/24					
Fluoride	1.92	mg/L		1.500	0.232	113	80-120	2	20
Matrix Spike Dup (B439262-MSD2)	**Sample: HG04591-11**			Prepared & Analyzed: 07/26/24					
Fluoride	1.87	mg/L		1.500	0.240	109	80-120	1	20
Chloride	1.0E9	mg/L	Q4	1.500	15	NR	80-120	0	20
Sulfate	1.00E9	mg/L	Q4	1.500	204	NR	80-120	0	20
Batch B439343 - No Prep - SM 2540 C-2011									
Blank (B439343-BLK1)				Prepared & Analyzed: 07/30/24					
Solids - total dissolved solids (TDS)	< 17	mg/L							
LCS (B439343-BS1)				Prepared & Analyzed: 07/30/24					
Solids - total dissolved solids (TDS)	973	mg/L		1000		97	84.4-107		
Duplicate (B439343-DUP1)	**Sample: HG04591-01**			Prepared & Analyzed: 07/30/24					
Solids - total dissolved solids (TDS)	810	mg/L			795			2	5
Duplicate (B439343-DUP2)	**Sample: HG04591-11**			Prepared & Analyzed: 07/30/24					
Solids - total dissolved solids (TDS)	670	mg/L			650			3	5
Batch B439360 - No Prep - SM 2540 C-2011									
Blank (B439360-BLK1)				Prepared: 07/30/24 Analyzed: 07/31/24					
Solids - total dissolved solids (TDS)	< 17	mg/L							
LCS (B439360-BS1)				Prepared: 07/30/24 Analyzed: 07/31/24					
Solids - total dissolved solids (TDS)	977	mg/L		1000		98	84.4-107		
Batch B439363 - IC No Prep - EPA 300.0 REV 2.1									
Calibration Blank (B439363-CCB1)				Prepared & Analyzed: 07/29/24					
Sulfate	0.00	mg/L							
Calibration Check (B439363-CCV1)				Prepared & Analyzed: 07/29/24					
Sulfate	4.88	mg/L		5.000		98	90-110		
Batch B439416 - No Prep - SM 4500-F C-2011									
Calibration Blank (B439416-CCB1)				Prepared & Analyzed: 07/30/24					
Fluoride	0.100	mg/L							
Calibration Blank (B439416-CCB2)				Prepared & Analyzed: 07/30/24					
Fluoride	0.0280	mg/L							
Calibration Check (B439416-CCV1)				Prepared & Analyzed: 07/30/24					
Fluoride	0.711	mg/L		0.7000		102	90-110		
Calibration Check (B439416-CCV2)				Prepared & Analyzed: 07/30/24					
Fluoride	0.688	mg/L		0.7000		98	90-110		
Matrix Spike (B439416-MS6)	**Sample: HG04591-04**			Prepared & Analyzed: 07/30/24					
Fluoride	1.20	mg/L		1.000	0.225	98	80-120		
Matrix Spike Dup (B439416-MSD6)	**Sample: HG04591-04**			Prepared & Analyzed: 07/30/24					
Fluoride	1.21	mg/L		1.000	0.225	98	80-120	0.6	20
Batch B439474 - SW 3015 - EPA 6020A									
Blank (B439474-BLK1)				Prepared: 07/31/24 Analyzed: 08/07/24					
Boron	< 10	ug/L							
Calcium	< 0.20	mg/L							
Magnesium	< 0.10	mg/L							

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QC SAMPLE RESULTS

Parameter	Result	Unit	Qual	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Blank (B439474-BLK1)				Prepared: 07/31/24 Analyzed: 08/02/24					
Potassium	< 0.10	mg/L							
Sodium	< 0.10	mg/L							
LCS (B439474-BS1)				Prepared: 07/31/24 Analyzed: 08/07/24					
Boron	544	ug/L		555.6		98	80-120		
Calcium	5.72	mg/L		5.556		103	80-120		
Magnesium	6.03	mg/L		5.556		109	80-120		
Potassium	5.58	mg/L		5.556		100	80-120		
Sodium	5.93	mg/L		5.556		107	80-120		
Batch B439582 - SW 3015 - EPA 6020A									
Blank (B439582-BLK1)				Prepared & Analyzed: 08/01/24					
Boron	< 10	ug/L							
Calcium	< 0.20	mg/L							
Magnesium	< 0.10	mg/L							
Potassium	< 0.10	mg/L							
Sodium	< 0.10	mg/L							
LCS (B439582-BS1)				Prepared & Analyzed: 08/01/24					
Boron	524	ug/L		555.6		94	80-120		
Calcium	5.71	mg/L		5.556		103	80-120		
Magnesium	5.85	mg/L		5.556		105	80-120		
Potassium	5.84	mg/L		5.556		105	80-120		
Sodium	5.87	mg/L		5.556		106	80-120		
Matrix Spike (B439582-MS1)	**Sample: HG05733-01**			Prepared & Analyzed: 08/01/24					
Boron	554	ug/L		555.6	18.4	96	75-125		
Calcium	94.3	mg/L		5.556	89.5	87	75-125		
Magnesium	49.9	mg/L		5.556	44.8	92	75-125		
Potassium	6.40	mg/L		5.556	0.607	104	75-125		
Sodium	15.8	mg/L		5.556	10.1	102	75-125		
Matrix Spike Dup (B439582-MSD1)	**Sample: HG05733-01**			Prepared & Analyzed: 08/01/24					
Boron	558	ug/L		555.6	18.4	97	75-125	0.6	20
Calcium	94.8	mg/L		5.556	89.5	96	75-125	0.5	20
Magnesium	50.1	mg/L		5.556	44.8	95	75-125	0.4	20
Potassium	6.35	mg/L		5.556	0.607	103	75-125	0.8	20
Sodium	15.9	mg/L		5.556	10.1	104	75-125	0.8	20
Batch B439866 - No Prep - SM 2540 C-2011									
Blank (B439866-BLK1)				Prepared: 08/05/24 Analyzed: 08/06/24					
Solids - total dissolved solids (TDS)	< 17	mg/L							
LCS (B439866-BS1)				Prepared: 08/05/24 Analyzed: 08/06/24					
Solids - total dissolved solids (TDS)	1000	mg/L		1000		100	84.4-107		
Batch B439872 - No Prep - SM 2320 B-2011									
Duplicate (B439872-DUP1)	**Sample: HG04591-01**			Prepared & Analyzed: 08/02/24					
Alkalinity - bicarbonate as CaCO3	562	mg/L			550			2	10
Alkalinity - carbonate as CaCO3	< 10	mg/L			ND				10
Duplicate (B439872-DUP2)	**Sample: HG04591-11**			Prepared & Analyzed: 08/02/24					
Alkalinity - carbonate as CaCO3	< 10	mg/L			ND				10

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QC SAMPLE RESULTS

Parameter	Result	Unit	Qual	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Duplicate (B439872-DUP2)	**Sample: HG04591-11**			Prepared & Analyzed: 08/02/24					
Alkalinity - bicarbonate as CaCO3	338	mg/L			325			4	10
Batch B439959 - No Prep - SM 2540 C-2011									
Blank (B439959-BLK1)				Prepared & Analyzed: 08/06/24					
Solids - total dissolved solids (TDS)	< 17	mg/L							
LCS (B439959-BS1)				Prepared & Analyzed: 08/06/24					
Solids - total dissolved solids (TDS)	943	mg/L		1000		94	84.4-107		
Duplicate (B439959-DUP1)	**Sample: HG05733-01**			Prepared & Analyzed: 08/06/24					
Solids - total dissolved solids (TDS)	430	mg/L			445			3	5
Batch B440226 - SW 3015 - EPA 6020A									
Blank (B440226-BLK1)				Prepared: 08/08/24 Analyzed: 08/12/24					
Boron	< 10	ug/L							
Calcium	< 0.20	mg/L							
Magnesium	< 0.10	mg/L							
Potassium	< 0.10	mg/L							
Sodium	< 0.10	mg/L							
LCS (B440226-BS1)				Prepared: 08/08/24 Analyzed: 08/12/24					
Boron	599	ug/L		555.6		108	80-120		
Calcium	5.77	mg/L		5.556		104	80-120		
Magnesium	5.95	mg/L		5.556		107	80-120		
Potassium	5.81	mg/L		5.556		105	80-120		
Sodium	5.94	mg/L		5.556		107	80-120		
Matrix Spike (B440226-MS1)	**Sample: HH00162-03**			Prepared: 08/08/24 Analyzed: 08/12/24					
Boron	590	ug/L		555.6	18.8	103	75-125		
Calcium	105	mg/L	Q4	5.556	101	68	75-125		
Magnesium	49.8	mg/L		5.556	45.3	82	75-125		
Potassium	6.41	mg/L		5.556	0.617	104	75-125		
Sodium	18.0	mg/L		5.556	12.4	100	75-125		
Matrix Spike Dup (B440226-MSD1)	**Sample: HH00162-03**			Prepared: 08/08/24 Analyzed: 08/12/24					
Boron	583	ug/L		555.6	18.8	102	75-125	1	20
Calcium	105	mg/L		5.556	101	78	75-125	0.5	20
Magnesium	50.1	mg/L		5.556	45.3	88	75-125	0.6	20
Potassium	6.39	mg/L		5.556	0.617	104	75-125	0.2	20
Sodium	18.1	mg/L		5.556	12.4	102	75-125	0.7	20
Batch B440228 - No Prep - SM 2540 C-2011									
Blank (B440228-BLK1)				Prepared & Analyzed: 08/08/24					
Solids - total dissolved solids (TDS)	< 17	mg/L							
LCS (B440228-BS1)				Prepared & Analyzed: 08/08/24					
Solids - total dissolved solids (TDS)	950	mg/L		1000		95	84.4-107		
Duplicate (B440228-DUP1)	**Sample: HH00162-11**			Prepared & Analyzed: 08/08/24					
Solids - total dissolved solids (TDS)	10500	mg/L			10200			2	5
Duplicate (B440228-DUP2)	**Sample: HH00162-13**			Prepared & Analyzed: 08/08/24					
Solids - total dissolved solids (TDS)	670	mg/L			655			2	5
Batch B440549 - IC No Prep - EPA 300.0 REV 2.1									

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QC SAMPLE RESULTS

Parameter	Result	Unit	Qual	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Calibration Blank (B440549-CCB1)				Prepared & Analyzed: 08/09/24					
Fluoride	0.00	mg/L							
Chloride	0.00	mg/L							
Sulfate	0.00	mg/L							
Calibration Check (B440549-CCV1)				Prepared & Analyzed: 08/09/24					
Chloride	4.98	mg/L		5.000		100	90-110		
Sulfate	4.85	mg/L		5.000		97	90-110		
Fluoride	5.16	mg/L		5.000		103	90-110		
Matrix Spike (B440549-MS1)	**Sample: HG05733-01**			Prepared & Analyzed: 08/09/24					
Chloride	1.0E9	mg/L	Q4	1.500	10	NR	80-120		
Fluoride	1.68	mg/L		1.500	0.256	95	80-120		
Matrix Spike (B440549-MS2)	**Sample: HH00162-03**			Prepared & Analyzed: 08/09/24					
Fluoride	1.92	mg/L		1.500	0.219	113	80-120		
Sulfate	1.00E9	mg/L	Q4	1.500	22.7	NR	80-120		
Chloride	4.5	mg/L		1.500	2.8	112	80-120		
Matrix Spike (B440549-MS3)	**Sample: HH00162-11**			Prepared & Analyzed: 08/10/24					
Sulfate	1.00E9	mg/L	Q4	1.500	2640	NR	80-120		
Chloride	1.0E9	mg/L	Q4	1.500	2500	NR	80-120		
Matrix Spike Dup (B440549-MSD1)	**Sample: HG05733-01**			Prepared & Analyzed: 08/09/24					
Fluoride	1.66	mg/L		1.500	0.256	94	80-120	1	20
Chloride	1.0E9	mg/L	Q4	1.500	10	NR	80-120	0	20
Matrix Spike Dup (B440549-MSD2)	**Sample: HH00162-03**			Prepared & Analyzed: 08/09/24					
Sulfate	1.00E9	mg/L	Q4	1.500	22.7	NR	80-120	0	20
Chloride	4.4	mg/L		1.500	2.8	109	80-120	0.8	20
Fluoride	1.88	mg/L		1.500	0.219	111	80-120	2	20
Matrix Spike Dup (B440549-MSD3)	**Sample: HH00162-11**			Prepared & Analyzed: 08/10/24					
Sulfate	1.00E9	mg/L	Q4	1.500	2640	NR	80-120	0	20
Chloride	1.0E9	mg/L	Q4	1.500	2500	NR	80-120	0	20
Batch B440591 - No Prep - SM 2320 B-2011									
Blank (B440591-BLK1)				Prepared & Analyzed: 08/12/24					
Alkalinity - bicarbonate as CaCO3	2.50	mg/L							
Alkalinity - carbonate as CaCO3	< 2.0	mg/L							
Duplicate (B440591-DUP1)	**Sample: HG05733-01**			Prepared & Analyzed: 08/12/24					
Alkalinity - bicarbonate as CaCO3	338	mg/L			338			0	10
Alkalinity - carbonate as CaCO3	< 10	mg/L			ND				10
Duplicate (B440591-DUP2)	**Sample: HG05733-11**			Prepared & Analyzed: 08/12/24					
Alkalinity - bicarbonate as CaCO3	562	mg/L			550			2	10
Batch B440662 - IC No Prep - EPA 300.0 REV 2.1									
Calibration Blank (B440662-CCB1)				Prepared & Analyzed: 08/12/24					
Sulfate	0.00	mg/L							
Calibration Check (B440662-CCV1)				Prepared & Analyzed: 08/12/24					
Sulfate	4.89	mg/L		5.000		98	90-110		
Batch B440664 - IC No Prep - EPA 300.0 REV 2.1									
Calibration Blank (B440664-CCB1)				Prepared & Analyzed: 08/12/24					
Sulfate	0.00	mg/L							

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QC SAMPLE RESULTS

Parameter	Result	Unit	Qual	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Calibration Blank (B440664-CCB1)				Prepared & Analyzed: 08/12/24					
Chloride	0.00	mg/L							
Calibration Check (B440664-CCV1)				Prepared & Analyzed: 08/12/24					
Sulfate	4.83	mg/L		5.000		97	90-110		
Chloride	4.93	mg/L		5.000		99	90-110		
Batch B440802 - No Prep - SM 2320 B-2011									
Duplicate (B440802-DUP1)	**Sample: HH00162-03**			Prepared & Analyzed: 08/13/24					
Alkalinity - carbonate as CaCO3	< 10	mg/L			ND				10
Alkalinity - bicarbonate as CaCO3	412	mg/L			425			3	10
Batch B440849 - No Prep - SM 4500-F C-2011									
Calibration Blank (B440849-CCB1)				Prepared & Analyzed: 08/14/24					
Fluoride	0.0280	mg/L							
Calibration Blank (B440849-CCB2)				Prepared & Analyzed: 08/14/24					
Fluoride	0.0140	mg/L							
Calibration Check (B440849-CCV1)				Prepared & Analyzed: 08/14/24					
Fluoride	0.698	mg/L		0.7000		100	90-110		
Calibration Check (B440849-CCV2)				Prepared & Analyzed: 08/14/24					
Fluoride	0.710	mg/L		0.7000		101	90-110		
Matrix Spike (B440849-MS5)	**Sample: HG05733-04**			Prepared & Analyzed: 08/14/24					
Fluoride	1.25	mg/L		1.000	0.211	104	80-120		
Matrix Spike Dup (B440849-MSD5)	**Sample: HG05733-04**			Prepared & Analyzed: 08/14/24					
Fluoride	1.28	mg/L		1.000	0.211	107	80-120	2	20

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NOTES

Specifications regarding method revisions and method modifications used for analysis are available upon request. Please contact your project manager.

* Not a TNI accredited analyte

Certifications

CHI - McHenry, IL - 4314-A W. Crystal Lake Road, McHenry, IL 60050
TNI Accreditation for Drinking Water and Wastewater Fields of Testing through IL EPA Accreditation No. 100279
Illinois Department of Public Health Bacterial Analysis in Drinking Water Approved Laboratory Registry No. 17556

PIA - Peoria, IL - 2231 W. Altorfer Drive, Peoria, IL 61615
TNI Accreditation for Drinking Water, Wastewater, Solid and Hazardous Material Fields of Testing through IL EPA Accreditation No. 100230
Illinois Department of Public Health Bacterial Analysis in Drinking Water Approved Laboratory Registry No. 17553
Drinking Water Certifications/Accreditations: Iowa (240); Kansas (E-10338); Missouri (870)
Wastewater Certifications/Accreditations: Arkansas (88-0677); Iowa (240); Kansas (E-10338)
Solid and Hazardous Material Certifications/Accreditations: Arkansas (88-0677); Iowa (240); Kansas (E-10338)

SPMO - Springfield, MO - 1805 W Sunset Street, Springfield, MO 65807
USEPA DMR-QA Program

STL - Hazelwood, MO - 944 Anglum Rd, Hazelwood, MO 63042
TNI Accreditation for Wastewater, Solid and Hazardous Material Fields of Testing through KS KDHE Certification No. E-10389
TNI Accreditation for Wastewater, Solid and Hazardous Material Fields of Testing through IL EPA Accreditation No. - 200080
Illinois Department of Public Health Bacterial Analysis in Drinking Water Approved Laboratory, Registry No. 171050
Missouri Department of Natural Resources - Certificate of Approval for Microbiological Laboratory Service - No. 1050

Qualifiers

Q4 The matrix spike recovery result is unusable since the analyte concentration in the sample is greater than four times the spike level. The associated blank spike was acceptable.

Certified by: Diane Billings, Project Manager

CHAIN-OF-CUSTODY / Analytical Request Document

HL04591

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

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Section A Required Client Information:

Company:	Vistra Corp-Duck Creek
Address:	17751 North Cilco Rd
	Canton, IL 61520
Email To:	Brian.Voelker@VistraCorp.com
Phone: (217) 753-8911	Fax:
Requested Due Date/TAT:	10 day

Section B Required Project Information:

Report To:	Brian Voelker
Copy To:	Sam Davies: samantha.davies@vistracorp.com
	Daryl Johnson: Robert.Johnson@vistracorp.com
Purchase Order No.:	
Project Name:	
Project Number:	2285

Section C Invoice Information:

Attention:	Brian Voelker
Company Name:	Vistra Corp
Address:	see Section A
Quote Reference:	
Project Manager:	
Profile #:	

REGULATORY AGENCY

NPDES | GROUND WATER | DRINKING WATER
UST | RCRA | OTHER

Site Location STATE: IL

Section D Valid Matrix Codes

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

SAMPLE ID
(A-Z, 0-9 / ,-)
Sample IDs MUST BE UNIQUE

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED DATE	COLLECTED TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analysis Test Y/N	DC-257-203	DC-257-204	DC-257-205	DC-811-204	DC-845-201-202	DC-845-203	DC-845-205	DC-CLOSURE-201-202	DC-SUP-000	DC-WPCP-203-206		Residual Chlorine (Y/N)	Project No./ Lab I.D.
1	OM07	WT	G	7/24/24	1400		5	X		X																		
2	OR13D	WT	G	7/24/24	1134		5	X		X																		
3	OR13S	WT	G	7/24/24	1239		5	X		X																		
4	OR14D	WT	G	7/24/24	1513		5	X		X																		
5	OR04D	WT	G	7/24/24	1450		5	X		X																		
6	OM15D	WT	G	7/24/24	1050		5	X		X																		
7	OM22D	WT	G	7/24/24	1150		5	X		X																		
8	OM23D	WT	G	7/24/24	1243		5	X		X																		
9	OM25S	WT	G	7/24/24	1345		5	X		X																		
10	GO3L	WT	G	7/24/24	1021		1		X																			
11	GO4S	WT	G	7/24/24	1056		3	X		X																		
12	GO6S	WT	G	7/24/24	1200		3	X		X																		
13	GI2S	WT	G	7/24/24	1400		3	X		X																		
14	GO9S	WT	G	7/24/24	1530		3	X		X																		
15	BAO~~4~~3L	WT	G	7/24/24	1540		4	X		X																		
16	EB #1	WT	G	7/24/24	1545		5	X		X																		

Requested Analysis Filtered (Y/N)

Shipped Via: FedEx UPS Walk-In USPS Other — Cooler Temp (Deg C): 13 — Correction Factor (Deg C): 1

Observed Temp (Deg C): 46 — Corrected Temp (Deg C): 4.1

Delivery Method: FedEx UPS Walk-In USPS Other

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS: Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
DC-24Q2 Rev 0		7/24/24	1647							
					72424	1147	4.1	√		

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Aaron Femberton

SIGNATURE of SAMPLER: DATE Signed (MM/DD/YY): 07/24/24

Courier

APP 7/24/24

APPENDIX A.
ANNUAL GRONUDWATER MONITORING AND CORRECTIVE ACTION REPORT
DUCK CREEK, LANDFILL
DC-257-204

APPENDIX A.
ANNUAL GRONUDWATER MONITORING AND CORRECTIVE ACTION REPORT
DUCK CREEK, LANDFILL
DC-257-204

CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: 1 of 10

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:
Company: Vistra Corp-Duck Creek	Report To: Brian Voelker	Attention: Brian Voelker
Address: 17751 North Cilco Rd	Copy To: Sam Davies: samantha.davies@vistracorp.com	Company Name: Vistra Corp
Canton, IL 61520	Daryl Johnson: Robert.Johnson@vistracorp.com	Address: see Section A
Email To: Brian.Voelker@VistraCorp.com	Purchase Order No.:	Quote Reference:
Phone: (217) 753-8911 Fax:	Project Name:	Project Manager:
Requested Due Date/TAT: 10 day	Project Number: 2285	Profile #:

REGULATORY AGENCY: NPDES, GROUND WATER, DRINKING WATER, UST, RCRA, OTHER

Site Location STATE: IL

Section D Valid Matrix Codes: DRINKING WATER DW, WATER WT, WASTE WATER WW, PRODUCT P, SOIL/SOLID SL, OIL OL, WIPE WP, AIR AR, OTHER OT, TISSUE TS

ITEM #	SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED DATE	COLLECTED TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Requested Analysis Filtered (Y/N) Y/N	Analysis Test	DC-257-203	DC-257-204	DC-257-205	DC-811-204	DC-845-201-202	DC-845-203	DC-845-205	DC-CLOSURE-201-202	DC-SUP-000	DC-WPCP-203-206	Residual Chlorine (Y/N)	Project No./ Lab I.D.
1	G15S	GW	G	7/31/24	1232		3	2		1																	
2	G55S	GW	G	7/31/24	1525		3	2		1																	
3	G60L	GW	G	7/31/24	1405		4	2		2																	
4	R61L	GW	G	7/31/24	1258		4	2		2																	
5	G61S	GW	G	7/31/24	1247		4	2		2																	
6	G64L	GW	G	7/31/24	1143		4	2		2																	
7	G67L	GW	G	7/31/24	1405		3	2		1																	
8	G67S	GW	G	7/31/24	1410		3	2		1																	
9	G06L	GW	G	7/31/24	1238		3	2		1																	
10	G07L 7/31/24 dd	GW	G	7/31/24	1325		3	2		1																	
11	G08L 7/31/24 dd	GW	G	7/31/24	1419		3	2		1																	
12	G09L 7/31/24 dd	GW	G	7/31/24	1527		3	2		1																	
13	G09L Dup 7/31/24 dd	GW	G	7/31/24	1527		3	2		1																	
14																											
15																											
16																											

IR Gun #: 13 Correction Factor (Deg C): +1

Observed Temp (Deg C): 3.5 Corrected Temp (Deg C): 3.6

Delivery Method: FedEx UPS Walk-in USPS Other

HG65733

Project No./ Lab I.D.

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
DC-24Q2 Rev 0	JBohannan	7/31/24	1635				
					7-31-24	1635	3.6

SAMPLER NAME AND SIGNATURE					
PRINT Name of SAMPLER:	Jordan Bohannan		Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
SIGNATURE of SAMPLER:	JBohannan	DATE Signed (MM/DD/YY): 7/31/2024				

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CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: 1 of 10

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:	
Company: ~~Vistra Corp Duck Creek~~	Report To: ~~Brian Voelker~~	Attention: Brian Voelker	
Address: 17751 North Cilco Rd	Copy To: Sam Davies: samantha.davies@vistracorp.com	Company Name: Vistra Corp	REGULATORY AGENCY
Canton, IL 61520	Daryl Johnson: Robert.Johnson@vistracorp.com	Address: see Section A	NPDES GROUND WATER DRINKING WATER
Email To: Brian.Voelker@VistraCorp.com	Purchase Order No.:	Quote Reference:	UST RCRA OTHER
Phone: (217) 753-8911 Fax:	Project Name:	Project Manager:	Site Location IL HH00162 VS
Requested Due Date/TAT: 10 day	Project Number: 2285	Profile #:	STATE:

Requested Analysis Filtered (Y/N)

ITEM #	Section D SAMPLE ID (A-Z, 0-9 / .-) Sample IDs MUST BE UNIQUE	Valid Matrix Codes: DRINKING WATER DW, WATER WT, WASTE WATER WW, PRODUCT P, SOIL/SOLID SL, OIL OL, WIPE WP, AIR AR, OTHER OT, TISSUE TS	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED DATE	COLLECTED TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Y/N	Analysis Test: DC-257-203	DC-257-204	DC-257-205	DC-811-204	DC-845-201-202	DC-845-203	DC-845-205	DC-CLOSURE-201-202	DC-SUP-000	DC-WPCP-203-206			Residual Chlorine (Y/N)	Project No./ Lab I.D.
1	Field Blank		WT	G	8/1/24	1340		12	X	X	X																			
2	X301		WT	G	8/1/24	1359		3	X		X																			
3	G645		WT	G	8/1/24	1312		4	X		X																			
4	G655		WT	G	8/1/24	1128		3	X		X																			
5	G625		WT	G	8/1/24	1030		4	X		X																			
6	G56L		GW	G	8/1/24	1312		3	X		X																			
7	P60		GW	G	8/1/24	1219		4	X		X																			
8	G65L		GW	G	8/1/24	1354		3	X		X																			
9	G71L		GW	G	8/1/24	0950		3	X		X																			
10	G72L		GW	G	8/1/24	1130		3	X		X																			
11	R705		GW	G	8/1/24	1036		3	X		X																			
12	R13L		GW	G	8/1/24	0926		1			X																			
13	G57L		GW	G	8/1/24	1214		3	X		X																			
14	G58L		GW	G	8/1/24	1188		3	X		X																			
15	G59L + Dup 8/1/24		GW	G	8/1/24	1041		6	X		X																			
16	G62L		GW	G	8/1/24	1329		3	X		X																			

IR Gun # 149 Correction Factor (Deg C) +0.0

Observed Temp (Deg C) 4.3 Corrected Temp (Deg C) 4.3

Delivery Method: FedEx UPS Walk-in USPS Other

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS: Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
DC-24Q2 Rev 0		8/1/24	1506							
					8/1/24	1506				

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Tom Robertson

SIGNATURE of SAMPLER: DATE Signed (MM/DD/YY): 08/01/24

SAR-3: Episodic Depth to Groundwater Measurements
All DTWs on SAR-3 must be collected within 24 hours.
Plant: DC
Event: DC-24Q3 Rev 0

Well	Unique ID	Unit Numt	Unit Name	Date	Time	Measured Depth to Water (ft bmp)	Comments	Initials
G54C	DC_G54!C	203	GMF	7/22/24	1347	36.24		JB
OM100S	DC_OM100#S	201-202	AP1/2	7/22/24	1132	11.88	TD = 28.03	JD
OM100D	DC_OM100&D	201-202	AP1/2	7/22/24	1130	11.71	TD: 56.31	JD
OM101S	DC_OM101#S	201-202	AP1/2	7/22/24	1534	15.42	TD = 19.97	JD
OM101D	DC_OM101&D	201-202	AP1/2	7/22/24	1536	17.00	TD: 36.33	JD
OM12D	DC_OM12&D	201-202	AP1/2	7/22/24	1234	16.20	TD - 54.83	APP
OM15D	DC_OM15&D	201-202	AP1/2	7/22/24	1009	24.54		JD
OM17D	DC_OM17&D	201-202	AP1/2	7/22/24	1058	14.73	TD=43.27	JD
OM26	DC_OM26	201-202	AP1/2	7/22/24	1408	30.15	TD: 62.08	JD
OM27	DC_OM27	201-202	AP1/2	7/22/24	1401	32.34	TD=62.20	JD
OM28	DC_OM28	201-202	AP1/2	7/22/24	1356	46.97	TD=68.95	JD
XPW01	DC_XPW01	201-202	AP1/2	7/22/24	1632	6.98	Dry	APP
BA01C	DC-BA01!C	205	BAB	7/22/24	1200	12.74		APP
BA01L	DC-BA01!L	205	BAB	7/22/24	1159	12.71		APP
G02L	DC-G02!L	204	LF	07/22/24	1100	8.15	DTB - 1800	KMO
G02D	DC-G02&D	204	LF	07/22/24	1105	21.05	78.51 - DTB	KMO
G03L	DC-G03!L	204	LF	07/22/24	1001	6.42	26.43 - DTB	KMO
G03S	DC-G03#S	204	LF	07/22/24	1008	6.04	Pump -	KMO
G04L	DC-G04!L	204	LF	07/22/24	1111	14.70	17.04 - DTB	KMO
G04S	DC-G04#S	204	LF	07/22/24	1113	14.51	Pump -	KMO
G06L	DC-G06!L	204	LF	07/22/24	1533	19.70	23.41 - DTB	KMO
G06S	DC-G06#S	204	LF	07/22/24	1531	20.00	Pump	KMO
G07L	DC-G07!L	204	LF	07/22/24	1525	19.35	23.09 - DTB	KMO

BG

SAR-3: Episodic Depth to Groundwater Measurements
All DTWs on SAR-3 must be collected within 24 hours.
Plant: DC
Event: DC-24Q3 Rev 0

Well	Unique ID	Unit Numt	Unit Name	Date	Time	Measured Depth to Water (ft bmp)	Comments	Initials
G08L	DC-G08!L	204	LF	07/22/24	1485	19.00	22.13-DTB	BWG
G09L	DC-G09!L	204	LF	07/22/24	1422	19.35	33.43-DTB	KWG
G09S	DC-G09#S	204	LF	07/22/24	1481	19.43	Pump	KWG
G12L	DC-G12!L	204	LF	07/22/24	1350	16.69	Pump	KWG
G12S	DC-G12#S	204	LF	07/22/24	1351	18.69	Pump	KWG
G14L	DC-G14!L	204	LF	07/22/24	1321	21.32	26.86-DTB	KWG
G15L	DC-G15!L	204	LF	07/22/24	1240	24.56	34.57-DTB	KWG
G15S	DC-G15#S	204	LF	07/22/24	1239	27.00	Pump	KWG
G16L	DC-G16!L	204	LF	07/22/24	1233	24.84	Pump	KWG
G50L	DC-G50!L	203	GMF	7/22/24	1333	11.56		JB
G51L	DC-G51!L	203	GMF	7/22/24	1049	12.22		JB
G52L	DC-G52!L	203	GMF	7/22/24	1019	24.34		JB
G52S	DC-G52#S	203	GMF	7/22/24	1027	29.64	Lock hard to open + close	JB
G53L	DC-G53!L	203	GMF	7/22/24	1107	10.96		JB
G53S	DC-G53#S	203	GMF	7/22/24	1111	12.84	Lock rusting	JB
G55L	DC-G55!L	203	GMF	7/22/24	1345	18.61		AW
G55S	DC-G55#S	203	GMF	7/22/24	1344	18.54		AW
G56L	DC-G56!L	203	GMF	7/22/24	1132	17.83		AW
G56S	DC-G56#S	203	GMF	7/22/24	1133	17.20		AW
G57L	DC-G57!L	203	GMF	7/22/24	1204	18.81		AW
G58L	DC-G58!L	203	GMF	07/22/24	1623	22.13	33.87-DTB	BWG
G58S	DC-G58#S	203	GMF	07/22/24	1622	22.07	Pump	KWG
G59L	DC-G59!L	203	GMF	~~7/22/24~~ 7/22/24	~~1021~~ 1626	19.19	Needed different key Right key almost broke 35.36-DTB	JB 7/22

24 BG

SAR-3: Episodic Depth to Groundwater Measurements
All DTWs on SAR-3 must be collected within 24 hours.
Plant: DC
Event: DC-24Q3 Rev 0

Well	Unique ID	Unit Numt	Unit Name	Date	Time	Measured Depth to Water (ft bmp)	Comments	Initials
G59S	DC-G59#S	203	GMF	7/22/24	1220	30.99		JB
G61S	DC-G61#S	203	GMF	7/22/24	1204	17.62		JB
G62L	DC-G62!L	203	GMF	7/22/24	1148	18.72		JB
G63L	DC-G63!L	203	GMF	7/22/24	1705	21.65		AP
G63S	DC-G63#S	203	GMF	7/22/24	1706	22.47		AM
G65L	DC-G65!L	203	GMF	7/22/24	12:47	16.46	Peristaltic	AW
G65S	DC-G65#S	203	GMF	7/22/24	10:58	16.76	Dedicated Bladder	AW
G66L	DC-G66!L	203	GMF	7/22/24	11:12	14.20	Peristaltic	AW
G66S	DC-G66#S	203	GMF	7/22/24	11:10	14.59	Dedicated Bladder	AW
G67L	DC-G67!L	203	GMF	7/22/24	11:23	11.71	Peristaltic	AW
G67S	DC-G67#S	203	GMF	7/22/24	11:22	12.67	Dedicated Bladder	AW
G68L	DC-G68!L	203	GMF	7/22/24	13:25	12.30	Portable Pump DTB: 17.10	AW
G68S	DC-G68#S	203	GMF	7/22/24	13:27	13.50	Dedicated Bladder	AW
G69L	DC-G69!L	203	GMF	7/22/24	13:08	12.16	Portable Pump DTB: 27.80	AW
G69S	DC-G69#S	203	GMF	7/22/24	13:11	15.93	Dedicated Bladder	AW
G70L	DC-G70!L	203	GMF	7/22/24	10:28	15.99	Dedicated Bladder	AW
G71L	DC-G71!L	203	GMF	7/22/24	10.33	22.72	Peristaltic	AW
G71S	DC-G71#S	203	GMF	07/22/24	1557	23.55	Pump	KB
G72L	DC-G72!L	203	GMF	7/22/24	10:43	21.92	Peristaltic	AW
G73L	DC-G73!L	203	GMF	07/22/24	1559	23.73	Pump	KB
L103	DC-L103	204	LF	07/22/24	1304		ARTISAN	KB
OM05S	DC-OM05#S	201-202	AP1/2	7/22/24	1331	20.64		AP
OM08	DC-OM08	201-202	AP1/2	7/22/24	1319	13.20	TD- 27.0	JD

SAR-3: Episodic Depth to Groundwater Measurements
All DTWs on SAR-3 must be collected within 24 hours.
Plant: DC
Event: DC-24Q3 Rev 0

Well	Unique ID	Unit Numt	Unit Name	Date	Time	Measured Depth to Water (ft bmp)	Comments	Initials
OM09	DC-OM09	201-202	AP1/2	7/22/24	1347	3.58	TD = 27.04	JD
OM10	DC-OM10	201-202	AP1/2	7/22/24	1108	9.23	TD: 21.90	
OM15	DC-OM15	201-202	AP1/2	7/22/24	1012	20.94		JD
OM22S	DC-OM22#S	201-202	AP1/2	7/22/24	1302	17.07	TD: 40.21	
OM23S	DC-OM23#S	201-202	AP1/2	7/22/24	1247	40.81	TD = 46.15	
OM25D	DC-OM25&D	201-202	AP1/2	7/22/24	1233	57.73	TD: 77.48	
OR03S	DC-OR03#S	201-202	AP1/2	7/22/24	1444	45.22		APP
OR05D	DC-OR05&D	201-202	AP1/2	7/22/24	1328	21.32		APP
OR14S	DC-OR14#S	201-202	AP1/2	7/22/24	1356	6.58		APP
OR18	DC-OR18	201-202	AP1/2	7/22/24	1141	17.59	53.07 = TD	KWG
P01L	DC-P01!L	204	LF	07/22/24	1018	8.36	82.33 - DTB	KWG
P01S	DC-P01#S	204	LF	07/22/24	1020	8.27	29.66 - DTB	KWG
P01I	DC-P01$I	204	LF	07/22/24	1014	8.53	46.96 - DTB	KWG
P02S	DC-P02#S	204	LF	07/22/24	1057	13.84	91.86 - DTB	KWG
P04S	DC-P04#S	204	LF	07/22/24	1113	14.51	SAME AS GW45	KWG
P05L	DC-P05!L	204	LF	07/22/24	1124	3.04	14.92 - DTB	KWG
P05S	DC-P05#S	204	LF	07/22/24	1641	3.19	PUMP	KWG
P05D	DC-P05&D	204	LF	07/22/24	1644	5.09	45.93 - DTB	KWG
P36L	DC-P36!L	204	LF	07/22/24	1512	9.60	PUMP	KWG
P36S	DC-P36#S	204	LF	07/22/24	1513	9.26	31.44 - DTB	KWG
P36D	DC-P36&D	204	LF	07/22/24	1515	10.30	24.28 - DTB	KWG
P37L	DC-P37!L	204	LF	07/22/24	1401	12.36	PUMP	KWG
P37D	DC-P37&D	204	LF	07/22/24	1403	14.19	45.19 - DTB	KWG

SAR-3: Episodic Depth to Groundwater Measurements
All DTWs on SAR-3 must be collected within 24 hours.
Plant: DC
Event: DC-24Q3 Rev 0

Well	Unique ID	Unit Numt	Unit Name	Date	Time	Measured Depth to Water (ft bmp)	Comments	Initials
P38L	DC-P38!L	204	LF	07/22/24	1313	14.72	DTB-19.72	KMD
P38S	DC-P38#S	204	LF	07/22/24	1316	14.08	DTB-22.32	KMD
P39L	DC-P39!L	204	LF	07/22/24	1207	4.72	DTB-15.08	KMD
P39S	DC-P39#S	204	LF	07/22/24	1202	4.85	DTB-26.28	KMD
P39D	DC-P39&D	204	LF	07/22/24	1204	12.34	DTB 43.57 KMD	KMD
P40L	DC-P40!L	204	LF	07/22/24	1555 ~~6.51~~	6.51 ~~20.46~~ KMD	DTB-20.41	KMD
P40S	DC-P40#S	204	LF	07/22/24	1557	5.72	DTB-35.33	KMD
P41L	DC-P41!L	204	LF	07/22/24	1639	5.51	DTB-12.14	KMD
P41S	DC-P41#S	204	LF	07/22/24	1638 ~~4.90~~	7.90 ~~31.4~~	DTB-31.48	KMD
P41D	DC-P41&D	204	LF	07/22/24	1637	34.20	69.02	KMD
P42L	DC-P42!L	204	LF	07/22/24	—	—	BROKEN	KMD
P42S	DC-P42#S	204	LF	07/22/24	1633	5.33	31.56-DTB	KMD
P42I1	DC-P42$I1	204	LF	07/22/24	1632	5.64	42.23 DTB	KMD
P42I2	DC-P42%I2	204	LF	07/22/24	1630	31.69	57.31	KMD
P42D	DC-P42&D	204	LF	07/22/24	1629	36.84	DTB-77.52	KMD
P52	DC-P52	203	GMF	07/22/24	1620	12.08	DTB-28.27	JD
P57L	DC-P57!L	203	GMF	07/22/24	1614	4.38	DTB-22.97	JD
P57S	DC-P57#S	203	GMF	07/22/24	1616	3.94	DTB-34.35	JD
P60	DC-P60	203	GMF	07/22/24	1211	18.46		JD
P61	DC-P61	203	GMF	07/22/24	1315	6.78		JD
P62	DC-P62	203	GMF	07/22/24	1250	8.71		JD
P63	DC-P63	203	GMF	07/22/24	1254	12.49		JD
P64	DC-P64	203	GMF	07/22/24	1303	13.32		JD

BG

SAR-3: Episodic Depth to Groundwater Measurements
All DTWs on SAR-3 must be collected within 24 hours.
Plant: DC
Event: DC-24Q3 Rev 0

Well	Unique ID	Unit Numt	Unit Name	Date	Time	Measured Depth to Water (ft bmp)	Comments	Initials
R10L	DC-R10!L	204	LF	07/22/24	1628	19.89		
R11L	DC-R11!L	204	LF	07/22/24	1354	10.53	DTB-26.42	KMD
R13L	DC-R13!L	204	LF	07/22/24	1345	1906	DTB-29.97	KMD
R61L	DC-R61!L	203	GMF	07/22/24	1202	17.48		
R72S	DC-R72#S	203	GMF	07/22/24	1040	21.91	PERISTALTIC	
T43L	DC-T43!L	204	LF	07/22/24	1428	5.65	PUMP	KMD
T44L	DC-T44!L	204	LF	07/22/24	1430	9.52	PUMP	KMD
T45L	DC-T45!L	204	LF	07/22/24	1435	7.40	PUMP	KMD
T46L	DC-T46!L	204	LF	07/22/24	1518	5.89	PUMP	KMD
X301	DC-X301-leachate	203	GMF	07/22/24	1626	49.30		

U:6/19/23 GKJ

BG

SAR-4: Depth to Groundwater Measurements - On-site Transducer Downloads

All episodic water levels on SAR-3 and SAR-4 must be collected within a 24 hour period.
Transducer data on SAR-4 form may be collected at anytime during the sampling event.

Plant: DC
Event: DC-24Q3 Rev 1

Well	Unique ID	Unit Number	Unit Name	Date	Time	Measured Depth to Water (ft bmp)	On-site Transducer Data					Comments	Initials
							Data Logger Serial No.	Does Data Logger Serial No. Match?	WL Reading on Transducer (ft)	Data down-loaded?	Batt (H/M/L/R)		
BA01	DC-BA01	205	BAB	7/22/24	1156	13.29	21615533	Yes	574.1342	Yes	H		APP
BA02	DC-BA02	205	BAB	7/22/24	1216	8.93	21615636	yes	571.2715	Yes	H		APP
BA02L	DC-BA02!L	205	BAB	7/22/24	1219	8.74	21615682	yes	571.3186	yes	H		APP
BA03	DC-BA03	205	BAB	7/22/24	1124	8.05	21615637	yes	570.478	yes	H		APP
BA03L	DC-BA03!L	205	BAB	7/22/24	1120	7.47	21615687	yes	568.6324	yes	H		APP
BA04	DC-BA04	205	BAB	7/22/24	1109	4.71	21615631	yes	573.6833	yes	H		APP
BA05	DC-BA05#	205	BAB	7/22/24	1143	17.97	21615540	yes	577.8438	yes	H		APP
BA06	DC-BA06	205	BAB	7/22/24	1135	20.15	21615525	yes	575.7928	yes	H		APP
G02S	DC-G02#S	204	LF	07/22/24	1100	7.86	21615554	Yes	614.01	Yes	H		KD
G50S	DC-G50#S	203	GMF	7/22/24	1328	12.54	21615535	Yes	611.28	Yes	High		JB
G51S	DC-G51#S	203	GMF	7/22/24	1044	11.42	21615691	Yes	606.80	Yes	High		JB
G54L	DC-G54!L	203	GMF	7/22/24	0958	20.93	21615690	Yes	607.96	Yes	High		JB
G54S	DC-G54#S	203	GMF	7/22/24	1005	22.29	21615684	Yes	607.08	Yes	High		JB
G57S	DC-G57#S	203	GMF	7/22/24	1201	18.46	21615683	yes	604.14	Yes	H		AW
G60L	DC-G60!L	203	GMF	7/22/24	1040	9.89	21615678	Yes	606.01	Yes	High		JB
G60S	DC-G60#S	203	GMF	7/22/24	1238	21.21	21615677	Yes	593.75	Yes	High		JB
G64L	DC-G64!L	203	GMF	7/22/24	1130	20.81	21615688	Yes	607.60	Yes	High		JB
G64S	DC-G64#S	203	GMF	7/22/24	1127	22.21	21615632	Yes	600.96	Yes	High		JB

BG

SAR-4: Depth to Groundwater Measurements - On-site Transducer Downloads

All episodic water levels on SAR-3 and SAR-4 must be collected within a 24 hour period.
Transducer data on SAR-4 form may be collected at anytime during the sampling event.

Plant: DC
Event: DC-24Q3 Rev 1

Well	Unique ID	Unit Number	Unit Name	Date	Time	Measured Depth to Water (ft bmp)	On-site Transducer Data					Comments	Initials
							Data Logger Serial No.	Does Data Logger Serial No. Match?	WL Reading on Transducer (ft)	Data down-loaded?	Batt (H/M/L/R)		
OM01	DC-OM01	201-202	AP1/2	7/22/24	1409	9.16	21615685	Yes	586.1435	Yes	H		JD
OM04S	DC-OM04#S	201-202	AP1/2	7/22/24	1426	19.64	21615542	Yes	587.5785	Yes	H		AP
OM07	DC-OM07	201-202	AP1/2	7/22/24	1300	11.34	21615541	NO	-	NO	-	NO Transducer	AP
OM12	DC-OM12	201-202	AP1/2	7/22/24	1239	15.12	21615527	NO	—	NO	—	NO Transducer	AP
OM16	DC-OM16	201-202	AP1/2	7/22/24	1047	26.46	21615539	Yes	582.6077	Yes	H		JD
OM17	DC-OM17	201-202	AP1/2	7/22/24	1055	11.20	21615693	Yes	580.6229	Yes	H		JD
OM21	DC-OM21	201-202	AP1/2	7/22/24	1416	9.47	21615593	Yes	596.9011	Yes	H		AP
OM22D	DC-OM22&D	201-202	AP1/2	7/22/24	1300	16.80	21615592	Yes	582.2973	Yes	H		JD
OM23D	DC-OM23&D	201-202	AP1/2	7/22/24	1244	37.64	21615591	Yes	575.6738	Yes	H		JD
OM24D	DC-OM24&D	201-202	AP1/2	7/22/24	1220	3.49	21615522	Yes	573.4653	Yes	H		JD
OM25S	DC-OM25#S	201-202	AP1/2	7/22/24	1229	57.97	21615681	Yes	571.2313	Yes	H		JD
OR02	DC-OR02	201-202	AP1/2	7/22/24	1453	4.91	21615679	Yes	596.3070	Yes	H		AP
OR03D	DC-OR03&D	201-202	AP1/2	7/22/24	1445	44.70	21615577	Yes	583.1636	Yes	H		AP
OR04D	DC-OR04&D	201-202	AP1/2	7/22/24	1428	21.09	21615570	Yes	586.5686	Yes	H		AP
OR06A	DC-OR06!A	201-202	AP1/2	7/22/24	1318	13.45	21615692	Yes	581.9741	Yes	H		AP
OR11	DC-OR11	201-202	AP1/2	7/22/24	1433	30.31	21615686	Yes	565.9783	Yes	H		JD
OR13S	DC-OR13#S	201-202	AP1/2	7/22/24	1341	12.41	21615676	Yes	590.1160	Yes	H		AP
OR13D	DC-OR13&D	201-202	AP1/2	7/22/24	1344	12.85	21564135	Yes	589.7038	Yes	H		AP

BG

SAR-4: Depth to Groundwater Measurements - On-site Transducer Downloads

All episodic water levels on SAR-3 and SAR-4 must be collected within a 24 hour period.
Transducer data on SAR-4 form may be collected at anytime during the sampling event.

Plant: DC
Event: DC-24Q3 Rev 1

Well	Unique ID	Unit Number	Unit Name	Date	Time	Measured Depth to Water (ft bmp)	On-site Transducer Data					Comments	Initials
							Data Logger Serial No.	Does Data Logger Serial No. Match?	WL Reading on Transducer (ft)	Data down-loaded?	Batt (H/M/L/R)		
OR14D	DC-OR14&D	201-202	AP1/2	7/22/24	1356	9.57	21615611	yes	589.595	yes	H		AMP
OR19	DC-OR19	201-202	AP1/2	7/22/24	1245	20.81	21615634	Yes	576.954	yes	H		AMP
OR20	DC-OR20	201-202	AP1/2	7/22/24	1429	20.85	21615610	Yes	566.709	Yes	H		AMP
RG01	DC-RG01	?	?	7/22/24	1009	—	21628685	—	—	NO	~~R~~ AMP 7/22/24	Record Serial No.	AMP

Notes:
Batt = battery
bmp = below measuring point
ft = feet
H = high
L = low
M = medium
R = replaced

unable to connect to laptop

Duck Creek

WELL/SAMPLE POINT G02S **Purge Method:** Bladder

Date: 8/1/2024 Start Time: 0920 Last Quarter: Bladder Finish/Sample Time: 1030

Well Depth (Bottom) From MP: _____ ft Min. Purge Volume: 1000 mL

Depth to Water From MP: 8.51 ft Total Purge Volume: 1900 mL

Water Column Length: _____ ft

Well Water Volume: _____ L Total Drawdown: 0.60 ft

Reading	Time	Depth	Flow Rate	pH	Spec Cond	Temp	ORP	DO	Turb
(Units)		ft.	mL/min	s.u.	umhos/cm	deg C	mV	mg/L	NTU
1	0936	9.31	100	6.64	868	17.43	-72	1.53	36.3
2	0939	9.40	100	6.61	831	17.39	-82	1.46	27.9
3	0942	9.48	100	6.63	818	17.32	-89	1.38	18.3
4									
5									
Stabilization	NA	NA	NA	± 0.2	± 3%	± 0.2	± 20	± 10% or 0.2	NA

Field Meter: Horiba

Sample Appearance:

Odor: ☒ None ☐ Slight ☐ Mod. ☐ Strong

Color ☐ None ☒ Slight ☐ Mod. ☐ Strong

Turb: ☐ None ☒ Slight ☐ Mod ☐ Strong

Well Integrity	Yes	No
Well has ID sign	✓	
Casing locked/secure	✓	
Well cap fits securely.		
Good seal/drainage	✓	
Well has weep holes	✓	

BOTTLE INFORMATION:

Unfiltered	
Qty	Bottles
	VOAs (C,V, 40mL, HCL)
	VOAS (C,V, 40mL)
	Organics (A,G,U 1000mL)
	Organics (A,G,U 500mL)
	TOC (A,V 40mL, H2SO4)
	TOX (A,G 250mL, H2SO4)
1	Metals (P,250mL, HNO3)
	Cyanide (P, 250mL, NaOH)
	Ammonia (P,250mL, H2S04)
	General (P,500mL)
1	General (P,1000mL)
1	Rad (P, 2.5L, HNO3)

(1)

Filtered	
Qty	Bottles
	Metals (P,250mL, HNO3)
	Ammonia (P,250mL, H2S04)
	General (P,500mL)
1	General (P,1000mL)
	TOC (A,V 40mL, H2SO4)

Final DTW: 9.11 ft

Comments

Sampler's Signature:

BG

Duck Creek

WELL/SAMPLE POINT G04S **Purge Method:** Compressor

AW 7/24/24

Date: ~~10~~ 7/24/24 Start Time: 10:35 Finish/Sample Time: 10:56

AW 7/24/24

Well Depth (Bottom) From MP: ~~35.89~~ ft 35.96 Min. Purge Volume: 1000 mL

Depth to Water From MP: ~~14.98~~ ~~14.91~~ ft 14.91 Total Purge Volume: ~~1150~~ mL

Water Column Length: AW ~~20.98~~ ft 21.05 2150 BG 8/2/24

AW 7/24/24

Well Water Volume: ~~2.71~~ L 12.75 Total Drawdown: 0.38 ft

AW 7/24/24

Reading (Units)	Time	Depth ft.	Flow Rate mL/min	pH s.u.	Spec Cond umhos/cm	Temp deg C	ORP mV	DO mg/L	Turb NTU
1	10:44	15.01	150	7.29	999	19.25	71	3.20	139
2	10:47	15.01	150	7.23	1020	19.07	54	2.90	108
3	10:50	15.03	150	7.23	1020	18.91	51	2.63	102
4									
5									
Stabilization	NA	NA	NA	± 0.2	± 3%	± 0.2	± 20	± 10% or 0.2	NA

Field Meter: Horiba

Sample Appearance:

Odor: ☒ None ☐ Slight ☐ Mod. ☐ Strong

Color ☒ None ☐ Slight ☐ Mod. ☐ Strong

Turb: ☐ None ☒ Slight ☐ Mod ☐ Strong

Well Integrity	Yes	No
Well has ID sign	X	
Casing locked/secure	X	
Well cap fits securely.	X	
Good seal/drainage	X	
Well has weep holes	X	

BOTTLE INFORMATION:

Unfiltered	
Qty	Bottles
	VOAs (C,V, 40mL, HCL)
	VOAS (C,V, 40mL)
	Organics (A,G,U 1000mL)
	Organics (A,G,U 500mL)
	TOC (A,V 40mL, H2SO4)
	TOX (A,G 250mL, H2SO4)
1	Metals (P,250mL, HNO3)
	Cyanide (P, 250mL, NaOH)
	Ammonia (P,250mL, H2S04)
	General (P,500mL)
1	General (P,1000mL)
	Rad (P, 2.5L, HNO3)

(3)

Filtered	
Qty	Bottles
	Metals (P,250mL, HNO3)
	Ammonia (P,250mL, H2S04)
1	General (P,500mL)
	General (P,1000mL)
	TOC (A,V 40mL, H2SO4)

Final DTW: 15.29 ft

Comments

Sampler's Signature: Haley Watson

Duck Creek

WELL/SAMPLE POINT G06S

Purge Method: Compressor

Date: 7/24/24 Start Time: 11:30 Finish/Sample Time: 12:00

Well Depth (Bottom) From MP: 43.24 ft

Depth to Water From MP: 20.28 ft

Water Column Length: 22.96 ft

Well Water Volume: 13.90 L

Min. Purge Volume: 1000 mL

Total Purge Volume: ~~1200~~ mL 2200 BG 8/2/24

Total Drawdown: -0.02 ft

Reading (Units)	Time	Depth ft.	Flow Rate mL/min	pH s.u.	Spec Cond umhos/cm	Temp deg C	ORP mV	DO mg/L	Turb NTU
1	11:39	20.29	200	7.10	944	19.35	121	1.22	196
2	11:41	20.22	200	7.02	940	19.25	128	1.14	190
3	11:44	20.22	200	6.99	937	19.15	127	.98	191
4									
5									
Stabilization	NA	NA	NA	± 0.2	± 3%	± 0.2	± 20	± 10% or 0.2	NA

Field Meter: Horiba

Sample Appearance:

Odor:	☒ None	☐ Slight	☐ Mod.	☐ Strong
Color	☐ None	☒ Slight	☐ Mod.	☐ Strong
Turb:	☐ None	☒ Slight	☐ Mod	☐ Strong

Well Integrity	Yes	No
Well has ID sign	X	
Casing locked/secure	X	
Well cap fits securely.	X	
Good seal/drainage	X	
Well has weep holes	X	

BOTTLE INFORMATION:

Unfiltered	
Qty	**Bottles**
	VOAs (C,V, 40mL, HCL)
	VOAS (C,V, 40mL)
	Organics (A,G,U 1000mL)
	Organics (A,G,U 500mL)
	TOC (A,V 40mL, H2SO4)
	TOX (A,G 250mL, H2SO4)
1	Metals (P,250mL, HNO3)
	Cyanide (P, 250mL, NaOH)
	Ammonia (P,250mL, H2S04)
	General (P,500mL)
1	General (P,1000mL)
	Rad (P, 2.5L, HNO3)

(3)

Filtered	
Qty	**Bottles**
	Metals (P,250mL, HNO3)
	Ammonia (P,250mL, H2S04)
1	General (P,500mL)
	General (P,1000mL)
	TOC (A,V 40mL, H2SO4)

Final DTW: 20.26 ft

Comments **Check pH if readings are below 6.5 or above 7.2**

Sampler's Signature: [signature]

AW 7/24/24 to G09S **Duck Creek**

WELL/SAMPLE POINT ~~G12S~~ ~~to G09S~~ AW 7/24/24 **Purge Method:** Compressor

Date: 7/24/24 Start Time: 14:53 Finish/Sample Time: 15:30

Well Depth (Bottom) From MP: 44.26 ft
Depth to Water From MP: 19.52 ft
Water Column Length: 24.74 ft
Well Water Volume: 14.98 L

Min. Purge Volume: 1000 mL
Total Purge Volume: ~~1000~~ mL 2200 BG 8/12/24
Total Drawdown: 1.92 ft

Reading (Units)	Time	Depth ft.	Flow Rate mL/min	pH s.u.	Spec Cond umhos/cm	Temp deg C	ORP mV	DO mg/L	Turb NTU
1	15:03	20.56	200	7.10	836	19.94	151	3.16	~~1000~~
2	15:06	20.82	200	6.99	831	19.76	151	2.90	~~1000~~
3	15:09	21.04	200	6.97	827	19.59	144	2.72	~~1000~~
4									
5									
Stabilization	NA	NA	NA	± 0.2	± 3%	± 0.2	± 20	± 10% or 0.2	NA

all over range B/6/dab 8/15/24

Field Meter: Horiba

Sample Appearance:

Odor:	☒ None	☐ Slight	☐ Mod.	☐ Strong
Color	☐ None	☐ Slight	☒ Mod.	☐ Strong
Turb:	☐ None	☐ Slight	☐ Mod	☒ Strong

Well Integrity	Yes	No
Well has ID sign	X	
Casing locked/secure	X	
Well cap fits securely.	X	
Good seal/drainage	X	
Well has weep holes	X	

BOTTLE INFORMATION:

Unfiltered	
Qty	**Bottles**
	VOAs (C,V, 40mL, HCL)
	VOAS (C,V, 40mL)
	Organics (A,G,U 1000mL)
	Organics (A,G,U 500mL)
	TOC (A,V 40mL, H2SO4)
	TOX (A,G 250mL, H2SO4)
1	Metals (P,250mL, HNO3)
	Cyanide (P, 250mL, NaOH)
	Ammonia (P,250mL, H2S04)
	General (P,500mL)
1	General (P,1000mL)
	Rad (P, 2.5L, HNO3)

(3)

Filtered	
Qty	**Bottles**
	Metals (P,250mL, HNO3)
	Ammonia (P,250mL, H2S04)
1	General (P,500mL)
	General (P,1000mL)
	TOC (A,V 40mL, H2SO4)

Final DTW: 21.44 ft

Comments **Check pH if readings are above 7.2** or below 6.5.

Sampler's Signature: [signature]

BG

Duck Creek

G125 AW 7/24/24

WELL/SAMPLE POINT ~~G09S~~ G125 **Purge Method:** Compressor

Date: 7/24/24 Start Time: 12:22 Finish/Sample Time: 1400

Well Depth (Bottom) From MP: 44.16 ft
Depth to Water From MP: 19.58 ft
Water Column Length: 24.58 ft
Well Water Volume: 14.87 L

Min. Purge Volume: 1000 mL
Total Purge Volume: ~~1000~~ mL 4600 BG 8/2/24
Total Drawdown: 1.14 ft

Reading (Units)	Time	Depth ft.	Flow Rate mL/min	pH s.u.	Spec Cond umhos/cm	Temp deg C	ORP mV	DO mg/L	Turb NTU
1	13:25	20.54	300	7.57	664	18.49	103	1.32	130
2	13:28	20.62	300	7.47	675	16.44	-10	0.97	92.8
3	13:31	20.71	300	7.39	683	16.20	-99	0.71	72.3
4	13:34	20.87	300	7.39	683	16.05	-105	0.66	49.8
5	13:37	20.78	300	7.39	686	15.92	-109	0.64	48.1
Stabilization	NA	NA	NA	± 0.2	± 3%	± 0.2	± 20	± 10% or 0.2	NA

Field Meter: Horiba / oakton

Sample Appearance:

Odor: ☒ None ☐ Slight ☐ Mod. ☐ Strong
Color ☒ None ☐ Slight ☐ Mod. ☐ Strong
Turb: ☐ None ☒ Slight ☐ Mod ☐ Strong

Well Integrity	Yes	No
Well has ID sign	X	
Casing locked/secure	X	
Well cap fits securely.	X	
Good seal/drainage	X	
Well has weep holes	X	

BOTTLE INFORMATION:

Unfiltered Qty	Bottles
	VOAs (C,V, 40mL, HCL)
	VOAS (C,V, 40mL)
	Organics (A,G,U 1000mL)
	Organics (A,G,U 500mL)
	TOC (A,V 40mL, H2SO4)
	TOX (A,G 250mL, H2SO4)
1	Metals (P,250mL, HNO3)
	Cyanide (P, 250mL, NaOH)
	Ammonia (P,250mL, H2S04)
	General (P,500mL)
1	General (P,1000mL)
	Rad (P, 2.5L, HNO3)

(3)

Filtered Qty	Bottles
	Metals (P,250mL, HNO3)
	Ammonia (P,250mL, H2S04)
1	General (P,500mL)
	General (P,1000mL)
	TOC (A,V 40mL, H2SO4)

Final DTW: 20.72 ft

Comments ~~**Check pH if readings are below 6.5**~~ **or above 7.2**
pH reads taken with oakton, too.

Sampler's Signature: [signature]

BG

Duck Creek

WELL/SAMPLE POINT G15S **Purge Method:** Dedicated Bladder

Date: 7/31/2024 Start Time: 1150 Finish/Sample Time: 1232

Well Depth (Bottom) From MP: _____ ft Min. Purge Volume: 1000 mL

Depth to Water From MP: 28.09 ft Total Purge Volume: 1900 mL

Water Column Length: _____ ft

Well Water Volume: _____ L Total Drawdown: 0.60 ft

Reading	Time	Depth	Flow Rate	pH	Spec Cond	Temp	ORP	DO	Turb
(Units)		ft.	mL/min	s.u.	umhos/cm	deg C	mV	mg/L	NTU
1	1205	29.30	100	6.98	746	16.27	311	2.86	79.3
2	1208	29.30	100	6.99	746	16.30	318	2.76	71.2
3	1211	29.30	100	6.99	743	16.35	325	2.82	71.4
4									
5									
Stabilization	NA	NA	NA	± 0.2	± 3%	± 0.2	± 20	± 10% or 0.2	NA

Field Meter: Horiba

Sample Appearance:

Odor: ☒ None ☐ Slight ☐ Mod. ☐ Strong

Color ☒ None ☐ Slight ☐ Mod. ☐ Strong

Turb: ☐ None ☒ Slight ☐ Mod ☐ Strong

Well Integrity	Yes	No
Well has ID sign	✓	
Casing locked/secure	✓	
Well cap fits securely.		X
Good seal/drainage	✓	
Well has weep holes	✓	

BOTTLE INFORMATION:

Qty	Unfiltered Bottles
	VOAs (C,V, 40mL, HCL)
	VOAS (C,V, 40mL)
	Organics (A,G,U 1000mL)
	Organics (A,G,U 500mL)
	TOC (A,V 40mL, H2SO4)
	TOX (A,G 250mL, H2SO4)
1	Metals (P,250mL, HNO3)
	Cyanide (P, 250mL, NaOH)
	Ammonia (P,250mL, H2S04)
	General (P,500mL)
1	General (P,1000mL)
	Rad (P, 2.5L, HNO3)

(3)

Qty	Filtered Bottles
	Metals (P,250mL, HNO3)
	Ammonia (P,250mL, H2S04)
1	General (P,500mL)
	General (P,1000mL)
	TOC (A,V 40mL, H2SO4)

Final DTW: 28.69 ft

Comments **Check pH if readings are below 6.2**

Sampler's Signature: [signature]

BG

APPENDIX A.
ANNUAL GRONUDWATER MONITORING AND CORRECTIVE ACTION REPORT
DUCK CREEK, LANDFILL
DC-257-204

Duck Creek

WELL/SAMPLE POINT L103 **Purge Method:** Bailer

Last Quarter: Bailer

Date: 7/30/2024 Start Time: 1225 Finish/Sample Time: 1236

Depth to Water From MP: 0.52 ft

Reading	Time	Depth	Flow Rate	pH	Spec Cond	Temp	ORP	DO	Turb
(Units)		ft.	mL/min	s.u.	umhos/cm	deg C	mV	mg/L	NTU
1	1228	0.52	—	7.50	4150	19.04	50	0.00	0.0

Field Meter: Horiba

Sample Appearance:

Odor: ☒ None ☐ Slight ☐ Mod. ☐ Strong

Color ☒ None ☐ Slight ☐ Mod. ☐ Strong

Turb: ☒ None ☐ Slight ☐ Mod ☐ Strong

Well Integrity	Yes	No
Well has ID sign		✓
Casing locked/secure		x
Well cap fits securely.		x
Good seal/drainage	✓	
Well has weep holes		x

BOTTLE INFORMATION:

Unfiltered	
Qty	Bottles
	VOAs (C,V, 40mL, HCL)
	VOAS (C,V, 40mL)
	Organics (A,G,U 1000mL)
	Organics (A,G,U 500mL)
	TOC (A,V 40mL, H2SO4)
	TOX (A,G 250mL, H2SO4)
1	Metals (P,250mL, HNO3)
	Cyanide (P, 250mL, NaOH)
	Phenols (A,G,250mL, H2SO4)
1	General (P, ~~250~~ mL) 1000mL

(3)

Filtered	
Qty	Bottles
	Metals (P,250mL, HNO3)
	Ammonia (P,250mL, H2S04)
1	General (P,500mL)

Comments

Sampler's Signature:

BG

Multiparameter Meter Field Calibration Checklist

Field Personnel:	SD	Location:	Duck Creek
Weather:	77-86°F pressing wind W 7-10mph	Environment:	woods

Multiparameter Water Meter	Make:	Horiba	Model:	U-5000	Serial Number:	WUC83C85
Water Level Meter	Make:	QED	Model:	MP-30	Serial Number:	30065

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.04	s.u.	±0.1 s.u.	P	N	NA	MSI	023219-02	8/9/2025
pH 7.00a	6.72	s.u.	±0.1 s.u.	F	Y	7.01	MSI	023334-01	12/7/2025
pH 10.00a	9.68	s.u.	±0.1 s.u.	F	Y	10.00	MSI	024037-01	2/21/2026
SC Zero (DI)	0.0	µS/cm	0<25 µS/cm	P	N	NA	Pace Labs	N/A (DI)	N/A (DI)
SC 2000	2090	µS/cm	±5%	P	N	NA	Proactive	3GJ1438	Oct-24
ORP	95	mV	±15 mV	F	Y	226	Reagents	8406644	Apr-25
DO (Zero pt)	0.08	mg/L	±0.1	P	N	NA	Macron	#000228049	8/26/2025
DO (Saturated)	97.89	%	97-100%	P	N	NA	Pace Labs	N/A (DI)	N/A (DI)
Turbidity (DI)	1.9	NTU	<2 NTU	P	N	NA	Pace Labs	N/A (DI)	N/A (DI)

Approx. every 8 hrs, unless only one well

ICV (Initial Calibration Verification) — Time: 1003

Buffer	Check Value	Units	Range	Pass/Fail	Action Taken?	Manufacturer	Lot#	Exp.
pH 4.00b	4.08	s.u.	±0.15 s.u.	P	NA	Proactive	3GE1074	May-25
pH 7.00b	7.10	s.u.	±0.15 s.u.	P		Proactive	3GE1252	May-25
pH 10.00b	10.04	s.u.	±0.15 s.u.	P		Geotech	3GA1134	Jan-25
SC 1000	975	µS/cm	±5%	P		Spectrum	2NA0024	Dec-25

Approx. every 8 hrs, unless only one well

CCV (Continued Calibration Verification): — Time: 1540

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.10	s.u.	±0.1 s.u.	P	No	NA	MSI	023219-02	8/9/2025
pH 7.00a	7.10	s.u.	±0.1 s.u.				MSI	023334-01	12/7/2025
pH 10.00a	10.08	s.u.	±0.1 s.u.				MSI	024037-01	2/21/2026
SC 1000	1010	µS/cm	±5%				Spectrum	2NA0024	Dec-25
DO (Zero pt)	0.06	mg/L	±0.1 mg/L				Macron	#000228049	8/26/2025
Turbidity (DI)	1.8	NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

Approx. every 8 hrs, unless only one well

Comments:

Signature: [signature] Date: 7/23/24

BG

Multiparameter Meter Field Calibration Checklist

Field Personnel:	Austin Moore	Location:	Duck creek
Weather:	86-63 sunny wind 4mph WSW	Environment:	landfill, forest, Grassy
Multiparameter Water Meter	Make: Horiba	Model: U-5000	Serial Number: AGJTK4XG
Water Level Meter	Make: WT	Model: Heron	Serial Number: 19FE220213ML

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	3.88	s.u.	±0.1 s.u.	F		4.00	MSI	023219-02	8/9/2025
pH 7.00a	6.96	s.u.	±0.1 s.u.	P	N	—	MSI	023334-01	12/7/2025
pH 10.00a	10.01	s.u.	±0.1 s.u.	P	N	—	MSI	024037-01	2/21/2026
SC Zero (DI)	75	µS/cm	0<25 µS/cm	F	Y	25	Pace Labs	N/A (DI)	N/A (DI)
SC 2000	2040	µS/cm	±5%	P	N	—	Proactive	3GJ1438	Oct-24
ORP	202	mV	±15 mV	F	Y	223	Reagents	8406644	Apr-25
DO (Zero pt)	0.0	mg/L	±0.1	P	N	—	Macron	#000228049	8/26/2025
DO (Saturated)	99.9	%	97-100%	P	N	—	Pace Labs	N/A (DI)	N/A (DI)
Turbidity (DI)	0.0	NTU	<2 NTU	P	N	—	Pace Labs	N/A (DI)	N/A (DI)

Approx. every 8 hrs, unless only one well

ICV (Initial Calibration Verification) — Time: 0921

Buffer	Check Value	Units	Range	Pass/Fail	Action Taken?	Manufacturer	Lot#	Exp.
pH 4.00b	3.94	s.u.	±0.15 s.u.	P	N	Proactive	3GE1074	May-25
pH 7.00b	7.14	s.u.	±0.15 s.u.	P	N	Proactive	3GE1252	May-25
pH 10.00b	10.39	s.u.	±0.15 s.u.	F	Y 9.99	Geotech	3GA1134	Jan-25
SC 1000	300	µS/cm	±5%	F	Y 1010	Spectrum	2NA0024	Dec-25

Approx. every 8 hrs, unless only one well

CCV (Continued Calibration Verification): — Time: 1540

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.06	s.u.	±0.1 s.u.	P	N	N/A	MSI	023219-02	8/9/2025
pH 7.00a	6.98	s.u.	±0.1 s.u.				MSI	023334-01	12/7/2025
pH 10.00a	10.03	s.u.	±0.1 s.u.				MSI	024037-01	2/21/2026
SC 1000	1020	µS/cm	±5%				Spectrum	2NA0024	Dec-25
DO (Zero pt)	0.0	mg/L	±0.1 mg/L				Macron	#000228049	8/26/2025
Turbidity (DI)	0.0	NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

Approx. every 8 hrs, unless only one well

Comments:

Signature: [signature] Date: 7-23-24

BG

Multiparameter Meter Field Calibration Checklist

Field Personnel:	Aaron Pemberton	Location:	Duck Creek
Weather:	81°-86°F Windy Sunny SW 6mph	Environment:	Woods, grass
Multiparameter Water Meter	Make: Horiba	Model: U5000	Serial Number: YLAKJAHA
Water Level Meter	Make: Heron	Model: Dipper T	Serial Number: 3717-T

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.04	s.u.	±0.1 s.u.	P	No	—	MSI	023219-02	8/9/2025
pH 7.00a	7.04	s.u.	±0.1 s.u.	P	No	—	MSI	023334-01	12/7/2025
pH 10.00a	10.08	s.u.	±0.1 s.u.	P	No	—	MSI	024037-01	2/21/2026
SC Zero (DI)	~~34~~ 13	µS/cm	0<25 µS/cm	P	No	—	Pace Labs	N/A (DI)	N/A (DI)
SC 2000	2020	µS/cm	±5%	P	No	—	Proactive	3GJ1438	Oct-24
ORP	227	mV	±15 mV	P	No	—	Reagents	8406644	Apr-25
DO (Zero pt)	0.04	mg/L	±0.1	P	No	—	Macron	#000228049	8/26/2025
DO (Saturated)	98.9	%	97-100%	P	No	—	Pace Labs	N/A (DI)	N/A (DI)
Turbidity (DI)	0.0	NTU	<2 NTU	P	No	—	Pace Labs	N/A (DI)	N/A (DI)

AM 7/23/24

Approx. every 8 hrs, unless only one well

223 @ 26°C

ICV (Initial Calibration Verification)					Time: 1025			
Buffer	Check Value	Units	Range	Pass/Fail	Action Taken?	Manufacturer	Lot#	Exp.
pH 4.00b	4.01	s.u.	±0.15 s.u.	P	—	Proactive	3GE1074	May-25
pH 7.00b	7.03	s.u.	±0.15 s.u.	P	—	Proactive	3GE1252	May-25
pH 10.00b	10.10	s.u.	±0.15 s.u.	P	—	Geotech	3GA1134	Jan-25
SC 1000	987	µS/cm	±5%	P	—	Spectrum	2NA0024	Dec-25

Approx. every 8 hrs, unless only one well

CCV (Continued Calibration Verification):					Time: 1532				
Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.03	s.u.	±0.1 s.u.	P	No	—	MSI	023219-02	8/9/2025
pH 7.00a	7.06	s.u.	±0.1 s.u.	P	No	—	MSI	023334-01	12/7/2025
pH 10.00a	10.09	s.u.	±0.1 s.u.	P	No	—	MSI	024037-01	2/21/2026
SC 1000	1000	µS/cm	±5%	P	No	—	Spectrum	2NA0024	Dec-25
DO (Zero pt)	0.04	mg/L	±0.1 mg/L	P	No	—	Macron	#000228049	8/26/2025
Turbidity (DI)	0.0	NTU	<2 NTU	P	No	—	Pace Labs	N/A (DI)	N/A (DI)

Approx. every 8 hrs, unless only one well

Comments:

Signature:		Date:	7/23/2024

BGL

Multiparameter Meter Field Calibration Checklist

Field Personnel:	KALEB DESKE	Location:	DUCKY CREEK
Weather:	75° SUNNY 4 MPH SW	Environment:	GRASSY

Multiparameter Water Meter	Make: HORIBA	Model: U-5000	Serial Number:	V7320PKK	
Water Level Meter	Make: HERON	Model: WT	Serial Number:	AFF2111192 HB	

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.36	s.u.	±0.1 s.u.	FAIL	YES	4.00	MSI	023219-02	8/9/2025
pH 7.00a	6.98	s.u.	±0.1 s.u.	PASS	NO	N/A	MSI	023334-01	12/7/2025
pH 10.00a	9.97	s.u.	±0.1 s.u.				MSI	024037-01	2/21/2026
SC Zero (DI)	0	µS/cm	0<25 µS/cm				Pace Labs	N/A (DI)	N/A (DI)
SC 2000	2016	µS/cm	±5%				Proactive	3GJ1438	Oct-24
ORP	227	mV	±15 mV				Reagents ~~InSite~~	840G644 ~~3GI1011~~	Apr-25 ~~Jun-24~~
DO (Zero pt)	0	mg/L	±0.1				Macron	#000228049	8/26/2025
DO (Saturated)	99	%	97-100%				Pace Labs	N/A (DI)	N/A (DI)
Turbidity (DI)	0	NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

BG 8/2/24

Approx. every 8 hrs, unless only one well

ICV (Initial Calibration Verification) Time: 0948

Buffer	Check Value	Units	Range	Pass/Fail	Action Taken?	Manufacturer	Lot#	Exp.
pH 4.00b	4.02	s.u.	±0.15 s.u.	PASS	NO	Proactive	3GE1074	May-25
pH 7.00b	7.01	s.u.	±0.15 s.u.			Proactive	3GE1252	May-25
pH 10.00b	9.99	s.u.	±0.15 s.u.			Geotech	3GA1134	Jan-25
SC 1000	1000	µS/cm	±5%			Spectrum	2NA0024	Dec-25

Approx. every 8 hrs, unless only one well

CCV (Continued Calibration Verification): Time: 1531

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.03	s.u.	±0.1 s.u.	PASS	NO	N/A	MSI	023219-02	8/9/2025
pH 7.00a	7.06	s.u.	±0.1 s.u.				MSI	023334-01	12/7/2025
pH 10.00a	10.01	s.u.	±0.1 s.u.				MSI	024037-01	2/21/2026
SC 1000	1003	µS/cm	±5%				Spectrum	2NA0024	Dec-25
DO (Zero pt)	0	mg/L	±0.1 mg/L				Macron	#000228049	8/26/2025
Turbidity (DI)	0	NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

Approx. every 8 hrs, unless only one well

Comments:

Signature: [signature] Date: 07/23/24

BG

Multiparameter Meter Field Calibration Checklist

Field Personnel:	Auron Pemberton	Location:	Duck creek
Weather:	70°-85°f sunny wind NW 5mph	Environment:	Grass Woods

Multiparameter Water Meter	Make: Horiba	Model: U 5000	Serial Number:	YL9KJ9HA	
Water Level Meter	Make: Heron	Model: Dipper T	Serial Number:	3717-7	

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.04	s.u.	±0.1 s.u.	P	NO	–	MSI	023219-02	8/9/2025
pH 7.00a	6.96	s.u.	±0.1 s.u.	P	NO	–	MSI	023334-01	12/7/2025
pH 10.00a	10.03	s.u.	±0.1 s.u.	P	NO	–	MSI	024037-01	2/21/2026
SC Zero (DI)	14	µS/cm	0<25 µS/cm	P	NO	–	Pace Labs	N/A (DI)	N/A (DI)
SC 2000	2010	µS/cm	±5%	P	NO	–	Proactive	3GJ1438	Oct-24
ORP	221	mV	±15 mV	P	NO	–	Reagents	8406644	Apr-25
DO (Zero pt)	0.09	mg/L	±0.1	P	NO	–	Macron	#000228049	8/26/2025
DO (Saturated)	99.7	%	97-100%	P	NO	–	Pace Labs	N/A (DI)	N/A (DI)
Turbidity (DI)	0.0	NTU	<2 NTU	P	Nd	–	Pace Labs	N/A (DI)	N/A (DI)

Approx. every 8 hrs, unless only one well

ICV (Initial Calibration Verification) Time: 1011

Buffer	Check Value	Units	Range	Pass/Fail	Action Taken?	Manufacturer	Lot#	Exp.
pH 4.00b	3.99	s.u.	±0.15 s.u.	P	–	Proactive	3GE1074	May-25
pH 7.00b	6.96	s.u.	±0.15 s.u.	P	–	Proactive	3GE1252	May-25
pH 10.00b	10.11	s.u.	±0.15 s.u.	P	–	Geotech	3GA1134	Jan-25
SC 1000	988	µS/cm	±5%	P	–	Spectrum	2NA0024	Dec-25

Approx. every 8 hrs, unless only one well

CCV (Continued Calibration Verification): Time: 1540

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	3.98	s.u.	±0.1 s.u.	P	NO	–	MSI	023219-02	8/9/2025
pH 7.00a	7.06	s.u.	±0.1 s.u.	P	NO	–	MSI	023334-01	12/7/2025
pH 10.00a	10.05	s.u.	±0.1 s.u.	P	NO	–	MSI	024037-01	2/21/2026
SC 1000	985	µS/cm	±5%	P	NO	–	Spectrum	2NA0024	Dec-25
DO (Zero pt)	0.09	mg/L	±0.1 mg/L	P	Nd	–	Macron	#000228049	8/26/2025
Turbidity (DI)	0.0	NTU	<2 NTU	P	Nd	✓	Pace Labs	N/A (DI)	N/A (DI)

Approx. every 8 hrs, unless only one well

Comments:

Signature: [signature] Date: 7/24/24

BG

Multiparameter Meter Field Calibration Checklist

Field Personnel:	SD	Location:	Duck Creek
Weather:	75-83° F p.sunny wind WNW 7mph	Environment:	woods, weeds
Multiparameter Water Meter	Make: Horiba	Model: U-5000	Serial Number: WUG83C85
Water Level Meter	Make: QED	Model: MP-30	Serial Number: 30065

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.66	s.u.	±0.1 s.u.	F	Y	4.00	MSI	023219-02	8/9/2025
pH 7.00a	6.85	s.u.	±0.1 s.u.	F	Y	7.01	MSI	023334-01	12/7/2025
pH 10.00a	10.24	s.u.	±0.1 s.u.	F	Y	10.00	MSI	024037-01	2/21/2026
SC Zero (DI)	0.0	µS/cm	0<25 µS/cm	P	N	NA	Pace Labs	N/A (DI)	N/A (DI)
SC 2000	2080	µS/cm	±5%	P	N	NA	Proactive	3GJ1438	Oct-24
ORP	348	mV	±15 mV	F	Y	228	Reagents	8406644	Apr-25
DO (Zero pt)	0.07	mg/L	±0.1	P	N	NA	Macron	#000228049	8/26/2025
DO (Saturated)	98.19	%	97-100%	P	N	NA	Pace Labs	N/A (DI)	N/A (DI)
Turbidity (DI)	0.0	NTU	<2 NTU	P	N	NA	Pace Labs	N/A (DI)	N/A (DI)

Approx. every 8 hrs, unless only one well

ICV (Initial Calibration Verification) Time: 1000

Buffer	Check Value	Units	Range	Pass/Fail	Action Taken?	Manufacturer	Lot#	Exp.
pH 4.00b	3.92	s.u.	±0.15 s.u.	P	NA	Proactive	3GE1074	May-25
pH 7.00b	7.02	s.u.	±0.15 s.u.	"	"	Proactive	3GE1252	May-25
pH 10.00b	10.04	s.u.	±0.15 s.u.	"	"	Geotech	3GA1134	Jan-25
SC 1000	986	µS/cm	±5%	"	"	Spectrum	2NA0024	Dec-25

Approx. every 8 hrs, unless only one well

CCV (Continued Calibration Verification): Time: 1545

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.09	s.u.	±0.1 s.u.	P	N	NA	MSI	023219-02	8/9/2025
pH 7.00a	7.10	s.u.	±0.1 s.u.	"	"	"	MSI	023334-01	12/7/2025
pH 10.00a	10.05	s.u.	±0.1 s.u.	"	"	"	MSI	024037-01	2/21/2026
SC 1000	995	µS/cm	±5%	"	"	"	Spectrum	2NA0024	Dec-25
DO (Zero pt)	0.09	mg/L	±0.1 mg/L	"	"	"	Macron	#000228049	8/26/2025
Turbidity (DI)	0.5	NTU	<2 NTU	"	"	"	Pace Labs	N/A (DI)	N/A (DI)

Approx. every 8 hrs, unless only one well

Comments:

Signature: [signature] Date: 7/24/24

BG

Multiparameter Meter Field Calibration Checklist

Field Personnel:	JB, AW	Location:	Duck Creek
Weather:	76°-83° Sunny 3mph Wind NE	Environment:	

Multiparameter Water Meter	Make: Horiba	Model: Differ-T U-5000	Serial Number:	V7320PKR	
Water Level Meter	Make: Heron	Model:	Serial Number:	19FF2111192HB	

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.07	s.u.	±0.1 s.u.	P	No	N/A	MSI	023219-02	8/9/2025
pH 7.00a	6.87	s.u.	±0.1 s.u.	F	Yes	7.00	MSI	023334-01	12/7/2025
pH 10.00a	10.05	s.u.	±0.1 s.u.	P	No	N/A	MSI	024037-01	2/21/2026
SC Zero (DI)	47	µS/cm	0<25 µS/cm	F	Yes	05	Pace Labs	N/A (DI)	N/A (DI)
SC 2000	2000	µS/cm	±5%	P	No	N/A	Proactive	3GJ1438	Oct-24
ORP	220	mV	±15 mV	P	No	N/A	Reagents InSitu	8406644 ~~3GJ1011~~	Apr-25 ~~Jun-24~~
DO (Zero pt)	0.00	mg/L	±0.1				Macron	#000228049	8/26/2025
DO (Saturated)	100	%	97-100%				Pace Labs	N/A (DI)	N/A (DI)
Turbidity (DI)	0.00	NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

Approx. every 8 hrs, unless only one well

ICV (Initial Calibration Verification) Time: 9:15

Buffer	Check Value	Units	Range	Pass/Fail	Action Taken?	Manufacturer	Lot#	Exp.
pH 4.00b	3.98	s.u.	±0.15 s.u.	P	None	Proactive	3GE1074	May-25
pH 7.00b	6.91	s.u.	±0.15 s.u.	P	None	Proactive	3GE1252	May-25
pH 10.00b	10.03	s.u.	±0.15 s.u.	P	None	Geotech	3GA1134	Jan-25
SC 1000	1020	µS/cm	±5%	P	None	Spectrum	2NA0024	Dec-25

Approx. every 8 hrs, unless only one well

CCV (Continued Calibration Verification): Time: 15:40

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.08	s.u.	±0.1 s.u.	P	NO	N/A	MSI	023219-02	8/9/2025
pH 7.00a	6.95	s.u.	±0.1 s.u.	P	NO		MSI	023334-01	12/7/2025
pH 10.00a	10.02	s.u.	±0.1 s.u.	P	NO		MSI	024037-01	2/21/2026
SC 1000	1020	µS/cm	±5%	P	NO		Spectrum	2NA0024	Dec-25
DO (Zero pt)	0.0	mg/L	±0.1 mg/L	P	NO		Macron	#000228049	8/26/2025
Turbidity (DI)	0.0	NTU	<2 NTU	P	NO		Pace Labs	N/A (DI)	N/A (DI)

Approx. every 8 hrs, unless only one well

Comments:

Signature: [signature] Date: 7/24/24

BG

Multiparameter Meter Field Calibration Checklist

Field Personnel:	Austin Moore	Location:	Clinton landfill + Duck creek
Weather:	85°-65° cloudy wind from NW	Environment:	landfill grassy

Multiparameter Water Meter	Make: Horiba	Model: U-5000	Serial Number:	AG7TK4XG	
Water Level Meter	Make: WT	Model: Heron	Serial Number:	19FF220213ML	

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	3.99	s.u.	±0.1 s.u.	P	N	N/A	MSI	023219-02	8/9/2025
pH 7.00a	7.01	s.u.	±0.1 s.u.				MSI	023334-01	12/7/2025
pH 10.00a	10.05	s.u.	±0.1 s.u.				MSI	024037-01	2/21/2026
SC Zero (DI)	22	µS/cm	0<25 µS/cm				Pace Labs	N/A (DI)	N/A (DI)
SC 2000	2618	µS/cm	±5%	F	Y	2000	Proactive	3GJ1438	Oct-24
ORP	224	mV	±15 mV	P	N	N/A	Reagents	8406644	Apr-25
DO (Zero pt)	0.0	mg/L	±0.1				Macron	#000228049	8/26/2025
DO (Saturated)	98.9	%	97-100%				Pace Labs	N/A (DI)	N/A (DI)
Turbidity (DI)	0.0	NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

Approx. every 8 hrs, unless only one well

ICV (Initial Calibration Verification) Time: 0952

Buffer	Check Value	Units	Range	Pass/Fail	Action Taken?	Manufacturer	Lot#	Exp.
pH 4.00b	3.65	s.u.	±0.15 s.u.	F	Y 3.99	Proactive	3GE1074	May-25
pH 7.00b	6.90	s.u.	±0.15 s.u.	P	N	Proactive	3GE1252	May-25
pH 10.00b	10.36	s.u.	±0.15 s.u.	F	Y 10.00	Geotech	3GA1134	Jan-25
SC 1000	1010	µS/cm	±5%	P	N	Spectrum	2NA0024	Dec-25

Approx. every 8 hrs, unless only one well

CCV (Continued Calibration Verification): Time: 1542

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.02	s.u.	±0.1 s.u.	P	N	N/A	MSI	023219-02	8/9/2025
pH 7.00a	7.01	s.u.	±0.1 s.u.				MSI	023334-01	12/7/2025
pH 10.00a	10.06	s.u.	±0.1 s.u.				MSI	024037-01	2/21/2026
SC 1000	1030	µS/cm	±5%				Spectrum	2NA0024	Dec-25
DO (Zero pt)	0.0	mg/L	±0.1 mg/L				Macron	#000228049	8/26/2025
Turbidity (DI)	0.0	NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

Approx. every 8 hrs, unless only one well

Comments:

Signature: Austin Moore Date: 7-24-24

BG

Multiparameter Meter Field Calibration Checklist

Field Personnel:	KAKEB DESKE	Location:	DUCK CREEK
Weather:	72° CLOUDY 7 MPH E	Environment:	GRASSY

Multiparameter Water Meter	Make: HORIBA	Model: U5000	Serial Number:	AGJTK4XG	
Water Level Meter	Make: HERON	Model: WT	Serial Number:	19FF220213MC	

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.03	s.u.	±0.1 s.u.	PASS	NO	N/A	MSI	023219-02	8/9/2025
pH 7.00a	7.01	s.u.	±0.1 s.u.				MSI	023334-01	12/7/2025
pH 10.00a	10.06	s.u.	±0.1 s.u.				MSI	024037-01	2/21/2026
SC Zero (DI)	0	µS/cm	0<25 µS/cm				Pace Labs	N/A (DI)	N/A (DI)
SC 2000	1093	µS/cm	±5%				Proactive	3GJ1438	Oct-24
ORP	224	mV	±15 mV				Reagents	8406644	Apr-25
DO (Zero pt)	0	mg/L	±0.1				Macron	#000228049	8/26/2025
DO (Saturated)	97	%	97-100%				Pace Labs	N/A (DI)	N/A (DI)
Turbidity (DI)	0.0	NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

Approx. every 8 hrs, unless only one well

ICV (Initial Calibration Verification) Time: 0925

Buffer	Check Value	Units	Range	Pass/Fail	Action Taken?	Manufacturer	Lot#	Exp.
pH 4.00b	4.06	s.u.	±0.15 s.u.	PASS	NO	Proactive	3GE1074	May-25
pH 7.00b	6.98	s.u.	±0.15 s.u.			Proactive	3GE1252	May-25
pH 10.00b	9.99	s.u.	±0.15 s.u.			Geotech	3GA1134	Jan-25
SC 1000	1014	µS/cm	±5%			Spectrum	2NA0024	Dec-25

Approx. every 8 hrs, unless only one well

CCV (Continued Calibration Verification): Time: 1558

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.01	s.u.	±0.1 s.u.	PASS	NO	N/A	MSI	023219-02	8/9/2025
pH 7.00a	6.98	s.u.	±0.1 s.u.				MSI	023334-01	12/7/2025
pH 10.00a	10.02	s.u.	±0.1 s.u.				MSI	024037-01	2/21/2026
SC 1000	1013	µS/cm	±5%				Spectrum	2NA0024	Dec-25
DO (Zero pt)	0	mg/L	±0.1 mg/L				Macron	#000228049	8/26/2025
Turbidity (DI)	0	NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

Approx. every 8 hrs, unless only one well

Comments:

Signature: [signature] Date: 07/25/24

BG

Multiparameter Meter Field Calibration Checklist

Field Personnel:	Aaron Pemberton	Location:	Duck creek
Weather:	73°-83°F cloudy Wind 5-7mph	Environment:	grass, woods

Multiparameter Water Meter	Make: Horiba	Model: U50CD	Serial Number:	YL9K59HA	
Water Level Meter	Make: Heron	Model: Dipper T	Serial Number:	3717-T	

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.09	s.u.	±0.1 s.u.	P	NO	—	MSI	023219-02	8/9/2025
pH 7.00a	6.94	s.u.	±0.1 s.u.	P	NO	—	MSI	023334-01	12/7/2025
pH 10.00a	10.05	s.u.	±0.1 s.u.	P	NO	—	MSI	024037-01	2/21/2026
SC Zero (DI)	16	µS/cm	0<25 µS/cm	P	NO	—	Pace Labs	N/A (DI)	N/A (DI)
SC 2000	1970	µS/cm	±5%	P	NO	—	Proactive	3GJ1438	Oct-24
ORP	227	mV	±15 mV	P	NO	—	Reagents	8406644	Apr-25
DO (Zero pt)	0.09	mg/L	±0.1	P	NO	—	Macron	#000228049	8/26/2025
DO (Saturated)	99.2	%	97-100%	P	NO	—	Pace Labs	N/A (DI)	N/A (DI)
Turbidity (DI)	0.0	NTU	<2 NTU	P	NO	—	Pace Labs	N/A (DI)	N/A (DI)

Approx. every 8 hrs, unless only one well

230 @ 24°C

ICV (Initial Calibration Verification) Time: 0934

Buffer	Check Value	Units	Range	Pass/Fail	Action Taken?	Manufacturer	Lot#	Exp.
pH 4.00b	4.05	s.u.	±0.15 s.u.	P	—	Proactive	3GE1074	May-25
pH 7.00b	6.89	s.u.	±0.15 s.u.	P	—	Proactive	3GE1252	May-25
pH 10.00b	10.09	s.u.	±0.15 s.u.	P	—	Geotech	3GA1134	Jan-25
SC 1000	977	µS/cm	±5%	P	—	Spectrum	2NA0024	Dec-25

Approx. every 8 hrs, unless only one well

CCV (Continued Calibration Verification): Time: 1420

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.02	s.u.	±0.1 s.u.	P	NO	—	MSI	023219-02	8/9/2025
pH 7.00a	7.01	s.u.	±0.1 s.u.	P	NO	—	MSI	023334-01	12/7/2025
pH 10.00a	10.09	s.u.	±0.1 s.u.	P	NO	—	MSI	024037-01	2/21/2026
SC 1000	994	µS/cm	±5%	P	NO	—	Spectrum	2NA0024	Dec-25
DO (Zero pt)	0.09	mg/L	±0.1 mg/L	P	NO	—	Macron	#000228049	8/26/2025
Turbidity (DI)	0.0	NTU	<2 NTU	P	NO	—	Pace Labs	N/A (DI)	N/A (DI)

Approx. every 8 hrs, unless only one well

Comments:

Signature: [signature] Date: 7/25/2024

36

Multiparameter Meter Field Calibration Checklist

Field Personnel:	AW, JB	Location:	Duck Creek
Weather:	72°-83° Cloudy 7mph Winds	Environment:	Grassy, Overgrown
Multiparameter Water Meter	Make: Horiba	Model: U-5000	Serial Number: V7320PKK
Water Level Meter	Make: Heron	Model: Dipper-T	Serial Number: 19FF2111192HB

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.19	s.u.	±0.1 s.u.	F	yes	4.00	MSI	023219-02	8/9/2025
pH 7.00a	6.89	s.u.	±0.1 s.u.	F	yes	7.00	MSI	023334-01	12/7/2025
pH 10.00a	10.00	s.u.	±0.1 s.u.	P	NO	N/A	MSI	024037-01	2/21/2026
SC Zero (DI)	0.0	µS/cm	0<25 µS/cm	P	NO	N/A	Pace Labs	N/A (DI)	N/A (DI)
SC 2000	2010	µS/cm	±5%	P	NO	N/A	Proactive	3GJ1438	Oct-24
ORP	220	mV	±15 mV	P	NO	N/A	Reagents	8406644	Apr-25
DO (Zero pt)	0.0	mg/L	±0.1	P	NO	N/A	Macron	#000228049	8/26/2025
DO (Saturated)	98.3	%	97-100%	P	NO	N/A	Pace Labs	N/A (DI)	N/A (DI)
Turbidity (DI)	0.0	NTU	<2 NTU	P	NO	N/A	Pace Labs	N/A (DI)	N/A (DI)

Approx. every 8 hrs, unless only one well

ICV (Initial Calibration Verification) Time: 9:04

Buffer	Check Value	Units	Range	Pass/Fail	Action Taken?	Manufacturer	Lot#	Exp.
pH 4.00b	3.95	s.u.	±0.15 s.u.	P	NO	Proactive	3GE1074	May-25
pH 7.00b	6.87	s.u.	±0.15 s.u.	P	NO	Proactive	3GE1252	May-25
pH 10.00b	9.99	s.u.	±0.15 s.u.	P	NO	Geotech	3GA1134	Jan-25
SC 1000	1040	µS/cm	±5%	P	NO	Spectrum	2NA0024	Dec-25

Approx. every 8 hrs, unless only one well

CCV (Continued Calibration Verification): Time: 14:58

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.12	s.u.	±0.1 s.u.	F	Yes	4.01	MSI	023219-02	8/9/2025
pH 7.00a	6.91	s.u.	±0.1 s.u.	P	NO	N/A	MSI	023334-01	12/7/2025
pH 10.00a	10.01	s.u.	±0.1 s.u.	P	NO		MSI	024037-01	2/21/2026
SC 1000	1020	µS/cm	±5%	P	NO		Spectrum	2NA0024	Dec-25
DO (Zero pt)	0.0	mg/L	±0.1 mg/L	P	NO		Macron	#000228049	8/26/2025
Turbidity (DI)	0.0	NTU	<2 NTU	P	NO		Pace Labs	N/A (DI)	N/A (DI)

Approx. every 8 hrs, unless only one well

Comments:

Signature: [signature] Date: 7/25/24

BG

Multiparameter Meter Field Calibration Checklist

Field Personnel:	JD	Location:	Duck Creek
Weather:	77 - 83°F p. sunny wind E 7-13 mph	Environment:	woods + grass
Multiparameter Water Meter	Make: Horiba	Model: U-5000	Serial Number: WUC83C85
Water Level Meter	Make: QED	Model: MP-30	Serial Number: 30065

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.01	s.u.	±0.1 s.u.	P	N	NA	MSI	023219-02	8/9/2025
pH 7.00a	7.05	s.u.	±0.1 s.u.	↓	↓	↓	MSI	023334-01	12/7/2025
pH 10.00a	10.05	s.u.	±0.1 s.u.	↓	↓	↓	MSI	024037-01	2/21/2026
SC Zero (DI)	0.0	µS/cm	0<25 µS/cm	↓	↓	↓	Pace Labs	N/A (DI)	N/A (DI)
SC 2000	2090	µS/cm	±5%	↓	↓	↓	Proactive	3GJ1438	Oct-24
ORP	234	mV	±15 mV	↓	↓	↓	Reagents	8406644	Apr-25
DO (Zero pt)	0.09	mg/L	±0.1	↓	↓	↓	Macron	#000228049	8/26/2025
DO (Saturated)	97.70	%	97-100%	↓	↓	↓	Pace Labs	N/A (DI)	N/A (DI)
Turbidity (DI)	0.3	NTU	<2 NTU	↓	↓	↓	Pace Labs	N/A (DI)	N/A (DI)

Approx. every 8 hrs, unless only one well

ICV (Initial Calibration Verification)					Time: 0926			
Buffer	Check Value	Units	Range	Pass/Fail	Action Taken?	Manufacturer	Lot#	Exp.
pH 4.00b	4.02	s.u.	±0.15 s.u.	P	NA	Proactive	3GE1074	May-25
pH 7.00b	6.90	s.u.	±0.15 s.u.	↓	↓	Proactive	3GE1252	May-25
pH 10.00b	9.96	s.u.	±0.15 s.u.	↓	↓	Geotech	3GA1134	Jan-25
SC 1000	992	µS/cm	±5%	↓	↓	Spectrum	2NA0024	Dec-25

Approx. every 8 hrs, unless only one well

CCV (Continued Calibration Verification):					Time: 1448			
Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.08	s.u.	±0.1 s.u.	P	N.	NA	MSI	023219-02	8/9/2025
pH 7.00a	7.07	s.u.	±0.1 s.u.	↓	↓	↓	MSI	023334-01	12/7/2025
pH 10.00a	10.03	s.u.	±0.1 s.u.	↓	↓	↓	MSI	024037-01	2/21/2026
SC 1000	1010	µS/cm	±5%	↓	↓	↓	Spectrum	2NA0024	Dec-25
DO (Zero pt)	0.08	mg/L	±0.1 mg/L	↓	↓	↓	Macron	#000228049	8/26/2025
Turbidity (DI)	0.0	NTU	<2 NTU	↓	↓	↓	Pace Labs	N/A (DI)	N/A (DI)

Approx. every 8 hrs, unless only one well

Comments:

Signature:		Date:	7/25/24

BG

Multiparameter Meter Field Calibration Checklist

Field Personnel:	Aaron Pemberton	Location:	Duck creek
Weather:	76°-89°F sunny wind SW 11mph	Environment:	grass

Multiparameter Water Meter	Make: Horiba	Model: U5000	Serial Number:	AGS TKH X6	
Water Level Meter	Make: Heron	Model: Dipper T	Serial Number:	3717-T	

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	3.94	s.u.	±0.1 s.u.	P	NC	—	MSI	023219-02	8/9/2025
pH 7.00a	7.08	s.u.	±0.1 s.u.	P	NC	—	MSI	023334-01	12/7/2025
pH 10.00a	10.02	s.u.	±0.1 s.u.	P	NC	—	MSI	024037-01	2/21/2026
SC Zero (DI)	0.0	µS/cm	0<25 µS/cm	P	NC	—	Pace Labs	N/A (DI)	N/A (DI)
SC 2000	1940	µS/cm	±5%	P	NC	—	Proactive	3GJ1438	Oct-24
ORP	233	mV	±15 mV	P	NC	—	Reagents	8406644	Apr-25
DO (Zero pt)	0.09	mg/L	±0.1	P	NC	—	Macron	#000228049	8/26/2025
DO (Saturated)	98.6	%	97-100%	P	NC	—	Pace Labs	N/A (DI)	N/A (DI)
Turbidity (DI)	0.0	NTU	<2 NTU	P	NC	—	Pace Labs	N/A (DI)	N/A (DI)

Approx. every 8 hrs, unless only one well

232 @ 23°C

ICV (Initial Calibration Verification) Time: 1006

Buffer	Check Value	Units	Range	Pass/Fail	Action Taken?	Manufacturer	Lot#	Exp.
pH 4.00b	4.03	s.u.	±0.15 s.u.	P	—	Proactive	3GE1074	May-25
pH 7.00b	7.03	s.u.	±0.15 s.u.	P	—	Proactive	3GE1252	May-25
pH 10.00b	10.12	s.u.	±0.15 s.u.	P	—	Geotech	3GA1134	Jan-25
SC 1000	956	µS/cm	±5%	P	—	Spectrum	2NA0024	Dec-25

Approx. every 8 hrs, unless only one well

CCV (Continued Calibration Verification): Time: 1501

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.06	s.u.	±0.1 s.u.	P	NC	—	MSI	023219-02	8/9/2025
pH 7.00a	7.09	s.u.	±0.1 s.u.	P	NC	—	MSI	023334-01	12/7/2025
pH 10.00a	10.09	s.u.	±0.1 s.u.	P	NC	—	MSI	024037-01	2/21/2026
SC 1000	1020	µS/cm	±5%	P	NC	—	Spectrum	2NA0024	Dec-25
DO (Zero pt)	0.09	mg/L	±0.1 mg/L	P	NC	—	Macron	#000228049	8/26/2025
Turbidity (DI)	0.0	NTU	<2 NTU	P	NC	—	Pace Labs	N/A (DI)	N/A (DI)

Approx. every 8 hrs, unless only one well

Comments:

Signature: [signature] Date: 7/29/2024

BG

Multiparameter Meter Field Calibration Checklist

Field Personnel:	Jordan Bohannan	Location:	Duck Creek
Weather:	75°F, Cloudy, 10 mph wind	Environment:	Grassy, Muddy
Multiparameter Water Meter	Make: Horiba	Model: U-5000	Serial Number: V7320 PIKK
Water Level Meter	Make: Heron	Model: Dipper T	Serial Number: 19FF 211192 HB

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.17	s.u.	±0.1 s.u.	F	Yes	4.00	MSI	023219-02	8/9/2025
pH 7.00a	6.94	s.u.	±0.1 s.u.	P	No	N/A	MSI	023334-01	12/7/2025
pH 10.00a	10.04	s.u.	±0.1 s.u.	P	No	N/A	MSI	024037-01	2/21/2026
SC Zero (DI)	0009	µS/cm	0<25 µS/cm	P	No	N/A	Pace Labs	N/A (DI)	N/A (DI)
SC 2000	2030	µS/cm	±5%	P	No	N/A	Proactive	3GJ1438	Oct-24
ORP	218	mV	±15 mV	P	No	N/A	Reagents	8406644	Apr-25
DO (Zero pt)	0.00	mg/L	±0.1	P	No	N/A	Macron	#000228049	8/26/2025
DO (Saturated)	98.8	%	97-100%	P	NO	N/A	Pace Labs	N/A (DI)	N/A (DI)
Turbidity (DI)	0.07	NTU	<2 NTU	P	No	N/A	Pace Labs	N/A (DI)	N/A (DI)

Approx. every 8 hrs, unless only one well

ICV (Initial Calibration Verification) — Time: 0919

Buffer	Check Value	Units	Range	Pass/Fail	Action Taken?	Manufacturer	Lot#	Exp.
pH 4.00b	3.98	s.u.	±0.15 s.u.	P	None	Proactive	3GE1074	May-25
pH 7.00b	6.96	s.u.	±0.15 s.u.	P	None	Proactive	3GE1252	May-25
pH 10.00b	9.97	s.u.	±0.15 s.u.	P	None	Geotech	3GA1134	Jan-25
SC 1000	1010	µS/cm	±5%	P	None	Spectrum	2NA0024	Dec-25

Approx. every 8 hrs, unless only one well

CCV (Continued Calibration Verification): — Time: 1458

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.07	s.u.	±0.1 s.u.	P	No	N/A	MSI	023219-02	8/9/2025
pH 7.00a	6.98	s.u.	±0.1 s.u.				MSI	023334-01	12/7/2025
pH 10.00a	10.01	s.u.	±0.1 s.u.				MSI	024037-01	2/21/2026
SC 1000	1003	µS/cm	±5%				Spectrum	2NA0024	Dec-25
DO (Zero pt)	0.00	mg/L	±0.1 mg/L				Macron	#000228049	8/26/2025
Turbidity (DI)	0.00	NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

Approx. every 8 hrs, unless only one well

Comments:

Signature: JBohannan — Date: 7/29/24

BG

Multiparameter Meter Field Calibration Checklist

Field Personnel:	JD	Location:	Duck Creek
Weather:	73-88°F p. sunny wind SSW 10-18 mph	Environment:	grass

Multiparameter Water Meter	Make: Hach	Model: U-5000	Serial Number:	WUG-83C85	
Water Level Meter	Make: QED	Model: MP-30	Serial Number:	30065	

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	3.70	s.u.	±0.1 s.u.	F	Y	4.00	MSI	023219-02	8/9/2025
pH 7.00a	6.80	s.u.	±0.1 s.u.	F	Y	7.00	MSI	023334-01	12/7/2025
pH 10.00a	10.22	s.u.	±0.1 s.u.	F	Y	10.00	MSI	024037-01	2/21/2026
SC Zero (DI)	15	µS/cm	0<25 µS/cm	P	N	NA	Pace Labs	N/A (DI)	N/A (DI)
SC 2000	1950	µS/cm	±5%	P	N	NA	Proactive	3GJ1438	Oct-24
ORP	251	mV	±15 mV	F	Y	229	Reagents	8406644	Apr-25
DO (Zero pt)	0.08	mg/L	±0.1	P	N	NA	Macron	#000228049	8/26/2025
DO (Saturated)	98.11	%	97-100%	P	N	NA	Pace Labs	N/A (DI)	N/A (DI)
Turbidity (DI)	1.2	NTU	<2 NTU	P	N	NA	Pace Labs	N/A (DI)	N/A (DI)

Approx. every 8 hrs, unless only one well

ICV (Initial Calibration Verification) Time: 0947

Buffer	Check Value	Units	Range	Pass/Fail	Action Taken?	Manufacturer	Lot#	Exp.
pH 4.00b	4.01	s.u.	±0.15 s.u.	P	NA	Proactive	3GE1074	May-25
pH 7.00b	7.12	s.u.	±0.15 s.u.	P	"	Proactive	3GE1252	May-25
pH 10.00b	10.02	s.u.	±0.15 s.u.	P	"	Geotech	3GA1134	Jan-25
SC 1000	1010	µS/cm	±5%	P	"	Spectrum	2NA0024	Dec-25

Approx. every 8 hrs, unless only one well

CCV (Continued Calibration Verification): Time: 1307

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.06	s.u.	±0.1 s.u.	P	N.	NA	MSI	023219-02	8/9/2025
pH 7.00a	7.05	s.u.	±0.1 s.u.	"	"	"	MSI	023334-01	12/7/2025
pH 10.00a	10.03	s.u.	±0.1 s.u.	"	"	"	MSI	024037-01	2/21/2026
SC 1000	1020	µS/cm	±5%	"	"	"	Spectrum	2NA0024	Dec-25
DO (Zero pt)	0.09	mg/L	±0.1 mg/L	"	"	"	Macron	#000228049	8/26/2025
Turbidity (DI)	0.5	NTU	<2 NTU	"	"	"	Pace Labs	N/A (DI)	N/A (DI)

Approx. every 8 hrs, unless only one well

Comments:

Signature:	[signature]	Date:	7/29/24 SD 7/29

BG

Multiparameter Meter Field Calibration Checklist

Field Personnel:	JB, AW	Location:	Duck Creek
Weather:	77°F, light rain, 5mph wind	Environment:	Grass, Mud
Multiparameter Water Meter	Make: Horiba	Model: U-5006	Serial Number: V7320P1413
Water Level Meter	Make: Heron	Model: Dipper T	Serial Number: 19FF2111192HB

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.40	s.u.	±0.1 s.u.	F	Yes	4.00	MSI	023219-02	8/9/2025
pH 7.00a	6.99	s.u.	±0.1 s.u.	P	No	N/A	MSI	023334-01	12/7/2025
pH 10.00a	10.03	s.u.	±0.1 s.u.	P	No	N/A	MSI	024037-01	2/21/2026
SC Zero (DI)	0002	µS/cm	0<25 µS/cm	P	N/A	N/A	Pace Labs	N/A (DI)	N/A (DI)
SC 2000	1870	µS/cm	±5%	F	Yes	2000	Proactive	3GJ1438	Oct-24
ORP	218	mV	±15 mV	P	No	N/A	Reagents	8406644	Apr-25
DO (Zero pt)	0.00	mg/L	±0.1	P	No	N/A	Macron	#000228049	8/26/2025
DO (Saturated)	100	%	97-100%	P	No	N/A	Pace Labs	N/A (DI)	N/A (DI)
Turbidity (DI)	0.4	NTU	<2 NTU	P	No	N/A	Pace Labs	N/A (DI)	N/A (DI)

Approx. every 8 hrs, unless only one well

ICV (Initial Calibration Verification) — Time: 0844

Buffer	Check Value	Units	Range	Pass/Fail	Action Taken?	Manufacturer	Lot#	Exp.
pH 4.00b	3.74	s.u.	±0.15 s.u.	F	Calibrated: 4.00	Proactive	3GE1074	May-25
pH 7.00b	6.91	s.u.	±0.15 s.u.	P	None	Proactive	3GE1252	May-25
pH 10.00b	9.96	s.u.	±0.15 s.u.	P	None	Geotech	3GA1134	Jan-25
SC 1000	999	µS/cm	±5%	P	None	Spectrum	2NA0024	Dec-25

Approx. every 8 hrs, unless only one well

CCV (Continued Calibration Verification): — Time: 1407

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.07	s.u.	±0.1 s.u.	P	NO	N/A	MSI	023219-02	8/9/2025
pH 7.00a	7.01	s.u.	±0.1 s.u.				MSI	023334-01	12/7/2025
pH 10.00a	10.02	s.u.	±0.1 s.u.				MSI	024037-01	2/21/2026
SC 1000	1007	µS/cm	±5%				Spectrum	2NA0024	Dec-25
DO (Zero pt)	0.00	mg/L	±0.1 mg/L				Macron	#000228049	8/26/2025
Turbidity (DI)	0.00	NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

Approx. every 8 hrs, unless only one well

Comments:

Signature: JBohannan Date: 7/30/2024

BCa

Multiparameter Meter Field Calibration Checklist

Field Personnel:	Aaron Pemberton	Location:	Duck Creek
Weather:	81° 91° C Sunny wind 5 6mph	Environment:	grass, mud
Multiparameter Water Meter	Make: Horiba	Model: U52G	Serial Number: A6JTM4X6
Water Level Meter	Make: Heron	Model: Dipper T	Serial Number: 3717-T

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.01	s.u.	±0.1 s.u.	P	NO	—	MSI	023219-02	8/9/2025
pH 7.00a	6.91	s.u.	±0.1 s.u.	P	NO	—	MSI	023334-01	12/7/2025
pH 10.00a	10.08	s.u.	±0.1 s.u.	P	NO	—	MSI	024037-01	2/21/2026
SC Zero (DI)	13	µS/cm	0<25 µS/cm	P	NO	—	Pace Labs	N/A (DI)	N/A (DI)
SC 2000	2000	µS/cm	±5%	P	NO	—	Proactive	3GJ1438	Oct-24
ORP	224	mV	±15 mV	P	NO	—	Reagents	8406644	Apr-25
DO (Zero pt)	0.01	mg/L	±0.1	P	NO	—	Macron	#000228049	8/26/2025
DO (Saturated)	18.6	%	97-100%	P	NO	—	Pace Labs	N/A (DI)	N/A (DI)
Turbidity (DI)	1.2	NTU	<2 NTU	P	NO	—	Pace Labs	N/A (DI)	N/A (DI)

Approx. every 8 hrs, unless only one well

230 @ 24 °C

ICV (Initial Calibration Verification) Time: 0942

Buffer	Check Value	Units	Range	Pass/Fail	Action Taken?	Manufacturer	Lot#	Exp.
pH 4.00b	3.93	s.u.	±0.15 s.u.	P	—	Proactive	3GE1074	May-25
pH 7.00b	6.96	s.u.	±0.15 s.u.	P	—	Proactive	3GE1252	May-25
pH 10.00b	10.14	s.u.	±0.15 s.u.	P	—	Geotech	3GA1134	Jan-25
SC 1000	984	µS/cm	±5%	P	—	Spectrum	2NA0024	Dec-25

Approx. every 8 hrs, unless only one well

CCV (Continued Calibration Verification): Time: 1416

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.03	s.u.	±0.1 s.u.	P	NO	—	MSI	023219-02	8/9/2025
pH 7.00a	7.05	s.u.	±0.1 s.u.	P	NO	—	MSI	023334-01	12/7/2025
pH 10.00a	10.08	s.u.	±0.1 s.u.	P	NO	—	MSI	024037-01	2/21/2026
SC 1000	955	µS/cm	±5%	P	NO	—	Spectrum	2NA0024	Dec-25
DO (Zero pt)	0.00	mg/L	±0.1 mg/L	P	NO	—	Macron	#000228049	8/26/2025
Turbidity (DI)	0.0	NTU	<2 NTU	P	NO	—	Pace Labs	N/A (DI)	N/A (DI)

Approx. every 8 hrs, unless only one well

Comments:

Signature: [signature] Date: 7/30/2024

BG

Multiparameter Meter Field Calibration Checklist

Field Personnel:	JD, KD	Location:	Duck Creek
Weather:	77-92°F cloudy wind S 7-10mph	Environment:	grass

Multiparameter Water Meter	Make: Horiba	Model: U-5000	Serial Number:	WUG83C85	
Water Level Meter	Make: QED	Model: MP-30	Serial Number:	30065	

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.02	s.u.	±0.1 s.u.	P	No	NA	MSI	023219-02	8/9/2025
pH 7.00a	6.93	s.u.	±0.1 s.u.				MSI	023334-01	12/7/2025
pH 10.00a	9.96	s.u.	±0.1 s.u.				MSI	024037-01	2/21/2026
SC Zero (DI)	0.0	µS/cm	0<25 µS/cm				Pace Labs	N/A (DI)	N/A (DI)
SC 2000	2020	µS/cm	±5%				Proactive	3GJ1438	Oct-24
ORP	228	mV	±15 mV				Reagents	8406644	Apr-25
DO (Zero pt)	0.07	mg/L	±0.1				Macron	#000228049	8/26/2025
DO (Saturated)	98.32	%	97-100%				Pace Labs	N/A (DI)	N/A (DI)
Turbidity (DI)	0.0	NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

Approx. every 8 hrs, unless only one well

ICV (Initial Calibration Verification) — Time: 0905

Buffer	Check Value	Units	Range	Pass/Fail	Action Taken?	Manufacturer	Lot#	Exp.
pH 4.00b	3.94	s.u.	±0.15 s.u.	P	NA	Proactive	3GE1074	May-25
pH 7.00b	6.85	s.u.	±0.15 s.u.			Proactive	3GE1252	May-25
pH 10.00b	9.93	s.u.	±0.15 s.u.			Geotech	3GA1134	Jan-25
SC 1000	1020	µS/cm	±5%			Spectrum	2NA0024	Dec-25

Approx. every 8 hrs, unless only one well

CCV (Continued Calibration Verification): — Time: 1430

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.07	s.u.	±0.1 s.u.	P	No	NA	MSI	023219-02	8/9/2025
pH 7.00a	7.05	s.u.	±0.1 s.u.				MSI	023334-01	12/7/2025
pH 10.00a	10.03	s.u.	±0.1 s.u.				MSI	024037-01	2/21/2026
SC 1000	1010	µS/cm	±5%				Spectrum	2NA0024	Dec-25
DO (Zero pt)	0.08	mg/L	±0.1 mg/L				Macron	#000228049	8/26/2025
Turbidity (DI)	0.0	NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

Approx. every 8 hrs, unless only one well

Comments:

Signature:	7/30/24	Date:	

BG

Multiparameter Meter Field Calibration Checklist

Field Personnel:	Aaron Pemberton	Location:	Duck creek
Weather:	84°-91°F cloudy wind SW 5mph	Environment:	grassy

Multiparameter Water Meter	Make: Horiba	Model: U50	Serial Number:	3T85NNNF	
Water Level Meter	Make: Heron	Model: Dipper T	Serial Number:	3717-T	

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.01	s.u.	±0.1 s.u.	P	NO	–	MSI	023219-02	8/9/2025
pH 7.00a	6.93	s.u.	±0.1 s.u.	P	NO	–	MSI	023334-01	12/7/2025
pH 10.00a	9.94	s.u.	±0.1 s.u.	P	No	–	MSI	024037-01	2/21/2026
SC Zero (DI)	13	µS/cm	0<25 µS/cm	P	NO	–	Pace Labs	N/A (DI)	N/A (DI)
SC 2000	2000	µS/cm	±5%	P	No	–	Proactive	3GJ1438	Oct-24
ORP	188	mV	±15 mV	C	yes	235	Reagents	8406644	Apr-25
DO (Zero pt)	0.04	mg/L	±0.1	P	NO	–	Macron	#000228049	8/26/2025
DO (Saturated)	99.6	%	97-100%	P	No	–	Pace Labs	N/A (DI)	N/A (DI)
Turbidity (DI)	0.0	NTU	<2 NTU	P	NO	–	Pace Labs	N/A (DI)	N/A (DI)

Approx. every 8 hrs, unless only one well

233 @ 27°C

ICV (Initial Calibration Verification) Time: 1035

Buffer	Check Value	Units	Range	Pass/Fail	Action Taken?	Manufacturer	Lot#	Exp.
pH 4.00b	3.98	s.u.	±0.15 s.u.	P	–	Proactive	3GE1074	May-25
pH 7.00b	6.92	s.u.	±0.15 s.u.	P	–	Proactive	3GE1252	May-25
pH 10.00b	9.87	s.u.	±0.15 s.u.	P	–	Geotech	3GA1134	Jan-25
SC 1000	1030	µS/cm	±5%	P	–	Spectrum	2NA0024	Dec-25

Approx. every 8 hrs, unless only one well

CCV (Continued Calibration Verification): Time: 1532

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.09	s.u.	±0.1 s.u.	P	No	–	MSI	023219-02	8/9/2025
pH 7.00a	6.98	s.u.	±0.1 s.u.	P	NO	–	MSI	023334-01	12/7/2025
pH 10.00a	9.94	s.u.	±0.1 s.u.	P	No	–	MSI	024037-01	2/21/2026
SC 1000	985	µS/cm	±5%	P	No	–	Spectrum	2NA0024	Dec-25
DO (Zero pt)	0.08	mg/L	±0.1 mg/L	P	NO	–	Macron	#000228049	8/26/2025
Turbidity (DI)	1.3	NTU	<2 NTU	P	No	–	Pace Labs	N/A (DI)	N/A (DI)

Approx. every 8 hrs, unless only one well

Comments:

Signature: [signature] Date: 7/31/2024

BG

Multiparameter Meter Field Calibration Checklist

Field Personnel:	JB AW	Location:	Duck Creek
Weather:	80°F, Cloudy,	Environment:	Grassy, Mud
Multiparameter Water Meter	Make: Horiba	Model: U-5000	Serial Number:
Water Level Meter	Make: Heron	Model: Dipper T	Serial Number: 19FF 2111192HB

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	3.96	s.u.	±0.1 s.u.	P	No	N/A	MSI	023219-02	8/9/2025
pH 7.00a	6.88	s.u.	±0.1 s.u.	F	Yes	7.00	MSI	023334-01	12/7/2025
pH 10.00a	10.03	s.u.	±0.1 s.u.	P	No	N/A	MSI	024037-01	2/21/2026
SC Zero (DI)	0003	µS/cm	0<25 µS/cm	↓	↓	↓	Pace Labs	N/A (DI)	N/A (DI)
SC 2000	2012	µS/cm	±5%	↓	↓	↓	Proactive	3GJ1438	Oct-24
ORP	227	mV	±15 mV	↓	↓	↓	Reagents	8406644	Apr-25
DO (Zero pt)	0.00	mg/L	±0.1	↓	↓	↓	Macron	#000228049	8/26/2025
DO (Saturated)	100	%	97-100%	↓	↓	↓	Pace Labs	N/A (DI)	N/A (DI)
Turbidity (DI)	0.00	NTU	<2 NTU	↓	↓	↓	Pace Labs	N/A (DI)	N/A (DI)

Approx. every 8 hrs, unless only one well

ICV (Initial Calibration Verification) Time: 1019

Buffer	Check Value	Units	Range	Pass/Fail	Action Taken?	Manufacturer	Lot#	Exp.
pH 4.00b	3.90	s.u.	±0.15 s.u.	P	None	Proactive	3GE1074	May-25
pH 7.00b	6.95	s.u.	±0.15 s.u.	↓	↓	Proactive	3GE1252	May-25
pH 10.00b	10.03	s.u.	±0.15 s.u.	↓	↓	Geotech	3GA1134	Jan-25
SC 1000	998	µS/cm	±5%	↓	↓	Spectrum	2NA0024	Dec-25

Approx. every 8 hrs, unless only one well

CCV (Continued Calibration Verification): Time: 1535

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.07	s.u.	±0.1 s.u.	P	No	N/A	MSI	023219-02	8/9/2025
pH 7.00a	7.03	s.u.	±0.1 s.u.	↓	↓	↓	MSI	023334-01	12/7/2025
pH 10.00a	10.02	s.u.	±0.1 s.u.	↓	↓	↓	MSI	024037-01	2/21/2026
SC 1000	1011	µS/cm	±5%	↓	↓	↓	Spectrum	2NA0024	Dec-25
DO (Zero pt)	0.00	mg/L	±0.1 mg/L	↓	↓	↓	Macron	#000228049	8/26/2025
Turbidity (DI)	0.00	NTU	<2 NTU	↓	↓	↓	Pace Labs	N/A (DI)	N/A (DI)

Approx. every 8 hrs, unless only one well

Comments:

Signature: [signature] Date: 7/31/2024

BG

Multiparameter Meter Field Calibration Checklist

Field Personnel:	JD	Location:	Duck Creek
Weather:	81-92°F cloudy wind SW 7-9mph	Environment:	grass

Multiparameter Water Meter	Make: Horiba	Model: U-5000	Serial Number:	WUG83C85	
Water Level Meter	Make: QED	Model: MP30	Serial Number:	30065	

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	3.66	s.u.	±0.1 s.u.	F	Y	4.00	MSI	023219-02	8/9/2025
pH 7.00a	6.92	s.u.	±0.1 s.u.	P	N	NA	MSI	023334-01	12/7/2025
pH 10.00a	10.04	s.u.	±0.1 s.u.	↓	↓	↓	MSI	024037-01	2/21/2026
SC Zero (DI)	0.0	µS/cm	0<25 µS/cm	↓	↓	↓	Pace Labs	N/A (DI)	N/A (DI)
SC 2000	2010	µS/cm	±5%	↓	↓	↓	Proactive	3GJ1438	Oct-24
ORP	244	mV	±15 mV	↓	↓	↓	Reagents	8406644	Apr-25
DO (Zero pt)	0.09	mg/L	±0.1	↓	↓	↓	Macron	#000228049	8/26/2025
DO (Saturated)	99.52	%	97-100%	↓	↓	↓	Pace Labs	N/A (DI)	N/A (DI)
Turbidity (DI)	0.0	NTU	<2 NTU	↓	↓	↓	Pace Labs	N/A (DI)	N/A (DI)

Approx. every 8 hrs, unless only one well

ICV (Initial Calibration Verification)					Time: 1008			
Buffer	Check Value	Units	Range	Pass/Fail	Action Taken?	Manufacturer	Lot#	Exp.
pH 4.00b	3.92	s.u.	±0.15 s.u.	P	NA	Proactive	3GE1074	May-25
pH 7.00b	6.85	s.u.	±0.15 s.u.	↓	↓	Proactive	3GE1252	May-25
pH 10.00b	10.03	s.u.	±0.15 s.u.	↓	↓	Geotech	3GA1134	Jan-25
SC 1000	961	µS/cm	±5%	↓	↓	Spectrum	2NA0024	Dec-25

Approx. every 8 hrs, unless only one well

CCV (Continued Calibration Verification):					Time: 1540				
Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.03	s.u.	±0.1 s.u.	P	N.	NA	MSI	023219-02	8/9/2025
pH 7.00a	7.07	s.u.	±0.1 s.u.	↓	↓	↓	MSI	023334-01	12/7/2025
pH 10.00a	10.05	s.u.	±0.1 s.u.	↓	↓	↓	MSI	024037-01	2/21/2026
SC 1000	1000	µS/cm	±5%	↓	↓	↓	Spectrum	2NA0024	Dec-25
DO (Zero pt)	0.08	mg/L	±0.1 mg/L	↓	↓	↓	Macron	#000228049	8/26/2025
Turbidity (DI)	0.0	NTU	<2 NTU	↓	↓	↓	Pace Labs	N/A (DI)	N/A (DI)

Approx. every 8 hrs, unless only one well

Comments:

Signature:	[signature]	Date:	7/31/24

BG

Multiparameter Meter Field Calibration Checklist

Field Personnel:	Auron Pemberton	Location:	Duck Creek
Weather:	77°-87° cloudy wind SW 5mph	Environment:	grass, mud
Multiparameter Water Meter	Make: Horiba	Model: U5000	Serial Number: 3T85NNNF
Water Level Meter	Make: Heron	Model: Dipper T	Serial Number: 3717-T

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.01	s.u.	±0.1 s.u.	P	NO	–	MSI	023219-02	8/9/2025
pH 7.00a	6.98	s.u.	±0.1 s.u.	P	NO	–	MSI	023334-01	12/7/2025
pH 10.00a	9.99	s.u.	±0.1 s.u.	P	NO	–	MSI	024037-01	2/21/2026
SC Zero (DI)	14	µS/cm	0<25 µS/cm	P	NO	–	Pace Labs	N/A (DI)	N/A (DI)
SC 2000	2010	µS/cm	±5%	P	NO	–	Proactive	3GJ1438	Oct-24
ORP	279	mV	±15 mV	P	yes	229	Reagents	8406644	Apr-25
DO (Zero pt)	0.09	mg/L	±0.1	P	NO	–	Macron	#000228049	8/26/2025
DO (Saturated)	99.3	%	97-100%	P	NO	–	Pace Labs	N/A (DI)	N/A (DI)
Turbidity (DI)	0.5	NTU	<2 NTU	P	NO	–	Pace Labs	N/A (DI)	N/A (DI)

Approx. every 8 hrs, unless only one well

229@25°C

ICV (Initial Calibration Verification) Time: 0900

Buffer	Check Value	Units	Range	Pass/Fail	Action Taken?	Manufacturer	Lot#	Exp.
pH 4.00b	3.97	s.u.	±0.15 s.u.	P	–	Proactive	3GE1074	May-25
pH 7.00b	6.89	s.u.	±0.15 s.u.	P	–	Proactive	3GE1252	May-25
pH 10.00b	9.94	s.u.	±0.15 s.u.	P	–	Geotech	3GA1134	Jan-25
SC 1000	1020	µS/cm	±5%	P	✓	Spectrum	2NA0024	Dec-25

Approx. every 8 hrs, unless only one well

CCV (Continued Calibration Verification): Time: 1412

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.03	s.u.	±0.1 s.u.	P	NO	✓	MSI	023219-02	8/9/2025
pH 7.00a	7.03	s.u.	±0.1 s.u.	P	NO	✓	MSI	023334-01	12/7/2025
pH 10.00a	10.06	s.u.	±0.1 s.u.	P	NO	✓	MSI	024037-01	2/21/2026
SC 1000	1010	µS/cm	±5%	P	NO	–	Spectrum	2NA0024	Dec-25
DO (Zero pt)	0.09	mg/L	±0.1 mg/L	P	NO	✓	Macron	#000228049	8/26/2025
Turbidity (DI)	0.0	NTU	<2 NTU	P	NO	~	Pace Labs	N/A (DI)	N/A (DI)

Approx. every 8 hrs, unless only one well

Comments:

Signature: [signature] Date: 8/1/2024

BG

Multiparameter Meter Field Calibration Checklist

Field Personnel:	SD, KO	Location:	Duck Creek
Weather:	76-86° F cloudy wind WSW 2-3mph	Environment:	grass

Multiparameter Water Meter	Make: Horiba	Model: U-5000	Serial Number:	WUG83C85	
Water Level Meter	Make: QED	Model: MP30	Serial Number:	30065	

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.31	s.u.	±0.1 s.u.	F	Y	4.00	MSI	023219-02	8/9/2025
pH 7.00a	6.99	s.u.	±0.1 s.u.	P	N	NA	MSI	023334-01	12/7/2025
pH 10.00a	10.03	s.u.	±0.1 s.u.				MSI	024037-01	2/21/2026
SC Zero (DI)	0.0	µS/cm	0<25 µS/cm				Pace Labs	N/A (DI)	N/A (DI)
SC 2000	2050	µS/cm	±5%				Proactive	3GJ1438	Oct-24
ORP	227	mV	±15 mV				Reagents	8406644	Apr-25
DO (Zero pt)	0.9	mg/L	±0.1				Macron	#000228049	8/26/2025
DO (Saturated)	98.88	%	97-100%				Pace Labs	N/A (DI)	N/A (DI)
Turbidity (DI)	0.0	NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

Approx. every 8 hrs, unless only one well

ICV (Initial Calibration Verification) Time: 0850

Buffer	Check Value	Units	Range	Pass/Fail	Action Taken?	Manufacturer	Lot#	Exp.
pH 4.00b	3.96	s.u.	±0.15 s.u.	P	NA	Proactive	3GE1074	May-25
pH 7.00b	6.85	s.u.	±0.15 s.u.			Proactive	3GE1252	May-25
pH 10.00b	10.02	s.u.	±0.15 s.u.			Geotech	3GA1134	Jan-25
SC 1000	960	µS/cm	±5%			Spectrum	2NA0024	Dec-25

Approx. every 8 hrs, unless only one well

CCV (Continued Calibration Verification): Time: 1410

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.07	s.u.	±0.1 s.u.	P	N	NA	MSI	023219-02	8/9/2025
pH 7.00a	7.05	s.u.	±0.1 s.u.				MSI	023334-01	12/7/2025
pH 10.00a	10.04	s.u.	±0.1 s.u.				MSI	024037-01	2/21/2026
SC 1000	990	µS/cm	±5%				Spectrum	2NA0024	Dec-25
DO (Zero pt)	0.08	mg/L	±0.1 mg/L				Macron	#000228049	8/26/2025
Turbidity (DI)	0.0	NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

Approx. every 8 hrs, unless only one well

Comments:

Signature: [signature] Date: 8/1/24

BG

Multiparameter Meter Field Calibration Checklist

Field Personnel:	AW, JB	Location:	Duck Creek
Weather:	77°F, Cloudy, 6mph wind	Environment:	Grass, Mud
Multiparameter Water Meter	Make: Horiba	Model: U5000	Serial Number: V7320PKK
Water Level Meter	Make: Heron	Model: Dipper T	Serial Number: 19FF221911192HB

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.14	s.u.	±0.1 s.u.	F	Yes	4.00	MSI	023219-02	8/9/2025
pH 7.00a	6.89	s.u.	±0.1 s.u.	I	I	7.00	MSI	023334-01	12/7/2025
pH 10.00a	10.03	s.u.	±0.1 s.u.	P	No	N/A	MSI	024037-01	2/21/2026
SC Zero (DI)	0.00	µS/cm	0<25 µS/cm	P			Pace Labs	N/A (DI)	N/A (DI)
SC 2000	2050	µS/cm	±5%	P			Proactive	3GJ1438	Oct-24
ORP	219	mV	±15 mV	P			Reagents	8406644	Apr-25
DO (Zero pt)	0.00	mg/L	±0.1	P			Macron	#000228049	8/26/2025
DO (Saturated)	100%	%	97-100%	P			Pace Labs	N/A (DI)	N/A (DI)
Turbidity (DI)	0.00	NTU	<2 NTU	P			Pace Labs	N/A (DI)	N/A (DI)

Approx. every 8 hrs, unless only one well

ICV (Initial Calibration Verification) — Time: 0842

Buffer	Check Value	Units	Range	Pass/Fail	Action Taken?	Manufacturer	Lot#	Exp.
pH 4.00b	3.99	s.u.	±0.15 s.u.	P	None	Proactive	3GE1074	May-25
pH 7.00b	6.92	s.u.	±0.15 s.u.		None	Proactive	3GE1252	May-25
pH 10.00b	9.97	s.u.	±0.15 s.u.		None	Geotech	3GA1134	Jan-25
SC 1000	978	µS/cm	±5%		None	Spectrum	2NA0024	Dec-25

Approx. every 8 hrs, unless only one well

CCV (Continued Calibration Verification): — Time: 1340

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.01	s.u.	±0.1 s.u.	P	No	N/A	MSI	023219-02	8/9/2025
pH 7.00a	7.02	s.u.	±0.1 s.u.				MSI	023334-01	12/7/2025
pH 10.00a	9.89	s.u.	±0.1 s.u.				MSI	024037-01	2/21/2026
SC 1000	987	µS/cm	±5%				Spectrum	2NA0024	Dec-25
DO (Zero pt)	0.00	mg/L	±0.1 mg/L				Macron	#000228049	8/26/2025
Turbidity (DI)	0.00	NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

Approx. every 8 hrs, unless only one well

Comments:

Signature:	JBohannon	Date:	9/1/24

BG1

Multiparameter Meter Field Calibration Checklist

Field Personnel:	Austin Moore	Location:	Duck Creek
Weather:	93°-72° sunny wind 6 mph WSW	Environment:	Grassy

Multiparameter Water Meter	Make: Horiba	Model: U-5000	Serial Number:	3T85NNNF	
Water Level Meter	Make: NT	Model: Heron	Serial Number:	3717-T	

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.08	s.u.	±0.1 s.u.	P	N	N/A	MSI	023219-02	8/9/2025
pH 7.00a	6.94	s.u.	±0.1 s.u.				MSI	023334-01	12/7/2025
pH 10.00a	9.97	s.u.	±0.1 s.u.				MSI	024037-01	2/21/2026
SC Zero (DI)	178	µS/cm	0<25 µS/cm	F	Y	25	Pace Labs	N/A (DI)	N/A (DI)
SC 2000	3750	µS/cm	±5%	F	Y	2000	Proactive	3GJ1438	Oct-24
ORP	228	mV	±15 mV	P	N	N/A	Reagents	8406644	Apr-25
DO (Zero pt)	0.55	mg/L	±0.1	F	Y	0.0	Macron	#000228049	8/26/2025
DO (Saturated)	104.8	%	97-100%	F	Y	98.9	Pace Labs	N/A (DI)	N/A (DI)
Turbidity (DI)	0.4	NTU	<2 NTU	P	N	N/A	Pace Labs	N/A (DI)	N/A (DI)

Approx. every 8 hrs, unless only one well

ICV (Initial Calibration Verification) Time: 0927

Buffer	Check Value	Units	Range	Pass/Fail	Action Taken?	Manufacturer	Lot#	Exp.
pH 4.00b	3.99	s.u.	±0.15 s.u.	P	N	Proactive	3GE1074	May-25
pH 7.00b	6.85	s.u.	±0.15 s.u.	P		Proactive	3GE1252	May-25
pH 10.00b	9.91	s.u.	±0.15 s.u.	P		Geotech	3GA1134	Jan-25
SC 1000	216	µS/cm	±5%	F	Y 1000	Spectrum	2NA0024	Dec-25

Approx. every 8 hrs, unless only one well

CCV (Continued Calibration Verification): Time: 1501

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.05	s.u.	±0.1 s.u.	P	N	N/A	MSI	023219-02	8/9/2025
pH 7.00a	7.01	s.u.	±0.1 s.u.				MSI	023334-01	12/7/2025
pH 10.00a	10.03	s.u.	±0.1 s.u.				MSI	024037-01	2/21/2026
SC 1000	1030	µS/cm	±5%				Spectrum	2NA0024	Dec-25
DO (Zero pt)	0.0	mg/L	±0.1 mg/L				Macron	#000228049	8/26/2025
Turbidity (DI)	0.0	NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

Approx. every 8 hrs, unless only one well

Comments:

Signature: Austin M Date: 8/5/24

Multiparameter Meter Field Calibration Checklist

Field Personnel:	KALEB DESKE	Location:	DUCK CREEK / INDIAN
Weather:	70°C CLOUDY 4 MPH W	Environment:	GRASS
Multiparameter Water Meter	Make: HORIBA OAKTON	Model: U-52	Serial Number: Y5X21HRP
Water Level Meter	Make: HERON	Model: WT	Serial Number: 19FF220213ML

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.29	s.u.	±0.1 s.u.	FAIL	YES	4.00	MSI	023219-02	8/9/2025
pH 7.00a	7.00	s.u.	±0.1 s.u.	PASS	NO	N/A	MSI	023334-01	12/7/2025
pH 10.00a	9.99	s.u.	±0.1 s.u.				MSI	024037-01	2/21/2026
SC Zero (DI)	0.01	µS/cm	0<25 µS/cm				Pace Labs	N/A (DI)	N/A (DI)
SC 2000	1998	µS/cm	±5%				Proactive	3GJ1438	Oct-24
ORP	231	mV	±15 mV				Reagents	8406644	Apr-25
DO (Zero pt)	0.00	mg/L	±0.1				Macron	#000228049	8/26/2025
DO (Saturated)	98	%	97-100%				Pace Labs	N/A (DI)	N/A (DI)
Turbidity (DI)	0.0	NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

Approx. every 8 hrs, unless only one well

ICV (Initial Calibration Verification) Time: 1006

Buffer	Check Value	Units	Range	Pass/Fail	Action Taken?	Manufacturer	Lot#	Exp.
pH 4.00b	4.01	s.u.	±0.15 s.u.	PASS	NO	Proactive	3GE1074	May-25
pH 7.00b	7.03	s.u.	±0.15 s.u.			Proactive	3GE1252	May-25
pH 10.00b	9.97	s.u.	±0.15 s.u.			Geotech	3GA1134	Jan-25
SC 1000	999	µS/cm	±5%			Spectrum	2NA0024	Dec-25

Approx. every 8 hrs, unless only one well

CCV (Continued Calibration Verification): Time: 1020

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.03	s.u.	±0.1 s.u.	PASS	NO	N/A	MSI	023219-02	8/9/2025
pH 7.00a	6.98	s.u.	±0.1 s.u.				MSI	023334-01	12/7/2025
pH 10.00a	10.00	s.u.	±0.1 s.u.				MSI	024037-01	2/21/2026
SC 1000	1012	µS/cm	±5%				Spectrum	2NA0024	Dec-25
DO (Zero pt)	0.0	mg/L	±0.1 mg/L				Macron	#000228049	8/26/2025
Turbidity (DI)	0.0	NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

Approx. every 8 hrs, unless only one well

Comments:

Signature: [signature] Date: 08/13/24

Pace Analytical Services, LLC
2231 W. Altorfer Drive
Peoria, IL 61615
(800)752-6651

December 06, 2024

Daryl Johnson
Vistra - Duck Creek
17751 North Cilco Road
Canton, IL 61520-8761

Dear Daryl Johnson:

Please find enclosed the analytical results for the sample(s) the laboratory received. All testing is performed according to our current TNI accreditations unless otherwise noted. This report cannot be reproduced, except in full, without the written permission of Pace Analytical Services, LLC.

If you have any questions regarding your report, please contact your project manager. Quality and timely data is of the utmost importance to us.

Pace Analytical Services appreciates the opportunity to provide you with analytical expertise. We are always trying to improve our customer service and we welcome you to contact the General Manager, Lisa Grant, with any feedback you have about your experience with our laboratory at 309-683-1764 or lisa.grant@pacelabs.com.

Sincerely,

Diane Billings
Project Manager

Pace Analytical Services, LLC
2231 W. Altorfer Drive
Peoria, IL 61615
(800)752-6651

SAMPLE RECEIPT CHECK LIST

Items not applicable will be marked as in compliance

Work Order HJ04540

YES	Samples received within temperature compliance when applicable
YES	COC present upon sample receipt
YES	COC completed & legible
YES	Sampler name & signature present
YES	Unique sample IDs assigned
YES	Sample collection location recorded
YES	Date & time collected recorded on COC
YES	Relinquished by client signature on COC
YES	COC & labels match
YES	Sample labels are legible
YES	Appropriate bottle(s) received
YES	Sufficient sample volume received
YES	Sample containers received undamaged
NO	Zero headspace, <6 mm present in VOA vials
NO	Trip blank(s) received
YES	All non-field analyses received within holding times
YES	Short hold time analysis
YES	Current PDC COC submitted
NO	Case narrative provided

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Work Order HJ05299

YES	Samples received within temperature compliance when applicable
YES	COC present upon sample receipt
YES	COC completed & legible
YES	Sampler name & signature present
YES	Unique sample IDs assigned
YES	Sample collection location recorded
YES	Date & time collected recorded on COC
YES	Relinquished by client signature on COC
YES	COC & labels match
YES	Sample labels are legible
YES	Appropriate bottle(s) received
YES	Sufficient sample volume received
YES	Sample containers received undamaged
NO	Zero headspace, <6 mm present in VOA vials
NO	Trip blank(s) received
YES	All non-field analyses received within holding times
NO	Short hold time analysis
YES	Current PDC COC submitted
YES	Case narrative provided

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Case Narrative

G04L, G07L, G08L, G09L, G14L, G15L, BA02L, BA03L, G50L, G51L and G72L were dry. Wells were checked several times in an effort to get samples. Due to limited volumes at G02L, OM17, G06L, ORO2, P36L and P60, the wells were sampled over several days so results are in multiple work orders. We are not able to provide DTW at X301 due to no access point.

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Peoria, IL 61615
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ANALYTICAL RESULTS

Sample: HJ04540-02
Name: G06S
Matrix: Ground Water - Grab

Sampled: 10/23/24 12:30
Received: 10/23/24 16:18
PO #: 2438773/2438768

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Anions - PIA									
Sulfate	140	mg/L		10/30/24 16:20	50	50	10/30/24 16:20	JSM	EPA 300.0 REV 2.1
Field - PIA									
Depth, From Measuring Point	23.48	Feet		10/23/24 12:30	1		10/23/24 12:30	FIELD	Field*
Dissolved oxygen, Field	1.8	mg/L		10/23/24 12:30	1		10/23/24 12:30	FIELD	Field*
Oxidation Reduction Potential	75.0	mV		10/23/24 12:30	1	-500	10/23/24 12:30	FIELD	Field*
pH, Field Measured	6.93	pH Units		10/23/24 12:30	1		10/23/24 12:30	FIELD	Field*
Specific Conductance, Field Measured	869.0	umhos/cm		10/23/24 12:30	1		10/23/24 12:30	FIELD	Field*
Temperature, Field Measured	13.4	°C		10/23/24 12:30	1		10/23/24 12:30	FIELD	Field*
Turbidity, Field Measured	38.7	NTU		10/23/24 12:30	1	0.00	10/23/24 12:30	FIELD	Field*

Sample: HJ05299-03
Name: G12S
Matrix: Ground Water - Grab

Sampled: 10/16/24 12:18
Received: 10/29/24 16:12
PO #: 2438773/2438768

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Field - PIA									
Depth, From Measuring Point	24.35	Feet		10/16/24 12:02	1		10/16/24 12:02	FIELD	Field*
Dissolved oxygen, Field	2.3	mg/L		10/16/24 12:02	1		10/16/24 12:02	FIELD	Field*
Oxidation Reduction Potential	-140	mV		10/16/24 12:02	1	-500	10/16/24 12:02	FIELD	Field*
pH, Field Measured	7.35	pH Units		10/16/24 12:02	1		10/16/24 12:02	FIELD	Field*
Specific Conductance, Field Measured	673.0	umhos/cm		10/16/24 12:02	1		10/16/24 12:02	FIELD	Field*
Temperature, Field Measured	13.9	°C		10/16/24 12:02	1		10/16/24 12:02	FIELD	Field*
Turbidity, Field Measured	23.0	NTU		10/16/24 12:02	1	0.00	10/16/24 12:02	FIELD	Field*

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Peoria, IL 61615
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QC SAMPLE RESULTS

Parameter	Result	Unit	Qual	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B447311 - IC No Prep - EPA 300.0 REV 2.1									
Calibration Blank (B447311-CCB1)				Prepared & Analyzed: 10/30/24					
Sulfate	0.00	mg/L							
Calibration Check (B447311-CCV1)				Prepared & Analyzed: 10/30/24					
Sulfate	4.89	mg/L		5.000		98	90-110		
Matrix Spike (B447311-MS1)	**Sample: HJ04540-08**			Prepared & Analyzed: 10/30/24					
Sulfate	1.00E9	mg/L	Q4	1.500	13.3	NR	80-120		
Matrix Spike (B447311-MS2)	**Sample: HJ04540-09**			Prepared & Analyzed: 10/30/24					
Sulfate	1.00E9	mg/L	Q4	1.500	12.5	NR	80-120		
Matrix Spike (B447311-MS3)	**Sample: HJ04540-10**			Prepared & Analyzed: 10/30/24					
Sulfate	1.00E9	mg/L	Q4	1.500	137	NR	80-120		
Matrix Spike Dup (B447311-MSD1)	**Sample: HJ04540-08**			Prepared & Analyzed: 10/30/24					
Sulfate	1.00E9	mg/L	Q4	1.500	13.3	NR	80-120	0	20
Matrix Spike Dup (B447311-MSD2)	**Sample: HJ04540-09**			Prepared & Analyzed: 10/30/24					
Sulfate	1.00E9	mg/L	Q4	1.500	12.5	NR	80-120	0	20
Matrix Spike Dup (B447311-MSD3)	**Sample: HJ04540-10**			Prepared & Analyzed: 10/31/24					
Sulfate	1.00E9	mg/L	Q4	1.500	137	NR	80-120	0	20

Pace Analytical Services, LLC
2231 W. Altorfer Drive
Peoria, IL 61615
(800)752-6651

NOTES

Specifications regarding method revisions and method modifications used for analysis are available upon request. Please contact your project manager.

* Not a TNI accredited analyte

Certifications

CHI - McHenry, IL - 4314-A W. Crystal Lake Road, McHenry, IL 60050
TNI Accreditation for Drinking Water and Wastewater Fields of Testing through IL EPA Accreditation No. 100279
Illinois Department of Public Health Bacterial Analysis in Drinking Water Approved Laboratory Registry No. 17556

PIA - Peoria, IL - 2231 W. Altorfer Drive, Peoria, IL 61615
TNI Accreditation for Drinking Water, Wastewater, Solid and Hazardous Material Fields of Testing through IL EPA Accreditation No. 100230
Illinois Department of Public Health Bacterial Analysis in Drinking Water Approved Laboratory Registry No. 17553
Drinking Water Certifications/Accreditations: Iowa (240); Kansas (E-10338); Missouri (870)
Wastewater Certifications/Accreditations: Arkansas (88-0677); Iowa (240); Kansas (E-10338)
Solid and Hazardous Material Certifications/Accreditations: Arkansas (88-0677); Iowa (240); Kansas (E-10338)

SPMO - Springfield, MO - 1805 W Sunset Street, Springfield, MO 65807
USEPA DMR-QA Program

STL - Hazelwood, MO - 944 Anglum Rd, Hazelwood, MO 63042
TNI Accreditation for Wastewater, Solid and Hazardous Material Fields of Testing through KS KDHE Certification No. E-10389
TNI Accreditation for Wastewater, Solid and Hazardous Material Fields of Testing through IL EPA Accreditation No. - 200080
Illinois Department of Public Health Bacterial Analysis in Drinking Water Approved Laboratory, Registry No. 171050
Missouri Department of Natural Resources - Certificate of Approval for Microbiological Laboratory Service - No. 1050

Qualifiers

Q4 The matrix spike recovery result is unusable since the analyte concentration in the sample is greater than four times the spike level. The associated blank spike was acceptable.

Certified by: Diane Billings, Project Manager

HJ04540

CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: 1 of 10

Section A Required Client Information:

Company:	Vistra Corp-Duck Creek
Address:	17751 North Cilco Rd
	Canton, IL 61520
Email To:	Brian.Voelker@VistraCorp.com
Phone: (217) 753-8911	Fax:
Requested Due Date/TAT:	10 day

Section B Required Project Information:

Report To:	Brian Voelker
Copy To:	Sam Davies: samantha.davies@vistracorp.com
	Daryl Johnson: Robert.Johnson@vistracorp.com
Purchase Order No.:	
Project Name:	
Project Number:	

Section C Invoice Information:

Attention:	Brian Voelker
Company Name:	Vistra Corp
Address:	see Section A
Quote Reference:	
Project Manager:	
Profile #:	

REGULATORY AGENCY

NPDES GROUND WATER DRINKING WATER
UST RCRA OTHER

Site Location STATE: IL

Section D Required Client Information

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Valid Matrix Codes: DRINKING WATER DW; WATER WT; WASTE WATER WW; PRODUCT P; SOIL/SOLID SL; OIL OL; WIPE WP; AIR AR; OTHER OT; TISSUE TS

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED DATE	COLLECTED TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	DC-257-203	DC-257-204	DC-257-205	DC-811-204	DC-845-201-202	DC-845-203	DC-845-205	DC-CLOSURE-201-202	DC-HCR-201-202	DC-SUP-000	DC-WPCP-203-206		Residual Chlorine (Y/N)	Project No./ Lab I.D.
1	G16L	GW	G	10/23/24	1339		5	X	X	X		X																	
2	G060				1230		1	X																					
3	G025				1120		4	X		X																			
4	OR11				1348		5	X		X																			
5	OR20				1508		3	X		X																			
6	OR20 DUP				1508		5	X		X																			
7	P60				0939		2	X																					
8	BA03				1345		4	X		X																			
9	BA02				1235		4	X		X																			
10	BA01				1135		4	X		X																			
11	BA01 DUP				1135		4	X		X																			
12	BA06				1459		4	X		X																			
13	RB1L			✓ 1152 +30 10/23/24			4	X		X																			
14																													
15																													
16																													

IR Gun # 16 Correction Factor (Deg C) +0.1

Observed Temp (Deg C) 3.0 Corrected Temp (Deg C) 3.1

Delivery Method: FedEx UPS Walk-in USPS Other

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS: Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
DC-24Q4 Rev 0		10/23/24	1618					Y	N	Y
					10/23/24	1618				

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: HALEY DESKE

SIGNATURE of SAMPLER:

DATE Signed (MM/DD/YY): 10/23/24

HJ082914

CHAIN-OF-CUSTODY / Analytical Request Document

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

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	Vistra Corp-Duck Creek	Report To:	Brian Voelker	Attention:	Brian Voelker
Address:	17751 North Cilco Rd	Copy To:	Sam Davies: samantha.davies@vistracorp.com	Company Name:	Vistra Corp
	Canton, IL 61520		Daryl Johnson: Robert.Johnson@vistracorp.com	Address:	see Section A
Email To:	Brian.Voelker@VistraCorp.com	Purchase Order No.:		Quote Reference:	
Phone:	(217) 753-8911 Fax:	Project Name:		Project Manager:	
Requested Due Date/TAT:	10 day	Project Number:		Profile #:	

REGULATORY AGENCY

NPDES | **GROUND WATER** | DRINKING WATER

UST | RCRA | OTHER

Site Location STATE: IL

Section D Required Client Information

Valid Matrix Codes

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

SAMPLE ID
(A-Z, 0-9 / ,-)
Sample IDs MUST BE UNIQUE

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED DATE	COLLECTED TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	DC-257-203	DC-257-204	DC-257-205	DC-811-204	DC-845-201-202	DC-845-203	DC-845-205	DC-CLOSURE-201-202	DC-HCR-201-202	DC-SUP-000	DC-WPCP-203-206		Residual Chlorine (Y/N)	Project No./ Lab I.D.
1	GW6L	GW	G	29-Oct-24	1142		1	X																					
2	RZ5	GW	G	29-Oct-24	1035		3	X		X																			
3																													
4																													
5																													
6																													
7																													
8																													
9																													
10																													
11																													
12																													
13																													
14																													
15																													
16																													

IR Gun # 15 Correction Factor (Deg C) 0.0

Observed Temp (Deg C) 2.1 Corrected Temp (Deg C) 2.1

Delivery Method: FedEx UPS Walk-in USPS Other

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
DC-24Q4 Rev 0	JBohnson	10/29/24	1612							
					10/29/24	1612	2.1	Y	N	Y
							Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Austin Moore

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 10/29/24

APPENDIX A.
ANNUAL GRONUDWATER MONITORING AND CORRECTIVE ACTION REPORT
DUCK CREEK, LANDFILL
DC-257-204

SAR-3: Plant Sampling and Analysis Request

Event: DC-24Q4

Date Generated: 09/16/2024

All episodic water levels on SAR-3 and SAR-4 must be collected within a 24 hour period.

Well	Unique ID	Date	Time	Measured Depth to Water (ft bmp)	Comments	Initials
BA01C	DC_BA01!C	10/14/24	1250	16.47		ABP
BA01L	DC_BA01!L	10/14/24	1248	17.24		ABP
G02BS	DC_G02*BS	10/14/24	1444	18.21		JD
G02D	DC_G02&D	10/14/24	1445	24.54		JD
G02L	DC_G02!L	10/14/24	1447	16.47		JD
G03L	DC_G03!L	10/14/24	1451	14.06		JD
G03S	DC_G03#S	10/14/24	1452	13.71		JD
G04L	DC_G04!L	10/14/24	1443	16.70		JB
G04S	DC_G04#S	10/14/24	1445	20.80		JB
G06L	DC_G06!L	10/14/24	0936	22.96		JB
G06S	DC_G06#S	10/14/24	0931	23.34	Was not locked	JB
G07L	DC_G07!L	10/14/24	0923	22.14		JB
G08L	DC_G08!L	10/14/24	0944	21.63		JB
G09L	DC_G09!L	10/14/24	0955	21.97		JB
G09S	DC_G09#S	10/14/24	0958	21.98		JB
G12L	DC_G12!L	10/14/24	1050	22.51		JB
G12S	DC_G12#S	10/14/24	1056	24.23		JB
G14L	DC_G14!L	10/14/24	1038	25.89		JB
G15L	DC_G15!L	10/14/24	1228	32.80		JB
G15S	DC_G15#S	10/14/24	1229	33.15		JB
G16L	DC_G16!L	10/14/24	1240	31.20		JB
G50L	DC_G50!L	10/14/24	1535	Dry		KMD
G51L	DC_G51!L	10/14/24	1417	19.40		KMD
G52L	DC_G52!L	10/14/24	1430	27.20		KMD
G52S	DC_G52#S	10/14/24	1428	31.58		KMD
G53L	DC_G53!L	10/14/24	1330	16.75		KMD
G53S	DC_G53#S	10/14/24	1329	18.24		KMD
G54C	DC_G54!C	10/14/24	1515	36.78		KMD
G55L	DC_G55!L	10/14/24	1505	22.30		KMD
G55S	DC_G55#S	10/14/24	1504	22.24		KMD
G56L	DC_G56!L	10/14/24	1253	21.82		KMD
G56S	DC_G56#S	10/14/24	1252	22.44		KMD
G57L	DC_G57!L	10/14/24	1246	24.32		KMD
G58L	DC_G58!L	10/14/24	1237	27.65		KMD
G58S	DC_G58#S	10/14/24	1236	27.80		KMD
G59L	DC_G59!L	10/14/24	1218	26.73		KMD
G59S	DC_G59#S	10/14/24	1216	34.20		KMD
G61S	DC_G61#S	10/14/24	1204	23.64		KMD
G62L	DC_G62!L	10/14/24	1136	23.65		KMD

SAR-3: Plant Sampling and Analysis Request

Event: DC-24Q4

Date Generated: 09/16/2024

All episodic water levels on SAR-3 and SAR-4 must be collected within a 24 hour period.

Well	Unique ID	Date	Time	Measured Depth to Water (ft bmp)	Comments	Initials
G63L	DC_G63!L	10/14/24	1129	24.64		
G63S	DC_G63#S	10/14/24	1132	25.60		
G65L	DC_G65!L	10/14/24	1102	20.92		
G65S	DC_G65#S	10/14/24	1101	21.22		
G66L	DC_G66!L	10/14/24	1046	19.55		
G66S	DC_G66#S	10/14/24	1045	20.12		
G67L	DC_G67!L	10/14/24	1052	16.74		
G67S	DC_G67#S	10/14/24	1053	17.64		
G68L	DC_G68!L	10/14/24	1447	15.58		
G68S	DC_G68#S	10/14/24	1446	16.68		
G69L	DC_G69!L	10/14/24	1437	17.87		
G69S	DC_G69#S	10/14/24	1440	20.66		
G70L	DC_G70!L	10/14/24	1015	21.38		
G71L	DC_G71!L	10/14/24	1020	26.80		
G71S	DC_G71#S	10/14/24	1018	27.44		
G72L	DC_G72!L	10/14/24	1030	26.49		
G73L	DC_G73!L	10/14/24	1514	27.79		JD
L103	DC_L103	10/14/24	1519	2.16		
OM05S	DC_OM05#S	10/14/24	1341	21.93		
OM08	DC_OM08	10/14/24	1254	13.88		JD
OM09	DC_OM09	10/14/24	1056	4.56		JD
OM10	DC_OM10	10/14/24	1208	14.35		JD
OM100D	DC_OM100&D	10/14/24	1146	14.15		JD
OM100S	DC_OM100#S	10/14/24	1145	14.33		JD
OM101D	DC_OM101&D	10/14/24	1014	19.23		
OM101S	DC_OM101#S	10/14/24	1013	18.59		
OM12D	DC_OM12&D	10/14/24	1248	18.00		JD
OM15	DC_OM15	10/14/24	1139	22.63		JD
OM15D	DC_OM15&D	10/14/24	1138	25.71		JD
OM17D	DC_OM17&D	10/14/24	1202	17.25		JD
OM22S	DC_OM22#S	10/14/24	1048	20.14		JD
OM23S	DC_OM23#S	10/14/24	1031	42.76		JD
OM25D	DC_OM25&D	10/14/24	1021	58.62		JD
OM26	DC_OM26	10/14/24	1113	32.40		JD
OM27	DC_OM27	10/14/24	1107	33.57		JD
OM28	DC_OM28	10/14/24	1103	47.98		JD
OR03S	DC_OR03#S	10/14/24	1320	45.89		JD
OR05D	DC_OR05&D	10/14/24	1339	23.10		
OR14S	DC_OR14#S	10/14/24	1343	8.56		JD

SAR-3: Plant Sampling and Analysis Request

Event: DC-24Q4

Date Generated: 09/16/2024

All episodic water levels on SAR-3 and SAR-4 must be collected within a 24 hour period.

Well	Unique ID	Date	Time	Measured Depth to Water (ft bmp)	Comments	Initials
OR18	DC_OR18	10/14/24	1130	19.39		JD
P01I	DC_P01$I	10/14/24	1520	16.41		JB
P01L	DC_P01!L	10/14/24	1524	17.09		JB
P01S	DC_P01#S	10/14/24	1522	16.74		JB
P02S	DC_P02#S	10/14/24	1444	18.21	same as 602BS	JD
P04S	DC_P04#S	10/14/24	1445	20.80	Same as 604S	JB
P05D	DC_P05&D	10/14/24	1430	7.63		JB
P05L	DC_P05!L	10/14/24	1432	7.45		JB
P05S	DC_P05#S	10/14/24	1428	7.35		JB
P36D	DC_P36&D	10/14/24	1207	12.79		JB
P36L	DC_P36!L	10/14/24	1206	12.45		JB
P36S	DC_P36#S	10/14/24	1204	12.57		JB
P37D	DC_P37&D	10/14/24	1108	16.71		JB
P37L	DC_P37!L	10/14/24	1115	Dry	Top of pump	JB
P38L	DC_P38!L	10/14/24	1215	19.44		JB
P38S	DC_P38#S	10/14/24	1217	19.64		JB
P39D	DC_P39&D	10/14/24	1339	14.85		JB
P39L	DC_P39!L	10/14/24	1341	9.73		JB
P39S	DC_P39#S	10/14/24	1338	9.95		JB
P40L	DC_P40!L	10/14/24	1405	17.14		JB
P40S	DC_P40#S	10/14/24	1403	16.30		JB
P41D	DC_P41&D	10/14/24	1454	35.68		APP
P41I1	DC_P41$I1	10/14/24	1453	13.58		APP
P41I2	DC_P41%I2	10/14/24	1451	35.90		APP
P41L	DC_P41!L	10/14/24	1457	11.67		APP
P41S	DC_P41#S	10/14/24	1456	13.29		APP
P42D	DC_P42&D	10/14/24	1457	24.14		
P42I1	DC_P42$I1	10/14/24	1459	11.56		
P42I2	DC_P42%I2	10/14/24	1458	33.42		
P42L	DC_P42!L	10/14/24	1501	10.65		
P42S	DC_P42#S	10/14/24	1500	11.14		
P52	DC_P52	10/14/24	1519	17.81		JD
P57L	DC_P57!L	10/14/24	1420	18.71		JD
P57S	DC_P57#S	10/14/24	1418	18.39		JD
P60	DC_P60	10/14/24	1809	25.00		
P61	DC_P61	10/14/24	1347	16.74		
P62	DC_P62	10/14/24	1119	14.62		
P63	DC_P63	10/14/24	1124	15.85		
P64	DC_P64	10/14/24	1355	17.60		

SAR-3: Plant Sampling and Analysis Request

Event: DC-24Q4

Date Generated: 09/16/2024

All episodic water levels on SAR-3 and SAR-4 must be collected within a 24 hour period.

Well	Unique ID	Date	Time	Measured Depth to Water (ft bmp)	Comments	Initials
R10L	DC_R10!L	10/14/24	1005	23.02	Not marked	JB
R11L	DC_R11!L	10/14/24	1009	22.24		JB
R13L	DC_R13!L	10/14/24	1022	23.17		JB
R61L	DC_R61!L	10/14/24	1202	22.97		KMD
R72S	DC_R72#S	10/14/24	1027	26.66		JD
T43L	DC_T43!L	10/14/24	1127	8.09		JB
T44L	DC_T44!L	10/14/24	1132	12.24		JB
T45L	DC_T45!L	10/14/24	1152	11.23		JB
T46L	DC_T46!L	10/14/24	1158	8.36		JB
X301	DC_X301_leachate	10/14/24	1530	NS		APP

SAR-4: Plant Sampling and Analysis Request
Event: DC-24Q4
Date Generated: 09/16/2024
All episodic water levels on SAR-3 and SAR-4 must be collected within a 24 hour period.

Well	Unique ID	Date	Time	Measured Depth to Water (ft bmp)	Serial Number	Does Data Logger Serial No Match?	WL Reading on Transducer (ft)	Data downloaded?	Batt (H/M/L/R)	Comments	Initials
BA01	DC_BA01	10/14/24	1245	17.05	21615533	yes	570.4207	yes	M		APP
BA02	DC_BA02	10/14/24	1301	12.66	21615636	yes	567.5209	yes	H		APP
BA02L	DC_BA02!L	10/14/24	1257	12.42	21615682	yes	567.6332	yes	H		APP
BA03	DC_BA03	10/14/24	1056	12.50	21615637	yes	566.1495	yes	M		APP
BA03L	DC_BA03!L	10/14/24	1211	7.55	21615687	yes	0.0017	NO	R	replaced Batteries no data to download	APP
BA04	DC_BA04	10/14/24	1040	8.33	21615631	yes	570.0896	yes	M		APP
BA05	DC_BA05#	10/14/24	1237	22.42	21615540	yes	573.5125	yes	M		APP
BA06	DC_BA06	10/14/24	1229	23.95	21615525	yes	572.0574	yes	M		APP
G02S	DC_G02#S	10/14/24	1442	14.06	21615554	yes	607.8053	yes	H		JD
G50S	DC_G50#S	10/14/24	1533	18.89	21615535	yes	604.8652	yes	H		KMD
G51S	DC_G51#S	10/14/24	1419	18.83	21615691	yes	598.6650	yes	H		KMD
G54L	DC_G54!L	10/14/24	1003	25.54	21615690	yes	598.1588	yes	H		KMD
G54S	DC_G54#S	10/14/24	1002	24.72	21615684	yes	597.5105	yes	H		KMD
G57S	DC_G57#S	10/14/24	1245	24.02	21615683	yes	598.5564	yes	H		KMD
G60L	DC_G60!L	10/14/24	1308	17.72	21615678	yes	596.5620	yes	H		KMD
G60S	DC_G60#S	10/14/24	1306	25.54	21615677	yes	584.3562	yes	H		KMD
G64L	DC_G64!L	10/14/24	1320	23.86	21615688	yes	598.4718	yes	H		KMD
G64S	DC_G64#S	10/14/24	1322	25.06	21615632	yes	598.0279	yes	M		KMD
OM01	DC_OM01	10/14/24	1307	12.38	21615685	yes	582.8997	yes	H		JD
OM04S	DC_OM04#S	10/14/24	1329	20.70	21615542	yes	586.5418	yes	M		JD
OM07	DC_OM07	10/14/24	1309	12.43	21921676	yes	584.3670	yes	H		APP
OM12	DC_OM12	10/14/24	1359	17.07	21926670	yes	578.6861	yes	H		JD
OM16	DC_OM16	10/14/24	1155	27.62	21615539	yes	581.4107	yes	H		JD
OM17	DC_OM17	10/14/24	1201	14.89	21615693	yes	576.9035	yes	L		JD
OM21	DC_OM21	10/14/24	1335	12.13	21615593	yes	594.2720	yes	H		JD
OM22D	DC_OM22&D	10/14/24	1046	19.88	21615592	yes	579.2247	yes	H		JD
OM23D	DC_OM23&D	10/14/24	1029	38.79	21615591	yes	574.5273	yes	H		JD
OM24D	DC_OM24&D	10/14/24	1011	5.83	21615522	yes	571.1287	yes	H		JD
OM25S	DC_OM25#S	10/14/24	1018	58.63	21615681	yes	570.5934	yes	H		JD

SAR-4: Plant Sampling and Analysis Request
Event: DC-24Q4
Date Generated: 09/16/2024
All episodic water levels on SAR-3 and SAR-4 must be collected within a 24 hour period.

Well	Unique ID	Date	Time	Measured Depth to Water (ft bmp)	Serial Number	Does Data Logger Serial No Match?	WL Reading on Transducer (ft)	Data downloaded?	Batt (H/M/L/R)	Comments	Initials
OR02	DC_OR02	10/14/24	1313	8.24	21615679	yes	593.0969	yes	H		JD
OR03D	DC_OR03&D	10/14/24	1318	45.37	21615577	yes	582.5450	yes	H		JD
OR04D	DC_OR04&D	10/14/24	1328	21.84	21615570	yes	585.8407	yes	H		JD
OR06A	DC_OR06!A	10/14/24	1314	15.09	21615692	yes	580.3470	yes	M		AF
OR11	DC_OR11	10/14/24	1232	32.20	21615686	yes	564.1113	yes	M		JD
OR13D	DC_OR13&D	10/14/24	1414	14.60	21564135	yes	587.9433	yes	M		AF
OR13S	DC_OR13#S	10/14/24	1412	14.72	21615676	yes	587.8021	yes	H		AF
OR14D	DC_OR14&D	10/14/24	1340	11.98	21615611	yes	587.1992	yes	H		JD
OR19	DC_OR19	10/14/24	1244	23.98	21615634	yes	574.8343	yes	H		JD
OR20	DC_OR20	10/14/24	1226	22.36	21615610	yes	595.2091	yes	H		JD
RG01	DC_RG01	10/14/24	0930	∞	21628685	yes	–	yes	–		AF

APPENDIX A.
ANNUAL GRONUDWATER MONITORING AND CORRECTIVE ACTION REPORT
DUCK CREEK, LANDFILL
DC-257-204

Duck Creek

WELL/SAMPLE POINT G06S **Purge Method:** Compressor

Last Quarter: Dedicated Bladder

Date: 10/23/24 Start Time: 1212 Finish/Sample Time: 1230

Well Depth (Bottom) From MP:	44.69 ft	Min. Purge Volume:	1000 mL
Depth to Water From MP:	23.48 ft	Total Purge Volume:	1500 mL
Water Column Length:	21.21 ft		
Well Water Volume:	12.85 L	Total Drawdown:	0.00 ft

Reading	Time	Depth	Flow Rate	pH	Spec Cond	Temp	ORP	DO	Turb
(Units)		ft.	mL/min	s.u.	umhos/cm	deg C	mV	mg/L	NTU
1	1221	23.48	250	6.48	861	13.41	65	1.84	64.8
2	1223	23.48	250	6.45	865	13.42	70	1.87	63.2
3	1225	23.48	250	6.43	869	13.43	75	1.82	38.7
4									
5									
Stabilization	NA	NA	NA	± 0.2	± 3%	± 0.2	± 20	± 10% or 0.2	NA

Field Meter: Horiba

Sample Appearance:

Odor: ■ None ☐ Slight ☐ Mod. ☐ Strong

Color ■ None ☐ Slight ☐ Mod. ☐ Strong

Turb: ☐ None ■ Slight ☐ Mod ☐ Strong

Well Integrity	Yes	No
Well has ID sign	X	
Casing locked/secure	X	
Well cap fits securely.	X	
Good seal/drainage	X	
Well has weep holes	X	

BOTTLE INFORMATION:

Unfiltered	
Qty	Bottles
	VOAs (C,V, 40mL, HCL)
	VOAS (C,V, 40mL)
	Organics (A,G,U 1000mL)
	Organics (A,G,U 500mL)
	TOC (A,V 40mL, H2SO4)
	TOX (A,G 250mL, H2SO4)
	Metals (P,250mL, HNO3)
	Cyanide (P, 250mL, NaOH)
	Ammonia (P,250mL, H2S04)
1	General (P,500mL)
	General (P,1000mL)
	Rad (P, 2.5L, HNO3)

1

Filtered	
Qty	Bottles
	Metals (P,250mL, HNO3)
	Ammonia (P,250mL, H2S04)
	General (P,500mL)
	General (P,1000mL)
	TOC (A,V 40mL, H2SO4)

Final DTW: 23.48 ft

Comments **Check pH if readings are below 6.5 or above 7.2**

Sampler's Signature: JBohannon

Duck Creek

WELL/SAMPLE POINT G12S **Purge Method:** DeSiccated Bladder

Last Quarter: Dedicated Bladder

Date: 10/16/2024 Start Time: 1202 Finish/Sample Time: 1218

Well Depth (Bottom) From MP: _____ ft Min. Purge Volume: 1000 mL

Depth to Water From MP: 24.35 ft Total Purge Volume: 1600 mL

Water Column Length: _____ ft

Well Water Volume: _____ L Total Drawdown: 0.98 ft

Reading	Time	Depth	Flow Rate	pH	Spec Cond	Temp	ORP	DO	Turb
(Units)		ft.	mL/min	s.u.	umhos/cm	deg C	mV	mg/L	NTU
1	1212	25.33	200	7.33	675	13.94	-133	2.38	32.3
2	1214	25.33	200	7.34	675	13.91	-137	2.37	25.3
3	1216	25.33	200	7.35	673	13.91	-140	2.29	23.0
4									
5									
Stabilization	NA	NA	NA	± 0.2	± 3%	± 0.2	± 20	± 10% or 0.2	NA

Field Meter: Horiba / Aquatroll

Sample Appearance:

Odor: ☒ None ☐ Slight ☐ Mod. ☐ Strong

Color ☐ None ☑ Slight ☐ Mod. ☐ Strong

Turb: ☐ None ☑ Slight ☐ Mod ☐ Strong

Well Integrity	Yes	No
Well has ID sign	✓	
Casing locked/secure	✓	
Well cap fits securely.	✓	
Good seal/drainage	✓	
Well has weep holes	✓	

BOTTLE INFORMATION:

Unfiltered	
Qty	Bottles
	VOAs (C,V, 40mL, HCL)
	VOAS (C,V, 40mL)
	Organics (A,G,U 1000mL)
	Organics (A,G,U 500mL)
	TOC (A,V 40mL, H2SO4)
	TOX (A,G 250mL, H2SO4)
	Metals (P,250mL, HNO3)
	Cyanide (P, 250mL, NaOH)
	Ammonia (P,250mL, H2S04)
	General (P,500mL)
	General (P,1000mL)
	Rad (P, 2.5L, HNO3)

Filtered	
Qty	Bottles
	Metals (P,250mL, HNO3)
	Ammonia (P,250mL, H2S04)
	General (P,500mL)
	General (P,1000mL)
	TOC (A,V 40mL, H2SO4)

Final DTW: 25.33 ft

Comments **Check pH if readings are above 7.2** Field Reads Only

pH Checked With Aquatroll, read 7.55

Sampler's Signature: _____

Multiparameter Meter Field Calibration Checklist

Field Personnel:	Austin Moore	Location:	Duck creek
Weather:	57°-37° mostly sunny wind 13mph N	Environment:	Grassy
Multiparameter Water Meter	Make: Horiba	Model: U-5000	Serial Number: 3T85NNNF
Water Level Meter	Make: WT	Model: Heron	Serial Number: 19F-F220213ML

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	3.51	s.u.	±0.1 s.u.	F	Y	4.00	MSI	023219-02	8/9/2025
pH 7.00a	6.82	s.u.	±0.1 s.u.	F	Y	7.00	MSI	023334-01	12/7/2025
pH 10.00a	10.18	s.u.	±0.1 s.u.	F	Y	10.00	MSI	024037-01	2/21/2026
SC Zero (DI)	353	µS/cm	0<25 µS/cm	F	Y	21	Pace Labs	N/A (DI)	N/A (DI)
SC 2000	2000	µS/cm	±5%	P	N	—	Proactive	3GJ1438	Oct-24
ORP	240	mV	±15 mV	P	N	—	Reagents	8406644	Apr-25
DO (Zero pt)	0.0	mg/L	±0.1	P	N	—	Macron	#000228049	8/26/2025
DO (Saturated)	98.3	%	97-100%	P	N	—	Pace Labs	N/A (DI)	N/A (DI)
Turbidity (DI)	1.3	NTU	<2 NTU	P	N	—	Pace Labs	N/A (DI)	N/A (DI)

Approx. every 8 hrs, unless only one well

ICV (Initial Calibration Verification) Time: 0917

Buffer	Check Value	Units	Range	Pass/Fail	Action Taken?	Manufacturer	Lot#	Exp.
pH 4.00b	3.88	s.u.	±0.15 s.u.	P	N	Proactive	3GE1074	May-25
pH 7.00b	6.94	s.u.	±0.15 s.u.	P	N	Proactive	3GE1252	May-25
pH 10.00b	9.94	s.u.	±0.15 s.u.	P	N	Geotech	3GA1134	Jan-25
SC 1000	960	µS/cm	±5%	P	N	Spectrum	2NA0024	Dec-25

Approx. every 8 hrs, unless only one well

CCV (Continued Calibration Verification): Time: 1541

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	3.97	s.u.	±0.1 s.u.	P	N	—	MSI	023219-02	8/9/2025
pH 7.00a	6.99	s.u.	±0.1 s.u.	↓	↓	—	MSI	023334-01	12/7/2025
pH 10.00a	10.03	s.u.	±0.1 s.u.	↓	↓	—	MSI	024037-01	2/21/2026
SC 1000	970	µS/cm	±5%	↓	↓	—	Spectrum	2NA0024	Dec-25
DO (Zero pt)	0.0	mg/L	±0.1 mg/L	↓	↓	—	Macron	#000228049	8/26/2025
Turbidity (DI)	0.0	NTU	<2 NTU	↓	↓	—	Pace Labs	N/A (DI)	N/A (DI)

Approx. every 8 hrs, unless only one well

Comments:

Signature: Austin Moore Date: 15-Oct-24

Multiparameter Meter Field Calibration Checklist

Field Personnel:	JD	Location:	Duck Creek
Weather:	40-56°F Steady wind NW 14-25 mph	Environment:	grass, woods
Multiparameter Water Meter	Make: Aquatroll	Model: 600	Serial Number: 762215
Water Level Meter	Make: Heron	Model: Dipper-T	Serial Number: 11FF220930SML

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.04	s.u.	±0.1 s.u.	P	N	NA	MSI	023219-02	8/9/2025
pH 7.00a	7.05	s.u.	±0.1 s.u.				MSI	023334-01	12/7/2025
pH 10.00a	10.01	s.u.	±0.1 s.u.				MSI	024037-01	2/21/2026
SC Zero (DI)	6.19	µS/cm	0<25 µS/cm				Pace Labs	N/A (DI)	N/A (DI)
SC 2000	2011.0	µS/cm	±5%				Proactive	3GJ1438	Oct-24
ORP	250.2	mV	±15 mV				Reagents	8406644	Apr-25
DO (Zero pt)	0.08	mg/L	±0.1				Macron	#000228049	8/26/2025
DO (Saturated)	97.21	%	97-100%				Pace Labs	N/A (DI)	N/A (DI)
Turbidity (DI)	0.06	NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

Approx. every 8 hrs, unless only one well

ICV (Initial Calibration Verification) Time: 0924

Buffer	Check Value	Units	Range	Pass/Fail	Action Taken?	Manufacturer	Lot#	Exp.
pH 4.00b	4.08	s.u.	±0.15 s.u.	P	NA	Proactive	3GE1074	May-25
pH 7.00b	6.90	s.u.	±0.15 s.u.			Proactive	3GE1252	May-25
pH 10.00b	10.08	s.u.	±0.15 s.u.			Geotech	3GA1134	Jan-25
SC 1000	1037.8	µS/cm	±5%			Spectrum	2NA0024	Dec-25

Approx. every 8 hrs, unless only one well

CCV (Continued Calibration Verification): Time: 1553

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.06	s.u.	±0.1 s.u.	P	No	NA	MSI	023219-02	8/9/2025
pH 7.00a	7.08	s.u.	±0.1 s.u.				MSI	023334-01	12/7/2025
pH 10.00a	10.03	s.u.	±0.1 s.u.				MSI	024037-01	2/21/2026
SC 1000	1042.8	µS/cm	±5%				Spectrum	2NA0024	Dec-25
DO (Zero pt)	0.07	mg/L	±0.1 mg/L				Macron	#000228049	8/26/2025
Turbidity (DI)	0.00	NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

Approx. every 8 hrs, unless only one well

Comments:

Signature: [signature] Date: 10/15/24

Multiparameter Meter Field Calibration Checklist

Field Personnel:	KALEB DESKE	Location:	DUCK CREEK
Weather:	42° SUNNY 12mph N	Environment:	GRASSY

Multiparameter Water Meter	Make: HORIBA	Model: U-5000	Serial Number:	AGJTK4XG	
Water Level Meter	Make: SOLINST	Model: WT	Serial Number:	33459	

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	5.78	s.u.	±0.1 s.u.	FAIL	YES	4.00	MSI	023219-02	8/9/2025
pH 7.00a	7.00	s.u.	±0.1 s.u.	PASS	NO	NA	MSI	023334-01	12/7/2025
pH 10.00a	9.98	s.u.	±0.1 s.u.				MSI	024037-01	2/21/2026
SC Zero (DI)	12	µS/cm	0<25 µS/cm				Pace Labs	N/A (DI)	N/A (DI)
SC 2000	2000	µS/cm	±5%				Proactive	3GJ1438	Oct-24
ORP	231	mV	±15 mV				Reagents	8406644	Apr-25
DO (Zero pt)	0.00	mg/L	±0.1				Macron	#000228049	8/26/2025
DO (Saturated)	99	%	97-100%				Pace Labs	N/A (DI)	N/A (DI)
Turbidity (DI)	00	NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

Approx. every 8 hrs, unless only one well

ICV (Initial Calibration Verification) Time: 0947

Buffer	Check Value	Units	Range	Pass/Fail	Action Taken?	Manufacturer	Lot#	Exp.
pH 4.00b	3.98	s.u.	±0.15 s.u.	PASS	NO	Proactive	3GE1074	May-25
pH 7.00b	6.99	s.u.	±0.15 s.u.			Proactive	3GE1252	May-25
pH 10.00b	10.00	s.u.	±0.15 s.u.			Geotech	3GA1134	Jan-25
SC 1000	998	µS/cm	±5%			Spectrum	2NA0024	Dec-25

Approx. every 8 hrs, unless only one well

CCV (Continued Calibration Verification): Time: 1517

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.01	s.u.	±0.1 s.u.	PASS	NO	NA	MSI	023219-02	8/9/2025
pH 7.00a	7.00	s.u.	±0.1 s.u.				MSI	023334-01	12/7/2025
pH 10.00a	9.98	s.u.	±0.1 s.u.				MSI	024037-01	2/21/2026
SC 1000	1000	µS/cm	±5%				Spectrum	2NA0024	Dec-25
DO (Zero pt)	0.0	mg/L	±0.1 mg/L				Macron	#000228049	8/26/2025
Turbidity (DI)	1.0	NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

Approx. every 8 hrs, unless only one well

Comments:

Signature: [signature] Date: 10/15/24

Multiparameter Meter Field Calibration Checklist

Field Personnel:	Aaron McGeerton	Location:	Duck creek
Weather:	Wind 5mph NW	Environment:	grass, dust
Multiparameter Water Meter	Make: Horiba	Model: U5000	Serial Number: 3T8SNNNF
Water Level Meter	Make: Heron	Model: Dipper T	Serial Number: 19FF2202131ML

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.02	s.u.	±0.1 s.u.	P	yes	0.0	MSI	023219-02	8/9/2025
pH 7.00a	6.92	s.u.	±0.1 s.u.	P	NO	—	MSI	023334-01	12/7/2025
pH 10.00a	9.99	s.u.	±0.1 s.u.	P	NC	—	MSI	024037-01	2/21/2026
SC Zero (DI)	20	µS/cm	0<25 µS/cm	P	NO	—	Pace Labs	N/A (DI)	N/A (DI)
SC 2000	2080	µS/cm	±5%	P	NO	—	Proactive	3GJ1438	Oct-24
ORP	230	mV	±15 mV	P	NO	—	Reagents	8406644	Apr-25
DO (Zero pt)	0.08	mg/L	±0.1	P	NO	—	Macron	#000228049	8/26/2025
DO (Saturated)	73.2	%	97-100%	P	yes	100.0	Pace Labs	N/A (DI)	N/A (DI)
Turbidity (DI)	41.0	NTU	<2 NTU	P	yes	0.0	Pace Labs	N/A (DI)	N/A (DI)

Approx. every 8 hrs, unless only one well

242 @ 15°C

ICV (Initial Calibration Verification) Time: 0950

Buffer	Check Value	Units	Range	Pass/Fail	Action Taken?	Manufacturer	Lot#	Exp.
pH 4.00b	4.01	s.u.	±0.15 s.u.	P	—	Proactive	3GE1074	May-25
pH 7.00b	6.96	s.u.	±0.15 s.u.	P	—	Proactive	3GE1252	May-25
pH 10.00b	10.04	s.u.	±0.15 s.u.	P	—	Geotech	3GA1134	Jan-25
SC 1000	958	µS/cm	±5%	P	✓	Spectrum	2NA0024	Dec-25

Approx. every 8 hrs, unless only one well

CCV (Continued Calibration Verification): Time: 1524

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.04	s.u.	±0.1 s.u.	P	NO	—	MSI	023219-02	8/9/2025
pH 7.00a	7.04	s.u.	±0.1 s.u.	P	NO	—	MSI	023334-01	12/7/2025
pH 10.00a	10.09	s.u.	±0.1 s.u.	P	NO	—	MSI	024037-01	2/21/2026
SC 1000	964	µS/cm	±5%	P	NO	—	Spectrum	2NA0024	Dec-25
DO (Zero pt)	0.09	mg/L	±0.1 mg/L	P	NO	—	Macron	#000228049	8/26/2025
Turbidity (DI)	0.0	NTU	<2 NTU	P	NO	—	Pace Labs	N/A (DI)	N/A (DI)

Approx. every 8 hrs, unless only one well

Comments:

Signature: [signature] Date: 10/16/24

Multiparameter Meter Field Calibration Checklist

Field Personnel:	SD	Location:	Duck Creek
Weather:	48-63°F m, sunny wind NW 7-12mph	Environment:	grass, woods

Multiparameter Water Meter	Make: Aquatroll	Model: 600	Serial Number:	762215	
Water Level Meter	Make: Heron	Model: Dipper-T	Serial Number:	11FF220930SML	

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.14	s.u.	±0.1 s.u.	F	Y	4.08	MSI	023219-02	8/9/2025
pH 7.00a	6.95	s.u.	±0.1 s.u.	P	N	NA	MSI	023334-01	12/7/2025
pH 10.00a	9.93	s.u.	±0.1 s.u.				MSI	024037-01	2/21/2026
SC Zero (DI)	6.17	µS/cm	0<25 µS/cm				Pace Labs	N/A (DI)	N/A (DI)
SC 2000	2060.7	µS/cm	±5%				Proactive	3GJ1438	Oct-24
ORP	242.2	mV	±15 mV				Reagents	8406644	Apr-25
DO (Zero pt)	0.09	mg/L	±0.1				Macron	#000228049	8/26/2025
DO (Saturated)	98.21	%	97-100%				Pace Labs	N/A (DI)	N/A (DI)
Turbidity (DI)	0.00	NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

Approx. every 8 hrs, unless only one well

ICV (Initial Calibration Verification) Time: 0938

Buffer	Check Value	Units	Range	Pass/Fail	Action Taken?	Manufacturer	Lot#	Exp.
pH 4.00b	3.94	s.u.	±0.15 s.u.	P	NA	Proactive	3GE1074	May-25
pH 7.00b	6.85	s.u.	±0.15 s.u.			Proactive	3GE1252	May-25
pH 10.00b	9.99	s.u.	±0.15 s.u.			Geotech	3GA1134	Jan-25
SC 1000	1038.2	µS/cm	±5%			Spectrum	2NA0024	Dec-25

Approx. every 8 hrs, unless only one well

CCV (Continued Calibration Verification): Time: 1538

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.03	s.u.	±0.1 s.u.	P	No	NA	MSI	023219-02	8/9/2025
pH 7.00a	7.01	s.u.	±0.1 s.u.				MSI	023334-01	12/7/2025
pH 10.00a	9.99	s.u.	±0.1 s.u.				MSI	024037-01	2/21/2026
SC 1000	1044.4	µS/cm	±5%				Spectrum	2NA0024	Dec-25
DO (Zero pt)	0.08	mg/L	±0.1 mg/L				Macron	#000228049	8/26/2025
Turbidity (DI)	0.00	NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

Approx. every 8 hrs, unless only one well

Comments:

Signature:	[signature]	Date:	10/16/24

Multiparameter Meter Field Calibration Checklist

Field Personnel:	KALEB DESKE	Location:	DUCK CREEK
Weather:	40° SUNNY 5mph NW	Environment:	GRASS
Multiparameter Water Meter	Make: HORIBA	Model:	Serial Number: AGJTK4XG
Water Level Meter	Make: SOLINST	Model: WT	Serial Number: 534159

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	6.58	s.u.	±0.1 s.u.	FAIL	YES	4.00	MSI	023219-02	8/9/2025
pH 7.00a	7.55	s.u.	±0.1 s.u.	FAIL	YES	7.00	MSI	023334-01	12/7/2025
pH 10.00a	8.20	s.u.	±0.1 s.u.	FAIL	YES	10.00	MSI	024037-01	2/21/2026
SC Zero (DI)	0.0	µS/cm	0<25 µS/cm	PASS	NO	N/A	Pace Labs	N/A (DI)	N/A (DI)
SC 2000	2020	µS/cm	±5%				Proactive	3GJ1438	Oct-24
ORP	253	mV	±15 mV				Reagents	8406644	Apr-25
DO (Zero pt)	0.0	mg/L	±0.1				Macron	#000228049	8/26/2025
DO (Saturated)	98	%	97-100%				Pace Labs	N/A (DI)	N/A (DI)
Turbidity (DI)	0.0	NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

Approx. every 8 hrs, unless only one well

ICV (Initial Calibration Verification) Time: 0924

Buffer	Check Value	Units	Range	Pass/Fail	Action Taken?	Manufacturer	Lot#	Exp.
pH 4.00b	4.01	s.u.	±0.15 s.u.	PASS	NO	Proactive	3GE1074	May-25
pH 7.00b	7.03	s.u.	±0.15 s.u.			Proactive	3GE1252	May-25
pH 10.00b	9.99	s.u.	±0.15 s.u.			Geotech	3GA1134	Jan-25
SC 1000	1000	µS/cm	±5%	FAIL	1000	Spectrum	2NA0024	Dec-25

Approx. every 8 hrs, unless only one well

CCV (Continued Calibration Verification): Time: 1328

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.01	s.u.	±0.1 s.u.	PASS	NO	N/A	MSI	023219-02	8/9/2025
pH 7.00a	7.02	s.u.	±0.1 s.u.				MSI	023334-01	12/7/2025
pH 10.00a	10.00	s.u.	±0.1 s.u.				MSI	024037-01	2/21/2026
SC 1000	1000	µS/cm	±5%				Spectrum	2NA0024	Dec-25
DO (Zero pt)	0.0	mg/L	±0.1 mg/L				Macron	#000228049	8/26/2025
Turbidity (DI)	1.00	NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

Approx. every 8 hrs, unless only one well

Comments:

Signature: [signature] Date: 10/16/24

Multiparameter Meter Field Calibration Checklist

Field Personnel:	Aaron Pemberton	Location:	Duck Creek
Weather:	47°- 66°F Windy S 7mph	Environment:	Grass, dust, woods

Multiparameter Water Meter	Make: Horiba	Model: U5000	Serial Number:	37 8SNNWF	
Water Level Meter	Make: Heron	Model: Dipper-T	Serial Number:	19FF2202 131ML	

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	3.98	s.u.	±0.1 s.u.	P	No	—	MSI	023310-01	11/10/2025
pH 7.00a	7.02	s.u.	±0.1 s.u.	P	NO	—	MSI	024145-01	5/29/2026
pH 10.00a	10.01	s.u.	±0.1 s.u.	P	NO	—	MSI	024072-02	3/21/2026
SC Zero (DI)	10	µS/cm	0<25 µS/cm	P	NO	—	Pace Labs	N/A (DI)	N/A (DI)
SC 2000	1950	µS/cm	±5%	P	NO	—	Proactive	3GJ1438	Oct-24
ORP	236	mV	±15 mV	P	NO	—	In-Situ	4GJ0045	Jul-25
DO (Zero pt)	0.09	mg/L	±0.1	P	NO	—	Macron	#000228049	8/26/2025
DO (Saturated)	~~0.~~ 98.2	%	97-100%	P	NO	—	Pace Labs	N/A (DI)	N/A (DI)
Turbidity (DI)	0.0	NTU	<2 NTU	P	NO	—	Pace Labs	N/A (DI)	N/A (DI)

10/17/24 AP

Approx. every 8 hrs, unless only one well

242 @ 15°C

ICV (Initial Calibration Verification)					Time: 0951			
Buffer	Check Value	Units	Range	Pass/Fail	Action Taken?	Manufacturer	Lot#	Exp.
pH 4.00b	3.99	s.u.	±0.15 s.u.	P	—	Proactive	3GE1074	May-25
pH 7.00b	6.85	s.u.	±0.15 s.u.	P	—	Proactive	3GE1252	May-25
pH 10.00b	10.00	s.u.	±0.15 s.u.	P	—	Geotech	3GA1134	Jan-25
SC 1000	975	µS/cm	±5%		—	Spectrum	2NA0056	Dec-25

Approx. every 8 hrs, unless only one well

CCV (Continued Calibration Verification):					Time: 1354				
Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.03	s.u.	±0.1 s.u.	P	NO	—	MSI	023310-01	11/10/2025
pH 7.00a	7.01	s.u.	±0.1 s.u.	P	NO	—	MSI	024145-01	5/29/2026
pH 10.00a	10.07	s.u.	±0.1 s.u.	P	NO	—	MSI	024072-02	3/21/2026
SC 1000	963	µS/cm	±5%	P	NO	—	Spectrum	2NA0024	Dec-25
DO (Zero pt)	0.04	mg/L	±0.1 mg/L	P	NO	—	Macron	#000228049	8/26/2025
Turbidity (DI)	0.0	NTU	<2 NTU	P	NO	—	Pace Labs	N/A (DI)	N/A (DI)

Approx. every 8 hrs, unless only one well

Comments:

Signature:		Date:	10/17/2024

Multiparameter Meter Field Calibration Checklist

Field Personnel:	AW	Location:	Duck Creek
Weather:	Sunny 43°-66° Lmph Wind S	Environment:	Grassy, muddy
Multiparameter Water Meter	Make: Horiba	Model: U-5000	Serial Number: V7320PKK
Water Level Meter	Make: ~~Horiba~~ Heron	Model: Dipper-T	Serial Number: 3717-T

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.37	s.u.	±0.1 s.u.	F	yes	4.00	MSI	023310-01	11/10/2025
pH 7.00a	6.60	s.u.	±0.1 s.u.	F	yes	7.00	MSI	024145-01	5/29/2026
pH 10.00a	10.02	s.u.	±0.1 s.u.	P	NO	N/A	MSI	024072-02	3/21/2026
SC Zero (DI)	0.0	µS/cm	0<25 µS/cm	P	NO		Pace Labs	N/A (DI)	N/A (DI)
SC 2000	1930	µS/cm	±5%	P	NO		Proactive	3GJ1438	Oct-24
ORP	248	mV	±15 mV	P	NO		In-Situ	4GJ0045	Jul-25
DO (Zero pt)	0.0	mg/L	±0.1	P	NO		Macron	#000228049	8/26/2025
DO (Saturated)	98.3	%	97-100%	P	NO		Pace Labs	N/A (DI)	N/A (DI)
Turbidity (DI)	0.0	NTU	<2 NTU	P	NO		Pace Labs	N/A (DI)	N/A (DI)

Approx. every 8 hrs, unless only one well

ICV (Initial Calibration Verification) Time: 9:20

Buffer	Check Value	Units	Range	Pass/Fail	Action Taken?	Manufacturer	Lot#	Exp.
pH 4.00b	3.89	s.u.	±0.15 s.u.	P	NO	Proactive	3GE1074	May-25
pH 7.00b	7.13	s.u.	±0.15 s.u.	P	NO	Proactive	3GE1252	May-25
pH 10.00b	10.10	s.u.	±0.15 s.u.	P	NO	Geotech	3GA1134	Jan-25
SC 1000	1030	µS/cm	±5%	P	NO	Spectrum	2NA0056	Dec-25

Approx. every 8 hrs, unless only one well

CCV (Continued Calibration Verification): Time: 14:30

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	3.93	s.u.	±0.1 s.u.	P	NO	N/A	MSI	023310-01	11/10/2025
pH 7.00a	7.05	s.u.	±0.1 s.u.	P			MSI	024145-01	5/29/2026
pH 10.00a	10.02	s.u.	±0.1 s.u.	P			MSI	024072-02	3/21/2026
SC 1000	1020	µS/cm	±5%	P			Spectrum	2NA0024	Dec-25
DO (Zero pt)	0.0	mg/L	±0.1 mg/L	P			Macron	#000228049	8/26/2025
Turbidity (DI)	0.0	NTU	<2 NTU	P			Pace Labs	N/A (DI)	N/A (DI)

Approx. every 8 hrs, unless only one well

Comments:

Signature: [signature] Date: 10/17/24

Multiparameter Meter Field Calibration Checklist

Field Personnel:	JD	Location:	Duck Creek
Weather:	48-66 °F [illegible] wind 5-[illegible]	Environment:	grass, woods

	Make:		Model:		Serial Number:	
Multiparameter Water Meter	Make:	Aquatroll	Model:	600	Serial Number:	762215
Water Level Meter	Make:	Heron	Model:	Dipper-T	Serial Number:	1/FF2209305ML

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.00	s.u.	±0.1 s.u.	P	No	NA	MSI	023310-01	11/10/2025
pH 7.00a	6.95	s.u.	±0.1 s.u.				MSI	024145-01	5/29/2026
pH 10.00a	9.94	s.u.	±0.1 s.u.				MSI	024072-02	3/21/2026
SC Zero (DI)	6.05	µS/cm	0<25 µS/cm				Pace Labs	N/A (DI)	N/A (DI)
SC 2000	1993.3	µS/cm	±5%				Proactive	3GJ1438	Oct-24
ORP	248.0	mV	±15 mV				In-Situ	4GJ0045	Jul-25
DO (Zero pt)	0.09	mg/L	±0.1				Macron	#000228049	8/26/2025
DO (Saturated)	98.71	%	97-100%				Pace Labs	N/A (DI)	N/A (DI)
Turbidity (DI)	0.00	NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

Approx. every 8 hrs, unless only one well

ICV (Initial Calibration Verification) Time: 0930

Buffer	Check Value	Units	Range	Pass/Fail	Action Taken?	Manufacturer	Lot#	Exp.
pH 4.00b	3.95	s.u.	±0.15 s.u.	P	N/A	Proactive	3GE1074	May-25
pH 7.00b	6.85	s.u.	±0.15 s.u.			Proactive	3GE1252	May-25
pH 10.00b	10.01	s.u.	±0.15 s.u.			Geotech	3GA1134	Jan-25
SC 1000	1008.2	µS/cm	±5%			Spectrum	2NA0056	Dec-25

Approx. every 8 hrs, unless only one well

CCV (Continued Calibration Verification): Time: 1413

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.02	s.u.	±0.1 s.u.	P	No	NA	MSI	023310-01	11/10/2025
pH 7.00a	6.98	s.u.	±0.1 s.u.				MSI	024145-01	5/29/2026
pH 10.00a	10.05	s.u.	±0.1 s.u.				MSI	024072-02	3/21/2026
SC 1000	1009.5	µS/cm	±5%				Spectrum	2NA0024	Dec-25
DO (Zero pt)	0.09	mg/L	±0.1 mg/L				Macron	#000228049	8/26/2025
Turbidity (DI)	0.00	NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

Approx. every 8 hrs, unless only one well

Comments:

Signature:	[signature]	Date:	10/17/24

AP

Multiparameter Meter Field Calibration Checklist

Field Personnel:	KALEB DESKE	Location:	DUCK CREEK
Weather:	43° SUNNY COMPASS	Environment:	GRASS
Multiparameter Water Meter	Make: HORIBA	Model: U-5000	Serial Number: AGJTK4XG
Water Level Meter	Make: SOLINST	Model: WT	Serial Number: 33459

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.81	s.u.	±0.1 s.u.	FAIL	YES NO	4.00	MSI	023219-02	8/9/2025
pH 7.00a	7.04	s.u.	±0.1 s.u.	PASS	NO	N/A	MSI	023334-01	12/7/2025
pH 10.00a	10.01	s.u.	±0.1 s.u.				MSI	024037-01	2/21/2026
SC Zero (DI)	13	µS/cm	0<25 µS/cm				Pace Labs	N/A (DI)	N/A (DI)
SC 2000	2000	µS/cm	±5%				Proactive	3GJ1438	Oct-24
ORP	232	mV	±15 mV				Reagents	8406644	Apr-25
DO (Zero pt)	0.0	mg/L	±0.1				Macron	#000228049	8/26/2025
DO (Saturated)	99	%	97-100%				Pace Labs	N/A (DI)	N/A (DI)
Turbidity (DI)	0.0	NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

Approx. every 8 hrs, unless only one well

ICV (Initial Calibration Verification) Time: 0935

Buffer	Check Value	Units	Range	Pass/Fail	Action Taken?	Manufacturer	Lot#	Exp.
pH 4.00b	4.00	s.u.	±0.15 s.u.	PASS	NO	Proactive	3GE1074	May-25
pH 7.00b	7.02	s.u.	±0.15 s.u.	1	1	Proactive	3GE1252	May-25
pH 10.00b	9.65	s.u.	±0.15 s.u.	FAIL	YES 10.00	Geotech	3GA1134	Jan-25
SC 1000	999	µS/cm	±5%	PASS	NO	Spectrum	2NA0024	Dec-25

Approx. every 8 hrs, unless only one well

CCV (Continued Calibration Verification): Time: 1413

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.02	s.u.	±0.1 s.u.	PASS	NO	N/A	MSI	023219-02	8/9/2025
pH 7.00a	6.98	s.u.	±0.1 s.u.				MSI	023334-01	12/7/2025
pH 10.00a	9.99	s.u.	±0.1 s.u.				MSI	024037-01	2/21/2026
SC 1000	997	µS/cm	±5%				Spectrum	2NA0024	Dec-25
DO (Zero pt)	0.0	mg/L	±0.1 mg/L				Macron	#000228049	8/26/2025
Turbidity (DI)	0.20	NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

Approx. every 8 hrs, unless only one well

Comments:

Signature: [signature] Date: 10/16/24

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APP 10/17/24

Multiparameter Meter Field Calibration Checklist

Field Personnel:	AW	Location:	Duck Creek
Weather:	Sunny 57°-79° 5mphWind S	Environment:	Grassy, gravel
Multiparameter Water Meter	Make: Horiba	Model: U-5000	Serial Number: V7320PKR
Water Level Meter	Make: Heron	Model: Dipper-T	Serial Number: 3717-T

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.29	s.u.	±0.1 s.u.	F	yes	3.99	MSI	023310-01	11/10/2025
pH 7.00a	6.59	s.u.	±0.1 s.u.	F	yes	7.01	MSI	024145-01	5/29/2026
pH 10.00a	10.18	s.u.	±0.1 s.u.	F	yes	10.02	MSI	024072-02	3/21/2026
SC Zero (DI)	0.0	µS/cm	0<25 µS/cm	P	NO	N/A	Pace Labs	N/A (DI)	N/A (DI)
SC 2000	2020	µS/cm	±5%	P	NO	N/A	Proactive	3GJ1438	Oct-24
ORP	252	mV	±15 mV	P	NO	N/A	In-Situ	4GJ0045	Jul-25
DO (Zero pt)	0.0	mg/L	±0.1	P	NO	N/A	Macron	#000228049	8/26/2025
DO (Saturated)	99.4	%	97-100%	P	NO	N/A	Pace Labs	N/A (DI)	N/A (DI)
Turbidity (DI)	0.0	NTU	<2 NTU	P	NO	N/A	Pace Labs	N/A (DI)	N/A (DI)

Approx. every 8 hrs, unless only one well

ICV (Initial Calibration Verification) Time: 9:30

Buffer	Check Value	Units	Range	Pass/Fail	Action Taken?	Manufacturer	Lot#	Exp.
pH 4.00b	3.94	s.u.	±0.15 s.u.	P	NO	Proactive	3GE1074	May-25
pH 7.00b	6.97	s.u.	±0.15 s.u.	P		Proactive	3GE1252	May-25
pH 10.00b	10.03	s.u.	±0.15 s.u.	P		Geotech	3GA1134	Jan-25
SC 1000	1020	µS/cm	±5%	P		Spectrum	2NA0056	Dec-25

Approx. every 8 hrs, unless only one well

CCV (Continued Calibration Verification): Time: 15:20

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.05	s.u.	±0.1 s.u.	P	NO	N/A	MSI	023310-01	11/10/2025
pH 7.00a	7.03	s.u.	±0.1 s.u.	P			MSI	024145-01	5/29/2026
pH 10.00a	10.07	s.u.	±0.1 s.u.	P			MSI	024072-02	3/21/2026
SC 1000	1010	µS/cm	±5%	P			Spectrum	2NA0024	Dec-25
DO (Zero pt)	0.0	mg/L	±0.1 mg/L	P			Macron	#000228049	8/26/2025
Turbidity (DI)	0.0	NTU	<2 NTU	P			Pace Labs	N/A (DI)	N/A (DI)

Approx. every 8 hrs, unless only one well

Comments:

Signature: [signature] Date: 10/21/24

Multiparameter Meter Field Calibration Checklist

Field Personnel:	KALEB DESKE	Location:	DUCK CREEK
Weather:	56° SUNNY 5MPH S	Environment:	GRASS

Multiparameter Water Meter	Make: HORIBA	Model: U-5000	Serial Number:	A2JTK4XG	
Water Level Meter	Make: SOLINST	Model: WT	Serial Number:	33459	

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.01	s.u.	±0.1 s.u.	PASS	NO	N/A	MSI	023310-01	11/10/2025
pH 7.00a	6.98	s.u.	±0.1 s.u.				MSI	024145-01	5/29/2026
pH 10.00a	10.00	s.u.	±0.1 s.u.				MSI	024072-02	3/21/2026
SC Zero (DI)	0.0	µS/cm	0<25 µS/cm				Pace Labs	N/A (DI)	N/A (DI)
SC 2000	2000	µS/cm	±5%				Proactive	3GJ1438	Oct-24
ORP	231	mV	±15 mV				In-Situ	4GJ0045	Jul-25
DO (Zero pt)	0.0	mg/L	±0.1				Macron	#000228049	8/26/2025
DO (Saturated)	99	%	97-100%				Pace Labs	N/A (DI)	N/A (DI)
Turbidity (DI)	1.03	NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

Approx. every 8 hrs, unless only one well

ICV (Initial Calibration Verification) Time: 0929

Buffer	Check Value	Units	Range	Pass/Fail	Action Taken?	Manufacturer	Lot#	Exp.
pH 4.00b	4.08	s.u.	±0.15 s.u.	PASS	NO	Proactive	3GE1074	May-25
pH 7.00b	6.99	s.u.	±0.15 s.u.			Proactive	3GE1252	May-25
pH 10.00b	9.97	s.u.	±0.15 s.u.			Geotech	3GA1134	Jan-25
SC 1000	1000	µS/cm	±5%			Spectrum	2NA0056	Dec-25

Approx. every 8 hrs, unless only one well

CCV (Continued Calibration Verification): Time: 1528

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.03	s.u.	±0.1 s.u.	PASS	NO	N/A	MSI	023310-01	11/10/2025
pH 7.00a	7.02	s.u.	±0.1 s.u.				MSI	024145-01	5/29/2026
pH 10.00a	10.00	s.u.	±0.1 s.u.				MSI	024072-02	3/21/2026
SC 1000	1000	µS/cm	±5%				Spectrum	2NA0024	Dec-25
DO (Zero pt)	0.0	mg/L	±0.1 mg/L				Macron	#000228049	8/26/2025
Turbidity (DI)	1.00	NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

Approx. every 8 hrs, unless only one well

Comments:

Signature: [signature] Date: 10/21/24

Multiparameter Meter Field Calibration Checklist

Field Personnel:	AW	Location:	Duck Creek
Weather:	Mostly Cloudy 57°-75° 10mph Wind South	Environment:	Grassy, gravel
Multiparameter Water Meter	Make: Horiba	Model: U-5000	Serial Number: V7320PKK
Water Level Meter	Make: Aeron	Model: Dipper-T	Serial Number: 3717-T

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	7.58	s.u.	±0.1 s.u.	F	yes	4.00	MSI	023310-01	11/10/2025
pH 7.00a	6.08	s.u.	±0.1 s.u.	F	yes	7.00	MSI	024145-01	5/29/2026
pH 10.00a	9.97	s.u.	±0.1 s.u.	P	NO	N/A	MSI	024072-02	3/21/2026
SC Zero (DI)	0.0	µS/cm	0<25 µS/cm	P	NO	N/A	Pace Labs	N/A (DI)	N/A (DI)
SC 2000	2050	µS/cm	±5%	P	NO	N/A	Proactive	3GJ1438	Oct-24
ORP	248	mV	±15 mV	P	NO		In-Situ	4GJ0045	Jul-25
DO (Zero pt)	0.0	mg/L	±0.1	P	NO	N/A	Macron	#000228049	8/26/2025
DO (Saturated)	97.7	%	97-100%	P	NO	N/A	Pace Labs	N/A (DI)	N/A (DI)
Turbidity (DI)	0.0	NTU	<2 NTU	P	NO	N/A	Pace Labs	N/A (DI)	N/A (DI)

Approx. every 8 hrs, unless only one well

ICV (Initial Calibration Verification) Time: 9:08

Buffer	Check Value	Units	Range	Pass/Fail	Action Taken?	Manufacturer	Lot#	Exp.
pH 4.00b	4.95	s.u.	±0.15 s.u.	F	yes / 3.99	Proactive	3GE1074	May-25
pH 7.00b	6.90	s.u.	±0.15 s.u.	P	NO	Proactive	3GE1252	May-25
pH 10.00b	9.96	s.u.	±0.15 s.u.	P	NO	Geotech	3GA1134	Jan-25
SC 1000	1020	µS/cm	±5%	P	NO	Spectrum	2NA0056	Dec-25

Approx. every 8 hrs, unless only one well

CCV (Continued Calibration Verification): Time: 1509

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.10	s.u.	±0.1 s.u.	P	NO	N/A	MSI	023310-01	11/10/2025
pH 7.00a	6.05	s.u.	±0.1 s.u.	P			MSI	024145-01	5/29/2026
pH 10.00a	9.96	s.u.	±0.1 s.u.	P			MSI	024072-02	3/21/2026
SC 1000	1030	µS/cm	±5%	P			Spectrum	2NA0024	Dec-25
DO (Zero pt)	0.0	mg/L	±0.1 mg/L	P			Macron	#000228049	8/26/2025
Turbidity (DI)	0.0	NTU	<2 NTU	P			Pace Labs	N/A (DI)	N/A (DI)

Approx. every 8 hrs, unless only one well

Comments:

Signature: [signature] Date: 10/22/24

Multiparameter Meter Field Calibration Checklist

Field Personnel:	KALEB DESKE	Location:	DUCK CREEK
Weather:	56°C CLOUDY 10 MPH S	Environment:	GRASS
Multiparameter Water Meter	Make: HORIBA	Model: U-5000	Serial Number: AGJTK4XG
Water Level Meter	Make: SOLINST	Model: WT	Serial Number: 33459

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.03	s.u.	±0.1 s.u.	PASS	NO	N/A	MSI	023310-01	11/10/2025
pH 7.00a	7.01	s.u.	±0.1 s.u.				MSI	024145-01	5/29/2026
pH 10.00a	10.00	s.u.	±0.1 s.u.				MSI	024072-02	3/21/2026
SC Zero (DI)	0.0	µS/cm	0<25 µS/cm				Pace Labs	N/A (DI)	N/A (DI)
SC 2000	2000	µS/cm	±5%				Proactive	3GJ1438	Oct-24
ORP	232	mV	±15 mV				In-Situ	4GJ0045	Jul-25
DO (Zero pt)	0.0	mg/L	±0.1				Macron	#000228049	8/26/2025
DO (Saturated)	99	%	97-100%				Pace Labs	N/A (DI)	N/A (DI)
Turbidity (DI)	1.20	NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

Approx. every 8 hrs, unless only one well

ICV (Initial Calibration Verification) Time: 0959

Buffer	Check Value	Units	Range	Pass/Fail	Action Taken?	Manufacturer	Lot#	Exp.
pH 4.00b	4.01	s.u.	±0.15 s.u.	PASS	NO	Proactive	3GE1074	May-25
pH 7.00b	7.02	s.u.	±0.15 s.u.			Proactive	3GE1252	May-25
pH 10.00b	9.97	s.u.	±0.15 s.u.			Geotech	3GA1134	Jan-25
SC 1000	1000	µS/cm	±5%			Spectrum	2NA0056	Dec-25

Approx. every 8 hrs, unless only one well

CCV (Continued Calibration Verification): Time: 1509

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	3.99	s.u.	±0.1 s.u.	PASS	NO	N/A	MSI	023310-01	11/10/2025
pH 7.00a	7.01	s.u.	±0.1 s.u.				MSI	024145-01	5/29/2026
pH 10.00a	10.02	s.u.	±0.1 s.u.				MSI	024072-02	3/21/2026
SC 1000	1000	µS/cm	±5%				Spectrum	2NA0024	Dec-25
DO (Zero pt)	0.0	mg/L	±0.1 mg/L				Macron	#000228049	8/26/2025
Turbidity (DI)	0.83	NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

Approx. every 8 hrs, unless only one well

Comments:

Signature: [signature] Date: 10/22/23/24

APP 10/23/24

Multiparameter Meter Field Calibration Checklist

Field Personnel:	AW	Location:	Duck Creek
Weather:	Cloudy 55°-65° 13mph Wind NW	Environment:	Grassy, Gravel
Multiparameter Water Meter	Make: Horiba	Model: U-5000	Serial Number: V7320PKK
Water Level Meter	Make: Heron	Model: Dipper-T	Serial Number: 3717-T

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.09	s.u.	±0.1 s.u.	P	NO	N/A	MSI	023310-01	11/10/2025
pH 7.00a	6.92	s.u.	±0.1 s.u.	P	NO		MSI	024145-01	5/29/2026
pH 10.00a	9.97	s.u.	±0.1 s.u.	P	NO		MSI	024072-02	3/21/2026
SC Zero (DI)	0.0	µS/cm	0<25 µS/cm	P	No		Pace Labs	N/A (DI)	N/A (DI)
SC 2000	2030	µS/cm	±5%	P	NO		Proactive	3GJ1438	Oct-24
ORP	245	mV	±15 mV	P	NO		In-Situ	4GJ0045	Jul-25
DO (Zero pt)	0.0	mg/L	±0.1	P	No		Macron	#000228049	8/26/2025
DO (Saturated)	97.8	%	97-100%	P	NO		Pace Labs	N/A (DI)	N/A (DI)
Turbidity (DI)	0.0	NTU	<2 NTU	P	No		Pace Labs	N/A (DI)	N/A (DI)

Approx. every 8 hrs, unless only one well

ICV (Initial Calibration Verification) Time: 9:03

Buffer	Check Value	Units	Range	Pass/Fail	Action Taken?	Manufacturer	Lot#	Exp.
pH 4.00b	3.98	s.u.	±0.15 s.u.	P	NO	Proactive	3GE1074	May-25
pH 7.00b	6.90	s.u.	±0.15 s.u.	P	NO	Proactive	3GE1252	May-25
pH 10.00b	9.94	s.u.	±0.15 s.u.	P	NO	Geotech	3GA1134	Jan-25
SC 1000	1040	µS/cm	±5%	P	NO	Spectrum	2NA0056	Dec-25

Approx. every 8 hrs, unless only one well

CCV (Continued Calibration Verification): Time: 15:05

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.05	s.u.	±0.1 s.u.	P	NO	N/A	MSI	023310-01	11/10/2025
pH 7.00a	6.98	s.u.	±0.1 s.u.	P			MSI	024145-01	5/29/2026
pH 10.00a	10.01	s.u.	±0.1 s.u.	P			MSI	024072-02	3/21/2026
SC 1000	1010	µS/cm	±5%	P			Spectrum	2NA0024	Dec-25
DO (Zero pt)	0.0	mg/L	±0.1 mg/L	P			Macron	#000228049	8/26/2025
Turbidity (DI)	0.0	NTU	<2 NTU	P			Pace Labs	N/A (DI)	N/A (DI)

Approx. every 8 hrs, unless only one well

Comments:

Signature: [signature] Date: 10/23/24

Multiparameter Meter Field Calibration Checklist

Field Personnel:	JD	Location:	Duck Creek
Weather:	56-67°F, sunny, wind NW 14-25 mph	Environment:	grass, woods

Multiparameter Water Meter	Make: Aquatroll	Model: 600	Serial Number: 762215		
Water Level Meter	Make: Heron	Model: Dipper-T	Serial Number: 11FF220930SML		

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	3.96	s.u.	±0.1 s.u.	P	N	NA	MSI	023310-01	11/10/2025
pH 7.00a	6.96	s.u.	±0.1 s.u.	P	N	NA	MSI	024145-01	5/29/2026
pH 10.00a	9.88	s.u.	±0.1 s.u.	F	Y	10.04	MSI	024072-02	3/21/2026
SC Zero (DI)	5.09	µS/cm	0<25 µS/cm	P	N	NA	Pace Labs	N/A (DI)	N/A (DI)
SC 2000	2043.0	µS/cm	±5%	↓	↓	↓	Proactive	3GJ1438	Oct-24
ORP	238.1	mV	±15 mV	↓	↓	↓	In-Situ	4GJ0045	Jul-25
DO (Zero pt)	0.09	mg/L	±0.1	↓	↓	↓	Macron	#000228049	8/26/2025
DO (Saturated)	98.01	%	97-100%	↓	↓	↓	Pace Labs	N/A (DI)	N/A (DI)
Turbidity (DI)	0.00	NTU	<2 NTU	↓	↓	↓	Pace Labs	N/A (DI)	N/A (DI)

Approx. every 8 hrs, unless only one well

ICV (Initial Calibration Verification) Time: 0910

Buffer	Check Value	Units	Range	Pass/Fail	Action Taken?	Manufacturer	Lot#	Exp.
pH 4.00b	4.01	s.u.	±0.15 s.u.	P	NA	Proactive	3GE1074	May-25
pH 7.00b	6.85	s.u.	±0.15 s.u.	↓	↓	Proactive	3GE1252	May-25
pH 10.00b	9.97	s.u.	±0.15 s.u.	↓	↓	Geotech	3GA1134	Jan-25
SC 1000	1014.4	µS/cm	±5%	↓	↓	Spectrum	2NA0056	Dec-25

Approx. every 8 hrs, unless only one well

CCV (Continued Calibration Verification): Time: 1520

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.02	s.u.	±0.1 s.u.	P	No	NA	MSI	023310-01	11/10/2025
pH 7.00a	6.99	s.u.	±0.1 s.u.	↓	↓	↓	MSI	024145-01	5/29/2026
pH 10.00a	10.06	s.u.	±0.1 s.u.	↓	↓	↓	MSI	024072-02	3/21/2026
SC 1000	1031.1	µS/cm	±5%	↓	↓	↓	Spectrum	2NA0024	Dec-25
DO (Zero pt)	0.08	mg/L	±0.1 mg/L	↓	↓	↓	Macron	#000228049	8/26/2025
Turbidity (DI)	0.00	NTU	<2 NTU	↓	↓	↓	Pace Labs	N/A (DI)	N/A (DI)

Approx. every 8 hrs, unless only one well

Comments:

Signature: [signature] Date: 10/23/24

Multiparameter Meter Field Calibration Checklist

Field Personnel:	KALEB DESKE	Location:	DUCK CREEK
Weather:	55°C CLOUDY 13mph NNW	Environment:	GRASS
Multiparameter Water Meter	Make: HORIBA	Model: U-5000	Serial Number: AGJTK4XG
Water Level Meter	Make: SOLINST	Model: WT	Serial Number: 334559

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	5.50	s.u.	±0.1 s.u.	FAIL	YES	4.00	MSI	023310-01	11/10/2025
pH 7.00a	7.03	s.u.	±0.1 s.u.	PASS	NO	N/A	MSI	024145-01	5/29/2026
pH 10.00a	10.04	s.u.	±0.1 s.u.				MSI	024072-02	3/21/2026
SC Zero (DI)	0.0	µS/cm	0<25 µS/cm				Pace Labs	N/A (DI)	N/A (DI)
SC 2000	2020	µS/cm	±5%				Proactive	3GJ1438	Oct-24
ORP	232	mV	±15 mV				In-Situ	4GJ0045	Jul-25
DO (Zero pt)	0.0	mg/L	±0.1				Macron	#000228049	8/26/2025
DO (Saturated)	99	%	97-100%				Pace Labs	N/A (DI)	N/A (DI)
Turbidity (DI)	1.00	NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

Approx. every 8 hrs, unless only one well

ICV (Initial Calibration Verification) Time: 0918

Buffer	Check Value	Units	Range	Pass/Fail	Action Taken?	Manufacturer	Lot#	Exp.
pH 4.00b	4.00	s.u.	±0.15 s.u.	PASS	NO	Proactive	3GE1074	May-25
pH 7.00b	7.01	s.u.	±0.15 s.u.			Proactive	3GE1252	May-25
pH 10.00b	9.99	s.u.	±0.15 s.u.			Geotech	3GA1134	Jan-25
SC 1000	1010	µS/cm	±5%			Spectrum	2NA0056	Dec-25

Approx. every 8 hrs, unless only one well

CCV (Continued Calibration Verification): Time: 1505

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.00	s.u.	±0.1 s.u.	PASS	NO	N/A	MSI	023310-01	11/10/2025
pH 7.00a	7.01	s.u.	±0.1 s.u.				MSI	024145-01	5/29/2026
pH 10.00a	9.99	s.u.	±0.1 s.u.				MSI	024072-02	3/21/2026
SC 1000	1000	µS/cm	±5%				Spectrum	2NA0024	Dec-25
DO (Zero pt)	0.0	mg/L	±0.1 mg/L				Macron	#000228049	8/26/2025
Turbidity (DI)	0.13	NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

Approx. every 8 hrs, unless only one well

Comments:

Signature: [signature] Date: 10/23/24

Multiparameter Meter Field Calibration Checklist

Field Personnel:	AW			Location:	Duck Creek
Weather:	Sunny 46°-68° 4mph Wind SE			Environment:	Grassy, gravel
Multiparameter Water Meter	Make: Horiba	Model: U-5000		Serial Number:	V7320PRK
Water Level Meter	Make: Heron	Model: Dipper-T		Serial Number:	3717-T

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	5.09	s.u.	±0.1 s.u.	F	yes	4.00	MSI	023310-01	11/10/2025
pH 7.00a	6.00	s.u.	±0.1 s.u.	F	yes	7.00	MSI	024145-01	5/29/2026
pH 10.00a	10.12	s.u.	±0.1 s.u.	F	yes	10.00	MSI	024072-02	3/21/2026
SC Zero (DI)	0.0	µS/cm	0<25 µS/cm	P	NO	N/A	Pace Labs	N/A (DI)	N/A (DI)
SC 2000	2010	µS/cm	±5%	P	NO		Proactive	3GJ1438	Oct-24
ORP	245	mV	±15 mV	P	NO		In-Situ	4GJ0045	Jul-25
DO (Zero pt)	0.0	mg/L	±0.1	P	NO		Macron	#000228049	8/26/2025
DO (Saturated)	100%	%	97-100%	P	NO		Pace Labs	N/A (DI)	N/A (DI)
Turbidity (DI)	0.0	NTU	<2 NTU	P	NO		Pace Labs	N/A (DI)	N/A (DI)

Approx. every 8 hrs, unless only one well

ICV (Initial Calibration Verification) Time: 9:17

Buffer	Check Value	Units	Range	Pass/Fail	Action Taken?	Manufacturer	Lot#	Exp.
pH 4.00b	3.77	s.u.	±0.15 s.u.	F	yes / 4.00	Proactive	3GE1074	May-25
pH 7.00b	6.98	s.u.	±0.15 s.u.	P	NO	Proactive	3GE1252	May-25
pH 10.00b	9.97	s.u.	±0.15 s.u.	P	NO	Geotech	3GA1134	Jan-25
SC 1000	1010	µS/cm	±5%	P	NO	Spectrum	2NA0056	Dec-25

Approx. every 8 hrs, unless only one well

CCV (Continued Calibration Verification): Time: 15:10

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.08	s.u.	±0.1 s.u.	P	NO	N/A	MSI	023310-01	11/10/2025
pH 7.00a	6.95	s.u.	±0.1 s.u.	P			MSI	024145-01	5/29/2026
pH 10.00a	10.05	s.u.	±0.1 s.u.	P			MSI	024072-02	3/21/2026
SC 1000	1020	µS/cm	±5%	P			Spectrum	2NA0024	Dec-25
DO (Zero pt)	0.0	mg/L	±0.1 mg/L	P			Macron	#000228049	8/26/2025
Turbidity (DI)	0.0	NTU	<2 NTU	P			Pace Labs	N/A (DI)	N/A (DI)

Approx. every 8 hrs, unless only one well

Comments:

Signature: Cody Wilhelm Date: 10/24/24

Multiparameter Meter Field Calibration Checklist

Field Personnel:	JD	Location:	Duck Creek
Weather:	36 - 70°F m.sunny wind SSE 7-15mph	Environment:	grass, woods

Multiparameter Water Meter	Make: Aquatroll	Model: 600	Serial Number:	762215	
Water Level Meter	Make: Heron	Model: Dipper-T	Serial Number:	11FF2209305ML	

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.18	s.u.	±0.1 s.u.	F	Y	4.00	MSI	023310-01	11/10/2025
pH 7.00a	6.97	s.u.	±0.1 s.u.	P	N	NA	MSI	024145-01	5/29/2026
pH 10.00a	10.06	s.u.	±0.1 s.u.				MSI	024072-02	3/21/2026
SC Zero (DI)	5.89	µS/cm	0<25 µS/cm				Pace Labs	N/A (DI)	N/A (DI)
SC 2000	2027.1	µS/cm	±5%				Proactive	3GJ1438	Oct-24
ORP	241.6	mV	±15 mV				In-Situ	4GJ0045	Jul-25
DO (Zero pt)	0.07	mg/L	±0.1				Macron	#000228049	8/26/2025
DO (Saturated)	99.25	%	97-100%				Pace Labs	N/A (DI)	N/A (DI)
Turbidity (DI)	0.00	NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

Approx. every 8 hrs, unless only one well

ICV (Initial Calibration Verification) Time: 0730

Buffer	Check Value	Units	Range	Pass/Fail	Action Taken?	Manufacturer	Lot#	Exp.
pH 4.00b	4.05	s.u.	±0.15 s.u.	P	NA	Proactive	3GE1074	May-25
pH 7.00b	6.86	s.u.	±0.15 s.u.			Proactive	3GE1252	May-25
pH 10.00b	9.96	s.u.	±0.15 s.u.			Geotech	3GA1134	Jan-25
SC 1000	1019.2	µS/cm	±5%			Spectrum	2NA0056	Dec-25

Approx. every 8 hrs, unless only one well

CCV (Continued Calibration Verification): Time: 1540

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.03	s.u.	±0.1 s.u.	P	N	NA	MSI	023310-01	11/10/2025
pH 7.00a	7.01	s.u.	±0.1 s.u.				MSI	024145-01	5/29/2026
pH 10.00a	10.06	s.u.	±0.1 s.u.				MSI	024072-02	3/21/2026
SC 1000	1030.6	µS/cm	±5%				Spectrum	2NA0024	Dec-25
DO (Zero pt)	0.09	mg/L	±0.1 mg/L				Macron	#000228049	8/26/2025
Turbidity (DI)	0.00	NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

Approx. every 8 hrs, unless only one well

Comments:

Signature: [signature] Date: 10/24/24

Multiparameter Meter Field Calibration Checklist

Field Personnel:	KALEB DESIKE	Location:	DUCK CREEK
Weather:	44° SUNNY 4MPH ESE	Environment:	GRASS
Multiparameter Water Meter	Make: HORIBA	Model: U5000	Serial Number: AGJTK4XG
Water Level Meter	Make: SOLINST	Model: WT	Serial Number: 334159

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.01	s.u.	±0.1 s.u.	PASS	NO	N/A	MSI	023310-01	11/10/2025
pH 7.00a	7.00	s.u.	±0.1 s.u.				MSI	024145-01	5/29/2026
pH 10.00a	9.99	s.u.	±0.1 s.u.				MSI	024072-02	3/21/2026
SC Zero (DI)	0.0	µS/cm	0<25 µS/cm				Pace Labs	N/A (DI)	N/A (DI)
SC 2000	2000	µS/cm	±5%				Proactive	3GJ1438	Oct-24
ORP	232	mV	±15 mV				In-Situ	4GJ0045	Jul-25
DO (Zero pt)	0.0	mg/L	±0.1				Macron	#000228049	8/26/2025
DO (Saturated)	98	%	97-100%				Pace Labs	N/A (DI)	N/A (DI)
Turbidity (DI)	1.13	NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

Approx. every 8 hrs, unless only one well

ICV (Initial Calibration Verification) Time: 0902

Buffer	Check Value	Units	Range	Pass/Fail	Action Taken?	Manufacturer	Lot#	Exp.
pH 4.00b	4.00	s.u.	±0.15 s.u.	PASS	NO	Proactive	3GE1074	May-25
pH 7.00b	7.02	s.u.	±0.15 s.u.			Proactive	3GE1252	May-25
pH 10.00b	10.01	s.u.	±0.15 s.u.			Geotech	3GA1134	Jan-25
SC 1000	998	µS/cm	±5%			Spectrum	2NA0056	Dec-25

Approx. every 8 hrs, unless only one well

CCV (Continued Calibration Verification): Time: 1504

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.02	s.u.	±0.1 s.u.	PASS	NO	NA	MSI	023310-01	11/10/2025
pH 7.00a	6.99	s.u.	±0.1 s.u.				MSI	024145-01	5/29/2026
pH 10.00a	10.00	s.u.	±0.1 s.u.				MSI	024072-02	3/21/2026
SC 1000	1000	µS/cm	±5%				Spectrum	2NA0024	Dec-25
DO (Zero pt)	0.0	mg/L	±0.1 mg/L				Macron	#000228049	8/26/2025
Turbidity (DI)	0.52	NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

Approx. every 8 hrs, unless only one well

Comments:

Signature: [signature] Date: 10/24/24

Multiparameter Meter Field Calibration Checklist

Field Personnel:	Austin Moore	Location:	Duck Creek
Weather:	64°-49° mostly sunny wind 3 mph SW	Environment:	landfill grassy

Multiparameter Water Meter	Make: Horiba	Model: U-5000	Serial Number:	AGJTKTXG	
Water Level Meter	Make: WT	Model: Heron	Serial Number:	19FF220213	mL

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.06	s.u.	±0.1 s.u.	P	N	N/A	MSI	023219-02	8/9/2025
pH 7.00a	7.03	s.u.	±0.1 s.u.				MSI	023334-01	12/7/2025
pH 10.00a	10.08	s.u.	±0.1 s.u.				MSI	024037-01	2/21/2026
SC Zero (DI)	0.0	µS/cm	0<25 µS/cm				Pace Labs	N/A (DI)	N/A (DI)
SC 2000	2050	µS/cm	±5%				Proactive	3GJ1438	Oct-24
ORP	245	mV	±15 mV				Reagents	8406644	Apr-25
DO (Zero pt)	0.0	mg/L	±0.1				Macron	#000228049	8/26/2025
DO (Saturated)	98.6	%	97-100%				Pace Labs	N/A (DI)	N/A (DI)
Turbidity (DI)	0.0	NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

Approx. every 8 hrs, unless only one well

ICV (Initial Calibration Verification) Time: 0941

Buffer	Check Value	Units	Range	Pass/Fail	Action Taken?	Manufacturer	Lot#	Exp.
pH 4.00b	3.98	s.u.	±0.15 s.u.	P	N	Proactive	3GE1074	May-25
pH 7.00b	7.02	s.u.	±0.15 s.u.			Proactive	3GE1252	May-25
pH 10.00b	10.04	s.u.	±0.15 s.u.			Geotech	3GA1134	Jan-25
SC 1000	1028	µS/cm	±5%			Spectrum	2NA0024	Dec-25

Approx. every 8 hrs, unless only one well

CCV (Continued Calibration Verification): Time: 1435

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.08	s.u.	±0.1 s.u.	P	N	N/A	MSI	023219-02	8/9/2025
pH 7.00a	7.06	s.u.	±0.1 s.u.				MSI	023334-01	12/7/2025
pH 10.00a	10.01	s.u.	±0.1 s.u.				MSI	024037-01	2/21/2026
SC 1000	1010	µS/cm	±5%				Spectrum	2NA0024	Dec-25
DO (Zero pt)	0.0	mg/L	±0.1 mg/L				Macron	#000228049	8/26/2025
Turbidity (DI)	0.0	NTU	<2 NTU				Pace Labs	N/A (DI)	N/A (DI)

Approx. every 8 hrs, unless only one well

Comments:

Signature:	Austin M	Date:	28-Oct-24

Multiparameter Meter Field Calibration Checklist

Field Personnel:	Austin Moore	Location:	Duck Creek, Edwards Power Station
Weather:	82°-65° mostly sunny wind 16mph	Environment:	Grassy

Multiparameter Water Meter	Make: Horiba	Model: U-5000	Serial Number:	AGJTKTXG	
Water Level Meter	Make: WT	Model: Heron	Serial Number:	19F-220213ML	

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	3.58	s.u.	±0.1 s.u.	F	Y	3.95	MSI	023219-02	8/9/2025
pH 7.00a	7.04	s.u.	±0.1 s.u.	P	N	—	MSI	023334-01	12/7/2025
pH 10.00a	10.03	s.u.	±0.1 s.u.	P	N	—	MSI	024037-01	2/21/2026
SC Zero (DI)	0.0	µS/cm	0<25 µS/cm	P	N	—	Pace Labs	N/A (DI)	N/A (DI)
SC 2000	2010	µS/cm	±5%	P	N	—	Proactive	3GJ1438	Oct-24
ORP	238	mV	±15 mV	P	N	—	Reagents	8406644	Apr-25
DO (Zero pt)	0.0	mg/L	±0.1	P	N	—	Macron	#000228049	8/26/2025
DO (Saturated)	99.2	%	97-100%	P	N	—	Pace Labs	N/A (DI)	N/A (DI)
Turbidity (DI)	0.0	NTU	<2 NTU	P	N	—	Pace Labs	N/A (DI)	N/A (DI)

Approx. every 8 hrs, unless only one well

ICV (Initial Calibration Verification) Time: 0918

Buffer	Check Value	Units	Range	Pass/Fail	Action Taken?	Manufacturer	Lot#	Exp.
pH 4.00b	3.72	s.u.	±0.15 s.u.	F	Y 4.00	Proactive	3GE1074	May-25
pH 7.00b	7.23	s.u.	±0.15 s.u.	F	Y 7.00	Proactive	3GE1252	May-25
pH 10.00b	10.46	s.u.	±0.15 s.u.	F	Y 10.00	Geotech	3GA1134	Jan-25
SC 1000	975	µS/cm	±5%	P	N	Spectrum	2NA0024	Dec-25

Approx. every 8 hrs, unless only one well

CCV (Continued Calibration Verification): Time: 1600

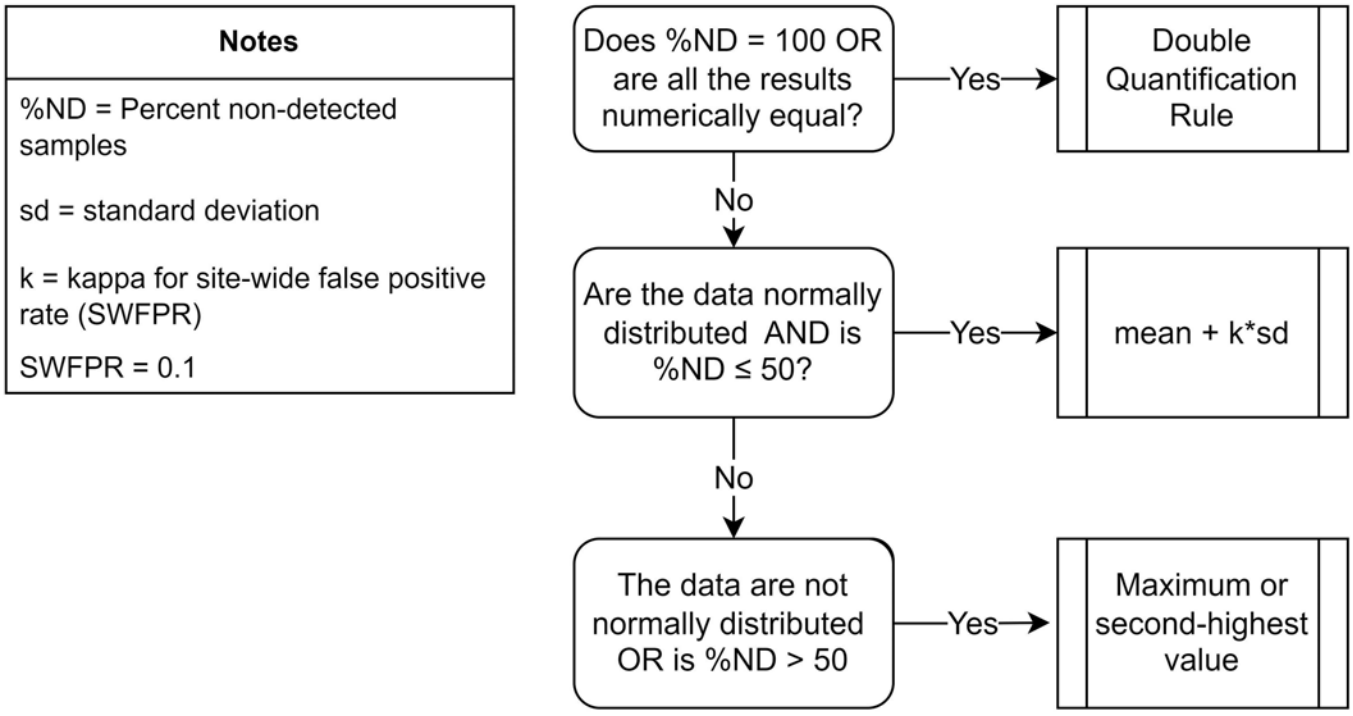
Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.03	s.u.	±0.1 s.u.	P	N	—	MSI	023219-02	8/9/2025
pH 7.00a	7.02	s.u.	±0.1 s.u.			—	MSI	023334-01	12/7/2025
pH 10.00a	10.02	s.u.	±0.1 s.u.			—	MSI	024037-01	2/21/2026
SC 1000	1010	µS/cm	±5%			—	Spectrum	2NA0024	Dec-25
DO (Zero pt)	0.0	mg/L	±0.1 mg/L			—	Macron	#000228049	8/26/2025
Turbidity (DI)	0.0	NTU	<2 NTU			—	Pace Labs	N/A (DI)	N/A (DI)

Approx. every 8 hrs, unless only one well

Comments:

Signature: [signature] Date: 29-Oct-24

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.

APPENDIX C
ALTERNATIVE SOURCE DEMONSTRATIONS

Intended for
Illinois Power Resources Generating, LLC

Date
April 16, 2024

Project Number
1940106781-005

40 C.F.R. § 257.94(E)(2): ALTERNATIVE SOURCE DEMONSTRATION

DUCK CREEK POWER PLANT

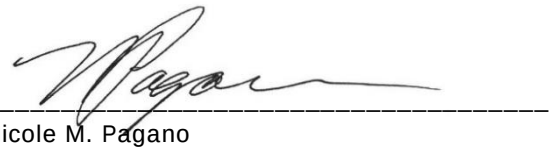
LANDFILL

CCR UNIT 204

RAMBOLL Bright ideas. Sustainable change.

CERTIFICATIONS

I, Nicole M. Pagano, a qualified professional engineer in good standing in the State of Illinois, certify that the information in this report is accurate as of the date of my signature below. The content of this report is not to be used other than for its intended purpose and meaning, or for extrapolations beyond the interpretations contained herein.



Nicole M. Pagano
Qualified Professional Engineer
062-075632
Illinois
Ramboll Americas Engineering Solutions, Inc.
Date: April 16, 2024

I, Chase J. Christenson, a professional geologist in good standing in the State of Illinois, certify that the information in this report is accurate as of the date of my signature below. The content of this report is not to be used other than for its intended purpose and meaning, or for extrapolations beyond the interpretations contained herein.

Chase J. Christenson
Professional Geologist
196.001467
Illinois
Ramboll Americas Engineering Solutions, Inc.
Date: April 16, 2024

Ramboll
234 W. Florida Street
Fifth Floor
Milwaukee, WI 53204
USA
T 414-837-3607
F 414-837-3608
https://ramboll.com

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TABLES (IN TEXT)

FIGURES (IN TEXT)

FIGURES (ATTACHED)

APPENDICES

ACRONYMS AND ABBREVIATIONS

35 I.A.C.	Title 35 of the Illinois Administrative Code
40 C.F.R.	Title 40 of the Code of Federal Regulations
ASD	Alternative Source Demonstration
bgs	below ground surface
CCR	coal combustion residuals
CCR Rule	40 C.F.R. § 257 Subpart D
D13	Detection Monitoring Round 13
DCPP	Duck Creek Power Plant
EPRI	Electric Power Research Institute
LOEs	Line of Evidence
mg/L	milligrams per liter
NAVD88	North American Vertical Datum of 1988
NRT/OBG	Natural Resource Technology, an OBG Company
Ramboll	Ramboll Americas Engineering Solutions, Inc.
SSI	Statistically Significant Increase
UA	Uppermost Aquifer
UPL	Upper Prediction Limit
USGS	United States Geological Survey

1. INTRODUCTION

Title 40 of the Code of Federal Regulations (40 C.F.R.) § 257.94(e)(2) allows the owner or operator of a coal combustion residuals (CCR) unit 90 days from the date of determination of Statistically Significant Increases (SSIs) over background for groundwater constituents listed in Appendix III of 40 C.F.R. § 257 to complete a written demonstration that a source other than the CCR unit being monitored caused the SSIs), or that the SSIs resulted from error in sampling, analysis, statistical evaluation, or natural variation in groundwater quality (Alternative Source Demonstration [ASD]).

This ASD has been prepared on behalf of Illinois Power Resources Generating, LLC by Ramboll Americas Engineering Solutions, Inc. (Ramboll) to provide pertinent information pursuant to 40 C.F.R. § 257.94(e)(2) for the Duck Creek Power Plant (DCPP) Landfill located near Canton, Illinois.

The thirteenth semi-annual detection monitoring samples (Detection Monitoring Round 13 [D13]) were collected between July 18 and July 25, 2023, and analytical data were received on October 19, 2023. In accordance with 40 C.F.R. § 257.93(h)(2), statistical analysis of the data to identify SSIs of 40 C.F.R. § 257 Subpart D (CCR Rule) Appendix III parameters over background concentrations was completed by January 17, 2024, within 90 days of receipt of the analytical data. The statistical determination identified the following SSIs at compliance monitoring wells:

- pH at well G12S and G15S
- Calcium at well G06S

In accordance with the Multi-Site Statistical Analysis Plan (Ramboll, 2022), all wells with SSIs were resampled. Following evaluation of analytical data from the resample event, the following SSIs remained:

- pH at well G12S
- Calcium at well G06S

Pursuant to 40 C.F.R. § 257.94(e)(2), the following lines of evidence (LOEs) demonstrate that sources other than the Landfill were the cause of the SSIs listed above. This ASD was completed by April 16, 2024, within 90 days of determination of the SSIs (January 17, 2024), as required by 40 C.F.R. § 257.94(e)(2).

2. BACKGROUND

2.1 Site Location and Description

The DCPP is in Fulton County, located in central Illinois, approximately 9 miles southeast of the town of Canton. The Landfill is located approximately 3.5 miles north of the power plant. Surface waters in the area include the Duck Creek Cooling Pond to the east, which was used as a source of cooling water for the plant, and various small ponds, some of which are remnants of the area's surface mining history. Prior to construction of the power plant and associated facilities, strip mining of coal took place within the boundaries of the DCPP, specifically on land in the immediate vicinity of the Landfill.

2.2 Description of Landfill CCR Unit

The Landfill has a permitted "in-place" disposal capacity of approximately 10,051,700 cubic yards and an estimated life of 61 years. The overall facility is 169 acres, of which 106 acres are permitted as a single waste disposal unit. The maximum final elevation will be approximately 708 feet North American Vertical Datum of 1988 (NAVD88). The Landfill has a compacted clay earth and synthetic geomembrane liner combined with leachate drainage, collection, and management systems. Historically, the facility received CCR and flue gas desulfurization waste as well as contaminated sediments and riprap generated by closure of the former Recycle Pond at the DCPP. CCR from the Edwards Power Plant was also disposed in the Landfill.

Strip mining has occurred in this area since the 1930s. Strip mining in the site vicinity extracted coal from the Springfield (No. 5) coal seam. Mining operations in the area have ceased. Strip mining has completely disrupted the natural stratigraphy down to the Springfield (No. 5) coal unit at some portions of the DCPP property. The Landfill is located immediately adjacent to and downgradient of several former large surface mining areas.

2.3 Geology and Hydrogeology

The DCPP geologic and hydrogeologic setting summarized below is obtained from published sources, hydrogeologic investigation data, and boring data collected during previous site investigations (Natural Resource Technology, an OBG Company [NRT/OBG], 2017; Ramboll, 2021).

Regionally, the DCPP is positioned on the glacial uplands above the Illinois River in the Ancient Illinois Floodplain of the Till Plains Section of the Central Lowland Province. The undisturbed unlithified materials consist of loess, diamictons, and lacustrine/alluvial deposits. The area is flat to gently rolling uplands that are dissected by deeply incised streams that are tributaries to major river systems. The three distinct hydrostratigraphic units summarized below have been identified at the Landfill based on stratigraphic relationships and common hydrogeologic characteristics:

Several large former surface coal mines are present in the vicinity; unlithified materials are present in the excavated strip mine spoils and have been mixed due to the surface mining activities. Mining operations in the area have ceased.

The uppermost bedrock stratum in the area is the Carbondale Formation of the Kewanee Group of the Pennsylvanian System. Bedrock in the area is identified as Pennsylvanian-age shale deposits and occurs within approximately 50 feet of the ground surface in this area.

Quaternary deposits in the Canton area consist mainly of loess, diamictons, and lacustrine/alluvial deposits that were deposited during Illinoian and Wisconsinian glaciations. The three distinct hydrostratigraphic units summarized below have been identified at the Landfill based on stratigraphic relationships and common hydrogeologic characteristics:

- **Uppermost Aquifer (UA):** At the Landfill, this unit includes the Peoria/Roxana Loess, the upper Radnor Till, and the shallow sands. These units are hydraulically connected and underlain by a thick till sequence of the Radnor Till (NRT/OBG, 2017). While the primary migration pathway is the shallow sand of the UA, the groundwater within the overlying Peoria/Roxanna Loess has the potential to be impacted and is considered a potential migration pathway.
- **Lower Radnor Till/Lower Confining Unit**: Underlying the UA, the lower Radnor Till is approximately 42 to 58 feet thick. Previous hydrogeologic studies indicate discontinuous sand lenses observed within the till are not hydraulically connected to the shallow sand unit (NRT/OBG, 2017).
- **Bedrock Confining Unit**: The thick and low permeability shaley siltstone, silty shale, and coal beds of the Carbondale Formation, are estimated to have a thickness of approximately 300 to 400 feet.

Groundwater elevations (referenced to NAVD88) in the Uppermost Aquifer across the Landfill are shown on **Figure 1**. Groundwater elevations were measured on July 17, 2023, during a combined D13 sampling event at the DCPP for the CCR units located there, and for multiple monitoring programs required by both federal and state regulatory agencies. Groundwater elevations ranged from 598.27 to 613.92 feet and overall groundwater flow within the Uppermost Aquifer under the Landfill was west to east with components of flow to the northeast and southeast.

2.4 Groundwater Monitoring

The CCR Rule groundwater monitoring system for the Landfill is shown on **Figure 1**. Monitoring wells G02S and G04S are used to monitor background groundwater quality for the Landfill. These wells are located south (G02S) and southwest (G04S) of the Landfill. The compliance wells are G06S, G09S, G12S, and G15S.

3. ALTERNATIVE SOURCE DEMONSTRATION: LINES OF EVIDENCE

As allowed by 40 C.F.R. § 257.94(e)(2), this ASD demonstrates that sources other than the Landfill (the CCR unit) caused the SSIs. LOEs supporting this ASD include the following:

1. Concentrations of boron and sulfate in G06S and G12S do not exceed background limits.
2. The major ion composition of Landfill groundwater is similar to background and distinct from Landfill leachate.
3. Proximity of the Landfill to historical mining activity and related groundwater quality impacts.

These LOEs are described and supported in greater detail below.

3.1 LOE #1: Concentrations of Boron and Sulfate in G06S and G12S do not Exceed Background Limits

Boron and sulfate are indicators of CCR impacts to groundwater due to their leachability from CCR, low occurrence as an anthropogenic contaminant, and mobility in groundwater (Electric Power Research Institute [EPRI], 2012). Leachate samples collected from the Landfill have elevated boron and sulfate concentrations, indicating that these parameters are site-specific indicators for CCR. If the groundwater downgradient of the Landfill had been impacted by CCR from the unit, boron and sulfate would be expected to be elevated above background Upper Prediction Limits (UPLs). The UPL is an upper bound on background concentrations calculated for comparing compliance well concentrations to background. Concentrations of boron and sulfate in compliance monitoring wells G06S and G12S, which had D13 SSIs for calcium and pH, respectively, have been consistently below their respective UPLs throughout the period of monitoring for 40 CFR § 257 as summarized in **Table A** below.

Table A. Summary Statistics for Boron and Sulfate Concentrations in Compliance and Leachate Wells (December 2015 to July 2023) with D13 SSIs.

Location	Location Type	Boron (UPL=0.157 mg/L)		Sulfate (UPL=330 mg/L)	
		Minimum	*Maximum*	*Minimum*	*Maximum*
G06S	Compliance	< 0.017	0.14	40	140
G12S	Compliance	< 0.010	0.077	78	100
L103	Leachate	9.8	20.0	1,200	3,500

mg/L = milligrams per liter

Concentrations of boron and sulfate below their respective UPLs in compliance monitoring wells G06S and G12S indicate these wells have not been affected by CCR impacts from the Landfill. Therefore, the Landfill is not the source of the SSIs. Analytical data to support this LOE are included in **Appendix A**.

3.2 LOE #2: The Major Ion Composition of Landfill Groundwater is Similar to Background and Distinct From Landfill Leachate

Piper diagrams graphically represent the major ion composition of aqueous solutions. A Piper diagram displays the position of water samples relative to their major cation and anion content on the two lower triangular portions of the diagram, providing the information which, when combined on the central, diamond-shaped portion of the diagram, identifies the compositional categories or groupings (hydrochemical facies). **Figure A** on the following page is a Piper diagram that displays the ionic composition of groundwater samples from the background and compliance wells associated with the Landfill, as well as leachate. A Leachate sample was collected from the leachate riser, L103, during the D13 sampling event. Wells with exceedances, G06S and G12S, are circled in red.

It is evident from the Piper diagram that the background (brown symbols) and compliance wells (blue symbols) are in the calcium-bicarbonate hydrochemical facies and that the landfill leachate (green symbol) is in the sodium-sulfate facies. The ionic composition of the background and compliance wells demonstrate strong similarity. Additionally, the ionic compositions of the Landfill background and compliance groundwater and the Landfill leachate are dissimilar. Together, the similarity of background and compliance groundwater ionic composition and the differences between groundwater and leachate indicate that the Landfill is not the source of SSIs identified in groundwater.

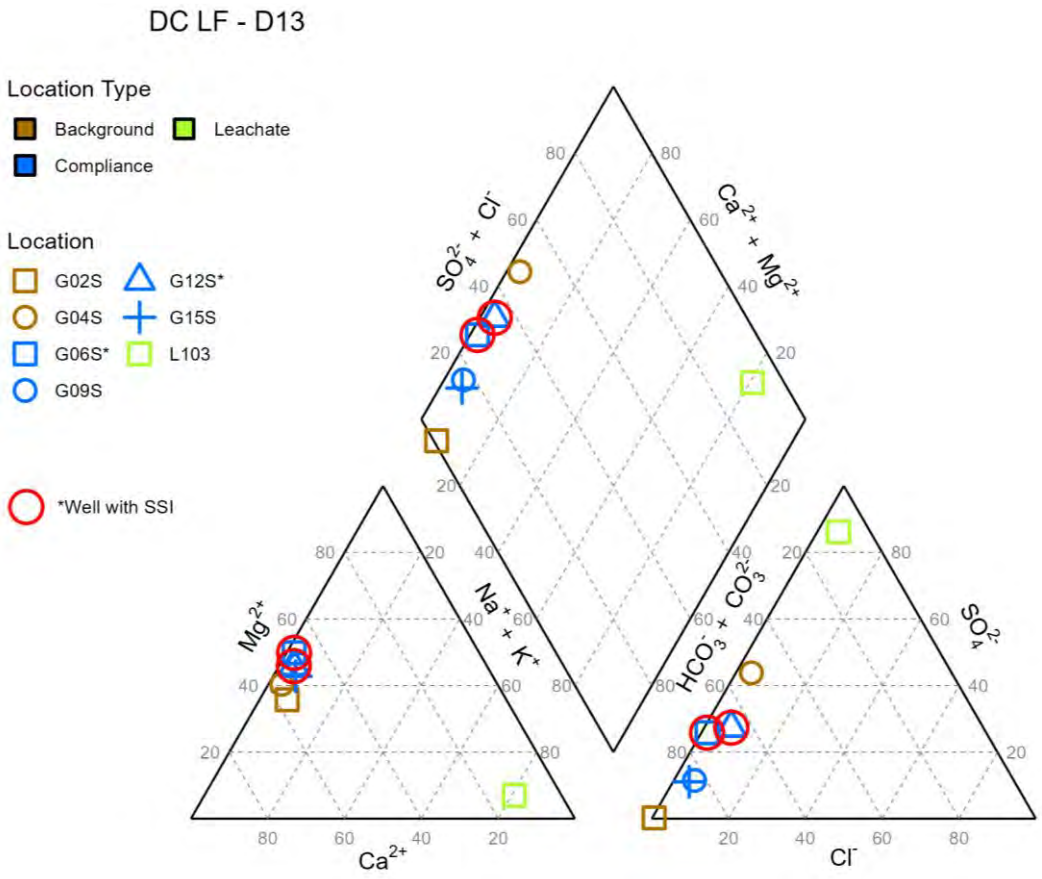


Figure A. Piper Diagram Showing Ionic Composition of Groundwater Samples and Leachate Associated with the Landfill.

3.3 LOE #3: Proximity of the Landfill to Historical Mining Activity and Related Groundwater Quality Impacts

The area surrounding the Landfill consists primarily of unmined coal and reclaimed surface mine land. The extent of nearby surface mines is shown in the attached **Figure 2**. The coal in the area varies in depth from 0 to 50 feet below ground surface (bgs). The CCR Rule groundwater monitoring wells for the Landfill are screened between 25 and 45 feet bgs. Potentiometric data indicates that groundwater flows from west to east as shown on the attached **Figure 1**. The CCR monitoring wells are located approximately 100 to 1,000 feet east (downgradient) of the nearby surface mines along the western, northern, and eastern boundaries of the Landfill (**Figure 2**).

A study of groundwater quality near surface coal mines, performed by the United States Geological Survey (USGS, 2006), provides data on the effects of mines on groundwater quality. The study evaluated regional differences in ionic composition of groundwater in unmined and mined areas using Piper diagrams (**Figure B** below). Groundwater samples collected from wells downgradient of

the reclaimed mine areas in the study ranged from primarily calcium-magnesium carbonate-bicarbonate type (calcium-bicarbonate hydrochemical facies) to a lesser amount of calcium-magnesium sulfate type (calcium sulfate hydrochemical facies). The calcium-bicarbonate groundwater documented in the vicinity of reclaimed surface coal mines is similar to the ionic composition of groundwater samples collected from background and downgradient groundwater monitoring wells at the Landfill.

State of Illinois groundwater quality regulations (Title 35 of the Illinois Administrative Code [35 I.A.C.] § 620 - Groundwater Quality) acknowledge that water quality is adversely affected in areas where coal mining activity has occurred. The groundwater quality standards for total dissolved solids, chloride, iron, manganese, sulfate, and pH within previously mined areas are the existing concentrations of these constituents in groundwater (35 I.A.C. § 620.440c).

The proximity of the Landfill to historic coal mining activity and similarities in the ionic composition of groundwater in areas of reclaimed surface coal mines and in the Landfill groundwater samples demonstrate that historic mining activity has affected groundwater quality at the Landfill.

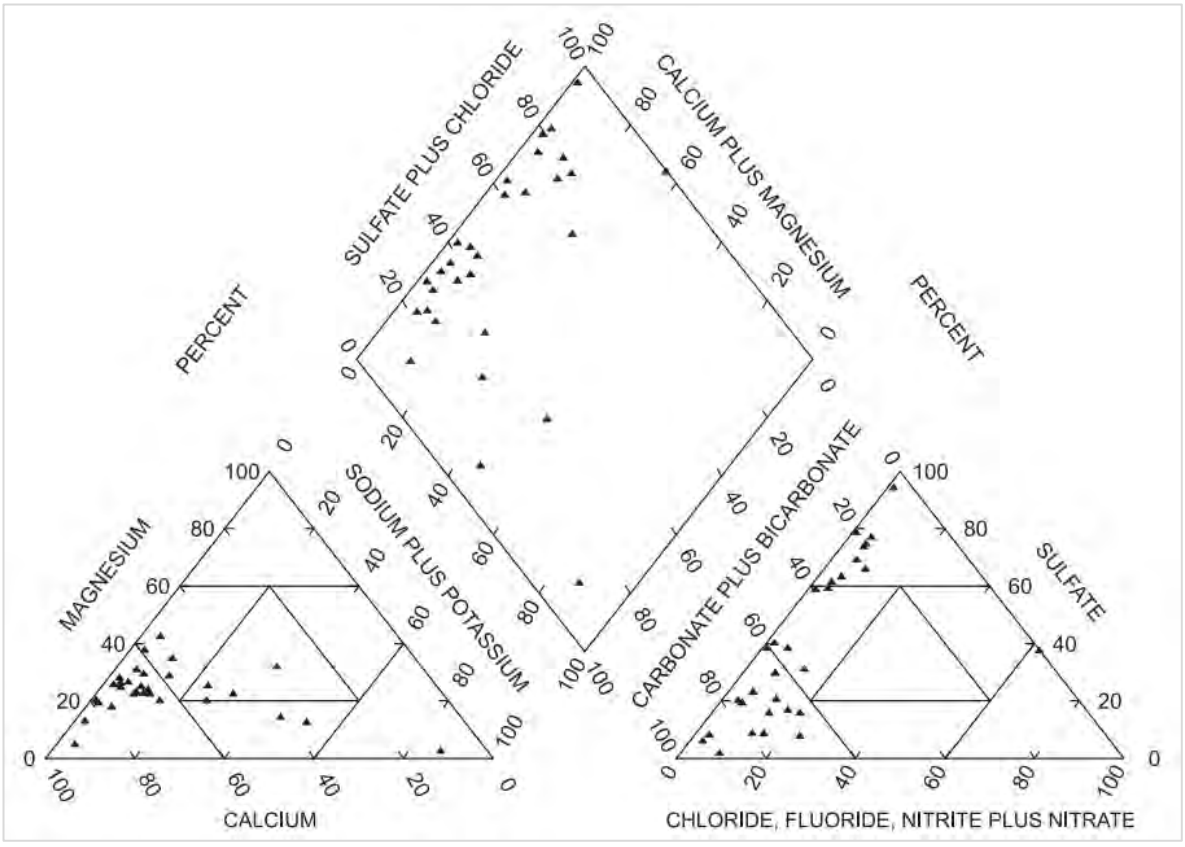


Figure B. Piper Diagram Showing Ionic Composition of Groundwater Downgradient of Reclaimed Surface Coal Mines in High-Sulfur Coal Regions (Modified from USGS).

4. CONCLUSIONS

Based on the three LOEs below and described in the previous section, it has been demonstrated that the Landfill is not the source of the calcium and pH SSIs at downgradient monitoring wells G06S and G12S, respectively.

1. Concentrations of boron and sulfate in G06S and G12S do not exceed background limits.
2. The major ion composition of Landfill groundwater is similar to background and distinct from Landfill leachate.
3. Proximity of the Landfill to historical mining activity and related groundwater quality impacts.

This information serves as the written ASD prepared in accordance with 40 C.F.R. § 257.94(e)(2) that the SSIs observed during D13 were not due to the Landfill. Therefore, an Assessment Monitoring Program is not required, and the Landfill will remain in detection monitoring.

5. REFERENCES

Code of Federal Regulations, Title 40, Chapter I, Subchapter I, Part 257, Subpart D, Standards for the Disposal of Coal Combustion Residuals in Landfills and Surface Impoundments, effective April 17, 2015.

Electric Power Research Institute (EPRI), 2012. *Groundwater Quality Signatures for Assessing Potential Impacts from Coal Combustion Product Leachate, Report 1017923*. October 2012.

Illinois Administrative Code, Title 35, Subtitle F, Chapter I, Part 620: Groundwater Quality, effective October 7, 2013.

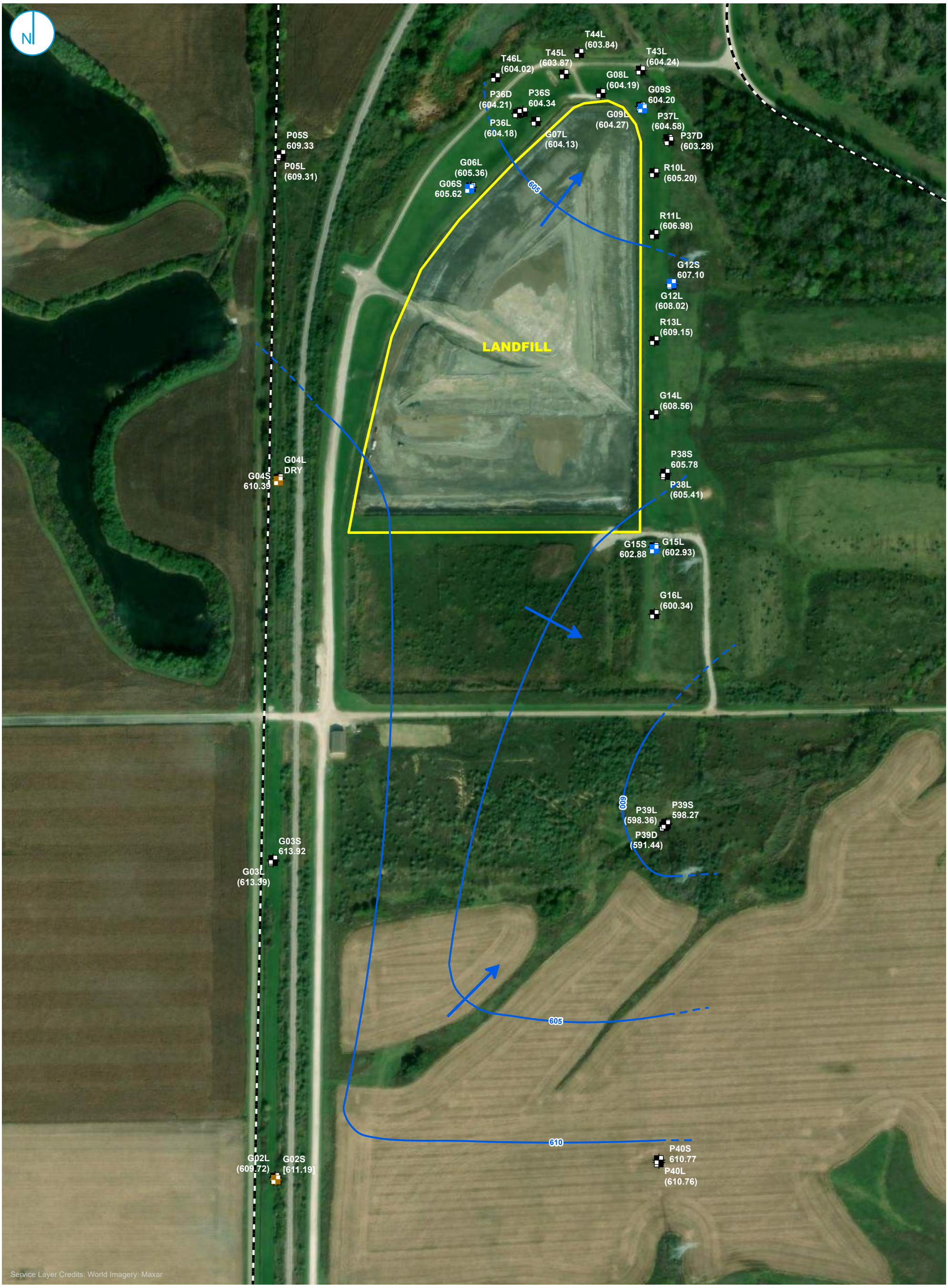
Natural Resource Technology, an OBG Company (NRT/OBG), 2017. *Hydrogeologic Monitoring Plan. Duck Creek GMF Pond – CCR Unit ID 203, Duck Creek Landfill – CCR Unit ID 204. Duck Creek Power Station, Canton, Illinois. Illinois Power Resources Generating, LLC.* October 17, 2017.

Ramboll Americas Engineering Solutions, Inc. (Ramboll), 2021. *Hydrogeologic Site Characterization Report. Duck Creek Power Plant, Gypsum Management Facility Pond, Canton, Illinois. Illinois Power Resources Generating, LLC.* October 25, 2021.

Ramboll Americas Engineering Solutions, Inc. (Ramboll), 2022. *Multi-Site Statistical Analysis Plan*. December 28, 2022.

United States Geological Survey (USGS), 2006. *Ground-Water Quality in Unmined Areas and Near Reclaimed Surface Coal Mines in the Northern and Central Appalachian Coal Regions, Pennsylvania and West Virginia*, Scientific Investigations Report 2006-5059, US Geological Survey.

FIGURES



COMPLIANCE MONITORING WELL
BACKGROUND MONITORING WELL
CCR SOURCE WATER SAMPLE
MONITORING WELL

GROUNDWATER ELEVATION CONTOUR (5-FT CONTOUR INTERVAL, NAVD88)
INFERRED GROUNDWATER ELEVATION
GROUNDWATER FLOW DIRECTION
REGULATED UNIT (SUBJECT UNIT)
PROPERTY BOUNDARY

0 150 300 Feet

NOTES:
1. ELEVATIONS IN PARENTHESES WERE NOT USED FOR CONTOURING.
2. ELEVATIONS IN BRACKETS WERE OBTAINED OUTSIDE OF THE 24 HOUR PERIOD FROM INITIATION OF DEPTH TO GROUNDWATER MEASUREMENTS BUT WITHIN THE SAME SAMPLING EVENT.
3. ELEVATION CONTOURS SHOWN IN FEET, NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).

SAMPLING LOCATIONS AND POTENTIOMETRIC SURFACE MAP JULY 17, 2023

ALTERNATIVE SOURCE DEMONSTRATION
LANDFILL (UNIT ID: 204)
DUCK CREEK POWER PLANT
CANTON, ILLINOIS

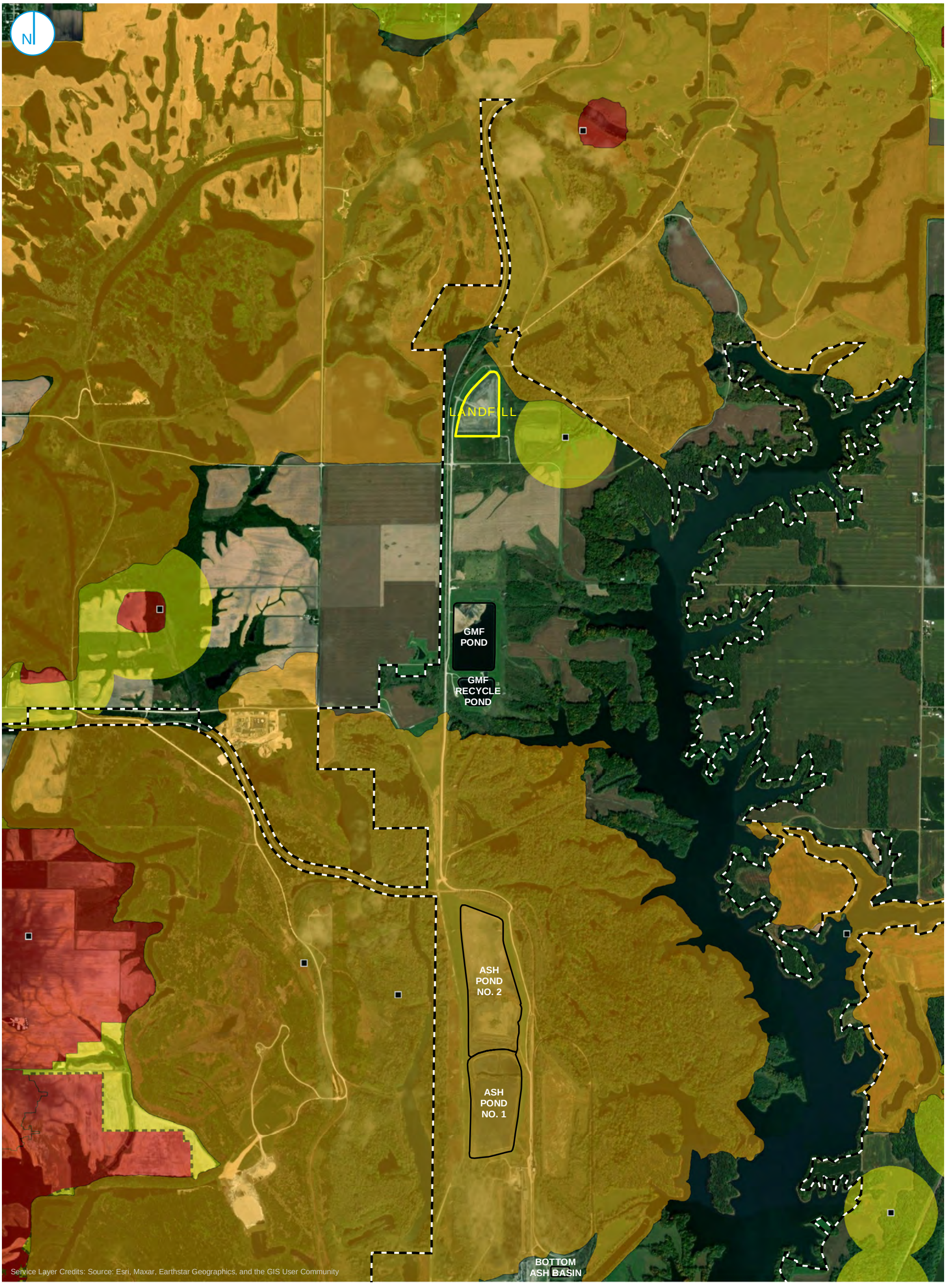
FIGURE 1

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.

RAMBOLL

PROJECT: 169000XXXX | DATED: 7/19/2023 | DESIGNER: egreaves

Y:\Mapping\Projects\22\2285\MXD\845_Operating_Permit\Duck_Creek\GMF_Pond\Figure 2-3_Coal Mine Coverage Area.mxd



- COAL MINE SHAFT
- SURFACE COAL MINE
- UNDERGROUND COAL MINE
- UNDERGROUND MINE BUFFER REGION
- REGULATED UNIT (SUBJECT UNIT)
- SITE FEATURE
- PROPERTY BOUNDARY

0 1,000 2,000 Feet

COAL MINE COVERAGE AREA

ALTERNATIVE SOURCE DEMONSTRATION
LANDFILL (UNIT ID: 204)

DUCK CREEK POWER PLANT
CANTON, ILLINOIS

FIGURE 2

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.

RAMBOLL

APPENDICES

APPENDIX A.
SUPPORTING GROUNDWATER ANALYTICAL DATA
40 C.F.R. § 257: ALTERNATIVE SOURCE DEMONSTRATION
DUCK CREEK POWER PLANT
LANDFILL
CANTON, IL

Well ID	Well Type	Date	Parameter	Result	Unit
G06S	Compliance	12/03/2015	Boron, total	0.140	mg/L
G06S	Compliance	02/04/2016	Boron, total	0.0460	mg/L
G06S	Compliance	04/20/2016	Boron, total	0.0460	mg/L
G06S	Compliance	08/18/2016	Boron, total	0.0220	mg/L
G06S	Compliance	10/19/2016	Boron, total	0.0190	mg/L
G06S	Compliance	01/12/2017	Boron, total	0.0250	mg/L
G06S	Compliance	04/22/2017	Boron, total	0.0170	mg/L
G06S	Compliance	06/28/2017	Boron, total	0.0280	mg/L
G06S	Compliance	11/11/2017	Boron, total	0.0180	mg/L
G06S	Compliance	06/06/2018	Boron, total	0.0470	mg/L
G06S	Compliance	10/04/2018	Boron, total	0.0220	mg/L
G06S	Compliance	02/08/2019	Boron, total	0.0230	mg/L
G06S	Compliance	07/09/2019	Boron, total	0.0620	mg/L
G06S	Compliance	01/07/2020	Boron, total	0.0410	mg/L
G06S	Compliance	08/11/2020	Boron, total	0.0240	mg/L
G06S	Compliance	02/19/2021	Boron, total	0.0180	mg/L
G06S	Compliance	08/09/2021	Boron, total	0.0220	mg/L
G06S	Compliance	01/31/2022	Boron, total	0.0220	mg/L
G06S	Compliance	07/20/2022	Boron, total	0.0230	mg/L
G06S	Compliance	01/11/2023	Boron, total	0.0250	mg/L
G06S	Compliance	07/18/2023	Boron, total	0.0650	mg/L
G06S	Compliance	12/03/2015	Sulfate, total	46.0	mg/L
G06S	Compliance	02/04/2016	Sulfate, total	49.0	mg/L
G06S	Compliance	04/20/2016	Sulfate, total	42.0	mg/L
G06S	Compliance	08/18/2016	Sulfate, total	46.0	mg/L
G06S	Compliance	10/19/2016	Sulfate, total	46.0	mg/L
G06S	Compliance	01/12/2017	Sulfate, total	56.0	mg/L
G06S	Compliance	04/22/2017	Sulfate, total	45.0	mg/L
G06S	Compliance	06/28/2017	Sulfate, total	43.0	mg/L
G06S	Compliance	11/11/2017	Sulfate, total	44.0	mg/L
G06S	Compliance	06/06/2018	Sulfate, total	44.0	mg/L
G06S	Compliance	10/04/2018	Sulfate, total	40.0	mg/L
G06S	Compliance	02/08/2019	Sulfate, total	41.0	mg/L
G06S	Compliance	07/09/2019	Sulfate, total	48.0	mg/L
G06S	Compliance	01/07/2020	Sulfate, total	47.0	mg/L
G06S	Compliance	08/11/2020	Sulfate, total	51.0	mg/L
G06S	Compliance	02/19/2021	Sulfate, total	55.0	mg/L
G06S	Compliance	08/09/2021	Sulfate, total	54.0	mg/L
G06S	Compliance	01/31/2022	Sulfate, total	96.0	mg/L
G06S	Compliance	07/20/2022	Sulfate, total	120	mg/L
G06S	Compliance	01/11/2023	Sulfate, total	110	mg/L
G06S	Compliance	07/18/2023	Sulfate, total	140	mg/L
G12S	Compliance	12/02/2015	Boron, total	0.0260	mg/L
G12S	Compliance	02/04/2016	Boron, total	0.01 U	mg/L
G12S	Compliance	04/20/2016	Boron, total	0.0140	mg/L
G12S	Compliance	08/18/2016	Boron, total	0.01 U	mg/L

APPENDIX A.
SUPPORTING GROUNDWATER ANALYTICAL DATA
40 C.F.R. § 257: ALTERNATIVE SOURCE DEMONSTRATION
DUCK CREEK POWER PLANT
LANDFILL
CANTON, IL

Well ID	Well Type	Date	Parameter	Result	Unit
G12S	Compliance	10/19/2016	Boron, total	0.01 U	mg/L
G12S	Compliance	01/27/2017	Boron, total	0.0100	mg/L
G12S	Compliance	05/04/2017	Boron, total	0.0190	mg/L
G12S	Compliance	06/28/2017	Boron, total	0.0150	mg/L
G12S	Compliance	11/11/2017	Boron, total	0.0110	mg/L
G12S	Compliance	06/07/2018	Boron, total	0.01 U	mg/L
G12S	Compliance	10/04/2018	Boron, total	0.0180	mg/L
G12S	Compliance	02/08/2019	Boron, total	0.0160	mg/L
G12S	Compliance	07/09/2019	Boron, total	0.0200	mg/L
G12S	Compliance	01/06/2020	Boron, total	0.0130	mg/L
G12S	Compliance	08/12/2020	Boron, total	0.0130	mg/L
G12S	Compliance	02/22/2021	Boron, total	0.0230	mg/L
G12S	Compliance	08/09/2021	Boron, total	0.0100	mg/L
G12S	Compliance	01/31/2022	Boron, total	0.0110	mg/L
G12S	Compliance	07/21/2022	Boron, total	0.0770	mg/L
G12S	Compliance	01/16/2023	Boron, total	0.0130	mg/L
G12S	Compliance	07/24/2023	Boron, total	0.0170 J+	mg/L
G12S	Compliance	12/02/2015	Sulfate, total	79.0	mg/L
G12S	Compliance	02/04/2016	Sulfate, total	99.0	mg/L
G12S	Compliance	04/20/2016	Sulfate, total	91.0	mg/L
G12S	Compliance	08/18/2016	Sulfate, total	95.0	mg/L
G12S	Compliance	10/19/2016	Sulfate, total	98.0	mg/L
G12S	Compliance	01/27/2017	Sulfate, total	95.0	mg/L
G12S	Compliance	05/04/2017	Sulfate, total	96.0	mg/L
G12S	Compliance	06/28/2017	Sulfate, total	95.0	mg/L
G12S	Compliance	11/11/2017	Sulfate, total	98.0	mg/L
G12S	Compliance	06/07/2018	Sulfate, total	95.0	mg/L
G12S	Compliance	10/04/2018	Sulfate, total	95.0	mg/L
G12S	Compliance	02/08/2019	Sulfate, total	91.0	mg/L
G12S	Compliance	07/09/2019	Sulfate, total	78.0	mg/L
G12S	Compliance	01/06/2020	Sulfate, total	90.0	mg/L
G12S	Compliance	08/12/2020	Sulfate, total	86.0	mg/L
G12S	Compliance	02/22/2021	Sulfate, total	97.0	mg/L
G12S	Compliance	08/09/2021	Sulfate, total	97.0	mg/L
G12S	Compliance	01/31/2022	Sulfate, total	95.0	mg/L
G12S	Compliance	07/21/2022	Sulfate, total	95.0	mg/L
G12S	Compliance	01/16/2023	Sulfate, total	89.0	mg/L
G12S	Compliance	07/24/2023	Sulfate, total	100	mg/L
L103	Leachate	04/16/2020	Boron, total	15.0	mg/L
L103	Leachate	11/19/2020	Boron, total	9.80	mg/L
L103	Leachate	05/14/2021	Boron, total	11.0	mg/L
L103	Leachate	11/19/2021	Boron, total	14.0	mg/L
L103	Leachate	04/28/2022	Boron, total	20.0	mg/L
L103	Leachate	10/27/2022	Boron, total	16.0	mg/L
L103	Leachate	05/09/2023	Boron, total	18.0	mg/L
L103	Leachate	04/16/2020	Sulfate, total	1,700	mg/L

APPENDIX A.
SUPPORTING GROUNDWATER ANALYTICAL DATA
40 C.F.R. § 257: ALTERNATIVE SOURCE DEMONSTRATION
DUCK CREEK POWER PLANT
LANDFILL
CANTON, IL

Well ID	Well Type	Date	Parameter	Result	Unit
L103	Leachate	11/19/2020	Sulfate, total	3,500	mg/L
L103	Leachate	05/14/2021	Sulfate, total	1,200	mg/L
L103	Leachate	11/19/2021	Sulfate, total	2,400	mg/L
L103	Leachate	04/28/2022	Sulfate, total	2,300	mg/L
L103	Leachate	10/27/2022	Sulfate, total	1,900	mg/L
L103	Leachate	05/09/2023	Sulfate, total	2,400	mg/L

Notes:
mg/L = milligrams per liter
J+ = The result is an estimated quantity, but the result may be biased high.
U = The analyte was analyzed for, but was not detected above the level of the adjusted detection limit or quantitation limit, as appropriate.

Intended for
Illinois Power Resources Generating, LLC

Date
September 2, 2024

Project Number
1940106781-005

40 C.F.R. § 257.94(E)(2): ALTERNATIVE SOURCE DEMONSTRATION

DUCK CREEK POWER PLANT

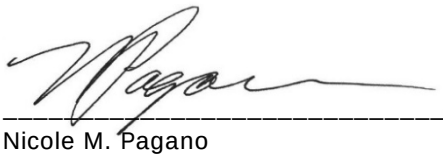
LANDFILL

CCR UNIT 204

RAMBOLL Bright ideas. Sustainable change.

CERTIFICATIONS

I, Nicole M. Pagano, a qualified professional engineer in good standing in the State of Illinois, certify that the information in this report is accurate as of the date of my signature below. The content of this report is not to be used other than for its intended purpose and meaning, or for extrapolations beyond the interpretations contained herein.



Nicole M. Pagano
Qualified Professional Engineer
062-075632
Illinois
Ramboll Americas Engineering Solutions, Inc.
Date: September 2, 2024

I, Chase J. Christenson, a professional geologist in good standing in the State of Illinois, certify that the information in this report is accurate as of the date of my signature below. The content of this report is not to be used other than for its intended purpose and meaning, or for extrapolations beyond the interpretations contained herein.

Chase J. Christenson
Professional Geologist
196.001467
Illinois
Ramboll Americas Engineering Solutions, Inc.
Date: September 2, 2024

Ramboll
234 W. Florida Street
Fifth Floor
Milwaukee, WI 53204
USA
T 414-837-3607
F 414-837-3608
https://ramboll.com

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FIGURES (IN TEXT)

FIGURES (ATTACHED)

APPENDICES

ACRONYMS AND ABBREVIATIONS

35 I.A.C.	Title 35 of the Illinois Administrative Code
40 C.F.R.	Title 40 of the Code of Federal Regulations
ASD	Alternative Source Demonstration
bgs	below ground surface
CCR	coal combustion residuals
CCR Rule	40 C.F.R. § 257 Subpart D
D14	Detection Monitoring Round 14
DCPP	Duck Creek Power Plant
EPRI	Electric Power Research Institute
IPRG	Illinois Power Resources Generating, LLC
LOEs	Line of Evidence
mg/L	milligrams per liter
NAVD88	North American Vertical Datum of 1988
NRT/OBG	Natural Resource Technology, an OBG Company
Ramboll	Ramboll Americas Engineering Solutions, Inc.
SSI	Statistically Significant Increase
UA	Uppermost Aquifer
UPL	Upper Prediction Limit
USGS	United States Geological Survey

1. INTRODUCTION

Title 40 of the Code of Federal Regulations (40 C.F.R.) § 257.94(e)(2) allows the owner or operator of a coal combustion residuals (CCR) unit 90 days from the date of determination of Statistically Significant Increases (SSIs) over background for groundwater constituents listed in Appendix III of 40 C.F.R. § 257 to complete a written demonstration that a source other than the CCR unit being monitored caused the SSIs, or that the SSIs resulted from error in sampling, analysis, statistical evaluation, or natural variation in groundwater quality (Alternative Source Demonstration [ASD]).

This ASD has been prepared on behalf of Illinois Power Resources Generating, LLC (IPRG) by Ramboll Americas Engineering Solutions, Inc. (Ramboll) to provide pertinent information pursuant to 40 C.F.R. § 257.94(e)(2) for the Duck Creek Power Plant (DCPP) Landfill located near Canton, Illinois.

The fourteenth semi-annual detection monitoring samples (Detection Monitoring Round 14 [D14]) were collected between January 18 and February 1, 2024, and analytical data were received on March 6, 2024. In accordance with 40 C.F.R. § 257.93(h)(2), statistical analysis of the data to identify SSIs of 40 C.F.R. § 257 Subpart D (CCR Rule) Appendix III parameters over background concentrations was completed by June 4, 2024, within 90 days of receipt of the analytical data. The statistical determination identified the following SSIs at compliance monitoring wells:

- pH at well G06S and G15S

In accordance with the Multi-Site Statistical Analysis Plan (Ramboll, 2022), all wells with SSIs were resampled. Following evaluation of analytical data from the resample event, the following SSI remained:

- pH at well G15S

Pursuant to 40 C.F.R. § 257.94(e)(2), the lines of evidence (LOEs) presented in **Section 3** demonstrate that sources other than the Landfill were the cause of the pH SSI listed above and the Landfill did not contribute to the SSI. This ASD was completed by September 2, 2024, within 90 days of determination of the SSI (June 4, 2024), as required by 40 C.F.R. § 257.94(e)(2).

2. BACKGROUND

2.1 Site Location and Description

The DCPP is located in Fulton County, in central Illinois, approximately 9 miles southeast of the town of Canton. The Landfill is located approximately 3.5 miles north of the decommissioned power plant. Surface waters in the area include the Duck Creek Cooling Pond to the east, which was used as a source of cooling water for the plant, and various small ponds, some of which are remnants of the area's surface mining history. Prior to construction of the power plant and associated facilities, strip mining of coal took place within the boundaries of the DCPP, specifically on land in the immediate vicinity of the Landfill.

2.2 Description of Landfill CCR Unit

The Landfill has a permitted "in-place" disposal capacity of approximately 10,051,700 cubic yards and an estimated life of 61 years. The overall facility is 169 acres, of which 106 acres are permitted as a single waste disposal unit. The maximum final elevation will be approximately 708 feet[1]. The Landfill has a compacted clay earth and synthetic geomembrane liner combined with leachate drainage, collection, and management systems. Historically, the facility received CCR and flue gas desulfurization waste as well as contaminated sediments and riprap generated by closure of the former Recycle Pond at the DCPP. CCR from the Edwards Power Plant (located in Peoria, Illinois and operated by IPRG) was also disposed in the Landfill.

Strip mining has occurred in this area since the 1930s. Strip mining in the site vicinity extracted coal from the Springfield (No. 5) coal seam. Mining operations in the area have ceased. Strip mining has completely disrupted the natural stratigraphy down to the Springfield (No. 5) coal unit at some portions of the DCPP property. The Landfill is located immediately adjacent to and downgradient of several former large surface mining areas.

2.3 Geology and Hydrogeology

The DCPP geologic and hydrogeologic setting summarized below is obtained from published sources, hydrogeologic investigation data, and boring data collected during previous site investigations (Natural Resource Technology, an OBG Company [NRT/OBG], 2017; Ramboll, 2021).

Regionally, the DCPP is positioned on the glacial uplands above the Illinois River in the Ancient Illinois Floodplain of the Till Plains Section of the Central Lowland Province. The undisturbed unlithified materials consist of loess, diamictons, and lacustrine/alluvial deposits. The area is flat to gently rolling uplands that are dissected by deeply incised streams that are tributaries to major river systems.

Several large former surface coal mines are present in the vicinity; unlithified materials are present in the excavated strip mine spoils and have been mixed due to the surface mining activities. Mining operations in the area have ceased.

[1] All elevations in this report are referenced to North American Vertical Datum of 1988 (NAVD88) unless otherwise noted.

The uppermost bedrock stratum in the area is the Carbondale Formation of the Kewanee Group of the Pennsylvanian System. Bedrock in the area is identified as Pennsylvanian-age shale deposits and occurs within approximately 50 feet of the ground surface in this area.

Quaternary deposits in the Canton area consist mainly of loess, diamictons, and lacustrine/alluvial deposits that were deposited during Illinoian and Wisconsinian glaciations. The three distinct hydrostratigraphic units summarized below have been identified at the Landfill based on stratigraphic relationships and common hydrogeologic characteristics:

- **Uppermost Aquifer (UA):** At the Landfill, this unit includes the Peoria/Roxana Loess, the upper Radnor Till, and the shallow sands. These units are hydraulically connected and underlain by a thick till sequence of the Radnor Till (NRT/OBG, 2017). While the primary migration pathway is the shallow sand of the UA, the groundwater within the overlying Peoria/Roxanna Loess has the potential to be impacted and is considered a potential migration pathway.
- **Lower Radnor Till/Lower Confining Unit**: Underlying the UA, the lower Radnor Till is approximately 42 to 58 feet thick. Previous hydrogeologic studies indicate discontinuous sand lenses observed within the till are not hydraulically connected to the shallow sand unit (NRT/OBG, 2017).
- **Bedrock Confining Unit**: The thick and low permeability shaley siltstone, silty shale, and coal beds of the Carbondale Formation, are estimated to have a thickness of approximately 300 to 400 feet.

Groundwater elevations in the UA across the Landfill are shown on **Figure 1**. Groundwater elevations were measured on January 17, 2024, during a combined D14 sampling event at the DCPP for the CCR units located there, and for multiple monitoring programs required by both federal and state regulatory agencies. Groundwater elevations ranged from 600.78 to 617.17 feet and overall groundwater flow within the UA under the Landfill was west to east with components of flow to the northeast and southeast.

2.4 Groundwater Monitoring

The CCR Rule groundwater monitoring system for the Landfill is shown on **Figure 1**. Monitoring wells G02S and G04S are used to monitor background groundwater quality for the Landfill. These wells are located south (G02S) and southwest (G04S) of the Landfill. The compliance wells are G06S, G09S, G12S, and G15S.

3. ALTERNATIVE SOURCE DEMONSTRATION: LINES OF EVIDENCE

As allowed by 40 C.F.R. § 257.94(e)(2), this ASD demonstrates that sources other than the Landfill (the CCR unit) caused the pH SSI and that the Landfill did not contribute to the SSI. LOEs supporting this ASD include the following:

1. Concentrations of boron and sulfate in G15S do not exceed background limits.
2. The major ion composition of Landfill groundwater is similar to background and distinct from Landfill leachate.
3. Proximity of the Landfill to historical mining activity and related groundwater quality impacts.

These LOEs are described and supported in greater detail below.

3.1 LOE #1: Concentrations of Boron and Sulfate in G15S Do Not Exceed Background Limits

Boron and sulfate are indicators of CCR impacts to groundwater due to their leachability from CCR, low occurrence as an anthropogenic contaminant, and mobility in groundwater (Electric Power Research Institute [EPRI], 2012). Leachate samples collected from the Landfill have elevated boron and sulfate concentrations, indicating that these parameters are site-specific indicators for CCR. If the groundwater downgradient of the Landfill had been impacted by CCR from the unit, boron and sulfate would be expected to be elevated above background Upper Prediction Limits (UPLs). The UPL is an upper bound on background concentrations calculated for comparing compliance well concentrations to background. Concentrations of boron and sulfate in compliance monitoring well G15S, which had an SSI for pH in D14, have been consistently below their respective UPLs throughout the period of monitoring for 40 C.F.R. § 257 as summarized in **Table A** below.

Table A. Summary Statistics for Boron and Sulfate Concentrations in Compliance Well G15S and Leachate Well L103 (December 2015 to January 2024).

Location	Location Type	Boron (UPL=0.157 mg/L)		Sulfate (UPL=330 mg/L)	
		Minimum	*Maximum*	*Minimum*	*Maximum*
G15S	Compliance	< 0.0071 U	0.056	37.0	69.0
L103	Leachate	9.8	20.0	1,200	3,500

mg/L = milligrams per liter
U = the analyte was analyzed for, but was not detected above the level of the adjusted detection limit or quantitation limit, as appropriate

Concentrations of boron and sulfate below their respective UPLs in compliance monitoring well G15S indicate these wells have not been affected by CCR impacts from the Landfill. Therefore, the Landfill is not the source of the SSI. Analytical data to support this LOE are included in **Appendix A**.

3.2 LOE #2: The Major Ion Composition of Landfill Groundwater is Similar to Background and Distinct From Landfill Leachate

Piper diagrams graphically represent the major ion composition of aqueous solutions. A Piper diagram displays the position of water samples relative to their major cation and anion content on the two lower triangular portions of the diagram, providing the information which, when combined on the central, diamond-shaped portion of the diagram, identifies the compositional categories or groupings (hydrochemical facies). **Figure A** below is a Piper diagram that displays the ionic composition of groundwater samples from the background and compliance wells associated with the Landfill, as well as leachate. A Leachate sample was collected from the leachate riser, L103, during the D14 sampling event. The compliance monitoring well with a D14 SSI, G15S, is circled in red.

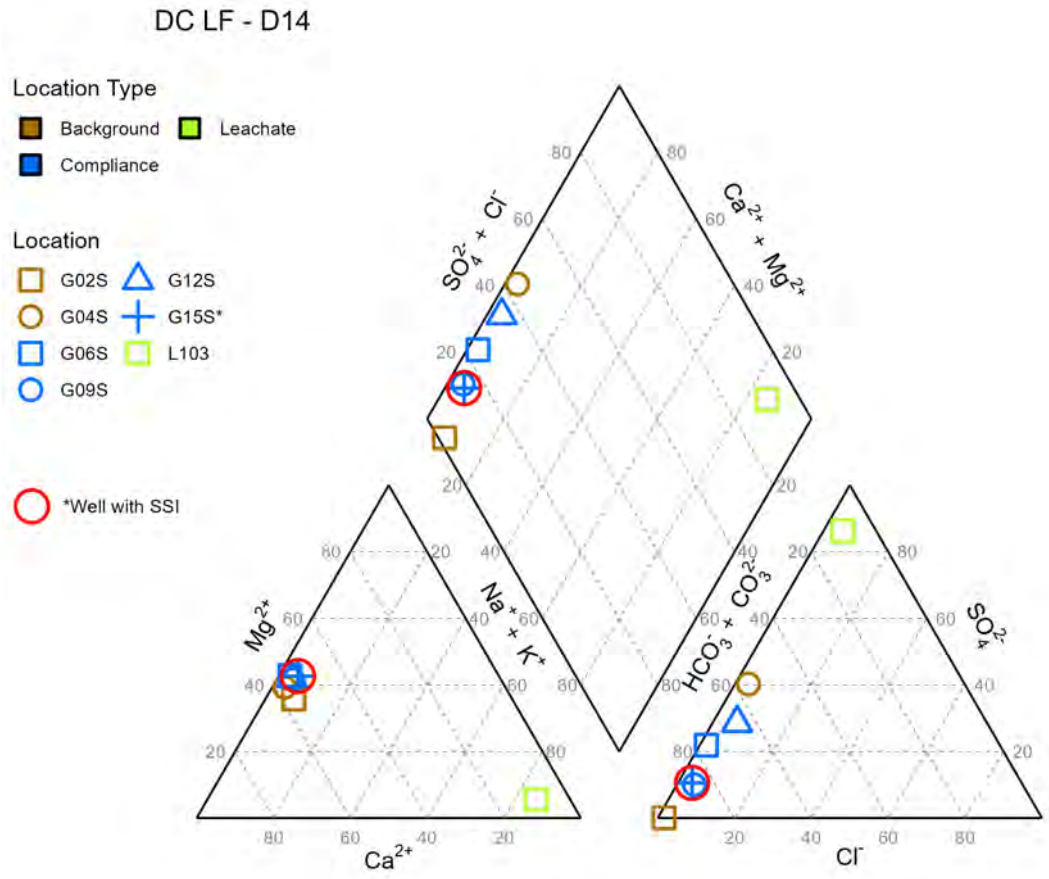


Figure A. Piper Diagram Showing Ionic Composition of Groundwater Samples and Leachate Associated with the Landfill (brown = background wells, blue = compliance wells, green = leachate/porewater). Well with pH SSI, G15S, is circled red.

It is evident from the Piper diagram that the background (brown symbols) and compliance wells (blue symbols) are in the calcium-bicarbonate hydrochemical facies and that the landfill leachate

(green symbol) is in the sodium-sulfate facies. The ionic composition of the background and compliance wells demonstrate strong similarity. Additionally, the ionic compositions of the Landfill background and compliance groundwater and the Landfill leachate are dissimilar. Together, the similarity of background and compliance groundwater ionic composition and the differences between groundwater and leachate indicate that the Landfill is not the source of the SSI identified in groundwater.

3.3 LOE #3: Proximity of the Landfill to Historical Mining Activity and Related Groundwater Quality Impacts

The area surrounding the Landfill consists primarily of unmined coal and reclaimed surface mine land. The extent of nearby surface mines is shown in the attached **Figure 2**. The coal in the area varies in depth from 0 to 50 feet below ground surface (bgs). The CCR Rule groundwater monitoring wells for the Landfill are screened between 25 and 45 feet bgs. Potentiometric data indicates that groundwater flows from west to east as shown on the attached **Figure 1**. The CCR monitoring wells are located approximately 100 to 1,000 feet east (downgradient) of the nearby surface mines along the western, northern, and eastern boundaries of the Landfill (**Figure 2**).

A study of groundwater quality near surface coal mines, performed by the United States Geological Survey (USGS, 2006), provides data on the effects of mines on groundwater quality. The study evaluated regional differences in ionic composition of groundwater in unmined and mined areas using Piper diagrams (**Figure B** on the following page). Groundwater samples collected from wells downgradient of the reclaimed mine areas in the study ranged from primarily calcium-magnesium carbonate-bicarbonate type (calcium-bicarbonate hydrochemical facies) to a lesser amount of calcium-magnesium sulfate type (calcium sulfate hydrochemical facies). The calcium-bicarbonate groundwater documented in the vicinity of reclaimed surface coal mines is similar to the ionic composition of groundwater samples collected from background and downgradient groundwater monitoring wells at the Landfill.

State of Illinois groundwater quality regulations (Title 35 of the Illinois Administrative Code [35 I.A.C.] § 620 - Groundwater Quality) acknowledge that water quality is adversely affected in areas where coal mining activity has occurred. The groundwater quality standards for total dissolved solids, chloride, iron, manganese, sulfate, and pH within previously mined areas are the existing concentrations of these constituents in groundwater (35 I.A.C. § 620.440c).

The proximity of the Landfill to historic coal mining activity and similarities in the ionic composition of groundwater in areas of reclaimed surface coal mines and in the Landfill groundwater samples demonstrate that historic mining activity has affected groundwater quality at the Landfill.

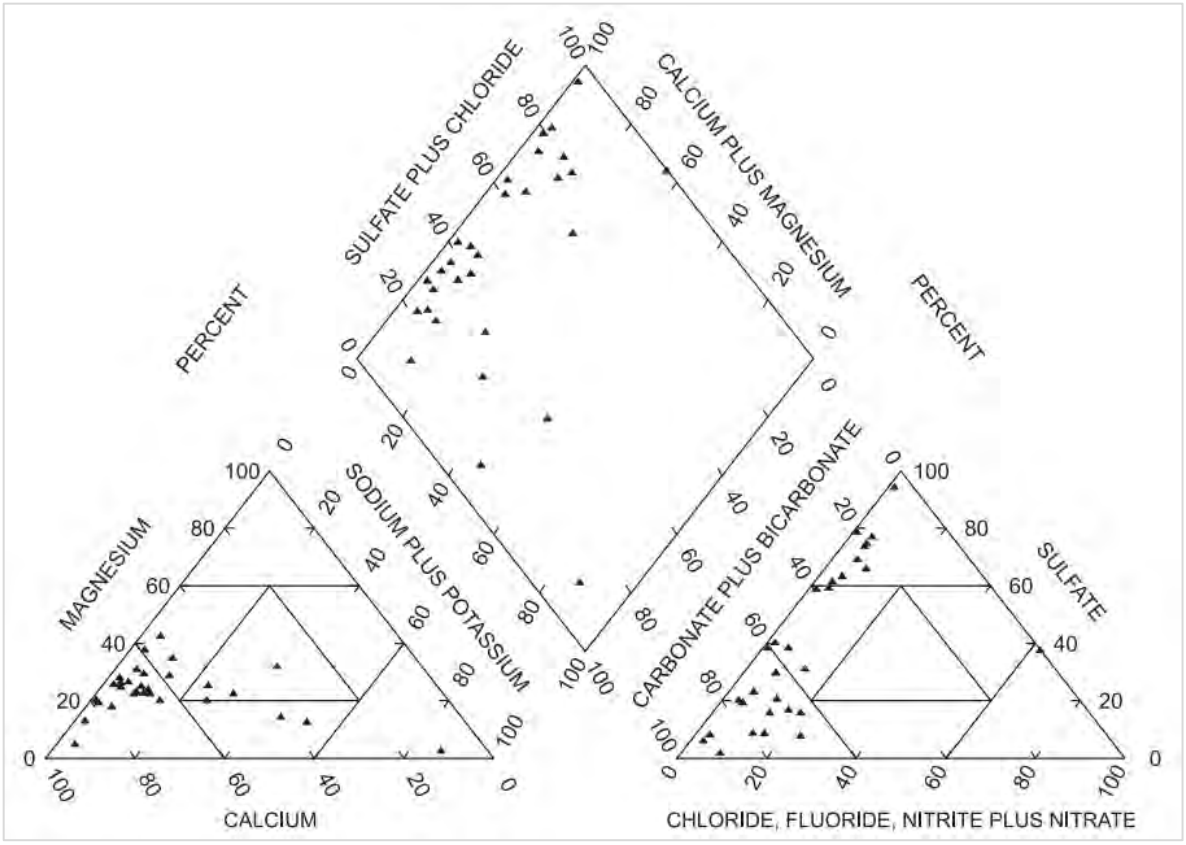


Figure B. Piper Diagram Showing Ionic Composition of Groundwater Downgradient of Reclaimed Surface Coal Mines in High-Sulfur Coal Regions (Modified from USGS).

4. CONCLUSIONS

Based on the three LOEs below and described in the previous section, it has been demonstrated that the Landfill is not the source of the pH SSI at downgradient monitoring well G15S and the Landfill did not contribute to the SSI.

1. Concentrations of boron and sulfate in G15S do not exceed background limits.
2. The major ion composition of Landfill groundwater is similar to background and distinct from Landfill leachate.
3. Proximity of the Landfill to historical mining activity and related groundwater quality impacts.

This information serves as the written ASD prepared in accordance with 40 C.F.R. § 257.94(e)(2) that the pH SSI observed during D14 was not caused by the Landfill and the Landfill did not contribute to the SSI. Therefore, an Assessment Monitoring Program is not required, and the Landfill will remain in Detection Monitoring.

5. REFERENCES

Code of Federal Regulations, Title 40, Chapter I, Subchapter I, Part 257, Subpart D, Standards for the Disposal of Coal Combustion Residuals in Landfills and Surface Impoundments, effective April 17, 2015.

Electric Power Research Institute (EPRI), 2012. *Groundwater Quality Signatures for Assessing Potential Impacts from Coal Combustion Product Leachate, Report 1017923*. October 2012.

Illinois Administrative Code, Title 35, Subtitle F, Chapter I, Part 620: Groundwater Quality, effective October 7, 2013.

Natural Resource Technology, an OBG Company (NRT/OBG), 2017. *Hydrogeologic Monitoring Plan. Duck Creek GMF Pond – CCR Unit ID 203, Duck Creek Landfill – CCR Unit ID 204. Duck Creek Power Station, Canton, Illinois. Illinois Power Resources Generating, LLC.* October 17, 2017.

Ramboll Americas Engineering Solutions, Inc. (Ramboll), 2021. *Hydrogeologic Site Characterization Report. Duck Creek Power Plant, Gypsum Management Facility Pond, Canton, Illinois. Illinois Power Resources Generating, LLC.* October 25, 2021.

Ramboll Americas Engineering Solutions, Inc. (Ramboll), 2022. *Multi-Site Statistical Analysis Plan*. December 28, 2022.

United States Geological Survey (USGS), 2006. *Ground-Water Quality in Unmined Areas and Near Reclaimed Surface Coal Mines in the Northern and Central Appalachian Coal Regions, Pennsylvania and West Virginia*, Scientific Investigations Report 2006-5059, US Geological Survey.

FIGURES

COMPLIANCE MONITORING WELL
BACKGROUND MONITORING WELL
PORE WATER WELL
MONITORING WELL

GROUNDWATER ELEVATION CONTOUR (5-FT CONTOUR INTERVAL, NAVD88)
INFERRED GROUNDWATER ELEVATION
GROUNDWATER FLOW DIRECTION
REGULATED UNIT (SUBJECT UNIT)
PROPERTY BOUNDARY

0 150 300 Feet

NOTES:
1. ELEVATIONS IN PARENTHESES WERE NOT USED FOR CONTOURING.
2. ELEVATIONS IN BRACKETS WERE OBTAINED OUTSIDE OF THE 24 HOUR PERIOD FROM INITIATION OF DEPTH TO GROUNDWATER MEASUREMENTS BUT WITHIN THE SAME SAMPLING EVENT.
3. ELEVATION CONTOURS SHOWN IN FEET, NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).

SAMPLING LOCATIONS AND POTENTIOMETRIC SURFACE MAP JANUARY 17, 2024

ALTERNATIVE SOURCE DEMONSTRATION
LANDFILL (UNIT ID: 204)
DUCK CREEK POWER PLANT
CANTON, ILLINOIS

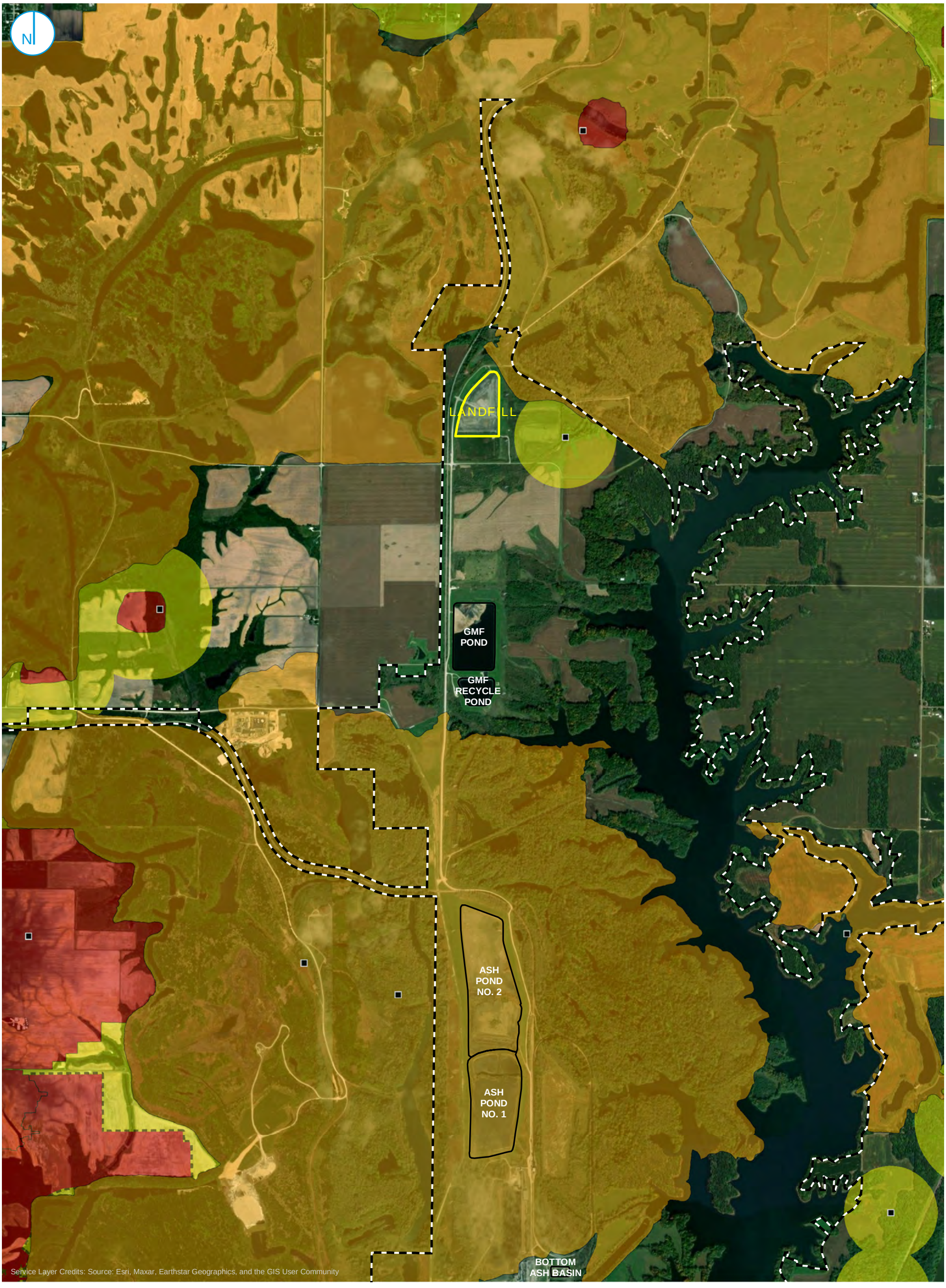
FIGURE 1

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.

RAMBOLL

PROJECT: 169000XXXX | DATED: 7/19/2023 | DESIGNER: egreaves

Y:\Mapping\Projects\22\2285\MXD\845_Operating_Permit\Duck_Creek\GMF_Pond\Figure 2-3_Coal Mine Coverage Area.mxd



- COAL MINE SHAFT
- SURFACE COAL MINE
- UNDERGROUND COAL MINE
- UNDERGROUND MINE BUFFER REGION
- REGULATED UNIT (SUBJECT UNIT)
- SITE FEATURE
- PROPERTY BOUNDARY

0 1,000 2,000 Feet

COAL MINE COVERAGE AREA

ALTERNATIVE SOURCE DEMONSTRATION
LANDFILL (UNIT ID: 204)

DUCK CREEK POWER PLANT
CANTON, ILLINOIS

FIGURE 2

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.

RAMBOLL

APPENDICES

APPENDIX A
SUPPORTING GROUNDWATER ANALYTICAL DATA

APPENDIX A.
SUPPORTING GROUNDWATER ANALYTICAL DATA
40 C.F.R. § 257: ALTERNATIVE SOURCE DEMONSTRATION
DUCK CREEK POWER PLANT
LANDFILL
CANTON, IL

Well ID	Well Type	Date	Parameter	Result	Unit
G15S	Compliance	12/03/2015	Boron, total	0.0120	mg/L
G15S	Compliance	02/04/2016	Boron, total	0.0130	mg/L
G15S	Compliance	04/20/2016	Boron, total	0.0110	mg/L
G15S	Compliance	08/18/2016	Boron, total	0.01 U	mg/L
G15S	Compliance	10/19/2016	Boron, total	0.0140	mg/L
G15S	Compliance	01/28/2017	Boron, total	0.0170	mg/L
G15S	Compliance	05/04/2017	Boron, total	0.01 U	mg/L
G15S	Compliance	06/28/2017	Boron, total	0.0130	mg/L
G15S	Compliance	11/11/2017	Boron, total	0.01 U	mg/L
G15S	Compliance	06/07/2018	Boron, total	0.01 U	mg/L
G15S	Compliance	10/05/2018	Boron, total	0.0110	mg/L
G15S	Compliance	02/08/2019	Boron, total	0.0120	mg/L
G15S	Compliance	07/16/2019	Boron, total	0.0250	mg/L
G15S	Compliance	01/07/2020	Boron, total	0.0150	mg/L
G15S	Compliance	08/12/2020	Boron, total	0.0130	mg/L
G15S	Compliance	02/22/2021	Boron, total	0.0290	mg/L
G15S	Compliance	08/10/2021	Boron, total	0.01 U	mg/L
G15S	Compliance	01/31/2022	Boron, total	0.0140	mg/L
G15S	Compliance	07/21/2022	Boron, total	0.0560	mg/L
G15S	Compliance	01/16/2023	Boron, total	0.0110	mg/L
G15S	Compliance	07/25/2023	Boron, total	0.01 UJ	mg/L
G15S	Compliance	01/26/2024	Boron, total	0.0071 U	mg/L
G15S	Compliance	12/03/2015	Sulfate, total	45.0	mg/L
G15S	Compliance	02/04/2016	Sulfate, total	53.0	mg/L
G15S	Compliance	04/20/2016	Sulfate, total	45.0	mg/L
G15S	Compliance	08/18/2016	Sulfate, total	56.0	mg/L
G15S	Compliance	10/19/2016	Sulfate, total	54.0	mg/L
G15S	Compliance	01/28/2017	Sulfate, total	69.0	mg/L
G15S	Compliance	05/04/2017	Sulfate, total	53.0	mg/L
G15S	Compliance	06/28/2017	Sulfate, total	52.0	mg/L
G15S	Compliance	11/11/2017	Sulfate, total	45.0	mg/L
G15S	Compliance	06/07/2018	Sulfate, total	50.0	mg/L
G15S	Compliance	10/05/2018	Sulfate, total	46.0	mg/L
G15S	Compliance	02/08/2019	Sulfate, total	38.0	mg/L
G15S	Compliance	07/16/2019	Sulfate, total	45.0	mg/L
G15S	Compliance	01/07/2020	Sulfate, total	48.0	mg/L
G15S	Compliance	08/12/2020	Sulfate, total	40.0	mg/L
G15S	Compliance	02/22/2021	Sulfate, total	44.0	mg/L
G15S	Compliance	08/10/2021	Sulfate, total	40.0	mg/L
G15S	Compliance	01/31/2022	Sulfate, total	40.0	mg/L
G15S	Compliance	07/21/2022	Sulfate, total	41.0	mg/L
G15S	Compliance	01/16/2023	Sulfate, total	37.0	mg/L
G15S	Compliance	07/25/2023	Sulfate, total	43.0	mg/L
G15S	Compliance	01/26/2024	Sulfate, total	39.0	mg/L
L103	Leachate	04/16/2020	Boron, total	15.0	mg/L
L103	Leachate	11/19/2020	Boron, total	9.80	mg/L

APPENDIX A.
SUPPORTING GROUNDWATER ANALYTICAL DATA
40 C.F.R. § 257: ALTERNATIVE SOURCE DEMONSTRATION
DUCK CREEK POWER PLANT
LANDFILL
CANTON, IL

Well ID	Well Type	Date	Parameter	Result	Unit
L103	Leachate	05/14/2021	Boron, total	11.0	mg/L
L103	Leachate	11/19/2021	Boron, total	14.0	mg/L
L103	Leachate	04/28/2022	Boron, total	20.0	mg/L
L103	Leachate	10/27/2022	Boron, total	16.0	mg/L
L103	Leachate	05/09/2023	Boron, total	18.0	mg/L
L103	Leachate	10/20/2023	Boron, total	15.0	mg/L
L103	Leachate	01/26/2024	Boron, total	12.0	mg/L
L103	Leachate	04/16/2020	Sulfate, total	1,700	mg/L
L103	Leachate	11/19/2020	Sulfate, total	3,500	mg/L
L103	Leachate	05/14/2021	Sulfate, total	1,200	mg/L
L103	Leachate	11/19/2021	Sulfate, total	2,400	mg/L
L103	Leachate	04/28/2022	Sulfate, total	2,300	mg/L
L103	Leachate	10/27/2022	Sulfate, total	1,900	mg/L
L103	Leachate	05/09/2023	Sulfate, total	2,400	mg/L
L103	Leachate	10/20/2023	Sulfate, total	2,100	mg/L
L103	Leachate	01/26/2024	Sulfate, total	2,200	mg/L

Notes:
mg/L = milligrams per liter
U = The analyte was analyzed for, but was not detected above the level of the adjusted detection limit or quantitation limit, as appropriate.
UJ = The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.