



Illinois Power Generating Company
1500 Eastport Plaza Drive
Collinsville, IL 62234

October 16, 2023

Illinois Environmental Protection Agency
DWPC – Permits MC#15
Attn: Part 845 Coal Combustion Residual Rule Submittal
1021 North Grand Avenue East
Springfield, IL 62794

Re: Coffeen Power Plant Ash Pond No. 2; IEPA ID # W1350150004-02

Dear Mr. LeCrone:

In accordance with Title 35 of the Illinois Administrative Code (35 I.A.C.) Section (§) 845.610(b)(3)(D), Illinois Power Generating Company (IPGC) is submitting groundwater monitoring data for the Quarter 2, 2023 sampling event at the Coffeen Power Plant Ash Pond Number (No.) 2 (AP2), identified by Illinois Environmental Protection Agency (IEPA) ID No. W1350150004-02. This data is being submitted and placed in the facility's operating record as required by 35 I.A.C. § 845.800(d)(15) within 60 days of receiving final laboratory analytical data. Results were compared with the groundwater protection standards (GWPSs) described in 35 I.A.C. § 845.600 to determine exceedances of the GWPS.

The date of this submittal is considered to be the date that exceedances of the GWPSs were detected. This notification of exceedances of the GWPSs in 35 I.A.C. § 845.600 will be placed in the facility's operating record within 30 days as required by 35 I.A.C. § 845.800(d)(16). As allowed in 35 I.A.C. § 845.650(e), an alternative source demonstration (ASD) will be evaluated for the detected exceedances of the GWPSs and, if successfully completed, the ASD will be submitted to IEPA within 60 days of this transmittal.

Sincerely,

A handwritten signature in blue ink that reads "Dianna Tickner".

Dianna Tickner, PE, PMP
Senior Director, Demolition and Decommission

Enclosures

Groundwater Monitoring Data and Detected Exceedances, Quarter 2, 2023, Ash Pond No. 2, Coffeen Power Plant, Coffeen, Illinois

**35 I.A.C. § 845.610(b)(3)(D)
GROUNDWATER MONITORING DATA AND DETECTED EXCEEDANCES
QUARTER 2, 2023
ASH POND NO. 2, COFFEEN POWER PLANT, COFFEEN, ILLINOIS**

October 16, 2023

Samples were collected on May 31 and June 6 through 8, 2023 and analyzed for the parameters listed in Title 35 of the Illinois Administrative Code (35 I.A.C.) Section (§) 845.600(a), calcium, and turbidity. Final laboratory analytical data was received on August 17, 2023.

The monitoring well locations are included in **Figure 1. Attachment A** summarizes the groundwater elevation data for the Quarter 2, 2023 sampling event. Groundwater was not observed within the screen interval of G1003 (the well was dry). This location will continue to be monitored for the presence of groundwater per the Groundwater Monitoring Plan (GMP)¹. **Table 1** is a summary of the field parameters and analytical results. **Attachment B** contains the associated laboratory analytical reports and field data sheets for the Quarter 2, 2023 sampling event.

Statistical procedures used to evaluate groundwater results are provided in Appendix B of the GMP¹ provided in the operating permit application. In accordance with 35 I.A.C. § 845.610(b)(3)(B), the Quarter 2, 2023 groundwater monitoring data were evaluated for statistically significant levels (SSLs) over background levels for the constituents listed in 35 I.A.C. § 845.600. **Attachment C** shows the statistically derived values compared to background levels.

In accordance with 35 I.A.C. § 845.610(b)(3)(C), the statistically derived values identified as Statistical Results in **Table 2** were compared with the groundwater protection standards (GWPSs) described in 35 I.A.C. § 845.600 to determine exceedances of the GWPSs, as shown in **Table 2**. The date of this submittal is considered to be the date that the exceedances were detected.

As allowed in 35 I.A.C. § 845.650(e), an alternative source demonstration (ASD) will be evaluated for the detected exceedances of the GWPSs and, if successfully completed, the ASD will be submitted to Illinois Environmental Protection Agency (IEPA) within 60 days of this transmittal.

TABLES

- Table 1 Field Parameters and Analytical Results - Quarter 2, 2023
- Table 2 Comparison of Statistical Results to GWPS - Quarter 2, 2023

FIGURES

- Figure 1 35 I.A.C. § 845 Groundwater Monitoring Well Network

ATTACHMENTS

- Attachment A Groundwater Elevation Data - Quarter 2, 2023
- Attachment B Laboratory Reports and Field Data Sheets - Quarter 2, 2023
- Attachment C Comparison of Statistical Results to Background - Quarter 2, 2023

¹ Ramboll Americas Engineering Solutions, Inc. (Ramboll), 2021. *Groundwater Monitoring Plan. Ash Pond No. 2. Coffeen Power Plant. Coffeen, Illinois. October 25, 2021.*

TABLES

TABLE 1.
FIELD PARAMETERS AND ANALYTICAL RESULTS - QUARTER 2, 2023

845 QUARTERLY REPORT
 COFFEEN POWER PLANT
 ASH POND NO. 2
 COFFEEN, IL

Well ID	Well Type	Event	Date	Parameter	Result	Unit
G270	Background	E001	06/08/2023	Antimony, total	0.00043 U	mg/L
G270	Background	E001	06/08/2023	Arsenic, total	0.00110	mg/L
G270	Background	E001	06/08/2023	Barium, total	0.0640	mg/L
G270	Background	E001	06/08/2023	Beryllium, total	0.00059 U	mg/L
G270	Background	E001	06/08/2023	Boron, total	0.0140	mg/L
G270	Background	E001	06/08/2023	Cadmium, total	0.00074 U	mg/L
G270	Background	E001	06/08/2023	Calcium, total	57.0	mg/L
G270	Background	E001	06/08/2023	Chloride, total	8.30	mg/L
G270	Background	E001	06/08/2023	Chromium, total	0.0028 U	mg/L
G270	Background	E001	06/08/2023	Cobalt, total	0.00064 J	mg/L
G270	Background	E001	06/08/2023	Dissolved Oxygen	11.0	mg/L
G270	Background	E001	06/08/2023	Fluoride, total	0.298	mg/L
G270	Background	E001	06/08/2023	Lead, total	0.00051 J	mg/L
G270	Background	E001	06/08/2023	Lithium, total	0.005 U	mg/L
G270	Background	E001	06/08/2023	Mercury, total	0.00014 U	mg/L
G270	Background	E001	06/08/2023	Molybdenum, total	0.00120	mg/L
G270	Background	E001	06/08/2023	Oxidation Reduction Potential	61.0	mV
G270	Background	E001	06/08/2023	pH (field)	6.6	SU
G270	Background	E001	06/08/2023	Radium 226 + Radium 228, total	0.485	pCi/L
G270	Background	E001	06/08/2023	Selenium, total	0.00074 U	mg/L
G270	Background	E001	06/08/2023	Specific Conductance @ 25C (field)	782	micromhos/cm
G270	Background	E001	06/08/2023	Sulfate, total	54.0	mg/L
G270	Background	E001	06/08/2023	Temperature	14.6	degrees C
G270	Background	E001	06/08/2023	Thallium, total	0.00038 U	mg/L
G270	Background	E001	06/08/2023	Total Dissolved Solids	500	mg/L
G270	Background	E001	06/08/2023	Turbidity, field	54.6	NTU
G280	Background	E001	06/08/2023	Antimony, total	0.00043 U	mg/L
G280	Background	E001	06/08/2023	Arsenic, total	0.00077 J	mg/L
G280	Background	E001	06/08/2023	Barium, total	0.0490	mg/L
G280	Background	E001	06/08/2023	Beryllium, total	0.00059 U	mg/L
G280	Background	E001	06/08/2023	Boron, total	0.0200	mg/L
G280	Background	E001	06/08/2023	Cadmium, total	0.00074 U	mg/L
G280	Background	E001	06/08/2023	Calcium, total	79.0	mg/L
G280	Background	E001	06/08/2023	Chloride, total	71.0	mg/L
G280	Background	E001	06/08/2023	Chromium, total	0.0028 U	mg/L
G280	Background	E001	06/08/2023	Cobalt, total	0.00048 U	mg/L
G280	Background	E001	06/08/2023	Dissolved Oxygen	2.00	mg/L
G280	Background	E001	06/08/2023	Fluoride, total	0.339	mg/L
G280	Background	E001	06/08/2023	Lead, total	0.00064 J	mg/L
G280	Background	E001	06/08/2023	Lithium, total	0.005 U	mg/L
G280	Background	E001	06/08/2023	Mercury, total	0.00014 U	mg/L
G280	Background	E001	06/08/2023	Molybdenum, total	0.00097 J	mg/L
G280	Background	E001	06/08/2023	Oxidation Reduction Potential	190	mV
G280	Background	E001	06/08/2023	pH (field)	7.3	SU
G280	Background	E001	06/08/2023	Radium 226 + Radium 228, total	0.839	pCi/L
G280	Background	E001	06/08/2023	Selenium, total	0.00074 U	mg/L

TABLE 1.
FIELD PARAMETERS AND ANALYTICAL RESULTS - QUARTER 2, 2023

845 QUARTERLY REPORT
 COFFEEN POWER PLANT
 ASH POND NO. 2
 COFFEEN, IL

Well ID	Well Type	Event	Date	Parameter	Result	Unit
G280	Background	E001	06/08/2023	Specific Conductance @ 25C (field)	902	micromhos/cm
G280	Background	E001	06/08/2023	Sulfate, total	91.0	mg/L
G280	Background	E001	06/08/2023	Temperature	15.4	degrees C
G280	Background	E001	06/08/2023	Thallium, total	0.00038 U	mg/L
G280	Background	E001	06/08/2023	Total Dissolved Solids	590	mg/L
G280	Background	E001	06/08/2023	Turbidity, field	46.1	NTU
G281	Background	E001	06/08/2023	Antimony, total	0.00043 U	mg/L
G281	Background	E001	06/08/2023	Arsenic, total	0.00093 J	mg/L
G281	Background	E001	06/08/2023	Barium, total	0.0710	mg/L
G281	Background	E001	06/08/2023	Beryllium, total	0.00059 U	mg/L
G281	Background	E001	06/08/2023	Boron, total	0.0071 U	mg/L
G281	Background	E001	06/08/2023	Cadmium, total	0.00074 U	mg/L
G281	Background	E001	06/08/2023	Calcium, total	130	mg/L
G281	Background	E001	06/08/2023	Chloride, total	75.0	mg/L
G281	Background	E001	06/08/2023	Chromium, total	0.0028 U	mg/L
G281	Background	E001	06/08/2023	Cobalt, total	0.00099 J	mg/L
G281	Background	E001	06/08/2023	Dissolved Oxygen	0.950	mg/L
G281	Background	E001	06/08/2023	Fluoride, total	0.253	mg/L
G281	Background	E001	06/08/2023	Lead, total	0.00053 J	mg/L
G281	Background	E001	06/08/2023	Lithium, total	0.005 U	mg/L
G281	Background	E001	06/08/2023	Mercury, total	0.00014 U	mg/L
G281	Background	E001	06/08/2023	Molybdenum, total	0.00074 U	mg/L
G281	Background	E001	06/08/2023	Oxidation Reduction Potential	11.0	mV
G281	Background	E001	06/08/2023	pH (field)	6.8	SU
G281	Background	E001	06/08/2023	Radium 226 + Radium 228, total	0	pCi/L
G281	Background	E001	06/08/2023	Selenium, total	0.00074 U	mg/L
G281	Background	E001	06/08/2023	Specific Conductance @ 25C (field)	1,350	micromhos/cm
G281	Background	E001	06/08/2023	Sulfate, total	140	mg/L
G281	Background	E001	06/08/2023	Temperature	18.4	degrees C
G281	Background	E001	06/08/2023	Thallium, total	0.00038 U	mg/L
G281	Background	E001	06/08/2023	Total Dissolved Solids	1,000	mg/L
G281	Background	E001	06/08/2023	Turbidity, field	35.6	NTU
G1001	Compliance	E001	06/07/2023	Antimony, total	0.0021 J	mg/L
G1001	Compliance	E001	06/07/2023	Arsenic, total	0.00069 U	mg/L
G1001	Compliance	E001	06/07/2023	Barium, total	0.0710	mg/L
G1001	Compliance	E001	06/07/2023	Beryllium, total	0.00059 U	mg/L
G1001	Compliance	E001	06/07/2023	Boron, total	0.950	mg/L
G1001	Compliance	E001	06/07/2023	Cadmium, total	0.00074 U	mg/L
G1001	Compliance	E001	06/07/2023	Calcium, total	140	mg/L
G1001	Compliance	E001	06/07/2023	Chloride, total	15.0	mg/L
G1001	Compliance	E001	06/07/2023	Chromium, total	0.0028 U	mg/L
G1001	Compliance	E001	06/07/2023	Cobalt, total	0.00048 U	mg/L
G1001	Compliance	E001	06/07/2023	Dissolved Oxygen	1.80	mg/L
G1001	Compliance	E001	06/07/2023	Fluoride, total	0.228 J	mg/L
G1001	Compliance	E001	06/07/2023	Lead, total	0.00022 U	mg/L
G1001	Compliance	E001	06/07/2023	Lithium, total	0.0094 J	mg/L

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845 QUARTERLY REPORT
 COFFEEN POWER PLANT
 ASH POND NO. 2
 COFFEEN, IL

Well ID	Well Type	Event	Date	Parameter	Result	Unit
G1001	Compliance	E001	06/07/2023	Mercury, total	0.0002 U	mg/L
G1001	Compliance	E001	06/07/2023	Molybdenum, total	0.00790	mg/L
G1001	Compliance	E001	06/07/2023	Oxidation Reduction Potential	111	mV
G1001	Compliance	E001	06/07/2023	pH (field)	7.0	SU
G1001	Compliance	E001	06/07/2023	Radium 226 + Radium 228, total	0.917 J+	pCi/L
G1001	Compliance	E001	06/07/2023	Selenium, total	0.00074 U	mg/L
G1001	Compliance	E001	06/07/2023	Specific Conductance @ 25C (field)	1,330	micromhos/cm
G1001	Compliance	E001	06/07/2023	Sulfate, total	180	mg/L
G1001	Compliance	E001	06/07/2023	Temperature	19.1	degrees C
G1001	Compliance	E001	06/07/2023	Thallium, total	0.00038 U	mg/L
G1001	Compliance	E001	06/07/2023	Total Dissolved Solids	830	mg/L
G1001	Compliance	E001	06/07/2023	Turbidity, field	9.20	NTU
G401	Compliance	E001	06/07/2023	Antimony, total	0.00043 U	mg/L
G401	Compliance	E001	06/07/2023	Arsenic, total	0.00069 J	mg/L
G401	Compliance	E001	06/07/2023	Barium, total	0.0100 J+	mg/L
G401	Compliance	E001	06/07/2023	Beryllium, total	0.00059 U	mg/L
G401	Compliance	E001	06/07/2023	Boron, total	3.90	mg/L
G401	Compliance	E001	06/07/2023	Cadmium, total	0.00074 U	mg/L
G401	Compliance	E001	06/07/2023	Calcium, total	490	mg/L
G401	Compliance	E001	06/07/2023	Chloride, total	3.60	mg/L
G401	Compliance	E001	06/07/2023	Chromium, total	0.0028 U	mg/L
G401	Compliance	E001	06/07/2023	Cobalt, total	0.110	mg/L
G401	Compliance	E001	06/07/2023	Dissolved Oxygen	1.10	mg/L
G401	Compliance	E001	06/07/2023	Fluoride, total	0.212 J	mg/L
G401	Compliance	E001	06/07/2023	Lead, total	0.00022 U	mg/L
G401	Compliance	E001	06/07/2023	Lithium, total	0.018 J	mg/L
G401	Compliance	E001	06/07/2023	Mercury, total	0.0002 U	mg/L
G401	Compliance	E001	06/07/2023	Molybdenum, total	0.00074 U	mg/L
G401	Compliance	E001	06/07/2023	Oxidation Reduction Potential	-32.0	mV
G401	Compliance	E001	06/07/2023	pH (field)	6.2	SU
G401	Compliance	E001	06/07/2023	Radium 226 + Radium 228, total	0.628	pCi/L
G401	Compliance	E001	06/07/2023	Selenium, total	0.00074 U	mg/L
G401	Compliance	E001	06/07/2023	Specific Conductance @ 25C (field)	3,130	micromhos/cm
G401	Compliance	E001	06/07/2023	Sulfate, total	2,100	mg/L
G401	Compliance	E001	06/07/2023	Temperature	12.3	degrees C
G401	Compliance	E001	06/07/2023	Thallium, total	0.00038 U	mg/L
G401	Compliance	E001	06/07/2023	Total Dissolved Solids	6,600	mg/L
G401	Compliance	E001	06/07/2023	Turbidity, field	28.8	NTU
G402	Compliance	E001	06/06/2023	Antimony, total	0.00043 U	mg/L
G402	Compliance	E001	06/06/2023	Arsenic, total	0.00340	mg/L
G402	Compliance	E001	06/06/2023	Barium, total	0.0260	mg/L
G402	Compliance	E001	06/06/2023	Beryllium, total	0.00059 U	mg/L
G402	Compliance	E001	06/06/2023	Boron, total	4.90	mg/L
G402	Compliance	E001	06/06/2023	Cadmium, total	0.00074 U	mg/L
G402	Compliance	E001	06/06/2023	Calcium, total	210	mg/L
G402	Compliance	E001	06/06/2023	Chloride, total	3.40	mg/L

TABLE 1.
FIELD PARAMETERS AND ANALYTICAL RESULTS - QUARTER 2, 2023

845 QUARTERLY REPORT
COFFEEN POWER PLANT
ASH POND NO. 2
COFFEEN, IL

Well ID	Well Type	Event	Date	Parameter	Result	Unit
G402	Compliance	E001	06/06/2023	Chromium, total	0.0034 J	mg/L
G402	Compliance	E001	06/06/2023	Cobalt, total	0.00350	mg/L
G402	Compliance	E001	06/06/2023	Dissolved Oxygen	8.60	mg/L
G402	Compliance	E001	06/06/2023	Fluoride, total	0.187 J	mg/L
G402	Compliance	E001	06/06/2023	Lead, total	0.00200	mg/L
G402	Compliance	E001	06/06/2023	Lithium, total	0.019 J	mg/L
G402	Compliance	E001	06/06/2023	Mercury, total	0.00014 U	mg/L
G402	Compliance	E001	06/06/2023	Molybdenum, total	0.00230	mg/L
G402	Compliance	E001	06/06/2023	Oxidation Reduction Potential	182	mV
G402	Compliance	E001	06/06/2023	pH (field)	6.6	SU
G402	Compliance	E001	06/06/2023	Radium 226 + Radium 228, total	1.22	pCi/L
G402	Compliance	E001	06/06/2023	Selenium, total	0.00074 U	mg/L
G402	Compliance	E001	06/06/2023	Specific Conductance @ 25C (field)	1,720	micromhos/cm
G402	Compliance	E001	06/06/2023	Sulfate, total	580	mg/L
G402	Compliance	E001	06/06/2023	Temperature	23.2	degrees C
G402	Compliance	E001	06/06/2023	Thallium, total	0.00038 U	mg/L
G402	Compliance	E001	06/06/2023	Total Dissolved Solids	1,400	mg/L
G402	Compliance	E001	06/06/2023	Turbidity, field	109	NTU
G403	Compliance	E001	06/07/2023	Antimony, total	0.00043 U	mg/L
G403	Compliance	E001	06/07/2023	Arsenic, total	0.00069 U	mg/L
G403	Compliance	E001	06/07/2023	Barium, total	0.120	mg/L
G403	Compliance	E001	06/07/2023	Beryllium, total	0.00059 U	mg/L
G403	Compliance	E001	06/07/2023	Boron, total	0.0350	mg/L
G403	Compliance	E001	06/07/2023	Cadmium, total	0.00074 U	mg/L
G403	Compliance	E001	06/07/2023	Calcium, total	78.0	mg/L
G403	Compliance	E001	06/07/2023	Chloride, total	6.20	mg/L
G403	Compliance	E001	06/07/2023	Chromium, total	0.0028 U	mg/L
G403	Compliance	E001	06/07/2023	Cobalt, total	0.00076 J	mg/L
G403	Compliance	E001	06/07/2023	Dissolved Oxygen	1.60	mg/L
G403	Compliance	E001	06/07/2023	Fluoride, total	0.261	mg/L
G403	Compliance	E001	06/07/2023	Lead, total	0.00022 U	mg/L
G403	Compliance	E001	06/07/2023	Lithium, total	0.005 U	mg/L
G403	Compliance	E001	06/07/2023	Mercury, total	0.0002 U	mg/L
G403	Compliance	E001	06/07/2023	Molybdenum, total	0.00076 J	mg/L
G403	Compliance	E001	06/07/2023	Oxidation Reduction Potential	40.7	mV
G403	Compliance	E001	06/07/2023	pH (field)	7.0	SU
G403	Compliance	E001	06/07/2023	Radium 226 + Radium 228, total	0.910 J+	pCi/L
G403	Compliance	E001	06/07/2023	Selenium, total	0.00074 U	mg/L
G403	Compliance	E001	06/07/2023	Specific Conductance @ 25C (field)	719	micromhos/cm
G403	Compliance	E001	06/07/2023	Sulfate, total	66.0	mg/L
G403	Compliance	E001	06/07/2023	Temperature	15.8	degrees C
G403	Compliance	E001	06/07/2023	Thallium, total	0.00038 U	mg/L
G403	Compliance	E001	06/07/2023	Total Dissolved Solids	400	mg/L
G403	Compliance	E001	06/07/2023	Turbidity, field	31.1	NTU
G404	Compliance	E001	06/07/2023	Antimony, total	0.00043 U	mg/L
G404	Compliance	E001	06/07/2023	Arsenic, total	0.00069 U	mg/L

TABLE 1.
FIELD PARAMETERS AND ANALYTICAL RESULTS - QUARTER 2, 2023

845 QUARTERLY REPORT
 COFFEEN POWER PLANT
 ASH POND NO. 2
 COFFEEN, IL

Well ID	Well Type	Event	Date	Parameter	Result	Unit
G404	Compliance	E001	06/07/2023	Barium, total	0.0190	mg/L
G404	Compliance	E001	06/07/2023	Beryllium, total	0.00059 U	mg/L
G404	Compliance	E001	06/07/2023	Boron, total	9.30	mg/L
G404	Compliance	E001	06/07/2023	Cadmium, total	0.00074 U	mg/L
G404	Compliance	E001	06/07/2023	Calcium, total	230	mg/L
G404	Compliance	E001	06/07/2023	Chloride, total	140	mg/L
G404	Compliance	E001	06/07/2023	Chromium, total	0.0028 U	mg/L
G404	Compliance	E001	06/07/2023	Cobalt, total	0.00048 U	mg/L
G404	Compliance	E001	06/07/2023	Dissolved Oxygen	0.160	mg/L
G404	Compliance	E001	06/07/2023	Fluoride, total	0.067 J	mg/L
G404	Compliance	E001	06/07/2023	Lead, total	0.00022 U	mg/L
G404	Compliance	E001	06/07/2023	Lithium, total	0.0062 J	mg/L
G404	Compliance	E001	06/07/2023	Mercury, total	0.0002 U	mg/L
G404	Compliance	E001	06/07/2023	Molybdenum, total	0.00074 U	mg/L
G404	Compliance	E001	06/07/2023	Oxidation Reduction Potential	79.2	mV
G404	Compliance	E001	06/07/2023	pH (field)	6.8	SU
G404	Compliance	E001	06/07/2023	Radium 226 + Radium 228, total	1.36 J+	pCi/L
G404	Compliance	E001	06/07/2023	Selenium, total	0.00074 U	mg/L
G404	Compliance	E001	06/07/2023	Specific Conductance @ 25C (field)	2,113	micromhos/cm
G404	Compliance	E001	06/07/2023	Sulfate, total	700	mg/L
G404	Compliance	E001	06/07/2023	Temperature	17.3	degrees C
G404	Compliance	E001	06/07/2023	Thallium, total	0.00038 U	mg/L
G404	Compliance	E001	06/07/2023	Total Dissolved Solids	1,300	mg/L
G404	Compliance	E001	06/07/2023	Turbidity, field	10.1	NTU
G405	Compliance	E001	06/06/2023	Antimony, total	0.00082 J	mg/L
G405	Compliance	E001	06/06/2023	Arsenic, total	0.00071 J	mg/L
G405	Compliance	E001	06/06/2023	Barium, total	0.0130	mg/L
G405	Compliance	E001	06/06/2023	Beryllium, total	0.00059 U	mg/L
G405	Compliance	E001	06/06/2023	Boron, total	9.50	mg/L
G405	Compliance	E001	06/06/2023	Cadmium, total	0.00074 U	mg/L
G405	Compliance	E001	06/06/2023	Calcium, total	250	mg/L
G405	Compliance	E001	06/06/2023	Chloride, total	8.90	mg/L
G405	Compliance	E001	06/06/2023	Chromium, total	0.0028 U	mg/L
G405	Compliance	E001	06/06/2023	Cobalt, total	0.00087 J	mg/L
G405	Compliance	E001	06/06/2023	Dissolved Oxygen	1.80	mg/L
G405	Compliance	E001	06/06/2023	Fluoride, total	0.161 J	mg/L
G405	Compliance	E001	06/06/2023	Lead, total	0.00063 J	mg/L
G405	Compliance	E001	06/06/2023	Lithium, total	0.0051 J	mg/L
G405	Compliance	E001	06/06/2023	Mercury, total	0.00014 U	mg/L
G405	Compliance	E001	06/06/2023	Molybdenum, total	0.00120	mg/L
G405	Compliance	E001	06/06/2023	Oxidation Reduction Potential	68.0	mV
G405	Compliance	E001	06/06/2023	pH (field)	6.8	SU
G405	Compliance	E001	06/06/2023	Radium 226 + Radium 228, total	1.68 J	pCi/L
G405	Compliance	E001	06/06/2023	Selenium, total	0.00120	mg/L
G405	Compliance	E001	06/06/2023	Specific Conductance @ 25C (field)	2,130	micromhos/cm
G405	Compliance	E001	06/06/2023	Sulfate, total	1,000	mg/L

TABLE 1.
FIELD PARAMETERS AND ANALYTICAL RESULTS - QUARTER 2, 2023

845 QUARTERLY REPORT
 COFFEEN POWER PLANT
 ASH POND NO. 2
 COFFEEN, IL

Well ID	Well Type	Event	Date	Parameter	Result	Unit
G405	Compliance	E001	06/06/2023	Temperature	19.7	degrees C
G405	Compliance	E001	06/06/2023	Thallium, total	0.00038 U	mg/L
G405	Compliance	E001	06/06/2023	Total Dissolved Solids	1,700	mg/L
G405	Compliance	E001	06/06/2023	Turbidity, field	7.10	NTU
G406	Compliance	E001	05/31/2023	Antimony, total	0.00043 U	mg/L
G406	Compliance	E001	05/31/2023	Arsenic, total	0.00069 U	mg/L
G406	Compliance	E001	05/31/2023	Barium, total	0.0130	mg/L
G406	Compliance	E001	05/31/2023	Beryllium, total	0.00059 U	mg/L
G406	Compliance	E001	05/31/2023	Boron, total	1.40	mg/L
G406	Compliance	E001	05/31/2023	Cadmium, total	0.00074 U	mg/L
G406	Compliance	E001	05/31/2023	Calcium, total	190	mg/L
G406	Compliance	E001	05/31/2023	Chloride, total	4.8 U	mg/L
G406	Compliance	E001	05/31/2023	Chromium, total	0.0028 U	mg/L
G406	Compliance	E001	05/31/2023	Cobalt, total	0.00052 J	mg/L
G406	Compliance	E001	05/31/2023	Dissolved Oxygen	2.70	mg/L
G406	Compliance	E001	05/31/2023	Fluoride, total	0.204 J	mg/L
G406	Compliance	E001	05/31/2023	Lead, total	0.00022 U	mg/L
G406	Compliance	E001	05/31/2023	Lithium, total	0.0098 J	mg/L
G406	Compliance	E001	05/31/2023	Mercury, total	0.00014 U	mg/L
G406	Compliance	E001	05/31/2023	Molybdenum, total	0.00074 U	mg/L
G406	Compliance	E001	05/31/2023	Oxidation Reduction Potential	166	mV
G406	Compliance	E001	05/31/2023	pH (field)	6.5	SU
G406	Compliance	E001	05/31/2023	Radium 226 + Radium 228, total	0.262	pCi/L
G406	Compliance	E001	05/31/2023	Selenium, total	0.00074 U	mg/L
G406	Compliance	E001	05/31/2023	Specific Conductance @ 25C (field)	1,410	micromhos/cm
G406	Compliance	E001	05/31/2023	Sulfate, total	480	mg/L
G406	Compliance	E001	05/31/2023	Temperature	21.2	degrees C
G406	Compliance	E001	05/31/2023	Thallium, total	0.00038 U	mg/L
G406	Compliance	E001	05/31/2023	Total Dissolved Solids	1,100	mg/L
G406	Compliance	E001	05/31/2023	Turbidity, field	0 U	NTU
G407	Compliance	E001	05/31/2023	Antimony, total	0.00043 U	mg/L
G407	Compliance	E001	05/31/2023	Arsenic, total	0.00073 J	mg/L
G407	Compliance	E001	05/31/2023	Barium, total	0.0120	mg/L
G407	Compliance	E001	05/31/2023	Beryllium, total	0.00059 U	mg/L
G407	Compliance	E001	05/31/2023	Boron, total	0.0900	mg/L
G407	Compliance	E001	05/31/2023	Cadmium, total	0.00074 U	mg/L
G407	Compliance	E001	05/31/2023	Calcium, total	270	mg/L
G407	Compliance	E001	05/31/2023	Chloride, total	17.0	mg/L
G407	Compliance	E001	05/31/2023	Chromium, total	0.0028 U	mg/L
G407	Compliance	E001	05/31/2023	Cobalt, total	0.0007 J	mg/L
G407	Compliance	E001	05/31/2023	Dissolved Oxygen	4.30	mg/L
G407	Compliance	E001	05/31/2023	Fluoride, total	0.129 J	mg/L
G407	Compliance	E001	05/31/2023	Lead, total	0.00022 U	mg/L
G407	Compliance	E001	05/31/2023	Lithium, total	0.0390	mg/L
G407	Compliance	E001	05/31/2023	Mercury, total	0.00014 U	mg/L
G407	Compliance	E001	05/31/2023	Molybdenum, total	0.00130	mg/L

TABLE 1.
FIELD PARAMETERS AND ANALYTICAL RESULTS - QUARTER 2, 2023

845 QUARTERLY REPORT
 COFFEEN POWER PLANT
 ASH POND NO. 2
 COFFEEN, IL

Well ID	Well Type	Event	Date	Parameter	Result	Unit
G407	Compliance	E001	05/31/2023	Oxidation Reduction Potential	162	mV
G407	Compliance	E001	05/31/2023	pH (field)	6.6	SU
G407	Compliance	E001	05/31/2023	Radium 226 + Radium 228, total	0.792 J+	pCi/L
G407	Compliance	E001	05/31/2023	Selenium, total	0.00074 U	mg/L
G407	Compliance	E001	05/31/2023	Specific Conductance @ 25C (field)	2,460	micromhos/cm
G407	Compliance	E001	05/31/2023	Sulfate, total	1,100	mg/L
G407	Compliance	E001	05/31/2023	Temperature	19.2	degrees C
G407	Compliance	E001	05/31/2023	Thallium, total	0.00038 U	mg/L
G407	Compliance	E001	05/31/2023	Total Dissolved Solids	2,000	mg/L
G407	Compliance	E001	05/31/2023	Turbidity, field	5.60	NTU

Notes:

C = Celsius

cm = centimeter

mg/L = milligrams per liter

mV = millivolts

NTU = Nephelometric Turbidity Units

pCi/L = picocuries per liter

SU = Standard Units

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.

TABLE 2.
COMPARISON OF STATISTICAL RESULTS TO GWPS - QUARTER 2, 2023
845 QUARTERLY REPORT
COFFEEN POWER PLANT
ASH POND NO. 2
COFFEEN, IL

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	GWPS	GWPS Source	Compliance Result
G1001	LCU	E001	Antimony, total	mg/L	02/15/23 - 06/07/23	2	100	Most recent sample	0.003	0.006	Standard	No Exceedance
G1001	LCU	E001	Arsenic, total	mg/L	02/15/23 - 06/07/23	2	50	Most recent sample	0.001	0.010	Standard	No Exceedance
G1001	LCU	E001	Barium, total	mg/L	02/15/23 - 06/07/23	2	0	Most recent sample	0.071	2.0	Standard	No Exceedance
G1001	LCU	E001	Beryllium, total	mg/L	02/15/23 - 06/07/23	2	50	Most recent sample	0.001	0.004	Standard	No Exceedance
G1001	LCU	E001	Boron, total	mg/L	05/12/21 - 06/07/23	3	0	Most recent sample	0.95	2	Standard	No Exceedance
G1001	LCU	E001	Cadmium, total	mg/L	02/15/23 - 06/07/23	2	100	Most recent sample	0.001	0.005	Standard	No Exceedance
G1001	LCU	E001	Chloride, total	mg/L	05/12/21 - 06/07/23	3	0	Most recent sample	15	200	Standard	No Exceedance
G1001	LCU	E001	Chromium, total	mg/L	02/15/23 - 06/07/23	2	50	Most recent sample	0.004	0.1	Standard	No Exceedance
G1001	LCU	E001	Cobalt, total	mg/L	05/12/21 - 06/07/23	3	67	Most recent sample	0.002	0.006	Standard	No Exceedance
G1001	LCU	E001	Fluoride, total	mg/L	02/15/23 - 06/07/23	2	100	Most recent sample	0.25	4.0	Standard	No Exceedance
G1001	LCU	E001	Lead, total	mg/L	02/15/23 - 06/07/23	2	50	Most recent sample	0.001	0.0120	Background	No Exceedance
G1001	LCU	E001	Lithium, total	mg/L	05/12/21 - 06/07/23	3	33	Most recent sample	0.02	0.04	Standard	No Exceedance
G1001	LCU	E001	Mercury, total	mg/L	02/15/23 - 06/07/23	2	100	Most recent sample	0.0002	0.002	Standard	No Exceedance
G1001	LCU	E001	Molybdenum, total	mg/L	02/15/23 - 06/07/23	2	0	Most recent sample	0.0079	0.1	Standard	No Exceedance
G1001	LCU	E001	pH (field)	SU	02/15/23 - 06/07/23	2	0	Most recent sample	7.0/7.0	6.5/9.0	Standard/Standard	No Exceedance
G1001	LCU	E001	Radium 226 + Radium 228, total	pCi/L	02/15/23 - 06/07/23	2	0	Most recent sample	0.917	5	Standard	No Exceedance
G1001	LCU	E001	Selenium, total	mg/L	02/15/23 - 06/07/23	2	50	Most recent sample	0.001	0.05	Standard	No Exceedance
G1001	LCU	E001	Sulfate, total	mg/L	05/12/21 - 06/07/23	3	0	Most recent sample	180	400	Standard	No Exceedance
G1001	LCU	E001	Thallium, total	mg/L	02/15/23 - 06/07/23	2	100	Most recent sample	0.001	0.002	Standard	No Exceedance
G1001	LCU	E001	Total Dissolved Solids	mg/L	02/15/23 - 06/07/23	2	0	Most recent sample	830	1,200	Standard	No Exceedance
G401	UA	E001	Antimony, total	mg/L	11/21/15 - 06/07/23	22	100	All ND - Last	0.003	0.006	Standard	No Exceedance
G401	UA	E001	Arsenic, total	mg/L	11/21/15 - 06/07/23	25	52	CB around T-S line	-0.019	0.010	Standard	No Exceedance
G401	UA	E001	Barium, total	mg/L	11/21/15 - 06/07/23	25	0	CB around T-S line	-0.191	2.0	Standard	No Exceedance
G401	UA	E001	Beryllium, total	mg/L	11/21/15 - 06/07/23	24	79	CI around median	0.001	0.004	Standard	No Exceedance
G401	UA	E001	Boron, total	mg/L	11/21/15 - 06/07/23	26	0	CI around median	3.5	2	Standard	Exceedance
G401	UA	E001	Cadmium, total	mg/L	11/21/15 - 06/07/23	25	64	CI around median	0.001	0.005	Standard	No Exceedance
G401	UA	E001	Chloride, total	mg/L	11/21/15 - 06/07/23	26	4	CI around geomean	3.02	200	Standard	No Exceedance

TABLE 2.
COMPARISON OF STATISTICAL RESULTS TO GWPS - QUARTER 2, 2023
 845 QUARTERLY REPORT
 COFFEEN POWER PLANT
 ASH POND NO. 2
 COFFEEN, IL

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	GWPS	GWPS Source	Compliance Result
G401	UA	E001	Chromium, total	mg/L	11/21/15 - 06/07/23	25	64	CI around median	0.004	0.1	Standard	No Exceedance
G401	UA	E001	Cobalt, total	mg/L	11/21/15 - 06/07/23	25	0	CB around linear reg	0.0629	0.006	Standard	Exceedance
G401	UA	E001	Fluoride, total	mg/L	11/21/15 - 06/07/23	26	96	CI around median	0.25	4.0	Standard	No Exceedance
G401	UA	E001	Lead, total	mg/L	11/21/15 - 06/07/23	24	62	CB around T-S line	-0.027	0.0120	Background	No Exceedance
G401	UA	E001	Lithium, total	mg/L	11/21/15 - 06/07/23	27	4	CB around T-S line	-0.0148	0.04	Standard	No Exceedance
G401	UA	E001	Mercury, total	mg/L	11/21/15 - 06/07/23	24	79	CI around median	0.0002	0.002	Standard	No Exceedance
G401	UA	E001	Molybdenum, total	mg/L	11/21/15 - 06/07/23	25	68	CI around median	0.001	0.1	Standard	No Exceedance
G401	UA	E001	pH (field)	SU	11/21/15 - 06/07/23	28	0	CI around mean	5.9/6.1	6.5/9.0	Standard/Standard	Exceedance
G401	UA	E001	Radium 226 + Radium 228, total	pCi/L	11/21/15 - 06/07/23	25	0	CI around median	0.694	5	Standard	No Exceedance
G401	UA	E001	Selenium, total	mg/L	11/21/15 - 06/07/23	25	60	CB around T-S line	-0.00172	0.05	Standard	No Exceedance
G401	UA	E001	Sulfate, total	mg/L	11/21/15 - 06/07/23	26	0	CI around median	2,000	400	Standard	Exceedance
G401	UA	E001	Thallium, total	mg/L	11/21/15 - 06/07/23	22	100	All ND - Last	0.001	0.002	Standard	No Exceedance
G401	UA	E001	Total Dissolved Solids	mg/L	11/21/15 - 06/07/23	26	0	CI around median	2,800	1,200	Standard	Exceedance
G402	UA	E001	Antimony, total	mg/L	11/21/15 - 06/06/23	22	100	All ND - Last	0.003	0.006	Standard	No Exceedance
G402	UA	E001	Arsenic, total	mg/L	11/21/15 - 06/06/23	25	0	CB around linear reg	-0.00557	0.010	Standard	No Exceedance
G402	UA	E001	Barium, total	mg/L	11/21/15 - 06/06/23	25	0	CB around linear reg	-0.00357	2.0	Standard	No Exceedance
G402	UA	E001	Beryllium, total	mg/L	11/21/15 - 06/06/23	24	100	All ND - Last	0.001	0.004	Standard	No Exceedance
G402	UA	E001	Boron, total	mg/L	11/21/15 - 06/06/23	26	0	CB around linear reg	4.43	2	Standard	Exceedance
G402	UA	E001	Cadmium, total	mg/L	11/21/15 - 06/06/23	25	96	Most recent sample	0.001	0.005	Standard	No Exceedance
G402	UA	E001	Chloride, total	mg/L	11/21/15 - 06/06/23	26	15	CI around mean	1.58	200	Standard	No Exceedance
G402	UA	E001	Chromium, total	mg/L	11/21/15 - 06/06/23	25	48	CB around linear reg	-0.00421	0.1	Standard	No Exceedance
G402	UA	E001	Cobalt, total	mg/L	11/21/15 - 06/06/23	25	24	CB around linear reg	-0.00293	0.006	Standard	No Exceedance
G402	UA	E001	Fluoride, total	mg/L	11/21/15 - 06/06/23	26	15	CI around mean	0.295	4.0	Standard	No Exceedance
G402	UA	E001	Lead, total	mg/L	11/21/15 - 06/06/23	24	29	CB around linear reg	-0.00445	0.0120	Background	No Exceedance
G402	UA	E001	Lithium, total	mg/L	11/21/15 - 06/06/23	25	4	CB around linear reg	0.0103	0.04	Standard	No Exceedance
G402	UA	E001	Mercury, total	mg/L	11/21/15 - 06/06/23	24	100	All ND - Last	0.0002	0.002	Standard	No Exceedance
G402	UA	E001	Molybdenum, total	mg/L	11/21/15 - 06/06/23	25	0	CB around linear reg	0.000959	0.1	Standard	No Exceedance

TABLE 2.
COMPARISON OF STATISTICAL RESULTS TO GWPS - QUARTER 2, 2023
 845 QUARTERLY REPORT
 COFFEEN POWER PLANT
 ASH POND NO. 2
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Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	GWPS	GWPS Source	Compliance Result
G402	UA	E001	pH (field)	SU	11/21/15 - 06/06/23	26	0	CI around mean	6.7/6.8	6.5/9.0	Standard/Standard	No Exceedance
G402	UA	E001	Radium 226 + Radium 228, total	pCi/L	11/21/15 - 06/06/23	25	0	CI around median	0.522	5	Standard	No Exceedance
G402	UA	E001	Selenium, total	mg/L	11/21/15 - 06/06/23	25	76	CB around T-S line	0.000296	0.05	Standard	No Exceedance
G402	UA	E001	Sulfate, total	mg/L	11/21/15 - 06/06/23	26	0	CB around T-S line	442	400	Standard	Exceedance
G402	UA	E001	Thallium, total	mg/L	11/21/15 - 06/06/23	22	100	All ND - Last	0.001	0.002	Standard	No Exceedance
G402	UA	E001	Total Dissolved Solids	mg/L	11/21/15 - 06/06/23	26	0	CB around linear reg	1,310	1,200	Standard	Exceedance
G403	UA	E001	Antimony, total	mg/L	11/23/15 - 06/07/23	22	100	All ND - Last	0.003	0.006	Standard	No Exceedance
G403	UA	E001	Arsenic, total	mg/L	11/23/15 - 06/07/23	25	56	CB around T-S line	0.000103	0.010	Standard	No Exceedance
G403	UA	E001	Barium, total	mg/L	11/23/15 - 06/07/23	25	0	CB around T-S line	0.0758	2.0	Standard	No Exceedance
G403	UA	E001	Beryllium, total	mg/L	11/23/15 - 06/07/23	24	100	All ND - Last	0.001	0.004	Standard	No Exceedance
G403	UA	E001	Boron, total	mg/L	11/23/15 - 06/07/23	26	19	CI around geomean	0.0154	2	Standard	No Exceedance
G403	UA	E001	Cadmium, total	mg/L	11/23/15 - 06/07/23	25	100	All ND - Last	0.001	0.005	Standard	No Exceedance
G403	UA	E001	Chloride, total	mg/L	11/23/15 - 06/07/23	26	0	CB around linear reg	4.15	200	Standard	No Exceedance
G403	UA	E001	Chromium, total	mg/L	11/23/15 - 06/07/23	25	92	CI around median	0.004	0.1	Standard	No Exceedance
G403	UA	E001	Cobalt, total	mg/L	11/23/15 - 06/07/23	25	60	CI around median	0.002	0.006	Standard	No Exceedance
G403	UA	E001	Fluoride, total	mg/L	11/23/15 - 06/07/23	26	12	CB around T-S line	0.187	4.0	Standard	No Exceedance
G403	UA	E001	Lead, total	mg/L	11/23/15 - 06/07/23	24	88	CI around median	0.001	0.0120	Background	No Exceedance
G403	UA	E001	Lithium, total	mg/L	11/23/15 - 06/07/23	25	100	All ND - Last	0.02	0.04	Standard	No Exceedance
G403	UA	E001	Mercury, total	mg/L	11/23/15 - 06/07/23	24	100	All ND - Last	0.0002	0.002	Standard	No Exceedance
G403	UA	E001	Molybdenum, total	mg/L	11/23/15 - 06/07/23	25	72	CB around T-S line	0.000926	0.1	Standard	No Exceedance
G403	UA	E001	pH (field)	SU	11/23/15 - 06/07/23	26	0	CI around mean	6.8/7.0	6.5/9.0	Standard/Standard	No Exceedance
G403	UA	E001	Radium 226 + Radium 228, total	pCi/L	11/23/15 - 06/07/23	25	0	CI around mean	0.583	5	Standard	No Exceedance
G403	UA	E001	Selenium, total	mg/L	11/23/15 - 06/07/23	25	96	CI around median	0.001	0.05	Standard	No Exceedance
G403	UA	E001	Sulfate, total	mg/L	11/23/15 - 06/07/23	26	0	CB around T-S line	49.1	400	Standard	No Exceedance
G403	UA	E001	Thallium, total	mg/L	11/23/15 - 06/07/23	22	100	All ND - Last	0.001	0.002	Standard	No Exceedance
G403	UA	E001	Total Dissolved Solids	mg/L	11/23/15 - 06/07/23	26	0	CB around linear reg	376	1,200	Standard	No Exceedance
G404	UA	E001	Antimony, total	mg/L	11/21/15 - 06/07/23	22	100	All ND - Last	0.003	0.006	Standard	No Exceedance

TABLE 2.
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 845 QUARTERLY REPORT
 COFFEEN POWER PLANT
 ASH POND NO. 2
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Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	GWPS	GWPS Source	Compliance Result
G404	UA	E001	Arsenic, total	mg/L	11/21/15 - 06/07/23	25	88	CI around median	0.001	0.010	Standard	No Exceedance
G404	UA	E001	Barium, total	mg/L	11/21/15 - 06/07/23	25	0	CB around linear reg	0.0188	2.0	Standard	No Exceedance
G404	UA	E001	Beryllium, total	mg/L	11/21/15 - 06/07/23	24	100	All ND - Last	0.001	0.004	Standard	No Exceedance
G404	UA	E001	Boron, total	mg/L	11/21/15 - 06/07/23	26	0	CB around linear reg	5.52	2	Standard	Exceedance
G404	UA	E001	Cadmium, total	mg/L	11/21/15 - 06/07/23	25	100	All ND - Last	0.001	0.005	Standard	No Exceedance
G404	UA	E001	Chloride, total	mg/L	11/21/15 - 06/07/23	26	0	CB around linear reg	133	200	Standard	No Exceedance
G404	UA	E001	Chromium, total	mg/L	11/21/15 - 06/07/23	25	100	All ND - Last	0.004	0.1	Standard	No Exceedance
G404	UA	E001	Cobalt, total	mg/L	11/21/15 - 06/07/23	25	96	CI around median	0.002	0.006	Standard	No Exceedance
G404	UA	E001	Fluoride, total	mg/L	11/21/15 - 06/07/23	26	82	CI around median	0.25	4.0	Standard	No Exceedance
G404	UA	E001	Lead, total	mg/L	11/21/15 - 06/07/23	24	96	CI around median	0.001	0.0120	Background	No Exceedance
G404	UA	E001	Lithium, total	mg/L	11/21/15 - 06/07/23	25	88	CB around T-S line	0.0166	0.04	Standard	No Exceedance
G404	UA	E001	Mercury, total	mg/L	11/21/15 - 06/07/23	24	100	All ND - Last	0.0002	0.002	Standard	No Exceedance
G404	UA	E001	Molybdenum, total	mg/L	11/21/15 - 06/07/23	25	100	All ND - Last	0.001	0.1	Standard	No Exceedance
G404	UA	E001	pH (field)	SU	11/21/15 - 06/07/23	26	0	CB around linear reg	6.4/6.8	6.5/9.0	Standard/Standard	No Exceedance
G404	UA	E001	Radium 226 + Radium 228, total	pCi/L	11/21/15 - 06/07/23	25	0	CI around mean	0.605	5	Standard	No Exceedance
G404	UA	E001	Selenium, total	mg/L	11/21/15 - 06/07/23	25	100	All ND - Last	0.001	0.05	Standard	No Exceedance
G404	UA	E001	Sulfate, total	mg/L	11/21/15 - 06/07/23	26	0	CB around linear reg	422	400	Standard	Exceedance
G404	UA	E001	Thallium, total	mg/L	11/21/15 - 06/07/23	22	100	All ND - Last	0.001	0.002	Standard	No Exceedance
G404	UA	E001	Total Dissolved Solids	mg/L	11/21/15 - 06/07/23	26	0	CB around linear reg	1,250	1,200	Standard	Exceedance
G405	UA	E001	Antimony, total	mg/L	11/21/15 - 06/06/23	22	100	All ND - Last	0.003	0.006	Standard	No Exceedance
G405	UA	E001	Arsenic, total	mg/L	11/21/15 - 06/06/23	25	35	CB around T-S line	-0.00241	0.010	Standard	No Exceedance
G405	UA	E001	Barium, total	mg/L	11/21/15 - 06/06/23	25	0	CB around linear reg	0.00689	2.0	Standard	No Exceedance
G405	UA	E001	Beryllium, total	mg/L	11/21/15 - 06/06/23	24	100	All ND - Last	0.001	0.004	Standard	No Exceedance
G405	UA	E001	Boron, total	mg/L	11/21/15 - 06/06/23	26	0	CI around mean	9.19	2	Standard	Exceedance
G405	UA	E001	Cadmium, total	mg/L	11/21/15 - 06/06/23	25	96	CI around median	0.001	0.005	Standard	No Exceedance
G405	UA	E001	Chloride, total	mg/L	11/21/15 - 06/06/23	26	0	CB around T-S line	-2.09	200	Standard	No Exceedance
G405	UA	E001	Chromium, total	mg/L	11/21/15 - 06/06/23	25	88	CI around median	0.004	0.1	Standard	No Exceedance

TABLE 2.
COMPARISON OF STATISTICAL RESULTS TO GWPS - QUARTER 2, 2023
 845 QUARTERLY REPORT
 COFFEEN POWER PLANT
 ASH POND NO. 2
 COFFEEN, IL

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	GWPS	GWPS Source	Compliance Result
G405	UA	E001	Cobalt, total	mg/L	11/21/15 - 06/06/23	25	73	CB around T-S line	0.00129	0.006	Standard	No Exceedance
G405	UA	E001	Fluoride, total	mg/L	11/21/15 - 06/06/23	26	11	CB around linear reg	0.208	4.0	Standard	No Exceedance
G405	UA	E001	Lead, total	mg/L	11/21/15 - 06/06/23	24	48	CB around T-S line	-0.00135	0.0120	Background	No Exceedance
G405	UA	E001	Lithium, total	mg/L	11/21/15 - 06/06/23	25	96	CB around T-S line	0.01	0.04	Standard	No Exceedance
G405	UA	E001	Mercury, total	mg/L	11/21/15 - 06/06/23	24	100	All ND - Last	0.0002	0.002	Standard	No Exceedance
G405	UA	E001	Molybdenum, total	mg/L	11/21/15 - 06/06/23	25	38	CI around median	0.001	0.1	Standard	No Exceedance
G405	UA	E001	pH (field)	SU	11/21/15 - 06/06/23	26	0	CI around mean	6.8/7.0	6.5/9.0	Standard/Standard	No Exceedance
G405	UA	E001	Radium 226 + Radium 228, total	pCi/L	11/21/15 - 06/06/23	25	0	CI around median	0.541	5	Standard	No Exceedance
G405	UA	E001	Selenium, total	mg/L	11/21/15 - 06/06/23	25	88	CI around median	0.001	0.05	Standard	No Exceedance
G405	UA	E001	Sulfate, total	mg/L	11/21/15 - 06/06/23	26	0	CB around linear reg	412	400	Standard	Exceedance
G405	UA	E001	Thallium, total	mg/L	11/21/15 - 06/06/23	22	100	All ND - Last	0.001	0.002	Standard	No Exceedance
G405	UA	E001	Total Dissolved Solids	mg/L	11/21/15 - 06/06/23	26	0	CI around mean	1,530	1,200	Standard	Exceedance
G406	UA	E001	Antimony, total	mg/L	10/14/20 - 05/31/23	11	100	All ND - Last	0.003	0.006	Standard	No Exceedance
G406	UA	E001	Arsenic, total	mg/L	10/14/20 - 05/31/23	11	91	CI around median	0.001	0.010	Standard	No Exceedance
G406	UA	E001	Barium, total	mg/L	10/14/20 - 05/31/23	11	0	CI around median	0.012	2.0	Standard	No Exceedance
G406	UA	E001	Beryllium, total	mg/L	10/14/20 - 05/31/23	11	100	All ND - Last	0.001	0.004	Standard	No Exceedance
G406	UA	E001	Boron, total	mg/L	10/14/20 - 05/31/23	11	0	CI around median	1.4	2	Standard	No Exceedance
G406	UA	E001	Cadmium, total	mg/L	10/14/20 - 05/31/23	11	100	All ND - Last	0.001	0.005	Standard	No Exceedance
G406	UA	E001	Chloride, total	mg/L	10/14/20 - 05/31/23	11	18	CI around mean	2.94	200	Standard	No Exceedance
G406	UA	E001	Chromium, total	mg/L	10/14/20 - 05/31/23	11	91	CI around median	0.004	0.1	Standard	No Exceedance
G406	UA	E001	Cobalt, total	mg/L	10/14/20 - 05/31/23	11	100	All ND - Last	0.002	0.006	Standard	No Exceedance
G406	UA	E001	Fluoride, total	mg/L	10/14/20 - 05/31/23	11	18	CI around geomean	0.269	4.0	Standard	No Exceedance
G406	UA	E001	Lead, total	mg/L	10/14/20 - 05/31/23	11	91	CI around median	0.001	0.0120	Background	No Exceedance
G406	UA	E001	Lithium, total	mg/L	10/14/20 - 05/31/23	11	100	All ND - Last	0.02	0.04	Standard	No Exceedance
G406	UA	E001	Mercury, total	mg/L	10/14/20 - 05/31/23	11	100	All ND - Last	0.0002	0.002	Standard	No Exceedance
G406	UA	E001	Molybdenum, total	mg/L	10/14/20 - 05/31/23	11	91	CI around median	0.001	0.1	Standard	No Exceedance
G406	UA	E001	pH (field)	SU	10/14/20 - 05/31/23	11	0	CI around mean	6.5/6.7	6.5/9.0	Standard/Standard	No Exceedance

TABLE 2.
COMPARISON OF STATISTICAL RESULTS TO GWPS - QUARTER 2, 2023
 845 QUARTERLY REPORT
 COFFEEN POWER PLANT
 ASH POND NO. 2
 COFFEEN, IL

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	GWPS	GWPS Source	Compliance Result
G406	UA	E001	Radium 226 + Radium 228, total	pCi/L	10/14/20 - 05/31/23	11	0	CI around mean	0.184	5	Standard	No Exceedance
G406	UA	E001	Selenium, total	mg/L	10/14/20 - 05/31/23	11	100	All ND - Last	0.001	0.05	Standard	No Exceedance
G406	UA	E001	Sulfate, total	mg/L	10/14/20 - 05/31/23	11	0	CI around median	450	400	Standard	Exceedance
G406	UA	E001	Thallium, total	mg/L	10/14/20 - 05/31/23	11	100	All ND - Last	0.001	0.002	Standard	No Exceedance
G406	UA	E001	Total Dissolved Solids	mg/L	10/14/20 - 05/31/23	11	0	CI around mean	992	1,200	Standard	No Exceedance
G407	UA	E001	Antimony, total	mg/L	10/14/20 - 05/31/23	11	100	All ND - Last	0.003	0.006	Standard	No Exceedance
G407	UA	E001	Arsenic, total	mg/L	10/14/20 - 05/31/23	11	82	CI around median	0.001	0.010	Standard	No Exceedance
G407	UA	E001	Barium, total	mg/L	10/14/20 - 05/31/23	11	0	CI around median	0.012	2.0	Standard	No Exceedance
G407	UA	E001	Beryllium, total	mg/L	10/14/20 - 05/31/23	11	100	All ND - Last	0.001	0.004	Standard	No Exceedance
G407	UA	E001	Boron, total	mg/L	10/14/20 - 05/31/23	11	0	CI around mean	0.0718	2	Standard	No Exceedance
G407	UA	E001	Cadmium, total	mg/L	10/14/20 - 05/31/23	11	100	All ND - Last	0.001	0.005	Standard	No Exceedance
G407	UA	E001	Chloride, total	mg/L	10/14/20 - 05/31/23	11	0	CI around mean	11.4	200	Standard	No Exceedance
G407	UA	E001	Chromium, total	mg/L	10/14/20 - 05/31/23	11	82	CI around median	0.004	0.1	Standard	No Exceedance
G407	UA	E001	Cobalt, total	mg/L	10/14/20 - 05/31/23	11	91	CI around median	0.002	0.006	Standard	No Exceedance
G407	UA	E001	Fluoride, total	mg/L	10/14/20 - 05/31/23	11	27	CI around geomean	0.254	4.0	Standard	No Exceedance
G407	UA	E001	Lead, total	mg/L	10/14/20 - 05/31/23	11	91	CI around median	0.001	0.0120	Background	No Exceedance
G407	UA	E001	Lithium, total	mg/L	10/14/20 - 05/31/23	11	0	CI around mean	0.0388	0.04	Standard	No Exceedance
G407	UA	E001	Mercury, total	mg/L	10/14/20 - 05/31/23	11	100	All ND - Last	0.0002	0.002	Standard	No Exceedance
G407	UA	E001	Molybdenum, total	mg/L	10/14/20 - 05/31/23	11	9	CI around median	0.0012	0.1	Standard	No Exceedance
G407	UA	E001	pH (field)	SU	10/14/20 - 05/31/23	11	0	CI around mean	6.5/6.7	6.5/9.0	Standard/Standard	No Exceedance
G407	UA	E001	Radium 226 + Radium 228, total	pCi/L	10/14/20 - 05/31/23	11	0	CI around mean	0.103	5	Standard	No Exceedance
G407	UA	E001	Selenium, total	mg/L	10/14/20 - 05/31/23	11	100	All ND - Last	0.001	0.05	Standard	No Exceedance
G407	UA	E001	Sulfate, total	mg/L	10/14/20 - 05/31/23	11	0	CI around median	440	400	Standard	Exceedance
G407	UA	E001	Thallium, total	mg/L	10/14/20 - 05/31/23	11	100	All ND - Last	0.001	0.002	Standard	No Exceedance
G407	UA	E001	Total Dissolved Solids	mg/L	10/14/20 - 05/31/23	11	0	CI around mean	1,920	1,200	Standard	Exceedance

TABLE 2.
COMPARISON OF STATISTICAL RESULTS TO GWPS - QUARTER 2, 2023

845 QUARTERLY REPORT
COFFEEN POWER PLANT
ASH POND NO. 2
COFFEEN, IL

Notes:

Compliance Result:

No Exceedance: the statistical result did not exceed the GWPS.

Exceedance: The statistical result exceeded the GWPS.

HSU = hydrostratigraphic unit:

LCU = Lower Confining Unit

UA = Uppermost Aquifer

mg/L = milligrams per liter

ND = non-detect

pCi/L = picocuries per liter

SU = standard units

Sample Count = number of samples from Sampled Date Range used to calculate the Statistical Result

Statistical Calculation = method used to calculate the statistical result:

All ND - Last = All results were below the reporting limit, and the last determined reporting limit is shown

CB around T-S line = Confidence band around Thiel-Sen line

CB around linear reg = Confidence band around linear regression

CI around geomean = Confidence interval around the geometric mean

CI around mean = Confidence interval around the mean

CI around median = Confidence interval around the median

Most recent sample = Result for the most recently collected sample used due to insufficient data

Statistical Result = calculated in accordance with the Statistical Analysis Plan using constituent concentrations observed at each monitoring well during all sampling events within the specified date range

For pH, the values presented are the lower / upper limits

GWPS = Groundwater Protection Standard

GWPS Source:

Standard = standard specified in 35 I.A.C. § 845.600(a)(1)

Background = background concentration (see cover page for additional information)

FIGURES

PROJECT: 169000XXXX | DATED: 10/6/2021 | DESIGNER: STOLZSD
 Y:\Mapping\Projects\22285\MXD\845_Operating_Permit\Coffeen\AP2_GMP\Figure 2-1_Proposed Monitoring Well Network.mxd



Service Layer Credits: Source: Esri, Microsoft, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

- COMPLIANCE WELL
- BACKGROUND WELL
- MONITORING WELL
- STAFF GAGE
- REGULATED UNIT (SUBJECT UNIT)
- SITE FEATURE
- LIMITS OF FINAL COVER
- PROPERTY BOUNDARY



35 I.A.C. § 845 GROUNDWATER MONITORING WELL NETWORK

FIGURE 1

56' POND 'BC' &
 COFFEEN POWER PLANT
 COFFEEN, ILLINOIS

RAMBOLL AMERICAS
 ENGINEERING SOLUTIONS, INC.



ATTACHMENTS

**ATTACHMENT A
GROUNDWATER ELEVATION DATA
QUARTER 2, 2023**

**ATTACHMENT A.
GROUNDWATER ELEVATION DATA - QUARTER 2, 2023**

845 QUARTERLY REPORT
COFFEEN POWER PLANT
ASH POND NO. 2
COFFEEN, IL

Well ID	Well Type	Date	Depth to Groundwater (feet BMP)	Groundwater Elevation (feet NAVD88)
G1001	Compliance	05/30/2023	6.61	590.99
G1003	Water Level	05/30/2023	10.97	599.82
G270	Background	05/30/2023	5.06	620.79
G280	Background	05/30/2023	3.96	621.38
G281	Background	05/30/2023	6.64	619.71
G401	Compliance	05/30/2023	21.72	603.85
G402	Compliance	05/30/2023	10.56	602.80
G403	Compliance	05/30/2023	8.13	618.33
G404	Compliance	05/30/2023	5.42	610.24
G405	Compliance	05/30/2023	6.83	616.79
G406	Compliance	05/30/2023	13.06	612.29
G407	Compliance	05/30/2023	7.35	613.96
SG-02	Water Level	05/30/2023	7.47	598.40
SG-03	Water Level	05/30/2023	9.85	585.09
SG-04	Water Level	05/30/2023	6.41	593.11

Notes:

BMP = below measuring point

NAVD88 = North American Vertical Datum of 1988

**ATTACHMENT B
LABORATORY REPORTS AND FIELD DATA SHEETS
QUARTER 2, 2023**

ATTACHMENT B.
845 QUARTERLY REPORT - QUARTER 2, 2023
COFFEEN POWER PLANT
ASH POND NO. 2
COFFEEN, IL



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

July 25, 2023

Brian Voelker
Vistra - Coffeen
1500 Eastport Plaza Drive
Collinsville, IL 62234

Dear Brian Voelker:

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,

Gail Schindler

Gail Schindler
Project Manager
(309) 692-9688 x1716
gail.schindler@pacelabs.com

SAMPLE RECEIPT CHECK LIST

Items not applicable will be marked as in compliance

Work Order GF00140

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
YES	Zero headspace, <6 mm present in VOA vials
YES	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

Work Order GF00908

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
YES	Zero headspace, <6 mm present in VOA vials
YES	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

Work Order GF01285

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
YES	Zero headspace, <6 mm present in VOA vials
YES	Trip blank(s) received
YES	All non-field analyses received within holding times
YES	Short hold time analysis
YES	Current PDC COC submitted
YES	Case narrative provided

Work Order GF01654

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
YES	Case narrative provided

ANALYTICAL RESULTS

Sample: GF00140-16
Name: G406
Matrix: Ground Water - Grab

Sampled: 05/31/23 16:45
Received: 06/01/23 13:59
PO #: 1940007155

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Anions - PIA									
Chloride	< 5.0	mg/L		06/01/23 23:57	5	5.0	06/01/23 23:57	CRD	EPA 300.0 REV 2.1
Fluoride	< 0.250	mg/L		06/01/23 23:39	1	0.250	06/01/23 23:39	CRD	EPA 300.0 REV 2.1
Sulfate	480	mg/L		06/02/23 00:15	100	100	06/02/23 00:15	CRD	EPA 300.0 REV 2.1
Field - PIA									
Depth, From Measuring Point	13.27	Feet		05/31/23 16:45	1		05/31/23 16:45	FIELD	Field*
Dissolved oxygen, Field	2.7	mg/L		05/31/23 16:45	1		05/31/23 16:45	FIELD	Field*
Oxidation Reduction Potential	166	mV		05/31/23 16:45	1	-500	05/31/23 16:45	FIELD	Field*
pH, Field Measured	6.53	pH Units		05/31/23 16:45	1		05/31/23 16:45	FIELD	Field*
Specific Conductance, Field Measured	1410	umhos/cm		05/31/23 16:45	1		05/31/23 16:45	FIELD	Field*
Temperature, Field Measured	21.2	°C		05/31/23 16:45	1		05/31/23 16:45	FIELD	Field*
Turbidity, Field Measured	< 0.00	NTU		05/31/23 16:45	1	0.00	05/31/23 16:45	FIELD	Field*
General Chemistry - PIA									
Alkalinity - bicarbonate as CaCO3	360	mg/L		06/12/23 10:31	1	10	06/12/23 10:31	CPS	SM 2320B 1997*
Alkalinity - carbonate as CaCO3	< 10	mg/L		06/12/23 10:31	1	10	06/12/23 10:31	CPS	SM 2320B 1997*
Soluble General Chemistry - PIA									
Solids - total dissolved solids (TDS)	1100	mg/L		06/02/23 14:38	1	26	06/02/23 14:38	HRF/MK H	SM 2540C
Total Metals - PIA									
Antimony	< 3.0	ug/L		06/12/23 09:37	5	3.0	06/13/23 11:53	JMW	EPA 6020A
Arsenic	< 1.0	ug/L		06/12/23 09:37	5	1.0	06/13/23 11:53	JMW	EPA 6020A
Barium	13	ug/L		06/12/23 09:37	5	1.0	06/13/23 11:53	JMW	EPA 6020A
Beryllium	< 1.0	ug/L		06/12/23 09:37	5	1.0	06/13/23 16:05	JMW	EPA 6020A
Boron	1400	ug/L		06/12/23 09:37	5	10	06/13/23 16:05	JMW	EPA 6020A
Cadmium	< 1.0	ug/L		06/12/23 09:37	5	1.0	06/13/23 11:53	JMW	EPA 6020A
Calcium	190	mg/L		06/12/23 09:37	5	0.20	06/13/23 16:05	JMW	EPA 6020A
Chromium	< 4.0	ug/L		06/12/23 09:37	5	4.0	06/13/23 16:05	JMW	EPA 6020A
Cobalt	< 2.0	ug/L		06/12/23 09:37	5	2.0	06/13/23 11:53	JMW	EPA 6020A
Lead	< 1.0	ug/L		06/12/23 09:37	5	1.0	06/13/23 11:53	JMW	EPA 6020A
Magnesium	65	mg/L		06/12/23 09:37	5	0.10	06/13/23 16:05	JMW	EPA 6020A
Mercury	< 0.20	ug/L		06/12/23 09:37	5	0.20	06/13/23 11:53	JMW	EPA 6020A
Molybdenum	< 1.0	ug/L		06/12/23 09:37	5	1.0	06/13/23 11:53	JMW	EPA 6020A
Potassium	0.15	mg/L		06/12/23 09:37	5	0.10	06/13/23 16:05	JMW	EPA 6020A

ANALYTICAL RESULTS

Sample: GF00140-16
Name: G406
Matrix: Ground Water - Grab

Sampled: 05/31/23 16:45
Received: 06/01/23 13:59
PO #: 1940007155

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Selenium	< 1.0	ug/L		06/12/23 09:37	5	1.0	06/13/23 11:53	JMW	EPA 6020A
Sodium	38	mg/L		06/12/23 09:37	5	0.10	06/13/23 16:05	JMW	EPA 6020A
Thallium	< 1.0	ug/L		06/12/23 09:37	5	1.0	06/13/23 11:53	JMW	EPA 6020A
Lithium	< 0.020	mg/L		06/12/23 09:37	1	0.020	06/13/23 08:22	TJJ	EPA 6010B

ANALYTICAL RESULTS

Sample: GF00140-17
Name: G406 DUP
Matrix: Ground Water - Grab

Sampled: 05/31/23 16:45
Received: 06/01/23 13:59
PO #: 1940007155

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Anions - PIA									
Chloride	4.2	mg/L		06/02/23 01:10	1	1.0	06/02/23 01:10	CRD	EPA 300.0 REV 2.1
Fluoride	< 0.250	mg/L		06/02/23 01:10	1	0.250	06/02/23 01:10	CRD	EPA 300.0 REV 2.1
Sulfate	490	mg/L		06/02/23 01:47	100	100	06/02/23 01:47	CRD	EPA 300.0 REV 2.1
Field - PIA									
Depth, From Measuring Point	13.27	Feet		05/31/23 16:45	1		05/31/23 16:45	FIELD	Field*
Dissolved oxygen, Field	2.7	mg/L		05/31/23 16:45	1		05/31/23 16:45	FIELD	Field*
Oxidation Reduction Potential	166	mV		05/31/23 16:45	1	-500	05/31/23 16:45	FIELD	Field*
pH, Field Measured	6.53	pH Units		05/31/23 16:45	1		05/31/23 16:45	FIELD	Field*
Specific Conductance, Field Measured	1410	umhos/cm		05/31/23 16:45	1		05/31/23 16:45	FIELD	Field*
Temperature, Field Measured	21.2	°C		05/31/23 16:45	1		05/31/23 16:45	FIELD	Field*
Turbidity, Field Measured	< 0.00	NTU		05/31/23 16:45	1	0.00	05/31/23 16:45	FIELD	Field*
General Chemistry - PIA									
Alkalinity - bicarbonate as CaCO3	350	mg/L		06/12/23 10:31	1	10	06/12/23 10:31	CPS	SM 2320B 1997*
Alkalinity - carbonate as CaCO3	< 10	mg/L		06/12/23 10:31	1	10	06/12/23 10:31	CPS	SM 2320B 1997*
Soluble General Chemistry - PIA									
Solids - total dissolved solids (TDS)	1100	mg/L		06/02/23 14:38	1	26	06/02/23 14:38	HRF/MK H	SM 2540C
Total Metals - PIA									
Antimony	< 3.0	ug/L		06/12/23 09:37	5	3.0	06/13/23 11:57	JMW	EPA 6020A
Arsenic	< 1.0	ug/L		06/12/23 09:37	5	1.0	06/13/23 11:57	JMW	EPA 6020A
Barium	13	ug/L		06/12/23 09:37	5	1.0	06/13/23 11:57	JMW	EPA 6020A
Beryllium	< 1.0	ug/L		06/12/23 09:37	5	1.0	06/13/23 16:09	JMW	EPA 6020A
Boron	1400	ug/L		06/12/23 09:37	5	10	06/13/23 16:09	JMW	EPA 6020A
Cadmium	< 1.0	ug/L		06/12/23 09:37	5	1.0	06/13/23 11:57	JMW	EPA 6020A
Calcium	190	mg/L		06/12/23 09:37	5	0.20	06/13/23 16:09	JMW	EPA 6020A
Chromium	< 4.0	ug/L		06/12/23 09:37	5	4.0	06/13/23 16:09	JMW	EPA 6020A
Cobalt	< 2.0	ug/L		06/12/23 09:37	5	2.0	06/13/23 11:57	JMW	EPA 6020A
Lead	< 1.0	ug/L		06/12/23 09:37	5	1.0	06/13/23 11:57	JMW	EPA 6020A
Magnesium	65	mg/L		06/12/23 09:37	5	0.10	06/13/23 16:09	JMW	EPA 6020A
Mercury	< 0.20	ug/L		06/12/23 09:37	5	0.20	06/13/23 11:57	JMW	EPA 6020A
Molybdenum	< 1.0	ug/L		06/12/23 09:37	5	1.0	06/13/23 11:57	JMW	EPA 6020A
Potassium	0.15	mg/L		06/12/23 09:37	5	0.10	06/13/23 16:09	JMW	EPA 6020A

ANALYTICAL RESULTS

Sample: GF00140-17
Name: G406 DUP
Matrix: Ground Water - Grab

Sampled: 05/31/23 16:45
Received: 06/01/23 13:59
PO #: 1940007155

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Selenium	< 1.0	ug/L		06/12/23 09:37	5	1.0	06/13/23 11:57	JMW	EPA 6020A
Sodium	37	mg/L		06/12/23 09:37	5	0.10	06/13/23 16:09	JMW	EPA 6020A
Thallium	< 1.0	ug/L		06/12/23 09:37	5	1.0	06/13/23 11:57	JMW	EPA 6020A
Lithium	< 0.020	mg/L		06/12/23 09:37	1	0.020	06/13/23 08:23	TJJ	EPA 6010B

ANALYTICAL RESULTS

Sample: GF00140-18
Name: G407
Matrix: Ground Water - Grab

Sampled: 05/31/23 14:09
Received: 06/01/23 13:59
PO #: 1940007155

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
<u>Anions - PIA</u>									
Chloride	17	mg/L		06/02/23 20:47	10	10	06/02/23 20:47	LAM	EPA 300.0 REV 2.1
Fluoride	< 0.250	mg/L		06/02/23 02:06	1	0.250	06/02/23 02:06	CRD	EPA 300.0 REV 2.1
Sulfate	1100	mg/L		06/02/23 02:44	250	250	06/02/23 02:44	CRD	EPA 300.0 REV 2.1
<u>Field - PIA</u>									
Depth, From Measuring Point	7.42	Feet		05/31/23 14:09	1		05/31/23 14:09	FIELD	Field*
Dissolved oxygen, Field	4.3	mg/L		05/31/23 14:09	1		05/31/23 14:09	FIELD	Field*
Oxidation Reduction Potential	162	mV		05/31/23 14:09	1	-500	05/31/23 14:09	FIELD	Field*
pH, Field Measured	6.64	pH Units		05/31/23 14:09	1		05/31/23 14:09	FIELD	Field*
Specific Conductance, Field Measured	2460	umhos/cm		05/31/23 14:09	1		05/31/23 14:09	FIELD	Field*
Temperature, Field Measured	19.2	°C		05/31/23 14:09	1		05/31/23 14:09	FIELD	Field*
Turbidity, Field Measured	5.60	NTU		05/31/23 14:09	1	0.00	05/31/23 14:09	FIELD	Field*
<u>General Chemistry - PIA</u>									
Alkalinity - bicarbonate as CaCO3	510	mg/L		06/12/23 10:31	1	10	06/12/23 10:31	CPS	SM 2320B 1997*
Alkalinity - carbonate as CaCO3	< 10	mg/L		06/12/23 10:31	1	10	06/12/23 10:31	CPS	SM 2320B 1997*
<u>Soluble General Chemistry - PIA</u>									
Solids - total dissolved solids (TDS)	2000	mg/L		06/02/23 14:38	1	26	06/02/23 14:38	HRF/MK H	SM 2540C
<u>Total Metals - PIA</u>									
Antimony	< 3.0	ug/L		06/12/23 09:37	5	3.0	06/13/23 12:01	JMW	EPA 6020A
Arsenic	< 1.0	ug/L		06/12/23 09:37	5	1.0	06/13/23 12:01	JMW	EPA 6020A
Barium	12	ug/L		06/12/23 09:37	5	1.0	06/13/23 12:01	JMW	EPA 6020A
Beryllium	< 1.0	ug/L		06/12/23 09:37	5	1.0	06/13/23 16:13	JMW	EPA 6020A
Boron	90	ug/L		06/12/23 09:37	5	10	06/13/23 16:13	JMW	EPA 6020A
Cadmium	< 1.0	ug/L		06/12/23 09:37	5	1.0	06/13/23 12:01	JMW	EPA 6020A
Calcium	270	mg/L		06/12/23 09:37	5	0.20	06/13/23 16:13	JMW	EPA 6020A
Chromium	< 4.0	ug/L		06/12/23 09:37	5	4.0	06/13/23 16:13	JMW	EPA 6020A
Cobalt	< 2.0	ug/L		06/12/23 09:37	5	2.0	06/13/23 12:01	JMW	EPA 6020A
Lead	< 1.0	ug/L		06/12/23 09:37	5	1.0	06/13/23 12:01	JMW	EPA 6020A
Magnesium	170	mg/L		06/12/23 09:37	5	0.10	06/13/23 16:13	JMW	EPA 6020A
Mercury	< 0.20	ug/L		06/12/23 09:37	5	0.20	06/13/23 12:01	JMW	EPA 6020A
Molybdenum	1.3	ug/L		06/12/23 09:37	5	1.0	06/13/23 12:01	JMW	EPA 6020A
Potassium	2.7	mg/L		06/12/23 09:37	5	0.10	06/13/23 16:13	JMW	EPA 6020A

ANALYTICAL RESULTS

Sample: GF00140-18
Name: G407
Matrix: Ground Water - Grab

Sampled: 05/31/23 14:09
Received: 06/01/23 13:59
PO #: 1940007155

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Selenium	< 1.0	ug/L		06/12/23 09:37	5	1.0	06/13/23 12:01	JMW	EPA 6020A
Sodium	88	mg/L		06/12/23 09:37	5	0.10	06/13/23 16:13	JMW	EPA 6020A
Thallium	< 1.0	ug/L		06/12/23 09:37	5	1.0	06/13/23 12:01	JMW	EPA 6020A
Lithium	0.039	mg/L		06/12/23 09:37	1	0.020	06/13/23 08:24	TJJ	EPA 6010B

Sample: GF00140-34
Name: SG-02
Matrix: Water

Sampled: 05/30/23 15:25
Received: 06/01/23 13:59
PO #: 1940007155

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
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Field - PIA

Depth, From Measuring Point	7.47	Feet		05/30/23 15:25	1		05/30/23 15:25	FIELD	Field*
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Sample: GF00140-35
Name: SG-03
Matrix: Water

Sampled: 05/30/23 13:47
Received: 06/01/23 13:59
PO #: 1940007155

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
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Field - PIA

Depth, From Measuring Point	9.85	Feet		05/30/23 13:47	1		05/30/23 13:47	FIELD	Field*
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Sample: GF00140-36
Name: SG-04
Matrix: Water

Sampled: 05/30/23 16:12
Received: 06/01/23 13:59
PO #: 1940007155

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
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Field - PIA

Depth, From Measuring Point	6.41	Feet		05/30/23 16:12	1		05/30/23 16:12	FIELD	Field*
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ANALYTICAL RESULTS

Sample: GF00140-37
Name: G1003
Matrix: Water

Sampled: 05/30/23 15:38
Received: 06/01/23 13:59
PO #: 1940007155

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Field - PIA									
Depth, From Measuring Point	10.97	Feet		05/30/23 15:38	1		05/30/23 15:38	FIELD	Field*

ANALYTICAL RESULTS

Sample: GF00908-16
Name: G405
Matrix: Ground Water - Grab

Sampled: 06/06/23 13:07
Received: 06/06/23 17:25
PO #: 1940007155

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Anions - PIA									
Chloride	8.9	mg/L		06/08/23 03:42	1	1.0	06/08/23 03:42	CRD	EPA 300.0 REV 2.1
Fluoride	< 0.250	mg/L		06/08/23 03:42	1	0.250	06/08/23 03:42	CRD	EPA 300.0 REV 2.1
Sulfate	1000	mg/L		06/08/23 04:25	250	250	06/08/23 04:25	CRD	EPA 300.0 REV 2.1
Field - PIA									
Depth, From Measuring Point	7.13	Feet		06/06/23 13:07	1		06/06/23 13:07	FIELD	Field*
Dissolved oxygen, Field	1.8	mg/L		06/06/23 13:07	1		06/06/23 13:07	FIELD	Field*
Oxidation Reduction Potential	68.0	mV		06/06/23 13:07	1	-500	06/06/23 13:07	FIELD	Field*
pH, Field Measured	6.84	pH Units		06/06/23 13:07	1		06/06/23 13:07	FIELD	Field*
Specific Conductance, Field Measured	2130	umhos/cm		06/06/23 13:07	1		06/06/23 13:07	FIELD	Field*
Temperature, Field Measured	19.7	°C		06/06/23 13:07	1		06/06/23 13:07	FIELD	Field*
Turbidity, Field Measured	7.10	NTU		06/06/23 13:07	1	0.00	06/06/23 13:07	FIELD	Field*
General Chemistry - PIA									
Alkalinity - bicarbonate as CaCO3	280	mg/L		06/14/23 09:59	1	2.0	06/14/23 09:59	CPS	SM 2320B 1997*
Alkalinity - carbonate as CaCO3	< 2.0	mg/L		06/14/23 09:59	1	2.0	06/14/23 09:59	CPS	SM 2320B 1997*
Soluble General Chemistry - PIA									
Solids - total dissolved solids (TDS)	1700	mg/L		06/07/23 11:24	1	26	06/07/23 11:24	MKH	SM 2540C
Total Metals - PIA									
Antimony	< 3.0	ug/L		06/13/23 09:07	5	3.0	06/14/23 18:09	JMW	EPA 6020A
Arsenic	< 1.0	ug/L		06/13/23 09:07	5	1.0	06/16/23 11:52	JMW	EPA 6020A
Barium	13	ug/L		06/13/23 09:07	5	1.0	06/14/23 18:09	JMW	EPA 6020A
Beryllium	< 1.0	ug/L		06/13/23 09:07	5	1.0	06/14/23 18:09	JMW	EPA 6020A
Boron	9500	ug/L		06/13/23 09:07	20	40	06/20/23 11:36	JMW	EPA 6020A
Cadmium	< 1.0	ug/L		06/13/23 09:07	5	1.0	06/14/23 18:09	JMW	EPA 6020A
Calcium	250	mg/L		06/13/23 09:07	5	0.20	06/14/23 18:09	JMW	EPA 6020A
Chromium	< 4.0	ug/L		06/13/23 09:07	5	4.0	06/14/23 18:09	JMW	EPA 6020A
Cobalt	< 2.0	ug/L		06/13/23 09:07	5	2.0	06/14/23 18:09	JMW	EPA 6020A
Lead	< 1.0	ug/L		06/13/23 09:07	5	1.0	06/16/23 11:52	JMW	EPA 6020A
Magnesium	110	mg/L		06/13/23 09:07	5	0.10	06/14/23 18:09	JMW	EPA 6020A
Mercury	< 0.20	ug/L		06/13/23 09:07	5	0.20	06/14/23 18:09	JMW	EPA 6020A
Molybdenum	1.2	ug/L		06/13/23 09:07	5	1.0	06/14/23 18:09	JMW	EPA 6020A
Potassium	0.41	mg/L		06/13/23 09:07	5	0.10	06/16/23 15:58	JMW	EPA 6020A

ANALYTICAL RESULTS

Sample: GF00908-16
Name: G405
Matrix: Ground Water - Grab

Sampled: 06/06/23 13:07
Received: 06/06/23 17:25
PO #: 1940007155

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Selenium	1.2	ug/L		06/13/23 09:07	5	1.0	06/14/23 18:09	JMW	EPA 6020A
Sodium	110	mg/L		06/13/23 09:07	5	0.10	06/16/23 15:58	JMW	EPA 6020A
Thallium	< 1.0	ug/L		06/13/23 09:07	5	1.0	06/16/23 11:52	JMW	EPA 6020A
Lithium	< 0.020	mg/L		06/13/23 09:07	1	0.020	06/20/23 10:41	TJJ	EPA 6010B

ANALYTICAL RESULTS

Sample: GF01285-07
Name: G402
Matrix: Ground Water - Grab

Sampled: 06/06/23 16:05
Received: 06/07/23 16:16
PO #: 1940007155

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Anions - PIA									
Chloride	3.4	mg/L		06/08/23 07:51	1	1.0	06/08/23 07:51	CRD	EPA 300.0 REV 2.1
Fluoride	< 0.250	mg/L		06/08/23 07:51	1	0.250	06/08/23 07:51	CRD	EPA 300.0 REV 2.1
Sulfate	580	mg/L		06/08/23 08:28	100	100	06/08/23 08:28	CRD	EPA 300.0 REV 2.1
Field - PIA									
Depth, From Measuring Point	11	Feet		06/06/23 16:05	1		06/06/23 16:05	FIELD	Field*
Dissolved oxygen, Field	8.6	mg/L		06/06/23 16:05	1		06/06/23 16:05	FIELD	Field*
Oxidation Reduction Potential	182	mV		06/06/23 16:05	1	-500	06/06/23 16:05	FIELD	Field*
pH, Field Measured	6.62	pH Units		06/06/23 16:05	1		06/06/23 16:05	FIELD	Field*
Specific Conductance, Field Measured	1720	umhos/cm		06/06/23 16:05	1		06/06/23 16:05	FIELD	Field*
Temperature, Field Measured	23.2	°C		06/06/23 16:05	1		06/06/23 16:05	FIELD	Field*
Turbidity, Field Measured	109	NTU		06/06/23 16:05	1	0.00	06/06/23 16:05	FIELD	Field*
General Chemistry - PIA									
Alkalinity - bicarbonate as CaCO3	500	mg/L		06/14/23 09:59	1	2.0	06/14/23 09:59	CPS	SM 2320B 1997*
Alkalinity - carbonate as CaCO3	< 2.0	mg/L		06/14/23 09:59	1	2.0	06/14/23 09:59	CPS	SM 2320B 1997*
Soluble General Chemistry - PIA									
Solids - total dissolved solids (TDS)	1400	mg/L		06/08/23 12:23	1	26	06/08/23 12:23	MKH	SM 2540C
Total Metals - PIA									
Antimony	< 3.0	ug/L		06/14/23 10:45	5	3.0	06/16/23 13:08	JMW	EPA 6020A
Arsenic	3.4	ug/L		06/14/23 10:45	5	1.0	06/16/23 13:08	JMW	EPA 6020A
Barium	26	ug/L		06/14/23 10:45	5	1.0	06/16/23 13:08	JMW	EPA 6020A
Beryllium	< 1.0	ug/L		06/14/23 10:45	5	1.0	06/20/23 09:05	JMW	EPA 6020A
Boron	4900	ug/L		06/14/23 10:45	5	10	06/20/23 09:05	JMW	EPA 6020A
Cadmium	< 1.0	ug/L		06/14/23 10:45	5	1.0	06/16/23 13:08	JMW	EPA 6020A
Calcium	210	mg/L		06/14/23 10:45	5	0.20	06/16/23 16:34	JMW	EPA 6020A
Chromium	< 4.0	ug/L		06/14/23 10:45	5	4.0	06/16/23 16:34	JMW	EPA 6020A
Cobalt	3.5	ug/L		06/14/23 10:45	5	2.0	06/16/23 13:08	JMW	EPA 6020A
Lead	2.0	ug/L		06/14/23 10:45	5	1.0	06/16/23 13:08	JMW	EPA 6020A
Magnesium	130	mg/L		06/14/23 10:45	5	0.10	06/16/23 16:34	JMW	EPA 6020A
Mercury	< 0.20	ug/L		06/14/23 10:45	5	0.20	06/16/23 13:08	JMW	EPA 6020A
Molybdenum	2.3	ug/L		06/14/23 10:45	5	1.0	06/16/23 13:08	JMW	EPA 6020A
Potassium	1.0	mg/L		06/14/23 10:45	5	0.10	06/16/23 16:34	JMW	EPA 6020A

ANALYTICAL RESULTS

Sample: GF01285-07
Name: G402
Matrix: Ground Water - Grab

Sampled: 06/06/23 16:05
Received: 06/07/23 16:16
PO #: 1940007155

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Selenium	< 1.0	ug/L		06/14/23 10:45	5	1.0	06/16/23 13:08	JMW	EPA 6020A
Sodium	44	mg/L		06/14/23 10:45	5	0.10	06/20/23 09:05	JMW	EPA 6020A
Thallium	< 1.0	ug/L		06/14/23 10:45	5	1.0	06/16/23 13:08	JMW	EPA 6020A
Lithium	< 0.020	mg/L		06/14/23 10:45	1	0.020	06/20/23 10:48	TJJ	EPA 6010B

ANALYTICAL RESULTS

Sample: GF01285-09
Name: G403
Matrix: Ground Water - Grab

Sampled: 06/07/23 11:25
Received: 06/07/23 16:16
PO #: 1940007155

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Anions - PIA									
Chloride	6.2	mg/L		06/08/23 13:08	1	1.0	06/08/23 13:08	CRD	EPA 300.0 REV 2.1
Fluoride	0.261	mg/L		06/08/23 13:08	1	0.250	06/08/23 13:08	CRD	EPA 300.0 REV 2.1
Sulfate	66	mg/L		06/08/23 13:26	10	10	06/08/23 13:26	CRD	EPA 300.0 REV 2.1
Field - PIA									
Depth, From Measuring Point	8.82	Feet		06/07/23 11:25	1		06/07/23 11:25	FIELD	Field*
Dissolved oxygen, Field	1.6	mg/L		06/07/23 11:25	1		06/07/23 11:25	FIELD	Field*
Oxidation Reduction Potential	40.7	mV		06/07/23 11:25	1	-500	06/07/23 11:25	FIELD	Field*
pH, Field Measured	7.00	pH Units		06/07/23 11:25	1		06/07/23 11:25	FIELD	Field*
Specific Conductance, Field Measured	719.4	umhos/cm		06/07/23 11:25	1		06/07/23 11:25	FIELD	Field*
Temperature, Field Measured	15.8	°C		06/07/23 11:25	1		06/07/23 11:25	FIELD	Field*
Turbidity, Field Measured	31.1	NTU		06/07/23 11:25	1	0.00	06/07/23 11:25	FIELD	Field*
General Chemistry - PIA									
Alkalinity - bicarbonate as CaCO3	340	mg/L		06/14/23 09:59	1	2.0	06/14/23 09:59	CPS	SM 2320B 1997*
Alkalinity - carbonate as CaCO3	< 2.0	mg/L		06/14/23 09:59	1	2.0	06/14/23 09:59	CPS	SM 2320B 1997*
Soluble General Chemistry - PIA									
Solids - total dissolved solids (TDS)	400	mg/L		06/08/23 12:23	1	26	06/08/23 12:23	MKH	SM 2540C
Total Metals - PIA									
Antimony	< 3.0	ug/L		06/14/23 10:45	5	3.0	06/16/23 13:16	JMW	EPA 6020A
Arsenic	< 1.0	ug/L		06/14/23 10:45	5	1.0	06/16/23 13:16	JMW	EPA 6020A
Barium	120	ug/L		06/14/23 10:45	5	1.0	06/16/23 13:16	JMW	EPA 6020A
Beryllium	< 1.0	ug/L		06/14/23 10:45	5	1.0	06/20/23 09:13	JMW	EPA 6020A
Boron	35	ug/L		06/14/23 10:45	5	10	06/20/23 09:13	JMW	EPA 6020A
Cadmium	< 1.0	ug/L		06/14/23 10:45	5	1.0	06/16/23 13:16	JMW	EPA 6020A
Calcium	78	mg/L		06/14/23 10:45	5	0.20	06/16/23 16:42	JMW	EPA 6020A
Chromium	< 4.0	ug/L		06/14/23 10:45	5	4.0	06/16/23 16:42	JMW	EPA 6020A
Cobalt	< 2.0	ug/L		06/14/23 10:45	5	2.0	06/16/23 13:16	JMW	EPA 6020A
Lead	< 1.0	ug/L		06/14/23 10:45	5	1.0	06/16/23 13:16	JMW	EPA 6020A
Magnesium	37	mg/L		06/14/23 10:45	5	0.10	06/16/23 16:42	JMW	EPA 6020A
Mercury	< 0.20	ug/L		06/14/23 10:45	5	0.20	06/16/23 13:16	JMW	EPA 6020A
Molybdenum	< 1.0	ug/L		06/14/23 10:45	5	1.0	06/16/23 13:16	JMW	EPA 6020A
Potassium	0.45	mg/L		06/14/23 10:45	5	0.10	06/16/23 16:42	JMW	EPA 6020A

ANALYTICAL RESULTS

Sample: GF01285-09
Name: G403
Matrix: Ground Water - Grab

Sampled: 06/07/23 11:25
Received: 06/07/23 16:16
PO #: 1940007155

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Selenium	< 1.0	ug/L		06/14/23 10:45	5	1.0	06/16/23 13:16	JMW	EPA 6020A
Sodium	27	mg/L		06/14/23 10:45	5	0.10	06/20/23 09:13	JMW	EPA 6020A
Thallium	< 1.0	ug/L		06/14/23 10:45	5	1.0	06/16/23 13:16	JMW	EPA 6020A
Lithium	< 0.020	mg/L		06/14/23 10:45	1	0.020	06/20/23 10:51	TJJ	EPA 6010B

ANALYTICAL RESULTS

Sample: GF01285-10
Name: G404
Matrix: Ground Water - Grab

Sampled: 06/07/23 12:51
Received: 06/07/23 16:16
PO #: 1940007155

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Anions - PIA									
Chloride	140	mg/L		06/08/23 15:32	100	100	06/08/23 15:32	CRD	EPA 300.0 REV 2.1
Fluoride	< 0.250	mg/L		06/08/23 14:56	1	0.250	06/08/23 14:56	CRD	EPA 300.0 REV 2.1
Sulfate	700	mg/L		06/08/23 15:32	100	100	06/08/23 15:32	CRD	EPA 300.0 REV 2.1
Field - PIA									
Depth, From Measuring Point	5.89	Feet		06/07/23 12:51	1		06/07/23 12:51	FIELD	Field*
Dissolved oxygen, Field	0.16	mg/L		06/07/23 12:51	1		06/07/23 12:51	FIELD	Field*
Oxidation Reduction Potential	79.2	mV		06/07/23 12:51	1	-500	06/07/23 12:51	FIELD	Field*
pH, Field Measured	6.76	pH Units		06/07/23 12:51	1		06/07/23 12:51	FIELD	Field*
Specific Conductance, Field Measured	2113	umhos/cm		06/07/23 12:51	1		06/07/23 12:51	FIELD	Field*
Temperature, Field Measured	17.3	°C		06/07/23 12:51	1		06/07/23 12:51	FIELD	Field*
Turbidity, Field Measured	10.1	NTU		06/07/23 12:51	1	0.00	06/07/23 12:51	FIELD	Field*
General Chemistry - PIA									
Alkalinity - bicarbonate as CaCO3	390	mg/L		06/14/23 09:59	1	2.0	06/14/23 09:59	CPS	SM 2320B 1997*
Alkalinity - carbonate as CaCO3	< 2.0	mg/L		06/14/23 09:59	1	2.0	06/14/23 09:59	CPS	SM 2320B 1997*
Soluble General Chemistry - PIA									
Solids - total dissolved solids (TDS)	1300	mg/L		06/08/23 12:23	1	26	06/08/23 12:23	MKH	SM 2540C
Total Metals - PIA									
Antimony	< 3.0	ug/L		06/14/23 10:45	5	3.0	06/16/23 13:20	JMW	EPA 6020A
Arsenic	< 1.0	ug/L		06/14/23 10:45	5	1.0	06/16/23 13:20	JMW	EPA 6020A
Barium	19	ug/L		06/14/23 10:45	5	1.0	06/16/23 13:20	JMW	EPA 6020A
Beryllium	< 1.0	ug/L		06/14/23 10:45	5	1.0	06/20/23 09:16	JMW	EPA 6020A
Boron	9300	ug/L		06/14/23 10:45	5	10	06/20/23 09:16	JMW	EPA 6020A
Cadmium	< 1.0	ug/L		06/14/23 10:45	5	1.0	06/16/23 13:20	JMW	EPA 6020A
Calcium	230	mg/L		06/14/23 10:45	5	0.20	06/16/23 16:46	JMW	EPA 6020A
Chromium	< 4.0	ug/L		06/14/23 10:45	5	4.0	06/16/23 16:46	JMW	EPA 6020A
Cobalt	< 2.0	ug/L		06/14/23 10:45	5	2.0	06/16/23 13:20	JMW	EPA 6020A
Lead	< 1.0	ug/L		06/14/23 10:45	5	1.0	06/16/23 13:20	JMW	EPA 6020A
Magnesium	110	mg/L		06/14/23 10:45	5	0.10	06/16/23 16:46	JMW	EPA 6020A
Mercury	< 0.20	ug/L		06/14/23 10:45	5	0.20	06/16/23 13:20	JMW	EPA 6020A
Molybdenum	< 1.0	ug/L		06/14/23 10:45	5	1.0	06/16/23 13:20	JMW	EPA 6020A
Potassium	0.43	mg/L		06/14/23 10:45	5	0.10	06/16/23 16:46	JMW	EPA 6020A

ANALYTICAL RESULTS

Sample: GF01285-10
Name: G404
Matrix: Ground Water - Grab

Sampled: 06/07/23 12:51
Received: 06/07/23 16:16
PO #: 1940007155

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Selenium	< 1.0	ug/L		06/14/23 10:45	5	1.0	06/16/23 13:20	JMW	EPA 6020A
Sodium	81	mg/L		06/14/23 10:45	5	0.10	06/20/23 09:16	JMW	EPA 6020A
Thallium	< 1.0	ug/L		06/14/23 10:45	5	1.0	06/16/23 13:20	JMW	EPA 6020A
Lithium	< 0.020	mg/L		06/14/23 10:45	1	0.020	06/20/23 10:52	TJJ	EPA 6010B

ANALYTICAL RESULTS

Sample: GF01285-11
Name: G1001
Matrix: Ground Water - Grab

Sampled: 06/07/23 10:24
Received: 06/07/23 16:16
PO #: 1940007155

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Anions - PIA									
Chloride	15	mg/L	Q4	06/08/23 18:51	10	10	06/08/23 18:51	CRD	EPA 300.0 REV 2.1
Fluoride	< 0.250	mg/L		06/08/23 17:21	1	0.250	06/08/23 17:21	CRD	EPA 300.0 REV 2.1
Sulfate	180	mg/L	Q4	06/08/23 19:09	100	100	06/08/23 19:09	CRD	EPA 300.0 REV 2.1
Field - PIA									
Depth, From Measuring Point	6.82	Feet		06/07/23 10:24	1		06/07/23 10:24	FIELD	Field*
Dissolved oxygen, Field	1.8	mg/L		06/07/23 10:24	1		06/07/23 10:24	FIELD	Field*
Oxidation Reduction Potential	111	mV		06/07/23 10:24	1	-500	06/07/23 10:24	FIELD	Field*
pH, Field Measured	6.98	pH Units		06/07/23 10:24	1		06/07/23 10:24	FIELD	Field*
Specific Conductance, Field Measured	1330	umhos/cm		06/07/23 10:24	1		06/07/23 10:24	FIELD	Field*
Temperature, Field Measured	19.1	°C		06/07/23 10:24	1		06/07/23 10:24	FIELD	Field*
Turbidity, Field Measured	9.20	NTU		06/07/23 10:24	1	0.00	06/07/23 10:24	FIELD	Field*
General Chemistry - PIA									
Alkalinity - bicarbonate as CaCO3	580	mg/L	M	06/14/23 09:59	1	2.0	06/14/23 09:59	CPS	SM 2320B 1997*
Alkalinity - carbonate as CaCO3	< 2.0	mg/L		06/14/23 09:59	1	2.0	06/14/23 09:59	CPS	SM 2320B 1997*
Soluble General Chemistry - PIA									
Solids - total dissolved solids (TDS)	830	mg/L		06/12/23 12:26	1	26	06/12/23 12:26	MKH	SM 2540C
Total Metals - PIA									
Antimony	< 3.0	ug/L		06/14/23 10:45	5	3.0	06/16/23 13:24	JMW	EPA 6020A
Arsenic	< 1.0	ug/L		06/14/23 10:45	5	1.0	06/16/23 13:24	JMW	EPA 6020A
Barium	71	ug/L		06/14/23 10:45	5	1.0	06/16/23 13:24	JMW	EPA 6020A
Beryllium	< 1.0	ug/L		06/14/23 10:45	5	1.0	06/20/23 09:20	JMW	EPA 6020A
Boron	950	ug/L		06/14/23 10:45	5	10	06/20/23 09:20	JMW	EPA 6020A
Cadmium	< 1.0	ug/L		06/14/23 10:45	5	1.0	06/16/23 13:24	JMW	EPA 6020A
Calcium	140	mg/L		06/14/23 10:45	5	0.20	06/16/23 16:50	JMW	EPA 6020A
Chromium	< 4.0	ug/L		06/14/23 10:45	5	4.0	06/16/23 16:50	JMW	EPA 6020A
Cobalt	< 2.0	ug/L		06/14/23 10:45	5	2.0	06/16/23 13:24	JMW	EPA 6020A
Lead	< 1.0	ug/L		06/14/23 10:45	5	1.0	06/16/23 13:24	JMW	EPA 6020A
Magnesium	65	mg/L		06/14/23 10:45	5	0.10	06/16/23 16:50	JMW	EPA 6020A
Mercury	< 0.20	ug/L		06/14/23 10:45	5	0.20	06/16/23 13:24	JMW	EPA 6020A
Molybdenum	7.9	ug/L		06/14/23 10:45	5	1.0	06/16/23 13:24	JMW	EPA 6020A
Potassium	2.5	mg/L		06/14/23 10:45	5	0.10	06/16/23 16:50	JMW	EPA 6020A

ANALYTICAL RESULTS

Sample: GF01285-11
Name: G1001
Matrix: Ground Water - Grab

Sampled: 06/07/23 10:24
Received: 06/07/23 16:16
PO #: 1940007155

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Selenium	< 1.0	ug/L		06/14/23 10:45	5	1.0	06/16/23 13:24	JMW	EPA 6020A
Sodium	94	mg/L		06/14/23 10:45	5	0.10	06/20/23 09:20	JMW	EPA 6020A
Thallium	< 1.0	ug/L		06/14/23 10:45	5	1.0	06/16/23 13:24	JMW	EPA 6020A
Lithium	< 0.020	mg/L		06/14/23 10:45	1	0.020	06/20/23 10:55	TJJ	EPA 6010B

ANALYTICAL RESULTS

Sample: GF01285-12
Name: G401
Matrix: Ground Water - Grab

Sampled: 06/07/23 11:58
Received: 06/07/23 16:16
PO #: 1940007155

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Anions - PIA									
Chloride	3.6	mg/L		06/08/23 20:58	1	1.0	06/08/23 20:58	CRD	EPA 300.0 REV 2.1
Sulfate	2100	mg/L		06/08/23 22:10	500	500	06/08/23 22:10	CRD	EPA 300.0 REV 2.1
Field - PIA									
Depth, From Measuring Point	21.83	Feet		06/07/23 11:58	1		06/07/23 11:58	FIELD	Field*
Dissolved oxygen, Field	1.1	mg/L		06/07/23 11:58	1		06/07/23 11:58	FIELD	Field*
Oxidation Reduction Potential	-32.0	mV		06/07/23 11:58	1	-500	06/07/23 11:58	FIELD	Field*
pH, Field Measured	6.20	pH Units		06/07/23 11:58	1		06/07/23 11:58	FIELD	Field*
Specific Conductance, Field Measured	3130	umhos/cm		06/07/23 11:58	1		06/07/23 11:58	FIELD	Field*
Temperature, Field Measured	12.3	°C		06/07/23 11:58	1		06/07/23 11:58	FIELD	Field*
Turbidity, Field Measured	28.8	NTU		06/07/23 11:58	1	0.00	06/07/23 11:58	FIELD	Field*
General Chemistry - PIA									
Alkalinity - bicarbonate as CaCO3	140	mg/L		06/14/23 09:59	1	2.0	06/14/23 09:59	CPS	SM 2320B 1997*
Alkalinity - carbonate as CaCO3	< 2.0	mg/L		06/14/23 09:59	1	2.0	06/14/23 09:59	CPS	SM 2320B 1997*
Fluoride	< 0.250	mg/L		06/16/23 11:01	1	0.250	06/16/23 11:01	ANK	SM 4500F C 1997
Soluble General Chemistry - PIA									
Solids - total dissolved solids (TDS)	6600	mg/L		06/12/23 12:26	1	51	06/12/23 12:26	MKH	SM 2540C
Total Metals - PIA									
Antimony	< 3.0	ug/L		06/14/23 10:45	5	3.0	06/20/23 09:24	JMW	EPA 6020A
Arsenic	< 1.0	ug/L		06/14/23 10:45	5	1.0	06/16/23 16:54	JMW	EPA 6020A
Barium	10	ug/L		06/14/23 10:45	5	1.0	06/20/23 09:24	JMW	EPA 6020A
Beryllium	< 1.0	ug/L		06/14/23 10:45	5	1.0	06/20/23 09:24	JMW	EPA 6020A
Boron	3900	ug/L		06/14/23 10:45	5	10	06/20/23 09:24	JMW	EPA 6020A
Cadmium	< 1.0	ug/L		06/14/23 10:45	5	1.0	06/16/23 16:54	JMW	EPA 6020A
Calcium	490	mg/L		06/14/23 10:45	5	0.20	06/20/23 09:24	JMW	EPA 6020A
Chromium	< 4.0	ug/L		06/14/23 10:45	5	4.0	06/16/23 16:54	JMW	EPA 6020A
Cobalt	110	ug/L		06/14/23 10:45	5	2.0	06/16/23 16:54	JMW	EPA 6020A
Lead	< 1.0	ug/L		06/14/23 10:45	5	1.0	06/20/23 09:24	JMW	EPA 6020A
Magnesium	150	mg/L		06/14/23 10:45	5	0.10	06/16/23 16:54	JMW	EPA 6020A
Mercury	< 0.20	ug/L		06/14/23 10:45	5	0.20	06/20/23 09:24	JMW	EPA 6020A
Molybdenum	< 1.0	ug/L		06/14/23 10:45	5	1.0	06/16/23 16:54	JMW	EPA 6020A
Potassium	2.2	mg/L		06/14/23 10:45	5	0.10	06/16/23 16:54	JMW	EPA 6020A

ANALYTICAL RESULTS

Sample: GF01285-12
Name: G401
Matrix: Ground Water - Grab

Sampled: 06/07/23 11:58
Received: 06/07/23 16:16
PO #: 1940007155

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Selenium	< 1.0	ug/L		06/14/23 10:45	5	1.0	06/20/23 16:12	JMW	EPA 6020A
Sodium	71	mg/L		06/14/23 10:45	5	0.10	06/20/23 09:24	JMW	EPA 6020A
Thallium	< 1.0	ug/L		06/14/23 10:45	5	1.0	06/20/23 09:24	JMW	EPA 6020A
Lithium	< 0.020	mg/L		06/14/23 10:45	1	0.020	06/20/23 10:57	TJJ	EPA 6010B

ANALYTICAL RESULTS

Sample: GF01654-09
Name: G280
Matrix: Ground Water - Grab

Sampled: 06/08/23 09:25
Received: 06/09/23 06:50
PO #: 1940007155

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
<u>Anions - PIA</u>									
Chloride	71	mg/L		06/09/23 11:18	10	10	06/09/23 11:18	CRD	EPA 300.0 REV 2.1
Fluoride	0.339	mg/L		06/09/23 10:56	1	0.250	06/09/23 10:56	CRD	EPA 300.0 REV 2.1
Sulfate	91	mg/L		06/09/23 11:18	10	10	06/09/23 11:18	CRD	EPA 300.0 REV 2.1
<u>Field - PIA</u>									
Depth, From Measuring Point	4.47	Feet		06/08/23 09:25	1		06/08/23 09:25	FIELD	Field*
Dissolved oxygen, Field	2.0	mg/L		06/08/23 09:25	1		06/08/23 09:25	FIELD	Field*
Oxidation Reduction Potential	190	mV		06/08/23 09:25	1	-500	06/08/23 09:25	FIELD	Field*
pH, Field Measured	7.35	pH Units		06/08/23 09:25	1		06/08/23 09:25	FIELD	Field*
Specific Conductance, Field Measured	902.1	umhos/cm		06/08/23 09:25	1		06/08/23 09:25	FIELD	Field*
Temperature, Field Measured	15.4	°C		06/08/23 09:25	1		06/08/23 09:25	FIELD	Field*
Turbidity, Field Measured	46.1	NTU		06/08/23 09:25	1	0.00	06/08/23 09:25	FIELD	Field*
<u>General Chemistry - PIA</u>									
Alkalinity - bicarbonate as CaCO3	260	mg/L		06/15/23 12:21	1	10	06/15/23 12:21	CPS	SM 2320B 1997*
Alkalinity - carbonate as CaCO3	< 10	mg/L		06/15/23 12:21	1	10	06/15/23 12:21	CPS	SM 2320B 1997*
<u>Soluble General Chemistry - PIA</u>									
Solids - total dissolved solids (TDS)	590	mg/L		06/12/23 10:55	1	26	06/12/23 10:55	MKH	SM 2540C
<u>Total Metals - PIA</u>									
Antimony	< 3.0	ug/L		06/15/23 05:55	5	3.0	06/21/23 09:56	JMW	EPA 6020A
Arsenic	< 1.0	ug/L		06/15/23 05:55	5	1.0	06/21/23 09:56	JMW	EPA 6020A
Barium	49	ug/L		06/15/23 05:55	5	1.0	06/21/23 09:56	JMW	EPA 6020A
Beryllium	< 1.0	ug/L		06/15/23 05:55	5	1.0	06/21/23 09:56	JMW	EPA 6020A
Boron	20	ug/L		06/15/23 05:55	5	10	06/21/23 09:56	JMW	EPA 6020A
Cadmium	< 1.0	ug/L		06/15/23 05:55	5	1.0	06/21/23 09:56	JMW	EPA 6020A
Calcium	79	mg/L		06/15/23 05:55	5	0.20	06/21/23 09:56	JMW	EPA 6020A
Chromium	< 4.0	ug/L		06/15/23 05:55	5	4.0	06/21/23 09:56	JMW	EPA 6020A
Cobalt	< 2.0	ug/L		06/15/23 05:55	5	2.0	06/21/23 09:56	JMW	EPA 6020A
Lead	< 1.0	ug/L		06/15/23 05:55	5	1.0	06/21/23 09:56	JMW	EPA 6020A
Magnesium	38	mg/L		06/15/23 05:55	5	0.10	06/21/23 09:56	JMW	EPA 6020A
Mercury	< 0.20	ug/L		06/15/23 05:55	5	0.20	06/21/23 09:56	JMW	EPA 6020A
Molybdenum	< 1.0	ug/L		06/15/23 05:55	5	1.0	06/21/23 09:56	JMW	EPA 6020A
Potassium	0.58	mg/L		06/15/23 05:55	5	0.10	06/21/23 09:56	JMW	EPA 6020A

ANALYTICAL RESULTS

Sample: GF01654-09
Name: G280
Matrix: Ground Water - Grab

Sampled: 06/08/23 09:25
Received: 06/09/23 06:50
PO #: 1940007155

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Selenium	< 1.0	ug/L		06/15/23 05:55	5	1.0	06/22/23 08:10	JMW	EPA 6020A
Sodium	56	mg/L		06/15/23 05:55	5	0.10	06/21/23 09:56	JMW	EPA 6020A
Thallium	< 1.0	ug/L		06/15/23 05:55	5	1.0	06/21/23 09:56	JMW	EPA 6020A
Lithium	< 0.020	mg/L		06/15/23 05:55	1	0.020	06/20/23 12:05	TJJ	EPA 6010B

ANALYTICAL RESULTS

Sample: GF01654-13
Name: G281
Matrix: Ground Water - Grab

Sampled: 06/08/23 13:48
Received: 06/09/23 06:50
PO #: 1940007155

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
<u>Anions - PIA</u>									
Chloride	75	mg/L		06/09/23 15:55	10	10	06/09/23 15:55	CRD	EPA 300.0 REV 2.1
Fluoride	0.253	mg/L		06/09/23 15:34	1	0.250	06/09/23 15:34	CRD	EPA 300.0 REV 2.1
Sulfate	140	mg/L		06/09/23 16:17	50	50	06/09/23 16:17	CRD	EPA 300.0 REV 2.1
<u>Field - PIA</u>									
Depth, From Measuring Point	7.42	Feet		06/08/23 13:48	1		06/08/23 13:48	FIELD	Field*
Dissolved oxygen, Field	0.95	mg/L		06/08/23 13:48	1		06/08/23 13:48	FIELD	Field*
Oxidation Reduction Potential	11.0	mV		06/08/23 13:48	1	-500	06/08/23 13:48	FIELD	Field*
pH, Field Measured	6.77	pH Units		06/08/23 13:48	1		06/08/23 13:48	FIELD	Field*
Specific Conductance, Field Measured	1350	umhos/cm		06/08/23 13:48	1		06/08/23 13:48	FIELD	Field*
Temperature, Field Measured	18.4	°C		06/08/23 13:48	1		06/08/23 13:48	FIELD	Field*
Turbidity, Field Measured	35.6	NTU		06/08/23 13:48	1	0.00	06/08/23 13:48	FIELD	Field*
<u>General Chemistry - PIA</u>									
Alkalinity - bicarbonate as CaCO3	360	mg/L		06/15/23 12:21	1	10	06/15/23 12:21	CPS	SM 2320B 1997*
Alkalinity - carbonate as CaCO3	< 10	mg/L		06/15/23 12:21	1	10	06/15/23 12:21	CPS	SM 2320B 1997*
<u>Soluble General Chemistry - PIA</u>									
Solids - total dissolved solids (TDS)	1000	mg/L		06/12/23 10:55	1	26	06/12/23 10:55	MKH	SM 2540C
<u>Total Metals - PIA</u>									
Antimony	< 3.0	ug/L		06/15/23 05:55	5	3.0	06/21/23 10:39	JMW	EPA 6020A
Arsenic	< 1.0	ug/L		06/15/23 05:55	5	1.0	06/21/23 10:39	JMW	EPA 6020A
Barium	71	ug/L		06/15/23 05:55	5	1.0	06/21/23 10:39	JMW	EPA 6020A
Beryllium	< 1.0	ug/L		06/15/23 05:55	5	1.0	06/21/23 10:39	JMW	EPA 6020A
Boron	< 10	ug/L		06/15/23 05:55	5	10	06/21/23 10:39	JMW	EPA 6020A
Cadmium	< 1.0	ug/L		06/15/23 05:55	5	1.0	06/21/23 10:39	JMW	EPA 6020A
Calcium	130	mg/L		06/15/23 05:55	5	0.20	06/21/23 10:39	JMW	EPA 6020A
Chromium	< 4.0	ug/L		06/15/23 05:55	5	4.0	06/21/23 10:39	JMW	EPA 6020A
Cobalt	< 2.0	ug/L		06/15/23 05:55	5	2.0	06/21/23 10:39	JMW	EPA 6020A
Lead	< 1.0	ug/L		06/15/23 05:55	5	1.0	06/21/23 10:39	JMW	EPA 6020A
Magnesium	61	mg/L		06/15/23 05:55	5	0.10	06/21/23 10:39	JMW	EPA 6020A
Mercury	< 0.20	ug/L		06/15/23 05:55	5	0.20	06/21/23 10:39	JMW	EPA 6020A
Molybdenum	< 1.0	ug/L		06/15/23 05:55	5	1.0	06/21/23 10:39	JMW	EPA 6020A
Potassium	0.53	mg/L		06/15/23 05:55	5	0.10	06/21/23 10:39	JMW	EPA 6020A

ANALYTICAL RESULTS

Sample: GF01654-13
Name: G281
Matrix: Ground Water - Grab

Sampled: 06/08/23 13:48
Received: 06/09/23 06:50
PO #: 1940007155

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Selenium	< 1.0	ug/L		06/15/23 05:55	5	1.0	06/22/23 08:19	JMW	EPA 6020A
Sodium	89	mg/L		06/15/23 05:55	5	0.10	06/21/23 10:39	JMW	EPA 6020A
Thallium	< 1.0	ug/L		06/15/23 05:55	5	1.0	06/21/23 10:39	JMW	EPA 6020A
Lithium	< 0.020	mg/L		06/15/23 05:55	1	0.020	06/20/23 12:09	TJJ	EPA 6010B

ANALYTICAL RESULTS

Sample: GF01654-16
Name: G270
Matrix: Ground Water - Grab

Sampled: 06/08/23 09:54
Received: 06/09/23 06:50
PO #: 1940007155

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Anions - PIA									
Chloride	8.3	mg/L		06/09/23 12:15	5	5.0	06/09/23 12:15	CRD	EPA 300.0 REV 2.1
Fluoride	0.298	mg/L		06/09/23 11:57	1	0.250	06/09/23 11:57	CRD	EPA 300.0 REV 2.1
Sulfate	54	mg/L		06/09/23 12:33	25	25	06/09/23 12:33	CRD	EPA 300.0 REV 2.1
Field - PIA									
Depth, From Measuring Point	6.45	Feet		06/08/23 09:54	1		06/08/23 09:54	FIELD	Field*
Dissolved oxygen, Field	11	mg/L		06/08/23 09:54	1		06/08/23 09:54	FIELD	Field*
Oxidation Reduction Potential	61.0	mV		06/08/23 09:54	1	-500	06/08/23 09:54	FIELD	Field*
pH, Field Measured	6.63	pH Units		06/08/23 09:54	1		06/08/23 09:54	FIELD	Field*
Specific Conductance, Field Measured	782.0	umhos/cm		06/08/23 09:54	1		06/08/23 09:54	FIELD	Field*
Temperature, Field Measured	14.6	°C		06/08/23 09:54	1		06/08/23 09:54	FIELD	Field*
Turbidity, Field Measured	54.6	NTU		06/08/23 09:54	1	0.00	06/08/23 09:54	FIELD	Field*
General Chemistry - PIA									
Alkalinity - bicarbonate as CaCO3	350	mg/L		06/15/23 12:21	1	10	06/15/23 12:21	CPS	SM 2320B 1997*
Alkalinity - carbonate as CaCO3	< 10	mg/L		06/15/23 12:21	1	10	06/15/23 12:21	CPS	SM 2320B 1997*
Soluble General Chemistry - PIA									
Solids - total dissolved solids (TDS)	500	mg/L		06/12/23 10:55	1	26	06/12/23 10:55	MKH	SM 2540C
Total Metals - PIA									
Antimony	< 3.0	ug/L		06/15/23 05:55	5	3.0	06/21/23 10:50	JMW	EPA 6020A
Arsenic	1.1	ug/L		06/15/23 05:55	5	1.0	06/21/23 10:50	JMW	EPA 6020A
Barium	64	ug/L		06/15/23 05:55	5	1.0	06/21/23 10:50	JMW	EPA 6020A
Beryllium	< 1.0	ug/L		06/15/23 05:55	5	1.0	06/21/23 10:50	JMW	EPA 6020A
Boron	14	ug/L		06/15/23 05:55	5	10	06/21/23 10:50	JMW	EPA 6020A
Cadmium	< 1.0	ug/L		06/15/23 05:55	5	1.0	06/21/23 10:50	JMW	EPA 6020A
Calcium	57	mg/L		06/15/23 05:55	5	0.20	06/21/23 10:50	JMW	EPA 6020A
Chromium	< 4.0	ug/L		06/15/23 05:55	5	4.0	06/21/23 10:50	JMW	EPA 6020A
Cobalt	< 2.0	ug/L		06/15/23 05:55	5	2.0	06/21/23 10:50	JMW	EPA 6020A
Lead	< 1.0	ug/L		06/15/23 05:55	5	1.0	06/21/23 10:50	JMW	EPA 6020A
Magnesium	24	mg/L		06/15/23 05:55	5	0.10	06/21/23 10:50	JMW	EPA 6020A
Mercury	< 0.20	ug/L		06/15/23 05:55	5	0.20	06/21/23 10:50	JMW	EPA 6020A
Molybdenum	1.2	ug/L		06/15/23 05:55	5	1.0	06/21/23 10:50	JMW	EPA 6020A
Potassium	0.67	mg/L		06/15/23 05:55	5	0.10	06/21/23 10:50	JMW	EPA 6020A

ANALYTICAL RESULTS

Sample: GF01654-16
Name: G270
Matrix: Ground Water - Grab

Sampled: 06/08/23 09:54
Received: 06/09/23 06:50
PO #: 1940007155

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Selenium	< 1.0	ug/L		06/15/23 05:55	5	1.0	06/22/23 08:32	JMW	EPA 6020A
Sodium	82	mg/L		06/15/23 05:55	5	0.10	06/21/23 10:50	JMW	EPA 6020A
Thallium	< 1.0	ug/L		06/15/23 05:55	5	1.0	06/21/23 10:50	JMW	EPA 6020A
Lithium	< 0.020	mg/L		06/15/23 05:55	1	0.020	06/20/23 12:10	TJJ	EPA 6010B

QC SAMPLE RESULTS

Parameter	Result	Unit	Qual	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<u>Batch B334979 - No Prep - SM 2540C</u>									
Blank (B334979-BLK1)				Prepared & Analyzed: 06/02/23					
Solids - total dissolved solids (TDS)	< 17	mg/L							
LCS (B334979-BS1)				Prepared & Analyzed: 06/02/23					
Solids - total dissolved solids (TDS)	970	mg/L		1000		97	84.9-109		
<u>Batch B335327 - No Prep - SM 2540C</u>									
Blank (B335327-BLK1)				Prepared & Analyzed: 06/07/23					
Solids - total dissolved solids (TDS)	< 17	mg/L							
LCS (B335327-BS1)				Prepared & Analyzed: 06/07/23					
Solids - total dissolved solids (TDS)	987	mg/L		1000		99	84.9-109		
<u>Batch B335489 - No Prep - SM 2540C</u>									
Blank (B335489-BLK1)				Prepared & Analyzed: 06/08/23					
Solids - total dissolved solids (TDS)	< 17	mg/L							
LCS (B335489-BS1)				Prepared & Analyzed: 06/08/23					
Solids - total dissolved solids (TDS)	983	mg/L		1000		98	84.9-109		
Duplicate (B335489-DUP2)				Sample: GF01285-11		Prepared & Analyzed: 06/08/23			
Solids - total dissolved solids (TDS)	3180	mg/L	M		730			125	5
<u>Batch B335621 - No Prep - SM 2540C</u>									
Blank (B335621-BLK1)				Prepared & Analyzed: 06/12/23					
Solids - total dissolved solids (TDS)	< 17	mg/L							
LCS (B335621-BS1)				Prepared & Analyzed: 06/12/23					
Solids - total dissolved solids (TDS)	1030	mg/L		1000		103	84.9-109		
<u>Batch B335623 - No Prep - SM 2540C</u>									
Blank (B335623-BLK1)				Prepared & Analyzed: 06/12/23					
Solids - total dissolved solids (TDS)	< 17	mg/L							
LCS (B335623-BS1)				Prepared & Analyzed: 06/12/23					
Solids - total dissolved solids (TDS)	983	mg/L		1000		98	84.9-109		
Duplicate (B335623-DUP1)				Sample: GF01285-11RE1		Prepared & Analyzed: 06/12/23			
Solids - total dissolved solids (TDS)	805	mg/L			830			3	5
<u>Batch B335646 - IC No Prep - EPA 300.0 REV 2.1</u>									
Matrix Spike (B335646-MS1)				Sample: GF01285-11		Prepared & Analyzed: 06/08/23			
Chloride	1.0E9	mg/L	Q4	1.500	15	NR	80-120		
Fluoride	1.60	mg/L		1.500	0.228	92	80-120		
Sulfate	1.00E9	mg/L	Q4	1.500	178	NR	80-120		
Matrix Spike Dup (B335646-MSD1)				Sample: GF01285-11		Prepared & Analyzed: 06/08/23			
Fluoride	1.71	mg/L		1.500	0.228	99	80-120	6	20
Sulfate	1.00E9	mg/L	Q4	1.500	178	NR	80-120	0	20
Chloride	1.0E9	mg/L	Q4	1.500	15	NR	80-120	0	20
<u>Batch B335739 - SW 3015 - EPA 6010B</u>									
Blank (B335739-BLK1)				Prepared: 06/12/23 Analyzed: 06/13/23					
Lithium	< 0.020	mg/L							

QC SAMPLE RESULTS

Parameter	Result	Unit	Qual	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
LCS (B335739-BS1)				Prepared: 06/12/23 Analyzed: 06/13/23					
Lithium	0.588	mg/L		0.5556		106	80-120		

Batch B335739 - SW 3015 - EPA 6020A

Blank (B335739-BLK1)				Prepared: 06/12/23 Analyzed: 06/13/23					
Antimony	< 3.0	ug/L							
Arsenic	< 1.0	ug/L							
Barium	< 1.0	ug/L							
Beryllium	< 1.0	ug/L							
Boron	< 10	ug/L							
Cadmium	< 1.0	ug/L							
Calcium	< 0.20	mg/L							
Chromium	< 4.0	ug/L							
Cobalt	< 2.0	ug/L							
Lead	< 1.0	ug/L							
Magnesium	< 0.10	mg/L							
Mercury	< 0.20	ug/L							
Molybdenum	< 1.0	ug/L							
Potassium	< 0.10	mg/L							
Selenium	< 1.0	ug/L							
Sodium	< 0.10	mg/L							
Thallium	< 1.0	ug/L							

LCS (B335739-BS1)				Prepared: 06/12/23 Analyzed: 06/13/23					
Antimony	537	ug/L		555.6		97	80-120		
Arsenic	545	ug/L		555.6		98	80-120		
Barium	534	ug/L		555.6		96	80-120		
Beryllium	542	ug/L		555.6		98	80-120		
Boron	557	ug/L		555.6		100	80-120		
Cadmium	568	ug/L		555.6		102	80-120		
Calcium	5.90	mg/L		5.556		106	80-120		
Chromium	569	ug/L		555.6		102	80-120		
Cobalt	543	ug/L		555.6		98	80-120		
Lead	562	ug/L		555.6		101	80-120		
Magnesium	5.53	mg/L		5.556		99	80-120		
Mercury	54.9	ug/L		55.56		99	80-120		
Molybdenum	552	ug/L		555.6		99	80-120		
Potassium	5.66	mg/L		5.556		102	80-120		
Selenium	573	ug/L		555.6		103	80-120		
Sodium	5.65	mg/L		5.556		102	80-120		
Thallium	561	ug/L		555.6		101	80-120		

Batch B335861 - SW 3015 - EPA 6010B

Blank (B335861-BLK1)				Prepared: 06/13/23 Analyzed: 06/20/23					
Lithium	< 0.020	mg/L							
LCS (B335861-BS1)				Prepared: 06/13/23 Analyzed: 06/20/23					
Lithium	0.582	mg/L		0.5556		105	80-120		

Batch B335861 - SW 3015 - EPA 6020A

QC SAMPLE RESULTS

Parameter	Result	Unit	Qual	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Blank (B335861-BLK1)									
				Prepared: 06/13/23 Analyzed: 06/14/23					
Antimony	< 3.0	ug/L							
Arsenic	< 1.0	ug/L							
Barium	< 1.0	ug/L							
Beryllium	< 1.0	ug/L							
Boron	< 10	ug/L							
Cadmium	< 1.0	ug/L							
Calcium	< 0.20	mg/L							
Chromium	< 4.0	ug/L							
Cobalt	< 2.0	ug/L							
Lead	< 1.0	ug/L							
Magnesium	< 0.10	mg/L							
Mercury	< 0.20	ug/L							
Molybdenum	< 1.0	ug/L							
Potassium	< 0.10	mg/L							
Selenium	< 1.0	ug/L							
Sodium	< 0.10	mg/L							
Thallium	< 1.0	ug/L							
LCS (B335861-BS1)									
				Prepared: 06/13/23 Analyzed: 06/14/23					
Antimony	516	ug/L		555.6		93	80-120		
Arsenic	548	ug/L		555.6		99	80-120		
Barium	509	ug/L		555.6		92	80-120		
Beryllium	512	ug/L		555.6		92	80-120		
Boron	590	ug/L		555.6		106	80-120		
Cadmium	529	ug/L		555.6		95	80-120		
Calcium	5.31	mg/L		5.556		96	80-120		
Chromium	534	ug/L		555.6		96	80-120		
Cobalt	535	ug/L		555.6		96	80-120		
Lead	537	ug/L		555.6		97	80-120		
Magnesium	5.61	mg/L		5.556		101	80-120		
Mercury	51.3	ug/L		55.56		92	80-120		
Molybdenum	503	ug/L		555.6		90	80-120		
Potassium	5.74	mg/L		5.556		103	80-120		
Selenium	528	ug/L		555.6		95	80-120		
Sodium	5.65	mg/L		5.556		102	80-120		
Thallium	552	ug/L		555.6		99	80-120		
<u>Batch B336004 - SW 3015 - EPA 6010B</u>									
Blank (B336004-BLK1)									
				Prepared: 06/14/23 Analyzed: 06/20/23					
Lithium	< 0.020	mg/L							
LCS (B336004-BS1)									
				Prepared: 06/14/23 Analyzed: 06/20/23					
Lithium	0.580	mg/L		0.5556		104	80-120		
<u>Batch B336004 - SW 3015 - EPA 6020A</u>									
Blank (B336004-BLK1)									
				Prepared: 06/14/23 Analyzed: 06/16/23					
Antimony	< 3.0	ug/L							
Arsenic	< 1.0	ug/L							
Barium	< 1.0	ug/L							

QC SAMPLE RESULTS

Parameter	Result	Unit	Qual	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Blank (B336004-BLK1)				Prepared: 06/14/23 Analyzed: 06/20/23					
Beryllium	< 1.0	ug/L							
Boron	< 10	ug/L							
Cadmium	< 1.0	ug/L							
Calcium	< 0.20	mg/L							
Chromium	< 4.0	ug/L							
Cobalt	< 2.0	ug/L							
Lead	< 1.0	ug/L							
Magnesium	< 0.10	mg/L							
Mercury	< 0.20	ug/L							
Molybdenum	< 1.0	ug/L							
Potassium	< 0.10	mg/L							
Selenium	< 1.0	ug/L							
Sodium	< 0.10	mg/L							
Thallium	< 1.0	ug/L							
LCS (B336004-BS1)				Prepared: 06/14/23 Analyzed: 06/16/23					
Antimony	566	ug/L		555.6		102	80-120		
Arsenic	570	ug/L		555.6		103	80-120		
Barium	558	ug/L		555.6		100	80-120		
Beryllium	555	ug/L		555.6		100	80-120		
Boron	542	ug/L		555.6		98	80-120		
Cadmium	554	ug/L		555.6		100	80-120		
Calcium	6.00	mg/L		5.556		108	80-120		
Chromium	569	ug/L		555.6		102	80-120		
Cobalt	551	ug/L		555.6		99	80-120		
Lead	553	ug/L		555.6		100	80-120		
Magnesium	5.81	mg/L		5.556		105	80-120		
Mercury	53.4	ug/L		55.56		96	80-120		
Molybdenum	546	ug/L		555.6		98	80-120		
Potassium	6.02	mg/L		5.556		108	80-120		
Selenium	579	ug/L		555.6		104	80-120		
Sodium	5.80	mg/L		5.556		104	80-120		
Thallium	563	ug/L		555.6		101	80-120		
<u>Batch B336065 - No Prep - SM 2320B 1997</u>									
Duplicate (B336065-DUP2)				Sample: GF01285-11		Prepared & Analyzed: 06/14/23			
Alkalinity - bicarbonate as CaCO3	638	mg/L	M		575			10	10
Alkalinity - carbonate as CaCO3	< 2.0	mg/L			ND				10
Duplicate (B336065-DUP3)				Sample: GF01285-12		Prepared & Analyzed: 06/14/23			
Alkalinity - bicarbonate as CaCO3	138	mg/L			138			0	10
Alkalinity - carbonate as CaCO3	< 2.0	mg/L			ND				10
<u>Batch B336092 - SW 3015 - EPA 6010B</u>									
Blank (B336092-BLK1)				Prepared: 06/15/23 Analyzed: 06/20/23					
Lithium	< 0.020	mg/L							
LCS (B336092-BS1)				Prepared: 06/15/23 Analyzed: 06/20/23					
Lithium	0.583	mg/L		0.5556		105	80-120		

QC SAMPLE RESULTS

Parameter	Result	Unit	Qual	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<u>Batch B336092 - SW 3015 - EPA 6020A</u>									
Blank (B336092-BLK1)				Prepared: 06/15/23 Analyzed: 06/21/23					
Antimony	< 3.0	ug/L							
Arsenic	< 1.0	ug/L							
Barium	< 1.0	ug/L							
Beryllium	< 1.0	ug/L							
Boron	< 10	ug/L							
Cadmium	< 1.0	ug/L							
Calcium	< 0.20	mg/L							
Chromium	< 4.0	ug/L							
Cobalt	< 2.0	ug/L							
Lead	< 1.0	ug/L							
Magnesium	< 0.10	mg/L							
Mercury	< 0.20	ug/L							
Molybdenum	< 1.0	ug/L							
Potassium	< 0.10	mg/L							
Selenium	< 1.0	ug/L							
Sodium	< 0.10	mg/L							
Thallium	< 1.0	ug/L							
LCS (B336092-BS1)				Prepared: 06/15/23 Analyzed: 06/21/23					
Antimony	548	ug/L		555.6		99	80-120		
Arsenic	550	ug/L		555.6		99	80-120		
Barium	558	ug/L		555.6		100	80-120		
Beryllium	502	ug/L		555.6		90	80-120		
Boron	492	ug/L		555.6		89	80-120		
Cadmium	563	ug/L		555.6		101	80-120		
Calcium	5.73	mg/L		5.556		103	80-120		
Chromium	566	ug/L		555.6		102	80-120		
Cobalt	534	ug/L		555.6		96	80-120		
Lead	538	ug/L		555.6		97	80-120		
Magnesium	5.58	mg/L		5.556		100	80-120		
Mercury	52.7	ug/L		55.56		95	80-120		
Molybdenum	546	ug/L		555.6		98	80-120		
Potassium	5.42	mg/L		5.556		98	80-120		
Selenium	574	ug/L		555.6		103	80-120		
Sodium	5.41	mg/L		5.556		97	80-120		
Thallium	538	ug/L		555.6		97	80-120		

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

- M Analyte failed to meet the required acceptance criteria for duplicate analysis.
- 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: Gail Schindler, Project Manager



GFO0140
 Vm-6-1-23
 6-1-23

COFFEEN POWER PLANT
 ASH POND NO. 2
 COFFEEN, IL

Page: 1 of 7

REGULATORY AGENCY

NPDES GROUND WATER DRINKING WATER
 UST RCRA OTHER

Site Location IL
 STATE:

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:
 Company: Vistra Corp
 Address: 13498 E. 900th St
 Email To: Brian.Voelker@VistraCorp.com
 Phone: (217) 753-8911 Fax:

Section B
 Required Project Information:
 Report To: Brian Voelker
 Copy To: Jason Stuckey
 Purchase Order No.:
 Project Name:
 Project Number: 2285

Section C
 Invoice Information:
 Attention: Jason Stuckey
 Company Name: Vistra Corp
 Address: see Section A
 Quote Reference:
 Project Manager:
 Profile #:

Requested Due Date/TAT: 10 day

ITEM #	Section D Required Client Information	Valid Matrix Codes	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		# OF CONTAINERS	Requested Analysis Filtered (Y/N)	Project No./ Lab I.D.
					DATE	TIME			
1	G214	DRINKING WATER DW	G	6/1	1300	6	Y	COF_257_101	
2	G111	WASTE WATER WW	G	6/1	1315	8	Y	COF_257_103	
3	G310	WASTE WATER WW	G	6/1	1442	13	Y	COF_257_104	
4	G312	SOLID WASTE SW	G	6/1	1401	13	Y	COF_845_101	
5	G279	SOIL/SOLID SL	G	6/1	1207	15	Y	COF_845_102	
6	G277	OIL OL	G	6/1	1027	15	Y	COF_845_103	
7		WIFE WP						COF_845_104	
8		AIR AR						COF_845_105	
9		OTHER OT						COF_845_106	
10		TISSUE TS						COF_845_107	
11								COF_845_108	
12								COF_845_109	
13								COF_845_110	
14								COF_845_111	
15								COF_845_112	
16								COF_845_113	

Section E
 ADDITIONAL COMMENTS
COF-23Q2 Rev 1

RELINQUISHED BY / AFFILIATION: Brenden Blenma DATE: 6/1 TIME: 1645

ACCEPTED BY / AFFILIATION: Jason Stuckey DATE: 6/1/23 TIME: 16:45:24.2

SAMPLER NAME AND SIGNATURE: Brenden Blenma
 PRINT Name of SAMPLER: Brenden Blenma
 SIGNATURE of SAMPLER: Brenden Blenma

DATE SIGNED: 6/1/23
 (MM/DD/YY): 06/01/23

Received on Ice (Y/N): Y
 Custody Sealed Cooler (Y/N): Y
 Samples Intact (Y/N): Y

GFO0140
Vmw-6-1-23
6-1-23

CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: 1 of 7

Section A
Required Client Information:
Company: Visira Corp
Address: 13498 E. 900th St
Email To: Brian.Voelker@VisiraCorp.com
Phone: (217) 753-9811 Fax:
Requested Due Date/TAT: 10 day

Section B
Required Project Information:
Report To: Brian Voelker
Copy To: Jason Stuckey
Purchase Order No.:
Project Name:
Project Number: 2285

Section C
Invoice Information:
Attention: Jason Stuckey
Company Name: Visira Corp
Address: see Section A
Quote Reference:
Project Manager:
Profile #:

REGULATORY AGENCY
NPDES GROUND WATER DRINKING WATER
UST RCRA OTHER
Site Location: IL
STATE: IL

ITEM #	Section D Required Client Information SAMPLE ID (A-Z, 0-9, /, -) Sample IDs MUST BE UNIQUE	Valid Matrix Codes MATRIX CODE DRINKING WATER DW WASTE WATER WW WATER PRODUCT P SOIL/SOLID SL OIL OL PIPE WP OTHER OT TISSUE TS	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED DATE TIME	# OF CONTAINERS	Preservatives Unpreserved H ₂ SO ₄ HNO ₃ HCl NaOH Na ₂ S ₂ O ₃ Methanol Other	Requested Analysis Filtered (Y/N)	Project No./ Lab I.D.
1	G111		G	G	6/1/23 1300	6			COF_257_101
2	G310		G	G	6/1/23 1345	8			COF_257_102
3	G312		G	G	6/1/23 1412	13			COF_257_103
4	G312		G	G	6/1/23 1401	13			COF_257_104
5	G312		G	G	6/1/23 1207	15			COF_257_105
6	G312		G	G	6/1/23 1037	15			COF_257_106
7	G111 DUP		G	G	6/1/23 1345	4			COF_845_101
8									COF_845_102
9									COF_845_103
10									COF_845_104
11									COF_845_105
12									COF_845_106
13									COF_845_107
14									COF_845_108
15									COF_845_109
16									COF_845_110

ADDITIONAL COMMENTS
COF-23Q2 Rev 1

RELINQUISHED BY / AFFILIATION: Bruce Blum DATE: 6/1/23 TIME: 9:56 AM

ACCEPTED BY / AFFILIATION: Jason Stuckey DATE: 6/1/23 TIME: 16:45

SAMPLER NAME AND SIGNATURE: Bruce Blum DATE SIGNED: 6/1/23 (MM/DD/YY): 6/1/23

PRINT Name of SAMPLER: Bruce Blum
SIGNATURE of SAMPLER: [Signature]

Received on: 6/1/23 Temp in °C: 24.2
Sealed Cooler (Y/N): Y
Samples Intact (Y/N): Y

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:

Company: Visira Corp
 Address: 13498 E. 900th St
 Email To: Brian.Voelker@VisiraCorp.com
 Phone: (217) 753-8911 Fax:

Section B
Required Project Information:

Report To: Brian Voelker
 Copy To: Jason Stuckey
 Purchase Order No.:
 Project Name:
 Project Number: 2285

Section C
Invoice Information:

Attention: Jason Stuckey
 Company Name: Visira Corp
 Address: see Section A
 Quote Reference:
 Project Manager:
 Profile #:

Page: 2 of 7

REGULATORY AGENCY
 NPDES GROUND WATER DRINKING WATER
 US RCRA OTHER
 Site Location IL
 STATE: GFO0908

Requested Due Date/TAT: 10 day

Requested Analysis Filtered (Y/N)
 Residual Chlorine (Y/N)

ITEM #	Section D Required Client Information	Valid Matrix Codes MATRIX CODE DRINKING WATER DW WATER WT WASTE WATER WW PRODUCT P SOIL/SOLID SL OIL OIL WASTE WP AIR AR OTHER OT TISSUE TS	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		# OF CONTAINERS	Preservatives Unpreserved H ₂ SO ₄ HCl NaOH Na ₂ S ₂ O ₃ Methanol Other	Analysis Test Y/N	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS	Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
					DATE	TIME											
1	G103				6/6/23	1301	7			COF_257_101	6-6-23	1725	Y	4.6	Y	N	Y
2	G152					1043	5			COF_257_102							
3	G153					1220	5			COF_257_103							
4	G154					1345	6			COF_257_104							
5	G271					1116	5			COF_845_103							
6	G305					959	13			COF_845_102							
7	G405					1307	14			COF_845_101							
8	XPW01					105	12			COF_811_105							
9	XPW02					1213	9			COF_257_105							
10										COF_257_104							
11										COF_257_103							
12										COF_845_104							
13										COF_845_103							
14										COF_845_102							
15										COF_845_101							
16										COF_257_105							

ADDITIONAL COMMENTS
COF-23Q2 Rev 1

REQUISITIONED BY / AFFILIATION: Joseph Stuckey DATE: 6/6/23 TIME: 1725
 ACCEPTED BY / AFFILIATION: Van Wagner DATE: 6-6-23 TIME: 1725
 SAMPLE CONDITIONS: Received on Ice (Y/N) Y, Custody Sealed Cooler (Y/N) N, Samples Intact (Y/N) Y

SAMPLER NAME AND SIGNATURE
 PRINT Name of SAMPLER: Joseph Stuckey DATE Signed (MM/DD/YYYY): 6/6/23
 SIGNATURE of SAMPLER: Joseph Stuckey

SAR-3: Depth to Groundwater Measurements
Plant: COF
Event: COF-23Q2 Rev 1

Well	Unique ID	Episodic	Transducer	Unit Name	Unit Number	Date	Time	Measured Depth to Water (ft bmp)	Transducer				Notes
									WL from HOBConnec t (ft)	Downloaded Y/N	Data Logger Serial No.	Batt (H/M/L)	
G045D	COF_G045&D	X		AP2	102	5/30/23	1622	7.82				AP	Start note with relevant well ID TD 44.96
G046D	COF_G046&D	X		AP2	102	5/30/23	1447	14.54				AP	TD 55.14
G1001	COF_G1001		X	AP2	102					21615675			
G1003	COF_G1003	X		AP2	102	5/30/23	1538	10.97				AP	TD 11.23
G101	COF_G101	X		LF	105	5/30/23	1428	6.53				KL	
G102	COF_G102		X	LF	105					21615680			
G103	COF_G103		X	LF	105					21615689			
G105	COF_G105		X	LF	105					21615694			
G106	COF_G106		X	LF	105					21638030			
G107	COF_G107	X		LF	105	5/30/23	1422	10.85				KL	
G108	COF_G108	X		LF	105	5/30/23	1327	11.65				JD	
G109	COF_G109	X		LF	105	5/30/23	1330	11.89				JD	
G110	COF_G110	X		LF	105	5/30/23	1332	12.70				JD	
G111	COF_G111	X		LF	105	5/30/23	1622	13.70				JD	
G119	COF_G119	X		LF	105	5/30/23	1402	15.08				JD	
G120	COF_G120	X		LF	105	5/30/23	1405	14.86				JD	
G121	COF_G121	X		LF	105	5/30/23	1420	15.38				JD	

SAR-3: Depth to Groundwater Measurements

Plant: COF
 Event: COF-23Q2 Rev 1

Well	Unique ID	Episodic	Transducer	Unit Name	Unit Number	Date	Time	Measured Depth to Water (ft bmp)	Transducer				Notes
									WL from HOBConnecct (ft)	Downloaded Y/N	Data Logger Serial No.	Batt (H/M/L)	
G122	COF_G122	X		LF	105	5/30/23	1427	14.00					Start note with relevant well ID
G123	COF_G123	X		LF	105	5/30/23	1430	12.68					
G124	COF_G124	X		LF	105	5/30/23	1434	13.43					
G125	COF_G125	X		LF	105	5/30/23	1436	13.54					
G126	COF_G126	X		LF	105	5/30/23	1344	10.04					
G151	COF_G151	X		SWP	106	5/30/23	1352	11.58					
G152	COF_G152	X		SWP	106	5/30/23	1443	11.11					
G153	COF_G153	X		SWP	106	5/30/23	1452	11.40					
G154	COF_G154	X		SWP	106	5/30/23	1456	13.15					
G155	COF_G155	X		SWP	106	5/30/23	1459	12.44					
G200	COF_G200		X	GSP	103						21615630		
G206	COF_G206		X	GSP	103						21629315		
G206D	COF_G206&D		X	GSP	103						21638031		
G207	COF_G207		X	GSP	103						21638029		
G208	COF_G208		X	GSP	103						21638037		
G209	COF_G209		X	GSP	103						21629318		
G210	COF_G210		X	GSP	103						21638036		

SAR-3: Depth to Groundwater Measurements

Plant: COF
 Event: COF-23Q2 Rev 1

Well	Unique ID	Episodic	Transducer	Unit Name	Unit Number	Date	Time	Measured Depth to Water (ft bmp)	Transducer			Initials	Notes	
									WL from HOBConnec t (ft)	Downloaded Y/N	Data Logger Serial No.			Batt (H/M/L)
G211	COF_G211		X	GSP	103									
G212	COF_G212		X	GSP	103									
G213	COF_G213		X	GSP	103									
G214	COF_G214		X	GSP	103									
G215	COF_G215		X	GSP	103									
G216	COF_G216		X	GSP	103									
G217	COF_G217		X	GSP	103									
G218	COF_G218		X	GSP	103									
G270	COF_G270		X	RP	104									
G271	COF_G271		X	RP	104									
G272	COF_G272		X	RP	104									
G273	COF_G273		X	RP	104									
G274	COF_G274		X	RP	104									
G275	COF_G275	X		RP	104	5/30/23	1409	13.38				KL	Dry	
G275D	COF_G275&D		X	RP	104									
G276	COF_G276		X	RP	104									
G277	COF_G277	X		RP	104	5/30/23	1404	18.21				KL		

SAR-3: Depth to Groundwater Measurements
 Plant: COF
 Event: COF-23Q2 Rev 1

Well	Unique ID	Episodic	Transducer	Unit Name	Unit Number	Date	Time	Measured Depth to Water (ft bmp)	Transducer				Notes
									WL from HOBConnec t (ft)	Downloaded Y/N	Data Logger Serial No.	Batt (H/M/L)	
G278	COF_G278	X		RP	104	5/30/23	1359	21.75					Start note with relevant well ID
G279	COF_G279	X		RP	104	5/30/23	1352	22.73					KL
G280	COF_G280		X	RP	104						21615563		KL
G281	COF_G281		X	RP	104						21629317		
G283	COF_G283		X	RP	104						21615528		
G284	COF_G284		X	RP	104						21638042		
G285	COF_G285		X	RP	104						21615521		
G286	COF_G286		X	RP	104						21615538		
G287	COF_G287		X	RP	104						21615534		
G288	COF_G288		X	RP	104						21615549		
G301	COF_G301		X	AP1	101						21615529		
G302	COF_G302		X	AP1	101						21615530		
G303	COF_G303		X	AP1	101						21615547		
G305	COF_G305		X	AP1	101						21615546		
G306	COF_G306		X	AP1	101						21615545		
G307	COF_G307		X	AP1	101						21615560		
G307D	COF_G307&D		X	AP1	101						21629305		

SAR-3: Depth to Groundwater Measurements

Plant: COF
 Event: COF-23Q2 Rev 1

ATTACHMENT B.
 845 QUARTERLY REPORT - QUARTER 2, 2023
 COFFEEN POWER PLANT
 ASH POND NO. 2
 COFFEEN #

Well	Unique ID	Episodic	Transducer	Unit Name	Unit Number	Date	Time	Measured Depth to Water (ft bmp)	Transducer				Initials	Notes	
									WL from HOB	connect	(ft)	Downloaded Y/N			Data Logger Serial No.
G308	COF_G308		X	AP1	101										
G309	COF_G309		X	AP1	101										
G310	COF_G310		X	AP1	101										
G311	COF_G311	X	X	AP1	101	5/30/23	1415	8.26				AP			
G311D	COF_G311&D	X	X	AP1	101	5/30/23	1417	23.26				AP			
G312	COF_G312		X	AP1	101										
G313	COF_G313		X	AP1	101										
G314	COF_G314		X	AP1	101										
G314D	COF_G314&D		X	AP1	101										
G315	COF_G315		X	AP1	101										
G316	COF_G316	X	X	AP1	101	5/30/23	1358	12.28				AP			
G317	COF_G317		X	AP1	101										
G401	COF_G401	X	X	AP2	102	5/30/23	1550	21.72				AP			
G402	COF_G402		X	AP2	102										
G403	COF_G403		X	AP2	102										
G404	COF_G404		X	AP2	102										
G405	COF_G405		X	AP2	102										

SAR-3: Depth to Groundwater Measurements

Plant: COF
 Event: COF-23Q2 Rev 1

ATTACHMENT B.
 845 QUARTERLY REPORT - QUARTER 2, 2023
 COFFEEN POWER PLANT
 ASH POND NO. 2
 COFFEEN #

Well	Unique ID	Episodic	Transducer	Unit Name	Unit Number	Date	Time	Measured Depth to Water (ft bmp)	Transducer				Notes
									WL from HOB	Downloaded	Data Logger Serial No.	Batt (H/M/L)	
G406	COF_G406		X	AP2	102						21615123		Start note with relevant well ID
G407	COF_G407		X	AP2	102						21615122		
G410	COF_G410	X		AP2	102	5/30/23	1515	8.99				AP	
G411	COF_G411	X		AP2	102	5/30/23	1458	8.52				AP	
L201	COF_L201_leachate	X		LF	105	5/30/23	1611	3.28				JD	
L202	COF_L202_leachate	X		LF	105	5/30/23	1613	5.51				JD	
L203	COF_L203_leachate	X		LF	105	5/30/23	1617	5.73				SD	
MW03D	COF_MW03&D		X	GSP	103						21629304		
MW04S	COF_MW04#S	X		North	000	5/30/23	1558	6.63				JR	
MW05S	COF_MW05#S	X		North	000	5/30/23	1552	7.25				JAL	
MW05D	COF_MW05&D	X		North	000	5/30/23	1550	18.29				JR	
MW06S	COF_MW06#S	X		North	000	5/30/23	1451	6.45				JR	
MW07S	COF_MW07#S	X		North	000	5/30/23	1544	5.23				JR	
MW09S	COF_MW09#S	X		North	000	5/30/23	1502	5.45				JR	
MW09D	COF_MW09&D	X		North	000	5/30/23	1500	13.91				JR	
MW10S	COF_MW10#S	X		North	000	5/30/23	1343	5.44				JR	
MW10D	COF_MW10&D	X		North	000	5/30/23	1341	15.73				JR	

SAR-3: Depth to Groundwater Measurements

Plant: COF
 Event: COF-23Q2 Rev 1

ATTACHMENT B.
 845 QUARTERLY REPORT - QUARTER 2, 2023
 COFFEEN POWER PLANT
 ASH POND NO. 2
 COFFEEN #

Well	Unique ID	Episodic	Transducer	Unit Name	Unit Number	Date	Time	Measured Depth to Water (ft bmp)	Transducer				Notes		
									WL from HOBConnct (ft)	Downloaded Y/N	Data Logger Serial No.	Batt (H/M/L)		Initials	
MW11S	COF_MW11#S		X	GSP	103						21615553				
MW11D	COF_MW11&D		X	GSP	103						21629307				
MW12S	COF_MW12#S	X		GSP	103	5/30/23	1544	7.36						KL	TD 18.54
MW12D	COF_MW12&D		X	GSP	103						21629310				
MW13S	COF_MW13#S	X		SWP	106	5/30/23	1445	10.19						JD	TD 19.39
MW13D	COF_MW13&D	X		SWP	106	5/30/23	1444	13.52						JD	TD 53.32
MW16S	COF_MW16#S		X	GSP	103						21615550				
MW16D	COF_MW16&D		X	GSP	103						21629306				
MW17S	COF_MW17#S	X		North	000	5/30/23	1404	6.41						JR	
MW17D	COF_MW17&D	X		North	000	5/30/23	1402	13.33						JR	
MW20S	COF_MW20#S		X	RP	104						21615518				
R104	COF_R104		X	LF	105						21615124				
R201	COF_R201		X	GSP	103						21615118				
R205	COF_R205		X	GSP	103						21615633				
T127	COF_T127	X		LF	105	5/30/23	1356	14.56						JD	
T128	COF_T128	X		LF	105	5/30/23	1354	14.26						JD	
T202	COF_T202	X		GSP	103	5/30/23	1510	5.80						JD	

SAR-3: Depth to Groundwater Measurements

Plant: COF
 Event: COF-23Q2 Rev 1

Well	Unique ID	Episodic	Transducer	Unit Name	Unit Number	Date	Time	Measured Depth to Water (ft bmp)	Transducer				Notes
									WL from HOBConnec (ft)	Downloaded Y/N	Data Logger Serial No.	Batt (H/M/L)	
T408	COF_T408	X		AP2	102	5/30/23	1618	7.42				AP	Start note relevant with ID TD 28.85
T409	COF_T409	X		AP2	102	5/30/23	1442	11.27				AP	TD 30.06
TA31	COF_TA31	X		LF	105	5/30/23	1431	7.06				KL	TD 22.75
TA33	COF_TA33	X		LF	105	5/30/23	1430	8.42				JR	
TA34	COF_TA34	X		LF	105	5/30/23	1410	9.48				JD	TD 18.70
TR32	COF_TR32	X		LF	105	5/30/23	1440	6.18				JR	
X201	COF_X201_leachate		X	RP	104						21024091		
XPW01	COF_XPW01_pore		X	AP1	101						21615536		
XPW02	COF_XPW02_pore		X	AP1	101						21615507		
NE Riser	COF_XRISER_NE_leachate		X	GSP	103						21048333		
XSG-01	COF_XSG-01	X		AP1	101	5/30/23	1432	5.45				AP	
SG-02	COF_YSG02	X		AP1	101	5/30/23	1525	7.47				AP	
SG-03	COF_YSG03	X		AP1	101	5/30/23	1347	9.85				AG	
SG-04	COF_YSG04	X		AP2	102	5/30/23	1612	6.41				AP	

IU:GKJ 5/3/231

Coffeen

WELL/SAMPLE POINT G1001

Purge Method: portable pump w/ Delicate Tubing

Date: 6/7/2023 Start Time: 0855 Finish/Sample Time: 1024

Well Depth (Bottom) From MP: 14.37 ft Min. Purge Volume: _____ Gal / L

Depth to Water From MP: 6.82 ft Total Purge Volume: 1500 Gal / L (mL)

Total Drawdown: 3.52 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	0920	9.28	100	6.96	1340	20.06	104	1.81	18.6
2	0922	9.28	100	6.96	1330	20.06	107	1.79	17.7
3	0924	9.29	100	6.98	1330	19.09	111	1.75	9.2
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	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Casing locked/secure	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Well cap fits securely.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Good seal/drainage	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Well has weep holes	<input checked="" type="checkbox"/>	<input type="checkbox"/>

BOTTLE INFORMATION:

Unfiltered	
Qty	Bottles
	VOAs (C,V, 40mL, HCL)
	VOAS (C,V, 40mL)
	Organics (A,G,U 1000mL)
	Organics (A,G,U 500mL)
3	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
1	Ammonia (P, 250mL, H2SO4)
1	(P, 2.5 L, HNO3)

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

Final DTW 10.34 RL

Comments Transducer SN 21615675 sol Iron²⁺ 0.045 ppm

Sampler's Signature: [Signature]

Coffeen

WELL/SAMPLE POINT G270

Purge Method: Deaerated Bladder pump

Date: 6/8/2023 Start Time: 0820 Finish/Sample Time: 0954

Well Depth (Bottom) From MP: 21.13 ft Min. Purge Volume: _____ Gal / L

Depth to Water From MP: 6.45 ft Total Purge Volume: 1500 Gal / L

Total Drawdown: 0.15 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	0845	6.78	100	6.55	801	14.67	70	11.12	90.6
2	0847	6.78	100	6.62	743	14.62	65	11.05	76.5
3	0849	6.78	100	6.63	782	14.61	61	11.03	54.6
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)
3	TOC (A,V 40mL, H2SO4)
	TOX (A,G 250mL, H2SO4)
1	Metals (P, 250mL, HNO3)
1	Cyanide (P, 250mL, NaOH)
1	Phenols (A,G,250mL, H2SO4)
1	General (P, 250mL) 1000 mL
1	Ammonia (P, 250mL H2SO4)
1	(P, 250mL, HNO3)

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

Final DTW - 6.60 ft

Comments Transducer S/N 216 15537 sol Iron⁺² - 0.262 ppm
bits in well

Sampler's Signature: _____

Coffeen

WELL/SAMPLE POINT G280

Purge Method: Dedicated pump

Date: 6/8/23 Start Time: 0805 Finish/Sample Time: 0925

Well Depth (Bottom) From MP: 20.38 ft Min. Purge Volume: 1500 Gal/L (2)

Depth to Water From MP: 4.47 ft Total Purge Volume: 1800 Gal/L (2)

Total Drawdown: 0.28 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	0820	4.65	100	7.35	901.41	15.45	191.0	2.11	50.10
2	0822	4.65	100	7.35	905.73	15.48	190.4	2.08	48.70
3	0823	4.65	100	7.35	902.06	15.44	190.0	2.05	46.14
4									
5									
Stabilization	NA	NA	NA	± 0.2	± 3%	± 0.2	± 20	± 10% or 0.2	NA

Field Meter: Aquastroll 600

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	/	

JUN 6/8

BOTTLE INFORMATION:

Unfiltered	
Qty	Bottles
	VOAs (C,V, 40mL, HCL)
	VOAs (C,V, 40mL)
	Organics (A,G,U 1000mL)
	Organics (A,G,U 500mL)
3	TOC (A,V 40mL, H2SO4)
	TOX (A,G 250mL, H2SO4)
1	Metals (P,250mL, HNO3)
1	Cyanide (P, 250mL, NaOH)
1	Phenols (A,G,250mL, H2SO4)
1	General (P, 250 mL) 1000 mL JMD 6/8
1	Ammonia
1	P 2.5L HNO3

Filtered	
Qty	Bottles
1	Metals (P,250mL, HNO3)
1	Ammonia (P,250mL, H2SO4)
	General (P,500mL)
1	General 1000 mL
3	TOC
0.000 ppm	Soluble Iron +2

Final DTW = 4.75

Comments

Sampler's Signature: [Signature]

Coffeen

WELL/SAMPLE POINT G281

Purge Method: Defecorle & Blender pump

Date: 6/15/2023 Start Time: 1220 Finish/Sample Time: 1348

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

Depth to Water From MP: 2.42 ft Total Purge Volume: 1500 Gal / L Ⓟ

Total Drawdown: 0.03 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	1248	2.55	100	6.77	1360	18.44	10	0.96	40.0
2	1242	2.55	100	6.76	1360	18.38	11	1.00	39.3
3	1244	2.55	100	6.77	1350	18.42	11	0.95	35.6
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	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Casing locked/secure	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Well cap fits securely.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Good seal/drainage	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Well has weep holes	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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)
<u>3</u>	TOX (A,G 250mL, H2SO4)
<u>1</u>	Metals (P,250mL, HNO3)
<u>1</u>	Cyanide (P, 250mL, NaOH)
<u>4</u>	Phenols (A,G,250mL, H2SO4)
<u>1</u>	General (P, 250 mL) <u>1000 mL</u>
<u>1</u>	Ammonia (P, 250mL, H2SO4)
<u>1</u>	(P, 2.5L, HNO3)

Filtered	
Qty	Bottles
<u>1</u>	Metals (P,250mL, HNO3)
<u>1</u>	Ammonia (P,250mL, H2SO4)
<u>1</u>	General (P, 500mL) <u>1000 mL</u>
<u>3</u>	TOC (A,V, 40mL, H2SO4)
	In-Line Filters Used

Final DTW 2.45 ft

Comments Transducer S/N - 21629317 diss Iron²⁺ - 0.265 ppm
construction occurring near well

Sampler's Signature: _____

[Handwritten Signature]

Coffeen

WELL/SAMPLE POINT G401

Purge Method: Dedicated Backer Pump
Date: 6/7/2023 Start Time: 10:29 Finish/Sample Time: 11:58 11:53 6-19-23

Well Depth (Bottom) From MP: 23.90 ft

Min. Purge Volume: _____ Gal / L

Depth to Water From MP: 21.83 ft

Total Purge Volume: 1500 Gal / L (ML)

Total Drawdown: 0.22 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	1051	22.05	100	6.25	3130	19.20	-34	1.23	43.7
2	1053	22.05	100	6.23	3120	19.26	-33	1.15	37.7
3	1055	22.05	100	6.20	3130	12.28	-32	1.08	28.8
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)
3	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
1	Ammonia (A, 250mL, H2SO4)
1	(P, 2.5L, HNO3)

(14)

Filtered	
Qty	Bottles
1	Metals (P,250mL, HNO3)
1	Ammonia (P,250mL, H2SO4)
1	General (P, 500mL) 1000mL
3	TOC (A, V, 40mL, H2SO4)
	In-Line Filters Used

Final DTW 22.05 PL *

Comments * water level below top of pump disIron - over range 1ppm

Sampler's Signature: _____

Coffeen

WELL/SAMPLE POINT G402

Purge Method: Defecated Bladder pump

Date: 6/6/2023 Start Time: 1436 Finish/Sample Time: 1605

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

Depth to Water From MP: 11.00 ft Total Purge Volume: 1500 Gal / L (mL)

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	1458	11.30	100	6.64	1720	23.25	183	8.64	104
2	1500	11.30	100	6.64	1730	23.20	182	8.55	107
3	1502	11.30	100	6.62	1720	23.24	182	8.61	109
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)
3	TOC (A,V 40mL, H2SO4)
	TOX (A,G 250mL, H2SO4)
1	Metals (P,250mL, HNO3)
1	Cyanide (P, 250mL, NaOH)
	Phenols (A,G,250mL, H2SO4)
1	General (P, 250 mL) 1000mL
1	Ammonia (P, 250mL, H2SO4)
1	(P, 250 mL, HNO3)

14

Filtered	
Qty	Bottles
1	Metals (P,250mL, HNO3)
1	Ammonia (P,250mL, H2SO4)
1	General (P, 500mL) 1000mL
3	TOC (A,V, 40mL, H2SO4)
	In-Line Filters Used

Final D/W ~~4.42~~ 11.65 ft

Comments Transducer S/N 216 5532 DissIron²⁺ 0.260 ppm

Sampler's Signature: _____



Coffeen

WELL/SAMPLE POINT G403

Purge Method: Dedicated pump

Date: 6/7/23 Start Time: 1009 Finish/Sample Time: 1125

Well Depth (Bottom) From MP: _____ ft Min. Purge Volume: 1500 Gal / L (ml)

Depth to Water From MP: 8.82 ft Total Purge Volume: 1800 Gal / L (ml)

Total Drawdown: 3.36 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	1024	10.18	100	7.00	701.05	15.78	39.3	1.65	30.44
2	1025	10.26	100	7.00	720.49	15.80	40.3	1.60	32.19
3	1026	10.34	100	7.00	719.40	15.82	40.7	1.63	31.14
4									
5									
Stabilization	NA	NA	NA	± 0.2	± 3%	± 0.2	± 20	± 10% or 0.2	NA

Field Meter: Aquatroll 600

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)
3	TOC (A,V 40mL, H2SO4)
	TOX (A,G 250mL, H2SO4)
1	Metals (P,250mL, HNO3)
1	Cyanide (P, 250mL, NaOH)
	Phenols (A,G,250mL, H2SO4)
1	General (P, 250 mL)
1	Ammonia
1	P 250L HNO3

Filtered	
Qty	Bottles
1	Metals (P,250mL, HNO3)
1	Ammonia (P,250mL, H2SO4)
	General (P,500mL)
1	General P 1000ml
3	TOC
	In-Line Filters Used

Final DTW = 12.18

Comments

Sampler's Signature: _____

John D...

Coffeen

WELL/SAMPLE POINT G404

Purge Method: Delicated pump

Date: 6/7/23 Start Time: 1133 Finish/Sample Time: 1251

Well Depth (Bottom) From MP: _____ ft Min. Purge Volume: 1500 Gal/L (mL)

Depth to Water From MP: 5.89 ft Total Purge Volume: 1800 Gal/L (mL)

Total Drawdown: 0.91 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	1148	6.60	100	6.76	2137.7	17.28	78.9	0.18	12.81
2	1149	6.60	100	6.75	2124.7	17.30	79.2	0.17	11.36
3	1150	6.61	100	6.76	2113.2	17.28	79.2	0.16	10.14
4									
5									
Stabilization	NA	NA	NA	±0.2	±3%	±0.2	±20	±10% or 0.2	NA

Field Meter: Aquatroll 600

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	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Casing locked/secure	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Well cap fits securely.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Good seal/drainage	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Well has weep holes	<input checked="" type="checkbox"/>	<input type="checkbox"/>

BOTTLE INFORMATION:

Unfiltered	
Qty	Bottles
	VOAs (C,V, 40mL, HCL)
	VOAS (C,V, 40mL)
	Organics (A,G,U 1000mL)
	Organics (A,G,U 500mL)
3	TOC (A,V 40mL, H2SO4)
	TOX (A,G 250mL, H2SO4)
1	Metals (P,250mL, HNO3)
1	Cyanide (P, 250mL, NaOH)
	Phenols (A,G,250mL, H2SO4)
1	General (P, 250mL) 1000 mL Sub 6/7
1	Ammonia
1	P 2.5L HNO3

Filtered	
Qty	Bottles
1	Metals (P,250mL, HNO3)
1	Ammonia (P,250mL, H2SO4)
	General (P,500mL)
1	General P 1000 mL
3	TOC
0.100 ppm	Soluble Iron r2
1	In-Line Filters Used

Final DTW = 6.80

Comments

Sampler's Signature: [Signature]

Coffeen

WELL/SAMPLE POINT G406

Purge Method: Desiccated pump

Date: 5/31/2023 Start Time: 1413 Finish/Sample Time: 1645

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

Depth to Water From MP: 13.27 ft Total Purge Volume: 1500 Gal / L (ML)

Total Drawdown: 0.10 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	1438	13.37	100	6.56	1420	21.23	164	2.83	0.0
2	1440	13.37	100	6.49	1400	21.20	165	2.78	0.0
3	1442	13.37	100	6.53	1410	21.17	166	2.71	0.0
4									
5									
Stabilization	NA	NA	NA	± 0.2	± 3%	± 0.2	± 20	± 10% or 0.2	NA

Field Meter: Hanna

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	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Casing locked/secure	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Well cap fits securely.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Good seal/drainage	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Well has weep holes	<input checked="" type="checkbox"/>	<input type="checkbox"/>

BOTTLE INFORMATION:

Unfiltered		Filtered	
Qty	Bottles	Qty	Bottles
	VOAs (C,V, 40mL, HCL)	1 (1 FD)	Metals (P, 250mL, HNO3)
	VOAS (C,V, 40mL)	1 (1 FD)	Ammonia (P, 250mL, H2SO4)
	Organics (A,G,U 1000mL)	1 (1 FD)	General (P, 500mL) 1000ml
	Organics (A,G,U 500mL)	3 (3 FD)	TDC (A, V, 40mL, H2SO4)
3 (3 FD)	TOC (A,V 40mL, H2SO4)		
	TOX (A,G 250mL, H2SO4)		
1 (1 FD)	Metals (P, 250mL, HNO3)		
1 (1 FD)	Cyanide (P, 250mL, NaOH)		
	Phenols (A,G, 250mL, H2SO4)		
1 (1 FD)	General (P, 250mL) 1000 ml		
1 (1 FD)	Ammonia (P, 250mL, H2SO4)		
1 (1 FD)	(P, 250mL, HNO3)		
			In-Line Filters Used

Final DTL - 13.37 PL

Comments Transducer S/N 21615123 diss IAN⁺ - 0.185 ppm
Field Dup Filled here

Sampler's Signature: _____

Coffeen

WELL/SAMPLE POINT G407

Purge Method: Delegated Blender

Date: 5/31/2023 Start Time: 1235 Finish/Sample Time: 1409

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

Depth to Water From MP: 7.42 ft Total Purge Volume: 1500 Gal / L (L)

Total Drawdown: 5.31 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	1257	9.97	100	6.65	2730	20.78	169	4.77	13.7
2	1259	10.17	100	6.65	2610	20.20	168	4.59	13.1
3	1301	10.25	100	6.65	2500	19.25	165	4.48	7.0
4	1303	10.40	100	6.60	2480	19.18	163	4.34	5.2
5	1305	10.59	100	6.64	2460	19.20	162	4.30	5.6
Stabilization	NA	NA	NA	± 0.2	± 3%	± 0.2	± 20	± 10% or 0.2	NA

Field Meter: Hanna

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	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Casing locked/secure	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Well cap fits securely.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Good seal/drainage	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Well has weep holes	<input checked="" type="checkbox"/>	<input type="checkbox"/>

BOTTLE INFORMATION:

Unfiltered	
Qty	Bottles
	VOAs (C,V, 40mL, HCL)
	VOAs (C,V, 40mL)
	Organics (A,G,U 1000mL)
	Organics (A,G,U 500mL)
<u>3</u>	TOC (A,V 40mL, H2SO4)
	TOX (A,G 250mL, H2SO4)
<u>1</u>	Metals (P,250mL, HNO3)
<u>1</u>	Cyanide (P, 250mL, NaOH)
	Phenols (A,G,250mL, H2SO4)
<u>1</u>	General (P, 250 mL) 1000mL
<u>1</u>	Ammonia (P, 250mL, H2SO4)
<u>1</u>	(P, 2.5L HNO3)

(L)

Filtered	
Qty	Bottles
<u>1</u>	Metals (P,250mL, HNO3)
<u>1</u>	Ammonia (P,250mL, H2SO4)
<u>1</u>	General (P, 500mL) 1000mL
<u>3</u>	TOC (A,V, 40mL, H2SO4)
<u>1</u>	In-Line Filters Used

Final DTW - 12.73 PL

Comments transducer S/N 21615122 diss Iron²⁺ - 0.269 ppm
forgot to download transducer data until 1647

Sampler's Signature: _____

Multiparameter Meter Field Calibration Checklist

Field Personnel: Joe Reed		Location: Coffeen Power	
Weather: 74-85° partly cloudy		Environment: gravel/grass	
Multiparameter Water Meter	Make: Hanna	Model: U5000	Serial Number: U4U1FVTF
Water Level Meter	Make: Solinst	Model: 101	Serial Number: P7/LM2

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	/	MSI	L344-09	12/14/2023
pH 7.00a	6.99	s.u.	±0.1 s.u.	P	N		MSI	L343-07	12/9/2023
pH 10.00a	10.00	s.u.	±0.1 s.u.	P	N		MSI	M082-04	3/25/2024
SC Zero (DI)	2.0	µS/cm	0<25 µS/cm	P	N		Pace Labs	N/A (DI)	N/A (DI)
SC 2000	2050	µS/cm	±5%	P	N		Geotech	2GE1442	May-23
ORP	224	mV	±15 mV	P	N		InSitu	2G1762	Jun-23
DO (Zero pt)	0.05	mg/L	±0.1	P	N		Macron	#000228049	8/26/2025
DO (Saturated)	99.1	%	97-100%	P	N		Pace Labs	N/A (DI)	N/A (DI)
Turbidity (DI)	0.50	NTU	<2 NTU	P	N		Pace Labs	N/A (DI)	N/A (DI)

25.49°

Approx. every 4 hrs, unless only one well

ICV (Initial Calibration Verification)					Time: 900				
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	2GE870	Mar-24	
pH 7.00b	6.97	s.u.	±0.15 s.u.	P	N	Geotech	2GC931	Mar-24	
pH 10.00b	9.98	s.u.	±0.15 s.u.	P	N	Geotech	2GE820	May-24	
SC 1000	990	µS/cm	±5%	P	N	Ricca	4207N97	Jul-24	

Approx. every 4 hrs, unless only one well

CCV (Continued Calibration Verification):					Time: 1549				
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	L344-09	12/14/2023
pH 7.00a	7.02	s.u.	±0.1 s.u.	P	N		MSI	L343-07	12/9/2023
pH 10.00a	10.02	s.u.	±0.1 s.u.	P	N		MSI	M082-04	3/25/2024
SC 1000	1010	µS/cm	±5%	P	N		Ricca	4207N97	Jul-24
DO (Zero pt)	0.05	mg/L	±0.1 mg/L	P	N		Macron	#000228049	8/26/2025
Turbidity (DI)	0.0	NTU	<2 NTU	P	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	L344-09	12/14/2023
7.00a		s.u.	±0.1 s.u.				MSI	L343-07	12/9/2023
10.00a		s.u.	±0.1 s.u.				MSI	M082-04	3/25/2024
SC 1000		µS/cm	±5%				Ricca	4207N97	Jul-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:	5/31/23
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Multiparameter Meter Field Calibration Checklist

Field Personnel: JD				Location: Vista Coffee					
Weather: 70-86°F p. sunny with S 7-14				Environment: grass, weeds					
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	4.05	s.u.	±0.1 s.u.	pass	No	NA	MSI	L344-09	12/14/2023
pH 7.00a	7.07	s.u.	±0.1 s.u.				MSI	L343-07	12/9/2023
pH 10.00a	10.05	s.u.	±0.1 s.u.				MSI	M082-04	3/25/2024
SC Zero (DI)	10.89	µS/cm	0<25 µS/cm				Pace Labs	N/A (DI)	N/A (DI)
SC 2000	2089.2	µS/cm	±5%				Geotech	2GE1442	May-23
ORP	222.4	mV	±15 mV				InSitu	2G1762	Jun-23
DO (Zero pt)	0.03	mg/L	±0.1				Macron	#000228049	8/26/2025
DO (Saturated)	98.78	%	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 4 hrs, unless only one well

ICV (Initial Calibration Verification)						Time: _____			
Buffer	Check Value	Units	Range	Pass/Fail	Action Taken?	Manufacturer	Lot#	Exp.	
pH 4.00b	4.04	s.u.	±0.15 s.u.	pass	NA	Geotech	2GE870	Mar-24	
pH 7.00b	6.95	s.u.	±0.15 s.u.			Geotech	2GC931	Mar-24	
pH 10.00b	9.94	s.u.	±0.15 s.u.			Geotech	2GE820	May-24	
SC 1000	1042.5	µS/cm	±5%			Ricca	4207N97	Jul-24	


Approx. every 4 hrs, unless only one well

CCV (Continued Calibration Verification):						Time: 1650			
Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.07	s.u.	±0.1 s.u.	pass	No	NA	MSI	L344-09	12/14/2023
pH 7.00a	7.08	s.u.	±0.1 s.u.				MSI	L343-07	12/9/2023
pH 10.00a	10.06	s.u.	±0.1 s.u.				MSI	M082-04	3/25/2024
SC 1000	1040.6	µS/cm	±5%				Ricca	4207N97	Jul-24
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 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	L344-09	12/14/2023
7.00a		s.u.	±0.1 s.u.				MSI	L343-07	12/9/2023
10.00a		s.u.	±0.1 s.u.				MSI	M082-04	3/25/2024
SC 1000		µS/cm	±5%				Ricca	4207N97	Jul-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: 5/31/23
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Multiparameter Meter Field Calibration Checklist

Field Personnel: <i>Aaron Pemberton</i>				Location: <i>Coffeeen</i>					
Weather: <i>77°-87° sunny with 5 mph</i>				Environment: <i>grass, dirt, dust</i>					
Multiparameter Water Meter		Make: <i>Horiba</i>	Model: <i>U5000</i>	Serial Number: <i>PW264503</i>					
Water Level Meter		Make: <i>Heron</i>	Model: <i>Dipper?</i>	Serial Number: <i>3217-7</i>					

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	<i>4.00</i>	s.u.	±0.1 s.u.	P	No	N/A	MSI	L344-09	12/14/2023
pH 7.00a	<i>6.91</i>	s.u.	±0.1 s.u.	P			MSI	L343-07	12/9/2023
pH 10.00a	<i>9.99</i>	s.u.	±0.1 s.u.	P			MSI	M082-04	3/25/2024
SC Zero (DI)	<i>0.0</i>	µS/cm	0<25 µS/cm	P			Pace Labs	N/A (DI)	N/A (DI)
SC 2000	<i>2060</i>	µS/cm	±5%	P			Geotech	2GE1442	May-23
ORP	<i>220</i>	mV	±15 mV	P			InSitu	2G1762	Jun-23
DO (Zero pt)	<i>0.08</i>	mg/L	±0.1	P			Macron	#000228049	8/26/2025
DO (Saturated)	<i>98.8</i>	%	97-100%	P			Pace Labs	N/A (DI)	N/A (DI)
Turbidity (DI)	<i>0.0</i>	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: <i>0430</i>		<i>22A @ 25°C</i>			
Buffer	Check Value	Units	Range	Pass/Fail	Action Taken?	Manufacturer	Lot#	Exp.	
pH 4.00b	<i>3.97</i>	s.u.	±0.15 s.u.	P	N/A	Geotech	2GE870	Mar-24	
pH 7.00b	<i>6.91</i>	s.u.	±0.15 s.u.	P		Geotech	2GC931	Mar-24	
pH 10.00b	<i>10.00</i>	s.u.	±0.15 s.u.	P		Geotech	2GE820	May-24	
SC 1000	<i>1987</i>	µS/cm	±5%	P		Ricca	4207N97	Jul-24	

Approx. every 4 hrs, unless only one well

CCV (Continued Calibration Verification):				Time: <i>16:19</i>					
Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	<i>4.02</i>	s.u.	±0.1 s.u.	P	No	N/A	MSI	L344-09	12/14/2023
pH 7.00a	<i>6.95</i>	s.u.	±0.1 s.u.	P			MSI	L343-07	12/9/2023
pH 10.00a	<i>9.96</i>	s.u.	±0.1 s.u.	P			MSI	M082-04	3/25/2024
SC 1000	<i>1020</i>	µS/cm	±5%	P			Ricca	4207N97	Jul-24
DO (Zero pt)	<i>0.09</i>	mg/L	±0.1 mg/L	P			Macron	#000228049	8/26/2025
Turbidity (DI)	<i>0.0</i>	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: <i>16:00</i>					
Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
4.00a	/	s.u.	±0.1 s.u.	/	/	/	MSI	L344-09	12/14/2023
7.00a	/	s.u.	±0.1 s.u.	/	/	/	MSI	L343-07	12/9/2023
10.00a	/	s.u.	±0.1 s.u.	/	/	/	MSI	M082-04	3/25/2024
SC 1000	/	µS/cm	±5%	/	/	/	Ricca	4207N97	Jul-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: <i>5/31/2023</i>
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Multiparameter Meter Field Calibration Checklist

Field Personnel:	Kylie Lane			Location:	Coffeen Power				
Weather:	64° to 88°			Environment:	Dry				
Multiparameter Water Meter	Make:	HORIBA	Model:	U-5000	Serial Number:	YL9KJ911A			
Water Level Meter	Make:	HERON	Model:	Water tape	Serial Number:	19 FF2202131ML			
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	NA	NA	MSI	L344-09	12/14/2023
pH 7.00a	7.01	s.u.	±0.1 s.u.	P	NA	NA	MSI	L343-07	12/9/2023
pH 10.00a	10.01	s.u.	±0.1 s.u.	P	NA	NA	MSI	M082-04	3/25/2024
SC Zero (DI)	23.24	µS/cm	0<25 µS/cm	P	NA	NA	Pace Labs	N/A (DI)	N/A (DI)
SC 2000	1970	µS/cm	±5%	P	NA	NA	Geotech	2GE1442	May-23
ORP	224	mV	±15 mV	P	NA	NA	InSitu	2G1762	Jun-23
DO (Zero pt)	0.04	mg/L	±0.1	P	NA	NA	Macron	#000228049	8/26/2025
DO (Saturated)	97.40	%	97-100%	P	NA	NA	Pace Labs	N/A (DI)	N/A (DI)
Turbidity (DI)	0	NTU	<2 NTU	P	NA	NA	Pace Labs	N/A (DI)	N/A (DI)

Approx. every 4 hrs, unless only one well

ICV (Initial Calibration Verification)					Time:	09:08			
Buffer	Check Value	Units	Range	Pass/Fail	Action Taken?	Manufacturer	Lot#	Exp.	
pH 4.00b	4.00	s.u.	±0.15 s.u.	P	NA	Geotech	2GE870	Mar-24	
pH 7.00b	7.00	s.u.	±0.15 s.u.	P	NA	Geotech	2GC931	Mar-24	
pH 10.00b	10.00	s.u.	±0.15 s.u.	P	NA	Geotech	2GE820	May-24	
SC 1000	10.10	µS/cm	±5%	P	NA	Ricca	4207N97	Jul-24	

Approx. every 4 hrs, unless only one well

CCV (Continued Calibration Verification):					Time:	NA			
Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	/	s.u.	±0.1 s.u.	/	/	/	MSI	L344-09	12/14/2023
pH 7.00a	/	s.u.	±0.1 s.u.	/	/	/	MSI	L343-07	12/9/2023
pH 10.00a	/	s.u.	±0.1 s.u.	/	/	/	MSI	M082-04	3/25/2024
SC 1000	/	µS/cm	±5%	/	/	/	Ricca	4207N97	Jul-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:	13:09			
Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
4.00a	4.00	s.u.	±0.1 s.u.	P	NA	NA	MSI	L344-09	12/14/2023
7.00a	7.01	s.u.	±0.1 s.u.	P	NA	NA	MSI	L343-07	12/9/2023
10.00a	10.00	s.u.	±0.1 s.u.	P	NA	NA	MSI	M082-04	3/25/2024
SC 1000	1020	µS/cm	±5%	P	NA	NA	Ricca	4207N97	Jul-24
DO (Zero pt)	0.01	mg/L	±0.1 mg/L	P	NA	NA	Macron	#000228049	8/26/2025
Turbidity (DI)	NA	NTU	<2 NTU	NA	NA	NA	Pace Labs	N/A (DI)	N/A (DI)

Comments: Turbidity Had Problems taking reads

Signature:	[Signature]	Date:	5-31-2023
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Multiparameter Meter Field Calibration Checklist

Field Personnel: <u>J. Reed</u>				Location: <u>Coffeen Power</u>					
Weather: <u>65-86°F sunny wind 3-6 mph</u>				Environment: <u>Gravel Road</u>					
Multiparameter Water Meter		Make: <u>Horiba</u>	Model: <u>U5000</u>	Serial Number: <u>YL9KJ9HA</u>					
Water Level Meter		Make: <u>Solinst</u>	Model: <u>101</u>	Serial Number: <u>33459</u>					
Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	<u>4.00</u>	s.u.	±0.1 s.u.	P	N	↘	MSI	L344-09	12/14/2023
pH 7.00a	<u>7.01</u>	s.u.	±0.1 s.u.	P	N		MSI	L343-07	12/9/2023
pH 10.00a	<u>9.98</u>	s.u.	±0.1 s.u.	P	N		MSI	M082-04	3/25/2024
SC Zero (DI)	<u>0.0</u>	µS/cm	0<25 µS/cm	P	N		Pace Labs	N/A (DI)	N/A (DI)
SC 2000	<u>2000</u>	µS/cm	±5%	P	N		Geotech	2GE1442	May-23
ORP	<u>230</u>	mV	±15 mV	P	N		InSitu	2G1762	Jun-23
DO (Zero pt)	<u>0.04</u>	mg/L	±0.1	P	N		Macron	#000228049	8/26/2025
DO (Saturated)	<u>99.2</u>	%	97-100%	P	N		Pace Labs	N/A (DI)	N/A (DI)
Turbidity (DI)	<u>0.0</u>	NTU	<2 NTU	P	N		Pace Labs	N/A (DI)	N/A (DI)

Approx. every 4 hrs, unless only one well

ICV (Initial Calibration Verification)

						Time: <u>850</u>			
Buffer	Check Value	Units	Range	Pass/Fail	Action Taken?	Manufacturer	Lot#	Exp.	
pH 4.00b	<u>4.01</u>	s.u.	±0.15 s.u.	P	N	Geotech	2GE870	Mar-24	
pH 7.00b	<u>7.02</u>	s.u.	±0.15 s.u.	P	N	Geotech	2GC931	Mar-24	
pH 10.00b	<u>9.98</u>	s.u.	±0.15 s.u.	P	N	Geotech	2GE820	May-24	
SC 1000	<u>1010</u>	µS/cm	±5%	P	N	Ricca	4207N97	Jul-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	<u>4.02</u>	s.u.	±0.1 s.u.	P	N	↘	MSI	L344-09	12/14/2023
pH 7.00a	<u>7.01</u>	s.u.	±0.1 s.u.	P	N		MSI	L343-07	12/9/2023
pH 10.00a	<u>10.00</u>	s.u.	±0.1 s.u.	P	N		MSI	M082-04	3/25/2024
SC 1000	<u>1020</u>	µS/cm	±5%	P	N		Ricca	4207N97	Jul-24
DO (Zero pt)	<u>0.05</u>	mg/L	±0.1 mg/L	P	N		Macron	#000228049	8/26/2025
Turbidity (DI)	<u>0:0</u>	NTU	<2 NTU	P	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	L344-09	12/14/2023
7.00a		s.u.	±0.1 s.u.				MSI	L343-07	12/9/2023
10.00a		s.u.	±0.1 s.u.				MSI	M082-04	3/25/2024
SC 1000		µS/cm	±5%				Ricca	4207N97	Jul-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:	<u>Joseph P. Reed</u>	Date:	<u>6/6/23</u>
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2GK1516
Nov 23
715

24.14°

Multiparameter Meter Field Calibration Checklist

Field Personnel: Kyle Lane Location: Coffeen Power

Weather: 64° to 86° Sunny Environment: Dry

Multiparameter Water Meter Make: Horiba Model: J-500 Serial Number: V4V1FVTF

Water Level Meter Make: Hera Model: Water tape Serial Number: 19FF2202131ML

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	<u>4.00</u>	s.u.	±0.1 s.u.	<u>P</u>	<u>na</u>	<u>na</u>	MSI	L344-09	12/14/2023
pH 7.00a	<u>6.95</u>	s.u.	±0.1 s.u.	<u>P</u>	<u>na</u>	<u>na</u>	MSI	L343-07	12/9/2023
pH 10.00a	<u>9.90</u>	s.u.	±0.1 s.u.	<u>P</u>	<u>na</u>	<u>na</u>	MSI	M082-04	3/25/2024
SC Zero (DI)	<u>18.00</u>	µS/cm	0<25 µS/cm	<u>P</u>	<u>na</u>	<u>na</u>	Pace Labs	N/A (DI)	N/A (DI)
SC 2000	<u>2030</u>	µS/cm	±5%	<u>P</u>	<u>na</u>	<u>na</u>	Geotech	2GE1442	May-23
ORP	<u>254</u>	mV	±15 mV	<u>P</u>	<u>na</u>	<u>na</u>	InSitu	2G1762	Jun-23
DO (Zero pt)	<u>0.04</u>	mg/L	±0.1	<u>P</u>	<u>na</u>	<u>na</u>	Macron	#000228049	8/26/2025
DO (Saturated)	<u>97.60</u>	%	97-100%	<u>P</u>	<u>na</u>	<u>na</u>	Pace Labs	N/A (DI)	N/A (DI)
Turbidity (DI)	<u>0.0</u>	NTU	<2 NTU	<u>P</u>	<u>na</u>	<u>na</u>	Pace Labs	N/A (DI)	N/A (DI)

2GK086
 NOV. 23
 CW 715

Approx. every 4 hrs, unless only one well

ICV (Initial Calibration Verification) Time: 10:57

Buffer	Check Value	Units	Range	Pass/Fail	Action Taken?	Manufacturer	Lot#	Exp.
pH 4.00b	<u>4.02</u>	s.u.	±0.15 s.u.	<u>P</u>	<u>na</u>	Geotech	2GE870	Mar-24
pH 7.00b	<u>7.04</u>	s.u.	±0.15 s.u.	<u>P</u>	<u>na</u>	Geotech	2GC931	Mar-24
pH 10.00b	<u>9.99</u>	s.u.	±0.15 s.u.	<u>P</u>	<u>na</u>	Geotech	2GE820	May-24
SC 1000	<u>990</u>	µS/cm	±5%	<u>P</u>	<u>na</u>	Ricca	4207N97	Jul-24

Approx. every 4 hrs, unless only one well

CCV (Continued Calibration Verification): Time: na

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	<u>na</u>	s.u.	±0.1 s.u.	<u>na</u>	<u>na</u>	<u>na</u>	MSI	L344-09	12/14/2023
pH 7.00a	<u>na</u>	s.u.	±0.1 s.u.	<u>na</u>	<u>na</u>	<u>na</u>	MSI	L343-07	12/9/2023
pH 10.00a	<u>na</u>	s.u.	±0.1 s.u.	<u>na</u>	<u>na</u>	<u>na</u>	MSI	M082-04	3/25/2024
SC 1000	<u>na</u>	µS/cm	±5%	<u>na</u>	<u>na</u>	<u>na</u>	Ricca	4207N97	Jul-24
DO (Zero pt)	<u>na</u>	mg/L	±0.1 mg/L	<u>na</u>	<u>na</u>	<u>na</u>	Macron	#000228049	8/26/2025
Turbidity (DI)	<u>na</u>	NTU	<2 NTU	<u>na</u>	<u>na</u>	<u>na</u>	Pace Labs	N/A (DI)	N/A (DI)

Approx. every 4 hrs, unless only one well

CCV (Continued Calibration Verification): Time: 16:53

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
4.00a	<u>4.01</u>	s.u.	±0.1 s.u.	<u>P</u>	<u>na</u>	<u>na</u>	MSI	L344-09	12/14/2023
7.00a	<u>6.98</u>	s.u.	±0.1 s.u.	<u>P</u>	<u>na</u>	<u>na</u>	MSI	L343-07	12/9/2023
10.00a	<u>9.94</u>	s.u.	±0.1 s.u.	<u>P</u>	<u>na</u>	<u>na</u>	MSI	M082-04	3/25/2024
SC 1000	<u>1010</u>	µS/cm	±5%	<u>P</u>	<u>na</u>	<u>na</u>	Ricca	4207N97	Jul-24
DO (Zero pt)	<u>0.05</u>	mg/L	±0.1 mg/L	<u>P</u>	<u>na</u>	<u>na</u>	Macron	#000228049	8/26/2025
Turbidity (DI)	<u>0.0</u>	NTU	<2 NTU	<u>P</u>	<u>na</u>	<u>na</u>	Pace Labs	N/A (DI)	N/A (DI)

Comments:

Signature: [Signature] Date: 0-6-23

Multiparameter Meter Field Calibration Checklist

Field Personnel: JD		Location: Vista Coffeen	
Weather: 70-87°F mostly sunny wind N 5mph		Environment: grass, reeds	
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	4.08	s.u.	±0.1 s.u.	pass	Yes	4.00	MSI	L344-09	12/14/2023
pH 7.00a	7.11	s.u.	±0.1 s.u.	fail	Yes	7.01	MSI	L343-07	12/9/2023
pH 10.00a	10.12	s.u.	±0.1 s.u.	fail	Yes	10.02	MSI	M082-04	3/25/2024
SC Zero (DI)	9.91	µS/cm	0<25 µS/cm	pass	No	NA	Pace Labs	N/A (DI)	N/A (DI)
SC 2000	2046.9	µS/cm	±5%				Geotech	2GE1442	May-23
ORP	227.7	mV	±15 mV				InSitu	2G1762	Jun-23
DO (Zero pt)	0.07	mg/L	±0.1				Macron	#000228049	8/26/2025
DO (Saturated)	99.55	%	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)

3rd 616
Lot #
2GK086
Exp. Nov/23

Approx. every 4 hrs, unless only one well

ICV (Initial Calibration Verification)						Time:			
						0825			

Buffer	Check Value	Units	Range	Pass/Fail	Action Taken?	Manufacturer	Lot#	Exp.
pH 4.00b	4.01	s.u.	±0.15 s.u.	pass	NA	Geotech	2GE870	Mar-24
pH 7.00b	6.86	s.u.	±0.15 s.u.			Geotech	2GC931	Mar-24
pH 10.00b	9.86	s.u.	±0.15 s.u.			Geotech	2GE820	May-24
SC 1000	1031.0	µS/cm	±5%			Ricca	4207N97	Jul-24

Approx. every 4 hrs, unless only one well

CCV (Continued Calibration Verification):						Time:			
						1614			

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.07	s.u.	±0.1 s.u.	pass	No	NA	MSI	L344-09	12/14/2023
pH 7.00a	7.07	s.u.	±0.1 s.u.				MSI	L343-07	12/9/2023
pH 10.00a	10.01	s.u.	±0.1 s.u.				MSI	M082-04	3/25/2024
SC 1000	1043.5	µS/cm	±5%				Ricca	4207N97	Jul-24
DO (Zero pt)	0.10	mg/L	±0.1 mg/L				Macron	#000228049	8/26/2025
Turbidity (DI)	0.21	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	L344-09	12/14/2023
7.00a		s.u.	±0.1 s.u.				MSI	L343-07	12/9/2023
10.00a		s.u.	±0.1 s.u.				MSI	M082-04	3/25/2024
SC 1000		µS/cm	±5%				Ricca	4207N97	Jul-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: 6/6/23
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Multiparameter Meter Field Calibration Checklist

Field Personnel: <i>Aaron Pemberlon</i>				Location: <i>COFFEEN</i>					
Weather: <i>73° & 86° wind NW Sunny High</i>				Environment: <i>grass, gravel, etc</i>					
Multiparameter Water Meter		Make: <i>Hanna</i>	Model: <i>MS000</i>	Serial Number: <i>PW257603</i>					
Water Level Meter		Make: <i>Heron</i>	Model: <i>D:APPT</i>	Serial Number: <i>3717-7</i>					
Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	<i>3.94</i>	s.u.	±0.1 s.u.	<i>I</i>	<i>NO</i>	<i>N/A</i>	MSI	L344-09	12/14/2023
pH 7.00a	<i>7.00</i>	s.u.	±0.1 s.u.	<i>I</i>	<i>I</i>	<i>I</i>	MSI	L343-07	12/9/2023
pH 10.00a	<i>10.06</i>	s.u.	±0.1 s.u.	<i>I</i>	<i>I</i>	<i>I</i>	MSI	M082-04	3/25/2024
SC Zero (DI)	<i>0.0</i>	µS/cm	0<25 µS/cm	<i>I</i>	<i>I</i>	<i>I</i>	Pace Labs	N/A (DI)	N/A (DI)
SC 2000	<i>1960</i>	µS/cm	±5%	<i>I</i>	<i>I</i>	<i>I</i>	Geotech	2GE1442	May-23
ORP	<i>229</i>	mV	±15 mV	<i>I</i>	<i>I</i>	<i>I</i>	InSitu	2G1762	Jun-23
DO (Zero pt)	<i>0.09</i>	mg/L	±0.1	<i>I</i>	<i>I</i>	<i>I</i>	Macron	#000228049	8/26/2025
DO (Saturated)	<i>100.0</i>	%	97-100%	<i>I</i>	<i>I</i>	<i>I</i>	Pace Labs	N/A (DI)	N/A (DI)
Turbidity (DI)	<i>0.0</i>	NTU	<2 NTU	<i>I</i>	<i>I</i>	<i>I</i>	Pace Labs	N/A (DI)	N/A (DI)

*2GL086
Nov 23
OK*

Approx. every 4 hrs, unless only one well

ICV (Initial Calibration Verification)							Time: <i>0900</i>		
Buffer	Check Value	Units	Range	Pass/Fail	Action Taken?	Manufacturer	Lot#	Exp.	
pH 4.00b	<i>4.00</i>	s.u.	±0.15 s.u.	<i>I</i>	<i>N/A</i>	Geotech	2GE870	Mar-24	
pH 7.00b	<i>6.89</i>	s.u.	±0.15 s.u.	<i>I</i>	<i>I</i>	Geotech	2GC931	Mar-24	
pH 10.00b	<i>9.95</i>	s.u.	±0.15 s.u.	<i>I</i>	<i>I</i>	Geotech	2GE820	May-24	
SC 1000	<i>980</i>	µS/cm	±5%	<i>I</i>	<i>I</i>	Ricca	4207N97	Jul-24	

237 @ 19°C

Approx. every 4 hrs, unless only one well

CCV (Continued Calibration Verification):							Time: <i>16:48</i>		
Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	<i>4.06</i>	s.u.	±0.1 s.u.	<i>I</i>	<i>NO</i>	<i>N/A</i>	MSI	L344-09	12/14/2023
pH 7.00a	<i>7.01</i>	s.u.	±0.1 s.u.	<i>I</i>	<i>I</i>	<i>I</i>	MSI	L343-07	12/9/2023
pH 10.00a	<i>10.08</i>	s.u.	±0.1 s.u.	<i>I</i>	<i>I</i>	<i>I</i>	MSI	M082-04	3/25/2024
SC 1000	<i>989</i>	µS/cm	±5%	<i>I</i>	<i>I</i>	<i>I</i>	Ricca	4207N97	Jul-24
DO (Zero pt)	<i>0.09</i>	mg/L	±0.1 mg/L	<i>I</i>	<i>I</i>	<i>I</i>	Macron	#000228049	8/26/2025
Turbidity (DI)	<i>0.0</i>	NTU	<2 NTU	<i>I</i>	<i>I</i>	<i>I</i>	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	L344-09	12/14/2023
7.00a		s.u.	±0.1 s.u.				MSI	L343-07	12/9/2023
10.00a		s.u.	±0.1 s.u.				MSI	M082-04	3/25/2024
SC 1000		µS/cm	±5%				Ricca	4207N97	Jul-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:	<i>6/6/2023</i>
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Multiparameter Meter Field Calibration Checklist

Field Personnel: Kyle Lane				Location: Coffeen Power					
Weather: 81° CLOUDY				Environment: Dry					
Multiparameter Water Meter		Make: HORIBA	Model: U-5000	Serial Number: V4V1FVTF					
Water Level Meter		Make: HERON	Model: WATER TAP	Serial Number: 19FF2202131M					
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	NA	NA	MSI	L344-09	12/14/2023
pH 7.00a	6.92	s.u.	±0.1 s.u.	P	NA	NA	MSI	L343-07	12/9/2023
pH 10.00a	9.99	s.u.	±0.1 s.u.	P	NA	NA	MSI	M082-04	3/25/2024
SC Zero (DI)	19.20	µS/cm	0<25 µS/cm	P	NA	NA	Pace Labs	N/A (DI)	N/A (DI)
SC 2000	19.70	µS/cm	±5%	P	NA	NA	Geotech	2GE1442	May-23
ORP	214	mV	±15 mV	P	NA	NA	InSitu	2G1762	Jun-23
DO (Zero pt)	0.08	mg/L	±0.1	P	NA	NA	Macron	#000228049	8/26/2025
DO (Saturated)	98.20	%	97-100%	P	NA	NA	Pace Labs	N/A (DI)	N/A (DI)
Turbidity (DI)	0	NTU	<2 NTU	P	NA	NA	Pace Labs	N/A (DI)	N/A (DI)

2640820
Nov. 23
CH 717

Approx. every 4 hrs, unless only one well

ICV (Initial Calibration Verification)							Time: 08.30		
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	Geotech	2GE870	Mar-24	
pH 7.00b	7.88	s.u.	±0.15 s.u.	P	NA	Geotech	2GC931	Mar-24	
pH 10.00b	9.88	s.u.	±0.15 s.u.	P	NA	Geotech	2GE820	May-24	
SC 1000	9.80	µS/cm	±5%	P	NA	Ricca	4207N97	Jul-24	

Approx. every 4 hrs, unless only one well

CCV (Continued Calibration Verification):							Time: NA		
Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	/	s.u.	±0.1 s.u.	/	/	/	MSI	L344-09	12/14/2023
pH 7.00a	/	s.u.	±0.1 s.u.	/	/	/	MSI	L343-07	12/9/2023
pH 10.00a	/	s.u.	±0.1 s.u.	/	/	/	MSI	M082-04	3/25/2024
SC 1000	/	µS/cm	±5%	/	/	/	Ricca	4207N97	Jul-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: 14.06		
Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
4.00a	3.89	s.u.	±0.1 s.u.	P	NA	NA	MSI	L344-09	12/14/2023
7.00a	6.97	s.u.	±0.1 s.u.	P	NA	NA	MSI	L343-07	12/9/2023
10.00a	9.98	s.u.	±0.1 s.u.	P	NA	NA	MSI	M082-04	3/25/2024
SC 1000	10.30	µS/cm	±5%	P	NA	NA	Ricca	4207N97	Jul-24
DO (Zero pt)	0.06	mg/L	±0.1 mg/L	P	NA	NA	Macron	#000228049	8/26/2025
Turbidity (DI)	0.0	NTU	<2 NTU	P	NA	NA	Pace Labs	N/A (DI)	N/A (DI)

Comments:

NA

Signature: [Signature]	Date: 6-7-2023
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Multiparameter Meter Field Calibration Checklist

Field Personnel: JD			Location: Vista Coffeen						
Weather: 66-78°F cloudy wind NE 8mph			Environment: grass, reeds						
Multiparameter Water Meter	Make: Aquatroll	Model: 600	Serial Number: 762215						
Water Level Meter	Make: Heron	Model: Diaper-T	Serial Number: 11FF2209305ML						
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	L344-09	12/14/2023
pH 7.00a	7.00	s.u.	±0.1 s.u.	pass	No	NA	MSI	L343-07	12/9/2023
pH 10.00a	9.98	s.u.	±0.1 s.u.	pass	No	NA	MSI	M082-04	3/25/2024
SC Zero (DI)	9.72	µS/cm	0<25 µS/cm	pass	No	NA	Pace Labs	N/A (DI)	N/A (DI)
SC 2000	2086.7	µS/cm	±5%	pass	No	NA	Geotech	2GE1442	May-23
ORP	226.1	mV	±15 mV	pass	No	NA	InSitu	2G1762	Jun-23
DO (Zero pt)	0.09	mg/L	±0.1	pass	No	NA	Macron	#000228049	8/26/2025
DO (Saturated)	98.09	%	97-100%	pass	No	NA	Pace Labs	N/A (DI)	N/A (DI)
Turbidity (DI)	0.00	NTU	<2 NTU	pass	No	NA	Pace Labs	N/A (DI)	N/A (DI)

SMO 6/7
 Lot #
 ZGK086
 Exp. Nov/23

Approx. every 4 hrs, unless only one well

ICV (Initial Calibration Verification)						Time: 0825		
Buffer	Check Value	Units	Range	Pass/Fail	Action Taken?	Manufacturer	Lot#	Exp.
pH 4.00b	4.04	s.u.	±0.15 s.u.	pass	NA	Geotech	2GE870	Mar-24
pH 7.00b	6.90	s.u.	±0.15 s.u.	pass	NA	Geotech	2GC931	Mar-24
pH 10.00b	9.86	s.u.	±0.15 s.u.	pass	NA	Geotech	2GE820	May-24
SC 1000	992.0	µS/cm	±5%	pass	NA	Ricca	4207N97	Jul-24

Approx. every 4 hrs, unless only one well

CCV (Continued Calibration Verification):						Time: 1722			
Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.06	s.u.	±0.1 s.u.	pass	No	NA	MSI	L344-09	12/14/2023
pH 7.00a	7.04	s.u.	±0.1 s.u.	pass	No	NA	MSI	L343-07	12/9/2023
pH 10.00a	10.02	s.u.	±0.1 s.u.	pass	No	NA	MSI	M082-04	3/25/2024
SC 1000	1026.9	µS/cm	±5%	pass	No	NA	Ricca	4207N97	Jul-24
DO (Zero pt)	0.09	mg/L	±0.1 mg/L	pass	No	NA	Macron	#000228049	8/26/2025
Turbidity (DI)	0.00	NTU	<2 NTU	pass	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	L344-09	12/14/2023
7.00a		s.u.	±0.1 s.u.				MSI	L343-07	12/9/2023
10.00a		s.u.	±0.1 s.u.				MSI	M082-04	3/25/2024
SC 1000		µS/cm	±5%				Ricca	4207N97	Jul-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: 6/7/23
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Multiparameter Meter Field Calibration Checklist

Field Personnel: <i>Aaron Pemberton</i>	Location: <i>Coffeen</i>
Weather: <i>60% - 70% cloudy wind NE 5mph</i>	Environment: <i>grass, dirt</i>

Multiparameter Water Meter	Make: <i>Hanna</i>	Model: <i>USCOO</i>	Serial Number: <i>PW26YJ03</i>
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Water Level Meter	Make: <i>Heron</i>	Model: <i>D:part</i>	Serial Number: <i>3717-7</i>
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Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	<i>3.01</i>	s.u.	±0.1 s.u.	<i>P</i>	<i>NO</i>	—	MSI	L344-09	12/14/2023
pH 7.00a	<i>7.68</i>	s.u.	±0.1 s.u.	<i>P</i>	<i>YES</i>	<i>7.00</i>	MSI	L343-07	12/9/2023
pH 10.00a	<i>10.01</i>	s.u.	±0.1 s.u.	<i>P</i>	<i>NO</i>	—	MSI	M082-04	3/25/2024
SC Zero (DI)	<i>0.0</i>	µS/cm	0<25 µS/cm	<i>P</i>	<i>NO</i>	—	Pace Labs	N/A (DI)	N/A (DI)
SC 2000	<i>2090</i>	µS/cm	±5%	<i>P</i>	<i>NO</i>	—	Geotech	2GE1442	May-23
ORP	<i>220</i>	mV	±15 mV	<i>P</i>	<i>NO</i>	—	InSitu	2G1762	Jun-23
DO (Zero pt)	<i>0.01</i>	mg/L	±0.1	<i>P</i>	<i>NO</i>	—	Macron	#000228049	8/26/2025
DO (Saturated)	<i>99.3</i>	%	97-100%	<i>P</i>	<i>NO</i>	—	Pace Labs	N/A (DI)	N/A (DI)
Turbidity (DI)	<i>1.3</i>	NTU	<2 NTU	<i>P</i>	<i>NO</i>	—	Pace Labs	N/A (DI)	N/A (DI)

*2GK086
Nov. 23
7/3*

Approx. every 4 hrs, unless only one well

230 @ 24°C

ICV (Initial Calibration Verification)						Time:				
Buffer	Check Value	Units	Range	Pass/Fail	Action Taken?	Manufacturer	Lot#	Exp.		
pH 4.00b	<i>4.02</i>	s.u.	±0.15 s.u.	<i>P</i>	—	Geotech	2GE870	Mar-24		
pH 7.00b	<i>7.08</i>	s.u.	±0.15 s.u.	<i>P</i>	—	Geotech	2GC931	Mar-24		
pH 10.00b	<i>10.10</i>	s.u.	±0.15 s.u.	<i>P</i>	—	Geotech	2GE820	May-24		
SC 1000	<i>989</i>	µS/cm	±5%	<i>P</i>	—	Ricca	4207N97	Jul-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	<i>4.06</i>	s.u.	±0.1 s.u.	<i>I</i>	<i>NO</i>	<i>N/A</i>	MSI	L344-09	12/14/2023	
pH 7.00a	<i>7.07</i>	s.u.	±0.1 s.u.	<i>I</i>			MSI	L343-07	12/9/2023	
pH 10.00a	<i>10.09</i>	s.u.	±0.1 s.u.	<i>I</i>			MSI	M082-04	3/25/2024	
SC 1000	<i>1030</i>	µS/cm	±5%	<i>I</i>			Ricca	4207N97	Jul-24	
DO (Zero pt)	<i>0.01</i>	mg/L	±0.1 mg/L	<i>I</i>			Macron	#000228049	8/26/2025	
Turbidity (DI)	<i>0.0</i>	NTU	<2 NTU	<i>I</i>			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	L344-09	12/14/2023	
7.00a		s.u.	±0.1 s.u.				MSI	L343-07	12/9/2023	
10.00a		s.u.	±0.1 s.u.				MSI	M082-04	3/25/2024	
SC 1000		µS/cm	±5%				Ricca	4207N97	Jul-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: <i>6/7/2023</i>
------------------------------------------------------------------------------------------------	-----------------------

Multiparameter Meter Field Calibration Checklist

Field Personnel: JD			Location: Vista Coffeen						
Weather: 59-78° F hazy sun wind NNE 8 mph			Environment: grass						
Multiparameter Water Meter		Make: Aquatrill	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	4.00	s.u.	±0.1 s.u.	pass	No	NA	MSI	L344-09	12/14/2023
pH 7.00a	7.01	s.u.	±0.1 s.u.				MSI	L343-07	12/9/2023
pH 10.00a	10.02	s.u.	±0.1 s.u.				MSI	M082-04	3/25/2024
SC Zero (DI)	4.34	µS/cm	0<25 µS/cm				Pace Labs	N/A (DI)	N/A (DI)
SC 2000	2033.8	µS/cm	±5%				Geotech	2GE1442	May-23
ORP	230.7	mV	±15 mV				InSitu	2G1762	Jun-23
DO (Zero pt)	0.08	mg/L	±0.1				Macron	#000228049	8/26/2025
DO (Saturated)	99.39	%	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)

Lot #
26K086
 Exp Nov/23
575 618

Approx. every 4 hrs, unless only one well

ICV (Initial Calibration Verification)						Time: 0748		
Buffer	Check Value	Units	Range	Pass/Fail	Action Taken?	Manufacturer	Lot#	Exp.
pH 4.00b	4.02	s.u.	±0.15 s.u.	pass	NA	Geotech	2GE870	Mar-24
pH 7.00b	6.89	s.u.	±0.15 s.u.			Geotech	2GC931	Mar-24
pH 10.00b	9.87	s.u.	±0.15 s.u.			Geotech	2GE820	May-24
SC 1000	1028.9	µS/cm	±5%			Ricca	4207N97	Jul-24

Approx. every 4 hrs, unless only one well

CCV (Continued Calibration Verification):						Time: 1635			
Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	4.04	s.u.	±0.1 s.u.	pass	No	NA	MSI	L344-09	12/14/2023
pH 7.00a	7.05	s.u.	±0.1 s.u.				MSI	L343-07	12/9/2023
pH 10.00a	10.04	s.u.	±0.1 s.u.				MSI	M082-04	3/25/2024
SC 1000	1037.6	µS/cm	±5%				Ricca	4207N97	Jul-24
DO (Zero pt)	0.10	mg/L	±0.1 mg/L				Macron	#000228049	8/26/2025
Turbidity (DI)	0.34	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	L344-09	12/14/2023
7.00a		s.u.	±0.1 s.u.				MSI	L343-07	12/9/2023
10.00a		s.u.	±0.1 s.u.				MSI	M082-04	3/25/2024
SC 1000		µS/cm	±5%				Ricca	4207N97	Jul-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: [Handwritten Signature]	Date: 6/18/23
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Multiparameter Meter Field Calibration Checklist

Field Personnel: <i>Arron Pumberla</i>		Location: <i>coffeen</i>	
Weather: <i>58°-78° Sunny Wind NE at 6mph</i>		Environment: <i>grass field</i>	
Multiparameter Water Meter	Make: <i>HORIBA</i>	Model: <i>VS000</i>	Serial Number: <i>PJ26YJ03</i>
Water Level Meter	Make: <i>Heron</i>	Model: <i>Diparty</i>	Serial Number: <i>3717-T</i>

Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.
pH 4.00a	<i>4.00</i>	s.u.	±0.1 s.u.	P	NO	NA	MSI	L344-09	12/14/2023
pH 7.00a	<i>7.01</i>	s.u.	±0.1 s.u.	P	NO	NA	MSI	L343-07	12/9/2023
pH 10.00a	<i>10.03</i>	s.u.	±0.1 s.u.	P	NO	NA	MSI	M082-04	3/25/2024
SC Zero (DI)	<i>0.00</i>	µS/cm	0<25 µS/cm	P	NO	NA	Pace Labs	N/A (DI)	N/A (DI)
SC 2000	<i>2000</i>	µS/cm	±5%	P	NO	NA	Geotech	2GE1442	May-23
ORP	<i>232</i>	mV	±15 mV	P	NO	NA	InSitu	2G1762	Jun-23
DO (Zero pt)	<i>0.09</i>	mg/L	±0.1	P	NO	NA	Macron	#000228049	8/26/2025
DO (Saturated)	<i>99.9</i>	%	97-100%	P	NO	NA	Pace Labs	N/A (DI)	N/A (DI)
Turbidity (DI)	<i>0.0</i>	NTU	<2 NTU	P	NO	NA	Pace Labs	N/A (DI)	N/A (DI)

Approx. every 4 hrs, unless only one well *242 @ 15°C*

*2G1762
Nov. 23
Exp. 7/23*

ICV (Initial Calibration Verification)						Time:				
						<i>0800</i>				
Buffer	Check Value	Units	Range	Pass/Fail	Action Taken?	Manufacturer	Lot#	Exp.		
pH 4.00b	<i>3.96</i>	s.u.	±0.15 s.u.	P	N/A	Geotech	2GE870	Mar-24		
pH 7.00b	<i>6.69</i>	s.u.	±0.15 s.u.	P	N/A	Geotech	2GC931	Mar-24		
pH 10.00b	<i>10.00</i>	s.u.	±0.15 s.u.	P	N/A	Geotech	2GE820	May-24		
SC 1000	<i>993</i>	µS/cm	±5%	P	N/A	Ricca	4207N97	Jul-24		

Approx. every 4 hrs, unless only one well

CCV (Continued Calibration Verification):						Time:				
						<i>1734</i>				
Buffer	Check Value	Units	Range	Pass/Fail	Calibrate?	Adjusted Reading	Manufacturer	Lot#	Exp.	
pH 4.00a	<i>4.07</i>	s.u.	±0.1 s.u.	P	NO	NA	MSI	L344-09	12/14/2023	
pH 7.00a	<i>7.03</i>	s.u.	±0.1 s.u.	P	NO	NA	MSI	L343-07	12/9/2023	
pH 10.00a	<i>10.09</i>	s.u.	±0.1 s.u.	P	NO	NA	MSI	M082-04	3/25/2024	
SC 1000	<i>999</i>	µS/cm	±5%	P	NO	NA	Ricca	4207N97	Jul-24	
DO (Zero pt)	<i>0.09</i>	mg/L	±0.1 mg/L	P	NO	NA	Macron	#000228049	8/26/2025	
Turbidity (DI)	<i>0.0</i>	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	L344-09	12/14/2023	
7.00a		s.u.	±0.1 s.u.				MSI	L343-07	12/9/2023	
10.00a		s.u.	±0.1 s.u.				MSI	M082-04	3/25/2024	
SC 1000		µS/cm	±5%				Ricca	4207N97	Jul-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:	<i>[Signature]</i>	Date:	<i>6/8/2023</i>
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ATTACHMENT B.
845 QUARTERLY REPORT - QUARTER 2, 2023
COFFEEN POWER PLANT
ASH POND NO. 2
COFFEEN, IL



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

August 17, 2023

Brian Voelker
Vistra - Coffeen
1500 Eastport Plaza Drive
Collinsville, IL 62234

Dear Brian Voelker:

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,

A handwritten signature in cursive script that reads "Gail Schindler".

Gail Schindler
Project Manager
(309) 692-9688 x1716
gail.schindler@pacelabs.com

SAMPLE RECEIPT CHECK LIST

Items not applicable will be marked as in compliance

Work Order GF00183

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
YES	Zero headspace, <6 mm present in VOA vials
YES	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

Work Order GF00247

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

Work Order GF00917

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
YES	Zero headspace, <6 mm present in VOA vials
YES	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

Work Order GF01342

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
YES	Zero headspace, <6 mm present in VOA vials
YES	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

Work Order GF01733

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
YES	Zero headspace, <6 mm present in VOA vials
YES	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

Work Order GF01900

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

ANALYTICAL RESULTS

Sample: GF00183-01
Name: G302
Matrix: Ground Water - Grab

Sampled: 05/31/23 16:00
Received: 06/01/23 13:59
PO #: 1940007155

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Miscellaneous - Pace Analytical - Mt Juliet, Tn									
Rad 226 and 228-Subcontract	1.5	pCi/L			1	0.7	07/06/23 21:21		904.0 903.0

Sample: GF00183-02
Name: G302 DUP
Matrix: Ground Water - Grab

Sampled: 05/31/23 16:00
Received: 06/01/23 13:59
PO #: 1940007155

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Miscellaneous - Pace Analytical - Mt Juliet, Tn									
Rad 226 and 228-Subcontract	2.46	pCi/L			1	0.673	07/06/23 21:21		904.0 903.0

Sample: GF00183-03
Name: G303
Matrix: Ground Water - Grab

Sampled: 05/31/23 17:23
Received: 06/01/23 13:59
PO #: 1940007155

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Miscellaneous - Pace Analytical - Mt Juliet, Tn									
Rad 226 and 228-Subcontract	1.22	pCi/L			1	0.652	07/06/23 21:21		904.0 903.0

Sample: GF00183-04
Name: G316
Matrix: Ground Water - Grab

Sampled: 05/31/23 10:33
Received: 06/01/23 13:59
PO #: 1940007155

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Miscellaneous - Pace Analytical - Mt Juliet, Tn									
Rad 226 and 228-Subcontract	1.81	pCi/L			1	0.544	07/06/23 21:21		904.0 903.0

ANALYTICAL RESULTS

Sample: GF00183-05
Name: G406
Matrix: Ground Water - Grab

Sampled: 05/31/23 16:45
Received: 06/01/23 13:59
PO #: 1940007155

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
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Miscellaneous - Pace Analytical - Mt Juliet, Tn

Rad 226 and 228-Subcontract	0.262 U	pCi/L			1	0.778	07/06/23 21:21		904.0 903.0
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Sample: GF00183-06
Name: G406 DUP
Matrix: Ground Water - Grab

Sampled: 05/31/23 16:45
Received: 06/01/23 13:59
PO #: 1940007155

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
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Miscellaneous - Pace Analytical - Mt Juliet, Tn

Rad 226 and 228-Subcontract	0.482 J	pCi/L			1	0.597	07/06/23 21:21		904.0 903.0
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Sample: GF00183-07
Name: G407
Matrix: Ground Water - Grab

Sampled: 05/31/23 14:09
Received: 06/01/23 13:59
PO #: 1940007155

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
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Miscellaneous - Pace Analytical - Mt Juliet, Tn

Rad 226 and 228-Subcontract	0.792	pCi/L			1	0.589	07/10/23 16:46		904.0 903.0
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Sample: GF00183-08
Name: G410
Matrix: Ground Water - Grab

Sampled: 05/31/23 13:27
Received: 06/01/23 13:59
PO #: 1940007155

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
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Miscellaneous - Pace Analytical - Mt Juliet, Tn

Rad 226 and 228-Subcontract	3.15	pCi/L			1	0.624	07/10/23 16:46		904.0 903.0
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ANALYTICAL RESULTS

Sample: GF00183-09
Name: G411
Matrix: Ground Water - Grab

Sampled: 05/31/23 12:00
Received: 06/01/23 13:59
PO #: 1940007155

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
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Miscellaneous - Pace Analytical - Mt Juliet, Tn

Rad 226 and 228-Subcontract	0.623 J	pCi/L			1	0.642	07/10/23 16:46		904.0 903.0
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Sample: GF00183-10
Name: G314D
Matrix: Ground Water - Grab

Sampled: 06/01/23 09:38
Received: 06/01/23 13:59
PO #: 1940007155

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
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Miscellaneous - Pace Analytical - Mt Juliet, Tn

Rad 226 and 228-Subcontract	2.54	pCi/L			1	0.616	07/10/23 16:46		904.0 903.0
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Sample: GF00183-11
Name: G314
Matrix: Ground Water - Grab

Sampled: 06/01/23 10:47
Received: 06/01/23 13:59
PO #: 1940007155

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
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Miscellaneous - Pace Analytical - Mt Juliet, Tn

Rad 226 and 228-Subcontract	0.924	pCi/L			1	0.483	07/10/23 16:46		904.0 903.0
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Sample: GF00183-12
Name: G218
Matrix: Ground Water - Grab

Sampled: 06/01/23 11:12
Received: 06/01/23 13:59
PO #: 1940007155

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
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Miscellaneous - Pace Analytical - Mt Juliet, Tn

Rad 226 and 228-Subcontract	1.05	pCi/L			1	0.668	07/10/23 16:46		904.0 903.0
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ANALYTICAL RESULTS

Sample: GF00183-13
Name: G310
Matrix: Ground Water - Grab

Sampled: 06/01/23 12:42
Received: 06/01/23 13:59
PO #: 1940007155

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Miscellaneous - Pace Analytical - Mt Juliet, Tn									
Rad 226 and 228-Subcontract	1.52	pCi/L			1	0.576	07/10/23 16:46		904.0 903.0

Sample: GF00183-14
Name: G312
Matrix: Ground Water - Grab

Sampled: 06/01/23 14:01
Received: 06/01/23 13:59
PO #: 1940007155

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Miscellaneous - Pace Analytical - Mt Juliet, Tn									
Rad 226 and 228-Subcontract	0.845	pCi/L			1	0.543	07/10/23 16:46		904.0 903.0

Sample: GF00183-15
Name: G279
Matrix: Ground Water - Grab

Sampled: 06/01/23 12:07
Received: 06/01/23 13:59
PO #: 1940007155

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Miscellaneous - Pace Analytical - Mt Juliet, Tn									
Rad 226 and 228-Subcontract	0.107 U	pCi/L			1	0.651	07/10/23 16:46		904.0 903.0

Sample: GF00183-16
Name: G277
Matrix: Ground Water - Grab

Sampled: 06/01/23 10:27
Received: 06/01/23 13:59
PO #: 1940007155

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
Miscellaneous - Pace Analytical - Mt Juliet, Tn									
Rad 226 and 228-Subcontract	1.05	pCi/L			1	0.526	07/10/23 16:46		904.0 903.0

ANALYTICAL RESULTS

Sample: GF00247-01
Name: G151
Matrix: Ground Water - Grab

Sampled: 06/01/23 14:34
Received: 06/02/23 07:00
PO #: 1940007155

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
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Miscellaneous - Pace Analytical - Mt Juliet, Tn

Rad 226 and 228-Subcontract	0.268 U	pCi/L			1	0.724	07/06/23 21:21		904.0 903.0
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Sample: GF00247-02
Name: G215
Matrix: Ground Water - Grab

Sampled: 06/01/23 15:32
Received: 06/02/23 07:00
PO #: 1940007155

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
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Miscellaneous - Pace Analytical - Mt Juliet, Tn

Rad 226 and 228-Subcontract	0.881	pCi/L			1	0.864	07/06/23 21:21		904.0 903.0
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Sample: GF00247-03
Name: G308
Matrix: Ground Water - Grab

Sampled: 06/01/23 15:52
Received: 06/02/23 07:00
PO #: 1940007155

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
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Miscellaneous - Pace Analytical - Mt Juliet, Tn

Rad 226 and 228-Subcontract	0.481 J	pCi/L			1	0.73	07/06/23 21:21		904.0 903.0
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Sample: GF00917-01
Name: G276
Matrix: Ground Water - Grab

Sampled: 06/05/23 16:53
Received: 06/06/23 17:25
PO #: 1940007155

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
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Miscellaneous - Pace Analytical - Mt Juliet, Tn

Rad 226 and 228-Subcontract	0.966	pCi/L			1	0.558	07/14/23 16:39		904.0 903.0
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ANALYTICAL RESULTS

Sample: GF00917-02
Name: G273
Matrix: Ground Water - Grab

Sampled: 06/05/23 15:25
Received: 06/06/23 17:25
PO #: 1940007155

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
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Miscellaneous - Pace Analytical - Mt Juliet, Tn

Rad 226 and 228-Subcontract	0.248 U	pCi/L			1	0.548	07/14/23 16:39		904.0 903.0
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Sample: GF00917-03
Name: G307
Matrix: Ground Water - Grab

Sampled: 06/05/23 13:05
Received: 06/06/23 17:25
PO #: 1940007155

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
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Miscellaneous - Pace Analytical - Mt Juliet, Tn

Rad 226 and 228-Subcontract	0.528 J	pCi/L			1	0.539	07/14/23 16:39		904.0 903.0
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Sample: GF00917-04
Name: G307D
Matrix: Ground Water - Grab

Sampled: 06/05/23 14:20
Received: 06/06/23 17:25
PO #: 1940007155

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
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Miscellaneous - Pace Analytical - Mt Juliet, Tn

Rad 226 and 228-Subcontract	1.02	pCi/L			1	0.72	07/14/23 16:39		904.0 903.0
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Sample: GF00917-05
Name: G306
Matrix: Ground Water - Grab

Sampled: 06/05/23 15:43
Received: 06/06/23 17:25
PO #: 1940007155

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
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Miscellaneous - Pace Analytical - Mt Juliet, Tn

Rad 226 and 228-Subcontract	0.0900 U	pCi/L			1	0.569	07/14/23 16:39		904.0 903.0
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ANALYTICAL RESULTS

Sample: GF00917-06
Name: G152
Matrix: Ground Water - Grab

Sampled: 06/06/23 10:43
Received: 06/06/23 17:25
PO #: 1940007155

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
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Miscellaneous - Pace Analytical - Mt Juliet, Tn

Rad 226 and 228-Subcontract	0.513 J	pCi/L			1	0.983	07/14/23 21:08		904.0 903.0
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Sample: GF00917-07
Name: G153
Matrix: Ground Water - Grab

Sampled: 06/06/23 12:20
Received: 06/06/23 17:25
PO #: 1940007155

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
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Miscellaneous - Pace Analytical - Mt Juliet, Tn

Rad 226 and 228-Subcontract	0.146 U	pCi/L			1	0.974	07/14/23 21:08		904.0 903.0
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Sample: GF00917-08
Name: G154
Matrix: Ground Water - Grab

Sampled: 06/06/23 13:45
Received: 06/06/23 17:25
PO #: 1940007155

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
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Miscellaneous - Pace Analytical - Mt Juliet, Tn

Rad 226 and 228-Subcontract	0.993	pCi/L			1	0.752	07/14/23 21:08		904.0 903.0
Rad 226 -Subcontract	0.141 J	pCi/L			1	0.31	07/14/23 21:08		904.0 903.0
Rad 228- Subcontract	0.852	pCi/L			1	0.685	07/14/23 21:08		904.0 904.0

Sample: GF00917-09
Name: G271
Matrix: Ground Water - Grab

Sampled: 06/06/23 11:16
Received: 06/06/23 17:25
PO #: 1940007155

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
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Miscellaneous - Pace Analytical - Mt Juliet, Tn

Rad 226 and 228-Subcontract	2.32	pCi/L			1	0.765	07/14/23 21:08		904.0 903.0
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ANALYTICAL RESULTS

Sample: GF00917-10
Name: G305
Matrix: Ground Water - Grab

Sampled: 06/06/23 09:58
Received: 06/06/23 17:25
PO #: 1940007155

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
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Miscellaneous - Pace Analytical - Mt Juliet, Tn

Rad 226 and 228-Subcontract	1.63	pCi/L			1	0.675	07/14/23 21:08		904.0 903.0
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Sample: GF00917-11
Name: G405
Matrix: Ground Water - Grab

Sampled: 06/06/23 13:07
Received: 06/06/23 17:25
PO #: 1940007155

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
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Miscellaneous - Pace Analytical - Mt Juliet, Tn

Rad 226 and 228-Subcontract	1.68	pCi/L			1	0.972	07/14/23 21:08		904.0 903.0
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Sample: GF01342-01
Name: G301
Matrix: Ground Water - Grab

Sampled: 06/06/23 16:38
Received: 06/07/23 17:02
PO #: 1940007155

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
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Miscellaneous - Pace Analytical - Mt Juliet, Tn

Rad 226 and 228-Subcontract	0.0829 U	pCi/L			1	0.97	07/14/23 16:39		904.0 903.0
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Sample: GF01342-02
Name: G313
Matrix: Ground Water - Grab

Sampled: 06/06/23 15:15
Received: 06/07/23 17:02
PO #: 1940007155

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
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Miscellaneous - Pace Analytical - Mt Juliet, Tn

Rad 226 and 228-Subcontract	0.879	pCi/L			1	0.843	07/14/23 16:39		904.0 903.0
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ANALYTICAL RESULTS

Sample: GF01342-03
Name: G313 DUP
Matrix: Ground Water - Grab

Sampled: 06/06/23 15:15
Received: 06/07/23 17:02
PO #: 1940007155

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
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Miscellaneous - Pace Analytical - Mt Juliet, Tn

Rad 226 and 228-Subcontract	0.325 J	pCi/L			1	0.755	07/14/23 16:39		904.0 903.0
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Sample: GF01342-04
Name: G402
Matrix: Ground Water - Grab

Sampled: 06/06/23 16:05
Received: 06/07/23 17:02
PO #: 1940007155

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
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Miscellaneous - Pace Analytical - Mt Juliet, Tn

Rad 226 and 228-Subcontract	1.22	pCi/L			1	0.723	07/14/23 16:39		904.0 903.0
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Sample: GF01342-05
Name: G315
Matrix: Ground Water - Grab

Sampled: 06/07/23 10:02
Received: 06/07/23 17:02
PO #: 1940007155

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
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Miscellaneous - Pace Analytical - Mt Juliet, Tn

Rad 226 and 228-Subcontract	0.344 J	pCi/L			1	0.672	07/14/23 16:39		904.0 903.0
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Sample: GF01342-06
Name: G403
Matrix: Ground Water - Grab

Sampled: 06/07/23 11:25
Received: 06/07/23 17:02
PO #: 1940007155

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
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Miscellaneous - Pace Analytical - Mt Juliet, Tn

Rad 226 and 228-Subcontract	0.91	pCi/L			1	0.644	07/14/23 16:39		904.0 903.0
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ANALYTICAL RESULTS

Sample: GF01342-07
Name: G404
Matrix: Ground Water - Grab

Sampled: 06/07/23 12:51
Received: 06/07/23 17:02
PO #: 1940007155

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
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Miscellaneous - Pace Analytical - Mt Juliet, Tn

Rad 226 and 228-Subcontract	1.36	pCi/L			1	0.514	07/14/23 16:39		904.0 903.0
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Sample: GF01342-08
Name: G1001
Matrix: Ground Water - Grab

Sampled: 06/07/23 10:24
Received: 06/07/23 17:02
PO #: 1940007155

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
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Miscellaneous - Pace Analytical - Mt Juliet, Tn

Rad 226 and 228-Subcontract	0.917	pCi/L			1	0.744	07/14/23 16:39		904.0 903.0
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Sample: GF01342-09
Name: G401
Matrix: Ground Water - Grab

Sampled: 06/07/23 11:58
Received: 06/07/23 17:02
PO #: 1940007155

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
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Miscellaneous - Pace Analytical - Mt Juliet, Tn

Rad 226 and 228-Subcontract	0.628 J	pCi/L			1	0.665	07/14/23 16:39		904.0 903.0
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Sample: GF01342-10
Name: G155
Matrix: Ground Water - Grab

Sampled: 06/07/23 10:08
Received: 06/07/23 17:02
PO #: 1940007155

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
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Miscellaneous - Pace Analytical - Mt Juliet, Tn

Rad 226 and 228-Subcontract	1.3	pCi/L			1	1.08	07/14/23 16:39		904.0 903.0
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ANALYTICAL RESULTS

Sample: GF01733-01
Name: G212
Matrix: Ground Water - Grab

Sampled: 06/07/23 15:35
Received: 06/09/23 06:50
PO #: 1940007155

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
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Miscellaneous - Pace Analytical - Mt Juliet, Tn

Rad 226 and 228-Subcontract	0.194 U	pCi/L			1	0.838	07/13/23 20:53		904.0 903.0
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Sample: GF01733-02
Name: G213
Matrix: Ground Water - Grab

Sampled: 06/07/23 16:49
Received: 06/09/23 06:50
PO #: 1940007155

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
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Miscellaneous - Pace Analytical - Mt Juliet, Tn

Rad 226 and 228-Subcontract	0.399 J	pCi/L			1	0.642	07/13/23 20:53		904.0 903.0
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Sample: GF01733-03
Name: G200
Matrix: Ground Water - Grab

Sampled: 06/07/23 17:23
Received: 06/09/23 06:50
PO #: 1940007155

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
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Miscellaneous - Pace Analytical - Mt Juliet, Tn

Rad 226 and 228-Subcontract	4.48	pCi/L			1	0.893	07/13/23 20:53		904.0 903.0
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Sample: GF01733-04
Name: EB-01
Matrix: Ground Water - Equipment Blank

Sampled: 06/07/23 17:55
Received: 06/09/23 06:50
PO #: 1940007155

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
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Miscellaneous - Pace Analytical - Mt Juliet, Tn

Rad 226 and 228-Subcontract	0.88	pCi/L			1	0.558	07/13/23 20:53		904.0 903.0
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ANALYTICAL RESULTS

Sample: GF01733-05
Name: G275
Matrix: Ground Water - Grab

Sampled: 06/08/23 12:00
Received: 06/09/23 06:50
PO #: 1940007155

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
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Miscellaneous - Pace Analytical - Mt Juliet, Tn

Rad 226 and 228-Subcontract	0.0751 U	pCi/L			1	0.749	07/13/23 20:53		904.0 903.0
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Sample: GF01733-06
Name: G275 DUP
Matrix: Ground Water - Field Duplicate

Sampled: 06/08/23 12:00
Received: 06/09/23 06:50
PO #: 1940007155

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
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Miscellaneous - Pace Analytical - Mt Juliet, Tn

Rad 226 and 228-Subcontract	0.0267 U	pCi/L			1	0.893	07/14/23 10:35		904.0 903.0
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Sample: GF01733-07
Name: G275D
Matrix: Ground Water - Grab

Sampled: 06/08/23 13:13
Received: 06/09/23 06:50
PO #: 1940007155

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
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Miscellaneous - Pace Analytical - Mt Juliet, Tn

Rad 226 and 228-Subcontract	1.34	pCi/L			1	0.73	07/14/23 10:35		904.0 903.0
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Sample: GF01733-08
Name: G280
Matrix: Ground Water - Grab

Sampled: 06/08/23 09:25
Received: 06/09/23 06:50
PO #: 1940007155

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
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Miscellaneous - Pace Analytical - Mt Juliet, Tn

Rad 226 and 228-Subcontract	0.839	pCi/L			1	0.764	07/14/23 10:35		904.0 903.0
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ANALYTICAL RESULTS

Sample: GF01733-09
Name: G283
Matrix: Ground Water - Grab

Sampled: 06/08/23 14:32
Received: 06/09/23 06:50
PO #: 1940007155

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
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Miscellaneous - Pace Analytical - Mt Juliet, Tn

Rad 226 and 228-Subcontract	2.88	pCi/L			1	0.791	07/14/23 10:35		904.0 903.0
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Sample: GF01733-10
Name: G285
Matrix: Ground Water - Grab

Sampled: 06/08/23 13:53
Received: 06/09/23 06:50
PO #: 1940007155

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
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Miscellaneous - Pace Analytical - Mt Juliet, Tn

Rad 226 and 228-Subcontract	3.1	pCi/L			1	0.516	07/14/23 10:35		904.0 903.0
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Sample: GF01733-11
Name: G281
Matrix: Ground Water - Grab

Sampled: 06/08/23 13:48
Received: 06/09/23 06:50
PO #: 1940007155

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
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Miscellaneous - Pace Analytical - Mt Juliet, Tn

Rad 226 and 228-Subcontract	0.000 U	pCi/L			1	0.769	07/14/23 10:35		904.0 903.0
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Sample: GF01733-12
Name: G270
Matrix: Ground Water - Grab

Sampled: 06/08/23 09:54
Received: 06/09/23 06:50
PO #: 1940007155

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
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Miscellaneous - Pace Analytical - Mt Juliet, Tn

Rad 226 and 228-Subcontract	0.485 J	pCi/L			1	0.772	07/14/23 10:35		904.0 903.0
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ANALYTICAL RESULTS

Sample: GF01733-13
Name: G284
Matrix: Ground Water - Grab

Sampled: 06/08/23 15:16
Received: 06/09/23 06:50
PO #: 1940007155

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
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Miscellaneous - Pace Analytical - Mt Juliet, Tn

Rad 226 and 228-Subcontract	1.01	pCi/L			1	0.742	07/14/23 10:35		904.0 903.0
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Sample: GF01733-14
Name: G217
Matrix: Ground Water - Grab

Sampled: 06/08/23 16:56
Received: 06/09/23 06:50
PO #: 1940007155

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
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Miscellaneous - Pace Analytical - Mt Juliet, Tn

Rad 226 and 228-Subcontract	0.574 J	pCi/L			1	0.778	07/14/23 10:35		904.0 903.0
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Sample: GF01733-15
Name: R201
Matrix: Ground Water - Grab

Sampled: 06/07/23 15:40
Received: 06/09/23 06:50
PO #: 1940007155

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
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Miscellaneous - Pace Analytical - Mt Juliet, Tn

Rad 226 and 228-Subcontract	1.5	pCi/L			1	0.778	07/14/23 16:39		904.0 903.0
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Sample: GF01900-01
Name: G206
Matrix: Ground Water - Grab

Sampled: 06/09/23 13:20
Received: 06/09/23 16:14
PO #: 1940007155

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
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Miscellaneous - Pace Analytical - Mt Juliet, Tn

Rad 226 and 228-Subcontract	0.227 U	pCi/L			1	0.656	07/14/23 16:39		904.0 903.0
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ANALYTICAL RESULTS

Sample: GF01900-02
Name: G206 DUP
Matrix: Ground Water - Grab

Sampled: 06/09/23 13:20
Received: 06/09/23 16:14
PO #: 1940007155

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
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Miscellaneous - Pace Analytical - Mt Juliet, Tn

Rad 226 and 228-Subcontract	1.79	pCi/L			1	0.704	07/14/23 16:39		904.0 903.0
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Sample: GF01900-03
Name: G206D
Matrix: Ground Water - Grab

Sampled: 06/09/23 12:29
Received: 06/09/23 16:14
PO #: 1940007155

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
-----------	--------	------	-----------	----------	----------	-----	----------	---------	--------

Miscellaneous - Pace Analytical - Mt Juliet, Tn

Rad 226 and 228-Subcontract	0.701	pCi/L			1	0.591	07/14/23 16:39		904.0 903.0
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Sample: GF01900-04
Name: G209
Matrix: Ground Water - Grab

Sampled: 06/09/23 09:44
Received: 06/09/23 16:14
PO #: 1940007155

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
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Miscellaneous - Pace Analytical - Mt Juliet, Tn

Rad 226 and 228-Subcontract	0.292 J	pCi/L			1	0.665	07/14/23 16:39		904.0 903.0
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QC SAMPLE RESULTS

Parameter	Result	Unit	Qual	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
-----------	--------	------	------	-------------	---------------	------	-------------	-----	-----------

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

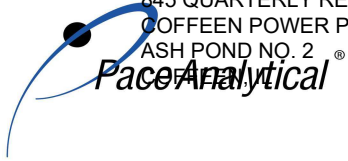
Illinois Department of Public Health Bacterial Analysis in Drinking Water Approved Laboratory, Registry No. 171050

Missouri Department of Natural Resources - Certificate of Approval for Microbiological Laboratory Service - No. 1050



Certified by: Gail Schindler, Project Manager





ANALYTICAL REPORT

July 13, 2023

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

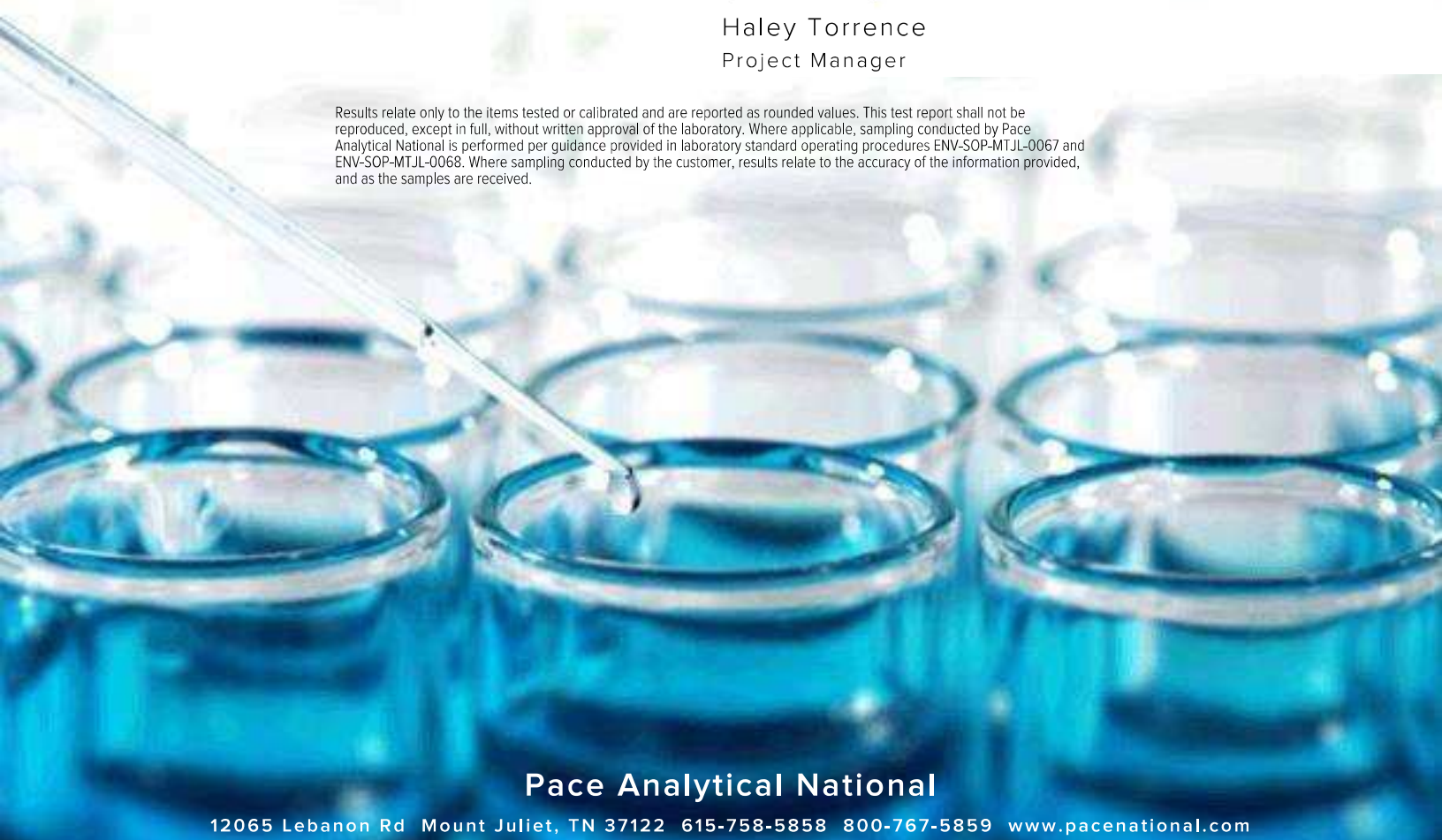
Pace IR - Peoria, IL

Sample Delivery Group: L1623496
Samples Received: 06/07/2023
Project Number: GF00183
Description: Vistra-Coffeen
Site: 001
Report To: Gail Schindler
2231 W. Altorfer Drive
Peoria, IL 61615

Entire Report Reviewed By:

Haley Torrence
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

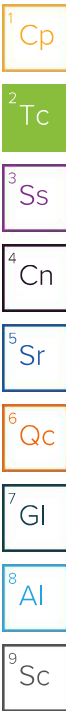


Pace Analytical National

12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

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SAMPLE SUMMARY

G302 L1623496-01 Non-Potable Water

Collected by
Collected date/time
Received date/time
05/31/23 16:00 06/07/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2085377	1	06/29/23 16:49	07/05/23 21:27	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2089290	1	07/05/23 13:39	07/06/23 21:21	SNR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2089290	1	07/05/23 13:39	07/06/23 21:21	RGT	Mt. Juliet, TN

G302 DUP L1623496-02 Non-Potable Water

Collected by
Collected date/time
Received date/time
05/31/23 16:00 06/07/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2085377	1	06/29/23 16:49	07/05/23 21:27	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2089290	1	07/05/23 13:39	07/06/23 21:21	SNR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2089290	1	07/05/23 13:39	07/06/23 21:21	RGT	Mt. Juliet, TN

G303 L1623496-03 Non-Potable Water

Collected by
Collected date/time
Received date/time
05/31/23 17:23 06/07/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2085377	1	06/29/23 16:49	07/05/23 21:27	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2089290	1	07/05/23 13:39	07/06/23 21:21	SNR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2089290	1	07/05/23 13:39	07/06/23 21:21	RGT	Mt. Juliet, TN

G316 L1623496-04 Non-Potable Water

Collected by
Collected date/time
Received date/time
05/31/23 10:33 06/07/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2085377	1	06/29/23 16:49	07/05/23 21:27	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2089290	1	07/05/23 13:39	07/06/23 21:21	SNR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2089290	1	07/05/23 13:39	07/06/23 21:21	RGT	Mt. Juliet, TN

G406 L1623496-05 Non-Potable Water

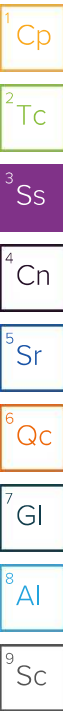
Collected by
Collected date/time
Received date/time
05/31/23 16:45 06/07/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2085377	1	06/29/23 16:49	07/05/23 21:27	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2089290	1	07/05/23 13:39	07/06/23 21:21	SNR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2089290	1	07/05/23 13:39	07/06/23 21:21	RGT	Mt. Juliet, TN

G406 DUP L1623496-06 Non-Potable Water

Collected by
Collected date/time
Received date/time
05/31/23 16:45 06/07/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2085377	1	06/29/23 16:49	07/05/23 21:27	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2089290	1	07/05/23 13:39	07/06/23 21:21	SNR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2089290	1	07/05/23 13:39	07/06/23 21:21	RGT	Mt. Juliet, TN



SAMPLE SUMMARY

G407 L1623496-07 Non-Potable Water

Collected by
Collected date/time
Received date/time
05/31/23 14:09 06/07/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2085377	1	06/29/23 16:49	07/05/23 21:27	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2089578	1	07/07/23 11:14	07/10/23 16:46	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2089578	1	07/07/23 11:14	07/10/23 16:46	RGT	Mt. Juliet, TN

G410 L1623496-08 Non-Potable Water

Collected by
Collected date/time
Received date/time
05/31/23 13:27 06/07/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2085377	1	06/29/23 16:49	07/05/23 21:27	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2089578	1	07/07/23 11:14	07/10/23 16:46	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2089578	1	07/07/23 11:14	07/10/23 16:46	RGT	Mt. Juliet, TN

G411 L1623496-09 Non-Potable Water

Collected by
Collected date/time
Received date/time
05/31/23 12:00 06/07/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2085377	1	06/29/23 16:49	07/05/23 21:27	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2089578	1	07/07/23 11:14	07/10/23 16:46	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2089578	1	07/07/23 11:14	07/10/23 16:46	RGT	Mt. Juliet, TN

G314D L1623496-10 Non-Potable Water

Collected by
Collected date/time
Received date/time
06/01/23 09:38 06/07/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2085377	1	06/29/23 16:49	07/05/23 21:27	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2089578	1	07/07/23 11:14	07/10/23 16:46	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2089578	1	07/07/23 11:14	07/10/23 16:46	RGT	Mt. Juliet, TN

G314 L1623496-11 Non-Potable Water

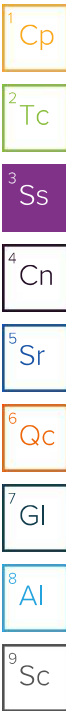
Collected by
Collected date/time
Received date/time
06/01/23 10:47 06/07/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2085377	1	06/29/23 16:49	07/05/23 21:27	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2089578	1	07/07/23 11:14	07/10/23 16:46	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2089578	1	07/07/23 11:14	07/10/23 16:46	RGT	Mt. Juliet, TN

G218 L1623496-12 Non-Potable Water

Collected by
Collected date/time
Received date/time
06/01/23 11:12 06/07/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2085377	1	06/29/23 16:49	07/05/23 21:27	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2089578	1	07/07/23 11:14	07/10/23 16:46	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2089578	1	07/07/23 11:14	07/10/23 16:46	RGT	Mt. Juliet, TN



SAMPLE SUMMARY

G310 L1623496-13 Non-Potable Water

Collected by
 Collected date/time
 Received date/time

06/01/23 12:42 06/07/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2085377	1	06/29/23 16:49	07/05/23 21:27	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2089578	1	07/07/23 11:14	07/10/23 16:46	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2089578	1	07/07/23 11:14	07/10/23 16:46	RGT	Mt. Juliet, TN

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

G312 L1623496-14 Non-Potable Water

Collected by
 Collected date/time
 Received date/time

06/01/23 14:01 06/07/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2085377	1	06/29/23 16:49	07/05/23 21:27	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2089578	1	07/07/23 11:14	07/10/23 16:46	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2089578	1	07/07/23 11:14	07/10/23 16:46	RGT	Mt. Juliet, TN

G279 L1623496-15 Non-Potable Water

Collected by
 Collected date/time
 Received date/time

06/01/23 12:07 06/07/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2085377	1	06/29/23 16:49	07/05/23 21:27	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2089578	1	07/07/23 11:14	07/10/23 16:46	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2089578	1	07/07/23 11:14	07/10/23 16:46	RGT	Mt. Juliet, TN

G277 L1623496-16 Non-Potable Water

Collected by
 Collected date/time
 Received date/time

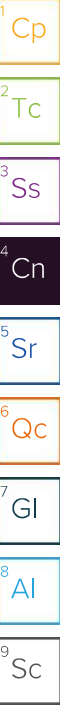
06/01/23 10:27 06/07/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2085377	1	06/29/23 16:49	07/05/23 21:27	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2089578	1	07/07/23 11:14	07/10/23 16:46	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2089578	1	07/07/23 11:14	07/10/23 16:46	RGT	Mt. Juliet, TN

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Haley Torrence
Project Manager



Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	1.40		0.390	0.669	07/05/2023 21:27	WG2085377
(T) Barium	72.2			30.0-143	07/05/2023 21:27	WG2085377
(T) Yttrium	107			30.0-136	07/05/2023 21:27	WG2085377

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	1.50		0.415	0.700	07/06/2023 21:21	WG2089290

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.106	J	0.142	0.205	07/06/2023 21:21	WG2089290
(T) Barium-133	118			30.0-143	07/06/2023 21:21	WG2089290

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	2.19		0.374	0.613	07/05/2023 21:27	WG2085377
(T) Barium	71.4			30.0-143	07/05/2023 21:27	WG2085377
(T) Yttrium	114			30.0-136	07/05/2023 21:27	WG2085377

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	2.46		0.442	0.673	07/06/2023 21:21	WG2089290

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.272	J	0.235	0.278	07/06/2023 21:21	WG2089290
(T) Barium-133	106			30.0-143	07/06/2023 21:21	WG2089290

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	1.09		0.320	0.550	07/05/2023 21:27	WG2085377
(T) Barium	77.6			30.0-143	07/05/2023 21:27	WG2085377
(T) Yttrium	108			30.0-136	07/05/2023 21:27	WG2085377

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	1.22		0.396	0.652	07/06/2023 21:21	WG2089290

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.126	J	0.234	0.351	07/06/2023 21:21	WG2089290
(T) Barium-133	101			30.0-143	07/06/2023 21:21	WG2089290

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	1.49		0.284	0.467	07/05/2023 21:27	WG2085377
(T) Barium	80.1			30.0-143	07/05/2023 21:27	WG2085377
(T) Yttrium	111			30.0-136	07/05/2023 21:27	WG2085377

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	1.81		0.376	0.544	07/06/2023 21:21	WG2089290

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.327		0.247	0.279	07/06/2023 21:21	WG2089290
(T) Barium-133	102			30.0-143	07/06/2023 21:21	WG2089290

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.0457	<u>U</u>	0.397	0.719	07/05/2023 21:27	WG2085377
(T) Barium	75.3			30.0-143	07/05/2023 21:27	WG2085377
(T) Yttrium	110			30.0-136	07/05/2023 21:27	WG2085377

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.262	<u>U</u>	0.457	0.778	07/06/2023 21:21	WG2089290

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.217	<u>J</u>	0.226	0.298	07/06/2023 21:21	WG2089290
(T) Barium-133	99.9			30.0-143	07/06/2023 21:21	WG2089290

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.342	J	0.284	0.510	07/05/2023 21:27	WG2085377
(T) Barium	76.7			30.0-143	07/05/2023 21:27	WG2085377
(T) Yttrium	103			30.0-136	07/05/2023 21:27	WG2085377

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.482	J	0.351	0.597	07/06/2023 21:21	WG2089290

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.140	J	0.207	0.311	07/06/2023 21:21	WG2089290
(T) Barium-133	95.1			30.0-143	07/06/2023 21:21	WG2089290

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

G407

ATTACHMENT B.

SAMPLE RESULTS - 07

845 QUARTERLY REPORT - QUARTER 2, 2023

L1623496

Collected date/time: 05/31/23 14:09
COFFEEN POWER PLANT
ASH POND NO. 2
COFFEEN, IL

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.734		0.318	0.558	07/05/2023 21:27	WG2085377
(T) Barium	82.0			30.0-143	07/05/2023 21:27	WG2085377
(T) Yttrium	101			30.0-136	07/05/2023 21:27	WG2085377

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.792		0.336	0.589	07/10/2023 16:46	WG2089578

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.0575	<u>U</u>	0.109	0.190	07/10/2023 16:46	WG2089578
(T) Barium-133	80.0			30.0-143	07/10/2023 16:46	WG2089578

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.747		0.320	0.560	07/05/2023 21:27	WG2085377
(T) Barium	87.7			30.0-143	07/05/2023 21:27	WG2085377
(T) Yttrium	97.7			30.0-136	07/05/2023 21:27	WG2085377

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	3.15		0.684	0.624	07/10/2023 16:46	WG2089578

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	2.40		0.604	0.275	07/10/2023 16:46	WG2089578
(T) Barium-133	85.3			30.0-143	07/10/2023 16:46	WG2089578

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	-0.498	<u>U</u>	0.299	0.561	07/05/2023 21:27	WG2085377
(T) Barium	81.9			30.0-143	07/05/2023 21:27	WG2085377
(T) Yttrium	118			30.0-136	07/05/2023 21:27	WG2085377

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.623	<u>J</u>	0.465	0.642	07/10/2023 16:46	WG2089578

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.623		0.356	0.313	07/10/2023 16:46	WG2089578
(T) Barium-133	74.2			30.0-143	07/10/2023 16:46	WG2089578

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

G314D

ATTACHMENT B.

SAMPLE RESULTS - 10

845 QUARTERLY REPORT - QUARTER 2, 2023
Collected date/time: 06/04/23 09:33

L1623496

COFFEEN POWER PLANT

ASH POND NO. 2

COFFEEN, IL

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	1.57		0.313	0.523	07/05/2023 21:27	WG2085377
(T) Barium	82.2			30.0-143	07/05/2023 21:27	WG2085377
(T) Yttrium	105			30.0-136	07/05/2023 21:27	WG2085377

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	2.54		0.515	0.616	07/10/2023 16:46	WG2089578

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.969		0.409	0.325	07/10/2023 16:46	WG2089578
(T) Barium-133	104			30.0-143	07/10/2023 16:46	WG2089578

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

G314

ATTACHMENT B.

SAMPLE RESULTS - 11

Collected date/time: 06/04/23 10:47

845 QUARTERLY REPORT - QUARTER 2, 2023

L1623496

COFFEEN POWER PLANT

ASH POND NO. 2

COFFEEN, IL

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.609		0.247	0.432	07/05/2023 21:27	WG2085377
(T) Barium	88.3			30.0-143	07/05/2023 21:27	WG2085377
(T) Yttrium	107			30.0-136	07/05/2023 21:27	WG2085377

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.924		0.336	0.483	07/10/2023 16:46	WG2089578

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.315		0.228	0.217	07/10/2023 16:46	WG2089578
(T) Barium-133	106			30.0-143	07/10/2023 16:46	WG2089578

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.859		0.353	0.619	07/05/2023 21:27	WG2085377
(T) Barium	76.8			30.0-143	07/05/2023 21:27	WG2085377
(T) Yttrium	98.0			30.0-136	07/05/2023 21:27	WG2085377

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	1.05		0.404	0.668	07/10/2023 16:46	WG2089578

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.189	J	0.196	0.250	07/10/2023 16:46	WG2089578
(T) Barium-133	112			30.0-143	07/10/2023 16:46	WG2089578

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.698		0.288	0.505	07/05/2023 21:27	WG2085377
(T) Barium	82.7			30.0-143	07/05/2023 21:27	WG2085377
(T) Yttrium	114			30.0-136	07/05/2023 21:27	WG2085377

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	1.52		0.457	0.576	07/10/2023 16:46	WG2089578

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.822		0.355	0.277	07/10/2023 16:46	WG2089578
(T) Barium-133	105			30.0-143	07/10/2023 16:46	WG2089578

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.685		0.239	0.414	07/05/2023 21:27	WG2085377
(T) Barium	85.8			30.0-143	07/05/2023 21:27	WG2085377
(T) Yttrium	126			30.0-136	07/05/2023 21:27	WG2085377

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.845		0.336	0.543	07/10/2023 16:46	WG2089578

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.160	J	0.236	0.351	07/10/2023 16:46	WG2089578
(T) Barium-133	88.3			30.0-143	07/10/2023 16:46	WG2089578

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

G279

ATTACHMENT B.

SAMPLE RESULTS - 15

845 QUARTERLY REPORT - QUARTER 2, 2023
Collected date/time: 06/04/23 12:07

L1623496

COFFEEN POWER PLANT

ASH POND NO. 2

COFFEEN, IL

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	-0.144	<u>U</u>	0.314	0.576	07/05/2023 21:27	WG2085377
(T) Barium	86.3			30.0-143	07/05/2023 21:27	WG2085377
(T) Yttrium	109			30.0-136	07/05/2023 21:27	WG2085377

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.107	<u>U</u>	0.370	0.651	07/10/2023 16:46	WG2089578

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.107	<u>U</u>	0.195	0.303	07/10/2023 16:46	WG2089578
(T) Barium-133	97.0			30.0-143	07/10/2023 16:46	WG2089578

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

G277

ATTACHMENT B.

SAMPLE RESULTS - 16

845 QUARTERLY REPORT - QUARTER 2, 2023

L1623496

Collected date/time: 06/04/23 10:27
COFFEEN POWER PLANT
ASH POND NO. 2
COFFEEN, IL

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.777		0.286	0.498	07/05/2023 21:27	WG2085377
(T) Barium	77.8			30.0-143	07/05/2023 21:27	WG2085377
(T) Yttrium	115			30.0-136	07/05/2023 21:27	WG2085377

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	1.05		0.341	0.526	07/10/2023 16:46	WG2089578

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.275		0.186	0.169	07/10/2023 16:46	WG2089578
(T) Barium-133	99.6			30.0-143	07/10/2023 16:46	WG2089578

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Method Blank (MB)

(MB) R3946996-1 07/05/23 21:27

Analyte	MB Result pCi/l	MB Qualifier	MB Uncertainty +/-	MB MDA pCi/l
Radium-228	0.202	J	0.186	0.335
(T) Barium	84.2		84.2	
(T) Yttrium	106		106	

L1623496-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1623496-03 07/05/23 21:27 • (DUP) R3946996-5 07/05/23 21:27

Analyte	Original Result pCi/l	Original Uncertainty +/-	Original MDA pCi/l	DUP Result pCi/l	DUP Uncertainty +/-	DUP MDA pCi/l	Dilution	DUP RPD %	DUP RER	DUP Qualifier	DUP RPD Limits %	DUP RER Limit
Radium-228	1.09	0.320	0.550	1.05	0.420	0.550	1	4.30	0.0871		20	3
(T) Barium	77.6		93.1	93.1								
(T) Yttrium	108		107	107								

Laboratory Control Sample (LCS)

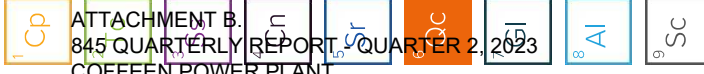
(LCS) R3946996-2 07/05/23 21:27

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-228	5.00	5.08	102	80.0-120	
(T) Barium		92.3			
(T) Yttrium		117			

L1623493-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1623493-01 07/05/23 21:27 • (MS) R3946996-3 07/05/23 21:27 • (MSD) R3946996-4 07/05/23 21:27

Analyte	Spike Amount pCi/l	Original Result pCi/l	MS Result pCi/l	MSD Result pCi/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	RPD %	MS RER	RPD Limits %
Radium-228	10.0	0.153	10.4	11.1	102	109	1	70.0-130		6.34		20
(T) Barium		75.2		87.9								
(T) Yttrium		109		109								



ATTACHMENT B.
845 QUARTERLY REPORT QUARTER 2, 2023
COFFEEN POWER PLANT
ASH POND NO. 2
COFFEEN, IL

Method Blank (MB)

(MB) R3946774-1 07/06/23 21:21

Analyte	MB Result pCi/l	MB Qualifier	MB Uncertainty +/-	MB MDA pCi/l
Radium-226	-0.00437	<u>U</u>	0.0542	0.105
(7) Barium-133	77.4		77.4	

L1623471-23 Original Sample (OS) • Duplicate (DUP)

(OS) L1623471-23 07/06/23 21:21 • (DUP) R3946774-5 07/06/23 21:21

Analyte	Original Result pCi/l	Original Uncertainty +/-	Original MDA pCi/l	DUP Result pCi/l	DUP Uncertainty +/-	DUP MDA pCi/l	Dilution	DUP RPD %	DUP RER	DUP Qualifier	DUP RPD Limits %	DUP RER Limit
Radium-226	1.73	0.526	0.274	0.0499	0.0948	0.274	1	189	3.14	<u>J3 U</u>	20	3
(7) Barium-133	84.8			99.6	99.6							

L1623471-23 Original Sample (OS) • Duplicate (DUP)

(OS) L1623471-23 07/06/23 21:21 • (DUP) R3946774-6 07/07/23 23:34

Analyte	Original Result pCi/l	Original Uncertainty +/-	Original MDA pCi/l	DUP Result pCi/l	DUP Uncertainty +/-	DUP MDA pCi/l	Dilution	DUP RPD %	DUP RER	DUP Qualifier	DUP RPD Limits %	DUP RER Limit
Radium-226	1.73	0.526	0.274	0.0460	0.165	0.274	1	190	3.05	<u>J3 U</u>	20	3
(7) Barium-133	84.8			99.6	99.6							

Laboratory Control Sample (LCS)

(LCS) R3946774-2 07/06/23 21:21

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-226	5.01	4.08	81.5	80.0-120	
(7) Barium-133			88.5		

L1623471-28 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1623471-28 07/06/23 21:21 • (MS) R3946774-3 07/06/23 21:21 • (MSD) R3946774-4 07/06/23 21:21

Analyte	Spike Amount pCi/l	Original Result pCi/l	MS Result pCi/l	MSD Result pCi/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier	RPD %	MS RER	RPD Limits %
um-226	20.0	0.469	16.8	17.9	81.6	1	75.0-125		6.23		20
(7) Barium-133		93.5		89.3	84.3						

Method Blank (MB)

(MB) R3947336-1 07/10/23 16:46

Analyte	MB Result pCi/l	MB Uncertainty +/-	MB MDA pCi/l
Radium-226	-0.0221	0.0292	0.0840
(7) Barium-133	88.1	88.1	

L1624825-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1624825-02 07/10/23 16:46 • (DUP) R3947336-5 07/10/23 16:46

Analyte	Original Result pCi/l	Original Uncertainty +/-	Original MDA pCi/l	DUP Result pCi/l	DUP Uncertainty +/-	DUP MDA pCi/l	Dilution	DUP RPD %	DUP RER	DUP Qualifier	DUP RPD Limits %	DUP RER Limit
Radium-226	0.651	0.404	0.430	0.543	0.474	0.430	1	18.2	0.174	J	20	3
(7) Barium-133	75.9			44.1	44.1							

Laboratory Control Sample (LCS)

(LCS) R3947336-2 07/10/23 16:46

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-226	5.01	4.21	84.1	80.0-120	
(7) Barium-133		82.5			

L1623496-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1623496-07 07/10/23 16:46 • (MS) R3947336-3 07/10/23 16:46 • (MSD) R3947336-4 07/10/23 16:46

Analyte	Spike Amount pCi/l	Original Result pCi/l	MS Result pCi/l	MSD Result pCi/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	RPD %	MS RER	RPD Limits %
Radium-226	20.0	0.0575	16.6	19.9	82.7	99.0	1	75.0-125		17.9		20
(7) Barium-133		80.0		93.0	93.0	80.9						

ATTACHMENT B.
845 QUARTERLY REPORT QUARTER 2, 2023

1 Cp 2 Sr 3 Cs 4 Pb 5 U 6 Th 7 Pu 8 AI 9 SC

COFFEEN POWER PLANT
ASH POND NO. 2
COFFEEN, IL

Guide to Reading and Understanding Your Laboratory Report

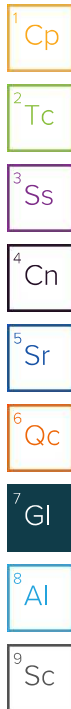
The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDA	Minimum Detectable Activity.
Rec.	Recovery.
RER	Replicate Error Ratio.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(T)	Tracer - A radioisotope of known concentration added to a solution of chemically equivalent radioisotopes at a known concentration to assist in monitoring the yield of the chemical separation.
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.
J3	The associated batch QC was outside the established quality control range for precision.
U	Below Detectable Limits: Indicates that the analyte was not detected.



ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey-NELAP	TN002
California	2932	New Mexico ¹	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina ¹	DW21704
Georgia	NELAP	North Carolina ³	41
Georgia ¹	923	North Dakota	R-140
Idaho	TN00003	Ohio-VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky ^{1,6}	KY90010	South Carolina	84004002
Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ^{1,4}	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas ⁵	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP, LLC EMLAP	100789
A2LA – ISO 17025 ⁵	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA-Crypto	TN00003		

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.



Internal Transfer Chain of Custody

State of Origin: IL YES NO
 Cert. Needed: YES NO
 Owner Received Date: 6/1/2023 Results Required By: 6/27/2023



Workorder: GF00183 (Page 1) Workorder Name: Vistra - Coffeen
 Report To: Subcontract To:
 Gail Schindler
 Pace Analytical - IL/MO
 2231 W. Altorfer Drive
 Peoria, IL 61615
 800-752-6651
 Pace Analytical - Mt Juliet
 12065 Lebanon Rd
 Mt Juliet TN 37122

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers	Date/Time	Received By	Date/Time	Comments
1	G302	GRAB	5/31/2023 16:00	GF00183-01	GW					
2	G302 DUP	GRAB	5/31/2023 16:00	GF00183-02	GW					
3	G303	GRAB	5/31/2023 17:23	GF00183-03	GW					
4	G316	GRAB	5/31/2023 10:33	GF00183-04	GW					
5	G406	GRAB	5/31/2023 16:45	GF00183-05	GW					
6	G406 DUP	GRAB	5/31/2023 16:45	GF00183-06	GW					
7	G407	GRAB	5/31/2023 14:09	GF00183-07	GW					
8	G410	GRAB	5/31/2023 13:27	GF00183-08	GW					
9	G411	GRAB	5/31/2023 12:00	GF00183-09	GW					
10	G314D	GRAB	6/1/2023 9:38	GF00183-10	GW					
Transfers Released By: <i>[Signature]</i> Date/Time: 6/1/23 12:35 Received By: <i>Hailey Roberts</i> Date/Time: 6/1/23 0900										
1	Radium 226/228									
2	LAB USE ONLY									
3	LAB USE ONLY									

Cooler Temperature on Receipt _____ °C Custody Seal Y or N Received on Ice Y or N Sample Intact Y or N

***In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document.
 This chain of custody is considered complete as is since this information is available in the owner laboratory.

FMT-ALL-C-002rev.00 24March2009 Page 1 of 1

Sample Receipt Checklist

COC Seal Present/Intact: N Y If Applicable

COC Signed/Accurate: N Y VOA Zero Headspace: Y N

Bottles arrive intact: N Y Pres. Correct/Check: N Y

Correct bottles used: N Y

Sufficient volume sent: N Y

RAD Screen <0.5 mR/hr: N Y

Internal Transfer Chain of Custody



State of Origin: IL
 Cert. Needed: YES NO

Owner Received Date: 6/1/2023
 Results Required By: 6/27/2023

Workorder: GF00183 (Page 2) Workorder Name: Vistra - Coffeen

Report To: Subcontract To:

Gail Schindler
 Pace Analytical - IL/MO
 2231 W. Altorfer Drive
 Peoria, IL 61615
 800-752-6651

Pace Analytical - Mt Juliet
 12065 Lebanon Rd
 Mt Juliet TN 37122

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers	Date/Time	Received By	Date/Time	Comments
1	G314	GRAB	6/1/2023 10:47	GF00183-11	GW					
2	G218	GRAB	6/1/2023 11:12	GF00183-12	GW					
3	G310	GRAB	6/1/2023 12:42	GF00183-13	GW					
4	G312	GRAB	6/1/2023 14:01	GF00183-14	GW					
5	G279	GRAB	6/1/2023 12:07	GF00183-15	GW					
6	G277	GRAB	6/1/2023 10:27	GF00183-16	GW					
7										
8										
9										
10										

4623496
 LAB USE ONLY

Radium 226/228

6/1/23 12:30 Hanky Robinson

[Signature]

Needs reported as 226, 228 and also combined 226/228
 Include QC summary and ead

Cooler Temperature on Receipt _____ °C Custody Seal Y or N

Received on Ice Y or N Sample Intact Y or N

***In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document.
 This chain of custody is considered complete as is since this information is available in the owner laboratory.

41623496



Ship to :
 Pace Analytical - Mt Juliet
 12065 Lebanon Rd
 Mt Juliet TN 37122

INTER_LABORATORY WORK ORDER # GF00183

(To be complete by sending lab)

Sending Project No:	GF00183
Receiving Project No:	
Check Box for Consolidated Invoice:	<input type="checkbox"/>
Date Prepared:	6/6/2023
REQUESTED COMPLETION DATE:	6/27/2023

Sending Region	IR72-IL/MO	Sending Project Mgr.	Gail Schindler
Receiving Region	MT JULIET	External Client	Vistra - Coffeen
State of Sample Origin	IL	QC Deliverable	STD Report

All questions should be addressed to sending project manager.

Requested Reportable Units _____ Report Wet or Dry Weight? _____ Cert Needed: IL

WORK REQUESTED						
Method Description	Container Type	Quantity of	Preservative	Quantity of	Unit Price	Amount
Radium 226/228		16		16	\$229.30	\$3,668.80
		1		1	\$0.00	\$0.00
		1		1		\$0.00
TOTAL						\$3,668.80

Special Requirements: Report as 226, 228 & combined 226/228. Include QC summary

Receiving Region Department	Acctg. Code	Totals from above	Revenue Allocation	
			Receiving Region (80%)	Client Services Dept.
radiological	38	\$3,668.80	\$2,935.04	\$733.76
		TOTAL	\$2,935.04	\$733.76

* Custom Revenue Allocation

FOR ANALYTICAL WORK COMPLETED THIS SECTION ALSO

Return Samples to Sending Region: Yes No

CONFIRMATION OF WORK COMPLETED

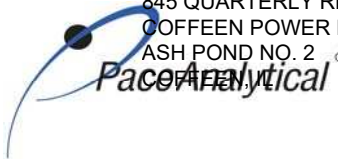
Date Completed: _____ Receiving Project Manager: _____

Original sent to the receiving lab - Copy kept at the sending lab.

When work completed: Original sent to the ABM at the receiving laboratory. Copies are made to corporate as needed.

41623496

Tracking Numbers	NS AT Temperature
6319 5999 89160	20.7±0=20.7
6319 5999 8999	20.9±0=20.9
6319 5999 9002	22.9±0=22.9



ANALYTICAL REPORT

July 13, 2023

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

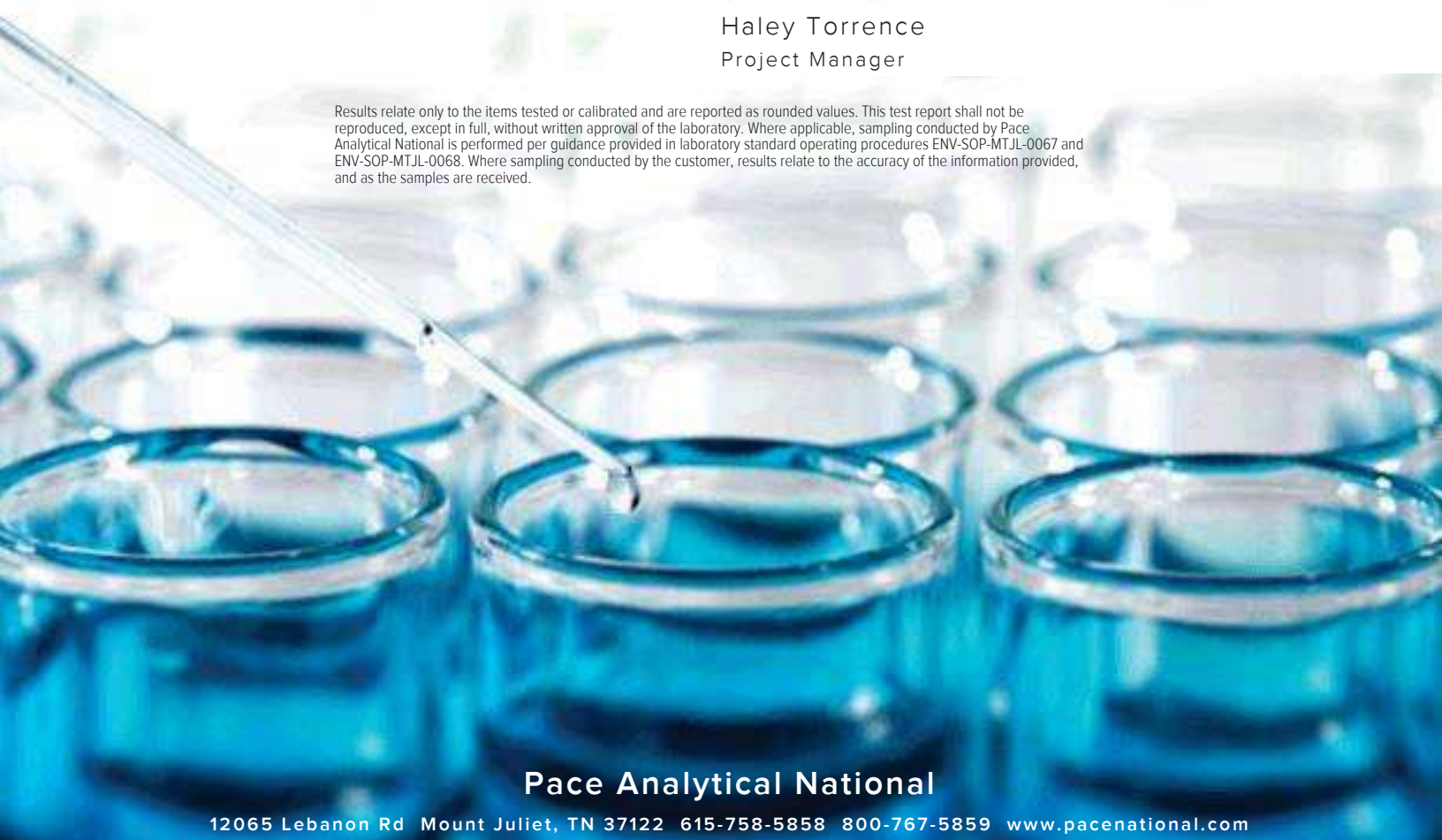
Pace IR - Peoria, IL

Sample Delivery Group: L1623493
Samples Received: 06/07/2023
Project Number: GF00247
Description: Vistra-Coffeen
Site: 001
Report To: Gail Schindler
2231 W. Altorfer Drive
Peoria, IL 61615

Entire Report Reviewed By:

Haley Torrence
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

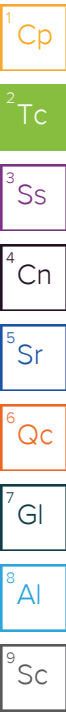


Pace Analytical National

12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

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SAMPLE SUMMARY

G151 L1623493-01 Non-Potable Water

Collected by
 Collected date/time
 Received date/time

06/01/23 14:34
 06/07/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2085377	1	06/29/23 16:49	07/05/23 21:27	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2089290	1	07/05/23 13:39	07/06/23 21:21	SNR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2089290	1	07/05/23 13:39	07/06/23 21:21	RGT	Mt. Juliet, TN

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

G215 L1623493-02 Non-Potable Water

Collected by
 Collected date/time
 Received date/time

06/01/23 15:32
 06/07/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2085377	1	06/29/23 16:49	07/05/23 21:27	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2089290	1	07/05/23 13:39	07/06/23 21:21	SNR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2089290	1	07/05/23 13:39	07/06/23 21:21	RGT	Mt. Juliet, TN

G308 L1623493-03 Non-Potable Water

Collected by
 Collected date/time
 Received date/time

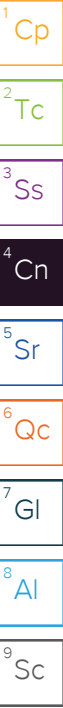
06/01/23 15:52
 06/07/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2085377	1	06/29/23 16:49	07/05/23 21:27	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2089290	1	07/05/23 13:39	07/06/23 21:21	SNR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2089290	1	07/05/23 13:39	07/06/23 21:21	RGT	Mt. Juliet, TN

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Haley Torrence
Project Manager



G151

ATTACHMENT B.

SAMPLE RESULTS - 01

845 QUARTERLY REPORT - QUARTER 2, 2023

L1623493

Collected date/time: 06/01/23 14:37
COFFEEN POWER PLANT
ASH POND NO. 2
COFFEEN, IL

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.153	<u>U</u>	0.390	0.704	07/05/2023 21:27	WG2085377
(T) Barium	75.2			30.0-143	07/05/2023 21:27	WG2085377
(T) Yttrium	109			30.0-136	07/05/2023 21:27	WG2085377

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.268	<u>U</u>	0.411	0.724	07/06/2023 21:21	WG2089290

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.115	<u>J</u>	0.131	0.169	07/06/2023 21:21	WG2089290
(T) Barium-133	106			30.0-143	07/06/2023 21:21	WG2089290

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.231	<u>U</u>	0.437	0.785	07/05/2023 21:27	WG2085377
(T) Barium	69.7			30.0-143	07/05/2023 21:27	WG2085377
(T) Yttrium	110			30.0-136	07/05/2023 21:27	WG2085377

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.881		0.571	0.864	07/06/2023 21:21	WG2089290

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.650		0.367	0.362	07/06/2023 21:21	WG2089290
(T) Barium-133	86.8			30.0-143	07/06/2023 21:21	WG2089290

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.195	<u>U</u>	0.354	0.637	07/05/2023 21:27	WG2085377
(T) Barium	83.1			30.0-143	07/05/2023 21:27	WG2085377
(T) Yttrium	104			30.0-136	07/05/2023 21:27	WG2085377

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.481	<u>J</u>	0.437	0.713	07/06/2023 21:21	WG2089290

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.286	<u>J</u>	0.256	0.321	07/06/2023 21:21	WG2089290
(T) Barium-133	121			30.0-143	07/06/2023 21:21	WG2089290

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Method Blank (MB)
 ASH POND NO. 2
 COFFEEN, IL

(MB) R3946996-1 07/05/23 21:27

Analyte	MB Result pCi/l	MB Qualifier	MB Uncertainty + / -	MB MDA pCi/l
Radium-228	0.202	↓	0.186	0.335
(T) Barium	84.2		84.2	
(T) Yttrium	106		106	

L1623496-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1623496-03 07/05/23 21:27 • (DUP) R3946996-5 07/05/23 21:27

Analyte	Original Result pCi/l	Original Uncertainty + / -	Original MDA pCi/l	DUP Result pCi/l	DUP Uncertainty + / -	DUP MDA pCi/l	Dilution	DUP RPD %	DUP RER	DUP Qualifier	DUP RPD Limits %	DUP RER Limit
Radium-228	1.09	0.320	0.550	1.05	0.420	0.550	1	4.30	0.0871		20	3
(T) Barium	77.6			93.1	93.1							
(T) Yttrium	108			107	107							

Laboratory Control Sample (LCS)

(LCS) R3946996-2 07/05/23 21:27

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-228	5.00	5.08	102	80.0-120	
(T) Barium			92.3		
(T) Yttrium			117		

L1623493-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1623493-01 07/05/23 21:27 • (MS) R3946996-3 07/05/23 21:27 • (MSD) R3946996-4 07/05/23 21:27

Analyte	Spike Amount pCi/l	Original Result pCi/l	MS Result pCi/l	MSD Result pCi/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	MS RER	RPD Limits %
Radium-228	10.0	0.153	10.4	11.1	102	109	1	70.0-130			6.34		20
(T) Barium		75.2			90.8	87.9							
(T) Yttrium		109			109	110							

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)
 ASH POND NO. 2
 COFFEEN, IL

(MB) R3946774-1 07/06/23 21:21

Analyte	MB Result	MB Qualifier	MB Uncertainty	MB MDA
	pCi/l		+ / -	pCi/l
Radium-226	-0.00437	<u>U</u>	0.0542	0.105
(T) Barium-133	77.4		77.4	

L1623471-23 Original Sample (OS) • Duplicate (DUP)

(OS) L1623471-23 07/06/23 21:21 • (DUP) R3946774-5 07/06/23 21:21

Analyte	Original Result	Original Uncertainty	Original MDA	DUP Result	DUP Uncertainty	DUP MDA	Dilution	DUP RPD	DUP RER	DUP Qualifier	DUP RPD Limits	DUP RER Limit
	pCi/l	+ / -	pCi/l	pCi/l	+ / -	pCi/l		%			%	
Radium-226	1.73	0.526	0.274	0.0499	0.0948	0.274	1	189	3.14	<u>J3 U</u>	20	3
(T) Barium-133	84.8			99.6	99.6							

L1623471-23 Original Sample (OS) • Duplicate (DUP)

(OS) L1623471-23 07/06/23 21:21 • (DUP) R3946774-6 07/07/23 23:34

Analyte	Original Result	Original Uncertainty	Original MDA	DUP Result	DUP Uncertainty	DUP MDA	Dilution	DUP RPD	DUP RER	DUP Qualifier	DUP RPD Limits	DUP RER Limit
	pCi/l	+ / -	pCi/l	pCi/l	+ / -	pCi/l		%			%	
Radium-226	1.73	0.526	0.274	0.0460	0.165	0.274	1	190	3.05	<u>J3 U</u>	20	3
(T) Barium-133	84.8			99.6	99.6							

Laboratory Control Sample (LCS)

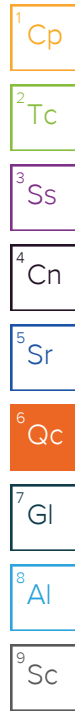
(LCS) R3946774-2 07/06/23 21:21

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	pCi/l	pCi/l	%	%	
Radium-226	5.01	4.08	81.5	80.0-120	
(T) Barium-133			88.5		

L1623471-28 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1623471-28 07/06/23 21:21 • (MS) R3946774-3 07/06/23 21:21 • (MSD) R3946774-4 07/06/23 21:21

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	MS RER	RPD Limits
	pCi/l	pCi/l	pCi/l	pCi/l	%	%		%			%		%
Radium-226	20.0	0.469	16.8	17.9	81.6	87.0	1	75.0-125			6.23		20
(T) Barium-133		93.5			84.3	89.3							



Guide to Reading and Understanding Your Laboratory Report

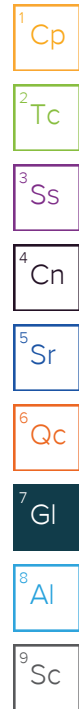
The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDA	Minimum Detectable Activity.
Rec.	Recovery.
RER	Replicate Error Ratio.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(T)	Tracer - A radioisotope of known concentration added to a solution of chemically equivalent radioisotopes at a known concentration to assist in monitoring the yield of the chemical separation.
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.
J3	The associated batch QC was outside the established quality control range for precision.
U	Below Detectable Limits: Indicates that the analyte was not detected.



Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey-NELAP	TN002
California	2932	New Mexico ¹	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina ¹	DW21704
Georgia	NELAP	North Carolina ³	41
Georgia ¹	923	North Dakota	R-140
Idaho	TN00003	Ohio-VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky ^{1,6}	KY90010	South Carolina	84004002
Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ^{1,4}	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas ⁵	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 ⁵	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA-Crypto	TN00003		

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.



Internal Transfer Chain of Custody

State of Origin: IL
 Cert. Needed: YES NO



Workorder: GF00247

Workorder Name: Vistra - Coffeen

Owner Received Date: 6/1/2023

Results Required By: 6/27/2023

Report To: Gail Schindler Pace Analytical - IL/MO 2231 W. Altorfer Drive Peoria, IL 61615 800-752-6651	Subcontract To: Pace Analytical - Mt Juliet 12065 Lebanon Rd Mt Juliet TN 37122	Requested Analysis
-----------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	--------------------

A173

41623493
LAB USE ONLY

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers	Radium 226/228	LAB USE ONLY
1	G151	GRAB	6/1/2023 14:34	GF00247-01	GW		X	-01
2	G215	GRAB	6/1/2023 15:32	GF00247-02	GW		X	-02
3	G308	GRAB	6/1/2023 15:52	GF00247-03	GW		X	-03
4								
5								
6								
7								
8								
9								
10								

Transfers	Released By	Date/Time	Received By	Date/Time	Comments
1	<i>[Signature]</i>	6/6/23 1235	<i>Hailey Potl...</i>	6/7/23 0900	Needs reported as 226, 228 and also combined 226/228
2					Include QC summary and edd
3					

Cooler Temperature on Receipt _____ °C Custody Seal Y or N Received on Ice Y or N Sample Intact Y or N

***In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document.
 This chain of custody is considered complete as is since this information is available in the owner laboratory.

Sample Receipt Checklist

COC Seal Present/Intact: N If Applicable
 COC Signed/Accurate: N VOA Zero Headspace: Y N
 Bottles arrive intact: N Pres. Correct/Check: Y N
 Correct bottles used: N
 Sufficient volume sent: N
 RAD Screen <0.5 mR/hr: N

63195998966 20.7 ± 0.7
 NS A7



Ship to :
 Pace Analytical - Mt Juliet
 12065 Lebanon Rd
 Mt Juliet TN 37122

INTER LABORATORY WORK ORDER # GF00247
 (To be complete by sending lab)

Sending Project No:	GF00247
Receiving Project No:	
Check Box for Consolidated Invoice:	<input type="checkbox"/>
Date Prepared:	6/6/2023
REQUESTED COMPLETION DATE:	6/27/2023

11073493

Sending Region	IR72-IL/MO	Sending Project Mgr.	Gail Schindler
Receiving Region	MT JULIET	External Client	Vistra - Coffeen
State of Sample Origin	IL	QC Deliverable	STD Report

All questions should be addressed to sending project manager.

Requested Reportable Units _____ Report Wet or Dry Weight? _____ Cert Needed: IL

WORK REQUESTED						
Method Description	Container Type	Quantity of	Preservative	Quantity of	Unit Price	Amount
Radium 226/228		3		3	\$229.30	\$687.90
		1		1	\$0.00	\$0.00
		1		1		\$0.00
TOTAL						\$687.90

Special Requirements: Report as 226, 228 & combined 226/228. Include QC summary

Receiving Region Department	Acctg. Code	Totals from above	Revenue Allocation	Client Services Dept.
radiological	38	\$687.90	\$550.32	\$137.58
* Custom Revenue Allocation		TOTAL	\$550.32	\$137.58

FOR ANALYTICAL WORK COMPLETED THIS SECTION ALSO

Return Samples to Sending Region: Yes No

CONFIRMATION OF WORK COMPLETED
 Date Completed: _____ Receiving Project Manager: _____

Original sent to the receiving lab - Copy kept at the sending lab.

When work completed: Original sent to the ABM at the receiving laboratory. Copies are made to incorporate as needed.

LANT

ANALYTICAL REPORT

July 19, 2023

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

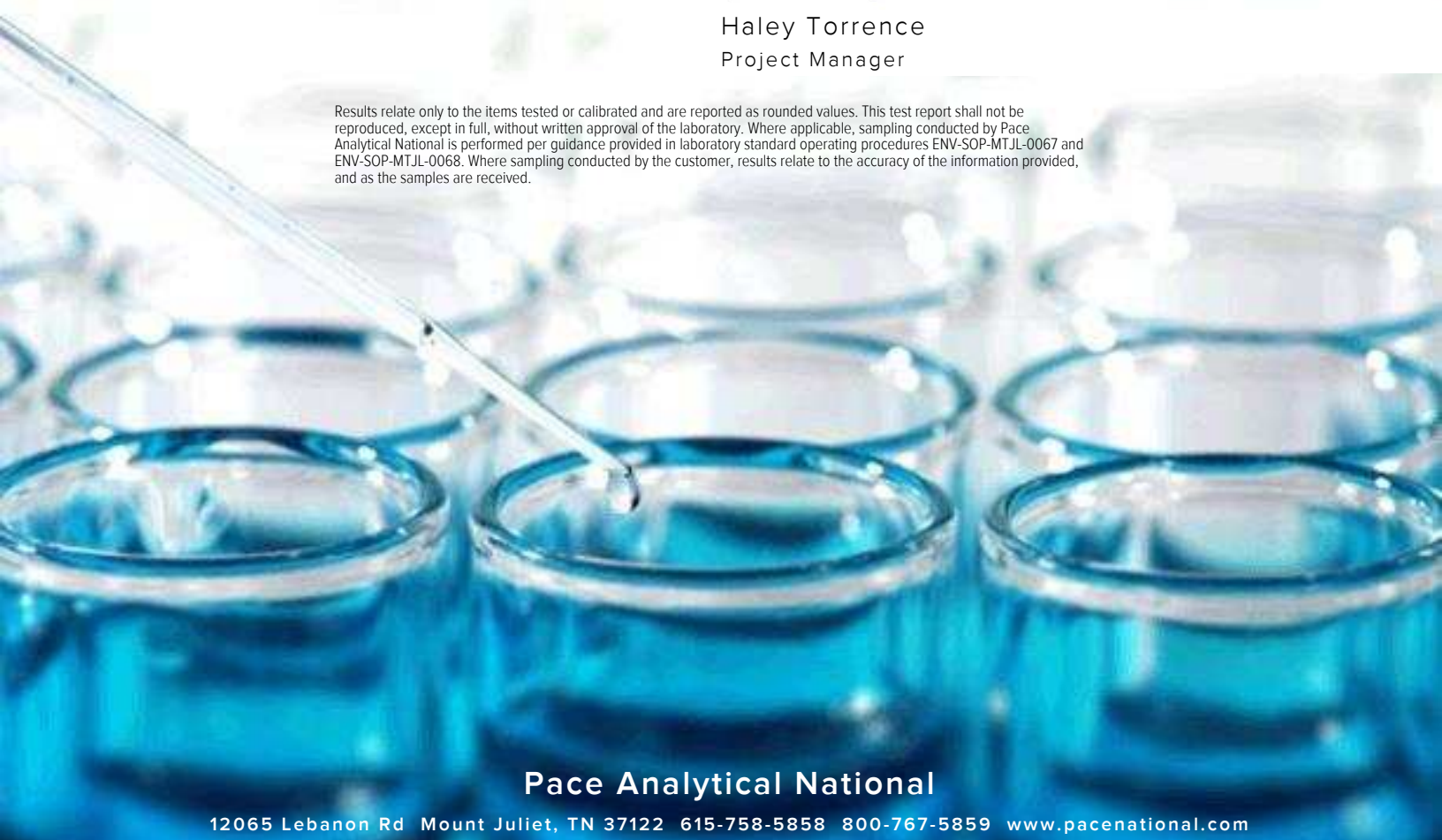
Pace IR - Peoria, IL

Sample Delivery Group:	L1626090
Samples Received:	06/14/2023
Project Number:	GF00917
Description:	Vistra-Coffeen
Site:	001
Report To:	Gail Schindler
	2231 W. Altorfer Drive
	Peoria, IL 61615

Entire Report Reviewed By:

Haley Torrence
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

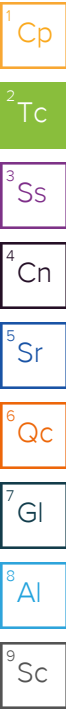


Pace Analytical National

12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

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SAMPLE SUMMARY

G276 L1626090-01 Non-Potable Water

Collected by
 Collected date/time
 Received date/time
 06/05/23 16:53 06/14/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2090394	1	07/06/23 17:46	07/14/23 16:39	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2091007	1	07/10/23 16:29	07/14/23 16:39	SNR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2091007	1	07/10/23 16:29	07/12/23 09:41	RGT	Mt. Juliet, TN

G273 L1626090-02 Non-Potable Water

Collected by
 Collected date/time
 Received date/time
 06/05/23 15:25 06/14/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2090394	1	07/06/23 17:46	07/14/23 16:39	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2091007	1	07/10/23 16:29	07/14/23 16:39	SNR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2091007	1	07/10/23 16:29	07/12/23 09:41	RGT	Mt. Juliet, TN

G307 L1626090-03 Non-Potable Water

Collected by
 Collected date/time
 Received date/time
 06/05/23 13:05 06/14/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2090394	1	07/06/23 17:46	07/14/23 16:39	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2091007	1	07/10/23 16:29	07/14/23 16:39	SNR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2091007	1	07/10/23 16:29	07/12/23 09:41	RGT	Mt. Juliet, TN

G307D L1626090-04 Non-Potable Water

Collected by
 Collected date/time
 Received date/time
 06/05/23 14:20 06/14/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2090394	1	07/06/23 17:46	07/14/23 16:39	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2091007	1	07/10/23 16:29	07/14/23 16:39	SNR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2091007	1	07/10/23 16:29	07/12/23 09:41	RGT	Mt. Juliet, TN

G306 L1626090-05 Non-Potable Water

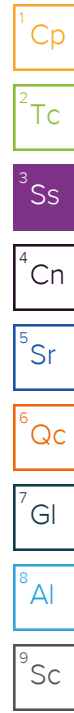
Collected by
 Collected date/time
 Received date/time
 06/05/23 15:43 06/14/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2090394	1	07/06/23 17:46	07/14/23 16:39	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2091007	1	07/10/23 16:29	07/14/23 16:39	SNR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2091007	1	07/10/23 16:29	07/12/23 09:41	RGT	Mt. Juliet, TN

G152 L1626090-06 Non-Potable Water

Collected by
 Collected date/time
 Received date/time
 06/06/23 10:43 06/14/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2090705	1	07/07/23 09:51	07/14/23 21:08	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2091007	1	07/10/23 16:29	07/14/23 21:08	SNR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2091007	1	07/10/23 16:29	07/12/23 09:41	RGT	Mt. Juliet, TN



SAMPLE SUMMARY

G153 L1626090-07 Non-Potable Water

Collected by
 Collected date/time
 Received date/time
 06/06/23 12:20 06/14/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2090705	1	07/07/23 09:51	07/14/23 21:08	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2091007	1	07/10/23 16:29	07/14/23 21:08	SNR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2091007	1	07/10/23 16:29	07/12/23 09:41	RGT	Mt. Juliet, TN



G154 L1626090-08 Non-Potable Water

Collected by
 Collected date/time
 Received date/time
 06/06/23 13:45 06/14/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2090705	1	07/07/23 09:51	07/14/23 21:08	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2091007	1	07/10/23 16:29	07/14/23 21:08	SNR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2091007	1	07/10/23 16:29	07/12/23 09:41	RGT	Mt. Juliet, TN

G271 L1626090-09 Non-Potable Water

Collected by
 Collected date/time
 Received date/time
 06/06/23 11:16 06/14/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2090705	1	07/07/23 09:51	07/14/23 21:08	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2091007	1	07/10/23 16:29	07/14/23 21:08	SNR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2091007	1	07/10/23 16:29	07/12/23 09:42	RGT	Mt. Juliet, TN

G305 L1626090-10 Non-Potable Water

Collected by
 Collected date/time
 Received date/time
 06/06/23 09:58 06/14/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2090705	1	07/07/23 09:51	07/14/23 21:08	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2091007	1	07/10/23 16:29	07/14/23 21:08	SNR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2091007	1	07/10/23 16:29	07/12/23 09:42	RGT	Mt. Juliet, TN

G405 L1626090-11 Non-Potable Water

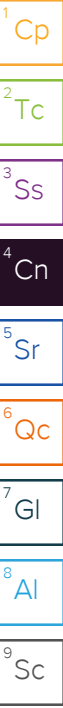
Collected by
 Collected date/time
 Received date/time
 06/06/23 13:07 06/14/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2090705	1	07/07/23 09:51	07/14/23 21:08	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2091007	1	07/10/23 16:29	07/14/23 21:08	SNR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2091007	1	07/10/23 16:29	07/12/23 09:42	RGT	Mt. Juliet, TN

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Haley Torrence
Project Manager



G276

ATTACHMENT B.

SAMPLE RESULTS - 01

845 QUARTERLY REPORT - QUARTER 2, 2023

L1626090

Collected date/time: 06/05/23 16:33
COFFEEN POWER PLANT
ASH POND NO. 2
COFFEEN, IL

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.892		0.312	0.537	07/14/2023 16:39	WG2090394
(T) Barium	75.1			30.0-143	07/14/2023 16:39	WG2090394
(T) Yttrium	113			30.0-136	07/14/2023 16:39	WG2090394

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.966		0.329	0.558	07/14/2023 16:39	WG2091007

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.0747	J	0.104	0.152	07/12/2023 09:41	WG2091007
(T) Barium-133	106			30.0-143	07/12/2023 09:41	WG2091007

G273

ATTACHMENT B.

SAMPLE RESULTS - 02

845 QUARTERLY REPORT - QUARTER 2, 2023

L1626090

Collected date/time: 06/05/23 15:25

COFFEEN POWER PLANT

ASH POND NO. 2

COFFEEN, IL

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.248	J	0.277	0.496	07/14/2023 16:39	WG2090394
(T) Barium	77.4			30.0-143	07/14/2023 16:39	WG2090394
(T) Yttrium	100			30.0-136	07/14/2023 16:39	WG2090394

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.248	U	0.294	0.548	07/14/2023 16:39	WG2091007

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	-0.0129	U	0.0979	0.234	07/12/2023 09:41	WG2091007
(T) Barium-133	105			30.0-143	07/12/2023 09:41	WG2091007

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.333	J	0.273	0.486	07/14/2023 16:39	WG2090394
(T) Barium	79.4			30.0-143	07/14/2023 16:39	WG2090394
(T) Yttrium	95.2			30.0-136	07/14/2023 16:39	WG2090394

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.528	J	0.331	0.539	07/14/2023 16:39	WG2091007

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.194	J	0.188	0.233	07/12/2023 09:41	WG2091007
(T) Barium-133	108			30.0-143	07/12/2023 09:41	WG2091007

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

G307D

ATTACHMENT B.

SAMPLE RESULTS - 04

845 QUARTERLY REPORT - QUARTER 2, 2023

L1626090

Collected date/time: 06/05/23 14:20

COFFEEN POWER PLANT

ASH POND NO. 2

COFFEEN, IL Method 904/9320

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.927		0.371	0.643	07/14/2023 16:39	WG2090394
(T) Barium	70.9			30.0-143	07/14/2023 16:39	WG2090394
(T) Yttrium	110			30.0-136	07/14/2023 16:39	WG2090394

1 Cp

2 Tc

3 Ss

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	1.02		0.422	0.720	07/14/2023 16:39	WG2091007

4 Cn

5 Sr

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.0984	<u>U</u>	0.202	0.325	07/12/2023 09:41	WG2091007
(T) Barium-133	100			30.0-143	07/12/2023 09:41	WG2091007

6 Qc

7 Gl

8 Al

9 Sc

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	-0.274	<u>U</u>	0.283	0.526	07/14/2023 16:39	WG2090394
(T) Barium	73.4			30.0-143	07/14/2023 16:39	WG2090394
(T) Yttrium	103			30.0-136	07/14/2023 16:39	WG2090394

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.0900	<u>U</u>	0.315	0.569	07/14/2023 16:39	WG2091007

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.0900	<u>J</u>	0.139	0.217	07/12/2023 09:41	WG2091007
(T) Barium-133	106			30.0-143	07/12/2023 09:41	WG2091007

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

G152

ATTACHMENT B.

SAMPLE RESULTS - 06

845 QUARTERLY REPORT - QUARTER 2, 2023

L1626090

Collected date/time: 06/08/23 10:43

COFFEEN POWER PLANT

ASH POND NO. 2

COFFEEN, IL

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.475	J	0.523	0.951	07/14/2023 21:08	WG2090705
(T) Barium	70.0			30.0-143	07/14/2023 21:08	WG2090705
(T) Yttrium	103			30.0-136	07/14/2023 21:08	WG2090705

1 Cp

2 Tc

3 Ss

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.513	J	0.539	0.983	07/14/2023 21:08	WG2091007

4 Cn

5 Sr

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.0379	U	0.129	0.250	07/12/2023 09:41	WG2091007
(T) Barium-133	102			30.0-143	07/12/2023 09:41	WG2091007

6 Qc

7 Gl

8 Al

9 Sc

G153

ATTACHMENT B.

SAMPLE RESULTS - 07

845 QUARTERLY REPORT - QUARTER 2, 2023
Collected date/time: 06/06/23 12:20

L1626090

COFFEEN POWER PLANT

ASH POND NO. 2

COFFEEN, IL

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	-1.50	<u>U</u>	0.467	0.891	07/14/2023 21:08	WG2090705
(T) Barium	67.0			30.0-143	07/14/2023 21:08	WG2090705
(T) Yttrium	114			30.0-136	07/14/2023 21:08	WG2090705

1 Cp

2 Tc

3 Ss

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.146	<u>U</u>	0.531	0.974	07/14/2023 21:08	WG2091007

4 Cn

5 Sr

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.146	<u>J</u>	0.252	0.394	07/12/2023 09:41	WG2091007
(T) Barium-133	70.4			30.0-143	07/12/2023 09:41	WG2091007

6 Qc

7 Gl

8 Al

9 Sc

G154

ATTACHMENT B.
845 QUARTERLY REPORT - QUARTER 2, 2023
COLLECTED DATE/TIME: 06/08/23 13:45
COFFEEN POWER PLANT
ASH POND NO. 2
COFFEEN, IL

SAMPLE RESULTS - 08

L1626090

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.852		0.385	0.685	07/14/2023 21:08	WG2090705
(T) Barium	77.4			30.0-143	07/14/2023 21:08	WG2090705
(T) Yttrium	106			30.0-136	07/14/2023 21:08	WG2090705

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.993		0.438	0.752	07/14/2023 21:08	WG2091007

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.141	J	0.208	0.310	07/12/2023 09:41	WG2091007
(T) Barium-133	110			30.0-143	07/12/2023 09:41	WG2091007

G271

ATTACHMENT B.
845 QUARTERLY REPORT - QUARTER 2, 2023
COLLECTED DATE/TIME: 06/08/23 11:16
COFFEEN POWER PLANT
ASH POND NO. 2
COFFEEN, IL

SAMPLE RESULTS - 09

L1626090

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	2.09		0.413	0.706	07/14/2023 21:08	WG2090705
(T) Barium	75.7			30.0-143	07/14/2023 21:08	WG2090705
(T) Yttrium	98.5			30.0-136	07/14/2023 21:08	WG2090705

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	2.32		0.472	0.765	07/14/2023 21:08	WG2091007

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.234	J	0.228	0.294	07/12/2023 09:42	WG2091007
(T) Barium-133	104			30.0-143	07/12/2023 09:42	WG2091007

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	1.47		0.378	0.654	07/14/2023 21:08	WG2090705
(T) Barium	70.8			30.0-143	07/14/2023 21:08	WG2090705
(T) Yttrium	107			30.0-136	07/14/2023 21:08	WG2090705

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	1.63		0.405	0.675	07/14/2023 21:08	WG2091007

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.157	J	0.146	0.168	07/12/2023 09:42	WG2091007
(T) Barium-133	104			30.0-143	07/12/2023 09:42	WG2091007

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

G405

ATTACHMENT B.

SAMPLE RESULTS - 11

Collected date/time: 06/08/23 13:07
845 QUARTERLY REPORT - QUARTER 2, 2023

L1626090

COFFEEN POWER PLANT

ASH POND NO. 2

COFFEEN, IL

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	1.53		0.543	0.957	07/14/2023 21:08	WG2090705
(T) Barium	67.8			30.0-143	07/14/2023 21:08	WG2090705
(T) Yttrium	102			30.0-136	07/14/2023 21:08	WG2090705

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	1.68		0.562	0.972	07/14/2023 21:08	WG2091007

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.147	J	0.146	0.169	07/12/2023 09:42	WG2091007
(T) Barium-133	106			30.0-143	07/12/2023 09:42	WG2091007

Method Blank (MB)
ASH POND NO. 2
COFFEE, IL

(MB) R3949806-1 07/14/23 16:39

Analyte	MB Result pCi/l	MB Qualifier	MB Uncertainty + / -	MB MDA pCi/l
Radium-228	-0.0717	<u>U</u>	0.214	0.391
(T) Barium	75.2		75.2	
(T) Yttrium	103		103	

L1626087-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1626087-01 07/14/23 16:39 • (DUP) R3949806-5 07/14/23 16:39

Analyte	Original Result pCi/l	Original Uncertainty + / -	Original MDA pCi/l	DUP Result pCi/l	DUP Uncertainty + / -	DUP MDA pCi/l	Dilution	DUP RPD %	DUP RER	DUP Qualifier	DUP RPD Limits %	DUP RER Limit
Radium-228	0.0607	0.339	0.611	0.575	0.509	0.611	1	162	0.841	<u>J</u>	20	3
(T) Barium	75.6			73.0	73.0							
(T) Yttrium	99.0			106	106							

Laboratory Control Sample (LCS)

(LCS) R3949806-2 07/14/23 16:39

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-228	5.00	5.82	116	80.0-120	
(T) Barium			78.0		
(T) Yttrium			95.3		

L1626083-15 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1626083-15 07/14/23 16:39 • (MS) R3949806-3 07/14/23 16:39 • (MSD) R3949806-4 07/14/23 16:39

Analyte	Spike Amount pCi/l	Original Result pCi/l	MS Result pCi/l	MSD Result pCi/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	MS RER	RPD Limits %
Radium-228	10.0	1.14	13.2	13.1	120	120	1	70.0-130			0.304		20
(T) Barium		66.6			75.7	76.3							
(T) Yttrium		116			116	116							

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)
ASH POND NO. 2
COFFEEN, IL

(MB) R3949833-1 07/14/23 21:08

Analyte	MB Result	MB Qualifier	MB Uncertainty	MB MDA
	pCi/l		+ / -	pCi/l
Radium-228	-0.240	<u>U</u>	0.169	0.323
(T) Barium	91.9		91.9	
(T) Yttrium	99.0		99.0	

L1626090-11 Original Sample (OS) • Duplicate (DUP)

(OS) L1626090-11 07/14/23 21:08 • (DUP) R3949833-5 07/14/23 21:08

Analyte	Original Result	Original Uncertainty	Original MDA	DUP Result	DUP Uncertainty	DUP MDA	Dilution	DUP RPD	DUP RER	DUP Qualifier	DUP RPD Limits	DUP RER Limit
	pCi/l	+ / -	pCi/l	pCi/l	+ / -	pCi/l		%			%	
Radium-228	1.53	0.543	0.957	1.10	0.470	0.957	1	32.7	0.599		20	3
(T) Barium	67.8			79.4	79.4							
(T) Yttrium	102			119	119							

Laboratory Control Sample (LCS)

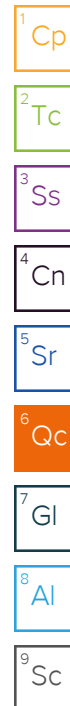
(LCS) R3949833-2 07/14/23 21:08

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	pCi/l	pCi/l	%	%	
Radium-228	5.00	5.83	117	80.0-120	
(T) Barium			79.4		
(T) Yttrium			94.1		

L1626090-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1626090-06 07/14/23 21:08 • (MS) R3949833-3 07/14/23 21:08 • (MSD) R3949833-4 07/14/23 21:08

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	MS RER	RPD Limits
	pCi/l	pCi/l	pCi/l	pCi/l	%	%		%			%		%
Radium-228	16.7	0.475	21.8	20.8	127	122	1	70.0-130			4.47		20
(T) Barium		70.0			80.0	78.5							
(T) Yttrium		103			112	114							



Method Blank (MB)
ASH POND NO. 2
COFFEEN, IL

(MB) R3947927-1 07/12/23 09:41

Analyte	MB Result pCi/l	MB Qualifier	MB Uncertainty + / -	MB MDA pCi/l
Radium-226	0.0193	<u>U</u>	0.0480	0.0791
(T) Barium-133	99.3		99.3	

L1626090-11 Original Sample (OS) • Duplicate (DUP)

(OS) L1626090-11 07/12/23 09:42 • (DUP) R3947927-5 07/12/23 09:41

Analyte	Original Result pCi/l	Original Uncertainty + / -	Original MDA pCi/l	DUP Result pCi/l	DUP Uncertainty + / -	DUP MDA pCi/l	Dilution	DUP RPD %	DUP RER	DUP Qualifier	DUP RPD Limits %	DUP RER Limit
Radium-226	0.147	0.146	0.169	0.00608	0.205	0.169	1	184	0.560	<u>U</u>	20	3
(T) Barium-133	106			98.7	98.7							

Laboratory Control Sample (LCS)

(LCS) R3947927-2 07/12/23 09:41

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-226	5.01	4.58	91.3	80.0-120	
(T) Barium-133			103		

L1626086-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1626086-07 07/12/23 09:41 • (MS) R3947927-3 07/12/23 09:41 • (MSD) R3947927-4 07/12/23 09:41

Analyte	Spike Amount pCi/l	Original Result pCi/l	MS Result pCi/l	MSD Result pCi/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	MS RER	RPD Limits %
Radium-226	20.0	0.376	18.6	19.0	91.2	93.3	1	75.0-125			2.23		20
(T) Barium-133		93.7			94.0	93.5							

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

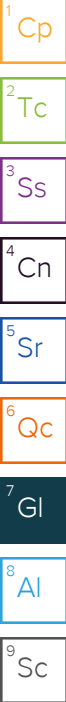
Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDA	Minimum Detectable Activity.
Rec.	Recovery.
RER	Replicate Error Ratio.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(T)	Tracer - A radioisotope of known concentration added to a solution of chemically equivalent radioisotopes at a known concentration to assist in monitoring the yield of the chemical separation.
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier Description

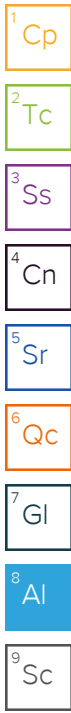
J	The identification of the analyte is acceptable; the reported value is an estimate.
U	Below Detectable Limits: Indicates that the analyte was not detected.



ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey-NELAP	TN002
California	2932	New Mexico ¹	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina ¹	DW21704
Georgia	NELAP	North Carolina ³	41
Georgia ¹	923	North Dakota	R-140
Idaho	TN00003	Ohio-VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky ^{1,6}	KY90010	South Carolina	84004002
Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ^{1,4}	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas ⁵	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 ⁵	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA-Crypto	TN00003		



¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.



Ship to :
 Pace Analytical Services, LLC
 1638 Roseytown Rd - Suites 2,3,4
 Greensburg, PA 15601
 (724)850-5600

INTER LABORATORY WORK ORDER # GF00917

(To be complete by sending lab)

Sending Project No:	GF00917
Receiving Project No:	
Check Box for Consolidated Invoice:	<input type="checkbox"/>
Date Prepared:	6/12/2023
REQUESTED COMPLETION DATE:	7/3/2023

Handwritten signature/initials

Sending Region	IR72-IL/MO	Sending Project Mgr.	Gail Schindler
Receiving Region	MT JULIET	External Client	Vistra - Coffeen
State of Sample Origin	IL	QC Deliverable	STD Report

All questions should be addressed to sending project manager.

Requested Reportable Units _____ Report Wet or Dry Weight? _____ Cert Needed: IL

WORK REQUESTED						
Method Description	Container Type	Quantity of	Preservative	Quantity of	Unit Price	Amount
Radium 226/228		11		11	\$229.30	\$2,522.30
		1		1	\$0.00	\$0.00
		1		1		\$0.00
TOTAL						\$2,522.30

Special Requirements: Report as 226, 228 & combined 226/228. Include QC summary

Receiving Region Department	Acctg. Code	Totals from above	Revenue Allocation	Client Services Dept.
radiological	38	\$2,522.30	\$2,017.84	\$504.46
* Custom Revenue Allocation		TOTAL	\$2,017.84	\$504.46

FOR ANALYTICAL WORK COMPLETED THIS SECTION ALSO

Return Samples to Sending Region: Yes No

CONFIRMATION OF WORK COMPLETED

Date Completed: _____ Receiving Project Manager: _____

Original sent to the receiving lab - Copy kept at the sending lab.
 When work completed: Original sent to the ABM at the receiving laboratory. Copies are made to corporate as needed.

Tracking Numbers	GRM Temperature
6319 6000 4262	20.6±0=20.6
" " 4332	20.3±0=20.3
" " 4398	20.2±0=20.2
" " 4343	20.7±0=20.7
" " 4284	20.5±0=20.5

41626090

LANT

ANALYTICAL REPORT

July 20, 2023

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

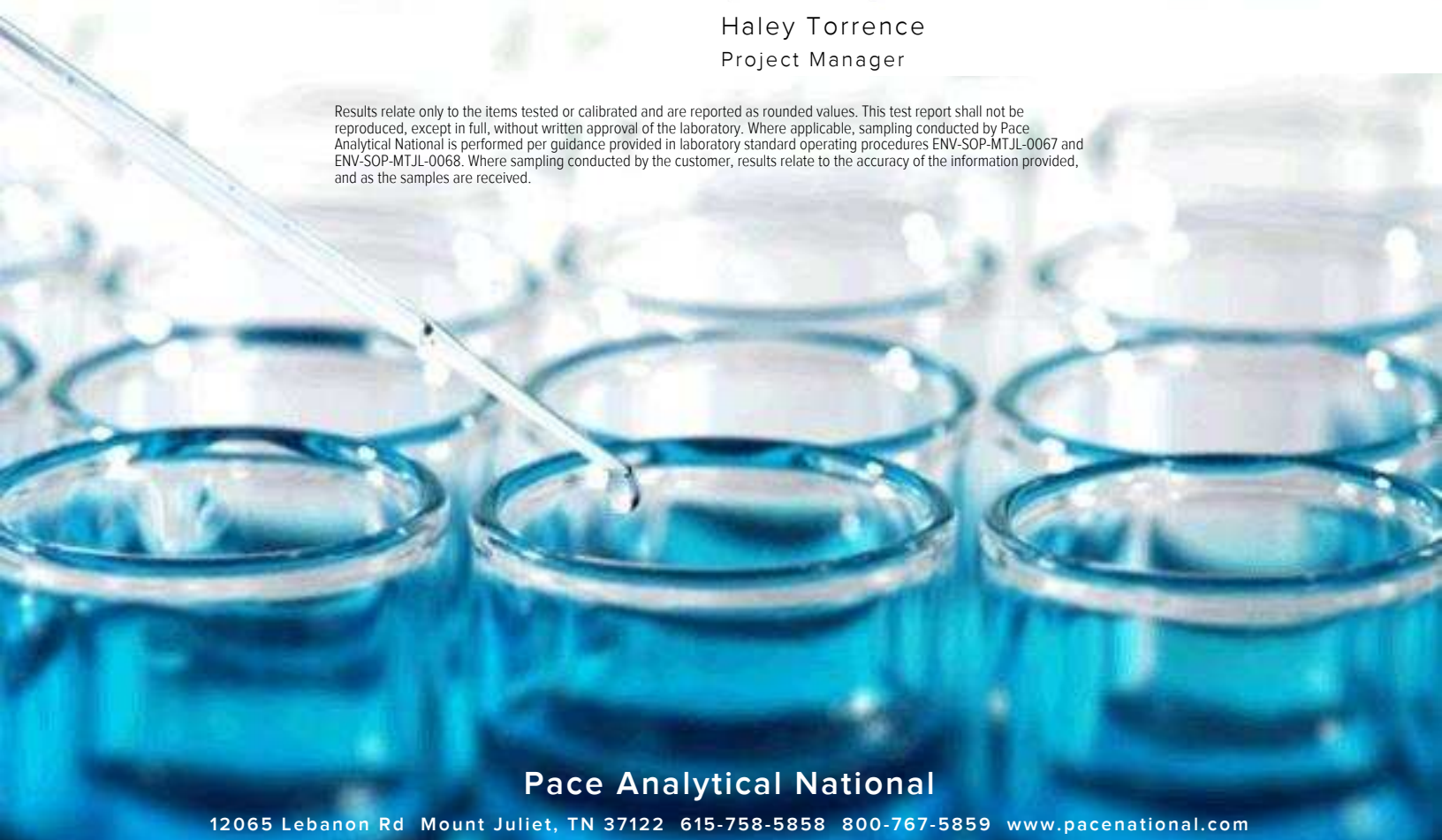
Pace IR - Peoria, IL

Sample Delivery Group: L1626086
 Samples Received: 06/14/2023
 Project Number: GF01342
 Description: Vistra-Coffeen
 Site: 001
 Report To: Gail Schindler
 2231 W. Altorfer Drive
 Peoria, IL 61615

Entire Report Reviewed By:

Haley Torrence
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

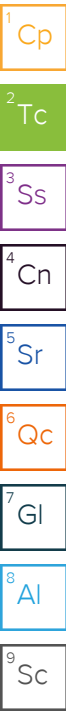


Pace Analytical National

12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

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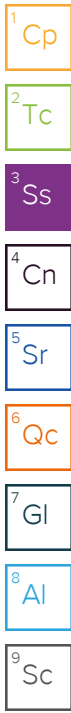


SAMPLE SUMMARY

G301 L1626086-01 Non-Potable Water

Collected by
Collected date/time
Received date/time
06/06/23 16:38 06/14/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2090394	1	07/06/23 17:46	07/14/23 16:39	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2090952	1	07/10/23 12:04	07/14/23 16:39	SNR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2090952	1	07/10/23 12:04	07/11/23 19:56	RGT	Mt. Juliet, TN



G313 L1626086-02 Non-Potable Water

Collected by
Collected date/time
Received date/time
06/06/23 15:15 06/14/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2090394	1	07/06/23 17:46	07/14/23 16:39	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2090952	1	07/10/23 12:04	07/14/23 16:39	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2090952	1	07/10/23 12:04	07/11/23 19:56	RGT	Mt. Juliet, TN

G313 DUP L1626086-03 Non-Potable Water

Collected by
Collected date/time
Received date/time
06/06/23 15:15 06/14/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2090394	1	07/06/23 17:46	07/14/23 16:39	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2090952	1	07/10/23 12:04	07/14/23 16:39	SNR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2090952	1	07/10/23 12:04	07/11/23 19:56	RGT	Mt. Juliet, TN

G402 L1626086-04 Non-Potable Water

Collected by
Collected date/time
Received date/time
06/06/23 16:05 06/14/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2090394	1	07/06/23 17:46	07/14/23 16:39	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2090952	1	07/10/23 12:04	07/14/23 16:39	SNR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2090952	1	07/10/23 12:04	07/11/23 19:57	RGT	Mt. Juliet, TN

G315 L1626086-05 Non-Potable Water

Collected by
Collected date/time
Received date/time
06/07/23 10:02 06/14/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2090394	1	07/06/23 17:46	07/14/23 16:39	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2090952	1	07/10/23 12:04	07/14/23 16:39	SNR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2090952	1	07/10/23 12:04	07/11/23 19:56	RGT	Mt. Juliet, TN

G403 L1626086-06 Non-Potable Water

Collected by
Collected date/time
Received date/time
06/07/23 11:25 06/14/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2090394	1	07/06/23 17:46	07/14/23 16:39	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2091007	1	07/10/23 16:29	07/14/23 16:39	SNR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2091007	1	07/10/23 16:29	07/12/23 09:41	RGT	Mt. Juliet, TN

SAMPLE SUMMARY

G404 L1626086-07 Non-Potable Water

Collected by
 Collected date/time
 Received date/time
 06/07/23 12:51 06/14/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2090394	1	07/06/23 17:46	07/14/23 16:39	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2091007	1	07/10/23 16:29	07/14/23 16:39	SNR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2091007	1	07/10/23 16:29	07/12/23 09:41	RGT	Mt. Juliet, TN

G1001 L1626086-08 Non-Potable Water

Collected by
 Collected date/time
 Received date/time
 06/07/23 10:24 06/14/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2090394	1	07/06/23 17:46	07/14/23 16:39	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2091007	1	07/10/23 16:29	07/14/23 16:39	SNR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2091007	1	07/10/23 16:29	07/12/23 09:41	RGT	Mt. Juliet, TN

G401 L1626086-09 Non-Potable Water

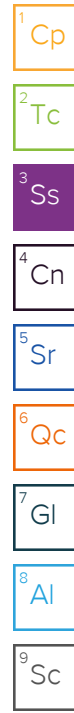
Collected by
 Collected date/time
 Received date/time
 06/07/23 11:58 06/14/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2090394	1	07/06/23 17:46	07/14/23 16:39	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2091007	1	07/10/23 16:29	07/14/23 16:39	SNR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2091007	1	07/10/23 16:29	07/12/23 09:41	RGT	Mt. Juliet, TN

G155 L1626086-10 Non-Potable Water

Collected by
 Collected date/time
 Received date/time
 06/07/23 10:08 06/14/23 09:00

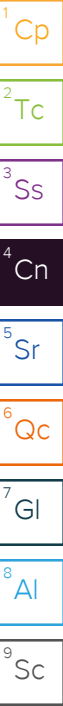
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2090394	1	07/06/23 17:46	07/14/23 16:39	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2091007	1	07/10/23 16:29	07/14/23 16:39	SNR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2091007	1	07/10/23 16:29	07/12/23 09:41	RGT	Mt. Juliet, TN



All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Haley Torrence
Project Manager



G301

ATTACHMENT B.

SAMPLE RESULTS - 01

845 QUARTERLY REPORT - QUARTER 2, 2023

L1626086

Collected date/time: 06/08/23 16:39
COFFEEN POWER PLANT
ASH POND NO. 2
COFFEEN, IL

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	-1.73	<u>U</u>	0.485	0.910	07/14/2023 16:39	WG2090394
(T) Barium	70.7			30.0-143	07/14/2023 16:39	WG2090394
(T) Yttrium	91.3			30.0-136	07/14/2023 16:39	WG2090394

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.0829	<u>U</u>	0.524	0.970	07/14/2023 16:39	WG2090952

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.0829	<u>U</u>	0.199	0.336	07/11/2023 19:56	WG2090952
(T) Barium-133	82.5			30.0-143	07/11/2023 19:56	WG2090952

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.442	J	0.436	0.773	07/14/2023 16:39	WG2090394
(T) Barium	68.6			30.0-143	07/14/2023 16:39	WG2090394
(T) Yttrium	105			30.0-136	07/14/2023 16:39	WG2090394

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.879		0.534	0.843	07/14/2023 16:39	WG2090952

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.436		0.309	0.337	07/11/2023 19:56	WG2090952
(T) Barium-133	92.0			30.0-143	07/11/2023 19:56	WG2090952

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.251	<u>U</u>	0.389	0.691	07/14/2023 16:39	WG2090394
(T) Barium	76.5			30.0-143	07/14/2023 16:39	WG2090394
(T) Yttrium	105			30.0-136	07/14/2023 16:39	WG2090394

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.325	<u>J</u>	0.431	0.755	07/14/2023 16:39	WG2090952

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.0742	<u>U</u>	0.185	0.305	07/11/2023 19:56	WG2090952
(T) Barium-133	96.5			30.0-143	07/11/2023 19:56	WG2090952

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.848		0.400	0.697	07/14/2023 16:39	WG2090394
(T) Barium	66.1			30.0-143	07/14/2023 16:39	WG2090394
(T) Yttrium	102			30.0-136	07/14/2023 16:39	WG2090394

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	1.22		0.461	0.723	07/14/2023 16:39	WG2090952

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.377		0.230	0.192	07/11/2023 19:57	WG2090952
(T) Barium-133	87.9			30.0-143	07/11/2023 19:57	WG2090952

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.221	<u>U</u>	0.362	0.647	07/14/2023 16:39	WG2090394
(T) Barium	72.4			30.0-143	07/14/2023 16:39	WG2090394
(T) Yttrium	98.8			30.0-136	07/14/2023 16:39	WG2090394

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.344	<u>J</u>	0.388	0.672	07/14/2023 16:39	WG2090952

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.123	<u>J</u>	0.141	0.180	07/11/2023 19:56	WG2090952
(T) Barium-133	93.5			30.0-143	07/11/2023 19:56	WG2090952

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

G403

ATTACHMENT B.
845 QUARTERLY REPORT - QUARTER 2, 2023
Collected date/time: 06/07/23 11:27
COFFEEN POWER PLANT
ASH POND NO. 2
COFFEEN, IL

SAMPLE RESULTS - 06

L1626086

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.750		0.333	0.580	07/14/2023 16:39	WG2090394
(T) Barium	77.0			30.0-143	07/14/2023 16:39	WG2090394
(T) Yttrium	95.6			30.0-136	07/14/2023 16:39	WG2090394

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.910		0.387	0.644	07/14/2023 16:39	WG2091007

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.160	J	0.198	0.279	07/12/2023 09:41	WG2091007
(T) Barium-133	101			30.0-143	07/12/2023 09:41	WG2091007

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.982		0.243	0.404	07/14/2023 16:39	WG2090394
(T) Barium	74.4			30.0-143	07/14/2023 16:39	WG2090394
(T) Yttrium	105			30.0-136	07/14/2023 16:39	WG2090394

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	1.36		0.371	0.514	07/14/2023 16:39	WG2091007

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.376		0.280	0.318	07/12/2023 09:41	WG2091007
(T) Barium-133	93.7			30.0-143	07/12/2023 09:41	WG2091007

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

G1001

ATTACHMENT B.

SAMPLE RESULTS - 08

845 QUARTERLY REPORT - QUARTER 2, 2023

L1626086

Collected date/time: 06/07/23 10:24

COFFEEN POWER PLANT

ASH POND NO. 2

COFFEEN, IL

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	-0.292	<u>U</u>	0.376	0.683	07/14/2023 16:39	WG2090394
(T) Barium	75.7			30.0-143	07/14/2023 16:39	WG2090394
(T) Yttrium	108			30.0-136	07/14/2023 16:39	WG2090394

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.917		0.546	0.744	07/14/2023 16:39	WG2091007

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.917		0.396	0.296	07/12/2023 09:41	WG2091007
(T) Barium-133	106			30.0-143	07/12/2023 09:41	WG2091007

G401

ATTACHMENT B.
845 QUARTERLY REPORT - QUARTER 2, 2023
COLLECTED DATE/TIME: 06/07/23 11:58
COFFEEN POWER PLANT
ASH POND NO. 2
COFFEEN, IL

SAMPLE RESULTS - 09

L1626086

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	-0.133	<u>U</u>	0.312	0.569	07/14/2023 16:39	WG2090394
(T) Barium	76.5			30.0-143	07/14/2023 16:39	WG2090394
(T) Yttrium	106			30.0-136	07/14/2023 16:39	WG2090394

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.628	<u>J</u>	0.465	0.665	07/14/2023 16:39	WG2091007

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.628		0.345	0.344	07/12/2023 09:41	WG2091007
(T) Barium-133	94.9			30.0-143	07/12/2023 09:41	WG2091007

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.618	J	0.487	0.861	07/14/2023 16:39	WG2090394
(T) Barium	74.8			30.0-143	07/14/2023 16:39	WG2090394
(T) Yttrium	102			30.0-136	07/14/2023 16:39	WG2090394

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	1.30		0.739	1.08	07/14/2023 16:39	WG2091007

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.687		0.556	0.651	07/12/2023 09:41	WG2091007
(T) Barium-133	45.4			30.0-143	07/12/2023 09:41	WG2091007

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Method Blank (MB)
ASH POND NO. 2
COFFEE, IL

(MB) R3949806-1 07/14/23 16:39

Analyte	MB Result pCi/l	MB Qualifier	MB Uncertainty + / -	MB MDA pCi/l
Radium-228	-0.0717	<u>U</u>	0.214	0.391
(T) Barium	75.2		75.2	
(T) Yttrium	103		103	

L1626087-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1626087-01 07/14/23 16:39 • (DUP) R3949806-5 07/14/23 16:39

Analyte	Original Result pCi/l	Original Uncertainty + / -	Original MDA pCi/l	DUP Result pCi/l	DUP Uncertainty + / -	DUP MDA pCi/l	Dilution	DUP RPD %	DUP RER	DUP Qualifier	DUP RPD Limits %	DUP RER Limit
Radium-228	0.0607	0.339	0.611	0.575	0.509	0.611	1	162	0.841	<u>J</u>	20	3
(T) Barium	75.6			73.0	73.0							
(T) Yttrium	99.0			106	106							

Laboratory Control Sample (LCS)

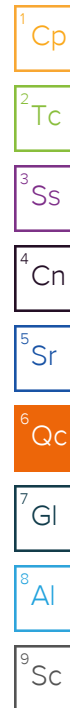
(LCS) R3949806-2 07/14/23 16:39

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-228	5.00	5.82	116	80.0-120	
(T) Barium			78.0		
(T) Yttrium			95.3		

L1626083-15 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1626083-15 07/14/23 16:39 • (MS) R3949806-3 07/14/23 16:39 • (MSD) R3949806-4 07/14/23 16:39

Analyte	Spike Amount pCi/l	Original Result pCi/l	MS Result pCi/l	MSD Result pCi/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	MS RER	RPD Limits %
Radium-228	10.0	1.14	13.2	13.1	120	120	1	70.0-130			0.304		20
(T) Barium		66.6			75.7	76.3							
(T) Yttrium		116			116	116							



Method Blank (MB)
ASH POND NO. 2
COFFEEN, IL

(MB) R3947847-1 07/11/23 15:40

Analyte	MB Result	MB Qualifier	MB Uncertainty	MB MDA
	pCi/l		+ / -	pCi/l
Radium-226	-0.00573	<u>U</u>	0.0205	0.0441
(T) Barium-133	105		105	

L1626086-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1626086-03 07/11/23 19:56 • (DUP) R3947847-5 07/11/23 19:56

Analyte	Original Result	Original Uncertainty	Original MDA	DUP Result	DUP Uncertainty	DUP MDA	Dilution	DUP RPD	DUP RER	DUP Qualifier	DUP RPD Limits	DUP RER Limit
	pCi/l	+ / -	pCi/l	pCi/l	+ / -	pCi/l		%			%	
Radium-226	0.0742	0.185	0.305	0.0779	0.108	0.305	1	4.84	0.0172	<u>J</u>	20	3
(T) Barium-133	96.5			95.9	95.9							

Laboratory Control Sample (LCS)

(LCS) R3947847-2 07/11/23 19:56

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	pCi/l	pCi/l	%	%	
Radium-226	5.01	4.42	88.1	80.0-120	
(T) Barium-133			82.9		

L1626083-11 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1626083-11 07/11/23 19:56 • (MS) R3947847-3 07/11/23 19:56 • (MSD) R3947847-4 07/11/23 19:56

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	MS RER	RPD Limits
	pCi/l	pCi/l	pCi/l	pCi/l	%	%		%			%		%
Radium-226	20.0	-0.0479	18.2	18.3	91.2	91.5	1	75.0-125			0.274		20
(T) Barium-133		94.2			101	103							

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)
ASH POND NO. 2
COFFEE, IL

(MB) R3947927-1 07/12/23 09:41

Analyte	MB Result pCi/l	MB Qualifier	MB Uncertainty + / -	MB MDA pCi/l
Radium-226	0.0193	<u>U</u>	0.0480	0.0791
(T) Barium-133	99.3		99.3	

L1626090-11 Original Sample (OS) • Duplicate (DUP)

(OS) L1626090-11 07/12/23 09:42 • (DUP) R3947927-5 07/12/23 09:41

Analyte	Original Result pCi/l	Original Uncertainty + / -	Original MDA pCi/l	DUP Result pCi/l	DUP Uncertainty + / -	DUP MDA pCi/l	Dilution	DUP RPD %	DUP RER	DUP Qualifier	DUP RPD Limits %	DUP RER Limit
Radium-226	0.147	0.146	0.169	0.00608	0.205	0.169	1	184	0.560	<u>U</u>	20	3
(T) Barium-133	106			98.7	98.7							

Laboratory Control Sample (LCS)

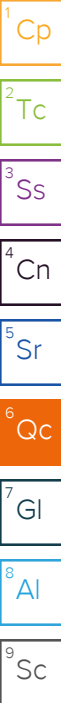
(LCS) R3947927-2 07/12/23 09:41

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-226	5.01	4.58	91.3	80.0-120	
(T) Barium-133			103		

L1626086-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1626086-07 07/12/23 09:41 • (MS) R3947927-3 07/12/23 09:41 • (MSD) R3947927-4 07/12/23 09:41

Analyte	Spike Amount pCi/l	Original Result pCi/l	MS Result pCi/l	MSD Result pCi/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	MS RER	RPD Limits %
Radium-226	20.0	0.376	18.6	19.0	91.2	93.3	1	75.0-125			2.23		20
(T) Barium-133		93.7			94.0	93.5							



Guide to Reading and Understanding Your Laboratory Report

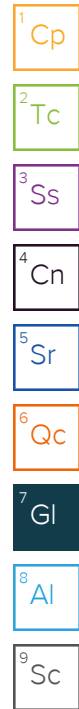
The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDA	Minimum Detectable Activity.
Rec.	Recovery.
RER	Replicate Error Ratio.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(T)	Tracer - A radioisotope of known concentration added to a solution of chemically equivalent radioisotopes at a known concentration to assist in monitoring the yield of the chemical separation.
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

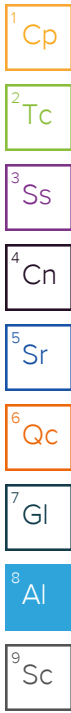
Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.
U	Below Detectable Limits: Indicates that the analyte was not detected.



ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey-NELAP	TN002
California	2932	New Mexico ¹	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina ¹	DW21704
Georgia	NELAP	North Carolina ³	41
Georgia ¹	923	North Dakota	R-140
Idaho	TN00003	Ohio-VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky ^{1,6}	KY90010	South Carolina	84004002
Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ^{1,4}	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas ⁵	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 ⁵	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA-Crypto	TN00003		



¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

Internal Transfer Chain of Custody

State of Origin: IL
 Cert. Needed: YES NO



Workorder: GF01342

Workorder Name: Vistra - Coffeen

Owner Received
 Date: 6/7/2023

Results Requ
 By: 7/3/2023

Report To:	Subcontract To:	Requested Analysis
------------	-----------------	--------------------

Gail Schindler
 Pace Analytical - IL/MO
 2231 W. Altorfer Drive
 Peoria, IL 61615
 800-752-6651

Pace Analytical - Mt Juliet
 12065 Lebanon Rd
 Mt Juliet TN 37122

Preserved Containers

Radium 226/228

21626086

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix															LAB USE ONLY
1	G301	GRAB	6/6/2023 16:38	GF01342-01	GW						X									-01
2	G313	GRAB	6/6/2023 15:15	GF01342-02	GW						X									-02
3	G313 DUP	GRAB	6/6/2023 15:15	GF01342-03	GW						X									-03
4	G402	GRAB	6/6/2023 16:05	GF01342-04	GW						X									-04
5	G315	GRAB	6/7/2023 10:02	GF01342-05	GW						X									-05
6	G403	GRAB	6/7/2023 11:25	GF01342-06	GW						X									-06
7	G404	GRAB	6/7/2023 12:51	GF01342-07	GW						X									-07
8	G1001	GRAB	6/7/2023 10:24	GF01342-08	GW						X									-08
9	G401	GRAB	6/7/2023 11:58	GF01342-09	GW						X									-09
10	G155	GRAB	6/7/2023 10:08	GF01342-10	GW						X									-10

Transfers	Released By	Date/Time	Received By	Date/Time	Comments
1	<i>[Signature]</i>	6/13/23 12:00	<i>[Signature]</i>	6/14/23 09:00	Needs reported as 226, 228 and also combined 226/228
2					Include QC summary and edd
3					

Cooler Temperature on Receipt _____ °C Custody Seal or N Received on Ice or N Sample Intact or N

***In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document.
 This chain of custody is considered complete as is since this information is available in the owner laboratory.

Sample Receipt Checklist
 COC Seal Present/Intact: Y N If Applicable
 COC Signed/Accurate: Y N VOA Zero Headspace: Y N
 Bottles arrive intact: Y N Pres. Correct/Check: Y N
 Correct bottles used: Y N
 Sufficient volume sent: Y N
 RAD Screen <0.5 mR/hr: Y N

PH-10BDH432: TPC-2122-21
 CR6-20221V



Ship to :

Pace Analytical Services, LLC
 1638 Roseytown Rd - Suites 2,3,4
 Greensburg, PA 15601
 (724)850-5600

INTER_LABORATORY WORK ORDER # GF01342

(To be complete by sending lab)

Sending Project No:	GF01342
Receiving Project No:	
Check Box for Consolidated Invoice:	<input type="checkbox"/>
Date Prepared:	6/12/2023
REQUESTED COMPLETION DATE:	7/3/2023

Handwritten signature/initials

Sending Region	IR72-IL/MO	Sending Project Mgr.	Gail Schindler
Receiving Region	MT JULIET	External Client	Vistra - Coffeen
State of Sample Origin	IL	QC Deliverable	STD Report

All questions should be addressed to sending project manager.

Requested Reportable Units _____ Report Wet or Dry Weight? _____ Cert Needed: IL

WORK REQUESTED						
Method Description	Container Type	Quantity of	Preservative	Quantity of	Unit Price	Amount
Radium 226/228		10		10	\$229.30	\$2,293.00
		1		1	\$0.00	\$0.00
		1		1		\$0.00
TOTAL						\$2,293.00

Special Requirements: Report as 226, 228 & combined 226/228. Include QC summary

Receiving Region Department	Acctg. Code	Totals from above	Revenue Allocation	Client Services Dept.
radiological	38	\$2,293.00	\$1,834.40	\$458.60
* Custom Revenue Allocation		TOTAL	\$1,834.40	\$458.60

Return Samples to Sending Region: Yes No

FOR ANALYTICAL WORK COMPLETED THIS SECTION ALSO

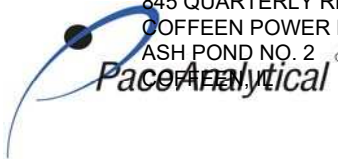
CONFIRMATION OF WORK COMPLETED

Date Completed: _____ Receiving Project Manager: _____

Original sent to the receiving lab - Copy kept at the sending lab.
 When work completed: Original sent to the ABM at the receiving laboratory. Copies are made to incorporate as needed.

Tracking Numbers		GRM Temperature
6319 6000 4262		20.6±0=20.6
" " 4332		20.3±0=20.3
" " 4398		20.2±0=20.2
" " 4343		20.7±0=20.7
" " 4284		20.5±0=20.5

41626086



ANALYTICAL REPORT

July 19, 2023

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

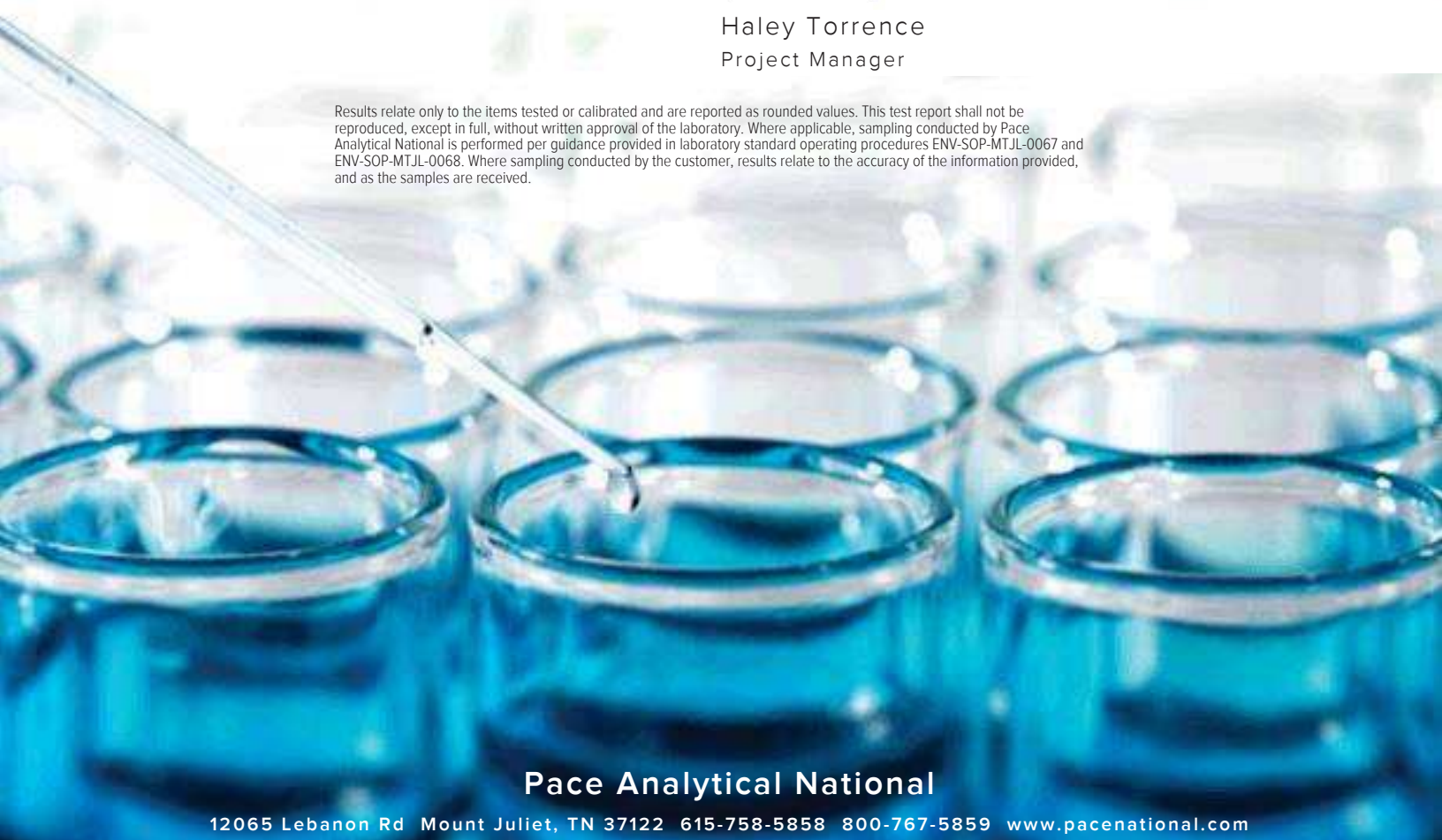
Pace IR - Peoria, IL

Sample Delivery Group: L1626083
Samples Received: 06/14/2023
Project Number: GF01733
Description: Vistra-Coffeen
Site: 001
Report To: Gail Schindler
2231 W. Altorfer Drive
Peoria, IL 61615

Entire Report Reviewed By:

Haley Torrence
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

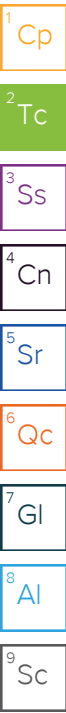


Pace Analytical National

12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

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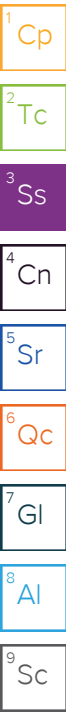


SAMPLE SUMMARY

G212 L1626083-01 Non-Potable Water

Collected by
Collected date/time
Received date/time
06/07/23 15:35 06/14/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2090017	1	07/06/23 09:51	07/13/23 20:53	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2090830	1	07/07/23 15:45	07/13/23 20:53	SNR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2090830	1	07/07/23 15:45	07/10/23 21:49	RGT	Mt. Juliet, TN



G213 L1626083-02 Non-Potable Water

Collected by
Collected date/time
Received date/time
06/07/23 16:49 06/14/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2090017	1	07/06/23 09:51	07/13/23 20:53	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2090830	1	07/07/23 15:45	07/13/23 20:53	SNR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2090830	1	07/07/23 15:45	07/10/23 21:49	RGT	Mt. Juliet, TN

G200 L1626083-03 Non-Potable Water

Collected by
Collected date/time
Received date/time
06/07/23 17:23 06/14/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2090017	1	07/06/23 09:51	07/13/23 20:53	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2090830	1	07/07/23 15:45	07/13/23 20:53	SNR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2090830	1	07/07/23 15:45	07/10/23 21:49	RGT	Mt. Juliet, TN

EB-01 L1626083-04 Non-Potable Water

Collected by
Collected date/time
Received date/time
06/07/23 17:55 06/14/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2090017	1	07/06/23 09:51	07/13/23 20:53	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2090830	1	07/07/23 15:45	07/13/23 20:53	SNR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2090830	1	07/07/23 15:45	07/10/23 21:49	RGT	Mt. Juliet, TN

G275 L1626083-05 Non-Potable Water

Collected by
Collected date/time
Received date/time
06/08/23 12:00 06/14/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2090017	1	07/06/23 09:51	07/13/23 20:53	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2090830	1	07/07/23 15:45	07/13/23 20:53	SNR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2090830	1	07/07/23 15:45	07/10/23 21:49	RGT	Mt. Juliet, TN

G275 DUP L1626083-06 Non-Potable Water

Collected by
Collected date/time
Received date/time
06/08/23 12:00 06/14/23 09:00

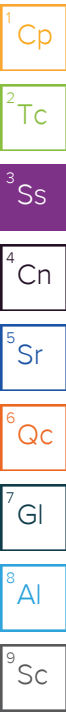
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2090017	1	07/06/23 09:51	07/14/23 10:35	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2090830	1	07/07/23 15:45	07/14/23 10:35	SNR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2090830	1	07/07/23 15:45	07/10/23 21:49	RGT	Mt. Juliet, TN

SAMPLE SUMMARY

G275D L1626083-07 Non-Potable Water

Collected by
Collected date/time
Received date/time
06/08/23 13:13 06/14/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2090017	1	07/06/23 09:51	07/14/23 10:35	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2090830	1	07/07/23 15:45	07/14/23 10:35	SNR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2090830	1	07/07/23 15:45	07/10/23 21:49	RGT	Mt. Juliet, TN



G280 L1626083-08 Non-Potable Water

Collected by
Collected date/time
Received date/time
06/08/23 09:25 06/14/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2090017	1	07/06/23 09:51	07/14/23 10:35	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2090830	1	07/07/23 15:45	07/14/23 10:35	SNR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2090830	1	07/07/23 15:45	07/10/23 21:49	RGT	Mt. Juliet, TN

G283 L1626083-09 Non-Potable Water

Collected by
Collected date/time
Received date/time
06/08/23 14:32 06/14/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2090017	1	07/06/23 09:51	07/14/23 10:35	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2090830	1	07/07/23 15:45	07/14/23 10:35	SNR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2090830	1	07/07/23 15:45	07/10/23 21:49	RGT	Mt. Juliet, TN

G285 L1626083-10 Non-Potable Water

Collected by
Collected date/time
Received date/time
06/08/23 13:53 06/14/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2090017	1	07/06/23 09:51	07/14/23 10:35	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2090830	1	07/07/23 15:45	07/14/23 10:35	SNR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2090830	1	07/07/23 15:45	07/10/23 21:49	RGT	Mt. Juliet, TN

G281 L1626083-11 Non-Potable Water

Collected by
Collected date/time
Received date/time
06/08/23 13:48 06/14/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2090017	1	07/06/23 09:51	07/14/23 10:35	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2090952	1	07/10/23 12:04	07/14/23 10:35	SNR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2090952	1	07/10/23 12:04	07/11/23 19:56	RGT	Mt. Juliet, TN

G270 L1626083-12 Non-Potable Water

Collected by
Collected date/time
Received date/time
06/08/23 09:54 06/14/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2090017	1	07/06/23 09:51	07/14/23 10:35	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2090952	1	07/10/23 12:04	07/14/23 10:35	SNR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2090952	1	07/10/23 12:04	07/11/23 19:56	RGT	Mt. Juliet, TN

SAMPLE SUMMARY

G284 L1626083-13 Non-Potable Water

Collected by
 Collected date/time
 Received date/time

06/08/23 15:16 06/14/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2090017	1	07/06/23 09:51	07/14/23 10:35	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2090952	1	07/10/23 12:04	07/14/23 10:35	SNR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2090952	1	07/10/23 12:04	07/11/23 19:56	RGT	Mt. Juliet, TN

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

G217 L1626083-14 Non-Potable Water

Collected by
 Collected date/time
 Received date/time

06/08/23 16:56 06/14/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2090017	1	07/06/23 09:51	07/14/23 10:35	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2090952	1	07/10/23 12:04	07/14/23 10:35	SNR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2090952	1	07/10/23 12:04	07/11/23 19:56	RGT	Mt. Juliet, TN

R201 L1626083-15 Non-Potable Water

Collected by
 Collected date/time
 Received date/time

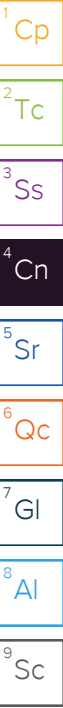
06/07/23 15:40 06/14/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2090394	1	07/06/23 17:46	07/14/23 16:39	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2090952	1	07/10/23 12:04	07/14/23 16:39	SNR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2090952	1	07/10/23 12:04	07/11/23 19:56	RGT	Mt. Juliet, TN

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Haley Torrence
Project Manager



Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.187	<u>U</u>	0.415	0.777	07/13/2023 20:53	WG2090017
(T) Barium	81.4			30.0-143	07/13/2023 20:53	WG2090017
(T) Yttrium	105			30.0-136	07/13/2023 20:53	WG2090017

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.194	<u>U</u>	0.446	0.838	07/13/2023 20:53	WG2090830

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.00696	<u>U</u>	0.164	0.314	07/10/2023 21:49	WG2090830
(T) Barium-133	105			30.0-143	07/10/2023 21:49	WG2090830

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.0797	<u>U</u>	0.293	0.556	07/13/2023 20:53	WG2090017
(T) Barium	67.7			30.0-143	07/13/2023 20:53	WG2090017
(T) Yttrium	110			30.0-136	07/13/2023 20:53	WG2090017

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.399	<u>J</u>	0.394	0.642	07/13/2023 20:53	WG2090830

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.319	<u>J</u>	0.264	0.321	07/10/2023 21:49	WG2090830
(T) Barium-133	110			30.0-143	07/10/2023 21:49	WG2090830

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	2.20		0.495	0.869	07/13/2023 20:53	WG2090017
(T) Barium	58.5			30.0-143	07/13/2023 20:53	WG2090017
(T) Yttrium	114			30.0-136	07/13/2023 20:53	WG2090017

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	4.48		0.736	0.893	07/13/2023 20:53	WG2090830

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	2.29		0.545	0.205	07/10/2023 21:49	WG2090830
(T) Barium-133	128			30.0-143	07/10/2023 21:49	WG2090830

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.350	J	0.261	0.484	07/13/2023 20:53	WG2090017
(T) Barium	77.7			30.0-143	07/13/2023 20:53	WG2090017
(T) Yttrium	113			30.0-136	07/13/2023 20:53	WG2090017

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.880		0.400	0.558	07/13/2023 20:53	WG2090830

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.530		0.303	0.278	07/10/2023 21:49	WG2090830
(T) Barium-133	112			30.0-143	07/10/2023 21:49	WG2090830

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

G275

ATTACHMENT B.

SAMPLE RESULTS - 05

845 QUARTERLY REPORT - QUARTER 2, 2023

L1626083

Collected date/time: 06/08/23 12:00
COFFEEN POWER PLANT
ASH POND NO. 2
COFFEEN, IL

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.0751	<u>U</u>	0.346	0.650	07/13/2023 20:53	WG2090017
(T) Barium	73.2			30.0-143	07/13/2023 20:53	WG2090017
(T) Yttrium	117			30.0-136	07/13/2023 20:53	WG2090017

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.0751	<u>U</u>	0.388	0.749	07/13/2023 20:53	WG2090830

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	-0.121	<u>U</u>	0.175	0.373	07/10/2023 21:49	WG2090830
(T) Barium-133	94.0			30.0-143	07/10/2023 21:49	WG2090830

COFFEEN POWER PLANT
 ASH POND NO. 2
 COFFEEN, IL

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	-0.903	<u>U</u>	0.449	0.848	07/14/2023 10:35	WG2090017
(T) Barium	69.3			30.0-143	07/14/2023 10:35	WG2090017
(T) Yttrium	88.8			30.0-136	07/14/2023 10:35	WG2090017

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.0267	<u>U</u>	0.473	0.893	07/14/2023 10:35	WG2090830

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.0267	<u>U</u>	0.149	0.279	07/10/2023 21:49	WG2090830
(T) Barium-133	107			30.0-143	07/10/2023 21:49	WG2090830

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

COFFEEN POWER PLANT
 ASH POND NO. 2
 COFFEEN, IL
 Method 904/9320

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.987		0.377	0.666	07/14/2023 10:35	WG2090017
(T) Barium	73.2			30.0-143	07/14/2023 10:35	WG2090017
(T) Yttrium	94.0			30.0-136	07/14/2023 10:35	WG2090017

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	1.34		0.459	0.730	07/14/2023 10:35	WG2090830

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.352		0.262	0.298	07/10/2023 21:49	WG2090830
(T) Barium-133	103			30.0-143	07/10/2023 21:49	WG2090830

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.118	<u>U</u>	0.384	0.704	07/14/2023 10:35	WG2090017
(T) Barium	79.7			30.0-143	07/14/2023 10:35	WG2090017
(T) Yttrium	81.4			30.0-136	07/14/2023 10:35	WG2090017

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.839		0.524	0.764	07/14/2023 10:35	WG2090830

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.721		0.357	0.296	07/10/2023 21:49	WG2090830
(T) Barium-133	123			30.0-143	07/10/2023 21:49	WG2090830

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	2.22		0.428	0.720	07/14/2023 10:35	WG2090017
(T) Barium	67.0			30.0-143	07/14/2023 10:35	WG2090017
(T) Yttrium	88.0			30.0-136	07/14/2023 10:35	WG2090017

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	2.88		0.547	0.791	07/14/2023 10:35	WG2090830

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.664		0.341	0.327	07/10/2023 21:49	WG2090830
(T) Barium-133	107			30.0-143	07/10/2023 21:49	WG2090830

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

G285

ATTACHMENT B.

SAMPLE RESULTS - 10

845 QUARTERLY REPORT - QUARTER 2, 2023

L1626083

Collected date/time: 06/08/23 13:53
COFFEEN POWER PLANT
ASH POND NO. 2
COFFEEN, IL

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	2.82		0.289	0.423	07/14/2023 10:35	WG2090017
(T) Barium	70.9			30.0-143	07/14/2023 10:35	WG2090017
(T) Yttrium	103			30.0-136	07/14/2023 10:35	WG2090017

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	3.10		0.378	0.516	07/14/2023 10:35	WG2090830

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.277	J	0.243	0.296	07/10/2023 21:49	WG2090830
(T) Barium-133	126			30.0-143	07/10/2023 21:49	WG2090830

G281

ATTACHMENT B.

SAMPLE RESULTS - 11

845 QUARTERLY REPORT - QUARTER 2, 2023

L1626083

Collected date/time: 06/08/23 13:45
COFFEEN POWER PLANT
ASH POND NO. 2
COFFEEN, IL

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.000	<u>U</u>	0.397	0.728	07/14/2023 10:35	WG2090017
(T) Barium	73.4			30.0-143	07/14/2023 10:35	WG2090017
(T) Yttrium	96.1			30.0-136	07/14/2023 10:35	WG2090017

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.000	<u>U</u>	0.405	0.769	07/14/2023 10:35	WG2090952

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	-0.0479	<u>U</u>	0.0794	0.249	07/11/2023 19:56	WG2090952
(T) Barium-133	94.2			30.0-143	07/11/2023 19:56	WG2090952

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

G270

ATTACHMENT B.

SAMPLE RESULTS - 12

Collected date/time: 06/08/23 08:52

845 QUARTERLY REPORT - QUARTER 2, 2023

L1626083

COFFEEN POWER PLANT

ASH POND NO. 2

COFFEEN, IL

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	-1.16	<u>U</u>	0.371	0.726	07/14/2023 10:35	WG2090017
(T) Barium	74.0			30.0-143	07/14/2023 10:35	WG2090017
(T) Yttrium	79.6			30.0-136	07/14/2023 10:35	WG2090017

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.485	<u>J</u>	0.471	0.772	07/14/2023 10:35	WG2090952

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.485		0.290	0.263	07/11/2023 19:56	WG2090952
(T) Barium-133	88.3			30.0-143	07/11/2023 19:56	WG2090952

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.512	J	0.366	0.660	07/14/2023 10:35	WG2090017
(T) Barium	74.8			30.0-143	07/14/2023 10:35	WG2090017
(T) Yttrium	92.6			30.0-136	07/14/2023 10:35	WG2090017

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	1.01		0.488	0.742	07/14/2023 10:35	WG2090952

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.497		0.323	0.339	07/11/2023 19:56	WG2090952
(T) Barium-133	95.9			30.0-143	07/11/2023 19:56	WG2090952

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.435	J	0.410	0.741	07/14/2023 10:35	WG2090017
(T) Barium	70.6			30.0-143	07/14/2023 10:35	WG2090017
(T) Yttrium	86.9			30.0-136	07/14/2023 10:35	WG2090017

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.574	J	0.445	0.778	07/14/2023 10:35	WG2090952

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.140	J	0.173	0.238	07/11/2023 19:56	WG2090952
(T) Barium-133	91.2			30.0-143	07/11/2023 19:56	WG2090952

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

R201

ATTACHMENT B.

SAMPLE RESULTS - 15

845 QUARTERLY REPORT - QUARTER 2, 2023

L1626083

Collected date/time: 06/07/23 15:40
COFFEEN POWER PLANT
ASH POND NO. 2
COFFEEN, IL

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	1.14		0.416	0.719	07/14/2023 16:39	WG2090394
(T) Barium	66.6			30.0-143	07/14/2023 16:39	WG2090394
(T) Yttrium	116			30.0-136	07/14/2023 16:39	WG2090394

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	1.50		0.501	0.778	07/14/2023 16:39	WG2090952

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.360		0.279	0.297	07/11/2023 19:56	WG2090952
(T) Barium-133	84.3			30.0-143	07/11/2023 19:56	WG2090952

Method Blank (MB)
ASH POND NO. 2
COFFEEN, IL

(MB) R3949552-1 07/13/23 20:53

Analyte	MB Result pCi/l	MB Qualifier	MB Uncertainty + / -	MB MDA pCi/l
Radium-228	0.147	<u>U</u>	0.176	0.329
(T) Barium	80.6		80.6	
(T) Yttrium	104		104	

L1626083-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1626083-01 07/13/23 20:53 • (DUP) R3949552-5 07/13/23 20:53

Analyte	Original Result pCi/l	Original Uncertainty + / -	Original MDA pCi/l	DUP Result pCi/l	DUP Uncertainty + / -	DUP MDA pCi/l	Dilution	DUP RPD %	DUP RER	DUP Qualifier	DUP RPD Limits %	DUP RER Limit
Radium-228	0.187	0.415	0.777	-0.452	0.532	0.777	1	200	0.946	<u>U</u>	20	3
(T) Barium	81.4			69.6	69.6							
(T) Yttrium	105			114	114							

Laboratory Control Sample (LCS)

(LCS) R3949552-2 07/13/23 20:53

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-228	5.00	5.49	110	80.0-120	
(T) Barium			76.9		
(T) Yttrium			119		

L1624831-18 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1624831-18 07/13/23 20:53 • (MS) R3949552-3 07/13/23 20:53 • (MSD) R3949552-4 07/13/23 20:53

Analyte	Spike Amount pCi/l	Original Result pCi/l	MS Result pCi/l	MSD Result pCi/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	MS RER	RPD Limits %
Radium-228	16.7	0.226	21.7	18.5	129	109	1	70.0-130			16.0		20
(T) Barium		79.7			76.7	80.8							
(T) Yttrium		121			107	117							

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

COFFEEN POWER PLANT
 ASH POND NO. 2
 COFFEEN, IL

(MB) R3949806-1 07/14/23 16:39

Analyte	MB Result	MB Qualifier	MB Uncertainty	MB MDA
	pCi/l		+ / -	pCi/l
Radium-228	-0.0717	<u>U</u>	0.214	0.391
(T) Barium	75.2		75.2	
(T) Yttrium	103		103	

L1626087-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1626087-01 07/14/23 16:39 • (DUP) R3949806-5 07/14/23 16:39

Analyte	Original Result	Original Uncertainty	Original MDA	DUP Result	DUP Uncertainty	DUP MDA	Dilution	DUP RPD	DUP RER	DUP Qualifier	DUP RPD Limits	DUP RER Limit
	pCi/l	+ / -	pCi/l	pCi/l	+ / -	pCi/l		%			%	
Radium-228	0.0607	0.339	0.611	0.575	0.509	0.611	1	162	0.841	<u>J</u>	20	3
(T) Barium	75.6			73.0	73.0							
(T) Yttrium	99.0			106	106							

Laboratory Control Sample (LCS)

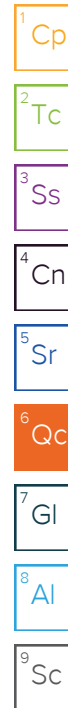
(LCS) R3949806-2 07/14/23 16:39

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	pCi/l	pCi/l	%	%	
Radium-228	5.00	5.82	116	80.0-120	
(T) Barium			78.0		
(T) Yttrium			95.3		

L1626083-15 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1626083-15 07/14/23 16:39 • (MS) R3949806-3 07/14/23 16:39 • (MSD) R3949806-4 07/14/23 16:39

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	MS RER	RPD Limits
	pCi/l	pCi/l	pCi/l	pCi/l	%	%		%			%		%
Radium-228	10.0	1.14	13.2	13.1	120	120	1	70.0-130			0.304		20
(T) Barium		66.6			75.7	76.3							
(T) Yttrium		116			116	116							



Method Blank (MB)
ASH POND NO. 2
COFFEE, IL

(MB) R3947945-1 07/10/23 21:49

Analyte	MB Result pCi/l	MB Qualifier	MB Uncertainty + / -	MB MDA pCi/l
Radium-226	0.00648	<u>U</u>	0.0284	0.0563
(T) Barium-133	98.6		98.6	

L1624825-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1624825-03 07/10/23 21:49 • (DUP) R3947945-5 07/10/23 21:49

Analyte	Original Result pCi/l	Original Uncertainty + / -	Original MDA pCi/l	DUP Result pCi/l	DUP Uncertainty + / -	DUP MDA pCi/l	Dilution	DUP RPD %	DUP RER	DUP Qualifier	DUP RPD Limits %	DUP RER Limit
Radium-226	1.08	0.405	0.264	1.13	0.413	0.264	1	5.17	0.0985		20	3
(T) Barium-133	88.8			75.1	75.1							

Laboratory Control Sample (LCS)

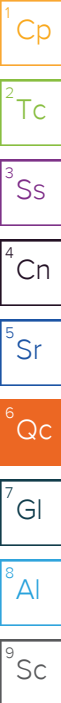
(LCS) R3947945-2 07/10/23 21:49

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-226	5.01	4.90	97.8	80.0-120	
(T) Barium-133			93.2		

L1624825-08 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1624825-08 07/10/23 21:49 • (MS) R3947945-3 07/10/23 21:49 • (MSD) R3947945-4 07/10/23 21:49

Analyte	Spike Amount pCi/l	Original Result pCi/l	MS Result pCi/l	MSD Result pCi/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	MS RER	RPD Limits %
Radium-226	20.0	0.351	16.6	19.0	81.1	93.4	1	75.0-125			13.9		20
(T) Barium-133		97.6			71.4	63.9							



Method Blank (MB)
ASH POND NO. 2
COFFEEN, IL

(MB) R3947847-1 07/11/23 15:40

Analyte	MB Result	MB Qualifier	MB Uncertainty	MB MDA
	pCi/l	+ / -	pCi/l	pCi/l
Radium-226	-0.00573	<u>U</u>	0.0205	0.0441
(T) Barium-133	105		105	

L1626086-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1626086-03 07/11/23 19:56 • (DUP) R3947847-5 07/11/23 19:56

Analyte	Original Result	Original Uncertainty	Original MDA	DUP Result	DUP Uncertainty	DUP MDA	Dilution	DUP RPD	DUP RER	DUP Qualifier	DUP RPD Limits	DUP RER Limit
	pCi/l	+ / -	pCi/l	pCi/l	+ / -	pCi/l		%			%	
Radium-226	0.0742	0.185	0.305	0.0779	0.108	0.305	1	4.84	0.0172	<u>J</u>	20	3
(T) Barium-133	96.5			95.9	95.9							

Laboratory Control Sample (LCS)

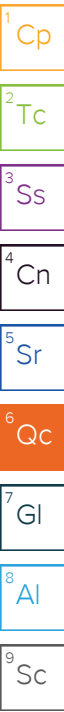
(LCS) R3947847-2 07/11/23 19:56

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	pCi/l	pCi/l	%	%	
Radium-226	5.01	4.42	88.1	80.0-120	
(T) Barium-133			82.9		

L1626083-11 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1626083-11 07/11/23 19:56 • (MS) R3947847-3 07/11/23 19:56 • (MSD) R3947847-4 07/11/23 19:56

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	MS RER	RPD Limits
	pCi/l	pCi/l	pCi/l	pCi/l	%	%		%			%		%
Radium-226	20.0	-0.0479	18.2	18.3	91.2	91.5	1	75.0-125			0.274		20
(T) Barium-133		94.2			101	103							



Guide to Reading and Understanding Your Laboratory Report

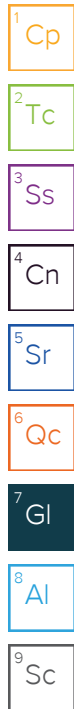
The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDA	Minimum Detectable Activity.
Rec.	Recovery.
RER	Replicate Error Ratio.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(T)	Tracer - A radioisotope of known concentration added to a solution of chemically equivalent radioisotopes at a known concentration to assist in monitoring the yield of the chemical separation.
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.
U	Below Detectable Limits: Indicates that the analyte was not detected.



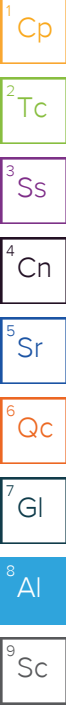
Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey-NELAP	TN002
California	2932	New Mexico ¹	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina ¹	DW21704
Georgia	NELAP	North Carolina ³	41
Georgia ¹	923	North Dakota	R-140
Idaho	TN00003	Ohio-VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky ^{1,6}	KY90010	South Carolina	84004002
Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ^{1,4}	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas ⁵	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 ⁵	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA-Crypto	TN00003		

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.





Ship to :
 Pace Analytical Services, LLC
 1638 Roseytown Rd - Suites 2,3,4
 Greensburg, PA 15601
 (724)850-5600

INTER LABORATORY WORK ORDER # GF01733

(To be complete by sending lab)

Sending Project No:	GF01733
Receiving Project No:	
Check Box for Consolidated Invoice:	<input type="checkbox"/>
Date Prepared:	6/12/2023
REQUESTED COMPLETION DATE:	7/3/2023

LN21053

Sending Region	IR72-IL/MO	Sending Project Mgr.	Gail Schindler
Receiving Region	MT JULIET	External Client	Vistra - Coffeen
State of Sample Origin	IL	QC Deliverable	STD Report

All questions should be addressed to sending project manager.

Requested Reportable Units _____

Report Wet or Dry Weight? _____

Cert Needed: _____ IL

WORK REQUESTED						
Method Description	Container Type	Quantity of	Preservative	Quantity of	Unit Price	Amount
Radium 226/228		15		15	\$229.30	\$3,439.50
		1		1	\$0.00	\$0.00
		1		1		\$0.00
TOTAL						\$3,439.50

Special Requirements: _____

Report as 226, 228 & combined 226/228. Include QC summary

Receiving Region Department	Actcg. Code	Totals from above		Revenue Allocation	
		Receiving Region (80%)	Client Services Dept.		
radiological	38	\$3,439.50	\$2,751.60	\$687.90	
* Custom Revenue Allocation		TOTAL	\$2,751.60	\$687.90	

FOR ANALYTICAL WORK COMPLETED THIS SECTION ALSO

Return Samples to Sending Region:

Yes No

CONFIRMATION OF WORK COMPLETED

Date Completed: _____ Receiving Project Manager: _____

Original sent to the receiving lab - Copy kept at the sending lab.
 When work completed: Original sent to the ABM at the receiving laboratory. Copies are made to incorporate as needed.

Tracking Numbers	GRM Temperature
6319 6000 4262	20.6±0=20.6
" " 4332	20.3±0=20.3
" " 4398	20.2±0=20.2
" " 4343	20.7±0=20.7
" " 4284	20.5±0=20.5

U1626083

LANT

ANALYTICAL REPORT

July 19, 2023

Pace IR - Peoria, IL

Sample Delivery Group: L1626087
Samples Received: 06/14/2023
Project Number: GF01900
Description: Vistra-Coffeen
Site: 001
Report To: Gail Schindler
2231 W. Altorfer Drive
Peoria, IL 61615

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Entire Report Reviewed By:
















Haley Torrence
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

Pace Analytical National

12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

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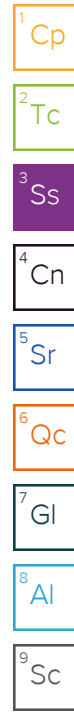
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10	10	
11	11	
12	12	
13	13	

SAMPLE SUMMARY

G206 L1626087-01 Non-Potable Water

Collected by
 Collected date/time
 Received date/time
 06/09/23 13:20 06/14/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2090394	1	07/06/23 17:46	07/14/23 16:39	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2091007	1	07/10/23 16:29	07/14/23 16:39	SNR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2091007	1	07/10/23 16:29	07/12/23 09:41	RGT	Mt. Juliet, TN



G206 DUP L1626087-02 Non-Potable Water

Collected by
 Collected date/time
 Received date/time
 06/09/23 13:20 06/14/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2090394	1	07/06/23 17:46	07/14/23 16:39	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2091007	1	07/10/23 16:29	07/14/23 16:39	SNR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2091007	1	07/10/23 16:29	07/12/23 09:41	RGT	Mt. Juliet, TN

G206D L1626087-03 Non-Potable Water

Collected by
 Collected date/time
 Received date/time
 06/09/23 12:29 06/14/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2090394	1	07/06/23 17:46	07/14/23 16:39	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2091007	1	07/10/23 16:29	07/14/23 16:39	SNR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2091007	1	07/10/23 16:29	07/12/23 09:41	RGT	Mt. Juliet, TN

G209 L1626087-04 Non-Potable Water

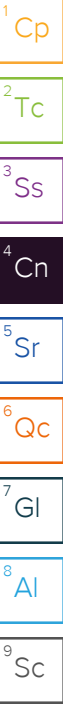
Collected by
 Collected date/time
 Received date/time
 06/09/23 09:44 06/14/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2090394	1	07/06/23 17:46	07/14/23 16:39	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2091007	1	07/10/23 16:29	07/14/23 16:39	SNR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2091007	1	07/10/23 16:29	07/12/23 09:41	RGT	Mt. Juliet, TN

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Haley Torrence
Project Manager



Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.0607	<u>U</u>	0.339	0.611	07/14/2023 16:39	WG2090394
(T) Barium	75.6			30.0-143	07/14/2023 16:39	WG2090394
(T) Yttrium	99.0			30.0-136	07/14/2023 16:39	WG2090394

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.227	<u>U</u>	0.385	0.656	07/14/2023 16:39	WG2091007

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.166	<u>J</u>	0.182	0.240	07/12/2023 09:41	WG2091007
(T) Barium-133	92.5			30.0-143	07/12/2023 09:41	WG2091007

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	1.20		0.336	0.571	07/14/2023 16:39	WG2090394
(T) Barium	74.6			30.0-143	07/14/2023 16:39	WG2090394
(T) Yttrium	105			30.0-136	07/14/2023 16:39	WG2090394

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	1.79		0.519	0.704	07/14/2023 16:39	WG2091007

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.589		0.396	0.412	07/12/2023 09:41	WG2091007
(T) Barium-133	66.4			30.0-143	07/12/2023 09:41	WG2091007

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Collected date/time: 06/09/23 12:29
 COFFEEN POWER PLANT
 ASH POND NO. 2
 COFFEEN, IL

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.372	J	0.319	0.568	07/14/2023 16:39	WG2090394
(T) Barium	71.7			30.0-143	07/14/2023 16:39	WG2090394
(T) Yttrium	121			30.0-136	07/14/2023 16:39	WG2090394

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.701		0.380	0.591	07/14/2023 16:39	WG2091007

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.330		0.206	0.164	07/12/2023 09:41	WG2091007
(T) Barium-133	101			30.0-143	07/12/2023 09:41	WG2091007

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.0301	<u>U</u>	0.337	0.609	07/14/2023 16:39	WG2090394
(T) Barium	74.4			30.0-143	07/14/2023 16:39	WG2090394
(T) Yttrium	114			30.0-136	07/14/2023 16:39	WG2090394

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.292	<u>J</u>	0.407	0.665	07/14/2023 16:39	WG2091007

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.262	<u>J</u>	0.229	0.267	07/12/2023 09:41	WG2091007
(T) Barium-133	91.5			30.0-143	07/12/2023 09:41	WG2091007

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Method Blank (MB)
ASH POND NO. 2
COFFEE, IL

(MB) R3949806-1 07/14/23 16:39

Analyte	MB Result pCi/l	MB Qualifier	MB Uncertainty + / -	MB MDA pCi/l
Radium-228	-0.0717	<u>U</u>	0.214	0.391
(T) Barium	75.2		75.2	
(T) Yttrium	103		103	

L1626087-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1626087-01 07/14/23 16:39 • (DUP) R3949806-5 07/14/23 16:39

Analyte	Original Result pCi/l	Original Uncertainty + / -	Original MDA pCi/l	DUP Result pCi/l	DUP Uncertainty + / -	DUP MDA pCi/l	Dilution	DUP RPD %	DUP RER	DUP Qualifier	DUP RPD Limits %	DUP RER Limit
Radium-228	0.0607	0.339	0.611	0.575	0.509	0.611	1	162	0.841	<u>J</u>	20	3
(T) Barium	75.6			73.0	73.0							
(T) Yttrium	99.0			106	106							

Laboratory Control Sample (LCS)

(LCS) R3949806-2 07/14/23 16:39

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-228	5.00	5.82	116	80.0-120	
(T) Barium			78.0		
(T) Yttrium			95.3		

L1626083-15 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1626083-15 07/14/23 16:39 • (MS) R3949806-3 07/14/23 16:39 • (MSD) R3949806-4 07/14/23 16:39

Analyte	Spike Amount pCi/l	Original Result pCi/l	MS Result pCi/l	MSD Result pCi/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	MS RER	RPD Limits %
Radium-228	10.0	1.14	13.2	13.1	120	120	1	70.0-130			0.304		20
(T) Barium		66.6			75.7	76.3							
(T) Yttrium		116			116	116							

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)
ASH POND NO. 2
COFFEEN, IL

(MB) R3947927-1 07/12/23 09:41

Analyte	MB Result pCi/l	MB Qualifier	MB Uncertainty + / -	MB MDA pCi/l
Radium-226	0.0193	<u>U</u>	0.0480	0.0791
(T) Barium-133	99.3		99.3	

L1626090-11 Original Sample (OS) • Duplicate (DUP)

(OS) L1626090-11 07/12/23 09:42 • (DUP) R3947927-5 07/12/23 09:41

Analyte	Original Result pCi/l	Original Uncertainty + / -	Original MDA pCi/l	DUP Result pCi/l	DUP Uncertainty + / -	DUP MDA pCi/l	Dilution	DUP RPD %	DUP RER	DUP Qualifier	DUP RPD Limits %	DUP RER Limit
Radium-226	0.147	0.146	0.169	0.00608	0.205	0.169	1	184	0.560	<u>U</u>	20	3
(T) Barium-133	106			98.7	98.7							

Laboratory Control Sample (LCS)

(LCS) R3947927-2 07/12/23 09:41

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-226	5.01	4.58	91.3	80.0-120	
(T) Barium-133			103		

L1626086-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1626086-07 07/12/23 09:41 • (MS) R3947927-3 07/12/23 09:41 • (MSD) R3947927-4 07/12/23 09:41

Analyte	Spike Amount pCi/l	Original Result pCi/l	MS Result pCi/l	MSD Result pCi/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	MS RER	RPD Limits %
Radium-226	20.0	0.376	18.6	19.0	91.2	93.3	1	75.0-125			2.23		20
(T) Barium-133		93.7			94.0	93.5							



Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

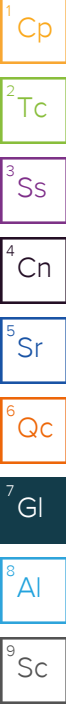
Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDA	Minimum Detectable Activity.
Rec.	Recovery.
RER	Replicate Error Ratio.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(T)	Tracer - A radioisotope of known concentration added to a solution of chemically equivalent radioisotopes at a known concentration to assist in monitoring the yield of the chemical separation.
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier Description

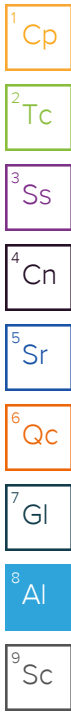
J	The identification of the analyte is acceptable; the reported value is an estimate.
U	Below Detectable Limits: Indicates that the analyte was not detected.



ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey-NELAP	TN002
California	2932	New Mexico ¹	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina ¹	DW21704
Georgia	NELAP	North Carolina ³	41
Georgia ¹	923	North Dakota	R-140
Idaho	TN00003	Ohio-VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky ^{1,6}	KY90010	South Carolina	84004002
Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ^{1,4}	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas ⁵	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 ⁵	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA-Crypto	TN00003		



¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

Tracking Numbers	GRM Temperature
6319 6000 4262	20.6±0=20.6
" " 4332	20.3±0=20.3
" " 4398	20.2±0=20.2
" " 4343	20.7±0=20.7
" " 4284	20.5±0=20.5

6000087

GFO0140
Vmw-6-1-23
6-1-23

CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: 1 of 7

Section A
Required Client Information:
Company: Visira Corp
Address: 13498 E. 900th St
Email To: Brian.Voelker@VisiraCorp.com
Phone: (217) 753-9811 Fax:
Requested Due Date/TAT: 10 day

Section B
Required Project Information:
Report To: Brian Voelker
Copy To: Jason Stuckey
Purchase Order No.:
Project Name:
Project Number: 2285

Section C
Invoice Information:
Attention: Jason Stuckey
Company Name: Visira Corp
Address: see Section A
Quote Reference:
Project Manager:
Profile #:

REGULATORY AGENCY
NPDES GROUND WATER DRINKING WATER
UST RCRA OTHER
Site Location: IL
STATE:

ITEM #	Section D Required Client Information SAMPLE ID (A-Z, 0-9, /, -) Sample IDs MUST BE UNIQUE	Valid Matrix Codes MATRIX CODE DRINKING WATER DW WASTE WATER WW WATER PRODUCT P SOIL/SOLID SL OIL OL PIPE WP OTHER OT TISSUE TS	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED DATE TIME	# OF CONTAINERS	Preservatives Unpreserved H ₂ SO ₄ HNO ₃ HCl NaOH Na ₂ S ₂ O ₃ Methanol Other	Requested Analysis Filtered (Y/N)	Project No./ Lab I.D.	Residual Chlorine (Y/N)	SAMPLE CONDITIONS				
											Temp in °C	Received on	Sealed Cooler (Y/N)	Samples Intact (Y/N)	
1	GAIL		G	G	6/1/23 1300	6		Y	COF_257_101						
2	G11		G	G	6/1/23 1345	8			COF_257_102						
3	G310		G	G	6/1/23 1412	13			COF_257_103						
4	G312		G	G	6/1/23 1401	13			COF_845_101						
5	G707A		G	G	6/1/23 207	15			COF_845_102						
6	G277		G	G	6/1/23 1037	15			COF_845_103						
7	G11 GUP		G	G	6/1/23 1345	4			COF_845_104						
8									COF_257_104						
9									COF_257_103						
10									COF_257_102						
11									COF_845_104						
12									COF_845_103						
13									COF_845_102						
14									COF_845_101						
15									COF_257_104						
16									COF_257_103						

ADDITIONAL COMMENTS
COF-23Q2 Rev 1

RELINQUISHED BY / AFFILIATION: Bruce Blum DATE: 6/1/23 TIME: 9:56 AM

ACCEPTED BY / AFFILIATION: Jason Stuckey DATE: 6/1/23 TIME: 6:45 AM

SAMPLER NAME AND SIGNATURE: Bruce Blum PRINT Name of SAMPLER: Bruce Blum
SIGNATURE of SAMPLER: [Signature] DATE Signed (MM/DD/YY): 6/1/23

Temp in °C: 24.2 Received on: 6/1/23 Sealed Cooler (Y/N): Y Samples Intact (Y/N): Y

6501342
VMS 6-7-23

Page: 3 of 7

Section A
Required Client Information:
Company: **Visira Corp**
Address: **13498 E. 900th-St**
Email To: **Brian.Voelker@VisiraCorp.com**
Phone: **(217) 753-8911** Fax:
Requested Due Date/TAT: **10 day**

Section B
Required Project Information:
Report To: **Brian Voelker**
Copy To: **Jason Stuckey**
Purchase Order No.:
Project Name:
Project Number: **2285**

Section C
Invoice Information:
Attention: **Jason Stuckey**
Company Name: **Visira Corp**
Address: **see Section A**
Quota Reference:
Project Manager:
Profile #:

REGULATORY AGENCY
NPDES **GROUND WATER** DRINKING WATER
UST **RCRA** OTHER

Site Location **IL**
STATE:

ITEM #	Section D Required Client Information	Valid Matrix Codes MATRIX CODE DW WW P SL OL WP AR OT TS	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		DATE	TIME	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	Requested Analysis Filtered (Y/N)	Project No./ Lab I.D.
					DATE	TIME									
1	6102		W	G	6/6/23	1411	6/6/23	1351	6/7/23	1351	Jason Stuckey	6/7/23	1351	COF_257_101	COF_257_101
2	R104		W	G	6/6/23	1519	6/6/23	1702	6/7/23	1702	Jason Stuckey	6/7/23	1702	COF_257_102	COF_257_102
3	6105		W	G	6/6/23	1626	6/6/23	1702	6/7/23	1702	Jason Stuckey	6/7/23	1702	COF_257_103	COF_257_103
4	6301		W	G	6/6/23	1638	6/6/23	1702	6/7/23	1702	Jason Stuckey	6/7/23	1702	COF_845_104	COF_845_104
5	6313		W	G	6/6/23	1515	6/6/23	1702	6/7/23	1702	Jason Stuckey	6/7/23	1702	COF_845_105	COF_845_105
6	6313 Dup		W	G	6/6/23	1515	6/6/23	1702	6/7/23	1702	Jason Stuckey	6/7/23	1702	COF_845_106	COF_845_106
7	6402		W	G	6/6/23	1605	6/6/23	1702	6/7/23	1702	Jason Stuckey	6/7/23	1702	COF_845_107	COF_845_107
8															
9															
10															
11															
12															
13															
14															
15															
16															

ADDITIONAL COMMENTS
COF-23Q2 Rev 1

RELINQUISHED BY / AFFILIATION: *[Signature]*
DATE: 6/7/23
TIME: 1351

SAMPLER NAME AND SIGNATURE: *[Signature]*
DATE SIGNED (MM/DD/YYYY): 6/7/23
TIME SIGNED: 1702

PRINT Name of SAMPLER: *[Signature]*
SIGNATURE of SAMPLER: *[Signature]*

DATE SIGNED (MM/DD/YYYY): 06/06/23

Temp in °C: 4.1

Received on Ice (Y/N): Y

Custody Sealed Cooler (Y/N): N

Samples Intact (Y/N): Y

JFO1342
Vmw 6-7-23

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:
Company: **Vistra Corp**
Address: **13498 E. 900th St**
Email To: **Brian.Voelker@VistraCorp.com**
Phone: **(217) 753-8911** Fax:

Section B
Required Project Information:
Report To: **Brian Voelker**
Copy To: **Jason Stuckey**
Purchase Order No.:
Project Name:
Project Number: **2285**
Requested Due Date/TAT: **10 day**

Section C
Invoice Information:
Attention: **Jason Stuckey**
Company Name: **Vistra Corp**
Address: **see Section A**
Circle Reference:
Project Manager:
Profile #:

Page: **4** of **7**

COFFEEN POWER PLANT
ASH POND NO. 2
COFFEEN, IL

REGULATORY AGENCY
NPDES
GROUND WATER
RCRA
DRINKING WATER
OTHER

Site Location
STATE: **IL**

ITEM #	Section D Required Client Information	Valid Matrix Codes MATRIX CODE DRINKING WATER DW WASTE WATER WW WATER PRODUCT SOIL OK WIFE AIR OTHER TISSUE	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		# OF CONTAINERS	Preservatives							Analysis Test Y/N	Requested Analysis Filtered (Y/N)	Project No./ Lab I.D.		
					DATE	TIME		Unpreserved	H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₅	Methanol				Other	
1	G315		WT G		6/7/23	1002	13	X	X	X									
2	G403		WT G		6/7/23	1125	14	X	X	X									
3	G404		WT G		6/7/23	1251	14	X	X	X									
4	L201		WT G		6/7/23	1329	21	X	X	X	X	X							
5	G1001		WT G		6/7/23	1024	13	X	X	X									
6	G401		WT G		6/7/23	1158	14	X	X	X									
7	X201		WT G		6/7/23	1236	12	X	X	X									
8	G278		WT G		6/7/23	1338	6	X	X	X									
9	G208		WT G		6/7/23	1352	6	X	X	X									
10	G106		WT G		6/7/23	1215	7	X	X	X									
11	G126		WT G		6/7/23	1100	4	X	X	X									
12	G155		WT G		6/7/23	1008	5	X	X	X									
13																			
14																			
15																			
16																			

ADDITIONAL COMMENTS
COF-23Q2 Rev 1

RELINQUISHED BY / AFFILIATION: *Handwritten* DATE: **6/12/23** TIME: **17:01**

ACCEPTED BY / AFFILIATION: *Handwritten* DATE: **6/23/23** TIME: **17:02**

SAMPLER NAME AND SIGNATURE: *Handwritten* PRINT Name of SAMPLER: **KYLE LANE** DATE Signed (MM/DD/YY): **6/7/23**

SIGNATURE of SAMPLER: *Handwritten* DATE Signed (MM/DD/YY): **6/7/23**

Temp in °C: **41** Received on: **6-23-23** Sailed Cooler (Y/N): **N** Intact (Y/N): **Y**

**ATTACHMENT C
COMPARISON OF STATISTICAL RESULTS TO BACKGROUND
QUARTER 2, 2023**

ATTACHMENT C.
COMPARISON OF STATISTICAL RESULTS TO BACKGROUND - QUARTER 2, 2023
845 QUARTERLY REPORT
COFFEEN POWER PLANT
ASH POND NO. 2
COFFEEN, IL

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	Background
G1001	LCU	E001	Antimony, total	mg/L	02/15/23 - 06/07/23	2	100	Most recent sample	0.003	0.003
G1001	LCU	E001	Arsenic, total	mg/L	02/15/23 - 06/07/23	2	50	Most recent sample	0.001	0.00660
G1001	LCU	E001	Barium, total	mg/L	02/15/23 - 06/07/23	2	0	Most recent sample	0.071	0.140
G1001	LCU	E001	Beryllium, total	mg/L	02/15/23 - 06/07/23	2	50	Most recent sample	0.001	0.001
G1001	LCU	E001	Boron, total	mg/L	05/12/21 - 06/07/23	3	0	Most recent sample	0.95	0.0290
G1001	LCU	E001	Cadmium, total	mg/L	02/15/23 - 06/07/23	2	100	Most recent sample	0.001	0.001
G1001	LCU	E001	Chloride, total	mg/L	05/12/21 - 06/07/23	3	0	Most recent sample	15	75.0
G1001	LCU	E001	Chromium, total	mg/L	02/15/23 - 06/07/23	2	50	Most recent sample	0.004	0.0190
G1001	LCU	E001	Cobalt, total	mg/L	05/12/21 - 06/07/23	3	67	Most recent sample	0.002	0.00590
G1001	LCU	E001	Fluoride, total	mg/L	02/15/23 - 06/07/23	2	100	Most recent sample	0.25	0.513
G1001	LCU	E001	Lead, total	mg/L	02/15/23 - 06/07/23	2	50	Most recent sample	0.001	0.0120
G1001	LCU	E001	Lithium, total	mg/L	05/12/21 - 06/07/23	3	33	Most recent sample	0.02	0.0190
G1001	LCU	E001	Mercury, total	mg/L	02/15/23 - 06/07/23	2	100	Most recent sample	0.0002	0.0002
G1001	LCU	E001	Molybdenum, total	mg/L	02/15/23 - 06/07/23	2	0	Most recent sample	0.0079	0.00450
G1001	LCU	E001	pH (field)	SU	02/15/23 - 06/07/23	2	0	Most recent sample	7.0/7.0	6.6/7.5
G1001	LCU	E001	Radium 226 + Radium 228, total	pCi/L	02/15/23 - 06/07/23	2	0	Most recent sample	0.917	1.89
G1001	LCU	E001	Selenium, total	mg/L	02/15/23 - 06/07/23	2	50	Most recent sample	0.001	0.00480
G1001	LCU	E001	Sulfate, total	mg/L	05/12/21 - 06/07/23	3	0	Most recent sample	180	370
G1001	LCU	E001	Thallium, total	mg/L	02/15/23 - 06/07/23	2	100	Most recent sample	0.001	0.001
G1001	LCU	E001	Total Dissolved Solids	mg/L	02/15/23 - 06/07/23	2	0	Most recent sample	830	840
G401	UA	E001	Antimony, total	mg/L	11/21/15 - 06/07/23	22	100	All ND - Last	0.003	0.003
G401	UA	E001	Arsenic, total	mg/L	11/21/15 - 06/07/23	25	52	CB around T-S line	-0.019	0.00660
G401	UA	E001	Barium, total	mg/L	11/21/15 - 06/07/23	25	0	CB around T-S line	-0.191	0.140
G401	UA	E001	Beryllium, total	mg/L	11/21/15 - 06/07/23	24	79	CI around median	0.001	0.001
G401	UA	E001	Boron, total	mg/L	11/21/15 - 06/07/23	26	0	CI around median	3.5	0.0290
G401	UA	E001	Cadmium, total	mg/L	11/21/15 - 06/07/23	25	64	CI around median	0.001	0.001
G401	UA	E001	Chloride, total	mg/L	11/21/15 - 06/07/23	26	4	CI around geomean	3.02	75.0

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Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	Background
G401	UA	E001	Chromium, total	mg/L	11/21/15 - 06/07/23	25	64	CI around median	0.004	0.0190
G401	UA	E001	Cobalt, total	mg/L	11/21/15 - 06/07/23	25	0	CB around linear reg	0.0629	0.00590
G401	UA	E001	Fluoride, total	mg/L	11/21/15 - 06/07/23	26	96	CI around median	0.25	0.513
G401	UA	E001	Lead, total	mg/L	11/21/15 - 06/07/23	24	62	CB around T-S line	-0.027	0.0120
G401	UA	E001	Lithium, total	mg/L	11/21/15 - 06/07/23	27	4	CB around T-S line	-0.0148	0.0190
G401	UA	E001	Mercury, total	mg/L	11/21/15 - 06/07/23	24	79	CI around median	0.0002	0.0002
G401	UA	E001	Molybdenum, total	mg/L	11/21/15 - 06/07/23	25	68	CI around median	0.001	0.00450
G401	UA	E001	pH (field)	SU	11/21/15 - 06/07/23	28	0	CI around mean	5.9/6.1	6.6/7.5
G401	UA	E001	Radium 226 + Radium 228, total	pCi/L	11/21/15 - 06/07/23	25	0	CI around median	0.694	1.89
G401	UA	E001	Selenium, total	mg/L	11/21/15 - 06/07/23	25	60	CB around T-S line	-0.00172	0.00480
G401	UA	E001	Sulfate, total	mg/L	11/21/15 - 06/07/23	26	0	CI around median	2,000	370
G401	UA	E001	Thallium, total	mg/L	11/21/15 - 06/07/23	22	100	All ND - Last	0.001	0.001
G401	UA	E001	Total Dissolved Solids	mg/L	11/21/15 - 06/07/23	26	0	CI around median	2,800	840
G402	UA	E001	Antimony, total	mg/L	11/21/15 - 06/06/23	22	100	All ND - Last	0.003	0.003
G402	UA	E001	Arsenic, total	mg/L	11/21/15 - 06/06/23	25	0	CB around linear reg	-0.00557	0.00660
G402	UA	E001	Barium, total	mg/L	11/21/15 - 06/06/23	25	0	CB around linear reg	-0.00357	0.140
G402	UA	E001	Beryllium, total	mg/L	11/21/15 - 06/06/23	24	100	All ND - Last	0.001	0.001
G402	UA	E001	Boron, total	mg/L	11/21/15 - 06/06/23	26	0	CB around linear reg	4.43	0.0290
G402	UA	E001	Cadmium, total	mg/L	11/21/15 - 06/06/23	25	96	Most recent sample	0.001	0.001
G402	UA	E001	Chloride, total	mg/L	11/21/15 - 06/06/23	26	15	CI around mean	1.58	75.0
G402	UA	E001	Chromium, total	mg/L	11/21/15 - 06/06/23	25	48	CB around linear reg	-0.00421	0.0190
G402	UA	E001	Cobalt, total	mg/L	11/21/15 - 06/06/23	25	24	CB around linear reg	-0.00293	0.00590
G402	UA	E001	Fluoride, total	mg/L	11/21/15 - 06/06/23	26	15	CI around mean	0.295	0.513
G402	UA	E001	Lead, total	mg/L	11/21/15 - 06/06/23	24	29	CB around linear reg	-0.00445	0.0120
G402	UA	E001	Lithium, total	mg/L	11/21/15 - 06/06/23	25	4	CB around linear reg	0.0103	0.0190
G402	UA	E001	Mercury, total	mg/L	11/21/15 - 06/06/23	24	100	All ND - Last	0.0002	0.0002
G402	UA	E001	Molybdenum, total	mg/L	11/21/15 - 06/06/23	25	0	CB around linear reg	0.000959	0.00450

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COFFEEN, IL

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	Background
G402	UA	E001	pH (field)	SU	11/21/15 - 06/06/23	26	0	CI around mean	6.7/6.8	6.6/7.5
G402	UA	E001	Radium 226 + Radium 228, total	pCi/L	11/21/15 - 06/06/23	25	0	CI around median	0.522	1.89
G402	UA	E001	Selenium, total	mg/L	11/21/15 - 06/06/23	25	76	CB around T-S line	0.000296	0.00480
G402	UA	E001	Sulfate, total	mg/L	11/21/15 - 06/06/23	26	0	CB around T-S line	442	370
G402	UA	E001	Thallium, total	mg/L	11/21/15 - 06/06/23	22	100	All ND - Last	0.001	0.001
G402	UA	E001	Total Dissolved Solids	mg/L	11/21/15 - 06/06/23	26	0	CB around linear reg	1,310	840
G403	UA	E001	Antimony, total	mg/L	11/23/15 - 06/07/23	22	100	All ND - Last	0.003	0.003
G403	UA	E001	Arsenic, total	mg/L	11/23/15 - 06/07/23	25	56	CB around T-S line	0.000103	0.00660
G403	UA	E001	Barium, total	mg/L	11/23/15 - 06/07/23	25	0	CB around T-S line	0.0758	0.140
G403	UA	E001	Beryllium, total	mg/L	11/23/15 - 06/07/23	24	100	All ND - Last	0.001	0.001
G403	UA	E001	Boron, total	mg/L	11/23/15 - 06/07/23	26	19	CI around geomean	0.0154	0.0290
G403	UA	E001	Cadmium, total	mg/L	11/23/15 - 06/07/23	25	100	All ND - Last	0.001	0.001
G403	UA	E001	Chloride, total	mg/L	11/23/15 - 06/07/23	26	0	CB around linear reg	4.15	75.0
G403	UA	E001	Chromium, total	mg/L	11/23/15 - 06/07/23	25	92	CI around median	0.004	0.0190
G403	UA	E001	Cobalt, total	mg/L	11/23/15 - 06/07/23	25	60	CI around median	0.002	0.00590
G403	UA	E001	Fluoride, total	mg/L	11/23/15 - 06/07/23	26	12	CB around T-S line	0.187	0.513
G403	UA	E001	Lead, total	mg/L	11/23/15 - 06/07/23	24	88	CI around median	0.001	0.0120
G403	UA	E001	Lithium, total	mg/L	11/23/15 - 06/07/23	25	100	All ND - Last	0.02	0.0190
G403	UA	E001	Mercury, total	mg/L	11/23/15 - 06/07/23	24	100	All ND - Last	0.0002	0.0002
G403	UA	E001	Molybdenum, total	mg/L	11/23/15 - 06/07/23	25	72	CB around T-S line	0.000926	0.00450
G403	UA	E001	pH (field)	SU	11/23/15 - 06/07/23	26	0	CI around mean	6.8/7.0	6.6/7.5
G403	UA	E001	Radium 226 + Radium 228, total	pCi/L	11/23/15 - 06/07/23	25	0	CI around mean	0.583	1.89
G403	UA	E001	Selenium, total	mg/L	11/23/15 - 06/07/23	25	96	CI around median	0.001	0.00480
G403	UA	E001	Sulfate, total	mg/L	11/23/15 - 06/07/23	26	0	CB around T-S line	49.1	370
G403	UA	E001	Thallium, total	mg/L	11/23/15 - 06/07/23	22	100	All ND - Last	0.001	0.001
G403	UA	E001	Total Dissolved Solids	mg/L	11/23/15 - 06/07/23	26	0	CB around linear reg	376	840
G404	UA	E001	Antimony, total	mg/L	11/21/15 - 06/07/23	22	100	All ND - Last	0.003	0.003

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845 QUARTERLY REPORT
COFFEEN POWER PLANT
ASH POND NO. 2
COFFEEN, IL

Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	Background
G404	UA	E001	Arsenic, total	mg/L	11/21/15 - 06/07/23	25	88	CI around median	0.001	0.00660
G404	UA	E001	Barium, total	mg/L	11/21/15 - 06/07/23	25	0	CB around linear reg	0.0188	0.140
G404	UA	E001	Beryllium, total	mg/L	11/21/15 - 06/07/23	24	100	All ND - Last	0.001	0.001
G404	UA	E001	Boron, total	mg/L	11/21/15 - 06/07/23	26	0	CB around linear reg	5.52	0.0290
G404	UA	E001	Cadmium, total	mg/L	11/21/15 - 06/07/23	25	100	All ND - Last	0.001	0.001
G404	UA	E001	Chloride, total	mg/L	11/21/15 - 06/07/23	26	0	CB around linear reg	133	75.0
G404	UA	E001	Chromium, total	mg/L	11/21/15 - 06/07/23	25	100	All ND - Last	0.004	0.0190
G404	UA	E001	Cobalt, total	mg/L	11/21/15 - 06/07/23	25	96	CI around median	0.002	0.00590
G404	UA	E001	Fluoride, total	mg/L	11/21/15 - 06/07/23	26	82	CI around median	0.25	0.513
G404	UA	E001	Lead, total	mg/L	11/21/15 - 06/07/23	24	96	CI around median	0.001	0.0120
G404	UA	E001	Lithium, total	mg/L	11/21/15 - 06/07/23	25	88	CB around T-S line	0.0166	0.0190
G404	UA	E001	Mercury, total	mg/L	11/21/15 - 06/07/23	24	100	All ND - Last	0.0002	0.0002
G404	UA	E001	Molybdenum, total	mg/L	11/21/15 - 06/07/23	25	100	All ND - Last	0.001	0.00450
G404	UA	E001	pH (field)	SU	11/21/15 - 06/07/23	26	0	CB around linear reg	6.4/6.8	6.6/7.5
G404	UA	E001	Radium 226 + Radium 228, total	pCi/L	11/21/15 - 06/07/23	25	0	CI around mean	0.605	1.89
G404	UA	E001	Selenium, total	mg/L	11/21/15 - 06/07/23	25	100	All ND - Last	0.001	0.00480
G404	UA	E001	Sulfate, total	mg/L	11/21/15 - 06/07/23	26	0	CB around linear reg	422	370
G404	UA	E001	Thallium, total	mg/L	11/21/15 - 06/07/23	22	100	All ND - Last	0.001	0.001
G404	UA	E001	Total Dissolved Solids	mg/L	11/21/15 - 06/07/23	26	0	CB around linear reg	1,250	840
G405	UA	E001	Antimony, total	mg/L	11/21/15 - 06/06/23	22	100	All ND - Last	0.003	0.003
G405	UA	E001	Arsenic, total	mg/L	11/21/15 - 06/06/23	25	35	CB around T-S line	-0.00241	0.00660
G405	UA	E001	Barium, total	mg/L	11/21/15 - 06/06/23	25	0	CB around linear reg	0.00689	0.140
G405	UA	E001	Beryllium, total	mg/L	11/21/15 - 06/06/23	24	100	All ND - Last	0.001	0.001
G405	UA	E001	Boron, total	mg/L	11/21/15 - 06/06/23	26	0	CI around mean	9.19	0.0290
G405	UA	E001	Cadmium, total	mg/L	11/21/15 - 06/06/23	25	96	CI around median	0.001	0.001
G405	UA	E001	Chloride, total	mg/L	11/21/15 - 06/06/23	26	0	CB around T-S line	-2.09	75.0
G405	UA	E001	Chromium, total	mg/L	11/21/15 - 06/06/23	25	88	CI around median	0.004	0.0190

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Well ID	HSU	Event	Parameter	Units	Date Range	Sample Count	Percent ND	Statistical Calculation	Statistical Result	Background
G405	UA	E001	Cobalt, total	mg/L	11/21/15 - 06/06/23	25	73	CB around T-S line	0.00129	0.00590
G405	UA	E001	Fluoride, total	mg/L	11/21/15 - 06/06/23	26	11	CB around linear reg	0.208	0.513
G405	UA	E001	Lead, total	mg/L	11/21/15 - 06/06/23	24	48	CB around T-S line	-0.00135	0.0120
G405	UA	E001	Lithium, total	mg/L	11/21/15 - 06/06/23	25	96	CB around T-S line	0.01	0.0190
G405	UA	E001	Mercury, total	mg/L	11/21/15 - 06/06/23	24	100	All ND - Last	0.0002	0.0002
G405	UA	E001	Molybdenum, total	mg/L	11/21/15 - 06/06/23	25	38	CI around median	0.001	0.00450
G405	UA	E001	pH (field)	SU	11/21/15 - 06/06/23	26	0	CI around mean	6.8/7.0	6.6/7.5
G405	UA	E001	Radium 226 + Radium 228, total	pCi/L	11/21/15 - 06/06/23	25	0	CI around median	0.541	1.89
G405	UA	E001	Selenium, total	mg/L	11/21/15 - 06/06/23	25	88	CI around median	0.001	0.00480
G405	UA	E001	Sulfate, total	mg/L	11/21/15 - 06/06/23	26	0	CB around linear reg	412	370
G405	UA	E001	Thallium, total	mg/L	11/21/15 - 06/06/23	22	100	All ND - Last	0.001	0.001
G405	UA	E001	Total Dissolved Solids	mg/L	11/21/15 - 06/06/23	26	0	CI around mean	1,530	840
G406	UA	E001	Antimony, total	mg/L	10/14/20 - 05/31/23	11	100	All ND - Last	0.003	0.003
G406	UA	E001	Arsenic, total	mg/L	10/14/20 - 05/31/23	11	91	CI around median	0.001	0.00660
G406	UA	E001	Barium, total	mg/L	10/14/20 - 05/31/23	11	0	CI around median	0.012	0.140
G406	UA	E001	Beryllium, total	mg/L	10/14/20 - 05/31/23	11	100	All ND - Last	0.001	0.001
G406	UA	E001	Boron, total	mg/L	10/14/20 - 05/31/23	11	0	CI around median	1.4	0.0290
G406	UA	E001	Cadmium, total	mg/L	10/14/20 - 05/31/23	11	100	All ND - Last	0.001	0.001
G406	UA	E001	Chloride, total	mg/L	10/14/20 - 05/31/23	11	18	CI around mean	2.94	75.0
G406	UA	E001	Chromium, total	mg/L	10/14/20 - 05/31/23	11	91	CI around median	0.004	0.0190
G406	UA	E001	Cobalt, total	mg/L	10/14/20 - 05/31/23	11	100	All ND - Last	0.002	0.00590
G406	UA	E001	Fluoride, total	mg/L	10/14/20 - 05/31/23	11	18	CI around geomean	0.269	0.513
G406	UA	E001	Lead, total	mg/L	10/14/20 - 05/31/23	11	91	CI around median	0.001	0.0120
G406	UA	E001	Lithium, total	mg/L	10/14/20 - 05/31/23	11	100	All ND - Last	0.02	0.0190
G406	UA	E001	Mercury, total	mg/L	10/14/20 - 05/31/23	11	100	All ND - Last	0.0002	0.0002
G406	UA	E001	Molybdenum, total	mg/L	10/14/20 - 05/31/23	11	91	CI around median	0.001	0.00450
G406	UA	E001	pH (field)	SU	10/14/20 - 05/31/23	11	0	CI around mean	6.5/6.7	6.6/7.5

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G406	UA	E001	Radium 226 + Radium 228, total	pCi/L	10/14/20 - 05/31/23	11	0	CI around mean	0.184	1.89
G406	UA	E001	Selenium, total	mg/L	10/14/20 - 05/31/23	11	100	All ND - Last	0.001	0.00480
G406	UA	E001	Sulfate, total	mg/L	10/14/20 - 05/31/23	11	0	CI around median	450	370
G406	UA	E001	Thallium, total	mg/L	10/14/20 - 05/31/23	11	100	All ND - Last	0.001	0.001
G406	UA	E001	Total Dissolved Solids	mg/L	10/14/20 - 05/31/23	11	0	CI around mean	992	840
G407	UA	E001	Antimony, total	mg/L	10/14/20 - 05/31/23	11	100	All ND - Last	0.003	0.003
G407	UA	E001	Arsenic, total	mg/L	10/14/20 - 05/31/23	11	82	CI around median	0.001	0.00660
G407	UA	E001	Barium, total	mg/L	10/14/20 - 05/31/23	11	0	CI around median	0.012	0.140
G407	UA	E001	Beryllium, total	mg/L	10/14/20 - 05/31/23	11	100	All ND - Last	0.001	0.001
G407	UA	E001	Boron, total	mg/L	10/14/20 - 05/31/23	11	0	CI around mean	0.0718	0.0290
G407	UA	E001	Cadmium, total	mg/L	10/14/20 - 05/31/23	11	100	All ND - Last	0.001	0.001
G407	UA	E001	Chloride, total	mg/L	10/14/20 - 05/31/23	11	0	CI around mean	11.4	75.0
G407	UA	E001	Chromium, total	mg/L	10/14/20 - 05/31/23	11	82	CI around median	0.004	0.0190
G407	UA	E001	Cobalt, total	mg/L	10/14/20 - 05/31/23	11	91	CI around median	0.002	0.00590
G407	UA	E001	Fluoride, total	mg/L	10/14/20 - 05/31/23	11	27	CI around geomean	0.254	0.513
G407	UA	E001	Lead, total	mg/L	10/14/20 - 05/31/23	11	91	CI around median	0.001	0.0120
G407	UA	E001	Lithium, total	mg/L	10/14/20 - 05/31/23	11	0	CI around mean	0.0388	0.0190
G407	UA	E001	Mercury, total	mg/L	10/14/20 - 05/31/23	11	100	All ND - Last	0.0002	0.0002
G407	UA	E001	Molybdenum, total	mg/L	10/14/20 - 05/31/23	11	9	CI around median	0.0012	0.00450
G407	UA	E001	pH (field)	SU	10/14/20 - 05/31/23	11	0	CI around mean	6.5/6.7	6.6/7.5
G407	UA	E001	Radium 226 + Radium 228, total	pCi/L	10/14/20 - 05/31/23	11	0	CI around mean	0.103	1.89
G407	UA	E001	Selenium, total	mg/L	10/14/20 - 05/31/23	11	100	All ND - Last	0.001	0.00480
G407	UA	E001	Sulfate, total	mg/L	10/14/20 - 05/31/23	11	0	CI around median	440	370
G407	UA	E001	Thallium, total	mg/L	10/14/20 - 05/31/23	11	100	All ND - Last	0.001	0.001
G407	UA	E001	Total Dissolved Solids	mg/L	10/14/20 - 05/31/23	11	0	CI around mean	1,920	840

ATTACHMENT C.
COMPARISON OF STATISTICAL RESULTS TO BACKGROUND - QUARTER 2, 2023

845 QUARTERLY REPORT
COFFEEN POWER PLANT
ASH POND NO. 2
COFFEEN, IL

Notes:

Lower Confidence Limit (LCL) or Upper Confidence Limit (UCL) exceeded the statistical background value

HSU = hydrostratigraphic unit:

LCU = Lower Confining Unit

UA = Uppermost Aquifer

mg/L = milligrams per liter

ND = non-detect

pCi/L = picocuries per liter

SU = standard units

Sample Count = number of samples from Sampled Date Range used to calculate the Statistical Result

Statistical Calculation = method used to calculate the statistical result:

All ND - Last = All results were below the reporting limit, and the last determined reporting limit is shown

CB around T-S line = Confidence band around Thiel-Sen line

CB around linear reg = Confidence band around linear regression

CI around geomean = Confidence interval around the geometric mean

CI around mean = Confidence interval around the mean

CI around median = Confidence interval around the median

Most recent sample = Result for the most recently collected sample used due to insufficient data

Statistical Result = calculated in accordance with the Statistical Analysis Plan using constituent concentrations observed at each monitoring well during all sampling events within the specified date range
For pH, the values presented are the lower / upper limits of the background determination