



ERM

1968 Craig Road
Suite 100
St. Louis, Missouri
63146

T +1 314 733 4490
F +1 314 754 8121

erm.com

Illinois Environmental Protection Agency
BOW-Permits #15-CCR Coordinator
1021 North Grand Avenue East
P.O. Box 19276
Springfield, IL 62794-9276

DATE
14 October 2024

SUBJECT
Tenth Post-Closure Groundwater
Monitoring Report
Third Quarter 2024

REFERENCE
Grand Tower Energy Center
Closed Coal Combustion Residuals
Impoundment
1820 Power Plant Rd
Grand Tower, IL 62942
ERM Project No. 0599247

To Whom it May Concern:

Environmental Resources Management Inc. (ERM) is submitting this report which provides the results and findings of the Grand Tower Energy Center (GTEC) quarterly post-closure groundwater sampling and closed coal combustion residuals (CCR) impoundment inspection event conducted during the third quarter 2024 at the GTEC facility located at 1820 Power Plant Rd, Grand Tower, Illinois (the "Site"). The third quarter groundwater sampling event took place between 04 September and 06 September 2024, and the closed impoundment inspection event was conducted on 06 September 2024. A Site location map is provided in Figure 1.

The third quarter 2024 groundwater sampling event was performed in accordance with the post-closure groundwater monitoring program presented within the Grand Tower Operating Permit Application submitted to the Illinois Environmental Protection Administration (IEPA) on 28 October 2021, which was modified in accordance with the Consolidated IEPA Comments dated 17 March 2022. The purpose of the sampling event was to continue the initial five-year period of quarterly groundwater monitoring for the evaluation of the concentration and areal distribution of impacts related to the closed CCR impoundment in Site groundwater. The parameters detected in the groundwater are associated with the historical CCR impoundment, which was capped and closed in 2020. The quarterly results include a summary of field activities, laboratory analytical, and documentation of other associated Site activity, as necessary.

Third quarter 2024 site activities, performed in accordance with the proposed post-closure groundwater monitoring program, the results of which are summarized below, included:

- Inspection of the final cover system of the closed CCR impoundment.

- Inspection of the groundwater monitoring well array; and
- Groundwater monitoring activities.

QUARTERLY CLOSED CCR IMPOUNDMENT INSPECTION

During the third quarter of 2024, an inspection of the closed CCR impoundment cover system and associated features was completed, and the full quarterly inspection report can be found in Appendix A. The woody vegetation (up to 1" diameter) noted to be within the riprap on the north, west, and southern impoundment cap faces during 2022 was treated with herbicide during the first half of 2023. However, a limited amount of live woody vegetation growth continues to be observed within the riprap. The erosion noted above the riprap on the north, west, and southern impoundment cap faces during 2022 and 2023 has increased from 10-inches deep to 13-inches deep in the deepest locations. These erosional features will be addressed prior to the next sampling event. No significant degradation or issues were noted associated with the overall closed CCR impoundment cover system.

QUARTERLY MONITORING WELL INSPECTION AND GAUGING

During the third quarter of 2024, monitoring well inspections were conducted. The monitoring well protectors and casings were inspected for damage and/or signs of settling that might impact the integrity of the surface seals. The inspection tasks also included gauging total depths as well as static groundwater elevations. Both measurements were referenced from the top of casing (TOC) at each of the Site monitoring wells. Total depth and groundwater level measurements were obtained from the monitoring wells using a water level meter with an accuracy of 0.01 foot. The quarterly monitoring well inspection forms can be found in Appendix B. Based upon these measurements, a shallow groundwater contour map for the Site was developed for the third quarter of 2024. The groundwater gradient is primarily from east to west towards the Mississippi River except during times of flooding events that may cause a reverse flow from west to east for a short period of time (Natural Resource Technology, Phase 1 Hydrogeologic Assessment Report, March 2013). Figure 2 shows monitoring well locations with a groundwater contour and groundwater gradient direction arrow(s), groundwater elevations at each monitoring well, and the Mississippi River elevation at the time of groundwater level gauging.

QUARTERLY GROUNDWATER MONITORING

The Groundwater Protection Standards (GWPS) for the Site are those provided in 35 IAC §845.600(a). Assessment of corrective measures began on 16 June 2022 with the commencement of the initial post-closure groundwater sampling event. During the third quarter 2024 sampling event, 12 monitoring wells (APW-01R, APW-02, APW-03, APW-04, APW-05R, APW-06D, APW-06S, APW-07, APW-08, APW-09, APW-10D, and APW-10S) were sampled. The monitoring wells were purged prior to sampling

using a submersible pump according to United States Environmental Protection Administration (USEPA) low flow purging and sampling procedures (“Low Stress Purging and Sampling Procedure for the Collection of Groundwater Samples from Monitoring Wells” revised September 19, 2017). The pump intake was placed within the screened interval of each monitoring well sampled and stabilization measurements were collected using a calibrated YSI ProDSS meter during purging activities for the collection of pH, specific conductivity, temperature, dissolved oxygen, and oxidation reduction potential (ORP) readings. Turbidity readings were also collected from each monitoring well using a Hach 2100Q Turbidimeter. Well purging continued until stabilization of each field parameter was achieved according to USEPA guidelines for low-flow sampling. Once the field parameters stabilized, the YSI meter was disconnected, and groundwater samples were collected for analysis using the same dedicated polyethylene tubing that was used to purge the well. Field parameter measurements collected during this sampling event were recorded on field data forms. Copies of the field data forms are included in Appendix C.

The groundwater samples collected were placed in laboratory-provided sample containers for analysis by Pace Analytical located in Mt. Juliet, TN which is an IEPA-approved laboratory. Samples were transported via FedEx under chain-of-custody procedures to the laboratory for analytical testing within laboratory provided coolers containing ice. The laboratory analytical reports for the third quarter 2024 sampling event are included in Appendices D & E.

In accordance with the 3 March 2022 draft comments received from the IEPA Groundwater Section associated with the post-closure groundwater monitoring program contained in the Operating Permit Application submitted to the IEPA on 28 October 2021, the IEPA evaluates the efficacy of corrective actions for closed CCR impoundments through the comparison of the groundwater analytical results to the GWPS contained in 35 IAC §845.600. Under 35 IAC §845.600, the following groundwater parameters are to be monitored:

- Antimony
- Arsenic
- Barium
- Beryllium
- Boron
- Cadmium
- Chloride
- Chromium
- Cobalt
- Fluoride
- Lead
- Lithium
- Mercury
- Molybdenum
- pH
- Selenium
- Sulfate
- Thallium
- TDS
- Radium 226/228
- Calcium
- Turbidity

GROUNDWATER ANALYTICAL RESULTS

The analytical results for the post-closure groundwater sampling event conducted during the third quarter 2024 are presented in Table 1. During the third quarter 2024 sampling event, the following analytes were detected in the listed wells above the GWPS:

- Arsenic: APW-02, APW-06D, APW-10S
- Boron: APW-02, APW-03, APW-05R, APW-06D, APW-06S
- Calcium: APW-02, APW-03, APW-04, APW-06D, APW-06S, APW-07, APW-10S
- Lithium: APW-02
- Molybdenum: APW-02, APW-05R, APW-06S
- Turbidity: APW-01R, APW-02, APW-04, APW-05R, APW-06D, APW-08

APW-10S, located approximately one-half mile south of the closed CCR impoundment, continues to exhibit elevated arsenic concentrations. However, the occurrence of arsenic in this well is not considered to be related to the closed CCR impoundment due to its distance and location hydraulically side gradient in relation to the Site. Additionally, the monitoring wells located between the closed CCR impoundment (APW-03, APW-07, APW-08, and APW-09) and APW-10D do not exhibit arsenic concentration above the GWPS.

The GTEC closed CCR impoundment is currently in Corrective Action Monitoring (CAM). As reported in the *2023 Grand Tower Energy Center Annual Groundwater Monitoring Report* submitted by ERM and dated January 2024, statistical analysis conducted on the data collected from the first seven quarters of post-closure monitoring (2nd quarter 2022 through 4th quarter 2023) indicates that arsenic, boron, lithium, molybdenum, and sulfate exceed the calculated background concentrations and the IEPA GWPS established in 35 IAC Section 845.600 in monitoring wells at the Site. Statistical analysis of the groundwater sampling results will continue to be completed on an annual basis to evaluate if statistically significant increases or decreases have occurred after cap and closure occurred in 2020 in accordance with 35 IAC Section §845.640(f). In accordance with 35 IAC Section §845.550(a) an Annual Groundwater Monitoring and Corrective Action Report will be submitted for the preceding calendar year no later than January 31st of 2025.

At the end of the current five-year monitoring and reporting post-closure time frame, a groundwater performance monitoring report will be submitted to IEPA to either demonstrate restoration of groundwater quality to Class I standards or present a continued groundwater monitoring plan for an additional five years. In addition, the results will be compared to the modeled concentrations to evaluate if a decreasing trend, as defined through modeling, is occurring at the predicted rate. Significant changes from the model results will lead to additional calibration and assessment of future expected rates of decrease for the constituents of concern (COCs).

SUMMARY AND CONCLUSIONS

Based upon the results of the third quarter 2024 groundwater sampling event, well inspection, and closed CCR impoundment inspection, the following observations and conclusions have been made:


- Similar to the groundwater sampling results obtained during the eight pre-closure sampling events in 2017 to 2018, and ten post-closure groundwater sampling events, concentrations of COCs above the GWPS continue to be detected at well locations downgradient of the closed CCR impoundment.
- Boron has historically been the key indicator for corrective action and continued monitoring of groundwater at the Site. Incorporating data from the eight rounds of pre-closure groundwater sampling conducted during 2017 and 2018, as well as the ten post groundwater monitoring events, boron had previously demonstrated a decreasing trend in Site monitoring wells.
- Historically, woody vegetation has been noted on the impoundment cap and treated with herbicide in early 2023. Live woody vegetation growth is limited in the impoundment riprap. During this event, erosion noted above the riprap has increased from 10-inches to 13-inches in the deepest locations as compared to prior inspections dating back to 2022. ERM will continue to monitor the woody vegetation and erosion on the impoundment cap, and the erosional features noted on the cap will be addressed prior to the next sampling event. No other significant degradation or issues were noted associated with the overall closed CCR impoundment cover system. ERM will periodically monitor Site conditions and cap and impoundment maintenance items.

If you have any questions, please contact me at (314) 447-7237.

Sincerely,



Randy Homburg
Managing Consultant

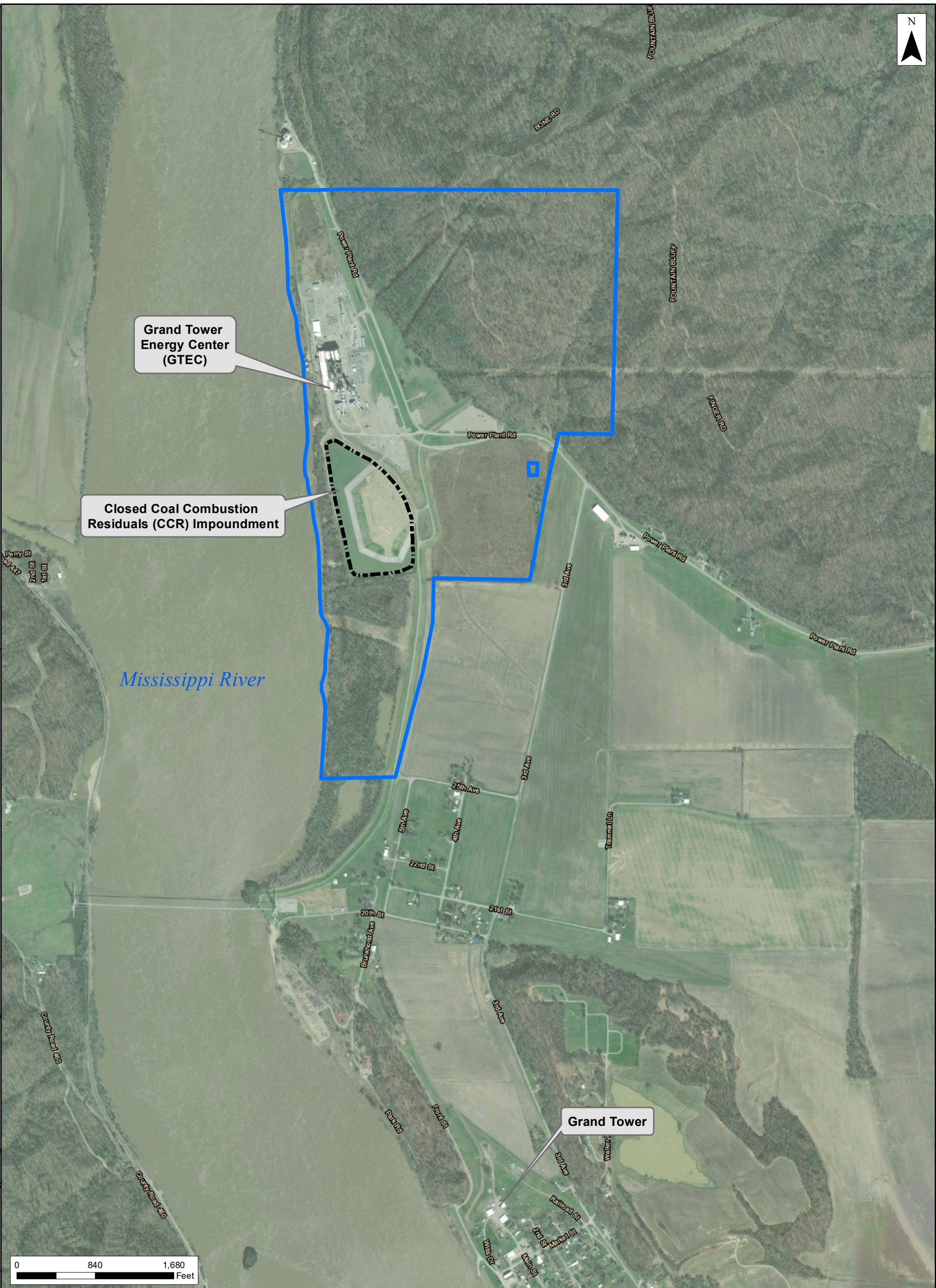


Alan J. Cork, P.E.
Partner, Engineer

Attachments

cc: Mr. John Brodhead, Grand Tower Energy Center (electronic)

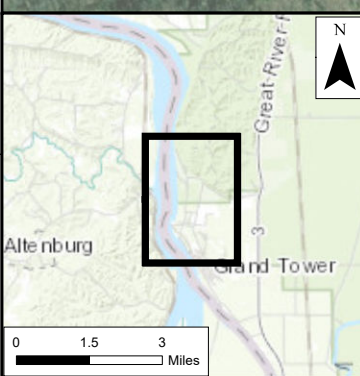
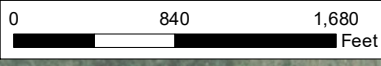
FILE: \\usbd\dfs02\data\Philadelphia\Team\DM\GIS\Projects\Grand Tower Energy Center\ MXD\FIGURE1-SITELLOCATIONMAP_20221003.mxd | REVISED: 10/03/2022 | SCALE: 1:12,000 when printed at 11x17



Grand Tower Energy Center (GTEC)

Closed Coal Combustion Residuals (CCR) Impoundment

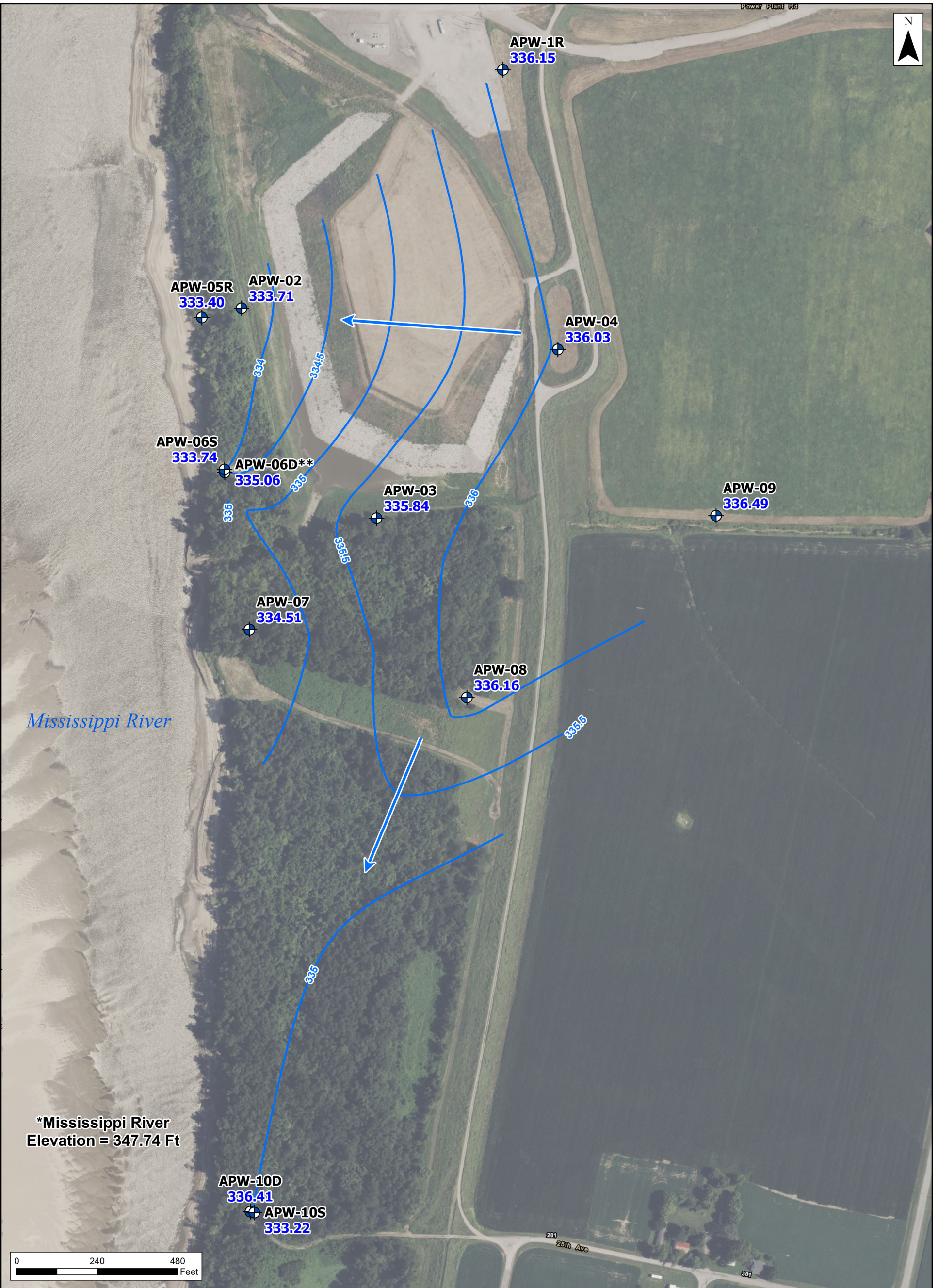
Grand Tower



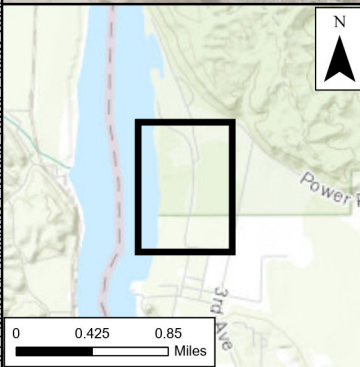
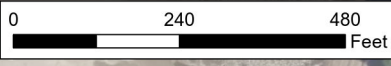
- Legend**
- Closed Coal Combustion Residuals (CCR) Impoundment
 - Approximate Parcel Boundary

Notes:
 1. CCR Surface Impoundment Closed Prior to July 31, 2021
 2. World Imagery (3/24/2021)

Figure 1
Site Location Map
 Grand Tower Energy Center, LLC
 Grand Tower, Illinois
 Jackson County



*Mississippi River Elevation = 347.74 Ft



Legend

- Monitoring Well Location
- Groundwater Contour (0.5 Ft. Interval) - Dashed where inferred
- Groundwater Flow Direction
- 328.84 Groundwater Elevation

- Notes:
1. CCR Surface Impoundment Closed Prior to July 31, 2021
 2. Date of gauging - September 4, 2024
 3. ** - Measurement taken on September 5, 2024
 4. Ft AMSL - Feet Above Mean Sea Level
 5. (D) - Designated Wells not used in contouring
 6. * River stage at Mississippi River Gauge at Grand Tower, IL (NGVD29) (<https://rivergages.mvr.usace.army.mil/WaterControl/shefdata2.cfm?sid=CE358576&d=31&dt=E>)
 7. BING Imagery, 2022

Figure 2: Third Quarter 2024 Groundwater Contour Map
 Grand Tower Energy Center, LLC
 Grand Tower, Illinois
 Jackson County



Table 1
Groundwater Summary Table
Grand Tower Energy Center (GTCE)
Grand Tower, US-IL

Sample ID Location ID Sample Date Sample Type	APW-1R-20170907 APW-01R 09/05/2017 N	APW-1R-20170927 APW-01R 09/27/2017 N	APW-1R-20171016 APW-01R 10/16/2017 N	Composite 18-20171108 APW-1R-20171108 APW-01R 11/08/2017 N				Composite 18-20171117 APW-1R-20171117 APW-01R 11/27/2017 N				Composite 18-20180117 APW-1R-20180117 APW-01R 01/17/2018 N				Composite 18-20180207 APW-1R-20180207 APW-01R 02/07/2018 N				Composite 18-20200415 APW-01R-20200415 APW-01R 04/15/2022 N				Composite 18-20200515 APW-01R-20200515 APW-01R 05/15/2022 N				Composite 18-20221130 APW-01R-20221130 APW-01R 11/30/2022 N				Composite 18-20230202 APW-01R-20230202 APW-01R 02/02/2023 N				Composite 18-20230920 APW-01R-20230920 APW-01R 09/27/2023 N				Composite 18-20231128 APW-01R-20231128 APW-01R 11/28/2023 N				Composite 18-20240110 APW-01R-20240110 APW-01R 01/10/2024 N				Composite 18-20240501 APW-01R-20240501 APW-01R 05/01/2024 N				Composite 18-20240504 APW-01R-20240504 APW-01R 05/04/2024 N			
				APW-1R-20170907	APW-1R-20170927	APW-1R-20171016	APW-1R-20171108	APW-1R-20171117	APW-1R-20180117	APW-1R-20180207	APW-01R-20200415	APW-01R-20200515	APW-01R-20221130	APW-01R-20230202	APW-01R-20230920	APW-01R-20231128	APW-01R-20240110	APW-01R-20240501	APW-01R-20240504																																				
Parameter / Analyte	Total or Residual	Units	Protection Standard	Detection Limit																																																			
UNPICKED																																																							
Iron	NA	mg/L	0.15	0.17	0.18	0.12	0.14	0.13	0.18	0.16	0.21	0.18	0.17	0.14	0.17	0.183	0.136	0.201																																					
Ironium-136	NA	mg/L	0.25 ± 12 U	0.18 ± 09 U	0.307 ± 320	0.13 ± 0.43 U	0.07 ± 0.16 U	0.23 ± 0.1 U	0.03 ± 0.07 U	-0.04 ± 0.08 U	0.0321 ± 0.141 U	0.24 ± 0.1 U	0.4 ± 0.12 U	0.16 ± 0.169 U	0.27 ± 0.11 U	0.32 ± 0.154	0.383 ± 0.234	0.167 ± 0.164 U																																					
Ironium-228	NA	mg/L	2.25 ± 38	0.1 ± 0.39 U	0.12 ± 0.12	0.1 ± 0.33 U	0.47 ± 0.34 U	0.04 ± 0.16 U	0.04 ± 0.07 U	0.27 ± 0.18 U	0.061 ± 0.207	0.4 ± 0.16 U	0.51 ± 0.284	0.85 ± 0.61 U	0.32 ± 0.26 U	1.04 ± 0.209	0.11 ± 0.262	0.12 ± 0.228 U																																					
Sulfate	NA	mg/L	200	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55																																					
CALC																																																							
Barium-226/228	NA	mg/L	7.002	2.54 ± 1.1	0.69 ± 0.48 U	0.427 ± 0.552	0.7 ± 0.76 U	0.47 ± 0.7 U	0.27 ± 0.44 U	0.22 ± 0.42 U	0.67 ± 0.59 U	0.81 ± 0.68 U	0.65 ± 0.330	1.12 ± 0.72 U	0.64 ± 0.67 U	1.21 ± 0.75 U	2.18 ± 0.422	1.05 ± 0.394	0.167 ± 0.338 U																																				
FIELD PARAM																																																							
Temperature Field	NA	NTU	17.967							31.9	31.7	31.7	30.5	33.2	33	35.6	25.6	71.3	49.2																																				
ION CHEM																																																							
Ammonia	NA	mg/L	200	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U																																				
Disolved Solids Total	NA	mg/L	1200	400	428	376	358 R	517	474	434	392	452	385	384	328	395	385	372	372																																				
PH Lab	NA	PH	6.20-9.07	6.64	6.54	6.6	6.8	7.41	6.96	6.52	6.98	6.53	6.43	6.52	6.53	6.46	6.39	7.18	7.24																																				
METALS																																																							
Aluminum	D	mg/L	0.006																																																				
Antimony	T	mg/L	0.006	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U																																				
Arsenic	D	mg/L	0.01																																																				
Arsenic	T	mg/L	0.0012	0.0012	0.0012	0.0012	0.0012	0.0012	0.0012	0.0012	0.0012	0.0012	0.0012	0.0012	0.0012	0.0012	0.0012	0.0012	0.0012																																				
Bismuth	D	mg/L	0.01																																																				
Bismuth	T	mg/L	2	0.168	0.193	0.171	0.176	0.165	0.178	0.182	0.18	0.197	0.185	0.199	0.178	0.168	0.202	0.259	0.204																																				
Boron	D	mg/L	0.004																																																				
Boron	T	mg/L	0.004	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U																																				
Calcium	D	mg/L	0.004																																																				
Calcium	T	mg/L	2	0.218	0.241	0.238	0.231	0.223	0.229	0.232	0.231	0.249	0.248	0.249	0.248	0.249	0.249	0.248	0.248																																				
Cadmium	D	mg/L	0.005	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U																																				
Cadmium	T	mg/L	100.2	84.3 S	93 S	86.2 S	88.2	91.2 S	91	97.1	85.5 S	85.6	81.8 S	71.9	71.4	66.4 S	57.6	74.8	101.1																																				
Chromium	D	mg/L	0.1																																																				
Chromium	T	mg/L	0.1	0.0023	0.0021	0.0033	0.001 U	0.001 U	0.0018	0.0015	0.001	0.00097	0.0014	0.001	0.0015 U	0.0015 U	0.0015 U	0.0015 U	0.0015 U																																				
Cobalt	D	mg/L	0.006																																																				
Cobalt	T	mg/L	0.006	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U																																				
Copper	D	mg/L	NS																																																				
Copper	T	mg/L	NS																																																				
Lead	D	mg/L	NS																																																				
Lead	T	mg/L	NS																																																				
Lithium	D	mg/L	0.004	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U																																				
Lithium	T	mg/L	0.04	0.0155	0.218	0.2172	0.2175	0.215	0.2172	0.2164	0.2139	0.2177	0.2166	0.2139	0.215	0.214	0.213	0.213	0.213																																				
Manganese	D	mg/L	NS																																																				
Manganese	T	mg/L	NS																																																				
Molybdenum	D	mg/L	0.002																																																				
Molybdenum	T	mg/L	0.002	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U																																				
Nickel	D	mg/L	0.1	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U																																				
Nickel	T	mg/L	NS																																																				
Selenium	D	mg/L	0.05	0.004	0.002	0.0054	0.004	0.0038	0.0046	0.004	0.0037	0.0038	0.0032	0.0032	0.0032	0.0032	0.0032	0.0032	0.0032																																				
Selenium	T	mg/L	0.19	0.0038	0.004	0.004	0.004	0.004	0.004	0.004	0.0039	0.0038	0.0038	0.0038	0.0038	0.0038	0.0038	0.0038	0.0038																																				
Thallium	D	mg/L	0.002																																																				
Thallium	T	mg/L	0.002	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U																																				

Notes:
 Empty cells = not analyzed
 N = Normal Environmental Sample
 FD = Field Duplicate Sample
 NA = not applicable
 T = total
 D = dissolved
 mg/L = milligrams per liter
 mg/L = micrograms per liter
 NTU = nephelometric turbidity units
 H = Holdline times exceeded
 1 = Analyte detected below quantitation limits
 F1 = Sample filtration was performed in the laboratory
 13 = The associated batch QC was outside the established quality control range for detection
 16 = The sample matrix interfered with the ability to make an accurate determination; sock value is low
 C = Cobar Reagents outside recovery limits
 R = RFD outside accredited recovery limits
 U = Not Detected at the Reporting Limit
 TR = Sample returned within 10% of holdline time activation
 1 Standard is from the Upper Tolerance Limit (UTL) calculated from background
 2 Standard value ± 2σ is from the Lower Tolerance Limit (LL) calculated from 1681 samples of groundwater sampling were conducted from September 2017
 4 Well was redrilled in February with Location ID of APW-05R
 Multimerized values exceed action level
 NS = No standard

Table 1
Groundwater Summary Table
Grand Tower Energy Center (GTEC)

Parameter/Analyte		Sampled Prior to Closure of CCR Impoundment																Post Closure Sampling				
		APW-4-20170907 APW-04 09/08/2017 N	APW-4-20170910 APW-04 09/29/2017 N	APW-4-20170919 APW-04 10/19/2017 N	APW-4-20171108 APW-04 11/08/2017 N	APW-4-20171128 APW-04 11/28/2017 N	APW-4-20180119 APW-04 01/19/2018 N	APW-4-20180208 APW-04 02/08/2018 N	APW-04-WG-20220615 APW-04 06/15/2022 N	APW-04-WG-20220915 APW-04 09/15/2022 N	APW-04-WG-20221128 APW-04 11/28/2022 N	APW-04-WG-20230202 APW-04 02/02/2023 N	APW-04-WG-20230627 APW-04 06/27/2023 N	APW-04-WG-20230920 APW-04 09/20/2023 N	APW-04-WG-20231129 APW-04 11/29/2023 N	APW-04-WG-20240110 APW-04 01/10/2024 N	APW-04-WG-20240501 APW-04 05/01/2024 N	APW-04-WG-20240904 APW-04 09/04/2024 N				
UNSATURATED																						
Fluoride	NA mg/L	4	0.18	0.19	0.18	0.17	0.18	0.17	0.17	0.16	0.2	0.17	0.16	0.15	0.18	0.17	0.201	0.178				
Barium-136	NA mg/L	NS	0.78 ± 0.16 U	0.02 ± 0.28 U	0.22 ± 0.28 U	0.13 ± 0.29 U	0.09 ± 0.13 U	0.17 ± 0.29 U	0.09 ± 0.08 U	0.13 ± 0.11 U	0.103 ± 0.164 U	0.5 ± 0.13 U	0.11 ± 0.28 U	0.32 ± 0.23 U	0.13 ± 0.12 U	0.29 ± 0.07 U	0.19 ± 0.07 U	0.21 ± 0.24 U	0.18 ± 0.25 U	0.30 ± 0.25 U		
Barium-228	NA pCi/L	NS	0.95 ± 0.64 U	0.45 ± 0.68 U	0.33 ± 0.39 U	0.64 ± 0.11 U	0.88 ± 0.64 U	0.73 ± 0.39 U	0.31 ± 0.51 U	0.84 ± 0.48 U	0.245 ± 0.235 U	2.15 ± 0.78 U	1.87 ± 0.67 U	0.961 ± 0.296 U	0.9 ± 0.68 U	1.18 ± 0.67 U	0.66 ± 0.64 U	0.62 ± 0.28 U	0.51 ± 0.20 U	0.51 ± 0.20 U		
Sulfate	NA mg/L	136	116	190	107	100	99	93	94	93	61	61	61	61	61	61	61	61	61	61		
CAIC		NA	0.002	1.33 ± 0.8 U	0.02 ± 0.26 U	0.33 ± 0.71 U	0.79 ± 0.4 U	0.97 ± 0.77 U	0.9 ± 0.46 U	0.31 ± 0.59 U	0.77 ± 0.59 U	0.346 ± 0.287 U	2.65 ± 0.91 U	1.58 ± 0.73 U	1.31 ± 0.376 U	1.25 ± 0.8 U	0.85 ± 0.71 U	0.85 ± 0.370 U	0.597 ± 0.398 U	0.811 ± 0.327 U		
FIELD PARAM		NA	17.96																			
Turbidity, Field	NA NTU	17.96																				
ISEM CHEM		NA	mg/L	290	12	11	11	13	11	10	11	12	10	12	9	11	9.31	11.6	9.98			
Dissolved Solids, Total	NA mg/L	1200	490	484	492	472	492	514	424	358	430	436	446	426	476	430	494	442				
pH, Lab	NA	pH units	6.22-6.27	7.31	7.33	7.31	7.42	7.32	7.33	7.25	7.2	7.41	7.51	7.34	7.39 H	7.36 H	7.31 H	7.57 H	7.65 H			
HEAVY METALS		D	mg/L	0.006	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.004 U	0.004 U			
Antimony	D	mg/L	0.006	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.004 U	0.004 U			
Arsenic	D	mg/L	0.01	0.0025	0.0018	0.0016	0.0016	0.0016	0.0016	0.0016	0.0016	0.0016	0.0016	0.0016	0.0016	0.0016	0.0016	0.004 U	0.004 U			
Bismuth	D	mg/L	0.01	0.0025	0.0018	0.0016	0.0016	0.0016	0.0016	0.0016	0.0016	0.0016	0.0016	0.0016	0.0016	0.0016	0.0016	0.004 U	0.004 U			
Boron	T	mg/L	2	0.145	0.132	0.123	0.13	0.128	0.141	0.135	0.144	0.135	0.132	0.138	0.138	0.137	0.137	0.14	0.14			
Beryllium	D	mg/L	0.004	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.002 U	0.002 U			
Beryllium	T	mg/L	0.004	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.002 U	0.002 U			
Bromine	D	mg/L	2	0.145	0.132	0.123	0.13	0.128	0.141	0.135	0.144	0.135	0.132	0.138	0.138	0.137	0.137	0.14	0.14			
Bromine	T	mg/L	2	0.145	0.132	0.123	0.13	0.128	0.141	0.135	0.144	0.135	0.132	0.138	0.138	0.137	0.137	0.14	0.14			
Cadmium	D	mg/L	0.005	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.002 U	0.002 U			
Cadmium	T	mg/L	0.005	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.002 U	0.002 U			
Calcium	D	mg/L	103.2	101.5	100	89.4	97.5	107	107	113	113	114	108.5	109	93.5	88	93.4	93.4	107			
Chromium	D	mg/L	0.1	0.0441	0.0025	0.0017	0.001 U	0.001 U	0.0007	0.0037	0.001 U	0.0015 U	0.0015 U	0.0015 U	0.0015 U	0.0015 U	0.0015 U	0.002 U	0.002 U			
Chromium	T	mg/L	0.1	0.0441	0.0025	0.0017	0.001 U	0.001 U	0.0007	0.0037	0.001 U	0.0015 U	0.0015 U	0.0015 U	0.0015 U	0.0015 U	0.0015 U	0.002 U	0.002 U			
Cobalt	D	mg/L	0.006	0.0013	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.002 U	0.002 U			
Cobalt	T	mg/L	0.006	0.0013	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.002 U	0.002 U			
Copper	D	mg/L	NS																			
Copper	T	mg/L	NS																			
Lead	D	mg/L	0.0075	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.002 U	0.002 U			
Lead	T	mg/L	0.0075	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.002 U	0.002 U			
Lithium	D	mg/L	0.94	0.0406	0.0402	0.0402	0.0406	0.0406	0.0411	0.0397	0.0397	0.0397	0.0397	0.0397	0.0397	0.0397	0.0397	0.0397	0.0397			
Lithium	T	mg/L	0.94	0.0406	0.0402	0.0402	0.0406	0.0406	0.0411	0.0397	0.0397	0.0397	0.0397	0.0397	0.0397	0.0397	0.0397	0.0397	0.0397			
Manganese	D	mg/L	NS																			
Manganese	T	mg/L	NS																			
Mercury	D	mg/L	0.002	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U			
Mercury	T	mg/L	0.002	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U			
Molybdenum	D	mg/L	0.1	0.0491	0.084	0.0793	0.0812	0.0748	0.0714	0.0592	0.057	0.0788	0.0445	0.0449	0.0449	0.0449	0.0449	0.0449	0.0449			
Molybdenum	T	mg/L	0.1	0.0491	0.084	0.0793	0.0812	0.0748	0.0714	0.0592	0.057	0.0788	0.0445	0.0449	0.0449	0.0449	0.0449	0.0449	0.0449			
Nickel	D	mg/L	NS	0.0005	0.0014	0.0029	0.002	0.002	0.0024	0.0039	0.001	0.0045	0.001 U	0.0017	0.0017	0.0017	0.0017	0.0017	0.0017			
Nickel	T	mg/L	NS	0.0005	0.0014	0.0029	0.002	0.002	0.0024	0.0039	0.001	0.0045	0.001 U	0.0017	0.0017	0.0017	0.0017	0.0017	0.0017			
Selenium	D	mg/L	0.05	0.0158	0.015	0.0149	0.0161	0.014	0.013	0.0101	0.0102	0.0137	0.0111	0.0085	0.0099	0.0105	0.0099	0.0119	0.0119			
Selenium	T	mg/L	0.05	0.0158	0.015	0.0149	0.0161	0.014	0.013	0.0101	0.0102	0.0137	0.0111	0.0085	0.0099	0.0105	0.0099	0.0119	0.0119			
Thallium	D	mg/L	0.002	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.002 U	0.002 U			
Thallium	T	mg/L	0.002	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.002 U	0.002 U			

Notes:
 Empty cells = not analyzed
 N = Normal Environmental Sample
 FD = Field Duplicate Sample
 NA = not applicable
 T = total
 D = dissolved
 mg/L = milligrams per liter
 pCi/L = picocuries per liter
 NTU = nephelometric turbidity units
 U = Holding time exceeded
 J = Analyte detected below quantization limits
 F1 = Sample filtration was performed in the laboratory
 J3 = The associated batch DC was outside the established quality control range for precision
 J6 = The sample matrix interfered with the ability to make any accurate determination; spike value is low
 S = Spike Recovery outside recovery limits
 R = RPD outside accepted recovery limits
 U = Not Detected at the Reporting Limit
 TS = Sample received past/too close to holding time expiration
 1 Standard is from the Upper Tolerance Limit (UTL) calculated from background
 2 Standard value is 2.21 from the Lower Tolerance Limit (LTL) calculated from
 3 Eight episodes of groundwater sampling were conducted from September 2017
 4 Well was installed in February with Location ID of APW-05A
 Highlighted values exceed action level
 NS = No standard

Table 1
Groundwater Summary Table
Grand Tower Energy Center (GTCE)
Grand Tower, US-IL

Sample ID Location ID Sample Date Sample Type	Chemical Data by Date of Collection														Date of Sample						
	APW-65-20170907	APW-65-20170928	APW-65-20171010	APW-65-20171101	APW-65-20171111	APW-65-20171227	APW-65-20180118	APW-65-20180208	APW-65-20200616	APW-65-20200622	APW-65-20200913	APW-65-20211128	APW-65-20230201	APW-65-20230920	APW-65-20231128	APW-65-20240110	APW-65-20240501	APW-65-20240504			
Parameter / Analyte	Total or Residual	Units	APW-65-20170907	APW-65-20170928	APW-65-20171010	APW-65-20171101	APW-65-20171111	APW-65-20171227	APW-65-20180118	APW-65-20180208	APW-65-20200616	APW-65-20200622	APW-65-20200913	APW-65-20211128	APW-65-20230201	APW-65-20230920	APW-65-20231128	APW-65-20240110	APW-65-20240501	APW-65-20240504	
UNEXPECTED																					
Iron	NA	mg/L	0.41	0.26	0.25	0.26	0.25	0.25	0.27	0.24	0.20	0.28	0.32	0.28	0.26	0.3	0.32	0.27	0.15 U	0.20	
Iron	NA	mg/L	0.36 ± 0.14 U	0.09 ± 0.08 U	0.117 ± 0.131	0.22 ± 0.11 U	0.18 ± 0.13 U	0.11 ± 0.09 U	0.09 ± 0.09 U	0.15 ± 0.11 U	0.269 ± 0.187	0.2 ± 0.08 U	0.10 ± 0.09 U	0.0203 ± 0.222 U	0.11 ± 0.08 U	0.32 ± 0.11 U	0.09 ± 0.06 U	1.25 ± 0.41	0.207 ± 0.135	0.31 ± 0.217	
Iron	NA	mg/L	0.36 ± 0.27 U	1.08 ± 0.53	0.481 ± 0.216	0.1 ± 0.1	0.2 ± 0.2	0.44 ± 0.24 U	0.7 ± 0.53	0.28 ± 0.28 U	0.22 ± 0.15	0.4 ± 0.15 U	0.4 ± 0.15 U	0.04 ± 0.08 U	0.41 ± 0.28 U	0.29 ± 0.21 U	0.288 ± 0.263	0.25 ± 0.265	0.65 ± 0.386 U	0.51 ± 0.365 U	
Iron	NA	mg/L	0.27	0.17	0.17	0.19	0.18	0.21	0.23	0.20	0.27	0.24	0.27	0.28	0.21	0.27	0.29	0.29	0.21	0.13	
CAIC																					
Iron	NA	mg/L	7.002	0.92 ± 0.81 U	1.15 ± 0.61 U	0.708 ± 0.847	1.45 ± 0.52 U	1.1 ± 0.73 U	0.55 ± 0.53 U	0.8 ± 0.62 U	1.04 ± 0.49 U	0.497 ± 0.308	2.93 ± 0.98	0.6 ± 0.50 U	1.47 ± 0.568	0.11 ± 0.97 U	0.73 ± 0.49 U	0.38 ± 0.36 U	1.93 ± 0.477	1.66 ± 0.481	0.77 ± 0.441
FIELD PARAM																					
Temperature	NA	NTU	17.961							30.5	15.1	5.56	6.67	0.66	0.99	1.26	3.32	3.81	5.09		
ION CHEM																					
Chloride	NA	mg/L	200	31	28	27	27	26	27	26	25	24	24	23	20	24	23	21	21.6	21.1	
Disinfectant Residual	NA	mg/L	1200	500	546	574	528	586	588	586	600	578 U	606	538	615	585	615	604	578 U	599	
PH Lab	NA	mg/L	6.29 ± 0.27	7.46	7.06	7.16	7.23	7.09	7.13	7.04	7.04	7.24	7.28	7.04	7.13	7.11	7.12	7.07	7.25	7.18	
METALS																					
Aluminum	D	mg/L	0.006								0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.004 U	0.004 U	
Aluminum	T	mg/L	0.006	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.004 U	0.004 U	
Arsenic	D	mg/L	0.01								0.0009 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	
Arsenic	T	mg/L	0.01	0.0017	0.0016	0.0018	0.002	0.0014	0.0012	0.0011	0.0009 U	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001 U	0.001 U	
Boron	D	mg/L	0.004								0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001 U	0.001 U	
Boron	T	mg/L	0.004	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	
Calcium	D	mg/L	2	0.222	0.237	0.205	0.226	0.214	0.213	0.224	0.205	0.25	0.221	0.19	0.209	0.224	0.206	0.205	0.204	0.21	
Calcium	T	mg/L	2	0.004	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	
Cadmium	D	mg/L	0.004								0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	
Cadmium	T	mg/L	0.004	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	
Cobalt	D	mg/L	0.005								0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	
Cobalt	T	mg/L	0.005	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	
Copper	D	mg/L	0.006								0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	
Copper	T	mg/L	0.006	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	
Cyanide	D	mg/L	NS								0.35								0.1 U		
Cyanide	T	mg/L	NS								0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	
Lead	D	mg/L	0.0075								0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	
Lead	T	mg/L	0.0075	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	
Lithium	D	mg/L	0.04								0.0355	0.0384	0.0386	0.0406	0.0411	0.0487	0.0498	0.0481	0.038 U	0.038 U	
Lithium	T	mg/L	0.04	0.0135	0.0411	0.04	0.0415	0.042	0.0405	0.0421	0.0401	0.0401	0.0401	0.0401	0.0401	0.0401	0.0401	0.0401	0.0401	0.0401	
Manganese	D	mg/L	NS								0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	
Manganese	T	mg/L	NS								0.53								0.478	0.406	
Molybdenum	D	mg/L	0.002								0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	
Molybdenum	T	mg/L	0.002	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	
Nickel	D	mg/L	0.1								0.029	0.036	0.034	0.044	0.042	0.044	0.039	0.036	0.034 U	0.034 U	
Nickel	T	mg/L	0.1	0.049	0.107	0.077	0.103	0.074	0.104	0.104	0.077	0.077	0.077	0.077	0.077	0.077	0.077	0.077	0.077	0.077	
Nitrate	D	mg/L	NS								0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	
Nitrate	T	mg/L	NS	0.001	0.009	0.001	0.002	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001 U	0.001 U	
Selenium	D	mg/L	0.09								0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	
Selenium	T	mg/L	0.09	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	
Thallium	D	mg/L	0.002								0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	
Thallium	T	mg/L	0.002	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	

Notes:
 Empty cells = not analyzed
 N = Normal Environmental Sample
 FD = Field Duplicate Sample
 NA = not applicable
 T = total
 D = dissolved
 mg/L = milligrams per liter
 mg/L = micrograms per liter
 NTU = nephelometric turbidity units
 H = Holding time exceeded
 I = Analyte detected below quantitation limits
 F1 = Sample filtration was performed in the laboratory
 I3 = The associated batch QC was outside the established quality control range for detection
 I6 = The sample matrix interfered with the ability to make an accurate determination; sock value is low
 C = Cuts Returns outside recovery limits
 R = RFD outside accepted recovery limits
 U = Not Detected at the Reporting Limit
 NS = Sample returned within value to hold time activation
 TS = Sample returned within value to hold time activation
 1 Standard is from the Upper Tolerance Limit (UTL) calculated from background
 2 Standard value ± 2σ is from the Lower Tolerance Limit (LL) calculated from 160 samples of groundwater sampling were conducted from September 2017
 3 Well was redrilled in February with Location ID of APW-65R
 Multistep values exceed action level
 NS = No standard

Table 1
Groundwater Summary Table
Grand Tower Energy Center (GTEC)
Grand Tower, US-IL

Parameter/Analyte	Total or Dissolved	Units	Groundwater Protection Standards ¹	Sampled Prior to Closure of CCR Impoundment												Post Closure Sampling							
				APW-7-20170907 APW-07 09/07/2017 N	APW-7-20170918 APW-07 09/28/2017 N	APW-7-20171019 APW-07 10/19/2017 N	APW-7-20171109 APW-07 11/09/2017 N	APW-7-20171127 APW-07 11/27/2017 N	APW-7-20180118 APW-07 01/18/2018 N	APW-7-20180208 APW-07 02/08/2018 N	APW-7-20180616 APW-07 06/16/2018 N	APW-7-20220914 APW-07 09/14/2022 N	APW-7-20221130 APW-07 11/30/2022 N	APW-7-20230130 APW-07 01/30/2023 N	APW-7-20230626 APW-07 06/26/2023 N	APW-7-20230919 APW-07 09/19/2023 N	APW-7-20231128 APW-07 11/28/2023 N	APW-7-20240111 APW-07 01/11/2024 N	APW-7-20240430 APW-07 04/30/2024 N	APW-7-20240904 APW-07 09/04/2024 N			
UNSPECIFIED	NA	mg/L	4	0.15	0.21	0.19	0.2	0.2	0.19	0.2	0.18	0.18	0.17	0.18	0.17	0.18	0.2	0.17	0.15 U				
Fluoride	NA	mg/L	4	0.15	0.21	0.19	0.2	0.2	0.19	0.2	0.18	0.18	0.17	0.18	0.17	0.18	0.2	0.17	0.15 U				
Barium-135	NA	Bq/L	NS	0.47 ± 0.13 U	0.4 ± 0.08 U	0.501 ± 0.136	0.11 ± 0.08 U	0.16 ± 0.14 U	0.29 ± 0.11 U	0.14 ± 0.09 U	0.34 ± 0.14 U	0.333 ± 0.208	0.18 ± 0.09 U	0.2 ± 0.11 U	0.337 ± 0.265	-0.01 ± 0.06 U	0.114 ± 0.07 U	0.16 ± 0.06 U	0.17 ± 0.124				
Barium-228	NA	Bq/L	NS	0.42 ± 0.78 U	0.76 ± 0.61	0.283 ± 0.432	1.13 ± 0.39	0.61 ± 0.51 U	0.14 ± 0.18 U	1.19 ± 0.55	0.51 ± 0.4 U	0.766 ± 0.234	1.45 ± 0.72	1.13 ± 0.66	1.77 ± 0.352	1.11 ± 0.74	0.99 ± 0.62 QDOR	0.45 ± 0.57 U	1.93 ± 0.294				
Sulfate	NA	mg/L	66	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50				
CAIC	NA	µg/L	2,002	0.87 ± 0.94 U	0.76 ± 0.87 U	1.29 ± 0.808	1.24 ± 0.87 U	0.77 ± 0.65 U	0.39 ± 0.45 U	1.31 ± 0.64 U	0.77 ± 0.54 U	1.1 ± 0.313	1.63 ± 0.81 U	1.33 ± 0.77 U	2.1 ± 0.441	1.11 ± 0.8 U	1.1 ± 0.89 U	0.61 ± 0.63 U	2.7 ± 0.461				
FIELD PARAM	NA	NTU	17.96 ²									66.2	34.6	10.5	79.2	14.8	42.9	21	4.36				
ISEM CHEM	NA	mg/L	250	15	15	14	15	16	15	15	15	11	12	15	14	10	9	11	9.63				
Chloride	NA	mg/L	1,000	795	786	824	790	745	796	720	740	780	815 U	800	824	665	740	794	727				
Dissolved Solids, Total	NA	mg/L	6.84	6.84	6.84	6.84	6.84	6.84	6.84	6.84	6.84	6.84	6.84	6.84	6.84	6.84	6.84	6.84	6.84				
HEAVY	D	mg/L	0.006	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U				
Antimony	D	mg/L	0.006	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U				
Arsenic	T	mg/L	0.01	0.0014	0.0012	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U				
Boron	D	mg/L	2	0.445	0.448	0.794	0.401	0.37	0.374	0.38	0.399	0.374	0.381	0.371	0.372	0.367	0.352	0.36	0.349				
Bromine	T	mg/L	0.004	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U				
Calcium	D	mg/L	2	0.235	0.308	0.302	0.3	0.278	0.342	0.288	0.338	0.348	0.333	0.336	0.327	0.298	0.287	0.283	0.283				
Cadmium	D	mg/L	0.005	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U				
Chromium	T	mg/L	0.005	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U				
Calcium	D	mg/L	103.2	192	204	171	187	196	193	191	185	228	210	209	205	183	185	181	209				
Chromium	D	mg/L	0.1	0.0017	0.0063	0.0026	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U				
Chromium	T	mg/L	0.1	0.0017	0.0063	0.0026	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U				
Cobalt	D	mg/L	0.006	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U				
Cobalt	T	mg/L	0.006	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U				
Copper	D	mg/L	NS																				
Lead	D	mg/L	0.0075	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U				
Lead	T	mg/L	NS																				
Lithium	D	mg/L	0.04	0.0147	0.0148	0.0172	0.0176	0.0185	0.0193	0.0181	0.0178	0.0142	0.0148	0.0148	0.0148	0.0148	0.0148	0.0148	0.0148				
Lithium	T	mg/L	NS																				
Manganese	D	mg/L	NS																				
Manganese	T	mg/L	NS																				
Mercury	D	mg/L	0.002	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U				
Mercury	T	mg/L	0.1	0.0046	0.0036	0.0033	0.0023	0.003	0.0044	0.0037	0.0036	0.0035	0.003	0.0029	0.0031	0.0028	0.0029	0.0029	0.0029				
Nickel	D	mg/L	NS	0.0014	0.0013	0.0013	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U				
Nickel	T	mg/L	NS	0.0014	0.0013	0.0013	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U				
Selenium	D	mg/L	0.05	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U				
Selenium	T	mg/L	0.05	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U				
Thallium	D	mg/L	0.002	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U				
Thallium	T	mg/L	0.002	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U				

Notes:
 Empty cells = not analyzed
 N = Normal Environmental Sample
 FD = Field Duplicate Sample
 NA = not applicable
 T = total
 D = dissolved
 mg/L = milligrams per liter
 µCi/L = microcuries per liter
 NTU = nephelometric turbidity units
 U = Holding time exceeded
 J = Analyte detected below quantization limits
 F1 = Sample filtration was performed in the laboratory
 J3 = The associated batch DC was outside the established quality control range for precision
 J6 = The sample matrix interfered with the ability to make any accurate determination; spike value is low
 S = Spike Recovery outside recovery limits
 R = RPD outside accepted recovery limits
 U = Not Detected at the Reporting Limit
 TS = Sample received past/too close to holding time expiration
 1 Standard is from the Upper Tolerance Limit (UTL) calculated from background
 2 Standard value is 2.21 from the Lower Tolerance Limit (LTL) calculated from
 3 Eight episodes of groundwater sampling were conducted from September 2017
 4 Well was notified in February with Location ID of APW-05A
 Highlighted values exceed action level
 NS = No standard

Table 1
Groundwater Summary Table
Grand Tower Energy Center (GTEC)

Parameter/Analyte		Sampled Prior to Closure of CCR Impoundment															Post Closure Sampling					
		Sample ID Location ID Sample Date Sample Type	APW-8-20170907 APW-08 09/07/2017 N	APW-8-20170918 APW-08 09/28/2017 N	APW-8-20171018 APW-08 10/18/2017 N	APW-8-20171108 APW-08 11/08/2017 N	APW-8-20171127 APW-08 11/27/2017 N	APW-8-20180117 APW-08 01/17/2018 N	APW-8-20180208 APW-08 02/08/2018 N	APW-08-WG-20220616 APW-08 06/16/2022 N	APW-08-WG-20220915 APW-08 09/15/2022 N	APW-08-WG-20221130 APW-08 11/30/2022 N	APW-08-WG-20230202 APW-08 02/02/2023 N	APW-08-WG-20230626 APW-08 06/26/2023 N	APW-08-WG-20230919 APW-08 09/19/2023 N	APW-08-WG-20231128 APW-08 11/28/2023 N	APW-08-WG-20240111 APW-08 01/11/2024 N	APW-08-WG-20240430 APW-08 04/30/2024 N	APW-08-WG-20240904 APW-08 09/04/2024 N			
UNSPECIFIED		NA	mg/L	4	0.3	0.20	0.20	0.28	0.28	0.3	0.28	0.20	0.28	0.28	0.28	0.29	0.29	0.29	0.29	0.29		
Fluoride	NA	mg/L	4	0.3	0.20	0.20	0.28	0.28	0.3	0.28	0.20	0.28	0.28	0.28	0.29	0.29	0.29	0.29	0.29			
Radon-222	NA	ppm	NS	0.22 ± 0.12 U	0.12 ± 0.08 U	0.2 ± 0.303	0.15 ± 0.1 U	0.14 ± 0.08 U	0.21 ± 0.11 U	0.30 ± 0.15 U	0.208 ± 0.236 U	0.27 ± 0.1 U	0.4 ± 0.13 U	0.247 ± 0.244 U	0.34 ± 0.12 U	0.23 ± 0.09 U	0.1 ± 0.025 U	1.71 ± 0.499	0.381 ± 0.271	0.206 ± 0.250		
Radon-222	NA	ppm	NS	1.13 ± 0.63	0.88 ± 0.48 U	1.1 ± 0.545	0.37 ± 0.26 U	0.7 ± 0.55 U	1.31 ± 0.58	0.61 ± 0.49 U	0.49 ± 0.43 U	0.528 ± 0.224	0.86 ± 0.62 U	1.68 ± 0.77	0.137 ± 0.282 U	0.1 ± 0.6 U	0.81 ± 0.49 U	0.15 ± 0.94 U	0.087 ± 0.215	0.254 ± 0.288 U	0.929 ± 0.250	
Sulfide	NA	mg/L	40	40	38	40	38	38	37	38	37	39	34	31	31	31	31	31	31	31	31	
CAIC		NA	ppm	7.002	1.35 ± 0.75 U	1 ± 0.56 U	1.5 ± 1.61	0.48 ± 0.35 U	1.22 ± 0.73 U	1.45 ± 0.66 U	0.85 ± 0.6 U	0.88 ± 0.58 U	0.735 ± 0.325	1.13 ± 0.72 U	2.08 ± 0.9	0.247 ± 0.373 U	0.45 ± 0.72 U	1.64 ± 0.58 U	0.25 ± 0.59 U	2.39 ± 0.507	0.341 ± 0.381 U	1.26 ± 0.317
FIELD PARAM		NA	NTU	17.96 ¹																		
ISEM CHEM		NA	mg/L	350	4	10	10	10	11	12	11	9	11	12	10	10	11	10.6	10.2	10.2	8.97	
Disolved Solids, Total	NA	mg/L	350	438	458	446	466	410	399	442	382	372	371	370	378	420	440	396	370	371	323	
pH, Lab	NA	pH units	6.92-9.92	7.04	7.07	7	7.12	7.25	7.11	7.04	7.04	7.34	7.47	7.25	7.18 H	7.16 H	7.27 H	7.16 H	7.27 H	7.53 H	7.2 H	
HEAVY		D	mg/L	0.006	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Antimony	D	mg/L	0.006	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Arsenic	T	mg/L	0.01	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Boron	T	mg/L	0.01	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Bismuth	T	mg/L	0.004	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Bismuth	T	mg/L	0.004	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Bismuth	T	mg/L	0.004	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Bismuth	T	mg/L	0.004	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Bismuth	T	mg/L	0.004	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Bismuth	T	mg/L	0.004	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Bismuth	T	mg/L	0.004	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Bismuth	T	mg/L	0.004	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Bismuth	T	mg/L	0.004	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Bismuth	T	mg/L	0.004	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Bismuth	T	mg/L	0.004	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Bismuth	T	mg/L	0.004	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Bismuth	T	mg/L	0.004	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Bismuth	T	mg/L	0.004	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Bismuth	T	mg/L	0.004	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Bismuth	T	mg/L	0.004	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Bismuth	T	mg/L	0.004	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Bismuth	T	mg/L	0.004	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Bismuth	T	mg/L	0.004	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Bismuth	T	mg/L	0.004	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Bismuth	T	mg/L	0.004	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Bismuth	T	mg/L	0.004	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Bismuth	T	mg/L	0.004	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Bismuth	T	mg/L	0.004	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Bismuth	T	mg/L	0.004	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Bismuth	T	mg/L	0.004	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Bismuth	T	mg/L	0.004	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Bismuth	T	mg/L	0.004	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Bismuth	T	mg/L	0.004	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Bismuth	T	mg/L	0.004	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Bismuth	T	mg/L	0.004	0.001 U	0.001 U	0.001																

Table 3
Groundwater Summary Table
Grand Tower Energy Center (GTEC)
Grand Tower, US-IL

Parameter/Analyte	Total or Dissolved	Units	Sampling Date by Chain of CCR Impoundment																Date Collected																
			APW-100-20170907		APW-100-20170912		APW-100-20171015		APW-100-20171109		APW-100-20171118		APW-100-20171214		APW-100-20180118		APW-100-20180209		APW-100-20180215		APW-100-20180222		APW-100-20180228		APW-100-20180305		APW-100-20180311		APW-100-20180317		APW-100-20180324		APW-100-20180331		
			Sample ID	Location ID	Sample Date	Sample ID	Location ID	Sample Date	Sample ID	Location ID	Sample Date	Sample ID	Location ID	Sample Date	Sample ID	Location ID	Sample Date	Sample ID	Location ID	Sample Date	Sample ID	Location ID	Sample Date	Sample ID	Location ID	Sample Date	Sample ID	Location ID	Sample Date	Sample ID	Location ID	Sample Date	Sample ID	Location ID	Sample Date
UNDETECTED	NA	mg/L	4	0-1	0-12	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	
DO (mg/L)	NA	mg/L	NS	0.18 ± 0.12 U	0.11 ± 0.1 U	0.22 ± 0.13 U	0.15 ± 0.12 U	0.16 ± 0.13 U	0.23 ± 0.1 U	0.08 ± 0.1 U	0 ± 0.07 U	0.20 ± 0.09 U	0.22 ± 0.09 U	0.11 ± 0.11 U	0.18 ± 0.13 U	0.31 ± 0.12 U	0.14 ± 0.09 U	0.31 ± 0.12 U	0.21 ± 0.09 U	0.14 ± 0.06 U	0.24 ± 0.10 U	0.16 ± 0.10 U	0.18 ± 0.09 U	0.14 ± 0.06 U	0.24 ± 0.10 U	0.16 ± 0.10 U	0.18 ± 0.09 U	0.14 ± 0.06 U	0.24 ± 0.10 U	0.16 ± 0.10 U	0.18 ± 0.09 U	0.14 ± 0.06 U	0.24 ± 0.10 U		
Iron (mg/L)	NA	mg/L	NS	1.0 ± 0.3 U	1.2 ± 0.4 U	0.33 ± 0.36 U	0.55 ± 0.31 U	0.87 ± 0.35 U	0.81 ± 0.31 U	0.8 ± 0.4 U	0.54 ± 0.31 U	1.07 ± 0.31 U	0.76 ± 0.38 U	0.28 ± 0.43 U	0.80 ± 0.37 U	1.39 ± 0.36 U	0.21 ± 0.49 U	1.38 ± 0.37 U	0.49 ± 0.35 U	1.49 ± 0.35 U	0.81 ± 0.35 U	0.81 ± 0.35 U	0.81 ± 0.35 U	0.81 ± 0.35 U	0.81 ± 0.35 U	0.81 ± 0.35 U	0.81 ± 0.35 U	0.81 ± 0.35 U	0.81 ± 0.35 U	0.81 ± 0.35 U	0.81 ± 0.35 U	0.81 ± 0.35 U	0.81 ± 0.35 U	0.81 ± 0.35 U	
Calcium (mg/L)	NA	mg/L	400	35	44	41	42	42	44	44	44	41	43	42	39	44	31	44	31	26	25	25	25	25	25	25	25	25	25	25	25	25	25	25	
Chloride (mg/L)	NA	mg/L	7,000	1.5 ± 0.88 U	1.27 ± 0.74 U	0.754 ± 0.703 U	1.17 ± 0.85 U	0.63 ± 0.68 U	0.57 ± 0.67 U	1.06 ± 0.7 U	0.59 ± 0.5 U	1.48 ± 0.74 U	0.78 ± 0.67 U	0.93 ± 0.54 U	1.51 ± 0.60 U	1.7 ± 0.88 U	0.82 ± 0.58 U	1.5 ± 0.81 U	1.53 ± 0.79 U	1.02 ± 0.55 U	0.83 ± 0.58 U	1.02 ± 0.55 U	0.83 ± 0.58 U	1.02 ± 0.55 U	0.83 ± 0.58 U	1.02 ± 0.55 U	0.83 ± 0.58 U	1.02 ± 0.55 U	0.83 ± 0.58 U	1.02 ± 0.55 U	0.83 ± 0.58 U	1.02 ± 0.55 U	0.83 ± 0.58 U		
PHOSPHORUS (mg/L)	NA	mg/L	12.50 ¹																																
Turbidity (NTU)	NA	NTU	200	21	17	17	15	17	16	16	16	15	16	16	13	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	
Chloride Solids Total (g/L)	NA	g/L	0.22 ± 0.07	7.12	7.11	7.05	7.11	7.12	7.15	7.03	7.03	7.21	7.29	7.04	7.57	6.98 H	7.57	6.98 H	7.57	6.98 H	7.57	6.98 H	7.57	6.98 H	7.57	6.98 H	7.57	6.98 H	7.57	6.98 H	7.57	6.98 H	7.57	6.98 H	
ANIONS																																			
Ammonia (mg/L)	D	mg/L	0.006	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	
Aspartic (mg/L)	D	mg/L	0.01	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	
Aspartic (mg/L)	D	mg/L	0.01	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	
Benzoic (mg/L)	D	mg/L	2	0.437	0.304	0.363	0.325	0.284	0.295	0.301	0.357	0.407	0.448	0.326	0.343	0.485	0.339	0.391	0.448	0.339	0.341	0.355	0.448	0.339	0.341	0.355	0.448	0.339	0.341	0.355	0.448	0.339	0.341	0.355	
Benzoic (mg/L)	D	mg/L	0.004	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	
Benzoic (mg/L)	D	mg/L	2	0.9999	0.101	0.0843	0.0713	0.0885	0.0786	0.0923	0.0990	0.118	0.0719	0.0841	0.0879	0.094	0.095	0.094	0.095	0.094	0.095	0.094	0.095	0.094	0.095	0.094	0.095	0.094	0.095	0.094	0.095	0.094	0.095	0.094	0.095
Calcium (mg/L)	D	mg/L	0.005	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	
Calcium (mg/L)	D	mg/L	103.2	118	136	120	121	125	123	128.5	124.3	143	124	111	114	114	114	114	114	114	114	114	114	114	114	114	114	114	114	114	114	114	114	114	
Calcium (mg/L)	D	mg/L	0.1	0.0105	0.0128	0.0092	0.0091	0.0091 U	0.0091 U	0.0091 U	0.0091 U	0.0091 U	0.0091 U	0.0091 U	0.0091 U	0.0091 U	0.0091 U	0.0091 U	0.0091 U	0.0091 U	0.0091 U	0.0091 U	0.0091 U	0.0091 U	0.0091 U	0.0091 U	0.0091 U	0.0091 U	0.0091 U	0.0091 U	0.0091 U	0.0091 U	0.0091 U	0.0091 U	
Chloride (mg/L)	D	mg/L	0.006	0.001 U	0.0024	0.0025	0.0032	0.0032	0.0028	0.0028	0.0028	0.0028	0.0028	0.0028	0.0028	0.0028	0.0028	0.0028	0.0028	0.0028	0.0028	0.0028	0.0028	0.0028	0.0028	0.0028	0.0028	0.0028	0.0028	0.0028	0.0028	0.0028	0.0028	0.0028	
Coliform (mg/L)	D	mg/L	NS																																
Iron (mg/L)	D	mg/L	NS																																
Lithium (mg/L)	D	mg/L	0.0078	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		
Lithium (mg/L)	D	mg/L	0.04	0.0147	0.0155	0.0146	0.0146	0.0153	0.0155	0.0142	0.014	0.015	0.015	0.015	0.015	0.015	0.015	0.015	0.015	0.015	0.015	0.015	0.015	0.015	0.015	0.015	0.015	0.015	0.015	0.015	0.015	0.015	0.015		
Manganese (mg/L)	D	mg/L	NS																																
Mercury (mg/L)	D	mg/L	0.002	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U		
Molybdenum (mg/L)	D	mg/L	0.1	0.0024	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		
Nickel (mg/L)	D	mg/L	NS	0.0085	0.0077	0.0085	0.0087	0.0085	0.0085	0.0085	0.0085	0.0085	0.0085	0.0085	0.0085	0.0085	0.0085	0.0085	0.0085	0.0085	0.0085	0.0085	0.0085	0.0085	0.0085	0.0085	0.0085	0.0085	0.0085	0.0085	0.0085	0.0085	0.0085	0.0085	
Nickel (mg/L)	D	mg/L	0.05	0.001 U	0.0011	0.0012	0.0013	0.001 U	0.0014	0.0016	0.0016	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	
Phosphate (mg/L)	D	mg/L	0.002	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		
Phosphate (mg/L)	D	mg/L	0.002	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		

Notes:
 Empty cells = not analyzed
 N = Normal Environmental Sample
 FD = Field Duplicate Sample
 NA = not applicable
 T = total
 D = dissolved
 mg/L = milligrams per liter
 µCi/L = microcurie per liter
 NTU = nephelometric turbidity units
 U = Holding time exceeded
 1 = Analyte detected below quantitation limits
 2 = Sample titration was performed in the laboratory
 3 = The associated batch QC was outside the established quality control range for precision
 36 = The sample matrix interfered with the ability to

**APPENDIX A THIRD QUARTER 2024 CCR IMPOUNDMENT
INSPECTION REPORT**



Grand Tower Energy Center
Closed CCR Impoundment
Quarterly Inspection Form

Date: 9/6/2024
Time: 7:40 – 8:10
Name: Marshall Arendell
(Inspector)

Weather:

Temperature:

80 deg. F

Sunny

Cloudy

Raining

Other

Observations:

Erosion / Gullies

Cracking / Sloughing

Ponding / Damp Areas

No Problems Identified

Woody Vegetation Growth

Other

Conditions Limiting Visibility:

Snow Cover

Vegetation

None

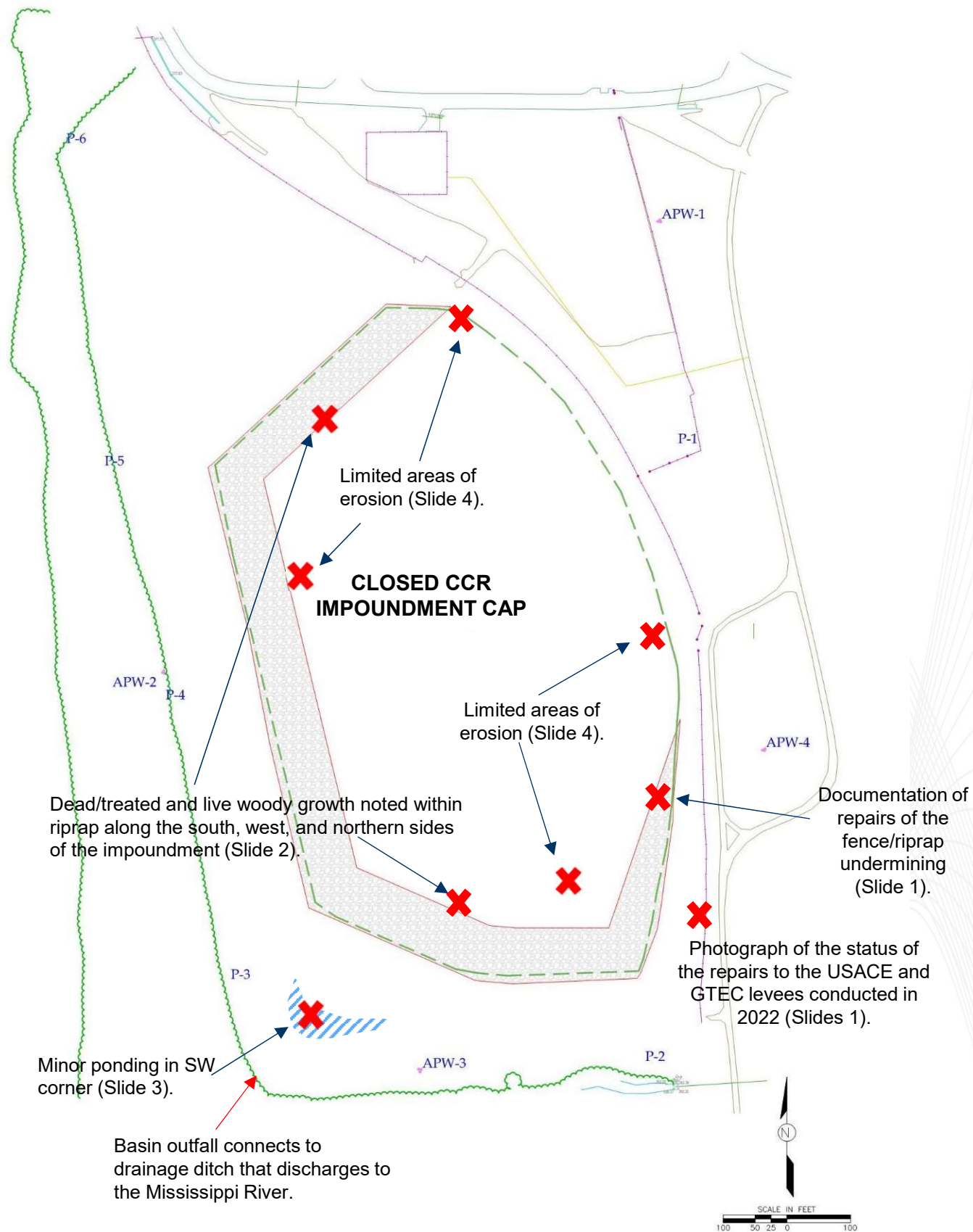
Other

Observations in Detail Below:

- ERM onsite for the Q3 2024 inspection of the closed CCR impoundment and groundwater sampling event.
- Repairs to the United States Army Corps of Engineers (USACE) and GTEC levees continue to hold, and successful revegetation of levee face continues to progress.
- Erosion channels noted across north, west, east, and southern closed CCR impoundment cap faces up to 13" deep.
- Ponding continues to be noted in the SW corner of the basin near the outfall.
- The impoundment cap was mowed during Q3 2024 and found to be in generally good condition.
- The inspector recommends continued treatment of woody growth within the riprap with herbicide, and the filling of the erosional channels noted above.

Please see observation locations on figure on the following page.

Observation Locations Map



Grand Tower Energy Center Q3 2024 Closed CCR Impoundment Cap Inspection

Repairs to the Fenceline and Levee area on the SE Side of Closed CCR Impoundment Cap



Facing west along the repaired fence-line, riprap, and levee area.



Facing south along the repaired fence-line, riprap, and levee area.

Levee has successfully revegetated since repairs were initiated during 2022.

Woody Growth Observations

Dead/herbicide treated woody vegetation noted within riprap up to 1" diameter. Limited amount of live woody growth remains.



September 6th, 2024, at 07:52:42 AM

Sparse woody vegetation on riprap facing north.

Picture facing south towards impoundment cap.



September 6th, 2024, at 07:44:04 AM

Woody vegetation on south facing riprap.
Picture facing south from impoundment cap.

Ponding in the SW Corner of Site Basin Near the Outfall



Ponded area in southwest corner of site as viewed from mowed impoundment cap.

Note: Mississippi River backwater enters the GTEC CCR Impoundment Basin when the river level gage operated by the U.S. Army Corps of Engineers at Grand Tower, IL reaches a stage of approximately 27 ft.

Erosional Channel Observations

Erosion channel on north side of impoundment cap.



Erosion channel on west side of impoundment cap.

Erosion channel on south side of impoundment cap.



Erosion channel on east side of impoundment cap.

**APPENDIX B THIRD QUARTER 2024 GROUDNWATER
MONITORING WELL INSPECTION FORMS**

Well Inspection Worksheet

Grand Tower Energy Center

Grand Tower, IL

Well ID: APW-01R Date: 9/4/2024
Total Depth (Actual): 58.30 (BTOC) Time: 12:59 PM
Total Depth (Measured): 59.20 (BTOC) Collection Order: 5
Depth to Water (Measured): 30.67 (BTOC)

Is well screen occluded more than 10%? No
If Yes, list steps for redevelopment: _____

LNAPL Present: No
If Yes, measured thickness = _____
DNAPL Present: No
If Yes, measured thickness = _____

Well Completion Type:

Condition of protector: INTACT Yes
Well ID present and readable: Yes
Locks intact: Yes
Weep hole present: No
Water present in protector: No
Are well "markers" (i.e.bumper posts) needed at this location: No
If yes, are current well "markers" adequate around well: _____
Comments: _____

Well Surface Seal: INTACT

Is surrounding area sloped away from well: Yes
Any observed ponding: No
Is surface run-off flow evident around well: No

Well Casing Condition: INTACT

Size of well (diameter) = 2 inches
Marking point present: Yes
Well cap in place: Yes
Comments: _____

General Comments:

Large hole, 3ft southeast of monitoring well.

Well Inspection Worksheet

Grand Tower Energy Center

Grand Tower, IL

Well ID: APW-02 Date: 9/4/2024
Total Depth (Actual): 58.75 (BTOC) Time: 12:37 PM
Total Depth (Measured): 59.30 (BTOC) Collection Order: 4
Depth to Water (Measured): 30.90 (BTOC)

Is well screen occluded more than 10%? No
If Yes, list steps for redevelopment: _____

LNAPL Present: No
If Yes, measured thickness = _____
DNAPL Present: No
If Yes, measured thickness = _____

Well Completion Type:

Condition of protector: INTACT Yes
Well ID present and readable: Yes
Locks intact: Yes
Weep hole present: No
Water present in protector: Yes
Are well "markers" (i.e.bumper posts) needed at this location: No
If yes, are current well "markers" adequate around well: _____
Comments: _____

Well Surface Seal: INTACT

Is surrounding area sloped away from well: Yes
Any observed ponding: No
Is surface run-off flow evident around well: No

Well Casing Condition: INTACT

Size of well (diameter) = 2 inches
Marking point present: Yes
Well cap in place: Yes
Comments: _____

General Comments:

Well Inspection Worksheet

Grand Tower Energy Center

Grand Tower, IL

Well ID: APW-03 Date: 9/4/2024
Total Depth (Actual): 54.65 (BTOC) Time: 1:57 PM
Total Depth (Measured): 60.80 (BTOC) Collection Order: 12
Depth to Water (Measured): 29.95 (BTOC)

Is well screen occluded more than 10%? No
If Yes, list steps for redevelopment: _____

LNAPL Present: No
If Yes, measured thickness = _____
DNAPL Present: No
If Yes, measured thickness = _____

Well Completion Type:

Condition of protector: INTACT Yes
Well ID present and readable: Yes
Locks intact: Yes
Weep hole present: No
Water present in protector: Yes
Are well "markers" (i.e.bumper posts) needed at this location: No
If yes, are current well "markers" adequate around well: _____
Comments: _____

Well Surface Seal: INTACT

Is surrounding area sloped away from well: Yes
Any observed ponding: No
Is surface run-off flow evident around well: No

Well Casing Condition: INTACT

Size of well (diameter) = 2 inches
Marking point present: Yes
Well cap in place: Yes
Comments: _____

General Comments:

Well Inspection Worksheet

Grand Tower Energy Center

Grand Tower, IL

Well ID: APW-04 Date: 9/4/2024
Total Depth (Actual): 60.40 (BTOC) Time: 1:25 PM
Total Depth (Measured): 61.30 (BTOC) Collection Order: 7
Depth to Water (Measured): 31.41 (BTOC)

Is well screen occluded more than 10%? No
If Yes, list steps for redevelopment: _____

LNAPL Present: No
If Yes, measured thickness = _____
DNAPL Present: No
If Yes, measured thickness = _____

Well Completion Type:

Condition of protector: INTACT Yes
Well ID present and readable: Yes
Locks intact: Yes
Weep hole present: No
Water present in protector: Yes
Are well "markers" (i.e.bumper posts) needed at this location: No
If yes, are current well "markers" adequate around well: _____
Comments: 2 ballards are very lose.

Well Surface Seal: INTACT

Is surrounding area sloped away from well: No
Any observed ponding: No
Is surface run-off flow evident around well: No

Well Casing Condition: INTACT

Size of well (diameter) = 2 inches
Marking point present: Yes
Well cap in place: Yes
Comments: _____

General Comments:

Well Inspection Worksheet

Grand Tower Energy Center

Grand Tower, IL

Well ID: APW-05R Date: 9/4/2024
Total Depth (Actual): 56.90 (BTOC) Time: 12:14 PM
Total Depth (Measured): 63.50 (BTOC) Collection Order: 3
Depth to Water (Measured): 30.40 (BTOC)

Is well screen occluded more than 10%? No
If Yes, list steps for redevelopment: _____

LNAPL Present: No
If Yes, measured thickness = _____
DNAPL Present: No
If Yes, measured thickness = _____

Well Completion Type:

Condition of protector: INTACT Yes
Well ID present and readable: Yes
Locks intact: Yes
Weep hole present: No
Water present in protector: No
Are well "markers" (i.e.bumper posts) needed at this location: No
If yes, are current well "markers" adequate around well: _____
Comments: No ballards present.

Well Surface Seal: INTACT

Is surrounding area sloped away from well: Yes
Any observed ponding: No
Is surface run-off flow evident around well: No

Well Casing Condition: INTACT

Size of well (diameter) = 2 inches
Marking point present: Yes
Well cap in place: Yes
Comments: _____

General Comments:

Well Inspection Worksheet

Grand Tower Energy Center

Grand Tower, IL

Well ID: APW-06D Date: 9/4 - 9/5/2024
Total Depth (Actual): 152.57 (BTOC) Time: 12:01 PM
Total Depth (Measured): 158.05 (BTOC) Collection Order: 2
Depth to Water (Measured): 28.50 (BTOC)

Is well screen occluded more than 10%? No
If Yes, list steps for redevelopment: _____

LNAPL Present: No
If Yes, measured thickness = _____
DNAPL Present: No
If Yes, measured thickness = _____

Well Completion Type:

Condition of protector: INTACT Yes
Well ID present and readable: No
Locks intact: Yes
Weep hole present: No
Water present in protector: No
Are well "markers" (i.e.bumper posts) needed at this location: No
If yes, are current well "markers" adequate around well: _____
Comments: _____

Well Surface Seal: INTACT

Is surrounding area sloped away from well: Yes
Any observed ponding: No
Is surface run-off flow evident around well: No

Well Casing Condition: INTACT

Size of well (diameter) = 2 inches
Marking point present: Yes
Well cap in place: Yes
Comments: _____

General Comments:

Well protector surrounded by sand. Wasp nest in protector lid, removed on
9/4 and finished inspection on 9/5.

Well Inspection Worksheet

Grand Tower Energy Center

Grand Tower, IL

Well ID: APW-06S Date: 9/4/2024
Total Depth (Actual): 63.98 (BTOC) Time: 11:58 AM
Total Depth (Measured): 64.62 (BTOC) Collection Order: 1
Depth to Water (Measured): 29.77 (BTOC)

Is well screen occluded more than 10%? No
If Yes, list steps for redevelopment: _____

LNAPL Present: No
If Yes, measured thickness = _____
DNAPL Present: No
If Yes, measured thickness = _____

Well Completion Type:

Condition of protector: INTACT Yes
Well ID present and readable: No
Locks intact: Yes
Weep hole present: No
Water present in protector: No
Are well "markers" (i.e.bumper posts) needed at this location: No
If yes, are current well "markers" adequate around well: _____
Comments: _____

Well Surface Seal: INTACT

Is surrounding area sloped away from well: Yes
Any observed ponding: No
Is surface run-off flow evident around well: No

Well Casing Condition: INTACT

Size of well (diameter) = 2 inches
Marking point present: Yes
Well cap in place: Yes
Comments: _____

General Comments:

Well protector surrounded by sand.

Well Inspection Worksheet

Grand Tower Energy Center

Grand Tower, IL

Well ID: APW-07 Date: 9/4/2024
Total Depth (Actual): 63.35 (BTOC) Time: 1:43 PM
Total Depth (Measured): 64.45 (BTOC) Collection Order: 10
Depth to Water (Measured): 26.10 (BTOC)

Is well screen occluded more than 10%? No
If Yes, list steps for redevelopment: _____

LNAPL Present: No
If Yes, measured thickness = _____
DNAPL Present: No
If Yes, measured thickness = _____

Well Completion Type:

Condition of protector: INTACT Yes
Well ID present and readable: Yes
Locks intact: Yes
Weep hole present: No
Water present in protector: Yes
Are well "markers" (i.e.bumper posts) needed at this location: No
If yes, are current well "markers" adequate around well: _____
Comments: _____

Well Surface Seal: INTACT

Is surrounding area sloped away from well: No
Any observed ponding: No
Is surface run-off flow evident around well: No

Well Casing Condition: INTACT

Size of well (diameter) = 2 inches
Marking point present: Yes
Well cap in place: Yes
Comments: _____

General Comments:

Well was pressurized.

Well Inspection Worksheet

Grand Tower Energy Center

Grand Tower, IL

Well ID: APW-08 Date: 9/4/2024
Total Depth (Actual): 61.89 (BTOC) Time: 1:51 PM
Total Depth (Measured): 63.34 (BTOC) Collection Order: 11
Depth to Water (Measured): 26.55 (BTOC)

Is well screen occluded more than 10%? No
If Yes, list steps for redevelopment: _____

LNAPL Present: No
If Yes, measured thickness = _____
DNAPL Present: No
If Yes, measured thickness = _____

Well Completion Type:

Condition of protector: INTACT Yes
Well ID present and readable: Yes
Locks intact: Yes
Weep hole present: No
Water present in protector: No
Are well "markers" (i.e.bumper posts) needed at this location: No
If yes, are current well "markers" adequate around well: _____
Comments: _____

Well Surface Seal: INTACT

Is surrounding area sloped away from well: Yes
Any observed ponding: No
Is surface run-off flow evident around well: No

Well Casing Condition: INTACT

Size of well (diameter) = 2 inches
Marking point present: Yes
Well cap in place: Yes
Comments: _____

General Comments:

Well Inspection Worksheet

Grand Tower Energy Center

Grand Tower, IL

Well ID: APW-09 Date: 9/4/2024
Total Depth (Actual): 63.40 (BTOC) Time: 1:09 PM
Total Depth (Measured): 64.18 (BTOC) Collection Order: 6
Depth to Water (Measured): 30.35 (BTOC)

Is well screen occluded more than 10%? No
If Yes, list steps for redevelopment: _____

LNAPL Present: No
If Yes, measured thickness = _____
DNAPL Present: No
If Yes, measured thickness = _____

Well Completion Type:

Condition of protector: INTACT Yes
Well ID present and readable: Yes
Locks intact: Yes
Weep hole present: No
Water present in protector: No
Are well "markers" (i.e.bumper posts) needed at this location: No
If yes, are current well "markers" adequate around well: _____
Comments: _____

Well Surface Seal: INTACT

Is surrounding area sloped away from well: No
Any observed ponding: No
Is surface run-off flow evident around well: No

Well Casing Condition: INTACT

Size of well (diameter) = 2 inches
Marking point present: Yes
Well cap in place: Yes
Comments: _____

General Comments:

Well Inspection Worksheet

Grand Tower Energy Center

Grand Tower, IL

Well ID: APW-10D Date: 9/4/2024
Total Depth (Actual): 98.19 (BTOC) Time: 1:32 AM
Total Depth (Measured): 100.05 (BTOC) Collection Order: 9
Depth to Water (Measured): 23.00 (BTOC)

Is well screen occluded more than 10%? No
If Yes, list steps for redevelopment: _____

LNAPL Present: No
If Yes, measured thickness = _____
DNAPL Present: No
If Yes, measured thickness = _____

Well Completion Type:

Condition of protector: INTACT Yes
Well ID present and readable: Yes
Locks intact: Yes
Weep hole present: No
Water present in protector: No
Are well "markers" (i.e.bumper posts) needed at this location: No
If yes, are current well "markers" adequate around well: _____
Comments: _____

Well Surface Seal: INTACT

Is surrounding area sloped away from well: No
Any observed ponding: No
Is surface run-off flow evident around well: No

Well Casing Condition: INTACT

Size of well (diameter) = 2 inches
Marking point present: Yes
Well cap in place: Yes
Comments: _____

General Comments:

Well Inspection Worksheet

Grand Tower Energy Center

Grand Tower, IL

Well ID: APW-10S Date: 9/4/2024
Total Depth (Actual): 62.84 (BTOC) Time: 1:31 PM
Total Depth (Measured): 63.65 (BTOC) Collection Order: 8
Depth to Water (Measured): 26.25 (BTOC)

Is well screen occluded more than 10%? No
If Yes, list steps for redevelopment: _____

LNAPL Present: No
If Yes, measured thickness = _____
DNAPL Present: No
If Yes, measured thickness = _____

Well Completion Type:

Condition of protector: INTACT Yes
Well ID present and readable: Yes
Locks intact: Yes
Weep hole present: No
Water present in protector: No
Are well "markers" (i.e.bumper posts) needed at this location: No
If yes, are current well "markers" adequate around well: _____
Comments: _____

Well Surface Seal: INTACT

Is surrounding area sloped away from well: No
Any observed ponding: No
Is surface run-off flow evident around well: No

Well Casing Condition: INTACT

Size of well (diameter) = 2 inches
Marking point present: Yes
Well cap in place: Yes
Comments: _____

General Comments:

APPENDIX C THIRD QUARTER 2024 FIELD DATA FORMS



Low Flow Groundwater Sampling Field Data Form

Well ID: APW-01R
Well Permit No:

Date: 2024/09/05

Site ID GTEC-GRAND-TOWER	Purge Method / Pump Intake Depth Low Flow / 54.2 (ft)	Reference Elevation 366.82 (ft)
Site Address 1820 Power Plant Road, Grand Tower, US-IL	Purge Equipment NA	Depth to Water / Free Product 30.8 (ft) / None
Project Number 0599247	Sample Equipment NA	Total Well Depth 59.2 (ft)
Project Name 20240429-GWMonitor	Average Purge Rate 450 (mL/min)	Well Diameter / Well Screen Interval 2 (in) / 48.3 - 58.3 ()
Sampler marshall arendell	Volume of Water in Well / Total Volume Purged 4.63 (gal) / 4.5 (gal)	Well Construction

Well Head Vapor Measurements
PID: NA; FID: NA; CO: NA; CO2: NA; O2: NA; CH4: NA; H2S: NA

Time	DTW (ft)	Flow Rate (mL/min)	Purge Volume (gal)	Temperature (C) ±3%	pH ±0.1pH units	Specific Conductivity (uS/cm) ±3%	Total Conductivity (NA)	Dissolved Oxygen (mg/L) ±10%	ORP (mV) ±10 mV	Turbidity (NTU) ±10%	Total Dissolved Solids(NA)	Comments
15:22	30.8	450	0	18.7	6.27	0.3	NM	3.21	101.2	455	NM	TURBID, NO ODORS
15:27	30.8	450	0.5	16.8	6.34	0.3	NM	2.1	98.7	434	NM	TURBID, NO ODORS
15:32	30.8	450	1	16.6	6.49	0.3	NM	1.66	101.1	209	NM	TURBID, NO ODORS
15:37	30.8	450	1.5	16.7	6.6	0.3	NM	1.57	102.7	103	NM	CLOUDY, NO ODORS
15:42	30.8	450	2	16.6	6.6	0.3	NM	1.6	104.4	58.5	NM	CLOUDY, NO ODORS
15:47	30.8	450	2.5	16.3	6.64	0.3	NM	1.57	105.9	48.4	NM	CLOUDY, NO ODORS
15:52	30.8	450	3	16.5	6.65	0.3	NM	1.53	107.8	26.4	NM	CLEAR, NO ODORS
15:57	30.8	450	3.5	16.3	6.59	0.3	NM	1.52	110.2	19.6	NM	CLEAR, NO ODORS
16:02	30.8	450	4	16.3	6.54	0.3	NM	1.52	112.2	18.6	NM	CLEAR, NO ODORS
16:07	30.8	450	4.5	16.3	6.55	0.3	NM	1.51	113.6	19.2	NM	CLEAR, NO ODORS

Sample ID(s): APW-01R-WG-20240905	Additional Comments	SAMPLER NAME AND SIGNATURE	Date Time
Analysis:		Marshall Arendell	09/11/2024 18:00



Low Flow Groundwater Sampling Field Data Form

Well ID: APW-02
Well Permit No:

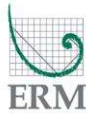
Date: 2024/09/05

Site ID GTEC-GRAND-TOWER	Purge Method / Pump Intake Depth Low Flow / 54.3 (ft)	Reference Elevation 364.61 (ft)
Site Address 1820 Power Plant Road, Grand Tower, US-IL	Purge Equipment NA	Depth to Water / Free Product 28.5 (ft) / None
Project Number 0599247	Sample Equipment NA	Total Well Depth 59.3 (ft)
Project Name 20240429-GWMonitor	Average Purge Rate 193.8 (mL/min)	Well Diameter / Well Screen Interval 2 (in) / 47.2 - 57.2 ()
Sampler marshall arendell	Volume of Water in Well / Total Volume Purged 5.03 (gal) / 1.3 (gal)	Well Construction

Well Head Vapor Measurements
PID: NA; FID: NA; CO: NA; CO2: NA; O2: NA; CH4: NA; H2S: NA

Time	DTW (ft)	Flow Rate (mL/min)	Purge Volume (gal)	Temperature (C) ±3%	pH ±0.1pH units	Specific Conductivity (uS/cm) ±3%	Total Conductivity (NA)	Dissolved Oxygen (mg/L) ±10%	ORP (mV) ±10 mV	Turbidity (NTU) ±10%	Total Dissolved Solids(NA)	Comments
10:05	31	250	0	18.7	7.07	0.6	NM	3	80.1	65.8	NM	CLEAR, NO ODOR
10:10	33.25	250	0.25	19.2	7.1	0.5	NM	2.72	38.7	1000	NM	TURBID, BROWN, NO ODOR
10:15	34.41	200	0.5	19.6	7.09	0.5	NM	2.48	31.6	416	NM	CLOUDY, NO ODORS
10:20	35.03	200	0.75	20.5	7.1	0.5	NM	2.28	26	307	NM	CLOUDY, NO ODORS
10:25	35.57	200	1	20.7	7.11	0.5	NM	1.66	27.5	410	NM	CLOUDY, NO ODORS
10:30	35.94	150	1.1	21.4	7.1	0.5	NM	1.43	33.4	177	NM	CLOUDY, NO ODORS
10:35	36.18	150	1.2	21.7	7.1	0.5	NM	1.36	39.1	171	NM	CLOUDY, NO ODORS
10:40	36.59	150	1.3	21.9	7.1	0.5	NM	1.28	40.5	174	NM	CLOUDY, NO ODORS

Sample ID(s): APW-02-WG-20240905	Additional Comments	SAMPLER NAME AND SIGNATURE	Date Time
Analysis:		Marshall Arendell	09/11/2024 19:46



Low Flow Groundwater Sampling Field Data Form

Well ID: APW-03
Well Permit No:

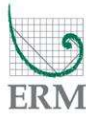
Date: 2024/09/04

Site ID GTEC-GRAND-TOWER	Purge Method / Pump Intake Depth Low Flow / 55.8 (ft)	Reference Elevation 365.79 (ft)
Site Address 1820 Power Plant Road, Grand Tower, US-IL	Purge Equipment NA	Depth to Water / Free Product 29.95 (ft) / None
Project Number 0599247	Sample Equipment NA	Total Well Depth 60.8 (ft)
Project Name 20240429-GWMonitor	Average Purge Rate 450 (mL/min)	Well Diameter / Well Screen Interval 2 (in) / 45.7 - 55.7 ()
Sampler marshall arendell	Volume of Water in Well / Total Volume Purged 5.03 (gal) / 2.5 (gal)	Well Construction

Well Head Vapor Measurements
PID: NA; FID: NA; CO: NA; CO2: NA; O2: NA; CH4: NA; H2S: NA

Time	DTW (ft)	Flow Rate (mL/min)	Purge Volume (gal)	Temperature (C) ±3%	pH ±0.1pH units	Specific Conductivity (uS/cm) ±3%	Total Conductivity (NA)	Dissolved Oxygen (mg/L) ±10%	ORP (mV) ±10 mV	Turbidity (NTU) ±10%	Total Dissolved Solids(NA)	Comments
14:25	29.95	450	0	16.2	7.47	0.7	NM	2.59	83.2	54.8	NM	CLEAR, NO ODORS
14:30	29.95	450	0.5	15.4	7.85	0.7	NM	0.52	7.9	10.7	NM	CLEAR, NO ODORS
14:35	29.95	450	1	15.5	7.86	0.6	NM	0.37	10.1	4.32	NM	CLEAR, NO ODORS
14:40	29.95	450	1.5	15.6	7.87	0.6	NM	0.3	11.6	2.87	NM	CLEAR, NO ODORS
14:45	29.95	450	2	15.4	7.87	0.6	NM	0.25	16.9	2.14	NM	CLEAR, NO ODORS
14:50	29.95	450	2.5	15.3	7.88	0.6	NM	0.22	16.3	1.94	NM	CLEAR, NO ODORS

Sample ID(s): APW-03-WG-20240904	Additional Comments	SAMPLER NAME AND SIGNATURE	Date Time
Analysis:		Marshall Arendell	09/11/2024 19:54



Low Flow Groundwater Sampling Field Data Form

Well ID: APW-04
Well Permit No:

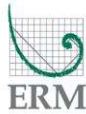
Date: 2024/09/04

Site ID GTEC-GRAND-TOWER	Purge Method / Pump Intake Depth Low Flow / 56.3 (ft)	Reference Elevation 367.44 (ft)
Site Address 1820 Power Plant Road, Grand Tower, US-IL	Purge Equipment NA	Depth to Water / Free Product 31.41 (ft) / None
Project Number 0599247	Sample Equipment NA	Total Well Depth 61.3 (ft)
Project Name 20240429-GWMonitor	Average Purge Rate 500 (mL/min)	Well Diameter / Well Screen Interval 2 (in) / 45.7 - 55.7 ()
Sampler marshall arendell	Volume of Water in Well / Total Volume Purged 4.88 (gal) / 3 (gal)	Well Construction

Well Head Vapor Measurements
PID: NA; FID: NA; CO: NA; CO2: NA; O2: NA; CH4: NA; H2S: NA

Time	DTW (ft)	Flow Rate (mL/min)	Purge Volume (gal)	Temperature (C) ±3%	pH ±0.1pH units	Specific Conductivity (uS/cm) ±3%	Total Conductivity (NA)	Dissolved Oxygen (mg/L) ±10%	ORP (mV) ±10 mV	Turbidity (NTU) ±10%	Total Dissolved Solids(NA)	Comments
17:40	31.41	500	0	18	7.09	0.4	NM	1.27	111.4	230	NM	CLOUDY, NO ODORS
17:45	31.41	500	0.5	17.6	7.16	0.4	NM	0.5	106	110	NM	CLOUDY, NO ODORS
17:50	31.41	500	1	17.6	7.17	0.4	NM	0.21	108.7	57.1	NM	CLOUDY, NO ODORS
17:55	31.41	500	1.5	17.5	7.17	0.4	NM	0.14	110.7	43.1	NM	CLOUDY, NO ODORS
18:00	31.41	500	2	17.4	7.17	0.4	NM	0.11	112.1	33.6	NM	CLOUDY, NO ODORS
18:05	31.41	500	2.5	17.5	7.17	0.4	NM	0.1	112.9	30.6	NM	CLOUDY, NO ODORS
18:10	31.41	500	3	17.5	7.17	0.4	NM	0.09	113.4	30.2	NM	CLOUDY, NO ODORS

Sample ID(s): APW-04-WG-20240904	Additional Comments	SAMPLER NAME AND SIGNATURE	Date Time
Analysis:		Marshall Arendell	09/11/2024 20:06



Low Flow Groundwater Sampling Field Data Form

Well ID: APW-05R
Well Permit No:

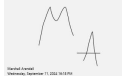
Date: 2024/09/05

Site ID GTEC-GRAND-TOWER	Purge Method / Pump Intake Depth Low Flow / 58.5 (ft)	Reference Elevation ()
Site Address 1820 Power Plant Road, Grand Tower, US-IL	Purge Equipment NA	Depth to Water / Free Product 30.5 (ft) / None
Project Number 0599247	Sample Equipment NA	Total Well Depth 63.5 (ft)
Project Name 20240429-GWMonitor	Average Purge Rate 450 (mL/min)	Well Diameter / Well Screen Interval 2 (in) / - ()
Sampler marshall arendell	Volume of Water in Well / Total Volume Purged 5.39 (gal) / 4.5 (gal)	Well Construction

Well Head Vapor Measurements

PID: NA; FID: NA; CO: NA; CO2: NA; O2: NA; CH4: NA; H2S: NA

Time	DTW (ft)	Flow Rate (mL/min)	Purge Volume (gal)	Temperature (C) ±3%	pH ±0.1pH units	Specific Conductivity (uS/cm) ±3%	Total Conductivity (NA)	Dissolved Oxygen (mg/L) ±10%	ORP (mV) ±10 mV	Turbidity (NTU) ±10%	Total Dissolved Solids(NA)	Comments
11:43	30.5	450	0	17.9	7.48	0.4	NM	2.01	114.1	805	NM	TURBID, LIGHT BROWN, NO ODORS
11:48	30.5	450	0.5	17.3	7.4	0.4	NM	1.05	78.7	579	NM	TURBID, LIGHT BROWN, NO ODORS
11:53	30.5	450	1	17.4	7.44	0.4	NM	0.74	62.7	413	NM	TURBID, LIGHT BROWN, NO ODORS
11:58	30.5	450	1.5	17.3	7.5	0.4	NM	0.52	52.1	301	NM	TURBID, LIGHT BROWN, NO ODORS
12:03	30.5	450	2	17.3	7.5	0.4	NM	0.24	45.5	160	NM	CLOUDY, LIGHT BROWN, NO ODORS
12:08	30.5	450	2.5	17.3	7.5	0.4	NM	0.26	40.2	94.8	NM	CLOUDY, LIGHT BROWN, NO ODORS
12:13	30.5	450	3	17.4	7.52	0.4	NM	0.21	35.6	67.1	NM	CLEAR, NO ODORS
12:18	30.5	450	3.5	17.4	7.5	0.4	NM	0.2	33.1	59.5	NM	CLEAR, NO ODORS
12:23	30.5	450	4	17.4	7.53	0.4	NM	0.07	27.7	62.1	NM	CLEAR, NO ODORS
12:28	30.5	450	4.5	17.3	7.53	0.4	NM	0.07	24.4	64.1	NM	CLEAR, NO ODORS

Sample ID(s): APW-05R-WG-20240905,DUP-01-WG-20240905	Additional Comments	SAMPLER NAME AND SIGNATURE	Date Time
Analysis:		Marshall Arendell 	09/11/2024 21:18



Low Flow Groundwater Sampling Field Data Form

Well ID: APW-06D
Well Permit No:

Date: 2024/09/05

Site ID GTEC-GRAND-TOWER	Purge Method / Pump Intake Depth Low Flow / 153.05 (ft)	Reference Elevation 363.69 (ft)
Site Address 1820 Power Plant Road, Grand Tower, US-IL	Purge Equipment NA	Depth to Water / Free Product 28.45 (ft) / None
Project Number 0599247	Sample Equipment NA	Total Well Depth 158.05 (ft)
Project Name 20240429-GWMonitor	Average Purge Rate 450 (mL/min)	Well Diameter / Well Screen Interval 2 (in) / 140 - 150 (ft)
Sampler marshall arendell	Volume of Water in Well / Total Volume Purged 21.15 (gal) / 2.5 (gal)	Well Construction

Well Head Vapor Measurements
PID: NA; FID: NA; CO: NA; CO2: NA; O2: NA; CH4: NA; H2S: NA

Time	DTW (ft)	Flow Rate (mL/min)	Purge Volume (gal)	Temperature (C) ±3%	pH ±0.1pH units	Specific Conductivity (uS/cm) ±3%	Total Conductivity (NA)	Dissolved Oxygen (mg/L) ±10%	ORP (mV) ±10 mV	Turbidity (NTU) ±10%	Total Dissolved Solids(NA)	Comments
08:45	28.47	450	0	15.7	7.25	0.5	NM	4.03	68.1	33.9	NM	CLEAR, ROTTEN EGG-LIKE ODOR
08:50	28.47	450	0.5	16.5	7.23	0.5	NM	0.87	55.3	190	NM	CLOUDY, ROTTEN EGG-LIKE ODOR
08:55	28.47	450	1	15.5	7.21	0.5	NM	0.2	48.9	70.6	NM	CLOUDY, ROTTEN EGG-LIKE ODOR
09:00	28.47	450	1.5	15.4	7.21	0.5	NM	0.1	44.1	23.1	NM	CLOUDY, ROTTEN EGG-LIKE ODOR
09:05	28.47	450	2	15.6	7.21	0.5	NM	0.07	38.9	23.2	NM	CLOUDY, ROTTEN EGG-LIKE ODOR
09:10	28.47	450	2.5	15.6	7.21	0.5	NM	0.07	36.9	21.8	NM	CLOUDY, ROTTEN EGG-LIKE ODOR

Sample ID(s): APW-06D-WG-20240905	Additional Comments	SAMPLER NAME AND SIGNATURE	Date Time
Analysis:		Marshall Arendell	09/11/2024 20:24



Low Flow Groundwater Sampling Field Data Form

Well ID: APW-06S
Well Permit No:

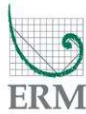
Date: 2024/09/05

Site ID GTEC-GRAND-TOWER	Purge Method / Pump Intake Depth Low Flow / 59.62 (ft)	Reference Elevation 363.51 (ft)
Site Address 1820 Power Plant Road, Grand Tower, US-IL	Purge Equipment NA	Depth to Water / Free Product 29.77 (ft) / None
Project Number 0599247	Sample Equipment NA	Total Well Depth 64.62 (ft)
Project Name 20240429-GWMonitor	Average Purge Rate 450 (mL/min)	Well Diameter / Well Screen Interval 2 (in) / 50 - 60 (ft)
Sampler marshall arendell	Volume of Water in Well / Total Volume Purged 5.69 (gal) / 2.5 (gal)	Well Construction

Well Head Vapor Measurements
PID: NA; FID: NA; CO: NA; CO2: NA; O2: NA; CH4: NA; H2S: NA

Time	DTW (ft)	Flow Rate (mL/min)	Purge Volume (gal)	Temperature (C) ±3%	pH ±0.1pH units	Specific Conductivity (uS/cm) ±3%	Total Conductivity (NA)	Dissolved Oxygen (mg/L) ±10%	ORP (mV) ±10 mV	Turbidity (NTU) ±10%	Total Dissolved Solids(NA)	Comments
07:52	30.09	450	0	16.1	7.12	0.5	NM	0.89	94.6	258	NM	CLOUDY, NO ODORS
07:57	30.1	450	0.5	14.6	7.05	0.5	NM	0.16	37.8	9.61	NM	CLEAR, NO ODORS
08:02	30.1	450	1	14.6	7.06	0.5	NM	0.13	18.8	7.83	NM	CLEAR, NO ODORS
08:07	30.1	450	1.5	14.6	7.06	0.5	NM	0.13	10.2	9.3	NM	CLEAR, NO ODORS
08:12	30.1	450	2	14.6	7.07	0.5	NM	0.12	4	7.5	NM	CLEAR, NO ODORS
08:17	30.1	450	2.5	14.6	7.07	0.5	NM	0.11	0.4	5.09	NM	CLEAR, NO ODORS

Sample ID(s): APW-06S-WG-20240905	Additional Comments	SAMPLER NAME AND SIGNATURE	Date Time
Analysis:		Marshall Arendell	09/11/2024 20:45



Low Flow Groundwater Sampling Field Data Form

Well ID: APW-07
Well Permit No:

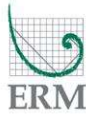
Date: 2024/09/04

Site ID GTEC-GRAND-TOWER	Purge Method / Pump Intake Depth Low Flow / 59.45 (ft)	Reference Elevation 360.61 (ft)
Site Address 1820 Power Plant Road, Grand Tower, US-IL	Purge Equipment NA	Depth to Water / Free Product 25.96 (ft) / None
Project Number 0599247	Sample Equipment NA	Total Well Depth 64.45 (ft)
Project Name 20240429-GWMonitor	Average Purge Rate 450 (mL/min)	Well Diameter / Well Screen Interval 2 (in) / 50 - 60 (ft)
Sampler marshall arendell	Volume of Water in Well / Total Volume Purged 6.28 (gal) / 2 (gal)	Well Construction

Well Head Vapor Measurements
PID: NA; FID: NA; CO: NA; CO2: NA; O2: NA; CH4: NA; H2S: NA

Time	DTW (ft)	Flow Rate (mL/min)	Purge Volume (gal)	Temperature (C) ±3%	pH ±0.1pH units	Specific Conductivity (uS/cm) ±3%	Total Conductivity (NA)	Dissolved Oxygen (mg/L) ±10%	ORP (mV) ±10 mV	Turbidity (NTU) ±10%	Total Dissolved Solids(NA)	Comments
16:35	26.14	450	0	19.5	6.83	0.6	NM	1.64	101.4	105	NM	CLOUDY, ROTTEN EGG-LIKE ODOR
16:40	26.19	450	0.5	15.6	6.76	0.5	NM	0.1	48.8	33.3	NM	CLEAR, ROTTEN EGG-LIKE ODOR
16:45	26.19	450	1	15.7	6.76	0.5	NM	0.07	35.8	9.31	NM	CLEAR, ROTTEN EGG-LIKE ODOR
16:50	26.19	450	1.5	15.6	6.75	0.5	NM	0.07	29.9	7.16	NM	CLEAR, ROTTEN EGG-LIKE ODOR
16:55	26.19	450	2	15.7	6.75	0.5	NM	0.09	26.3	5.27	NM	CLEAR, ROTTEN EGG-LIKE ODOR

Sample ID(s): APW-07-WG-20240904	Additional Comments	SAMPLER NAME AND SIGNATURE	Date Time
Analysis:		Marshall Arendell	09/11/2024 20:57



Low Flow Groundwater Sampling Field Data Form

Well ID: APW-08
Well Permit No:

Date: 2024/09/04

Site ID GTEC-GRAND-TOWER	Purge Method / Pump Intake Depth Low Flow / 58.34 (ft)	Reference Elevation 362.71 (ft)
Site Address 1820 Power Plant Road, Grand Tower, US-IL	Purge Equipment NA	Depth to Water / Free Product 26.55 (ft) / None
Project Number 0599247	Sample Equipment NA	Total Well Depth 63.34 (ft)
Project Name 20240429-GWMonitor	Average Purge Rate 450 (mL/min)	Well Diameter / Well Screen Interval 2 (in) / 50 - 60 (ft)
Sampler marshall arendell	Volume of Water in Well / Total Volume Purged 6 (gal) / 2.5 (gal)	Well Construction

Well Head Vapor Measurements
PID: NA; FID: NA; CO: NA; CO2: NA; O2: NA; CH4: NA; H2S: NA

Time	DTW (ft)	Flow Rate (mL/min)	Purge Volume (gal)	Temperature (C) ±3%	pH ±0.1pH units	Specific Conductivity (uS/cm) ±3%	Total Conductivity (NA)	Dissolved Oxygen (mg/L) ±10%	ORP (mV) ±10 mV	Turbidity (NTU) ±10%	Total Dissolved Solids(NA)	Comments
15:48	26.47	450	0	17.3	7	0.5	NM	1.28	99.9	1000	NM	TURBID, BROWN, NO ODORS
15:53	26.47	450	0.5	16.6	6.99	0.5	NM	0.23	93.9	379	NM	CLOUDY, BROWN, NO ODORS
15:58	26.47	450	1	16.6	6.97	0.4	NM	0.09	98.5	222	NM	CLOUDY, BROWN, NO ODORS
16:03	26.47	450	1.5	16.7	6.97	0.4	NM	0.07	102.7	104	NM	CLOUDY, BROWN, NO ODORS
16:08	26.47	450	2	16.7	6.95	0.4	NM	0.05	104.6	101	NM	CLOUDY, BROWN, NO ODORS
16:13	26.47	450	2.5	16.7	6.95	0.4	NM	0.07	106.4	97.4	NM	CLOUDY, BROWN, NO ODORS

Sample ID(s): APW-08-WG-20240904	Additional Comments	SAMPLER NAME AND SIGNATURE	Date Time
Analysis:		Marshall Arendell	09/11/2024 21:04



Low Flow Groundwater Sampling Field Data Form

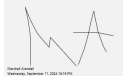
Well ID: APW-09
Well Permit No:

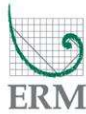
Date: 2024/09/06

Site ID GTEC-GRAND-TOWER	Purge Method / Pump Intake Depth Low Flow / 59.18 (ft)	Reference Elevation 366.84 (ft)
Site Address 1820 Power Plant Road, Grand Tower, US-IL	Purge Equipment NA	Depth to Water / Free Product 30.57 (ft) / None
Project Number 0599247	Sample Equipment NA	Total Well Depth 64.18 (ft)
Project Name 20240429-GWMonitor	Average Purge Rate 500 (mL/min)	Well Diameter / Well Screen Interval 2 (in) / 50 - 60 (ft)
Sampler marshall arendell	Volume of Water in Well / Total Volume Purged 5.49 (gal) / 3 (gal)	Well Construction

Well Head Vapor Measurements
PID: NA; FID: NA; CO: NA; CO2: NA; O2: NA; CH4: NA; H2S: NA

Time	DTW (ft)	Flow Rate (mL/min)	Purge Volume (gal)	Temperature (C) ±3%	pH ±0.1pH units	Specific Conductivity (uS/cm) ±3%	Total Conductivity (NA)	Dissolved Oxygen (mg/L) ±10%	ORP (mV) ±10 mV	Turbidity (NTU) ±10%	Total Dissolved Solids(NA)	Comments
08:20	30.57	500	0	17	7.35	0.3	NM	0.73	128.7	246	NM	CLOUDY, NO ODORS
08:25	30.57	500	0.5	15.5	7.17	0.3	NM	0.21	125.3	129	NM	CLOUDY, NO ODORS
08:30	30.57	500	1	15.4	7.15	0.3	NM	0.19	127.1	55	NM	CLEAR, NO ODORS
08:35	30.57	500	1.5	15.2	7.13	0.3	NM	0.15	128.5	16.7	NM	CLEAR, NO ODORS
08:40	30.57	500	2	15.3	7.12	0.3	NM	0.1	129.1	15.2	NM	CLEAR, NO ODORS
08:45	30.57	500	2.5	15.3	7.12	0.3	NM	0.08	129.7	14.1	NM	CLEAR, NO ODORS
08:50	30.57	500	3	15.3	7.11	0.3	NM	0.07	130.4	13.8	NM	CLEAR, NO ODORS

Sample ID(s): APW-09-WG-20240906,DUP-02-WG-20240906	Additional Comments	SAMPLER NAME AND SIGNATURE	Date Time
Analysis:		Marshall Arendell 	09/11/2024 21:16



Low Flow Groundwater Sampling Field Data Form	Well ID: APW-10D Well Permit No:	Date: 2024/09/05
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Site ID GTEC-GRAND-TOWER	Purge Method / Pump Intake Depth Low Flow / 95.05 (ft)	Reference Elevation 359.41 (ft)
Site Address 1820 Power Plant Road, Grand Tower, US-IL	Purge Equipment NA	Depth to Water / Free Product 23.1 (ft) / None
Project Number 0599247	Sample Equipment NA	Total Well Depth 100.05 (ft)
Project Name 20240429-GWMonitor	Average Purge Rate 500 (mL/min)	Well Diameter / Well Screen Interval 2 (in) / 86 - 96 (ft)
Sampler marshall arendell	Volume of Water in Well / Total Volume Purged 12.56 (gal) / 4.5 (gal)	Well Construction

Well Head Vapor Measurements
 PID: NA; FID: NA; CO: NA; CO2: NA; O2: NA; CH4: NA; H2S: NA

Time	DTW (ft)	Flow Rate (mL/min)	Purge Volume (gal)	Temperature (C) ±3%	pH ±0.1pH units	Specific Conductivity (uS/cm) ±3%	Total Conductivity (NA)	Dissolved Oxygen (mg/L) ±10%	ORP (mV) ±10 mV	Turbidity (NTU) ±10%	Total Dissolved Solids(NA)	Comments
13:25	23.1	500	0	19.9	7.22	0.4	NM	2.2	122.6	61.4	NM	CLOUDY, NO ODORS
13:30	23.1	500	0.5	18.2	7.15	0.4	NM	0.26	117.9	1000	NM	TURBID, WHITE, NO ODORS
13:35	23.1	500	1	16	7.1	0.3	NM	0.11	123.9	484	NM	TURBID, WHITE, NO ODORS
13:40	23.1	500	1.5	15.8	7.13	0.3	NM	0.08	128.3	237	NM	TURBID, WHITE, NO ODORS
13:45	23.1	500	2	15.8	7.13	0.3	NM	0.07	131.1	48.1	NM	CLOUDY, NO ODORS
13:50	23.1	500	2.5	15.8	7.04	0.3	NM	0.07	132.3	18.4	NM	CLEAR, NO ODORS
13:55	23.1	500	3	15.8	7.03	0.3	NM	0.06	133.1	11.2	NM	CLEAR, NO ODORS
14:00	23.1	500	3.5	15.8	7.02	0.3	NM	0.06	133.3	7.19	NM	CLEAR, NO ODORS
14:05	23.1	500	4	15.8	7.03	0.3	NM	0.06	133.7	6.05	NM	CLEAR, NO ODORS
14:10	23.1	500	4.5	15.8	7.03	0.3	NM	0.05	133.6	5.56	NM	CLEAR, NO ODORS

Sample ID(s): APW-10D-WG-20240905	Additional Comments	SAMPLER NAME AND SIGNATURE	Date Time
Analysis:		Marshall Arendell	09/11/2024 21:29



Low Flow Groundwater Sampling Field Data Form

Well ID: APW-10S
Well Permit No:

Date: 2024/09/05

Site ID GTEC-GRAND-TOWER	Purge Method / Pump Intake Depth Low Flow / 58.65 (ft)	Reference Elevation 359.47 (ft)
Site Address 1820 Power Plant Road, Grand Tower, US-IL	Purge Equipment NA	Depth to Water / Free Product 26.09 (ft) / None
Project Number 0599247	Sample Equipment NA	Total Well Depth 63.65 (ft)
Project Name 20240429-GWMonitor	Average Purge Rate 500 (mL/min)	Well Diameter / Well Screen Interval 2 (in) / 50 - 60 (ft)
Sampler marshall arendell	Volume of Water in Well / Total Volume Purged 6.13 (gal) / 2.5 (gal)	Well Construction

Well Head Vapor Measurements
PID: NA; FID: NA; CO: NA; CO2: NA; O2: NA; CH4: NA; H2S: NA

Time	DTW (ft)	Flow Rate (mL/min)	Purge Volume (gal)	Temperature (C) ±3%	pH ±0.1pH units	Specific Conductivity (uS/cm) ±3%	Total Conductivity (NA)	Dissolved Oxygen (mg/L) ±10%	ORP (mV) ±10 mV	Turbidity (NTU) ±10%	Total Dissolved Solids(NA)	Comments
14:29	26.65	500	0	16.1	6.81	0.5	NM	0.46	77.1	204	NM	CLOUDY, NO ODORS
14:34	26.79	500	0.5	15.7	6.77	0.5	NM	0.21	19.3	68.6	NM	CLOUDY, NO ODORS
14:39	26.84	500	1	15.7	6.72	0.4	NM	0.17	-3.9	23.5	NM	CLEAR, NO ODORS
14:44	26.84	500	1.5	15.7	6.73	0.4	NM	0.14	-15.6	8.98	NM	CLEAR, NO ODORS
14:49	26.9	500	2	15.6	6.75	0.4	NM	0.13	-20.2	9.33	NM	CLEAR, NO ODORS
14:54	26.9	500	2.5	15.6	6.75	0.4	NM	0.13	-22.9	9.12	NM	CLEAR, NO ODORS

Sample ID(s): APW-10S-WG-20240905	Additional Comments	SAMPLER NAME AND SIGNATURE	Date Time
Analysis:		Marshall Arendell	09/11/2024 21:51

**APPENDIX D – THIRD QUARTER 2024 LABORATORY ANALYTICAL
REPORT**

ERM - St. Louis, MO

Sample Delivery Group: L1775404
Samples Received: 09/07/2024
Project Number: 0599247
Description: Grand Tower Energy Center Groundwater 3Q24 Sampling
Report To: Randy Homburg
1968 Craig Road, Suite 100
Saint Louis, MO 63146

Entire Report Reviewed By:



Jeff Carr
Project Manager

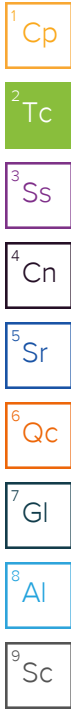
Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory 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 mydata.pacelabs.com

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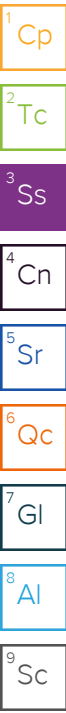


SAMPLE SUMMARY

APW-03-WG-20240904 L1775404-01 Non-Potable Water

Collected by: Marshall Arendell
 Collected date/time: 09/04/24 15:00
 Received date/time: 09/07/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2356942	1	09/11/24 18:43	09/20/24 16:03	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2358602	1	09/09/24 10:48	09/20/24 16:03	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2358602	1	09/09/24 10:48	09/11/24 13:29	ZRG	Mt. Juliet, TN



APW-08-WG-20240904 L1775404-02 Non-Potable Water

Collected by: Marshall Arendell
 Collected date/time: 09/04/24 16:15
 Received date/time: 09/07/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2356942	1	09/11/24 18:43	09/20/24 16:03	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2358602	1	09/09/24 10:48	09/20/24 16:03	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2358602	1	09/09/24 10:48	09/11/24 13:29	ZRG	Mt. Juliet, TN

APW-07-WG-20240904 L1775404-03 Non-Potable Water

Collected by: Marshall Arendell
 Collected date/time: 09/04/24 17:00
 Received date/time: 09/07/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2356942	1	09/11/24 18:43	09/20/24 16:03	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2358602	1	09/09/24 10:48	09/20/24 16:03	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2358602	1	09/09/24 10:48	09/11/24 13:29	ZRG	Mt. Juliet, TN

APW-10S-WG-20240905 L1775404-04 Non-Potable Water

Collected by: Marshall Arendell
 Collected date/time: 09/05/24 14:55
 Received date/time: 09/07/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2356942	1	09/11/24 18:43	09/20/24 16:03	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2358602	1	09/09/24 10:48	09/20/24 16:03	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2358602	1	09/09/24 10:48	09/11/24 13:29	ZRG	Mt. Juliet, TN

APW-10D-WG-20240905 L1775404-05 Non-Potable Water

Collected by: Marshall Arendell
 Collected date/time: 09/05/24 14:15
 Received date/time: 09/07/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2356942	1	09/11/24 17:13	09/20/24 16:03	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2358602	1	09/09/24 10:48	09/20/24 16:03	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2358602	1	09/09/24 10:48	09/11/24 13:29	ZRG	Mt. Juliet, TN

APW-06S-WG-20240905 L1775404-06 Non-Potable Water

Collected by: Marshall Arendell
 Collected date/time: 09/05/24 08:20
 Received date/time: 09/07/24 09:00

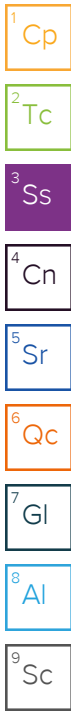
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2356942	1	09/11/24 17:13	09/20/24 16:03	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2358602	1	09/09/24 10:48	09/20/24 16:03	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2358602	1	09/09/24 10:48	09/11/24 13:29	ZRG	Mt. Juliet, TN

SAMPLE SUMMARY

APW-06D-WG-20240905 L1775404-07 Non-Potable Water

Collected by: Marshall Arendell
 Collected date/time: 09/05/24 09:15
 Received date/time: 09/07/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2356942	1	09/11/24 17:13	09/20/24 16:03	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2358602	1	09/09/24 10:48	09/20/24 16:03	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2358602	1	09/09/24 10:48	09/11/24 13:29	ZRG	Mt. Juliet, TN



APW-05R-WG-20240905 L1775404-08 Non-Potable Water

Collected by: Marshall Arendell
 Collected date/time: 09/05/24 12:30
 Received date/time: 09/07/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2356942	1	09/11/24 17:14	09/20/24 16:03	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2358602	1	09/09/24 10:48	09/20/24 16:03	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2358602	1	09/09/24 10:48	09/11/24 13:29	ZRG	Mt. Juliet, TN

APW-09-WG-20240906 L1775404-09 Non-Potable Water

Collected by: Marshall Arendell
 Collected date/time: 09/06/24 09:00
 Received date/time: 09/07/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2361562	1	09/12/24 18:43	09/24/24 21:02	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2358602	1	09/09/24 10:48	09/24/24 21:02	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2358602	1	09/09/24 10:48	09/11/24 13:29	ZRG	Mt. Juliet, TN

APW-02-WG-20240905 L1775404-10 Non-Potable Water

Collected by: Marshall Arendell
 Collected date/time: 09/05/24 10:45
 Received date/time: 09/07/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2361562	1	09/12/24 18:43	09/24/24 21:02	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2358602	1	09/09/24 10:48	09/24/24 21:02	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2358602	1	09/09/24 10:48	09/11/24 13:29	ZRG	Mt. Juliet, TN

APW-01R-WG-20240905 L1775404-11 Non-Potable Water

Collected by: Marshall Arendell
 Collected date/time: 09/05/24 16:10
 Received date/time: 09/07/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2361562	1	09/12/24 18:43	09/24/24 21:02	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2358602	1	09/09/24 10:48	09/24/24 21:02	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2358602	1	09/09/24 10:48	09/11/24 13:29	ZRG	Mt. Juliet, TN

APW-04-WG-20240904 L1775404-12 Non-Potable Water

Collected by: Marshall Arendell
 Collected date/time: 09/04/24 18:15
 Received date/time: 09/07/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2361562	1	09/12/24 18:43	09/24/24 21:02	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2360503	1	09/11/24 14:55	09/24/24 21:02	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2360503	1	09/11/24 14:55	09/13/24 19:55	ZRG	Mt. Juliet, TN

SAMPLE SUMMARY

EB-01-WG-20240904 L1775404-13 Non-Potable Water

Collected by: Marshell Arendell
 Collected date/time: 09/04/24 11:30
 Received date/time: 09/07/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2361562	1	09/12/24 18:43	09/24/24 21:02	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2360503	1	09/11/24 14:55	09/24/24 21:02	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2360503	1	09/11/24 14:55	09/13/24 19:55	ZRG	Mt. Juliet, TN

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

DUP-01-WG-20240905 L1775404-14 Non-Potable Water

Collected by: Marshell Arendell
 Collected date/time: 09/05/24 00:01
 Received date/time: 09/07/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2361562	1	09/12/24 18:43	09/24/24 21:02	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2360503	1	09/11/24 14:55	09/24/24 21:02	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2360503	1	09/11/24 14:55	09/13/24 19:55	ZRG	Mt. Juliet, TN

DUP-02-WG-20240906 L1775404-15 Non-Potable Water

Collected by: Marshell Arendell
 Collected date/time: 09/06/24 00:02
 Received date/time: 09/07/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2361562	1	09/12/24 18:43	09/24/24 21:02	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2360503	1	09/11/24 14:55	09/24/24 21:02	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2360503	1	09/11/24 14:55	09/13/24 19:55	ZRG	Mt. Juliet, TN

CASE NARRATIVE

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.



Jeff Carr
Project Manager

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	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-228	1.40		0.319	0.596	0.542	0.285	09/20/2024 16:03	WG2356942
(T) Barium	101					30.0-143	09/20/2024 16:03	WG2356942
(T) Yttrium	118					30.0-136	09/20/2024 16:03	WG2356942

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	1.90		0.406	0.567	09/20/2024 16:03	WG2358602

4 Cn

5 Sr

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-226	0.493		0.251	0.521	0.167	0.131	09/11/2024 13:29	WG2358602
(T) Barium-133	98.3					30.0-143	09/11/2024 13:29	WG2358602

6 Qc

7 Gl

8 Al

9 Sc

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-228	0.959		0.240	0.438	0.412	0.216	09/20/2024 16:03	WG2356942
(T) Barium	118					30.0-143	09/20/2024 16:03	WG2356942
(T) Yttrium	108					30.0-136	09/20/2024 16:03	WG2356942

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	1.26		0.312	0.440	09/20/2024 16:03	WG2358602

4 Cn

5 Sr

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-226	0.296		0.200	0.403	0.155	0.128	09/11/2024 13:29	WG2358602
(T) Barium-133	102					30.0-143	09/11/2024 13:29	WG2358602

6 Qc

7 Gl

8 Al

9 Sc

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-228	0.736		0.361	0.639	0.640	0.334	09/20/2024 16:03	WG2356942
(T) Barium	112					30.0-143	09/20/2024 16:03	WG2356942
(T) Yttrium	120					30.0-136	09/20/2024 16:03	WG2356942

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	0.933		0.401	0.666	09/20/2024 16:03	WG2358602

4 Cn

5 Sr

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-226	0.197		0.174	0.326	0.185	0.145	09/11/2024 13:29	WG2358602
(T) Barium-133	95.2					30.0-143	09/11/2024 13:29	WG2358602

6 Qc

7 Gl

8 Al

9 Sc

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-228	-0.0143	<u>U</u>	0.345	0.624	0.633	0.330	09/20/2024 16:03	WG2356942
(T) Barium	126					30.0-143	09/20/2024 16:03	WG2356942
(T) Yttrium	99.3					30.0-136	09/20/2024 16:03	WG2356942

- 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	0.498	<u>J</u>	0.430	0.652	09/20/2024 16:03	WG2358602

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-226	0.498		0.257	0.530	0.155	0.128	09/11/2024 13:29	WG2358602
(T) Barium-133	101					30.0-143	09/11/2024 13:29	WG2358602

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-228	-0.266	<u>U</u>	0.253	0.451	0.469	0.245	09/20/2024 16:03	WG2356942
(T) Barium	117					30.0-143	09/20/2024 16:03	WG2356942
(T) Yttrium	115					30.0-136	09/20/2024 16:03	WG2356942

- 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	0.163	<u>U</u>	0.295	0.494	09/20/2024 16:03	WG2358602

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-226	0.163		0.151	0.293	0.156	0.129	09/11/2024 13:29	WG2358602
(T) Barium-133	101					30.0-143	09/11/2024 13:29	WG2358602

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-228	0.667	J	0.386	0.663	0.687	0.358	09/20/2024 16:03	WG2356942
(T) Barium	101					30.0-143	09/20/2024 16:03	WG2356942
(T) Yttrium	112					30.0-136	09/20/2024 16:03	WG2356942

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	0.977		0.443	0.718	09/20/2024 16:03	WG2358602

4 Cn

5 Sr

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-226	0.310		0.217	0.406	0.210	0.155	09/11/2024 13:29	WG2358602
(T) Barium-133	99.5					30.0-143	09/11/2024 13:29	WG2358602

6 Qc

7 Gl

8 Al

9 Sc

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-228	1.83		0.372	0.650	0.629	0.329	09/20/2024 16:03	WG2356942
(T) Barium	110					30.0-143	09/20/2024 16:03	WG2356942
(T) Yttrium	119					30.0-136	09/20/2024 16:03	WG2356942

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	2.27		0.448	0.649	09/20/2024 16:03	WG2358602

4 Cn

5 Sr

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-226	0.447		0.249	0.481	0.161	0.133	09/11/2024 13:29	WG2358602
(T) Barium-133	96.3					30.0-143	09/11/2024 13:29	WG2358602

6 Qc

7 Gl

8 Al

9 Sc

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-228	0.460	J	0.343	0.620	0.615	0.322	09/20/2024 16:03	WG2356942
(T) Barium	122					30.0-143	09/20/2024 16:03	WG2356942
(T) Yttrium	107					30.0-136	09/20/2024 16:03	WG2356942

- 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	0.473	J	0.353	0.645	09/20/2024 16:03	WG2358602

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-226	0.0135	U	0.0835	0.127	0.195	0.148	09/11/2024 13:29	WG2358602
(T) Barium-133	99.0					30.0-143	09/11/2024 13:29	WG2358602

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-228	0.997		0.496	0.959	0.884	0.466	09/24/2024 21:02	WG2361562
(T) Barium	115					30.0-143	09/24/2024 21:02	WG2361562
(T) Yttrium	100					30.0-136	09/24/2024 21:02	WG2361562

- 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	1.09		0.510	0.898	09/24/2024 21:02	WG2358602

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-226	0.0956	J	0.120	0.203	0.157	0.130	09/11/2024 13:29	WG2358602
(T) Barium-133	93.8					30.0-143	09/11/2024 13:29	WG2358602

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-228	1.15		0.464	0.801	0.818	0.430	09/24/2024 21:02	WG2361562
(T) Barium	71.9					30.0-143	09/24/2024 21:02	WG2361562
(T) Yttrium	98.1					30.0-136	09/24/2024 21:02	WG2361562

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	1.55		0.519	0.833	09/24/2024 21:02	WG2358602

4 Cn

5 Sr

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-226	0.402		0.233	0.468	0.157	0.130	09/11/2024 13:29	WG2358602
(T) Barium-133	94.7					30.0-143	09/11/2024 13:29	WG2358602

6 Qc

7 Gl

8 Al

9 Sc

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-228	-0.199	<u>U</u>	0.295	0.516	0.549	0.287	09/24/2024 21:02	WG2361562
(T) Barium	81.9					30.0-143	09/24/2024 21:02	WG2361562
(T) Yttrium	107					30.0-136	09/24/2024 21:02	WG2361562

- 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	0.167	<u>U</u>	0.338	0.584	09/24/2024 21:02	WG2358602

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-226	0.167	<u>J</u>	0.164	0.293	0.199	0.148	09/11/2024 13:29	WG2358602
(T) Barium-133	103					30.0-143	09/11/2024 13:29	WG2358602

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-228	0.510		0.209	0.407	0.369	0.195	09/24/2024 21:02	WG2361562
(T) Barium	107					30.0-143	09/24/2024 21:02	WG2361562
(T) Yttrium	105					30.0-136	09/24/2024 21:02	WG2361562

- 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	0.811		0.327	0.476	09/24/2024 21:02	WG2360503

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-226	0.302		0.252	0.456	0.301	0.203	09/13/2024 19:55	WG2360503
(T) Barium-133	100					30.0-143	09/13/2024 19:55	WG2360503

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-228	-0.0548	<u>U</u>	0.206	0.404	0.384	0.203	09/24/2024 21:02	WG2361562
(T) Barium	120					30.0-143	09/24/2024 21:02	WG2361562
(T) Yttrium	104					30.0-136	09/24/2024 21:02	WG2361562

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	0.000	<u>U</u>	0.211	0.433	09/24/2024 21:02	WG2360503

4 Cn

5 Sr

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-226	-0.0150	<u>U</u>	0.0466	0.0888	0.199	0.156	09/13/2024 19:55	WG2360503
(T) Barium-133	98.4					30.0-143	09/13/2024 19:55	WG2360503

6 Qc

7 Gl

8 Al

9 Sc

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-228	1.10		0.203	0.401	0.335	0.178	09/24/2024 21:02	WG2361562
(T) Barium	100					30.0-143	09/24/2024 21:02	WG2361562
(T) Yttrium	102					30.0-136	09/24/2024 21:02	WG2361562

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	2.43		0.462	0.369	09/24/2024 21:02	WG2360503

4 Cn

5 Sr

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-226	1.33		0.415	0.993	0.154	0.127	09/13/2024 19:55	WG2360503
(T) Barium-133	104					30.0-143	09/13/2024 19:55	WG2360503

6 Qc

7 Gl

8 Al

9 Sc

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-228	0.552		0.263	0.480	0.468	0.247	09/24/2024 21:02	WG2361562
(T) Barium	93.8					30.0-143	09/24/2024 21:02	WG2361562
(T) Yttrium	89.5					30.0-136	09/24/2024 21:02	WG2361562

- 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	1.22		0.390	0.496	09/24/2024 21:02	WG2360503

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	2 sigma CE	TPU	MDA	Lc	Analysis Date	Batch
	pCi/l		+ / -	+ / -	pCi/l	pCi/l	date / time	
RADIUM-226	0.671		0.288	0.628	0.164	0.129	09/13/2024 19:55	WG2360503
(T) Barium-133	106					30.0-143	09/13/2024 19:55	WG2360503

Method Blank (MB)

(MB) R4125059-1 09/20/24 16:03

Analyte	MB Result pCi/l	MB Qualifier	MB 2 sigma CE + / -	MB MDA pCi/l	MB Lc pCi/l
Radium-228	-0.430	<u>U</u>	0.181	0.346	0.181
(T) Barium	122		122		
(T) Yttrium	93.1		93.1		

L1775404-08 Original Sample (OS) • Duplicate (DUP)

(OS) L1775404-08 09/20/24 16:03 • (DUP) R4125059-5 09/20/24 16:03

Analyte	Original Result pCi/l	Original 2 sigma CE + / -	Original MDA pCi/l	Original Lc pCi/l	DUP Result pCi/l	DUP 2 sigma CE + / -	DUP MDA pCi/l	DUP Lc pCi/l	DUP RPD %	DUP RER	DUP Qualifier	DUP RPD Limits %	DUP RER Limit
Radium-228	0.460	0.343	0.615	0.322	0.664	0.291	0.516	0.272	36.4	0.455		20	3
(T) Barium	122				109	109							
(T) Yttrium	107				103	103							

Laboratory Control Sample (LCS)

(LCS) R4125059-2 09/20/24 16:03

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-228	5.00	4.18	83.5	80.0-120	
(T) Barium			123		
(T) Yttrium			113		

L1773936-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1773936-06 09/20/24 16:03 • (MS) R4125059-3 09/20/24 16:03 • (MSD) R4125059-4 09/20/24 16:03

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	0.0260	15.1	12.5	90.4	74.8	1	70.0-130			18.9		20
(T) Barium		124			124	98.3							
(T) Yttrium		114			113	110							

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gf

8 Al

9 Sc

Method Blank (MB)

(MB) R4126991-1 09/24/24 21:02

Analyte	MB Result pCi/l	MB Qualifier	MB 2 sigma CE + / -	MB MDA pCi/l	MB Lc pCi/l
Radium-228	0.247	<u>J</u>	0.185	0.334	0.175
(T) Barium	97.8		97.8		
(T) Yttrium	112		112		

L1776572-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1776572-02 09/24/24 21:02 • (DUP) R4126991-5 09/24/24 21:02

Analyte	Original Result pCi/l	Original 2 sigma CE + / -	Original MDA pCi/l	Original Lc pCi/l	DUP Result pCi/l	DUP 2 sigma CE + / -	DUP MDA pCi/l	DUP Lc pCi/l	DUP RPD %	DUP RER	DUP Qualifier	DUP RPD Limits %	DUP RER Limit
Radium-228	0.816	0.362	0.640	0.334	0.171	0.273	0.502	0.266	131	1.42	<u>U</u>	20	3
(T) Barium	98.1				102	102							
(T) Yttrium	112				116	116							

Laboratory Control Sample (LCS)

(LCS) R4126991-2 09/24/24 21:02

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-228	5.00	4.05	81.0	80.0-120	
(T) Barium			112		
(T) Yttrium			93.9		

L1775404-09 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1775404-09 09/24/24 21:02 • (MS) R4126991-3 09/24/24 21:02 • (MSD) R4126991-4 09/24/24 21:02

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	0.997	12.7	12.8	70.1	70.7	1	70.0-130			0.784		20
(T) Barium		115			91.3	120							
(T) Yttrium		100			107	89.8							

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R4118915-1 09/11/24 13:29

Analyte	MB Result pCi/l	MB Qualifier	MB 2 sigma CE + / -	MB MDA pCi/l	MB Lc pCi/l
Radium-226	0.0116	<u>U</u>	0.0272	0.0462	0.0290
(T) Barium-133	102		102		

L1774968-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1774968-02 09/11/24 13:29 • (DUP) R4118915-5 09/11/24 13:29

Analyte	Original Result pCi/l	Original 2 sigma CE + / -	Original MDA pCi/l	Original Lc pCi/l	DUP Result pCi/l	DUP 2 sigma CE + / -	DUP MDA pCi/l	DUP Lc pCi/l	DUP RPD %	DUP RER	DUP Qualifier	DUP RPD Limits %	DUP RER Limit
Radium-226	0.761	0.315	0.154	0.127	0.562	0.332	0.330	0.223	30.2	0.437		20	3
(T) Barium-133	105				107	107							

Laboratory Control Sample (LCS)

(LCS) R4118915-2 09/11/24 13:29

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-226	5.00	4.54	90.8	75.0-125	
(T) Barium-133			98.3		

L1775404-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1775404-05 09/11/24 13:29 • (MS) R4118915-3 09/11/24 13:29 • (MSD) R4118915-4 09/11/24 13:29

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	0.163	18.1	17.9	89.7	88.9	1	75.0-125			0.943		20
(T) Barium-133		101			101	100							

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R4120671-1 09/13/24 19:55

Analyte	MB Result pCi/l	MB Qualifier	MB 2 sigma CE + / -	MB MDA pCi/l	MB Lc pCi/l
Radium-226	0.00603	<u>U</u>	0.0233	0.0530	0.0416
(T) Barium-133	92.8		92.8		

L1775404-12 Original Sample (OS) • Duplicate (DUP)

(OS) L1775404-12 09/13/24 19:55 • (DUP) R4120671-4 09/13/24 19:55

Analyte	Original Result pCi/l	Original 2 sigma CE + / -	Original MDA pCi/l	Original Lc pCi/l	DUP Result pCi/l	DUP 2 sigma CE + / -	DUP MDA pCi/l	DUP Lc pCi/l	DUP RPD %	DUP RER	DUP Qualifier	DUP RPD Limits %	DUP RER Limit
Radium-226	0.302	0.252	0.301	0.203	0.429	0.262	0.247	0.175	34.9	0.350		20	3
(T) Barium-133	100				107	107							

Laboratory Control Sample (LCS)

(LCS) R4120671-2 09/13/24 19:55

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-226	5.00	4.91	98.2	75.0-125	
(T) Barium-133			95.7		

L1775404-13 Original Sample (OS) • Matrix Spike (MS)

(OS) L1775404-13 09/13/24 19:55 • (MS) R4120671-3 09/13/24 19:55

Analyte	Spike Amount pCi/l	Original Result pCi/l	MS Result pCi/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Radium-226	20.0	-0.0150	20.5	102	1	75.0-125	
(T) Barium-133		98.4		103			

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

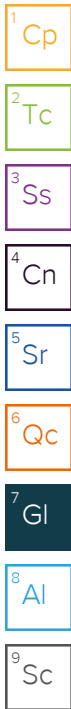
The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

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.

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Company Name/Address:
ERM - St. Louis, MO
 1968 Craig Road, Suite 100
 Saint Louis, MO 63146

Billing Information:
 Accounts Payable Dept.
 1701 Golf Road, Suite 1-1000
 Rolling Meadows, IL 60008-4242

Pres
 Chk

22

22

Analysis / Container / Preservative

Chain of Custody Page 1 of 2



MT JULIET, TN

12065 Lebanon Rd Mount Juliet, TN 37122
 Submitting a sample via this chain of custody
 constitutes acknowledgment and acceptance of the
 Pace Terms and Conditions found at:
<https://info.pacelabs.com/hubs/pas-standard-terms.pdf>

Report to:
Randy Homburg

Email To:
 Randy.Homburg@erm.com; Tim.Wilson@erm.co

Project Description:
 Grand Tower Energy Center Groundwater 3Q24

City/State
 Collected: **Grand Tower, FL**

Please Circle:
 PT MT ET

Phone: 314-682-3980

Client Project #
0599247

Lab Project #
ERMSCMO-0599247

Collected by (print):
Marshall Arendell

Site/Facility ID #

P.O. #

Collected by (signature):
Marshall Arendell
 Immediately
 Packed on Ice N Y

Rush? (Lab MUST Be Notified)
 Same Day Five Day
 Next Day 5 Day (Rad Only)
 Two Day 10 Day (Rad Only)
 Three Day **standard**

Quote #
 Date Results Needed
 No. of Cntrs

RA-226 1L-HDPE-Add-HNO3

RA-228 1L-HDPE-Add-HNO3

SDG # **1775404**
L-052

Acctnum: **ERMSCMO**
 Template: **T243472**
 Prelogin: **P1087429**
 PM: **206 - Jeff Carr**
 PB:

Shipped Via: **FedEX Ground**

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	RA-226 1L-HDPE-Add-HNO3	RA-228 1L-HDPE-Add-HNO3	Remarks	Sample # (lab only)
APW-03-WG-2024 0904	Grab	NPW		9/4/24	1500	3	X	X		-01
APW-08-WG-2024 0904		NPW		9/4/24	1615	3	X	X		-02
APW-07-WG-2024 0904		NPW		9/4/24	1700	3	X	X		-03
APW-10S-WG-2024 0905		NPW		9/5/24	1455	3	X	X		-04
APW-10D-WG-2024 0905		NPW		9/5/24	1415	3	X	X		-05
APW-06S-WG-2024 0905		NPW		9/5/24	0820	3	X	X		-06
APW-06D-WG-2024 0905		NPW		9/5/24	0915	3	X	X		-07
APW-05R-WG-2024 0905		NPW		9/5/24	1230	3	X	X		-08
APW-09-WG-2024 0906		NPW		9/6/24	0900	3	X	X		-09
APW-02-WG-2024 0905		NPW		9/5/24	1045	3	X	X		-10

* Matrix:
 SS - Soil AIR - Air F - Filter
 GW - Groundwater B - Bioassay
 WW - WasteWater
 DW - Drinking Water
 OT - Other

Remarks:
 pH _____ Temp _____
 Flow _____ Other _____
 Samples returned via:
 UPS FedEx Courier
 Tracking #

Sample Receipt Checklist
 COC Seal Present/Intact: Y N
 COC Signed/Accurate: Y N
 Bottles arrive intact: Y N
 Correct bottles used: Y N
 Sufficient volume sent: Y N
 If Applicable
 VOA Zero Headspace: Y N
 Preservation Correct/Checked: Y N
 RAD Screen <0.5 mR/hr: Y N

Relinquished by: (Signature) *Marshall Arendell* ERM Date: 9/16/24 Time: Received by: (Signature) *ESumo* Trip Blank Received: Yes / No
 HCL / MeOH TBR
 Relinquished by: (Signature) *Tom* Date: Time: Received by: (Signature) Temp: °C Bottles Received: 45 If p PH-10BDH5021 Date/Time
 TRC-3223A2026
 Relinquished by: (Signature) Date: Time: Received for lab by: (Signature) *Chadler* Date: 09-07-24 Time: 0900 Hold: Condition: NCF / OK

Company Name/Address:

ERM - St. Louis, MO

1968 Craig Road, Suite 100
Saint Louis, MO 63146

Billing Information:

Accounts Payable Dept.
1701 Golf Road, Suite 1-1000
Rolling Meadows, IL 60008-4242

Pres
Chk

27 27

Analysis / Container / Preservative

Chain of Custody Page 2 of 2



MT JULIET, TN

12065 Lebanon Rd Mount Juliet, TN 37122
Submitting a sample via this chain of custody
constitutes acknowledgment and acceptance of the
Pace Terms and Conditions found at:
<https://info.pacelabs.com/hubfs/pas-standard-terms.pdf>

Report to:
Randy Homburg

Email To:
Randy.Homburg@erm.com; Tim.Wilson@erm.co

Project Description:
Grand Tower Energy Center Groundwater 3Q24

City/State
Collected: Grand Tower, IL

Please Circle:
PT MT ET

Phone: 314-682-3980

Client Project #
0599247

Lab Project #
ERMSCMO-0599247

Collected by (print):
Marshall Arendell

Site/Facility ID #

P.O. #

Collected by (signature):
Marshall Arendell

Rush? (Lab MUST Be Notified)

Quote #

Same Day Five Day
Next Day 5 Day (Rad Only)
Two Day 10 Day (Rad Only)
Three Day Standard

Date Results Needed

Immediately
Packed on Ice N Y

No.
of
Cnts

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cnts		RA-226 1L-HDPE-Add HNO3	RA-228 1L-HDPE-Add-HNO3
APW-01R-WG-2024 0905	Grab	NPW		9/5/24	1610	3	X	X	
APW-04-WG-2024 0904		NPW		9/4/24	1815	3	X	X	
EB-01-WG-2024 0904		NPW		9/4/24	1130	3	X	X	
DUP-01-WG-2024 0905		NPW		9/5/24	0801	3	X	X	
DUP-02-WG-2024 0906		NPW		9/6/24	0802	3	X	X	

SDG # LTT5404

Table #

Acctnum: ERMSCMO

Template: T243472

Prelogin: P1087429

PM: 206 - Jeff Carr

PB:

Shipped Via: FedEX Ground

Remarks Sample # (lab only)

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other

Remarks:

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:

UPS FedEx Courier

Tracking #

Sample Receipt Checklist

COC Seal Present/Intact:	<input checked="" type="checkbox"/>	Y	N
COC Signed/Accurate:	<input checked="" type="checkbox"/>	Y	N
Bottles arrive intact:	<input checked="" type="checkbox"/>	Y	N
Correct bottles used:	<input checked="" type="checkbox"/>	Y	N
Sufficient volume sent:	<input checked="" type="checkbox"/>	Y	N
If Applicable			
VOA Zero Headspace:	<input checked="" type="checkbox"/>	Y	N
Preservation Correct/Checked:	<input checked="" type="checkbox"/>	Y	N
RAD Screen <0.5 mR/hr:	<input checked="" type="checkbox"/>	Y	N

Relinquished by: (Signature)

Marshall Arendell

ERM

Date: 9/6/24

Time: 12:33

Received by: (Signature)

Tom Esom

Trip Blank Received: Yes/No

HCL/MeOH
TBR

Relinquished by: (Signature)

Tom

Date:

Time:

Received by: (Signature)

Temp: °C Bottles Received: 45

If preservation required by Login: Date/Time

Relinquished by: (Signature)

Received for lab by: (Signature)

CRABENA

Date: 09-07-24 Time: 0900

Hold:

Condition:
NCF / OK

**APPENDIX E – THIRD QUARTER 2024 RADIOLOGICAL
LABORATORY ANALYTICAL REPORT**

ERM - St. Louis, MO

Sample Delivery Group: L1775426
Samples Received: 09/07/2024
Project Number: 0599247
Description: Grand Tower Energy Center Groundwater 3Q24 Sampling
Report To: Randy Homburg
1968 Craig Road, Suite 100
Saint Louis, MO 63146

Entire Report Reviewed By:



Jeff Carr
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 mydata.pacelabs.com

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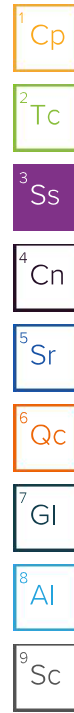
1	Cp
2	Tc
3	Ss
4	Cn
5	Sr
6	Qc
7	Gl
8	Al
9	Sc

SAMPLE SUMMARY

APW-03-WG-20240904 L1775426-01 GW

Collected by: Marshall Avendell
 Collected date/time: 09/04/24 15:00
 Received date/time: 09/07/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2358895	1	09/09/24 15:50	09/09/24 18:52	MMF	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2358129	1	09/09/24 03:48	09/09/24 03:48	DLH	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2358129	10	09/09/24 04:05	09/09/24 04:05	DLH	Mt. Juliet, TN
Wet Chemistry by Method 9040C	WG2358157	1	09/07/24 17:35	09/07/24 17:35	KRB	Mt. Juliet, TN
Mercury by Method 7470A	WG2358151	1	09/09/24 12:59	09/09/24 22:20	SDG	Mt. Juliet, TN
Mercury by Method 7470A	WG2358153	1	09/09/24 13:05	09/09/24 22:54	SDG	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2360872	1	09/20/24 11:27	09/20/24 21:16	MAP	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2362180	1	09/25/24 13:08	09/25/24 22:02	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020A	WG2362186	1	09/25/24 13:16	09/26/24 02:11	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020A	WG2362203	1	09/25/24 15:18	09/25/24 22:59	UNP	Mt. Juliet, TN



APW-08-WG-20240904 L1775426-02 GW

Collected by: Marshall Avendell
 Collected date/time: 09/04/24 16:15
 Received date/time: 09/07/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2358895	1	09/09/24 15:50	09/09/24 18:52	MMF	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2358129	1	09/09/24 04:23	09/09/24 04:23	DLH	Mt. Juliet, TN
Wet Chemistry by Method 9040C	WG2358157	1	09/07/24 17:35	09/07/24 17:35	KRB	Mt. Juliet, TN
Mercury by Method 7470A	WG2358151	1	09/09/24 12:59	09/09/24 22:22	SDG	Mt. Juliet, TN
Mercury by Method 7470A	WG2358153	1	09/09/24 13:05	09/09/24 22:57	SDG	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2360872	1	09/20/24 11:27	09/20/24 21:17	MAP	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2362180	1	09/25/24 13:08	09/25/24 22:04	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020A	WG2362186	1	09/25/24 13:16	09/26/24 02:15	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020A	WG2362203	1	09/25/24 15:18	09/25/24 22:46	UNP	Mt. Juliet, TN

APW-07-WG-20240904 L1775426-03 GW

Collected by: Marshall Avendell
 Collected date/time: 09/04/24 17:00
 Received date/time: 09/07/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2360092	1	09/11/24 08:17	09/11/24 15:28	DLS	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2358129	1	09/09/24 05:35	09/09/24 05:35	DLH	Mt. Juliet, TN
Wet Chemistry by Method 9040C	WG2358423	1	09/10/24 11:13	09/10/24 11:13	KA	Mt. Juliet, TN
Mercury by Method 7470A	WG2358153	1	09/09/24 13:05	09/09/24 22:59	SDG	Mt. Juliet, TN
Mercury by Method 7470A	WG2359509	1	09/10/24 16:22	09/11/24 14:16	NDL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2360872	1	09/20/24 11:27	09/20/24 21:19	MAP	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2362180	1	09/25/24 13:08	09/25/24 22:05	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020A	WG2362186	1	09/25/24 13:16	09/26/24 02:18	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020A	WG2362203	1	09/25/24 15:18	09/25/24 23:02	UNP	Mt. Juliet, TN

APW-10S-WG-20240905 L1775426-04 GW

Collected by: Marshall Avendell
 Collected date/time: 09/05/24 14:55
 Received date/time: 09/07/24 09:00

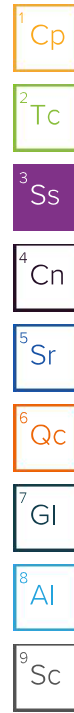
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2358912	1	09/11/24 11:10	09/11/24 11:15	JAC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2358129	1	09/09/24 06:29	09/09/24 06:29	DLH	Mt. Juliet, TN
Wet Chemistry by Method 9040C	WG2358157	1	09/07/24 17:35	09/07/24 17:35	KRB	Mt. Juliet, TN
Mercury by Method 7470A	WG2358153	1	09/09/24 13:05	09/09/24 23:02	SDG	Mt. Juliet, TN
Mercury by Method 7470A	WG2359509	1	09/10/24 16:22	09/11/24 14:18	NDL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2360872	1	09/20/24 11:27	09/20/24 21:21	MAP	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2362180	1	09/25/24 13:08	09/25/24 22:07	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020A	WG2362186	1	09/25/24 13:16	09/26/24 02:21	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020A	WG2362203	1	09/25/24 15:18	09/26/24 00:42	UNP	Mt. Juliet, TN
Metals (ICPMS) by Method 6020A	WG2362203	5	09/25/24 15:18	09/25/24 23:05	UNP	Mt. Juliet, TN

SAMPLE SUMMARY

APW-10D-WG-20240905 L1775426-05 GW

Collected by: Marshall Avendell
 Collected date/time: 09/05/24 14:15
 Received date/time: 09/07/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2358912	1	09/11/24 11:10	09/11/24 11:15	JAC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2358129	1	09/09/24 06:47	09/09/24 06:47	DLH	Mt. Juliet, TN
Wet Chemistry by Method 9040C	WG2358157	1	09/07/24 17:35	09/07/24 17:35	KRB	Mt. Juliet, TN
Mercury by Method 7470A	WG2358153	1	09/09/24 13:05	09/09/24 23:04	SDG	Mt. Juliet, TN
Mercury by Method 7470A	WG2359509	1	09/10/24 16:22	09/11/24 14:20	NDL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2360872	1	09/20/24 11:27	09/20/24 21:23	MAP	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2362181	1	09/20/24 10:17	09/20/24 20:03	MAP	Mt. Juliet, TN
Metals (ICPMS) by Method 6020A	WG2362186	1	09/25/24 13:15	09/26/24 02:34	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020A	WG2362203	1	09/25/24 15:18	09/25/24 23:08	UNP	Mt. Juliet, TN



APW-06S-WG-20240905 L1775426-06 GW

Collected by: Marshall Avendell
 Collected date/time: 09/05/24 08:20
 Received date/time: 09/07/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2358911	1	09/09/24 16:44	09/09/24 22:34	MMF	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2358129	1	09/09/24 07:05	09/09/24 07:05	DLH	Mt. Juliet, TN
Wet Chemistry by Method 9040C	WG2358157	1	09/07/24 17:35	09/07/24 17:35	KRB	Mt. Juliet, TN
Mercury by Method 7470A	WG2358153	1	09/09/24 13:05	09/09/24 23:12	SDG	Mt. Juliet, TN
Mercury by Method 7470A	WG2359509	1	09/10/24 16:22	09/11/24 14:23	NDL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2360872	1	09/20/24 11:27	09/20/24 21:25	MAP	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2362181	1	09/20/24 10:17	09/20/24 20:06	MAP	Mt. Juliet, TN
Metals (ICPMS) by Method 6020A	WG2362186	1	09/25/24 13:15	09/26/24 02:37	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020A	WG2362203	1	09/25/24 15:18	09/26/24 00:01	UNP	Mt. Juliet, TN

APW-06D-WG-20240905 L1775426-07 GW

Collected by: Marshall Avendell
 Collected date/time: 09/05/24 09:15
 Received date/time: 09/07/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2358912	1	09/11/24 11:10	09/11/24 11:15	JAC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2358129	1	09/09/24 07:41	09/09/24 07:41	DLH	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2358129	10	09/09/24 08:35	09/09/24 08:35	DLH	Mt. Juliet, TN
Wet Chemistry by Method 9040C	WG2358157	1	09/07/24 17:35	09/07/24 17:35	KRB	Mt. Juliet, TN
Mercury by Method 7470A	WG2358153	1	09/09/24 13:05	09/09/24 23:14	SDG	Mt. Juliet, TN
Mercury by Method 7470A	WG2359509	1	09/10/24 16:22	09/11/24 14:25	NDL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2360872	1	09/20/24 11:27	09/20/24 21:30	MAP	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2362181	1	09/20/24 10:17	09/20/24 20:09	MAP	Mt. Juliet, TN
Metals (ICPMS) by Method 6020A	WG2362186	1	09/25/24 13:15	09/26/24 02:41	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020A	WG2362203	1	09/25/24 15:18	09/26/24 00:04	UNP	Mt. Juliet, TN

APW-05R-WG-20240905 L1775426-08 GW

Collected by: Marshall Avendell
 Collected date/time: 09/05/24 12:30
 Received date/time: 09/07/24 09:00

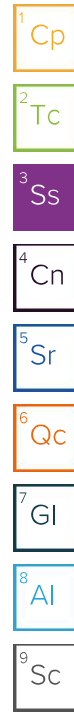
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2358912	1	09/11/24 11:10	09/11/24 11:15	JAC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2358129	1	09/09/24 08:53	09/09/24 08:53	DLH	Mt. Juliet, TN
Wet Chemistry by Method 9040C	WG2358157	1	09/07/24 17:35	09/07/24 17:35	KRB	Mt. Juliet, TN
Mercury by Method 7470A	WG2358153	1	09/09/24 13:05	09/09/24 23:17	SDG	Mt. Juliet, TN
Mercury by Method 7470A	WG2359509	1	09/10/24 16:22	09/11/24 14:28	NDL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2360872	1	09/20/24 11:27	09/20/24 21:32	MAP	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2362181	1	09/20/24 10:17	09/20/24 20:12	MAP	Mt. Juliet, TN
Metals (ICPMS) by Method 6020A	WG2362186	1	09/25/24 13:15	09/26/24 02:44	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020A	WG2362203	1	09/25/24 15:18	09/26/24 00:07	UNP	Mt. Juliet, TN

SAMPLE SUMMARY

APW-09-WG-20240906 L1775426-09 GW

Collected by: Marshall Avendell
 Collected date/time: 09/06/24 09:00
 Received date/time: 09/07/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2358912	1	09/11/24 11:10	09/11/24 11:15	JAC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2358129	1	09/09/24 09:11	09/09/24 09:11	DLH	Mt. Juliet, TN
Wet Chemistry by Method 9040C	WG2358157	1	09/07/24 17:35	09/07/24 17:35	KRB	Mt. Juliet, TN
Mercury by Method 7470A	WG2358153	1	09/09/24 13:05	09/09/24 23:19	SDG	Mt. Juliet, TN
Mercury by Method 7470A	WG2359509	1	09/10/24 16:22	09/11/24 14:01	NDL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2360872	1	09/20/24 11:27	09/20/24 21:33	MAP	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2362181	1	09/20/24 10:17	09/20/24 20:20	MAP	Mt. Juliet, TN
Metals (ICPMS) by Method 6020A	WG2362186	1	09/25/24 13:15	09/26/24 02:47	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020A	WG2362203	1	09/25/24 15:18	09/26/24 00:10	UNP	Mt. Juliet, TN



APW-02-WG-20240905 L1775426-10 GW

Collected by: Marshall Avendell
 Collected date/time: 09/05/24 10:45
 Received date/time: 09/07/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2358895	1	09/09/24 15:50	09/09/24 18:52	MMF	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2358129	1	09/09/24 09:29	09/09/24 09:29	DLH	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2358129	10	09/09/24 09:47	09/09/24 09:47	DLH	Mt. Juliet, TN
Wet Chemistry by Method 9040C	WG2358157	1	09/07/24 17:35	09/07/24 17:35	KRB	Mt. Juliet, TN
Mercury by Method 7470A	WG2358153	1	09/09/24 13:05	09/09/24 23:22	SDG	Mt. Juliet, TN
Mercury by Method 7470A	WG2359509	1	09/10/24 16:22	09/11/24 14:30	NDL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2360872	1	09/20/24 11:27	09/20/24 21:35	MAP	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2362181	1	09/20/24 10:17	09/20/24 20:23	MAP	Mt. Juliet, TN
Metals (ICPMS) by Method 6020A	WG2362186	1	09/25/24 13:15	09/26/24 02:50	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020A	WG2362203	1	09/25/24 15:18	09/26/24 00:14	UNP	Mt. Juliet, TN

APW-01R-WG-20240905 L1775426-11 GW

Collected by: Marshall Avendell
 Collected date/time: 09/05/24 16:10
 Received date/time: 09/07/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2358912	1	09/11/24 11:10	09/11/24 11:15	JAC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2358129	1	09/09/24 10:04	09/09/24 10:04	DLH	Mt. Juliet, TN
Wet Chemistry by Method 9040C	WG2358157	1	09/07/24 17:35	09/07/24 17:35	KRB	Mt. Juliet, TN
Mercury by Method 7470A	WG2358153	1	09/09/24 13:05	09/09/24 23:24	SDG	Mt. Juliet, TN
Mercury by Method 7470A	WG2359509	1	09/10/24 16:22	09/11/24 14:32	NDL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2360872	1	09/20/24 11:27	09/20/24 21:37	MAP	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2362181	1	09/20/24 10:17	09/20/24 20:26	MAP	Mt. Juliet, TN
Metals (ICPMS) by Method 6020A	WG2362186	1	09/25/24 13:15	09/26/24 02:54	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020A	WG2362203	1	09/25/24 15:18	09/26/24 00:17	UNP	Mt. Juliet, TN

APW-04-WG-20240904 L1775426-12 GW

Collected by: Marshall Avendell
 Collected date/time: 09/05/24 18:15
 Received date/time: 09/07/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2358911	1	09/09/24 16:44	09/09/24 22:34	MMF	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2358129	1	09/09/24 10:22	09/09/24 10:22	DLH	Mt. Juliet, TN
Wet Chemistry by Method 9040C	WG2358157	1	09/07/24 17:35	09/07/24 17:35	KRB	Mt. Juliet, TN
Mercury by Method 7470A	WG2358153	1	09/09/24 13:05	09/09/24 23:27	SDG	Mt. Juliet, TN
Mercury by Method 7470A	WG2359509	1	09/10/24 16:22	09/11/24 14:40	NDL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2360874	1	09/25/24 21:10	09/26/24 00:58	MAP	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2362181	1	09/20/24 10:17	09/20/24 20:29	MAP	Mt. Juliet, TN
Metals (ICPMS) by Method 6020A	WG2362186	1	09/25/24 13:15	09/26/24 02:57	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020A	WG2362203	1	09/25/24 15:18	09/26/24 00:20	UNP	Mt. Juliet, TN

SAMPLE SUMMARY

EB-01-WG-20240904 L1775426-13 GW

Collected by: Marshall Avendell
 Collected date/time: 09/05/24 11:30
 Received date/time: 09/07/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2358912	1	09/11/24 11:10	09/11/24 11:15	JAC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2358129	1	09/09/24 10:58	09/09/24 10:58	DLH	Mt. Juliet, TN
Wet Chemistry by Method 9040C	WG2358157	1	09/07/24 17:35	09/07/24 17:35	KRB	Mt. Juliet, TN
Mercury by Method 7470A	WG2359509	1	09/10/24 16:22	09/11/24 14:42	NDL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2360874	1	09/25/24 21:10	09/26/24 01:00	MAP	Mt. Juliet, TN
Metals (ICPMS) by Method 6020A	WG2362203	1	09/25/24 15:18	09/26/24 00:23	UNP	Mt. Juliet, TN



DUP-01-WG-20240905 L1775426-14 GW

Collected by: Marshall Avendell
 Collected date/time: 09/05/24 00:01
 Received date/time: 09/07/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2358895	1	09/09/24 15:50	09/09/24 18:52	MMF	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2358129	1	09/09/24 11:16	09/09/24 11:16	DLH	Mt. Juliet, TN
Wet Chemistry by Method 9040C	WG2358157	1	09/07/24 17:35	09/07/24 17:35	KRB	Mt. Juliet, TN
Mercury by Method 7470A	WG2358153	1	09/09/24 13:05	09/09/24 23:29	SDG	Mt. Juliet, TN
Mercury by Method 7470A	WG2359509	1	09/10/24 16:22	09/11/24 14:45	NDL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2360874	1	09/25/24 21:10	09/26/24 01:02	MAP	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2362181	1	09/20/24 10:17	09/20/24 20:32	MAP	Mt. Juliet, TN
Metals (ICPMS) by Method 6020A	WG2362186	1	09/25/24 13:15	09/26/24 03:00	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020A	WG2362203	1	09/25/24 15:18	09/26/24 00:27	UNP	Mt. Juliet, TN

DUP-02-WG-20240906 L1775426-15 GW

Collected by: Marshall Avendell
 Collected date/time: 09/05/24 00:02
 Received date/time: 09/07/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2358912	1	09/11/24 11:10	09/11/24 11:15	JAC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2358129	1	09/09/24 13:50	09/09/24 13:50	DLH	Mt. Juliet, TN
Wet Chemistry by Method 9040C	WG2358157	1	09/07/24 17:35	09/07/24 17:35	KRB	Mt. Juliet, TN
Mercury by Method 7470A	WG2358153	1	09/09/24 13:05	09/09/24 23:32	SDG	Mt. Juliet, TN
Mercury by Method 7470A	WG2359509	1	09/10/24 16:22	09/11/24 14:47	NDL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2360874	1	09/25/24 21:10	09/26/24 01:03	MAP	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2362181	1	09/20/24 10:17	09/20/24 20:35	MAP	Mt. Juliet, TN
Metals (ICPMS) by Method 6020A	WG2362186	1	09/25/24 13:15	09/26/24 03:03	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020A	WG2362203	1	09/25/24 15:18	09/26/24 00:30	UNP	Mt. Juliet, TN

CASE NARRATIVE

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 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.

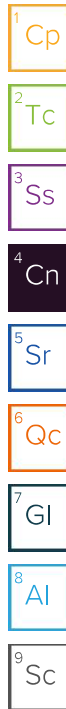


Jeff Carr
Project Manager

Sample Delivery Group (SDG) Narrative

Analysis was filtered in the laboratory.

<u>Lab Sample ID</u>	<u>Project Sample ID</u>	<u>Method</u>
L1775426-01	APW-03-WG-20240904	6020A, 6010D, 7470A
L1775426-02	APW-08-WG-20240904	6020A, 6010D, 7470A
L1775426-03	APW-07-WG-20240904	7470A, 6020A, 6010D
L1775426-04	APW-10S-WG-20240905	6010D, 6020A, 7470A
L1775426-05	APW-10D-WG-20240905	6020A, 7470A
L1775426-06	APW-06S-WG-20240905	6020A, 6010D, 7470A
L1775426-07	APW-06D-WG-20240905	6020A, 7470A, 6010D
L1775426-08	APW-05R-WG-20240905	6010D, 6020A, 7470A
L1775426-09	APW-09-WG-20240906	6020A, 7470A, 6010D
L1775426-10	APW-02-WG-20240905	6010D, 6020A, 7470A
L1775426-11	APW-01R-WG-20240905	6020A, 7470A, 6010D
L1775426-12	APW-04-WG-20240904	6010D, 6020A, 7470A
L1775426-14	DUP-01-WG-20240905	6010D, 6020A, 7470A
L1775426-15	DUP-02-WG-20240906	6010D, 6020A, 7470A
R4124471-3		6010D
R4124609-3		6020A
R4124735-1		6010D



Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	567		10.0	1	09/09/2024 18:52	WG2358895

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Chloride	11.6		1.00	1	09/09/2024 03:48	WG2358129
Fluoride	0.285		0.150	1	09/09/2024 03:48	WG2358129
Sulfate	259		50.0	10	09/09/2024 04:05	WG2358129

Wet Chemistry by Method 9040C

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	7.88	<u>T8</u>	1	09/07/2024 17:35	WG2358157

Sample Narrative:

L1775426-01 WG2358157: 7.88 at 20.7C

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Mercury	ND		0.000200	1	09/09/2024 22:20	WG2358151
Mercury,Dissolved	ND		0.000200	1	09/09/2024 22:54	WG2358153

Metals (ICP) by Method 6010D

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Boron	4.22		0.200	1	09/20/2024 21:16	WG2360872
Boron,Dissolved	4.07		0.200	1	09/25/2024 22:02	WG2362180
Calcium	125		1.00	1	09/20/2024 21:16	WG2360872
Calcium,Dissolved	122		1.00	1	09/25/2024 22:02	WG2362180

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Antimony	ND		0.00400	1	09/25/2024 22:59	WG2362203
Antimony,Dissolved	ND		0.00400	1	09/26/2024 02:11	WG2362186
Arsenic	ND		0.00200	1	09/25/2024 22:59	WG2362203
Arsenic,Dissolved	ND		0.00200	1	09/26/2024 02:11	WG2362186
Barium	0.116		0.00200	1	09/25/2024 22:59	WG2362203
Barium,Dissolved	0.114		0.00200	1	09/26/2024 02:11	WG2362186
Beryllium	ND		0.00200	1	09/25/2024 22:59	WG2362203
Beryllium,Dissolved	ND		0.00200	1	09/26/2024 02:11	WG2362186
Cadmium	ND		0.00100	1	09/25/2024 22:59	WG2362203
Cadmium,Dissolved	ND		0.00100	1	09/26/2024 02:11	WG2362186
Chromium	ND		0.00200	1	09/25/2024 22:59	WG2362203
Chromium,Dissolved	ND		0.00200	1	09/26/2024 02:11	WG2362186
Cobalt	ND		0.00200	1	09/25/2024 22:59	WG2362203
Cobalt,Dissolved	ND		0.00200	1	09/26/2024 02:11	WG2362186
Lead	ND		0.00200	1	09/25/2024 22:59	WG2362203
Lead,Dissolved	ND		0.00200	1	09/26/2024 02:11	WG2362186
Lithium	0.0315		0.00200	1	09/25/2024 22:59	WG2362203
Lithium,Dissolved	0.0314		0.00200	1	09/26/2024 02:11	WG2362186
Molybdenum	0.0656		0.00500	1	09/25/2024 22:59	WG2362203



Metals (ICPMS) by Method 6020A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Molybdenum,Dissolved	0.0656		0.00500	1	09/26/2024 02:11	WG2362186
Selenium	ND		0.00200	1	09/25/2024 22:59	WG2362203
Selenium,Dissolved	ND		0.00200	1	09/26/2024 02:11	WG2362186
Thallium	ND		0.00200	1	09/25/2024 22:59	WG2362203
Thallium,Dissolved	ND		0.00200	1	09/26/2024 02:11	WG2362186

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

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	393		10.0	1	09/09/2024 18:52	WG2358895

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Chloride	8.97		1.00	1	09/09/2024 04:23	WG2358129
Fluoride	0.254		0.150	1	09/09/2024 04:23	WG2358129
Sulfate	33.4	J6	5.00	1	09/09/2024 04:23	WG2358129

Wet Chemistry by Method 9040C

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	7.20	T8	1	09/07/2024 17:35	WG2358157

Sample Narrative:

L1775426-02 WG2358157: 7.2 at 20.3C

Mercury by Method 7470A

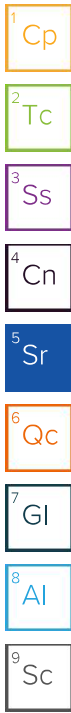
Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Mercury	ND		0.000200	1	09/09/2024 22:22	WG2358151
Mercury,Dissolved	ND		0.000200	1	09/09/2024 22:57	WG2358153

Metals (ICP) by Method 6010D

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Boron	ND		0.200	1	09/20/2024 21:17	WG2360872
Boron,Dissolved	ND		0.200	1	09/25/2024 22:04	WG2362180
Calcium	98.3		1.00	1	09/20/2024 21:17	WG2360872
Calcium,Dissolved	94.9		1.00	1	09/25/2024 22:04	WG2362180

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Antimony	ND		0.00400	1	09/25/2024 22:46	WG2362203
Antimony,Dissolved	ND		0.00400	1	09/26/2024 02:15	WG2362186
Arsenic	ND		0.00200	1	09/25/2024 22:46	WG2362203
Arsenic,Dissolved	ND		0.00200	1	09/26/2024 02:15	WG2362186
Barium	0.197		0.00200	1	09/25/2024 22:46	WG2362203
Barium,Dissolved	0.194		0.00200	1	09/26/2024 02:15	WG2362186
Beryllium	ND		0.00200	1	09/25/2024 22:46	WG2362203
Beryllium,Dissolved	ND		0.00200	1	09/26/2024 02:15	WG2362186
Cadmium	ND		0.00100	1	09/25/2024 22:46	WG2362203
Cadmium,Dissolved	ND		0.00100	1	09/26/2024 02:15	WG2362186
Chromium	ND		0.00200	1	09/25/2024 22:46	WG2362203
Chromium,Dissolved	ND		0.00200	1	09/26/2024 02:15	WG2362186
Cobalt	ND		0.00200	1	09/25/2024 22:46	WG2362203
Cobalt,Dissolved	ND		0.00200	1	09/26/2024 02:15	WG2362186
Lead	ND		0.00200	1	09/25/2024 22:46	WG2362203
Lead,Dissolved	ND		0.00200	1	09/26/2024 02:15	WG2362186
Lithium	0.0173		0.00200	1	09/25/2024 22:46	WG2362203
Lithium,Dissolved	0.0168		0.00200	1	09/26/2024 02:15	WG2362186
Molybdenum	ND		0.00500	1	09/25/2024 22:46	WG2362203



Metals (ICPMS) by Method 6020A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Molybdenum,Dissolved	ND		0.00500	1	09/26/2024 02:15	WG2362186
Selenium	0.00529		0.00200	1	09/25/2024 22:46	WG2362203
Selenium,Dissolved	0.00425		0.00200	1	09/26/2024 02:15	WG2362186
Thallium	ND		0.00200	1	09/25/2024 22:46	WG2362203
Thallium,Dissolved	ND		0.00200	1	09/26/2024 02:15	WG2362186

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

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	673		13.3	1	09/11/2024 15:28	WG2360092

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Chloride	11.5		1.00	1	09/09/2024 05:35	WG2358129
Fluoride	0.199	P1	0.150	1	09/09/2024 05:35	WG2358129
Sulfate	34.7	J6	5.00	1	09/09/2024 05:35	WG2358129

Wet Chemistry by Method 9040C

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	7.03	T8	1	09/10/2024 11:13	WG2358423

Sample Narrative:

L1775426-03 WG2358423: 7.03 at 19.6C

Mercury by Method 7470A

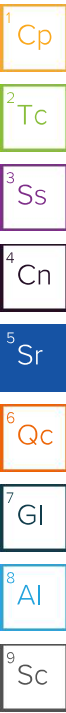
Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Mercury	ND		0.000200	1	09/11/2024 14:16	WG2359509
Mercury,Dissolved	ND		0.000200	1	09/09/2024 22:59	WG2358153

Metals (ICP) by Method 6010D

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Boron	0.526		0.200	1	09/20/2024 21:19	WG2360872
Boron,Dissolved	0.505		0.200	1	09/25/2024 22:05	WG2362180
Calcium	192		1.00	1	09/20/2024 21:19	WG2360872
Calcium,Dissolved	185		1.00	1	09/25/2024 22:05	WG2362180

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Antimony	ND		0.00400	1	09/25/2024 23:02	WG2362203
Antimony,Dissolved	ND		0.00400	1	09/26/2024 02:18	WG2362186
Arsenic	ND		0.00200	1	09/25/2024 23:02	WG2362203
Arsenic,Dissolved	ND		0.00200	1	09/26/2024 02:18	WG2362186
Barium	0.309		0.00200	1	09/25/2024 23:02	WG2362203
Barium,Dissolved	0.252		0.00200	1	09/26/2024 02:18	WG2362186
Beryllium	ND		0.00200	1	09/25/2024 23:02	WG2362203
Beryllium,Dissolved	ND		0.00200	1	09/26/2024 02:18	WG2362186
Cadmium	ND		0.00100	1	09/25/2024 23:02	WG2362203
Cadmium,Dissolved	ND		0.00100	1	09/26/2024 02:18	WG2362186
Chromium	ND		0.00200	1	09/25/2024 23:02	WG2362203
Chromium,Dissolved	ND		0.00200	1	09/26/2024 02:18	WG2362186
Cobalt	ND		0.00200	1	09/25/2024 23:02	WG2362203
Cobalt,Dissolved	ND		0.00200	1	09/26/2024 02:18	WG2362186
Lead	ND		0.00200	1	09/25/2024 23:02	WG2362203
Lead,Dissolved	ND		0.00200	1	09/26/2024 02:18	WG2362186
Lithium	0.0152		0.00200	1	09/25/2024 23:02	WG2362203
Lithium,Dissolved	0.0151		0.00200	1	09/26/2024 02:18	WG2362186
Molybdenum	ND		0.00500	1	09/25/2024 23:02	WG2362203



Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Molybdenum,Dissolved	ND		0.00500	1	09/26/2024 02:18	WG2362186
Selenium	ND		0.00200	1	09/25/2024 23:02	WG2362203
Selenium,Dissolved	ND		0.00200	1	09/26/2024 02:18	WG2362186
Thallium	ND		0.00200	1	09/25/2024 23:02	WG2362203
Thallium,Dissolved	ND		0.00200	1	09/26/2024 02:18	WG2362186

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

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	751		13.3	1	09/11/2024 11:15	WG2358912

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Chloride	10.3		1.00	1	09/09/2024 06:29	WG2358129
Fluoride	0.251		0.150	1	09/09/2024 06:29	WG2358129
Sulfate	ND		5.00	1	09/09/2024 06:29	WG2358129

Wet Chemistry by Method 9040C

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	6.96	<u>T8</u>	1	09/07/2024 17:35	WG2358157

Sample Narrative:

L1775426-04 WG2358157: 6.96 at 20.3C

Mercury by Method 7470A

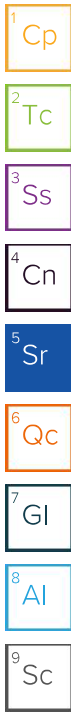
Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Mercury	ND		0.000200	1	09/11/2024 14:18	WG2359509
Mercury,Dissolved	ND		0.000200	1	09/09/2024 23:02	WG2358153

Metals (ICP) by Method 6010D

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Boron	0.554		0.200	1	09/20/2024 21:21	WG2360872
Boron,Dissolved	0.535		0.200	1	09/25/2024 22:07	WG2362180
Calcium	163		1.00	1	09/20/2024 21:21	WG2360872
Calcium,Dissolved	154		1.00	1	09/25/2024 22:07	WG2362180

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Antimony	ND		0.00400	1	09/26/2024 00:42	WG2362203
Antimony,Dissolved	ND		0.00400	1	09/26/2024 02:21	WG2362186
Arsenic	0.190		0.00200	1	09/26/2024 00:42	WG2362203
Arsenic,Dissolved	0.0620		0.00200	1	09/26/2024 02:21	WG2362186
Barium	0.567		0.0100	5	09/25/2024 23:05	WG2362203
Barium,Dissolved	0.299		0.00200	1	09/26/2024 02:21	WG2362186
Beryllium	ND		0.00200	1	09/26/2024 00:42	WG2362203
Beryllium,Dissolved	ND		0.00200	1	09/26/2024 02:21	WG2362186
Cadmium	ND		0.00100	1	09/26/2024 00:42	WG2362203
Cadmium,Dissolved	ND		0.00100	1	09/26/2024 02:21	WG2362186
Chromium	ND		0.00200	1	09/26/2024 00:42	WG2362203
Chromium,Dissolved	ND		0.00200	1	09/26/2024 02:21	WG2362186
Cobalt	ND		0.00200	1	09/26/2024 00:42	WG2362203
Cobalt,Dissolved	ND		0.00200	1	09/26/2024 02:21	WG2362186
Lead	ND		0.00200	1	09/26/2024 00:42	WG2362203
Lead,Dissolved	ND		0.00200	1	09/26/2024 02:21	WG2362186
Lithium	0.0272		0.00200	1	09/26/2024 00:42	WG2362203
Lithium,Dissolved	0.0268		0.00200	1	09/26/2024 02:21	WG2362186
Molybdenum	ND		0.00500	1	09/26/2024 00:42	WG2362203



Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Molybdenum,Dissolved	ND		0.00500	1	09/26/2024 02:21	WG2362186
Selenium	ND		0.00200	1	09/26/2024 00:42	WG2362203
Selenium,Dissolved	ND		0.00200	1	09/26/2024 02:21	WG2362186
Thallium	ND		0.00200	1	09/26/2024 00:42	WG2362203
Thallium,Dissolved	ND		0.00200	1	09/26/2024 02:21	WG2362186

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

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	351		10.0	1	09/11/2024 11:15	WG2358912

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Chloride	25.5		1.00	1	09/09/2024 06:47	WG2358129
Fluoride	ND		0.150	1	09/09/2024 06:47	WG2358129
Sulfate	37.1		5.00	1	09/09/2024 06:47	WG2358129

Wet Chemistry by Method 9040C

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	7.28	<u>T8</u>	1	09/07/2024 17:35	WG2358157

Sample Narrative:

L1775426-05 WG2358157: 7.28 at 20.9C

Mercury by Method 7470A

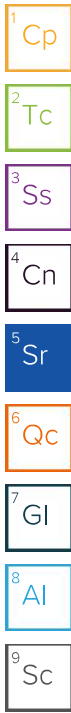
Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Mercury	ND		0.000200	1	09/11/2024 14:20	WG2359509
Mercury,Dissolved	0.000229		0.000200	1	09/09/2024 23:04	WG2358153

Metals (ICP) by Method 6010D

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Boron	ND		0.200	1	09/20/2024 21:23	WG2360872
Boron,Dissolved	ND		0.200	1	09/20/2024 20:03	WG2362181
Calcium	98.5		1.00	1	09/20/2024 21:23	WG2360872
Calcium,Dissolved	101		1.00	1	09/20/2024 20:03	WG2362181

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Antimony	ND		0.00400	1	09/25/2024 23:08	WG2362203
Antimony,Dissolved	ND		0.00400	1	09/26/2024 02:34	WG2362186
Arsenic	ND		0.00200	1	09/25/2024 23:08	WG2362203
Arsenic,Dissolved	ND		0.00200	1	09/26/2024 02:34	WG2362186
Barium	0.220		0.00200	1	09/25/2024 23:08	WG2362203
Barium,Dissolved	0.217		0.00200	1	09/26/2024 02:34	WG2362186
Beryllium	ND		0.00200	1	09/25/2024 23:08	WG2362203
Beryllium,Dissolved	ND		0.00200	1	09/26/2024 02:34	WG2362186
Cadmium	ND		0.00100	1	09/25/2024 23:08	WG2362203
Cadmium,Dissolved	ND		0.00100	1	09/26/2024 02:34	WG2362186
Chromium	ND		0.00200	1	09/25/2024 23:08	WG2362203
Chromium,Dissolved	ND		0.00200	1	09/26/2024 02:34	WG2362186
Cobalt	ND		0.00200	1	09/25/2024 23:08	WG2362203
Cobalt,Dissolved	ND		0.00200	1	09/26/2024 02:34	WG2362186
Lead	ND		0.00200	1	09/25/2024 23:08	WG2362203
Lead,Dissolved	ND		0.00200	1	09/26/2024 02:34	WG2362186
Lithium	0.0113		0.00200	1	09/25/2024 23:08	WG2362203
Lithium,Dissolved	0.0116		0.00200	1	09/26/2024 02:34	WG2362186
Molybdenum	ND		0.00500	1	09/25/2024 23:08	WG2362203



Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Molybdenum,Dissolved	ND		0.00500	1	09/26/2024 02:34	WG2362186
Selenium	ND		0.00200	1	09/25/2024 23:08	WG2362203
Selenium,Dissolved	ND		0.00200	1	09/26/2024 02:34	WG2362186
Thallium	ND		0.00200	1	09/25/2024 23:08	WG2362203
Thallium,Dissolved	ND		0.00200	1	09/26/2024 02:34	WG2362186

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	599		10.0	1	09/09/2024 22:34	WG2358911

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Chloride	21.1		1.00	1	09/09/2024 07:05	WG2358129
Fluoride	0.242		0.150	1	09/09/2024 07:05	WG2358129
Sulfate	133		5.00	1	09/09/2024 07:05	WG2358129

Wet Chemistry by Method 9040C

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	7.20	<u>T8</u>	1	09/07/2024 17:35	WG2358157

Sample Narrative:

L1775426-06 WG2358157: 7.2 at 21.5C

Mercury by Method 7470A

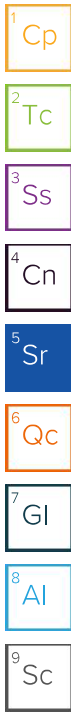
Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Mercury	ND		0.000200	1	09/11/2024 14:23	WG2359509
Mercury,Dissolved	0.000221		0.000200	1	09/09/2024 23:12	WG2358153

Metals (ICP) by Method 6010D

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Boron	4.05		0.200	1	09/20/2024 21:25	WG2360872
Boron,Dissolved	4.10		0.200	1	09/20/2024 20:06	WG2362181
Calcium	131		1.00	1	09/20/2024 21:25	WG2360872
Calcium,Dissolved	136		1.00	1	09/20/2024 20:06	WG2362181

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Antimony	ND		0.00400	1	09/26/2024 00:01	WG2362203
Antimony,Dissolved	ND		0.00400	1	09/26/2024 02:37	WG2362186
Arsenic	ND		0.00200	1	09/26/2024 00:01	WG2362203
Arsenic,Dissolved	ND		0.00200	1	09/26/2024 02:37	WG2362186
Barium	0.232		0.00200	1	09/26/2024 00:01	WG2362203
Barium,Dissolved	0.180		0.00200	1	09/26/2024 02:37	WG2362186
Beryllium	ND		0.00200	1	09/26/2024 00:01	WG2362203
Beryllium,Dissolved	ND		0.00200	1	09/26/2024 02:37	WG2362186
Cadmium	ND		0.00100	1	09/26/2024 00:01	WG2362203
Cadmium,Dissolved	ND		0.00100	1	09/26/2024 02:37	WG2362186
Chromium	ND		0.00200	1	09/26/2024 00:01	WG2362203
Chromium,Dissolved	ND		0.00200	1	09/26/2024 02:37	WG2362186
Cobalt	ND		0.00200	1	09/26/2024 00:01	WG2362203
Cobalt,Dissolved	ND		0.00200	1	09/26/2024 02:37	WG2362186
Lead	ND		0.00200	1	09/26/2024 00:01	WG2362203
Lead,Dissolved	ND		0.00200	1	09/26/2024 02:37	WG2362186
Lithium	0.0320		0.00200	1	09/26/2024 00:01	WG2362203
Lithium,Dissolved	0.0318		0.00200	1	09/26/2024 02:37	WG2362186
Molybdenum	0.176		0.00500	1	09/26/2024 00:01	WG2362203



Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Molybdenum,Dissolved	0.178		0.00500	1	09/26/2024 02:37	WG2362186
Selenium	ND		0.00200	1	09/26/2024 00:01	WG2362203
Selenium,Dissolved	ND		0.00200	1	09/26/2024 02:37	WG2362186
Thallium	ND		0.00200	1	09/26/2024 00:01	WG2362203
Thallium,Dissolved	ND		0.00200	1	09/26/2024 02:37	WG2362186

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

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	624		10.0	1	09/11/2024 11:15	WG2358912

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Chloride	15.0		1.00	1	09/09/2024 07:41	WG2358129
Fluoride	0.205		0.150	1	09/09/2024 07:41	WG2358129
Sulfate	242		50.0	10	09/09/2024 08:35	WG2358129

Wet Chemistry by Method 9040C

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	7.46	<u>T8</u>	1	09/07/2024 17:35	WG2358157

Sample Narrative:

L1775426-07 WG2358157: 7.46 at 21.2C

Mercury by Method 7470A

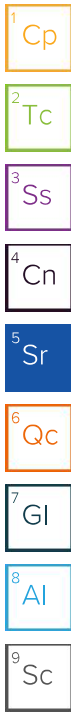
Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Mercury	ND		0.000200	1	09/11/2024 14:25	WG2359509
Mercury,Dissolved	0.000209		0.000200	1	09/09/2024 23:14	WG2358153

Metals (ICP) by Method 6010D

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Boron	4.31		0.200	1	09/20/2024 21:30	WG2360872
Boron,Dissolved	4.36		0.200	1	09/20/2024 20:09	WG2362181
Calcium	124		1.00	1	09/20/2024 21:30	WG2360872
Calcium,Dissolved	130		1.00	1	09/20/2024 20:09	WG2362181

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Antimony	ND		0.00400	1	09/26/2024 00:04	WG2362203
Antimony,Dissolved	ND		0.00400	1	09/26/2024 02:41	WG2362186
Arsenic	0.0103		0.00200	1	09/26/2024 00:04	WG2362203
Arsenic,Dissolved	0.00479		0.00200	1	09/26/2024 02:41	WG2362186
Barium	0.129		0.00200	1	09/26/2024 00:04	WG2362203
Barium,Dissolved	0.121		0.00200	1	09/26/2024 02:41	WG2362186
Beryllium	ND		0.00200	1	09/26/2024 00:04	WG2362203
Beryllium,Dissolved	ND		0.00200	1	09/26/2024 02:41	WG2362186
Cadmium	ND		0.00100	1	09/26/2024 00:04	WG2362203
Cadmium,Dissolved	ND		0.00100	1	09/26/2024 02:41	WG2362186
Chromium	ND		0.00200	1	09/26/2024 00:04	WG2362203
Chromium,Dissolved	ND		0.00200	1	09/26/2024 02:41	WG2362186
Cobalt	ND		0.00200	1	09/26/2024 00:04	WG2362203
Cobalt,Dissolved	ND		0.00200	1	09/26/2024 02:41	WG2362186
Lead	ND		0.00200	1	09/26/2024 00:04	WG2362203
Lead,Dissolved	ND		0.00200	1	09/26/2024 02:41	WG2362186
Lithium	0.0163		0.00200	1	09/26/2024 00:04	WG2362203
Lithium,Dissolved	0.0156		0.00200	1	09/26/2024 02:41	WG2362186
Molybdenum	0.0628		0.00500	1	09/26/2024 00:04	WG2362203



Metals (ICPMS) by Method 6020A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Molybdenum,Dissolved	0.0647		0.00500	1	09/26/2024 02:41	WG2362186
Selenium	ND		0.00200	1	09/26/2024 00:04	WG2362203
Selenium,Dissolved	ND		0.00200	1	09/26/2024 02:41	WG2362186
Thallium	ND		0.00200	1	09/26/2024 00:04	WG2362203
Thallium,Dissolved	ND		0.00200	1	09/26/2024 02:41	WG2362186

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

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	354		10.0	1	09/11/2024 11:15	WG2358912

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Chloride	28.1		1.00	1	09/09/2024 08:53	WG2358129
Fluoride	0.347		0.150	1	09/09/2024 08:53	WG2358129
Sulfate	70.5		5.00	1	09/09/2024 08:53	WG2358129

Wet Chemistry by Method 9040C

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	7.56	<u>T8</u>	1	09/07/2024 17:35	WG2358157

Sample Narrative:

L1775426-08 WG2358157: 7.56 at 20.9C

Mercury by Method 7470A

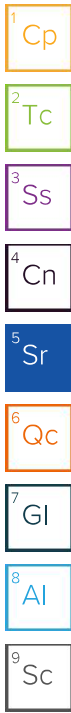
Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Mercury	ND		0.000200	1	09/11/2024 14:28	WG2359509
Mercury,Dissolved	ND		0.000200	1	09/09/2024 23:17	WG2358153

Metals (ICP) by Method 6010D

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Boron	2.18		0.200	1	09/20/2024 21:32	WG2360872
Boron,Dissolved	2.23		0.200	1	09/20/2024 20:12	WG2362181
Calcium	74.0		1.00	1	09/20/2024 21:32	WG2360872
Calcium,Dissolved	76.7		1.00	1	09/20/2024 20:12	WG2362181

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Antimony	ND		0.00400	1	09/26/2024 00:07	WG2362203
Antimony,Dissolved	ND		0.00400	1	09/26/2024 02:44	WG2362186
Arsenic	0.00305		0.00200	1	09/26/2024 00:07	WG2362203
Arsenic,Dissolved	0.00215		0.00200	1	09/26/2024 02:44	WG2362186
Barium	0.102		0.00200	1	09/26/2024 00:07	WG2362203
Barium,Dissolved	0.0718		0.00200	1	09/26/2024 02:44	WG2362186
Beryllium	ND		0.00200	1	09/26/2024 00:07	WG2362203
Beryllium,Dissolved	ND		0.00200	1	09/26/2024 02:44	WG2362186
Cadmium	ND		0.00100	1	09/26/2024 00:07	WG2362203
Cadmium,Dissolved	ND		0.00100	1	09/26/2024 02:44	WG2362186
Chromium	ND		0.00200	1	09/26/2024 00:07	WG2362203
Chromium,Dissolved	ND		0.00200	1	09/26/2024 02:44	WG2362186
Cobalt	ND		0.00200	1	09/26/2024 00:07	WG2362203
Cobalt,Dissolved	ND		0.00200	1	09/26/2024 02:44	WG2362186
Lead	ND		0.00200	1	09/26/2024 00:07	WG2362203
Lead,Dissolved	ND		0.00200	1	09/26/2024 02:44	WG2362186
Lithium	0.0179		0.00200	1	09/26/2024 00:07	WG2362203
Lithium,Dissolved	0.0172		0.00200	1	09/26/2024 02:44	WG2362186
Molybdenum	0.109		0.00500	1	09/26/2024 00:07	WG2362203



Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Molybdenum,Dissolved	0.110		0.00500	1	09/26/2024 02:44	WG2362186
Selenium	ND		0.00200	1	09/26/2024 00:07	WG2362203
Selenium,Dissolved	ND		0.00200	1	09/26/2024 02:44	WG2362186
Thallium	ND		0.00200	1	09/26/2024 00:07	WG2362203
Thallium,Dissolved	ND		0.00200	1	09/26/2024 02:44	WG2362186

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

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	389		10.0	1	09/11/2024 11:15	WG2358912

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Chloride	11.0		1.00	1	09/09/2024 09:11	WG2358129
Fluoride	0.215		0.150	1	09/09/2024 09:11	WG2358129
Sulfate	56.1		5.00	1	09/09/2024 09:11	WG2358129

Wet Chemistry by Method 9040C

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	7.45	<u>T8</u>	1	09/07/2024 17:35	WG2358157

Sample Narrative:

L1775426-09 WG2358157: 7.45 at 20.9C

Mercury by Method 7470A

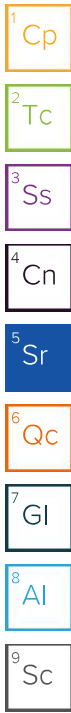
Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Mercury	ND		0.000200	1	09/11/2024 14:01	WG2359509
Mercury,Dissolved	0.000236		0.000200	1	09/09/2024 23:19	WG2358153

Metals (ICP) by Method 6010D

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Boron	0.829		0.200	1	09/20/2024 21:33	WG2360872
Boron,Dissolved	0.833		0.200	1	09/20/2024 20:20	WG2362181
Calcium	90.4		1.00	1	09/20/2024 21:33	WG2360872
Calcium,Dissolved	94.7		1.00	1	09/20/2024 20:20	WG2362181

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Antimony	ND		0.00400	1	09/26/2024 00:10	WG2362203
Antimony,Dissolved	ND		0.00400	1	09/26/2024 02:47	WG2362186
Arsenic	0.00230		0.00200	1	09/26/2024 00:10	WG2362203
Arsenic,Dissolved	0.00211		0.00200	1	09/26/2024 02:47	WG2362186
Barium	0.117		0.00200	1	09/26/2024 00:10	WG2362203
Barium,Dissolved	0.112		0.00200	1	09/26/2024 02:47	WG2362186
Beryllium	ND		0.00200	1	09/26/2024 00:10	WG2362203
Beryllium,Dissolved	ND		0.00200	1	09/26/2024 02:47	WG2362186
Cadmium	ND		0.00100	1	09/26/2024 00:10	WG2362203
Cadmium,Dissolved	ND		0.00100	1	09/26/2024 02:47	WG2362186
Chromium	ND		0.00200	1	09/26/2024 00:10	WG2362203
Chromium,Dissolved	ND		0.00200	1	09/26/2024 02:47	WG2362186
Cobalt	ND		0.00200	1	09/26/2024 00:10	WG2362203
Cobalt,Dissolved	ND		0.00200	1	09/26/2024 02:47	WG2362186
Lead	ND		0.00200	1	09/26/2024 00:10	WG2362203
Lead,Dissolved	ND		0.00200	1	09/26/2024 02:47	WG2362186
Lithium	0.0163		0.00200	1	09/26/2024 00:10	WG2362203
Lithium,Dissolved	0.0159		0.00200	1	09/26/2024 02:47	WG2362186
Molybdenum	0.0259		0.00500	1	09/26/2024 00:10	WG2362203



Metals (ICPMS) by Method 6020A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Molybdenum,Dissolved	0.0255		0.00500	1	09/26/2024 02:47	WG2362186
Selenium	0.0178		0.00200	1	09/26/2024 00:10	WG2362203
Selenium,Dissolved	0.0186		0.00200	1	09/26/2024 02:47	WG2362186
Thallium	ND		0.00200	1	09/26/2024 00:10	WG2362203
Thallium,Dissolved	ND		0.00200	1	09/26/2024 02:47	WG2362186

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

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	783		13.3	1	09/09/2024 18:52	WG2358895

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Chloride	7.55		1.00	1	09/09/2024 09:29	WG2358129
Fluoride	0.197		0.150	1	09/09/2024 09:29	WG2358129
Sulfate	376		50.0	10	09/09/2024 09:47	WG2358129

Wet Chemistry by Method 9040C

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	7.18	<u>T8</u>	1	09/07/2024 17:35	WG2358157

Sample Narrative:

L1775426-10 WG2358157: 7.18 at 21.2C

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Mercury	ND		0.000200	1	09/11/2024 14:30	WG2359509
Mercury,Dissolved	0.000214		0.000200	1	09/09/2024 23:22	WG2358153

Metals (ICP) by Method 6010D

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Boron	8.24		0.200	1	09/20/2024 21:35	WG2360872
Boron,Dissolved	8.28		0.200	1	09/20/2024 20:23	WG2362181
Calcium	156		1.00	1	09/20/2024 21:35	WG2360872
Calcium,Dissolved	156		1.00	1	09/20/2024 20:23	WG2362181

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Antimony	ND		0.00400	1	09/26/2024 00:14	WG2362203
Antimony,Dissolved	ND		0.00400	1	09/26/2024 02:50	WG2362186
Arsenic	0.0178		0.00200	1	09/26/2024 00:14	WG2362203
Arsenic,Dissolved	0.00426		0.00200	1	09/26/2024 02:50	WG2362186
Barium	0.162		0.00200	1	09/26/2024 00:14	WG2362203
Barium,Dissolved	0.124		0.00200	1	09/26/2024 02:50	WG2362186
Beryllium	ND		0.00200	1	09/26/2024 00:14	WG2362203
Beryllium,Dissolved	ND		0.00200	1	09/26/2024 02:50	WG2362186
Cadmium	ND		0.00100	1	09/26/2024 00:14	WG2362203
Cadmium,Dissolved	ND		0.00100	1	09/26/2024 02:50	WG2362186
Chromium	0.00658		0.00200	1	09/26/2024 00:14	WG2362203
Chromium,Dissolved	ND		0.00200	1	09/26/2024 02:50	WG2362186
Cobalt	0.00232		0.00200	1	09/26/2024 00:14	WG2362203
Cobalt,Dissolved	ND		0.00200	1	09/26/2024 02:50	WG2362186
Lead	0.00662		0.00200	1	09/26/2024 00:14	WG2362203
Lead,Dissolved	ND		0.00200	1	09/26/2024 02:50	WG2362186
Lithium	0.0408		0.00200	1	09/26/2024 00:14	WG2362203
Lithium,Dissolved	0.0380		0.00200	1	09/26/2024 02:50	WG2362186
Molybdenum	0.162		0.00500	1	09/26/2024 00:14	WG2362203

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Molybdenum,Dissolved	0.172		0.00500	1	09/26/2024 02:50	WG2362186
Selenium	ND		0.00200	1	09/26/2024 00:14	WG2362203
Selenium,Dissolved	ND		0.00200	1	09/26/2024 02:50	WG2362186
Thallium	ND		0.00200	1	09/26/2024 00:14	WG2362203
Thallium,Dissolved	ND		0.00200	1	09/26/2024 02:50	WG2362186

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

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	372		10.0	1	09/11/2024 11:15	WG2358912

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Chloride	1.97		1.00	1	09/09/2024 10:04	WG2358129
Fluoride	0.201		0.150	1	09/09/2024 10:04	WG2358129
Sulfate	34.0		5.00	1	09/09/2024 10:04	WG2358129

Wet Chemistry by Method 9040C

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	6.88	<u>T8</u>	1	09/07/2024 17:35	WG2358157

Sample Narrative:

L1775426-11 WG2358157: 6.88 at 21C

Mercury by Method 7470A

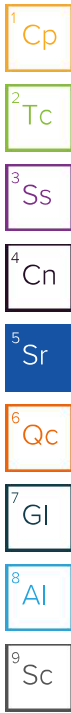
Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Mercury	ND		0.000200	1	09/11/2024 14:32	WG2359509
Mercury,Dissolved	0.000200		0.000200	1	09/09/2024 23:24	WG2358153

Metals (ICP) by Method 6010D

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Boron	ND		0.200	1	09/20/2024 21:37	WG2360872
Boron,Dissolved	0.205		0.200	1	09/20/2024 20:26	WG2362181
Calcium	89.5		1.00	1	09/20/2024 21:37	WG2360872
Calcium,Dissolved	94.1		1.00	1	09/20/2024 20:26	WG2362181

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Antimony	ND		0.00400	1	09/26/2024 00:17	WG2362203
Antimony,Dissolved	ND		0.00400	1	09/26/2024 02:54	WG2362186
Arsenic	ND		0.00200	1	09/26/2024 00:17	WG2362203
Arsenic,Dissolved	ND		0.00200	1	09/26/2024 02:54	WG2362186
Barium	0.155		0.00200	1	09/26/2024 00:17	WG2362203
Barium,Dissolved	0.154		0.00200	1	09/26/2024 02:54	WG2362186
Beryllium	ND		0.00200	1	09/26/2024 00:17	WG2362203
Beryllium,Dissolved	ND		0.00200	1	09/26/2024 02:54	WG2362186
Cadmium	ND		0.00100	1	09/26/2024 00:17	WG2362203
Cadmium,Dissolved	ND		0.00100	1	09/26/2024 02:54	WG2362186
Chromium	ND		0.00200	1	09/26/2024 00:17	WG2362203
Chromium,Dissolved	ND		0.00200	1	09/26/2024 02:54	WG2362186
Cobalt	ND		0.00200	1	09/26/2024 00:17	WG2362203
Cobalt,Dissolved	ND		0.00200	1	09/26/2024 02:54	WG2362186
Lead	ND		0.00200	1	09/26/2024 00:17	WG2362203
Lead,Dissolved	ND		0.00200	1	09/26/2024 02:54	WG2362186
Lithium	0.0133		0.00200	1	09/26/2024 00:17	WG2362203
Lithium,Dissolved	0.0130		0.00200	1	09/26/2024 02:54	WG2362186
Molybdenum	ND		0.00500	1	09/26/2024 00:17	WG2362203



Metals (ICPMS) by Method 6020A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Molybdenum,Dissolved	ND		0.00500	1	09/26/2024 02:54	WG2362186
Selenium	0.00351		0.00200	1	09/26/2024 00:17	WG2362203
Selenium,Dissolved	0.00289		0.00200	1	09/26/2024 02:54	WG2362186
Thallium	ND		0.00200	1	09/26/2024 00:17	WG2362203
Thallium,Dissolved	ND		0.00200	1	09/26/2024 02:54	WG2362186

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

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	442		10.0	1	09/09/2024 22:34	WG2358911

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Chloride	9.98		1.00	1	09/09/2024 10:22	WG2358129
Fluoride	0.178		0.150	1	09/09/2024 10:22	WG2358129
Sulfate	86.2		5.00	1	09/09/2024 10:22	WG2358129

Wet Chemistry by Method 9040C

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	7.65	<u>T8</u>	1	09/07/2024 17:35	WG2358157

Sample Narrative:

L1775426-12 WG2358157: 7.65 at 21C

Mercury by Method 7470A

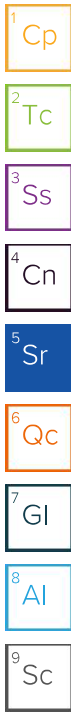
Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Mercury	ND		0.000200	1	09/11/2024 14:40	WG2359509
Mercury,Dissolved	ND		0.000200	1	09/09/2024 23:27	WG2358153

Metals (ICP) by Method 6010D

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Boron	1.79		0.200	1	09/26/2024 00:58	WG2360874
Boron,Dissolved	1.85		0.200	1	09/20/2024 20:29	WG2362181
Calcium	107		1.00	1	09/26/2024 00:58	WG2360874
Calcium,Dissolved	110		1.00	1	09/20/2024 20:29	WG2362181

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Antimony	ND		0.00400	1	09/26/2024 00:20	WG2362203
Antimony,Dissolved	ND		0.00400	1	09/26/2024 02:57	WG2362186
Arsenic	ND		0.00200	1	09/26/2024 00:20	WG2362203
Arsenic,Dissolved	ND		0.00200	1	09/26/2024 02:57	WG2362186
Barium	0.140		0.00200	1	09/26/2024 00:20	WG2362203
Barium,Dissolved	0.134		0.00200	1	09/26/2024 02:57	WG2362186
Beryllium	ND		0.00200	1	09/26/2024 00:20	WG2362203
Beryllium,Dissolved	ND		0.00200	1	09/26/2024 02:57	WG2362186
Cadmium	ND		0.00100	1	09/26/2024 00:20	WG2362203
Cadmium,Dissolved	ND		0.00100	1	09/26/2024 02:57	WG2362186
Chromium	ND		0.00200	1	09/26/2024 00:20	WG2362203
Chromium,Dissolved	ND		0.00200	1	09/26/2024 02:57	WG2362186
Cobalt	ND		0.00200	1	09/26/2024 00:20	WG2362203
Cobalt,Dissolved	ND		0.00200	1	09/26/2024 02:57	WG2362186
Lead	ND		0.00200	1	09/26/2024 00:20	WG2362203
Lead,Dissolved	ND		0.00200	1	09/26/2024 02:57	WG2362186
Lithium	0.0284		0.00200	1	09/26/2024 00:20	WG2362203
Lithium,Dissolved	0.0277		0.00200	1	09/26/2024 02:57	WG2362186
Molybdenum	0.0517		0.00500	1	09/26/2024 00:20	WG2362203



Metals (ICPMS) by Method 6020A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Molybdenum,Dissolved	0.0543		0.00500	1	09/26/2024 02:57	WG2362186
Selenium	0.0186		0.00200	1	09/26/2024 00:20	WG2362203
Selenium,Dissolved	0.0176		0.00200	1	09/26/2024 02:57	WG2362186
Thallium	ND		0.00200	1	09/26/2024 00:20	WG2362203
Thallium,Dissolved	ND		0.00200	1	09/26/2024 02:57	WG2362186

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	ND		10.0	1	09/11/2024 11:15	WG2358912

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Chloride	ND		1.00	1	09/09/2024 10:58	WG2358129
Fluoride	ND		0.150	1	09/09/2024 10:58	WG2358129
Sulfate	ND		5.00	1	09/09/2024 10:58	WG2358129

Wet Chemistry by Method 9040C

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	6.71	<u>T8</u>	1	09/07/2024 17:35	WG2358157

Sample Narrative:

L1775426-13 WG2358157: 6.71 at 21.6C

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Mercury	ND		0.000200	1	09/11/2024 14:42	WG2359509

Metals (ICP) by Method 6010D

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Boron	ND		0.200	1	09/26/2024 01:00	WG2360874
Calcium	ND		1.00	1	09/26/2024 01:00	WG2360874

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Antimony	ND		0.00400	1	09/26/2024 00:23	WG2362203
Arsenic	ND		0.00200	1	09/26/2024 00:23	WG2362203
Barium	ND		0.00200	1	09/26/2024 00:23	WG2362203
Beryllium	ND		0.00200	1	09/26/2024 00:23	WG2362203
Cadmium	ND		0.00100	1	09/26/2024 00:23	WG2362203
Chromium	ND		0.00200	1	09/26/2024 00:23	WG2362203
Cobalt	ND		0.00200	1	09/26/2024 00:23	WG2362203
Lead	ND		0.00200	1	09/26/2024 00:23	WG2362203
Lithium	ND		0.00200	1	09/26/2024 00:23	WG2362203
Molybdenum	ND		0.00500	1	09/26/2024 00:23	WG2362203
Selenium	ND		0.00200	1	09/26/2024 00:23	WG2362203
Thallium	ND		0.00200	1	09/26/2024 00:23	WG2362203

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	359		10.0	1	09/09/2024 18:52	WG2358895

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Chloride	28.1		1.00	1	09/09/2024 11:16	WG2358129
Fluoride	0.342		0.150	1	09/09/2024 11:16	WG2358129
Sulfate	70.6		5.00	1	09/09/2024 11:16	WG2358129

Wet Chemistry by Method 9040C

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	7.56	<u>T8</u>	1	09/07/2024 17:35	WG2358157

Sample Narrative:

L1775426-14 WG2358157: 7.56 at 21.2C

Mercury by Method 7470A

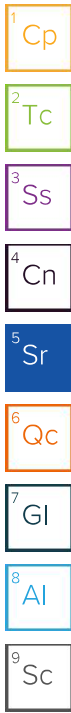
Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Mercury	ND		0.000200	1	09/11/2024 14:45	WG2359509
Mercury,Dissolved	0.000207		0.000200	1	09/09/2024 23:29	WG2358153

Metals (ICP) by Method 6010D

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Boron	2.17		0.200	1	09/26/2024 01:02	WG2360874
Boron,Dissolved	2.22		0.200	1	09/20/2024 20:32	WG2362181
Calcium	73.3		1.00	1	09/26/2024 01:02	WG2360874
Calcium,Dissolved	76.5		1.00	1	09/20/2024 20:32	WG2362181

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Antimony	ND		0.00400	1	09/26/2024 00:27	WG2362203
Antimony,Dissolved	ND		0.00400	1	09/26/2024 03:00	WG2362186
Arsenic	0.00300		0.00200	1	09/26/2024 00:27	WG2362203
Arsenic,Dissolved	0.00201		0.00200	1	09/26/2024 03:00	WG2362186
Barium	0.0999		0.00200	1	09/26/2024 00:27	WG2362203
Barium,Dissolved	0.0720		0.00200	1	09/26/2024 03:00	WG2362186
Beryllium	ND		0.00200	1	09/26/2024 00:27	WG2362203
Beryllium,Dissolved	ND		0.00200	1	09/26/2024 03:00	WG2362186
Cadmium	ND		0.00100	1	09/26/2024 00:27	WG2362203
Cadmium,Dissolved	ND		0.00100	1	09/26/2024 03:00	WG2362186
Chromium	ND		0.00200	1	09/26/2024 00:27	WG2362203
Chromium,Dissolved	ND		0.00200	1	09/26/2024 03:00	WG2362186
Cobalt	ND		0.00200	1	09/26/2024 00:27	WG2362203
Cobalt,Dissolved	ND		0.00200	1	09/26/2024 03:00	WG2362186
Lead	ND		0.00200	1	09/26/2024 00:27	WG2362203
Lead,Dissolved	ND		0.00200	1	09/26/2024 03:00	WG2362186
Lithium	0.0176		0.00200	1	09/26/2024 00:27	WG2362203
Lithium,Dissolved	0.0175		0.00200	1	09/26/2024 03:00	WG2362186
Molybdenum	0.107		0.00500	1	09/26/2024 00:27	WG2362203



Metals (ICPMS) by Method 6020A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Molybdenum,Dissolved	0.111		0.00500	1	09/26/2024 03:00	WG2362186
Selenium	ND		0.00200	1	09/26/2024 00:27	WG2362203
Selenium,Dissolved	ND		0.00200	1	09/26/2024 03:00	WG2362186
Thallium	ND		0.00200	1	09/26/2024 00:27	WG2362203
Thallium,Dissolved	ND		0.00200	1	09/26/2024 03:00	WG2362186

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	387		10.0	1	09/11/2024 11:15	WG2358912

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Chloride	11.0		1.00	1	09/09/2024 13:50	WG2358129
Fluoride	0.198		0.150	1	09/09/2024 13:50	WG2358129
Sulfate	55.7		5.00	1	09/09/2024 13:50	WG2358129

Wet Chemistry by Method 9040C

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	7.60	<u>T8</u>	1	09/07/2024 17:35	WG2358157

Sample Narrative:

L1775426-15 WG2358157: 7.6 at 21.7C

Mercury by Method 7470A

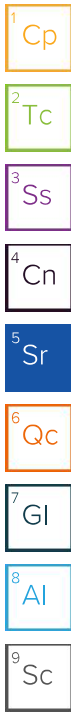
Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Mercury	ND		0.000200	1	09/11/2024 14:47	WG2359509
Mercury,Dissolved	ND		0.000200	1	09/09/2024 23:32	WG2358153

Metals (ICP) by Method 6010D

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Boron	0.833		0.200	1	09/26/2024 01:03	WG2360874
Boron,Dissolved	0.834		0.200	1	09/20/2024 20:35	WG2362181
Calcium	91.7		1.00	1	09/26/2024 01:03	WG2360874
Calcium,Dissolved	95.2		1.00	1	09/20/2024 20:35	WG2362181

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Antimony	ND		0.00400	1	09/26/2024 00:30	WG2362203
Antimony,Dissolved	ND		0.00400	1	09/26/2024 03:03	WG2362186
Arsenic	0.00204		0.00200	1	09/26/2024 00:30	WG2362203
Arsenic,Dissolved	0.00215		0.00200	1	09/26/2024 03:03	WG2362186
Barium	0.119		0.00200	1	09/26/2024 00:30	WG2362203
Barium,Dissolved	0.109		0.00200	1	09/26/2024 03:03	WG2362186
Beryllium	ND		0.00200	1	09/26/2024 00:30	WG2362203
Beryllium,Dissolved	ND		0.00200	1	09/26/2024 03:03	WG2362186
Cadmium	ND		0.00100	1	09/26/2024 00:30	WG2362203
Cadmium,Dissolved	ND		0.00100	1	09/26/2024 03:03	WG2362186
Chromium	ND		0.00200	1	09/26/2024 00:30	WG2362203
Chromium,Dissolved	ND		0.00200	1	09/26/2024 03:03	WG2362186
Cobalt	ND		0.00200	1	09/26/2024 00:30	WG2362203
Cobalt,Dissolved	ND		0.00200	1	09/26/2024 03:03	WG2362186
Lead	ND		0.00200	1	09/26/2024 00:30	WG2362203
Lead,Dissolved	ND		0.00200	1	09/26/2024 03:03	WG2362186
Lithium	0.0163		0.00200	1	09/26/2024 00:30	WG2362203
Lithium,Dissolved	0.0159		0.00200	1	09/26/2024 03:03	WG2362186
Molybdenum	0.0251		0.00500	1	09/26/2024 00:30	WG2362203



Metals (ICPMS) by Method 6020A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Molybdenum,Dissolved	0.0256		0.00500	1	09/26/2024 03:03	WG2362186
Selenium	0.0186		0.00200	1	09/26/2024 00:30	WG2362203
Selenium,Dissolved	0.0182		0.00200	1	09/26/2024 03:03	WG2362186
Thallium	ND		0.00200	1	09/26/2024 00:30	WG2362203
Thallium,Dissolved	ND		0.00200	1	09/26/2024 03:03	WG2362186

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

WG2358895

Gravimetric Analysis by Method 2540 C-2011

QUALITY CONTROL SUMMARY

[L1775426-01,02,10,14](#)

Method Blank (MB)

(MB) R4118967-1 09/09/24 18:52

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Dissolved Solids	U		10.0	10.0

L1775037-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1775037-02 09/09/24 18:52 • (DUP) R4118967-3 09/09/24 18:52

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits
Dissolved Solids	1190	1190	1	0.337		10

L1775463-12 Original Sample (OS) • Duplicate (DUP)

(OS) L1775463-12 09/09/24 18:52 • (DUP) R4118967-4 09/09/24 18:52

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits
Dissolved Solids	2710	2880	1	6.09		10

Laboratory Control Sample (LCS)

(LCS) R4118967-2 09/09/24 18:52

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800	8460	96.1	85.0-115	

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

WG2358911

Gravimetric Analysis by Method 2540 C-2011

QUALITY CONTROL SUMMARY

[L1775426-06,12](#)

Method Blank (MB)

(MB) R4119251-1 09/09/24 22:34

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Dissolved Solids	U		10.0	10.0

L1774840-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1774840-01 09/09/24 22:34 • (DUP) R4119251-3 09/09/24 22:34

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Dissolved Solids	1070	1100	1	3.31		10

L1775426-12 Original Sample (OS) • Duplicate (DUP)

(OS) L1775426-12 09/09/24 22:34 • (DUP) R4119251-4 09/09/24 22:34

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Dissolved Solids	442	462	1	4.42		10

Laboratory Control Sample (LCS)

(LCS) R4119251-2 09/09/24 22:34

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Dissolved Solids	8800	8540	97.0	85.0-115	

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

WG2358912

Gravimetric Analysis by Method 2540 C-2011

QUALITY CONTROL SUMMARY

[L1775426-04,05,07,08,09,11,13,15](#)

Method Blank (MB)

(MB) R4120027-1 09/11/24 11:15

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Dissolved Solids	U		10.0	10.0

L1774977-12 Original Sample (OS) • Duplicate (DUP)

(OS) L1774977-12 09/11/24 11:15 • (DUP) R4120027-3 09/11/24 11:15

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Dissolved Solids	2940	3340	1	12.6	J3	10

Sample Narrative:

OS: Duplicate Analysis performed due to QC failure. Results confirm; reporting in hold data

L1775523-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1775523-05 09/11/24 11:15 • (DUP) R4120027-4 09/11/24 11:15

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Dissolved Solids	4990	5090	1	1.98		10

Laboratory Control Sample (LCS)

(LCS) R4120027-2 09/11/24 11:15

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Dissolved Solids	8800	8690	98.8	85.0-115	

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

WG2360092

Gravimetric Analysis by Method 2540 C-2011

QUALITY CONTROL SUMMARY

[L1775426-03](#)

Method Blank (MB)

(MB) R4119893-1 09/11/24 15:28

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Dissolved Solids	U		10.0	10.0

L1774983-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1774983-01 09/11/24 15:28 • (DUP) R4119893-3 09/11/24 15:28

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits
Dissolved Solids	5050	5060	1	0.198		10

L1775882-12 Original Sample (OS) • Duplicate (DUP)

(OS) L1775882-12 09/11/24 15:28 • (DUP) R4119893-4 09/11/24 15:28

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits
Dissolved Solids	130	128	1	1.55		10

Laboratory Control Sample (LCS)

(LCS) R4119893-2 09/11/24 15:28

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800	8750	99.4	85.0-115	

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

WG2358129

Wet Chemistry by Method 300.0

QUALITY CONTROL SUMMARY

[L1775426-01,02,03,04,05,06,07,08,09,10,11,12,13,14,15](#)

Method Blank (MB)

(MB) R4119484-1 09/09/24 03:12

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Chloride	U		0.547	1.00
Fluoride	U		0.0761	0.150
Sulfate	U		0.637	5.00

L1775426-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1775426-02 09/09/24 04:23 • (DUP) R4119484-3 09/09/24 04:41

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	8.97	8.92	1	0.667		15
Fluoride	0.254	0.245	1	3.77		15
Sulfate	33.4	33.4	1	0.0838		15

L1775426-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1775426-03 09/09/24 05:35 • (DUP) R4119484-6 09/09/24 05:53

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	11.5	11.6	1	0.843		15
Fluoride	0.199	ND	1	37.6	Pl	15
Sulfate	34.7	34.7	1	0.131		15

Laboratory Control Sample (LCS)

(LCS) R4119484-2 09/09/24 03:30

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	40.0	37.7	94.3	80.0-120	
Fluoride	8.00	7.49	93.7	80.0-120	
Sulfate	40.0	37.4	93.6	80.0-120	

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

WG2358129

Wet Chemistry by Method 300.0

QUALITY CONTROL SUMMARY

L1775426-01,02,03,04,05,06,07,08,09,10,11,12,13,14,15

L1775426-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1775426-02 09/09/24 04:23 • (MS) R4119484-4 09/09/24 04:59 • (MSD) R4119484-5 09/09/24 05:17

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	40.0	8.97	44.8	45.0	89.6	90.0	1	80.0-120			0.368	15
Fluoride	8.00	0.254	7.60	7.64	91.8	92.3	1	80.0-120			0.526	15
Sulfate	40.0	33.4	63.7	64.1	75.8	76.8	1	80.0-120	J6	J6	0.619	15

L1775426-03 Original Sample (OS) • Matrix Spike (MS)

(OS) L1775426-03 09/09/24 05:35 • (MS) R4119484-7 09/09/24 06:11

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	40.0	11.5	47.1	89.1	1	80.0-120	
Fluoride	8.00	0.199	7.60	92.5	1	80.0-120	
Sulfate	40.0	34.7	65.0	75.7	1	80.0-120	J6

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

WG2358157

Wet Chemistry by Method 9040C

QUALITY CONTROL SUMMARY

[L1775426-01,02,04,05,06,07,08,09,10,11,12,13,14,15](#)

L1775150-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1775150-01 09/07/24 17:35 • (DUP) R4116881-2 09/07/24 17:35

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
pH	7.88	7.88	1	0.000		1

Sample Narrative:

OS: 7.88 at 19.1C
DUP: 7.88 at 19C

L1775426-15 Original Sample (OS) • Duplicate (DUP)

(OS) L1775426-15 09/07/24 17:35 • (DUP) R4116881-3 09/07/24 17:35

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
pH	7.60	7.60	1	0.000		1

Sample Narrative:

OS: 7.6 at 21.7C
DUP: 7.6 at 21.8C

Laboratory Control Sample (LCS)

(LCS) R4116881-1 09/07/24 17:35

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
pH	10.0	10.0	100	99.0-101	

Sample Narrative:

LCS: 10 at 20.5C

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

WG2358423

Wet Chemistry by Method 9040C

QUALITY CONTROL SUMMARY

[L1775426-03](#)

L1774991-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1774991-01 09/10/24 11:13 • (DUP) R4117860-2 09/10/24 11:13

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
pH	8.16	8.16	1	0.000		1

Sample Narrative:

OS: 8.16 at 20.6C
DUP: 8.16 at 20.5C

L1775714-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1775714-01 09/10/24 11:13 • (DUP) R4117860-3 09/10/24 11:13

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
pH	6.75	6.76	1	0.148		1

Sample Narrative:

OS: 6.75 at 20C
DUP: 6.76 at 21C

Laboratory Control Sample (LCS)

(LCS) R4117860-1 09/10/24 11:13

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
pH	10.0	10.0	100	99.0-101	

Sample Narrative:

LCS: 10 at 20.9C

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

WG2358151

Mercury by Method 7470A

QUALITY CONTROL SUMMARY

[L1775426-01,02](#)

Method Blank (MB)

(MB) R4117477-1 09/09/24 21:10

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Mercury	U		0.000100	0.000200

Laboratory Control Sample (LCS)

(LCS) R4117477-2 09/09/24 21:12

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Mercury	0.00300	0.00290	96.5	80.0-120	

L1774969-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1774969-05 09/09/24 21:15 • (MS) R4117477-4 09/09/24 21:24 • (MSD) R4117477-5 09/09/24 21:26

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Mercury	0.00300	ND	0.00309	0.00311	103	104	1	75.0-125			0.616	20

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

WG2358153

Mercury by Method 7470A

QUALITY CONTROL SUMMARY

L1775426-01,02,03,04,05,06,07,08,09,10,11,12,14,15

Method Blank (MB)

(MB) R4117490-1 09/09/24 22:25

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Mercury,Dissolved	U		0.000100	0.000200

Laboratory Control Sample (LCS)

(LCS) R4117490-2 09/09/24 22:27

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Mercury,Dissolved	0.00300	0.00301	100	80 0-120	

L1775340-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1775340-01 09/09/24 22:30 • (MS) R4117490-4 09/09/24 22:42 • (MSD) R4117490-5 09/09/24 22:45

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Mercury,Dissolved	0.00300	ND	0.00293	0.00303	97.8	101	1	75.0-125			3.33	20

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

WG2359509

Mercury by Method 7470A

QUALITY CONTROL SUMMARY

[L1775426-03,04,05,06,07,08,09,10,11,12,13,14,15](#)

Method Blank (MB)

(MB) R4118499-1 09/11/24 13:56

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Mercury	U		0.000100	0.000200

Laboratory Control Sample (LCS)

(LCS) R4118499-2 09/11/24 13:58

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Mercury	0.00300	0.00284	94.6	80.0-120	

L1775426-09 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1775426-09 09/11/24 14:01 • (MS) R4118499-4 09/11/24 14:10 • (MSD) R4118499-5 09/11/24 14:13

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Mercury	0.00300	ND	0.00279	0.00291	93.0	97.0	1	75.0-125			4.27	20

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

WG2360872

Metals (ICP) by Method 6010D

QUALITY CONTROL SUMMARY

L1775426-01,02,03,04,05,06,07,08,09,10,11

Method Blank (MB)

(MB) R4122595-1 09/20/24 20:48

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Boron	U		0.0200	0.200
Calcium	U		0.0793	1.00

Laboratory Control Sample (LCS)

(LCS) R4122595-2 09/20/24 20:50

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Boron	1.00	0.978	97.8	80.0-120	
Calcium	10.0	10.2	102	80.0-120	

L1775409-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1775409-06 09/20/24 20:51 • (MS) R4122595-4 09/20/24 20:55 • (MSD) R4122595-5 09/20/24 20:56

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Boron	1.00	ND	1.08	1.08	96.0	96.4	1	75.0-125			0.337	20
Calcium	10.0	103	111	111	87.3	81.5	1	75.0-125			0.526	20

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

WG2360874

Metals (ICP) by Method 6010D

QUALITY CONTROL SUMMARY

[L1775426-12,13,14,15](#)

Method Blank (MB)

(MB) R4124528-1 09/26/24 00:46

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Boron	U		0.0200	0.200
Calcium	U		0.0793	1.00

Laboratory Control Sample (LCS)

(LCS) R4124528-2 09/26/24 00:48

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Boron	1.00	0.945	94.5	80.0-120	
Calcium	10.0	9.86	98.6	80.0-120	

L1775463-14 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1775463-14 09/26/24 00:50 • (MS) R4124528-4 09/26/24 00:53 • (MSD) R4124528-5 09/26/24 00:56

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Boron	1.00	ND	1.06	1.06	95.8	96.6	1	75.0-125			0.720	20
Calcium	10.0	123	132	131	88.9	74.4	1	75.0-125	V		1.10	20

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

WG2362180

Metals (ICP) by Method 6010D

QUALITY CONTROL SUMMARY

[L1775426-01,02,03,04](#)

Method Blank (MB)

(MB) R4124471-1 09/25/24 21:19

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Boron,Dissolved	U		0.0200	0.200
Calcium,Dissolved	U		0.0793	1.00

Laboratory Control Sample (LCS)

(LCS) R4124471-2 09/25/24 21:21

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Boron,Dissolved	1.00	0.917	91.7	80.0-120	
Calcium,Dissolved	10.0	9.54	95.4	80.0-120	

L1775411-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1775411-01 09/25/24 21:22 • (MS) R4124471-4 09/25/24 21:26 • (MSD) R4124471-5 09/25/24 21:28

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Boron,Dissolved	1.00	2.71	3.58	3.59	87.3	87.8	1	75.0-125			0.142	20
Calcium,Dissolved	10.0	609	606	608	0.000	0.000	1	75.0-125	⬇	⬇	0.257	20

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

WG2362181

Metals (ICP) by Method 6010D

QUALITY CONTROL SUMMARY

[L1775426-05,06,07,08,09,10,11,12,14,15](#)

Method Blank (MB)

(MB) R4122578-1 09/20/24 19:47

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Boron,Dissolved	U		0.0200	0.200
Calcium,Dissolved	U		0.0793	1.00

Laboratory Control Sample (LCS)

(LCS) R4122578-2 09/20/24 19:49

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Boron,Dissolved	1.00	0.992	99.2	80.0-120	
Calcium,Dissolved	10.0	10.3	103	80.0-120	

L1775430-09 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1775430-09 09/20/24 19:52 • (MS) R4122578-4 09/20/24 19:58 • (MSD) R4122578-5 09/20/24 20:01

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Boron,Dissolved	1.00	ND	1.00	0.969	100	96.9	1	75.0-125			3.61	20
Calcium,Dissolved	10.0	ND	10.4	10.2	104	102	1	75.0-125			1.73	20

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

WG2362186

Metals (ICPMS) by Method 6020A

QUALITY CONTROL SUMMARY

L1775426-01,02,03,04,05,06,07,08,09,10,11,12,14,15

Method Blank (MB)

(MB) R4124609-1 09/26/24 01:52

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Antimony,Dissolved	U		0.00103	0.00400
Arsenic,Dissolved	U		0.000180	0.00200
Barium,Dissolved	U		0.000381	0.00200
Beryllium,Dissolved	U		0.000190	0.00200
Cadmium,Dissolved	U		0.000150	0.00100
Chromium,Dissolved	U		0.00124	0.00200
Cobalt,Dissolved	U		0.0000596	0.00200
Lead,Dissolved	U		0.000849	0.00200
Lithium,Dissolved	U		0.000695	0.00200
Molybdenum,Dissolved	U		0.000348	0.00500
Selenium,Dissolved	U		0.000300	0.00200
Thallium,Dissolved	U		0.000121	0.00200

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

Laboratory Control Sample (LCS)

(LCS) R4124609-2 09/26/24 01:55

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Antimony,Dissolved	0.0500	0.0478	95.7	80.0-120	
Arsenic,Dissolved	0.0500	0.0499	99.7	80.0-120	
Barium,Dissolved	0.0500	0.0453	90.7	80.0-120	
Beryllium,Dissolved	0.0500	0.0464	92.9	80.0-120	
Cadmium,Dissolved	0.0500	0.0484	96.7	80.0-120	
Chromium,Dissolved	0.0500	0.0507	101	80.0-120	
Cobalt,Dissolved	0.0500	0.0507	101	80.0-120	
Lead,Dissolved	0.0500	0.0502	100	80.0-120	
Lithium,Dissolved	0.0500	0.0475	95.0	80.0-120	
Molybdenum,Dissolved	0.0500	0.0473	94.6	80.0-120	
Selenium,Dissolved	0.0500	0.0485	97.0	80.0-120	
Thallium,Dissolved	0.0500	0.0511	102	80.0-120	

L1775882-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1775882-01 09/26/24 01:58 • (MS) R4124609-4 09/26/24 02:05 • (MSD) R4124609-5 09/26/24 02:08

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Antimony,Dissolved	0.0500	ND	0.0513	0.0509	103	102	1	75.0-125			0.693	20
Arsenic,Dissolved	0.0500	0.00278	0.0552	0.0527	105	99.8	1	75.0-125			4.65	20
Barium,Dissolved	0.0500	0.0719	0.123	0.118	103	91.6	1	75.0-125			4.60	20

ACCOUNT:
ERM - St. Louis, MO

PROJECT:
0599247

SDG:
L1775426

DATE/TIME:
09/26/24 14:45

PAGE:
52 of 60

WG2362186

Metals (ICPMS) by Method 6020A

QUALITY CONTROL SUMMARY

L1775426-01,02,03,04,05,06,07,08,09,10,11,12,14,15

L1775882-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1775882-01 09/26/24 01:58 • (MS) R4124609-4 09/26/24 02:05 • (MSD) R4124609-5 09/26/24 02:08

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Beryllium,Dissolved	0.0500	ND	0.0497	0.0465	99.3	93.0	1	75.0-125			6.52	20
Cadmium,Dissolved	0.0500	ND	0.0525	0.0487	105	97.4	1	75.0-125			7.52	20
Chromium,Dissolved	0.0500	ND	0.0541	0.0506	108	101	1	75.0-125			6.63	20
Cobalt,Dissolved	0.0500	ND	0.0546	0.0513	109	102	1	75.0-125			6.22	20
Lead,Dissolved	0.0500	ND	0.0533	0.0498	107	99.7	1	75.0-125			6.63	20
Lithium,Dissolved	0.0500	0.00986	0.0589	0.0572	98.1	94.7	1	75.0-125			2.92	20
Molybdenum,Dissolved	0.0500	ND	0.0509	0.0493	101	97.4	1	75.0-125			3.23	20
Selenium,Dissolved	0.0500	ND	0.0503	0.0469	101	93.9	1	75.0-125			7.00	20
Thallium,Dissolved	0.0500	ND	0.0541	0.0513	108	103	1	75.0-125			5.37	20

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

WG2362203

Metals (ICPMS) by Method 6020A

QUALITY CONTROL SUMMARY

[L1775426-01,02,03,04,05,06,07,08,09,10,11,12,13,14,15](#)

Method Blank (MB)

(MB) R4124519-1 09/25/24 22:39

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Antimony	U		0.00103	0.00400
Arsenic	U		0.000180	0.00200
Barium	U		0.000381	0.00200
Beryllium	U		0.000190	0.00200
Cadmium	U		0.000150	0.00100
Chromium	U		0.00124	0.00200
Cobalt	U		0.0000596	0.00200
Lead	U		0.000849	0.00200
Lithium	U		0.000695	0.00200
Molybdenum	U		0.000348	0.00500
Selenium	U		0.000300	0.00200
Thallium	U		0.000121	0.00200

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

Laboratory Control Sample (LCS)

(LCS) R4124519-2 09/25/24 22:42

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Antimony	0.0500	0.0480	96.0	80.0-120	
Arsenic	0.0500	0.0496	99.3	80.0-120	
Barium	0.0500	0.0462	92.4	80.0-120	
Beryllium	0.0500	0.0465	93.1	80.0-120	
Cadmium	0.0500	0.0476	95.3	80.0-120	
Chromium	0.0500	0.0501	100	80.0-120	
Cobalt	0.0500	0.0502	100	80.0-120	
Lead	0.0500	0.0482	96.3	80.0-120	
Lithium	0.0500	0.0474	94.8	80.0-120	
Molybdenum	0.0500	0.0476	95.2	80.0-120	
Selenium	0.0500	0.0475	95.0	80.0-120	
Thallium	0.0500	0.0497	99.4	80.0-120	

L1775426-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1775426-02 09/25/24 22:46 • (MS) R4124519-4 09/25/24 22:52 • (MSD) R4124519-5 09/25/24 22:55

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Antimony	0.0500	ND	0.0509	0.0512	102	102	1	75.0-125			0.567	20
Arsenic	0.0500	ND	0.0525	0.0510	103	99.6	1	75.0-125			2.87	20
Barium	0.0500	0.197	0.241	0.244	87.8	94.0	1	75.0-125			1.27	20

ACCOUNT:
ERM - St. Louis, MO

PROJECT:
0599247

SDG:
L1775426

DATE/TIME:
09/26/24 14:45

PAGE:
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WG2362203

Metals (ICPMS) by Method 6020A

QUALITY CONTROL SUMMARY

L1775426-01,02,03,04,05,06,07,08,09,10,11,12,13,14,15

L1775426-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1775426-02 09/25/24 22:46 • (MS) R4124519-4 09/25/24 22:52 • (MSD) R4124519-5 09/25/24 22:55

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Beryllium	0.0500	ND	0.0472	0.0463	94.4	92.7	1	75.0-125			1.89	20
Cadmium	0.0500	ND	0.0502	0.0486	100	97.2	1	75.0-125			3.17	20
Chromium	0.0500	ND	0.0521	0.0512	104	102	1	75.0-125			1.69	20
Cobalt	0.0500	ND	0.0509	0.0514	99.7	101	1	75.0-125			1.04	20
Lead	0.0500	ND	0.0509	0.0498	101	98.5	1	75.0-125			2.12	20
Lithium	0.0500	0.0173	0.0649	0.0640	95.3	93.4	1	75.0-125			1.47	20
Molybdenum	0.0500	ND	0.0498	0.0493	99.5	98.7	1	75.0-125			0.857	20
Selenium	0.0500	0.00529	0.0545	0.0533	98.4	96.0	1	75.0-125			2.23	20
Thallium	0.0500	ND	0.0522	0.0506	104	101	1	75.0-125			2.93	20

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

GLOSSARY OF TERMS

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.

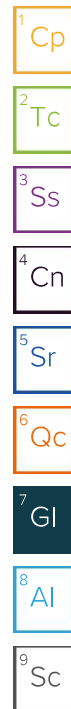
Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location.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

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
U	Not detected at the Reporting Limit (or MDL where applicable).
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

J3	The associated batch QC was outside the established quality control range for precision.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
P1	RPD value not applicable for sample concentrations less than 5 times the reporting limit.
T8	Sample(s) received past/too close to holding time expiration.
V	The sample concentration is too high to evaluate accurate spike recoveries.



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.

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl


⁸ Al

⁹ Sc

Company Name/Address:
ERM - St. Louis, MO
 1968 Craig Road, Suite 100
 Saint Louis, MO 63146

Billing Information:
 Accounts Payable Dept.
 1701 Golf Road, Suite 1-1000
 Rolling Meadows, IL 60008-4242

Analysis / Container / Preservative	
Pres Chk	W

Chain of Custody Page 1 of 2

 PEOPLE ADVANCING SCIENCE

Report to:
Randy Homburg

Email To:
 Randy.Homburg@erm.com; Tim.Wilson@erm.co

Project Description:
Grand Tower Energy Center Groundwater 3Q24

City/State Collected: **Grand Tower, IL**

Please Circle:
 PT MT **DET**

Phone: **314-682-3980**

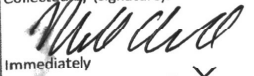
Client Project #
0599247

Lab Project #
ERMSCMO-0599247

Collected by (print):
Marsha H. Arendt II

Site/Facility ID #

P.O. #

Collected by (signature):


Rush? (Lab MUST Be Notified)
 Same Day Five Day
 Next Day 5 Day (Rad Only)
 Two Day 10 Day (Rad Only)
 Three Day **Standard**

Quote #
 Date Results Needed

Immediately Packed on Ice N Y


No. of Cntrs

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Anions 125mlHDPE-NoPres	Dissolved Metals 250mlHDPE-NoPres	TDS 1L-HDPE NoPres	Total Metals 250mlHDPE-HNO3	pH 125mlHDPE-NoPres							
APW-03-WG-2024 0904	Grab	GW		9/4/24	1500	5	X	X	X	X	X							01
APW-08-WG-2024 0904		GW		9/4/24	1615	5	X	X	X	X	X							02
APW-07-WG-2024 0904		GW		9/4/24	1700	5	X	X	X	X	X							03
APW-10S-WG-2024 0905		GW		9/5/24	1455	5	X	X	X	X	X							04
APW-10D-WG-2024 0905		GW		9/5/24	1415	5	X	X	X	X	X							05
APW-06S-WG-2024 0905		GW			0820	5	X	X	X	X	X							06
APW-06D-WG-2024 0905		GW			0915	5	X	X	X	X	X							07
APW-05R-WG-2024 0905		GW			1230	5	X	X	X	X	X							08
APW-09-WG-2024 0906		GW		9/6/24	0900	5	X	X	X	X	X							09
APW-02-WG-2024 0905		GW		9/6/24	1045	5	X	X	X	X	X							10

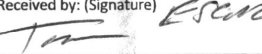
* Matrix:
 SS - Soil AIR - Air F - Filter
 GW - Groundwater B - Bioassay
 WW - WasteWater
 DW - Drinking Water
 OT - Other

Remarks:
 pH _____ Temp _____
 Flow _____ Other _____
 Samples returned via:
 UPS FedEx Courier
 Tracking # **7123 3300 4861**

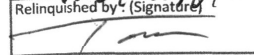
Sample Receipt Checklist
 COU Seal Present/Intact: Y N
 COC Signed/Accurate: Y N
 Bottles arrive intact: Y N
 Correct bottles used: Y N
 Sufficient volume sent: Y N
 If Applicable
 VOA Zero Headspace: Y N
 Preservation Correct/Checked: Y N
 RAD Screen <0.5 mR/hr: Y N

Relinquished by: (Signature)


Date: **9/6/24**
 Time: **12:33**

Received by: (Signature)


Trip Blank Received: Yes / No
 HCL / MeOH
 TBR

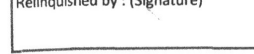
Relinquished by: (Signature)


Date: _____
 Time: _____

Received by: (Signature)
 Temp: **15.76.3 = 28.69**

Bottles Received: **69**

PH-10BDH0941
 TRC-3223A22R

Relinquished by: (Signature)


Date: _____
 Time: _____

Received for lab by: (Signature)


Date: **09-07-24** Time: **0900**

Hold: _____ Condition: **NCF / OK**

Company Name/Address:
ERM - St. Louis, MO
 1968 Craig Road, Suite 100
 Saint Louis, MO 63146

Billing Information:
 Accounts Payable Dept.
 1701 Golf Road, Suite 1-1000
 Rolling Meadows, IL 60008-4242

Pres
 Chk

Analysis / Container / Preservative

Chain of Custody Page 2 of 2



MT JULIET, TN

12065 Lebanon Rd Mount Juliet, TN 37122
 Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: <https://info.pacelabs.com/hubfs/pas-standard-terms.pdf>

Report to:
Randy Homburg

Email To:
 Randy.Homburg@erm.com; Tim.Wilson@erm.co

Project Description:
Grand Tower Energy Center Groundwater 3Q24

City/State Collected:
Grand Tower, IL

Please Circle:
 PT MT **W** ET

Phone: **314-682-3980**

Client Project #
0599247

Lab Project #
ERMSCMO-0599247

Collected by (print):
Marshall Arendoll

Site/Facility ID #

P.O. #

Collected by (signature):
Marshall Arendoll

Rush? (Lab MUST Be Notified)
 ___ Same Day ___ Five Day
 ___ Next Day ___ 5 Day (Rad Only)
 ___ Two Day ___ 10 Day (Rad Only)
 ___ Three Day **Standard**

Quote #

Immediately Packed on Ice N ___ Y **X**

Date Results Needed

No. of
 Cntrs

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Anions 125mlHDPE-NoPres	Dissolved Metals 250mlHDPE-NoPres	TDS 1L-HDPE NoPres	Total Metals 250mlHDPE-HNO3	pH 125mlHDPE-NoPres									
APW-01R-WG-2024 0905	Grab	GW		1610	5	5	X	X	X	X	X									
APW-04-WG-2024 0904		GW		1815	5	5	X	X	X	X	X									
EB-01-WG-2024 0904		GW	—	1130	5	5	X	X	X	X	X									
DUP-01-WG-2024 0905		GW	—	0001	5	5	X	X	X	X	X									
DUP-02-WG-2024 0906		GW	—	0002	5	5	X	X	X	X	X									

SDG # **UAT5476**
 Table #
 Acctnum: **ERMSCMO**
 Template: **T243415**
 Prelogin: **P1087428**
 PM: **206 - Jeff Carr**
 PB:
 Shipped Via: **FedEX Ground**
 Remarks | Sample # (lab only)

No dissolved collection EB-01
 11
 12
 13
 14
 15

* Matrix:
 SS - Soil AIR - Air F - Filter
 GW - Groundwater B - Bioassay
 WW - WasteWater
 DW - Drinking Water
 OT - Other

Remarks:
 pH ___ Temp ___
 Flow ___ Other ___
 Samples returned via:
 ___ UPS ___ FedEx ___ Courier ___
 Tracking # **7123 3306 4861**

Sample Receipt Checklist
 COC Seal Present/Intact: N
 COC Signed/Accurate: N
 Bottles arrive intact: N
 Correct bottles used: N
 Sufficient volume sent: N
 If Applicable
 VOA Zero Headspace: N
 Preservation Correct/Checked: N
 RAD Screen <0.5 mR/hr: N

Relinquished by: (Signature)
Marshall Arendoll ERM

Date: **9/16/24**
 Time: **12:33**

Received by: (Signature)
Tom ERM

Trip Blank Received: Yes / No
 HCL / MeOH
 TBR
0

If preservation required by Login: Date/Time

Relinquished by: (Signature)
Tom

Date: _____
 Time: _____

Received by: (Signature)

Temp: **15.576.3=19.609** °C
 Bottles Received:

Hold: _____
 Condition: **OK**

Relinquished by: (Signature)

Date: _____
 Time: _____

Received for lab by: (Signature)
Tom

Date: **09-07-24**
 Time: **0000**

Condition: **OK**

