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Illinois Environmental Protection Agency
BOW-Permits #15-CCR Coordinator
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DATE
23 January 2026

SUBJECT
Fifteenth Post-Closure Groundwater Monitoring Report
Fourth Quarter 2025
Grand Tower Energy Center
Closed Coal Combustion Residuals Impoundment
1820 Power Plant Road
Grand Tower, IL 62942
BOW ID No. W0770400003

REFERENCE
ERM Project No. 0761817

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 fourth quarter 2025 at the GTEC facility located at 1820 Power Plant Road, Grand Tower, IL (the "Site"). The fourth quarter groundwater sampling event took place between 19 November and 20 November 2025, and the closed impoundment inspection event was conducted on 20 November 2025. A Site location map is provided in Figure 1.

The fourth quarter 2025 groundwater sampling event was performed in accordance with the post-closure groundwater monitoring program presented within the Grand Tower Operating Permit Application (OPA) submitted to the Illinois Environmental Protection Administration (IEPA) on 28 October 2021, as modified in accordance with the Consolidated IEPA Comments dated 17 March 2022 and included in the updated Closure/Post-Closure Plan submitted to the IEPA with the 27 February 2024 response to the 23 January 2023 OPA comment letter from the IEPA. 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.

Fourth quarter 2025 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 fourth quarter of 2025, 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. Woody vegetation (up to 1” diameter) was noted within the riprap around the toe of the side slope of the CCR impoundment cap faces. Additionally, woody vegetation was noted in the outfall channel, which allows discharge of water within the basin at the foot of the closed CCR side slope to the Mississippi River via an unnamed drainage ditch. Erosional channels on the west, south, and east faces were noted as less than 6” deep in the deepest locations and will be monitored during subsequent inspection events and recommendations made to repair these features, if necessary. No significant degradation or issues were noted associated with the overall closed CCR impoundment cover system.

QUARTERLY MONITORING WELL INPSECTION AND GAUGING

During the fourth quarter of 2025, 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 and/or the well casings. All monitoring wells were observed to be intact during the quarterly monitoring well inspections. The inspection tasks also included gauging total depths as well as static groundwater elevations in all site wells. 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 fourth quarter of 2025. 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 fourth quarter 2025 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 fourth quarter 2025 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 OPA 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
- Chloride
- Chromium
- Cobalt
- Fluoride
- Lead
- Mercury
- Molybdenum
- pH
- Selenium
- Sulfate
- TDS
- Radium 226/228
- Calcium
- Turbidity

- Cadmium
- Lithium
- Thallium

GROUNDWATER ANALYTICAL RESULTS

The analytical results for the post-closure groundwater sampling event conducted during the fourth quarter 2025 are presented in Table 1. During the fourth quarter 2025 sampling event, the following analytes and/or field parameters were detected in the listed wells above the GWPS:

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

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, APW-09, and APW-10D) and APW-10S do not exhibit arsenic concentrations above the GWPS.

The GTEC closed CCR impoundment is currently in Corrective Action Monitoring (CAM). As reported in the *2024 Annual Groundwater Monitoring Report - Grand Tower Energy Center* submitted by ERM and dated January 2025, statistical analysis conducted on the data collected from the first eleven quarters of post-closure monitoring (2nd quarter 2022 through 4th quarter 2024) indicates that arsenic, boron, calcium, 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 2025 on or before 31 January 2026.

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 fourth quarter 2025 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 14 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 14 post groundwater monitoring events, boron concentrations have shown a decreasing trend in Site monitoring wells.
- During the Q4 2025 event, woody vegetation was observed in the riprap, less than 1” thick in diameter. Continued monitoring of woody growth, and treatment recommendation will take place during subsequent quarterly sampling events.

If you have any questions, please contact me at (314) 733-4490.

Sincerely,

Jarred Schmidt
Principal Consultant

Wayne T. Sicora, P.E.
Principal Engineer

Attachments

cc: Mr. Brandon Stempa, Perdomo Worldwide - Grand Tower Energy Center (electronic)

FIGURES

DRAWN BY: S. Vickery

Grand Tower Energy Center (GTEC)

Closed Coal Combustion Residuals (CCR) Impoundment

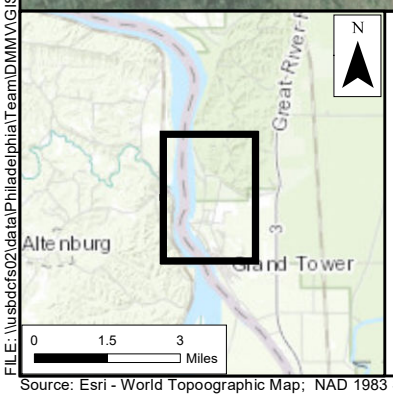
Mississippi River

Grand Tower

Bone Rd
Fountain Bluff
Power Plant Rd
Finger Rd
Perry St
2nd St
1st St
3rd Ave
5th Ave
4th Ave
25th Ave
22nd St
21st St
20th St
Trammel Ln
Brunkhorst Ave
County Road 460
Ford St
Park Rd
Walker Ln
Railroad St
2nd St
Market St
Wills Dr
Main St

N

0 840 1,680 Feet



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

Environmental Resources Management
www.erm.com

Source: Esri - World Topoographic Map; NAD 1983 StatePlane Illinois West FIPS 1202 Feet

FILE: \\usbdcfs02\data\PhiladelphiaTeam\DMMV\GIS\Projects\Grand Tower Energy Center\ MXD\FIGURE1-SITELOCATIONMAP_20221003.mxd | REVISED: 10/03/2022 | SCALE: 1:12,000 when printed at 11x17

DRAWN BY: ECLW

APW-01R
330.94

APW-05R
329.59

APW-02
330.51

APW-04
330.84

APW-06S
330.09

APW-06D
330.22

APW-03
330.79

APW-09
331.20

APW-07
330.10

APW-08
327.26

Mississippi River

*Mississippi River Elevation = 328.50 Ft

APW-10D
331.45

APW-10S
330.05

330
330.5
331
327.5
328
328.5
329
329.5

0 240 480 Feet

N

0 0.425 0.85 Miles

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 - November 19, 2025
3. Ft AMSL - Feet Above Mean Sea Level
4. (D) - Designated Wells not used in contouring
5. * 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)
6. BING Imagery, 2022

Figure 2: Fourth Quarter 2025 Groundwater Contour Map
Grand Tower Energy Center, LLC
Grand Tower, Illinois
Jackson County

ERM

Source: Esri - World Topoographic Map; NAD 1983 StatePlane Illinois West FIPS 1202 Feet

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TABLES

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

				Sampled prior to closure of CCR Impoundment									Post-Closure Sampling														
			Sample ID	APW-1R-20170907	APW-1R-20170927	APW-1R-20171018	APW-1R-20171108	APW-1R-20171127	APW-1R-20171228	APW-1R-20180117	APW-1R-20180207	APW-1R-WG-20220615	APW-01R-WG-20220915	APW-01R-WG-20221130	APW-01R-WG-20230202	APW-01R-WG-20230627	APW-01R-WG-20230920	APW-01R-WG-20231129	APW-01R-WG-20240110	APW-01R-WG-20240501	APW-01R-WG-20240905	APW-01R-WG-20241015	APW-01R-WG-20250115	APW-01R-WG-20250625	APW-01R-WG-20250904	APW-01R-WG-20251120
			Location ID	APW-01R	APW-01R	APW-01R	APW-01R	APW-01R	APW-01R	APW-01R	APW-01R	APW-01R	APW-01R	APW-01R	APW-01R	APW-01R	APW-01R	APW-01R	APW-01R	APW-01R	APW-01R	APW-01R	APW-01R	APW-01R	APW-01R	APW-01R
			Sample Date	09/05/2017	09/27/2017	10/18/2017	11/08/2017	11/27/2017	12/28/2017	01/17/2018	02/07/2018	06/15/2022	09/15/2022	11/30/2022	02/02/2023	06/27/2023	09/20/2023	11/29/2023	01/10/2024	05/01/2024	09/05/2024	10/15/2024	01/15/2025	06/25/2025	09/04/2025	11/20/2025
			Sample Type	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Parameter/Analyte	Total or Dissolved	Units	35 IAC 845.600																							
UNSPECIFIED																										
Fluoride	N	mg/L	4	0.15	0.17	0.16	0.12	0.14	0.15	0.18	0.16	0.21	0.15	0.18	0.17	0.14	0.17	0.17	0.183	0.326	0.201	0.15 U	0.15 U	0.159	0.155	0.194
Radium-226	N	pCi/L	NS	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	0.0323 ± 0.141 U	0.24 ± 0.1 U	0.4 ± 0.12 U	0.16 ± 0.169 J	0.27 ± 0.11 U	0.32 ± 0.11 U	0.24 ± 0.08 U	0.738 ± 0.354	0.383 ± 0.294	0.167 ± 0.164 J	0.126 ± 0.144 J	0.0217 ± 0.0838 U	0.213 ± 0.216 J	0.00715 ± 0.137 U	0.222 ± 0.267 J
Radium-228	N	pCi/L	NS	2.29 ± .98	0.51 ± .39 U	0.12 ± .332	0.57 ± 0.33 U	0.47 ± 0.54 U	0.04 ± 0.14 U	0.98 ± 0.62 J	0.22 ± 0.34 U	0.661 ± 0.257	0.43 ± 0.49 UOM-	0.41 ± 0.56 U	0.531 ± 0.284	0.85 ± 0.61 J	0.32 ± 0.56 U	0.97 ± 0.67 J	1.44 ± 0.229	0.671 ± 0.262	-0.199 ± 0.295 U	0.183 ± 0.206 J	0.924 ± 0.295	0.654 ± 0.609 J	0.857 ± 0.646 J	0.572 ± 0.456 J
Sulfate	N	mg/L	400	41	65	65	54	58	88	78	79	33	73 S	69	74	37	79	73	68.9	61.7	34	58.5	81.4	25.1	23.1	60.8
CALC																										
Radium-226/228	N	pCi/L	7.002	2.54 ± 1.1	0.69 ± 0.48 U	0.427 ± 0.652	0.7 ± 0.76 U	0.47 ± 0.7 U	0.27 ± 0.44 U	1.01 ± 0.69 U	0.22 ± 0.42 U	0.693 ± 0.293	0.67 ± 0.59 U	0.81 ± 0.68 U	0.691 ± 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	0.309 ± 0.251 J	0.946 ± 0.307	0.867 ± 0.646 J	0.859 ± 0.660 J	0.794 ± 0.528 J
FIELD PARAM																										
Turbidity, Field	N	NTU	17.96[1]									33.9	31.7	31.7	89.5	83.2	133	95.6	25.6	71.3	19.2	16.8	8.95	47.6	30.5	48.2
GEN CHEM																										
Chloride	N	mg/L	200	5 U	5 U	5 U	5 U	5 U	9	11	10	2	7	7	7	4 U	5	7	9.07	7.19	1.97	6.15	9.52	1.1	1.1	6.53
Dissolved Solids, Total	N	mg/L	1200	400	428	376	358 B	412	474	434	392	342	420 H	385	384	328	355	300	385	439	372	384	395	307	324	383
pH, Lab	N	pH units	6.22-9.02[2]	6.64	6.54	6.6	6.8	7.11	6.96	7.09	6.52	6.98	6.91	6.43	6.57	6.53 H	6.66 H	6.59 H	7.19 T8	7.04 T8	6.88 T8	6.85 T8	7.25 T8	7.18 T8	6.79 T8	6.92 T8
METALS																										
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	0.004 U	0.004 U F1	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U
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	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U
Arsenic	D	mg/L	0.01									0.0012	0.001 U	0.001 U	0.001	0.0011	0.0016	0.0015	0.002 U	0.002 U F1	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Arsenic	T	mg/L	0.01	0.0012	0.0012	0.001 U	0.0012	0.0011	0.001 U	0.0011	0.0011	0.0019	0.0019	0.0021	0.0016	0.0013	0.0029	0.0033	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Barium	D	mg/L	2									0.16	0.153	0.162 B	0.155	0.164	0.21	0.245	0.159	0.194 F1	0.154	0.162	0.163	0.135	0.135	0.175
Barium	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	0.169	0.204	0.155	0.165	0.168	0.148	0.148	0.17
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	0.002 U	0.002 U F1	0.002 U	0.002 U	0.002 U	0.002 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	0.001 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Boron	D	mg/L	2									0.163	0.244	0.219	0.205	0.249	0.204	0.279		0.238 F1	0.205	0.238	0.261	0.2 U	0.2 U	0.224
Boron	T	mg/L	2	0.218	0.251	0.238	0.211	0.225	0.329	0.357	0.311	0.228	0.242	0.222	0.221	0.176	0.18	0.263		0.247	0.2 U	0.242	0.244	0.2 U	0.2 U	0.231
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 F1	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 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	0.001 U	0.001 U	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[3]									85.6	83.8 S	73.9	71.4	66.4	72.1	57.6	76.8	101 F1	94.1	91.1	89.8	68.8	71.2	87.6
Calcium	T	mg/L	103.2[3]	84.3 S	93 S	86.2 S	88.2	91.2 S	91	97.1	85.8 S	90.3	91.4	79.7	75.5 S	66.8 B	59.2 S	94.3	78.4	98	89.5	89.5	95.4	69.4	72.2	84.6
Chromium	D	mg/L	0.1									0.0009 J	0.0015 U	0.0015 U	0.0015 U	0.0015 U	0.0015 U	0.0015 U	0.002 U	0.002 U F1	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Chromium	T	mg/L	0.1	0.0023	0.0021	0.0033	0.001 U	0.001 U	0.0018	0.0015	0.0015	0.0031	0.0034	0.0041	0.0022	0.0015 U	0.0085	0.0049	0.00248	0.00322	0.002 U	0.00206	0.002 U	0.00299	0.0027	0.00242
Cobalt	D	mg/L	0.006									0.0002 J	0.001 U	0.001 U	0.001 U	0.001 U	0.0012	0.0013	0.002 U	0.002 U F1	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 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	0.0017	0.0017	0.0031	0.0013	0.0014	0.0041	0.0027	0.002 U	0.00225	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Iron	D	mg/L	NS																0.1 U							
Iron	T	mg/L	NS									1.42							0.405							
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	0.002 U	0.002 U F1	0.002 U	0.002 U	0.002 U	0.002 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	0.0013	0.0062	0.0014	0.001 U	0.001 U	0.0026	0.002	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Lithium	D	mg/L	0.04									0.0127	0.0156	0.0139	0.0135	0.015	0.0211	0.0193	0.014	0.0143 F1	0.013	0.0165	0.0145	0.0121	0.0114	0.0141
Lithium	T	mg/L	0.04	0.0155	0.018	0.0173	0.0175	0.018	0.0179	0.0164	0.0159	0.0171	0.0169	0.0155	0.0157	0.0142	0.0147	0.0189	0.0153	0.015	0.0133	0.0152	0.0154	0.0124	0.0136	0.0146
Manganese	D	mg/L	NS																0.0362							
Manganese	T	mg/L	NS									0.139							0.0791							
Mercury	D	mg/L	0.002										0.0002 U						0.0002 U	0.0002 U F1	0.0002	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	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									0.0015 U	0.0015 U	0.0015 U	0.0015 U	0.0015 U	0.0015 U	0.0015 U	0.00523	0.005 U F1	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Molybdenum	T	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	0.0015 U	0.0015 U	0.0015 U	0.0015 U	0.0015 U	0.0015 U	0.0015 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Nickel	D	mg/L	NS									0.0043		0.0061					0.00664							
Nickel	T	mg/L	NS	0.0044	0.0062	0.0054	0.004	0.0038	0.0046	0.005	0.0057	0.0083		0.012					0.00804							
Selenium	D	mg/L	0.05									0.0028	0.0032	0.0033	0.0032	0.0032	0.0037	0.0058	0.00435	0.00444 F1	0.00289	0.00341	0.0042	0.00289	0.00309	0.00403
Selenium	T	mg/L	0.05	0.0038	0.004	0.0034	0.0044	0.0041	0.004	0.004	0.0037	0.0028	0.0038	0.0035	0.0037	0.0033	0.0037	0.0054	0.00514	0.00437	0.00351	0.00327	0.00337	0.00316	0.00293	0.00406
Thallium	D	mg/L	0.002									0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U F1	0.002 U	0.002 U	0.002 U	0.002 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	0.0014	0.001 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 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
H = Holding times exceeded
J = Analyte detected below quantitation limits
J3 = The associated batch QC was outside the established quality control range for precision
J6 = The sample matrix interferred 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
TB = Sample received past/too close to holding time expiration

1 Standard is from the Upper Tolerance Limit (UTL) calculated from background well APW-01R concentrations from 8 quarterly sampling events from 2017-2018
2 Standard value 6.22 is from the Lower Tolerance Limit (LTL) calculated from background well APW-01R concentrations from 8 quarterly sampling events from 2017-2018 and 9.0 is the regulatory standard
3 Eight episodes of groundwater sampling were conducted from September 2017 through February 2018 to establish background concentrations for the Site utilizing data from background wells APW-1R and APW-9. The final Groundwater Protection Standards (GPS) are the higher of the values provided in 35 IAC 845.600(a) and the final background concentrations as found in Table 6 of the 07/25/2019 GMZ Application with the exception of turbidity and pH. Radium 226+228 was the only value taken from Table 6.
Highlighted 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	Sample ID	APW-2-20170907	APW-2-20170927	APW-2-20171020	APW-2-20171109	APW-2-20171129	APW-2-20171227	APW-2-20180119	APW-2-20180207
				Sampled prior to closure of CCR Impoundment							
			Location ID	APW-02	APW-02	APW-02	APW-02	APW-02	APW-02	APW-02	APW-02
			Sample Date	09/06/2017	09/28/2017	10/20/2017	11/09/2017	11/29/2017	12/27/2017	01/19/2018	02/07/2018
			Sample Type	N	N	N	N	N	N	N	N
			35 IAC 845.600								
UNSPECIFIED											
Fluoride	N	mg/L	4	0.24	0.26	0.25	0.24	0.24	0.25	0.26	0.24
Radium-226	N	pCi/L	NS	1.06 ± 0.21	0.03 ± 0.1 U	-0.132 ± 0.410	1.47 ± 0.26		0.33 ± 0.12 U	0.47 ± 0.15 U	0.97 ± 0.23 J
Radium-228	N	pCi/L	NS	1.98 ± 0.95	-0.01 ± 0.6 U	0.504 ± 0.378	0.91 ± 0.36 J		0.95 ± 0.52 J	1.08 ± 0.59	0.99 ± 0.5 J
Sulfate	N	mg/L	400	462	460	472 S	479	472	426	443	416
CALC											
Radium-226/228	N	pCi/L	7.002	3.04 ± 1.16	0.03 ± 0.7 U	0.504 ± 0.788	2.38 ± 0.62		1.28 ± 0.64 U	1.55 ± 0.74 U	1.96 ± 0.73 U
FIELD PARAM											
Turbidity, Field	N	NTU	17.96[1]								
GEN CHEM											
Chloride	N	mg/L	200	13	12	11	11	12	12	12	12
Dissolved Solids, Tota	N	mg/L	1200	858	880	934	916	870	848	836	888
pH, Lab	N	pH units	6.22-9.02[2]	7.09	7.05	7.08	7.07	7.05	7.14	7.06	6.96
METALS											
Antimony	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	0.0021
Arsenic	D	mg/L	0.01								
Arsenic	T	mg/L	0.01	0.0199	0.0147	0.0212	0.017	0.0169	0.0157	0.0148	0.0243
Barium	D	mg/L	2								
Barium	T	mg/L	2	0.479	0.355	0.685	0.44	0.427	0.338	0.351	0.739
Beryllium	D	mg/L	0.004								
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	0.0011
Boron	D	mg/L	2								
Boron	T	mg/L	2	8.16	8.73	8.94 S	9	8.98	8.39	8.19	8.24
Cadmium	D	mg/L	0.005								
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
Calcium	D	mg/L	103.2[1]								
Calcium	T	mg/L	103.2[1]	148	145	171 S	157	158	135	134	175
Chromium	D	mg/L	0.1								
Chromium	T	mg/L	0.1	0.0374	0.0455	0.0503	0.0235	0.014	0.0566	0.127	0.112
Cobalt	D	mg/L	0.006								
Cobalt	T	mg/L	0.006	0.0057	0.0023	0.0097	0.0041	0.0038	0.0018	0.0028	0.011
Iron	D	mg/L	NS								
Iron	T	mg/L	NS								
Lead	D	mg/L	0.0075								
Lead	T	mg/L	0.0075	0.0115	0.0054	0.0201	0.0096	0.0075	0.0031	0.0048	0.0239
Lithium	D	mg/L	0.04								
Lithium	T	mg/L	0.04	0.05	0.0455	0.0647	0.0521	0.0542	0.0474	0.045	0.0604
Manganese	D	mg/L	NS								
Manganese	T	mg/L	NS								
Mercury	D	mg/L	0.002								
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
Molybdenum	D	mg/L	0.1								
Molybdenum	T	mg/L	0.1	0.172	0.147	0.214	0.175	0.165	0.111	0.0951	0.131
Nickel	D	mg/L	NS								
Nickel	T	mg/L	NS	0.0288	0.0263	0.0412	0.0202	0.0135	0.0295	0.0631	0.0725
Selenium	D	mg/L	0.05								
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
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

Parameter/Analyte	Total or Dissolved	Units	APW-02-WG-20220616	APW-02-WG-20220914	DUP-002-WG-20220914	APW-02-WG-20221129	DUP-02-WG-20221129	APW-02-WG-20230201	DUP-02-WG-20230201	APW-02-WG-20230627	DUP-02-WG-20230627	APW-02-WG-20230920	APW-02-WG-20231128	APW-02-WG-20240110	APW-02-WG-20240501	APW-02-WG-20240905	APW-02-WG-20241015	APW-02-WG-20250115	APW-02-WG-20250626	APW-02-WG-20250904	APW-02-WG-20251119
			Post-Closure Sampling																		
		Location ID	APW-02	APW-02	APW-02	APW-02	APW-02	APW-02	APW-02	APW-02	APW-02	APW-02	APW-02	APW-02	APW-02	APW-02	APW-02	APW-02	APW-02	APW-02	APW-02
		Sample Date	06/16/2022	09/14/2022	09/14/2022	11/29/2022	11/29/2022	02/01/2023	02/01/2023	06/27/2023	06/27/2023	09/20/2023	11/28/2023	01/10/2024	05/01/2024	09/05/2024	10/15/2024	01/15/2025	06/26/2025	09/04/2025	11/19/2025
		Sample Type	N	N	FD	N	FD	N	FD	N	FD	N	N	N	N	N	N	N	N	N	N
UNSPECIFIED																					
Fluoride	N	mg/L	0.25	0.22	0.22	0.25	0.26	0.23	0.22	0.22	0.22	0.24	0.26	0.23	0.25	0.197	1.5 U	0.224	0.264	0.218	0.75 U
Radium-226	N	pCi/L	0.159 ± 0.181 J	0.27 ± 0.1 UQDR	0.14 ± 0.07 U	0.5 ± 0.14 U	0.35 ± 0.12 U	0.0737 ± 0.256 U	0.175 ± 0.279 J	0.21 ± 0.1 U	-0.05 ± 0.07 U	0.38 ± 0.12 U	0.12 ± 0.06 U	0.0909 ± 0.186 U	0.326 ± 0.259	0.402 ± 0.233	1.29 ± 0.447	0.301 ± 0.253	0.497 ± 0.284	0.0586 ± 0.159 U	0.526 ± 0.397
Radium-228	N	pCi/L	0.308 ± 0.236 J3U	0.4 ± 0.48 UQDR	2.81 ± 1.03	0.24 ± 0.44 U	0.27 ± 0.55 U	1.07 ± 0.466	0.981 ± 0.290	-0.42 ± 0.6 U	0.13 ± 0.52 U	3.71 ± 0.93	0.56 ± 0.64 U	0.243 ± 0.202 J	0.966 ± 0.329	1.15 ± 0.464	0.218 ± 0.450 U	1.89 ± 0.774	1.13 ± 0.873 J	0.56 ± 0.696 J	0.0608 ± 0.602 U
Sulfate	N	mg/L	496	491	490	418	438	459	455	500	465	460	440	411	510	376	385	509	432	402	397
CALC																					
Radium-226/228	N	pCi/L	0.467 ± 0.297 J	0.67 ± 0.58 U	2.95 ± 1.1	0.74 ± 0.58 U	0.62 ± 0.67 U	1.14 ± 0.532	1.16 ± 0.402	0.21 ± 0.7 U	0.13 ± 0.59 U	4.09 ± 1.05	0.68 ± 0.7 U	0.333 ± 0.275 J	1.29 ± 0.419	1.55 ± 0.519	1.51 ± 0.634	2.19 ± 0.814	1.62 ± 0.918	0.619 ± 0.714 J	0.587 ± 0.721 J
FIELD PARAM																					
Turbidity, Field	N	NTU	38	19.2		132		93.6		104.3		97	169	104	66.1	174	663	127	115	78.6	72
GEN CHEM																					
Chloride	N	mg/L	9	11	10	9	9	10	10	7	8	7	8	7.78	5.38	7.55	10 U	8.58	8.99	8.16	8.8
Dissolved Solids, Tota	N	mg/L	930	890 H	905 H	885	855	852	866	920	870	845	920	820	845	783	816	861	801	799	775
pH, Lab	N	pH units	7.21	7.32	7.25	7.01	7.02	6.98	7.05	6.9 H	7.03 H	7.15 H	7.11 H	7.52 T8	7.14 T8	7.18 T8	7.2 T8	7.67 T8	7.41 T8	7.26 T8	7.38 T8
METALS																					
Antimony	D	mg/L	0.001 U	0.001 U	0.001 U	0.001 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 F1	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U
Antimony	T	mg/L	0.0006 J	0.001 U	0.001 U	0.001 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	0.004 U	0.004 U	0.004 U	0.004 U	0.04 U	0.004 U
Arsenic	D	mg/L	0.0117	0.0048	0.0049	0.0012	0.0187	0.016	0.0138	0.011	0.0107	0.0072	0.0168	0.00409	0.00255 F1	0.00426	0.0028	0.00299	0.00214	0.00382	0.0045
Arsenic	T	mg/L	0.0158	0.026	0.0176	0.022	0.0173	0.0185	0.0175	0.0148	0.0146	0.0093	0.0237	0.0112	0.0101	0.0178	0.0267	0.00904	0.0284	0.02 U	0.0175
Barium	D	mg/L	0.154	0.123	0.135	0.125 B	0.148 B	0.187	0.154	0.142	0.145	0.133	0.205	0.131	0.137 F1	0.124	0.141	0.125	0.127	0.127	0.138
Barium	T	mg/L	0.237	0.408	0.238	0.254	0.218	0.214	0.159	0.149	0.206	0.152	0.303	0.155	0.145	0.162	0.173	0.147	0.484	0.162	0.157
Beryllium	D	mg/L	0.001 U	0.001 U	0.001 U	0.001 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 F1	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Beryllium	T	mg/L	0.002 U	0.001 U	0.001 U	0.001 SU	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	0.002 U	0.002 U	0.002 U	0.002 U	0.02 U	0.002 U
Boron	D	mg/L	8.17	7.49 S	7.9	0.656	6.63	8.21	7.39	8.97	9.24	8.91	9.57 S		9.91 F1	8.28	8.21	9.11	10.4	9.56	9.17
Boron	T	mg/L	8.13	9.43	8.72	8.97 S	7.69	7.75	8.32 S	9.14	9.51 S	8.24	9.62		10.2	8.24	8.09	9.07	10.3	9.9	9.05
Cadmium	D	mg/L	0.0003 J	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U F1	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Cadmium	T	mg/L	0.0006 J	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.00104	0.01 U	0.001 U
Calcium	D	mg/L	175	136 S	165	96.1	129	108	144	147	148	151	121 S	144	162 F1	156	155	150	151	145	149
Calcium	T	mg/L	189	198	178	145 S	149	144	149 S	161 B	167 S	132	132	146	161	156	170	165	185	151	150
Chromium	D	mg/L	0.0015 U	0.0015 U	0.0015 U	0.0015 U	0.0015 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 F1	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Chromium	T	mg/L	0.0254	0.0148	0.0066	0.0064	0.0054	0.0052	0.0022	0.0024	0.0079	0.008	0.0092	0.002 U	0.002 U	0.00658	0.0191	0.00228	0.0361	0.02 U	0.0835
Cobalt	D	mg/L	0.0003 J	0.001 U	0.001 U	0.001 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 F1	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Cobalt	T	mg/L	0.0011 J	0.0044	0.0011	0.0015	0.0011	0.001 U	0.001 U	0.001 U	0.0016	0.001 U	0.0027	0.002 U	0.002 U	0.00232	0.0057	0.002 U	0.0117	0.02 U	0.0036
Iron	D	mg/L												0.1 U							
Iron	T	mg/L	11.7											7.63							
Lead	D	mg/L	0.001 U	0.001 U	0.001 U	0.001 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 F1	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Lead	T	mg/L	0.0022	0.0119	0.0033	0.0033	0.0034	0.0027	0.0023	0.0025	0.0029	0.002	0.0057	0.00235	0.002 U	0.00662	0.0176	0.00229	0.0323	0.02 U	0.00688
Lithium	D	mg/L	0.037	0.0374	0.0404	0.028	0.0356	0.0425	0.0387	0.0442	0.0455	0.0583	0.0506	0.0396	0.0432 F1	0.038	0.0444	0.0424	0.0402	0.0375	0.0417
Lithium	T	mg/L	0.0507	0.0559	0.0456	0.0386	0.0411	0.0417	0.044	0.0459	0.048	0.0422	0.056	0.0416	0.045	0.0408	0.048	0.0437	0.0513	0.0438	0.0405
Manganese	D	mg/L												0.616							
Manganese	T	mg/L	0.752											0.669							
Mercury	D	mg/L		0.0002 U	0.0002 U									0.0002 U	0.0002 U F1	0.000214	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Mercury	T	mg/L	0.0002 U	0.00043	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	D	mg/L	0.201	0.139	0.156	0.0337	0.145	0.151	0.155	0.227	0.227	0.214	0.205	0.157	0.34 F1	0.172	0.163	0.193	0.207	0.201	0.178
Molybdenum	T	mg/L	0.24	0.174	0.174	0.128	0.119	0.165	0.16	0.229	0.252	0.198	0.147	0.158	0.332	0.162	0.129	0.188	0.21	0.197	0.159
Nickel	D	mg/L	0.0039			0.0022	0.001 U							0.002 U							
Nickel	T	mg/L	0.0142			0.0045	0.0047							0.00237							
Selenium	D	mg/L	0.001 U	0.001 U	0.001 U	0.0071	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 F1	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Selenium	T	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0015	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.02 U	0.002 U
Thallium	D	mg/L	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U F1	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Thallium	T	mg/L	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.02 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
H = Holding times exceeded
J = Analyte detected below quantitation limits
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
S = Spike Recovery outside recovery limits
R = RPD outside accepted recovery limits
U = Not Detected at the Reporting Limit
T8 = Sample received past/too close to holding time expiration

1 Standard is from the Upper Tolerance Limit (UTL) calculated from background well APW-01R concentrations from 8 quarterly sampling events from 2017-2018
2 Standard value 6.22 is from the Lower Tolerance Limit (LTL) calculated from background well APW-01R concentrations from 8 quarterly sampling events from 2017-2018 and 9.0 is the regulatory standard
3 Eight episodes of groundwater sampling were conducted from September 2017 through February 2018 to establish background concentrations for the Site utilizing data from background wells APW-1R and APW-9. The final Groundwater Protection Standards (GPS) are the higher of the values provided in 35 IAC 845.600(a) and the final background concentrations as found in Table 6 of the 07/25/2019 GMZ Application with the exception of turbidity and pH. Radium 226+228 was the only value taken from Table 6.
Highlighted values exceed action level
NS = No standard

Table 1
Groundwater Summary Table
Grand Tower Enerov Center (GTEC)
Grand Tower. US-IL

				Sampled prior to closure of CCR Impoundment										Post-Closure Sampling														
			Sample ID	APW-3-20170907	APW-3-20170929	APW-3-20171026	APW-3-20171110	APW-3-20171129	APW-3-20171228	APW-3-20180119	APW-3-20180208	APW-03-WG-20220616	APW-03-WG-20220915	APW-03-WG-20221130	APW-03-WG-20230130	APW-03-WG-20230626	APW-03-WG-20230919	APW-03-WG-20231127	APW-03-WG-20240111	APW-03-WG-20240430	APW-03-WG-20240904	APW-03-WG-20241016	APW-03-WG-20250116	APW-03-WG-20250625	APW-03-WG-20250903	APW-03-WG-20251120
			Location ID	APW-03	APW-03	APW-03	APW-03	APW-03	APW-03	APW-03	APW-03	APW-03	APW-03	APW-03	APW-03	APW-03	APW-03	APW-03	APW-03	APW-03	APW-03	APW-03	APW-03	APW-03	APW-03	APW-03
			Sample Date	09/06/2017	09/29/2017	10/20/2017	11/10/2017	11/29/2017	12/28/2017	01/19/2018	02/08/2018	06/16/2022	09/15/2022	11/30/2022	01/30/2023	06/26/2023	09/19/2023	11/27/2023	01/11/2024	04/30/2024	09/04/2024	10/16/2024	01/16/2025	06/25/2025	09/03/2025	11/20/2025
			Sample Type	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Parameter/Analyte	Total or Dissolved	Units	35 IAC 845.600																									
UNSPECIFIED																												
Fluoride	N	mg/L	4	0.28	0.29	0.29	0.31	0.27	0.29	0.29	0.34	0.26	0.2	0.26	0.23	0.23	0.25	0.24	0.202	0.37	0.285	0.15 U	0.254	0.263	0.75 U	0.289		
Radium-226	N	pCi/L	NS	0.53 ± .18 U	0.04 ± 0.09 U	0.409 ± 0.426	0.18 ± 0.11 U	0.33 ± 0.17 U	0.2 ± 0.1 U	0.1 ± 0.1 U	0.31 ± 0.15 U	0.201 ± 0.155	0.56 ± 0.13 U	0.19 ± 0.1 U	0.293 ± 0.212	0.23 ± 0.11 U	0.2 ± 0.09 U	0.11 ± 0.05 U	3.18 ± 0.675	0.594 ± 0.383	0.493 ± 0.251	0.0651 ± 0.146 U	0.096 ± 0.120 J	0.451 ± 0.313	0.302 ± 0.356 J	0.469 ± 0.353		
Radium-228	N	pCi/L	NS	2.05 ± .96	1.01 ± 0.57	0.462 ± 0.373	0.72 ± 0.37 J	0.31 ± 0.49 U	0.37 ± 0.44 U	1.32 ± 0.68	0.86 ± 0.36 U	1.89 ± 0.26 J3	0.4 ± 0.5 UQDR	0.67 ± 0.59 U	0.119 ± 0.430 U	0.61 ± 0.54 U	0.85 ± 0.52 J	0.66 ± 0.58 JQDR	-0.0217 ± 0.241 U	0.585 ± 0.256	1.4 ± 0.319	1.09 ± 0.261	0.698 ± 0.382	0.702 ± 0.515 J	0.597 ± 0.557	0.427 ± 0.529 J		
Sulfate	N	mg/L	400	175	222	201	207	204	168	152	194	393	150	226	322	292	280	133	80.1	285	259	271	299	261	251	242		
CALC																												
Radium-226/228	N	pCi/L	7.002	2.58 ± 1.14	1.05 ± 0.66 U	0.901 ± 0.799	0.9 ± 0.48 U	0.64 ± 0.66 U	0.57 ± 0.54 U	1.42 ± 0.78 U	0.37 ± 0.51 U	2.09 ± 0.303	0.96 ± 0.63 U	0.86 ± 0.69 U	0.412 ± 0.479 J	0.84 ± 0.65 U	1.05 ± 0.61 U	0.77 ± 0.63 U	3.18 ± 0.717	1.18 ± 0.461	1.9 ± 0.406	1.15 ± 0.299	0.794 ± 0.400	1.15 ± 0.603	0.899 ± 0.661	0.895 ± 0.636 J		
FIELD PARAM																												
Turbidity, Field	N	NTU	17.96[1]									40.3	56.1	103	50.7	6.04	2.72	4	7.12	2.53	1.94	4.48	7.69	7.34	8.17	12.6		
GEN CHEM																												
Chloride	N	mg/L	200	22	21	21	22	19	20	16	23	20	16	20	21	17	16	11	8.04	15	11.6	10.5	10.4	6.54	6.03	8.41		
Dissolved Solids, Total	N	mg/L	1200	464	514	486	450	554	504	498	456	724	602 H	610	524	614	636	556	489	627	567	587	577	536	540	541		
pH, Lab	N	pH units	6.22-9.02[2]	7.88	7.46	7.65	7.93	7.5	7.48	7.26	7.78	7.85	7.46	7.21	7.45	7.77 H	7.84 H	7.24 H	7.4 T8	7.8 T8	7.88 T8	7.94 T8	8.08 T8	8.11 T8	8.03 T8	7.75 T8		
METALS																												
Antimony	D	mg/L	0.006									0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0018	0.004 U	0.004 U F1	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U		
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	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U		
Arsenic	D	mg/L	0.01									0.0015	0.0014	0.0024	0.002	0.0016	0.0019	0.0013	0.002 U	0.00219 F1	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U		
Arsenic	T	mg/L	0.01	0.0022	0.0029	0.0021	0.0018	0.0023	0.0024	0.0028	0.0019	0.002	0.0046	0.0059	0.003	0.004	0.0017	0.002	0.002 U	0.00254	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U		
Barium	D	mg/L	2									0.139	0.124	0.108 B	0.139	0.13	0.136	0.122	0.122	0.122 F1	0.14	0.103	0.102	0.0973	0.0998	0.118		
Barium	T	mg/L	2	0.111	0.146	0.104	0.0814	0.121	0.1	0.15	0.0806	0.158	0.181	0.19	0.135	0.155	0.137	0.167	0.123	0.119	0.116	0.108	0.11	0.107	0.116	0.115		
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	0.002 U	0.002 U F1	0.002 U	0.002 U	0.002 U	0.002 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	0.001 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U		
Boron	D	mg/L	2									4.23	1.49	2.99	4.98	4.64	4.14	1.69		4.2 F1	4.07	4.38	4.24	4.49	4.19	4		
Boron	T	mg/L	2	4.16	4.21 S	4.7	4.67	4.44 S	4.52	4.08	4.92	4.27	1.84	3.59	4.94	4.67	4.19 S	2.22		4.28	4.22	4.41	4.83	4.52	4.36	4.02		
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 F1	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 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	0.0002 J	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	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[3]									174	125	101	121	125	137	111	123	125 F1	122	121	116	115 V	107	122		
Calcium	T	mg/L	103.2[3]	86.3	104 S	88.1	74.9	116 S	95	101	77.1	153	143	115	111	139 B	124 S	115	122	121	125	123	124	116	111	116		
Chromium	D	mg/L	0.1									0.0011 J	0.0015 U	0.0015 U	0.0015 U	0.0015 U	0.0015 U	0.0015 U	0.002 U	0.002 U F1	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U		
Chromium	T	mg/L	0.1	0.0081	0.0053	0.0026	0.001 U	0.001 U	0.005	0.0025	0.001 U	0.0044	0.0083	0.0118	0.0019	0.0241	0.0015 U	0.0015 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.00203	0.002 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	0.002 U	0.002 U F1	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U		
Cobalt	T	mg/L	0.006	0.001 U	0.0015	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0005 J	0.0014	0.0021	0.001 U	0.0014	0.001 U	0.001 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U		
Iron	D	mg/L	NS																0.1 U									
Iron	T	mg/L	NS									1.66							0.357									
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	0.002 U	0.002 U F1	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U		
Lead	T	mg/L	0.0075	0.0021	0.0042	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0013	0.0023	0.0029	0.001 U	0.0044	0.001 U	0.001 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U		
Lithium	D	mg/L	0.04									0.0338	0.0288	0.0266	0.0275	0.0262	0.0406	0.0256	0.0281	0.0289 F1	0.0314	0.0357	0.0297	0.0314	0.0294	0.0304		
Lithium	T	mg/L	0.04	0.0258	0.0262	0.0259	0.0245	0.0308	0.027	0.035	0.0239	0.0361	0.0329	0.029	0.0276	0.0352	0.0312	0.0324	0.0316	0.0327	0.0315	0.0328	0.0307	0.029	0.03	0.0276		
Manganese	D	mg/L	NS																0.438									
Manganese	T	mg/L	NS									0.321							0.435									
Mercury	D	mg/L	0.002										0.0002 U						0.0002 U	0.0002 U F1	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	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									0.057	0.0342	0.0648	0.0521	0.0656	0.0487	0.0303	0.0274	0.0643 F1	0.0656	0.0626	0.0656	0.058	0.0596	0.0584		
Molybdenum	T	mg/L	0.1	0.0778	0.0754	0.0761	0.0713	0.0684	0.0748	0.0824	0.0849	0.0601	0.0413	0.0621	0.0528	0.0551	0.0558	0.0319	0.0262	0.0608	0.0656	0.0608	0.0673	0.06	0.0626	0.0567		
Nickel	D	mg/L	NS									0.0016		0.0011					0.002 U									
Nickel	T	mg/L	NS	0.0055	0.0051	0.0019	0.001 U	0.001 U	0.0026	0.0025	0.001	0.0033		0.01					0.002 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	0.0012	0.002 U	0.002 U F1	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 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	0.0011	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0019	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U		
Thallium	D	mg/L	0.002									0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U F1	0.002 U	0.002 U	0.002 U	0.002 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	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 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 = nephalometric turbidity units
H = Holding times exceeded
J = Analyte detected below quantitation limits
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
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2 Standard value 6.22 is from the Lower Tolerance Limit (LTL) calculated from background well APW-01R concentrations from 8 quarterly sampling events from 2017-2018 and 9.0 is the regulatory standard
3 Eight episodes of groundwater sampling were conducted from September 2017 through February 2018 to establish background concentrations for the Site utilizing data from background wells APW-1R and APW-9. The final Groundwater Protection Standards (GPS) are the higher of the values provided in 35 IAC 845.600(a) and the final background concentrations as found in Table 6 of the 07/25/2019 GMZ Application with the exception of turbidity and pH. Radium 226+228 was the only value taken from Table 6.
Highlighted values exceed action level
NS = No standard

Table 1
Groundwater Summary Table
Grand Tower Enerov Center (GTEC)
Grand Tower. US-IL

				Sampled prior to closure of CCR Impoundment										Post-Closure Sampling											
			Sample ID	APW-4-20170907	APW-4-20170929	APW-4-20171019	APW-4-20171108	APW-4-20171128	APW-4-20171228	APW-4-20180119	APW-4-20180208	APW-04-WG-20220615	APW-04-WG-20220915	APW-04-WG-20221128	APW-04-WG-20230202	APW-04-WG-20230627	APW-04-WG-20230920	APW-04-WG-20231129	APW-04-WG-20240110	APW-04-WG-20240501	APW-04-WG-20240904	APW-04-WG-20241017	APW-04-WG-20250114	APW-04-WG-20250625	APW-04-WG-20250904	APW-04-WG-20251119
			Location ID	APW-04	APW-04	APW-04	APW-04	APW-04	APW-04	APW-04	APW-04	APW-04	APW-04	APW-04	APW-04	APW-04	APW-04	APW-04	APW-04	APW-04	APW-04	APW-04	APW-04	APW-04	APW-04	APW-04
			Sample Date	09/08/2017	09/29/2017	10/19/2017	11/08/2017	11/28/2017	12/28/2017	01/19/2018	02/08/2018	06/15/2022	09/15/2022	11/28/2022	02/02/2023	06/27/2023	09/20/2023	11/30/2023	01/10/2024	05/01/2024	09/04/2024	10/17/2024	01/14/2025	06/25/2025	09/04/2025	11/19/2025
			Sample Type	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Parameter/Analyte	Total or Dissolved	Units	35 IAC 845.600																							
UNSPECIFIED																										
Fluoride	N	mg/L	4	0.18	0.19	0.18	0.17	0.18	0.17	0.17	0.16	0.2	0.17	0.17	0.15	0.16	0.15	0.18	0.17	0.201	0.178	0.15 U	0.15 U	0.167	0.163	0.178
Radium-226	N	pCi/L	NS	0.38 ± 0.16 U	0.02 ± 0.08 U	-0.272 ± 0.328	0.15 ± 0.09 U	0.09 ± 0.13 U	0.17 ± 0.09 U	-0.05 ± 0.08 U	0.13 ± 0.11 U	0.103 ± 0.164 J	0.5 ± 0.13 U	0.11 ± 0.08 U	0.352 ± 0.232	0.33 ± 0.12 U	0.09 ± 0.07 U	0.19 ± 0.07 U	0.223 ± 0.242 J	0.146 ± 0.275 U	0.302 ± 0.252	0.116 ± 0.132 J	0.0629 ± 0.123 U	0.0133 ± 0.154 U	0.501 ± 0.285	0.282 ± 0.227
Radium-228	N	pCi/L	NS	0.95 ± 0.64 J	-0.45 ± 0.68 U	0.53 ± 0.382	0.64 ± 0.31 U	0.88 ± 0.64 J	0.73 ± 0.36 J	0.34 ± 0.51 U	0.64 ± 0.48 U	0.245 ± 0.235 J	2.15 ± 0.78	1.47 ± 0.67	0.961 ± 0.296	0.52 ± 0.68 J	1.18 ± 0.67	0.66 ± 0.64 J	0.629 ± 0.280	0.451 ± 0.288 J	0.51 ± 0.209	0.379 ± 0.275 J	0.111 ± 0.567 U	1.08 ± 0.553	0.634 ± 0.668 J	0.883 ± 0.431 J
Sulfate	N	mg/L	400	126	116	109	120	107	100	99	92	94	83	68	62	65	66	54	50.9 J6	53.9	86.2	65.6	70.8	68.4	69.1	67.3
CALC																										
Radium-226/228	N	pCi/L	7.002	1.33 ± 0.8 U	0.02 ± 0.76 U	0.53 ± 0.71	0.79 ± 0.4 U	0.97 ± 0.77 U	0.9 ± 0.45 U	0.34 ± 0.59 U	0.77 ± 0.59 U	0.348 ± 0.287 J	2.65 ± 0.91	1.58 ± 0.75 U	1.31 ± 0.376	1.25 ± 0.8 U	1.27 ± 0.74 U	0.85 ± 0.71 U	0.852 ± 0.370	0.597 ± 0.398 J	0.811 ± 0.327	0.494 ± 0.305 J	0.174 ± 0.580 U	1.09 ± 0.574	1.14 ± 0.726 J	0.966 ± 0.487
FIELD PARAM																										
Turbidity, Field	N	NTU	17.96[1]									19.1	18.3	26.5	37.3	38.7	21.6	22.8	29.8	91.7	30.2	91.4	15.7	61.5	21.7	51.3
GEN CHEM																										
Chloride	N	mg/L	200	12	11	11	11	11	11	10	11	12	10	11	10	12	9	11	9.21	11.6	9.98	10.1	10.4	11.1	9.92	10
Dissolved Solids, Total	N	mg/L	1200	460	484	452	472	492	514	424	528	430	436 H	446	416	432	476	430	418	404		418	440	445	436	438
pH, Lab	N	pH units	6.22-9.02[2]	7.31	7.33	7.31	7.42	7.32	7.33	7.25	7.2	7.41	7.51	7.34	7.21	7.39 H	7.56 H	7.31 H	8.17 T8	7.5 T8	7.65 T8	7.46 T8	7.77 T8	7.83 T8	7.55 T8	7.43 T8
METALS																										
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	0.004 U	0.004 U F1	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U
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	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U
Arsenic	D	mg/L	0.01									0.0013	0.0013	0.0021	0.0011	0.0014	0.0016	0.002	0.002 U	0.002 U F1	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Arsenic	T	mg/L	0.01	0.0025	0.0018	0.0016	0.0018	0.0016	0.0014	0.0016	0.0015	0.0015	0.0029	0.0016	0.0017	0.002	0.0019	0.0028	0.002 U	0.002 U	0.002 U	0.00219	0.002 U	0.002 U	0.002 U	0.002 U	0.002
Barium	D	mg/L	2									0.116	0.132	0.13 B	0.116	0.122	0.138	0.165	0.13	0.128 F1	0.134	0.126	0.132	0.127	0.128	0.143
Barium	T	mg/L	2	0.145	0.139	0.123	0.13	0.128	0.141	0.155	0.144	0.143	0.165	0.133	0.134	0.138	0.131	0.153	0.139	0.12	0.14	0.142	0.139	0.133	0.131	0.15
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	0.002 U	0.002 U F1	0.002 U	0.002 U	0.002 U	0.002 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	0.001 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Boron	D	mg/L	2									1.41	0.875	7.33	0.619	0.908	0.591	0.645		0.556 F1	1.85	1.1	0.71	1.16	1.16	0.654
Boron	T	mg/L	2	2.37	2.16	2.12	2.21	2.03	1.7	1.33	1.18	1.88	0.973	0.653	0.65	0.876	0.572	0.559		0.578	1.79	1.07	0.733	1.14	1.21	0.654
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 F1	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 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	0.001 U	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[3]									111	93.7	108	93.3 S	88.3	101 S	77.9		93.1 F1	110	102	105	102	97.7	109
Calcium	T	mg/L	103.2[3]	101 S	105	99.4	97.5	107	107	113	113	97.8	108 S	102	100	97.5 B	87.9	124	94.1	93.4	107	101	110	99.8	102	106
Chromium	D	mg/L	0.1									0.0015 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 F1	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Chromium	T	mg/L	0.1	0.0041	0.0025	0.0017	0.001 U	0.001 U	0.0027	0.0037	0.001 U	0.0015 U	0.0251	0.0043	0.0016	0.0015 U	0.0023	0.0033	0.00267	0.002 U	0.002 U	0.00762	0.002 U	0.002 U	0.00293	0.00328
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	0.002 U F1	0.002 U	0.002 U	0.002 U	0.002 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	0.0006 J	0.0025	0.001 U	0.001 U	0.001 U	0.001 U	0.0012	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Iron	D	mg/L	NS																0.1 U							
Iron	T	mg/L	NS									0.563							0.709							
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	0.002 U	0.002 U F1	0.002 U	0.002 U	0.002 U	0.002 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	0.0016	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Lithium	D	mg/L	0.04									0.0264	0.0283	0.0355	0.0292	0.0311	0.0411	0.0333	0.0266	0.0264 F1	0.0277	0.0314	0.0275	0.0263	0.0253	0.0276
Lithium	T	mg/L	0.04	0.0404	0.0403	0.0412	0.0406	0.0424	0.0416	0.0411	0.0397	0.036	0.0322	0.0293	0.0326	0.0314	0.0299	0.0298	0.029	0.0277	0.0284	0.0293	0.0293	0.0269	0.0297	0.0277
Manganese	D	mg/L	NS																0.173							
Manganese	T	mg/L	NS									0.192							0.21							
Mercury	D	mg/L	0.002										0.0002 U						0.0002 U	0.0002 U F1	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	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									0.0653	0.0445	0.227	0.0383	0.0503	0.0367	0.0461	0.037	0.0511 F1	0.0543	0.0502	0.044	0.0499	0.0549	0.0347
Molybdenum	T	mg/L	0.1	0.0891	0.084	0.0793	0.0812	0.0748	0.0714	0.0592	0.057	0.0788	0.0404	0.0406	0.0377	0.0449	0.0299	0.0347	0.0332	0.0494	0.0517	0.0458	0.0443	0.0535	0.0538	0.0301
Nickel	D	mg/L	NS									0.0019	0.0017						0.00313							
Nickel	T	mg/L	NS	0.0065	0.0034	0.0029	0.002	0.002	0.0026	0.0039	0.003	0.0045	0.0051						0.00557							
Selenium	D	mg/L	0.05									0.0134	0.0101	0.001 U	0.009	0.0165	0.0096	0.0139	0.00962	0.0221 F1	0.0176	0.0172	0.0111	0.0152	0.0173	0.0108
Selenium	T	mg/L	0.05	0.0158	0.015	0.0149	0.0161	0.014	0.013	0.0101	0.0102	0.0133	0.0111	0.0085	0.0099	0.0165	0.009	0.015	0.0105	0.0218	0.0186	0.0176	0.0117	0.0165	0.0179	0.0109
Thallium	D	mg/L	0.002									0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U F1	0.002 U	0.002 U	0.002 U	0.002 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	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 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 = nephalometric turbidity units
H = Holding times exceeded
J = Analyte detected below quantitation limits
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
S = Spike Recovery outside recovery limits
R = RPD outside accepted recovery limits
U = Not Detected at the Reporting Limit
T8 = Sample received past/too close to holding time expiration

1 Standard is from the Upper Tolerance Limit (UTL) calculated from background well APW-01R concentrations from 8 quarterly sampling events from 2017-2018
2 Standard value 6.22 is from the Lower Tolerance Limit (LTL) calculated from background well APW-01R concentrations from 8 quarterly sampling events from 2017-2018 and 9.0 is the regulatory standard
3 Eight episodes of groundwater sampling were conducted from September 2017 through February 2018 to establish background concentrations for the Site utilizing data from background wells APW-1R and APW-9. The final Groundwater Protection Standards (GPS) are the higher of the values provided in 35 IAC 845.600(a) and the final background concentrations as found in Table 6 of the 07/25/2019 GMZ Application with the exception of turbidity and pH. Radium 226+228 was the only value taken from Table 6.
Highlighted values exceed action level
NS = No standard

Table 1
Groundwater Summary Table
Grand Tower Enerav Center (GTEC)
Grand Tower. US-IL

				Sampled prior to closure of CCR Impoundment									Post-Closure Sampling							
			Sample ID	APW-5-20170907	APW-5-20170928	APW-5-20171019	APW-5-20171109	APW-5-20171129	APW-5-20171227	APW-5-20180118	APW-5-20180207	APW-05-WG-20220616	DUP-001-WG-20220616	APW-05-WG-20220914	DUP-001-WG-20220914	APW-05-WG-20221128	DUP-01-WG-20221128	APW-05-WG-20230201	DUP-01-WG-20230201
			Location ID	APW-05	APW-05	APW-05	APW-05	APW-05	APW-05	APW-05	APW-05	APW-05	APW-05	APW-05	APW-05	APW-05	APW-05	APW-05	APW-05
			Sample Date	09/06/2017	09/28/2017	10/19/2017	11/09/2017	11/29/2017	12/27/2017	01/18/2018	02/07/2018	06/16/2022	06/16/2022	09/14/2022	09/14/2022	11/28/2022	11/28/2022	02/01/2023	02/01/2023
			Sample Type	N	N	N	N	N	N	N	N	N	FD	N	FD	N	FD	N	FD
Parameter/Analyte	Total or Dissolved	Units	35 IAC 845.600																
UNSPECIFIED																			
Fluoride	N	mg/L	4	0.34	0.34	0.32	0.32	0.32	0.33	0.36	0.32	0.35	0.33	0.33	0.31	0.37	0.38	0.33	0.33
Radium-226	N	pCi/L	NS	0.37 ± 0.14 U	0.19 ± 0.1 U	0.133 ± 0.370	0.48 ± 0.15 U		0.35 ± 0.12 U	0.13 ± 0.1 U	0.26 ± 0.13 U	0.649 ± 0.316	0.259 ± 0.27 J	0.17 ± 0.08 U	0.11 ± 0.07 U	0.11 ± 0.11 U	0.17 ± 0.08 U	0.209 ± 0.245 J	0.205 ± 0.241 J
Radium-228	N	pCi/L	NS	1.07 ± 0.8	0.89 ± 0.55 J	0.661 ± 0.418	1.17 ± 0.33		0.49 ± 0.42 U	1.04 ± 0.56	0.35 ± 0.4 U	1.1 ± 0.282	0.715 ± 0.31	0.82 ± 0.88 J	0.27 ± 0.55 U	0.49 ± 0.49 U	1.24 ± 0.71	0.399 ± 0.422 J	0.249 ± 0.228 J
Sulfate	N	mg/L	400	407	460	399	413	381	394	439	378	224	239	379	403	324	338	325	305
CALC																			
Radium-226/228	N	pCi/L	7.002	1.44 ± 0.94 U	1.08 ± 0.65 U	0.794 ± 0.78	1.65 ± 0.48 U		0.84 ± 0.54 U	1.17 ± 0.66 U	0.61 ± 0.53 U	1.75 ± 0.424	0.973 ± 0.411	0.99 ± 0.96 U	0.38 ± 0.62 U	0.6 ± 0.6 U	1.41 ± 0.79 U	0.608 ± 0.488 J	0.454 ± 0.332 J
FIELD PARAM																			
Turbidity, Field	N	NTU	17.96[1]									51.8		9.19		4.65		8.21	
GEN CHEM																			
Chloride	N	mg/L	200	15	15	15	14	16	16	16	16	19	19	15	15	19	19	18	18
Dissolved Solids, Total	N	mg/L	1200	842	832	804	826	790	792	552	804	650	690	750 H	774 H	714	728 H	696	670
pH, Lab	N	pH units	6.22-9.02[2]	7.37	7.3	7.26	7.3	7.26	7.31	7.23	7.18	7.35	7.49	7.55	7.57	7.24	7.27	7.31	7.33
METALS																			
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
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	0.0011	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Arsenic	D	mg/L	0.01									0.002	0.0021	0.001	0.001 U	0.001 U	0.0019	0.0026	0.0018
Arsenic	T	mg/L	0.01	0.0031	0.0026	0.0015	0.0016	0.0016	0.0019	0.0021	0.0019	0.0048	0.0041	0.0025	0.0023	0.0022	0.0023	0.0024	0.0025
Barium	D	mg/L	2									0.133	0.132	0.13	0.128	0.172 B	0.13 B	0.125	0.135
Barium	T	mg/L	2	0.226	0.233	0.183	0.216	0.193	0.214	0.214	0.195	0.187	0.174	0.154	0.152	0.14	0.136	0.145	0.148
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
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	0.002 U	0.002 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Boron	D	mg/L	2									7.63	7.7	7.42	7.09	6.12	7.03 S	8.68 S	6.76
Boron	T	mg/L	2	9.3	10.3	8.89	9.98	9.1	9.83	9.25	8.73	7.67	8.24 S	7.76	7.62	7.48	7.97	7.35	7.59
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
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	0.001 U	0.001 U
Calcium	D	mg/L	103.2[1]									139	141	119	131	87.4	110 S	106 S	111
Calcium	T	mg/L	103.2[1]	136	142	119	131	123	125	121	124	127	129 S	127	137	117	118	112	114
Chromium	D	mg/L	0.1									0.0015 U	0.0015 U	0.0015 U	0.0015 U	0.0015 U	0.0015 U	0.0015 U	0.0015 U
Chromium	T	mg/L	0.1	0.0137	0.001 U	0.0041	0.001 U	0.001 U	0.0084	0.0033	0.001 U	0.0016 J	0.003 U	0.0015 U	0.0015 U	0.0015 U	0.0016	0.0015 U	0.0015 U
Cobalt	D	mg/L	0.006									0.0006 J	0.0005 J	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	0.0013 J	0.0011 J	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Iron	T	mg/L	NS									2.77	1.89						
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
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
Lithium	D	mg/L	0.04									0.0282	0.029	0.0381	0.0373	0.0338	0.0365	0.045	0.0375
Lithium	T	mg/L	0.04	0.0363	0.0443	0.0393	0.0405	0.0415	0.0433	0.0404	0.0397	0.0331	0.0363	0.0408	0.0397	0.0373	0.0371	0.0399	0.0402
Manganese	T	mg/L	NS									0.9	0.904						
Mercury	D	mg/L	0.002											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									0.172	0.17	0.213	0.206	0.293	0.211 S	0.187	0.199
Molybdenum	T	mg/L	0.1	0.172	0.195	0.201	0.168	0.193	0.246	0.244	0.249	0.203	0.195	0.235	0.224	0.223	0.226	0.217	0.212
Nickel	D	mg/L	NS									0.0036	0.0035			0.0011	0.0024		
Nickel	T	mg/L	NS	0.0074	0.0012	0.0023	0.001 U	0.001 U	0.0043	0.0021	0.001 U	0.0037	0.0039			0.002	0.0029		
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
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									0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 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	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U

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

				Post-Closure Sampling																							
			Sample ID	APW-05R-WG-20230627	DUP-01-WG-20230627	APW-05R-WG-20230920	DUP-01-WG-20230920	APW-05R-WG-20231128	DUP-01-WG-20231128	APW-05R-WG-20240110	DUP-01-WG-20240110	APW-05R-WG-20240501	DUP-01-WG-20240501	APW-05R-WG-20240905	DUP-01-WG-20240905	APW-05R-WG-20241016	DUP-01-WG-20241016	APW-05R-WG-20250115	DUP-01-WG-20250115	APW-05R-WG-20250626	DUP-01-WG-20250626	APW-05R-WG-20250904	DUP-01-WG-20250904	APW-05R-WG-20251119	DUP-01-WG-20251119
			Location ID	APW-05	APW-05	APW-05	APW-05	APW-05	APW-05	APW-05R	APW-05R	APW-05	APW-05	APW-05	APW-05	APW-05R	APW-05R	APW-05R	APW-05R	APW-05R	APW-05R	APW-05R	APW-05R	APW-05R	APW-05R	APW-05R	APW-05R
			Sample Date	06/27/2023	06/27/2023	09/20/2023	09/20/2023	11/28/2023	11/28/2023	01/10/2024	01/10/2024	05/01/2024	05/01/2024	09/05/2024	09/05/2024	10/16/2024	10/16/2024	01/15/2025	01/15/2025	06/26/2025	06/26/2025	09/04/2025	09/04/2025	11/19/2025	11/19/2025
			Sample Type	N	FD	N	FD	N	FD	N	FD	N	FD	N	FD	N	FD	N	FD	N	FD	N	FD	N	FD
Parameter/Analyte	Total or Dissolved	Units	35 IAC 845.600																								
UNSPECIFIED																											
Alkalinity	N	mg/L	4	0.3	0.32	0.35	0.34	0.38	0.35	0.398	0.317	0.151 J	0.301	0.347	0.342	0.199	0.177	0.2893	0.295	0.369	0.301	0.357	0.301	0.75 U	0.75 U		
Radium-226	N	pCi/L	NS	0.23 ± 0.1 U	0.11 ± 0.08 U	0.49 ± 0.13 U	0.36 ± 0.13 U	0.15 ± 0.06 U	0.05 ± 0.04 U	0.303 ± 0.271 J	0.297 ± 0.208	0.18 ± 0.189 J	0.427 ± 0.329	0.0135 ± 0.0835 U	1.33 ± 0.415	0.261 ± 0.188	0 ± 0.130 U	0.71 ± 0.394	0.356 ± 0.228	-0.016 ± 0.198 U	0.188 ± 0.232 J	0.224 ± 0.250 J	0.341 ± 0.283	0.674 ± 0.378	0.195 ± 0.308 J		
Radium-228	N	pCi/L	NS	0.31 ± 0.5 UODR	0.61 ± 0.67 U	5.85 ± 1.14 ^	0.42 ± 0.71 U	0.73 ± 0.57 J	0.75 ± 0.67 J	3.55 ± 0.372	0.885 ± 0.244	0.94 ± 0.271	1.08 ± 0.284	0.46 ± 0.343 J	1.1 ± 0.203	0.468 ± 0.329 J	0.498 ± 0.226	1.4 ± 0.828	1.48 ± 0.434	0.879 ± 0.780 J	0.643 ± 0.367	0.463 ± 0.500 J	1.66 ± 0.734	0.287 ± 0.719 U	0.165 ± 0.659 J5 U		
Sulfate	N	mg/L	400	335	326	363	333	330	321	306	305	365	368	70.5	70.6	102	101	373	374	135	133	97.9	116	330	320		
CALC																											
Radium-226/228	N	pCi/L	7.002	0.54 ± 0.6 U	0.72 ± 0.75 U	6.34 ± 1.53	0.78 ± 0.84 U	0.88 ± 0.63 U	0.8 ± 0.71 U	3.86 ± 0.460	1.18 ± 0.321	1.12 ± 0.330	1.5 ± 0.435	0.473 ± 0.353 J	2.43 ± 0.462	0.73 ± 0.379	0.498 ± 0.261	2.1 ± 0.917	1.83 ± 0.490	0.879 ± 0.813 J	0.85 ± 0.436	0.687 ± 0.559 J	2 ± 0.787	0.962 ± 0.812 J	0.36 ± 0.727 U		
FIELD PARAM																											
Turbidity, Field	N	NTU	17.96[3]	42.6		33.7		76.1		38.9		8.02		64.1		23.4		27.2		14.8		16.3		32.8			
GEN CHEM																											
Chloride	N	mg/L	200	17	18	14	14	16	16	16.9	17	15.8	16.1	28.1	28.1	18.9	18.7	16.1	16.2	24.1	23.6	20.2	24.1	15	15.5		
Dissolved Solids, Total	N	mg/L	1200	740	695	680	710	705	690	677	691	754	740	354	352	560	543	702	688	504	500	485	479	700	703		
pH, Lab	N	pH units	6.22-9.02[2]	7.27 H	7.3 H	7.36 H	7.36 H	7.33 H	7.34 H	7.42 T8	7.82 T8	7.6 T8	7.62 T8	7.56 T8	7.56 T8	7.53 T8	7.54 T8	7.77 T8	7.82 T8	8 T8	7.82 T8	7.56 T8	7.53 T8	7.66 T8	7.62 T8		
METALS																											
Antimony	D	mg/L	0.006	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 SU	0.004 U	0.004 U	0.004 U F1	0.004 U F1	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U		
Antimony	T	mg/L	0.006	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U		
Arsenic	D	mg/L	0.01	0.0024	0.00225	0.0023	0.0024	0.0029	0.0018	0.002 U	0.002 U	0.002 U F1	0.002 U F1	0.00215	0.00201	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U		
Arsenic	T	mg/L	0.01	0.003	0.003	0.0028	0.0026	0.0042	0.0031	0.0022	0.00228	0.00228	0.00235	0.00305	0.003	0.00236	0.00374	0.00203	0.00206	0.00223	0.00227	0.00216	0.00218	0.00218	0.0025		
Barium	N	mg/L	2	0.168	0.162	0.167	0.177	0.186	0.173	0.113	0.114	0.161 F1	0.151 F1	0.0718	0.072	0.136	0.137	0.164	0.157	0.167	0.165	0.195	0.161	0.166	0.185		
Barium	T	mg/L	2	0.183	0.181	0.163	0.158	0.225	0.158	0.151	0.153	0.195	0.19	0.102	0.0999	0.158	0.166	0.194	0.198	0.147	0.146	0.199	0.141	0.181	0.185		
Beryllium	D	mg/L	0.004	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.002 U	0.002 U	0.002 U F1	0.002 U F1	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 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	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U		
Boron	D	mg/L	2	8.64	8.37	7.91	8.05	8.71	8.443			8.86 F1	8.89 F1	2.21	2.22	6.29	6.28	8.2	8.17	5.58	5.47	4.02	4	8.72	8.74		
Boron	T	mg/L	2	8.76	8.68	7.42	8.33 S	9.62	8.77			9.28	9.26	2.18	2.17	6.19	6.23	8.37	8.28	5.49	5.53	4.18	4.2	8.5	8.54		
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 F1	0.001 U F1	0.001 U	0.001 U	0.001 U	0.001 U	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	0.005	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		
Calcium	D	mg/L	103.3[2]	120	120	118	119	98.4	91.9 S	112	111	142 F1	142 F1	76.7	76.5	111	112	132	134	104	102	98.1	97.4	136	136		
Calcium	T	mg/L	103.3[2]	136 B	133 B	105	126 S	97.1	134	114	115	141	139	74	73.3	111	112	141	141	104	103	102	102	132	131		
Chromium	D	mg/L	0.1	0.00151 U	0.00151 U	0.0015 U	0.0015 U	0.00151 U	0.00151 SU	0.002 U	0.002 U	0.002 U F1	0.002 U F1	0.0021 U	0.0021 U	0.002 U	0.002 U	0.002 U	0.002 U	0.0021 U	0.0021 U	0.002 U	0.002 U	0.00208 U	0.002 U	0.0026		
Chromium	T	mg/L	0.1	0.0015 U	0.0015 U	0.0031	0.0016	0.002	0.0023	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.0021 U	0.002 U	0.002 U	0.002 U	0.00208 U	0.002 U	0.0026		
Cobalt	D	mg/L	0.006	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 SU	0.002 U	0.002 U	0.002 U F1	0.002 U F1	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 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	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U		
Iron	D	mg/L	NS							0.1 U	0.1 U																
Iron	T	mg/L	NS							5.89	5.91																
Lead	D	mg/L	0.0075	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.002 U	0.002 U	0.002 U F1	0.002 U F1	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U		
Lead	T	mg/L	0.0075	0.0011	0.001	0.0026	0.0021	0.002	0.0014	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.00237	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U		
Lithium	D	mg/L	0.04	0.0384	0.0398	0.0624	0.0509	0.0455	0.0343	0.0377	0.039	0.0362 F1	0.0394 F1	0.0172	0.0175	0.0316	0.0303	0.0342	0.0326	0.0257	0.0263	0.0237	0.0229	0.0358	0.0352		
Lithium	T	mg/L	0.04	0.0429	0.0415	0.0367	0.0425	0.0523	0.0371	0.0389	0.0404	0.0385	0.0377	0.0179	0.0176	0.0314	0.0304	0.0373	0.0361	0.0248	0.0258	0.0262	0.0269	0.035	0.0345		
Manganese	D	mg/L	NS							0.548	0.537																
Manganese	T	mg/L	NS							0.548 V	0.553																
Mercury	D	mg/L	0.002							0.0002 U	0.0002 U	0.0002 U F1	0.0002 U F1	0.0002 U	0.000207	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	0.00003 U	0.00003 U	0.00003 U	0.00003 U	0.00003 U	0.00003 U	0.00003 U	0.00003 U	0.00003 U	0.00003 U	0.00003 U	0.00003 U	0.00003 U	0.00003 U	0.00003 U	0.00003 U	0.00003 U	0.00003 U	0.00003 U	0.00003 U	0.00003 U	0.00003 U	0.00003 U		
Molybdenum	D	mg/L	0.1	0.213	0.204	0.235	0.231	0.282	0.192	0.235	0.235	0.213 F1	0.215 F1	0.11	0.111	0.168	0.165	0.182	0.172	0.139	0.14	0.134	0.132	0.208	0.2		
Molybdenum	T	mg/L	0.1	0.212	0.21	0.223	0.235	0.203	0.215	0.227	0.231	0.221	0.214	0.109	0.107	0.164	0.165	0.185	0.185	0.147	0.146	0.13	0.132	0.185	0.189		
Nickel	D	mg/L	NS							0.002 U	0.002 U																
Nickel	T	mg/L	NS							0.002 U	0.002 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	0.002 U	0.002 U	0.002 U F1	0.002 U F1	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 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	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U		
Thallium	D	mg/L	0.002	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U F1	0.002 U F1	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U		
Thallium	T	mg/L	0.002	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U		

Notes:
Empty cells = not analyzed
N = Normal Environmental Sample
FD = Field Duplicate Samole
NA = not applicable
T = total
D = dissolved
mg/L = milligrams oer liter
pCi/L = picocuries per liter
NTU = nephelometric turbidity units
H = Holding times exceeded
J = Analyte detected below quantitation limits
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
S = Spike Recovery outside recovery limits
R = RPD outside accepted recovery limits
U = Not Detected at the Reporting Limit
T8 = Samole received oast/too close to holding time expiration

1 Standard is from the Upper Tolerance Limit (UTL) calculated from backcround well APW-01R concentrations from 8 quarterly samolina events from 2017-2018
2 Standard value 6.22 is from the Lower Tolerance Limit (LTL) calculated from backcround well APW-01R concentrations from 8 quarterly samolina events from 2017-2018 and 9.0 is the reaulatory standard
3 Eight episodes of croundwater samolina were conducted from Seotember 2017 throuah Februarv 2018 to establish backcround concentrations for the Site utilizina data from backcround wells APW-1R and APW-9. The final Groundwater Protection Standards (GPS) are the hiaher of the values orovided in 35 IAC 845.600(a) and the final backcround concentrations as found in Table 6 of the 07/25/2019 GMZ Application with the exception of turbidity and oH. Radium 226+228 was the onlv value taken from Table 6.
Highlighted values exceed action level
NS = No standard

Table 1
Groundwater Summary Table
Grand Tower Enerov Center (GTEC)
Grand Tower. US-IL

				Sampled prior to closure of CCR Impoundment									Post-Closure Sampling												
			Sample ID	APW-6D-20170907	APW-6D-20170927	APW-6D-20171019	APW-6D-20171109	APW-6D-20171128	APW-6D-20171227	APW-6D-20180118	APW-6D-20180208	APW-06D-20220913	APW-06D-WG-20221128	APW-06D-WG-20230201	APW-06D-WG-20230627	APW-06D-WG-20230920	APW-06D-WG-20231128	APW-06D-WG-20240110	APW-06D-WG-20240501	APW-06D-WG-20240905	APW-06D-WG-20241016	APW-06D-WG-20250115	APW-06D-WG-20250624	APW-06D-WG-20250904	APW-06D-WG-20251119
			Location ID	APW-06D	APW-06D	APW-06D	APW-06D	APW-06D	APW-06D	APW-06D	APW-06D	APW-06D	APW-06D	APW-06D	APW-06D	APW-06D	APW-06D	APW-06D	APW-06D	APW-06D	APW-06D	APW-06D	APW-06D	APW-06D	APW-06D
			Sample Date	09/06/2017	09/28/2017	10/19/2017	11/09/2017	11/28/2017	12/27/2017	01/18/2018	02/08/2018	09/13/2022	11/28/2022	02/01/2023	06/27/2023	09/20/2023	11/28/2023	01/10/2024	05/01/2024	09/05/2024	10/16/2024	01/15/2025	06/24/2025	09/04/2025	11/19/2025
			Sample Type	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Parameter/Analyte	Total or Dissolved	Units	35 IAC 845.600																						
UNSPECIFIED																									
Fluoride	N	mg/L	4	0.22	0.23	0.21	0.22	0.21	0.22	0.23	0.21	0.2	0.24	0.21	0.2	0.22	0.24	0.212	0.15 U	0.205	0.15 U	0.17	0.216	0.202	0.249
Radium-226	N	pCi/L	NS	0.62 ± 0.17 U	0.37 ± 0.11 U	1.22 ± 0.744	0.39 ± 0.15 U	0.38 ± 0.18 U	0.3 ± 0.12 U	0.03 ± 0.08 U	0.2 ± 0.13 U	0.31 ± 0.1 U	0.62 ± 0.15 U	0.355 ± 0.275	0.3 ± 0.12 U	0.18 ± 0.09 U	0.11 ± 0.05 U	0.582 ± 0.161	0.422 ± 0.235	0.447 ± 0.249	0.258 ± 0.255 J	0.227 ± 0.176	0.374 ± 0.274	0.548 ± 0.319	0.585 ± 0.407
Radium-228	N	pCi/L	NS	1.07 ± 0.65	0.61 ± 0.33 U	0.549 ± 0.377	0.86 ± 0.37 J	1.4 ± 0.71	0.78 ± 0.48 J	0.74 ± 0.57 J	0.24 ± 0.34 U	1.46 ± 0.71	0.28 ± 0.43 U	1.02 ± 0.451	0.74 ± 0.54 J	2.62 ± 0.76	0.76 ± 0.6 J	1.24 ± 0.276	1.1 ± 0.285	1.83 ± 0.372	0.642 ± 0.345	2.46 ± 0.626	0.586 ± 0.483 J	0.798 ± 0.534	1.03 ± 0.360
Sulfate	N	mg/L	400	215	228	206	222	230	236	211	189	272	254	269	270	218	184	180	184	242	214	266	211	201	136
CALC																									
Radium-226/228	N	pCi/L	7.002	1.69 ± 0.82 U	0.98 ± 0.44 U	1.77 ± 1.12	1.12 ± 0.51 U	1.78 ± 0.89 U	1.08 ± 0.6 U	0.77 ± 0.65 U	0.44 ± 0.47 U	1.77 ± 0.81 U	0.9 ± 0.58 U	1.38 ± 0.528	1.04 ± 0.66 U	2.8 ± 0.85	0.87 ± 0.65 U	1.82 ± 0.454	1.52 ± 0.369	2.27 ± 0.448	0.9 ± 0.429	2.68 ± 0.631	0.96 ± 0.555	1.55 ± 0.622	1.62 ± 0.543
FIELD PARAM																									
Turbidity, Field	N	NTU	17.96[1]									18.5	74.4	26.9	181	65.5	3.02	18.2	35.8	21.8	8.39	11	4.81	3.78	1.12
GEN CHEM																									
Chloride	N	mg/L	200	17	17	16	16	16	16	17	17	14	17	16	15	16	22	21.2	21.5	15	14.7	20.5	17.5	17.3	35.3
Dissolved Solids, Total	N	mg/L	1200	558	560	562	564	590	516 R	482	584	670 H	580	582	735	565	560	536	549	624	568	549	584	712	680
pH, Lab	N	pH units	6.22-9.00[2]	7.23	7.25	7.23	7.19	7.2	7.22	7.21	7.2	7.42	7.21	7.29	7.39 H	7.3 H	7.36 H	7.73 T8	7.54 T8	7.46 T8	7.42 T8	7.64 T8	7.72 T8	7.55 T8	7.5 T8
METALS																									
Antimony	D	mg/L	0.006									0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.004 U	0.004 U F1	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U
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	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U
Arsenic	D	mg/L	0.01									0.004	0.0116	0.012	0.0102	0.01	0.0161	0.00451	0.00385 F1	0.00479	0.00485	0.00414	0.0052	0.00467	0.00527
Arsenic	T	mg/L	0.01	0.0068	0.0101	0.0075	0.0074	0.009	0.0095	0.0106	0.0096	0.0104	0.0111	0.0107	0.0115	0.0109	0.0135	0.0102	0.0108	0.0103	0.0103	0.00969	0.0109	0.0107	0.0108
Barium	D	mg/L	2									0.129	0.118 B	0.152	0.13	0.121	0.185	0.106	0.115 F1	0.121	0.113	0.111	0.107	0.115	0.114
Barium	T	mg/L	2	0.173	0.172	0.142	0.153	0.155	0.163	0.166	0.148	0.143	0.142	0.134	0.145	0.128	0.151	0.115	0.119	0.129	0.119	0.124	0.123	0.123	0.109
Beryllium	D	mg/L	0.004									0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.002 U	0.002 U F1	0.002 U	0.002 U	0.002 U	0.002 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	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Boron	D	mg/L	2									5.32	4.14	4.39	5.01	3.77	4.63		2.98 F1	4.36	4.03	3.33	3.92	3.6	2.67
Boron	T	mg/L	2	3.72	3.87	3.55	3.58	3.9	3.84	3.3	3.09	5.31	4.29	5.05	4.99	3.81	3.8		3.13	4.31	3.99	3.46	3.89	3.63	2.57
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 F1	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 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	0.001 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[3]									118	105	109	118	114	80.3	106	114 F1	130	118	114	118	118	115
Calcium	T	mg/L	103.2[3]	99.9	110	96.7	100	110	107	105 S	105	123	110	116	128 B	106	98.4	111	114	124	120	120	119	121	110
Chromium	D	mg/L	0.1									0.0015 U	0.0015 U	0.0015 U	0.0015 U	0.0015 U	0.0015 U	0.002 U	0.002 U F1	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Chromium	T	mg/L	0.1	0.001 U	0.0013	0.001 U	0.001 U	0.001 U	0.0017	0.003	0.0014	0.0015 U	0.0063	0.0015 U	0.0057	0.0727	0.0015 U	0.00861	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.0945	0.002 U
Cobalt	D	mg/L	0.006									0.0013	0.0012	0.001	0.001 U	0.001 U	0.0012	0.002 U	0.002 U F1	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Cobalt	T	mg/L	0.006	0.0012	0.001	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0035	0.0013	0.0054	0.0035	0.0013	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.00223	0.002 U
Iron	D	mg/L	NS															0.1 U							
Iron	T	mg/L	NS															3.65							
Lead	D	mg/L	0.0075									0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.002 U	0.002 U F1	0.002 U	0.002 U	0.002 U	0.002 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	0.0012	0.001 U	0.0016	0.001 U	0.001 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Lithium	D	mg/L	0.04									0.0179	0.0155	0.0194	0.016	0.0197	0.0241	0.0161	0.0159 F1	0.0156	0.0173	0.0156	0.0152	0.0151	0.0153
Lithium	T	mg/L	0.04	0.016	0.0176	0.0161	0.0163	0.0178	0.0181	0.0165	0.0162	0.0185	0.0175	0.0172	0.0184	0.0169	0.0199	0.0173	0.0171	0.0163	0.0168	0.0167	0.0148	0.0167	0.0148
Manganese	D	mg/L	NS															0.611							
Manganese	T	mg/L	NS															0.622							
Mercury	D	mg/L	0.002									0.0002 U						0.0002 U	0.0002 U F1	0.000209	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	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Molybdenum	D	mg/L	0.1									0.0969	0.0796	0.0583	0.0643	0.0559	0.0949	0.0617	0.0748 F1	0.0647	0.0542	0.0524	0.0538	0.0598	0.0522
Molybdenum	T	mg/L	0.1	0.0646	0.0606	0.0582	0.0589	0.06	0.0584	0.0465	0.0463	0.0719	0.0698	0.0681	0.0602	0.0672	0.0557	0.0605	0.072	0.0628	0.0527	0.0553	0.0609	0.0658	0.0461
Nickel	D	mg/L	NS										0.002					0.00219							
Nickel	T	mg/L	NS	0.0032	0.0028	0.0018	0.002	0.0017	0.0022	0.0032	0.0025		0.0093					0.00825							
Selenium	D	mg/L	0.05									0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.002 U	0.002 U F1	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 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	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Thallium	D	mg/L	0.002									0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U F1	0.002 U	0.002 U	0.002 U	0.002 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	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 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 = nephalometric turbidity units
H = Holding times exceeded
J = Analyte detected below quantitation limits
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
S = Spike Recovery outside recovery limits
R = RPD outside accepted recovery limits
U = Not Detected at the Reporting Limit
T8 = Sample received past/too close to holding time expiration

1 Standard is from the Upper Tolerance Limit (UTL) calculated from background well APW-01R concentrations from 8 quarterly sampling events from 2017-2018
2 Standard value 6.22 is from the Lower Tolerance Limit (LTL) calculated from background well APW-01R concentrations from 8 quarterly sampling events from 2017-2018 and 9.0 is the regulatory standard
3 Eight episodes of groundwater sampling were conducted from September 2017 through February 2018 to establish background concentrations for the Site utilizing data from background wells APW-1R and APW-9. The final Groundwater Protection Standards (GPS) are the higher of the values provided in 35 IAC 845.600(a) and the final background concentrations as found in Table 6 of the 07/25/2019 GMZ Application with the exception of turbidity and pH. Radium 226+228 was the only value taken from Table 6.
Highlighted values exceed action level
NS = No standard

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

				Sampled prior to closure of CCR Impoundment								Post-Closure Sampling														
			Sample ID	APW-6S-20170907	APW-6S-20170928	APW-6S-20171019	APW-6S-20171104	APW-6S-20171128	APW-6S-20171227	APW-6S-20180118	APW-6S-20180208	APW-6S-WG-20220616	APW-06S-WG-20220913	APW-06S-WG-20221128	APW-06S-WG-20230201	APW-06S-WG-20230627	APW-06S-WG-20230920	APW-06S-WG-20231128	APW-06S-WG-20240110	APW-06S-WG-20240501	APW-06S-WG-20240905	APW-06S-WG-20241016	APW-06S-WG-20250115	APW-06S-WG-20250624	APW-06S-WG-20250904	APW-06S-WG-20251119
			Location ID	APW-06S	APW-06S	APW-06S	APW-06S	APW-06S	APW-06S	APW-06S	APW-06S	APW-06S	APW-06S	APW-06S	APW-06S	APW-06S	APW-06S	APW-06S	APW-06S	APW-06S	APW-06S	APW-06S	APW-06S	APW-06S	APW-06S	APW-06S
			Sample Date	09/06/2017	09/28/2017	10/19/2017	11/09/2017	11/28/2017	12/27/2017	01/18/2018	02/08/2018	06/16/2022	09/13/2022	11/28/2022	02/01/2023	06/27/2023	09/20/2023	11/28/2023	01/10/2024	05/01/2024	09/05/2024	10/16/2024	01/15/2025	06/24/2025	09/04/2025	11/19/2025
			Sample Type	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Parameter/Analyte	Total or Dissolved	Units	35 IAC 845.600																							
UNSPECIFIED																										
Fluoride	N	mo/L	4	0.41	0.26	0.25	0.26	0.25	0.25	0.27	0.24	0.26	0.28	0.32	0.29	0.26	0.3	0.35	0.277	0.15 U	0.342	0.15 U	0.239	0.291	0.223	0.299
Radium-226	N	pCi/L	NS	0.36 ± 0.14 U	0.09 ± 0.08 U	0.317 ± 0.331	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 ± 0.182	0.2 ± 0.08 U	0.19 ± 0.09 U	0.0283 ± 0.232 U	0.11 ± 0.08 U	0.32 ± 0.11 U	0.09 ± 0.05 U	1.25 ± 0.411	0.707 ± 0.335	0.31 ± 0.217	0.0841 ± 0.233 U	0.262 ± 0.188	0.291 ± 0.247 J	0.339 ± 0.283	0.418 ± 0.311
Radium-228	N	pCi/L	NS	0.56 ± 0.77 U	1.06 ± 0.53	0.481 ± 0.316	0.9 ± 0.4 J	0.92 ± 0.6 J	0.44 ± 0.44 U	0.71 ± 0.53 J	0.89 ± 0.38 J	0.228 ± 0.248 J	2.73 ± 0.9	0.41 ± 0.5 U	1.44 ± 0.518	-0.03 ± 0.59 U	0.41 ± 0.38 U	0.29 ± 0.51 U	0.688 ± 0.243	0.951 ± 0.345	0.667 ± 0.386 J	0.895 ± 0.221	2.23 ± 0.613	1.01 ± 0.805 J	0.8 ± 0.516 J	0.916 ± 0.386
Sulfate	N	mo/L	400	127	177	167	151	180	201	233	220	200	227	243	247	208	221	237	240	211	133	148	246	116	92.6	228
CALC																										
Radium-226/228	N	pCi/L	7.002	0.92 ± 0.91 U	1.15 ± 0.61 U	0.798 ± 0.647	1.25 ± 0.52 U	1.1 ± 0.71 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 ± 0.59 U	1.47 ± 0.568	0.11 ± 0.67 U	0.73 ± 0.49 U	0.38 ± 0.56 U	1.93 ± 0.477	1.66 ± 0.481	0.977 ± 0.443	0.979 ± 0.321	2.49 ± 0.641	1.3 ± 0.842 J	1.14 ± 0.589	1.33 ± 0.496
FIELD PARAM																										
Turbidity, Field	N	NTU	17.96[1]									30.5	15.1	5.56	6.67	9.06	8.99	1.26	3.32	3.81	5.09	5.72	8.11	22.9	38.25	87
GEN CHEM																										
Chloride	N	mo/L	200	31	28	27	27	26	27	26	25	24	25	24	24	23	20	22	21.2	21.6	21.1	19.4	23	27.2	36.1	20.1
Dissolved Solids, Total	N	mo/L	1200	500	546	574	578	566	588	598	666	600	630 H	605	638	615	565	635	644	678 J2	599	673	578	538	481	692
pH, Lab	N	pH units	6.22-9.02[2]	7.16	7.06	7.18	7.23	7.09	7.13	7.09	7.02	7.24	7.38	7.04	7.12	7.05 H	7.21 H	7.12 H	7.67 T8	7.35 T8	7.2 T8	7.27 T8	7.39 T8	7.58 T8	7.65 T8	7.28 T8
METALS																										
Antimony	D	mo/L	0.006									0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.004 U	0.004 U F1	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U
Antimony	T	mo/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	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U
Arsenic	D	mo/L	0.01									0.0009 J	0.001 U	0.001 U	0.0013	0.001	0.001 U	0.0019	0.002 U	0.002 U F1	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Arsenic	T	mo/L	0.01	0.0017	0.0016	0.0018	0.002	0.0013	0.0012	0.0011	0.0011	0.0009 J	0.0012	0.001	0.0011	0.001 U	0.0012	0.0016	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Barium	D	mo/L	2									0.235	0.146	0.158	0.219	0.21	0.216	0.369	0.155	0.106 F1	0.18	0.167	0.12	0.138	0.214
Barium	T	mo/L	2	0.222	0.237	0.205	0.226	0.214	0.213	0.224	0.205	0.25	0.223	0.19	0.202	0.224	0.206	0.305	0.204	0.23	0.232	0.213	0.262	0.23	0.197	0.267
Beryllium	D	mo/L	0.004									0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.002 U	0.002 U F1	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Beryllium	T	mo/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	0.002 U	0.002 U F1	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Boron	D	mo/L	2									4.32	5.95	6.88	7.12	5.83	6.65	8.41		5.36 F1	4.1	4.8	5.34	3.1	3.56	6.15
Boron	T	mo/L	2	4.65	5.93	5.83	5.64 S	5.8	6.93 S	7.42	6.66	4.77	4.61	4.31	4.84 S	5.84	5.79	9.49		5.54	4.05	4.58	5.34	3.66	3.78	4
Cadmium	D	mo/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 F1	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Cadmium	T	mo/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
Calcium	D	mg/L	103.3[3]									124	93.7	98	94.1	100	107	88.8	100 V	120 F1	136	112	134	84.1	96	143
Calcium	T	mg/L	103.3[3]	101	97.2	87.5	96.8 S	99.5	98.1	98.7	97.4	115	105	103	97.1 S	109 B	92.7	90	101	120	131	126	130	109	101	137
Chromium	D	mo/L	0.1									0.0015 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 F1	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Chromium	T	mo/L	0.1	0.0027	0.0173	0.0028	0.001 U	0.001 U	0.0048	0.0012	0.001 U	0.0028	0.0015 U	0.0022	0.0015 U	0.0019	0.0067	0.0015 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.0226	0.00498
Cobalt	D	mo/L	0.006									0.0002 J	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.002 U	0.002 U F1	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Cobalt	T	mo/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	0.0002 J	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Iron	D	mo/L	NS																0.1 U							
Iron	T	mo/L	NS									9.35							9.18							
Lead	D	mo/L	0.0075									0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.002 U	0.002 U F1	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Lead	T	mo/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	0.0028	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Lithium	D	mo/L	0.04									0.0355	0.0384	0.0386	0.0406	0.0411	0.0497	0.0498	0.0383	0.038 F1	0.0318	0.0303	0.0386	0.0261	0.0278	0.0432
Lithium	T	mo/L	0.04	0.0135	0.0413	0.04	0.0415	0.042	0.0458	0.0451	0.0417	0.0363	0.041	0.0393	0.0406	0.0412	0.0369	0.0564	0.0427	0.0408	0.032	0.037	0.0409	0.0295	0.0311	0.0391
Manganese	D	mo/L	NS																0.478							
Manganese	T	mo/L	NS									0.53							0.512							
Mercury	D	mo/L	0.002										0.0002 U						0.0002 U	0.0002 U F1	0.000221	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Mercury	T	mo/L	0.002	0.0003 U	0.0003 U	0.0003 U	0.0003 U	0.0003 U	0.0003 U	0.0003 U	0.0003 U	0.0003 U	0.0003 U	0.0003 U	0.0003 U	0.0003 U	0.0003 U	0.0003 U	0.0003 U	0.0003 U	0.0003 U	0.0003 U	0.0003 U	0.0003 U	0.0003 U	0.0003 U	0.0003 U
Molybdenum	D	mo/L	0.1									0.226	0.236	0.24	0.244	0.232	0.234	0.309	0.26	0.24 F1	0.178	0.189	0.19	0.167	0.199	0.19
Molybdenum	T	mo/L	0.1	0.249	0.287	0.272	0.243	0.274	0.314	0.324	0.323	0.237	0.271	0.259	0.265	0.235	0.225	0.207	0.255	0.231	0.176	0.187	0.195	0.185	0.203	0.171
Nickel	D	mo/L	NS									0.0015		0.001 U					0.001 U							
Nickel	T	mo/L	NS	0.0021	0.009	0.0021	0.0012	0.001 U	0.0031	0.0016	0.0012	0.0027		0.0023					0.002 U							
Selenium	D	mo/L	0.05									0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.002 U	0.002 U F1	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Selenium	T	mo/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	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Thallium	D	mo/L	0.002									0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U F1	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Thallium	T	mo/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	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 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
mo/L = milligrams per liter
pCi/L = picocuries per liter
NTU = nephelometric turbidity units
H = Holding times exceeded
J = Analyte detected below quantitation limits
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
S = Spike Recovery outside recovery limits
R = RPD outside accepted recovery limits
U = Not Detected at the Reporting Limit
T8 = Sample received past/too close to holding time expiration

1 Standard is from the Upper Tolerance Limit (UTL) calculated from background well APW-01R concentrations from 8 quarterly sampling events from 2017-2018
2 Standard value 6.22 is from the Lower Tolerance Limit (LTL) calculated from background well APW-01R concentrations from 8 quarterly sampling events from 2017-2018 and 9.0 is the regulatory standard
3 Eight episodes of groundwater sampling were conducted from September 2017 through February 2018 to establish background concentrations for the Site utilizing data from background wells APW-1R and APW-9. The final Groundwater Protection Standards (GPS) are the higher of the values provided in 35 IAC 845.600(a) and the final background concentrations as found in Table 6 of the 07/25/2019 GMZ Application with the exception of turbidity and pH. Radium 226+228 was the only value taken from Table 6.
Highlighted values exceed action level
NS = No standard

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

				Sampled prior to closure of CCR Impoundment										Post-Closure Sampling												
			Sample ID	APW-7-20170907	APW-7-20170928	APW-7-20171019	APW-7-20171109	APW-7-20171128	APW-7-20171227	APW-7-20180118	APW-7-20180208	APW-07-WG-20220616	APW-07-WG-20220914	APW-07-WG-20221130	APW-07-WG-20230130	APW-07-WG-20230626	APW-07-WG-20230919	APW-07-WG-20231128	APW-07-WG-20240111	APW-07-WG-20240430	APW-07-WG-20240904	APW-07-WG-20241016	APW-07-WG-20250625	APW-07-WG-20250904	APW-07-WG-20251120
			Location ID	APW-07	APW-07	APW-07	APW-07	APW-07	APW-07	APW-07	APW-07	APW-07	APW-07	APW-07	APW-07	APW-07	APW-07	APW-07	APW-07	APW-07	APW-07	APW-07	APW-07	APW-07	APW-07
			Sample Date	09/07/2017	09/28/2017	10/19/2017	11/09/2017	11/28/2017	12/27/2017	01/18/2018	02/08/2018	06/16/2022	09/14/2022	11/30/2022	01/30/2023	06/26/2023	09/19/2023	11/28/2023	01/11/2024	04/30/2024	09/04/2024	10/16/2024	06/25/2025	09/04/2025	11/20/2025
			Sample Type	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Parameter/Analyte	Total or Dissolved	Units	35 IAC 845.600																							
UNSPECIFIED																										
Fluoride	N	mg/L	4	0.35	0.21	0.19	0.2	0.2	0.19	0.2	0.18	0.18	0.17	0.18	0.19	0.17	0.18	0.2	0.172	0.15 U	0.199 P1	0.15 U	0.168	0.174	0.197
Radium-226	N	pCi/L	NS	0.47 ± 0.15 U	0 ± 0.06 U	0.505 ± 0.396	0.11 ± 0.08 U	0.16 ± 0.14 U	0.25 ± 0.1 U	0.14 ± 0.09 U	0.24 ± 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	0.11 ± 0.07 U	0.16 ± 0.06 U	0.775 ± 0.378	0.617 ± 0.356	0.197 ± 0.174	0.232 ± 0.212 J	0.127 ± 0.171 J	0.597 ± 0.399	0.362 ± 0.355 J
Radium-228	N	pCi/L	NS	-0.42 ± 0.79 U	0.76 ± 0.61 J	0.785 ± 0.412	1.13 ± 0.39	0.61 ± 0.51 U	0.14 ± 0.35 U	1.19 ± 0.55	0.53 ± 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 JQDR	0.45 ± 0.57 U	1.93 ± 0.264	0.803 ± 0.291	0.736 ± 0.361	1.77 ± 0.347	0.8 ± 0.610 J	1.32 ± 0.518	1.31 ± 0.435
Sulfate	N	mg/L	400	66	59	52	50	61	63	67	64	72	78	48	48	54	44	40	68.8	56.3	34.7 J6	46.3	39.4	37.4	48.7
CALC																										
Radium-226/228	N	pCi/L	7.002	0.47 ± 0.94 U	0.76 ± 0.67 U	1.29 ± 0.808	1.24 ± 0.47 U	0.77 ± 0.65 U	0.39 ± 0.45 U	1.33 ± 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 ± 0.69 U	0.61 ± 0.63 U	2.7 ± 0.461	1.42 ± 0.460	0.933 ± 0.401	2.01 ± 0.407	0.927 ± 0.634 J	1.91 ± 0.654	1.67 ± 0.561
FIELD PARAM																										
Turbidity, Field	N	NTU	17.96[1]									66.2	34.8	10.5	79.2	14.8	42.9	21	4.36	3.34	5.27	6.88	5.5	8.77	15.5
GEN CHEM																										
Chloride	N	mg/L	200	15	15	14	15	16	15	15	15	11	12	12	14	10	9	11	11.5	9.63	11.5	9.63	9.38	8.97	9.77
Dissolved Solids, Total	N	mg/L	1200	762	786	624	730	742	736	720	740	780	815 H	800	824	665	740	790	734	727	673	741	683	729	706
pH, Lab	N	pH units	6.22-9.02[2]	6.84	6.84	6.86	6.87	6.83	6.96	6.97	6.88	6.88	7.02	6.78	7.23	6.79 H	6.94 H	6.86 H	7.31 T8	7.02 T8	7.03 T8	6.93 T8	7.22 T8	7.08 T8	7.01 T8
METALS																										
Antimony	D	mg/L	0.006									0.001 U	0.001 U	0.001 U	0.0015	0.001 U	0.001 U	0.001 U	0.004 U	0.004 U F1	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U
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	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U
Arsenic	D	mg/L	0.01									0.0011	0.001 U	0.001 U	0.001 U	0.0012	0.0013	0.0016	0.002 U	0.002 U F1	0.002 U	0.002 U	0.002 U	0.002 U	0.002 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	0.0023	0.0016	0.0011	0.0014	0.0014	0.0018	0.0022	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Barium	D	mg/L	2									0.334	0.255	0.354 B	0.411	0.303	0.336	0.465	0.256	0.28 F1	0.252	0.265	0.255	0.256	0.267
Barium	T	mg/L	2	0.465	0.448	0.394	0.401	0.37	0.374	0.38	0.359	0.374	0.382	0.381	0.371	0.312	0.303	0.522	0.36	0.349	0.309	0.351	0.31	0.337	0.335
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	0.002 U	0.002 U F1	0.002 U	0.002 U	0.002 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	0.001 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Boron	D	mg/L	2									0.148	0.193	0.199	0.267	0.208	0.192	0.243		0.2 U F1	0.505	0.225	0.217	0.204	0.211
Boron	T	mg/L	2	0.235	0.308	0.302	0.3	0.278	0.342	0.298	0.318	0.168	0.208	0.217	0.246	0.237	0.181	0.274		0.2 U	0.526	0.228	0.204	0.215	0.212
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 F1	0.001 U	0.001 U	0.001 U	0.001 U	0.001 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	0.001 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[3]									222	199	204	199	180 S	196	162	203	216 F1	185	171	195	201	217
Calcium	T	mg/L	103.2[3]	192	204	171	187	196	193	191	185	238	210	209	200	183 BS	161	177	209	213	192	219	199	212	213
Chromium	D	mg/L	0.1									0.0015 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 F1	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Chromium	T	mg/L	0.1	0.0017	0.0063	0.0026	0.001 U	0.001 U	0.0329	0.001 U	0.001 U	0.0041	0.0021	0.0015 U	0.0034	0.0015 U	0.0057	0.0024	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 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	0.002 U	0.002 U F1	0.002 U	0.002 U	0.002 U	0.002 U	0.002 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 J	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0013	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Iron	D	mg/L	NS																0.1 U						
Iron	T	mg/L	NS									17.3							18.9						
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	0.002 U	0.002 U F1	0.002 U	0.002 U	0.002 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	0.0074	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Lithium	D	mg/L	0.04									0.0126	0.0148	0.0158	0.0191	0.0136	0.0184	0.0212	0.0176	0.0167 F1	0.0151	0.0173	0.0138	0.0139	0.0152
Lithium	T	mg/L	0.04	0.0147	0.0181	0.0172	0.0176	0.0185	0.0191	0.0181	0.0178	0.0143	0.0161	0.0166	0.0181	0.0153	0.0141	0.0231	0.019	0.0174	0.0152	0.0169	0.0141	0.0154	0.0151
Manganese	D	mg/L	NS																1.16						
Manganese	T	mg/L	NS									1.11							1.19						
Mercury	D	mg/L	0.002										0.0002 U						0.0002 U	0.0002 U F1	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	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Molybdenum	D	mg/L	0.1									0.0026	0.0026	0.0021	0.0027	0.0027	0.0029	0.004	0.005 U	0.005 U F1	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Molybdenum	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	0.0042	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Nickel	D	mg/L	NS									0.0008 J		0.001 U					0.002 U						
Nickel	T	mg/L	NS	0.0014	0.0033	0.0013	0.001 U	0.001 U	0.015	0.001 U	0.001 U	0.0042		0.001 U					0.002 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	0.002 U	0.002 U F1	0.002 U	0.002 U	0.002 U	0.002 U	0.002 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	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Thallium	D	mg/L	0.002									0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U F1	0.002 U	0.002 U	0.002 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	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U

Notes:
Empty cells = not analyzed
N = Normal Environmental Sample
FD = Field Duplicate Sample
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U = Not Detected at the Reporting Limit
T8 = Sample received past/too close to holding time expiration

1 Standard is from the Upper Tolerance Limit (UTL) calculated from background well APW-01R concentrations from 8 quarterly sampling events from 2017-2018
2 Standard value 6.22 is from the Lower Tolerance Limit (LTL) calculated from background well APW-01R concentrations from 8 quarterly sampling events from 2017-2018 and 9.0 is the regulatory standard
3 Eight episodes of groundwater sampling were conducted from September 2017 through February 2018 to establish background concentrations for the Site utilizing data from background wells APW-1R and APW-9. The final Groundwater Protection Standards (GPS) are the higher of the values provided in 35 IAC 845.600(a) and the final background concentrations as found in Table 6 of the 07/25/2019 GMZ Application with the exception of turbidity and pH. Radium 226+228 was the only value taken from Table 6.
Highlighted values exceed action level
NS = No standard

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

			Sampled prior to closure of CCR Impoundment									Post-Closure Sampling															
Sample ID			APW-8-20170907	APW-8-20170928	APW-8-20171018	APW-8-20171108	APW-8-20171127	APW-8-20171227	APW-8-20180117	APW-8-20180208	APW-08-WG-20220616	APW-08-WG-20220915	APW-08-WG-20221130	APW-08-WG-20230202	APW-08-WG-20230626	APW-08-WG-20230919	APW-08-WG-20231128	APW-08-WG-20240111	APW-08-WG-20240430	APW-08-WG-20240904	APW-08-WG-20241016	APW-08-WG-20250115	APW-08-WG-20250625	APW-08-WG-20250905	APW-08-WG-20251120
Location ID			APW-08	APW-08	APW-08	APW-08	APW-08	APW-08	APW-08	APW-08	APW-08	APW-08	APW-08	APW-08	APW-08	APW-08	APW-08	APW-08	APW-08	APW-08	APW-08	APW-08	APW-08	APW-08	APW-08
Sample Date			09/07/2017	09/28/2017	10/18/2017	11/08/2017	11/27/2017	12/27/2017	01/17/2018	02/08/2018	06/16/2022	09/15/2022	11/30/2022	02/02/2023	06/26/2023	09/19/2023	11/28/2023	01/11/2024	04/30/2024	09/04/2024	10/16/2024	01/15/2025	06/25/2025	09/05/2025	11/20/2025
Sample Type			N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Parameter/Analyte	Total or Dissolved	Units	35 IAC 845.600																						
UNSPECIFIED																									
Fluoride	N	mg/L	4	0.3	0.3	0.29	0.29	0.28	0.28	0.3	0.28	0.29	0.26	0.28	0.26	0.26	0.26	0.29	0.232	0.336	0.254	0.15 U	0.238 P1	0.25	0.253	0.266
Radium-226	N	pCi/L	NS	0.22 ± 0.12 U	0.12 ± 0.08 U	0.2 ± 0.393	0.11 ± 0.1 U	0.35 ± 0.16 U	0.14 ± 0.08 U	0.21 ± 0.11 U	0.39 ± 0.15 U	0.208 ± 0.236 J	0.27 ± 0.1 U	0.4 ± 0.13 U	0.247 ± 0.244 J	0.34 ± 0.12 U	0.23 ± 0.09 U	0.1 ± 0.05 U	1.71 ± 0.459	0.341 ± 0.271	0.296 ± 0.200	0.171 ± 0.182 J	0.382 ± 0.233	0.258 ± 0.193	0.273 ± 0.291 J	0.268 ± 0.303 J
Radium-228	N	pCi/L	NS	1.13 ± 0.63	0.88 ± 0.48 J	1.3 ± 0.545	0.37 ± 0.25 U	0.77 ± 0.55 J	1.31 ± 0.58	0.64 ± 0.49 U	0.49 ± 0.43 U	0.526 ± 0.224	0.86 ± 0.62 J	1.68 ± 0.77	-0.157 ± 0.282 U	0.11 ± 0.6 U	0.81 ± 0.49 JQ26	0.15 ± 0.54 U	0.687 ± 0.215	-0.254 ± 0.268 U	0.959 ± 0.240	0.874 ± 0.414	1.1 ± 0.445	0.546 ± 0.543 J	0.95 ± 0.568	1.03 ± 0.451
Sulfate	N	mg/L	400	43	40	38	40	39	38	39	37	39	39	34	29	31	23	24	24.7	28.6	33.4 J6	29.4	28.5	28.6	27.7	26.2
CALC																										
Radium-226/228	N	pCi/L	7.002	1.35 ± 0.75 U	1 ± 0.56 U	1.5 ± 1.61	0.48 ± 0.35 U	1.12 ± 0.71 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 J	0.45 ± 0.72 U	1.04 ± 0.58 U	0.25 ± 0.59 U	2.39 ± 0.507	0.341 ± 0.381 J	1.26 ± 0.312	1.04 ± 0.452	1.48 ± 0.502	0.804 ± 0.576 J	1.22 ± 0.638	1.3 ± 0.543
FIELD PARAM																										
Turbidity, Field	N	NTU	17.96[1]								119	139	305	26.9	152	141	169	23.1	136	97.4	47.5	8.97	6.7	12	172
GEN CHEM																										
Chloride	N	mg/L	200	9	10	10	10	10	11	12	11	9	11	12	13	10	10	11	10.6	10.2	8.97	8.61	8.85	8.66	8.39	7.46
Dissolved Solids, Total	N	mg/L	1200	438	458	436	446	466	410	398	442	382	372 H	370	378	420	440	395	370	371	393	403	418	422	426	432
pH, Lab	N	pH units	6.22-9.02[2]	7.04	7.07	7	7.12	7.25	7.11	7.04	7.04	7.34	7.47	7.25	7.31	7.18 H	7.16 H	7.27 H	7.68 T8	7.53 T8	7.2 T8	7.33 T8	7.53 T8	7.63 T8	7.36 T8	7.25 T8
METALS																										
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	0.004 U	0.004 U F1	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U
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	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U
Arsenic	D	mg/L	0.01									0.0011	0.001 U	0.0012	0.001	0.001	0.0014	0.0019	0.002 U	0.002 U F1	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Arsenic	T	mg/L	0.01	0.001 U	0.0011	0.001 U	0.001 U	0.001 U	0.001	0.001 U	0.001 U	0.0022	0.0015	0.0017	0.0016	0.002	0.0018	0.0025	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Barium	D	mg/L	2									0.194	0.163	0.146 B	0.15	0.191	0.236	0.255	0.17	0.172 F1	0.194	0.188	0.191	0.191	0.185	0.216
Barium	T	mg/L	2	0.207	0.256	0.219	0.24	0.217	0.223	0.226	0.215	0.235	0.19	0.179	0.167	0.225	0.199	0.261	0.17	0.173	0.197	0.192	0.199	0.206	0.2	0.21
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	0.002 U	0.002 U F1	0.002 U	0.002 U	0.002 U	0.002 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	0.001 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Boron	D	mg/L	2									0.0277	0.0993	0.0844	0.0895	0.124	0.117	0.154		0.2 U F1	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Boron	T	mg/L	2	0.132	0.154	0.135	0.138	0.141	0.145	0.151	0.132	0.115	0.11	0.103	0.095	0.103	0.116	0.155	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
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 F1	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 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	0.0002 J	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	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[3]									108	79.7	75.4	72.1	92.6	94.1 S	71.3	83.1	88.4 F1	94.9	99.9	102	104	100	111
Calcium	T	mg/L	103.2[3]	97.4	105	92.6	101	102	98.6	95	97.8	91.3	85.1	82.8	79.4	99.4 B	86.4	81.2	82.8	87.8	98.3	102	105	104	102	107
Chromium	D	mg/L	0.1									0.0015 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 F1	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Chromium	T	mg/L	0.1	0.0018	0.0023	0.001 U	0.0059	0.001 U	0.0021	0.001 U	0.001 U	0.0054	0.0016	0.0036	0.0027	0.0082	0.0031	0.0049	0.002 U	0.002 U	0.002 U	0.00738	0.002 U	0.00204	0.002 U	0.00243
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	0.002 U	0.002 U F1	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Cobalt	T	mg/L	0.006	0.0017	0.0013	0.001	0.0012	0.001 U	0.001 U	0.001 U	0.001 U	0.002	0.0013	0.0016	0.0012	0.0019	0.0014	0.0021	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Iron	D	mg/L	NS																0.1 U							
Iron	T	mg/L	NS									3.14							0.44							
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	0.002 U	0.002 U F1	0.002 U	0.002 U	0.002 U	0.002 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	0.0024	0.001 U	0.0012	0.001 U	0.0028	0.0015	0.0018	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Lithium	D	mg/L	0.04									0.0141	0.0142	0.0132	0.0131	0.0125	0.022	0.0204	0.0134	0.0137 F1	0.0168	0.0196	0.017	0.018	0.017	0.0185
Lithium	T	mg/L	0.04	0.0196	0.0206	0.0207	0.0216	0.0223	0.0216	0.0192	0.0196	0.016	0.016	0.0147	0.0155	0.0157	0.0177	0.0211	0.0142	0.0147	0.0173	0.0187	0.0181	0.019	0.018	0.0186
Manganese	D	mg/L	NS																0.0443							
Manganese	T	mg/L	NS									0.202							0.0435							
Mercury	D	mg/L	0.002										0.0002 U						0.0002 U	0.0002 U F1	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	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									0.0008 J	0.0015 U	0.0015 U	0.0015 U	0.0015 U	0.0015 U	0.0015 U	0.005 U	0.005 U F1	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Molybdenum	T	mg/L	0.1	0.0011	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0015 J	0.0015 U	0.0015 U	0.0015 U	0.0015 U	0.0015 U	0.0015 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Nickel	D	mg/L	NS									0.0023	0.0012						0.00227							
Nickel	T	mg/L	NS	0.0039	0.0043	0.0029	0.0062	0.0026	0.0027	0.0026	0.0026	0.0054	0.0077						0.00354							
Selenium	D	mg/L	0.05									0.0027	0.0068	0.0126	0.0128	0.0113	0.0121	0.0231	0.0173	0.0185 F1	0.00425	0.0193	0.0203	0.0169	0.0169	0.016
Selenium	T	mg/L	0.05	0.008	0.0141	0.0132	0.0149	0.0135	0.0141	0.0149	0.013	0.0036	0.0077	0.011	0.0148	0.0129	0.0122	0.0221	0.0169	0.0182	0.00529	0.0187	0.0196	0.0183	0.0166	0.0153
Thallium	D	mg/L	0.002									0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U F1	0.002 U	0.002 U	0.002 U	0.002 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	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 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 = nephalometric turbidity units
H = Holding times exceeded
J = Analyte detected below quantitation limits
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
S = Spike Recovery outside recovery limits
R = RPD outside accepted recovery limits
U = Not Detected at the Reporting Limit
T8 = Sample received past/too close to holding time expiration

1 Standard is from the Upper Tolerance Limit (UTL) calculated from background well APW-01R concentrations from 8 quarterly sampling events from 2017-2018
2 Standard value 6.22 is from the Lower Tolerance Limit (LTL) calculated from background well APW-01R concentrations from 8 quarterly sampling events from 2017-2018 and 9.0 is the regulatory standard
3 Eight episodes of groundwater sampling were conducted from September 2017 through February 2018 to establish background concentrations for the Site utilizing data from background wells APW-1R and APW-9. The final Groundwater Protection Standards (GPS) are the higher of the values provided in 35 IAC 845.600(a) and the final background concentrations as found in Table 6 of the 07/25/2019 GMZ Application with the exception of turbidity and pH. Radium 226+228 was the only value taken from Table 6.
Highlighted 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	35 IAC 845.600	Sampled prior to closure of CCR Impoundment							
			Sample ID	APW-9-20170907	APW-9-20170927	APW-9-20171018	APW-9-20171108	APW-9-20171127	APW-9-20171228	APW-9-20180117	APW-9-20180208
			Location ID	APW-09	APW-09	APW-09	APW-09	APW-09	APW-09	APW-09	APW-09
			Sample Date	09/05/2017	09/27/2017	10/18/2017	11/08/2017	11/27/2017	12/28/2017	01/17/2018	02/08/2018
			Sample Type	N	N	N	N	N	N	N	N
UNSPECIFIED											
Fluoride	N	mg/L	4	0.19	0.22	0.21	0.2	0.2	0.2	0.22	0.19
Radium-226	N	pCi/L	NS	0.17 ± .12 U	0.03 ± 0.07 U	-0.229 ± 0.389	0.14 ± 0.09 U	-0.06 ± 0.1 U	0.14 ± 0.08 U	0.05 ± 0.08 U	0.13 ± 0.13 U
Radium-228	N	pCi/L	NS	0.91 ± .69 J	0.67 ± 0.56 U	0.275 ± 0.316	0.49 ± 0.29 U	1.07 ± 0.48 U	1.06 ± 0.51	0.46 ± 0.46 U	0.23 ± 0.37 U
Sulfate	N	mg/L	400	65	47	53	65	50	42	28	25
CALC											
Radium-226/228	N	pCi/L	7.002	1.08 ± 0.81 U	0.7 ± 0.63 U	0.275 ± 0.705	0.63 ± 0.38 U	1.07 ± 0.58 U	1.2 ± 0.59 U	0.51 ± 0.54 U	0.36 ± 0.5 U
FIELD PARAM											
Turbidity, Field	N	NTU	17.96[1]								
GEN CHEM											
Chloride	N	mg/L	200	13	13	13	13	13	13	13	768
Dissolved Solids, Total	N	mg/L	1200	364 R	372	324	366	392	278	348	3380
pH, Lab	N	pH units	6.22-9.02[2]	7.31	7.35	7.39	7.39	7.52	7.42	7.57	7.33
METALS											
Antimony	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
Arsenic	D	mg/L	0.01								
Arsenic	T	mg/L	0.01	0.0031	0.0024	0.0018	0.0022	0.002	0.002	0.0022	0.0022
Barium	D	mg/L	2								
Barium	T	mg/L	2	0.227	0.171	0.118	0.133	0.121	0.129	0.133	0.125
Beryllium	D	mg/L	0.004								
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
Boron	D	mg/L	2								
Boron	T	mg/L	2	0.877	0.569	0.668	0.792	0.506	0.369	0.317	0.255
Cadmium	D	mg/L	0.005								
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
Calcium	D	mg/L	103.2[1]								
Calcium	T	mg/L	103.2[1]	85.9	85.3	76.5	81.9	85.6	81.5 S	80.3	92
Chromium	D	mg/L	0.1								
Chromium	T	mg/L	0.1	0.0148	0.0021	0.001 U	0.001 U	0.001 U	0.0011	0.0016	0.001 U
Cobalt	D	mg/L	0.006								
Cobalt	T	mg/L	0.006	0.0031	0.0014	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Iron	D	mg/L	NS								
Iron	T	mg/L	NS								
Lead	D	mg/L	0.0075								
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
Lithium	D	mg/L	0.04								
Lithium	T	mg/L	0.04	0.0176	0.0173	0.0174	0.018	0.0167	0.0173	0.0155	0.0148
Manganese	D	mg/L	NS								
Manganese	T	mg/L	NS								
Mercury	D	mg/L	0.002								
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
Molybdenum	D	mg/L	0.1								
Molybdenum	T	mg/L	0.1	0.0223	0.0252	0.0327	0.0303	0.0247	0.0246	0.0223	0.0224
Nickel	D	mg/L	NS								
Nickel	T	mg/L	NS	0.012	0.0032	0.001 U	0.001	0.001 U	0.001 U	0.0012	0.001 U
Selenium	D	mg/L	0.05								
Selenium	T	mg/L	0.05	0.0126	0.0139	0.017	0.0186	0.0138	0.0143	0.0147	0.0134
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	0.001 U

Parameter/Analyte	Total or Dissolved	Post-Closure Sampling										
Sample ID		APW-09-WG-20220615	APW-09-WG-20220913	APW-09-WG-20221130	APW-09-WG-20230201	APW-09-WG-20230627	APW-09-WG-20230920	DUP-02-WG-20230920	APW-09-WG-20231129	DUP-02-WG-20231129	APW-09-WG-20240111	DUP-02-WG-20240111
Location ID		APW-09	APW-09	APW-09	APW-09	APW-09	APW-09	APW-09	APW-09	APW-09	APW-09	APW-09
Sample Date		06/15/2022	09/13/2022	11/30/2022	02/01/2023	06/27/2023	09/20/2023	09/20/2023	11/29/2023	11/29/2023	01/11/2024	01/11/2024
Sample Type		N	N	N	N	N	N	FD	N	FD	N	FD
UNSPECIFIED												
Fluoride	N	0.23	0.19	0.2	0.19	0.19	0.2	0.19	0.2	0.21	0.197	0.186
Radium-226	N	0.267 ± 0.199	0.24 ± 0.09 U	0.06 ± 0.06 U	0.0975 ± 0.156 J	0.18 ± 0.09 U	0 ± 0.05 U	-0.02 ± 0.05 U	0 ± 0.02 U	0.03 ± 0.03 U	0.203 ± 0.210 J	0.459 ± 0.287
Radium-228	N	-0.213 ± 0.244 U	0.22 ± 0.49 U	0.77 ± 0.55 J	0.023 ± 0.243 U	0.35 ± 0.65 U	1.17 ± 0.6	0.22 ± 0.41 U	0.8 ± 0.65 J	0.2 ± 0.66 U	1.09 ± 0.251	0.723 ± 0.211
Sulfate	N	104	39	36	38	47	32	31	34	35	35.3	35.4
CALC												
Radium-226/228	N	0.267 ± 0.315 J	0.46 ± 0.58 U	0.83 ± 0.61 U	0.12 ± 0.289 U	0.53 ± 0.74 U	1.17 ± 0.65 U	0.22 ± 0.46 U	0.8 ± 0.67 U	0.23 ± 0.69 U	1.29 ± 0.327	1.18 ± 0.356
FIELD PARAM												
Turbidity, Field	N	34.2	7.3	7.28	23.6	24.7	5.64		3.82		13.4	
GEN CHEM												
Chloride	N	13	12	12	13	12	11	11	12	12	12.1	12.1
Dissolved Solids, Total	N	424	380 H	372	360	386	372	386	380	376	354	361
pH, Lab	N	7.48	7.59	7.32	7.72	7.32 H	7.56 H	7.65 H	7.5 H	7.45 H	8.03 T8	8.1 T8
METALS												
Antimony	D	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0011	0.001 U	0.004 U	0.004 U
Antimony	T	0.001 U	0.001 U	0.001 U	0.001 U	0.001	0.001 U	0.001 U	0.001 U	0.001 U	0.004 U	0.004 U
Arsenic	D	0.0019	0.0021	0.0019	0.0019	0.0021	0.0022	0.0021	0.002	0.002	0.00216	0.00206
Arsenic	T	0.0026	0.0025	0.0021	0.0024	0.0021	0.002	0.0023	0.0026	0.0028	0.00235	0.00214
Barium	D	0.129	0.111	0.109 B	0.107	0.116	0.114	0.117	0.109	0.108	0.118	0.12
Barium	T	0.186	0.134	0.124	0.122	0.123	0.12	0.125	0.131	0.143	0.138	0.136
Beryllium	D	0.001 U	0.001 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	0.001 U	0.001 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
Boron	D	1.32	0.327	0.24	0.239	0.572	0.234	0.236	0.169	0.166		
Boron	T	1.61	0.329	0.243	0.225	0.473	0.209	0.239	0.191	0.221		
Cadmium	D	0.001 U	0.001 U	0.001 U	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	0.001 U	0.001 U	0.001 U	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	107 S	76.5	78.3	76.3	82.8 S	81	81.1	73.5	73.6	80.2	78.4
Calcium	T	110	89.5	80.5	80.3	86.9 B	69.5	87.5	80.9	111	80.4	80.9
Chromium	D	0.0015 U	0.0015 U	0.0015 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	0.0011 J	0.0015 U	0.0015	0.0015 U	0.0015 U	0.0018	0.0015 U	0.0015 U	0.0015 U	0.002 U	0.002 U
Cobalt	D	0.001 U	0.001 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	0.001	0.001 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
Iron	D										0.1 U	0.1 U
Iron	T	0.496									0.179	0.21
Lead	D	0.001 U	0.001 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	0.001 U	0.0039	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	0.0184	0.0137	0.0131	0.0125	0.0163	0.0196	0.0184	0.0121	0.012	0.0129	0.0142
Lithium	T	0.0246	0.0143	0.0131	0.0137	0.0157	0.0134	0.015	0.0138	0.0163	0.0139	0.0143
Manganese	D										0.005 U	0.005 U
Manganese	T	0.599									0.124	0.119
Mercury	D		0.0002 U								0.0002 U	0.0002 U
Mercury	T	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	0.0351	0.0182	0.0139	0.0165	0.0211	0.0167	0.0173	0.0154	0.0146	0.0186	0.0188
Molybdenum	T	0.0455	0.0194	0.015	0.0173	0.0189	0.0162	0.0173	0.0188	0.0171	0.0163	0.0157
Nickel	D	0.0017		0.001 U							0.002 U	0.002 U
Nickel	T	0.004		0.0019							0.002 U	0.002 U
Selenium	D	0.021	0.0142	0.0147	0.0179	0.0186	0.0155	0.0162	0.0163	0.0159	0.022	0.0216
Selenium	T	0.0219	0.0151	0.0138	0.0196	0.0198	0.0153	0.0182	0.0214	0.0194	0.0225	0.0222
Thallium	D	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Thallium	T	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U

Parameter/Analyte	Total or Dissolved	Post-Closure Sampling													
Sample ID		APW-09-WG-20240430	DUP-02-WG-20240430	APW-09-WG-20240906	DUP-02-WG-20240906	APW-09-WG-20241017	DUP-02-WG-20241017	APW-09-WG-20250115	DUP-02-WG-20250115	APW-09-WG-20250625	DUP-02-WG-20250625	APW-09-WG-20250905	DUP-02-WG-20250905	APW-09-WG-20251120	DUP-02-WG-20251120
Location ID		APW-09	APW-09	APW-09	APW-09	APW-09	APW-09	APW-09	APW-09	APW-09	APW-09	APW-09	APW-09	APW-09	APW-09
Sample Date		04/30/2024	04/30/2024	09/06/2024	09/06/2024	10/17/2024	10/17/2024	01/15/2025	01/15/2025	06/25/2025	06/25/2025	09/05/2025	09/05/2025	11/20/2025	11/20/2025
Sample Type		N	FD	N	FD	N	FD	N	FD	N	FD	N	FD	N	FD
UNSPECIFIED															
Fluoride	N	0.339	0.23	0.215	0.198	0.15 U	0.203	0.15	0.162	0.204	0.208	0.211	0.201	0.223	0.231
Radium-226	N	0.252 ± 0.234 J	0.0618 ± 0.185 U	0.0956 ± 0.120 J	0.671 ± 0.288	0.0259 ± 0.0696 U	0.222 ± 0.187	0.246 ± 0.256 J	0.0607 ± 0.0981 J	0.132 ± 0.195 J	0.22 ± 0.272 J	-0.0072 ± 0.105 U	-0.0852 ± 0.181 U	0.237 ± 0.241 J	0.288 ± 0.279 J
Radium-228	N	0.614 ± 0.214	0.51 ± 0.220	0.997 ± 0.496	0.552 ± 0.263	-0.422 ± 0.295 U	0.314 ± 0.253 J	1.21 ± 0.764	0.63 ± 0.376 J	0.0472 ± 0.567 U	0.299 ± 0.463 U	0.0164 ± 0.480 U	0.551 ± 0.694 J	-0.16 ± 0.463 U	0.352 ± 0.507 U
Sulfate	N	53.6	53.5 J6	56.1	55.7	40.8	41.5	46.8	41.7	48.6	49.4	44	43.3	35.4	35.4
CALC															
Radium-226/228	N	0.866 ± 0.317	0.572 ± 0.287	1.09 ± 0.510	1.22 ± 0.390	0.0259 ± 0.303 U	0.536 ± 0.315	1.46 ± 0.806	0.691 ± 0.389	0.179 ± 0.600 U	0.519 ± 0.537 J	0.0164 ± 0.491 U	0.551 ± 0.717 J	0.237 ± 0.522 U	0.64 ± 0.579 J
FIELD PARAM															
Turbidity, Field	N	5.69		13.8		13.9		19.4		31.8		4.92		23.7	
GEN CHEM															
Chloride	N	14.3	14	11	11	10.7	11.1	12.8	14.8	12.1	12.2	9.87	9.54	11.8	11.8
Dissolved Solids, Total	N	367	365	389	387	370	371	370	362	378	393	374	375	363	350
pH, Lab	N	7.7 T8	7.81 T8	7.45 T8	7.6 T8	7.51 T8	7.56 T8	7.81 T8	8.15 T8	7.91 T8	7.9 T8	7.73 T8	7.67 T8	7.65 T8	7.82 T8
METALS															
Antimony	D	0.004 U F1	0.004 U F1	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U
Antimony	T	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U
Arsenic	D	0.00222 F1	0.00223 F1	0.00211	0.00215	0.0021	0.00213	0.00202	0.002 U	0.00233	0.00221	0.00213	0.00209	0.00223	0.00219
Arsenic	T	0.00227	0.00216	0.0023	0.00204	0.00219	0.0021	0.00226	0.00211	0.00266	0.0024	0.00225	0.00203	0.00221	0.00236
Barium	D	0.114 F1	0.117 F1	0.112	0.109	0.111	0.114	0.113	0.106	0.101	0.101	0.106	0.106	0.13	0.124
Barium	T	0.113	0.109	0.117	0.119	0.116	0.121	0.125	0.124	0.132	0.117	0.108	0.107	0.123	0.124
Beryllium	D	0.002 U F1	0.002 U F1	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Beryllium	T	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Boron	D	0.481 F1	0.466 F1	0.833	0.834	0.466	0.469	0.311	0.318	0.642	0.624	0.504	0.505	0.235	0.247
Boron	T	0.501	0.493	0.829	0.833	0.471	0.466	0.301	0.31	0.614	0.608	0.523	0.53	0.244	0.237
Cadmium	D	0.001 U F1	0.001 U F1	0.001 U	0.001 U	0.001 U	0.001 U	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	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	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	88.5 F1	88.3 F1	94.7	95.2	89.4	89.7	88.2	86.1	91	89.4	86.6	86.3	89.2	88.2
Calcium	T	88.3	87.9	90.4	91.7	88.4	87.5	90	90.2	91.9	92	89	88.5	85.8	85.1
Chromium	D	0.002 U F1	0.002 U F1	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Chromium	T	0.002 U	0.002 U	0.002 U	0.002 U	0.00338	0.0035	0.002 U	0.002 U	0.002 U	0.002 U	0.00268	0.002 U	0.002 U	0.002 U
Cobalt	D	0.002 U F1	0.002 U F1	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Cobalt	T	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Iron	D														
Iron	T														
Lead	D	0.002 U F1	0.002 U F1	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Lead	T	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Lithium	D	0.0159 F1	0.017 F1	0.0159	0.0159	0.0162	0.0151	0.0144	0.0128	0.0164	0.0163	0.0147	0.0141	0.0139	0.0138
Lithium	T	0.0163	0.0191	0.0163	0.0163	0.016	0.0149	0.0155	0.0146	0.0157	0.016	0.0166	0.0159	0.0134	0.0139
Manganese	D														
Manganese	T														
Mercury	D	0.0002 U F1	0.0002 U F1	0.000236	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	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	0.0311 F1	0.0309 F1	0.0255	0.0256	0.0194	0.019	0.0213	0.0205	0.0298	0.0301	0.0252	0.025	0.0212	0.0207
Molybdenum	T	0.031	0.0295	0.0259	0.0251	0.0196	0.0191	0.0214	0.0213	0.0336	0.0314	0.0252	0.0238	0.0184	0.0187
Nickel	D														
Nickel	T														
Selenium	D	0.0319 F1	0.0354 F1	0.0186	0.0182	0.0191	0.0175	0.0208	0.0203	0.0227	0.0223	0.017	0.0173	0.0167	0.0168
Selenium	T	0.0334	0.0328	0.0178	0.0186	0.0182	0.019	0.0204	0.0216	0.0226	0.0225	0.0164	0.016	0.016	0.0159
Thallium	D	0.002 U F1	0.002 U F1	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Thallium	T	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 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
H = Holding times exceeded
J = Analyte detected below quantitation limits
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
S = Spike Recovery outside recovery limits
R = RPD outside accepted recovery limits
U = Not Detected at the Reporting Limit
T8 = Sample received past/too close to holding time expiration

1 Standard is from the Upper Tolerance Limit (UTL) calculated from background well APW-01R concentrations from 8 quarterly sampling events from 2017-2018
2 Standard value 6.22 is from the Lower Tolerance Limit (LTL) calculated from background well APW-01R concentrations from 8 quarterly sampling events from 2017-2018 and 9.0 is the regulatory standard
3 Eight episodes of groundwater sampling were conducted from September 2017 through February 2018 to establish background concentrations for the Site utilizing data from background wells APW-1R and APW-9. The final Groundwater Protection Standards (GPS) are the higher of the values provided in 35 IAC 845.600(a) and the final background concentrations as found in Table 6 of the 07/25/2019 GMZ Application with the exception of turbidity and pH. Radium 226+228 was the only value taken from Table 6.
Highlighted values exceed action level
NS = No standard

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

				Sampled prior to closure of CCR Impoundment									Post-Closure Sampling														
			Sample ID	APW-10D-20170907	APW-10D-20170927	APW-10D-20171019	APW-10D-20171109	APW-10D-20171128	APW-10D-20171228	APW-10D-20180118	APW-10D-20180209	APW-10D-WG-20220615	APW-10D-WG-20220918	APW-10D-WG-20221129	APW-10D-WG-20230202	APW-10D-WG-20230626	APW-10D-WG-20230919	APW-10D-WG-20231127	APW-10D-WG-20240111	APW-10D-WG-20240430	APW-10D-WG-20240905	APW-10D-WG-20241015	APW-10D-WG-20250116	APW-10D-WG-20250625	APW-10D-WG-20250903	APW-10D-WG-20251119
			Location ID	APW-10D	APW-10D	APW-10D	APW-10D	APW-10D	APW-10D	APW-10D	APW-10D	APW-10D	APW-10D	APW-10D	APW-10D	APW-10D	APW-10D	APW-10D	APW-10D	APW-10D	APW-10D	APW-10D	APW-10D	APW-10D	APW-10D	APW-10D
			Sample Date	09/07/2017	09/27/2017	10/19/2017	11/09/2017	11/28/2017	12/28/2017	01/18/2018	02/09/2018	06/15/2022	09/16/2022	11/29/2022	02/02/2023	06/26/2023	09/19/2023	11/27/2023	01/11/2024	04/30/2024	09/05/2024	10/15/2024	01/16/2025	06/25/2025	09/03/2025	11/19/2025
			Sample Type	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Parameter/Analyte	Total or Dissolved	Units	35 IAC 845.600																							
UNSPECIFIED																										
Alkalinity	N	mg/L	4	8.1	8.12	8.1	8.1 U	8.1	8.1	8.11	8.1 U	8.12	8.1	8.12	8.13	8.11	8.11	8.14	8.15 U	8.15 U	8.15 U	8.15 U	8.15 U	8.15 U	8.15 FJ	8.15 U
Radium-226	N	pCi/L	NS	0.34 ± 0.12 U	-0.11 ± 0.1 U	0.121 ± 0.337	0.19 ± 0.12 U	0.16 ± 0.13 U	0.23 ± 0.1 U	0.08 ± 0.1 U	0 ± 0.07 U	0.249 ± 0.207	0.22 ± 0.09 U	0.31 ± 0.11 U	0.186 ± 0.157	0.31 ± 0.12 U	0.21 ± 0.09 U	0.14 ± 0.06 U	0.04 ± 0.170 U	0.134 ± 0.199 J	0.163 ± 0.151	0.108 ± 0.274 U	0.114 ± 0.141 J	0.155 ± 0.161 J	0.185 ± 0.256 J	0.651 ± 0.380
Radium-228	N	pCi/L	NS	1.16 ± 0.52	1.72 ± 0.64	0.633 ± 0.366	0.98 ± 0.33 J	0.47 ± 0.55 U	0.34 ± 0.37 U	0.98 ± 0.6 J	0.59 ± 0.43 U	1.19 ± 0.311	0.56 ± 0.58 U	0.28 ± 0.43 U	0.847 ± 0.370	1.39 ± 0.76	0.61 ± 0.49 U	1.36 ± 0.77	1.49 ± 0.351	0.886 ± 0.294	-0.266 ± 0.253 U	0.282 ± 0.302 J	2.1 ± 0.605	0.987 ± 0.557	0.697 ± 0.553 J	0.909 ± 0.378
Sulfate	N	mg/L	400	38	44	43	42	42	44	44	44	41	43	42	39	44	31	26	35.5	36.3	37.1	37.9	44.5	33	29.1	32
CALC																										
Radium-226/228	N	pCi/L	7.002	1.5 ± 0.64 U	1.72 ± 0.74 U	0.754 ± 0.703	1.17 ± 0.45 U	0.63 ± 0.68 U	0.57 ± 0.47 U	1.06 ± 0.7 U	0.59 ± 0.5 U	1.44 ± 0.374	0.78 ± 0.67 U	0.59 ± 0.54 U	1.03 ± 0.402	1.7 ± 0.88 U	0.82 ± 0.58 U	1.5 ± 0.83 U	1.53 ± 0.398	1.02 ± 0.355	0.163 ± 0.295 U	0.39 ± 0.408 J	2.21 ± 0.621	1.14 ± 0.580	0.881 ± 0.609 J	1.56 ± 0.536
FIELD PARAM																										
Turbidity, Field	N	NTU	17.96[1]									46.9	21.9	36.4	45.3	176	169	196	4.76	198	5.56	45.3	169	59.9	16.6	121
GEN CHEM																										
Chloride	N	mg/L	200	24	17	17	15	17	16	14	16	16	18	14	13	14	10	10	15.4	10.9	25.5	15	13.3	16.2	20.8	11.6
Dissolved Solids, Total	N	mg/L	1200	466	474	442	468	482	448	448	512	452	460 H	460	454	485	468	445	436	459	351	447	447	463	452	447
pH, Lab	N	pH units	6.22-9.02[2]	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	7.22 H	7.08 H	7.66 T8	7.38 T8	7.28 T8	7.31 T8	7.37 T8	7.65 T8	7.57 T8	7.4 T8
METALS																										
Antimony	D	mg/L	0.006									0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0013	0.004 U	0.004 U F1	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U
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	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U
Arsenic	D	mg/L	0.01									0.0008 J	0.001 U	0.0012	0.0011	0.0011	0.0011	0.0018	0.002 U	0.002 U F1	0.002 U	0.002 U	0.002 U	0.002 U	0.00355	0.002 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	0.001 U	0.0017	0.0057	0.0014	0.0017	0.0019	0.0016	0.0021	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.00492	0.002 U
Barium	D	mg/L	2									0.342	0.321	0.336	0.354	0.348	0.355	0.468	0.336	0.368 F1	0.317	0.334	0.34	0.32	0.287	0.363
Barium	T	mg/L	2	0.437	0.304	0.363	0.325	0.284	0.295	0.391	0.357	0.407	0.418	0.376	0.343	0.405	0.339	0.398	0.341	0.351	0.22	0.342	0.354	0.344	0.315	0.325
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	0.002 U	0.002 U F1	0.002 U	0.002 U	0.002 U	0.002 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	0.001 U	0.002 U	0.002 U F1	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Boron	D	mg/L	2									0.0786	0.0711	0.0841	0.0579	0.0704	0.0639	0.0823		0.2 U F1	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Boron	T	mg/L	2	0.0999	0.101	0.0843	0.0713	0.0885	0.0922	0.0923	0.0906	0.138	0.0731	0.0522	0.073	0.0674	0.066	0.0754		0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
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 F1	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 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	0.0011	0.001 U	0.001 U	0.001 U	0.001 U F1	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Calcium	D	mg/L	153.3[3]									143	134	113		114	116	83.4	119	121 F1	101	113	126	129	118	127
Calcium	T	mg/L	103.2[3]	118	136	120	121	125	123	148 S	124 S	135	374	115	122	611 B	118	120	125	141	98.5	129	142	135	123	127
Chromium	D	mg/L	0.1									0.0015 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 F1	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Chromium	T	mg/L	0.1	0.0036	0.0078	0.0022	0.0011	0.001 U	0.001 U	0.0042	0.001 U	0.0015 U	0.0148	0.0024	0.0015 U	0.0015	0.0062	0.0021	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Cobalt	D	mg/L	0.006									0.0025	0.0021	0.0032	0.003	0.0026	0.0026	0.0038	0.00228	0.00238 F1	0.002 U	0.002 U	0.00244	0.00253	0.00263	0.00298
Cobalt	T	mg/L	0.006	0.0039	0.0024	0.0025	0.0032	0.0017	0.0013	0.0026	0.0026	0.0034	0.0069	0.003	0.0033	0.007	0.0031	0.0039	0.00261	0.00271	0.002 U	0.00242	0.00271	0.00295	0.0028	0.00286
Iron	D	mg/L	NS																0.1 U							
Iron	T	mg/L	NS									0.758							0.175							
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	0.002 U	0.002 U F1	0.002 U	0.002 U	0.002 U	0.002 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	0.002	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Lithium	D	mg/L	0.04									0.0135	0.0133	0.0133	0.012	0.0148	0.02	0.0176	0.0135	0.014 F1	0.0116	0.0156	0.0142	0.0149	0.0126	0.0155
Lithium	T	mg/L	0.04	0.0147	0.0155	0.0146	0.0146	0.0153	0.0155	0.0142	0.014	0.018	0.0156	0.0126	0.0146	0.0158	0.0148	0.0154	0.0152	0.0142	0.0113	0.0147	0.0152	0.0144	0.0142	0.0147
Manganese	D	mg/L	NS																0.857							
Manganese	T	mg/L	NS									1.16							0.88							
Mercury	D	mg/L	0.002										0.0002 U						0.0002 U	0.0002 U F1	0.000229	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Mercury	T	mg/L	0.002	0.0003 U	0.0003 U	0.0003 U	0.0003 U	0.0003 U	0.0003 U	0.0003 U	0.0003 U	0.0003 U	0.0003 U	0.0003 U	0.0003 U	0.0003 U	0.0003 U	0.0003 U	0.0003 U	0.0003 U	0.0003 U	0.0003 U	0.0003 U	0.0003 U	0.0003 U	0.0003 U	0.0003 U
Molybdenum	D	mg/L	0.1									0.0015 U	0.0015 U	0.0015 U	0.0015 U	0.0015 U	0.0015 U	0.0025	0.005 U	0.005 U F1	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Molybdenum	T	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	0.0015 U	0.0015 U	0.0015 U	0.0015 U	0.0015 U	0.0015 U	0.0015 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Nickel	D	mg/L	NS									0.0054		0.0054					0.00754							
Nickel	T	mg/L	NS	0.0095	0.0077	0.0065	0.0057	0.0035	0.0025	0.0072	0.0053	0.007		0.0063					0.00513							
Selenium	D	mg/L	0.05									0.001 U	0.0016	0.0015	0.0024	0.0013	0.0016	0.0043	0.00274	0.00238 F1	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 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	0.0014	0.0016	0.001 U	0.0021	0.001 U	0.0027	0.0016	0.0015	0.00369	0.00364	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Thallium	D	mg/L	0.002									0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U F1	0.002 U	0.002 U	0.002 U	0.002 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	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U

Notes:
Empty cells = not analyzed
N = Normal Environmental Sample
FD = Field Duplicate Samole
NA = not applicable
T = total
D = dissolved
mg/L = milligrams per liter
pCi/L = picocuries per liter
NTU = nephelometric turbidity units
H = Holding times exceeded
J = Analyte detected below quantitation limits
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
S = Spike Recovery outside recovery limits
R = RPD outside accepted recovery limits
U = Not Detected at the Reporting Limit
T8 = Sample received past/too close to holding time expiration

1 Standard is from the Upper Tolerance Limit (UTL) calculated from background well APW-01R concentrations from 8 quarterly sampling events from 2017-2018
2 Standard value 6.22 is from the Lower Tolerance Limit (LTL) calculated from background well APW-01R concentrations from 8 quarterly sampling events from 2017-2018 and 9.0 is the regulatory standard
3 Eight episodes of groundwater sampling were conducted from September 2017 through February 2018 to establish background concentrations for the Site utilizing data from background wells APW-1R and APW-9. The final Groundwater Protection Standards (GPS) are the higher of the values provided in 35 IAC 845.600(a) and the final background concentrations as found in Table 6 of the 07/25/2019 GMZ Application with the exception of turbidity and pH. Radium 226+228 was the only value taken from Table 6.
Highlighted values exceed action level
NS = No standard

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

				Sampled prior to closure of CCR Impoundment														Post-Closure Sampling									
			Sample ID	APW-10S-20170907	APW-10S-20170927	APW-10S-20171019	APW-10S-20171109	APW-10S-20171128	APW-10S-20171228	APW-10S-20180118	APW-10S-20180209	APW-10S-20220615	APW-10S-20220915	APW-10S-20221129	APW-10S-20230202	APW-10S-20230626	APW-10S-20230919	APW-10S-20231127	APW-10S-20240111	APW-10S-20240430	APW-10S-20240905	APW-10S-20241015	APW-10S-20250116	APW-10S-20250625	APW-10S-20250903	APW-10S-20251119
			Location ID	APW-10S	APW-10S	APW-10S	APW-10S	APW-10S	APW-10S	APW-10S	APW-10S	APW-10S	APW-10S	APW-10S	APW-10S	APW-10S	APW-10S	APW-10S	APW-10S	APW-10S	APW-10S	APW-10S	APW-10S	APW-10S	APW-10S	APW-10S
			Sample Date	09/07/2017	09/27/2017	10/19/2017	11/09/2017	11/28/2017	12/28/2017	01/18/2018	02/09/2018	06/15/2022	09/15/2022	11/29/2022	02/02/2023	06/26/2023	09/19/2023	11/27/2023	01/11/2024	04/30/2024	09/05/2024	10/15/2024	01/16/2025	06/25/2025	09/03/2025	11/19/2025
			Sample Type	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Parameter/Analyte	Total or Dissolved	Units	35 IAC 845.600																							
UNSPECIFIED																										
Alkalinity	N	mg/L	4	0.19	0.21	0.16	0.16	0.16	0.17	0.17	0.16	0.17	0.15	0.17	0.15	0.15	0.16	0.18	0.15 U	0.15 U	0.351	0.15 U	0.199	0.238	0.265	0.187
Radium-226	N	pCi/L	NS	0.4 ± 0.14 U	0.19 ± 0.11 U	0.774 ± 0.430	0.16 ± 0.11 U	0.18 ± 0.16 U	0.23 ± 0.1 U	0.29 ± 0.12 U	0.24 ± 0.13 U	0.778 ± 0.324	0.3 ± 0.1 U	0.31 ± 0.11 U	1.08 ± 0.395	0.37 ± 0.13 U	0.59 ± 0.14 U	0.32 ± 0.09 U	0.313 ± 0.206	0.347 ± 0.299 J	0.498 ± 0.257	0.236 ± 0.267 J	0.331 ± 0.211	0.446 ± 0.231	0.869 ± 0.405	0.889 ± 0.351
Radium-228	N	pCi/L	NS	0.38 ± 0.47 U	0.98 ± 0.7 J	0.856 ± 0.391	0.71 ± 0.33 J	0.66 ± 0.57 U	0.56 ± 0.43 U	2.71 ± 0.78	0.93 ± 0.52 J	0.475 ± 0.268 J	2.52 ± 0.91	1.64 ± 0.68	0.162 ± 0.371 U	-0.18 ± 0.47 U	4.24 ± 0.91	0.95 ± 0.66 J	2.1 ± 0.728	0.234 ± 0.289 U	-0.0143 ± 0.345 U	0.934 ± 0.351	1.69 ± 0.451	0.575 ± 0.588 J	1.19 ± 0.510	1.6 ± 0.479
Sulfate	N	mg/L	400	10	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	21 S	10 U	10 U	10 U	10 SU	10 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
CALC																										
Radium-226/228	N	pCi/L	7.002	0.78 ± 0.61	1.17 ± 0.81 U	1.63 ± 0.821	0.87 ± 0.46 U	0.84 ± 0.71 U	0.79 ± 0.54 U	3 ± 0.9	1.17 ± 0.65 U	1.25 ± 0.42	2.82 ± 1.01	1.95 ± 0.79 U	1.24 ± 0.542	0.37 ± 0.6 U	4.83 ± 1.05	1.27 ± 0.75 U	2.42 ± 0.307	0.582 ± 0.416 J	0.498 ± 0.430 J	1.17 ± 0.441	2.02 ± 0.498	1.02 ± 0.632	2.06 ± 0.651	2.48 ± 0.594
FIELD PARAM																										
Turbidity, Field	N	NTU	17.96[1]									61.5	34.3	52.6	37.3	57.2	63.6	13.1	3.78	17.1	9.12	20.4	7.11	60.1	5.22	44
GEN CHEM																										
Chloride	N	mg/L	200	10	7	6	6	6	6	6	6	12	15	18	21	14	15	20	17.2	11.4	10.3	13.2	14.4	12.4	10.4	14.6
Dissolved Solids, Total	N	mg/L	1200	708	720	678	708	734	720	680 R	762	735	770 H	750	780	725	775	900	692	744	751	758	758	770	780	714
pH, Lab	N	pH units	6.22-9.02[2]	6.99	6.96	6.95	6.98	6.97	6.98	7.06	6.91	7.09	7.2	6.95	7.2	7.01 H	7.17 H	7.01 H	7.58 T8	7.18 T8	6.96 T8	7.16 T8	7.28 T8	7.27 T8	7.29 T8	7.2 T8
METALS																										
Antimony	D	mg/L	0.006									0.001 U	0.001 U	0.001 U	0.0016	0.001 U	0.001 U	0.001 U	0.004 U	0.004 U F1	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U
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	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U
Arsenic	D	mg/L	0.01									0.152	0.0612	0.0138	0.171	0.166	0.176	0.251	0.0628	0.0639 F1	0.062	0.0557	0.0637	0.0578	0.0694	0.0352
Arsenic	T	mg/L	0.01	0.186	0.189	0.18	0.209	0.183	0.193	0.23	0.198	0.185	0.167	0.182	0.191	0.184	0.174	0.276	0.196	0.198	0.19	0.174	0.191	0.194	0.192	0.19
Barium	D	mg/L	2									0.471	0.393	0.163 R	0.506	0.506	0.567	0.717	0.388	0.393 F1	0.395	0.305	0.416	0.337	0.376	0.36
Barium	T	mg/L	2	0.613	0.634	0.543	0.668	0.565	0.598	0.703	0.585	0.575	0.412	0.536	0.525	0.599	0.591	0.804	0.597	0.59	0.567	0.474	0.593	0.596	0.601	0.556
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	0.002 U	0.002 U F1	0.002 U	0.002 U	0.002 U	0.002 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	0.001 U	0.002 U	0.002 U F1	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Boron	D	mg/L	2									0.57	0.541	7.68	0.497	0.578	0.571	0.682		0.544 F1	0.535	0.562	0.563	0.552	0.553	0.579
Boron	T	mg/L	2	0.525	0.544	0.536	0.595	0.545	0.573	0.645	0.582	0.683	0.565	0.569	0.592	0.582	0.553	0.555		0.571	0.554	0.567	0.554	0.591	0.574	0.586
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 F1	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 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	0.001 U	0.001 U	0.001 U F1	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Calcium	D	mg/L	103.3[3]									169	156	142	145	142	151	137	152	160 F1	154	152	159	159	157	160
Calcium	T	mg/L	103.3[3]	156	144	135	152	150	145	140	140	161	171 S	154	145	153 R	134	129 S	162	163	163	162	168	163	164	158 V
Chromium	D	mg/L	0.1									0.0015 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 F1	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Chromium	T	mg/L	0.1	0.0091	0.0019	0.001	0.0016	0.001 U	0.0016	0.0019	0.001 U	0.0015 J	0.015	0.0032	0.0023	0.0025	0.0087	0.0016	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.00271
Cobalt	D	mg/L	0.006									0.0001 J	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.002 U	0.002 U F1	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 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	0.0006 J	0.0021	0.0013	0.001 U	0.001 U	0.0021	0.0013	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Iron	D	mg/L	NS																0.1 U							
Iron	T	mg/L	NS									19.6							17.2							
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	0.002 U	0.002 U F1	0.002 U	0.002 U	0.002 U	0.002 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	0.0007 J	0.0043	0.0014	0.001 U	0.0016	0.0031	0.001 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Lithium	D	mg/L	0.04									0.0266	0.0286	0.0387 R	0.0268	0.0278	0.0349	0.0359	0.0302	0.0284 F1	0.0268	0.0296	0.0285	0.0288	0.0259	0.0309
Lithium	T	mg/L	0.04	0.0263	0.0278	0.0272	0.0289	0.0293	0.0308	0.0316	0.0297	0.0353	0.033	0.0307	0.0323	0.0291	0.0301	0.0401	0.0328	0.0291	0.0272	0.0297	0.031	0.0278	0.0297	0.0283
Manganese	D	mg/L	NS																0.155							
Manganese	T	mg/L	NS									0.243							0.174							
Mercury	D	mg/L	0.002										0.0002 U						0.0002 U	0.0002 U F1	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Mercury	T	mg/L	0.002	0.0003 U	0.0003 U	0.0003 U	0.0003 U	0.0003 U	0.0003 U	0.0003 U	0.0003 U	0.0003 U	0.0003 U	0.0003 U	0.0003 U	0.0003 U	0.0003 U	0.0003 U	0.0003 U	0.0003 U	0.0003 U	0.0003 U	0.0003 U	0.0003 U	0.0003 U	0.0003 U	0.0003 U
Molybdenum	D	mg/L	0.1									0.0015 U	0.0015 U	0.0015 U	0.0015 U	0.0015 U	0.0015 U	0.0015 U	0.005 U	0.005 U F1	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Molybdenum	T	mg/L	0.1	0.0017	0.0016	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0015 U	0.0015 U	0.0015 U	0.0015 U	0.0015 U	0.0015 U	0.0021	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Nickel	D	mg/L	NS									0.001 U		0.001 U					0.002 U							
Nickel	T	mg/L	NS	0.0051	0.0012	0.001 U	0.0015	0.001 U	0.001 U	0.0014	0.001 U	0.0014		0.0031					0.002 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	0.002 U	0.002 U F1	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 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	0.002 U	0.002 U F1	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Thallium	D	mg/L	0.002									0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U F1	0.002 U	0.002 U	0.002 U	0.002 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	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U

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3 Eight episodes of groundwater sampling were conducted from September 2017 through February 2018 to establish background concentrations for the Site utilizing data from background wells APW-1R and APW-9. The final Groundwater Protection Standards (GPS) are the higher of the values provided in 35 IAC 845.600(a) and the final background concentrations as found in Table 6 of the 07/25/2019 GMZ Application with the exception of turbidity and pH. Radium 226+228 was the only value taken from Table 6.
Highlighted values exceed action level
NS = No standard

APPENDIX A FOURTH QUARTER 2025 CCR IMPOUNDMENT INSPECTION REPORT

Grand Tower Energy Center
Closed CCR Impoundment
Quarterly Inspection Form

Date: 11/20/2025

Time: 12:47-13:06

Name: Marshall Arendell
(Inspector)

Weather:

Temperature:

53 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

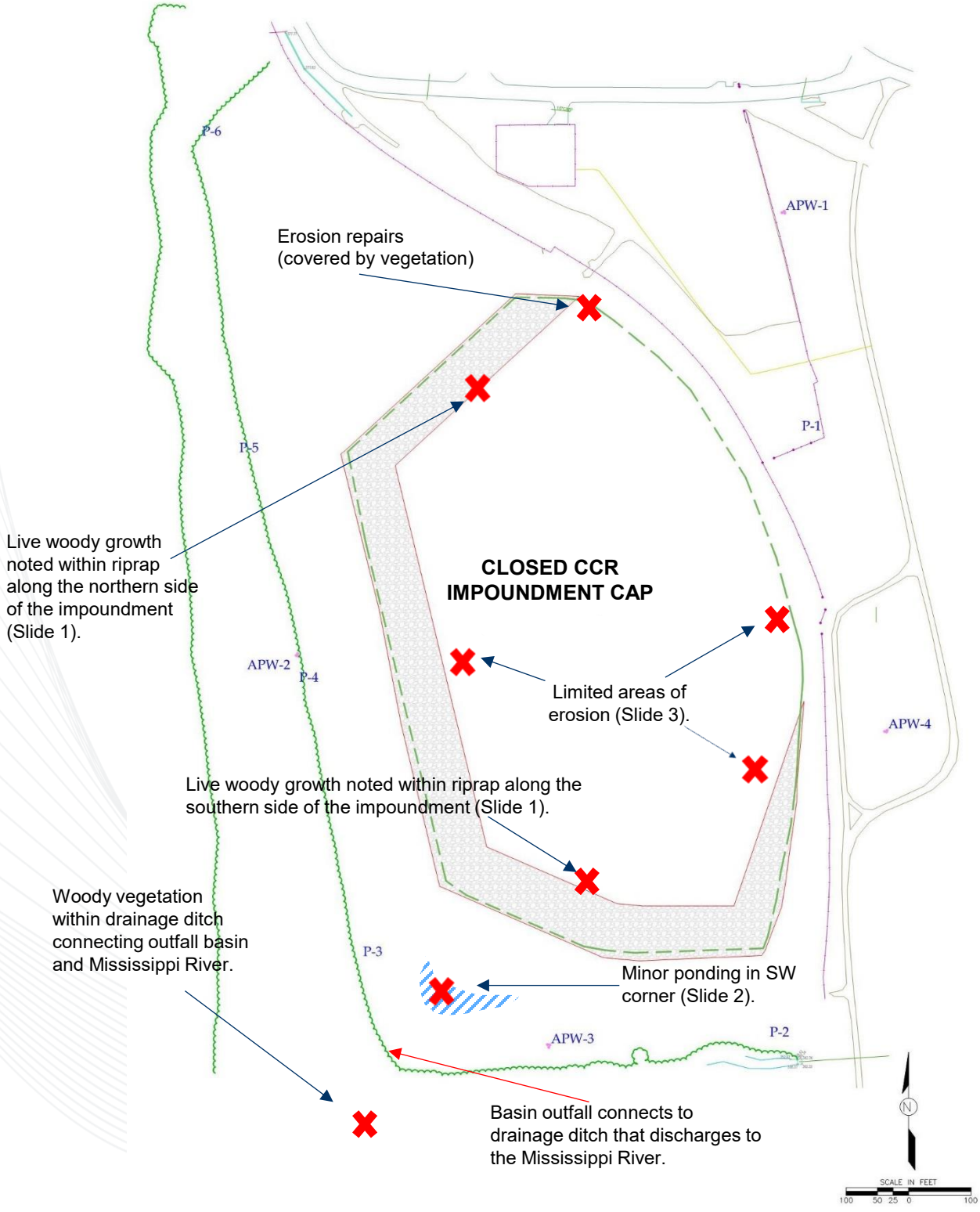
☐ Other

Observations in Detail Below:

- ERM onsite for the November inspection of the CCR impoundment and 4Q25 groundwater sampling event.
- Repairs made to the erosional channel on the NE face of the impoundment cap in 2024 held. ERM will continue to monitor.
- Continued monitoring of additional erosional channels across the west, east, and southern faces of the closed CCR impoundment cap. No additional controls necessary currently. ERM will continue to monitor.
- Ponding continues to be noted in the SW corner of the basin near the outfall. No adverse effects to the impoundment cap are associated with the ponding. ERM will continue to monitor.
- Woody vegetation noted on the north and south face of the closed CCR impoundment cap. Vegetation produced foliage and was alive during the Q3 inspection. ERM recommends herbicide treatment in the summer of 2026.
- Woody vegetation noted in the outfall channel to the drainage ditch connected to the Mississippi River. Vegetation does not present an immediate issue to surface water flowing from the basin to the drainage ditch to the river. ERM will continue to monitor and recommend removal if necessary.

Attach additional pages if necessary.

Observation Locations Map

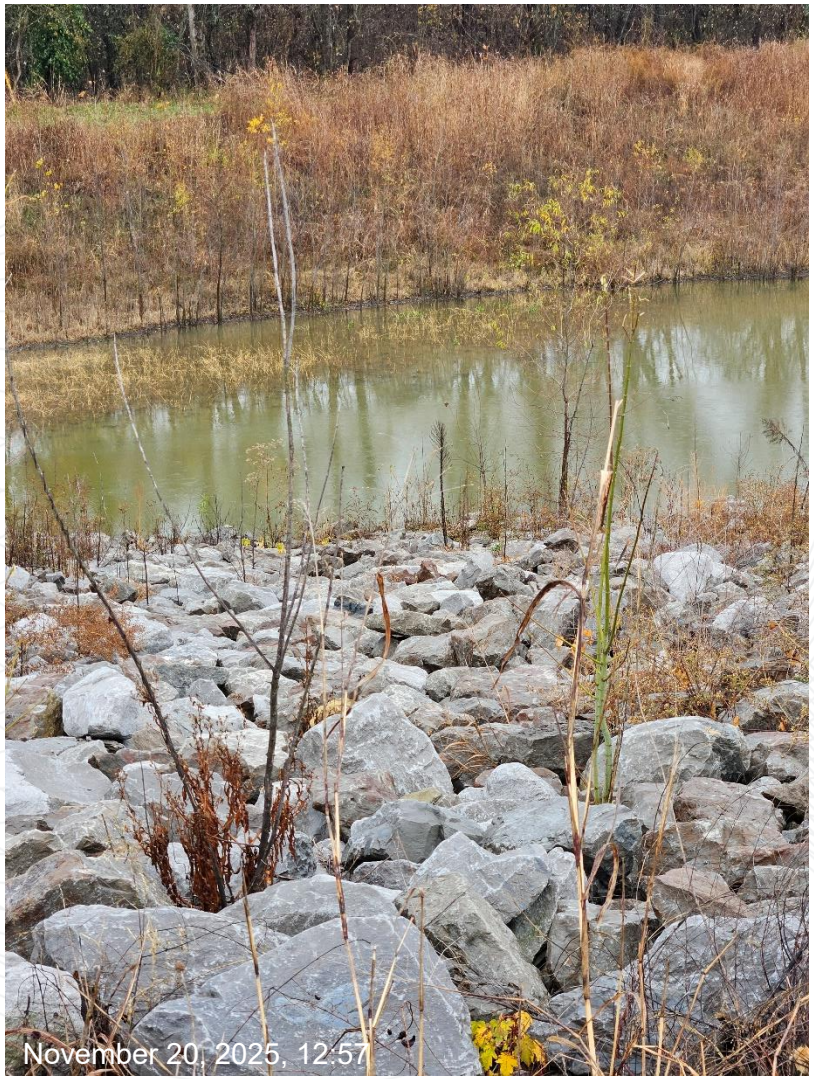


Grand Tower Energy Center Q4 2025 Closed CCR Impoundment Cap Inspection

Woody vegetation observed in the N and S side riprap

View facing N from the south of the impoundment cap

View facing west from the NE corner of the impoundment cap



Ponding in the SW Corner of Site Basin Near the Outfall

Ponded area in SW corner of site as viewed from APW-6D/S

Ponded area in SW corner of site as viewed from APW-6D/S

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.

Minor Erosional Channels

Erosion on the W side of impoundment cap. Photo taken facing east towards the impoundment cap. Approx. 4-6” deep.

Erosion on the E side of impoundment cap. Photo taken facing west towards the impoundment cap. Approx. 4-6” deep.

Erosion on the E side of impoundment cap. Photo taken facing west towards the impoundment cap. Approx. 6-8” deep.

APPENDIX B FOURTH QUARTER 2025 GROUNDWATER MONITORING WELL INSPECTION FORMS

Well Inspection Worksheet

Grand Tower Energy Center

Grand Tower, IL

Well ID:	APW-01R		Date:	11/19/2025
Total Depth (Actual):	58.30	(BTOC)	Time:	1015
Total Depth (Measured):	59.19	(BTOC)	Collection Order:	8
Depth to Water (Measured):	35.88	(BTOC)		

Is well screen occluded more than 10%?	No
If Yes, list steps for redevelopment:	
LNAPL Present:	No
If Yes, measured thickness =	N/A
DNAPL Present:	No
If Yes, measured thickness =	N/A

Well Completion Type:

Condition of protector: INTACT	Yes
Well ID present and readable:	Yes
Locks intact:	Yes
Weep hole present:	Yes
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:	N/A
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-02		Date:	11/19/2025
Total Depth (Actual):	58.75	(BTOC)	Time:	938
Total Depth (Measured):	57.7	(BTOC)	Collection Order:	3
Depth to Water (Measured):	30.5	(BTOC)		

Is well screen occluded more than 10%?	No
If Yes, list steps for redevelopment:	
LNAPL Present:	No
If Yes, measured thickness =	N/A
DNAPL Present:	No
If Yes, measured thickness =	N/A

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:	N/A
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:

Water in casing almost to well level

Well Inspection Worksheet

Grand Tower Energy Center

Grand Tower, IL

Well ID:	APW-03		Date:	11/19/2025
Total Depth (Actual):	59.65	(BTOC)	Time:	1020
Total Depth (Measured):	59.41	(BTOC)	Collection Order:	9
Depth to Water (Measured):	35	(BTOC)		

Is well screen occluded more than 10%?	No
If Yes, list steps for redevelopment:	
LNAPL Present:	No
If Yes, measured thickness =	N/A
DNAPL Present:	No
If Yes, measured thickness =	N/A

Well Completion Type:

Condition of protector: INTACT	Yes
Well ID present and readable:	Yes
Locks intact:	Yes
Weep hole present:	Yes
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:	N/A
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:

No tubing present well. Replaced with new dedicated tubing during sampling.

Well Inspection Worksheet

Grand Tower Energy Center

Grand Tower, IL

Well ID:	APW-04		Date:	11/1/1925
Total Depth (Actual):	60.40	(BTOC)	Time:	1010
Total Depth (Measured):	60.65	(BTOC)	Collection Order:	7
Depth to Water (Measured):	36.60	(BTOC)		

Is well screen occluded more than 10%?	No
If Yes, list steps for redevelopment:	
LNAPL Present:	No
If Yes, measured thickness =	N/A
DNAPL Present:	No
If Yes, measured thickness =	N/A

Well Completion Type:

Condition of protector: INTACT	Yes
Well ID present and readable:	Yes
Locks intact:	Yes
Weep hole present:	Yes
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:	N/A
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-05R		Date:	11/19/2025
Total Depth (Actual):	56.90	(BTOC)	Time:	940
Total Depth (Measured):	62.75	(BTOC)	Collection Order:	4
Depth to Water (Measured):	34.21	(BTOC)		

Is well screen occluded more than 10%?	No
If Yes, list steps for redevelopment:	
LNAPL Present:	No
If Yes, measured thickness =	N/A
DNAPL Present:	No
If Yes, measured thickness =	N/A

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:	N/A
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-06S		Date:	11/19/2025
Total Depth (Actual):	63.98	(BTOC)	Time:	930
Total Depth (Measured):	63.72	(BTOC)	Collection Order:	1
Depth to Water (Measured):	36.33	(BTOC)		

Is well screen occluded more than 10%?	No
If Yes, list steps for redevelopment:	
LNAPL Present:	No
If Yes, measured thickness =	N/A
DNAPL Present:	No
If Yes, measured thickness =	N/A

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:	N/A
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:

No tubing present well. Replaced with new dedicated tubing during sampling.

Well Inspection Worksheet

Grand Tower Energy Center

Grand Tower, IL

Well ID:	APW-06D		Date:	11/19/2025
Total Depth (Actual):	152.57	(BTOC)	Time:	1030
Total Depth (Measured):	154.55	(BTOC)	Collection Order:	2
Depth to Water (Measured):	33.25	(BTOC)		

Is well screen occluded more than 10%?	No
If Yes, list steps for redevelopment:	
LNAPL Present:	No
If Yes, measured thickness =	N/A
DNAPL Present:	No
If Yes, measured thickness =	N/A

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:	N/A
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:

No tubing present well. Replaced with new dedicated tubing during sampling.

Well Inspection Worksheet

Grand Tower Energy Center

Grand Tower, IL

Well ID:	APW-07		Date:	11/19/2025
Total Depth (Actual):	63.35	(BTOC)	Time:	1025
Total Depth (Measured):	63.18	(BTOC)	Collection Order:	10
Depth to Water (Measured):	30.31	(BTOC)		

Is well screen occluded more than 10%?	No
If Yes, list steps for redevelopment:	
LNAPL Present:	No
If Yes, measured thickness =	N/A
DNAPL Present:	No
If Yes, measured thickness =	N/A

Well Completion Type:

Condition of protector: INTACT	Yes
Well ID present and readable:	Yes
Locks intact:	Yes
Weep hole present:	Yes
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:	N/A
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:

Ants in well protector and tubing.

Well Inspection Worksheet

Grand Tower Energy Center

Grand Tower, IL

Well ID:	APW-08		Date:	11/19/2025
Total Depth (Actual):	61.89	(BTOC)	Time:	1030
Total Depth (Measured):	63.6	(BTOC)	Collection Order:	11
Depth to Water (Measured):	35.46	(BTOC)		

Is well screen occluded more than 10%?	No
If Yes, list steps for redevelopment:	
LNAPL Present:	No
If Yes, measured thickness =	N/A
DNAPL Present:	No
If Yes, measured thickness =	N/A

Well Completion Type:

Condition of protector: INTACT	Yes
Well ID present and readable:	Yes
Locks intact:	Yes
Weep hole present:	Yes
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:	N/A
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:	11/19/2025
Total Depth (Actual):	63.40	(BTOC)	Time:	1130
Total Depth (Measured):	63.12	(BTOC)	Collection Order:	12
Depth to Water (Measured):	35.64	(BTOC)		

Is well screen occluded more than 10%?	No
If Yes, list steps for redevelopment:	
LNAPL Present:	No
If Yes, measured thickness =	N/A
DNAPL Present:	No
If Yes, measured thickness =	N/A

Well Completion Type:

Condition of protector: INTACT	Yes
Well ID present and readable:	Yes
Locks intact:	Yes
Weep hole present:	Yes
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:	N/A
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-10S		Date:	11/19/2025
Total Depth (Actual):	62.84	(BTOC)	Time:	1153
Total Depth (Measured):	62.64	(BTOC)	Collection Order:	6
Depth to Water (Measured):	29.42	(BTOC)		

Is well screen occluded more than 10%?	No
If Yes, list steps for redevelopment:	
LNAPL Present:	No
If Yes, measured thickness =	N/A
DNAPL Present:	No
If Yes, measured thickness =	N/A

Well Completion Type:

Condition of protector: INTACT	Yes
Well ID present and readable:	Yes
Locks intact:	Yes
Weep hole present:	Yes
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:	N/A
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-10D		Date:	11/19/2025
Total Depth (Actual):	98.19	(BTOC)	Time:	1156
Total Depth (Measured):	98.00	(BTOC)	Collection Order:	5
Depth to Water (Measured):	27.96	(BTOC)		

Is well screen occluded more than 10%?	No
If Yes, list steps for redevelopment:	
LNAPL Present:	No
If Yes, measured thickness =	N/A
DNAPL Present:	No
If Yes, measured thickness =	N/A

Well Completion Type:

Condition of protector: INTACT	Yes
Well ID present and readable:	Yes
Locks intact:	Yes
Weep hole present:	Yes
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:	N/A
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:

Ants in well protector and on tubing.

APPENDIX C FOURTH QUARTER 2025 FIELD DATA FORMS

Well Development/Purging Data Sheet

Well/Piezometer Number: APW-1R | [ ] Development [X] Purging | Date: 11/20/2025 | Time Start: 1053 | Page 1 of 1

Project Name: GTEC Post Closure Monitoring Q4 2025 | Project Manager/Samplers: M. Arendell & M. Dawid | Project No.: 0761817

Client Company: Grand Tower Energy Center | Project/Task No.: 4

Site Name: GTEC Landfill | Site Address: 1820 Power Plant Rd Grand Tower, Illinois 62942

Development Criteria

- [ ] 3 Casing Volumes of Water Removal
- [X] Stabilization of Indicator Parameters
- [ ] Other

Water Volume Calculation

(2"-.1632 4"-.6524 6"-1.5)

Total Depth of Well (feet): 59.19
Screen Interval: to
Initial Depth to Water (feet): 35.88
Height (h) of Water Column in Well (feet):
Diameter (inches): Well 2" Gravel Pack

Item	Water Vol in Well	Purge Mult.	Purge/Dev Volume (Gal)
Well Casing			
Gravel Pack			
Drilling Fluids			
Total			

Water Quality Instrument

Calibration

- [X] YSI — Pro Plus
- [X] Solinst — Water Level Meter
- [X] Other: — HACH Turbidity Meter

Method of Purge/Development

Pump
- [X] Submersible (s)
- [ ] Peristaltic (p)
- [ ] Whale Pump (w)
- [ ] Other

Bailer
- [ ] Bottom Valve
- [ ] Double Check Valve
- [ ] Teflon
- [ ] Disposable

Water Management

- [X] Surface Discharge
- [ ] Containerize

Sample Information:

ID: APW-01R-WG-20251120 Date/Time: 11/20/25 / 1120
Analysis:
QA/QC Samples: NA

Stabilization Data

Time	Purge Rate		Removal Rate (mL/min)	Intake Depth (feet)	Water Depth (feet)	Water Volume Removed (gallons)		pH	Sp. Cond (µS/cm)	Temp (°C)	DO (mg/L)	ORP (mV)	Turbidity (mV)	Comments
	Vol (ml)	Time(sec)	v/t*60			Increment	Cumulative							
1053			500	54.19	35.92	-	initial	6.32	427.6	14.5	13.60	51.7	230.0	Cloudy, no odor
1056			500	54.19	35.92	0.25	0.3	6.33	463.9	15.5	6.90	44.00	216.0	Cloudy, no odor
1059			500	54.19	35.92	0.25	0.5	6.38	497.9	15.7	3.10	39.00	175.0	Cloudy, no odor
1103			500	54.19	35.92	0.25	0.8	6.44	523.3	15.8	1.70	32.60	121.0	Cloudy, no odor
1106			500	54.19	35.92	0.25	1.0	6.44	527.9	15.8	1.60	32.00	48.8	Cloudy, no odor
1109			500	54.19	35.92	0.25	1.3	6.47	535.3	15.8	1.50	29.50	49.1	Clear, no odor
1112			500	54.19	35.92	0.25	1.5	6.47	542.6	15.8	1.40	28.50	48.2	Clear, no odor
1115			500	54.19	35.92	0.25	1.8	6.50	547.1	15.8	1.4	28.1	47.8	Clear, no odor

Comments/Well Condition: Final DTW: 35.92

Signature (s) mdawid Date 11/20/2025 Reviewer Date

Well Development/Purging Data Sheet

Well/Piezometer Number: APW-2 | [ ] Development [X] Purging | Date: 11/19/2025 | Time Start: 1335 | Page 1 of 1

Project Name: GTEC Post Closure Monitoring Q4 2025 | Project Manager/Samplers: M. Arendell & M. Dawid | Project No.: 0761817

Client Company: Grand Tower Energy Center | Project/Task No.: 4

Site Name: GTEC Landfill | Site Address: 1820 Power Plant Rd Grand Tower, Illinois 62942

Development Criteria

- [ ] 3 Casing Volumes of Water Removal
- [X] Stabilization of Indicator Parameters
- [ ] Other

Water Volume Calculation

(2"-.1632 4"-.6524 6"-1.5)

Total Depth of Well (feet): 57.70
Screen Interval: to
Initial Depth to Water (feet): 34.10
Height (h) of Water Column in Well (feet):
Diameter (inches): Well 2" Gravel Pack

Item	Water Vol in Well	Purge Mult.	Purge/Dev Volume (Gal)
Well Casing			
Gravel Pack			
Drilling Fluids			
Total			

Water Quality Instrument

Calibration

- [X] YSI — Pro Plus
- [X] Solinst — Water Level Meter
- [X] Other: — HACH Turbidity Meter

Method of Purge/Development

Pump
- [X] Submersible (s)
- [ ] Peristaltic (p)
- [ ] Whale Pump (w)
- [ ] Other

Bailer
- [ ] Bottom Valve
- [ ] Double Check Valve
- [ ] Teflon
- [ ] Disposable

Water Management

- [X] Surface Discharge
- [ ] Containerize

Sample Information:

ID: APW-02-WG-20251119 | Date/Time: 11/19/25 / 1355
Analysis:
QA/QC Samples: NA

Stabilization Data

Time	Purge Rate		Removal Rate (mL/min)	Intake Depth (feet)	Water Depth (feet)	Water Volume Removed (gallons)		pH	Sp. Cond (µS/cm)	Temp (°C)	DO (mg/L)	ORP (mV)	Turbidity (mV)	Comments
	Vol (ml)	Time(sec)	v/t*60			Increment	Cumulative							
1335			200	52.7	38.90	-	initial	7.36	1010	14.3	0.90	-11.9	88.0	Clear, rotten egg-like odor
1338			200	52.7	40.65	0.1	0.1	7.28	1043	15.7	0.10	-47.7	71.9	Clear, rotten egg-like odor
1341			200	52.7	41.46	0.1	0.2	7.29	1040	15.8	0.10	-50.3	74.2	Clear, rotten egg-like odor
1344			200	52.7	41.90	0.1	0.3	7.27	1039	15.8	0.30	-52.3	73.4	Clear, rotten egg-like odor
1347			200	52.7	42.91	0.1	0.4	7.29	1035	16.3	0.10	-54.5	73.7	Clear, rotten egg-like odor
1350			200	52.7	43.30	0.1	0.5	7.28	1034	16.4	0.10	-55.4	72.4	Clear, rotten egg-like odor
1353			200	52.7	43.45	0.1	0.6	7.29	1036	16.5	0.10	-55.7	72.0	Clear, rotten egg-like odor

Comments/Well Condition: Final DTW: 43.5

Signature (s) [signature] Date 11/20/2025 Reviewer Date

Well Development/Purging Data Sheet

Well/Piezometer Number: APW-3 | [ ] Development [X] Purging | Date: 11/20/2025 | Time Start: 0915 | Page 1 of 1

Project Name: GTEC Post Closure Monitoring Q4 2025 | Project Manager/Samplers: M. Arendell & M. Dawid | Project No.: 0761817

Client Company: Grand Tower Energy Center | Project/Task No.: 4

Site Name: GTEC Landfill | Site Address: 1820 Power Plant Rd Grand Tower, Illinois 62942

Development Criteria

- [ ] 3 Casing Volumes of Water Removal
- [X] Stabilization of Indicator Parameters
- [ ] Other

Water Volume Calculation

(2"-.1632 4"-.6524 6"-1.5)

Total Depth of Well (feet): 59.41
Screen Interval: to
Initial Depth to Water (feet): 35.00
Height (h) of Water Column in Well (feet):
Diameter (inches): Well 2" Gravel Pack

Item	Water Vol in Well	Purge Mult.	Purge/Dev Volume (Gal)
Well Casing			
Gravel Pack			
Drilling Fluids			
Total			

Water Quality Instrument

Calibration

- [X] YSI — Pro Plus
- [X] Solinst — Water Level Meter
- [X] Other: — HACH Turbidity Meter

Method of Purge/Development

Pump
- [X] Submersible (s)
- [ ] Peristaltic (p)
- [ ] Whale Pump (w)
- [ ] Other

Bailer
- [ ] Bottom Valve
- [ ] Double Check Valve
- [ ] Teflon
- [ ] Disposable

Water Management

- [X] Surface Discharge
- [ ] Containerize

Sample Information:

ID: APW-03-WG-20251120 | Date/Time: 11/20/25 / 0940
Analysis:
QA/QC Samples: NA

Stabilization Data

Time	Purge Rate		Removal Rate (mL/min)	Intake Depth (feet)	Water Depth (feet)	Water Volume Removed (gallons)		pH	Sp. Cond (µS/cm)	Temp (°C)	DO (mg/L)	ORP (mV)	Turbidity (mV)	Comments
	Vol (ml)	Time(sec)	v/t*60			Increment	Cumulative							
0917			400	54.41	35.00	-	initial	8.16	687	13.8	1.00	-16.1	97.60	Clear, no odor
920			400	54.41	36.00	0.5	0.5	8.16	696	14.6	0.70	-19.9	87.20	Clear, no odor
923			400	54.41	37.00	0.5	1.0	8.12	686	15.0	0.80	-19.9	39.50	Clear, no odor
926			400	54.41	38.00	0.5	1.5	8.15	686	15.1	0.80	-22.7	23.20	Clear, no odor
929			400	54.41	39.00	0.5	2.0	8.15	689	15.2	0.60	-23.6	13.40	Clear, no odor
932			400	54.41	40.00	0.5	2.5	8.14	691	15.2	0.50	-23.6	14.00	Clear, no odor
935			400	54.41	41.00	0.5	3.0	8.12	694.000	15.2	0.50	-23.00	12.6	Clear, no odor

Comments/Well Condition: Final DTW: 35.0

Signature (s) [signature] Date 11/20/2025 Reviewer Date

Well Development/Purging Data Sheet

Well/Piezometer Number: APW-4 | [ ] Development [X] Purging | Date: 11/19/2025 | Time Start: 1626 | Page 1 of 1

Project Name: GTEC Post Closure Monitoring Q4 2025 | Project Manager/Samplers: M. Arendell & M. Dawid | Project No.: 0761817

Client Company: Grand Tower Energy Center | Project/Task No.: 4

Site Name: GTEC Landfill | Site Address: 1820 Power Plant Rd Grand Tower, Illinois 62942

Development Criteria

- [ ] 3 Casing Volumes of Water Removal
- [X] Stabilization of Indicator Parameters
- [ ] Other

Water Volume Calculation

(2"-.1632 4"-.6524 6"-1.5)

Total Depth of Well (feet): 60.65
Screen Interval: to
Initial Depth to Water (feet): 36.60
Height (h) of Water Column in Well (feet):
Diameter (inches): Well 2" Gravel Pack

Item	Water Vol in Well	Purge Mult.	Purge/Dev Volume (Gal)
Well Casing			
Gravel Pack			
Drilling Fluids			
Total			

Water Quality Instrument

Calibration

- [X] YSI — Pro Plus
- [X] Solinst — Water Level Meter
- [X] Other: — HACH Turbidity Meter

Method of Purge/Development

Pump
- [X] Submersible (s)
- [ ] Peristaltic (p)
- [ ] Whale Pump (w)
- [ ] Other

Bailer
- [ ] Bottom Valve
- [ ] Double Check Valve
- [ ] Teflon
- [ ] Disposable

Water Management

- [X] Surface Discharge
- [ ] Containerize

Sample Information:

ID: APW-04-WG-20251119 | Date/Time: 11/19/25; 1650
Analysis:
QA/QC Samples: NA

Stabilization Data

Time	Purge Rate		Removal Rate (mL/min)	Intake Depth (feet)	Water Depth (feet)	Water Volume Removed (gallons)		pH	Sp. Cond (µS/cm)	Temp (°C)	DO (mg/L)	ORP (mV)	Turbidity (mV)	Comments
	Vol (ml)	Time(sec)	v/t*60			Increment	Cumulative							
1626			300	55.65	36.65	-	initial	7.28	611	14.6	1.10	10.9	39.7	Clear, no odor
1629			300	55.65	36.65	0.25	0.3	7.22	611	14.9	0.60	9.9	101.0	Cloudy, no odor
1632			300	55.65	36.65	0.25	0.5	7.21	631	15.4	0.50	7.6	87.1	Cloudy, no odor
1635			300	55.65	36.65	0.25	0.8	7.20	639	15.5	0.50	6.6	70.5	Clear, no odor
1638			300	55.65	36.65	0.25	1.0	7.21	661	15.5	0.40	5.3	56.0	Clear, no odor
1641			300	55.65	36.65	0.25	1.3	7.21	662	15.6	0.40	4.4	53.4	Clear, no odor
1644			300	55.65	36.65	0.25	1.5	7.21	663.000	15.6	0.40	4.20	51.3	Clear, no odor

Comments/Well Condition: Final DTW: 36.65

Signature (s) mdawid | Date 11/19/2025 | Reviewer | Date

Well Development/Purging Data Sheet

Well/Piezometer Number: APW-5R | [ ] Development [X] Purging | Date: 11/19/2025 | Time Start: 1238 | Page 1 of 1

Project Name: GTEC Post Closure Monitoring Q4 2025 | Project Manager/Samplers: M. Arendell & M. Dawid | Project No.: 0761817

Client Company: Grand Tower Energy Center | Project/Task No.: 4

Site Name: GTEC Landfill | Site Address: 1820 Power Plant Rd Grand Tower, Illinois 62942

Development Criteria

- [ ] 3 Casing Volumes of Water Removal
- [X] Stabilization of Indicator Parameters
- [ ] Other

Water Volume Calculation

(2"-.1632 4"-.6524 6"-1.5)

Total Depth of Well (feet): 62.75
Screen Interval: to
Initial Depth to Water (feet): 34.21
Height (h) of Water Column in Well (feet):
Diameter (inches): Well 2" Gravel Pack

Item	Water Vol in Well	Purge Mult.	Purge/Dev Volume (Gal)
Well Casing			
Gravel Pack			
Drilling Fluids			
Total			

Water Quality Instrument

Calibration

- [X] YSI — Pro Plus
- [X] Solinst — Water Level Meter
- [X] Other: — HACH Turbidity Meter

Method of Purge/Development

Pump
- [X] Submersible (s)
- [ ] Peristaltic (p)
- [ ] Whale Pump (w)
- [ ] Other

Bailer
- [ ] Bottom Valve
- [ ] Double Check Valve
- [ ] Teflon
- [ ] Disposable

Water Management

- [X] Surface Discharge
- [ ] Containerize

Sample Information:

ID: APW-05R-WG-20251119 | Date/Time: 11/19/25 / 1310
Analysis:
QA/QC Samples: DUP-001-WG-20251119 0001

Stabilization Data

Time	Purge Rate		Removal Rate (mL/min)	Intake Depth (feet)	Water Depth (feet)	Water Volume Removed (gallons)		pH	Sp. Cond (µS/cm)	Temp (°C)	DO (mg/L)	ORP (mV)	Turbidity (mV)	Comments
	Vol (ml)	Time(sec)	v/t*60			Increment	Cumulative							
1238			500	57.75	34.21	-	initial	7.39	936	15.0	0.20	-23.5	522.0	Cloudy, rotten egg
1241			500	57.75	34.21	0.25	0.3	7.43	919	15.3	0.10	-35.70	464.0	Cloudy, rotten egg
1244			450	57.75	34.21	0.25	0.5	7.44	929	15.9	0.10	-46.00	208.0	Cloudy, rotten egg
1247			450	57.75	34.21	0.25	0.8	7.44	939	16.2	3.70	-54.30	130.0	Cloudy, rotten egg
1250			450	57.75	34.21	0.25	1.0	7.44	949	16.3	2.70	-58.50	90.2	Cloudy, rotten egg
1253			450	57.75	34.21	0.25	1.3	7.44	954	16.3	1.70	-62.30	48.2	Clear; rotten egg
1256			450	57.75	34.21	0.25	1.5	7.44	957	16.4	1.50	-65.40	51.1	Clear, rotten egg
1259			450	57.75	34.21	0.25	1.8	7.45	961	16.4	0.5	-69.2	34.5	Clear; rotten egg
1301			450	57.75	34.21	0.25	2.0	7.45	962	16.4	0.5	-69.6	33.3	Clear, rotten egg
1304			450	57.75	34.21	0.25	2.3	7.44	962	16.4	0.5	-69.3	32.8	Clear; rotten egg

Comments/Well Condition: Final DTW: 22.62

Signature (s) mdawid | Date 11/19/2025 | Reviewer | Date

Well Development/Purging Data Sheet

Well/Piezometer Number: APW-6S | [ ] Development [X] Purging | Date: 11/19/2025 | Time Start: 1140 | Page 1 of 1

Project Name: GTEC Post Closure Monitoring Q4 2025 | Project Manager/Samplers: M. Arendell & M. Dawid | Project No.: 0761817

Client Company: Grand Tower Energy Center | Project/Task No.: 4

Site Name: GTEC Landfill | Site Address: 1820 Power Plant Rd Grand Tower, Illinois 62942

Development Criteria

- [ ] 3 Casing Volumes of Water Removal
- [X] Stabilization of Indicator Parameters
- [ ] Other

Water Volume Calculation

(2"-.1632 4"-.6524 6"-1.5)

Total Depth of Well (feet): 63.72
Screen Interval: to
Initial Depth to Water (feet): 33.42
Height (h) of Water Column in Well (feet):
Diameter (inches): Well 2" Gravel Pack

Item	Water Vol in Well	Purge Mult.	Purge/Dev Volume (Gal)
Well Casing			
Gravel Pack			
Drilling Fluids			
Total			

Water Quality Instrument

Calibration

- [X] YSI — Pro Plus
- [X] Solinst — Water Level Meter
- [X] Other: — HACH Turbidity Meter

Method of Purge/Development

Pump
- [X] Submersible (s)
- [ ] Peristaltic (p)
- [ ] Whale Pump (w)
- [ ] Other

Bailer
- [ ] Bottom Valve
- [ ] Double Check Valve
- [ ] Teflon
- [ ] Disposable

Water Management

- [X] Surface Discharge
- [ ] Containerize

Sample Information:

ID: APW-06S-WG-20251119 | Date/Time: 11/19/25 / 1205
Analysis:
QA/QC Samples: NA

Stabilization Data

Time	Purge Rate		Removal Rate (mL/min)	Intake Depth (feet)	Water Depth (feet)	Water Volume Removed (gallons)		pH	Sp. Cond (µS/cm)	Temp (°C)	DO (mg/L)	ORP (mV)	Turbidity (mV)	Comments
	Vol (ml)	Time(sec)	v/t*60			Increment	Cumulative							
1140			500	58.72	33.42	-	initial	7.11	959	14.5	1.10	-29.9	50.9	Cloudy, no odor
1143			500	58.72	33.42	0.25	0.3	7.15	975	14.6	0.90	-42.7	118	Cloudy, no odor
1146			500	58.72	33.42	0.25	0.5	7.20	996	14.9	0.70	-53.9	205	Cloudy, no odor
1149			500	58.72	33.42	0.25	0.8	7.22	999	1.5	0.80	-60.1	178	Cloudy, no odor
1152			500	58.72	33.42	0.25	1.0	7.23	1002	15.5	0.60	-65.5	118.0	Cloudy, no odor
1155			500	58.72	33.42	0.25	1.3	7.23	1001	16.1	0.60	-67.8	86.9	Clear, no odor
1158			500	58.72	33.42	0.25	1.5	7.23	1001	16.5	0.60	-71.4	88.0	Clear, no odor
1202			500	58.72	33.42	0.25	1.8	7.23	1002	16.6	0.60	-72.6	87	Clear, no odor

Comments/Well Condition: Final DTW: 33.45

Signature (s) mdawid | Date 11/19/2025 | Reviewer | Date

Well Development/Purging Data Sheet

Well/Piezometer Number: APW-6D | [ ] Development [X] Purging | Date: 11/19/2025 | Time Start: 1055 | Page 1 of 1

Project Name: GTEC Post Closure Monitoring Q4 2025 | Project Manager/Samplers: M. Arendell & M. Dawid | Project No.: 0761817

Client Company: Grand Tower Energy Center | Project/Task No.: 4

Site Name: GTEC Landfill | Site Address: 1820 Power Plant Rd Grand Tower, Illinois 62942

Development Criteria

- [ ] 3 Casing Volumes of Water Removal
- [X] Stabilization of Indicator Parameters
- [ ] Other

Water Volume Calculation

(2"-.1632 4"-.6524 6"-1.5)

Total Depth of Well (feet): 156.44
Screen Interval: to
Initial Depth to Water (feet): 21.74
Height (h) of Water Column in Well (feet):
Diameter (inches): Well 2" Gravel Pack

Item	Water Vol in Well	Purge Mult.	Purge/Dev Volume (Gal)
Well Casing			
Gravel Pack			
Drilling Fluids			
Total			

Water Quality Instrument

Calibration

- [X] YSI — Pro Plus
- [X] Solinst — Water Level Meter
- [X] Other: — HACH Turbidity Meter

Method of Purge/Development

Pump
- [X] Submersible (s)
- [ ] Peristaltic (p)
- [ ] Whale Pump (w)
- [ ] Other

Bailer
- [ ] Bottom Valve
- [ ] Double Check Valve
- [ ] Teflon
- [ ] Disposable

Water Management

- [X] Surface Discharge
- [ ] Containerize

Sample Information:

ID: APW-06D-WG-20251119 | Date/Time: 11/19/2025
Analysis:
QA/QC Samples: NA

Stabilization Data

Time	Purge Rate		Removal Rate (mL/min)	Intake Depth (feet)	Water Depth (feet)	Water Volume Removed (gallons)		pH	Sp. Cond (µS/cm)	Temp (°C)	DO (mg/L)	ORP (mV)	Turbidity (mV)	Comments
	Vol (ml)	Time(sec)	v/t*60			Increment	Cumulative							
1055			400	149.55	33.34	-	initial	7.28	770	14.8	61.00	-15.3	4.8	Clear, rotten egg-like odor
1058			400	149.55	33.34	0.25	0.3	7.28	776	14.8	43.00	-19.0	4.5	Clear, rotten egg-like odor
1101			400	149.55	33.34	0.25	0.5	7.28	766	14.9	28.00	-23.6	2.0	Clear, rotten egg-like odor
1104			400	149.55	33.34	0.25	0.8	7.29	766	15.0	22.00	-27.0	1.7	Clear, rotten egg-like odor
1107			400	149.55	33.34	0.25	1.0	7.30	765	15.1	15.00	-30.0	1.8	Clear, rotten egg-like odor
1110			400	149.55	33.34	0.25	1.3	7.31	770	15.3	1.20	-34.1	1.2	Clear, rotten egg-like odor
1113			400	149.55	33.34	0.25	1.5	7.31	769	15.3	1.30	-35.7	1.2	Clear, rotten egg-like odor
1116			400	149.55	33.34	0.25	1.8	7.31	766	15.3	1.4	-37.5	1.12	Clear, rotten egg-like odor

Comments/Well Condition: From 1055 to 1107 DO reading in %; from 1110 on in mg/L. Final DTW: 21.75

Signature (s) mdawid | Date 11/19/2025 | Reviewer | Date

Well Development/Purging Data Sheet

Well/Piezometer Number: APW-7 | [ ] Development [X] Purging | Date: 11/20/2025 | Time Start: 0820 | Page 1 of 1

Project Name: GTEC Post Closure Monitoring Q4 2025 | Project Manager/Samplers: M. Arendell & M. Dawid | Project No.: 0761817

Client Company: Grand Tower Energy Center | Project/Task No.: 4

Site Name: GTEC Landfill | Site Address: 1820 Power Plant Rd Grand Tower, Illinois 62942

Development Criteria

- [ ] 3 Casing Volumes of Water Removal
- [X] Stabilization of Indicator Parameters
- [ ] Other

Water Volume Calculation

(2"-.1632 4"-.6524 6"-1.5)

Total Depth of Well (feet): 63.18
Screen Interval: to
Initial Depth to Water (feet): 19.05
Height (h) of Water Column in Well (feet):
Diameter (inches): Well 2" Gravel Pack

Item	Water Vol in Well	Purge Mult.	Purge/Dev Volume (Gal)
Well Casing			
Gravel Pack			
Drilling Fluids			
Total			

Water Quality Instrument

Calibration

- [X] YSI — Pro Plus
- [X] Solinst — Water Level Meter
- [X] Other: — HACH Turbidity Meter

Method of Purge/Development

Pump
- [X] Submersible (s)
- [ ] Peristaltic (p)
- [ ] Whale Pump (w)
- [ ] Other

Bailer
- [ ] Bottom Valve
- [ ] Double Check Valve
- [ ] Teflon
- [ ] Disposable

Water Management

- [X] Surface Discharge
- [ ] Containerize

Sample Information:

ID: APW-07-WG-20251120 | Date/Time: 11/20/25 / 0845
Analysis:
QA/QC Samples: NA

Stabilization Data

Time	Purge Rate		Removal Rate (mL/min)	Intake Depth (feet)	Water Depth (feet)	Water Volume Removed (gallons)		pH	Sp. Cond (µS/cm)	Temp (°C)	DO (mg/L)	ORP (mV)	Turbidity (mV)	Comments
	Vol (ml)	Time(sec)	v/t*60			Increment	Cumulative							
0820			400	58.18	30.51	-	initial	6.87	1216	14.1	11.10	13.5	57.8	Clear, no odor
823			400	58.18	30.51	0.5	0.5	6.91	1210	14.9	3.00	3.9	56.8	Clear; rotten egg
0826			400	58.18	30.51	0.5	1.0	6.93	1228	15.2	2.70	-11.4	38.9	Clear, rotten egg
829			400	58.18	30.51	0.5	1.5	6.94	1249	15.2	3.60	-13.8	18.2	Clear; rotten egg
0832			400	58.18	30.51	0.5	2.0	6.92	1238	15.6	3.00	-15.9	15.9	Clear, rotten egg
835			400	58.18	30.51	0.5	2.5	6.94	1235	15.6	2.80	-15.8	16.0	Clear; rotten egg
0838			400	58.18	30.51	0.5	3.0	6.91	1231	15.6	2.60	-15.1	15.5	Clear, rotten egg

Comments/Well Condition: Finla DTW: 30.51

Signature (s) mdawid | Date 11/20/2025 | Reviewer | Date

Well Development/Purging Data Sheet

Well/Piezometer Number: APW-8 | [ ] Development [X] Purging | Date: 11/20/2025 | Time Start: 1005 | Page 1 of 1

Project Name: GTEC Post Closure Monitoring Q4 2025 | Project Manager/Samplers: M. Arendell & M. Dawid | Project No.: 0761817

Client Company: Grand Tower Energy Center | Project/Task No.: 4

Site Name: GTEC Landfill | Site Address: 1820 Power Plant Rd Grand Tower, Illinois 62942

Development Criteria

- [ ] 3 Casing Volumes of Water Removal
- [X] Stabilization of Indicator Parameters
- [ ] Other

Water Volume Calculation

(2"-.1632 4"-.6524 6"-1.5)

Total Depth of Well (feet): 63.60
Screen Interval: to
Initial Depth to Water (feet): 35.45
Height (h) of Water Column in Well (feet):
Diameter (inches): Well 2" Gravel Pack

Item	Water Vol in Well	Purge Mult.	Purge/Dev Volume (Gal)
Well Casing			
Gravel Pack			
Drilling Fluids			
Total			

Water Quality Instrument

Calibration

- [X] YSI — Pro Plus
- [X] Solinst — Water Level Meter
- [X] Other: — HACH Turbidity Meter

Method of Purge/Development

Pump
- [X] Submersible (s)
- [ ] Peristaltic (p)
- [ ] Whale Pump (w)
- [ ] Other

Bailer
- [ ] Bottom Valve
- [ ] Double Check Valve
- [ ] Teflon
- [ ] Disposable

Water Management

- [X] Surface Discharge
- [ ] Containerize

Sample Information:

ID: APW-08-WG-20251120 | Date/Time: 11/20/25 @1020
Analysis:
QA/QC Samples: NA

Stabilization Data

Time	Purge Rate		Removal Rate (mL/min)	Intake Depth (feet)	Water Depth (feet)	Water Volume Removed (gallons)		pH	Sp. Cond (µS/cm)	Temp (°C)	DO (mg/L)	ORP (mV)	Turbidity (mV)	Comments
	Vol (ml)	Time(sec)	v/t*60			Increment	Cumulative							
1006			500	58.60	31.70	-	initial	7.14	798	14.7	0.40	-8.1	418	Cloudy, no odor
1009			500	58.60	31.70	0.5	0.5	7.13	788	15.0	0.30	-9.2	296	Cloudy, no odor
1012			500	58.60	31.70	0.5	1.0	7.12	781	15.3	0.30	-10.5	181	Cloudy, no odor
1015			500	58.60	31.70	0.5	1.5	7.12	788	15.4	0.30	-8.8	173	Cloudy, no odor
1018			500	58.60	31.70	0.5	2.0	7.12	779	15.4	0.30	-9.9	172	Cloudy, no odor

Final DTW: 31.70

Signature (s): Matt Arendell | Date: 11/20/2025 | Reviewer: | Date:

Well Development/Purging Data Sheet

Well/Piezometer Number: APW-9 | [ ] Development [X] Purging | Date: 11/20/2025 | Time Start: 1146 | Page 1 of 1

Project Name: GTEC Post Closure Monitoring Q4 2025 | Project Manager/Samplers: M. Arendell & M. Dawid | Project No.: 0761817

Client Company: Grand Tower Energy Center | Project/Task No.: 4

Site Name: GTEC Landfill | Site Address: 1820 Power Plant Rd Grand Tower, Illinois 62942

Development Criteria

- [ ] 3 Casing Volumes of Water Removal
- [X] Stabilization of Indicator Parameters
- [ ] Other

Water Volume Calculation

(2"-.1632 4"-.6524 6"-1.5)

Total Depth of Well (feet): 63.12
Screen Interval: to
Initial Depth to Water (feet): 35.64
Height (h) of Water Column in Well (feet):
Diameter (inches): Well 2" Gravel Pack

Item	Water Vol in Well	Purge Mult.	Purge/Dev Volume (Gal)
Well Casing			
Gravel Pack			
Drilling Fluids			
Total			

Water Quality Instrument

Calibration

- [X] YSI — Pro Plus
- [X] Solinst — Water Level Meter
- [X] Other: — HACH Turbidity Meter

Method of Purge/Development

Pump
- [X] Submersible (s)
- [ ] Peristaltic (p)
- [ ] Whale Pump (w)
- [ ] Other

Bailer
- [ ] Bottom Valve
- [ ] Double Check Valve
- [ ] Teflon
- [ ] Disposable

Water Management

- [X] Surface Discharge
- [ ] Containerize

Sample Information:

ID: APW-09-WG-20251120 | Date/Time: 11/20/25 / 1210
Analysis:
QA/QC Samples: DUP-002-WG-202511205; 0002

Stabilization Data

Time	Purge Rate		Removal Rate (mL/min)	Intake Depth (feet)	Water Depth (feet)	Water Volume Removed (gallons)		pH	Sp. Cond (µS/cm)	Temp (°C)	DO (mg/L)	ORP (mV)	Turbidity (mV)	Comments
	Vol (ml)	Time(sec)	v/t*60			Increment	Cumulative							
1146			400	58.12	35.65	-	initial	7.34	558.9	14.1	1.40	18.1	97.6	Clear, no odor
1149			400	58.12	35.65	0.25	0.3	7.39	552	14.8	0.90	13.5	94.8	Clear, no odor
1152			400	58.12	35.65	0.25	0.5	7.30	561	15.1	0.60	11.2	53.0	Clear, no odor
1155			400	58.12	35.65	0.25	0.8	7.40	566	15.1	0.50	9.5	42.4	Clear, no odor
1158			400	58.12	35.65	0.25	1.0	7.41	558	15.2	0.50	8.4	23.2	Clear, no odor
1201			400	58.12	35.65	0.25	1.3	7.41	565	15.2	0.50	7.6	22.9	Clear, no odor
1204			400	58.12	35.65	0.25	1.5	7.41	567	15.2	0.50	6.3	23.7	Clear, no odor

Comments/Well Condition: Final DTW: 35.65

Signature (s) mdawid | Date 11/20/2025 | Reviewer | Date

Well Development/Purging Data Sheet

Well/Piezometer Number: APW-10S | [ ] Development [X] Purging | Date: 11/19/2025 | Time Start: 1538 | Page 1 of 1

Project Name: GTEC Post Closure Monitoring Q4 2025 | Project Manager/Samplers: M. Arendell & M. Dawid | Project No.: 0761817

Client Company: Grand Tower Energy Center | Project/Task No.: 4

Site Name: GTEC Landfill | Site Address: 1820 Power Plant Rd Grand Tower, Illinois 62942

Development Criteria

- [ ] 3 Casing Volumes of Water Removal
- [X] Stabilization of Indicator Parameters
- [ ] Other

Water Volume Calculation

(2"-.1632 4"-.6524 6"-1.5)

Total Depth of Well (feet): 62.64
Screen Interval: to
Initial Depth to Water (feet): 29.42
Height (h) of Water Column in Well (feet):
Diameter (inches): Well 2" Gravel Pack

Item	Water Vol in Well	Purge Mult.	Purge/Dev Volume (Gal)
Well Casing			
Gravel Pack			
Drilling Fluids			
Total			

Water Quality Instrument

Calibration

- [X] YSI — Pro Plus
- [X] Solinst — Water Level Meter
- [X] Other: — HACH Turbidity Meter

Method of Purge/Development

Pump
- [X] Submersible (s)
- [ ] Peristaltic (p)
- [ ] Whale Pump (w)
- [ ] Other

Bailer
- [ ] Bottom Valve
- [ ] Double Check Valve
- [ ] Teflon
- [ ] Disposable

Water Management

- [X] Surface Discharge
- [ ] Containerize

Sample Information:

ID: APW-10S-WG-20251119 | Date/Time: 11/19/25 / 1600
Analysis:
QA/QC Samples: NA

Stabilization Data

Time	Purge Rate		Removal Rate (mL/min)	Intake Depth (feet)	Water Depth (feet)	Water Volume Removed (gallons)		pH	Sp. Cond (µS/cm)	Temp (°C)	DO (mg/L)	ORP (mV)	Turbidity (mV)	Comments
	Vol (ml)	Time(sec)	v/t*60			Increment	Cumulative							
1538			450	57.64	30.00	-	initial	7.07	1292	14.5	1.00	-1.7	936.0	Cloudy, slight rotten egg
1541			450	57.64	30.00	0.5	0.5	7.12	1296	15.0	0.40	-50.7	377	Cloudy, slight rotten egg
1544			450	57.64	30.00	0.5	1.0	7.12	1297	15.5	0.40	-66.7	105	Cloudy, slight rotten egg
1547			450	57.64	30.00	0.5	1.5	7.13	1297	15.7	0.30	-73.6	46	Clear, slight rotten egg
1550			450	57.64	30.00	0.5	2.0	7.12	1298	15.7	0.30	-77.6	46	Clear, slight rotten egg
1553			450	57.64	30.00	0.5	2.5	7.12	1298	15.8	0.30	-78.6	44.0	Clear, slight rotten egg

Comments/Well Condition: Final DTW: 30.0

Signature (s): mdawid | Date: 11/19/2025 | Reviewer: | Date:

Well Development/Purging Data Sheet

Well/Piezometer Number: APW-10D | [ ] Development [X] Purging | Date: 11/19/2025 | Time Start: 1509 | Page 1 of 1

Project Name: GTEC Post Closure Monitoring Q4 2025 | Project Manager/Samplers: M. Arendell & M. Dawid | Project No.: 0761817

Client Company: Grand Tower Energy Center | Project/Task No.: 4

Site Name: GTEC Landfill | Site Address: 1820 Power Plant Rd Grand Tower, Illinois 62942

Development Criteria

- [ ] 3 Casing Volumes of Water Removal
- [X] Stabilization of Indicator Parameters
- [ ] Other

Water Volume Calculation

(2"-.1632 4"-.6524 6"-1.5)

Total Depth of Well (feet): 98.00
Screen Interval: to
Initial Depth to Water (feet): 27.96
Height (h) of Water Column in Well (feet):
Diameter (inches): Well 2" Gravel Pack

Item	Water Vol in Well	Purge Mult.	Purge/Dev Volume (Gal)
Well Casing			
Gravel Pack			
Drilling Fluids			
Total			

Water Quality Instrument

Calibration

- [X] YSI — Pro Plus
- [X] Solinst — Water Level Meter
- [X] Other: — HACH Turbidity Meter

Method of Purge/Development

Pump
- [X] Submersible (s)
- [ ] Peristaltic (p)
- [ ] Whale Pump (w)
- [ ] Other

Bailer
- [ ] Bottom Valve
- [ ] Double Check Valve
- [ ] Teflon
- [ ] Disposable

Water Management

- [X] Surface Discharge
- [ ] Containerize

Sample Information:

ID: APW-10D-WG-20251119 | Date/Time: 11/19/25 / 1530
Analysis:
QA/QC Samples: NA

Stabilization Data

Time	Purge Rate		Removal Rate (mL/min)	Intake Depth (feet)	Water Depth (feet)	Water Volume Removed (gallons)		pH	Sp. Cond (µS/cm)	Temp (°C)	DO (mg/L)	ORP (mV)	Turbidity (mV)	Comments
	Vol (ml)	Time(sec)	v/t*60			Increment	Cumulative							
1509			450	93	28.05	-	initial	7.17	695	14.5	1.40	15.2	236.0	Clear, no odor
1512			450	93	28.05	0.5	0.5	7.07	693	15.0	0.50	14.20	215	Clear, no odor
1515			450	93	28.05	0.5	1.0	7.06	694	15.2	0.50	12.70	183	Clear, no odor
1518			450	93	28.05	0.5	1.5	7.06	695	15.3	0.40	11.30	125	Clear, no odor
1521			450	93	28.05	0.5	2.0	7.06	698	15.5	0.40	10.20	124	Clear, no odor
1524			450	93	28.05	0.5	2.5	7.06	698	15.3	0.40	9.60	121	Clear, no odor

Comments/Well Condition: Final DTW: 28.05

Signature (s) mdawid | Date 11/19/2025 | Reviewer | Date

APPENDIX D FOURTH QUARTER 2025 LABORATORY ANALYTICAL REPORT

ANALYTICAL REPORT

December 15, 2025

ERM - St. Louis, MO

Sample Delivery Group:	L1921496
Samples Received:	11/22/2025
Project Number:	0599247
Description:	Grand Tower Energy Center Groundwater 4Q25 Sampling
Report To:	Randy Homburg
	1968 Craig Road, Suite 100
	Saint Louis, MO 63146

Entire Report Reviewed By:

Jeff Carr
Project Manager

Pace Analytical National
12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 mydata.pacelabs.com

TABLE OF CONTENTS

APW-03-WG-20251120 L1921496-01

Collected by: Marshall A | Collected date/time: 11/20/25 09:40 | Received date/time: 11/22/25 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2646997	1	11/25/25 08:47	11/25/25 11:09	AMG	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2645785	1	11/27/25 14:59	11/27/25 14:59	GEB	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2645785	10	11/27/25 15:12	11/27/25 15:12	GEB	Mt. Juliet, TN
Wet Chemistry by Method 9040C	WG2647379	1	11/26/25 04:02	11/26/25 04:02	AVB	Mt. Juliet, TN
Mercury by Method 7470A	WG2645321	1	11/28/25 12:00	11/29/25 18:50	MDE	Mt. Juliet, TN
Mercury by Method 7470A	WG2646389	1	11/28/25 15:04	12/01/25 11:27	NDL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2646529	1	11/26/25 18:52	11/27/25 00:22	MAP	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2646564	1	11/28/25 09:25	11/29/25 14:27	JTM	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG2646542	1	11/26/25 20:55	12/14/25 15:10	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG2646586	1	12/01/25 21:57	12/13/25 18:28	JPD	Mt. Juliet, TN

APW-08-WG-20251120 L1921496-02

Collected by: Marshall A | Collected date/time: 11/20/25 10:20 | Received date/time: 11/22/25 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2646997	1	11/25/25 08:47	11/25/25 11:09	AMG	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2645785	1	11/27/25 16:28	11/27/25 16:28	GEB	Mt. Juliet, TN
Wet Chemistry by Method 9040C	WG2647379	1	11/26/25 04:02	11/26/25 04:02	AVB	Mt. Juliet, TN
Mercury by Method 7470A	WG2645321	1	11/28/25 12:00	11/29/25 18:53	MDE	Mt. Juliet, TN
Mercury by Method 7470A	WG2646389	1	11/28/25 15:04	12/01/25 11:30	NDL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2646529	1	11/26/25 18:52	11/27/25 00:24	MAP	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2646564	1	11/28/25 09:25	11/29/25 14:30	JTM	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG2646542	1	11/26/25 20:55	12/14/25 15:49	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG2646586	1	12/01/25 21:57	12/13/25 18:31	JPD	Mt. Juliet, TN

APW-07-WG-20251120 L1921496-03

Collected by: Marshall A | Collected date/time: 11/20/25 08:45 | Received date/time: 11/22/25 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2646997	1	11/25/25 08:47	11/25/25 11:09	AMG	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2645785	1	11/27/25 16:40	11/27/25 16:40	GEB	Mt. Juliet, TN
Wet Chemistry by Method 9040C	WG2647420	1	11/25/25 23:34	11/25/25 23:34	AVB	Mt. Juliet, TN
Mercury by Method 7470A	WG2645321	1	11/28/25 12:00	11/29/25 18:55	MDE	Mt. Juliet, TN
Mercury by Method 7470A	WG2646389	1	11/28/25 15:04	12/01/25 11:33	NDL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2646529	1	11/26/25 18:52	11/27/25 00:27	MAP	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2646564	1	11/28/25 09:25	11/29/25 14:32	JTM	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG2646542	1	11/26/25 20:55	12/14/25 15:52	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG2646586	1	12/01/25 21:57	12/13/25 18:34	JPD	Mt. Juliet, TN

APW-10S-WG-20251119 L1921496-04

Collected by: Marshall A | Collected date/time: 11/19/25 16:00 | Received date/time: 11/22/25 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2646997	1	11/25/25 08:47	11/25/25 11:09	AMG	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2645785	1	11/27/25 17:06	11/27/25 17:06	GEB	Mt. Juliet, TN
Wet Chemistry by Method 9040C	WG2647420	1	11/25/25 23:34	11/25/25 23:34	AVB	Mt. Juliet, TN
Mercury by Method 7470A	WG2646383	1	11/28/25 17:35	11/30/25 13:54	AKB	Mt. Juliet, TN
Mercury by Method 7470A	WG2646389	1	11/28/25 15:04	12/01/25 11:35	NDL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2646529	1	11/26/25 18:52	11/27/25 00:30	MAP	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2646564	1	11/28/25 09:21	11/29/25 14:18	JTM	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG2646542	1	11/26/25 20:55	12/14/25 15:55	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG2646586	1	12/01/25 21:57	12/13/25 18:45	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG2646586	5	12/01/25 21:57	12/13/25 19:28	TMT	Mt. Juliet, TN

APW-10D-WG-20251119 L1921496-05

Collected by: Marshall A | Collected date/time: 11/19/25 15:30 | Received date/time: 11/22/25 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2646997	1	11/25/25 08:47	11/25/25 11:09	AMG	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2645785	1	11/27/25 17:18	11/27/25 17:18	GEB	Mt. Juliet, TN
Wet Chemistry by Method 9040C	WG2647408	1	11/26/25 01:33	11/26/25 01:33	AVB	Mt. Juliet, TN
Mercury by Method 7470A	WG2646383	1	11/28/25 17:35	11/30/25 13:57	AKB	Mt. Juliet, TN
Mercury by Method 7470A	WG2646389	1	11/28/25 15:04	12/01/25 11:43	NDL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2646529	1	11/26/25 18:52	11/27/25 00:38	MAP	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2646564	1	11/28/25 09:21	11/29/25 14:34	JTM	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG2646542	1	11/26/25 20:55	12/14/25 15:58	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG2646586	1	12/01/25 21:57	12/13/25 18:48	JPD	Mt. Juliet, TN

APW-06S-WG-20251119 L1921496-06

Collected by: Marshall A | Collected date/time: 11/19/25 12:05 | Received date/time: 11/22/25 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2646997	1	11/25/25 08:47	11/25/25 11:09	AMG	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2645785	1	11/27/25 17:31	11/27/25 17:31	GEB	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2645785	10	11/27/25 17:43	11/27/25 17:43	GEB	Mt. Juliet, TN
Wet Chemistry by Method 9040C	WG2647420	1	11/25/25 23:34	11/25/25 23:34	AVB	Mt. Juliet, TN
Mercury by Method 7470A	WG2646383	1	11/28/25 17:35	11/30/25 14:11	AKB	Mt. Juliet, TN
Mercury by Method 7470A	WG2646389	1	11/28/25 15:04	12/01/25 11:45	NDL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2646529	1	11/26/25 18:52	11/27/25 00:40	MAP	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2646564	1	11/28/25 09:21	11/29/25 14:41	JTM	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG2646542	1	11/26/25 20:55	12/14/25 16:02	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG2646586	1	12/01/25 21:57	12/13/25 18:51	JPD	Mt. Juliet, TN

APW-06D-WG-20251119 L1921496-07

Collected by: Marshall A | Collected date/time: 11/19/25 11:40 | Received date/time: 11/22/25 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2646997	1	11/25/25 08:47	11/25/25 11:09	AMG	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2645785	1	11/27/25 17:56	11/27/25 17:56	GEB	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2645785	10	11/27/25 18:09	11/27/25 18:09	GEB	Mt. Juliet, TN
Wet Chemistry by Method 9040C	WG2647379	1	11/26/25 04:02	11/26/25 04:02	AVB	Mt. Juliet, TN
Mercury by Method 7470A	WG2646383	1	11/28/25 17:35	11/30/25 14:13	AKB	Mt. Juliet, TN
Mercury by Method 7470A	WG2646389	1	11/28/25 15:04	12/01/25 11:48	NDL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2646529	1	11/26/25 18:52	11/27/25 00:43	MAP	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2646564	1	11/28/25 09:21	11/29/25 14:43	JTM	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG2646542	1	11/26/25 20:55	12/14/25 16:05	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG2646586	1	12/01/25 21:57	12/13/25 18:54	JPD	Mt. Juliet, TN

APW-05R-WG-20251119 L1921496-08

Collected by: Marshall A | Collected date/time: 11/19/25 13:10 | Received date/time: 11/22/25 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2646997	1	11/25/25 08:47	11/25/25 11:09	AMG	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2645785	5	11/27/25 18:21	11/27/25 18:21	GEB	Mt. Juliet, TN
Wet Chemistry by Method 9040C	WG2647408	1	11/26/25 01:33	11/26/25 01:33	AVB	Mt. Juliet, TN
Mercury by Method 7470A	WG2646383	1	11/28/25 17:35	11/30/25 14:16	AKB	Mt. Juliet, TN
Mercury by Method 7470A	WG2646389	1	11/28/25 15:04	12/01/25 11:51	NDL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2646529	1	11/26/25 18:52	11/27/25 00:46	MAP	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2646564	1	11/28/25 09:21	11/29/25 14:46	JTM	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG2646542	1	11/26/25 20:55	12/14/25 16:08	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG2646586	1	12/01/25 21:57	12/13/25 18:57	JPD	Mt. Juliet, TN

APW-09-WG-20251120 L1921496-09

Collected by: Marshall A | Collected date/time: 11/20/25 12:10 | Received date/time: 11/22/25 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2646997	1	11/25/25 08:47	11/25/25 11:09	AMG	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2645785	1	11/27/25 19:12	11/27/25 19:12	GEB	Mt. Juliet, TN
Wet Chemistry by Method 9040C	WG2647408	1	11/26/25 01:33	11/26/25 01:33	AVB	Mt. Juliet, TN
Mercury by Method 7470A	WG2646383	1	11/28/25 17:35	11/30/25 14:19	AKB	Mt. Juliet, TN
Mercury by Method 7470A	WG2646389	1	11/28/25 15:04	12/01/25 11:53	NDL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2646529	1	11/26/25 18:52	11/27/25 00:48	MAP	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2646564	1	11/28/25 09:21	11/29/25 14:48	JTM	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG2646542	1	11/26/25 20:55	12/14/25 16:11	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG2646586	1	12/01/25 21:57	12/13/25 19:00	JPD	Mt. Juliet, TN

APW-02-WG-20251119 L1921496-10

Collected by: Marshall A | Collected date/time: 11/19/25 13:55 | Received date/time: 11/22/25 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2646997	1	11/25/25 08:47	11/25/25 11:09	AMG	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2645785	5	11/27/25 19:25	11/27/25 19:25	GEB	Mt. Juliet, TN
Wet Chemistry by Method 9040C	WG2647408	1	11/26/25 01:33	11/26/25 01:33	AVB	Mt. Juliet, TN
Mercury by Method 7470A	WG2646383	1	11/28/25 17:35	11/30/25 14:22	AKB	Mt. Juliet, TN
Mercury by Method 7470A	WG2646389	1	11/28/25 15:04	12/01/25 11:56	NDL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2646529	1	11/26/25 18:52	11/27/25 00:51	MAP	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2646564	1	11/28/25 09:21	11/29/25 14:50	JTM	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG2646542	1	11/26/25 20:55	12/14/25 16:14	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG2646586	1	12/01/25 21:57	12/13/25 19:03	JPD	Mt. Juliet, TN

APW-01R-WG-20251120 L1921496-11

Collected by: Marshall A | Collected date/time: 11/20/25 11:20 | Received date/time: 11/22/25 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2646997	1	11/25/25 08:47	11/25/25 11:09	AMG	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2645785	1	11/27/25 19:50	11/27/25 19:50	GEB	Mt. Juliet, TN
Wet Chemistry by Method 9040C	WG2647379	1	11/26/25 04:02	11/26/25 04:02	AVB	Mt. Juliet, TN
Mercury by Method 7470A	WG2646383	1	11/28/25 17:35	11/30/25 14:25	AKB	Mt. Juliet, TN
Mercury by Method 7470A	WG2646389	1	11/28/25 15:04	12/01/25 11:58	NDL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2646529	1	11/26/25 18:52	11/27/25 00:53	MAP	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2646564	1	11/28/25 09:21	11/29/25 14:53	JTM	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG2646542	1	11/26/25 20:55	12/14/25 16:18	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG2646586	1	12/01/25 21:57	12/13/25 19:06	JPD	Mt. Juliet, TN

APW-04-WG-20251119 L1921496-12

Collected by: Marshall A | Collected date/time: 11/19/25 16:50 | Received date/time: 11/22/25 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2646997	1	11/25/25 08:47	11/25/25 11:09	AMG	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2645785	1	11/27/25 20:02	11/27/25 20:02	GEB	Mt. Juliet, TN
Wet Chemistry by Method 9040C	WG2647420	1	11/25/25 23:34	11/25/25 23:34	AVB	Mt. Juliet, TN
Mercury by Method 7470A	WG2646383	1	11/28/25 17:35	11/30/25 14:33	AKB	Mt. Juliet, TN
Mercury by Method 7470A	WG2646389	1	11/28/25 15:04	12/01/25 12:01	NDL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2646529	1	11/26/25 18:52	11/27/25 00:56	MAP	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2646564	1	11/28/25 09:21	11/29/25 14:55	JTM	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG2646542	1	11/26/25 20:55	12/14/25 16:32	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG2646586	1	12/01/25 21:57	12/13/25 19:09	JPD	Mt. Juliet, TN

EB-01-WG-20251119 L1921496-13

Collected by: Marshall A
Collected date/time: 11/19/25 10:40
Received date/time: 11/22/25 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2646997	1	11/25/25 08:47	11/25/25 11:09	AMG	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2645785	1	11/27/25 20:15	11/27/25 20:15	GEB	Mt. Juliet, TN
Wet Chemistry by Method 9040C	WG2647420	1	11/25/25 23:34	11/25/25 23:34	AVB	Mt. Juliet, TN
Mercury by Method 7470A	WG2646383	1	11/28/25 17:35	11/30/25 14:36	AKB	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2646564	1	11/28/25 09:21	11/29/25 14:57	JTM	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG2646586	1	12/01/25 21:57	12/13/25 19:12	JPD	Mt. Juliet, TN

DUP-01-WG-20251119 L1921496-14

Collected by: Marshall A
Collected date/time: 11/19/25 00:01
Received date/time: 11/22/25 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2647002	1	11/25/25 07:03	11/25/25 14:17	AMG	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2645785	5	11/27/25 20:28	11/27/25 20:28	GEB	Mt. Juliet, TN
Wet Chemistry by Method 9040C	WG2647408	1	11/26/25 01:33	11/26/25 01:33	AVB	Mt. Juliet, TN
Mercury by Method 7470A	WG2646383	1	11/28/25 17:35	11/30/25 14:39	AKB	Mt. Juliet, TN
Mercury by Method 7470A	WG2646389	1	11/28/25 15:04	12/01/25 12:03	NDL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2646529	1	11/26/25 18:52	11/27/25 00:59	MAP	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2646564	1	11/28/25 09:21	11/29/25 15:00	JTM	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG2646542	1	11/26/25 20:55	12/14/25 16:35	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG2646586	1	12/01/25 21:57	12/13/25 19:22	TMT	Mt. Juliet, TN

DUP-02-WG-20251120 L1921496-15

Collected by: Marshall A
Collected date/time: 11/20/25 00:02
Received date/time: 11/22/25 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2647002	1	11/25/25 07:03	11/25/25 14:17	AMG	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2645785	1	11/27/25 20:53	11/27/25 20:53	GEB	Mt. Juliet, TN
Wet Chemistry by Method 9040C	WG2647408	1	11/26/25 01:33	11/26/25 01:33	AVB	Mt. Juliet, TN
Mercury by Method 7470A	WG2646383	1	11/28/25 17:35	11/30/25 14:42	AKB	Mt. Juliet, TN
Mercury by Method 7470A	WG2646389	1	11/28/25 15:04	12/01/25 12:06	NDL	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2646529	1	11/26/25 18:52	11/27/25 01:01	MAP	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2646564	1	11/28/25 09:21	11/29/25 15:02	JTM	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG2646542	1	11/26/25 20:55	12/14/25 16:39	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG2646586	1	12/01/25 21:57	12/13/25 19:25	TMT	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.

Lab Sample ID	Project Sample ID	Method
L1921496-01	APW-03-WG-20251120	6020B, 7470A, 6010D
L1921496-02	APW-08-WG-20251120	6020B, 6010D, 7470A
L1921496-03	APW-07-WG-20251120	6020B, 6010D, 7470A
L1921496-04	APW-10S-WG-20251119	6020B, 6010D, 7470A
L1921496-05	APW-10D-WG-20251119	6020B, 6010D, 7470A
L1921496-06	APW-06S-WG-20251119	7470A, 6020B, 6010D
L1921496-07	APW-06D-WG-20251119	6020B, 6010D, 7470A
L1921496-08	APW-05R-WG-20251119	6020B, 6010D, 7470A
L1921496-09	APW-09-WG-20251120	6010D, 6020B, 7470A
L1921496-10	APW-02-WG-20251119	6020B, 6010D, 7470A
L1921496-11	APW-01R-WG-20251120	6010D, 6020B, 7470A
L1921496-12	APW-04-WG-20251119	6010D, 7470A, 6020B
L1921496-14	DUP-01-WG-20251119	6010D, 6020B, 7470A
L1921496-15	DUP-02-WG-20251120	6020B, 6010D, 7470A
R4307085-3		6010D
R4313983-3		6020B

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	541		10.0	1	11/25/2025 11:09	WG2646997

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Chloride	8.41		1.00	1	11/27/2025 14:59	WG2645785
Fluoride	0.289		0.150	1	11/27/2025 14:59	WG2645785
Sulfate	242		50.0	10	11/27/2025 15:12	WG2645785

Wet Chemistry by Method 9040C

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	su			date / time	
pH	7.75	T8	1	11/26/2025 04:02	WG2647379

Sample Narrative:

L1921496-01 WG2647379: 7.75 at 18.8C

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Mercury	ND		0.000200	1	11/29/2025 18:50	WG2645321
Mercury,Dissolved	ND		0.000200	1	12/01/2025 11:27	WG2646389

Metals (ICP) by Method 6010D

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Boron	4.02		0.200	1	11/29/2025 14:27	WG2646564
Boron,Dissolved	4.00		0.200	1	11/27/2025 00:22	WG2646529
Calcium	116		1.00	1	11/29/2025 14:27	WG2646564
Calcium,Dissolved	122		1.00	1	11/27/2025 00:22	WG2646529

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Antimony	ND		0.00400	1	12/13/2025 18:28	WG2646586
Antimony,Dissolved	ND		0.00400	1	12/14/2025 15:10	WG2646542
Arsenic	ND		0.00200	1	12/13/2025 18:28	WG2646586
Arsenic,Dissolved	ND		0.00200	1	12/14/2025 15:10	WG2646542
Barium	0.115		0.00200	1	12/13/2025 18:28	WG2646586
Barium,Dissolved	0.118		0.00200	1	12/14/2025 15:10	WG2646542
Beryllium	ND		0.00200	1	12/13/2025 18:28	WG2646586
Beryllium,Dissolved	ND		0.00200	1	12/14/2025 15:10	WG2646542
Cadmium	ND		0.00100	1	12/13/2025 18:28	WG2646586
Cadmium,Dissolved	ND		0.00100	1	12/14/2025 15:10	WG2646542
Chromium	ND		0.00200	1	12/13/2025 18:28	WG2646586
Chromium,Dissolved	ND		0.00200	1	12/14/2025 15:10	WG2646542
Cobalt	ND		0.00200	1	12/13/2025 18:28	WG2646586
Cobalt,Dissolved	ND		0.00200	1	12/14/2025 15:10	WG2646542
Lead	ND		0.00200	1	12/13/2025 18:28	WG2646586
Lead,Dissolved	ND		0.00200	1	12/14/2025 15:10	WG2646542
Lithium	0.0276		0.00200	1	12/13/2025 18:28	WG2646586
Lithium,Dissolved	0.0304		0.00200	1	12/14/2025 15:10	WG2646542
Molybdenum	0.0567		0.00500	1	12/13/2025 18:28	WG2646586

Metals (ICPMS) by Method 6020B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Molybdenum,Dissolved	0.0584		0.00500	1	12/14/2025 15:10	WG2646542
Selenium	ND		0.00200	1	12/13/2025 18:28	WG2646586
Selenium,Dissolved	ND		0.00200	1	12/14/2025 15:10	WG2646542
Thallium	ND		0.00200	1	12/13/2025 18:28	WG2646586
Thallium,Dissolved	ND		0.00200	1	12/14/2025 15:10	WG2646542

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	432		20.0	1	11/25/2025 11:09	WG2646997

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Chloride	7.46		1.00	1	11/27/2025 16:28	WG2645785
Fluoride	0.266		0.150	1	11/27/2025 16:28	WG2645785
Sulfate	26.2		5.00	1	11/27/2025 16:28	WG2645785

Wet Chemistry by Method 9040C

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	su			date / time	
pH	7.25	T8	1	11/26/2025 04:02	WG2647379

Sample Narrative:

L1921496-02 WG2647379: 7.25 at 18.8C

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Mercury	ND		0.000200	1	11/29/2025 18:53	WG2645321
Mercury,Dissolved	ND		0.000200	1	12/01/2025 11:30	WG2646389

Metals (ICP) by Method 6010D

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Boron	ND		0.200	1	11/29/2025 14:30	WG2646564
Boron,Dissolved	ND		0.200	1	11/27/2025 00:24	WG2646529
Calcium	107		1.00	1	11/29/2025 14:30	WG2646564
Calcium,Dissolved	111		1.00	1	11/27/2025 00:24	WG2646529

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Antimony	ND		0.00400	1	12/13/2025 18:31	WG2646586
Antimony,Dissolved	ND		0.00400	1	12/14/2025 15:49	WG2646542
Arsenic	ND		0.00200	1	12/13/2025 18:31	WG2646586
Arsenic,Dissolved	ND		0.00200	1	12/14/2025 15:49	WG2646542
Barium	0.210		0.00200	1	12/13/2025 18:31	WG2646586
Barium,Dissolved	0.216		0.00200	1	12/14/2025 15:49	WG2646542
Beryllium	ND		0.00200	1	12/13/2025 18:31	WG2646586
Beryllium,Dissolved	ND		0.00200	1	12/14/2025 15:49	WG2646542
Cadmium	ND		0.00100	1	12/13/2025 18:31	WG2646586
Cadmium,Dissolved	ND		0.00100	1	12/14/2025 15:49	WG2646542
Chromium	0.00243		0.00200	1	12/13/2025 18:31	WG2646586
Chromium,Dissolved	ND		0.00200	1	12/14/2025 15:49	WG2646542
Cobalt	ND		0.00200	1	12/13/2025 18:31	WG2646586
Cobalt,Dissolved	ND		0.00200	1	12/14/2025 15:49	WG2646542
Lead	ND		0.00200	1	12/13/2025 18:31	WG2646586
Lead,Dissolved	ND		0.00200	1	12/14/2025 15:49	WG2646542
Lithium	0.0186		0.00200	1	12/13/2025 18:31	WG2646586
Lithium,Dissolved	0.0185		0.00200	1	12/14/2025 15:49	WG2646542
Molybdenum	ND		0.00500	1	12/13/2025 18:31	WG2646586

Metals (ICPMS) by Method 6020B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Molybdenum,Dissolved	ND		0.00500	1	12/14/2025 15:49	WG2646542
Selenium	0.0153		0.00200	1	12/13/2025 18:31	WG2646586
Selenium,Dissolved	0.0160		0.00200	1	12/14/2025 15:49	WG2646542
Thallium	ND		0.00200	1	12/13/2025 18:31	WG2646586
Thallium,Dissolved	ND		0.00200	1	12/14/2025 15:49	WG2646542

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	706		20.0	1	11/25/2025 11:09	WG2646997

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Chloride	9.77		1.00	1	11/27/2025 16:40	WG2645785
Fluoride	0.197		0.150	1	11/27/2025 16:40	WG2645785
Sulfate	48.7		5.00	1	11/27/2025 16:40	WG2645785

Wet Chemistry by Method 9040C

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	su			date / time	
pH	7.01	T8	1	11/25/2025 23:34	WG2647420

Sample Narrative:
L1921496-03 WG2647420: 7.01 at 18.6C

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Mercury	ND		0.000200	1	11/29/2025 18:55	WG2645321
Mercury,Dissolved	ND		0.000200	1	12/01/2025 11:33	WG2646389

Metals (ICP) by Method 6010D

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Boron	0.212		0.200	1	11/29/2025 14:32	WG2646564
Boron,Dissolved	0.211		0.200	1	11/27/2025 00:27	WG2646529
Calcium	213		1.00	1	11/29/2025 14:32	WG2646564
Calcium,Dissolved	217		1.00	1	11/27/2025 00:27	WG2646529

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Antimony	ND		0.00400	1	12/13/2025 18:34	WG2646586
Antimony,Dissolved	ND		0.00400	1	12/14/2025 15:52	WG2646542
Arsenic	ND		0.00200	1	12/13/2025 18:34	WG2646586
Arsenic,Dissolved	ND		0.00200	1	12/14/2025 15:52	WG2646542
Barium	0.335		0.00200	1	12/13/2025 18:34	WG2646586
Barium,Dissolved	0.267		0.00200	1	12/14/2025 15:52	WG2646542
Beryllium	ND		0.00200	1	12/13/2025 18:34	WG2646586
Beryllium,Dissolved	ND		0.00200	1	12/14/2025 15:52	WG2646542
Cadmium	ND		0.00100	1	12/13/2025 18:34	WG2646586
Cadmium,Dissolved	ND		0.00100	1	12/14/2025 15:52	WG2646542
Chromium	ND		0.00200	1	12/13/2025 18:34	WG2646586
Chromium,Dissolved	ND		0.00200	1	12/14/2025 15:52	WG2646542
Cobalt	ND		0.00200	1	12/13/2025 18:34	WG2646586
Cobalt,Dissolved	ND		0.00200	1	12/14/2025 15:52	WG2646542
Lead	ND		0.00200	1	12/13/2025 18:34	WG2646586
Lead,Dissolved	ND		0.00200	1	12/14/2025 15:52	WG2646542
Lithium	0.0151		0.00200	1	12/13/2025 18:34	WG2646586
Lithium,Dissolved	0.0152		0.00200	1	12/14/2025 15:52	WG2646542
Molybdenum	ND		0.00500	1	12/13/2025 18:34	WG2646586

Metals (ICPMS) by Method 6020B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Molybdenum,Dissolved	ND		0.00500	1	12/14/2025 15:52	WG2646542
Selenium	ND		0.00200	1	12/13/2025 18:34	WG2646586
Selenium,Dissolved	ND		0.00200	1	12/14/2025 15:52	WG2646542
Thallium	ND		0.00200	1	12/13/2025 18:34	WG2646586
Thallium,Dissolved	ND		0.00200	1	12/14/2025 15:52	WG2646542

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	714		20.0	1	11/25/2025 11:09	WG2646997

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Chloride	14.6		1.00	1	11/27/2025 17:06	WG2645785
Fluoride	0.187		0.150	1	11/27/2025 17:06	WG2645785
Sulfate	ND		5.00	1	11/27/2025 17:06	WG2645785

Wet Chemistry by Method 9040C

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	su			date / time	
pH	7.20	T8	1	11/25/2025 23:34	WG2647420

Sample Narrative:
L1921496-04 WG2647420: 7.2 at 18.4C

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Mercury	ND		0.000200	1	11/30/2025 13:54	WG2646383
Mercury,Dissolved	ND		0.000200	1	12/01/2025 11:35	WG2646389

Metals (ICP) by Method 6010D

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Boron	0.586		0.200	1	11/29/2025 14:18	WG2646564
Boron,Dissolved	0.579		0.200	1	11/27/2025 00:30	WG2646529
Calcium	158	V	1.00	1	11/29/2025 14:18	WG2646564
Calcium,Dissolved	160		1.00	1	11/27/2025 00:30	WG2646529

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Antimony	ND		0.00400	1	12/13/2025 18:45	WG2646586
Antimony,Dissolved	ND		0.00400	1	12/14/2025 15:55	WG2646542
Arsenic	0.190		0.00200	1	12/13/2025 18:45	WG2646586
Arsenic,Dissolved	0.0702		0.00200	1	12/14/2025 15:55	WG2646542
Barium	0.556		0.0100	5	12/13/2025 19:28	WG2646586
Barium,Dissolved	0.360		0.00200	1	12/14/2025 15:55	WG2646542
Beryllium	ND		0.00200	1	12/13/2025 18:45	WG2646586
Beryllium,Dissolved	ND		0.00200	1	12/14/2025 15:55	WG2646542
Cadmium	ND		0.00100	1	12/13/2025 18:45	WG2646586
Cadmium,Dissolved	ND		0.00100	1	12/14/2025 15:55	WG2646542
Chromium	0.00271		0.00200	1	12/13/2025 18:45	WG2646586
Chromium,Dissolved	ND		0.00200	1	12/14/2025 15:55	WG2646542
Cobalt	ND		0.00200	1	12/13/2025 18:45	WG2646586
Cobalt,Dissolved	ND		0.00200	1	12/14/2025 15:55	WG2646542
Lead	ND		0.00200	1	12/13/2025 18:45	WG2646586
Lead,Dissolved	ND		0.00200	1	12/14/2025 15:55	WG2646542
Lithium	0.0283		0.00200	1	12/13/2025 18:45	WG2646586
Lithium,Dissolved	0.0309		0.00200	1	12/14/2025 15:55	WG2646542
Molybdenum	ND		0.00500	1	12/13/2025 18:45	WG2646586

Metals (ICPMS) by Method 6020B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Molybdenum,Dissolved	ND		0.00500	1	12/14/2025 15:55	WG2646542
Selenium	ND		0.00200	1	12/13/2025 18:45	WG2646586
Selenium,Dissolved	ND		0.00200	1	12/14/2025 15:55	WG2646542
Thallium	ND		0.00200	1	12/13/2025 18:45	WG2646586
Thallium,Dissolved	ND		0.00200	1	12/14/2025 15:55	WG2646542

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	447		10.0	1	11/25/2025 11:09	WG2646997

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Chloride	11.6		1.00	1	11/27/2025 17:18	WG2645785
Fluoride	ND		0.150	1	11/27/2025 17:18	WG2645785
Sulfate	32.0		5.00	1	11/27/2025 17:18	WG2645785

Wet Chemistry by Method 9040C

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	su			date / time	
pH	7.40	T8	1	11/26/2025 01:33	WG2647408

Sample Narrative:
L1921496-05 WG2647408: 7.4 at 19C

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Mercury	ND		0.000200	1	11/30/2025 13:57	WG2646383
Mercury,Dissolved	ND		0.000200	1	12/01/2025 11:43	WG2646389

Metals (ICP) by Method 6010D

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Boron	ND		0.200	1	11/29/2025 14:34	WG2646564
Boron,Dissolved	ND		0.200	1	11/27/2025 00:38	WG2646529
Calcium	127		1.00	1	11/29/2025 14:34	WG2646564
Calcium,Dissolved	127		1.00	1	11/27/2025 00:38	WG2646529

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Antimony	ND		0.00400	1	12/13/2025 18:48	WG2646586
Antimony,Dissolved	ND		0.00400	1	12/14/2025 15:58	WG2646542
Arsenic	ND		0.00200	1	12/13/2025 18:48	WG2646586
Arsenic,Dissolved	ND		0.00200	1	12/14/2025 15:58	WG2646542
Barium	0.325		0.00200	1	12/13/2025 18:48	WG2646586
Barium,Dissolved	0.352		0.00200	1	12/14/2025 15:58	WG2646542
Beryllium	ND		0.00200	1	12/13/2025 18:48	WG2646586
Beryllium,Dissolved	ND		0.00200	1	12/14/2025 15:58	WG2646542
Cadmium	ND		0.00100	1	12/13/2025 18:48	WG2646586
Cadmium,Dissolved	ND		0.00100	1	12/14/2025 15:58	WG2646542
Chromium	ND		0.00200	1	12/13/2025 18:48	WG2646586
Chromium,Dissolved	ND		0.00200	1	12/14/2025 15:58	WG2646542
Cobalt	0.00285		0.00200	1	12/13/2025 18:48	WG2646586
Cobalt,Dissolved	0.00298		0.00200	1	12/14/2025 15:58	WG2646542
Lead	ND		0.00200	1	12/13/2025 18:48	WG2646586
Lead,Dissolved	ND		0.00200	1	12/14/2025 15:58	WG2646542
Lithium	0.0147		0.00200	1	12/13/2025 18:48	WG2646586
Lithium,Dissolved	0.0155		0.00200	1	12/14/2025 15:58	WG2646542
Molybdenum	ND		0.00500	1	12/13/2025 18:48	WG2646586

Metals (ICPMS) by Method 6020B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Molybdenum,Dissolved	ND		0.00500	1	12/14/2025 15:58	WG2646542
Selenium	ND		0.00200	1	12/13/2025 18:48	WG2646586
Selenium,Dissolved	ND		0.00200	1	12/14/2025 15:58	WG2646542
Thallium	ND		0.00200	1	12/13/2025 18:48	WG2646586
Thallium,Dissolved	ND		0.00200	1	12/14/2025 15:58	WG2646542

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	692		13.3	1	11/25/2025 11:09	WG2646997

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Chloride	20.1		1.00	1	11/27/2025 17:31	WG2645785
Fluoride	0.299		0.150	1	11/27/2025 17:31	WG2645785
Sulfate	228		50.0	10	11/27/2025 17:43	WG2645785

Wet Chemistry by Method 9040C

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	su			date / time	
pH	7.28	T8	1	11/25/2025 23:34	WG2647420

Sample Narrative:
L1921496-06 WG2647420: 7.28 at 18.4C

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Mercury	ND		0.000200	1	11/30/2025 14:11	WG2646383
Mercury,Dissolved	ND		0.000200	1	12/01/2025 11:45	WG2646389

Metals (ICP) by Method 6010D

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Boron	6.00		0.200	1	11/29/2025 14:41	WG2646564
Boron,Dissolved	6.15		0.200	1	11/27/2025 00:40	WG2646529
Calcium	137		1.00	1	11/29/2025 14:41	WG2646564
Calcium,Dissolved	143		1.00	1	11/27/2025 00:40	WG2646529

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Antimony	ND		0.00400	1	12/13/2025 18:51	WG2646586
Antimony,Dissolved	ND		0.00400	1	12/14/2025 16:02	WG2646542
Arsenic	ND		0.00200	1	12/13/2025 18:51	WG2646586
Arsenic,Dissolved	ND		0.00200	1	12/14/2025 16:02	WG2646542
Barium	0.267		0.00200	1	12/13/2025 18:51	WG2646586
Barium,Dissolved	0.214		0.00200	1	12/14/2025 16:02	WG2646542
Beryllium	ND		0.00200	1	12/13/2025 18:51	WG2646586
Beryllium,Dissolved	ND		0.00200	1	12/14/2025 16:02	WG2646542
Cadmium	ND		0.00100	1	12/13/2025 18:51	WG2646586
Cadmium,Dissolved	ND		0.00100	1	12/14/2025 16:02	WG2646542
Chromium	0.00498		0.00200	1	12/13/2025 18:51	WG2646586
Chromium,Dissolved	ND		0.00200	1	12/14/2025 16:02	WG2646542
Cobalt	ND		0.00200	1	12/13/2025 18:51	WG2646586
Cobalt,Dissolved	ND		0.00200	1	12/14/2025 16:02	WG2646542
Lead	ND		0.00200	1	12/13/2025 18:51	WG2646586
Lead,Dissolved	ND		0.00200	1	12/14/2025 16:02	WG2646542
Lithium	0.0391		0.00200	1	12/13/2025 18:51	WG2646586
Lithium,Dissolved	0.0432		0.00200	1	12/14/2025 16:02	WG2646542
Molybdenum	0.171		0.00500	1	12/13/2025 18:51	WG2646586

Metals (ICPMS) by Method 6020B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Molybdenum,Dissolved	0.190		0.00500	1	12/14/2025 16:02	WG2646542
Selenium	ND		0.00200	1	12/13/2025 18:51	WG2646586
Selenium,Dissolved	ND		0.00200	1	12/14/2025 16:02	WG2646542
Thallium	ND		0.00200	1	12/13/2025 18:51	WG2646586
Thallium,Dissolved	ND		0.00200	1	12/14/2025 16:02	WG2646542

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	680		20.0	1	11/25/2025 11:09	WG2646997

Wet Chemistry by Method 300.0

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Chloride	35.3		1.00	1	11/27/2025 17:56	WG2645785
Fluoride	0.249		0.150	1	11/27/2025 17:56	WG2645785
Sulfate	136		50.0	10	11/27/2025 18:09	WG2645785

Wet Chemistry by Method 9040C

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	7.50	T8	1	11/26/2025 04:02	WG2647379

Sample Narrative:
L1921496-07 WG2647379: 7.5 at 19C

Mercury by Method 7470A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Mercury	ND		0.000200	1	11/30/2025 14:13	WG2646383
Mercury,Dissolved	ND		0.000200	1	12/01/2025 11:48	WG2646389

Metals (ICP) by Method 6010D

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Boron	2.57		0.200	1	11/29/2025 14:43	WG2646564
Boron,Dissolved	2.67		0.200	1	11/27/2025 00:43	WG2646529
Calcium	110		1.00	1	11/29/2025 14:43	WG2646564
Calcium,Dissolved	115		1.00	1	11/27/2025 00:43	WG2646529

Metals (ICPMS) by Method 6020B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Antimony	ND		0.00400	1	12/13/2025 18:54	WG2646586
Antimony,Dissolved	ND		0.00400	1	12/14/2025 16:05	WG2646542
Arsenic	0.0108		0.00200	1	12/13/2025 18:54	WG2646586
Arsenic,Dissolved	0.00527		0.00200	1	12/14/2025 16:05	WG2646542
Barium	0.109		0.00200	1	12/13/2025 18:54	WG2646586
Barium,Dissolved	0.114		0.00200	1	12/14/2025 16:05	WG2646542
Beryllium	ND		0.00200	1	12/13/2025 18:54	WG2646586
Beryllium,Dissolved	ND		0.00200	1	12/14/2025 16:05	WG2646542
Cadmium	ND		0.00100	1	12/13/2025 18:54	WG2646586
Cadmium,Dissolved	ND		0.00100	1	12/14/2025 16:05	WG2646542
Chromium	ND		0.00200	1	12/13/2025 18:54	WG2646586
Chromium,Dissolved	ND		0.00200	1	12/14/2025 16:05	WG2646542
Cobalt	ND		0.00200	1	12/13/2025 18:54	WG2646586
Cobalt,Dissolved	ND		0.00200	1	12/14/2025 16:05	WG2646542
Lead	ND		0.00200	1	12/13/2025 18:54	WG2646586
Lead,Dissolved	ND		0.00200	1	12/14/2025 16:05	WG2646542
Lithium	0.0148		0.00200	1	12/13/2025 18:54	WG2646586
Lithium,Dissolved	0.0153		0.00200	1	12/14/2025 16:05	WG2646542
Molybdenum	0.0461		0.00500	1	12/13/2025 18:54	WG2646586

Metals (ICPMS) by Method 6020B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Molybdenum,Dissolved	0.0522		0.00500	1	12/14/2025 16:05	WG2646542
Selenium	ND		0.00200	1	12/13/2025 18:54	WG2646586
Selenium,Dissolved	ND		0.00200	1	12/14/2025 16:05	WG2646542
Thallium	ND		0.00200	1	12/13/2025 18:54	WG2646586
Thallium,Dissolved	ND		0.00200	1	12/14/2025 16:05	WG2646542

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	700		20.0	1	11/25/2025 11:09	WG2646997

Wet Chemistry by Method 300.0

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Chloride	15.0		5.00	5	11/27/2025 18:21	WG2645785
Fluoride	ND		0.750	5	11/27/2025 18:21	WG2645785
Sulfate	330		25.0	5	11/27/2025 18:21	WG2645785

Sample Narrative:

L1921496-08 WG2645785: Dilution due to matrix impact on instrumentation at lower dilution

Wet Chemistry by Method 9040C

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	7.66	T8	1	11/26/2025 01:33	WG2647408

Sample Narrative:

L1921496-08 WG2647408: 7.66 at 19.1C

Mercury by Method 7470A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Mercury	ND		0.000200	1	11/30/2025 14:16	WG2646383
Mercury,Dissolved	ND		0.000200	1	12/01/2025 11:51	WG2646389

Metals (ICP) by Method 6010D

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Boron	8.50		0.200	1	11/29/2025 14:46	WG2646564
Boron,Dissolved	8.72		0.200	1	11/27/2025 00:46	WG2646529
Calcium	132		1.00	1	11/29/2025 14:46	WG2646564
Calcium,Dissolved	136		1.00	1	11/27/2025 00:46	WG2646529

Metals (ICPMS) by Method 6020B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Antimony	ND		0.00400	1	12/13/2025 18:57	WG2646586
Antimony,Dissolved	ND		0.00400	1	12/14/2025 16:08	WG2646542
Arsenic	0.00218		0.00200	1	12/13/2025 18:57	WG2646586
Arsenic,Dissolved	ND		0.00200	1	12/14/2025 16:08	WG2646542
Barium	0.181		0.00200	1	12/13/2025 18:57	WG2646586
Barium,Dissolved	0.156		0.00200	1	12/14/2025 16:08	WG2646542
Beryllium	ND		0.00200	1	12/13/2025 18:57	WG2646586
Beryllium,Dissolved	ND		0.00200	1	12/14/2025 16:08	WG2646542
Cadmium	ND		0.00100	1	12/13/2025 18:57	WG2646586
Cadmium,Dissolved	ND		0.00100	1	12/14/2025 16:08	WG2646542
Chromium	ND		0.00200	1	12/13/2025 18:57	WG2646586
Chromium,Dissolved	ND		0.00200	1	12/14/2025 16:08	WG2646542
Cobalt	ND		0.00200	1	12/13/2025 18:57	WG2646586
Cobalt,Dissolved	ND		0.00200	1	12/14/2025 16:08	WG2646542
Lead	ND		0.00200	1	12/13/2025 18:57	WG2646586
Lead,Dissolved	ND		0.00200	1	12/14/2025 16:08	WG2646542

Metals (ICPMS) by Method 6020B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Lithium	0.0350		0.00200	1	12/13/2025 18:57	WG2646586
Lithium,Dissolved	0.0358		0.00200	1	12/14/2025 16:08	WG2646542
Molybdenum	0.185		0.00500	1	12/13/2025 18:57	WG2646586
Molybdenum,Dissolved	0.208		0.00500	1	12/14/2025 16:08	WG2646542
Selenium	ND		0.00200	1	12/13/2025 18:57	WG2646586
Selenium,Dissolved	ND		0.00200	1	12/14/2025 16:08	WG2646542
Thallium	ND		0.00200	1	12/13/2025 18:57	WG2646586
Thallium,Dissolved	ND		0.00200	1	12/14/2025 16:08	WG2646542

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	363		10.0	1	11/25/2025 11:09	WG2646997

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Chloride	11.8		1.00	1	11/27/2025 19:12	WG2645785
Fluoride	0.223		0.150	1	11/27/2025 19:12	WG2645785
Sulfate	35.4		5.00	1	11/27/2025 19:12	WG2645785

Wet Chemistry by Method 9040C

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	su			date / time	
pH	7.65	T8	1	11/26/2025 01:33	WG2647408

Sample Narrative:

L1921496-09 WG2647408: 7.65 at 18.6C

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Mercury	ND		0.000200	1	11/30/2025 14:19	WG2646383
Mercury,Dissolved	ND		0.000200	1	12/01/2025 11:53	WG2646389

Metals (ICP) by Method 6010D

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Boron	0.244		0.200	1	11/29/2025 14:48	WG2646564
Boron,Dissolved	0.235		0.200	1	11/27/2025 00:48	WG2646529
Calcium	85.8		1.00	1	11/29/2025 14:48	WG2646564
Calcium,Dissolved	89.2		1.00	1	11/27/2025 00:48	WG2646529

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Antimony	ND		0.00400	1	12/13/2025 19:00	WG2646586
Antimony,Dissolved	ND		0.00400	1	12/14/2025 16:11	WG2646542
Arsenic	0.00221		0.00200	1	12/13/2025 19:00	WG2646586
Arsenic,Dissolved	0.00223		0.00200	1	12/14/2025 16:11	WG2646542
Barium	0.123		0.00200	1	12/13/2025 19:00	WG2646586
Barium,Dissolved	0.130		0.00200	1	12/14/2025 16:11	WG2646542
Beryllium	ND		0.00200	1	12/13/2025 19:00	WG2646586
Beryllium,Dissolved	ND		0.00200	1	12/14/2025 16:11	WG2646542
Cadmium	ND		0.00100	1	12/13/2025 19:00	WG2646586
Cadmium,Dissolved	ND		0.00100	1	12/14/2025 16:11	WG2646542
Chromium	ND		0.00200	1	12/13/2025 19:00	WG2646586
Chromium,Dissolved	ND		0.00200	1	12/14/2025 16:11	WG2646542
Cobalt	ND		0.00200	1	12/13/2025 19:00	WG2646586
Cobalt,Dissolved	ND		0.00200	1	12/14/2025 16:11	WG2646542
Lead	ND		0.00200	1	12/13/2025 19:00	WG2646586
Lead,Dissolved	ND		0.00200	1	12/14/2025 16:11	WG2646542
Lithium	0.0134		0.00200	1	12/13/2025 19:00	WG2646586
Lithium,Dissolved	0.0139		0.00200	1	12/14/2025 16:11	WG2646542
Molybdenum	0.0184		0.00500	1	12/13/2025 19:00	WG2646586

Metals (ICPMS) by Method 6020B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Molybdenum,Dissolved	0.0212		0.00500	1	12/14/2025 16:11	WG2646542
Selenium	0.0160		0.00200	1	12/13/2025 19:00	WG2646586
Selenium,Dissolved	0.0167		0.00200	1	12/14/2025 16:11	WG2646542
Thallium	ND		0.00200	1	12/13/2025 19:00	WG2646586
Thallium,Dissolved	ND		0.00200	1	12/14/2025 16:11	WG2646542

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	775		13.3	1	11/25/2025 11:09	WG2646997

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Chloride	8.80		5.00	5	11/27/2025 19:25	WG2645785
Fluoride	ND		0.750	5	11/27/2025 19:25	WG2645785
Sulfate	397		25.0	5	11/27/2025 19:25	WG2645785

Sample Narrative:

L1921496-10 WG2645785: Dilution due to matrix impact on instrumentation at lower dilution

Wet Chemistry by Method 9040C

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	su			date / time	
pH	7.38	T8	1	11/26/2025 01:33	WG2647408

Sample Narrative:

L1921496-10 WG2647408: 7.38 at 18.8C

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Mercury	ND		0.000200	1	11/30/2025 14:22	WG2646383
Mercury,Dissolved	ND		0.000200	1	12/01/2025 11:56	WG2646389

Metals (ICP) by Method 6010D

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Boron	9.05		0.200	1	11/29/2025 14:50	WG2646564
Boron,Dissolved	9.17		0.200	1	11/27/2025 00:51	WG2646529
Calcium	150		1.00	1	11/29/2025 14:50	WG2646564
Calcium,Dissolved	149		1.00	1	11/27/2025 00:51	WG2646529

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Antimony	ND		0.00400	1	12/13/2025 19:03	WG2646586
Antimony,Dissolved	ND		0.00400	1	12/14/2025 16:14	WG2646542
Arsenic	0.0175		0.00200	1	12/13/2025 19:03	WG2646586
Arsenic,Dissolved	0.00450		0.00200	1	12/14/2025 16:14	WG2646542
Barium	0.157		0.00200	1	12/13/2025 19:03	WG2646586
Barium,Dissolved	0.138		0.00200	1	12/14/2025 16:14	WG2646542
Beryllium	ND		0.00200	1	12/13/2025 19:03	WG2646586
Beryllium,Dissolved	ND		0.00200	1	12/14/2025 16:14	WG2646542
Cadmium	ND		0.00100	1	12/13/2025 19:03	WG2646586
Cadmium,Dissolved	ND		0.00100	1	12/14/2025 16:14	WG2646542
Chromium	0.0835		0.00200	1	12/13/2025 19:03	WG2646586
Chromium,Dissolved	ND		0.00200	1	12/14/2025 16:14	WG2646542
Cobalt	0.00360		0.00200	1	12/13/2025 19:03	WG2646586
Cobalt,Dissolved	ND		0.00200	1	12/14/2025 16:14	WG2646542
Lead	0.00688		0.00200	1	12/13/2025 19:03	WG2646586
Lead,Dissolved	ND		0.00200	1	12/14/2025 16:14	WG2646542

Metals (ICPMS) by Method 6020B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Lithium	0.0405		0.00200	1	12/13/2025 19:03	WG2646586
Lithium,Dissolved	0.0417		0.00200	1	12/14/2025 16:14	WG2646542
Molybdenum	0.159		0.00500	1	12/13/2025 19:03	WG2646586
Molybdenum,Dissolved	0.178		0.00500	1	12/14/2025 16:14	WG2646542
Selenium	ND		0.00200	1	12/13/2025 19:03	WG2646586
Selenium,Dissolved	ND		0.00200	1	12/14/2025 16:14	WG2646542
Thallium	ND		0.00200	1	12/13/2025 19:03	WG2646586
Thallium,Dissolved	ND		0.00200	1	12/14/2025 16:14	WG2646542

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	383		10.0	1	11/25/2025 11:09	WG2646997

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Chloride	6.53		1.00	1	11/27/2025 19:50	WG2645785
Fluoride	0.194		0.150	1	11/27/2025 19:50	WG2645785
Sulfate	60.8		5.00	1	11/27/2025 19:50	WG2645785

Wet Chemistry by Method 9040C

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	su			date / time	
pH	6.92	T8	1	11/26/2025 04:02	WG2647379

Sample Narrative:
L1921496-11 WG2647379: 6.92 at 19.4C

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Mercury	ND		0.000200	1	11/30/2025 14:25	WG2646383
Mercury,Dissolved	ND		0.000200	1	12/01/2025 11:58	WG2646389

Metals (ICP) by Method 6010D

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Boron	0.231		0.200	1	11/29/2025 14:53	WG2646564
Boron,Dissolved	0.224		0.200	1	11/27/2025 00:53	WG2646529
Calcium	84.6		1.00	1	11/29/2025 14:53	WG2646564
Calcium,Dissolved	87.6		1.00	1	11/27/2025 00:53	WG2646529

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Antimony	ND		0.00400	1	12/13/2025 19:06	WG2646586
Antimony,Dissolved	ND		0.00400	1	12/14/2025 16:18	WG2646542
Arsenic	ND		0.00200	1	12/13/2025 19:06	WG2646586
Arsenic,Dissolved	ND		0.00200	1	12/14/2025 16:18	WG2646542
Barium	0.170		0.00200	1	12/13/2025 19:06	WG2646586
Barium,Dissolved	0.175		0.00200	1	12/14/2025 16:18	WG2646542
Beryllium	ND		0.00200	1	12/13/2025 19:06	WG2646586
Beryllium,Dissolved	ND		0.00200	1	12/14/2025 16:18	WG2646542
Cadmium	ND		0.00100	1	12/13/2025 19:06	WG2646586
Cadmium,Dissolved	ND		0.00100	1	12/14/2025 16:18	WG2646542
Chromium	0.00242		0.00200	1	12/13/2025 19:06	WG2646586
Chromium,Dissolved	ND		0.00200	1	12/14/2025 16:18	WG2646542
Cobalt	ND		0.00200	1	12/13/2025 19:06	WG2646586
Cobalt,Dissolved	ND		0.00200	1	12/14/2025 16:18	WG2646542
Lead	ND		0.00200	1	12/13/2025 19:06	WG2646586
Lead,Dissolved	ND		0.00200	1	12/14/2025 16:18	WG2646542
Lithium	0.0146		0.00200	1	12/13/2025 19:06	WG2646586
Lithium,Dissolved	0.0141		0.00200	1	12/14/2025 16:18	WG2646542
Molybdenum	ND		0.00500	1	12/13/2025 19:06	WG2646586

Metals (ICPMS) by Method 6020B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Molybdenum,Dissolved	ND		0.00500	1	12/14/2025 16:18	WG2646542
Selenium	0.00406		0.00200	1	12/13/2025 19:06	WG2646586
Selenium,Dissolved	0.00403		0.00200	1	12/14/2025 16:18	WG2646542
Thallium	ND		0.00200	1	12/13/2025 19:06	WG2646586
Thallium,Dissolved	ND		0.00200	1	12/14/2025 16:18	WG2646542

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	438		10.0	1	11/25/2025 11:09	WG2646997

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Chloride	10.0		1.00	1	11/27/2025 20:02	WG2645785
Fluoride	0.178		0.150	1	11/27/2025 20:02	WG2645785
Sulfate	67.3		5.00	1	11/27/2025 20:02	WG2645785

Wet Chemistry by Method 9040C

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	su			date / time	
pH	7.43	T8	1	11/25/2025 23:34	WG2647420

Sample Narrative:

L1921496-12 WG2647420: 7.43 at 18.5C

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Mercury	ND		0.000200	1	11/30/2025 14:33	WG2646383
Mercury,Dissolved	ND		0.000200	1	12/01/2025 12:01	WG2646389

Metals (ICP) by Method 6010D

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Boron	0.654		0.200	1	11/29/2025 14:55	WG2646564
Boron,Dissolved	0.654		0.200	1	11/27/2025 00:56	WG2646529
Calcium	106		1.00	1	11/29/2025 14:55	WG2646564
Calcium,Dissolved	109		1.00	1	11/27/2025 00:56	WG2646529

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Antimony	ND		0.00400	1	12/13/2025 19:09	WG2646586
Antimony,Dissolved	ND		0.00400	1	12/14/2025 16:32	WG2646542
Arsenic	0.00200		0.00200	1	12/13/2025 19:09	WG2646586
Arsenic,Dissolved	ND		0.00200	1	12/14/2025 16:32	WG2646542
Barium	0.150		0.00200	1	12/13/2025 19:09	WG2646586
Barium,Dissolved	0.143		0.00200	1	12/14/2025 16:32	WG2646542
Beryllium	ND		0.00200	1	12/13/2025 19:09	WG2646586
Beryllium,Dissolved	ND		0.00200	1	12/14/2025 16:32	WG2646542
Cadmium	ND		0.00100	1	12/13/2025 19:09	WG2646586
Cadmium,Dissolved	ND		0.00100	1	12/14/2025 16:32	WG2646542
Chromium	0.00328		0.00200	1	12/13/2025 19:09	WG2646586
Chromium,Dissolved	ND		0.00200	1	12/14/2025 16:32	WG2646542
Cobalt	ND		0.00200	1	12/13/2025 19:09	WG2646586
Cobalt,Dissolved	ND		0.00200	1	12/14/2025 16:32	WG2646542
Lead	ND		0.00200	1	12/13/2025 19:09	WG2646586
Lead,Dissolved	ND		0.00200	1	12/14/2025 16:32	WG2646542
Lithium	0.0277		0.00200	1	12/13/2025 19:09	WG2646586
Lithium,Dissolved	0.0276		0.00200	1	12/14/2025 16:32	WG2646542
Molybdenum	0.0301		0.00500	1	12/13/2025 19:09	WG2646586

Metals (ICPMS) by Method 6020B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Molybdenum,Dissolved	0.0347		0.00500	1	12/14/2025 16:32	WG2646542
Selenium	0.0109		0.00200	1	12/13/2025 19:09	WG2646586
Selenium,Dissolved	0.0108		0.00200	1	12/14/2025 16:32	WG2646542
Thallium	ND		0.00200	1	12/13/2025 19:09	WG2646586
Thallium,Dissolved	ND		0.00200	1	12/14/2025 16:32	WG2646542

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	ND		10.0	1	11/25/2025 11:09	WG2646997

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Chloride	ND		1.00	1	11/27/2025 20:15	WG2645785
Fluoride	ND		0.150	1	11/27/2025 20:15	WG2645785
Sulfate	ND		5.00	1	11/27/2025 20:15	WG2645785

Wet Chemistry by Method 9040C

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	su			date / time	
pH	6.68	T8	1	11/25/2025 23:34	WG2647420

Sample Narrative:
L1921496-13 WG2647420: 6.68 at 18.9C

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Mercury	ND		0.000200	1	11/30/2025 14:36	WG2646383

Metals (ICP) by Method 6010D

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Boron	ND		0.200	1	11/29/2025 14:57	WG2646564
Calcium	ND		1.00	1	11/29/2025 14:57	WG2646564

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Antimony	ND		0.00400	1	12/13/2025 19:12	WG2646586
Arsenic	ND		0.00200	1	12/13/2025 19:12	WG2646586
Barium	ND		0.00200	1	12/13/2025 19:12	WG2646586
Beryllium	ND		0.00200	1	12/13/2025 19:12	WG2646586
Cadmium	ND		0.00100	1	12/13/2025 19:12	WG2646586
Chromium	ND		0.00200	1	12/13/2025 19:12	WG2646586
Cobalt	ND		0.00200	1	12/13/2025 19:12	WG2646586
Lead	ND		0.00200	1	12/13/2025 19:12	WG2646586
Lithium	ND		0.00200	1	12/13/2025 19:12	WG2646586
Molybdenum	ND		0.00500	1	12/13/2025 19:12	WG2646586
Selenium	ND		0.00200	1	12/13/2025 19:12	WG2646586
Thallium	ND		0.00200	1	12/13/2025 19:12	WG2646586

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	703		13.3	1	11/25/2025 14:17	WG2647002

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Chloride	15.5		5.00	5	11/27/2025 20:28	WG2645785
Fluoride	ND		0.750	5	11/27/2025 20:28	WG2645785
Sulfate	329		25.0	5	11/27/2025 20:28	WG2645785

Sample Narrative:

L1921496-14 WG2645785: Dilution due to matrix impact on instrumentation at lower dilution

Wet Chemistry by Method 9040C

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	su			date / time	
pH	7.62	T8	1	11/26/2025 01:33	WG2647408

Sample Narrative:

L1921496-14 WG2647408: 7.62 at 18.6C

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Mercury	ND		0.000200	1	11/30/2025 14:39	WG2646383
Mercury,Dissolved	ND		0.000200	1	12/01/2025 12:03	WG2646389

Metals (ICP) by Method 6010D

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Boron	8.54		0.200	1	11/29/2025 15:00	WG2646564
Boron,Dissolved	8.74		0.200	1	11/27/2025 00:59	WG2646529
Calcium	131		1.00	1	11/29/2025 15:00	WG2646564
Calcium,Dissolved	136		1.00	1	11/27/2025 00:59	WG2646529

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Antimony	ND		0.00400	1	12/13/2025 19:22	WG2646586
Antimony,Dissolved	ND		0.00400	1	12/14/2025 16:35	WG2646542
Arsenic	0.00250		0.00200	1	12/13/2025 19:22	WG2646586
Arsenic,Dissolved	ND		0.00200	1	12/14/2025 16:35	WG2646542
Barium	0.185		0.00200	1	12/13/2025 19:22	WG2646586
Barium,Dissolved	0.149		0.00200	1	12/14/2025 16:35	WG2646542
Beryllium	ND		0.00200	1	12/13/2025 19:22	WG2646586
Beryllium,Dissolved	ND		0.00200	1	12/14/2025 16:35	WG2646542
Cadmium	ND		0.00100	1	12/13/2025 19:22	WG2646586
Cadmium,Dissolved	ND		0.00100	1	12/14/2025 16:35	WG2646542
Chromium	0.00260		0.00200	1	12/13/2025 19:22	WG2646586
Chromium,Dissolved	ND		0.00200	1	12/14/2025 16:35	WG2646542
Cobalt	ND		0.00200	1	12/13/2025 19:22	WG2646586
Cobalt,Dissolved	ND		0.00200	1	12/14/2025 16:35	WG2646542
Lead	ND		0.00200	1	12/13/2025 19:22	WG2646586
Lead,Dissolved	ND		0.00200	1	12/14/2025 16:35	WG2646542

Metals (ICPMS) by Method 6020B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Lithium	0.0345		0.00200	1	12/13/2025 19:22	WG2646586
Lithium,Dissolved	0.0352		0.00200	1	12/14/2025 16:35	WG2646542
Molybdenum	0.189		0.00500	1	12/13/2025 19:22	WG2646586
Molybdenum,Dissolved	0.200		0.00500	1	12/14/2025 16:35	WG2646542
Selenium	ND		0.00200	1	12/13/2025 19:22	WG2646586
Selenium,Dissolved	ND		0.00200	1	12/14/2025 16:35	WG2646542
Thallium	ND		0.00200	1	12/13/2025 19:22	WG2646586
Thallium,Dissolved	ND		0.00200	1	12/14/2025 16:35	WG2646542

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	350		10.0	1	11/25/2025 14:17	WG2647002

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Chloride	11.8		1.00	1	11/27/2025 20:53	WG2645785
Fluoride	0.231		0.150	1	11/27/2025 20:53	WG2645785
Sulfate	35.4		5.00	1	11/27/2025 20:53	WG2645785

Wet Chemistry by Method 9040C

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	su			date / time	
pH	7.82	T8	1	11/26/2025 01:33	WG2647408

Sample Narrative:

L1921496-15 WG2647408: 7.82 at 18.8C

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Mercury	ND		0.000200	1	11/30/2025 14:42	WG2646383
Mercury,Dissolved	ND		0.000200	1	12/01/2025 12:06	WG2646389

Metals (ICP) by Method 6010D

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Boron	0.237		0.200	1	11/29/2025 15:02	WG2646564
Boron,Dissolved	0.247		0.200	1	11/27/2025 01:01	WG2646529
Calcium	85.1		1.00	1	11/29/2025 15:02	WG2646564
Calcium,Dissolved	88.2		1.00	1	11/27/2025 01:01	WG2646529

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Antimony	ND		0.00400	1	12/13/2025 19:25	WG2646586
Antimony,Dissolved	ND		0.00400	1	12/14/2025 16:39	WG2646542
Arsenic	0.00236		0.00200	1	12/13/2025 19:25	WG2646586
Arsenic,Dissolved	0.00219		0.00200	1	12/14/2025 16:39	WG2646542
Barium	0.124		0.00200	1	12/13/2025 19:25	WG2646586
Barium,Dissolved	0.124		0.00200	1	12/14/2025 16:39	WG2646542
Beryllium	ND		0.00200	1	12/13/2025 19:25	WG2646586
Beryllium,Dissolved	ND		0.00200	1	12/14/2025 16:39	WG2646542
Cadmium	ND		0.00100	1	12/13/2025 19:25	WG2646586
Cadmium,Dissolved	ND		0.00100	1	12/14/2025 16:39	WG2646542
Chromium	ND		0.00200	1	12/13/2025 19:25	WG2646586
Chromium,Dissolved	ND		0.00200	1	12/14/2025 16:39	WG2646542
Cobalt	ND		0.00200	1	12/13/2025 19:25	WG2646586
Cobalt,Dissolved	ND		0.00200	1	12/14/2025 16:39	WG2646542
Lead	ND		0.00200	1	12/13/2025 19:25	WG2646586
Lead,Dissolved	ND		0.00200	1	12/14/2025 16:39	WG2646542
Lithium	0.0139		0.00200	1	12/13/2025 19:25	WG2646586
Lithium,Dissolved	0.0138		0.00200	1	12/14/2025 16:39	WG2646542
Molybdenum	0.0187		0.00500	1	12/13/2025 19:25	WG2646586

Metals (ICPMS) by Method 6020B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Molybdenum,Dissolved	0.0207		0.00500	1	12/14/2025 16:39	WG2646542
Selenium	0.0159		0.00200	1	12/13/2025 19:25	WG2646586
Selenium,Dissolved	0.0168		0.00200	1	12/14/2025 16:39	WG2646542
Thallium	ND		0.00200	1	12/13/2025 19:25	WG2646586
Thallium,Dissolved	ND		0.00200	1	12/14/2025 16:39	WG2646542

Method Blank (MB)

(MB) R4307746-1 11/25/25 11:09

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

L1920887-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1920887-02 11/25/25 11:09 • (DUP) R4307746-3 11/25/25 11:09

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	285	288	1	1.05		10

L1921496-13 Original Sample (OS) • Duplicate (DUP)

(OS) L1921496-13 11/25/25 11:09 • (DUP) R4307746-4 11/25/25 11:09

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	ND	ND	1	0.000		10

Laboratory Control Sample (LCS)

(LCS) R4307746-2 11/25/25 11:09

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800	8570	97.4	90.0-110	

Method Blank (MB)

(MB) R4307748-1 11/25/25 14:17

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

L1921504-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1921504-01 11/25/25 14:17 • (DUP) R4307748-3 11/25/25 14:17

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	2160	2210	1	2.52		10

L1921551-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1921551-06 11/25/25 14:17 • (DUP) R4307748-4 11/25/25 14:17

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	255	257	1	0.781		10

Laboratory Control Sample (LCS)

(LCS) R4307748-2 11/25/25 14:17

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800	8500	96.6	90.0-110	

Method Blank (MB)

(MB) R4307308-1 11/27/25 12:15

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

L1921371-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1921371-06 11/27/25 13:47 • (DUP) R4307308-3 11/27/25 14:10

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Fluoride	0.183	0.197	1	6.90		15

L1921371-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1921371-06 11/27/25 13:58 • (DUP) R4307308-4 11/27/25 14:21

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Sulfate	381	379	10	0.643		15

L1921496-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1921496-01 11/27/25 14:59 • (DUP) R4307308-7 11/27/25 15:24

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	8.41	7.97	1	5.38		15
Fluoride	0.289	0.280	1	3.38		15

L1921496-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1921496-01 11/27/25 15:12 • (DUP) R4307308-8 11/27/25 15:37

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Sulfate	242	242	10	0.159		15

L1921371-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1921371-06 11/28/25 23:16 • (DUP) R4307557-1 11/28/25 23:26

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	6720	6680	100	0.485		15

Laboratory Control Sample (LCS)

(LCS) R4307308-2 11/27/25 12:27

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	40.0	40.0	100	80.0-120	
Fluoride	8.00	8.36	105	80.0-120	
Sulfate	40.0	40.7	102	80.0-120	

L1921371-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1921371-06 11/27/25 13:47 • (MS) R4307308-5 11/27/25 14:34 • (MSD) R4307308-6 11/27/25 14:46

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	6780	5470	5480	0.000	0.000	1	80.0-120	E V	E V	0.134	15
Fluoride	8.00	0.183	4.46	4.54	53.4	54.4	1	80.0-120	J6	J6	1.77	15
Sulfate	40.0	384	347	349	0.000	0.000	1	80.0-120	E V	E V	0.309	15

L1921496-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1921496-01 11/27/25 14:59 • (MS) R4307308-9 11/27/25 15:50

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	40.0	8.41	46.5	95.1	1	80.0-120	
Fluoride	8.00	0.289	8.59	104	1	80.0-120	
Sulfate	40.0	255	244	0.000	1	80.0-120	E V

L1921294-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1921294-01 11/26/25 04:02 • (DUP) R4306483-2 11/26/25 04:02

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
pH	6.73	6.74	1	0.148		1

Sample Narrative:

OS: 6.73 at 19.8C

DUP: 6.74 at 19.9C

L1921781-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1921781-02 11/26/25 04:02 • (DUP) R4306483-3 11/26/25 04:02

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
pH	6.79	6.83	1	0.587		1

Sample Narrative:

OS: 6.79 at 18.8C

DUP: 6.83 at 18.9C

Laboratory Control Sample (LCS)

(LCS) R4306483-1 11/26/25 04:02

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	su	su	%	%	
pH	10.0	9.97	99.7	99.0-101	

Sample Narrative:

LCS: 9.97 at 18.8C

L1920440-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1920440-03 11/26/25 01:33 • (DUP) R4306484-2 11/26/25 01:33

Analyte	Original Result su	DUP Result su	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
pH	7.87	7.90	1	0.380		1

Sample Narrative:

OS: 7.87 at 18.8C

DUP: 7.9 at 19.2C

L1921789-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1921789-01 11/26/25 01:33 • (DUP) R4306484-3 11/26/25 01:33

Analyte	Original Result su	DUP Result su	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
pH	7.23	7.24	1	0.138		1

Sample Narrative:

OS: 7.23 at 18.6C

DUP: 7.24 at 19C

Laboratory Control Sample (LCS)

(LCS) R4306484-1 11/26/25 01:33

Analyte	Spike Amount su	LCS Result su	LCS Rec. %	Rec. Limits %	LCS Qualifier
pH	10.0	9.98	99.8	99.0-101	

Sample Narrative:

LCS: 9.98 at 18.5C

L1919938-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1919938-01 11/25/25 23:34 • (DUP) R4306487-2 11/25/25 23:34

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
pH	9.54	9.53	1	0.105		1

Sample Narrative:

OS: 9.54 at 18.7C

DUP: 9.53 at 19C

L1922013-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1922013-01 11/25/25 23:34 • (DUP) R4306487-3 11/25/25 23:34

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
pH	7.34	7.33	1	0.136		1

Sample Narrative:

OS: 7.34 at 18.7C

DUP: 7.33 at 18.8C

Laboratory Control Sample (LCS)

(LCS) R4306487-1 11/25/25 23:34

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

Sample Narrative:

LCS: 10 at 19.4C

Method Blank (MB)

(MB) R4307653-1 11/29/25 17:41

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Mercury	U		0.0000700	0.000200

Laboratory Control Sample (LCS)

(LCS) R4307653-2 11/29/25 17:44

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Mercury	0.00300	0.00293	97.8	80.0-120	

L1920880-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1920880-01 11/29/25 17:47 • (MS) R4307653-4 11/29/25 17:52 • (MSD) R4307653-5 11/29/25 18:01

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 %
Mercury	0.00300	ND	0.00280	0.00285	93.4	95.0	1	75.0-125			1.64	20

Method Blank (MB)

(MB) R4307841-1 11/30/25 13:31

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Mercury	U		0.0000700	0.000200

Laboratory Control Sample (LCS)

(LCS) R4307841-2 11/30/25 13:34

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Mercury	0.00300	0.00302	101	80.0-120	

L1921593-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1921593-01 11/30/25 13:37 • (MS) R4307841-4 11/30/25 13:43 • (MSD) R4307841-5 11/30/25 13:45

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	0.0300	ND	0.0288	0.0292	95.9	97.2	10	75.0-125			1.30	20

Method Blank (MB)

(MB) R4308141-1 12/01/25 11:12

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Mercury,Dissolved	U		0.0000700	0.000200

Laboratory Control Sample (LCS)

(LCS) R4308141-2 12/01/25 11:14

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Mercury,Dissolved	0.00300	0.00310	103	80.0-120	

L1921498-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1921498-06 12/01/25 11:17 • (MS) R4308141-4 12/01/25 11:22 • (MSD) R4308141-5 12/01/25 11:25

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	0.00286	0.00292	91.9	94.0	1	75.0-125			2.18	20

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

Method Blank (MB)

(MB) R4307085-1 11/27/25 00:06

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Boron,Dissolved	U		0.0233	0.200
Calcium,Dissolved	U		0.153	1.00

Laboratory Control Sample (LCS)

(LCS) R4307085-2 11/27/25 00:08

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Boron,Dissolved	1.00	0.942	94.2	80.0-120	
Calcium,Dissolved	10.0	10.1	101	80.0-120	

L1921725-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1921725-01 11/27/25 00:11 • (MS) R4307085-4 11/27/25 00:16 • (MSD) R4307085-5 11/27/25 00:19

Analyte	Spike Amount mg/l	Original Result	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		1.30	1.31	97.6	97.8	1	75.0-125			0.142	20
Calcium,Dissolved	10.0		50.6	51.0	87.9	91.3	1	75.0-125			0.664	20

Method Blank (MB)

(MB) R4307638-1 11/29/25 14:14

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Boron	U		0.0233	0.200
Calcium	0.221	J	0.153	1.00

Laboratory Control Sample (LCS)

(LCS) R4307638-2 11/29/25 14:16

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Boron	1.00	0.986	98.6	80.0-120	
Calcium	10.0	10.1	101	80.0-120	

L1921496-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1921496-04 11/29/25 14:18 • (MS) R4307638-4 11/29/25 14:23 • (MSD) R4307638-5 11/29/25 14:25

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	0.586	1.54	1.54	95.2	95.6	1	75.0-125			0.291	20
Calcium	10.0	158	164	164	58.6	56.7	1	75.0-125	V	V	0.116	20

Method Blank (MB)

(MB) R4313983-1 12/14/25 15:03

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Antimony,Dissolved	U		0.000310	0.00400
Arsenic,Dissolved	U		0.000120	0.00200
Barium,Dissolved	U		0.000500	0.00200
Beryllium,Dissolved	U		0.000200	0.00200
Cadmium,Dissolved	U		0.000120	0.00100
Chromium,Dissolved	U		0.000900	0.00200
Cobalt,Dissolved	U		0.000100	0.00200
Lead,Dissolved	U		0.000500	0.00200
Lithium,Dissolved	U		0.000600	0.00200
Molybdenum,Dissolved	U		0.000500	0.00500
Selenium,Dissolved	U		0.000250	0.00200
Thallium,Dissolved	U		0.000130	0.00200

Laboratory Control Sample (LCS)

(LCS) R4313983-2 12/14/25 15:06

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Antimony,Dissolved	0.0500	0.0496	99.2	80.0-120	
Arsenic,Dissolved	0.0500	0.0509	102	80.0-120	
Barium,Dissolved	0.0500	0.0487	97.3	80.0-120	
Beryllium,Dissolved	0.0500	0.0499	99.9	80.0-120	
Cadmium,Dissolved	0.0500	0.0515	103	80.0-120	
Chromium,Dissolved	0.0500	0.0518	104	80.0-120	
Cobalt,Dissolved	0.0500	0.0524	105	80.0-120	
Lead,Dissolved	0.0500	0.0500	99.9	80.0-120	
Lithium,Dissolved	0.0500	0.0513	103	80.0-120	
Molybdenum,Dissolved	0.0500	0.0497	99.5	80.0-120	
Selenium,Dissolved	0.0500	0.0488	97.6	80.0-120	
Thallium,Dissolved	0.0500	0.0507	101	80.0-120	

L1921496-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1921496-01 12/14/25 15:10 • (MS) R4313983-4 12/14/25 15:16 • (MSD) R4313983-5 12/14/25 15:19

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	0.0511	0.0502	102	100	1	75.0-125			1.92	20
Arsenic,Dissolved	0.0500	ND	0.0521	0.0515	101	100	1	75.0-125			1.08	20
Barium,Dissolved	0.0500	0.118	0.168	0.162	100	88.0	1	75.0-125			3.70	20

L1921496-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1921496-01 12/14/25 15:10 • (MS) R4313983-4 12/14/25 15:16 • (MSD) R4313983-5 12/14/25 15:19

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	0.0484	0.0477	96.9	95.5	1	75.0-125			1.46	20
Cadmium,Dissolved	0.0500	ND	0.0514	0.0511	103	102	1	75.0-125			0.662	20
Chromium,Dissolved	0.0500	ND	0.0504	0.0511	101	102	1	75.0-125			1.54	20
Cobalt,Dissolved	0.0500	ND	0.0515	0.0511	103	102	1	75.0-125			0.845	20
Lead,Dissolved	0.0500	ND	0.0495	0.0485	98.9	96.9	1	75.0-125			2.07	20
Lithium,Dissolved	0.0500	0.0304	0.0784	0.0767	96.0	92.5	1	75.0-125			2.24	20
Molybdenum,Dissolved	0.0500	0.0584	0.108	0.107	99.7	97.7	1	75.0-125			0.931	20
Selenium,Dissolved	0.0500	ND	0.0486	0.0489	94.9	95.5	1	75.0-125			0.646	20
Thallium,Dissolved	0.0500	ND	0.0487	0.0489	97.4	97.7	1	75.0-125			0.373	20

Method Blank (MB)

(MB) R4313830-1 12/13/25 18:06

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Antimony	U		0.000310	0.00400
Arsenic	U		0.000120	0.00200
Barium	U		0.000500	0.00200
Beryllium	U		0.000200	0.00200
Cadmium	U		0.000120	0.00100
Chromium	U		0.000900	0.00200
Cobalt	U		0.000100	0.00200
Lead	U		0.000500	0.00200
Lithium	U		0.000600	0.00200
Molybdenum	U		0.000500	0.00500
Selenium	U		0.000250	0.00200
Thallium	U		0.000130	0.00200

Laboratory Control Sample (LCS)

(LCS) R4313830-2 12/13/25 18:09

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Antimony	0.0500	0.0453	90.5	80.0-120	
Arsenic	0.0500	0.0472	94.4	80.0-120	
Barium	0.0500	0.0481	96.2	80.0-120	
Beryllium	0.0500	0.0461	92.2	80.0-120	
Cadmium	0.0500	0.0489	97.9	80.0-120	
Chromium	0.0500	0.0479	95.8	80.0-120	
Cobalt	0.0500	0.0481	96.3	80.0-120	
Lead	0.0500	0.0471	94.2	80.0-120	
Lithium	0.0500	0.0452	90.4	80.0-120	
Molybdenum	0.0500	0.0459	91.8	80.0-120	
Selenium	0.0500	0.0488	97.7	80.0-120	
Thallium	0.0500	0.0470	93.9	80.0-120	

L1921602-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1921602-02 12/13/25 18:12 • (MS) R4313830-4 12/13/25 18:19 • (MSD) R4313830-5 12/13/25 18:22

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	0.0480	0.0475	96.0	95.0	1	75.0-125			1.02	20
Arsenic	0.0500	0.00327	0.0514	0.0511	96.3	95.6	1	75.0-125			0.642	20
Barium	0.0500	0.890	0.917	0.918	55.2	57.4	1	75.0-125	V	V	0.122	20

L1921602-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1921602-02 12/13/25 18:12 • (MS) R4313830-4 12/13/25 18:19 • (MSD) R4313830-5 12/13/25 18:22

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	0.0448	0.0450	89.6	90.1	1	75.0-125			0.539	20
Cadmium	0.0500	ND	0.0496	0.0490	99.2	97.9	1	75.0-125			1.31	20
Chromium	0.0500	ND	0.0478	0.0479	95.5	95.8	1	75.0-125			0.291	20
Cobalt	0.0500	0.00733	0.0553	0.0554	95.9	96.1	1	75.0-125			0.250	20
Lead	0.0500	ND	0.0486	0.0465	96.0	91.8	1	75.0-125			4.43	20
Lithium	0.0500	0.0771	0.118	0.119	81.6	84.2	1	75.0-125			1.08	20
Molybdenum	0.0500	ND	0.0520	0.0515	97.8	96.8	1	75.0-125			1.00	20
Selenium	0.0500	ND	0.0492	0.0486	97.1	95.9	1	75.0-125			1.24	20
Thallium	0.0500	ND	0.0477	0.0461	95.3	92.2	1	75.0-125			3.27	20

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.
U (Radiochemistry)	Result + Error < MDA.
J (Radiochemistry)	Result < MDA; Result + Error > MDA.
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
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).
J	The identification of the analyte is acceptable; the reported value is an estimate.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
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.

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

Report to:
Randy Homburg 314-682-3980

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

Project Description:
Grand Tower Energy Center Groundwater 4Q25

City/State Collected: Grand Tower, IL

Please Circle: PT MT (CT) ET

Regulatory Program(DOD,RCRA,DW,etc):

Client Project #
0599247

Lab Project #
ERMSCMO-0599247

Collected by (print):
Marshall Arendell

Site/Facility ID #

P.O. #

Collected by (signature):
Immediately
Packed on Ice N ____ Y X

Rush? (Lab MUST Be Notified)
____ Same Day ____ Five Day
____ Next Day ____ 5 Day (Rad Only)
____ Two Day ____ 10 Day (Rad Only)
____ Three Day X STD TAT

Quote #

Date Results Needed

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					Remarks	Sample # (lab only)
APW-03-WG-2025	Grab	GW		11/20/2025	0940	5	X	X	X	X	X						01
APW-08-WG-2025		GW		11/20/2025	1020	5	X	X	X	X	X						02
APW-07-WG-2025		GW		11/20/2025	0845	5	X	X	X	X	X						03
APW-10S-WG-2025 1119		GW		11/19/2025	1600	5	X	X	X	X	X						04
APW-10D-WG-2025 1119		GW			1530	5	X	X	X	X	X						05
APW-06S-WG-2025 1119		GW			1205	5	X	X	X	X	X						06
APW-06D-WG-2025 1119		GW			1140	5	X	X	X	X	X						07
APW-05R-WG-2025 1119		GW			1310	5	X	X	X	X	X						08
APW-09-WG-2025		GW		11/20/2025	1210	5	X	X	X	X	X						09
APW-02-WG-2025 1119		GW		11/19/2025	1355	5	X	X	X	X	X						10

Analysis / Container / Preservative

Chain of Custody Page 1 of 2

Pace
PEOPLE ADVANCING SCIENCE

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

SDG # L1621046

F103

Acctnum: **ERMSCMO**
Template: **T243415**
Prelogin: **P1185095**
PM: **206 - Jeff Carr**
PB:

Shipped Via: **FedEX Ground**

* 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: NP 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:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR
	11/21/25	1222		
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received: 74
				If preservation required by Login: Date/Time
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 11.22.25 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

Report to:
Randy Homburg 314-682-3980

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

Project Description:
Grand Tower Energy Center Groundwater 4Q25

City/State Collected: Grand Tower, IL

Please Circle: PT MT (CT) ET

Regulatory Program(DOD,RCRA,DW,etc):

Client Project #
0599247

Lab Project #
ERMSCMO-0599247

Collected by (print):
Marshall Arendell

Site/Facility ID #

P.O. #

Collected by (signature):
Immediately
Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day X STD TAT

Quote #

Date Results Needed

No. of Cntrs

Analysis / Container / Preservative

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					Remarks	Sample # (lab only)
APW-01R-WG-2025 1120	Grab	GW		11/20/2025	1120	5	X	X	X	X	X						11
APW-04-WG-2025 1119		GW		11/19/2025	1650	5	X	X	X	X	X						12
EB-01-WG-2025 1119		GW			1040	5	X	X	X	X	X						13
DUP-01-WG-2025 1119		GW		"	0001	5	X	X	X	X	X						14
DUP-02-WG-2025 1120		GW		11/20/2025	0002	5	X	X	X	X	X						15

Chain of Custody Page 2 of 2

Pace
PEOPLE ADVANCING SCIENCE

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

SDG # L1521404

Table #

Acctnum: **ERMSCMO**
Template: **T243415**
Prelogin: **P1185095**
PM: **206 - Jeff Carr**
PB:

Shipped Via: **FedEX Ground**

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

Remarks: Did not collect dissolved metals on EB-01

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: __NP __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:	Time:	Received by: (Signature)
MDavid	11/21/25	1222	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)
			CRodeno

Trip Blank Received: Yes / No
HCL / MeoH
TBR

Temp: °C Bottles Received: 74

Date: 11.22.25 Time: 0900

If preservation required by Login: Date/Time

Hold: Condition: NCF / OK

Multiple Parcel Form L#____________________

Parcel Tracking Number	Infrared Thermometer ID	Temperature Reading (°C)	Correction Factor (°C)	Corrected Temperature (°C)	Custody Seal Intact
4448 1551 9479	TVA9	1.2	±0	1.2	Yes / No / Not Present (Not Present circled)
4746 8274 3733	TVA9	1.7	|	1.7	Yes / No / Not Present (Not Present circled)
4448 1551 9480	TVA9	0.4	|	0.4	Yes / No / Not Present (Not Present circled)
					Yes / No / Not Present
					Yes / No / Not Present
					Yes / No / Not Present
					Yes / No / Not Present
					Yes / No / Not Present
					Yes / No / Not Present
					Yes / No / Not Present
					Yes / No / Not Present
					Yes / No / Not Present
					Yes / No / Not Present
					Yes / No / Not Present
					Yes / No / Not Present
					Yes / No / Not Present
					Yes / No / Not Present
					Yes / No / Not Present

______________________ Name

______________________ Date

APPENDIX E FOURTH QUARTER 2025 RADIOLOGICAL LABORATORY ANALYTICAL REPORT

ANALYTICAL REPORT

December 23, 2025

ERM - St. Louis, MO

Sample Delivery Group:	L1921508
Samples Received:	11/22/2025
Project Number:	0599247
Description:	Grand Tower Energy Center Groundwater 4Q25 Sampling
Report To:	Randy Homburg
	1968 Craig Road, Suite 100
	Saint Louis, MO 63146

Entire Report Reviewed By:

John Hawkins
Project Manager

Pace Analytical National
12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 mydata.pacelabs.com

TABLE OF CONTENTS

APW-03-WG-20251120 L1921508-01

Collected by: Marshall A | Collected date/time: 11/20/25 09:40 | Received date/time: 11/22/25 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2650335	1	12/02/25 09:42	12/05/25 23:30	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2651021	1	12/04/25 07:32	12/09/25 10:36	ZRG	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2651021	1	12/04/25 07:32	12/09/25 10:36	ZRG	Mt. Juliet, TN

APW-08-WG-20251120 L1921508-02

Collected by: Marshall A | Collected date/time: 11/20/25 10:20 | Received date/time: 11/22/25 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2650335	1	12/02/25 09:42	12/05/25 23:30	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2651021	1	12/04/25 07:32	12/09/25 10:36	ZRG	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2651021	1	12/04/25 07:32	12/09/25 10:36	ZRG	Mt. Juliet, TN

APW-07-WG-20251120 L1921508-03

Collected by: Marshall A | Collected date/time: 11/20/25 08:45 | Received date/time: 11/22/25 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2650335	1	12/02/25 09:42	12/05/25 23:30	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2651021	1	12/04/25 07:32	12/09/25 10:37	ZRG	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2651021	1	12/04/25 07:32	12/09/25 10:37	ZRG	Mt. Juliet, TN

APW-10S-WG-20251119 L1921508-04

Collected by: Marshall A | Collected date/time: 11/19/25 16:00 | Received date/time: 11/22/25 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2650335	1	12/02/25 09:42	12/05/25 23:30	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2651021	1	12/04/25 07:32	12/09/25 10:36	ZRG	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2651021	1	12/04/25 07:32	12/09/25 10:36	ZRG	Mt. Juliet, TN

APW-10D-WG-20251119 L1921508-05

Collected by: Marshall A | Collected date/time: 11/19/25 15:30 | Received date/time: 11/22/25 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2650335	1	12/02/25 09:42	12/05/25 23:30	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2651021	1	12/04/25 07:32	12/09/25 10:36	ZRG	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2651021	1	12/04/25 07:32	12/09/25 10:36	ZRG	Mt. Juliet, TN

APW-06S-WG-20251119 L1921508-06

Collected by: Marshall A | Collected date/time: 11/19/25 12:05 | Received date/time: 11/22/25 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2650335	1	12/02/25 09:42	12/05/25 23:30	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2651021	1	12/04/25 07:32	12/09/25 10:36	ZRG	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2651021	1	12/04/25 07:32	12/09/25 10:36	ZRG	Mt. Juliet, TN

APW-06D-WG-20251119 L1921508-07

Collected by: Marshall A | Collected date/time: 11/19/25 11:40 | Received date/time: 11/22/25 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2650335	1	12/02/25 09:42	12/05/25 23:30	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2651021	1	12/04/25 07:32	12/09/25 10:36	ZRG	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2651021	1	12/04/25 07:32	12/09/25 10:36	ZRG	Mt. Juliet, TN

APW-05R-WG-20251119 L1921508-08

Collected by: Marshall A | Collected date/time: 11/19/25 13:10 | Received date/time: 11/22/25 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2650986	1	12/09/25 06:52	12/18/25 23:00	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2651021	1	12/04/25 07:32	12/18/25 23:00	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2651021	1	12/04/25 07:32	12/09/25 10:36	ZRG	Mt. Juliet, TN

APW-09-WG-20251120 L1921508-09

Collected by: Marshall A | Collected date/time: 11/20/25 12:10 | Received date/time: 11/22/25 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2650986	1	12/09/25 06:52	12/18/25 23:00	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2651021	1	12/04/25 07:32	12/18/25 23:00	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2651021	1	12/04/25 07:32	12/09/25 10:36	ZRG	Mt. Juliet, TN

APW-02-WG-20251119 L1921508-10

Collected by: Marshall A | Collected date/time: 11/19/25 13:55 | Received date/time: 11/22/25 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2650986	1	12/09/25 06:52	12/18/25 23:00	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2651021	1	12/04/25 07:32	12/18/25 23:00	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2651021	1	12/04/25 07:32	12/09/25 10:36	ZRG	Mt. Juliet, TN

APW-01R-WG-20251120 L1921508-11

Collected by: Marshall A | Collected date/time: 11/20/25 11:20 | Received date/time: 11/22/25 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2650986	1	12/09/25 06:52	12/18/25 23:00	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2651021	1	12/04/25 07:32	12/18/25 23:00	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2651021	1	12/04/25 07:32	12/09/25 10:36	ZRG	Mt. Juliet, TN

APW-04-WG-20251119 L1921508-12

Collected by: Marshall A | Collected date/time: 11/19/25 16:50 | Received date/time: 11/22/25 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2650986	1	12/09/25 06:52	12/18/25 23:00	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2651021	1	12/04/25 07:32	12/18/25 23:00	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2651021	1	12/04/25 07:32	12/09/25 10:36	ZRG	Mt. Juliet, TN

EB-01-WG-20251119 L1921508-13

Collected by: Marshall A | Collected date/time: 11/19/25 10:40 | Received date/time: 11/22/25 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2651786	1	12/10/25 07:57	12/22/25 09:38	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2651021	1	12/04/25 07:32	12/22/25 09:38	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2651021	1	12/04/25 07:32	12/09/25 10:36	ZRG	Mt. Juliet, TN

DUP-01-WG-20251119 L1921508-14

Collected by: Marshall A | Collected date/time: 11/19/25 00:01 | Received date/time: 11/22/25 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2651786	1	12/10/25 07:57	12/22/25 09:38	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2651021	1	12/04/25 07:32	12/22/25 09:38	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2651021	1	12/04/25 07:32	12/09/25 10:36	ZRG	Mt. Juliet, TN

DUP-02-WG-20251120 L1921508-15

Collected by: Marshall A | Collected date/time: 11/20/25 00:02 | Received date/time: 11/22/25 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2651786	1	12/10/25 07:57	12/22/25 09:38	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2651021	1	12/04/25 07:32	12/22/25 09:38	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2651021	1	12/04/25 07:32	12/09/25 10:36	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.

John Hawkins
Project Manager

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	0.427	J	0.529	0.558	0.893	0.322	12/05/2025 23:30	WG2650335
(T) Barium	*116*	C1				*30.0-110*	*12/05/2025 23:30*	WG2650335
(T) Yttrium	*84.5*					*30.0-110*	*12/05/2025 23:30*	WG2650335

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.895	J	0.636	0.978	12/09/2025 10:36	WG2651021

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	0.469		0.353	0.451	0.399	0.128	12/09/2025 10:36	WG2651021
(T) Barium-133	*72.1*					*30.0-110*	*12/09/2025 10:36*	WG2651021

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	1.03		0.451	0.497	0.696	0.250	12/05/2025 23:30	WG2650335
(T) Barium	*114*	C1				*30.0-110*	*12/05/2025 23:30*	WG2650335
(T) Yttrium	*75.8*					*30.0-110*	*12/05/2025 23:30*	WG2650335

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	1.30		0.543	0.808	12/09/2025 10:36	WG2651021

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	0.268	J	0.303	0.375	0.411	0.134	12/09/2025 10:36	WG2651021
(T) Barium-133	*73.2*					*30.0-110*	*12/09/2025 10:36*	WG2651021

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	1.31		0.435	0.486	0.647	0.233	12/05/2025 23:30	WG2650335
(T) Barium	*116*	C1				*30.0-110*	*12/05/2025 23:30*	WG2650335
(T) Yttrium	*82.7*					*30.0-110*	*12/05/2025 23:30*	WG2650335

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	1.67		0.561	0.779	12/09/2025 10:37	WG2651021

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	0.362	J	0.355	0.479	0.433	0.112	12/09/2025 10:37	WG2651021
(T) Barium-133	*52.5*					*30.0-110*	*12/09/2025 10:37*	WG2651021

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	1.60		0.479	0.535	0.699	0.251	12/05/2025 23:30	WG2650335
(T) Barium	*113*	C1				*30.0-110*	*12/05/2025 23:30*	WG2650335
(T) Yttrium	*74.9*					*30.0-110*	*12/05/2025 23:30*	WG2650335

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	2.48		0.594	0.730	12/09/2025 10:36	WG2651021

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	0.889		0.351	0.484	0.211	0.0548	12/09/2025 10:36	WG2651021
(T) Barium-133	*95.5*					*30.0-110*	*12/09/2025 10:36*	WG2651021

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	0.909		0.378	0.418	0.579	0.208	12/05/2025 23:30	WG2650335
(T) Barium	*117*	C1				*30.0-110*	*12/05/2025 23:30*	WG2650335
(T) Yttrium	*83.3*					*30.0-110*	*12/05/2025 23:30*	WG2650335

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	1.56		0.536	0.654	12/09/2025 10:36	WG2651021

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	0.651		0.380	0.530	0.304	0.0735	12/09/2025 10:36	WG2651021
(T) Barium-133	*73.0*					*30.0-110*	*12/09/2025 10:36*	WG2651021

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	0.916		0.386	0.428	0.593	0.213	12/05/2025 23:30	WG2650335
(T) Barium	*94.6*					*30.0-110*	*12/05/2025 23:30*	WG2650335
(T) Yttrium	*90.2*					*30.0-110*	*12/05/2025 23:30*	WG2650335

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	1.33		0.496	0.691	12/09/2025 10:36	WG2651021

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	0.418		0.311	0.409	0.354	0.117	12/09/2025 10:36	WG2651021
(T) Barium-133	*96.2*					*30.0-110*	*12/09/2025 10:36*	WG2651021

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-228	1.03		0.360	0.404	0.534	0.191	12/05/2025 23:30	WG2650335
(T) Barium	*111*	C1				*30.0-110*	*12/05/2025 23:30*	WG2650335
(T) Yttrium	*91.0*					*30.0-110*	*12/05/2025 23:30*	WG2650335

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	1.62		0.543	0.682	12/09/2025 10:36	WG2651021

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.585		0.407	0.524	0.425	0.129	12/09/2025 10:36	WG2651021
(T) Barium-133	*73.8*					*30.0-110*	*12/09/2025 10:36*	WG2651021

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 pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-228	0.287	U	0.719	0.743	1.24	0.411	12/18/2025 23:00	WG2650986
(T) Barium	*82.5*					*30.0-110*	*12/18/2025 23:00*	WG2650986
(T) Yttrium	*77.8*					*30.0-110*	*12/18/2025 23:00*	WG2650986

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	0.962	J	0.812	1.28	12/18/2025 23:00	WG2651021

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.674		0.378	0.486	0.318	0.0870	12/09/2025 10:36	WG2651021
(T) Barium-133	*87.8*					*30.0-110*	*12/09/2025 10:36*	WG2651021

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	-0.160	U	0.463	0.480	0.839	0.277	12/18/2025 23:00	WG2650986
(T) Barium	*84.3*					*30.0-110*	*12/18/2025 23:00*	WG2650986
(T) Yttrium	*74.3*					*30.0-110*	*12/18/2025 23:00*	WG2650986

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.237	U	0.522	0.894	12/18/2025 23:00	WG2651021

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	0.237	J	0.241	0.293	0.308	0.0906	12/09/2025 10:36	WG2651021
(T) Barium-133	*94.1*					*30.0-110*	*12/09/2025 10:36*	WG2651021

Radiochemistry by Method 904/9320

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-228	0.0608	U	0.602	0.613	1.06	0.350	12/18/2025 23:00	WG2650986
(T) Barium	*87.0*					*30.0-110*	*12/18/2025 23:00*	WG2650986
(T) Yttrium	*83.1*					*30.0-110*	*12/18/2025 23:00*	WG2650986

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	0.587	J	0.721	1.15	12/18/2025 23:00	WG2651021

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.526		0.397	0.503	0.448	0.144	12/09/2025 10:36	WG2651021
(T) Barium-133	*74.5*					*30.0-110*	*12/09/2025 10:36*	WG2651021

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 pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-228	0.572	J	0.456	0.490	0.749	0.247	12/18/2025 23:00	WG2650986
(T) Barium	*83.7*					*30.0-110*	*12/18/2025 23:00*	WG2650986
(T) Yttrium	*83.9*					*30.0-110*	*12/18/2025 23:00*	WG2650986

Radiochemistry by Method Calculation

Analyte	Result pCi/l	Qualifier	Uncertainty + / -	MDA pCi/l	Analysis Date date / time	Batch
Combined Radium	0.794	J	0.528	0.834	12/18/2025 23:00	WG2651021

Radiochemistry by Method SM7500Ra B M

Analyte	Result pCi/l	Qualifier	2 sigma CE + / -	TPU + / -	MDA pCi/l	Lc pCi/l	Analysis Date date / time	Batch
RADIUM-226	0.222	J	0.267	0.340	0.367	0.100	12/09/2025 10:36	WG2651021
(T) Barium-133	*75.4*					*30.0-110*	*12/09/2025 10:36*	WG2651021

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	0.683	J	0.431	0.468	0.693	0.228	12/18/2025 23:00	WG2650986
(T) Barium	*83.7*					*30.0-110*	*12/18/2025 23:00*	WG2650986
(T) Yttrium	*93.2*					*30.0-110*	*12/18/2025 23:00*	WG2650986

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.966		0.487	0.737	12/18/2025 23:00	WG2651021

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	0.282		0.227	0.300	0.252	0.0717	12/09/2025 10:36	WG2651021
(T) Barium-133	*93.2*					*30.0-110*	*12/09/2025 10:36*	WG2651021

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	2.00		0.639	0.703	0.968	0.309	12/22/2025 09:38	WG2651786
(T) Barium	*87.1*					*30.0-110*	*12/22/2025 09:38*	WG2651786
(T) Yttrium	*89.9*					*30.0-110*	*12/22/2025 09:38*	WG2651786

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	2.06		0.667	1.03	12/22/2025 09:38	WG2651021

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	0.0633	U	0.190	0.235	0.342	0.103	12/09/2025 10:36	WG2651021
(T) Barium-133	*81.7*					*30.0-110*	*12/09/2025 10:36*	WG2651021

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	0.165	J5 U	0.659	0.677	1.14	0.365	12/22/2025 09:38	WG2651786
(T) Barium	*89.4*					*30.0-110*	*12/22/2025 09:38*	WG2651786
(T) Yttrium	*101*					*30.0-110*	*12/22/2025 09:38*	WG2651786

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.360	U	0.727	1.23	12/22/2025 09:38	WG2651021

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	0.195	J	0.308	0.380	0.466	0.152	12/09/2025 10:36	WG2651021
(T) Barium-133	*80.2*					*30.0-110*	*12/09/2025 10:36*	WG2651021

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	0.352	U	0.507	0.534	0.863	0.272	12/22/2025 09:38	WG2651786
(T) Barium	*77.8*					*30.0-110*	*12/22/2025 09:38*	WG2651786
(T) Yttrium	*87.0*					*30.0-110*	*12/22/2025 09:38*	WG2651786

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.640	J	0.579	0.929	12/22/2025 09:38	WG2651021

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	0.288	J	0.279	0.353	0.345	0.0984	12/09/2025 10:36	WG2651021
(T) Barium-133	*83.6*					*30.0-110*	*12/09/2025 10:36*	WG2651021

Method Blank (MB)

(MB) R4311428-1 12/05/25 18:10

Analyte	MB Result pCi/l	MB Qualifier	MB 2 sigma CE + / -	MB MDA pCi/l	MB Lc pCi/l
Radium-228	0.408	J	0.338	0.556	0.168
(T) Barium	*107*		*107*		
(T) Yttrium	*78.9*		*78.9*		

L1921508-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1921508-01 12/05/25 23:30 • (DUP) R4311428-5 12/05/25 18:10

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	0.427	0.529	0.893	0.322	1.20	0.606	0.952	0.288	95.0	0.959		20	3
(T) Barium	*116*				*94.6*	*94.6*							
(T) Yttrium	*84.5*				*93.8*	*93.8*							

Laboratory Control Sample (LCS)

(LCS) R4311428-2 12/05/25 18:10

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-228	5.00	5.45	109	80.0-120	
(T) Barium			*95.0*		
(T) Yttrium			*82.2*		

L1921107-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1921107-01 12/05/25 18:10 • (MS) R4311428-3 12/05/25 18:10 • (MSD) R4311428-4 12/05/25 18:10

Analyte	Spike Amount pCi/l	Original Result pCi/l	MS Result pCi/l	MSD Result pCi/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	MS RER	RPD Limits %
Radium-228	10.0	7.85	17.6	17.1	97.0	92.0	1	70.0-130			2.89		20
(T) Barium		*91.7*			*103*	*98.1*							
(T) Yttrium		*92.1*			*81.3*	*85.7*							

Method Blank (MB)

(MB) R4317625-1 12/18/25 23:00

Analyte	MB Result pCi/l	MB Qualifier	MB 2 sigma CE + / -	MB MDA pCi/l	MB Lc pCi/l
Radium-228	0.0146	U	0.351	0.615	0.205
(T) Barium	*91.9*		*91.9*		
(T) Yttrium	*83.3*		*83.3*		

L1920564-07 Original Sample (OS) • Duplicate (DUP)

(OS) L1920564-07 12/18/25 23:00 • (DUP) R4317625-5 12/18/25 23:00

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	1.17	0.713	1.15	0.379	1.83	0.777	1.19	0.395	43.8	0.624		20	3
(T) Barium	*76.9*				*85.6*	*85.6*							
(T) Yttrium	*88.9*				*75.9*	*75.9*							

Laboratory Control Sample (LCS)

(LCS) R4317625-2 12/18/25 23:00

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-228	5.00	4.67	93.4	80.0-120	
(T) Barium			*101*		
(T) Yttrium			*83.6*		

L1920564-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1920564-05 12/18/25 23:00 • (MS) R4317625-3 12/18/25 23:00 • (MSD) R4317625-4 12/18/25 23:00

Analyte	Spike Amount pCi/l	Original Result pCi/l	MS Result pCi/l	MSD Result pCi/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	MS RER	RPD Limits %
Radium-228	10.0	0.127	11.5	12.3	114	122	1	70.0-130			6.72		20
(T) Barium		*91.4*			*95.8*	*90.4*							
(T) Yttrium		*78.8*			*80.1*	*79.9*							

Method Blank (MB)

(MB) R4317649-1 12/22/25 09:38

Analyte	MB Result pCi/l	MB Qualifier	MB 2 sigma CE + / -	MB MDA pCi/l	MB Lc pCi/l
Radium-228	-0.165	U	0.470	0.836	0.268
(T) Barium	*78.4*		*78.4*		
(T) Yttrium	*80.8*		*80.8*		

L1921891-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1921891-02 12/22/25 09:38 • (DUP) R4317649-5 12/22/25 09:38

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	1.06	0.708	1.15	0.339	-0.0275	0.733	1.28	0.411	200	1.06	U	20	3
(T) Barium	*92.8*				*91.0*	*91.0*							
(T) Yttrium	*93.9*				*86.3*	*86.3*							

Laboratory Control Sample (LCS)

(LCS) R4317649-2 12/22/25 09:38

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-228	5.00	4.59	91.9	80.0-120	
(T) Barium			*85.4*		
(T) Yttrium			*89.2*		

L1921508-14 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1921508-14 12/22/25 09:38 • (MS) R4317649-3 12/22/25 09:38 • (MSD) R4317649-4 12/22/25 09:38

Analyte	Spike Amount pCi/l	Original Result pCi/l	MS Result pCi/l	MSD Result pCi/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	MS RER	RPD Limits %
Radium-228	10.0	0.165	12.7	11.6	125	114	1	70.0-130			15.6		20
(T) Barium		*89.4*			*92.9*	*87.1*							
(T) Yttrium		*101*			*90.2*	*91.8*							

Method Blank (MB)

(MB) R4312085-1 12/09/25 10:36

Analyte	MB Result pCi/l	MB Qualifier	MB 2 sigma CE + / -	MB MDA pCi/l	MB Lc pCi/l
Radium-226	-0.0246	U	0.0481	0.113	0.0384
(T) Barium-133	*75.5*		*75.5*		

L1921508-15 Original Sample (OS) • Duplicate (DUP)

(OS) L1921508-15 12/09/25 10:36 • (DUP) R4312085-5 12/09/25 10:36

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	0.288	0.279	0.345	0.0984	0.0331	0.112	0.219	0.0598	159	0.848	U	20	3
(T) Barium-133	*83.6*				*91.0*	*91.0*							

Laboratory Control Sample (LCS)

(LCS) R4312085-2 12/09/25 10:36

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-226	5.00	5.38	108	80.0-120	
(T) Barium-133			*70.9*		

L1921508-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1921508-01 12/09/25 10:36 • (MS) R4312085-3 12/09/25 10:36 • (MSD) R4312085-4 12/09/25 10:36

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	0.469	24.5	25.1	120	123	1	75.0-125			2.46		20
(T) Barium-133		*72.1*			*56.2*	*59.9*							

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.
TPU	Total Propagated Uncertainty reported at 2 sigma (counting error plus all measurable variables).
Lc	Decision Level or Critical Level. DOE required Detection limit at a 68% confidence level.
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.
U (Radiochemistry)	Result + Error < MDA.
J (Radiochemistry)	Result < MDA; Result + Error > MDA.
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
C1	Tracer recovery limits have been exceeded; values are outside upper control limits.
J	The identification of the analyte is acceptable; the reported value is an estimate.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.
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	LAO000356
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.

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

Report to:
Randy Homburg 314-682-3980

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

Project Description:
Grand Tower Energy Center Groundwater 4Q25

City/State Collected: Grand Tower, IL

Please Circle: PT MT CT ET

Regulatory Program(DOD,RCRA,DW,etc):

Client Project #
0599247

Lab Project #
ERMSCMO-0599247

Collected by (print):
Marshall Arendell

Site/Facility ID #

P.O. #

Collected by (signature):

Immediately
Packed on Ice N ____ Y X

Rush? (Lab MUST Be Notified)
____ Same Day ____ Five Day
____ Next Day ____ 5 Day (Rad Only)
____ Two Day ____ 10 Day (Rad Only)
____ Three Day X STD TAT

Quote #

Date Results Needed

Analysis / Container / Preservative

Pres Chk

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-2025 1120	Grab	NPW		11/20/2025	0940	3	X	X		01
APW-08-WG-2025 1120		NPW		11/20/2025	1020	3	X	X		02
APW-07-WG-2025 1120		NPW		11/20/2025	0845	3	X	X		03
APW-10S-WG-2025 1119		NPW		11/19/2025	1600	3	X	X		04
APW-10D-WG-2025 1119		NPW			1530	3	X	X		05
APW-06S-WG-2025 1119		NPW			1205	3	X	X		06
APW-06D-WG-2025 1119		NPW			1140	3	X	X		07
APW-05R-WG-2025 1119		NPW			1310	3	X	X		08
APW-09-WG-2025 1120		NPW		11/20/2025	1210	3	X	X		09
APW-02-WG-2025 1119		NPW		11/19/2025	~~1355~~ ~~1357~~ MD	3	X	X		10

Chain of Custody Page 1 of 2

Pace
PEOPLE ADVANCING SCIENCE

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

SDG # L1421508

F104

Acctnum: **ERMSCMO**
Template: **T243472**
Prelogin: **P1185094**
PM: **206 - Jeff Carr**
PB:
Shipped Via: **FedEX Ground**

* 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: NP 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:	Time:	Received by: (Signature)
MDavis	11/24/25	1222	
Relinquished by : ~~(Signature)~~	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)
			CRoberts

Trip Blank Received: Yes / No
HCL / MeoH
TBR

Temp: °C Bottles Received: 45

Date: 11.22.25 Time: 0900

If preservation required by Login: Date/Time

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

Report to:
Randy Homburg 314-682-3980

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

Project Description:
Grand Tower Energy Center Groundwater 4Q25

City/State Collected: Grand Tower, IL

Please Circle: PT MT CT ET

Regulatory Program(DOD,RCRA,DW,etc):

Client Project #
0599247

Lab Project #
ERMSCMO-0599247

Collected by (print):
Marshall Arendell

Site/Facility ID #

P.O. #

Collected by (signature):
Immediately
Packed on Ice N ____ Y X

Rush? (Lab MUST Be Notified)
____ Same Day ____ Five Day
____ Next Day ____ 5 Day (Rad Only)
____ Two Day ____ 10 Day (Rad Only)
____ Three Day X STD TAT

Quote #

Date Results Needed

No. of Cntrs

Analysis / Container / Preservative

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-01R-WG-2025 1120	Grab	NPW		11/20/2025	1120	3	X	X		11
APW-04-WG-2025 1119		NPW		11/19/2025	1650	3	X	X		12
EB-01-WG-2025 1119		NPW			1040	3	X	X		13
DUP-01-WG-2025 1119		NPW			0001	3	X	X		14
DUP-02-WG-2025 1120		NPW		11/20/2025	0002	3	X	X		15

Chain of Custody Page 2 of 2

Pace
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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

SDG # L1921508

Table #

Acctnum: **ERMSCMO**
Template: **T243472**
Prelogin: **P1185094**
PM: **206 - Jeff Carr**
PB:

Shipped Via: **FedEX Ground**

* 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: NP __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:	Time:	Received by: (Signature)
MTDavis	11/21/25	1222	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)
			CRobert

Trip Blank Received: Yes / No
HCL / MeoH
TBR

Temp: °C Bottles Received: 45

Date: 11.22.25 Time: 0900

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

L1421505

Multiple Parcel Form L#_____

Parcel Tracking Number	Infrared Thermometer ID	Temperature Reading (°C)	Correction Factor (°C)	Corrected Temperature (°C)	Custody Seal Intact
4718 2716 7334	TMA9	0.2	±0	0.2	Yes / No / Not Present
411 B 2716 7255	1	3.0	1	3.0	Yes / No / Not Present
4796 8279 3722	1	2.1	1	2.1	Yes / No / Not Present
					Yes / No / Not Present
					Yes / No / Not Present
					Yes / No / Not Present
					Yes / No / Not Present
					Yes / No / Not Present
					Yes / No / Not Present
					Yes / No / Not Present
					Yes / No / Not Present
					Yes / No / Not Present
					Yes / No / Not Present
					Yes / No / Not Present
					Yes / No / Not Present
					Yes / No / Not Present
					Yes / No / Not Present
					Yes / No / Not Present
					Yes / No / Not Present
					Yes / No / Not Present
					Yes / No / Not Present

CRodero — Name

11.22.25 — Date