CITY WATER, LIGHT AND POWER
CITY OF SPRINGFIELD, ILLINOIS
MISTY BUSCHER, MAYOR
DOUG BROWN, CHIEF UTILITY ENGINEER

VIA E-MAIL: dierich.andrea@epa.gov

September 11, 2025

Andrea Dierich
EPA Project Officer
US EPA, Region 5
77 W Jackson Blvd
Chicago, IL 60604

RE: FGDS Development Unit 2 Landfill
Alternate Source Demonstration

Dear Ms. Dierich:

Provided herein is an Alternate Source Demonstration for the FGDS Development Unit 2 Landfill in accordance with paragraph 285 of the Consent Agreement and Final Order (CAFO) effective January 14, 2025.

CWLP agreed to provide to EPA a Nature and Extent Report or an Alternate Source Demonstration for the Appendix IV constituents exhibiting Statistically Significant Levels identified in the June 13, 2025 Confirmatory Sampling Report.

Should you have any questions or require additional information, please contact me at 217-757-8610 ext. 1110.

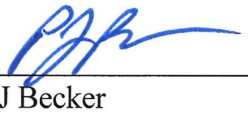
Sincerely,

PJ Becker
Environmental Health and Safety Manager

Certification of City Water, Light and Power

City of Springfield, Office of Public Utilities, d/b/a City Water, Light and Power provides the following certification as required by paragraph 300 of the Consent Agreement and Final Order effective January 14, 2025.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I have no personal knowledge that the information submitted is other than true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature: 
Name: PJ Becker
Title: Environmental Health and Safety Manager
Date: 9/11/2025

City Water, Light & Power
Springfield, Illinois

FGDS Development Landfill Unit 2 Alternate Source Demonstration

40 CFR Section 257.94(c)(2)

September 2025

Prepared for:
City Water, Light & Power
3100 Stevenson Drive
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ILLINOIS | MISSOURI | INDIANA

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APPENDICES

1. INTRODUCTION

The groundwater monitoring system for the CWLP Flue Gas Desulfurization System (FGDS) Development landfill includes five groundwater monitoring wells; one upgradient well (R101) and four downgradient wells (AW-2, P07D, G121 and G122). CWLP recalculated background concentrations and groundwater protection standards (GWPS) for the Appendix III and Appendix IV constituents for the landfill wells which were presented in the Updated Sampling Report/Confirmatory Sampling Report dated June 13, 2025. As agreed to in paragraph 284 of the Consent Agreement/Final Order (CAFO), CWLP retroactively applied the revised background concentrations and GWPS to groundwater data from October 2023, all of 2024 and the background sampling conducted in 2025. As presented in Appendix B to the June 13, 2025 report, confirmed SSIs were identified for Appendix III constituents and the Appendix IV constituent arsenic in wells AW-2, P07D and G121. A Notice of Statistically Significant Increases and Statistically Significant Levels was uploaded on June 13, 2025.

Pursuant to Section 257.94(e), the owner or operator must either establish an assessment monitoring program or demonstrate that the source other than the CCR unit caused the statistically significant increase. Pursuant to Section 257.94(e)(2), CWLP is providing an alternate source demonstration for the statistically significant increases of arsenic at wells AW-2, P07D and G121.

2. BACKGROUND

The CWLP FGDS Development landfill is located north of the former Lakeside Power Generating Station and Dallman Power Generating Station and east of the CCR surface impoundments in the Northeastern 1/4 of Section 12, Township 15 North, Range 5 West, in Springfield, Illinois (see Figure 1). The landfill consists of two (2) units. Unit 1 was permitted by the Illinois Environmental Protection Agency (Illinois EPA) to landfill materials generated from power plant and water treatment activities in 1980. Unit 1 consists of 10.5 acres and was filled to capacity and closed in accordance with 35 Illinois Administrative Code (Ill. Adm. Code) 807 regulations in February of 1993 and is not subject of this program. The Unit 1 final cover system consists of a three-foot-thick recompacted low hydraulic conductivity clay cover underlying a three-foot-thick protective cover/vegetative layer. A construction quality assurance report was submitted to the Illinois EPA upon completion of the final cover system for Unit 1.

Unit 2 consists of 22.3 acres located immediately north of Unit 1 and adjacent (east) to the Dallman Ash Pond. However, only a portion of Cell 3 (3.5 acres) of Unit 2 is currently developed and active. No other area of Unit 2 has been developed or utilized for any storage or disposal of Coal Combustion Residual (CCR) material. Unit 2 was designed and permitted pursuant to Ill. Adm. Code 814, Subpart C (Standards for Existing Units Accepting Chemical or Putrescible

Wastes That May Remain Open for More Than Seven Years). The developed portion of Cell 3 is operated and monitored pursuant to these same standards. The referenced standards were based on the RCRA Subtitle D standards (40 CFR Part 258 – Criteria for Municipal Solid Waste Landfills).

A groundwater monitoring program for the Unit 2 landfill was initially established in 1995 pursuant to 35 Ill. Adm. Code 811 requirements and has undergone several updates through the permitting process with Illinois EPA since that time. Under the Illinois program, analytical results from groundwater sampling and statistical comparison of the results to background concentrations are reported to the Illinois EPA on a quarterly basis. By December 31 of each year, an annual report characterizing the groundwater quality with summaries and analyses of trends is also included. Pursuant to the Illinois regulations, concentration exceedances of applicable groundwater quality standards (AGQSs) can trigger resampling events, alternate source demonstrations, establishment of an assessment monitoring program, installation of additional monitoring wells or increased frequency of monitoring existing wells, corrective action or any combination thereof. Such activities are conducted pursuant to the application process and must be approved by the Illinois EPA prior to commencing with such efforts.

To date, Illinois EPA has approved 18 modifications to CWLP's initial permit. Several of these modifications are the result of addressing variable groundwater quality, initiating assessment monitoring, revising AGQSs and providing an alternate source demonstration for groundwater quality in certain landfill wells. CWLP will continue to adhere to Illinois EPA requirements for groundwater sampling and analyses concurrently with the groundwater monitoring program proposed herein.

A separate groundwater monitoring program was derived for adherence to 40 CFR Part 257, specifically Sections 257.90 through 257.98. The most recent revision to the 40 CFR Part 257 landfill Groundwater Monitoring Program was posted in February 2025 subsequent to comments provided by the US EPA in the Consent Agreement and Final Order (CAFO) dated January 14, 2025.

3. SITE LAYOUT

As shown in Figure 1, the FGDS landfill is located within a facility that includes Lakeside Ash Pond, former lime settling ponds, lime sludge treatment settlement structures, the Dallman Ash Pond, the clarification pond, and the closed FGDS Development Landfill Unit 1. As discussed below, this ASD utilizes information from historical boring programs and potentiometric surface and geochemical data from other wells and piezometers existing around and within the facility. Information is provided showing that FGDS Unit 2 is located hydraulically downgradient to each of the aforementioned ponds/units, and monitoring wells upgradient (from other monitoring

programs) to FGDS Unit 2 exhibit detections of arsenic above those contained in wells AW-2, P07D and G121.

The design of the Groundwater Monitoring System and location of adjacent wells used in this ASD were based on the facility hydrogeologic characteristics provided in Section 4 below.

4. SUBSURFACE CONDITIONS

This ASD is largely dependent upon the facility hydrogeologic conditions. The subsurface conditions of the area, in and surrounding Unit 2, have been characterized through multiple subsurface investigations, including the hydrogeologic investigation of the Unit 2 landfill, Lakeside Ash Pond and Dallman Ash Pond. The investigations were most recently discussed in detail in the Periodic Safety Factor Assessment for Coal Combustion Residuals Surface Impoundments dated July 2025. The Groundwater Monitoring Program - CCR Landfill (February 2025) provides detailed hydrogeologic descriptions with reference to the current monitor well network.

The differing deposits are discussed below.

4.1 SURFICIAL DEPOSITS

The shallow stratigraphy and lithology at the landfill include approximately 20 to 50 feet of unconsolidated sediments, dependent upon location. In ascending order these materials are identified as basal sand, lower cohesive deposit, shallow sand, upper cohesive deposit and fill material.

The overall tendency is for the finer-grained materials (clays, silty clays and silts) to overlie the coarser-grained materials (sands and gravels). This coarsening downward is present throughout much of the site. At the majority of the borehole locations, the coarser materials rest directly on top of the weathered bedrock surface. It is this coarser material, the basal sand, which is characterized as the uppermost aquifer, or the bedrock surface interface an immediately overlying material. The basal sand is largely present on the bedrock surface; however, finer-grained deposits may directly overlie the bedrock.

Basal Sand

In most locations, the basal sand is the lower-most surficial deposit. The basal sand is a gray colored, poorly graded, silty to clayey fine sand to well graded sand with minor amounts of fine gravel. This unit was encountered in a medium dense to dense condition. The top elevation of the

basal sand varies from 491 to 513 feet mean sea level (MSL) and the thickness ranges from about 0 to 12.3 feet[1].

The basal sand generally overlies the bedrock surface and underlies the lower cohesive deposit. There are some pockets of very hard, fine grained silty clay to clay overlying bedrock in a few areas. The basal sand is typically present above these pockets of clayey deposits, thought to be weathered shale.

The basal sand generally consists of 0% to 34% gravel, 50% to 91% sand, and 6% to 44% silt/clay; and exhibits a mean field hydraulic conductivity of 1.73 x 10^{-2} cm/sec[1]. The basal sand was saturated in all locations where it was encountered.

Lower Cohesive Deposit

The lower cohesive deposit consists of brown, gray, and brownish gray silty clays, clayey silts, and clays, having very soft to stiff consistency. The lower cohesive deposit ranges in thickness from 0 to 22 feet with an average thickness of about 15 feet[1].

The lower cohesive deposit may be overlain by the shallow sand, where present, and underlain by the basal sand. However, within the abandoned creek area, the lower cohesive deposit was encountered directly below the creek fill sediments. In some areas the basal sand is not present and the lower cohesive deposit directly overlies the bedrock.

The soils in the lower cohesive deposit can be similar in color and texture to the soils in the upper cohesive deposit. The distinction between the two deposits was based on the presence or changes in soil consistency (as measured with a calibrated hand held penetrometer) and a marked difference in moisture content.

The lower cohesive deposit consists of 0% gravel, 5% to 48% sand, and 52% to 95% silt/clay; and has a relatively low hydraulic conductivity. The vertical hydraulic conductivity ranges from 1.3 x 10^{-8} to 1.8 x 10^{-6} cm/sec (triaxial permeameter)[1]. The horizontal hydraulic conductivity ranges from 4.6 x 10^{-5} to 7.6 x 10^{-5} cm/sec (field slug tests)[1].

Shallow Sand

The shallow sand is discontinuous. Where present, it overlies the lower cohesive deposit and underlies the upper cohesive deposit. The unit consists of a brown to gray silty to clayey fine sand. It contains small lenses of silty clay and clayey silt. This deposit is limited in occurrence.

[1] Patrick Engineering, Inc. (1993).

Laboratory tests performed on representative samples collected from the shallow sand unit during previous investigations indicate the shallow sand contains approximately 0% gravel, 50% to 52% sand, and 48% to 50% silt/clay[1]. Two landfill piezometers were screened in the shallow sand unit to obtain groundwater surface information and conduct field hydraulic conductivity tests. The hydraulic conductivity of this unit based on the slug test results ranges from 3.6×10^{-3} to 2.9×10^{-2} cm/sec[1].

Upper Cohesive Deposit

The upper cohesive deposit has a relatively low hydraulic conductivity in the vertical direction as determined by laboratory triaxial hydraulic conductivity tests from borings taken from the landfill investigation. The hydraulic conductivity values determined from the laboratory tests ranged from 5.2×10^{-7} cm/sec to 1.6×10^{-5} cm/sec[1].

Creek Fill Material

The borings made along the abandoned creek locations in the Unit 2 area indicate that the creek fill materials consist of variable soils ranging from silty clays to silty sands. Cohesive soils characterized as silty clays to organic silty clay were typically encountered. The granular fill materials are typically poorly graded silty to clayey sands and contain organics or wood fragments.

As presented in the Hydrogeologic Report for the initial significant modification permit application[1], the cohesive fill material contains 0% gravel, 2% to 48% sand, and 52% to 98% silt/clay. The vertical hydraulic conductivity ranges from 7.6×10^{-8} cm/sec to 2.1×10^{-5} cm/sec. The granular fill materials contain 0 to 2% gravel, 55% to 65% sand and 33% to 45% silt/clay. Based on one laboratory hydraulic conductivity test performed on a Shelby tube sample obtained from berm fill, the hydraulic conductivity of the granular fill material is 3.3×10^{-8} cm/sec.

Four landfill piezometers (P-S1, P-3S, P-5S and P-8S) were screened into the fill materials[1]. Of these, one piezometer was installed into cohesive fill material and the other piezometers were installed in granular fill materials. Hydraulic conductivity of the granular fill materials is based on one field test (falling head) resulting in a value of 6.1×10^{-2} cm/sec. The hydraulic conductivity of the cohesive fill material ranged from 7.1×10^{-5} cm/sec to 1.1×10^{-4} cm/sec. These values represent the hydraulic conductivity in the horizontal direction.

Laboratory hydraulic conductivity test performed on landfill cohesive fill materials ranged from 3.3×10^{-8} cm/sec to 2.1×10^{-3} cm/sec. The higher hydraulic conductivity values are believed to be typical of soils which contain organic matter (e.g. wood fragments). The hydraulic conductivity values based on laboratory tests are generally considered to be representative of the coefficient of hydraulic conductivity in the vertical direction because of the sample configuration during testing.

4.2 UPPERMOST BEDROCK

The bedrock at the project site consists of Pennsylvanian shales which are gray in color. The bedrock surface elevation varies from approximately 492 feet MSL near the center of the existing landfill, to approximately 554 feet MSL. In general, the bedrock surface slopes from the east and west towards the center of the landfill area.

Rock Quality Designation (RQD) measurements were performed on all core samples taken from the landfill area. RQDs measured from core samples collected during this investigation ranges from 80% to 100%[1]. The RQD values indicate that the bedrock is not highly fractured. Two in situ hydraulic conductivity tests were performed to determine the hydraulic conductivity of the upper portions of the bedrock. Test results indicate hydraulic conductivity values of 1.8×10^{-7} cm/sec and 1.3×10^{-6} cm/sec.

The April-May 2024 investigation included the advancement of a 100-foot boring (B100) northwest of the Dallman Ash Pond. The 100-foot boring was a requirement of the Illinois EPA. The objective of the boring was to collect information for the calculations of resistance to mine collapse. No mine voids were encountered in this boring. Boring B100 was advanced to a total depth of 106 feet below surface. Bedrock was encountered at 32.3 feet below surface (500.7 ft MSL).

Packer testing was completed at seven intervals in boring B100 (i.e., 93 to 103.5 feet bgs, 82.5 to 93 feet bgs, 72 to 82.5 feet bgs, 61.5 to 72 feet bgs, and 51 to 61.5 feet bgs with the final two intervals overlapping 40.5 to 51 and 38.5 to 49 feet bgs). Test results indicate hydraulic conductivity below 482 feet MSL is less than 1×10^{-9} cm/sec. The results confirm that bedrock below the weathered zone is relatively impermeable; however, the shallow weathered bedrock may have higher hydraulic conductivities and in direct hydraulic communication with the overlying basal sand such that the interface of the unconsolidated deposits and bedrock comprise the uppermost aquifer.

There is good correlation between the lithology of the rocks tested and the hydraulic conductivity values obtained. The upper bedrock beneath the impoundments is expected to exhibit the same characteristics as encountered at the landfill.

4.3 HYDROGEOLOGIC UNITS

The uppermost aquifer and underlying confining unit control groundwater movement and the potential for CCR impacted groundwater migration at the site. A description of the uppermost aquifer and the underlying confining unit follows:

Uppermost Aquifer

The uppermost aquifer is characterized as the basal sand overlying the shale bedrock. The hydraulic conductivity of the basal sand ranges from 5.6 x 10^{-4} to 3.6 x 10^{-2} cm/sec. The groundwater in the basal sand appears to be mostly semi-confined conditions. The upper limit of the uppermost aquifer is dependent upon the seasonally fluctuating potentiometric surface. The potentiometric surface of the basal sand varies from approximately 560 feet MSL at upgradient locations, south of the Lakeside Ash Pond, to approximately 522 feet MSL at downgradient locations near Sugar Creek, north of the Dallman Ash Pond. As a result, the saturated thickness of the basal sand is variably dependent upon the location and the seasonal variation.

Lower Confining Unit

The uppermost bedrock at the project site is primarily Pennsylvanian age shale with isolated thin coal layers. The Pennsylvanian shale functions as a lower confining unit due to its low permeability and effective porosity. The lower confining unit represents a natural hydrogeologic barrier (i.e., aquitard) to the vertical movement of groundwater.

In situ hydraulic conductivity test (slug tests) indicate that the hydraulic conductivity for the upper portions of the bedrock range from 1.8 x 10^{-7} to 1.3 x 10^{-6} cm/sec[1]. There appears to be good correlation between the rock lithology and the measured values of hydraulic conductivity. The bedrock will act as an aquitard and prevent the downward movement of groundwater.

4.4 GROUNDWATER MOVEMENT

The primary saturated interval beneath the CCR landfill and the adjacent CCR surface impoundments is the basal sand/bedrock interface, otherwise referred to as the uppermost aquifer. Groundwater movement within the uppermost aquifer is controlled by recharge along topographic highs and discharge along the stream valley. The pre-surface impoundment flow direction in the uppermost aquifer was dominantly horizontal from the adjacent banks toward the natural convergence along Sugar Creek, which formerly drained the site. This was overall from south to north with local deviations. This dominant flow pattern persists under present day conditions.

Monitoring wells and piezometers at the facility, including surface water elevations, were used to derive detailed potentiometric surface maps of the uppermost aquifer (see Appendix A). In addition to R-101, AW-2, P07D, G-121 and G-122, wells and piezometers utilized for derivation of the potentiometric surface maps are contained in other monitoring programs approved pursuant to 40 CFR Part 257 (surface impoundments), 35 IAC Part 845 (Illinois EPA Bureau of Water/surface impoundments), and 35 IAC Part 814, Subpart C (Illinois EPA Bureau of Land/FGDS Development Landfill) or are part of on-going investigations. The east perimeter of the Lakeside Ash Pond is upgradient to the Unit 2 landfill where groundwater movement is

perpendicular to the impoundment perimeter. Groundwater movement beneath the Unit 2 landfill is to the east/northeast.

5. GROUNDWATER MONITORING SYSTEM

The §257.91 monitoring network is comprised of one upgradient well (R101) and four downgradient wells (AW-2, P07D, G121 and G122). The well locations are depicted in Figure 2.

Each of the wells is screened in the basal sand deposit overlying the shale bedrock. As stated above, the direction of groundwater movement at Cell 3 is to the east-northeast; therefore, the northern and eastern boundaries of the developed portion of Cell 3 are downgradient and the southern and western boundaries are hydraulically upgradient to the cell. Upgradient monitor well R101 is located outside the historical Sugar Creek drainageway to the southeast of the landfill unit. Wells P07D and AW-2 are located downgradient and east of the Unit 2 landfill, and wells G121 and G122 are located downgradient and north of the Unit 2 landfill.

As stated in Section 3, the FGDS Unit 2 landfill is located within a facility that includes Lakeside Ash Pond, former lime settling ponds, lime sludge treatment settling structures, the Dallman Ash Pond, the clarification pond, and the closed FGDS Development Landfill Unit 1. Groundwater quality within R101 is representative of conditions southeast of the facility and is not influenced by surface impoundments or the Unit 1 landfill. The location of R101 meets 40 CFR §257.91(a)(1) as the groundwater quality has not been affected by leakage from a CCR unit. However, the well does not represent the groundwater quality that is immediately upgradient to the south and west periphery of the Unit 2 landfill.

Background Well

As stated above, CWLP recalculated background concentrations and groundwater protection standards (GWPS) for the Appendix III and Appendix IV constituents for the landfill wells which were presented in the Updated Sampling Report/Confirmatory Sampling Report dated June 13, 2025. As agreed to in paragraph 284 of the Consent Agreement/Final Order (CAFO), CWLP retroactively applied the revised background concentrations and GWPS to groundwater data from October 2023, all of 2024 and the background sampling conducted in 2025, ending in April. Groundwater monitoring well P07D was first sampled in August 2024.

Background well R101 is located south and east of the Unit 2 landfill and is screened from approximately 511.98 to 517.98 feet MSL. The screened zone consists of silty clay overlying the surface of the Pennsylvanian shale (511.78 ft. MSL). This well will provide representative background groundwater quality, as allowed under §257.91(a)(1)(ii).

Downgradient Wells

Groundwater wells AW-2, P07D, G121 and G122 allow monitoring of the downgradient groundwater quality conditions in the uppermost aquifer. The locations and depths of these wells represent the quality of groundwater passing beneath the impoundment boundaries of the landfill and reasonably make possible the detection of geochemical changes in the uppermost aquifer. These groundwater monitoring wells are all screened at the top of the weathered bedrock surface. Wells P07D and AW-2 are located immediately east of the landfill. Monitoring wells G121 and G122 are located along the northern berm of the landfill and adjacent to Sugar Creek. Further details are listed below:

- Monitoring well AW-2 is screened from approximately 494.86 to 504.86 feet MSL. The screened zone consists of sand overlying the surface of the Pennsylvanian shale (494.46 ft. MSL).
- Piezometer P07D is screened from approximately 496.2 to 498.7 feet MSL. The screened zone consists of sand immediately above the unconsolidated/Pennsylvanian shale interface (494 ft. MSL).
- Monitoring well G121 is screened from approximately 497.96 to 501.93 feet MSL. The screened zone consists of clayey sand, clayey silt and sand overlying the surface of the Pennsylvanian shale (498.7 ft MSL). Based on the potentiometric surface data, well G121 is also downgradient to the northeast corner of the Dallman Ash Pond.
- Monitoring well G122 is screened from approximately 497.76 to 507.46 feet MSL. The screened zone consists of clayey silt, clayey sand and sand immediately above the unconsolidated/Pennsylvanian shale interface (494.3 ft MSL).

6. ALTERNATE SOURCE

As discussed in Section 3, the FGDS Unit 2 landfill is located within a facility that includes Lakeside Ash Pond, former lime settling ponds, lime sludge treatment settling structures, the Dallman Ash Pond, the clarification pond and the closed FGDS Development Landfill Unit 1. Based on the hydrogeologic characteristics of the facility, the FGDS Unit 2 landfill is located hydraulically downgradient to each of the aforementioned ponds/units, and monitoring wells upgradient (from other monitoring programs) to FGDS Unit 2 exhibit detections of arsenic above those contained in wells AW-2, P07D and G121.

Arsenic data was reviewed not only from the five wells contained in the FGDS Unit 2 landfill groundwater monitoring system (R101, AW-2, P07D, G121 and G122), but also from wells R111, G112, G113, G120, AW-1, and P04D. The additional wells are screened in the uppermost aquifer and located upgradient to the landfill and downgradient to alternate sources, with the exception of existing program well R101, and wells G113 and P04D, which are located on the east side of the facility (see Figure 3). The data from wells R101, G113 and P04D represent groundwater quality coming onto the facility from the east. Wells R111, G112 and AW-1 are located such that

the data represents the groundwater quality downgradient of alternate sources but upgradient to the FGDS Unit 2 landfill.

The last 10 years of data (since second quarter 2015) for the 11 wells are provided in Table 1. The data has been included in a graph provided in Appendix B. As stated above, well P07D only recently began detection monitoring (third quarter 2024) and one set of data exists for well P04D which was sampled for purposes of the ASD, Nature and Extent Report revision, and the Flow Path Analysis, which will be submitted as separate documents.

Wells AW-2 and P07D are located linearly from south (upgradient) to north (downgradient) on the east side of the FDGS Unit 2 landfill. The concentrations within P07D and AW-2 are highest on the south and decrease uniformly to the north, indicating a source to the south is influencing the subject concentrations. Well G121 is partially downgradient to the northeast corner of the Dallman Ash Pond as well as the northwest corner of the Unit 2 landfill. During the last 10 years, total arsenic concentrations have ranged from 25.5 – 47 ug/L in P07D, with an average of 33.87 ug/L. Concentrations ranged from 1.2 – 31.8 ug/L in well AW-2, with an average of 20.03 ug/L. Concentrations ranged from 1 (below the reporting limit) to 22.1 ug/L in G121, with an average of 13.77 ug/L. During a timeframe from second quarter 2015 to fourth quarter 2019, the reporting limit for total arsenic was 25 ug/L. Sampling events that resulted in no detections below the reporting limit of 25 ug/L were not utilized in determination of the range or average concentrations.

Evaluating total arsenic concentrations in wells to the south of the AW-2, P07D and G121, the following characteristics are apparent:

- Well P04D is located on the east periphery of the facility where groundwater movement is from east to west towards the drainageway beneath the facility. The one-time sampling event resulted in a total arsenic concentration of 2.7 ug/L. The area east of the landfill and facility does not appear to be influencing the total arsenic concentrations within the groundwater monitoring system wells.
- Well G113 is located at the northeast corner of the FGDS Unit 1 landfill. Groundwater movement is from the east/southeast towards the drainageway beneath the facility. Total arsenic concentrations ranged from 1 ug/L (below the reporting limit) to 12.9 ug/L, with an average of 4.16 ug/L. Total arsenic has only been detected once in the last seven sampling events. Based on the potentiometric surface data and concentrations in the well, the area around G113 does not appear to be influencing the total arsenic concentrations with the groundwater monitoring system wells.
- Well G112 is located along the north perimeter of the FGDS Unit 1 landfill. Groundwater movement is from the south to north paralleling the drainageway beneath the facility. Total arsenic concentrations ranged from 1 ug/L (below the reporting limit) to 9.4 ug/L, with an average of 2.24 ug/L. Total arsenic has only been detected twice in the last nine sampling

events. Based on the potentiometric surface data, well G112 is upgradient to P07D, AW-2 and G121. However, total arsenic concentrations are below those detected in subject wells. Therefore, the area around G112 does not appear to be influencing the total arsenic concentrations with the groundwater monitoring system wells.

- Well R111 is located along the north perimeter of the FGDS Unit 1 landfill. Groundwater movement is from the south to north paralleling the drainageway beneath the facility. Total arsenic concentrations ranged from 1.5 ug/L to 46.5 ug/L, with an average of 17.95 ug/L. Total arsenic is encountered at higher concentrations in R111 than wells located to the east. Based on the potentiometric surface data, well R111 is upgradient to P07D, AW-2 and G121. Total arsenic concentrations are generally consistent with those in wells AW-2 and G121, and less than those detected in P07D.
- Well AW-1 is located at the northwest corner of the FGDS Unit 1 landfill and immediately adjacent to the Dallman Ash Pond. Groundwater movement is from the west/southwest to the easts/northeast towards the drainageway beneath the facility. Total arsenic concentrations ranged from 1.5 ug/L to 208 ug/L, with an average of 140.85 ug/L. The most recent sampling event (second quarter 2025) resulted in the low concentration of 1.5 ug/L. Based on the potentiometric surface data, well AW-1 is upgradient to P07D, AW-2 and G121. The area around AW-1 does appear to be influencing the total arsenic concentrations with the groundwater monitoring system wells and indicates the alternate source is nearby.
- Well G120 is located near the southwest corner of the FGDS Unit 2 landfill and immediately adjacent to the Dallman Ash Pond. Groundwater movement is from the west towards the drainageway beneath the facility. Total arsenic concentrations ranged from 10.4 ug/L to 17.4 ug/L, with an average of 12.66 ug/L. The total arsenic concentrations at G120 have been fairly consistent. Based on the potentiometric surface data, well G120 is upgradient to P07D, AW-2 and G120. However, total arsenic concentrations at G120 are typically below those detected in subject wells.

Total arsenic concentrations are monitored at the leachate manhole (L303) located in the Unit 2 landfill. Concentrations typically fluctuate between 20 and 60 ug/L (See Table 1). The subject concentrations are significantly less than those detected in wells AW-1 as well as P07D. The likelihood that Unit 2 landfill to impact the arsenic concentrations in P07D, AW-2 and G121 is minimal.

Based on the total arsenic concentrations from wells within the groundwater monitoring system and adjacent wells from other monitoring programs, a source of total arsenic affecting wells P07D, AW-2 and G121 is located upgradient to the south and/or west of the FGDS Unit 2 landfill.

The monitor well network approved by the Illinois EPA for FGDS Development Unit 2 (Permit No. 1995-243-LFM) detected arsenic in upgradient wells since the implementation of the network. Revised applicable groundwater quality standards (AGQSs) and maximum allowable predicted concentrations (MAPCs) for specific parameters were submitted and approved in Illinois EPA Application Log No. 1997-410. This included total arsenic applicable to well G121. The Illinois EPA had acknowledged spatial variability within the vicinity of the Unit 2 landfill due to historical property use.

Unit 2 was designed and permitted pursuant to Ill. Adm. Code 814, Subpart C (Standards for Existing Units Accepting Chemical or Putrescible Wastes That May Remain Open for More Than Seven Years). The developed portion of Cell 3 is operated and monitored pursuant to these same standards. The referenced standards were based on the RCRA Subtitle D standards (40 CFR Part 258 – Criteria for Municipal Solid Waste Landfills). Unit 2 contains a five-foot recompacted clay liner with a leachate collection system. Construction certification for the liner and leachate collection systems was recently provided as Attachment B to the Final Closure Plan for FGDS Development Landfill Unit 2 (Revised July 2025).

Based on the liner and leachate collection systems present in Unit 2, and review of the geochemical data from groundwater monitoring system wells and adjacent wells all screened in the uppermost aquifer, the Unit 2 landfill is not the cause of the total arsenic exceedances of the groundwater protection standard in wells P07D, AW-2 and G121. The alternate source is located upgradient, south/southwest of the landfill unit. The upgradient groundwater quality passing beneath the landfill unit is affected by a source other than the landfill (CCR unit).

7. REVISED BACKGROUND CONCENTRATIONS FOR TOTAL ARSENIC

The hydrogeologic conditions at the facility have been determined based on the numerous comprehensive boring programs completed for permitting of the FGDS Development Unit 2 landfill as well as the adjacent CCR impoundments. Groundwater movement has been accurately determined within the uppermost aquifer. The groundwater monitoring system was approved by the US EPA based on their comments and recommendations. The background well (R101) was located pursuant to § 257.91(a)(1), where the groundwater quality at the well was not affected by leakage from a CCR unit. The well is located to the southeast of the Unit 2 landfill slightly upslope of the historic Sugar Creek drainageway. Groundwater movement at R101 is from the southeast to the northwest.

Groundwater movement at the Unit 2 Landfill is also from south to north and from west to east, dependent upon the location of origin. Within those areas, three sources that could influence the groundwater quality at the downgradient wells (P07D, AW-2, G121 and G122) include the

Lakeside and Dallman Ash Ponds and the FGDS Unit 1 Landfill. The Dallman Ash Pond is immediately adjacent (west) of the FGDS Unit 2 Landfill. Due to the location of R101, it cannot account for elevated concentrations upgradient to the Unit 2 landfill where sources may be south or west of the unit. The Unified Guidance document[2] states the use of interwell prediction limits may not be appropriate in a setting where the downgradient concentrations are greater than background concentrations due to migration from off-site sources reaching the downgradient wells. In this situation, the off-site sources can be the two ash ponds or the FGDS Unit 1 Landfill. As such, the current prediction limit derived from data from R101 is not representative for total arsenic and is causing false positives. Calculating a revised prediction limit utilizing data from all or a combination of some wells upgradient to the Unit 2 Landfill, or deriving intrawell prediction limits for P07D, AW-2 and G121 are more appropriate.

There are six wells located upgradient to the Unit 2 Landfill; R101, R111, G112, G113, AW-1 and G120 (see Figure 3). In review of the total arsenic data for each of the wells (Table 1), it is apparent that R111, G120 and AW-1 detect total arsenic concentrations upgradient of the Unit 2 landfill that can influence the downgradient wells above concentrations detected by the background well (R101).

The Unified Guidance document also states intrawell testing is more appropriate than interwell testing where the background groundwater quality reflects significant spatial variability. An analysis of variance (ANOVA) was conducted on the most recent 8 sets of total arsenic concentrations from upgradient wells R111, G120 and AW-1. The data and results presented in Appendix C show the data sets are significantly different; derivation of an interwell prediction limit from the three data sets is not recommended. Given that the landfill contains a five-foot recompacted clay liner with a leachate collection system, upgradient sources of arsenic are present, and that the data from the upgradient wells (R111, G120 and AW-1) are significantly variable, the use of intrawell prediction limits for wells P07D, AW-2 and G121 are appropriate.

Intrawell prediction limits (groundwater protection standards) have been derived for downgradient wells P07D, AW-2 and G121 for total arsenic. The revised limits will account for upgradient influences to the total arsenic concentrations and mitigate the false positives/exceedances. The calculations are provided in Appendix D. The laboratory reports with the analytical data used in the intrawell calculations are provided in Appendix E.

[2] U.S. Environmental Protection Agency - Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities: Unified Guidance (March 2009).

8. CONCLUSION

CWLP recalculated background concentrations and GWPSs for the Appendix III and Appendix IV constituents for the landfill wells which were presented in the Updated Sampling Report/Confirmatory Sampling Report dated June 13, 2025. As agreed to in paragraph 284 of the CAFO, CWLP retroactively applied the revised background concentrations and GWPS to groundwater data from October 2023, all of 2024 and the background sampling conducted in 2025. As presented in Appendix B to the June 13, 2025 report, confirmed SSIs were identified for Appendix III constituents and the Appendix IV constituent arsenic in wells AW-2, P07D and G121.

Data from nearby upgradient wells screened in the basal sand were evaluated along with the data from the five wells contained in the monitor well system. It was determined potential sources other than the Unit 2 landfill were influencing total arsenic concentrations in downgradient wells P07D, AW-2 and G121. The data was statistically reviewed, evaluating methodologies for revision of the background concentrations of arsenic. An analysis of variance indicated the spatial variability upgradient of the Unit 2 landfill was too great to pool the data for derivation of the revised GWPS. As provided in the Unified Guidance document, derivation of intrawell GWPSs was more appropriate (Appendix D).

Pursuant to Section 257.94(e)(2), the owner has successfully demonstrated that a source other than the CCR unit (Unit 2 landfill) caused the statistically significant increase; no release has occurred. Therefore, there is no need for characterization of the nature and extent of the subject exceedances is necessary or applicable. Although alternate sources are present in proximity of the Unit 2 landfill, arsenic is a naturally occurring element in the earth's crust. Arsenic is found in the deep bedrock materials throughout Illinois, as well as in the shallow glacial materials that cover the northern two-thirds of the state. [3] Natural spatial variability may also influence the arsenic concentrations.

The current Groundwater Monitoring Program will be updated to include the new intrawell groundwater protection standards for arsenic at wells P07D, AW-2 and G121. A review of concentrations for the Appendix III constituents will be conducted with respect to upgradient influences to the downgradient groundwater quality. Additional intrawell background concentrations or groundwater protection standards may be warranted.

[3] Illinois State Water Survey – Arsenic in Illinois Groundwater, January 2002/Updated 2025.

9. ENGINEERING CERTIFICATION

The owner or operator of a coal combustion residual (CCR) unit must obtain a certification from a qualified professional engineer that the alternate source demonstration at the CCR unit has been completed pursuant to 40 C.F.R. § 257.94(e)(2).

The engineering certification for the groundwater monitoring system follows.

Professional Engineer Certification – Alternate Source Demonstration

40 CFR § 257.94(2) Alternate Source Demonstration

In accordance with Title 40 of the Code of Federal Regulations (40 CFR), Part 257, Subpart D, Section 257.94(e)(2) the owner or operator of a coal combustion residuals (CCR) unit must obtain certification from a qualified professional engineer verifying the accuracy of the information in the alternate source demonstration addressing statistically significant increases over background levels.

I, Karl W. Finke, a qualified professional engineer in good standing in the State of Illinois, certify that the information provided in the alternate source demonstration for the CWLP FGDS Development Unit 2 landfill is accurate.

Signature: _____

Illinois P.E. No: 062.068571

Date: September 10, 2025

TABLE 1:
TOTAL ARSENIC DATA

TABLE 1 - TOTAL ARSENIC CONCENTRATIONS

CWLP - FGDS DEVELOPMENT UNIT 2 LANDFILL

WELLS WITHIN THE GROUNDWATER MONITORING SYSTEM

Well ID	2015-Q2	2016-Q2	2017-Q2	2018-Q2	2019-Q2	2019-Q4	2020-Q2	2021-Q2	2022-Q2	2022-Q3	2023-Q2	2023-Q3	2023-Q4	2024-Q1	2024-Q2	2024-Q3	2024-Q4	2025-Q1	2025-Q1-1	2025-Q2	2025-Q2-1
AW-2	31.8	28	25.4	< 25	28.4	28.6	27.4	20.2	22.6		19		26.6	23.5	17.5	18	13	1.7	1.2	16.6	11
G121	< 25	< 25	< 25	< 25	< 25	< 25	13.6	14.9	16.3		15.5		22.1	17.3	14.6	8.4	16	16.9	< 1	18	4.4
G122	< 25	< 25	< 25	< 25	< 25	< 25	3.4	3.2	4.1		3.4		4.6	2.8	3.5	1.9	2.9	1	1.6	2.7	2.9
P07D								47								39.4	36	27.6	29.2	32.4	25.5
R101	< 25	< 25	< 25	< 25	< 25	< 25	< 1	< 1	< 1		< 1		< 1	< 1	< 1	< 1	< 1	< 1	< 1	2.1	< 10

ADDITIONAL WELLS USED FOR ARSENIC EVALUATION

Well ID	2015-Q2	2016-Q2	2017-Q2	2018-Q2	2019-Q2	2019-Q4	2020-Q2	2021-Q2	2022-Q2	2022-Q3	2023-Q2	2023-Q3	2023-Q4	2024-Q1	2024-Q2	2024-Q3	2024-Q4	2025-Q1	2025-Q1-1	2025-Q2	2025-Q2-1
AW-1	86.2	180	130	155	38.6	178	147	163	148	192	152		208	160	153	129	168	146		1.5	
R111			< 25	30.2	< 25	< 25	46.5	23.1	11.1	3.1	21	21.2	1.9	1.5	17.5	16.6	18.5	15.6	19.9	21.5	
G112	< 25	< 25	< 25	< 25	< 25	< 25	9.4	5.7	1.5		< 1		2.1	< 1	< 1	< 1	< 1	1	1.2	< 1	
G113	< 25	< 25	< 25	< 25	< 25	< 25	7.2	11.3	12.9		5.5		< 1	2.9	< 1	< 1	< 1	< 1		< 1	
G120	< 25	< 25	< 25	< 25	< 25	< 25	11.8	11.3	12		13.8		16.2	11.6	12.1	10.4	11.9	11.3	12.1	17.4	
P04D								< 25													2.7
L303	31.3	< 25	< 25	35.5	25.4	< 25	< 25	< 25	< 25		< 25		59.3				< 25			< 25	

Concentrations are in ug/L.

< Represents no detection at the shown reporting limit.

L303 is the leachate manhole in the Unit 2 landfill.

FIGURES

FIGURE 1:
SITE FEATURES

NOTE

1. AERIAL IMAGE FROM APRIL 7, 2024, FROM GOOGLE EARTH.

LEGEND

- POND/LANDFILL BOUNDARY
- ACCESS ROADS
- IMPOUNDMENT BOUNDARY
- TEMPORARY ASSESSMENT WELL
- GROUNDWATER MONITORING WELL

N

0 250 500 1000

SCALE: IN FEET

NO.	DATE	REVISION DESCRIPTION	BY

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PH (217) 787-2334 WWW.ANDREWSENG.COM
PONTIAC, IL • LOMBARD, IL • INDIANAPOLIS, IN • WARRENTON, MO

DESIGNED BY: BJH | DRAWN BY: BCK | APPROVED BY: BJH

SITE FEATURES

PREPARED FOR
CITY, WATER, LIGHT AND POWER
SPRINGFIELD, SANGAMON COUNTY, ILLINOIS

DATE: SEPTEMBER 2025

PROJECT ID: 240227/0001

SHEET NUMBER:

FIG. 1

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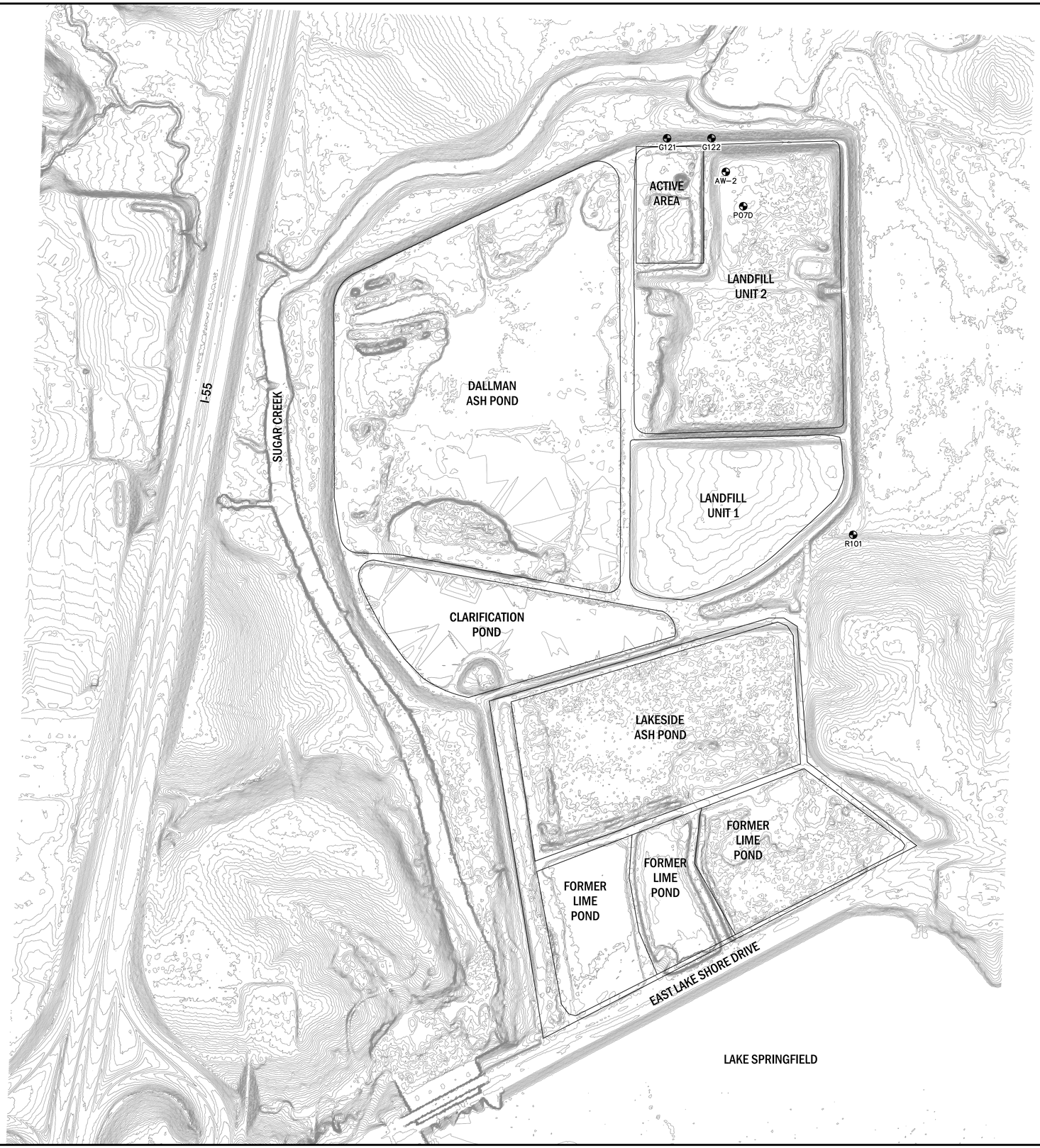
Tab: FIGURE 2 NEW Last Saved: September 4, 2025, by Ben Karpus Plotted: Thursday, September 4, 2025 11:24:13 AM
J:\S\Springfield CWLP\CWLP Ash Pond\DWG\2025\Site Plan Map.dwg

FIGURE 2:
MONITOR WELL SYSTEM



LEGEND

- 40 CFR 257 GROUNDWATER MONITORING WELL

NOTES

1. FLIGHT DATE: APRIL 2023.

N

0 200 400 800

SCALE: IN FEET

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PONTIAC, IL • LOMBARD, IL • INDIANAPOLIS, IN • WARRENTON, MO

DESIGNED BY: MTH | DRAWN BY: BCK | APPROVED BY: BJH

MONITOR WELL SYSTEMS

PREPARED FOR
CITY WATER, LIGHT, AND POWER
SPRINGFIELD, SANGAMON COUNTY, ILLINOIS

DATE: SEPTEMBER 2025

PROJECT ID: 230339/0026

SHEET NUMBER:

FIG 2

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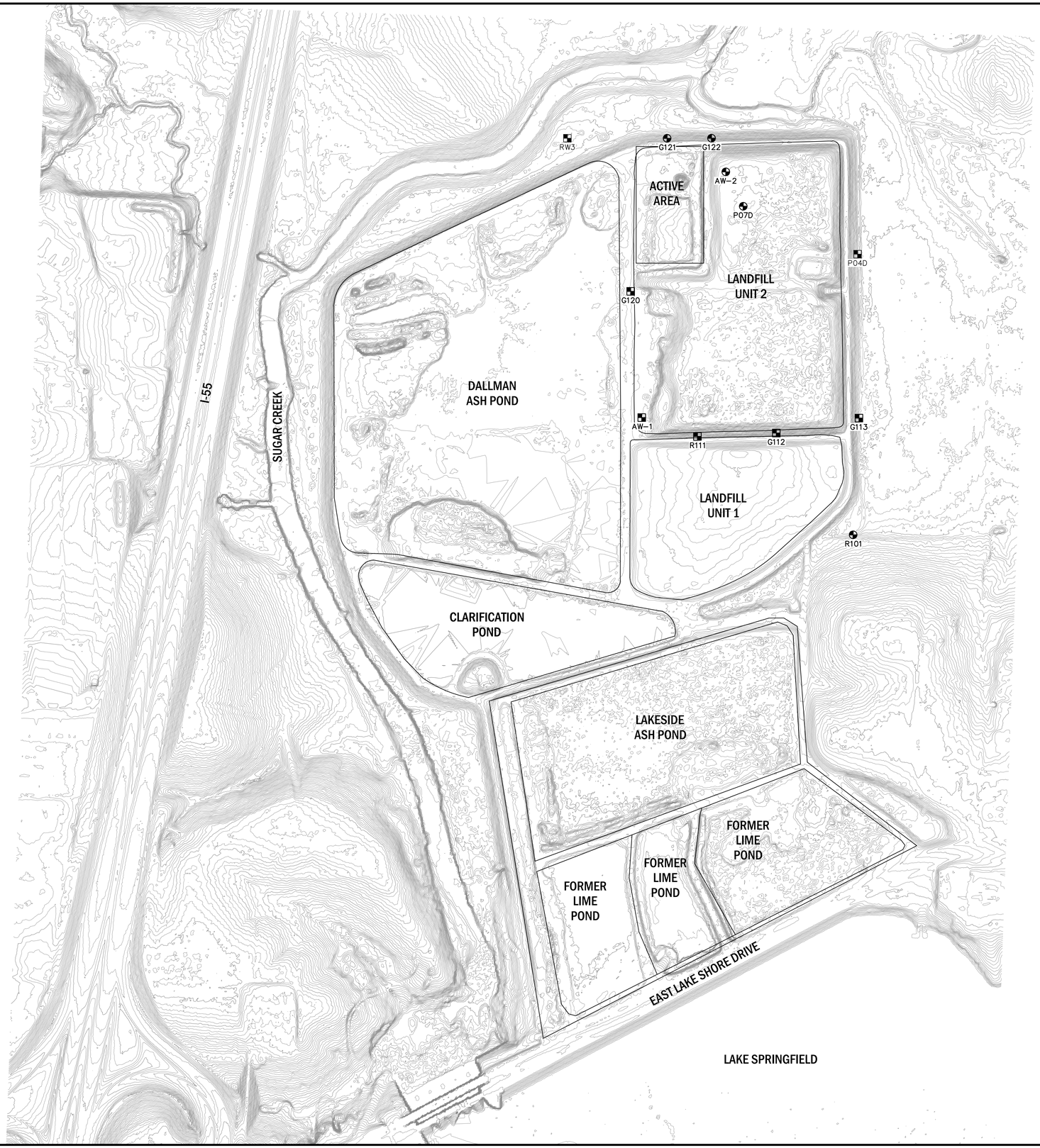
Tab: SITE DETAILS MAP Last Saved: September 4, 2025, by Ben Korpus Plotted: Thursday, September 4, 2025 12:02:57 PM
J:\S\Springfield CWLP\CWLP Ash Pond\DWG\2025\Monitoring Well System.dwg

FIGURE 3:
WELLS USED FOR ARSENIC EVALUATION



LEGEND

- 40 CFR 257 GROUNDWATER MONITORING WELL
- ADDITIONAL WELLS USED FOR ARSENIC CONCENTRATION

NOTES

1. FLIGHT DATE: APRIL 2023

N

0 200 400 800

SCALE: IN FEET

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DESIGNED BY: MTH | DRAWN BY: BCK | APPROVED BY: BJH

WELLS USED FOR ARSENIC EVALUATIONS

PREPARED FOR
CITY WATER, LIGHT, AND POWER
SPRINGFIELD, SANGAMON COUNTY, ILLINOIS

DATE: JANUARY 2025

PROJECT ID: 230339/0026

SHEET NUMBER:

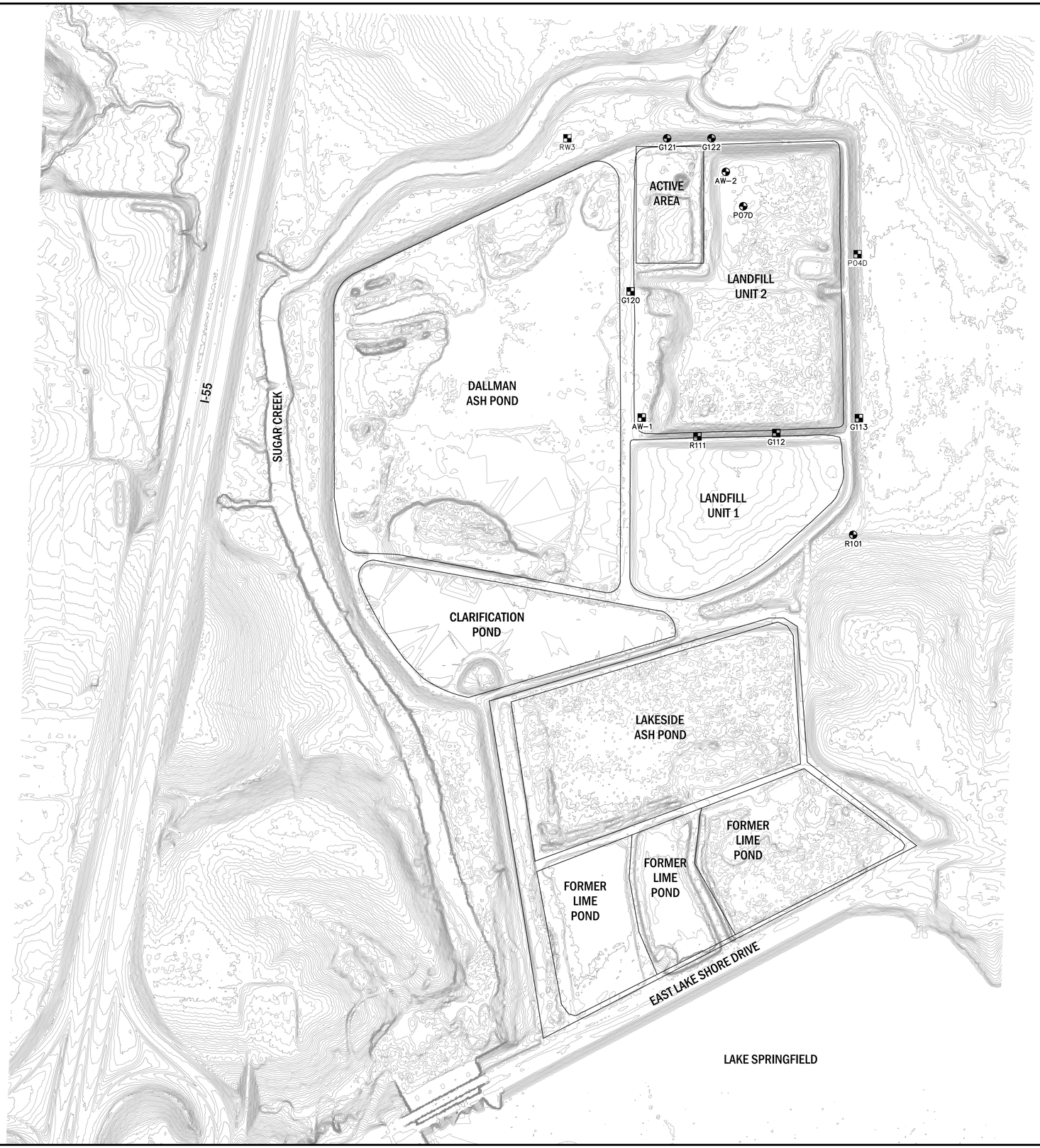
FIG 3

© 2025 Andrews Engineering, Inc.

Tab: SITE DETAILS MAP Last Saved: September 4, 2025, by Ben Korpus Plotted: Friday, September 5, 2025 9:11:45 AM
J:\S\Springfield CWLP\CWLP Ash Pond\DWG\2025\Wells Used For Arsenic.dwg

APPENDICES

APPENDIX A:
POTENTIOMETRIC SURFACE MAPS



LEGEND

- 40 CFR 257 GROUNDWATER MONITORING WELL
- ADDITIONAL WELLS USED FOR ARSENIC CONCENTRATION

NOTES

1. FLIGHT DATE: APRIL 2023

N

0 200 400 800

SCALE: IN FEET

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DESIGNED BY: MTH | DRAWN BY: BCK | APPROVED BY: BJH

WELLS USED FOR ARSENIC EVALUATIONS

PREPARED FOR
CITY WATER, LIGHT, AND POWER
SPRINGFIELD, SANGAMON COUNTY, ILLINOIS

DATE: JANUARY 2025

PROJECT ID: 230339/0026

SHEET NUMBER:

FIG 3

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Tab: SITE DETAILS MAP Last Saved: September 4, 2025, by Ben Korpus Plotted: Friday, September 5, 2025 9:11:45 AM
J:\S\Springfield CWLP\CWLP Ash Pond\DWG\2025\Wells Used For Arsenic.dwg

APPENDICESAPPENDIX A:
POTENTIOMETRIC SURFACE MAPS

Tab: 7-21-2025 Last Saved: September 3, 2025, by Ben Karpus Plotted: Wednesday, September 3, 2025 8:37:53 AM
J:\S\Springfield CWLP\CWLP Ash Pond\DWG\PMAPS\2025\2025 Monthly PMAPS.dwg

LEGEND

- 550 — EXISTING GROUND CONTOURS
- —540— GROUNDWATER CONTOURS
- ▲ TEMPORARY ASSESSMENT WELL
- ○ PIEZOMETER
- ◔ PART 257 GROUNDWATER MONITORING WELL
- ■ PART 845 GROUNDWATER MONITORING WELL
- ⊠ SURFACE WATER MEASURING LOCATIONS

NOTES

1. FLIGHT DATE APRIL 2023.
2. CONTOUR INTERVAL SHOWN IS 10 FEET.
3. WELLS AW-1 AND G120 ARE PART 257 GROUNDWATER MONITORING WELLS. GROUNDWATER ELEVATIONS FROM THESE LOCATIONS WERE USED TO PREPARE THE POTENTIOMETRIC SURFACE DRAWING.

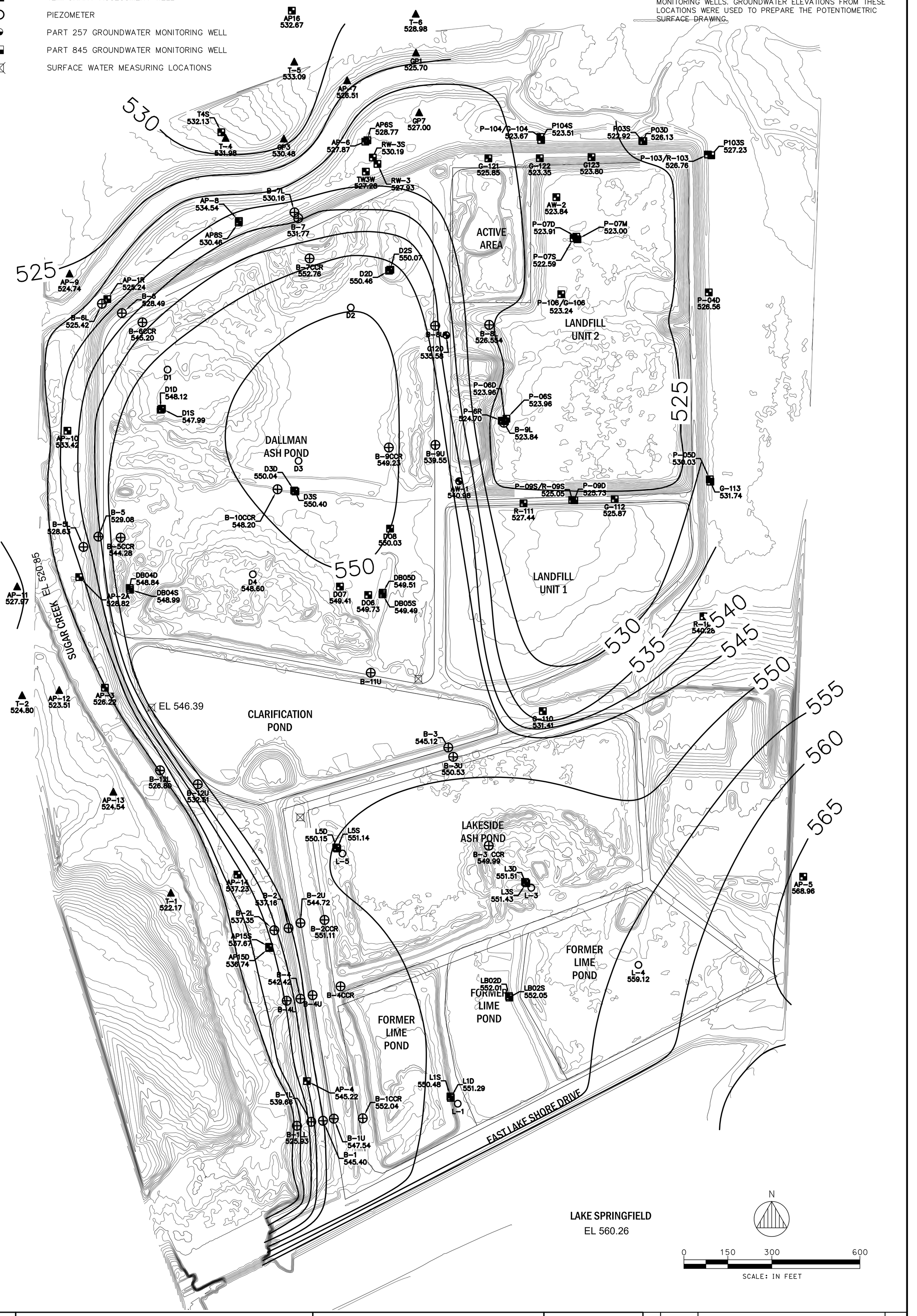

FIG. 7

POTENTIOMETRIC SURFACE MAP
JULY 21, 2025

PREPARED FOR

CITY WATER, LIGHT, AND POWER

SPRINGFIELD, SANGAMON COUNTY, ILLINOIS

SHEET NUMBER:

PROJECT ID: 240338/0014

DATE: AUGUST 2025

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APPROVED BY: MTH | DESIGNED BY: MTH | DRAWN BY: BCK

NO.	DATE	REVISION DESCRIPTION	BY

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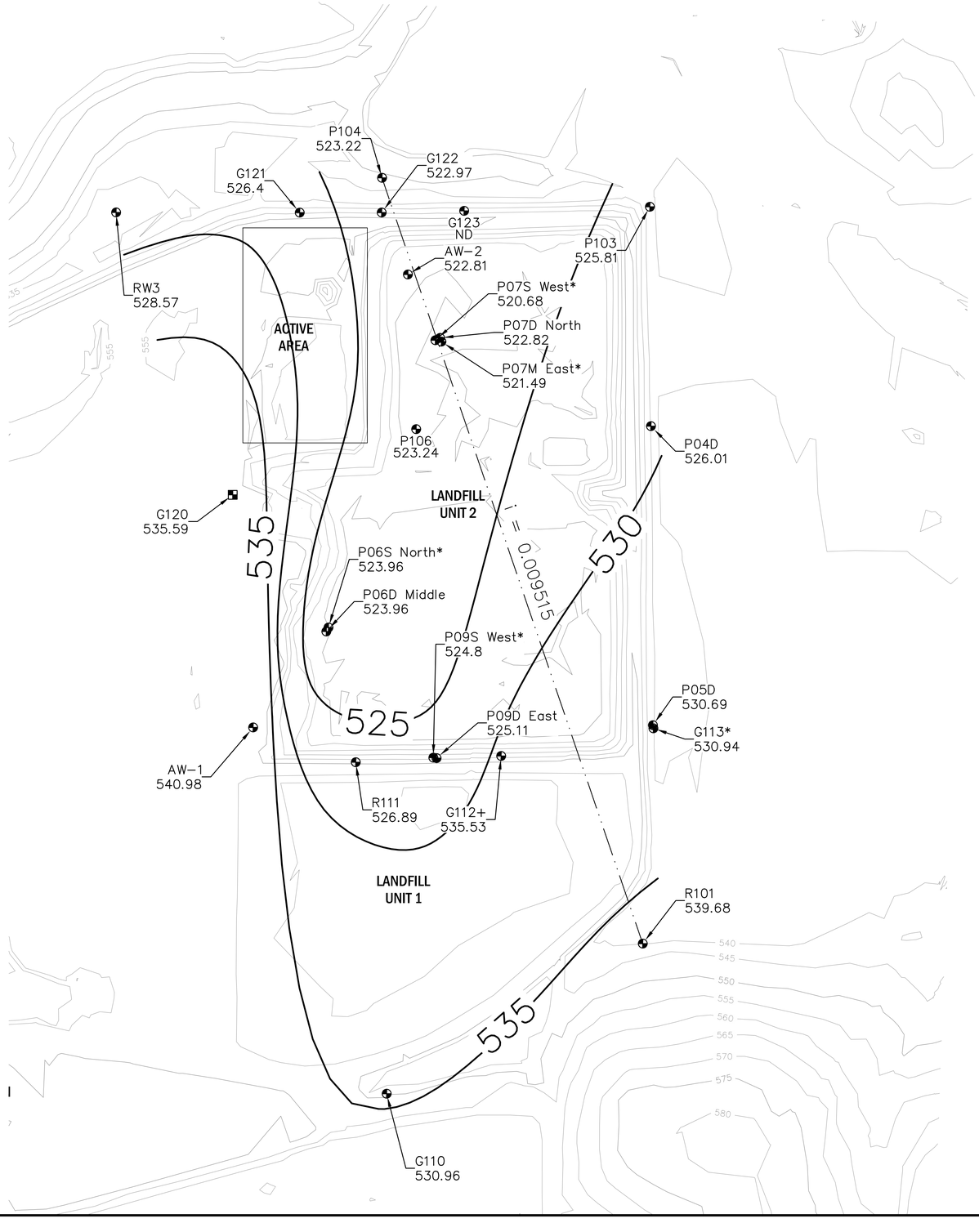
LEGEND

550 — EXISTING GROUND CONTOURS

—540— GROUNDWATER CONTOURS

FGDS LANDFILL WELL



NOTES

1. LIDAR DATA DERIVED FROM USGS WEBSITE (FLIGHT DATE: OCTOBER 15, 2018).
2. CONTOUR INTERVAL SHOWN IS 5 FEET.
3. SAMPLING DATE: 6/25/2025.
4. (*) WELL WITHIN SHALLOW SAND LAYER AND NOT USED FOR CONTOURS.
5. (+) G112 IS AN OUTLINER AND WAS NOT USED TO CREATE CONTOUR DATA.
6. ND = NO DATA.

N

0 125 250 500

SCALE: IN FEET

NO.	DATE	REVISION DESCRIPTION	BY

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DESIGNED BY: NGB | DRAWN BY: BCK | APPROVED BY: NGB

2ND QUARTER 2025 GROUNDWATER SURFACE MAP

PREPARED FOR
CITY WATER, LIGHT, AND POWER
SPRINGFIELD, SANGAMON COUNTY, ILLINOIS

DATE: JULY 2025

PROJECT ID: 230339/0002

SHEET NUMBER: 2Q25

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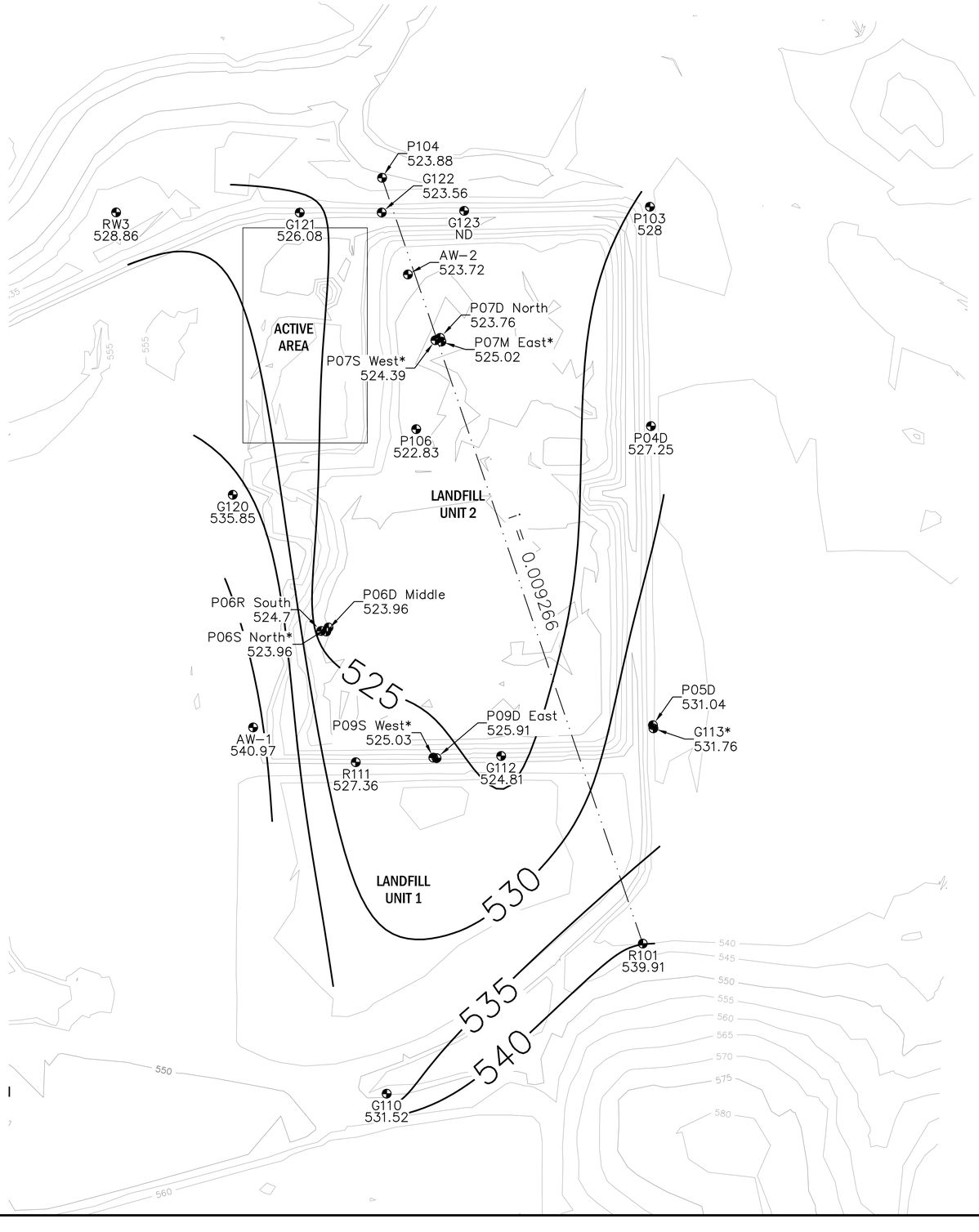
Tab: CWLP Last Saved: July 24, 2025, by Mike Nguyen Plotted: Thursday, July 24, 2025 4:47:08 PM
C:\Civil 3D Projects\Springfield CWLP\DWG\PMAPS\2025\2025.dwg



LEGEND

550 — EXISTING GROUND CONTOURS

—540— GROUNDWATER CONTOURS

FGDS LANDFILL WELL

NOTES

1. LIDAR DATA DERIVED FROM USGS WEBSITE (FLIGHT DATE: OCTOBER 15, 2018).
2. CONTOUR INTERVAL SHOWN IS 5 FEET.
3. SAMPLING DATE: 2/22/2025.
4. (*) WELL WITHIN SHALLOW SAND LAYER AND NOT USED FOR CONTOURS.
5. ND = NO DATA.

N

0 125 250 500

SCALE: IN FEET

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DESIGNED BY: NGB | DRAWN BY: BCK | APPROVED BY: NGB

1ST QUARTER 2025 GROUNDWATER SURFACE MAP

PREPARED FOR
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SPRINGFIELD, SANGAMON COUNTY, ILLINOIS

DATE: MARCH 2025

PROJECT ID: 230339/0002

SHEET NUMBER: 1Q25

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Tab: CWLP Last Saved: July 21, 2025, by Mike Nguyen Plotted: Monday, July 21, 2025 7:03:02 AM
C:\Civil 3D Projects\Springfield CWLP\DWG\PMAPS\2025\1Q25.dwg

LEGEND

- 550 — EXISTING GROUND CONTOURS
- —540— GROUNDWATER CONTOURS
- ▲ TEMPORARY ASSESSMENT WELL/PIEZOMETER
- ○ PIEZOMETER
- ◔ CCR SURFACE IMPOUNDMENT WELL
- ■ FGDS LANDFILL WELL
- ☒ SURFACE WATER MEASURING LOCATIONS
- NM NOT MEASURED

NOTES

1. FLIGHT DATE: APRIL 2023.
2. POTENTIOMETRIC CONTOUR INTERVAL SHOWN IS 5 FEET.
3. TOPOGRAPHIC CONTOUR INTERVAL SHOWN IS 2 FEET.
4. SAMPLING DATE: 11/12/2024.
5. SUGAR CREEK SURFACE WATER ELEVATION IS BASED ON AVERAGE OF USGS GAGE 05576250 FOR 11/12/2024.
6. "NM" – NOT MEASURED.
7. DEPICTED BOUNDARIES OF SITE FEATURES ARE APPROXIMATE.
8. (*) – DATA NOT USED TO CREATE CONTOURS.

T-6 527.30
T-5 529.20
AP-7 525.45
GP7 526.30
P104 NM
T-4 529.32
AP-6 526.65
RW-3 526.97
G121 519.80
G122 523.04
P103 NM
AW-2 523.74
AP-8 532.98
ACTIVE AREA
P07D North 523.88
P07S West* NM
P07M East* NM
AP-9 523.97
AP-7R 524.98
D2 549.62
P106 NM
P04D NM
LANDFILL UNIT 2
G120 534.98
D1 546.11
P06S North* NM
AP-10 531.91
DALLMAN ASH POND
D3 548.84
P06D Middle NM
P05D NM
P09S West* NM
AW-1 539.88
R111 527.16
G112 525.50
G113* 529.10
P09D East NM
530
AP-11 522.67
EL 521.57
SUGAR CREEK
AP-2A 529.56
D4 547.48
LANDFILL UNIT 1
R101 539.35
540
EL. NM
T-2 534.39
AP-12 522.68
AP-3 526.15
EL. 545.69
CLARIFICATION POND
G110 531.16
550
560
AP-13 522.60
EL. NM
LAKESIDE ASH POND
L-5 549.57
AP-14 534.96
T-1 521.64
L-3 550.02
AP-5 567.62
FORMER LIME POND
L-4 558.70
FORMER LIME POND
FORMER LIME POND
AP-4 544.75
L-1 550.69
EAST LAKE SHORE DRIVE

LAKE SPRINGFIELD
EL. 559.54

N

0 150 300 600
SCALE: IN FEET

SHEET NUMBER: 12	PROJECT ID: 240338/0014	DATE: APRIL 2025	POTENTIOMETRIC SURFACE MAP 4TH QUARTER 2024
			PREPARED FOR CITY WATER, LIGHT, AND POWER SPRINGFIELD, SANGAMON COUNTY, ILLINOIS

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APPROVED BY: MTH | DESIGNED BY: MTH | DRAWN BY: BCK

NO.	DATE	REVISION DESCRIPTION	BY

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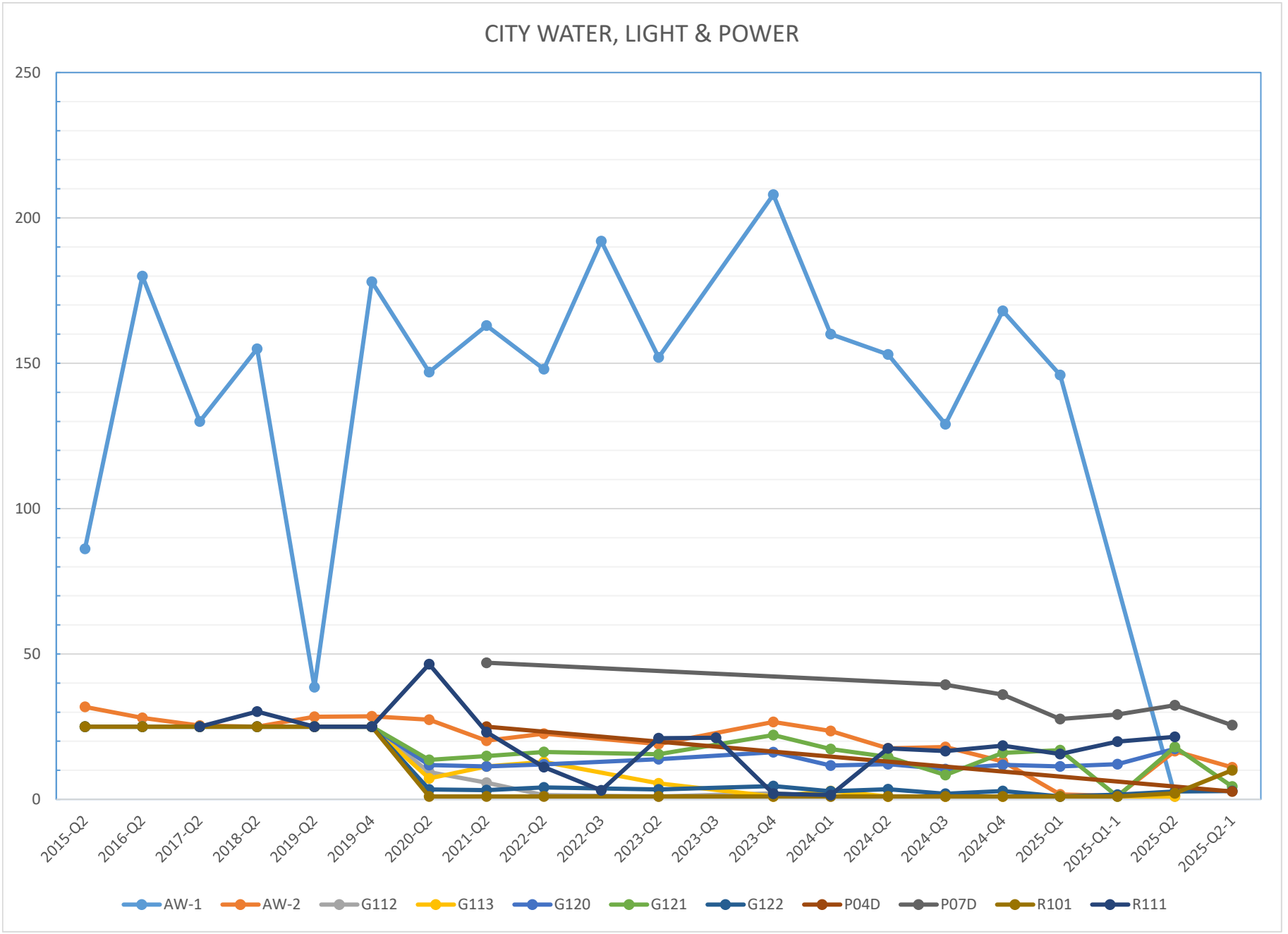
APPENDIX B:
CONCENTRATOIN GRAPH


CITY WATER, LIGHT & POWER
Concentrations in ug/L
250
200
150
100
50
0
2015-Q2
2016-Q2
2017-Q2
2018-Q2
2019-Q2
2019-Q4
2020-Q2
2021-Q2
2022-Q2
2022-Q3
2023-Q2
2023-Q3
2023-Q4
2024-Q1
2024-Q2
2024-Q3
2024-Q4
2025-Q1
2025-Q1-1
2025-Q2
2025-Q2-1
AW-1
AW-2
G112
G113
G120
G121
G122
P04D
P07D
R101
R111

APPENDIX C:
ANOVA NORMALITY TEST

Nonparametric Oneway ANOVA (Kruskal-Wallis Test)

Date/Time of Computation	ProUCL 5.2 08/29/2025 8:25:56 AM
From File	ProUCL Anova Data.xls
Full Precision	OFF

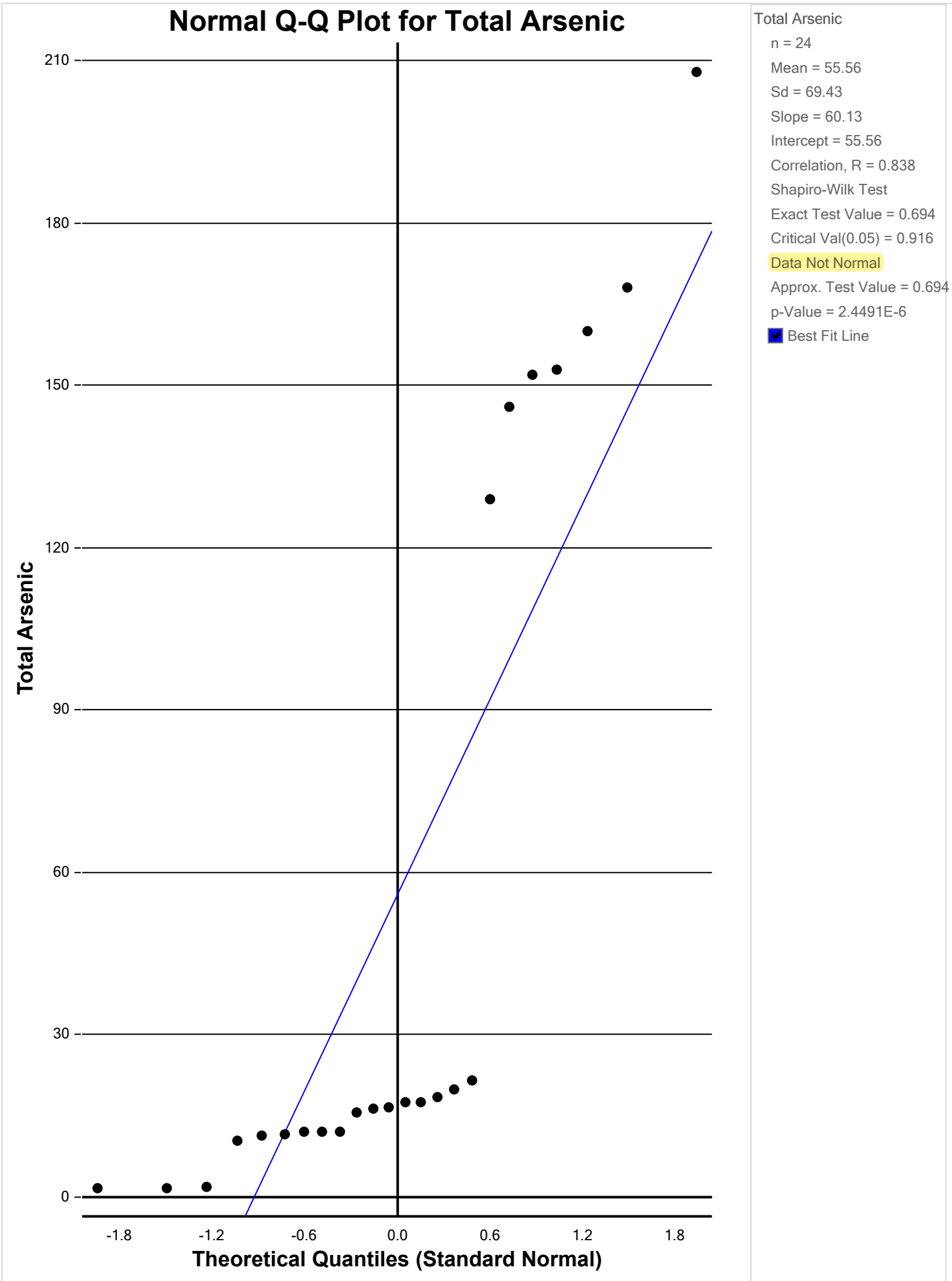
Total Arsenic

Group	Obs	Median	Ave Rank	Z
AW-1	8	152.5	18.56	2.97
R111	8	17.05	11.06	-0.704
G120	8	12	7.875	-2.266
Overall	24	17	12.5	

K-W (H-Stat)	DOF	P-Value	(Approx. Chisquare)
9.634	2	0.00809	
9.642	2	0.00806	(Adjusted for Ties)

Note: A p-value <= 0.05 (or some other selected level) suggests that there are significant differences in mean/median characteristics of the various groups at 0.05 or other selected level of significance

A p-value > 0.05 (or other selected level) suggests that mean/median characteristics of the various groups are comparable.


Normal Q-Q Plot for Total Arsenic
Total Arsenic
n = 24
Mean = 55.56
Sd = 69.43
Slope = 60.13
Intercept = 55.56
Correlation, R = 0.838
Shapiro-Wilk Test
Exact Test Value = 0.694
Critical Val(0.05) = 0.916
Data Not Normal
Approx. Test Value = 0.694
p-Value = 2.4491E-6
Best Fit Line
210
180
150
120
90
60
30
0
Total Arsenic
-1.8
-1.2
-0.6
0.0
0.6
1.2
1.8
Theoretical Quantiles (Standard Normal)

APPENDIX D:
INTRAWELL GROUNDWATER PROTECTION STANDARDS (P07D, AW-2 AND G121)

Springfield CWLP
Intrawell AGQS Statistics
Prediction Limits

Raw Data

Well	Parameter	Units	05/09 & 5/13/24	08/12 & 8/13/2024	11/11 & 11/13/24	02/20/2025	03/18/2025	04/24/2025	05/22/2025	08/11/2025
AW-2	Arsenic, total	ug/L	21.9	18	13	1.7	1.2	1.4	16.6	11
G121	Arsenic, total	ug/L	15	8.4	16	16.9	< 1	14.5	18	4.4

Well	Parameter	Units	05/28/2021	08/12/2024	11/13/2024	02/20/2025	03/18/2025	04/24/2025	05/27/2025	08/11/2025
P07D	Arsenic, total	ug/L	47	39.4	36	27.6	29.2	26.2	32.4	25.5

Outlier Testing

Well	Parameter	Units	05/09 & 5/13/24	08/12 & 8/13/2024	11/11 & 11/13/24	02/20/2025	03/18/2025	04/24/2025	05/22/2025	08/11/2025	n Number of Samples	X_{mean} Mean	SD Standard Deviation	T_n Critical Values
AW-2	Arsenic, total	ug/L	21.9	18	13	1.7	1.2	1.4	16.6	11	8	11.87	8.0214	2.221
G121	Arsenic, total	ug/L	15	8.4	16	16.9	< 1	14.5	18	4.4	8	11.04	6.4879	2.221

Well	Parameter	Units	05/28/2021	08/12/2024	11/13/2024	02/20/2025	03/18/2025	04/24/2025	05/27/2025	08/11/2025	Number of Samples	Mean	Standard Deviation	Critical Values
P07D	Arsenic, total	ug/L	47	39.4	36	27.6	29.2	26.2	32.4	25.5	8	33.67	7.7470	2.221

T = (X-X$_{mean}$)/SD,
where ***X*** = sample resul

Outlier = T > T$_n$

Well	Parameter	Units	05/09 & 5/13/24	08/12 & 8/13/2024	11/11 & 11/13/24	02/20/2025	03/18/2025	04/24/2025	05/22/2025	08/11/2025	05/09 & 5/13/24	08/12 & 8/13/2024	11/11 & 11/13/24	02/20/2025	03/18/2025	04/24/2025	05/22/2025	08/11/2025
AP-12	Calcium, total	mg/L	1.250	0.764	0.141	-1.268	-1.330	-1.305	0.589	-0.109	--	--	--	--	--	--	--	--
AP-12	Sulfate, total	mg/L	0.610	-0.407	0.764	0.903	-1.548	0.533	1.072	-1.024	--	--	--	--	--	--	--	--

Well	Parameter	Units	05/28/2021	08/12/2024	11/13/2024	02/20/2025	03/18/2025	04/24/2025	05/27/2025	08/11/2025	05/28/2021	08/12/2024	11/13/2024	02/20/2025	03/18/2025	04/24/2025	05/22/2025	08/11/2025
AP-12	Total Dissolved Solids	mg/L	1.720	0.739	0.301	-0.784	-0.577	-0.964	-0.164	-1.055	--	--	--	--	--	--	--	--

No outliers noted.

ND Analyses

Well	Parameter	Units	05/09 & 5/13/24	08/12 & 8/13/2024	11/11 & 11/13/24	02/20/2025	03/18/2025	04/24/2025	05/22/2025	08/11/2025	Number of Samples	Number of ND's	% ND	ND Treatment
AW-2	Arsenic, total	ug/L	21.9	18	13	1.7	1.2	1.4	16.6	11	8	0	0.0%	NO ADJ
G121	Arsenic, total	ug/L	15	8.4	16	16.9	< 1	14.5	18	4.4	8	1	12.5%	½ PQL

Well	Parameter	Units	05/28/2021	08/12/2024	11/13/2024	02/20/2025	03/18/2025	04/24/2025	05/27/2025	08/11/2025	Number of Samples	Number of ND's	% ND	ND Treatment
P07D	Arsenic, total	ug/L	47	39.4	36	27.6	29.2	26.2	32.4	25.5	8	0	0.0%	NO ADJ

Prediction Limits

Prediction Limit = x + st[1+(1/n)]^½
Confidence Level = 95%

Well	Parameter	Units	05/09 & 5/13/24	08/12 & 8/13/2024	11/11 & 11/13/24	02/20/2025	03/18/2025	04/24/2025	05/22/2025	08/11/2025	ND Treatment	Mean	Standard Deviation	Number of Samples	T Value	Prediction Limit
AW-2	Arsenic, total	ug/L	21.9	18	13	1.7	1.2	1.4	16.6	11	NO ADJ	10.6000	8.2512	8	1.8946	27.181
G121	Arsenic, total	ug/L	15	8.4	16	16.9	< **0.5**	14.5	18	4.4	½ PQL	11.7125	6.4760	8	1.8946	24.726

Well	Parameter	Units	05/28/2021	08/12/2024	11/13/2024	02/20/2025	03/18/2025	04/24/2025	05/27/2025	08/11/2025	ND Treatment	Mean	Standard Deviation	Number of Samples	T Value	Prediction Limit
P07D	Arsenic, total	ug/L	47	39.4	36	27.6	29.2	26.2	32.4	25.5	NO ADJ	32.9125	7.4866	8	1.8946	47.957

Note:
< indicates a non detect

APPENDIX E:
LABORATORY REPORTS FOR INTRAWELL CLACULATIONS

Client: City Water, Light & Power **Work Order:** 24050002

Client Project: FGDS Landfill **Report Date:** 18-Jun-24

Lab ID: 24050002-010 **Client Sample ID:** AW-2

Matrix: GROUNDWATER **Collection Date:** 05/13/2024 10:52

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**497.34**	ft	1	05/13/2024 10:52	R347527
Depth to water	*	-5.00		**-0.01**	ft	1	05/13/2024 10:52	R347527
Depth to water from measuring point	*	0		**3.29**	ft	1	05/13/2024 10:52	R347527
Elevation of groundwater surface	*	0		**526.69**	ft	1	05/13/2024 10:52	R347527
Measuring Point Elevation	*	0		**529.98**	ft	1	05/13/2024 10:52	R347527
Measuring Point Height Above Land Surface	*	0		**3.30**	ft	1	05/13/2024 10:52	R347527
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**8.1**	NTU	1	05/13/2024 10:52	R347527
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**59.0**	°F	1	05/13/2024 10:52	R347527
SW-846 9040B								
pH, Field	*	1.00		**6.83**		1	05/13/2024 10:52	R347527
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**784**	µmhos/cm @25C	1	05/13/2024 10:52	R347527
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	50		**715**	mg/L	2.5	05/17/2024 9:49	R347497
SW-846 9036 (TOTAL)								
Sulfate	NELAP	50		**130**	mg/L	5	05/20/2024 19:28	R347580
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10		**0.12**	mg/L	1	05/20/2024 12:59	R347555
SW-846 9251 (TOTAL)								
Chloride	NELAP	4		**32**	mg/L	1	05/20/2024 19:23	R347642
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.663**	mg/L	1	05/21/2024 10:27	223159
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	05/21/2024 10:27	223159
Boron	NELAP	0.0200		**2.71**	mg/L	1	05/21/2024 10:27	223159
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	05/21/2024 10:27	223159
Calcium	NELAP	0.100		**139**	mg/L	1	05/21/2024 10:27	223159
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	05/21/2024 10:27	223159
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	05/21/2024 10:27	223159
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	05/21/2024 10:27	223159
Lithium	NELAP	0.0500		**< 0.0500**	mg/L	1	05/23/2024 17:57	223159
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	05/21/2024 10:27	223159
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	05/22/2024 14:10	223159
Arsenic	NELAP	0.0010		**0.0219**	mg/L	5	05/21/2024 14:27	223159
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	05/21/2024 14:27	223159
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	05/21/2024 14:27	223159
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	05/22/2024 16:17	223231
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	06/07/2024 0:00	R348779
Radium-228	*	0		**See Attached**	pci/L	1	06/07/2024 0:00	R348779

Client: City Water, Light & Power **Work Order:** 24050002

Client Project: FGDS Landfill **Report Date:** 18-Jun-24

Lab ID: 24050002-007 **Client Sample ID:** G121

Matrix: GROUNDWATER **Collection Date:** 05/09/2024 11:19

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**497.04**	ft	1	05/09/2024 11:19	R347527
Depth to water	*	-5.00		**24.89**	ft	1	05/09/2024 11:19	R347527
Depth to water from measuring point	*	0		**26.76**	ft	1	05/09/2024 11:19	R347527
Elevation of groundwater surface	*	0		**528.84**	ft	1	05/09/2024 11:19	R347527
Measuring Point Elevation	*	0		**555.60**	ft	1	05/09/2024 11:19	R347527
Measuring Point Height Above Land Surface	*	0		**1.87**	ft	1	05/09/2024 11:19	R347527
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**8.2**	NTU	1	05/09/2024 11:19	R347527
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**59.0**	°F	1	05/09/2024 11:19	R347527
SW-846 9040B								
pH, Field	*	1.00		**6.76**		1	05/09/2024 11:19	R347527
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1040**	µmhos/cm @25C	1	05/09/2024 11:19	R347527
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	50		**990**	mg/L	2.5	05/15/2024 11:57	R347402
SW-846 9036 (TOTAL)								
Sulfate	NELAP	200		**337**	mg/L	20	05/15/2024 0:52	R347268
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10		**0.17**	mg/L	1	05/17/2024 12:05	R347462
SW-846 9251 (TOTAL)								
Chloride	NELAP	4		**32**	mg/L	1	05/15/2024 0:48	R347274
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.582**	mg/L	1	05/15/2024 13:34	222813
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	05/15/2024 13:34	222813
Boron	NELAP	0.0200		**3.48**	mg/L	1	05/15/2024 13:34	222813
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	05/15/2024 13:34	222813
Calcium	NELAP	0.100		**188**	mg/L	1	05/15/2024 13:34	222813
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	05/15/2024 13:34	222813
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	05/15/2024 13:34	222813
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	05/15/2024 13:34	222813
Lithium	NELAP	0.0500		**< 0.0500**	mg/L	1	05/20/2024 11:18	222813
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	05/15/2024 13:34	222813
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	05/14/2024 16:20	222813
Arsenic	NELAP	0.0010		**0.0150**	mg/L	5	05/14/2024 16:20	222813
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	05/14/2024 16:20	222813
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	05/15/2024 16:50	222813
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	05/24/2024 14:50	222922
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	06/07/2024 0:00	R348779
Radium-228	*	0		**See Attached**	pci/L	1	06/07/2024 0:00	R348779

Client: City Water, Light & Power **Work Order:** 24080243

Client Project: FGDS Landfill **Report Date:** 18-Sep-24

Lab ID: 24080243-010 **Client Sample ID:** AW-2

Matrix: GROUNDWATER **Collection Date:** 08/12/2024 11:23

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**497.34**	ft	1	08/12/2024 11:23	R352006
Depth to water	*	-5.00		**2.99**	ft	1	08/12/2024 11:23	R352006
Depth to water from measuring point	*	0		**6.29**	ft	1	08/12/2024 11:23	R352006
Elevation of groundwater surface	*	0		**523.69**	ft	1	08/12/2024 11:23	R352006
Measuring Point Elevation	*	0		**529.98**	ft	1	08/12/2024 11:23	R352006
Measuring Point Height Above Land Surface	*	0		**3.30**	ft	1	08/12/2024 11:23	R352006
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**2.8**	NTU	1	08/12/2024 11:23	R352006
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**64.2**	°F	1	08/12/2024 11:23	R352006
SW-846 9040B								
pH, Field	*	1.00		**6.65**		1	08/12/2024 11:23	R352006
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**963**	umhos/cm @25C	1	08/12/2024 11:23	R352006
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	20		**774**	mg/L	1	08/16/2024 12:19	R351892
SW-846 9036 (TOTAL)								
Sulfate	NELAP	50		**153**	mg/L	5	08/20/2024 17:56	R352032
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10		**0.12**	mg/L	1	08/19/2024 10:53	R351930
SW-846 9251 (TOTAL)								
Chloride	NELAP	4		**34**	mg/L	1	08/20/2024 17:51	R352062
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.644**	mg/L	1	08/14/2024 18:00	227065
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	08/14/2024 18:00	227065
Boron	NELAP	0.0200		**2.99**	mg/L	1	08/14/2024 18:00	227065
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	08/14/2024 18:00	227065
Calcium	NELAP	0.100		**152**	mg/L	1	08/14/2024 18:00	227065
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	08/14/2024 18:00	227065
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	08/14/2024 18:00	227065
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	08/14/2024 18:00	227065
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	08/14/2024 18:00	227065
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	08/15/2024 13:05	227065
Arsenic	NELAP	0.0010		**0.0180**	mg/L	5	08/15/2024 1:39	227065
Lithium	*	0.0030		**0.0071**	mg/L	5	08/15/2024 13:05	227065
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	08/15/2024 1:39	227065
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	08/15/2024 1:39	227065
CCV recovered outside the upper control limits for Tl. Sample results are below the reporting limit. Data is reportable per the TNI standard.								
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	08/14/2024 13:26	227055
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	09/13/2024 0:00	R353302
Radium-228	*	0		**See Attached**	pci/L	1	09/13/2024 0:00	R353302

Client: City Water, Light & Power **Work Order:** 24080243

Client Project: FGDS Landfill **Report Date:** 18-Sep-24

Lab ID: 24080243-007 **Client Sample ID:** G121

Matrix: GROUNDWATER **Collection Date:** 08/13/2024 10:41

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**497.04**	ft	1	08/13/2024 10:41	R352006
Depth to water	*	-5.00		**27.47**	ft	1	08/13/2024 10:41	R352006
Depth to water from measuring point	*	0		**29.34**	ft	1	08/13/2024 10:41	R352006
Elevation of groundwater surface	*	0		**526.26**	ft	1	08/13/2024 10:41	R352006
Measuring Point Elevation	*	0		**555.60**	ft	1	08/13/2024 10:41	R352006
Measuring Point Height Above Land Surface	*	0		**1.87**	ft	1	08/13/2024 10:41	R352006
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**22**	NTU	1	08/13/2024 10:41	R352006
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**63.0**	°F	1	08/13/2024 10:41	R352006
SW-846 9040B								
pH, Field	*	1.00		**6.90**		1	08/13/2024 10:41	R352006
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1530**	umhos/cm @25C	1	08/13/2024 10:41	R352006
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	20		**936**	mg/L	1	08/16/2024 12:18	R351892
SW-846 9036 (TOTAL)								
Sulfate	NELAP	100		**260**	mg/L	10	08/20/2024 17:32	R352032
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10		**0.17**	mg/L	1	08/19/2024 10:38	R351930
SW-846 9251 (TOTAL)								
Chloride	NELAP	4		**30**	mg/L	1	08/20/2024 17:27	R352062
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.500**	mg/L	1	08/15/2024 16:05	227124
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	08/15/2024 16:05	227124
Boron	NELAP	0.0200		**3.04**	mg/L	1	08/15/2024 16:05	227124
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	08/15/2024 16:05	227124
Calcium	NELAP	0.100		**164**	mg/L	1	08/15/2024 16:05	227124
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	08/15/2024 16:05	227124
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	08/15/2024 16:05	227124
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	08/15/2024 16:05	227124
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	08/15/2024 16:05	227124
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**0.0087**	mg/L	5	08/15/2024 15:36	227124
Arsenic	NELAP	0.0010		**0.0084**	mg/L	5	08/15/2024 15:36	227124
Lithium	*	0.0030		**0.0083**	mg/L	5	08/15/2024 15:36	227124
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	08/15/2024 15:36	227124
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	08/15/2024 15:36	227124
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	08/15/2024 16:37	227118
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	09/13/2024 0:00	R353302
Radium-228	*	0		**See Attached**	pci/L	1	09/13/2024 0:00	R353302

Client: City Water, Light & Power **Work Order:** 24080243

Client Project: FGDS Landfill **Report Date:** 18-Sep-24

Lab ID: 24080243-012 **Client Sample ID:** P07D

Matrix: GROUNDWATER **Collection Date:** 08/12/2024 12:21

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**494.89**	ft	1	08/12/2024 12:21	R352006
Depth to water	*	-5.00		**3.42**	ft	1	08/12/2024 12:21	R352006
Depth to water from measuring point	*	0		**5.43**	ft	1	08/12/2024 12:21	R352006
Elevation of groundwater surface	*	0		**522.00**	ft	1	08/12/2024 12:21	R352006
Measuring Point Elevation	*	0		**527.43**	ft	1	08/12/2024 12:21	R352006
Measuring Point Height Above Land Surface	*	0		**2.01**	ft	1	08/12/2024 12:21	R352006
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**170**	NTU	1	08/12/2024 12:21	R352006
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**59.8**	°F	1	08/12/2024 12:21	R352006
SW-846 9040B								
pH, Field	*	1.00		**6.70**		1	08/12/2024 12:21	R352006
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1170**	umhos/cm @25C	1	08/12/2024 12:21	R352006
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	20		**1090**	mg/L	1	08/16/2024 12:27	R351892
SW-846 9036 (TOTAL)								
Sulfate	NELAP	100		**332**	mg/L	10	08/20/2024 18:18	R352032
SW-846 9214 (TOTAL)								
Fluoride	NELAP	0.10		**0.10**	mg/L	1	08/19/2024 10:56	R351930
SW-846 9251 (TOTAL)								
Chloride	NELAP	4		**37**	mg/L	1	08/20/2024 17:59	R352062
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**1.00**	mg/L	1	08/14/2024 18:02	227065
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	08/14/2024 18:02	227065
Boron	NELAP	0.0200		**5.95**	mg/L	1	08/14/2024 18:02	227065
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	08/14/2024 18:02	227065
Calcium	NELAP	0.100		**205**	mg/L	1	08/14/2024 18:02	227065
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	08/14/2024 18:02	227065
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	08/14/2024 18:02	227065
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	08/14/2024 18:02	227065
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	08/14/2024 18:02	227065
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	08/15/2024 13:11	227065
Arsenic	NELAP	0.0010		**0.0394**	mg/L	5	08/15/2024 1:44	227065
Lithium	*	0.0030		**0.0085**	mg/L	5	08/15/2024 13:11	227065
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	08/15/2024 1:44	227065
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	08/15/2024 1:44	227065
CCV recovered outside the upper control limits for Tl. Sample results are below the reporting limit. Data is reportable per the TNI standard.								
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	08/14/2024 13:33	227055
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	09/13/2024 0:00	R353302
Radium-228	*	0		**See Attached**	pci/L	1	09/13/2024 0:00	R353302

Client: City Water, Light & Power **Work Order:** 24110121

Client Project: FGDS Landfill **Report Date:** 09-Dec-24

Lab ID: 24110121-010 **Client Sample ID:** AW-2

Matrix: GROUNDWATER **Collection Date:** 11/13/2024 12:38

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**497.34**	ft	1	11/13/2024 12:38	R356376
Depth to water	*	-5.00		**1.21**	ft	1	11/13/2024 12:38	R356376
Depth to water from measuring point	*	0		**4.51**	ft	1	11/13/2024 12:38	R356376
Elevation of groundwater surface	*	0		**525.47**	ft	1	11/13/2024 12:38	R356376
Measuring Point Elevation	*	0		**529.98**	ft	1	11/13/2024 12:38	R356376
Measuring Point Height Above Land Surface	*	0		**3.30**	ft	1	11/13/2024 12:38	R356376
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**6.6**	NTU	1	11/13/2024 12:38	R356376
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**58.6**	°F	1	11/13/2024 12:38	R356376
SW-846 9040B								
pH, Field	*	1.00		**6.73**		1	11/13/2024 12:38	R356376
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**840**	µmhos/cm @25C	1	11/13/2024 12:38	R356376
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	50	H	**795**	mg/L	2.5	11/21/2024 17:12	R356629
Sample analysis did not meet hold time requirements.								
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	11/15/2024 10:51	R356222
Chloride	NELAP	5.00		**25.7**	mg/L	10	11/15/2024 10:51	R356222
Sulfate	NELAP	10.0		**99.2**	mg/L	10	11/15/2024 10:51	R356222
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.516**	mg/L	1	11/18/2024 12:16	231260
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	11/18/2024 12:16	231260
Boron	NELAP	0.0200		**2.46**	mg/L	1	11/18/2024 12:16	231260
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	11/18/2024 12:16	231260
Calcium	NELAP	0.100		**144**	mg/L	1	11/18/2024 12:16	231260
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	11/18/2024 12:16	231260
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	11/18/2024 12:16	231260
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	11/18/2024 12:16	231260
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	11/18/2024 12:16	231260
Sample result(s) for Ca exceed 10 times the CCB. Data is reportable per the TNI Standard.								
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	11/20/2024 4:18	231194
Arsenic	NELAP	0.0010		**0.0130**	mg/L	5	11/20/2024 4:18	231194
Lithium	*	0.0030		**0.0062**	mg/L	5	11/20/2024 11:17	231194
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	11/20/2024 4:18	231194
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	11/20/2024 4:18	231194
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	11/18/2024 12:24	231196
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	12/03/2024 0:00	R357220
Radium-228	*	0		**See Attached**	pci/L	1	12/03/2024 0:00	R357220

Client: City Water, Light & Power **Work Order:** 24110121

Client Project: FGDS Landfill **Report Date:** 09-Dec-24

Lab ID: 24110121-007 **Client Sample ID:** G121

Matrix: GROUNDWATER **Collection Date:** 11/11/2024 13:30

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**497.04**	ft	1	11/11/2024 13:30	R356376
Depth to water	*	-5.00		**32.66**	ft	1	11/11/2024 13:30	R356376
Depth to water from measuring point	*	0		**34.53**	ft	1	11/11/2024 13:30	R356376
Elevation of groundwater surface	*	0		**521.07**	ft	1	11/11/2024 13:30	R356376
Measuring Point Elevation	*	0		**555.60**	ft	1	11/11/2024 13:30	R356376
Measuring Point Height Above Land Surface	*	0		**1.87**	ft	1	11/11/2024 13:30	R356376
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**12**	NTU	1	11/11/2024 13:30	R356376
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**58.2**	°F	1	11/11/2024 13:30	R356376
SW-846 9040B								
pH, Field	*	1.00		**6.75**		1	11/11/2024 13:30	R356376
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1370**	µmhos/cm @25C	1	11/11/2024 13:30	R356376
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	50		**1040**	mg/L	2.5	11/14/2024 12:22	R356260
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	11/13/2024 19:52	R355975
Chloride	NELAP	5.00		**29.0**	mg/L	10	11/13/2024 19:52	R355975
Sulfate	NELAP	10.0		**311**	mg/L	10	11/13/2024 19:52	R355975
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.626**	mg/L	1	11/12/2024 19:38	231056
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	11/12/2024 19:38	231056
Boron	NELAP	0.0200		**3.68**	mg/L	1	11/12/2024 19:38	231056
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	11/12/2024 19:38	231056
Calcium	NELAP	0.100		**191**	mg/L	1	11/12/2024 19:38	231056
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	11/12/2024 19:38	231056
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	11/12/2024 19:38	231056
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	11/12/2024 19:38	231056
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	11/12/2024 19:38	231056
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010	B	**< 0.0010**	mg/L	5	11/16/2024 1:51	231056
Arsenic	NELAP	0.0010		**0.0160**	mg/L	5	11/15/2024 5:18	231056
Lithium	*	0.0030		**0.0079**	mg/L	5	11/20/2024 10:10	231056
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	11/15/2024 5:18	231056
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	11/15/2024 5:18	231056

LCS recovered outside upper control limits. Sample results are below the reporting limit. Data is reportable per the TNI Standard.

Contamination present in the MBLK. Sample results below the reporting limit are reportable per the TNI Standard.

SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	11/14/2024 13:02	231146
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	12/03/2024 0:00	R357220
Radium-228	*	0		**See Attached**	pci/L	1	12/03/2024 0:00	R357220

Client: City Water, Light & Power **Work Order:** 24110121

Client Project: FGDS Landfill **Report Date:** 09-Dec-24

Lab ID: 24110121-012 **Client Sample ID:** P07D

Matrix: GROUNDWATER **Collection Date:** 11/13/2024 12:06

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**528.25**	ft	1	11/13/2024 12:06	R356376
Depth to water	*	-5.00		**1.37**	ft	1	11/13/2024 12:06	R356376
Depth to water from measuring point	*	0		**4.37**	ft	1	11/13/2024 12:06	R356376
Elevation of groundwater surface	*	0		**523.88**	ft	1	11/13/2024 12:06	R356376
Measuring Point Elevation	*	0		**528.25**	ft	1	11/13/2024 12:06	R356376
Measuring Point Height Above Land Surface	*	0		**3.00**	ft	1	11/13/2024 12:06	R356376
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**12**	NTU	1	11/13/2024 12:06	R356376
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**57.0**	°F	1	11/13/2024 12:06	R356376
SW-846 9040B								
pH, Field	*	1.00		**6.64**		1	11/13/2024 12:06	R356376
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1110**	µmhos/cm @25C	1	11/13/2024 12:06	R356376
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	50	H	**1020**	mg/L	2.5	11/21/2024 17:12	R356629
Sample analysis did not meet hold time requirements.								
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	11/15/2024 11:37	R356222
Chloride	NELAP	5.00		**32.2**	mg/L	10	11/15/2024 11:37	R356222
Sulfate	NELAP	10.0		**305**	mg/L	10	11/15/2024 11:37	R356222
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.857**	mg/L	1	11/18/2024 12:47	231260
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	11/18/2024 12:47	231260
Boron	NELAP	0.0200		**5.40**	mg/L	1	11/18/2024 12:47	231260
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	11/18/2024 12:47	231260
Calcium	NELAP	0.100		**189**	mg/L	1	11/18/2024 12:47	231260
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	11/18/2024 12:47	231260
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	11/18/2024 12:47	231260
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	11/18/2024 12:47	231260
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	11/18/2024 12:47	231260
Sample result(s) for Ca exceed 10 times the CCB. Data is reportable per the TNI Standard.								
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	11/20/2024 4:24	231194
Arsenic	NELAP	0.0010		**0.0360**	mg/L	5	11/20/2024 4:24	231194
Lithium	*	0.0030		**0.0095**	mg/L	5	11/20/2024 11:22	231194
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	11/20/2024 4:24	231194
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	11/20/2024 4:24	231194
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	11/18/2024 12:27	231196
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	12/03/2024 0:00	R357220
Radium-228	*	0		**See Attached**	pci/L	1	12/03/2024 0:00	R357220

Client: City Water, Light & Power **Work Order:** 25020750

Client Project: FGDS Landfill **Report Date:** 31-Mar-25

Lab ID: 25020750-010 **Client Sample ID:** AW-2

Matrix: GROUNDWATER **Collection Date:** 02/20/2025 10:18

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**497.34**	ft	1	02/20/2025 10:18	R360884
Depth to water	*	-5.00		**1.23**	ft	1	02/20/2025 10:18	R360884
Depth to water from measuring point	*	0		**4.53**	ft	1	02/20/2025 10:18	R360884
Elevation of groundwater surface	*	0		**525.45**	ft	1	02/20/2025 10:18	R360884
Measuring Point Elevation	*	0		**529.98**	ft	1	02/20/2025 10:18	R360884
Measuring Point Height Above Land Surface	*	0		**3.30**	ft	1	02/20/2025 10:18	R360884
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**18**	NTU	1	02/20/2025 10:18	R360884
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**41.9**	°F	1	02/20/2025 10:18	R360884
SW-846 9040B								
pH, Field	*	1.00		**7.05**		1	02/20/2025 10:18	R360884
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**764**	µmhos/cm @25C	1	02/20/2025 10:18	R360884
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	20		**588**	mg/L	1	02/21/2025 15:00	R360717
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	02/21/2025 15:32	R360629
Chloride	NELAP	5.00		**19.5**	mg/L	10	02/21/2025 15:32	R360629
Sulfate	NELAP	10.0		**53.7**	mg/L	10	02/21/2025 15:32	R360629
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.283**	mg/L	1	02/24/2025 11:19	235055
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	02/24/2025 11:19	235055
Boron	NELAP	0.0200		**1.48**	mg/L	1	02/24/2025 11:19	235055
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	02/24/2025 11:19	235055
Calcium	NELAP	0.100		**111**	mg/L	1	02/24/2025 11:19	235055
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	02/24/2025 11:19	235055
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	02/24/2025 11:19	235055
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	02/24/2025 11:19	235055
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	02/24/2025 11:19	235055
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	02/24/2025 11:02	235055
Arsenic	NELAP	0.0010		**0.0017**	mg/L	5	02/25/2025 12:25	235055
Lithium	*	0.0030		**0.0051**	mg/L	5	02/25/2025 12:25	235055
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	02/24/2025 11:02	235055
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	02/25/2025 12:25	235055
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	02/21/2025 14:58	235075
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	03/21/2025 0:00	R362556
Radium-228	*	0		**See Attached**	pci/L	1	03/21/2025 0:00	R362556

Client: City Water, Light & Power **Work Order:** 25020750

Client Project: FGDS Landfill **Report Date:** 31-Mar-25

Lab ID: 25020750-007 **Client Sample ID:** G121

Matrix: GROUNDWATER **Collection Date:** 02/20/2025 13:25

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**497.04**	ft	1	02/20/2025 13:25	R360884
Depth to water	*	-5.00		**26.38**	ft	1	02/20/2025 13:25	R360884
Depth to water from measuring point	*	0		**28.25**	ft	1	02/20/2025 13:25	R360884
Elevation of groundwater surface	*	0		**527.35**	ft	1	02/20/2025 13:25	R360884
Measuring Point Elevation	*	0		**555.60**	ft	1	02/20/2025 13:25	R360884
Measuring Point Height Above Land Surface	*	0		**1.87**	ft	1	02/20/2025 13:25	R360884
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**30**	NTU	1	02/20/2025 13:25	R360884
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**54.8**	°F	1	02/20/2025 13:25	R360884
SW-846 9040B								
pH, Field	*	1.00		**6.95**		1	02/20/2025 13:25	R360884
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1570**	µmhos/cm @25C	1	02/20/2025 13:25	R360884
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	200		**1240**	mg/L	10	02/21/2025 14:58	R360717
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	02/21/2025 14:22	R360629
Chloride	NELAP	5.00		**28.0**	mg/L	10	02/21/2025 14:22	R360629
Sulfate	NELAP	10.0		**314**	mg/L	10	02/21/2025 14:22	R360629
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.560**	mg/L	1	02/24/2025 11:12	235055
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	02/24/2025 11:12	235055
Boron	NELAP	0.0200		**3.54**	mg/L	1	02/24/2025 11:12	235055
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	02/24/2025 11:12	235055
Calcium	NELAP	0.100		**169**	mg/L	1	02/24/2025 11:12	235055
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	02/24/2025 11:12	235055
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	02/24/2025 11:12	235055
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	02/24/2025 11:12	235055
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	02/24/2025 11:12	235055
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	02/24/2025 10:13	235055
Arsenic	NELAP	0.0010		**0.0169**	mg/L	5	02/25/2025 11:05	235055
Lithium	*	0.0030		**0.0080**	mg/L	5	02/24/2025 10:13	235055
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	02/24/2025 10:13	235055
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	02/25/2025 11:05	235055
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	02/21/2025 14:41	235075
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	03/21/2025 0:00	R362556
Radium-228	*	0		**See Attached**	pci/L	1	03/21/2025 0:00	R362556

Client: City Water, Light & Power **Work Order:** 25020750

Client Project: FGDS Landfill **Report Date:** 31-Mar-25

Lab ID: 25020750-012 **Client Sample ID:** P07D

Matrix: GROUNDWATER **Collection Date:** 02/20/2025 11:12

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**528.25**	ft	1	02/20/2025 11:12	R360884
Depth to water	*	-5.00		**1.49**	ft	1	02/20/2025 11:12	R360884
Depth to water from measuring point	*	0		**4.49**	ft	1	02/20/2025 11:12	R360884
Elevation of groundwater surface	*	0		**523.76**	ft	1	02/20/2025 11:12	R360884
Measuring Point Elevation	*	0		**528.25**	ft	1	02/20/2025 11:12	R360884
Measuring Point Height Above Land Surface	*	0		**3.00**	ft	1	02/20/2025 11:12	R360884
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**40**	NTU	1	02/20/2025 11:12	R360884
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**46.8**	°F	1	02/20/2025 11:12	R360884
SW-846 9040B								
pH, Field	*	1.00		**6.78**		1	02/20/2025 11:12	R360884
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1250**	µmhos/cm @25C	1	02/20/2025 11:12	R360884
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	50		**990**	mg/L	2.5	02/21/2025 15:01	R360717
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	02/21/2025 15:44	R360629
Chloride	NELAP	5.00		**31.4**	mg/L	10	02/21/2025 15:44	R360629
Sulfate	NELAP	10.0		**287**	mg/L	10	02/21/2025 15:44	R360629
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.913**	mg/L	1	02/24/2025 11:20	235055
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	02/24/2025 11:20	235055
Boron	NELAP	0.0200		**5.26**	mg/L	1	02/24/2025 11:20	235055
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	02/24/2025 11:20	235055
Calcium	NELAP	0.100		**179**	mg/L	1	02/24/2025 11:20	235055
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	02/24/2025 11:20	235055
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	02/24/2025 11:20	235055
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	02/24/2025 11:20	235055
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	02/24/2025 11:20	235055
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	02/24/2025 11:07	235055
Arsenic	NELAP	0.0010		**0.0276**	mg/L	5	02/25/2025 12:31	235055
Lithium	*	0.0030		**0.0081**	mg/L	5	02/25/2025 12:31	235055
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	02/24/2025 11:07	235055
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	02/25/2025 12:31	235055
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	02/21/2025 15:00	235075
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	03/21/2025 0:00	R362556
Radium-228	*	0		**See Attached**	pci/L	1	03/21/2025 0:00	R362556

Client: City Water, Light & Power **Work Order:** 25030753

Client Project: FGDS Landfill **Report Date:** 22-Apr-25

Lab ID: 25030753-007 **Client Sample ID:** AW-2

Matrix: GROUNDWATER **Collection Date:** 03/18/2025 11:14

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**497.34**	ft	1	03/18/2025 11:14	R362264
Depth to water	*	-5.00		**-0.31**	ft	1	03/18/2025 11:14	R362264
Depth to water from measuring point	*	0		**2.99**	ft	1	03/18/2025 11:14	R362264
Elevation of groundwater surface	*	0		**526.99**	ft	1	03/18/2025 11:14	R362264
Measuring Point Elevation	*	0		**529.98**	ft	1	03/18/2025 11:14	R362264
Measuring Point Height Above Land Surface	*	0		**3.30**	ft	1	03/18/2025 11:14	R362264
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**12**	NTU	1	03/18/2025 11:14	R362264
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**55.1**	°F	1	03/18/2025 11:14	R362264
SW-846 9040B								
pH, Field	*	1.00		**7.01**		1	03/18/2025 11:14	R362264
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1740**	µmhos/cm @25C	1	03/18/2025 11:14	R362264
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	20		**632**	mg/L	1	03/19/2025 13:52	R362089
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	03/19/2025 11:01	R362092
Chloride	NELAP	5.00		**21.2**	mg/L	10	03/19/2025 11:01	R362092
Sulfate	NELAP	10.0		**66.1**	mg/L	10	03/19/2025 11:01	R362092
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.316**	mg/L	1	03/21/2025 16:44	236195
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	03/20/2025 15:42	236195
Boron	NELAP	0.0200		**1.90**	mg/L	1	03/21/2025 16:44	236195
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	03/20/2025 15:42	236195
Calcium	NELAP	0.100		**128**	mg/L	1	03/21/2025 16:44	236195
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	03/20/2025 15:42	236195
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	03/20/2025 15:42	236195
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	03/20/2025 15:42	236195
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	03/20/2025 15:42	236195
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	03/21/2025 15:44	236195
Arsenic	NELAP	0.0010		**0.0012**	mg/L	5	03/21/2025 15:44	236195
Lithium	*	0.0030		**0.0053**	mg/L	5	03/24/2025 11:41	236195
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	03/21/2025 15:44	236195
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	03/21/2025 15:44	236195
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	03/19/2025 16:47	236206
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	04/18/2025 0:00	R363684
Radium-228	*	0		**See Attached**	pci/L	1	04/18/2025 0:00	R363684

Client: City Water, Light & Power **Work Order:** 25030753

Client Project: FGDS Landfill **Report Date:** 22-Apr-25

Lab ID: 25030753-008 **Client Sample ID:** G121

Matrix: GROUNDWATER **Collection Date:** 03/18/2025 13:31

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**497.04**	ft	1	03/18/2025 13:31	R362264
Depth to water	*	-5.00		**25.56**	ft	1	03/18/2025 13:31	R362264
Depth to water from measuring point	*	0		**27.43**	ft	1	03/18/2025 13:31	R362264
Elevation of groundwater surface	*	0		**528.17**	ft	1	03/18/2025 13:31	R362264
Measuring Point Elevation	*	0		**555.60**	ft	1	03/18/2025 13:31	R362264
Measuring Point Height Above Land Surface	*	0		**1.87**	ft	1	03/18/2025 13:31	R362264
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**11**	NTU	1	03/18/2025 13:31	R362264
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**58.8**	°F	1	03/18/2025 13:31	R362264
SW-846 9040B								
pH, Field	*	1.00		**7.00**		1	03/18/2025 13:31	R362264
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**2320**	µmhos/cm @25C	1	03/18/2025 13:31	R362264
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	20		**1710**	mg/L	1	03/19/2025 13:52	R362089
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	03/19/2025 11:13	R362092
Chloride	NELAP	5.00		**28.8**	mg/L	10	03/19/2025 11:13	R362092
Sulfate	NELAP	10.0		**281**	mg/L	10	03/19/2025 11:13	R362092
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.274**	mg/L	1	03/21/2025 16:44	236195
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	03/20/2025 15:43	236195
Boron	NELAP	0.0200		**3.05**	mg/L	1	03/21/2025 16:44	236195
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	03/20/2025 15:43	236195
Calcium	NELAP	0.100		**186**	mg/L	1	03/21/2025 16:44	236195
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	03/20/2025 15:43	236195
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	03/20/2025 15:43	236195
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	03/20/2025 15:43	236195
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	03/20/2025 15:43	236195
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	03/21/2025 15:49	236195
Arsenic	NELAP	0.0010		**< 0.0010**	mg/L	5	03/21/2025 15:49	236195
Lithium	*	0.0030		**0.0073**	mg/L	5	03/24/2025 11:47	236195
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	03/24/2025 11:47	236195
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	03/21/2025 15:49	236195
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	03/19/2025 16:49	236206
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	04/18/2025 0:00	R363684
Radium-228	*	0		**See Attached**	pci/L	1	04/18/2025 0:00	R363684

Client: City Water, Light & Power **Work Order:** 25030753

Client Project: FGDS Landfill **Report Date:** 22-Apr-25

Lab ID: 25030753-006 **Client Sample ID:** P07D

Matrix: GROUNDWATER **Collection Date:** 03/18/2025 11:39

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**528.25**	ft	1	03/18/2025 11:39	R362264
Depth to water	*	-5.00		**1.18**	ft	1	03/18/2025 11:39	R362264
Depth to water from measuring point	*	0		**4.18**	ft	1	03/18/2025 11:39	R362264
Elevation of groundwater surface	*	0		**524.07**	ft	1	03/18/2025 11:39	R362264
Measuring Point Elevation	*	0		**528.25**	ft	1	03/18/2025 11:39	R362264
Measuring Point Height Above Land Surface	*	0		**3.00**	ft	1	03/18/2025 11:39	R362264
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**20**	NTU	1	03/18/2025 11:39	R362264
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**55.4**	°F	1	03/18/2025 11:39	R362264
SW-846 9040B								
pH, Field	*	1.00		**6.84**		1	03/18/2025 11:39	R362264
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**2340**	µmhos/cm @25C	1	03/18/2025 11:39	R362264
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	50		**990**	mg/L	2.5	03/19/2025 13:52	R362089
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	03/19/2025 10:50	R362092
Chloride	NELAP	5.00		**31.7**	mg/L	10	03/19/2025 10:50	R362092
Sulfate	NELAP	10.0		**298**	mg/L	10	03/19/2025 10:50	R362092
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.943**	mg/L	1	03/21/2025 16:43	236195
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	03/20/2025 15:41	236195
Boron	NELAP	0.0200		**5.65**	mg/L	1	03/21/2025 16:43	236195
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	03/20/2025 15:41	236195
Calcium	NELAP	0.100		**195**	mg/L	1	03/21/2025 16:43	236195
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	03/20/2025 15:41	236195
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	03/20/2025 15:41	236195
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	03/20/2025 15:41	236195
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	03/20/2025 15:41	236195
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	03/21/2025 15:38	236195
Arsenic	NELAP	0.0010		**0.0292**	mg/L	5	03/21/2025 15:38	236195
Lithium	*	0.0030		**0.0081**	mg/L	5	03/24/2025 11:34	236195
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	03/21/2025 15:38	236195
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	03/21/2025 15:38	236195
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	03/19/2025 16:45	236206
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	04/18/2025 0:00	R363684
Radium-228	*	0		**See Attached**	pci/L	1	04/18/2025 0:00	R363684

Client: City Water, Light & Power **Work Order:** 25041334

Client Project: FGDS Landfill **Report Date:** 09-May-25

Lab ID: 25041334-003 **Client Sample ID:** AW-2

Matrix: GROUNDWATER **Collection Date:** 04/24/2025 9:29

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**497.34**	ft	1	04/24/2025 9:29	R363926
Depth to water	*	-5.00		**0.49**	ft	1	04/24/2025 9:29	R363926
Depth to water from measuring point	*	0		**3.79**	ft	1	04/24/2025 9:29	R363926
Elevation of groundwater surface	*	0		**526.19**	ft	1	04/24/2025 9:29	R363926
Measuring Point Elevation	*	0		**529.98**	ft	1	04/24/2025 9:29	R363926
Measuring Point Height Above Land Surface	*	0		**3.30**	ft	1	04/24/2025 9:29	R363926
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**6.0**	NTU	1	04/24/2025 9:29	R363926
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**59.0**	°F	1	04/24/2025 9:29	R363926
SW-846 9040B								
pH, Field	*	1.00		**6.81**		1	04/24/2025 9:29	R363926
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1060**	µmhos/cm @25C	1	04/24/2025 9:29	R363926
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	20		**650**	mg/L	1	04/29/2025 14:45	R364192
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	04/25/2025 18:27	R363968
Chloride	NELAP	5.00		**21.2**	mg/L	10	04/25/2025 18:27	R363968
Sulfate	NELAP	10.0		**65.8**	mg/L	10	04/25/2025 18:27	R363968
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.299**	mg/L	1	04/25/2025 9:15	238084
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	04/25/2025 9:15	238084
Boron	NELAP	0.0200		**1.77**	mg/L	1	04/25/2025 9:15	238084
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	04/25/2025 9:15	238084
Calcium	NELAP	0.100		**115**	mg/L	1	04/25/2025 9:15	238084
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	04/25/2025 9:15	238084
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	04/25/2025 9:15	238084
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	04/25/2025 9:15	238084
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	04/25/2025 9:15	238084
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	04/25/2025 15:49	238084
Arsenic	NELAP	0.0010		**0.0014**	mg/L	5	04/25/2025 15:49	238084
Lithium	*	0.0030		**0.0054**	mg/L	5	04/25/2025 15:49	238084
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	04/25/2025 15:49	238084
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	04/25/2025 15:49	238084
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	04/28/2025 17:19	238209
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	05/07/2025 0:00	R364677
Radium-228	*	0		**See Attached**	pci/L	1	05/07/2025 0:00	R364677

Client: City Water, Light & Power **Work Order:** 25041334

Client Project: FGDS Landfill **Report Date:** 09-May-25

Lab ID: 25041334-004 **Client Sample ID:** G121

Matrix: GROUNDWATER **Collection Date:** 04/24/2025 10:36

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**497.04**	ft	1	04/24/2025 10:36	R363926
Depth to water	*	-5.00		**25.26**	ft	1	04/24/2025 10:36	R363926
Depth to water from measuring point	*	0		**27.13**	ft	1	04/24/2025 10:36	R363926
Elevation of groundwater surface	*	0		**528.47**	ft	1	04/24/2025 10:36	R363926
Measuring Point Elevation	*	0		**555.60**	ft	1	04/24/2025 10:36	R363926
Measuring Point Height Above Land Surface	*	0		**1.87**	ft	1	04/24/2025 10:36	R363926
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**78**	NTU	1	04/24/2025 10:36	R363926
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**57.0**	°F	1	04/24/2025 10:36	R363926
SW-846 9040B								
pH, Field	*	1.00		**6.65**		1	04/24/2025 10:36	R363926
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1500**	µmhos/cm @25C	1	04/24/2025 10:36	R363926
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	25		**1240**	mg/L	1.25	04/29/2025 14:44	R364192
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	04/25/2025 18:39	R363968
Chloride	NELAP	5.00		**28.1**	mg/L	10	04/25/2025 18:39	R363968
Sulfate	NELAP	10.0		**310**	mg/L	10	04/25/2025 18:39	R363968
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.573**	mg/L	1	04/25/2025 9:15	238084
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	04/25/2025 9:15	238084
Boron	NELAP	0.0200		**3.65**	mg/L	1	04/25/2025 9:15	238084
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	04/25/2025 9:15	238084
Calcium	NELAP	0.100		**173**	mg/L	1	04/25/2025 9:15	238084
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	04/25/2025 9:15	238084
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	04/25/2025 9:15	238084
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	04/25/2025 9:15	238084
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	04/25/2025 9:15	238084
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	04/25/2025 15:55	238084
Arsenic	NELAP	0.0010		**0.0145**	mg/L	5	04/25/2025 15:55	238084
Lithium	*	0.0030		**0.0068**	mg/L	5	04/25/2025 15:55	238084
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	04/25/2025 15:55	238084
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	04/25/2025 15:55	238084
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	04/28/2025 17:21	238209
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	05/07/2025 0:00	R364677
Radium-228	*	0		**See Attached**	pci/L	1	05/07/2025 0:00	R364677

Client: City Water, Light & Power **Work Order:** 25041334

Client Project: FGDS Landfill **Report Date:** 09-May-25

Lab ID: 25041334-002 **Client Sample ID:** P07D

Matrix: GROUNDWATER **Collection Date:** 04/24/2025 10:02

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**528.25**	ft	1	04/24/2025 10:02	R363926
Depth to water	*	-5.00		**0.99**	ft	1	04/24/2025 10:02	R363926
Depth to water from measuring point	*	0		**3.99**	ft	1	04/24/2025 10:02	R363926
Elevation of groundwater surface	*	0		**524.26**	ft	1	04/24/2025 10:02	R363926
Measuring Point Elevation	*	0		**528.25**	ft	1	04/24/2025 10:02	R363926
Measuring Point Height Above Land Surface	*	0		**3.00**	ft	1	04/24/2025 10:02	R363926
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**11**	NTU	1	04/24/2025 10:02	R363926
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**57.1**	°F	1	04/24/2025 10:02	R363926
SW-846 9040B								
pH, Field	*	1.00		**6.70**		1	04/24/2025 10:02	R363926
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1550**	µmhos/cm @25C	1	04/24/2025 10:02	R363926
STANDARD METHODS 2540 C (TOTAL) 1997, 2011								
Total Dissolved Solids	NELAP	33		**1160**	mg/L	1.67	04/29/2025 14:47	R364192
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	04/25/2025 18:16	R363968
Chloride	NELAP	5.00		**31.9**	mg/L	10	04/25/2025 18:16	R363968
Sulfate	NELAP	10.0		**283**	mg/L	10	04/25/2025 18:16	R363968
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.847**	mg/L	1	04/25/2025 9:14	238084
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	04/25/2025 9:14	238084
Boron	NELAP	0.0200		**5.22**	mg/L	1	04/25/2025 9:14	238084
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	04/25/2025 9:14	238084
Calcium	NELAP	0.100		**175**	mg/L	1	04/25/2025 9:14	238084
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	04/25/2025 9:14	238084
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	04/25/2025 9:14	238084
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	04/25/2025 9:14	238084
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	04/25/2025 9:14	238084
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	04/25/2025 15:44	238084
Arsenic	NELAP	0.0010		**0.0262**	mg/L	5	04/25/2025 15:44	238084
Lithium	*	0.0030		**0.0076**	mg/L	5	04/25/2025 15:44	238084
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	04/25/2025 15:44	238084
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	04/25/2025 15:44	238084
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	04/28/2025 17:16	238209
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	05/07/2025 0:00	R364677
Radium-228	*	0		**See Attached**	pci/L	1	05/07/2025 0:00	R364677

Client: City Water, Light & Power **Work Order:** 25051159

Client Project: FGDS Landfill **Report Date:** 03-Jul-25

Lab ID: 25051159-004 **Client Sample ID:** AW-2

Matrix: GROUNDWATER **Collection Date:** 05/22/2025 13:44

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**497.34**	ft	1	05/22/2025 13:44	R365854
Depth to water	*	-5.00		**1.62**	ft	1	05/22/2025 13:44	R365854
Depth to water from measuring point	*	0		**4.92**	ft	1	05/22/2025 13:44	R365854
Elevation of groundwater surface	*	0		**525.06**	ft	1	05/22/2025 13:44	R365854
Measuring Point Elevation	*	0		**529.98**	ft	1	05/22/2025 13:44	R365854
Measuring Point Height Above Land Surface	*	0		**3.30**	ft	1	05/22/2025 13:44	R365854
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**9.5**	NTU	1	05/22/2025 13:44	R365854
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**56.3**	°F	1	05/22/2025 13:44	R365854
SW-846 9040B								
pH, Field	*	1.00		**6.89**		1	05/22/2025 13:44	R365854
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1110**	µmhos/cm @25C	1	05/22/2025 13:44	R365854
STANDARD METHODS 2540 C (TOTAL) 2020								
Total Dissolved Solids	NELAP	100		**810**	mg/L	5	05/27/2025 16:01	R365834
Stability in final weights could not be achieved after multiple drying, cooling, and weighing cycles.								
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	05/23/2025 20:03	R365493
Chloride	NELAP	5.00		**29.5**	mg/L	10	05/23/2025 20:03	R365493
Sulfate	NELAP	10.0		**146**	mg/L	10	05/23/2025 20:03	R365493
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.647**	mg/L	1	05/30/2025 9:30	239588
Beryllium	NELAP	0.0005		**0.0006**	mg/L	1	05/30/2025 9:30	239588
Boron	NELAP	0.0200		**3.05**	mg/L	1	05/30/2025 9:30	239588
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	05/30/2025 9:30	239588
Calcium	NELAP	0.100		**148**	mg/L	1	05/30/2025 9:30	239588
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	05/30/2025 9:30	239588
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	05/30/2025 9:30	239588
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	05/30/2025 9:30	239588
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	05/30/2025 9:30	239588
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	05/27/2025 17:14	239588
Arsenic	NELAP	0.0010		**0.0166**	mg/L	5	05/27/2025 17:14	239588
Lithium	*	0.0030		**0.0062**	mg/L	5	05/27/2025 17:14	239588
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	05/27/2025 17:14	239588
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	05/27/2025 17:14	239588
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	05/27/2025 13:21	239623
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	07/02/2025 0:00	R367646
Radium-228	*	0		**See Attached**	pci/L	1	07/02/2025 0:00	R367646

Client: City Water, Light & Power **Work Order:** 25051159

Client Project: FGDS Landfill **Report Date:** 03-Jul-25

Lab ID: 25051159-002 **Client Sample ID:** G121

Matrix: GROUNDWATER **Collection Date:** 05/22/2025 11:43

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**497.04**	ft	1	05/22/2025 11:43	R365854
Depth to water	*	-5.00		**25.95**	ft	1	05/22/2025 11:43	R365854
Depth to water from measuring point	*	0		**27.82**	ft	1	05/22/2025 11:43	R365854
Elevation of groundwater surface	*	0		**527.78**	ft	1	05/22/2025 11:43	R365854
Measuring Point Elevation	*	0		**555.60**	ft	1	05/22/2025 11:43	R365854
Measuring Point Height Above Land Surface	*	0		**1.87**	ft	1	05/22/2025 11:43	R365854
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**22**	NTU	1	05/22/2025 11:43	R365854
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**57.9**	°F	1	05/22/2025 11:43	R365854
SW-846 9040B								
pH, Field	*	1.00		**6.79**		1	05/22/2025 11:43	R365854
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1560**	µmhos/cm @25C	1	05/22/2025 11:43	R365854
STANDARD METHODS 2540 C (TOTAL) 2020								
Total Dissolved Solids	NELAP	100		**1210**	mg/L	5	05/27/2025 16:01	R365834
Stability in final weights could not be achieved after multiple drying, cooling, and weighing cycles.								
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	05/23/2025 19:40	R365493
Chloride	NELAP	5.00		**29.9**	mg/L	10	05/23/2025 19:40	R365493
Sulfate	NELAP	10.0		**328**	mg/L	10	05/23/2025 19:40	R365493
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.641**	mg/L	1	05/30/2025 9:23	239588
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	05/30/2025 9:23	239588
Boron	NELAP	0.0200		**3.93**	mg/L	1	05/30/2025 9:23	239588
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	05/30/2025 9:23	239588
Calcium	NELAP	0.100		**185**	mg/L	1	05/30/2025 9:23	239588
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	05/30/2025 9:23	239588
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	05/30/2025 9:23	239588
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	05/30/2025 9:23	239588
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	05/30/2025 9:23	239588
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	05/27/2025 16:40	239588
Arsenic	NELAP	0.0010		**0.0180**	mg/L	5	05/27/2025 16:40	239588
Lithium	*	0.0030		**0.0070**	mg/L	5	05/27/2025 16:40	239588
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	05/27/2025 16:40	239588
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	05/27/2025 16:40	239588
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	05/27/2025 13:17	239623
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	07/02/2025 0:00	R367646
Radium-228	*	0		**See Attached**	pci/L	1	07/02/2025 0:00	R367646

Client: City Water, Light & Power **Work Order:** 25051159

Client Project: FGDS Landfill **Report Date:** 03-Jul-25

Lab ID: 25051159-005 **Client Sample ID:** P07D

Matrix: GROUNDWATER **Collection Date:** 05/27/2025 10:04

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**528.25**	ft	1	05/27/2025 10:04	R365854
Depth to water	*	-5.00		**2.31**	ft	1	05/27/2025 10:04	R365854
Depth to water from measuring point	*	0		**5.31**	ft	1	05/27/2025 10:04	R365854
Elevation of groundwater surface	*	0		**522.94**	ft	1	05/27/2025 10:04	R365854
Measuring Point Elevation	*	0		**528.25**	ft	1	05/27/2025 10:04	R365854
Measuring Point Height Above Land Surface	*	0		**3.00**	ft	1	05/27/2025 10:04	R365854
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**8.2**	NTU	1	05/27/2025 10:04	R365854
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**56.0**	°F	1	05/27/2025 10:04	R365854
SW-846 9040B								
pH, Field	*	1.00		**6.72**		1	05/27/2025 10:04	R365854
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1540**	µmhos/cm @25C	1	05/27/2025 10:04	R365854
STANDARD METHODS 2540 C (TOTAL) 2020								
Total Dissolved Solids	NELAP	20		**1110**	mg/L	1	06/02/2025 17:03	R365986
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	05/28/2025 12:47	R365685
Chloride	NELAP	5.00		**33.5**	mg/L	10	05/28/2025 12:47	R365685
Sulfate	NELAP	10.0		**307**	mg/L	10	05/28/2025 12:47	R365685
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.827**	mg/L	1	05/29/2025 19:18	239684
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	05/29/2025 19:18	239684
Boron	NELAP	0.0200		**5.28**	mg/L	1	05/29/2025 19:18	239684
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	05/29/2025 19:18	239684
Calcium	NELAP	0.100		**187**	mg/L	1	05/29/2025 19:18	239684
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	05/29/2025 19:18	239684
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	05/29/2025 19:18	239684
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	05/29/2025 19:18	239684
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	05/29/2025 19:18	239684
Sample result(s) for B exceed 10 times the CCB. Data is reportable per the TNI Standard.								
Contamination present in the CCB for Cr. Sample results below the reporting limit are reportable per the TNI Standard.								
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	05/28/2025 16:38	239684
Arsenic	NELAP	0.0010		**0.0324**	mg/L	5	05/28/2025 16:38	239684
Lithium	*	0.0030		**0.0099**	mg/L	5	05/28/2025 16:38	239684
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	05/28/2025 16:38	239684
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	05/28/2025 16:38	239684
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	05/29/2025 16:02	239734
EPA 903.0/904.0, RADIUM 226/228								
Radium-226	*	0		**See Attached**	pci/L	1	07/02/2025 0:00	R367646
Radium-228	*	0		**See Attached**	pci/L	1	07/02/2025 0:00	R367646

Client: City Water, Light & Power **Work Order:** 25080111

Client Project: FGDS Landfill **Report Date:** 21-Aug-25

Lab ID: 25080111-004 **Client Sample ID:** AW-2

Matrix: GROUNDWATER **Collection Date:** 08/11/2025 12:56

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**497.34**	ft	1	08/11/2025 12:56	R369784
Depth to water	*	-5.00		**2.72**	ft	1	08/11/2025 12:56	R369784
Depth to water from measuring point	*	0		**6.02**	ft	1	08/11/2025 12:56	R369784
Elevation of groundwater surface	*	0		**523.96**	ft	1	08/11/2025 12:56	R369784
Measuring Point Elevation	*	0		**529.98**	ft	1	08/11/2025 12:56	R369784
Measuring Point Height Above Land Surface	*	0		**3.30**	ft	1	08/11/2025 12:56	R369784
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**4.9**	NTU	1	08/11/2025 12:56	R369784
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**72.0**	°F	1	08/11/2025 12:56	R369784
SW-846 9040B								
pH, Field	*	1.00		**6.87**		1	08/11/2025 12:56	R369784
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1200**	µmhos/cm @25C	1	08/11/2025 12:56	R369784
STANDARD METHODS 2540 C (TOTAL) 2020								
Total Dissolved Solids	NELAP	20		**790**	mg/L	1	08/12/2025 15:23	R369703
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	08/12/2025 18:00	R369661
Chloride	NELAP	5.00		**26.0**	mg/L	10	08/12/2025 18:00	R369661
Sulfate	NELAP	10.0		**131**	mg/L	10	08/12/2025 18:00	R369661
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.604**	mg/L	1	08/14/2025 17:33	243289
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	08/14/2025 17:33	243289
Boron	NELAP	0.0200		**3.08**	mg/L	1	08/14/2025 17:33	243289
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	08/14/2025 17:33	243289
Calcium	NELAP	0.100		**157**	mg/L	1	08/14/2025 17:33	243289
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	08/14/2025 17:33	243289
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	08/14/2025 17:33	243289
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	08/14/2025 17:33	243289
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	08/14/2025 17:33	243289
Sample result(s) for Ca exceed 10 times the CCB. Data is reportable per the TNI Standard.								
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	08/14/2025 3:26	243289
Arsenic	NELAP	0.0010		**0.0110**	mg/L	5	08/19/2025 12:21	243589
Lithium	*	0.0030		**0.0053**	mg/L	5	08/14/2025 3:26	243289
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	08/14/2025 3:26	243289
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	08/14/2025 3:26	243289
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	08/12/2025 16:24	243283

PRELIMINARY REPORT

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Client: City Water, Light & Power **Work Order:** 25080111

Client Project: FGDS Landfill **Report Date:** 21-Aug-25

Lab ID: 25080111-002 **Client Sample ID:** G121

Matrix: GROUNDWATER **Collection Date:** 08/11/2025 11:23

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**497.04**	ft	1	08/11/2025 11:23	R369784
Depth to water	*	-5.00		**26.98**	ft	1	08/11/2025 11:23	R369784
Depth to water from measuring point	*	0		**28.85**	ft	1	08/11/2025 11:23	R369784
Elevation of groundwater surface	*	0		**526.75**	ft	1	08/11/2025 11:23	R369784
Measuring Point Elevation	*	0		**555.60**	ft	1	08/11/2025 11:23	R369784
Measuring Point Height Above Land Surface	*	0		**1.87**	ft	1	08/11/2025 11:23	R369784
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**14**	NTU	1	08/11/2025 11:23	R369784
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**69.7**	°F	1	08/11/2025 11:23	R369784
SW-846 9040B								
pH, Field	*	1.00		**6.76**		1	08/11/2025 11:23	R369784
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**1650**	µmhos/cm @25C	1	08/11/2025 11:23	R369784
STANDARD METHODS 2540 C (TOTAL) 2020								
Total Dissolved Solids	NELAP	33		**1250**	mg/L	1.67	08/15/2025 13:31	R369952
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	08/12/2025 17:37	R369661
Chloride	NELAP	5.00		**28.9**	mg/L	10	08/12/2025 17:37	R369661
Sulfate	NELAP	10.0		**344**	mg/L	10	08/12/2025 17:37	R369661
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.354**	mg/L	1	08/13/2025 19:17	243289
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	08/13/2025 19:17	243289
Boron	NELAP	0.0200		**3.21**	mg/L	1	08/13/2025 19:17	243289
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	08/13/2025 19:17	243289
Calcium	NELAP	0.100		**194**	mg/L	1	08/13/2025 19:17	243289
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	08/13/2025 19:17	243289
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	08/13/2025 19:17	243289
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	08/13/2025 19:17	243289
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	08/13/2025 19:17	243289
Sample result for Ba exceeds 10 times the CCB. Data is reportable per the TNI Standard.								
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**0.0020**	mg/L	5	08/14/2025 3:14	243289
Arsenic	NELAP	0.0010		**0.0044**	mg/L	5	08/19/2025 12:08	243589
Lithium	*	0.0030		**0.0067**	mg/L	5	08/14/2025 3:14	243289
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	08/14/2025 3:14	243289
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	08/14/2025 3:14	243289
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	08/12/2025 16:20	243283

PRELIMINARY REPORT

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Client: City Water, Light & Power **Work Order:** 25080111

Client Project: FGDS Landfill **Report Date:** 21-Aug-25

Lab ID: 25080111-005 **Client Sample ID:** P07D

Matrix: GROUNDWATER **Collection Date:** 08/11/2025 11:23

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
FIELD ELEVATION MEASUREMENTS								
Bottom of well elevation	*	0		**495.71**	ft	1	08/11/2025 11:23	R369784
Depth to water	*	-5.00		**2.02**	ft	1	08/11/2025 11:23	R369784
Depth to water from measuring point	*	0		**5.02**	ft	1	08/11/2025 11:23	R369784
Elevation of groundwater surface	*	0		**523.23**	ft	1	08/11/2025 11:23	R369784
Measuring Point Elevation	*	0		**528.25**	ft	1	08/11/2025 11:23	R369784
Measuring Point Height Above Land Surface	*	0		**3.00**	ft	1	08/11/2025 11:23	R369784
STANDARD METHODS 2130 B FIELD								
Turbidity	*	1.0		**35**	NTU	1	08/11/2025 11:23	R369784
STANDARD METHODS 2550 B FIELD								
Temperature	*	0		**66.9**	°F	1	08/11/2025 11:23	R369784
SW-846 9040B								
pH, Field	*	1.00		**6.67**		1	08/11/2025 11:23	R369784
SW-846 9050A								
Spec. Conductance, Field	*	1.00		**931**	µmhos/cm @25C	1	08/11/2025 11:23	R369784
STANDARD METHODS 2540 C (TOTAL) 2020								
Total Dissolved Solids	NELAP	33		**1180**	mg/L	1.67	08/15/2025 13:31	R369952
SW846 9056A TOTAL ANIONIC COMPOUNDS BY ION CHROMATOGRAPHY								
Fluoride	NELAP	0.50		**ND**	mg/L	10	08/12/2025 18:12	R369661
Chloride	NELAP	5.00		**31.8**	mg/L	10	08/12/2025 18:12	R369661
Sulfate	NELAP	10.0		**324**	mg/L	10	08/12/2025 18:12	R369661
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Barium	NELAP	0.0025		**0.789**	mg/L	1	08/14/2025 17:34	243289
Beryllium	NELAP	0.0005		**< 0.0005**	mg/L	1	08/14/2025 17:34	243289
Boron	NELAP	0.0200		**5.54**	mg/L	1	08/14/2025 17:34	243289
Cadmium	NELAP	0.0020		**< 0.0020**	mg/L	1	08/14/2025 17:34	243289
Calcium	NELAP	0.100		**194**	mg/L	1	08/14/2025 17:34	243289
Chromium	NELAP	0.0050		**< 0.0050**	mg/L	1	08/14/2025 17:34	243289
Cobalt	NELAP	0.0050		**< 0.0050**	mg/L	1	08/14/2025 17:34	243289
Lead	NELAP	0.0075		**< 0.0075**	mg/L	1	08/14/2025 17:34	243289
Molybdenum	NELAP	0.0100		**< 0.0100**	mg/L	1	08/14/2025 17:34	243289
Sample result(s) for Ca exceed 10 times the CCB. Data is reportable per the TNI Standard.								
SW-846 3005A, 6020A, METALS BY ICPMS (TOTAL)								
Antimony	NELAP	0.0010		**< 0.0010**	mg/L	5	08/14/2025 4:38	243289
Arsenic	NELAP	0.0010		**0.0255**	mg/L	5	08/19/2025 12:27	243589
Lithium	*	0.0030		**0.0069**	mg/L	5	08/14/2025 4:38	243289
Selenium	NELAP	0.0010		**< 0.0010**	mg/L	5	08/14/2025 4:38	243289
Thallium	NELAP	0.0020		**< 0.0020**	mg/L	5	08/14/2025 4:38	243289
SW-846 7470A (TOTAL)								
Mercury	NELAP	0.00020		**< 0.00020**	mg/L	1	08/12/2025 16:27	243283

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