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August 22, 2025

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Dear Mr. Anderson and Mr. Hendricks:

C-746-U CONTAINED LANDFILL SECOND QUARTER CALENDAR YEAR 2025 (APRIL–JUNE) COMPLIANCE MONITORING REPORT, PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY, FRNP-RPT-0387/V2, PERMIT NUMBER SW07300014, SW07300015, SW07300045, AGENCY INTEREST ID NO. 3059

The subject report for the second quarter of calendar year (CY) 2025 has been uploaded to the Kentucky eForms portal via the Kentucky Online Gateway. Other recipients outside the Solid Waste Branch are receiving this document via email distribution (see distribution list). This report is required in accordance with Permit Condition ACTV0006, Special Condition Number 3, of Solid Waste Landfill Permit Number SW07300014, SW07300015, SW07300045 (Permit). This report includes groundwater analytical data, a validation summary, groundwater flow rate and direction determination, figures depicting well locations, and methane monitoring results.

The statistical analyses on the second quarter CY 2025 monitoring well data collected from the C-746-U Landfill were performed in accordance with Monitoring Condition GSTR0001, Standard Requirement 3, using the U.S. Environmental Protection Agency guidance document, *Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Interim Final Guidance* (1989).

This report also serves as the statistical exceedance notification for the second quarter of CY 2025, in accordance with Monitoring Condition GSTR0001, Standard Requirement 5, of the Permit.

If you have any questions or require additional information, please contact Angus MacKelvey at (270) 349-7526.

Sincerely,

APRIL LADD Digitally signed by APRIL LADD
Date: 2025.08.22 10:19:15 -05'00'

April Ladd
Paducah Site Lead
Portsmouth/Paducah Project Office

Enclosure:
C-746-U Contained Landfill Second Quarter Calendar Year 2025 (April–June) Compliance Monitoring Report, Paducah Gaseous Diffusion Plant, Paducah, Kentucky, FRNP-RPT-0387/V2

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FRNP-RPT-0387/V2

C-746-U Contained Landfill
Second Quarter Calendar Year 2025
(April–June)
Compliance Monitoring Report,
Paducah Gaseous Diffusion Plant,
Paducah, Kentucky

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C-746-U Contained Landfill
Second Quarter Calendar Year 2025
(April–June)
Compliance Monitoring Report,
Paducah Gaseous Diffusion Plant,
Paducah, Kentucky

Date Issued—August 2025

U.S. DEPARTMENT OF ENERGY
Office of Environmental Management

Prepared by
FOUR RIVERS NUCLEAR PARTNERSHIP, LLC,
managing the
Deactivation and Remediation Project at the
Paducah Gaseous Diffusion Plant
under Contract DE-EM0004895

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ACRONYMS

CFR	*Code of Federal Regulations*
KAR	*Kentucky Administrative Regulations*
KDWM	Kentucky Division of Waste Management
KRS	*Kentucky Revised Statutes*
LEL	lower explosive limit
LRGA	Lower Regional Gravel Aquifer
LTL	lower tolerance limit
MCL	maximum contaminant level
MW	monitoring well
RGA	Regional Gravel Aquifer
UCRS	Upper Continental Recharge System
URGA	Upper Regional Gravel Aquifer
UTL	upper tolerance limit

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1. INTRODUCTION

This report, *C-746-U Contained Landfill Second Quarter Calendar Year 2025 (April–June) Compliance Monitoring Report, Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, is being submitted in accordance with Solid Waste Permit No. SW07300014, SW07300015, SW07300045.

The Groundwater, Surface Water, Leachate, and Methane Monitoring Sample Data Reporting Form is provided in Appendix A. The facility information sheet is provided in Appendix B. Groundwater analytical results are presented in groundwater sample analyses tables and laboratory reports, which are presented in Appendix C. The statistical analyses and qualification statement are provided in Appendix D. The groundwater flow rate and direction determinations are provided in Appendix E. Appendix F contains the notifications for all permit required parameters whose concentrations exceed the maximum contaminant level (MCL) for Kentucky solid waste facilities provided in 401 *KAR* 47:030 § 6, *Maximum Groundwater Contaminant Levels*, and for all permit required parameters listed in 40 *CFR* § 302.4, Appendix A, *Sequential CAS Registry Number List of CERCLA Hazardous Substances*, that do not have an MCL and whose concentrations exceed the historical background concentrations [upper tolerance limit (UTL), or both UTL and lower tolerance limit (LTL) for pH, as established at a 95% confidence]. Appendix G provides a chart of MCL and historical background UTL exceedances that have occurred, beginning in the third quarter, calendar year 2002. Methane monitoring results are documented on the approved C-746-U Landfill Methane Monitoring Report form provided in Appendix H. The form includes pertinent remarks/observations as required by 401 *KAR* 48:090 § 5, *Explosive Gases Control*. Surface water analyses are provided in Appendix I. Analytical laboratory certification is provided in Appendix J. Laboratory analytical methods used to analyze the included data set are provided in Appendix K. Micro-purging stability parameter results are provided in Appendix L.

1.1 BACKGROUND

The C-746-U Contained Landfill is an operating solid waste landfill located north of the Paducah Gaseous Diffusion Plant and north of the C-746-S&T Landfills. Construction and operation of the C-746-U Contained Landfill were permitted in November 1996. The operation is regulated under Solid Waste Landfill Permit No. SW07300014, SW07300015, SW07300045. The permitted C-746-U Contained Landfill area covers about 60 acres and includes a liner and leachate collection system. The C-746-U Contained Landfill currently is operating in Phases 4, 5, 6, and 7. A minor permit modification that included upgrades to the leachate storage capacity for Phases 6 and 7 was approved by the Kentucky Division of Waste Management (KDWM) on May 21, 2021 (FRNP 2021). Phases 1, 2, and 3 have long-term cover. Phases 8 through 23 have not been constructed.

1.2 MONITORING PERIOD ACTIVITIES

1.2.1 Groundwater Monitoring

Three zones are monitored at the site: the Upper Continental Recharge System (UCRS), the Upper Regional Gravel Aquifer (URGA), and the Lower Regional Gravel Aquifer (LRGA). There are 21 monitoring wells (MWs) under permit for the C-746-U Contained Landfill: 9 UCRS wells, 6 URGA wells, and 6 LRGA wells. A map of the MW locations is presented in Figure 1. All MWs were sampled this quarter, with the exception of MW376 and MW377 (screened in the UCRS), which had insufficient amounts of water to obtain samples; therefore, there are no laboratory analysis results for these locations.

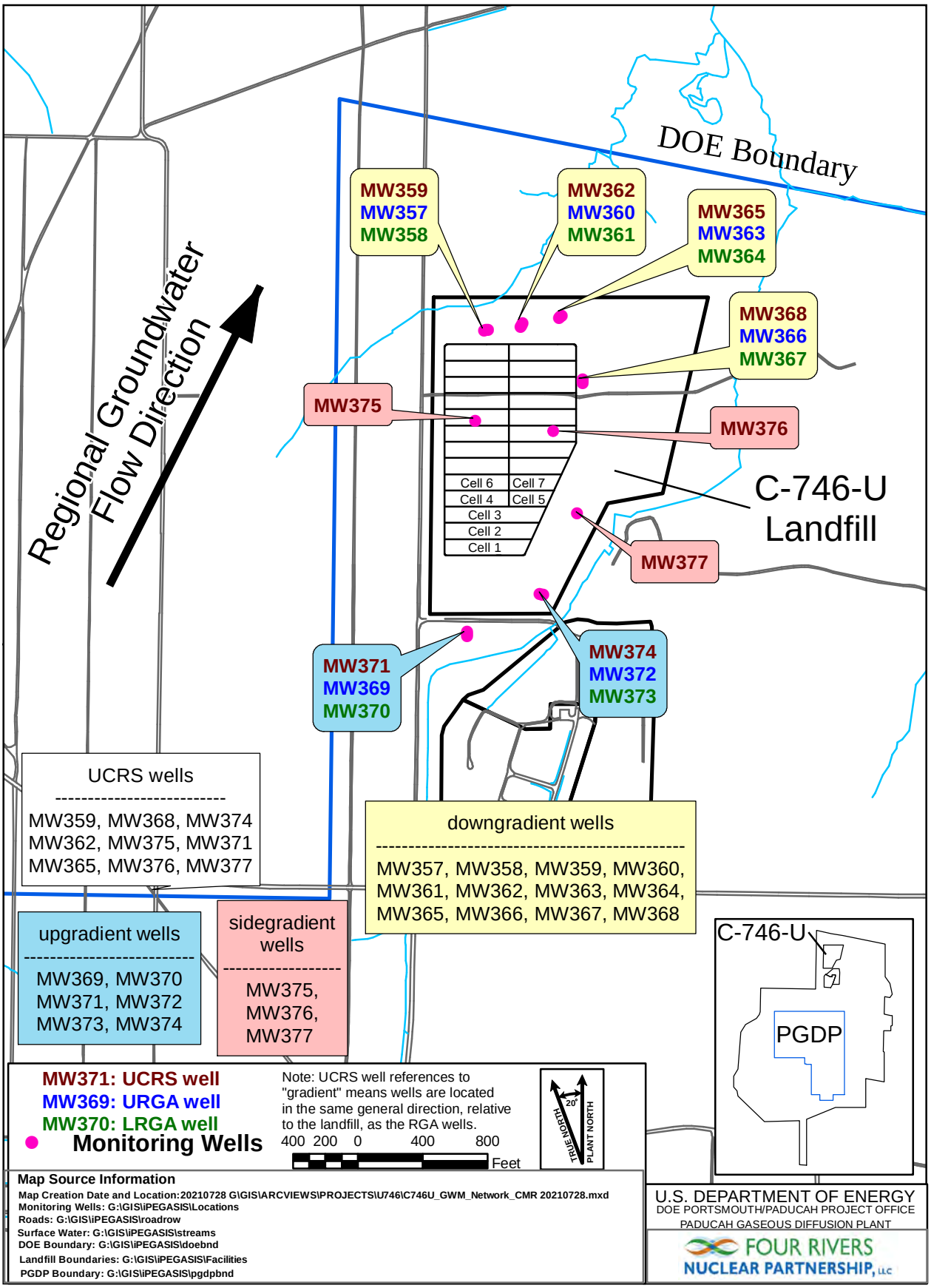

Figure 1. C-746-U Landfill Groundwater Monitoring Well Network

Consistent with the approved *Groundwater Monitoring Plan for the Solid Waste Permitted Landfills (C-746-S Residential Landfill, C-746-T Inert Landfill, and C-746-U Contained Landfill) at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, (Groundwater Monitoring Plan) UCRS wells are included in the monitoring program (LATA Kentucky 2014). Groundwater flow gradients are downward through the UCRS, but flow in the underlying Regional Gravel Aquifer (RGA) is lateral. Groundwater flow in the RGA typically is in a northeasterly direction in the vicinity of the C-746-U Contained Landfill. The Ohio River and lower reaches of Little Bayou Creek are the discharge areas for the RGA flow system from the vicinity of the landfills.

Consistent with the conceptual site model, the constituent concentrations in UCRS wells are considered to be representative only of the conditions local to the well or sourced from overlying soils; thus, no discussion of potential "upgradient" sources is relevant to the discussion for the UCRS. Nevertheless, a UTL for background also has been calculated for UCRS wells using concentrations from UCRS wells located in the same direction (relative to the landfill) as those RGA wells identified as upgradient. The results from these wells are considered to represent historical "background" for UCRS water quality. Similarly, other gradient references for UCRS wells are identified using the same gradient references (relative to the landfill) that are attributed to nearby RGA wells. Results from UCRS wells are compared to this UTL and exceedances of these values are reported in the quarterly report.

Groundwater sampling was conducted within the second quarter 2025 in accordance with the Groundwater Monitoring Plan (LATA Kentucky 2014) using the Deactivation and Remediation Contractor procedure CP4-ES-2101, *Groundwater Sampling*. Groundwater sampling for the second quarter 2025 was conducted on April 8–10, 2025. The analytical laboratory used U.S. Environmental Protection Agency-approved methods, as applicable. Appropriate sample containers and preservatives were used. The parameters specified in Permit Condition GSTR0001, Special Condition 1, were analyzed for all locations sampled.

The groundwater flow rate and direction determination are provided in Appendix E. Depth-to-water was measured on April 21, 2025, in MWs of the C-746-U Contained Landfill (see Appendix E, Table E.1), in MWs of the C-746-S&T Landfills, and in MWs of the surrounding region (shown on Appendix E, Figure E.4). Water level measurements in 39 vicinity wells define the potentiometric surface for the RGA. Typical regional flow in the RGA is northeastward, toward the Ohio River. During April 2025, RGA groundwater flow in the area of the landfill was oriented to the south. The Paducah Site and the Jackson Purchase region experienced a significant flood event on the Ohio River beginning on April 1, 2025, and peaking on April 7–17, 2025. High river stage was 333.61 on April 15, 2025, at Paducah, Kentucky (The previous river stage had been 301.04 ft on March 31. 2025). This sustained high river stage exceeded the potentiometric surface of the RGA from the Ohio River all the way back to the Paducah Site. Groundwater was unable to discharge to the Ohio River (because of the high river stage) and the RGA gradient (and groundwater flow direction) reversed for a period of approximately two weeks. The groundwater measurements date of April 21, 2025, took place during this two-week period.

The hydraulic gradient for the RGA in the vicinity of the C-746-U Contained Landfill in April 2025 was 2.70×10^{-4} ft/ft (see Appendix E, Table E.2). The hydraulic gradients for the URGA and LRGA at the C-746-U Contained Landfill were 3.50×10^{-4} ft/ft and 3.45×10^{-4} ft/ft, respectively (see Appendix E, Table E.2). Calculated groundwater flow rates (average linear velocity) at the C-746-U Contained Landfill range from 5.96×10^{-1} to 1.02 ft/day for the URGA and 5.86×10^{-1} to 1.00 ft/day for the LRGA (see Appendix E, Table E.3).

1.2.2 Methane Monitoring

Methane monitoring was conducted in accordance with 401 *KAR* 48:090 § 5 and the approved Explosive Gas Monitoring Program (KEEC 2011), which is Technical Application Attachment 12, of the Solid Waste

Permit. Industrial Hygiene staff monitored for the occurrence of methane in four on-site building locations and four locations along the landfill boundary on May 21, 2025. Appendix H provides a map of the monitoring locations (Appendix H, Figure H.1). Monitoring results identified that all locations were compliant with the regulatory requirement of < 100% lower explosive limit (LEL) at boundary locations and < 25% LEL at all other locations. The results are documented on the C-746-U Contained Landfill Methane Monitoring Report provided in Appendix H.

1.2.3 Surface Water Monitoring

Surface water was monitored, as specified in 401 *KAR* 48:300 § 2, *Surface Water Monitoring Plan*, and the approved *Surface Water Monitoring Plan for C-746-U and C-746-S&T Landfills Permit Number SW07300014, SW07300015, SW07300045, Paducah Gaseous Diffusion Plant, Paducah, Kentucky, Agency Interest Number 3059* (FRNP 2021), which is Technical Application Attachment 24 of the Solid Waste Permit. Surface water sampling was performed on April 3, 2025, at three locations monitored for the C-746-U Contained Landfill: (1) instream location L154, (2) downstream location L351, and (3) instream location L150 (Figure 2). Surface water results are provided in Appendix I.

1.3 KEY RESULTS

Groundwater data were evaluated in accordance with the approved Groundwater Monitoring Plan (LATA Kentucky 2014), which is Technical Application Attachment 25, of the Solid Waste Permit. For the current reporting quarter, there were no parameters that exceeded their respective MCLs. If there had been any MCL exceedances, they would have been listed in Table 1. Those constituents that exceeded their respective MCL would have been evaluated further against their historical background UTL. Table 2 identifies parameters (that do not have MCLs) with concentrations that exceeded the statistically derived historical background UTL[1] during the second quarter 2025, as well as parameters that exceeded their MCL and also exceeded their historical background UTL. Those constituents (present in downgradient wells) that exceed their historical background UTL were evaluated against their current UTL-derived background using the most recent eight quarters of data from wells considered to be background. Constituents in downgradient wells that exceeded current background UTL are shown on Table 3.

Table 1. Summary of MCL Exceedances

UCRS	URGA	LRGA
None	None	None

A notification of MCL exceedances, or lack of exceedances, was submitted electronically to KDWM, in accordance with 401 *KAR* 48:300 § 7, *Sampling and Analysis,* prior to the submittal of this report. There were no MCL exceedances in the current reporting quarter.

Any constituent that exceeded the MCL in downgradient wells would be subjected to a comparison against the UTL concentration calculated using historical concentrations from wells identified as background (Table 2).

This report is the notification of parameters that had statistically significant increased concentrations relative to historical background concentrations, as required by Permit No. SW07300014, SW07300015, SW07300045, Condition GSTR0001, Standard Requirement 5, and 401 *KAR* 48:300 § 7.

[1] The UTL comparison for pH uses a two-sided test for both UTLs and LTLs. For the purposes of this report, the reference to "UTL exceedances" also includes the LTL for pH.

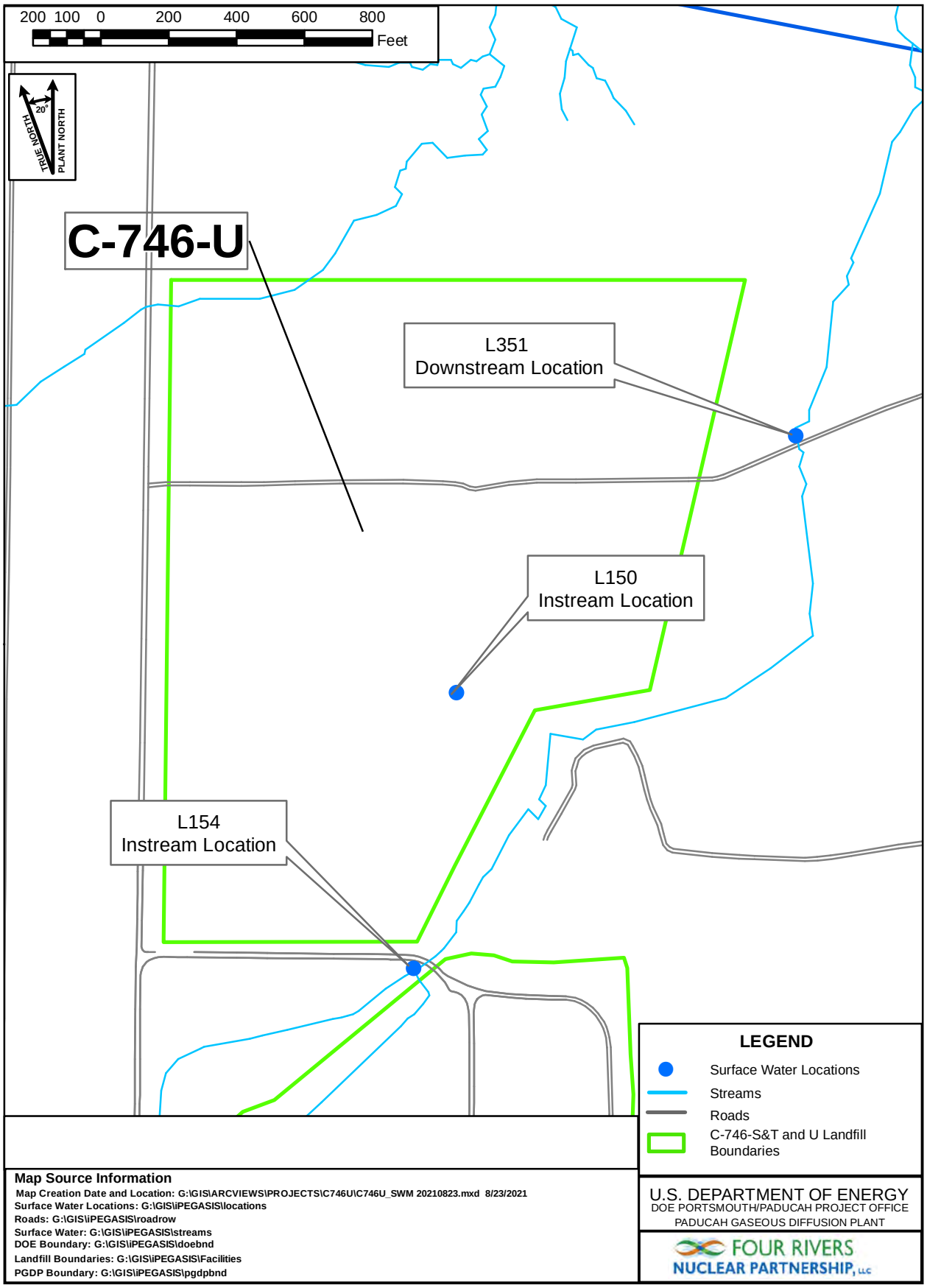

Figure 2. C-746-U Landfill Surface Water Monitoring Locations

Table 2. Exceedances of Statistically Derived Historical Background Concentrations

UCRS[a]	URGA	LRGA
MW359: Dissolved oxygen, oxidation-reduction potential,[b] and sulfate	MW357: Oxidation-reduction potential[b]	MW358: Cyanide and oxidation-reduction potential[b]
MW362: Dissolved oxygen, oxidation-reduction potential,[b] and sulfate	MW360: Oxidation-reduction potential[b]	MW361: Oxidation-reduction potential[b] and technetium-99
MW365: Dissolved oxygen, oxidation-reduction potential,[b] and sulfate	MW363: Oxidation-reduction potential[b]	MW364: Oxidation-reduction potential[b] and technetium-99
MW368: Oxidation-reduction potential[b] and sulfate	MW366: Dissolved oxygen and oxidation-reduction potential[b]	MW367: Oxidation-reduction potential[b] and technetium-99
MW371: Dissolved oxygen, oxidation-reduction potential,[b] and sulfate	MW369: Oxidation-reduction potential[b]	MW370: Dissolved oxygen and oxidation-reduction potential[b]
MW374: Dissolved oxygen, oxidation-reduction potential,[b] and sulfate	MW372: Calcium, conductivity, dissolved solids, magnesium, oxidation-reduction potential,[b] and sulfate	MW373: Calcium, conductivity, dissolved solids, and oxidation-reduction potential[b]
MW375: Dissolved oxygen, oxidation-reduction potential,[b] and sulfate		

[a] Gradients in the UCRS are downward. UCRS gradient designations are identified using the same gradient reference (relative to the landfill) that is attributed to nearby RGA wells.
[b] Oxidation-reduction potential calibrated as Eh.
Sidegradient wells: MW375, MW376, MW377. Downgradient wells: MW357, MW358, MW359, MW360, MW361, MW362, MW363, MW364, MW365, MW366, MW367, MW368. Upgradient wells: MW369, MW370, MW371, MW372, MW373, MW374.

The constituents that had exceedances of the statistically derived historical background UTL underwent additional statistical evaluation. The current quarter concentrations were compared to the current background UTLs that were developed using the most recent eight quarters of data from wells identified as background in order to determine if the current downgradient (compliance) well concentrations are consistent with current background values. Table 3 summarizes the evaluation against current background UTL for those constituents present in downgradient RGA wells with historical UTL exceedances. In accordance with the approved Groundwater Monitoring Plan, constituents in downgradient wells that exceed the historical UTL, but do not exceed the current UTL, are considered not to have a C-746-U Landfill source; therefore, they are Type 1 exceedances—not attributable to the C-746-U Landfill. Except for dissolved oxygen in URGA well MW366 and technetium-99 in LRGA wells MW361, MW364, and MW367, all UTL exceedances reported for this quarter were evaluated and considered to be Type 1 exceedances—not attributable to the C-746-U Landfill.

Table 3. Exceedances of Current Background UTL in Downgradient RGA Wells

URGA	LRGA
MW366: Dissolved Oxygen	MW361: Technetium-99
	MW364: Technetium-99
	MW367: Technetium-99

Dissolved oxygen in downgradient URGA well MW366, as well as technetium-99 in downgradient LRGA wells MW361, MW364, and MW367, exceeded both the historical background UTL and the current background UTL; therefore, these results are preliminarily considered to be Type 2 exceedances. To

evaluate the preliminary Type 2 exceedances further, the parameters were subjected to the Mann-Kendall statistical test for trends using the most recent eight quarters of data. The results are summarized in Table 4. No trend was indicated for any of the aforementioned preliminary Type 2 exceedances in wells MW361, MW364, MW366, and MW367, and are thus considered to be Type 1 exceedances—not attributable to the C-746-U Landfill.

Table 4. C-746-U Landfills Downgradient Wells Trend Summary Utilizing the Previous Eight Quarters

Location	Well ID	Parameter	Sample Size	Alpha[a]	P-value[b]	S[c]	Decision[d]
C-746-U Landfill	MW361	Technetium-99	8	0.05	0.548	-1	No trend
	MW364	Technetium-99	8	0.05	0.360	-4	No trend
	MW366	Dissolved oxygen	8	0.05	0.119	8	No trend
	MW367	Technetium-99	8	0.05	0.054	14	No trend

[a] An alpha of 0.05 represents a 95% confidence interval.
[b] The p-value represents the risk of acceptance the H_a hypothesis of a trend, in terms of a percentage.
[c] The initial value of the Mann-Kendall statistic, S, is assumed to be 0 (e.g., no trend). If a data value from a later time period is higher than a data value from an earlier time period, S is incremented by 1. On the other hand, if the data value from a later time period is lower than a data value sampled earlier, S is decremented by 1. The net result of all such increments and decrements yields the final value of S. A very high positive value of S is an indicator of an increasing trend, and a very low negative value indicates a decreasing trend.
[d] The Mann-Kendall decision operates on two hypotheses; the H_0 and H_a. H_0 assumes there is no trend in the data, whereas H_a assumes either a positive or negative trend.
Note: Statistics were generated using ProUCL.

The statistical evaluation of UCRS concentrations against the current UCRS background UTL identified exceedances of both the historical and current backgrounds for sulfate in MW365 (Table 5). Because gradients in the UCRS are downward (vertical), there are no hydrogeologically downgradient UCRS wells.

Table 5. Exceedances of Current Background UTL in Downgradient UCRS Wells*

UCRS
MW365: Sulfate

*In the same direction (relative to the landfill) as RGA wells.

All UTL exceedances reported for this quarter were evaluated and considered to be Type 1 exceedances—not attributable to the C-746-U Contained Landfill.

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2. DATA EVALUATION/STATISTICAL SYNOPSIS

The statistical analyses conducted on the second quarter 2025 groundwater data collected from the C-746-U Contained Landfill MWs were performed in accordance with the Groundwater Monitoring Plan (LATA Kentucky 2014). The statistical analyses for this report use data from the first eight quarters that were sampled for each parameter, beginning with the baseline sampling events in 2002, when available. The sampling dates associated with background data are listed next to the result in the statistical analysis sheets in Appendix D (Attachments D1 and D2).

If parameters that exceed the MCL for Kentucky solid waste facilities found in 401 *KAR* 47:030 § 6 were detected, they were documented and evaluated further. MCL exceedances, if found, were reviewed against historical background results (UTL). If the MCL exceedance was found not to exceed the historical UTL, the exceedance was noted as a Type 1 exceedance—an exceedance not attributable to the C-746-U Contained Landfill. If there was an exceedance of the MCL in a downgradient well and this constituent also exceeded the historical background, the quarterly result was compared to the current background UTL (developed using the most recent eight quarters of data from wells identified as background) to identify if this exceedance is attributable to upgradient/nonlandfill sources. If the downgradient concentration was less than the current background, the exceedance was noted as a Type 1 exceedance. If a constituent exceeds its Kentucky solid waste facility MCL, historical background UTL, and current background UTL, it was reported as a Type 2 exceedance—source undetermined. Type 2 exceedances (undetermined source) were evaluated further using the Mann-Kendall test for trend. If there was no statistically significant increasing trend for a constituent in a downgradient well, the exceedance was reclassified as a Type 1 exceedance (not attributable to the C-746-U Contained Landfill).

For those parameters that do not have a Kentucky solid waste facility MCL, the same process was used. If a constituent without an MCL exceeded its historical background UTL and its current background UTL, it was evaluated further to identify the source of the exceedance, if possible. If the source of the exceedance could not be identified, it was reported as a Type 2 exceedance—source undetermined. Type 2 exceedances (undetermined source) were evaluated further using the Mann-Kendall test for trend. If there was no statistically significant increasing trend for a constituent in a downgradient well, the exceedance was reclassified as a Type 1 exceedance (not attributable to the C-746-U Contained Landfill).

To calculate the UTL, the data were divided into censored (nondetects) and uncensored (detected) observations. The one-sided tolerance interval statistical test was conducted only on parameters that had at least one uncensored observation. Results of the one-sided tolerance interval statistical test were used to determine whether the data showed a statistical exceedance in concentrations with respect to historical background concentrations (UTL).

For the statistical analysis of pH, a two-sided tolerance interval statistical test was conducted. The test well results were compared to both a UTL and LTL to determine if statistically significant deviations in concentrations existed with respect to background well data.

A stepwise list of the one-sided tolerance interval statistical procedures applied to the data is provided in Appendix D under Statistical Analysis Process. The statistical analysis was conducted separately for each parameter in each well. The MWs included in the statistical analyses are listed in Table 6.

Table 6. Monitoring Wells Included in Statistical Analysis[a]

UCRS	URGA	LRGA
MW359	MW357	MW358
MW362	MW360	MW361
MW365	MW363	MW364
MW368	MW366	MW367
MW371[c]	MW369 (background)	MW370 (background)
MW374[c]	MW372 (background)	MW373 (background)
MW375		
MW376[b]		
MW377[b]		

[a] Map showing the MW locations is shown on Figure 1.
[b] Well had insufficient water to permit a water sample for laboratory analysis.
[c] In the same direction (relative to the landfill) as RGA wells considered to be upgradient.

2.1 STATISTICAL ANALYSIS OF GROUNDWATER DATA

Parameters requiring statistical analysis are summarized in Appendix D for each hydrogeological unit. A stepwise list for determining exceedances of statistically derived historical background concentrations is provided in Appendix D under Statistical Analysis Process. A comparison of the current quarter's results to the statistically derived historical background was conducted for parameters that do not have MCLs and also for those parameters whose concentrations exceed MCLs. Appendix G summarizes the occurrences (by well and by quarter) of historical UTLs and MCL exceedances. The constituents that had exceedances of the statistically derived historical background UTL underwent additional statistical evaluation. The current quarter concentrations were compared to the current background UTL developed using the most recent eight quarters of data from wells identified as upgradient in order to determine if the current downgradient concentrations are consistent with current background values.

2.1.1 Upper Continental Recharge System

In this quarter, 29 parameters, including those with MCLs, required statistical analysis in the UCRS. During the second quarter, dissolved oxygen, oxidation-reduction potential, and sulfate displayed concentrations that exceeded their respective historical UTL and are listed in Table 2. A current background UTL exceedance for sulfate was observed in downgradient UCRS well MW365 and is listed on Table 5.

2.1.2 Upper Regional Gravel Aquifer

In this quarter, 26 parameters, including those with MCLs, required statistical analysis in the URGA. During the second quarter, calcium, conductivity, dissolved oxygen, dissolved solids, magnesium, oxidation-reduction potential, and sulfate displayed concentrations that exceeded their respective historical UTL and are listed in Table 2. Dissolved oxygen exceeded the current background UTL in downgradient URGA well MW366 (Table 3).

2.1.3 Lower Regional Gravel Aquifer

In this quarter, 26 parameters, including those with MCLs, required statistical analysis in the LRGA. During the second quarter, calcium, conductivity, cyanide, dissolved oxygen, dissolved solids, oxidation-reduction potential, and technetium-99 displayed concentrations that exceeded their respective historical UTL and are listed in Table 2. Notably, this was the first historical UTL exceedance for cyanide identified for the C-746-U Contained Landfill. Technetium-99 exceeded the current background UTL in downgradient LRGA wells MW361, MW364, and MW367 (Table 3).

2.2 DATA VERIFICATION AND VALIDATION

Data verification is the process of comparing a data set against a set standard or contractual requirements. In accordance with the approved Groundwater Monitoring Plan (LATA Kentucky 2014), data are flagged as necessary.

Data validation was performed on 100% of the organic, inorganic, and radiochemical analytical data for groundwater by a qualified individual independent from sampling, laboratory, project management, or other decision-making personnel. Data validation evaluates the laboratory adherence to analytical method requirements. Validation codes are added by the independent validator and not the laboratory.

Field quality control samples are collected each sampling event. Field blanks, rinseate blanks, and trip blanks are obtained to ensure quality of field and laboratory practices and data are reported in the Groundwater Sample Analysis forms in Appendix C. Laboratory quality control samples, such as matrix spikes, matrix spike duplicates, and method blanks, are performed by the laboratory. Both field and laboratory quality control sample results are reviewed as part of the data verification/validation process. Data verification and validation results for this data set indicated that all data were considered usable.

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3. PROFESSIONAL GEOLOGIST AUTHORIZATION

DOCUMENT IDENTIFICATION: *C-746-U Contained Landfill Second Quarter Calendar Year 2025 (April–June) Compliance Monitoring Report, Paducah Gaseous Diffusion Plant, Paducah, Kentucky* (FRNP-RPT-0387/V2)

Stamped and signed pursuant to my authority as a duly registered geologist under the provisions of *KRS* Chapter 322A.

PG 113927
KD 8-20-2025

Kenneth R. Davis
Kenneth R. Davis

PG113927

August 20, 2025
Date

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4. REFERENCES

FRNP (Four Rivers Nuclear Partnership, LLC) 2021. *Surface Water Monitoring Plan for C-746-U and C-746-S&T Landfills Permit Number SW07300014, SW07300015, SW07300045, Paducah Gaseous Diffusion Plant, Paducah, Kentucky, Agency Interest Number 3059*, Solid Waste Landfill Permit No. SW07300014, SW07300015, SW07300045, Technical Application Attachment 24, Four Rivers Nuclear Partnership, LLC, Paducah, KY, March.

KEEC (Kentucky Energy and Environment Cabinet) 2011. Solid Waste Landfill Permit No. SW07300014, SW07300015, SW07300045, Division of Waste Management, Solid Waste Branch, Technical Application Attachment 12, "Explosive Gas Monitoring Program," January 21.

LATA Kentucky (LATA Environmental Services of Kentucky, LLC) 2014. *Groundwater Monitoring Plan for the Solid Waste Permitted Landfills (C-746-S Residential Landfill, C-746-T Inert Landfill, and C-746-U Contained Landfill) at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, PAD-PROJ-0139, Solid Waste Landfill Permit No. SW07300014, SW07300015, SW07300045, Technical Application Attachment 25, LATA Environmental Services of Kentucky, LLC, Kevil, KY, June.

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APPENDIX A

GROUNDWATER, SURFACE WATER, LEACHATE, AND METHANE MONITORING SAMPLE DATA REPORTING FORM

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GROUNDWATER, SURFACE WATER, LEACHATE, AND METHANE MONITORING SAMPLE DATA REPORTING FORM

NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION
DIVISION OF WASTE MANAGEMENT
SOLID WASTE BRANCH
14 REILLY ROAD
FRANKFORT, KY 40601

Facility Name: U.S. DOE–Paducah Gaseous Diffusion Plant (As officially shown on DWM Permit Face) Activity: C-746-U Contained Landfill

Permit No: SW07300014, SW07300015, SW07300045 Finds/Unit No: _____ Quarter & Year 2nd Qtr. CY 2025

Please check the following as applicable:

_____ Characterization X Quarterly _____ Semiannual _____ Annual _____ Assessment

Please check applicable submittal(s): X Groundwater X Surface Water

_____ Leachate X Methane Monitoring

This form is to be utilized by those sites required by regulation (Kentucky Waste Management Regulations-401 *KAR* 48:300 and 45:160) or by statute (Kentucky Revised Statues Chapter 224) to conduct groundwater and surface water monitoring under the jurisdiction of the Division of Waste Management. **You must report any indication of contamination within forty-eight (48) hours of making the determination using statistical analyses, direct comparison, or other similar techniques. Submitting the lab report is NOT considered notification.** Instructions for completing the form are attached. Do not submit the instruction pages.

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 directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for such violations.

_____

Myrna E. Redfield, Program Manager/Date
Four Rivers Nuclear Partnership, LLC

_____

April Ladd, Paducah Site Lead/Date
U.S. Department of Energy

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APPENDIX B

FACILITY INFORMATION SHEET

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FACILITY INFORMATION SHEET

Sampling Date: Groundwater: April 2025
Surface water: April 2025
Methane: May 2025 County: McCracken Permit Nos. SW07300014, SW07300015, SW07300045

Facility Name: U.S. DOE—Paducah Gaseous Diffusion Plant
(As officially shown on DWM Permit Face)

Site Address: 5600 Hobbs Road (Street) Kevil, Kentucky (City/State) 42053 (Zip)

Phone No: (270) 441-6800 Latitude: N 37° 07' 45" Longitude: W 88° 47' 55"

OWNER INFORMATION

Facility Owner: U.S. DOE, Joel Bradburne, Manager
Portsmouth/Paducah Project Office Phone No: (859) 219-4000

Contact Person: Myrna E. Redfield Phone No: (270) 441-5113

Contact Person Title: Program Manager/Chief Executive Officer
Four Rivers Nuclear Partnership, LLC

Mailing Address: 5511 Hobbs Road (Street) Kevil, Kentucky (City/State) 42053 (Zip)

SAMPLING PERSONNEL
(IF OTHER THAN LANDFILL OR LABORATORY)

Company: Four Rivers Nuclear Partnership, LLC

Contact Person: Chris Skinner Phone No: (270) 441-5675

Mailing Address: 5511 Hobbs Road (Street) Kevil, Kentucky (City/State) 42053 (Zip)

LABORATORY RECORD #1

Laboratory GEL Laboratories, LLC Lab ID No: KY90129

Contact Person: Valerie Davis Phone No: (843) 769-7391

Mailing Address: 2040 Savage Road (Street) Charleston, South Carolina (City/State) 29407 (Zip)

LABORATORY RECORD #2

Laboratory: N/A Lab ID No: N/A

Contact Person: N/A Phone No: N/A

Mailing Address: N/A (Street) City/State Zip

LABORATORY RECORD #3

Laboratory: N/A Lab ID No: N/A

Contact Person: N/A Phone No: N/A

Mailing Address: N/A (Street) City/State Zip

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APPENDIX C

GROUNDWATER SAMPLE ANALYSES AND LABORATORY REPORTS

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Paducah OREIS
GROUNDWATER MONITORING REPORT

Facility: C-746-U Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045

Sampling Point: MW357 DOWN **RGA Type:** URGA **Period:** 2nd Quarter 2025

AKGWA Well Tag #: 8004-4798 **SAMPLE ID:** MW357UG3-25 Sample Type: REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
Iodide	U	0.5	mg/L	0.5	4/8/2025			EPA-300.0	=
Bromide		0.32	mg/L	0.2	4/8/2025			SW846-9056A	=
Chloride	JW	28.1	mg/L	250	4/8/2025			SW846-9056A	J
Fluoride	J	0.152	mg/L	4	4/8/2025			SW846-9056A	=
Nitrate as Nitrogen	J	1.12	mg/L	10	4/8/2025			SW846-9056A	=
Sulfate		33.7	mg/L	1.6	4/8/2025			SW846-9056A	=
Barometric Pressure Reading		30.22	Inches/Hg		4/8/2025			FS	X
Conductivity		415	µmhos/cm		4/8/2025			FS	X
Depth to Water		42.61	ft		4/8/2025			FS	X
Dissolved Oxygen		5	mg/L		4/8/2025			FS	X
Eh (approx)		489	mV		4/8/2025			FS	X
pH		6.17	Std Unit		4/8/2025			FS	X
Temperature		57.2	deg F		4/8/2025			FS	X
Turbidity		9.8	NTU		4/8/2025			FS	X
Aluminum		0.0703	mg/L	0.05	4/8/2025			SW846-6020B	=
Antimony	U	0.003	mg/L	0.003	4/8/2025			SW846-6020B	=
Arsenic	U	0.005	mg/L	0.005	4/8/2025			SW846-6020B	=
Barium		0.0772	mg/L	0.004	4/8/2025			SW846-6020B	=
Beryllium	U	0.0005	mg/L	0.0005	4/8/2025			SW846-6020B	=
Boron		0.284	mg/L	0.15	4/8/2025			SW846-6020B	=
Cadmium	U	0.001	mg/L	0.001	4/8/2025			SW846-6020B	=
Calcium		24.9	mg/L	0.2	4/8/2025			SW846-6020B	=
Chromium	U	0.01	mg/L	0.01	4/8/2025			SW846-6020B	=
Cobalt	J	0.000461	mg/L	0.001	4/8/2025			SW846-6020B	=
Copper	J	0.00114	mg/L	0.002	4/8/2025			SW846-6020B	=
Iron		0.199	mg/L	0.1	4/8/2025			SW846-6020B	=
Lead	U	0.002	mg/L	0.002	4/8/2025			SW846-6020B	=
Magnesium		10.5	mg/L	0.03	4/8/2025			SW846-6020B	=
Manganese	NW*	0.0294	mg/L	0.005	4/8/2025			SW846-6020B	J
Molybdenum	U	0.001	mg/L	0.001	4/8/2025			SW846-6020B	=
Nickel	U	0.002	mg/L	0.002	4/8/2025			SW846-6020B	=
Potassium		1.73	mg/L	0.3	4/8/2025			SW846-6020B	=
Rhodium	U	0.005	mg/L	0.005	4/8/2025			SW846-6020B	=
Selenium	U	0.005	mg/L	0.005	4/8/2025			SW846-6020B	=
Silver	U	0.001	mg/L	0.001	4/8/2025			SW846-6020B	=
Sodium		42	mg/L	0.25	4/8/2025			SW846-6020B	=
Tantalum	U*	0.005	mg/L	0.005	4/8/2025			SW846-6020B	UJ
Thallium	U	0.002	mg/L	0.002	4/8/2025			SW846-6020B	=
Uranium	U	0.0002	mg/L	0.0002	4/8/2025			SW846-6020B	=
Vanadium	U	0.02	mg/L	0.02	4/8/2025			SW846-6020B	=
Zinc	J	0.00349	mg/L	0.02	4/8/2025			SW846-6020B	=
Mercury	U	0.0002	mg/L	0.0002	4/8/2025			SW846-7470A	=
Barium, Dissolved		0.0732	mg/L	0.004	4/8/2025			SW846-6020B	J
Chromium, Dissolved	U	0.01	mg/L	0.01	4/8/2025			SW846-6020B	UJ
Uranium, Dissolved	U	0.0002	mg/L	0.0002	4/8/2025			SW846-6020B	UJ
PCB-1016	U	0.0997	ug/L	0.0997	4/8/2025			SW846-8082A	=
PCB-1221	U	0.0997	ug/L	0.0997	4/8/2025			SW846-8082A	=

Paducah OREIS
GROUNDWATER MONITORING REPORT

Facility: C-746-U Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045

Sampling Point: MW357 DOWN **RGA Type:** URGA **Period:** 2nd Quarter 2025

AKGWA Well Tag #: 8004-4798 **SAMPLE ID:** MW357UG3-25 Sample Type: REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
PCB-1232	U	0.0997	ug/L	0.0997	4/8/2025			SW846-8082A	=
PCB-1242	U	0.0997	ug/L	0.0997	4/8/2025			SW846-8082A	=
PCB-1248	U	0.0997	ug/L	0.0997	4/8/2025			SW846-8082A	=
PCB-1254	U	0.0997	ug/L	0.0997	4/8/2025			SW846-8082A	=
PCB-1260	U	0.0997	ug/L	0.0997	4/8/2025			SW846-8082A	UJ
PCB-1268	U	0.0997	ug/L	0.0997	4/8/2025			SW846-8082A	=
Polychlorinated biphenyl	U	0.0997	ug/L	0.0997	4/8/2025			SW846-8082A	UJ
Radium-226	U	0.138	pCi/L	0.627	4/8/2025	0.346	0.347	AN-1418	=
Radium-228	U	-0.28	pCi/L	4.3	4/8/2025	2.25	2.25	EPA-904.0-M	=
Strontium-90	U	-1.79	pCi/L	5.14	4/8/2025	2.45	2.45	EPA-905.0-M	=
Tritium	U	9.75	pCi/L	231	4/8/2025	130	130	EPA-906.0-M	=
Technetium-99		34.2	pCi/L	21.6	4/8/2025	13.4	13.9	HASL 300, Tc-02-RC M	=
Thorium-230	U	-0.116	pCi/L	1.86	4/8/2025	0.807	0.807	HASL 300, Th-01-RC M	=
Thorium-232	U	0.0787	pCi/L	1.11	4/8/2025	0.558	0.558	HASL 300, Th-01-RC M	=
Alpha activity	U	0.57	pCi/L	7.54	4/8/2025	3.56	3.56	SW846-9310	=
Beta activity		24.4	pCi/L	11.2	4/8/2025	8.45	9.37	SW846-9310	=
1,2-Dibromo-3-chloropropane	U	0.019	ug/L	0.019	4/8/2025			SW846-8011	=
1,1,1,2-Tetrachloroethane	UY1	1	ug/L	1	4/8/2025			SW846-8260D	UJ
1,1,1-Trichloroethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
1,1,2,2-Tetrachloroethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
1,1,2-Trichloroethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
1,1-Dichloroethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
1,1-Dichloroethene	U	1	ug/L	1	4/8/2025			SW846-8260D	=
1,2,3-Trichloropropane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
1,2-Dibromoethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
1,2-Dichlorobenzene	UY1Y2	1	ug/L	1	4/8/2025			SW846-8260D	UJ
1,2-Dichloroethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
1,2-Dichloropropane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
1,4-Dichlorobenzene	UY1Y2	1	ug/L	1	4/8/2025			SW846-8260D	UJ
2-Butanone	U	5	ug/L	5	4/8/2025			SW846-8260D	=
2-Hexanone	U	5	ug/L	5	4/8/2025			SW846-8260D	=
4-Methyl-2-pentanone	U	5	ug/L	5	4/8/2025			SW846-8260D	=
Acetone	U	5	ug/L	5	4/8/2025			SW846-8260D	=
Acrolein	U	5	ug/L	5	4/8/2025			SW846-8260D	UJ
Acrylonitrile	U	5	ug/L	5	4/8/2025			SW846-8260D	=
Benzene	U	1	ug/L	1	4/8/2025			SW846-8260D	=
Bromochloromethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
Bromodichloromethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
Bromoform	UY1	1	ug/L	1	4/8/2025			SW846-8260D	UJ
Bromomethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
Carbon disulfide	U	5	ug/L	5	4/8/2025			SW846-8260D	=
Carbon tetrachloride	U	1	ug/L	1	4/8/2025			SW846-8260D	=
Chlorobenzene	UY1Y2	1	ug/L	1	4/8/2025			SW846-8260D	UJ
Chloroethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=

Paducah OREIS
GROUNDWATER MONITORING REPORT

Facility: C-746-U Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045

Sampling Point: MW357 DOWN **RGA Type:** URGA **Period:** 2nd Quarter 2025

AKGWA Well Tag #: 8004-4798 **SAMPLE ID:** MW357UG3-25 Sample Type: REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
Chloroform	U	1	ug/L	1	4/8/2025			SW846-8260D	=
Chloromethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
cis-1,2-Dichloroethene	U	1	ug/L	1	4/8/2025			SW846-8260D	=
cis-1,3-Dichloropropene	U	1	ug/L	1	4/8/2025			SW846-8260D	=
Dibromochloromethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
Dibromomethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
Ethylbenzene	UY1Y2	1	ug/L	1	4/8/2025			SW846-8260D	UJ
Iodomethane	U	5	ug/L	5	4/8/2025			SW846-8260D	=
Methylene chloride	U	5	ug/L	5	4/8/2025			SW846-8260D	=
Styrene	UY1Y2	1	ug/L	1	4/8/2025			SW846-8260D	UJ
Tetrachloroethene	UY1Y2	1	ug/L	1	4/8/2025			SW846-8260D	UJ
Toluene	UY1Y2	1	ug/L	1	4/8/2025			SW846-8260D	UJ
Total Xylene	UY1Y2	3	ug/L	3	4/8/2025			SW846-8260D	UJ
trans-1,2-Dichloroethene	U	1	ug/L	1	4/8/2025			SW846-8260D	=
trans-1,3-Dichloropropene	U	1	ug/L	1	4/8/2025			SW846-8260D	=
trans-1,4-Dichloro-2-butene	U	5	ug/L	5	4/8/2025			SW846-8260D	=
Trichloroethene	Y1	1.96	ug/L	1	4/8/2025			SW846-8260D	J
Trichlorofluoromethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
Vinyl acetate	U	5	ug/L	5	4/8/2025			SW846-8260D	=
Vinyl chloride	U	1	ug/L	1	4/8/2025			SW846-8260D	=
Dissolved Solids		191	mg/L	10	4/8/2025			EPA-160.1	=
Chemical Oxygen Demand (COD)	U	20	mg/L	20	4/8/2025			EPA-410.4	=
Cyanide	UN	0.2	mg/L	0.2	4/8/2025			SW846-9012B	=
Total Organic Halides (TOX)	J	3.4	ug/L	10	4/8/2025			SW846-9020B	=
Total Organic Carbon (TOC)	J	0.432	mg/L	2	4/8/2025			SW846-9060A	=

Paducah OREIS
GROUNDWATER MONITORING REPORT

Facility: C-746-U Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045

Sampling Point: MW358 DOWN **RGA Type:** LRGA **Period:** 2nd Quarter 2025

AKGWA Well Tag #: 8004-4799 **SAMPLE ID:** MW358UG3-25 Sample Type: REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
Iodide	U	0.5	mg/L	0.5	4/8/2025			EPA-300.0	=
Bromide		0.401	mg/L	0.2	4/8/2025			SW846-9056A	=
Chloride	JW	35.6	mg/L	250	4/8/2025			SW846-9056A	=
Fluoride	J	0.163	mg/L	4	4/8/2025			SW846-9056A	=
Nitrate as Nitrogen	J	1.21	mg/L	10	4/8/2025			SW846-9056A	=
Sulfate		53.3	mg/L	1.6	4/8/2025			SW846-9056A	=
Barometric Pressure Reading		30.22	Inches/Hg		4/8/2025			FS	X
Conductivity		440	µmhos/cm		4/8/2025			FS	X
Depth to Water		42.77	ft		4/8/2025			FS	X
Dissolved Oxygen		3.5	mg/L		4/8/2025			FS	X
Eh (approx)		175	mV		4/8/2025			FS	X
pH		6.25	Std Unit		4/8/2025			FS	X
Temperature		59.1	deg F		4/8/2025			FS	X
Turbidity		7	NTU		4/8/2025			FS	X
Aluminum	U	0.05	mg/L	0.05	4/8/2025			SW846-6020B	=
Antimony	U	0.003	mg/L	0.003	4/8/2025			SW846-6020B	=
Arsenic	U	0.005	mg/L	0.005	4/8/2025			SW846-6020B	=
Barium		0.0489	mg/L	0.004	4/8/2025			SW846-6020B	=
Beryllium	U	0.0005	mg/L	0.0005	4/8/2025			SW846-6020B	=
Boron		0.479	mg/L	0.075	4/8/2025			SW846-6020B	=
Cadmium	U	0.001	mg/L	0.001	4/8/2025			SW846-6020B	=
Calcium		32.3	mg/L	0.2	4/8/2025			SW846-6020B	=
Chromium	U	0.01	mg/L	0.01	4/8/2025			SW846-6020B	=
Cobalt	J	0.000864	mg/L	0.001	4/8/2025			SW846-6020B	=
Copper	J	0.000754	mg/L	0.002	4/8/2025			SW846-6020B	=
Iron		0.4	mg/L	0.1	4/8/2025			SW846-6020B	=
Lead	U	0.002	mg/L	0.002	4/8/2025			SW846-6020B	=
Magnesium		14.1	mg/L	0.03	4/8/2025			SW846-6020B	=
Manganese	NW*	0.0881	mg/L	0.005	4/8/2025			SW846-6020B	=
Molybdenum	U	0.001	mg/L	0.001	4/8/2025			SW846-6020B	=
Nickel		0.00345	mg/L	0.002	4/8/2025			SW846-6020B	=
Potassium		2.27	mg/L	0.3	4/8/2025			SW846-6020B	=
Rhodium	U	0.005	mg/L	0.005	4/8/2025			SW846-6020B	=
Selenium	U	0.005	mg/L	0.005	4/8/2025			SW846-6020B	=
Silver	U	0.001	mg/L	0.001	4/8/2025			SW846-6020B	=
Sodium		41.6	mg/L	0.25	4/8/2025			SW846-6020B	=
Tantalum	U*	0.005	mg/L	0.005	4/8/2025			SW846-6020B	=
Thallium	U	0.002	mg/L	0.002	4/8/2025			SW846-6020B	=
Uranium	U	0.0002	mg/L	0.0002	4/8/2025			SW846-6020B	=
Vanadium	U	0.02	mg/L	0.02	4/8/2025			SW846-6020B	=
Zinc	J	0.00343	mg/L	0.02	4/8/2025			SW846-6020B	=
Mercury	U	0.0002	mg/L	0.0002	4/8/2025			SW846-7470A	=
Barium, Dissolved		0.0477	mg/L	0.004	4/8/2025			SW846-6020B	J
Chromium, Dissolved	U	0.01	mg/L	0.01	4/8/2025			SW846-6020B	UJ
Uranium, Dissolved	U	0.0002	mg/L	0.0002	4/8/2025			SW846-6020B	UJ
PCB-1016	U	0.102	ug/L	0.102	4/8/2025			SW846-8082A	UJ
PCB-1221	U	0.102	ug/L	0.102	4/8/2025			SW846-8082A	=

Paducah OREIS
GROUNDWATER MONITORING REPORT

Facility: C-746-U Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045

Sampling Point: MW358 DOWN **RGA Type:** LRGA **Period:** 2nd Quarter 2025

AKGWA Well Tag #: 8004-4799 **SAMPLE ID:** MW358UG3-25 Sample Type: REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
PCB-1232	U	0.102	ug/L	0.102	4/8/2025			SW846-8082A	=
PCB-1242	U	0.102	ug/L	0.102	4/8/2025			SW846-8082A	=
PCB-1248	U	0.102	ug/L	0.102	4/8/2025			SW846-8082A	=
PCB-1254	U	0.102	ug/L	0.102	4/8/2025			SW846-8082A	=
PCB-1260	U	0.102	ug/L	0.102	4/8/2025			SW846-8082A	UJ
PCB-1268	U	0.102	ug/L	0.102	4/8/2025			SW846-8082A	=
Polychlorinated biphenyl	U	0.102	ug/L	0.102	4/8/2025			SW846-8082A	UJ
Radium-226	U	0.435	pCi/L	0.592	4/8/2025	0.488	0.491	AN-1418	=
Radium-228		8.99	pCi/L	4.72	4/8/2025	3.34	4.18	EPA-904.0-M	=
Strontium-90	U	1.4	pCi/L	3.28	4/8/2025	1.92	1.93	EPA-905.0-M	=
Tritium	U	10.6	pCi/L	233	4/8/2025	131	131	EPA-906.0-M	=
Technetium-99		44.6	pCi/L	20.4	4/8/2025	12.9	13.9	HASL 300, Tc-02-RC M	=
Thorium-230	U	0.129	pCi/L	1.45	4/8/2025	0.72	0.722	HASL 300, Th-01-RC M	=
Thorium-232	U	-0.194	pCi/L	1.21	4/8/2025	0.399	0.399	HASL 300, Th-01-RC M	=
Alpha activity	U	2.55	pCi/L	6.96	4/8/2025	3.92	3.95	SW846-9310	=
Beta activity		40.4	pCi/L	12.2	4/8/2025	10.1	12.1	SW846-9310	=
1,2-Dibromo-3-chloropropane	U	0.0188	ug/L	0.0188	4/8/2025			SW846-8011	=
1,1,1,2-Tetrachloroethane	UY1	1	ug/L	1	4/8/2025			SW846-8260D	=
1,1,1-Trichloroethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
1,1,2,2-Tetrachloroethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
1,1,2-Trichloroethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
1,1-Dichloroethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
1,1-Dichloroethene	U	1	ug/L	1	4/8/2025			SW846-8260D	=
1,2,3-Trichloropropane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
1,2-Dibromoethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
1,2-Dichlorobenzene	UY1Y2	1	ug/L	1	4/8/2025			SW846-8260D	=
1,2-Dichloroethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
1,2-Dichloropropane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
1,4-Dichlorobenzene	UY1Y2	1	ug/L	1	4/8/2025			SW846-8260D	=
2-Butanone	U	5	ug/L	5	4/8/2025			SW846-8260D	=
2-Hexanone	U	5	ug/L	5	4/8/2025			SW846-8260D	=
4-Methyl-2-pentanone	U	5	ug/L	5	4/8/2025			SW846-8260D	=
Acetone	U	5	ug/L	5	4/8/2025			SW846-8260D	=
Acrolein	U	5	ug/L	5	4/8/2025			SW846-8260D	UJ
Acrylonitrile	U	5	ug/L	5	4/8/2025			SW846-8260D	=
Benzene	U	1	ug/L	1	4/8/2025			SW846-8260D	=
Bromochloromethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
Bromodichloromethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
Bromoform	UY1	1	ug/L	1	4/8/2025			SW846-8260D	=
Bromomethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
Carbon disulfide	U	5	ug/L	5	4/8/2025			SW846-8260D	=
Carbon tetrachloride	U	1	ug/L	1	4/8/2025			SW846-8260D	=
Chlorobenzene	UY1Y2	1	ug/L	1	4/8/2025			SW846-8260D	=
Chloroethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=

Paducah OREIS
GROUNDWATER MONITORING REPORT

Facility: C-746-U Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045

Sampling Point: MW358 DOWN **RGA Type:** LRGA **Period:** 2nd Quarter 2025

AKGWA Well Tag #: 8004-4799 **SAMPLE ID:** MW358UG3-25 Sample Type: REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
Chloroform	U	1	ug/L	1	4/8/2025			SW846-8260D	=
Chloromethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
cis-1,2-Dichloroethene	U	1	ug/L	1	4/8/2025			SW846-8260D	=
cis-1,3-Dichloropropene	U	1	ug/L	1	4/8/2025			SW846-8260D	=
Dibromochloromethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
Dibromomethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
Ethylbenzene	UY1Y2	1	ug/L	1	4/8/2025			SW846-8260D	=
Iodomethane	U	5	ug/L	5	4/8/2025			SW846-8260D	=
Methylene chloride	U	5	ug/L	5	4/8/2025			SW846-8260D	=
Styrene	UY1Y2	1	ug/L	1	4/8/2025			SW846-8260D	=
Tetrachloroethene	UY1Y2	1	ug/L	1	4/8/2025			SW846-8260D	=
Toluene	UY1Y2	1	ug/L	1	4/8/2025			SW846-8260D	=
Total Xylene	UY1Y2	3	ug/L	3	4/8/2025			SW846-8260D	=
trans-1,2-Dichloroethene	U	1	ug/L	1	4/8/2025			SW846-8260D	=
trans-1,3-Dichloropropene	U	1	ug/L	1	4/8/2025			SW846-8260D	=
trans-1,4-Dichloro-2-butene	U	5	ug/L	5	4/8/2025			SW846-8260D	=
Trichloroethene	Y1	1.22	ug/L	1	4/8/2025			SW846-8260D	=
Trichlorofluoromethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
Vinyl acetate	U	5	ug/L	5	4/8/2025			SW846-8260D	=
Vinyl chloride	U	1	ug/L	1	4/8/2025			SW846-8260D	=
Dissolved Solids		236	mg/L	10	4/8/2025			EPA-160.1	=
Chemical Oxygen Demand (COD)	U	20	mg/L	20	4/8/2025			EPA-410.4	=
Cyanide	JN	0.0559	mg/L	0.2	4/8/2025			SW846-9012B	=
Total Organic Halides (TOX)	U	10	ug/L	10	4/8/2025			SW846-9020B	=
Total Organic Carbon (TOC)	J	0.46	mg/L	2	4/8/2025			SW846-9060A	=

Paducah OREIS
GROUNDWATER MONITORING REPORT

Facility: C-746-U Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045

Sampling Point: MW359 DOWN **RGA Type:** UCRS **Period:** 2nd Quarter 2025

AKGWA Well Tag #: 8004-0981 **SAMPLE ID:** MW359UG3-25 Sample Type: REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
Iodide	U	0.5	mg/L	0.5	4/8/2025			EPA-300.0	=
Bromide	U	0.2	mg/L	0.2	4/8/2025			SW846-9056A	=
Chloride	JW	0.623	mg/L	250	4/8/2025			SW846-9056A	=
Fluoride	J	0.0786	mg/L	4	4/8/2025			SW846-9056A	=
Nitrate as Nitrogen	J	0.614	mg/L	10	4/8/2025			SW846-9056A	=
Sulfate		35.7	mg/L	1.6	4/8/2025			SW846-9056A	=
Barometric Pressure Reading		30.22	Inches/Hg		4/8/2025			FS	X
Conductivity		230	µmhos/cm		4/8/2025			FS	X
Depth to Water		26.12	ft		4/8/2025			FS	X
Dissolved Oxygen		4.81	mg/L		4/8/2025			FS	X
Eh (approx)		232	mV		4/8/2025			FS	X
pH		6.16	Std Unit		4/8/2025			FS	X
Temperature		59.4	deg F		4/8/2025			FS	X
Turbidity		5.43	NTU		4/8/2025			FS	X
Aluminum	J	0.0491	mg/L	0.05	4/8/2025			SW846-6020B	=
Antimony	U	0.003	mg/L	0.003	4/8/2025			SW846-6020B	=
Arsenic	U	0.005	mg/L	0.005	4/8/2025			SW846-6020B	=
Barium		0.0254	mg/L	0.004	4/8/2025			SW846-6020B	=
Beryllium	U	0.0005	mg/L	0.0005	4/8/2025			SW846-6020B	=
Boron	J	0.00619	mg/L	0.015	4/8/2025			SW846-6020B	U
Cadmium	U	0.001	mg/L	0.001	4/8/2025			SW846-6020B	=
Calcium		7.9	mg/L	0.2	4/8/2025			SW846-6020B	=
Chromium	U	0.01	mg/L	0.01	4/8/2025			SW846-6020B	=
Cobalt	U	0.001	mg/L	0.001	4/8/2025			SW846-6020B	=
Copper	J	0.000807	mg/L	0.002	4/8/2025			SW846-6020B	=
Iron	J	0.0588	mg/L	0.1	4/8/2025			SW846-6020B	=
Lead	U	0.002	mg/L	0.002	4/8/2025			SW846-6020B	=
Magnesium		3.37	mg/L	0.03	4/8/2025			SW846-6020B	=
Manganese	UNW*	0.005	mg/L	0.005	4/8/2025			SW846-6020B	=
Molybdenum	J	0.000229	mg/L	0.001	4/8/2025			SW846-6020B	=
Nickel	J	0.00149	mg/L	0.002	4/8/2025			SW846-6020B	=
Potassium	J	0.204	mg/L	0.3	4/8/2025			SW846-6020B	=
Rhodium	U	0.005	mg/L	0.005	4/8/2025			SW846-6020B	=
Selenium	U	0.005	mg/L	0.005	4/8/2025			SW846-6020B	=
Silver	U	0.001	mg/L	0.001	4/8/2025			SW846-6020B	=
Sodium		30.9	mg/L	0.25	4/8/2025			SW846-6020B	=
Tantalum	U*	0.005	mg/L	0.005	4/8/2025			SW846-6020B	=
Thallium	U	0.002	mg/L	0.002	4/8/2025			SW846-6020B	=
Uranium	J	0.00008	mg/L	0.0002	4/8/2025			SW846-6020B	=
Vanadium	U	0.02	mg/L	0.02	4/8/2025			SW846-6020B	=
Zinc	U	0.02	mg/L	0.02	4/8/2025			SW846-6020B	=
Mercury	U	0.0002	mg/L	0.0002	4/8/2025			SW846-7470A	=
Barium, Dissolved		0.0248	mg/L	0.004	4/8/2025			SW846-6020B	J
Chromium, Dissolved	U	0.01	mg/L	0.01	4/8/2025			SW846-6020B	UJ
Uranium, Dissolved	U	0.0002	mg/L	0.0002	4/8/2025			SW846-6020B	UJ
PCB-1016	U	0.1	ug/L	0.1	4/8/2025			SW846-8082A	=
PCB-1221	U	0.1	ug/L	0.1	4/8/2025			SW846-8082A	=

Paducah OREIS
GROUNDWATER MONITORING REPORT

Facility: C-746-U Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045

Sampling Point: MW359 DOWN **RGA Type:** UCRS **Period:** 2nd Quarter 2025

AKGWA Well Tag #: 8004-0981 **SAMPLE ID:** MW359UG3-25 Sample Type: REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
PCB-1232	U	0.1	ug/L	0.1	4/8/2025			SW846-8082A	=
PCB-1242	U	0.1	ug/L	0.1	4/8/2025			SW846-8082A	=
PCB-1248	U	0.1	ug/L	0.1	4/8/2025			SW846-8082A	=
PCB-1254	U	0.1	ug/L	0.1	4/8/2025			SW846-8082A	=
PCB-1260	U	0.1	ug/L	0.1	4/8/2025			SW846-8082A	UJ
PCB-1268	U	0.1	ug/L	0.1	4/8/2025			SW846-8082A	=
Polychlorinated biphenyl	U	0.1	ug/L	0.1	4/8/2025			SW846-8082A	UJ
Radium-226	U	0.398	pCi/L	0.46	4/8/2025	0.397	0.4	AN-1418	=
Radium-228		6.24	pCi/L	4.51	4/8/2025	3.05	3.51	EPA-904.0-M	=
Strontium-90	U	-0.177	pCi/L	6.12	4/8/2025	3.3	3.3	EPA-905.0-M	=
Tritium	U	87.9	pCi/L	232	4/8/2025	136	137	EPA-906.0-M	=
Technetium-99	U	-11.5	pCi/L	20.9	4/8/2025	11.9	11.9	HASL 300, Tc-02-RC M	=
Thorium-230	U	1.02	pCi/L	1.55	4/8/2025	1.06	1.08	HASL 300, Th-01-RC M	=
Thorium-232	U	-0.136	pCi/L	1.01	4/8/2025	0.348	0.348	HASL 300, Th-01-RC M	=
Alpha activity	U	0.563	pCi/L	9.4	4/8/2025	4.65	4.65	SW846-9310	=
Beta activity	U	-0.586	pCi/L	11.4	4/8/2025	6.09	6.09	SW846-9310	=
1,2-Dibromo-3-chloropropane	U	0.0191	ug/L	0.0191	4/8/2025			SW846-8011	=
1,1,1,2-Tetrachloroethane	UY1	1	ug/L	1	4/8/2025			SW846-8260D	=
1,1,1-Trichloroethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
1,1,2,2-Tetrachloroethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
1,1,2-Trichloroethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
1,1-Dichloroethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
1,1-Dichloroethene	U	1	ug/L	1	4/8/2025			SW846-8260D	=
1,2,3-Trichloropropane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
1,2-Dibromoethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
1,2-Dichlorobenzene	UY1Y2	1	ug/L	1	4/8/2025			SW846-8260D	=
1,2-Dichloroethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
1,2-Dichloropropane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
1,4-Dichlorobenzene	UY1Y2	1	ug/L	1	4/8/2025			SW846-8260D	=
2-Butanone	U	5	ug/L	5	4/8/2025			SW846-8260D	=
2-Hexanone	U	5	ug/L	5	4/8/2025			SW846-8260D	=
4-Methyl-2-pentanone	U	5	ug/L	5	4/8/2025			SW846-8260D	=
Acetone	U	5	ug/L	5	4/8/2025			SW846-8260D	=
Acrolein	U	5	ug/L	5	4/8/2025			SW846-8260D	UJ
Acrylonitrile	U	5	ug/L	5	4/8/2025			SW846-8260D	=
Benzene	U	1	ug/L	1	4/8/2025			SW846-8260D	=
Bromochloromethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
Bromodichloromethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
Bromoform	UY1	1	ug/L	1	4/8/2025			SW846-8260D	=
Bromomethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
Carbon disulfide	U	5	ug/L	5	4/8/2025			SW846-8260D	=
Carbon tetrachloride	U	1	ug/L	1	4/8/2025			SW846-8260D	=
Chlorobenzene	UY1Y2	1	ug/L	1	4/8/2025			SW846-8260D	=
Chloroethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=

Paducah OREIS
GROUNDWATER MONITORING REPORT

Facility: C-746-U Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045

Sampling Point: MW359 DOWN **RGA Type:** UCRS **Period:** 2nd Quarter 2025

AKGWA Well Tag #: 8004-0981 **SAMPLE ID:** MW359UG3-25 Sample Type: REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
Chloroform	U	1	ug/L	1	4/8/2025			SW846-8260D	=
Chloromethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
cis-1,2-Dichloroethene	U	1	ug/L	1	4/8/2025			SW846-8260D	=
cis-1,3-Dichloropropene	U	1	ug/L	1	4/8/2025			SW846-8260D	=
Dibromochloromethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
Dibromomethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
Ethylbenzene	UY1Y2	1	ug/L	1	4/8/2025			SW846-8260D	=
Iodomethane	U	5	ug/L	5	4/8/2025			SW846-8260D	=
Methylene chloride	U	5	ug/L	5	4/8/2025			SW846-8260D	=
Styrene	UY1Y2	1	ug/L	1	4/8/2025			SW846-8260D	=
Tetrachloroethene	UY1Y2	1	ug/L	1	4/8/2025			SW846-8260D	=
Toluene	UY1Y2	1	ug/L	1	4/8/2025			SW846-8260D	=
Total Xylene	UY1Y2	3	ug/L	3	4/8/2025			SW846-8260D	=
trans-1,2-Dichloroethene	U	1	ug/L	1	4/8/2025			SW846-8260D	=
trans-1,3-Dichloropropene	U	1	ug/L	1	4/8/2025			SW846-8260D	=
trans-1,4-Dichloro-2-butene	U	5	ug/L	5	4/8/2025			SW846-8260D	=
Trichloroethene	UY1	1	ug/L	1	4/8/2025			SW846-8260D	=
Trichlorofluoromethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
Vinyl acetate	U	5	ug/L	5	4/8/2025			SW846-8260D	=
Vinyl chloride	U	1	ug/L	1	4/8/2025			SW846-8260D	=
Dissolved Solids	*	135	mg/L	10	4/8/2025			EPA-160.1	J
Chemical Oxygen Demand (COD)	U	20	mg/L	20	4/8/2025			EPA-410.4	=
Cyanide	JN	0.00467	mg/L	0.2	4/8/2025			SW846-9012B	=
Total Organic Halides (TOX)	J	4.74	ug/L	10	4/8/2025			SW846-9020B	=
Total Organic Carbon (TOC)	J	0.649	mg/L	2	4/8/2025			SW846-9060A	=

Paducah OREIS
GROUNDWATER MONITORING REPORT

Facility: C-746-U Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045

Sampling Point: MW360 DOWN **RGA Type:** URGA **Period:** 2nd Quarter 2025

AKGWA Well Tag #: 8004-4800 **SAMPLE ID:** MW360UG3-25 Sample Type: REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
Iodide	U	0.5	mg/L	0.5	4/8/2025			EPA-300.0	=
Bromide	J	0.128	mg/L	0.2	4/8/2025			SW846-9056A	=
Chloride	JW	5.32	mg/L	250	4/8/2025			SW846-9056A	=
Fluoride	J	0.233	mg/L	4	4/8/2025			SW846-9056A	=
Nitrate as Nitrogen	J	0.687	mg/L	10	4/8/2025			SW846-9056A	=
Sulfate		9.51	mg/L	1.6	4/8/2025			SW846-9056A	=
Barometric Pressure Reading		30.15	Inches/Hg		4/8/2025			FS	X
Conductivity		401	µmhos/cm		4/8/2025			FS	X
Depth to Water		36	ft		4/8/2025			FS	X
Dissolved Oxygen		2.66	mg/L		4/8/2025			FS	X
Eh (approx)		503	mV		4/8/2025			FS	X
pH		6.1	Std Unit		4/8/2025			FS	X
Temperature		53.1	deg F		4/8/2025			FS	X
Turbidity		7.1	NTU		4/8/2025			FS	X
Aluminum	J	0.0208	mg/L	0.05	4/8/2025			SW846-6020B	=
Antimony	U	0.003	mg/L	0.003	4/8/2025			SW846-6020B	=
Arsenic	U	0.005	mg/L	0.005	4/8/2025			SW846-6020B	=
Barium		0.202	mg/L	0.004	4/8/2025			SW846-6020B	=
Beryllium	U	0.0005	mg/L	0.0005	4/8/2025			SW846-6020B	=
Boron		0.0189	mg/L	0.015	4/8/2025			SW846-6020B	J
Cadmium	U	0.001	mg/L	0.001	4/8/2025			SW846-6020B	=
Calcium		20	mg/L	0.2	4/8/2025			SW846-6020B	=
Chromium	U	0.01	mg/L	0.01	4/8/2025			SW846-6020B	=
Cobalt		0.00151	mg/L	0.001	4/8/2025			SW846-6020B	=
Copper	J	0.00146	mg/L	0.002	4/8/2025			SW846-6020B	=
Iron	J	0.0959	mg/L	0.1	4/8/2025			SW846-6020B	=
Lead	U	0.002	mg/L	0.002	4/8/2025			SW846-6020B	=
Magnesium		8.23	mg/L	0.03	4/8/2025			SW846-6020B	=
Manganese	NW*	0.0204	mg/L	0.005	4/8/2025			SW846-6020B	=
Molybdenum	J	0.000214	mg/L	0.001	4/8/2025			SW846-6020B	=
Nickel	J	0.00164	mg/L	0.002	4/8/2025			SW846-6020B	=
Potassium		0.709	mg/L	0.3	4/8/2025			SW846-6020B	=
Rhodium	U	0.005	mg/L	0.005	4/8/2025			SW846-6020B	=
Selenium	U	0.005	mg/L	0.005	4/8/2025			SW846-6020B	=
Silver	U	0.001	mg/L	0.001	4/8/2025			SW846-6020B	=
Sodium		64.7	mg/L	1.25	4/8/2025			SW846-6020B	=
Tantalum	U*	0.005	mg/L	0.005	4/8/2025			SW846-6020B	=
Thallium	U	0.002	mg/L	0.002	4/8/2025			SW846-6020B	=
Uranium	J	0.000095	mg/L	0.0002	4/8/2025			SW846-6020B	=
Vanadium	U	0.02	mg/L	0.02	4/8/2025			SW846-6020B	=
Zinc	J	0.00431	mg/L	0.02	4/8/2025			SW846-6020B	=
Mercury	U	0.0002	mg/L	0.0002	4/8/2025			SW846-7470A	=
Barium, Dissolved		0.201	mg/L	0.004	4/8/2025			SW846-6020B	J
Chromium, Dissolved	U	0.01	mg/L	0.01	4/8/2025			SW846-6020B	UJ
Uranium, Dissolved	J	0.000091	mg/L	0.0002	4/8/2025			SW846-6020B	J
PCB-1016	U	0.101	ug/L	0.101	4/8/2025			SW846-8082A	=
PCB-1221	U	0.101	ug/L	0.101	4/8/2025			SW846-8082A	=

Paducah OREIS
GROUNDWATER MONITORING REPORT

Facility: C-746-U Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045

Sampling Point: MW360 DOWN **RGA Type:** URGA **Period:** 2nd Quarter 2025

AKGWA Well Tag #: 8004-4800 **SAMPLE ID:** MW360UG3-25 Sample Type: REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
PCB-1232	U	0.101	ug/L	0.101	4/8/2025			SW846-8082A	=
PCB-1242	U	0.101	ug/L	0.101	4/8/2025			SW846-8082A	=
PCB-1248	U	0.101	ug/L	0.101	4/8/2025			SW846-8082A	=
PCB-1254	U	0.101	ug/L	0.101	4/8/2025			SW846-8082A	=
PCB-1260	U	0.101	ug/L	0.101	4/8/2025			SW846-8082A	UJ
PCB-1268	U	0.101	ug/L	0.101	4/8/2025			SW846-8082A	=
Polychlorinated biphenyl	U	0.101	ug/L	0.101	4/8/2025			SW846-8082A	UJ
Radium-226	U	0.128	pCi/L	0.584	4/8/2025	0.322	0.323	AN-1418	=
Radium-228	U	3.24	pCi/L	4.77	4/8/2025	2.9	3.04	EPA-904.0-M	=
Strontium-90	U	-0.765	pCi/L	3.97	4/8/2025	1.92	1.92	EPA-905.0-M	=
Tritium	U	55.4	pCi/L	228	4/8/2025	131	132	EPA-906.0-M	=
Technetium-99	U	-3.56	pCi/L	20.5	4/8/2025	11.8	11.8	HASL 300, Tc-02-RC M	=
Thorium-230	U	0.0826	pCi/L	1.65	4/8/2025	0.794	0.796	HASL 300, Th-01-RC M	=
Thorium-232	U	-0.104	pCi/L	1	4/8/2025	0.367	0.368	HASL 300, Th-01-RC M	=
Alpha activity	U	-0.605	pCi/L	10.9	4/8/2025	5.14	5.14	SW846-9310	=
Beta activity	U	4.57	pCi/L	11.5	4/8/2025	6.7	6.75	SW846-9310	=
1,2-Dibromo-3-chloropropane	U	0.0187	ug/L	0.0187	4/8/2025			SW846-8011	=
1,1,1,2-Tetrachloroethane	UY1	1	ug/L	1	4/8/2025			SW846-8260D	=
1,1,1-Trichloroethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
1,1,2,2-Tetrachloroethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
1,1,2-Trichloroethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
1,1-Dichloroethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
1,1-Dichloroethene	U	1	ug/L	1	4/8/2025			SW846-8260D	=
1,2,3-Trichloropropane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
1,2-Dibromoethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
1,2-Dichlorobenzene	UY1Y2	1	ug/L	1	4/8/2025			SW846-8260D	=
1,2-Dichloroethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
1,2-Dichloropropane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
1,4-Dichlorobenzene	UY1Y2	1	ug/L	1	4/8/2025			SW846-8260D	=
2-Butanone	U	5	ug/L	5	4/8/2025			SW846-8260D	=
2-Hexanone	U	5	ug/L	5	4/8/2025			SW846-8260D	=
4-Methyl-2-pentanone	U	5	ug/L	5	4/8/2025			SW846-8260D	=
Acetone	U	5	ug/L	5	4/8/2025			SW846-8260D	=
Acrolein	U	5	ug/L	5	4/8/2025			SW846-8260D	UJ
Acrylonitrile	U	5	ug/L	5	4/8/2025			SW846-8260D	=
Benzene	U	1	ug/L	1	4/8/2025			SW846-8260D	=
Bromochloromethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
Bromodichloromethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
Bromoform	UY1	1	ug/L	1	4/8/2025			SW846-8260D	=
Bromomethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
Carbon disulfide	U	5	ug/L	5	4/8/2025			SW846-8260D	=
Carbon tetrachloride	U	1	ug/L	1	4/8/2025			SW846-8260D	=
Chlorobenzene	UY1Y2	1	ug/L	1	4/8/2025			SW846-8260D	=
Chloroethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=

Paducah OREIS
GROUNDWATER MONITORING REPORT

Facility: C-746-U Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045

Sampling Point: MW360 DOWN **RGA Type:** URGA **Period:** 2nd Quarter 2025

AKGWA Well Tag #: 8004-4800 **SAMPLE ID:** MW360UG3-25 Sample Type: REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
Chloroform	U	1	ug/L	1	4/8/2025			SW846-8260D	=
Chloromethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
cis-1,2-Dichloroethene	U	1	ug/L	1	4/8/2025			SW846-8260D	=
cis-1,3-Dichloropropene	U	1	ug/L	1	4/8/2025			SW846-8260D	=
Dibromochloromethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
Dibromomethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
Ethylbenzene	UY1Y2	1	ug/L	1	4/8/2025			SW846-8260D	=
Iodomethane	U	5	ug/L	5	4/8/2025			SW846-8260D	=
Methylene chloride	U	5	ug/L	5	4/8/2025			SW846-8260D	=
Styrene	UY1Y2	1	ug/L	1	4/8/2025			SW846-8260D	=
Tetrachloroethene	UY1Y2	1	ug/L	1	4/8/2025			SW846-8260D	=
Toluene	UY1Y2	1	ug/L	1	4/8/2025			SW846-8260D	=
Total Xylene	UY1Y2	3	ug/L	3	4/8/2025			SW846-8260D	=
trans-1,2-Dichloroethene	U	1	ug/L	1	4/8/2025			SW846-8260D	=
trans-1,3-Dichloropropene	U	1	ug/L	1	4/8/2025			SW846-8260D	=
trans-1,4-Dichloro-2-butene	U	5	ug/L	5	4/8/2025			SW846-8260D	=
Trichloroethene	JY1	0.74	ug/L	1	4/8/2025			SW846-8260D	=
Trichlorofluoromethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
Vinyl acetate	U	5	ug/L	5	4/8/2025			SW846-8260D	=
Vinyl chloride	U	1	ug/L	1	4/8/2025			SW846-8260D	=
Dissolved Solids		198	mg/L	10	4/8/2025			EPA-160.1	=
Chemical Oxygen Demand (COD)	U	20	mg/L	20	4/8/2025			EPA-410.4	=
Cyanide	JN	0.00241	mg/L	0.2	4/8/2025			SW846-9012B	=
Total Organic Halides (TOX)	J	4.5	ug/L	10	4/8/2025			SW846-9020B	J
Total Organic Carbon (TOC)	J	0.726	mg/L	2	4/8/2025			SW846-9060A	=

Paducah OREIS
GROUNDWATER MONITORING REPORT

Facility: C-746-U Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045

Sampling Point: MW361 DOWN **RGA Type:** LRGA **Period:** 2nd Quarter 2025

AKGWA Well Tag #: 8004-4795 **SAMPLE ID:** MW361DUG3-25 Sample Type: FR

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
Iodide	U	0.5	mg/L	0.5	4/8/2025			EPA-300.0	=
Bromide		0.397	mg/L	0.2	4/8/2025			SW846-9056A	=
Chloride	JW	33.3	mg/L	250	4/8/2025			SW846-9056A	=
Fluoride	J	0.15	mg/L	4	4/8/2025			SW846-9056A	=
Nitrate as Nitrogen	J	1.01	mg/L	10	4/8/2025			SW846-9056A	=
Sulfate		49.8	mg/L	2	4/8/2025			SW846-9056A	=
Aluminum	U	0.05	mg/L	0.05	4/8/2025			SW846-6020B	=
Antimony	U	0.003	mg/L	0.003	4/8/2025			SW846-6020B	=
Arsenic	U	0.005	mg/L	0.005	4/8/2025			SW846-6020B	=
Barium		0.0595	mg/L	0.004	4/8/2025			SW846-6020B	=
Beryllium	U	0.0005	mg/L	0.0005	4/8/2025			SW846-6020B	=
Boron		0.436	mg/L	0.075	4/8/2025			SW846-6020B	=
Cadmium	U	0.001	mg/L	0.001	4/8/2025			SW846-6020B	=
Calcium		29.7	mg/L	0.2	4/8/2025			SW846-6020B	=
Chromium	U	0.01	mg/L	0.01	4/8/2025			SW846-6020B	=
Cobalt	U	0.001	mg/L	0.001	4/8/2025			SW846-6020B	=
Copper	J	0.00108	mg/L	0.002	4/8/2025			SW846-6020B	=
Iron	J	0.0567	mg/L	0.1	4/8/2025			SW846-6020B	=
Lead	U	0.002	mg/L	0.002	4/8/2025			SW846-6020B	=
Magnesium		12.7	mg/L	0.03	4/8/2025			SW846-6020B	=
Manganese	NW*	0.0206	mg/L	0.005	4/8/2025			SW846-6020B	=
Molybdenum	U	0.001	mg/L	0.001	4/8/2025			SW846-6020B	=
Nickel	U	0.002	mg/L	0.002	4/8/2025			SW846-6020B	=
Potassium		1.85	mg/L	0.3	4/8/2025			SW846-6020B	=
Rhodium	U	0.005	mg/L	0.005	4/8/2025			SW846-6020B	=
Selenium	U	0.005	mg/L	0.005	4/8/2025			SW846-6020B	=
Silver	U	0.001	mg/L	0.001	4/8/2025			SW846-6020B	=
Sodium		41.6	mg/L	0.25	4/8/2025			SW846-6020B	=
Tantalum	U*	0.005	mg/L	0.005	4/8/2025			SW846-6020B	=
Thallium	U	0.002	mg/L	0.002	4/8/2025			SW846-6020B	=
Uranium	U	0.0002	mg/L	0.0002	4/8/2025			SW846-6020B	=
Vanadium	U	0.02	mg/L	0.02	4/8/2025			SW846-6020B	=
Zinc	J	0.00332	mg/L	0.02	4/8/2025			SW846-6020B	=
Mercury	U	0.0002	mg/L	0.0002	4/8/2025			SW846-7470A	=
Barium, Dissolved		0.0575	mg/L	0.004	4/8/2025			SW846-6020B	J
Chromium, Dissolved	U	0.01	mg/L	0.01	4/8/2025			SW846-6020B	UJ
Uranium, Dissolved	U	0.0002	mg/L	0.0002	4/8/2025			SW846-6020B	UJ
PCB-1016	US	0.0958	ug/L	0.0958	4/8/2025			SW846-8082A	=
PCB-1221	US	0.0958	ug/L	0.0958	4/8/2025			SW846-8082A	=
PCB-1232	US	0.0958	ug/L	0.0958	4/8/2025			SW846-8082A	=
PCB-1242	US	0.0958	ug/L	0.0958	4/8/2025			SW846-8082A	=
PCB-1248	US	0.0958	ug/L	0.0958	4/8/2025			SW846-8082A	=
PCB-1254	JS	0.0411	ug/L	0.0958	4/8/2025			SW846-8082A	J
PCB-1260	US	0.0958	ug/L	0.0958	4/8/2025			SW846-8082A	UJ
PCB-1268	US	0.0958	ug/L	0.0958	4/8/2025			SW846-8082A	=
Polychlorinated biphenyl	JS	0.0411	ug/L	0.0958	4/8/2025			SW846-8082A	J
Radium-226	U	0.348	pCi/L	0.508	4/8/2025	0.385	0.388	AN-1418	=

Paducah OREIS
GROUNDWATER MONITORING REPORT

Facility: C-746-U Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045

Sampling Point: MW361 DOWN **RGA Type:** LRGA **Period:** 2nd Quarter 2025

AKGWA Well Tag #: 8004-4795 **SAMPLE ID:** MW361DUG3-25 Sample Type: FR

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
Radium-228	U	1.76	pCi/L	4.81	4/8/2025	2.8	2.84	EPA-904.0-M	=
Strontium-90	U	-1.1	pCi/L	5.93	4/8/2025	3.05	3.05	EPA-905.0-M	=
Tritium	U	67.3	pCi/L	231	4/8/2025	134	135	EPA-906.0-M	=
Technetium-99		43	pCi/L	21.1	4/8/2025	13.3	14.2	HASL 300, Tc-02-RC M	=
Thorium-230	U	0.613	pCi/L	2.28	4/8/2025	1.3	1.31	HASL 300, Th-01-RC M	=
Thorium-232	U	0.24	pCi/L	1.03	4/8/2025	0.735	0.736	HASL 300, Th-01-RC M	=
Alpha activity	U	0.367	pCi/L	9.06	4/8/2025	4.4	4.4	SW846-9310	=
Beta activity		27.2	pCi/L	12.3	4/8/2025	9.14	10.2	SW846-9310	=
1,2-Dibromo-3-chloropropane	U	0.0187	ug/L	0.0187	4/8/2025			SW846-8011	=
1,1,1,2-Tetrachloroethane	UY1	1	ug/L	1	4/8/2025			SW846-8260D	=
1,1,1-Trichloroethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
1,1,2,2-Tetrachloroethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
1,1,2-Trichloroethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
1,1-Dichloroethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
1,1-Dichloroethene	U	1	ug/L	1	4/8/2025			SW846-8260D	=
1,2,3-Trichloropropane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
1,2-Dibromoethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
1,2-Dichlorobenzene	UY1Y2	1	ug/L	1	4/8/2025			SW846-8260D	=
1,2-Dichloroethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
1,2-Dichloropropane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
1,4-Dichlorobenzene	UY1Y2	1	ug/L	1	4/8/2025			SW846-8260D	=
2-Butanone	U	5	ug/L	5	4/8/2025			SW846-8260D	=
2-Hexanone	U	5	ug/L	5	4/8/2025			SW846-8260D	=
4-Methyl-2-pentanone	U	5	ug/L	5	4/8/2025			SW846-8260D	=
Acetone	U	5	ug/L	5	4/8/2025			SW846-8260D	=
Acrolein	U	5	ug/L	5	4/8/2025			SW846-8260D	UJ
Acrylonitrile	U	5	ug/L	5	4/8/2025			SW846-8260D	=
Benzene	U	1	ug/L	1	4/8/2025			SW846-8260D	=
Bromochloromethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
Bromodichloromethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
Bromoform	UY1	1	ug/L	1	4/8/2025			SW846-8260D	=
Bromomethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
Carbon disulfide	U	5	ug/L	5	4/8/2025			SW846-8260D	=
Carbon tetrachloride	U	1	ug/L	1	4/8/2025			SW846-8260D	=
Chlorobenzene	UY1Y2	1	ug/L	1	4/8/2025			SW846-8260D	=
Chloroethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
Chloroform	U	1	ug/L	1	4/8/2025			SW846-8260D	=
Chloromethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
cis-1,2-Dichloroethene	U	1	ug/L	1	4/8/2025			SW846-8260D	=
cis-1,3-Dichloropropene	U	1	ug/L	1	4/8/2025			SW846-8260D	=
Dibromochloromethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
Dibromomethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
Ethylbenzene	UY1Y2	1	ug/L	1	4/8/2025			SW846-8260D	=
Iodomethane	U	5	ug/L	5	4/8/2025			SW846-8260D	=

Paducah OREIS
GROUNDWATER MONITORING REPORT

Facility: C-746-U Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045

Sampling Point: MW361 DOWN **RGA Type:** LRGA **Period:** 2nd Quarter 2025

AKGWA Well Tag #: 8004-4795 **SAMPLE ID:** MW361DUG3-25 Sample Type: FR

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
Methylene chloride	U	5	ug/L	5	4/8/2025			SW846-8260D	=
Styrene	UY1Y2	1	ug/L	1	4/8/2025			SW846-8260D	=
Tetrachloroethene	UY1Y2	1	ug/L	1	4/8/2025			SW846-8260D	=
Toluene	UY1Y2	1	ug/L	1	4/8/2025			SW846-8260D	=
Total Xylene	UY1Y2	3	ug/L	3	4/8/2025			SW846-8260D	=
trans-1,2-Dichloroethene	U	1	ug/L	1	4/8/2025			SW846-8260D	=
trans-1,3-Dichloropropene	U	1	ug/L	1	4/8/2025			SW846-8260D	=
trans-1,4-Dichloro-2-butene	U	5	ug/L	5	4/8/2025			SW846-8260D	=
Trichloroethene	Y1	1.22	ug/L	1	4/8/2025			SW846-8260D	=
Trichlorofluoromethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
Vinyl acetate	U	5	ug/L	5	4/8/2025			SW846-8260D	=
Vinyl chloride	U	1	ug/L	1	4/8/2025			SW846-8260D	=
Dissolved Solids		207	mg/L	10	4/8/2025			EPA-160.1	=
Chemical Oxygen Demand (COD)	U	20	mg/L	20	4/8/2025			EPA-410.4	=
Cyanide	JN	0.00666	mg/L	0.2	4/8/2025			SW846-9012B	=
Total Organic Halides (TOX)	J	3.78	ug/L	10	4/8/2025			SW846-9020B	=
Total Organic Carbon (TOC)	J	0.454	mg/L	2	4/8/2025			SW846-9060A	=

Paducah OREIS
GROUNDWATER MONITORING REPORT

Facility: C-746-U Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045

Sampling Point: MW361 DOWN **RGA Type:** LRGA **Period:** 2nd Quarter 2025

AKGWA Well Tag #: 8004-4795 **SAMPLE ID:** MW361UG3-25 Sample Type: REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
Iodide	U	0.5	mg/L	0.5	4/8/2025			EPA-300.0	=
Bromide		0.466	mg/L	0.2	4/8/2025			SW846-9056A	=
Chloride	JW	33.7	mg/L	250	4/8/2025			SW846-9056A	=
Fluoride	J	0.149	mg/L	4	4/8/2025			SW846-9056A	=
Nitrate as Nitrogen	J	1.09	mg/L	10	4/8/2025			SW846-9056A	=
Sulfate		50.5	mg/L	2	4/8/2025			SW846-9056A	=
Barometric Pressure Reading		30.18	Inches/Hg		4/8/2025			FS	X
Conductivity		429	µmhos/cm		4/8/2025			FS	X
Depth to Water		35.24	ft		4/8/2025			FS	X
Dissolved Oxygen		4.25	mg/L		4/8/2025			FS	X
Eh (approx)		507	mV		4/8/2025			FS	X
pH		6.11	Std Unit		4/8/2025			FS	X
Temperature		53.9	deg F		4/8/2025			FS	X
Turbidity		6.36	NTU		4/8/2025			FS	X
Aluminum	U	0.05	mg/L	0.05	4/8/2025			SW846-6020B	=
Antimony	U	0.003	mg/L	0.003	4/8/2025			SW846-6020B	=
Arsenic	U	0.005	mg/L	0.005	4/8/2025			SW846-6020B	=
Barium		0.0584	mg/L	0.004	4/8/2025			SW846-6020B	=
Beryllium	U	0.0005	mg/L	0.0005	4/8/2025			SW846-6020B	=
Boron		0.433	mg/L	0.075	4/8/2025			SW846-6020B	=
Cadmium	U	0.001	mg/L	0.001	4/8/2025			SW846-6020B	=
Calcium		29.6	mg/L	0.2	4/8/2025			SW846-6020B	=
Chromium	U	0.01	mg/L	0.01	4/8/2025			SW846-6020B	=
Cobalt	U	0.001	mg/L	0.001	4/8/2025			SW846-6020B	=
Copper		0.015	mg/L	0.002	4/8/2025			SW846-6020B	=
Iron	J	0.0679	mg/L	0.1	4/8/2025			SW846-6020B	=
Lead	U	0.002	mg/L	0.002	4/8/2025			SW846-6020B	=
Magnesium		12.7	mg/L	0.03	4/8/2025			SW846-6020B	=
Manganese	NW*	0.0212	mg/L	0.005	4/8/2025			SW846-6020B	=
Molybdenum	U	0.001	mg/L	0.001	4/8/2025			SW846-6020B	=
Nickel	U	0.002	mg/L	0.002	4/8/2025			SW846-6020B	=
Potassium		1.85	mg/L	0.3	4/8/2025			SW846-6020B	=
Rhodium	U	0.005	mg/L	0.005	4/8/2025			SW846-6020B	=
Selenium	U	0.005	mg/L	0.005	4/8/2025			SW846-6020B	=
Silver	U	0.001	mg/L	0.001	4/8/2025			SW846-6020B	=
Sodium		41.6	mg/L	0.25	4/8/2025			SW846-6020B	=
Tantalum	U*	0.005	mg/L	0.005	4/8/2025			SW846-6020B	=
Thallium	U	0.002	mg/L	0.002	4/8/2025			SW846-6020B	=
Uranium	U	0.0002	mg/L	0.0002	4/8/2025			SW846-6020B	=
Vanadium	U	0.02	mg/L	0.02	4/8/2025			SW846-6020B	=
Zinc	J	0.0113	mg/L	0.02	4/8/2025			SW846-6020B	=
Mercury	U	0.0002	mg/L	0.0002	4/8/2025			SW846-7470A	=
Barium, Dissolved		0.0579	mg/L	0.004	4/8/2025			SW846-6020B	J
Chromium, Dissolved	U	0.01	mg/L	0.01	4/8/2025			SW846-6020B	UJ
Uranium, Dissolved	U	0.0002	mg/L	0.0002	4/8/2025			SW846-6020B	UJ
PCB-1016	U	0.0997	ug/L	0.0997	4/8/2025			SW846-8082A	=
PCB-1221	U	0.0997	ug/L	0.0997	4/8/2025			SW846-8082A	=

Paducah OREIS
GROUNDWATER MONITORING REPORT

Facility: C-746-U Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045

Sampling Point: MW361 DOWN **RGA Type:** LRGA **Period:** 2nd Quarter 2025

AKGWA Well Tag #: 8004-4795 **SAMPLE ID:** MW361UG3-25 Sample Type: REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
PCB-1232	U	0.0997	ug/L	0.0997	4/8/2025			SW846-8082A	=
PCB-1242	U	0.0997	ug/L	0.0997	4/8/2025			SW846-8082A	=
PCB-1248	U	0.0997	ug/L	0.0997	4/8/2025			SW846-8082A	=
PCB-1254	U	0.0997	ug/L	0.0997	4/8/2025			SW846-8082A	=
PCB-1260	U	0.0997	ug/L	0.0997	4/8/2025			SW846-8082A	UJ
PCB-1268	U	0.0997	ug/L	0.0997	4/8/2025			SW846-8082A	=
Polychlorinated biphenyl	U	0.0997	ug/L	0.0997	4/8/2025			SW846-8082A	UJ
Radium-226	U	0.425	pCi/L	0.61	4/8/2025	0.441	0.444	AN-1418	=
Radium-228	U	2.77	pCi/L	4.34	4/8/2025	2.65	2.76	EPA-904.0-M	=
Strontium-90	U	0.188	pCi/L	4.4	4/8/2025	2.31	2.31	EPA-905.0-M	=
Tritium	U	-12.3	pCi/L	227	4/8/2025	126	126	EPA-906.0-M	=
Technetium-99		47.7	pCi/L	21.5	4/8/2025	13.7	14.7	HASL 300, Tc-02-RC M	=
Thorium-230	U	-0.0766	pCi/L	1.91	4/8/2025	0.821	0.822	HASL 300, Th-01-RC M	=
Thorium-232	U	-0.0764	pCi/L	1.16	4/8/2025	0.477	0.478	HASL 300, Th-01-RC M	=
Alpha activity	U	-1.56	pCi/L	8.84	4/8/2025	3.59	3.59	SW846-9310	=
Beta activity		31.4	pCi/L	13.4	4/8/2025	10	11.3	SW846-9310	=
1,2-Dibromo-3-chloropropane	U	0.0188	ug/L	0.0188	4/8/2025			SW846-8011	=
1,1,1,2-Tetrachloroethane	UY1	1	ug/L	1	4/8/2025			SW846-8260D	=
1,1,1-Trichloroethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
1,1,2,2-Tetrachloroethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
1,1,2-Trichloroethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
1,1-Dichloroethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
1,1-Dichloroethene	U	1	ug/L	1	4/8/2025			SW846-8260D	=
1,2,3-Trichloropropane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
1,2-Dibromoethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
1,2-Dichlorobenzene	UY1Y2	1	ug/L	1	4/8/2025			SW846-8260D	=
1,2-Dichloroethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
1,2-Dichloropropane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
1,4-Dichlorobenzene	UY1Y2	1	ug/L	1	4/8/2025			SW846-8260D	=
2-Butanone	U	5	ug/L	5	4/8/2025			SW846-8260D	=
2-Hexanone	U	5	ug/L	5	4/8/2025			SW846-8260D	=
4-Methyl-2-pentanone	U	5	ug/L	5	4/8/2025			SW846-8260D	=
Acetone	U	5	ug/L	5	4/8/2025			SW846-8260D	=
Acrolein	U	5	ug/L	5	4/8/2025			SW846-8260D	UJ
Acrylonitrile	U	5	ug/L	5	4/8/2025			SW846-8260D	=
Benzene	U	1	ug/L	1	4/8/2025			SW846-8260D	=
Bromochloromethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
Bromodichloromethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
Bromoform	UY1	1	ug/L	1	4/8/2025			SW846-8260D	=
Bromomethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
Carbon disulfide	U	5	ug/L	5	4/8/2025			SW846-8260D	=
Carbon tetrachloride	U	1	ug/L	1	4/8/2025			SW846-8260D	=
Chlorobenzene	UY1Y2	1	ug/L	1	4/8/2025			SW846-8260D	=
Chloroethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=

Paducah OREIS
GROUNDWATER MONITORING REPORT

Facility: C-746-U Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045

Sampling Point: MW361 DOWN **RGA Type:** LRGA **Period:** 2nd Quarter 2025

AKGWA Well Tag #: 8004-4795 **SAMPLE ID:** MW361UG3-25 Sample Type: REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
Chloroform	U	1	ug/L	1	4/8/2025			SW846-8260D	=
Chloromethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
cis-1,2-Dichloroethene	U	1	ug/L	1	4/8/2025			SW846-8260D	=
cis-1,3-Dichloropropene	U	1	ug/L	1	4/8/2025			SW846-8260D	=
Dibromochloromethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
Dibromomethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
Ethylbenzene	UY1Y2	1	ug/L	1	4/8/2025			SW846-8260D	=
Iodomethane	U	5	ug/L	5	4/8/2025			SW846-8260D	=
Methylene chloride	U	5	ug/L	5	4/8/2025			SW846-8260D	=
Styrene	UY1Y2	1	ug/L	1	4/8/2025			SW846-8260D	=
Tetrachloroethene	UY1Y2	1	ug/L	1	4/8/2025			SW846-8260D	=
Toluene	UY1Y2	1	ug/L	1	4/8/2025			SW846-8260D	=
Total Xylene	UY1Y2	3	ug/L	3	4/8/2025			SW846-8260D	=
trans-1,2-Dichloroethene	U	1	ug/L	1	4/8/2025			SW846-8260D	=
trans-1,3-Dichloropropene	U	1	ug/L	1	4/8/2025			SW846-8260D	=
trans-1,4-Dichloro-2-butene	U	5	ug/L	5	4/8/2025			SW846-8260D	=
Trichloroethene	Y1	1	ug/L	1	4/8/2025			SW846-8260D	=
Trichlorofluoromethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
Vinyl acetate	U	5	ug/L	5	4/8/2025			SW846-8260D	=
Vinyl chloride	U	1	ug/L	1	4/8/2025			SW846-8260D	=
Dissolved Solids		220	mg/L	10	4/8/2025			EPA-160.1	=
Chemical Oxygen Demand (COD)	U	20	mg/L	20	4/8/2025			EPA-410.4	=
Cyanide	UN	0.2	mg/L	0.2	4/8/2025			SW846-9012B	=
Total Organic Halides (TOX)	U	10	ug/L	10	4/8/2025			SW846-9020B	=
Total Organic Carbon (TOC)	J	0.468	mg/L	2	4/8/2025			SW846-9060A	=

Paducah OREIS
GROUNDWATER MONITORING REPORT

Facility: C-746-U Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045

Sampling Point: MW362 DOWN **RGA Type:** UCRS **Period:** 2nd Quarter 2025

AKGWA Well Tag #: 8004-0986 **SAMPLE ID:** MW362UG3-25 Sample Type: REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
Iodide	U	0.5	mg/L	0.5	4/8/2025			EPA-300.0	=
Bromide	U	0.2	mg/L	0.2	4/8/2025			SW846-9056A	=
Chloride	JW	1.65	mg/L	250	4/8/2025			SW846-9056A	=
Fluoride	J	0.493	mg/L	4	4/8/2025			SW846-9056A	=
Nitrate as Nitrogen	J	0.415	mg/L	10	4/8/2025			SW846-9056A	=
Sulfate		31.6	mg/L	1.6	4/8/2025			SW846-9056A	=
Barometric Pressure Reading		30.21	Inches/Hg		4/8/2025			FS	X
Conductivity		580	µmhos/cm		4/8/2025			FS	X
Depth to Water		21.49	ft		4/8/2025			FS	X
Dissolved Oxygen		7.06	mg/L		4/8/2025			FS	X
Eh (approx)		461	mV		4/8/2025			FS	X
pH		6.91	Std Unit		4/8/2025			FS	X
Temperature		54.5	deg F		4/8/2025			FS	X
Turbidity		18.33	NTU		4/8/2025			FS	X
Aluminum		0.162	mg/L	0.05	4/8/2025			SW846-6020B	=
Antimony	U	0.003	mg/L	0.003	4/8/2025			SW846-6020B	=
Arsenic	U	0.005	mg/L	0.005	4/8/2025			SW846-6020B	=
Barium		0.0846	mg/L	0.004	4/8/2025			SW846-6020B	=
Beryllium	U	0.0005	mg/L	0.0005	4/8/2025			SW846-6020B	=
Boron		0.0265	mg/L	0.015	4/8/2025			SW846-6020B	J
Cadmium	U	0.001	mg/L	0.001	4/8/2025			SW846-6020B	=
Calcium		19.6	mg/L	0.2	4/8/2025			SW846-6020B	=
Chromium	U	0.01	mg/L	0.01	4/8/2025			SW846-6020B	=
Cobalt	U	0.001	mg/L	0.001	4/8/2025			SW846-6020B	=
Copper	J	0.00134	mg/L	0.002	4/8/2025			SW846-6020B	=
Iron		0.118	mg/L	0.1	4/8/2025			SW846-6020B	=
Lead	U	0.002	mg/L	0.002	4/8/2025			SW846-6020B	=
Magnesium		8.53	mg/L	0.03	4/8/2025			SW846-6020B	=
Manganese	JNW*	0.00198	mg/L	0.005	4/8/2025			SW846-6020B	=
Molybdenum		0.00105	mg/L	0.001	4/8/2025			SW846-6020B	=
Nickel	J	0.000649	mg/L	0.002	4/8/2025			SW846-6020B	=
Potassium		0.367	mg/L	0.3	4/8/2025			SW846-6020B	=
Rhodium	U	0.005	mg/L	0.005	4/8/2025			SW846-6020B	=
Selenium	U	0.005	mg/L	0.005	4/8/2025			SW846-6020B	=
Silver	U	0.001	mg/L	0.001	4/8/2025			SW846-6020B	=
Sodium		129	mg/L	1.25	4/8/2025			SW846-6020B	=
Tantalum	U*	0.005	mg/L	0.005	4/8/2025			SW846-6020B	=
Thallium	U	0.002	mg/L	0.002	4/8/2025			SW846-6020B	=
Uranium		0.00243	mg/L	0.0002	4/8/2025			SW846-6020B	=
Vanadium	U	0.02	mg/L	0.02	4/8/2025			SW846-6020B	=
Zinc	U	0.02	mg/L	0.02	4/8/2025			SW846-6020B	=
Mercury	U	0.0002	mg/L	0.0002	4/8/2025			SW846-7470A	=
Barium, Dissolved		0.085	mg/L	0.004	4/8/2025			SW846-6020B	J
Chromium, Dissolved	U	0.01	mg/L	0.01	4/8/2025			SW846-6020B	UJ
Uranium, Dissolved		0.00245	mg/L	0.0002	4/8/2025			SW846-6020B	J
PCB-1016	U	0.102	ug/L	0.102	4/8/2025			SW846-8082A	UJ
PCB-1221	U	0.102	ug/L	0.102	4/8/2025			SW846-8082A	=

Paducah OREIS
GROUNDWATER MONITORING REPORT

Facility: C-746-U Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045

Sampling Point: MW362 DOWN **RGA Type:** UCRS **Period:** 2nd Quarter 2025

AKGWA Well Tag #: 8004-0986 **SAMPLE ID:** MW362UG3-25 Sample Type: REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
PCB-1232	U	0.102	ug/L	0.102	4/8/2025			SW846-8082A	=
PCB-1242	U	0.102	ug/L	0.102	4/8/2025			SW846-8082A	=
PCB-1248	U	0.102	ug/L	0.102	4/8/2025			SW846-8082A	=
PCB-1254	U	0.102	ug/L	0.102	4/8/2025			SW846-8082A	=
PCB-1260	U	0.102	ug/L	0.102	4/8/2025			SW846-8082A	UJ
PCB-1268	U	0.102	ug/L	0.102	4/8/2025			SW846-8082A	=
Polychlorinated biphenyl	U	0.102	ug/L	0.102	4/8/2025			SW846-8082A	UJ
Radium-226	U	0.191	pCi/L	0.918	4/8/2025	0.498	0.499	AN-1418	=
Radium-228	U	0.457	pCi/L	4.74	4/8/2025	2.63	2.63	EPA-904.0-M	=
Strontium-90	U	3.98	pCi/L	5.16	4/8/2025	3.2	3.26	EPA-905.0-M	=
Tritium	U	43.7	pCi/L	224	4/8/2025	128	129	EPA-906.0-M	=
Technetium-99	U	-12.5	pCi/L	21.2	4/8/2025	12	12	HASL 300, Tc-02-RC M	UJ
Thorium-230	U	0.132	pCi/L	1.64	4/8/2025	0.804	0.806	HASL 300, Th-01-RC M	=
Thorium-232	U	-0.0692	pCi/L	1.01	4/8/2025	0.411	0.412	HASL 300, Th-01-RC M	=
Alpha activity	U	-0.295	pCi/L	10.3	4/8/2025	4.78	4.78	SW846-9310	=
Beta activity	U	-0.128	pCi/L	11.5	4/8/2025	6.16	6.16	SW846-9310	=
1,2-Dibromo-3-chloropropane	U	0.0189	ug/L	0.0189	4/8/2025			SW846-8011	=
1,1,1,2-Tetrachloroethane	UY1	1	ug/L	1	4/8/2025			SW846-8260D	=
1,1,1-Trichloroethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
1,1,2,2-Tetrachloroethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
1,1,2-Trichloroethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
1,1-Dichloroethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
1,1-Dichloroethene	U	1	ug/L	1	4/8/2025			SW846-8260D	=
1,2,3-Trichloropropane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
1,2-Dibromoethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
1,2-Dichlorobenzene	UY1Y2	1	ug/L	1	4/8/2025			SW846-8260D	=
1,2-Dichloroethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
1,2-Dichloropropane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
1,4-Dichlorobenzene	UY1Y2	1	ug/L	1	4/8/2025			SW846-8260D	=
2-Butanone	U	5	ug/L	5	4/8/2025			SW846-8260D	=
2-Hexanone	U	5	ug/L	5	4/8/2025			SW846-8260D	=
4-Methyl-2-pentanone	U	5	ug/L	5	4/8/2025			SW846-8260D	=
Acetone	U	5	ug/L	5	4/8/2025			SW846-8260D	=
Acrolein	U	5	ug/L	5	4/8/2025			SW846-8260D	UJ
Acrylonitrile	U	5	ug/L	5	4/8/2025			SW846-8260D	=
Benzene	U	1	ug/L	1	4/8/2025			SW846-8260D	=
Bromochloromethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
Bromodichloromethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
Bromoform	UY1	1	ug/L	1	4/8/2025			SW846-8260D	=
Bromomethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
Carbon disulfide	U	5	ug/L	5	4/8/2025			SW846-8260D	=
Carbon tetrachloride	U	1	ug/L	1	4/8/2025			SW846-8260D	=
Chlorobenzene	UY1Y2	1	ug/L	1	4/8/2025			SW846-8260D	=
Chloroethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=

Paducah OREIS
GROUNDWATER MONITORING REPORT

Facility: C-746-U Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045

Sampling Point: MW362 DOWN **RGA Type:** UCRS **Period:** 2nd Quarter 2025

AKGWA Well Tag #: 8004-0986 **SAMPLE ID:** MW362UG3-25 Sample Type: REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
Chloroform	U	1	ug/L	1	4/8/2025			SW846-8260D	=
Chloromethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
cis-1,2-Dichloroethene	U	1	ug/L	1	4/8/2025			SW846-8260D	=
cis-1,3-Dichloropropene	U	1	ug/L	1	4/8/2025			SW846-8260D	=
Dibromochloromethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
Dibromomethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
Ethylbenzene	UY1Y2	1	ug/L	1	4/8/2025			SW846-8260D	=
Iodomethane	U	5	ug/L	5	4/8/2025			SW846-8260D	=
Methylene chloride	U	5	ug/L	5	4/8/2025			SW846-8260D	=
Styrene	UY1Y2	1	ug/L	1	4/8/2025			SW846-8260D	=
Tetrachloroethene	UY1Y2	1	ug/L	1	4/8/2025			SW846-8260D	=
Toluene	UY1Y2	1	ug/L	1	4/8/2025			SW846-8260D	=
Total Xylene	UY1Y2	3	ug/L	3	4/8/2025			SW846-8260D	=
trans-1,2-Dichloroethene	U	1	ug/L	1	4/8/2025			SW846-8260D	=
trans-1,3-Dichloropropene	U	1	ug/L	1	4/8/2025			SW846-8260D	=
trans-1,4-Dichloro-2-butene	U	5	ug/L	5	4/8/2025			SW846-8260D	=
Trichloroethene	UY1	1	ug/L	1	4/8/2025			SW846-8260D	=
Trichlorofluoromethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
Vinyl acetate	U	5	ug/L	5	4/8/2025			SW846-8260D	=
Vinyl chloride	U	1	ug/L	1	4/8/2025			SW846-8260D	=
Dissolved Solids		366	mg/L	10	4/8/2025			EPA-160.1	=
Chemical Oxygen Demand (COD)	U	20	mg/L	20	4/8/2025			EPA-410.4	=
Cyanide	UN	0.2	mg/L	0.2	4/8/2025			SW846-9012B	=
Total Organic Halides (TOX)	J	8.62	ug/L	10	4/8/2025			SW846-9020B	=
Total Organic Carbon (TOC)	J	1.68	mg/L	2	4/8/2025			SW846-9060A	=

Paducah OREIS
GROUNDWATER MONITORING REPORT

Facility: C-746-U Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045

Sampling Point: MW363 DOWN **RGA Type:** URGA **Period:** 2nd Quarter 2025

AKGWA Well Tag #: 8004-4796 **SAMPLE ID:** MW363UG3-25 Sample Type: REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
Iodide	U	0.5	mg/L	0.5	4/9/2025			EPA-300.0	=
Bromide	UW	0.4	mg/L	0.4	4/9/2025			SW846-9056A	=
Chloride	J	13.8	mg/L	250	4/9/2025			SW846-9056A	=
Fluoride	J	0.231	mg/L	4	4/9/2025			SW846-9056A	=
Nitrate as Nitrogen	J	2.84	mg/L	10	4/9/2025			SW846-9056A	=
Sulfate		32.6	mg/L	0.8	4/9/2025			SW846-9056A	=
Barometric Pressure Reading		30.19	Inches/Hg		4/9/2025			FS	X
Conductivity		346	µmhos/cm		4/9/2025			FS	X
Depth to Water		42.3	ft		4/9/2025			FS	X
Dissolved Oxygen		2.16	mg/L		4/9/2025			FS	X
Eh (approx)		492	mV		4/9/2025			FS	X
pH		6.07	Std Unit		4/9/2025			FS	X
Temperature		53.7	deg F		4/9/2025			FS	X
Turbidity		4.73	NTU		4/9/2025			FS	X
Aluminum	U	0.05	mg/L	0.05	4/9/2025			SW846-6020B	=
Antimony	U	0.003	mg/L	0.003	4/9/2025			SW846-6020B	=
Arsenic	U	0.005	mg/L	0.005	4/9/2025			SW846-6020B	=
Barium		0.107	mg/L	0.004	4/9/2025			SW846-6020B	=
Beryllium	U	0.0005	mg/L	0.0005	4/9/2025			SW846-6020B	=
Boron		0.0224	mg/L	0.015	4/9/2025			SW846-6020B	=
Cadmium	U	0.001	mg/L	0.001	4/9/2025			SW846-6020B	=
Calcium		20.6	mg/L	0.2	4/9/2025			SW846-6020B	=
Chromium	U	0.01	mg/L	0.01	4/9/2025			SW846-6020B	=
Cobalt		0.00101	mg/L	0.001	4/9/2025			SW846-6020B	=
Copper	J	0.00102	mg/L	0.002	4/9/2025			SW846-6020B	=
Iron	J	0.0447	mg/L	0.1	4/9/2025			SW846-6020B	=
Lead	U	0.002	mg/L	0.002	4/9/2025			SW846-6020B	=
Magnesium		8.19	mg/L	0.03	4/9/2025			SW846-6020B	=
Manganese		0.174	mg/L	0.005	4/9/2025			SW846-6020B	=
Molybdenum	U	0.001	mg/L	0.001	4/9/2025			SW846-6020B	=
Nickel		0.0146	mg/L	0.002	4/9/2025			SW846-6020B	=
Potassium		1.83	mg/L	0.3	4/9/2025			SW846-6020B	=
Rhodium	U	0.005	mg/L	0.005	4/9/2025			SW846-6020B	=
Selenium	U	0.005	mg/L	0.005	4/9/2025			SW846-6020B	=
Silver	U	0.001	mg/L	0.001	4/9/2025			SW846-6020B	=
Sodium		37.8	mg/L	0.25	4/9/2025			SW846-6020B	=
Tantalum	U	0.005	mg/L	0.005	4/9/2025			SW846-6020B	=
Thallium	U	0.002	mg/L	0.002	4/9/2025			SW846-6020B	=
Uranium	U	0.0002	mg/L	0.0002	4/9/2025			SW846-6020B	=
Vanadium	U	0.02	mg/L	0.02	4/9/2025			SW846-6020B	=
Zinc	J	0.00539	mg/L	0.02	4/9/2025			SW846-6020B	=
Mercury	U	0.0002	mg/L	0.0002	4/9/2025			SW846-7470A	=
Barium, Dissolved		0.105	mg/L	0.004	4/9/2025			SW846-6020B	J
Chromium, Dissolved	U	0.01	mg/L	0.01	4/9/2025			SW846-6020B	UJ
Uranium, Dissolved	U	0.0002	mg/L	0.0002	4/9/2025			SW846-6020B	UJ
PCB-1016	U	0.0979	ug/L	0.0979	4/9/2025			SW846-8082A	UJ
PCB-1221	U	0.0979	ug/L	0.0979	4/9/2025			SW846-8082A	=

Paducah OREIS
GROUNDWATER MONITORING REPORT

Facility: C-746-U Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045

Sampling Point: MW363 DOWN **RGA Type:** URGA **Period:** 2nd Quarter 2025

AKGWA Well Tag #: 8004-4796 **SAMPLE ID:** MW363UG3-25 Sample Type: REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
PCB-1232	U	0.0979	ug/L	0.0979	4/9/2025			SW846-8082A	=
PCB-1242	U	0.0979	ug/L	0.0979	4/9/2025			SW846-8082A	=
PCB-1248	U	0.0979	ug/L	0.0979	4/9/2025			SW846-8082A	=
PCB-1254	U	0.0979	ug/L	0.0979	4/9/2025			SW846-8082A	=
PCB-1260	U	0.0979	ug/L	0.0979	4/9/2025			SW846-8082A	UJ
PCB-1268	U	0.0979	ug/L	0.0979	4/9/2025			SW846-8082A	=
Polychlorinated biphenyl	U	0.0979	ug/L	0.0979	4/9/2025			SW846-8082A	UJ
Radium-226	U	0.0542	pCi/L	0.771	4/9/2025	0.373	0.373	AN-1418	=
Radium-228	U	1.41	pCi/L	4.63	4/9/2025	2.64	2.67	EPA-904.0-M	=
Strontium-90	U	-1.57	pCi/L	2.95	4/9/2025	1.19	1.19	EPA-905.0-M	UJ
Tritium	U	166	pCi/L	222	4/9/2025	135	139	EPA-906.0-M	=
Technetium-99	U	-1.45	pCi/L	21.3	4/9/2025	12	12	HASL 300, Tc-02-RC M	=
Thorium-230	U	3.63	pCi/L	6.35	4/9/2025	4.36	4.41	HASL 300, Th-01-RC M	=
Thorium-232	U	0.505	pCi/L	3.94	4/9/2025	2.2	2.21	HASL 300, Th-01-RC M	=
Alpha activity	U	0.918	pCi/L	9.38	4/9/2025	4.61	4.61	SW846-9310	=
Beta activity	U	3.41	pCi/L	11.4	4/9/2025	6.59	6.61	SW846-9310	=
1,2-Dibromo-3-chloropropane	UY2	0.0188	ug/L	0.0188	4/9/2025			SW846-8011	=
1,1,1,2-Tetrachloroethane	U	1	ug/L	1	4/9/2025			SW846-8260D	=
1,1,1-Trichloroethane	U	1	ug/L	1	4/9/2025			SW846-8260D	=
1,1,2,2-Tetrachloroethane	U	1	ug/L	1	4/9/2025			SW846-8260D	=
1,1,2-Trichloroethane	U	1	ug/L	1	4/9/2025			SW846-8260D	=
1,1-Dichloroethane	U	1	ug/L	1	4/9/2025			SW846-8260D	=
1,1-Dichloroethene	U	1	ug/L	1	4/9/2025			SW846-8260D	=
1,2,3-Trichloropropane	U	1	ug/L	1	4/9/2025			SW846-8260D	=
1,2-Dibromoethane	U	1	ug/L	1	4/9/2025			SW846-8260D	=
1,2-Dichlorobenzene	U	1	ug/L	1	4/9/2025			SW846-8260D	=
1,2-Dichloroethane	U	1	ug/L	1	4/9/2025			SW846-8260D	=
1,2-Dichloropropane	U	1	ug/L	1	4/9/2025			SW846-8260D	=
1,4-Dichlorobenzene	U	1	ug/L	1	4/9/2025			SW846-8260D	=
2-Butanone	U	5	ug/L	5	4/9/2025			SW846-8260D	=
2-Hexanone	U	5	ug/L	5	4/9/2025			SW846-8260D	=
4-Methyl-2-pentanone	U	5	ug/L	5	4/9/2025			SW846-8260D	=
Acetone	U	5	ug/L	5	4/9/2025			SW846-8260D	=
Acrolein	U	5	ug/L	5	4/9/2025			SW846-8260D	UJ
Acrylonitrile	U	5	ug/L	5	4/9/2025			SW846-8260D	=
Benzene	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Bromochloromethane	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Bromodichloromethane	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Bromoform	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Bromomethane	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Carbon disulfide	U	5	ug/L	5	4/9/2025			SW846-8260D	=
Carbon tetrachloride	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Chlorobenzene	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Chloroethane	U	1	ug/L	1	4/9/2025			SW846-8260D	=

Paducah OREIS
GROUNDWATER MONITORING REPORT

Facility: C-746-U Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045

Sampling Point: MW363 DOWN **RGA Type:** URGA **Period:** 2nd Quarter 2025

AKGWA Well Tag #: 8004-4796 **SAMPLE ID:** MW363UG3-25 Sample Type: REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
Chloroform	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Chloromethane	U	1	ug/L	1	4/9/2025			SW846-8260D	=
cis-1,2-Dichloroethene	U	1	ug/L	1	4/9/2025			SW846-8260D	=
cis-1,3-Dichloropropene	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Dibromochloromethane	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Dibromomethane	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Ethylbenzene	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Iodomethane	U	5	ug/L	5	4/9/2025			SW846-8260D	=
Methylene chloride	U	5	ug/L	5	4/9/2025			SW846-8260D	=
Styrene	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Tetrachloroethene	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Toluene	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Total Xylene	U	3	ug/L	3	4/9/2025			SW846-8260D	=
trans-1,2-Dichloroethene	U	1	ug/L	1	4/9/2025			SW846-8260D	=
trans-1,3-Dichloropropene	U	1	ug/L	1	4/9/2025			SW846-8260D	=
trans-1,4-Dichloro-2-butene	UY1	5	ug/L	5	4/9/2025			SW846-8260D	UJ
Trichloroethene	J	0.37	ug/L	1	4/9/2025			SW846-8260D	=
Trichlorofluoromethane	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Vinyl acetate	U	5	ug/L	5	4/9/2025			SW846-8260D	=
Vinyl chloride	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Dissolved Solids		215	mg/L	10	4/9/2025			EPA-160.1	=
Chemical Oxygen Demand (COD)	U	20	mg/L	20	4/9/2025			EPA-410.4	=
Cyanide	UN1	0.2	mg/L	0.2	4/9/2025			SW846-9012B	=
Total Organic Halides (TOX)	U	10	ug/L	10	4/9/2025			SW846-9020B	=
Total Organic Carbon (TOC)	J	0.793	mg/L	2	4/9/2025			SW846-9060A	=

Paducah OREIS
GROUNDWATER MONITORING REPORT

Facility: C-746-U Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045

Sampling Point: MW364 DOWN **RGA Type:** LRGA **Period:** 2nd Quarter 2025

AKGWA Well Tag #: 8004-4797 **SAMPLE ID:** MW364UG3-25 Sample Type: REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
Iodide	U	0.5	mg/L	0.5	4/9/2025			EPA-300.0	=
Bromide	W	0.455	mg/L	0.2	4/9/2025			SW846-9056A	J
Chloride	J	37.2	mg/L	250	4/9/2025			SW846-9056A	=
Fluoride	U	4	mg/L	4	4/9/2025			SW846-9056A	=
Nitrate as Nitrogen	J	1.13	mg/L	10	4/9/2025			SW846-9056A	=
Sulfate		67.6	mg/L	2	4/9/2025			SW846-9056A	=
Barometric Pressure Reading		30.19	Inches/Hg		4/9/2025			FS	X
Conductivity		459	µmhos/cm		4/9/2025			FS	X
Depth to Water		42.04	ft		4/9/2025			FS	X
Dissolved Oxygen		3.91	mg/L		4/9/2025			FS	X
Eh (approx)		499	mV		4/9/2025			FS	X
pH		5.92	Std Unit		4/9/2025			FS	X
Temperature		57.5	deg F		4/9/2025			FS	X
Turbidity		3.96	NTU		4/9/2025			FS	X
Aluminum	U	0.05	mg/L	0.05	4/9/2025			SW846-6020B	=
Antimony	U	0.003	mg/L	0.003	4/9/2025			SW846-6020B	=
Arsenic	U	0.005	mg/L	0.005	4/9/2025			SW846-6020B	=
Barium		0.0518	mg/L	0.004	4/9/2025			SW846-6020B	=
Beryllium	U	0.0005	mg/L	0.0005	4/9/2025			SW846-6020B	=
Boron		0.199	mg/L	0.015	4/9/2025			SW846-6020B	=
Cadmium	U	0.001	mg/L	0.001	4/9/2025			SW846-6020B	=
Calcium		32.1	mg/L	0.2	4/9/2025			SW846-6020B	=
Chromium	U	0.01	mg/L	0.01	4/9/2025			SW846-6020B	=
Cobalt	U	0.001	mg/L	0.001	4/9/2025			SW846-6020B	=
Copper	J	0.000844	mg/L	0.002	4/9/2025			SW846-6020B	=
Iron	U	0.1	mg/L	0.1	4/9/2025			SW846-6020B	=
Lead	U	0.002	mg/L	0.002	4/9/2025			SW846-6020B	=
Magnesium		13.7	mg/L	0.03	4/9/2025			SW846-6020B	=
Manganese	J	0.00298	mg/L	0.005	4/9/2025			SW846-6020B	=
Molybdenum	U	0.001	mg/L	0.001	4/9/2025			SW846-6020B	=
Nickel	U	0.002	mg/L	0.002	4/9/2025			SW846-6020B	=
Potassium		1.99	mg/L	0.3	4/9/2025			SW846-6020B	=
Rhodium	U	0.005	mg/L	0.005	4/9/2025			SW846-6020B	=
Selenium	U	0.005	mg/L	0.005	4/9/2025			SW846-6020B	=
Silver	U	0.001	mg/L	0.001	4/9/2025			SW846-6020B	=
Sodium		41.5	mg/L	0.25	4/9/2025			SW846-6020B	=
Tantalum	U	0.005	mg/L	0.005	4/9/2025			SW846-6020B	=
Thallium	U	0.002	mg/L	0.002	4/9/2025			SW846-6020B	=
Uranium	U	0.0002	mg/L	0.0002	4/9/2025			SW846-6020B	=
Vanadium	U	0.02	mg/L	0.02	4/9/2025			SW846-6020B	=
Zinc		0.0229	mg/L	0.02	4/9/2025			SW846-6020B	=
Mercury	U	0.0002	mg/L	0.0002	4/9/2025			SW846-7470A	=
Barium, Dissolved		0.0517	mg/L	0.004	4/9/2025			SW846-6020B	J
Chromium, Dissolved	U	0.01	mg/L	0.01	4/9/2025			SW846-6020B	UJ
Uranium, Dissolved	U	0.0002	mg/L	0.0002	4/9/2025			SW846-6020B	UJ
PCB-1016	U	0.1	ug/L	0.1	4/9/2025			SW846-8082A	UJ
PCB-1221	U	0.1	ug/L	0.1	4/9/2025			SW846-8082A	=

Paducah OREIS
GROUNDWATER MONITORING REPORT

Facility: C-746-U Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045

Sampling Point: MW364 DOWN **RGA Type:** LRGA **Period:** 2nd Quarter 2025

AKGWA Well Tag #: 8004-4797 **SAMPLE ID:** MW364UG3-25 Sample Type: REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
PCB-1232	U	0.1	ug/L	0.1	4/9/2025			SW846-8082A	=
PCB-1242	U	0.1	ug/L	0.1	4/9/2025			SW846-8082A	=
PCB-1248	U	0.1	ug/L	0.1	4/9/2025			SW846-8082A	=
PCB-1254	U	0.1	ug/L	0.1	4/9/2025			SW846-8082A	=
PCB-1260	U	0.1	ug/L	0.1	4/9/2025			SW846-8082A	UJ
PCB-1268	U	0.1	ug/L	0.1	4/9/2025			SW846-8082A	=
Polychlorinated biphenyl	U	0.1	ug/L	0.1	4/9/2025			SW846-8082A	UJ
Radium-226	U	0.418	pCi/L	0.674	4/9/2025	0.488	0.49	AN-1418	=
Radium-228	U	1.65	pCi/L	4.55	4/9/2025	2.6	2.64	EPA-904.0-M	=
Strontium-90	U	1.5	pCi/L	2.69	4/9/2025	1.62	1.64	EPA-905.0-M	=
Tritium	U	-31.1	pCi/L	223	4/9/2025	122	122	EPA-906.0-M	=
Technetium-99		49.9	pCi/L	21	4/9/2025	14.3	15.3	HASL 300, Tc-02-RC M	=
Thorium-230	U	0.364	pCi/L	1.39	4/9/2025	0.79	0.795	HASL 300, Th-01-RC M	=
Thorium-232	U	-0.0991	pCi/L	0.936	4/9/2025	0.342	0.342	HASL 300, Th-01-RC M	=
Alpha activity	U	2.01	pCi/L	7.02	4/9/2025	3.71	3.73	SW846-9310	=
Beta activity		22	pCi/L	11	4/9/2025	8.15	8.91	SW846-9310	=
1,2-Dibromo-3-chloropropane	UY2	0.019	ug/L	0.019	4/9/2025			SW846-8011	UJ
1,1,1,2-Tetrachloroethane	U	1	ug/L	1	4/9/2025			SW846-8260D	=
1,1,1-Trichloroethane	U	1	ug/L	1	4/9/2025			SW846-8260D	=
1,1,2,2-Tetrachloroethane	U	1	ug/L	1	4/9/2025			SW846-8260D	=
1,1,2-Trichloroethane	U	1	ug/L	1	4/9/2025			SW846-8260D	=
1,1-Dichloroethane	U	1	ug/L	1	4/9/2025			SW846-8260D	=
1,1-Dichloroethene	U	1	ug/L	1	4/9/2025			SW846-8260D	=
1,2,3-Trichloropropane	U	1	ug/L	1	4/9/2025			SW846-8260D	=
1,2-Dibromoethane	U	1	ug/L	1	4/9/2025			SW846-8260D	=
1,2-Dichlorobenzene	U	1	ug/L	1	4/9/2025			SW846-8260D	=
1,2-Dichloroethane	U	1	ug/L	1	4/9/2025			SW846-8260D	=
1,2-Dichloropropane	U	1	ug/L	1	4/9/2025			SW846-8260D	=
1,4-Dichlorobenzene	U	1	ug/L	1	4/9/2025			SW846-8260D	=
2-Butanone	U	5	ug/L	5	4/9/2025			SW846-8260D	=
2-Hexanone	U	5	ug/L	5	4/9/2025			SW846-8260D	=
4-Methyl-2-pentanone	U	5	ug/L	5	4/9/2025			SW846-8260D	=
Acetone	U	5	ug/L	5	4/9/2025			SW846-8260D	=
Acrolein	U	5	ug/L	5	4/9/2025			SW846-8260D	UJ
Acrylonitrile	U	5	ug/L	5	4/9/2025			SW846-8260D	=
Benzene	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Bromochloromethane	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Bromodichloromethane	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Bromoform	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Bromomethane	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Carbon disulfide	U	5	ug/L	5	4/9/2025			SW846-8260D	=
Carbon tetrachloride	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Chlorobenzene	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Chloroethane	U	1	ug/L	1	4/9/2025			SW846-8260D	=

Paducah OREIS
GROUNDWATER MONITORING REPORT

Facility: C-746-U Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045

Sampling Point: MW364 DOWN **RGA Type:** LRGA **Period:** 2nd Quarter 2025

AKGWA Well Tag #: 8004-4797 **SAMPLE ID:** MW364UG3-25 Sample Type: REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
Chloroform	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Chloromethane	U	1	ug/L	1	4/9/2025			SW846-8260D	=
cis-1,2-Dichloroethene	U	1	ug/L	1	4/9/2025			SW846-8260D	=
cis-1,3-Dichloropropene	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Dibromochloromethane	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Dibromomethane	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Ethylbenzene	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Iodomethane	U	5	ug/L	5	4/9/2025			SW846-8260D	=
Methylene chloride	U	5	ug/L	5	4/9/2025			SW846-8260D	=
Styrene	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Tetrachloroethene	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Toluene	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Total Xylene	U	3	ug/L	3	4/9/2025			SW846-8260D	=
trans-1,2-Dichloroethene	U	1	ug/L	1	4/9/2025			SW846-8260D	=
trans-1,3-Dichloropropene	U	1	ug/L	1	4/9/2025			SW846-8260D	=
trans-1,4-Dichloro-2-butene	UY1	5	ug/L	5	4/9/2025			SW846-8260D	UJ
Trichloroethene	J	0.9	ug/L	1	4/9/2025			SW846-8260D	=
Trichlorofluoromethane	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Vinyl acetate	U	5	ug/L	5	4/9/2025			SW846-8260D	=
Vinyl chloride	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Dissolved Solids		248	mg/L	10	4/9/2025			EPA-160.1	=
Chemical Oxygen Demand (COD)	U	20	mg/L	20	4/9/2025			EPA-410.4	=
Cyanide	UN1	0.2	mg/L	0.2	4/9/2025			SW846-9012B	UJ
Total Organic Halides (TOX)	U	10	ug/L	10	4/9/2025			SW846-9020B	=
Total Organic Carbon (TOC)	J	0.484	mg/L	2	4/9/2025			SW846-9060A	=

Paducah OREIS
GROUNDWATER MONITORING REPORT

Facility: C-746-U Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045

Sampling Point: MW365 DOWN **RGA Type:** UCRS **Period:** 2nd Quarter 2025

AKGWA Well Tag #: 8004-0984 **SAMPLE ID:** MW365UG3-25 Sample Type: REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
Iodide	U	0.5	mg/L	0.5	4/9/2025			EPA-300.0	=
Bromide	UW	0.2	mg/L	0.2	4/9/2025			SW846-9056A	=
Chloride	J	2.03	mg/L	250	4/9/2025			SW846-9056A	=
Fluoride	J	0.33	mg/L	4	4/9/2025			SW846-9056A	=
Nitrate as Nitrogen	J	1.05	mg/L	10	4/9/2025			SW846-9056A	=
Sulfate		50.9	mg/L	1.6	4/9/2025			SW846-9056A	=
Barometric Pressure Reading		30.18	Inches/Hg		4/9/2025			FS	X
Conductivity		465	µmhos/cm		4/9/2025			FS	X
Depth to Water		35.27	ft		4/9/2025			FS	X
Dissolved Oxygen		4.86	mg/L		4/9/2025			FS	X
Eh (approx)		449	mV		4/9/2025			FS	X
pH		6.16	Std Unit		4/9/2025			FS	X
Temperature		58	deg F		4/9/2025			FS	X
Turbidity		5.44	NTU		4/9/2025			FS	X
Aluminum	U	0.05	mg/L	0.05	4/9/2025			SW846-6020B	=
Antimony	U	0.003	mg/L	0.003	4/9/2025			SW846-6020B	=
Arsenic	U	0.005	mg/L	0.005	4/9/2025			SW846-6020B	=
Barium		0.0765	mg/L	0.004	4/9/2025			SW846-6020B	=
Beryllium	U	0.0005	mg/L	0.0005	4/9/2025			SW846-6020B	=
Boron	J	0.00837	mg/L	0.015	4/9/2025			SW846-6020B	=
Cadmium	U	0.001	mg/L	0.001	4/9/2025			SW846-6020B	=
Calcium		20.4	mg/L	0.2	4/9/2025			SW846-6020B	=
Chromium	U	0.01	mg/L	0.01	4/9/2025			SW846-6020B	=
Cobalt		0.00147	mg/L	0.001	4/9/2025			SW846-6020B	=
Copper		0.00255	mg/L	0.002	4/9/2025			SW846-6020B	=
Iron	U	0.1	mg/L	0.1	4/9/2025			SW846-6020B	=
Lead	U	0.002	mg/L	0.002	4/9/2025			SW846-6020B	=
Magnesium		9.4	mg/L	0.03	4/9/2025			SW846-6020B	=
Manganese		0.0109	mg/L	0.005	4/9/2025			SW846-6020B	=
Molybdenum	J	0.000273	mg/L	0.001	4/9/2025			SW846-6020B	=
Nickel		0.00488	mg/L	0.002	4/9/2025			SW846-6020B	=
Potassium	J	0.287	mg/L	0.3	4/9/2025			SW846-6020B	=
Rhodium	U	0.005	mg/L	0.005	4/9/2025			SW846-6020B	=
Selenium	U	0.005	mg/L	0.005	4/9/2025			SW846-6020B	=
Silver	U	0.001	mg/L	0.001	4/9/2025			SW846-6020B	=
Sodium		57.6	mg/L	1.25	4/9/2025			SW846-6020B	=
Tantalum	U	0.005	mg/L	0.005	4/9/2025			SW846-6020B	=
Thallium	U	0.002	mg/L	0.002	4/9/2025			SW846-6020B	=
Uranium		0.000332	mg/L	0.0002	4/9/2025			SW846-6020B	=
Vanadium	U	0.02	mg/L	0.02	4/9/2025			SW846-6020B	=
Zinc	J	0.00341	mg/L	0.02	4/9/2025			SW846-6020B	=
Mercury	U	0.0002	mg/L	0.0002	4/9/2025			SW846-7470A	=
Barium, Dissolved		0.0769	mg/L	0.004	4/9/2025			SW846-6020B	J
Chromium, Dissolved	U	0.01	mg/L	0.01	4/9/2025			SW846-6020B	UJ
Uranium, Dissolved		0.000325	mg/L	0.0002	4/9/2025			SW846-6020B	J
PCB-1016	UY2	0.101	ug/L	0.101	4/9/2025			SW846-8082A	UJ
PCB-1221	U	0.101	ug/L	0.101	4/9/2025			SW846-8082A	=

Paducah OREIS
GROUNDWATER MONITORING REPORT

Facility: C-746-U Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045

Sampling Point: MW365 DOWN **RGA Type:** UCRS **Period:** 2nd Quarter 2025

AKGWA Well Tag #: 8004-0984 **SAMPLE ID:** MW365UG3-25 Sample Type: REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
PCB-1232	U	0.101	ug/L	0.101	4/9/2025			SW846-8082A	=
PCB-1242	J	0.0508	ug/L	0.101	4/9/2025			SW846-8082A	J
PCB-1248	U	0.101	ug/L	0.101	4/9/2025			SW846-8082A	=
PCB-1254	U	0.101	ug/L	0.101	4/9/2025			SW846-8082A	=
PCB-1260	UY1Y2	0.101	ug/L	0.101	4/9/2025			SW846-8082A	UJ
PCB-1268	U	0.101	ug/L	0.101	4/9/2025			SW846-8082A	=
Polychlorinated biphenyl	JY1Y2	0.0508	ug/L	0.101	4/9/2025			SW846-8082A	J
Radium-226	U	0.795	pCi/L	0.958	4/9/2025	0.722	0.729	AN-1418	=
Radium-228	U	1.17	pCi/L	4.86	4/9/2025	2.74	2.76	EPA-904.0-M	=
Strontium-90	U	1.8	pCi/L	2.83	4/9/2025	1.74	1.77	EPA-905.0-M	=
Tritium	U	-47.9	pCi/L	216	4/9/2025	117	117	EPA-906.0-M	=
Technetium-99	U	-11.8	pCi/L	21.4	4/9/2025	11.5	11.5	HASL 300, Tc-02-RC M	UJ
Thorium-230	U	0.745	pCi/L	1.43	4/9/2025	0.972	0.982	HASL 300, Th-01-RC M	=
Thorium-232	U	-0.155	pCi/L	1.17	4/9/2025	0.403	0.404	HASL 300, Th-01-RC M	=
Alpha activity	U	-2.08	pCi/L	9.6	4/9/2025	3.24	3.24	SW846-9310	=
Beta activity	U	2.69	pCi/L	8.42	4/9/2025	4.78	4.8	SW846-9310	=
1,2-Dibromo-3-chloropropane	UY2	0.0188	ug/L	0.0188	4/9/2025			SW846-8011	=
1,1,1,2-Tetrachloroethane	U	1	ug/L	1	4/9/2025			SW846-8260D	=
1,1,1-Trichloroethane	U	1	ug/L	1	4/9/2025			SW846-8260D	=
1,1,2,2-Tetrachloroethane	US	1	ug/L	1	4/9/2025			SW846-8260D	=
1,1,2-Trichloroethane	U	1	ug/L	1	4/9/2025			SW846-8260D	=
1,1-Dichloroethane	U	1	ug/L	1	4/9/2025			SW846-8260D	=
1,1-Dichloroethene	U	1	ug/L	1	4/9/2025			SW846-8260D	=
1,2,3-Trichloropropane	US	1	ug/L	1	4/9/2025			SW846-8260D	=
1,2-Dibromoethane	U	1	ug/L	1	4/9/2025			SW846-8260D	=
1,2-Dichlorobenzene	US	1	ug/L	1	4/9/2025			SW846-8260D	=
1,2-Dichloroethane	U	1	ug/L	1	4/9/2025			SW846-8260D	=
1,2-Dichloropropane	U	1	ug/L	1	4/9/2025			SW846-8260D	=
1,4-Dichlorobenzene	US	1	ug/L	1	4/9/2025			SW846-8260D	=
2-Butanone	U	5	ug/L	5	4/9/2025			SW846-8260D	=
2-Hexanone	U	5	ug/L	5	4/9/2025			SW846-8260D	=
4-Methyl-2-pentanone	U	5	ug/L	5	4/9/2025			SW846-8260D	=
Acetone	U	5	ug/L	5	4/9/2025			SW846-8260D	=
Acrolein	U	5	ug/L	5	4/9/2025			SW846-8260D	UJ
Acrylonitrile	U	5	ug/L	5	4/9/2025			SW846-8260D	=
Benzene	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Bromochloromethane	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Bromodichloromethane	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Bromoform	US	1	ug/L	1	4/9/2025			SW846-8260D	=
Bromomethane	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Carbon disulfide	U	5	ug/L	5	4/9/2025			SW846-8260D	=
Carbon tetrachloride	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Chlorobenzene	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Chloroethane	U	1	ug/L	1	4/9/2025			SW846-8260D	=

Paducah OREIS
GROUNDWATER MONITORING REPORT

Facility: C-746-U Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045

Sampling Point: MW365 DOWN **RGA Type:** UCRS **Period:** 2nd Quarter 2025

AKGWA Well Tag #: 8004-0984 **SAMPLE ID:** MW365UG3-25 Sample Type: REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
Chloroform	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Chloromethane	U	1	ug/L	1	4/9/2025			SW846-8260D	=
cis-1,2-Dichloroethene	U	1	ug/L	1	4/9/2025			SW846-8260D	=
cis-1,3-Dichloropropene	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Dibromochloromethane	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Dibromomethane	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Ethylbenzene	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Iodomethane	U	5	ug/L	5	4/9/2025			SW846-8260D	=
Methylene chloride	U	5	ug/L	5	4/9/2025			SW846-8260D	=
Styrene	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Tetrachloroethene	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Toluene	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Total Xylene	U	3	ug/L	3	4/9/2025			SW846-8260D	=
trans-1,2-Dichloroethene	U	1	ug/L	1	4/9/2025			SW846-8260D	=
trans-1,3-Dichloropropene	U	1	ug/L	1	4/9/2025			SW846-8260D	=
trans-1,4-Dichloro-2-butene	UY1S	5	ug/L	5	4/9/2025			SW846-8260D	UJ
Trichloroethene	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Trichlorofluoromethane	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Vinyl acetate	U	5	ug/L	5	4/9/2025			SW846-8260D	=
Vinyl chloride	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Dissolved Solids		242	mg/L	10	4/9/2025			EPA-160.1	=
Chemical Oxygen Demand (COD)	U	20	mg/L	20	4/9/2025			EPA-410.4	=
Cyanide	UN1	0.2	mg/L	0.2	4/9/2025			SW846-9012B	=
Total Organic Halides (TOX)		14.1	ug/L	10	4/9/2025			SW846-9020B	=
Total Organic Carbon (TOC)	J	1.22	mg/L	2	4/9/2025			SW846-9060A	=

Paducah OREIS
GROUNDWATER MONITORING REPORT

Facility: C-746-U Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045

Sampling Point: MW366 DOWN **RGA Type:** URGA **Period:** 2nd Quarter 2025

AKGWA Well Tag #: 8004-0982 **SAMPLE ID:** MW366UG3-25 Sample Type: REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
Iodide	U	0.5	mg/L	0.5	4/9/2025			EPA-300.0	=
Bromide	W	0.576	mg/L	0.2	4/9/2025			SW846-9056A	=
Chloride	J	42	mg/L	250	4/9/2025			SW846-9056A	=
Fluoride	J	0.161	mg/L	4	4/9/2025			SW846-9056A	=
Nitrate as Nitrogen	J	0.974	mg/L	10	4/9/2025			SW846-9056A	=
Sulfate		53.9	mg/L	2	4/9/2025			SW846-9056A	=
Barometric Pressure Reading		30.18	Inches/Hg		4/9/2025			FS	X
Conductivity		480	µmhos/cm		4/9/2025			FS	X
Depth to Water		42.61	ft		4/9/2025			FS	X
Dissolved Oxygen		5.6	mg/L		4/9/2025			FS	X
Eh (approx)		489	mV		4/9/2025			FS	X
pH		6.2	Std Unit		4/9/2025			FS	X
Temperature		62	deg F		4/9/2025			FS	X
Turbidity		11.04	NTU		4/9/2025			FS	X
Aluminum	U	0.05	mg/L	0.05	4/9/2025			SW846-6020B	=
Antimony	U	0.003	mg/L	0.003	4/9/2025			SW846-6020B	=
Arsenic	U	0.005	mg/L	0.005	4/9/2025			SW846-6020B	=
Barium		0.0959	mg/L	0.004	4/9/2025			SW846-6020B	=
Beryllium	U	0.0005	mg/L	0.0005	4/9/2025			SW846-6020B	=
Boron		0.109	mg/L	0.015	4/9/2025			SW846-6020B	=
Cadmium	U	0.001	mg/L	0.001	4/9/2025			SW846-6020B	=
Calcium		33.3	mg/L	0.2	4/9/2025			SW846-6020B	=
Chromium	U	0.01	mg/L	0.01	4/9/2025			SW846-6020B	=
Cobalt	U	0.001	mg/L	0.001	4/9/2025			SW846-6020B	=
Copper	J	0.00073	mg/L	0.002	4/9/2025			SW846-6020B	=
Iron	U	0.1	mg/L	0.1	4/9/2025			SW846-6020B	=
Lead	U	0.002	mg/L	0.002	4/9/2025			SW846-6020B	=
Magnesium		14	mg/L	0.03	4/9/2025			SW846-6020B	=
Manganese	J	0.00339	mg/L	0.005	4/9/2025			SW846-6020B	=
Molybdenum	U	0.001	mg/L	0.001	4/9/2025			SW846-6020B	=
Nickel	J	0.000644	mg/L	0.002	4/9/2025			SW846-6020B	=
Potassium		2.1	mg/L	0.3	4/9/2025			SW846-6020B	=
Rhodium	U	0.005	mg/L	0.005	4/9/2025			SW846-6020B	=
Selenium	J	0.00185	mg/L	0.005	4/9/2025			SW846-6020B	=
Silver	U	0.001	mg/L	0.001	4/9/2025			SW846-6020B	=
Sodium		48.4	mg/L	0.25	4/9/2025			SW846-6020B	=
Tantalum	U	0.005	mg/L	0.005	4/9/2025			SW846-6020B	=
Thallium	U	0.002	mg/L	0.002	4/9/2025			SW846-6020B	=
Uranium	U	0.0002	mg/L	0.0002	4/9/2025			SW846-6020B	=
Vanadium	U	0.02	mg/L	0.02	4/9/2025			SW846-6020B	=
Zinc	U	0.02	mg/L	0.02	4/9/2025			SW846-6020B	=
Mercury	U	0.0002	mg/L	0.0002	4/9/2025			SW846-7470A	=
Barium, Dissolved		0.0942	mg/L	0.004	4/9/2025			SW846-6020B	J
Chromium, Dissolved	U	0.01	mg/L	0.01	4/9/2025			SW846-6020B	UJ
Uranium, Dissolved	U	0.0002	mg/L	0.0002	4/9/2025			SW846-6020B	UJ
PCB-1016	UY2	0.103	ug/L	0.103	4/9/2025			SW846-8082A	UJ
PCB-1221	U	0.103	ug/L	0.103	4/9/2025			SW846-8082A	=

Paducah OREIS
GROUNDWATER MONITORING REPORT

Facility: C-746-U Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045

Sampling Point: MW366 DOWN **RGA Type:** URGA **Period:** 2nd Quarter 2025

AKGWA Well Tag #: 8004-0982 **SAMPLE ID:** MW366UG3-25 Sample Type: REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
PCB-1232	U	0.103	ug/L	0.103	4/9/2025			SW846-8082A	=
PCB-1242	U	0.103	ug/L	0.103	4/9/2025			SW846-8082A	=
PCB-1248	U	0.103	ug/L	0.103	4/9/2025			SW846-8082A	=
PCB-1254	U	0.103	ug/L	0.103	4/9/2025			SW846-8082A	=
PCB-1260	UY1Y2	0.103	ug/L	0.103	4/9/2025			SW846-8082A	UJ
PCB-1268	U	0.103	ug/L	0.103	4/9/2025			SW846-8082A	=
Polychlorinated biphenyl	UY1Y2	0.103	ug/L	0.103	4/9/2025			SW846-8082A	UJ
Radium-226	U	0.264	pCi/L	0.944	4/9/2025	0.541	0.542	AN-1418	=
Radium-228	U	1.44	pCi/L	4.87	4/9/2025	2.79	2.82	EPA-904.0-M	=
Strontium-90	U	1.68	pCi/L	3.42	4/9/2025	2.03	2.04	EPA-905.0-M	=
Tritium	U	46.9	pCi/L	207	4/9/2025	119	119	EPA-906.0-M	=
Technetium-99		62.4	pCi/L	21.3	4/9/2025	15	16.5	HASL 300, Tc-02-RC M	=
Thorium-230	U	1.47	pCi/L	1.49	4/9/2025	1.23	1.25	HASL 300, Th-01-RC M	=
Thorium-232	U	-0.0659	pCi/L	0.955	4/9/2025	0.387	0.388	HASL 300, Th-01-RC M	=
Alpha activity	U	-1.03	pCi/L	7.03	4/9/2025	1.9	1.91	SW846-9310	=
Beta activity		38.5	pCi/L	8.06	4/9/2025	8.62	10.6	SW846-9310	=
1,2-Dibromo-3-chloropropane	UY2	0.019	ug/L	0.019	4/9/2025			SW846-8011	=
1,1,1,2-Tetrachloroethane	U	1	ug/L	1	4/9/2025			SW846-8260D	=
1,1,1-Trichloroethane	U	1	ug/L	1	4/9/2025			SW846-8260D	=
1,1,2,2-Tetrachloroethane	U	1	ug/L	1	4/9/2025			SW846-8260D	=
1,1,2-Trichloroethane	U	1	ug/L	1	4/9/2025			SW846-8260D	=
1,1-Dichloroethane	U	1	ug/L	1	4/9/2025			SW846-8260D	=
1,1-Dichloroethene	U	1	ug/L	1	4/9/2025			SW846-8260D	=
1,2,3-Trichloropropane	U	1	ug/L	1	4/9/2025			SW846-8260D	=
1,2-Dibromoethane	U	1	ug/L	1	4/9/2025			SW846-8260D	=
1,2-Dichlorobenzene	U	1	ug/L	1	4/9/2025			SW846-8260D	=
1,2-Dichloroethane	U	1	ug/L	1	4/9/2025			SW846-8260D	=
1,2-Dichloropropane	U	1	ug/L	1	4/9/2025			SW846-8260D	=
1,4-Dichlorobenzene	U	1	ug/L	1	4/9/2025			SW846-8260D	=
2-Butanone	U	5	ug/L	5	4/9/2025			SW846-8260D	=
2-Hexanone	U	5	ug/L	5	4/9/2025			SW846-8260D	=
4-Methyl-2-pentanone	U	5	ug/L	5	4/9/2025			SW846-8260D	=
Acetone	U	5	ug/L	5	4/9/2025			SW846-8260D	=
Acrolein	U	5	ug/L	5	4/9/2025			SW846-8260D	UJ
Acrylonitrile	U	5	ug/L	5	4/9/2025			SW846-8260D	=
Benzene	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Bromochloromethane	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Bromodichloromethane	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Bromoform	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Bromomethane	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Carbon disulfide	U	5	ug/L	5	4/9/2025			SW846-8260D	=
Carbon tetrachloride	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Chlorobenzene	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Chloroethane	U	1	ug/L	1	4/9/2025			SW846-8260D	=

Paducah OREIS
GROUNDWATER MONITORING REPORT

Facility: C-746-U Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045

Sampling Point: MW366 DOWN **RGA Type:** URGA **Period:** 2nd Quarter 2025

AKGWA Well Tag #: 8004-0982 **SAMPLE ID:** MW366UG3-25 Sample Type: REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
Chloroform	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Chloromethane	U	1	ug/L	1	4/9/2025			SW846-8260D	=
cis-1,2-Dichloroethene	U	1	ug/L	1	4/9/2025			SW846-8260D	=
cis-1,3-Dichloropropene	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Dibromochloromethane	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Dibromomethane	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Ethylbenzene	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Iodomethane	U	5	ug/L	5	4/9/2025			SW846-8260D	=
Methylene chloride	U	5	ug/L	5	4/9/2025			SW846-8260D	=
Styrene	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Tetrachloroethene	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Toluene	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Total Xylene	U	3	ug/L	3	4/9/2025			SW846-8260D	=
trans-1,2-Dichloroethene	U	1	ug/L	1	4/9/2025			SW846-8260D	=
trans-1,3-Dichloropropene	U	1	ug/L	1	4/9/2025			SW846-8260D	=
trans-1,4-Dichloro-2-butene	UY1	5	ug/L	5	4/9/2025			SW846-8260D	UJ
Trichloroethene	J	0.39	ug/L	1	4/9/2025			SW846-8260D	=
Trichlorofluoromethane	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Vinyl acetate	U	5	ug/L	5	4/9/2025			SW846-8260D	=
Vinyl chloride	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Dissolved Solids		270	mg/L	10	4/9/2025			EPA-160.1	=
Chemical Oxygen Demand (COD)	U	20	mg/L	20	4/9/2025			EPA-410.4	=
Cyanide	UN1	0.2	mg/L	0.2	4/9/2025			SW846-9012B	=
Total Organic Halides (TOX)	J	9.4	ug/L	10	4/9/2025			SW846-9020B	=
Total Organic Carbon (TOC)	J	0.486	mg/L	2	4/9/2025			SW846-9060A	=

Paducah OREIS
GROUNDWATER MONITORING REPORT

Facility: C-746-U Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045

Sampling Point: MW367 DOWN **RGA Type:** LRGA **Period:** 2nd Quarter 2025

AKGWA Well Tag #: 8004-4793 **SAMPLE ID:** MW367UG3-25 Sample Type: REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
Iodide	U	0.5	mg/L	0.5	4/9/2025			EPA-300.0	=
Bromide	W	0.427	mg/L	0.2	4/9/2025			SW846-9056A	=
Chloride	J	35.9	mg/L	250	4/9/2025			SW846-9056A	=
Fluoride	J	0.119	mg/L	4	4/9/2025			SW846-9056A	=
Nitrate as Nitrogen	J	0.383	mg/L	10	4/9/2025			SW846-9056A	=
Sulfate		48.5	mg/L	2	4/9/2025			SW846-9056A	=
Barometric Pressure Reading		30.16	Inches/Hg		4/9/2025			FS	X
Conductivity		490	µmhos/cm		4/9/2025			FS	X
Depth to Water		43.05	ft		4/9/2025			FS	X
Dissolved Oxygen		3.05	mg/L		4/9/2025			FS	X
Eh (approx)		418	mV		4/9/2025			FS	X
pH		6.08	Std Unit		4/9/2025			FS	X
Temperature		61.2	deg F		4/9/2025			FS	X
Turbidity		4.22	NTU		4/9/2025			FS	X
Aluminum	U	0.05	mg/L	0.05	4/9/2025			SW846-6020B	=
Antimony	U	0.003	mg/L	0.003	4/9/2025			SW846-6020B	=
Arsenic	U	0.005	mg/L	0.005	4/9/2025			SW846-6020B	=
Barium		0.134	mg/L	0.004	4/9/2025			SW846-6020B	=
Beryllium	U	0.0005	mg/L	0.0005	4/9/2025			SW846-6020B	=
Boron		0.0599	mg/L	0.015	4/9/2025			SW846-6020B	=
Cadmium	U	0.001	mg/L	0.001	4/9/2025			SW846-6020B	=
Calcium		28.7	mg/L	0.2	4/9/2025			SW846-6020B	=
Chromium	U	0.01	mg/L	0.01	4/9/2025			SW846-6020B	=
Cobalt	J	0.000474	mg/L	0.001	4/9/2025			SW846-6020B	=
Copper	J	0.00105	mg/L	0.002	4/9/2025			SW846-6020B	=
Iron		0.261	mg/L	0.1	4/9/2025			SW846-6020B	=
Lead	U	0.002	mg/L	0.002	4/9/2025			SW846-6020B	=
Magnesium		12.8	mg/L	0.03	4/9/2025			SW846-6020B	=
Manganese		0.225	mg/L	0.005	4/9/2025			SW846-6020B	=
Molybdenum	U	0.001	mg/L	0.001	4/9/2025			SW846-6020B	=
Nickel	J	0.000967	mg/L	0.002	4/9/2025			SW846-6020B	=
Potassium		3.05	mg/L	0.3	4/9/2025			SW846-6020B	=
Rhodium	U	0.005	mg/L	0.005	4/9/2025			SW846-6020B	=
Selenium	U	0.005	mg/L	0.005	4/9/2025			SW846-6020B	=
Silver	U	0.001	mg/L	0.001	4/9/2025			SW846-6020B	=
Sodium		37.2	mg/L	0.25	4/9/2025			SW846-6020B	=
Tantalum	U	0.005	mg/L	0.005	4/9/2025			SW846-6020B	=
Thallium	U	0.002	mg/L	0.002	4/9/2025			SW846-6020B	=
Uranium	U	0.0002	mg/L	0.0002	4/9/2025			SW846-6020B	=
Vanadium	U	0.02	mg/L	0.02	4/9/2025			SW846-6020B	=
Zinc	J	0.00565	mg/L	0.02	4/9/2025			SW846-6020B	=
Mercury	U	0.0002	mg/L	0.0002	4/9/2025			SW846-7470A	=
Barium, Dissolved		0.141	mg/L	0.004	4/9/2025			SW846-6020B	J
Chromium, Dissolved	U	0.01	mg/L	0.01	4/9/2025			SW846-6020B	UJ
Uranium, Dissolved	U	0.0002	mg/L	0.0002	4/9/2025			SW846-6020B	UJ
PCB-1016	UY2	0.104	ug/L	0.104	4/9/2025			SW846-8082A	UJ
PCB-1221	U	0.104	ug/L	0.104	4/9/2025			SW846-8082A	=

Paducah OREIS
GROUNDWATER MONITORING REPORT

Facility: C-746-U Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045

Sampling Point: MW367 DOWN **RGA Type:** LRGA **Period:** 2nd Quarter 2025

AKGWA Well Tag #: 8004-4793 **SAMPLE ID:** MW367UG3-25 Sample Type: REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
PCB-1232	U	0.104	ug/L	0.104	4/9/2025			SW846-8082A	=
PCB-1242	U	0.104	ug/L	0.104	4/9/2025			SW846-8082A	=
PCB-1248	U	0.104	ug/L	0.104	4/9/2025			SW846-8082A	=
PCB-1254	U	0.104	ug/L	0.104	4/9/2025			SW846-8082A	=
PCB-1260	UY1Y2	0.104	ug/L	0.104	4/9/2025			SW846-8082A	UJ
PCB-1268	U	0.104	ug/L	0.104	4/9/2025			SW846-8082A	=
Polychlorinated biphenyl	UY1Y2	0.104	ug/L	0.104	4/9/2025			SW846-8082A	UJ
Radium-226	U	0.641	pCi/L	0.732	4/9/2025	0.592	0.597	AN-1418	=
Radium-228	U	4.07	pCi/L	4.94	4/9/2025	3.1	3.3	EPA-904.0-M	=
Strontium-90	U	-0.8	pCi/L	2.98	4/9/2025	1.41	1.41	EPA-905.0-M	=
Tritium	U	28.7	pCi/L	215	4/9/2025	122	122	EPA-906.0-M	=
Technetium-99		56	pCi/L	38.1	4/9/2025	24.6	25.4	HASL 300, Tc-02-RC M	=
Thorium-230	U	1.13	pCi/L	1.39	4/9/2025	1.07	1.08	HASL 300, Th-01-RC M	=
Thorium-232	U	0.155	pCi/L	1.15	4/9/2025	0.604	0.604	HASL 300, Th-01-RC M	=
Alpha activity	U	0.694	pCi/L	8.06	4/9/2025	3.76	3.76	SW846-9310	=
Beta activity		22.1	pCi/L	11.7	4/9/2025	8.28	9.06	SW846-9310	=
1,2-Dibromo-3-chloropropane	UY2	0.019	ug/L	0.019	4/9/2025			SW846-8011	=
1,1,1,2-Tetrachloroethane	U	1	ug/L	1	4/9/2025			SW846-8260D	=
1,1,1-Trichloroethane	U	1	ug/L	1	4/9/2025			SW846-8260D	=
1,1,2,2-Tetrachloroethane	U	1	ug/L	1	4/9/2025			SW846-8260D	=
1,1,2-Trichloroethane	U	1	ug/L	1	4/9/2025			SW846-8260D	=
1,1-Dichloroethane	U	1	ug/L	1	4/9/2025			SW846-8260D	=
1,1-Dichloroethene	U	1	ug/L	1	4/9/2025			SW846-8260D	=
1,2,3-Trichloropropane	U	1	ug/L	1	4/9/2025			SW846-8260D	=
1,2-Dibromoethane	U	1	ug/L	1	4/9/2025			SW846-8260D	=
1,2-Dichlorobenzene	U	1	ug/L	1	4/9/2025			SW846-8260D	=
1,2-Dichloroethane	U	1	ug/L	1	4/9/2025			SW846-8260D	=
1,2-Dichloropropane	U	1	ug/L	1	4/9/2025			SW846-8260D	=
1,4-Dichlorobenzene	U	1	ug/L	1	4/9/2025			SW846-8260D	=
2-Butanone	U	5	ug/L	5	4/9/2025			SW846-8260D	=
2-Hexanone	U	5	ug/L	5	4/9/2025			SW846-8260D	=
4-Methyl-2-pentanone	U	5	ug/L	5	4/9/2025			SW846-8260D	=
Acetone	U	5	ug/L	5	4/9/2025			SW846-8260D	=
Acrolein	U	5	ug/L	5	4/9/2025			SW846-8260D	UJ
Acrylonitrile	U	5	ug/L	5	4/9/2025			SW846-8260D	=
Benzene	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Bromochloromethane	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Bromodichloromethane	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Bromoform	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Bromomethane	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Carbon disulfide	U	5	ug/L	5	4/9/2025			SW846-8260D	=
Carbon tetrachloride	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Chlorobenzene	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Chloroethane	U	1	ug/L	1	4/9/2025			SW846-8260D	=

Paducah OREIS
GROUNDWATER MONITORING REPORT

Facility: C-746-U Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045

Sampling Point: MW367 DOWN **RGA Type:** LRGA **Period:** 2nd Quarter 2025

AKGWA Well Tag #: 8004-4793 **SAMPLE ID:** MW367UG3-25 Sample Type: REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
Chloroform	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Chloromethane	U	1	ug/L	1	4/9/2025			SW846-8260D	=
cis-1,2-Dichloroethene	U	1	ug/L	1	4/9/2025			SW846-8260D	=
cis-1,3-Dichloropropene	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Dibromochloromethane	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Dibromomethane	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Ethylbenzene	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Iodomethane	U	5	ug/L	5	4/9/2025			SW846-8260D	=
Methylene chloride	U	5	ug/L	5	4/9/2025			SW846-8260D	=
Styrene	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Tetrachloroethene	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Toluene	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Total Xylene	U	3	ug/L	3	4/9/2025			SW846-8260D	=
trans-1,2-Dichloroethene	U	1	ug/L	1	4/9/2025			SW846-8260D	=
trans-1,3-Dichloropropene	U	1	ug/L	1	4/9/2025			SW846-8260D	=
trans-1,4-Dichloro-2-butene	UY1	5	ug/L	5	4/9/2025			SW846-8260D	UJ
Trichloroethene		3.39	ug/L	1	4/9/2025			SW846-8260D	=
Trichlorofluoromethane	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Vinyl acetate	U	5	ug/L	5	4/9/2025			SW846-8260D	=
Vinyl chloride	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Dissolved Solids		230	mg/L	10	4/9/2025			EPA-160.1	=
Chemical Oxygen Demand (COD)	U	20	mg/L	20	4/9/2025			EPA-410.4	=
Cyanide	UN1	0.2	mg/L	0.2	4/9/2025			SW846-9012B	=
Total Organic Halides (TOX)	U	10	ug/L	10	4/9/2025			SW846-9020B	=
Total Organic Carbon (TOC)	J	0.487	mg/L	2	4/9/2025			SW846-9060A	=

Paducah OREIS
GROUNDWATER MONITORING REPORT

Facility: C-746-U Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045

Sampling Point: MW368 DOWN **RGA Type:** UCRS **Period:** 2nd Quarter 2025

AKGWA Well Tag #: 8004-0983 **SAMPLE ID:** MW368UG3-25 Sample Type: REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
Iodide	U	0.5	mg/L	0.5	4/9/2025			EPA-300.0	=
Bromide	UW	0.2	mg/L	0.2	4/9/2025			SW846-9056A	=
Chloride	J	1.02	mg/L	250	4/9/2025			SW846-9056A	=
Fluoride	J	0.208	mg/L	4	4/9/2025			SW846-9056A	=
Nitrate as Nitrogen	U	10	mg/L	10	4/9/2025			SW846-9056A	=
Sulfate		40.4	mg/L	4	4/9/2025			SW846-9056A	=
Barometric Pressure Reading		30.16	Inches/Hg		4/9/2025			FS	X
Conductivity		464	µmhos/cm		4/9/2025			FS	X
Depth to Water		11.12	ft		4/9/2025			FS	X
Dissolved Oxygen		2.24	mg/L		4/9/2025			FS	X
Eh (approx)		387	mV		4/9/2025			FS	X
pH		5.98	Std Unit		4/9/2025			FS	X
Temperature		61.6	deg F		4/9/2025			FS	X
Turbidity		6.59	NTU		4/9/2025			FS	X
Aluminum	J	0.0299	mg/L	0.05	4/9/2025			SW846-6020B	=
Antimony	U	0.003	mg/L	0.003	4/9/2025			SW846-6020B	=
Arsenic	J	0.0022	mg/L	0.005	4/9/2025			SW846-6020B	=
Barium		0.0435	mg/L	0.004	4/9/2025			SW846-6020B	=
Beryllium	U	0.0005	mg/L	0.0005	4/9/2025			SW846-6020B	=
Boron	U	0.015	mg/L	0.015	4/9/2025			SW846-6020B	=
Cadmium	U	0.001	mg/L	0.001	4/9/2025			SW846-6020B	=
Calcium		43.5	mg/L	0.2	4/9/2025			SW846-6020B	=
Chromium	U	0.01	mg/L	0.01	4/9/2025			SW846-6020B	=
Cobalt	U	0.001	mg/L	0.001	4/9/2025			SW846-6020B	=
Copper	J	0.000488	mg/L	0.002	4/9/2025			SW846-6020B	=
Iron	U	0.1	mg/L	0.1	4/9/2025			SW846-6020B	=
Lead	U	0.002	mg/L	0.002	4/9/2025			SW846-6020B	=
Magnesium		9.46	mg/L	0.03	4/9/2025			SW846-6020B	=
Manganese	J	0.00179	mg/L	0.005	4/9/2025			SW846-6020B	=
Molybdenum	J	0.000462	mg/L	0.001	4/9/2025			SW846-6020B	=
Nickel	U	0.002	mg/L	0.002	4/9/2025			SW846-6020B	=
Potassium	J	0.209	mg/L	0.3	4/9/2025			SW846-6020B	=
Rhodium	U	0.005	mg/L	0.005	4/9/2025			SW846-6020B	=
Selenium	U	0.005	mg/L	0.005	4/9/2025			SW846-6020B	=
Silver	U	0.001	mg/L	0.001	4/9/2025			SW846-6020B	=
Sodium		29.7	mg/L	0.25	4/9/2025			SW846-6020B	=
Tantalum	U	0.005	mg/L	0.005	4/9/2025			SW846-6020B	=
Thallium	U	0.002	mg/L	0.002	4/9/2025			SW846-6020B	=
Uranium		0.000219	mg/L	0.0002	4/9/2025			SW846-6020B	=
Vanadium	J	0.00331	mg/L	0.02	4/9/2025			SW846-6020B	=
Zinc	U	0.02	mg/L	0.02	4/9/2025			SW846-6020B	=
Mercury	U	0.0002	mg/L	0.0002	4/9/2025			SW846-7470A	=
Barium, Dissolved		0.0433	mg/L	0.004	4/9/2025			SW846-6020B	J
Chromium, Dissolved	U	0.01	mg/L	0.01	4/9/2025			SW846-6020B	UJ
Uranium, Dissolved		0.000207	mg/L	0.0002	4/9/2025			SW846-6020B	J
PCB-1016	UY2	0.0985	ug/L	0.0985	4/9/2025			SW846-8082A	UJ
PCB-1221	U	0.0985	ug/L	0.0985	4/9/2025			SW846-8082A	=

Paducah OREIS
GROUNDWATER MONITORING REPORT

Facility: C-746-U Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045

Sampling Point: MW368 DOWN **RGA Type:** UCRS **Period:** 2nd Quarter 2025

AKGWA Well Tag #: 8004-0983 **SAMPLE ID:** MW368UG3-25 Sample Type: REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
PCB-1232	U	0.0985	ug/L	0.0985	4/9/2025			SW846-8082A	=
PCB-1242	U	0.0985	ug/L	0.0985	4/9/2025			SW846-8082A	=
PCB-1248	U	0.0985	ug/L	0.0985	4/9/2025			SW846-8082A	=
PCB-1254	U	0.0985	ug/L	0.0985	4/9/2025			SW846-8082A	=
PCB-1260	UY1Y2	0.0985	ug/L	0.0985	4/9/2025			SW846-8082A	UJ
PCB-1268	U	0.0985	ug/L	0.0985	4/9/2025			SW846-8082A	=
Polychlorinated biphenyl	UY1Y2	0.0985	ug/L	0.0985	4/9/2025			SW846-8082A	UJ
Radium-226	U	0.256	pCi/L	0.671	4/9/2025	0.399	0.401	AN-1418	=
Radium-228	U	-0.938	pCi/L	4.7	4/9/2025	2.2	2.2	EPA-904.0-M	=
Strontium-90	U	-0.515	pCi/L	2.76	4/9/2025	1.32	1.32	EPA-905.0-M	=
Tritium	U	-19.4	pCi/L	222	4/9/2025	122	122	EPA-906.0-M	=
Technetium-99	U	-5.92	pCi/L	21.7	4/9/2025	12	12	HASL 300, Tc-02-RC M	=
Thorium-230	U	-0.0945	pCi/L	2.12	4/9/2025	0.952	0.953	HASL 300, Th-01-RC M	=
Thorium-232	U	-0.409	pCi/L	1.65	4/9/2025	0.488	0.489	HASL 300, Th-01-RC M	=
Alpha activity	U	3.06	pCi/L	8.17	4/9/2025	4.6	4.63	SW846-9310	=
Beta activity	U	-1.05	pCi/L	7.54	4/9/2025	3.67	3.67	SW846-9310	=
1,2-Dibromo-3-chloropropane	UY2	0.0189	ug/L	0.0189	4/9/2025			SW846-8011	=
1,1,1,2-Tetrachloroethane	U	1	ug/L	1	4/9/2025			SW846-8260D	=
1,1,1-Trichloroethane	U	1	ug/L	1	4/9/2025			SW846-8260D	=
1,1,2,2-Tetrachloroethane	U	1	ug/L	1	4/9/2025			SW846-8260D	=
1,1,2-Trichloroethane	U	1	ug/L	1	4/9/2025			SW846-8260D	=
1,1-Dichloroethane	U	1	ug/L	1	4/9/2025			SW846-8260D	=
1,1-Dichloroethene	U	1	ug/L	1	4/9/2025			SW846-8260D	=
1,2,3-Trichloropropane	U	1	ug/L	1	4/9/2025			SW846-8260D	=
1,2-Dibromoethane	U	1	ug/L	1	4/9/2025			SW846-8260D	=
1,2-Dichlorobenzene	U	1	ug/L	1	4/9/2025			SW846-8260D	=
1,2-Dichloroethane	U	1	ug/L	1	4/9/2025			SW846-8260D	=
1,2-Dichloropropane	U	1	ug/L	1	4/9/2025			SW846-8260D	=
1,4-Dichlorobenzene	U	1	ug/L	1	4/9/2025			SW846-8260D	=
2-Butanone	U	5	ug/L	5	4/9/2025			SW846-8260D	=
2-Hexanone	U	5	ug/L	5	4/9/2025			SW846-8260D	=
4-Methyl-2-pentanone	U	5	ug/L	5	4/9/2025			SW846-8260D	=
Acetone	U	5	ug/L	5	4/9/2025			SW846-8260D	=
Acrolein	U	5	ug/L	5	4/9/2025			SW846-8260D	UJ
Acrylonitrile	U	5	ug/L	5	4/9/2025			SW846-8260D	=
Benzene	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Bromochloromethane	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Bromodichloromethane	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Bromoform	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Bromomethane	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Carbon disulfide	U	5	ug/L	5	4/9/2025			SW846-8260D	=
Carbon tetrachloride	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Chlorobenzene	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Chloroethane	U	1	ug/L	1	4/9/2025			SW846-8260D	=

Paducah OREIS
GROUNDWATER MONITORING REPORT

Facility: C-746-U Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045

Sampling Point: MW368 DOWN **RGA Type:** UCRS **Period:** 2nd Quarter 2025

AKGWA Well Tag #: 8004-0983 **SAMPLE ID:** MW368UG3-25 Sample Type: REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
Chloroform	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Chloromethane	U	1	ug/L	1	4/9/2025			SW846-8260D	=
cis-1,2-Dichloroethene	U	1	ug/L	1	4/9/2025			SW846-8260D	=
cis-1,3-Dichloropropene	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Dibromochloromethane	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Dibromomethane	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Ethylbenzene	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Iodomethane	U	5	ug/L	5	4/9/2025			SW846-8260D	=
Methylene chloride	U	5	ug/L	5	4/9/2025			SW846-8260D	=
Styrene	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Tetrachloroethene	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Toluene	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Total Xylene	U	3	ug/L	3	4/9/2025			SW846-8260D	=
trans-1,2-Dichloroethene	U	1	ug/L	1	4/9/2025			SW846-8260D	=
trans-1,3-Dichloropropene	U	1	ug/L	1	4/9/2025			SW846-8260D	=
trans-1,4-Dichloro-2-butene	UY1	5	ug/L	5	4/9/2025			SW846-8260D	UJ
Trichloroethene	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Trichlorofluoromethane	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Vinyl acetate	U	5	ug/L	5	4/9/2025			SW846-8260D	=
Vinyl chloride	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Dissolved Solids		235	mg/L	10	4/9/2025			EPA-160.1	=
Chemical Oxygen Demand (COD)		34.5	mg/L	20	4/9/2025			EPA-410.4	=
Cyanide	UN1	0.2	mg/L	0.2	4/9/2025			SW846-9012B	=
Total Organic Halides (TOX)	U	10	ug/L	10	4/9/2025			SW846-9020B	=
Total Organic Carbon (TOC)	J	0.767	mg/L	2	4/9/2025			SW846-9060A	=

Paducah OREIS
GROUNDWATER MONITORING REPORT

Facility: C-746-U Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045

Sampling Point: MW369 UP **RGA Type:** URGA **Period:** 2nd Quarter 2025

AKGWA Well Tag #: 8004-4820 **SAMPLE ID:** MW369UG3-25 Sample Type: REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
Iodide	U	0.5	mg/L	0.5	4/10/2025			EPA-300.0	=
Bromide		0.471	mg/L	0.2	4/10/2025			SW846-9056A	=
Chloride	J	36.4	mg/L	250	4/10/2025			SW846-9056A	=
Fluoride	J	0.199	mg/L	4	4/10/2025			SW846-9056A	=
Nitrate as Nitrogen	J	1.04	mg/L	10	4/10/2025			SW846-9056A	=
Sulfate		18	mg/L	0.4	4/10/2025			SW846-9056A	=
Barometric Pressure Reading		29.99	Inches/Hg		4/10/2025			FS	X
Conductivity		387	µmhos/cm		4/10/2025			FS	X
Depth to Water		37.19	ft		4/10/2025			FS	X
Dissolved Oxygen		2.4	mg/L		4/10/2025			FS	X
Eh (approx)		425	mV		4/10/2025			FS	X
pH		6.08	Std Unit		4/10/2025			FS	X
Temperature		59.7	deg F		4/10/2025			FS	X
Turbidity		5.27	NTU		4/10/2025			FS	X
Aluminum	U	0.05	mg/L	0.05	4/10/2025			SW846-6020B	=
Antimony	U	0.003	mg/L	0.003	4/10/2025			SW846-6020B	=
Arsenic	U	0.005	mg/L	0.005	4/10/2025			SW846-6020B	=
Barium		0.505	mg/L	0.004	4/10/2025			SW846-6020B	=
Beryllium	U	0.0005	mg/L	0.0005	4/10/2025			SW846-6020B	=
Boron		0.0355	mg/L	0.015	4/10/2025			SW846-6020B	=
Cadmium	U	0.001	mg/L	0.001	4/10/2025			SW846-6020B	=
Calcium		25.3	mg/L	0.2	4/10/2025			SW846-6020B	=
Chromium	U	0.01	mg/L	0.01	4/10/2025			SW846-6020B	=
Cobalt		0.00139	mg/L	0.001	4/10/2025			SW846-6020B	=
Copper	J	0.00138	mg/L	0.002	4/10/2025			SW846-6020B	=
Iron	J	0.0379	mg/L	0.1	4/10/2025			SW846-6020B	=
Lead	U	0.002	mg/L	0.002	4/10/2025			SW846-6020B	=
Magnesium		10.8	mg/L	0.03	4/10/2025			SW846-6020B	=
Manganese		0.0102	mg/L	0.005	4/10/2025			SW846-6020B	=
Molybdenum	U	0.001	mg/L	0.001	4/10/2025			SW846-6020B	=
Nickel	J	0.00153	mg/L	0.002	4/10/2025			SW846-6020B	=
Potassium		0.994	mg/L	0.3	4/10/2025			SW846-6020B	=
Rhodium	U	0.005	mg/L	0.005	4/10/2025			SW846-6020B	=
Selenium	J	0.00183	mg/L	0.005	4/10/2025			SW846-6020B	=
Silver	U	0.001	mg/L	0.001	4/10/2025			SW846-6020B	=
Sodium		48.6	mg/L	0.25	4/10/2025			SW846-6020B	=
Tantalum	U	0.005	mg/L	0.005	4/10/2025			SW846-6020B	=
Thallium	U	0.002	mg/L	0.002	4/10/2025			SW846-6020B	=
Uranium	UN	0.0002	mg/L	0.0002	4/10/2025			SW846-6020B	=
Vanadium	U	0.02	mg/L	0.02	4/10/2025			SW846-6020B	=
Zinc	J	0.0057	mg/L	0.02	4/10/2025			SW846-6020B	=
Mercury	U	0.0002	mg/L	0.0002	4/10/2025			SW846-7470A	=
Barium, Dissolved		0.525	mg/L	0.004	4/10/2025			SW846-6020B	J
Chromium, Dissolved	U	0.01	mg/L	0.01	4/10/2025			SW846-6020B	UJ
Uranium, Dissolved	JN	0.00016	mg/L	0.0002	4/10/2025			SW846-6020B	J
PCB-1016	UY2	0.1	ug/L	0.1	4/10/2025			SW846-8082A	UJ
PCB-1221	U	0.1	ug/L	0.1	4/10/2025			SW846-8082A	=

Paducah OREIS
GROUNDWATER MONITORING REPORT

Facility: C-746-U Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045

Sampling Point: MW369 UP **RGA Type:** URGA **Period:** 2nd Quarter 2025

AKGWA Well Tag #: 8004-4820 **SAMPLE ID:** MW369UG3-25 Sample Type: REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
PCB-1232	U	0.1	ug/L	0.1	4/10/2025			SW846-8082A	=
PCB-1242	U	0.1	ug/L	0.1	4/10/2025			SW846-8082A	=
PCB-1248	U	0.1	ug/L	0.1	4/10/2025			SW846-8082A	=
PCB-1254	U	0.1	ug/L	0.1	4/10/2025			SW846-8082A	=
PCB-1260	UY1Y2	0.1	ug/L	0.1	4/10/2025			SW846-8082A	UJ
PCB-1268	U	0.1	ug/L	0.1	4/10/2025			SW846-8082A	=
Polychlorinated biphenyl	UY1Y2	0.1	ug/L	0.1	4/10/2025			SW846-8082A	UJ
Radium-226	U	0.209	pCi/L	1.45	4/10/2025	0.832	0.833	AN-1418	=
Radium-228	U	0.382	pCi/L	4.68	4/10/2025	2.5	2.5	EPA-904.0-M	=
Strontium-90	U	0.924	pCi/L	2.65	4/10/2025	1.52	1.53	EPA-905.0-M	=
Tritium	U	-25.7	pCi/L	234	4/10/2025	130	130	EPA-906.0-M	=
Technetium-99		29.6	pCi/L	20.3	4/10/2025	13	13.4	HASL 300, Tc-02-RC M	=
Thorium-230	U	0.576	pCi/L	3.32	4/10/2025	1.79	1.8	HASL 300, Th-01-RC M	=
Thorium-232	U	-0.152	pCi/L	2.28	4/10/2025	0.929	0.931	HASL 300, Th-01-RC M	=
Alpha activity	U	-1.35	pCi/L	7.3	4/10/2025	2.7	2.7	SW846-9310	=
Beta activity		24.9	pCi/L	10.6	4/10/2025	8.16	9.15	SW846-9310	J
1,2-Dibromo-3-chloropropane	U	0.0189	ug/L	0.0189	4/10/2025			SW846-8011	=
1,1,1,2-Tetrachloroethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
1,1,1-Trichloroethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
1,1,2,2-Tetrachloroethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
1,1,2-Trichloroethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
1,1-Dichloroethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
1,1-Dichloroethene	U	1	ug/L	1	4/10/2025			SW846-8260D	=
1,2,3-Trichloropropane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
1,2-Dibromoethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
1,2-Dichlorobenzene	U	1	ug/L	1	4/10/2025			SW846-8260D	=
1,2-Dichloroethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
1,2-Dichloropropane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
1,4-Dichlorobenzene	U	1	ug/L	1	4/10/2025			SW846-8260D	=
2-Butanone	U	5	ug/L	5	4/10/2025			SW846-8260D	=
2-Hexanone	U	5	ug/L	5	4/10/2025			SW846-8260D	=
4-Methyl-2-pentanone	U	5	ug/L	5	4/10/2025			SW846-8260D	=
Acetone	U	5	ug/L	5	4/10/2025			SW846-8260D	=
Acrolein	U	5	ug/L	5	4/10/2025			SW846-8260D	UJ
Acrylonitrile	U	5	ug/L	5	4/10/2025			SW846-8260D	=
Benzene	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Bromochloromethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Bromodichloromethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Bromoform	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Bromomethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Carbon disulfide	U	5	ug/L	5	4/10/2025			SW846-8260D	=
Carbon tetrachloride	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Chlorobenzene	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Chloroethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=

Paducah OREIS
GROUNDWATER MONITORING REPORT

Facility: C-746-U Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045

Sampling Point: MW369 UP **RGA Type:** URGA **Period:** 2nd Quarter 2025

AKGWA Well Tag #: 8004-4820 **SAMPLE ID:** MW369UG3-25 Sample Type: REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
Chloroform	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Chloromethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
cis-1,2-Dichloroethene	U	1	ug/L	1	4/10/2025			SW846-8260D	=
cis-1,3-Dichloropropene	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Dibromochloromethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Dibromomethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Ethylbenzene	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Iodomethane	U	5	ug/L	5	4/10/2025			SW846-8260D	=
Methylene chloride	J	0.66	ug/L	5	4/10/2025			SW846-8260D	=
Styrene	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Tetrachloroethene	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Toluene	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Total Xylene	U	3	ug/L	3	4/10/2025			SW846-8260D	=
trans-1,2-Dichloroethene	U	1	ug/L	1	4/10/2025			SW846-8260D	=
trans-1,3-Dichloropropene	U	1	ug/L	1	4/10/2025			SW846-8260D	=
trans-1,4-Dichloro-2-butene	UY1	5	ug/L	5	4/10/2025			SW846-8260D	UJ
Trichloroethene		1.51	ug/L	1	4/10/2025			SW846-8260D	=
Trichlorofluoromethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Vinyl acetate	U	5	ug/L	5	4/10/2025			SW846-8260D	=
Vinyl chloride	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Dissolved Solids		235	mg/L	10	4/10/2025			EPA-160.1	=
Chemical Oxygen Demand (COD)	U	20	mg/L	20	4/10/2025			EPA-410.4	=
Cyanide	UN1	0.2	mg/L	0.2	4/10/2025			SW846-9012B	=
Total Organic Halides (TOX)	BJ	3.6	ug/L	10	4/10/2025			SW846-9020B	U
Total Organic Carbon (TOC)	J	1.03	mg/L	2	4/10/2025			SW846-9060A	=

Paducah OREIS
GROUNDWATER MONITORING REPORT

Facility: C-746-U Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045

Sampling Point: MW370 UP **RGA Type:** LRGA **Period:** 2nd Quarter 2025

AKGWA Well Tag #: 8004-4818 **SAMPLE ID:** MW370UG3-25 Sample Type: REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
Iodide	U	0.5	mg/L	0.5	4/10/2025			EPA-300.0	=
Bromide		0.524	mg/L	0.2	4/10/2025			SW846-9056A	=
Chloride	J	41.5	mg/L	250	4/10/2025			SW846-9056A	=
Fluoride	J	0.183	mg/L	4	4/10/2025			SW846-9056A	=
Nitrate as Nitrogen	J	1.07	mg/L	10	4/10/2025			SW846-9056A	=
Sulfate		20.2	mg/L	2	4/10/2025			SW846-9056A	=
Barometric Pressure Reading		30.02	Inches/Hg		4/10/2025			FS	X
Conductivity		449	µmhos/cm		4/10/2025			FS	X
Depth to Water		38.06	ft		4/10/2025			FS	X
Dissolved Oxygen		4.54	mg/L		4/10/2025			FS	X
Eh (approx)		404	mV		4/10/2025			FS	X
pH		6.01	Std Unit		4/10/2025			FS	X
Temperature		60.9	deg F		4/10/2025			FS	X
Turbidity		4.33	NTU		4/10/2025			FS	X
Aluminum	U	0.05	mg/L	0.05	4/10/2025			SW846-6020B	=
Antimony	U	0.003	mg/L	0.003	4/10/2025			SW846-6020B	=
Arsenic	U	0.005	mg/L	0.005	4/10/2025			SW846-6020B	=
Barium		0.203	mg/L	0.004	4/10/2025			SW846-6020B	=
Beryllium	U	0.0005	mg/L	0.0005	4/10/2025			SW846-6020B	=
Boron		0.0859	mg/L	0.015	4/10/2025			SW846-6020B	=
Cadmium	U	0.001	mg/L	0.001	4/10/2025			SW846-6020B	=
Calcium		29.5	mg/L	0.2	4/10/2025			SW846-6020B	=
Chromium	U	0.01	mg/L	0.01	4/10/2025			SW846-6020B	=
Cobalt	U	0.001	mg/L	0.001	4/10/2025			SW846-6020B	=
Copper	J	0.00085	mg/L	0.002	4/10/2025			SW846-6020B	=
Iron	U	0.1	mg/L	0.1	4/10/2025			SW846-6020B	=
Lead	U	0.002	mg/L	0.002	4/10/2025			SW846-6020B	=
Magnesium		12.4	mg/L	0.03	4/10/2025			SW846-6020B	=
Manganese	J	0.00373	mg/L	0.005	4/10/2025			SW846-6020B	=
Molybdenum	U	0.001	mg/L	0.001	4/10/2025			SW846-6020B	=
Nickel	U	0.002	mg/L	0.002	4/10/2025			SW846-6020B	=
Potassium		2.44	mg/L	0.3	4/10/2025			SW846-6020B	=
Rhodium	U	0.005	mg/L	0.005	4/10/2025			SW846-6020B	=
Selenium	U	0.005	mg/L	0.005	4/10/2025			SW846-6020B	=
Silver	U	0.001	mg/L	0.001	4/10/2025			SW846-6020B	=
Sodium		45	mg/L	0.25	4/10/2025			SW846-6020B	=
Tantalum	U	0.005	mg/L	0.005	4/10/2025			SW846-6020B	=
Thallium	U	0.002	mg/L	0.002	4/10/2025			SW846-6020B	=
Uranium	UN	0.0002	mg/L	0.0002	4/10/2025			SW846-6020B	=
Vanadium	U	0.02	mg/L	0.02	4/10/2025			SW846-6020B	=
Zinc	J	0.0053	mg/L	0.02	4/10/2025			SW846-6020B	=
Mercury	U	0.0002	mg/L	0.0002	4/10/2025			SW846-7470A	=
Barium, Dissolved		0.207	mg/L	0.004	4/10/2025			SW846-6020B	J
Chromium, Dissolved	U	0.01	mg/L	0.01	4/10/2025			SW846-6020B	UJ
Uranium, Dissolved	UN	0.0002	mg/L	0.0002	4/10/2025			SW846-6020B	UJ
PCB-1016	UY2	0.0971	ug/L	0.0971	4/10/2025			SW846-8082A	UJ
PCB-1221	U	0.0971	ug/L	0.0971	4/10/2025			SW846-8082A	=

Paducah OREIS
GROUNDWATER MONITORING REPORT

Facility: C-746-U Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045

Sampling Point: MW370 UP **RGA Type:** LRGA **Period:** 2nd Quarter 2025

AKGWA Well Tag #: 8004-4818 **SAMPLE ID:** MW370UG3-25 Sample Type: REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
PCB-1232	U	0.0971	ug/L	0.0971	4/10/2025			SW846-8082A	=
PCB-1242	U	0.0971	ug/L	0.0971	4/10/2025			SW846-8082A	=
PCB-1248	U	0.0971	ug/L	0.0971	4/10/2025			SW846-8082A	=
PCB-1254	U	0.0971	ug/L	0.0971	4/10/2025			SW846-8082A	=
PCB-1260	UY1Y2	0.0971	ug/L	0.0971	4/10/2025			SW846-8082A	UJ
PCB-1268	U	0.0971	ug/L	0.0971	4/10/2025			SW846-8082A	=
Polychlorinated biphenyl	UY1Y2	0.0971	ug/L	0.0971	4/10/2025			SW846-8082A	UJ
Radium-226	U	0.858	pCi/L	1.24	4/10/2025	1.17	1.17	AN-1418	=
Radium-228	U	0.06	pCi/L	4.99	4/10/2025	2.75	2.75	EPA-904.0-M	=
Strontium-90	U	-1.16	pCi/L	2.72	4/10/2025	1.31	1.31	EPA-905.0-M	=
Tritium	U	-77.9	pCi/L	231	4/10/2025	125	125	EPA-906.0-M	=
Technetium-99	U	3.98	pCi/L	20.9	4/10/2025	12.1	12.1	HASL 300, Tc-02-RC M	=
Thorium-230	U	0.837	pCi/L	3.07	4/10/2025	1.78	1.8	HASL 300, Th-01-RC M	=
Thorium-232	U	-0.141	pCi/L	2.05	4/10/2025	0.831	0.833	HASL 300, Th-01-RC M	=
Alpha activity	U	4.35	pCi/L	9.55	4/10/2025	5.62	5.67	SW846-9310	=
Beta activity	U	9.18	pCi/L	11.2	4/10/2025	7.05	7.22	SW846-9310	UJ
1,2-Dibromo-3-chloropropane	U	0.019	ug/L	0.019	4/10/2025			SW846-8011	=
1,1,1,2-Tetrachloroethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
1,1,1-Trichloroethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
1,1,2,2-Tetrachloroethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
1,1,2-Trichloroethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
1,1-Dichloroethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
1,1-Dichloroethene	U	1	ug/L	1	4/10/2025			SW846-8260D	=
1,2,3-Trichloropropane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
1,2-Dibromoethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
1,2-Dichlorobenzene	U	1	ug/L	1	4/10/2025			SW846-8260D	=
1,2-Dichloroethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
1,2-Dichloropropane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
1,4-Dichlorobenzene	U	1	ug/L	1	4/10/2025			SW846-8260D	=
2-Butanone	U	5	ug/L	5	4/10/2025			SW846-8260D	=
2-Hexanone	U	5	ug/L	5	4/10/2025			SW846-8260D	=
4-Methyl-2-pentanone	U	5	ug/L	5	4/10/2025			SW846-8260D	=
Acetone	U	5	ug/L	5	4/10/2025			SW846-8260D	=
Acrolein	U	5	ug/L	5	4/10/2025			SW846-8260D	UJ
Acrylonitrile	U	5	ug/L	5	4/10/2025			SW846-8260D	=
Benzene	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Bromochloromethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Bromodichloromethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Bromoform	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Bromomethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Carbon disulfide	U	5	ug/L	5	4/10/2025			SW846-8260D	=
Carbon tetrachloride	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Chlorobenzene	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Chloroethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=

Paducah OREIS
GROUNDWATER MONITORING REPORT

Facility: C-746-U Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045

Sampling Point: MW370 UP **RGA Type:** LRGA **Period:** 2nd Quarter 2025

AKGWA Well Tag #: 8004-4818 **SAMPLE ID:** MW370UG3-25 Sample Type: REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
Chloroform	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Chloromethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
cis-1,2-Dichloroethene	U	1	ug/L	1	4/10/2025			SW846-8260D	=
cis-1,3-Dichloropropene	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Dibromochloromethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Dibromomethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Ethylbenzene	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Iodomethane	U	5	ug/L	5	4/10/2025			SW846-8260D	=
Methylene chloride	J	0.66	ug/L	5	4/10/2025			SW846-8260D	=
Styrene	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Tetrachloroethene	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Toluene	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Total Xylene	U	3	ug/L	3	4/10/2025			SW846-8260D	=
trans-1,2-Dichloroethene	U	1	ug/L	1	4/10/2025			SW846-8260D	=
trans-1,3-Dichloropropene	U	1	ug/L	1	4/10/2025			SW846-8260D	=
trans-1,4-Dichloro-2-butene	UY1	5	ug/L	5	4/10/2025			SW846-8260D	UJ
Trichloroethene		2	ug/L	1	4/10/2025			SW846-8260D	=
Trichlorofluoromethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Vinyl acetate	U	5	ug/L	5	4/10/2025			SW846-8260D	=
Vinyl chloride	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Dissolved Solids		226	mg/L	10	4/10/2025			EPA-160.1	=
Chemical Oxygen Demand (COD)	U	20	mg/L	20	4/10/2025			EPA-410.4	=
Cyanide	UN1	0.2	mg/L	0.2	4/10/2025			SW846-9012B	=
Total Organic Halides (TOX)	B	12.6	ug/L	10	4/10/2025			SW846-9020B	J
Total Organic Carbon (TOC)	J	1.11	mg/L	2	4/10/2025			SW846-9060A	=

Paducah OREIS
GROUNDWATER MONITORING REPORT

Facility: C-746-U Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045

Sampling Point: MW371 UP **RGA Type:** UCRS **Period:** 2nd Quarter 2025

AKGWA Well Tag #: 8004-4819 **SAMPLE ID:** MW371UG3-25 Sample Type: REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
Iodide	U	0.5	mg/L	0.5	4/10/2025			EPA-300.0	=
Bromide	U	0.2	mg/L	0.2	4/10/2025			SW846-9056A	=
Chloride	J	0.786	mg/L	250	4/10/2025			SW846-9056A	=
Fluoride	J	0.204	mg/L	4	4/10/2025			SW846-9056A	=
Nitrate as Nitrogen	U	10	mg/L	10	4/10/2025			SW846-9056A	=
Sulfate		19.9	mg/L	0.8	4/10/2025			SW846-9056A	=
Barometric Pressure Reading		30.02	Inches/Hg		4/10/2025			FS	X
Conductivity		515	µmhos/cm		4/10/2025			FS	X
Depth to Water		23	ft		4/10/2025			FS	X
Dissolved Oxygen		5.89	mg/L		4/10/2025			FS	X
Eh (approx)		397	mV		4/10/2025			FS	X
pH		6.55	Std Unit		4/10/2025			FS	X
Temperature		61.6	deg F		4/10/2025			FS	X
Turbidity		9.5	NTU		4/10/2025			FS	X
Aluminum	J	0.0429	mg/L	0.05	4/10/2025			SW846-6020B	=
Antimony	U	0.003	mg/L	0.003	4/10/2025			SW846-6020B	=
Arsenic	J	0.00206	mg/L	0.005	4/10/2025			SW846-6020B	=
Barium		0.0971	mg/L	0.004	4/10/2025			SW846-6020B	=
Beryllium	U	0.0005	mg/L	0.0005	4/10/2025			SW846-6020B	=
Boron	J	0.00655	mg/L	0.015	4/10/2025			SW846-6020B	=
Cadmium	U	0.001	mg/L	0.001	4/10/2025			SW846-6020B	=
Calcium		57.6	mg/L	1	4/10/2025			SW846-6020B	=
Chromium	U	0.01	mg/L	0.01	4/10/2025			SW846-6020B	=
Cobalt	U	0.001	mg/L	0.001	4/10/2025			SW846-6020B	=
Copper	J	0.00102	mg/L	0.002	4/10/2025			SW846-6020B	=
Iron	J	0.0438	mg/L	0.1	4/10/2025			SW846-6020B	=
Lead	U	0.002	mg/L	0.002	4/10/2025			SW846-6020B	=
Magnesium		9.03	mg/L	0.03	4/10/2025			SW846-6020B	=
Manganese	J	0.00247	mg/L	0.005	4/10/2025			SW846-6020B	=
Molybdenum	J	0.000539	mg/L	0.001	4/10/2025			SW846-6020B	=
Nickel	J	0.00105	mg/L	0.002	4/10/2025			SW846-6020B	=
Potassium	J	0.219	mg/L	0.3	4/10/2025			SW846-6020B	=
Rhodium	U	0.005	mg/L	0.005	4/10/2025			SW846-6020B	=
Selenium	U	0.005	mg/L	0.005	4/10/2025			SW846-6020B	=
Silver	U	0.001	mg/L	0.001	4/10/2025			SW846-6020B	=
Sodium		11.8	mg/L	0.25	4/10/2025			SW846-6020B	=
Tantalum	U	0.005	mg/L	0.005	4/10/2025			SW846-6020B	=
Thallium	U	0.002	mg/L	0.002	4/10/2025			SW846-6020B	=
Uranium	N	0.00053	mg/L	0.0002	4/10/2025			SW846-6020B	=
Vanadium	J	0.00406	mg/L	0.02	4/10/2025			SW846-6020B	=
Zinc	U	0.02	mg/L	0.02	4/10/2025			SW846-6020B	=
Mercury	U	0.0002	mg/L	0.0002	4/10/2025			SW846-7470A	=
Barium, Dissolved		0.0954	mg/L	0.004	4/10/2025			SW846-6020B	J
Chromium, Dissolved	U	0.01	mg/L	0.01	4/10/2025			SW846-6020B	UJ
Uranium, Dissolved	N	0.000421	mg/L	0.0002	4/10/2025			SW846-6020B	J
PCB-1016	UY2	0.0989	ug/L	0.0989	4/10/2025			SW846-8082A	UJ
PCB-1221	U	0.0989	ug/L	0.0989	4/10/2025			SW846-8082A	=

Paducah OREIS
GROUNDWATER MONITORING REPORT

Facility: C-746-U Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045

Sampling Point: MW371 UP **RGA Type:** UCRS **Period:** 2nd Quarter 2025

AKGWA Well Tag #: 8004-4819 **SAMPLE ID:** MW371UG3-25 Sample Type: REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
PCB-1232	U	0.0989	ug/L	0.0989	4/10/2025			SW846-8082A	=
PCB-1242	U	0.0989	ug/L	0.0989	4/10/2025			SW846-8082A	=
PCB-1248	U	0.0989	ug/L	0.0989	4/10/2025			SW846-8082A	=
PCB-1254	U	0.0989	ug/L	0.0989	4/10/2025			SW846-8082A	=
PCB-1260	UY1Y2	0.0989	ug/L	0.0989	4/10/2025			SW846-8082A	UJ
PCB-1268	U	0.0989	ug/L	0.0989	4/10/2025			SW846-8082A	=
Polychlorinated biphenyl	UY1Y2	0.0989	ug/L	0.0989	4/10/2025			SW846-8082A	UJ
Radium-226	U	0.333	pCi/L	0.485	4/10/2025	0.357	0.36	AN-1418	=
Radium-228	U	2.12	pCi/L	4.71	4/10/2025	2.77	2.83	EPA-904.0-M	=
Strontium-90	U	1.47	pCi/L	2.4	4/10/2025	1.46	1.48	EPA-905.0-M	=
Tritium	U	123	pCi/L	236	4/10/2025	141	143	EPA-906.0-M	=
Technetium-99	U	3.39	pCi/L	21.3	4/10/2025	12.3	12.3	HASL 300, Tc-02-RC M	=
Thorium-230	U	1	pCi/L	2.96	4/10/2025	1.83	1.84	HASL 300, Th-01-RC M	=
Thorium-232	U	0.171	pCi/L	2.38	4/10/2025	1.19	1.2	HASL 300, Th-01-RC M	=
Alpha activity	U	0.73	pCi/L	10.3	4/10/2025	5.17	5.17	SW846-9310	=
Beta activity	U	0.216	pCi/L	10.8	4/10/2025	5.81	5.81	SW846-9310	UJ
1,2-Dibromo-3-chloropropane	U	0.0191	ug/L	0.0191	4/10/2025			SW846-8011	=
1,1,1,2-Tetrachloroethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
1,1,1-Trichloroethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
1,1,2,2-Tetrachloroethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
1,1,2-Trichloroethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
1,1-Dichloroethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
1,1-Dichloroethene	U	1	ug/L	1	4/10/2025			SW846-8260D	=
1,2,3-Trichloropropane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
1,2-Dibromoethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
1,2-Dichlorobenzene	U	1	ug/L	1	4/10/2025			SW846-8260D	=
1,2-Dichloroethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
1,2-Dichloropropane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
1,4-Dichlorobenzene	U	1	ug/L	1	4/10/2025			SW846-8260D	=
2-Butanone	U	5	ug/L	5	4/10/2025			SW846-8260D	=
2-Hexanone	U	5	ug/L	5	4/10/2025			SW846-8260D	=
4-Methyl-2-pentanone	U	5	ug/L	5	4/10/2025			SW846-8260D	=
Acetone	U	5	ug/L	5	4/10/2025			SW846-8260D	=
Acrolein	U	5	ug/L	5	4/10/2025			SW846-8260D	UJ
Acrylonitrile	U	5	ug/L	5	4/10/2025			SW846-8260D	=
Benzene	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Bromochloromethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Bromodichloromethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Bromoform	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Bromomethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Carbon disulfide	U	5	ug/L	5	4/10/2025			SW846-8260D	=
Carbon tetrachloride	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Chlorobenzene	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Chloroethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=

Paducah OREIS
GROUNDWATER MONITORING REPORT

Facility: C-746-U Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045

Sampling Point: MW371 UP **RGA Type:** UCRS **Period:** 2nd Quarter 2025

AKGWA Well Tag #: 8004-4819 **SAMPLE ID:** MW371UG3-25 Sample Type: REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
Chloroform	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Chloromethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
cis-1,2-Dichloroethene	U	1	ug/L	1	4/10/2025			SW846-8260D	=
cis-1,3-Dichloropropene	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Dibromochloromethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Dibromomethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Ethylbenzene	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Iodomethane	U	5	ug/L	5	4/10/2025			SW846-8260D	=
Methylene chloride	J	0.64	ug/L	5	4/10/2025			SW846-8260D	=
Styrene	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Tetrachloroethene	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Toluene	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Total Xylene	U	3	ug/L	3	4/10/2025			SW846-8260D	=
trans-1,2-Dichloroethene	U	1	ug/L	1	4/10/2025			SW846-8260D	=
trans-1,3-Dichloropropene	U	1	ug/L	1	4/10/2025			SW846-8260D	=
trans-1,4-Dichloro-2-butene	UY1	5	ug/L	5	4/10/2025			SW846-8260D	UJ
Trichloroethene	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Trichlorofluoromethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Vinyl acetate	U	5	ug/L	5	4/10/2025			SW846-8260D	=
Vinyl chloride	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Dissolved Solids		194	mg/L	10	4/10/2025			EPA-160.1	=
Chemical Oxygen Demand (COD)	U	20	mg/L	20	4/10/2025			EPA-410.4	=
Cyanide	UN1	0.2	mg/L	0.2	4/10/2025			SW846-9012B	=
Total Organic Halides (TOX)	BJ	3.82	ug/L	10	4/10/2025			SW846-9020B	U
Total Organic Carbon (TOC)	J	1.67	mg/L	2	4/10/2025			SW846-9060A	=

Paducah OREIS
GROUNDWATER MONITORING REPORT

Facility: C-746-U Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045

Sampling Point: MW372 UP **RGA Type:** URGA **Period:** 2nd Quarter 2025

AKGWA Well Tag #: 8004-4808 **SAMPLE ID:** MW372UG3-25 Sample Type: REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
Iodide	U	0.5	mg/L	0.5	4/10/2025			EPA-300.0	=
Bromide		0.488	mg/L	0.2	4/10/2025			SW846-9056A	=
Chloride	J	34.4	mg/L	250	4/10/2025			SW846-9056A	=
Fluoride	J	0.19	mg/L	4	4/10/2025			SW846-9056A	=
Nitrate as Nitrogen	J	0.603	mg/L	10	4/10/2025			SW846-9056A	=
Sulfate		161	mg/L	8	4/10/2025			SW846-9056A	=
Barometric Pressure Reading		30.03	Inches/Hg		4/10/2025			FS	X
Conductivity		744	µmhos/cm		4/10/2025			FS	X
Depth to Water		32.41	ft		4/10/2025			FS	X
Dissolved Oxygen		2.1	mg/L		4/10/2025			FS	X
Eh (approx)		420	mV		4/10/2025			FS	X
pH		6.1	Std Unit		4/10/2025			FS	X
Temperature		62.4	deg F		4/10/2025			FS	X
Turbidity		4.63	NTU		4/10/2025			FS	X
Aluminum	U	0.05	mg/L	0.05	4/10/2025			SW846-6020B	=
Antimony	U	0.003	mg/L	0.003	4/10/2025			SW846-6020B	=
Arsenic	U	0.005	mg/L	0.005	4/10/2025			SW846-6020B	=
Barium		0.0598	mg/L	0.004	4/10/2025			SW846-6020B	=
Beryllium	U	0.0005	mg/L	0.0005	4/10/2025			SW846-6020B	=
Boron		1.43	mg/L	0.3	4/10/2025			SW846-6020B	=
Cadmium	U	0.001	mg/L	0.001	4/10/2025			SW846-6020B	=
Calcium		66.4	mg/L	4	4/10/2025			SW846-6020B	=
Chromium	U	0.01	mg/L	0.01	4/10/2025			SW846-6020B	=
Cobalt	J	0.000386	mg/L	0.001	4/10/2025			SW846-6020B	=
Copper	J	0.000896	mg/L	0.002	4/10/2025			SW846-6020B	=
Iron	J	0.0907	mg/L	0.1	4/10/2025			SW846-6020B	=
Lead	U	0.002	mg/L	0.002	4/10/2025			SW846-6020B	=
Magnesium		24.2	mg/L	0.03	4/10/2025			SW846-6020B	=
Manganese	J	0.00479	mg/L	0.005	4/10/2025			SW846-6020B	=
Molybdenum	J	0.000241	mg/L	0.001	4/10/2025			SW846-6020B	=
Nickel	J	0.000831	mg/L	0.002	4/10/2025			SW846-6020B	=
Potassium		2.47	mg/L	0.3	4/10/2025			SW846-6020B	=
Rhodium	U	0.005	mg/L	0.005	4/10/2025			SW846-6020B	=
Selenium	U	0.005	mg/L	0.005	4/10/2025			SW846-6020B	=
Silver	U	0.001	mg/L	0.001	4/10/2025			SW846-6020B	=
Sodium		59.1	mg/L	5	4/10/2025			SW846-6020B	=
Tantalum	U	0.005	mg/L	0.005	4/10/2025			SW846-6020B	=
Thallium	U	0.002	mg/L	0.002	4/10/2025			SW846-6020B	=
Uranium	UN	0.0002	mg/L	0.0002	4/10/2025			SW846-6020B	=
Vanadium	U	0.02	mg/L	0.02	4/10/2025			SW846-6020B	=
Zinc	J	0.00365	mg/L	0.02	4/10/2025			SW846-6020B	=
Mercury	U	0.0002	mg/L	0.0002	4/10/2025			SW846-7470A	=
Barium, Dissolved		0.0605	mg/L	0.004	4/10/2025			SW846-6020B	J
Chromium, Dissolved	U	0.01	mg/L	0.01	4/10/2025			SW846-6020B	UJ
Uranium, Dissolved	UN	0.0002	mg/L	0.0002	4/10/2025			SW846-6020B	UJ
PCB-1016	UY2	0.101	ug/L	0.101	4/10/2025			SW846-8082A	UJ
PCB-1221	U	0.101	ug/L	0.101	4/10/2025			SW846-8082A	=

Paducah OREIS
GROUNDWATER MONITORING REPORT

Facility: C-746-U Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045

Sampling Point: MW372 UP **RGA Type:** URGA **Period:** 2nd Quarter 2025

AKGWA Well Tag #: 8004-4808 **SAMPLE ID:** MW372UG3-25 Sample Type: REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
PCB-1232	U	0.101	ug/L	0.101	4/10/2025			SW846-8082A	=
PCB-1242	U	0.101	ug/L	0.101	4/10/2025			SW846-8082A	=
PCB-1248	U	0.101	ug/L	0.101	4/10/2025			SW846-8082A	=
PCB-1254	U	0.101	ug/L	0.101	4/10/2025			SW846-8082A	=
PCB-1260	UY1Y2	0.101	ug/L	0.101	4/10/2025			SW846-8082A	UJ
PCB-1268	U	0.101	ug/L	0.101	4/10/2025			SW846-8082A	=
Polychlorinated biphenyl	UY1Y2	0.101	ug/L	0.101	4/10/2025			SW846-8082A	UJ
Radium-226	U	-0.0354	pCi/L	1.23	4/10/2025	0.582	0.583	AN-1418	=
Radium-228	U	2.87	pCi/L	4.76	4/10/2025	2.87	2.97	EPA-904.0-M	=
Strontium-90	U	-0.317	pCi/L	3.22	4/10/2025	1.69	1.69	EPA-905.0-M	=
Tritium	U	99.4	pCi/L	237	4/10/2025	139	141	EPA-906.0-M	=
Technetium-99	U	6.43	pCi/L	21.5	4/10/2025	12.6	12.6	HASL 300, Tc-02-RC M	=
Thorium-230	U	0.574	pCi/L	3.11	4/10/2025	1.67	1.68	HASL 300, Th-01-RC M	=
Thorium-232	U	0.0608	pCi/L	2.35	4/10/2025	1.09	1.09	HASL 300, Th-01-RC M	=
Alpha activity	U	-0.95	pCi/L	9.69	4/10/2025	4.3	4.3	SW846-9310	=
Beta activity		16.4	pCi/L	12.2	4/10/2025	8.18	8.61	SW846-9310	J
1,2-Dibromo-3-chloropropane	U	0.0189	ug/L	0.0189	4/10/2025			SW846-8011	=
1,1,1,2-Tetrachloroethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
1,1,1-Trichloroethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
1,1,2,2-Tetrachloroethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
1,1,2-Trichloroethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
1,1-Dichloroethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
1,1-Dichloroethene	U	1	ug/L	1	4/10/2025			SW846-8260D	=
1,2,3-Trichloropropane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
1,2-Dibromoethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
1,2-Dichlorobenzene	U	1	ug/L	1	4/10/2025			SW846-8260D	=
1,2-Dichloroethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
1,2-Dichloropropane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
1,4-Dichlorobenzene	U	1	ug/L	1	4/10/2025			SW846-8260D	=
2-Butanone	U	5	ug/L	5	4/10/2025			SW846-8260D	=
2-Hexanone	U	5	ug/L	5	4/10/2025			SW846-8260D	=
4-Methyl-2-pentanone	U	5	ug/L	5	4/10/2025			SW846-8260D	=
Acetone	U	5	ug/L	5	4/10/2025			SW846-8260D	=
Acrolein	U	5	ug/L	5	4/10/2025			SW846-8260D	UJ
Acrylonitrile	U	5	ug/L	5	4/10/2025			SW846-8260D	=
Benzene	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Bromochloromethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Bromodichloromethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Bromoform	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Bromomethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Carbon disulfide	U	5	ug/L	5	4/10/2025			SW846-8260D	=
Carbon tetrachloride	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Chlorobenzene	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Chloroethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=

Paducah OREIS
GROUNDWATER MONITORING REPORT

Facility: C-746-U Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045

Sampling Point: MW372 UP **RGA Type:** URGA **Period:** 2nd Quarter 2025

AKGWA Well Tag #: 8004-4808 **SAMPLE ID:** MW372UG3-25 Sample Type: REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
Chloroform	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Chloromethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
cis-1,2-Dichloroethene	U	1	ug/L	1	4/10/2025			SW846-8260D	=
cis-1,3-Dichloropropene	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Dibromochloromethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Dibromomethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Ethylbenzene	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Iodomethane	U	5	ug/L	5	4/10/2025			SW846-8260D	=
Methylene chloride	J	0.92	ug/L	5	4/10/2025			SW846-8260D	=
Styrene	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Tetrachloroethene	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Toluene	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Total Xylene	U	3	ug/L	3	4/10/2025			SW846-8260D	=
trans-1,2-Dichloroethene	U	1	ug/L	1	4/10/2025			SW846-8260D	=
trans-1,3-Dichloropropene	U	1	ug/L	1	4/10/2025			SW846-8260D	=
trans-1,4-Dichloro-2-butene	UY1	5	ug/L	5	4/10/2025			SW846-8260D	UJ
Trichloroethene		2.73	ug/L	1	4/10/2025			SW846-8260D	=
Trichlorofluoromethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Vinyl acetate	U	5	ug/L	5	4/10/2025			SW846-8260D	=
Vinyl chloride	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Dissolved Solids		474	mg/L	10	4/10/2025			EPA-160.1	=
Chemical Oxygen Demand (COD)	U	20	mg/L	20	4/10/2025			EPA-410.4	=
Cyanide	JN1	0.00223	mg/L	0.2	4/10/2025			SW846-9012B	=
Total Organic Halides (TOX)	BJ	7.12	ug/L	10	4/10/2025			SW846-9020B	U
Total Organic Carbon (TOC)	J	1.3	mg/L	2	4/10/2025			SW846-9060A	=

Paducah OREIS
GROUNDWATER MONITORING REPORT

Facility: C-746-U Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045

Sampling Point: MW373 UP **RGA Type:** LRGA **Period:** 2nd Quarter 2025

AKGWA Well Tag #: 8004-4792 **SAMPLE ID:** MW373UG3-25 Sample Type: REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
Iodide	U	0.5	mg/L	0.5	4/10/2025			EPA-300.0	=
Bromide		0.462	mg/L	0.2	4/10/2025			SW846-9056A	=
Chloride	J	30.1	mg/L	250	4/10/2025			SW846-9056A	=
Fluoride	J	0.217	mg/L	4	4/10/2025			SW846-9056A	=
Nitrate as Nitrogen	J	0.627	mg/L	10	4/10/2025			SW846-9056A	=
Sulfate		225	mg/L	8	4/10/2025			SW846-9056A	=
Barometric Pressure Reading		30.03	Inches/Hg		4/10/2025			FS	X
Conductivity		1003	µmhos/cm		4/10/2025			FS	X
Depth to Water		32.72	ft		4/10/2025			FS	X
Dissolved Oxygen		2.9	mg/L		4/10/2025			FS	X
Eh (approx)		414	mV		4/10/2025			FS	X
pH		6.01	Std Unit		4/10/2025			FS	X
Temperature		63.3	deg F		4/10/2025			FS	X
Turbidity		6.1	NTU		4/10/2025			FS	X
Aluminum	U	0.05	mg/L	0.05	4/10/2025			SW846-6020B	=
Antimony	U	0.003	mg/L	0.003	4/10/2025			SW846-6020B	=
Arsenic	U	0.005	mg/L	0.005	4/10/2025			SW846-6020B	=
Barium		0.0318	mg/L	0.004	4/10/2025			SW846-6020B	=
Beryllium	U	0.0005	mg/L	0.0005	4/10/2025			SW846-6020B	=
Boron		2.47	mg/L	0.3	4/10/2025			SW846-6020B	=
Cadmium	U	0.001	mg/L	0.001	4/10/2025			SW846-6020B	=
Calcium		86.9	mg/L	4	4/10/2025			SW846-6020B	=
Chromium	U	0.01	mg/L	0.01	4/10/2025			SW846-6020B	=
Cobalt	U	0.001	mg/L	0.001	4/10/2025			SW846-6020B	=
Copper	J	0.000767	mg/L	0.002	4/10/2025			SW846-6020B	=
Iron	J	0.0482	mg/L	0.1	4/10/2025			SW846-6020B	=
Lead	U	0.002	mg/L	0.002	4/10/2025			SW846-6020B	=
Magnesium		31.6	mg/L	0.03	4/10/2025			SW846-6020B	=
Manganese		0.0211	mg/L	0.005	4/10/2025			SW846-6020B	=
Molybdenum	U	0.001	mg/L	0.001	4/10/2025			SW846-6020B	=
Nickel	J	0.000819	mg/L	0.002	4/10/2025			SW846-6020B	=
Potassium		2.97	mg/L	0.3	4/10/2025			SW846-6020B	=
Rhodium	U	0.005	mg/L	0.005	4/10/2025			SW846-6020B	=
Selenium	U	0.005	mg/L	0.005	4/10/2025			SW846-6020B	=
Silver	U	0.001	mg/L	0.001	4/10/2025			SW846-6020B	=
Sodium		75.3	mg/L	5	4/10/2025			SW846-6020B	=
Tantalum	U	0.005	mg/L	0.005	4/10/2025			SW846-6020B	=
Thallium	U	0.002	mg/L	0.002	4/10/2025			SW846-6020B	=
Uranium	JN	0.000091	mg/L	0.0002	4/10/2025			SW846-6020B	=
Vanadium	U	0.02	mg/L	0.02	4/10/2025			SW846-6020B	=
Zinc	U	0.02	mg/L	0.02	4/10/2025			SW846-6020B	=
Mercury	U	0.0002	mg/L	0.0002	4/10/2025			SW846-7470A	=
Barium, Dissolved		0.0318	mg/L	0.004	4/10/2025			SW846-6020B	J
Chromium, Dissolved	U	0.01	mg/L	0.01	4/10/2025			SW846-6020B	UJ
Uranium, Dissolved	JN	0.000071	mg/L	0.0002	4/10/2025			SW846-6020B	J
PCB-1016	UY2	0.1	ug/L	0.1	4/10/2025			SW846-8082A	UJ
PCB-1221	U	0.1	ug/L	0.1	4/10/2025			SW846-8082A	=

Paducah OREIS
GROUNDWATER MONITORING REPORT

Facility: C-746-U Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045

Sampling Point: MW373 UP **RGA Type:** LRGA **Period:** 2nd Quarter 2025

AKGWA Well Tag #: 8004-4792 **SAMPLE ID:** MW373UG3-25 Sample Type: REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
PCB-1232	U	0.1	ug/L	0.1	4/10/2025			SW846-8082A	=
PCB-1242	U	0.1	ug/L	0.1	4/10/2025			SW846-8082A	=
PCB-1248	U	0.1	ug/L	0.1	4/10/2025			SW846-8082A	=
PCB-1254	U	0.1	ug/L	0.1	4/10/2025			SW846-8082A	=
PCB-1260	UY1Y2	0.1	ug/L	0.1	4/10/2025			SW846-8082A	UJ
PCB-1268	U	0.1	ug/L	0.1	4/10/2025			SW846-8082A	=
Polychlorinated biphenyl	UY1Y2	0.1	ug/L	0.1	4/10/2025			SW846-8082A	UJ
Radium-226	U	0.509	pCi/L	1.35	4/10/2025	0.985	0.987	AN-1418	=
Radium-228	U	-0.25	pCi/L	4.98	4/10/2025	2.63	2.63	EPA-904.0-M	=
Strontium-90	U	-0.457	pCi/L	2.66	4/10/2025	1.31	1.31	EPA-905.0-M	=
Tritium	U	32.9	pCi/L	243	4/10/2025	139	139	EPA-906.0-M	=
Technetium-99	U	5.28	pCi/L	19.9	4/10/2025	11.5	11.6	HASL 300, Tc-02-RC M	=
Thorium-230	U	3.43	pCi/L	4.34	4/10/2025	3.03	3.07	HASL 300, Th-01-RC M	=
Thorium-232	U	0.613	pCi/L	1.91	4/10/2025	1.29	1.29	HASL 300, Th-01-RC M	=
Alpha activity	U	-2.42	pCi/L	10	4/10/2025	3.76	3.77	SW846-9310	=
Beta activity	U	7.5	pCi/L	13.2	4/10/2025	7.93	8.03	SW846-9310	UJ
1,2-Dibromo-3-chloropropane	U	0.0189	ug/L	0.0189	4/10/2025			SW846-8011	=
1,1,1,2-Tetrachloroethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
1,1,1-Trichloroethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
1,1,2,2-Tetrachloroethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
1,1,2-Trichloroethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
1,1-Dichloroethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
1,1-Dichloroethene	U	1	ug/L	1	4/10/2025			SW846-8260D	=
1,2,3-Trichloropropane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
1,2-Dibromoethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
1,2-Dichlorobenzene	U	1	ug/L	1	4/10/2025			SW846-8260D	=
1,2-Dichloroethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
1,2-Dichloropropane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
1,4-Dichlorobenzene	U	1	ug/L	1	4/10/2025			SW846-8260D	=
2-Butanone	U	5	ug/L	5	4/10/2025			SW846-8260D	=
2-Hexanone	U	5	ug/L	5	4/10/2025			SW846-8260D	=
4-Methyl-2-pentanone	U	5	ug/L	5	4/10/2025			SW846-8260D	=
Acetone	U	5	ug/L	5	4/10/2025			SW846-8260D	=
Acrolein	U	5	ug/L	5	4/10/2025			SW846-8260D	UJ
Acrylonitrile	U	5	ug/L	5	4/10/2025			SW846-8260D	=
Benzene	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Bromochloromethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Bromodichloromethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Bromoform	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Bromomethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Carbon disulfide	U	5	ug/L	5	4/10/2025			SW846-8260D	=
Carbon tetrachloride	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Chlorobenzene	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Chloroethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=

Paducah OREIS
GROUNDWATER MONITORING REPORT

Facility: C-746-U Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045

Sampling Point: MW373 UP **RGA Type:** LRGA **Period:** 2nd Quarter 2025

AKGWA Well Tag #: 8004-4792 **SAMPLE ID:** MW373UG3-25 Sample Type: REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
Chloroform	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Chloromethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
cis-1,2-Dichloroethene	U	1	ug/L	1	4/10/2025			SW846-8260D	=
cis-1,3-Dichloropropene	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Dibromochloromethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Dibromomethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Ethylbenzene	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Iodomethane	U	5	ug/L	5	4/10/2025			SW846-8260D	=
Methylene chloride	J	0.76	ug/L	5	4/10/2025			SW846-8260D	=
Styrene	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Tetrachloroethene	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Toluene	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Total Xylene	UY1	3	ug/L	3	4/10/2025			SW846-8260D	UJ
trans-1,2-Dichloroethene	U	1	ug/L	1	4/10/2025			SW846-8260D	=
trans-1,3-Dichloropropene	U	1	ug/L	1	4/10/2025			SW846-8260D	=
trans-1,4-Dichloro-2-butene	UY1	5	ug/L	5	4/10/2025			SW846-8260D	UJ
Trichloroethene		2.5	ug/L	1	4/10/2025			SW846-8260D	=
Trichlorofluoromethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Vinyl acetate	U	5	ug/L	5	4/10/2025			SW846-8260D	=
Vinyl chloride	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Dissolved Solids		635	mg/L	10	4/10/2025			EPA-160.1	=
Chemical Oxygen Demand (COD)	U	20	mg/L	20	4/10/2025			EPA-410.4	=
Cyanide	JN1	0.00796	mg/L	0.2	4/10/2025			SW846-9012B	=
Total Organic Halides (TOX)	B	11	ug/L	10	4/10/2025			SW846-9020B	J
Total Organic Carbon (TOC)	J	1.6	mg/L	2	4/10/2025			SW846-9060A	=

Paducah OREIS
GROUNDWATER MONITORING REPORT

Facility: C-746-U Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045

Sampling Point: MW374 UP **RGA Type:** UCRS **Period:** 2nd Quarter 2025

AKGWA Well Tag #: 8004-0990 **SAMPLE ID:** MW374UG3-25 Sample Type: REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
Iodide	U	0.5	mg/L	0.5	4/10/2025			EPA-300.0	=
Bromide		0.478	mg/L	0.2	4/10/2025			SW846-9056A	=
Chloride	J	45.4	mg/L	250	4/10/2025			SW846-9056A	=
Fluoride	J	0.197	mg/L	4	4/10/2025			SW846-9056A	=
Nitrate as Nitrogen	J	1.15	mg/L	10	4/10/2025			SW846-9056A	=
Sulfate		17.9	mg/L	0.4	4/10/2025			SW846-9056A	=
Barometric Pressure Reading		30.03	Inches/Hg		4/10/2025			FS	X
Conductivity		727	µmhos/cm		4/10/2025			FS	X
Depth to Water		17.27	ft		4/10/2025			FS	X
Dissolved Oxygen		2.82	mg/L		4/10/2025			FS	X
Eh (approx)		377	mV		4/10/2025			FS	X
pH		6.65	Std Unit		4/10/2025			FS	X
Temperature		63.4	deg F		4/10/2025			FS	X
Turbidity		10.59	NTU		4/10/2025			FS	X
Aluminum		0.0533	mg/L	0.05	4/10/2025			SW846-6020B	=
Antimony	U	0.003	mg/L	0.003	4/10/2025			SW846-6020B	=
Arsenic	J	0.00201	mg/L	0.005	4/10/2025			SW846-6020B	=
Barium		0.133	mg/L	0.004	4/10/2025			SW846-6020B	=
Beryllium	U	0.0005	mg/L	0.0005	4/10/2025			SW846-6020B	=
Boron	J	0.0092	mg/L	0.015	4/10/2025			SW846-6020B	=
Cadmium	U	0.001	mg/L	0.001	4/10/2025			SW846-6020B	=
Calcium		24	mg/L	0.2	4/10/2025			SW846-6020B	=
Chromium	U	0.01	mg/L	0.01	4/10/2025			SW846-6020B	=
Cobalt	J	0.000305	mg/L	0.001	4/10/2025			SW846-6020B	=
Copper	J	0.000518	mg/L	0.002	4/10/2025			SW846-6020B	=
Iron		0.649	mg/L	0.1	4/10/2025			SW846-6020B	=
Lead	U	0.002	mg/L	0.002	4/10/2025			SW846-6020B	=
Magnesium		6.28	mg/L	0.03	4/10/2025			SW846-6020B	=
Manganese		0.0673	mg/L	0.005	4/10/2025			SW846-6020B	=
Molybdenum	J	0.000263	mg/L	0.001	4/10/2025			SW846-6020B	=
Nickel	U	0.002	mg/L	0.002	4/10/2025			SW846-6020B	=
Potassium		0.377	mg/L	0.3	4/10/2025			SW846-6020B	=
Rhodium	U	0.005	mg/L	0.005	4/10/2025			SW846-6020B	=
Selenium		0.0131	mg/L	0.005	4/10/2025			SW846-6020B	=
Silver	U	0.001	mg/L	0.001	4/10/2025			SW846-6020B	=
Sodium		125	mg/L	1.25	4/10/2025			SW846-6020B	=
Tantalum	U	0.005	mg/L	0.005	4/10/2025			SW846-6020B	=
Thallium	U	0.002	mg/L	0.002	4/10/2025			SW846-6020B	=
Uranium	N	0.000808	mg/L	0.0002	4/10/2025			SW846-6020B	=
Vanadium	U	0.02	mg/L	0.02	4/10/2025			SW846-6020B	=
Zinc	U	0.02	mg/L	0.02	4/10/2025			SW846-6020B	=
Mercury	U	0.0002	mg/L	0.0002	4/10/2025			SW846-7470A	=
Barium, Dissolved		0.124	mg/L	0.004	4/10/2025			SW846-6020B	J
Chromium, Dissolved	U	0.01	mg/L	0.01	4/10/2025			SW846-6020B	UJ
Uranium, Dissolved	N	0.000764	mg/L	0.0002	4/10/2025			SW846-6020B	J
PCB-1016	UY2S	0.0994	ug/L	0.0994	4/10/2025			SW846-8082A	UJ
PCB-1221	US	0.0994	ug/L	0.0994	4/10/2025			SW846-8082A	=

Paducah OREIS
GROUNDWATER MONITORING REPORT

Facility: C-746-U Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045

Sampling Point: MW374 UP **RGA Type:** UCRS **Period:** 2nd Quarter 2025

AKGWA Well Tag #: 8004-0990 **SAMPLE ID:** MW374UG3-25 Sample Type: REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
PCB-1232	US	0.0994	ug/L	0.0994	4/10/2025			SW846-8082A	=
PCB-1242	US	0.0994	ug/L	0.0994	4/10/2025			SW846-8082A	=
PCB-1248	US	0.0994	ug/L	0.0994	4/10/2025			SW846-8082A	=
PCB-1254	US	0.0994	ug/L	0.0994	4/10/2025			SW846-8082A	=
PCB-1260	UY1Y2S	0.0994	ug/L	0.0994	4/10/2025			SW846-8082A	UJ
PCB-1268	US	0.0994	ug/L	0.0994	4/10/2025			SW846-8082A	=
Polychlorinated biphenyl	UY1Y2S	0.0994	ug/L	0.0994	4/10/2025			SW846-8082A	UJ
Radium-226	U	0.389	pCi/L	1.67	4/10/2025	0.993	0.994	AN-1418	=
Radium-228	U	1.43	pCi/L	4.8	4/10/2025	2.68	2.7	EPA-904.0-M	=
Strontium-90	U	1.8	pCi/L	2.68	4/10/2025	1.64	1.67	EPA-905.0-M	=
Tritium	U	42	pCi/L	244	4/10/2025	140	140	EPA-906.0-M	=
Technetium-99	U	-2.17	pCi/L	21.6	4/10/2025	12.2	12.2	HASL 300, Tc-02-RC M	=
Thorium-230	U	2.67	pCi/L	3.53	4/10/2025	2.75	2.79	HASL 300, Th-01-RC M	=
Thorium-232	U	-0.279	pCi/L	2.8	4/10/2025	1.04	1.04	HASL 300, Th-01-RC M	=
Alpha activity	U	0.395	pCi/L	10.1	4/10/2025	4.91	4.91	SW846-9310	=
Beta activity	U	4.84	pCi/L	11.5	4/10/2025	6.72	6.77	SW846-9310	UJ
1,2-Dibromo-3-chloropropane	U	0.0187	ug/L	0.0187	4/10/2025			SW846-8011	=
1,1,1,2-Tetrachloroethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
1,1,1-Trichloroethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
1,1,2,2-Tetrachloroethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
1,1,2-Trichloroethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
1,1-Dichloroethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
1,1-Dichloroethene	U	1	ug/L	1	4/10/2025			SW846-8260D	=
1,2,3-Trichloropropane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
1,2-Dibromoethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
1,2-Dichlorobenzene	U	1	ug/L	1	4/10/2025			SW846-8260D	=
1,2-Dichloroethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
1,2-Dichloropropane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
1,4-Dichlorobenzene	U	1	ug/L	1	4/10/2025			SW846-8260D	=
2-Butanone	U	5	ug/L	5	4/10/2025			SW846-8260D	=
2-Hexanone	U	5	ug/L	5	4/10/2025			SW846-8260D	=
4-Methyl-2-pentanone	U	5	ug/L	5	4/10/2025			SW846-8260D	=
Acetone	U	5	ug/L	5	4/10/2025			SW846-8260D	=
Acrolein	U	5	ug/L	5	4/10/2025			SW846-8260D	UJ
Acrylonitrile	U	5	ug/L	5	4/10/2025			SW846-8260D	=
Benzene	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Bromochloromethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Bromodichloromethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Bromoform	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Bromomethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Carbon disulfide	U	5	ug/L	5	4/10/2025			SW846-8260D	=
Carbon tetrachloride	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Chlorobenzene	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Chloroethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=

Paducah OREIS
GROUNDWATER MONITORING REPORT

Facility: C-746-U Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045

Sampling Point: MW374 UP **RGA Type:** UCRS **Period:** 2nd Quarter 2025

AKGWA Well Tag #: 8004-0990 **SAMPLE ID:** MW374UG3-25 Sample Type: REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
Chloroform	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Chloromethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
cis-1,2-Dichloroethene	U	1	ug/L	1	4/10/2025			SW846-8260D	=
cis-1,3-Dichloropropene	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Dibromochloromethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Dibromomethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Ethylbenzene	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Iodomethane	U	5	ug/L	5	4/10/2025			SW846-8260D	=
Methylene chloride	J	1.2	ug/L	5	4/10/2025			SW846-8260D	=
Styrene	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Tetrachloroethene	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Toluene	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Total Xylene	U	3	ug/L	3	4/10/2025			SW846-8260D	=
trans-1,2-Dichloroethene	U	1	ug/L	1	4/10/2025			SW846-8260D	=
trans-1,3-Dichloropropene	U	1	ug/L	1	4/10/2025			SW846-8260D	=
trans-1,4-Dichloro-2-butene	UY1	5	ug/L	5	4/10/2025			SW846-8260D	UJ
Trichloroethene	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Trichlorofluoromethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Vinyl acetate	U	5	ug/L	5	4/10/2025			SW846-8260D	=
Vinyl chloride	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Dissolved Solids		384	mg/L	10	4/10/2025			EPA-160.1	=
Chemical Oxygen Demand (COD)	U	20	mg/L	20	4/10/2025			EPA-410.4	=
Cyanide	JN1	0.0025	mg/L	0.2	4/10/2025			SW846-9012B	=
Total Organic Halides (TOX)	BHJ	4.24	ug/L	10	4/10/2025			SW846-9020B	UJ
Total Organic Carbon (TOC)		2.5	mg/L	2	4/10/2025			SW846-9060A	=

Paducah OREIS
GROUNDWATER MONITORING REPORT

Facility: C-746-U Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045

Sampling Point: MW375 SIDE **RGA Type:** UCRS **Period:** 2nd Quarter 2025

AKGWA Well Tag #: 8004-0985 **SAMPLE ID:** MW375UG3-25 Sample Type: REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
Iodide	U	0.5	mg/L	0.5	4/10/2025			EPA-300.0	=
Bromide	U	0.2	mg/L	0.2	4/10/2025			SW846-9056A	=
Chloride	J	3.21	mg/L	250	4/10/2025			SW846-9056A	=
Fluoride	J	0.293	mg/L	4	4/10/2025			SW846-9056A	=
Nitrate as Nitrogen	J	0.854	mg/L	10	4/10/2025			SW846-9056A	=
Sulfate		22	mg/L	0.8	4/10/2025			SW846-9056A	=
Barometric Pressure Reading		30.03	Inches/Hg		4/10/2025			FS	X
Conductivity		434	µmhos/cm		4/10/2025			FS	X
Depth to Water		36.26	ft		4/10/2025			FS	X
Dissolved Oxygen		4	mg/L		4/10/2025			FS	X
Eh (approx)		376	mV		4/10/2025			FS	X
pH		6.6	Std Unit		4/10/2025			FS	X
Temperature		64.2	deg F		4/10/2025			FS	X
Turbidity		6.49	NTU		4/10/2025			FS	X
Aluminum	J	0.0249	mg/L	0.05	4/10/2025			SW846-6020B	=
Antimony	U	0.003	mg/L	0.003	4/10/2025			SW846-6020B	=
Arsenic	U	0.005	mg/L	0.005	4/10/2025			SW846-6020B	=
Barium		0.162	mg/L	0.004	4/10/2025			SW846-6020B	=
Beryllium	U	0.0005	mg/L	0.0005	4/10/2025			SW846-6020B	=
Boron	J	0.0078	mg/L	0.015	4/10/2025			SW846-6020B	=
Cadmium	U	0.001	mg/L	0.001	4/10/2025			SW846-6020B	=
Calcium		13.3	mg/L	0.2	4/10/2025			SW846-6020B	=
Chromium	U	0.01	mg/L	0.01	4/10/2025			SW846-6020B	=
Cobalt	J	0.000575	mg/L	0.001	4/10/2025			SW846-6020B	=
Copper	J	0.000597	mg/L	0.002	4/10/2025			SW846-6020B	=
Iron		0.101	mg/L	0.1	4/10/2025			SW846-6020B	=
Lead	U	0.002	mg/L	0.002	4/10/2025			SW846-6020B	=
Magnesium		5.34	mg/L	0.03	4/10/2025			SW846-6020B	=
Manganese		0.0117	mg/L	0.005	4/10/2025			SW846-6020B	=
Molybdenum	U	0.001	mg/L	0.001	4/10/2025			SW846-6020B	=
Nickel	J	0.000897	mg/L	0.002	4/10/2025			SW846-6020B	=
Potassium	J	0.276	mg/L	0.3	4/10/2025			SW846-6020B	=
Rhodium	U	0.005	mg/L	0.005	4/10/2025			SW846-6020B	=
Selenium	J	0.00225	mg/L	0.005	4/10/2025			SW846-6020B	=
Silver	U	0.001	mg/L	0.001	4/10/2025			SW846-6020B	=
Sodium		51.6	mg/L	1.25	4/10/2025			SW846-6020B	=
Tantalum	U	0.005	mg/L	0.005	4/10/2025			SW846-6020B	=
Thallium	U	0.002	mg/L	0.002	4/10/2025			SW846-6020B	=
Uranium	UN	0.0002	mg/L	0.0002	4/10/2025			SW846-6020B	=
Vanadium	U	0.02	mg/L	0.02	4/10/2025			SW846-6020B	=
Zinc	J	0.00338	mg/L	0.02	4/10/2025			SW846-6020B	=
Mercury	U	0.0002	mg/L	0.0002	4/10/2025			SW846-7470A	=
Barium, Dissolved		0.159	mg/L	0.004	4/10/2025			SW846-6020B	J
Chromium, Dissolved	U	0.01	mg/L	0.01	4/10/2025			SW846-6020B	UJ
Uranium, Dissolved	UN	0.0002	mg/L	0.0002	4/10/2025			SW846-6020B	UJ
PCB-1016	UY2	0.0991	ug/L	0.0991	4/10/2025			SW846-8082A	UJ
PCB-1221	U	0.0991	ug/L	0.0991	4/10/2025			SW846-8082A	=

Paducah OREIS
GROUNDWATER MONITORING REPORT

Facility: C-746-U Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045

Sampling Point: MW375 SIDE **RGA Type:** UCRS **Period:** 2nd Quarter 2025

AKGWA Well Tag #: 8004-0985 **SAMPLE ID:** MW375UG3-25 Sample Type: REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
PCB-1232	U	0.0991	ug/L	0.0991	4/10/2025			SW846-8082A	=
PCB-1242	U	0.0991	ug/L	0.0991	4/10/2025			SW846-8082A	=
PCB-1248	U	0.0991	ug/L	0.0991	4/10/2025			SW846-8082A	=
PCB-1254	U	0.0991	ug/L	0.0991	4/10/2025			SW846-8082A	=
PCB-1260	UY1Y2	0.0991	ug/L	0.0991	4/10/2025			SW846-8082A	UJ
PCB-1268	U	0.0991	ug/L	0.0991	4/10/2025			SW846-8082A	=
Polychlorinated biphenyl	UY1Y2	0.0991	ug/L	0.0991	4/10/2025			SW846-8082A	UJ
Radium-226	U	0.399	pCi/L	0.62	4/10/2025	0.422	0.425	AN-1418	=
Radium-228	U	0.908	pCi/L	4.64	4/10/2025	2.6	2.61	EPA-904.0-M	=
Strontium-90	U	1.66	pCi/L	3.31	4/10/2025	1.96	1.98	EPA-905.0-M	=
Tritium	U	-53.4	pCi/L	250	4/10/2025	137	137	EPA-906.0-M	=
Technetium-99	U	-2.72	pCi/L	21	4/10/2025	11.8	11.8	HASL 300, Tc-02-RC M	=
Thorium-230	U	0.445	pCi/L	3.01	4/10/2025	1.58	1.59	HASL 300, Th-01-RC M	=
Thorium-232	U	-0.0434	pCi/L	1.62	4/10/2025	0.798	0.8	HASL 300, Th-01-RC M	=
Alpha activity	U	0.166	pCi/L	9.15	4/10/2025	4.34	4.34	SW846-9310	=
Beta activity	U	2.76	pCi/L	10.8	4/10/2025	6.11	6.13	SW846-9310	UJ
1,2-Dibromo-3-chloropropane	U	0.019	ug/L	0.019	4/10/2025			SW846-8011	=
1,1,1,2-Tetrachloroethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
1,1,1-Trichloroethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
1,1,2,2-Tetrachloroethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
1,1,2-Trichloroethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
1,1-Dichloroethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
1,1-Dichloroethene	U	1	ug/L	1	4/10/2025			SW846-8260D	=
1,2,3-Trichloropropane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
1,2-Dibromoethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
1,2-Dichlorobenzene	U	1	ug/L	1	4/10/2025			SW846-8260D	=
1,2-Dichloroethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
1,2-Dichloropropane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
1,4-Dichlorobenzene	U	1	ug/L	1	4/10/2025			SW846-8260D	=
2-Butanone	U	5	ug/L	5	4/10/2025			SW846-8260D	=
2-Hexanone	U	5	ug/L	5	4/10/2025			SW846-8260D	=
4-Methyl-2-pentanone	U	5	ug/L	5	4/10/2025			SW846-8260D	=
Acetone	U	5	ug/L	5	4/10/2025			SW846-8260D	=
Acrolein	U	5	ug/L	5	4/10/2025			SW846-8260D	UJ
Acrylonitrile	U	5	ug/L	5	4/10/2025			SW846-8260D	=
Benzene	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Bromochloromethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Bromodichloromethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Bromoform	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Bromomethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Carbon disulfide	U	5	ug/L	5	4/10/2025			SW846-8260D	=
Carbon tetrachloride	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Chlorobenzene	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Chloroethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=

Paducah OREIS
GROUNDWATER MONITORING REPORT

Facility: C-746-U Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045

Sampling Point: MW375 SIDE **RGA Type:** UCRS **Period:** 2nd Quarter 2025

AKGWA Well Tag #: 8004-0985 **SAMPLE ID:** MW375UG3-25 Sample Type: REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
Chloroform	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Chloromethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
cis-1,2-Dichloroethene	U	1	ug/L	1	4/10/2025			SW846-8260D	=
cis-1,3-Dichloropropene	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Dibromochloromethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Dibromomethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Ethylbenzene	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Iodomethane	U	5	ug/L	5	4/10/2025			SW846-8260D	=
Methylene chloride	J	1.32	ug/L	5	4/10/2025			SW846-8260D	=
Styrene	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Tetrachloroethene	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Toluene	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Total Xylene	U	3	ug/L	3	4/10/2025			SW846-8260D	=
trans-1,2-Dichloroethene	U	1	ug/L	1	4/10/2025			SW846-8260D	=
trans-1,3-Dichloropropene	U	1	ug/L	1	4/10/2025			SW846-8260D	=
trans-1,4-Dichloro-2-butene	UY1	5	ug/L	5	4/10/2025			SW846-8260D	UJ
Trichloroethene	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Trichlorofluoromethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Vinyl acetate	U	5	ug/L	5	4/10/2025			SW846-8260D	=
Vinyl chloride	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Dissolved Solids		195	mg/L	10	4/10/2025			EPA-160.1	=
Chemical Oxygen Demand (COD)	U	20	mg/L	20	4/10/2025			EPA-410.4	=
Cyanide	UN1	0.2	mg/L	0.2	4/10/2025			SW846-9012B	=
Total Organic Halides (TOX)	B	18.4	ug/L	10	4/10/2025			SW846-9020B	J
Total Organic Carbon (TOC)	J	0.881	mg/L	2	4/10/2025			SW846-9060A	=

Paducah OREIS
GROUNDWATER MONITORING REPORT

Facility: C-746-U Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045

Sampling Point: QC **Period:** 2nd Quarter 2025

AKGWA Well Tag #: N/A **SAMPLE ID:** FB1UG3-25 **Sample Type:** FB

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
Iodide	U	0.5	mg/L	0.5	4/8/2025			EPA-300.0	=
Aluminum	U	0.05	mg/L	0.05	4/8/2025			SW846-6020B	=
Antimony	U	0.003	mg/L	0.003	4/8/2025			SW846-6020B	=
Arsenic	U	0.005	mg/L	0.005	4/8/2025			SW846-6020B	=
Barium	U	0.004	mg/L	0.004	4/8/2025			SW846-6020B	=
Beryllium	U	0.0005	mg/L	0.0005	4/8/2025			SW846-6020B	=
Boron	U	0.015	mg/L	0.015	4/8/2025			SW846-6020B	=
Cadmium	U	0.001	mg/L	0.001	4/8/2025			SW846-6020B	=
Calcium	U	0.2	mg/L	0.2	4/8/2025			SW846-6020B	=
Chromium	U	0.01	mg/L	0.01	4/8/2025			SW846-6020B	=
Cobalt	U	0.001	mg/L	0.001	4/8/2025			SW846-6020B	=
Copper	U	0.002	mg/L	0.002	4/8/2025			SW846-6020B	=
Iron	U	0.1	mg/L	0.1	4/8/2025			SW846-6020B	=
Lead	U	0.002	mg/L	0.002	4/8/2025			SW846-6020B	=
Magnesium	U	0.03	mg/L	0.03	4/8/2025			SW846-6020B	=
Manganese	UNW*	0.005	mg/L	0.005	4/8/2025			SW846-6020B	=
Molybdenum	U	0.001	mg/L	0.001	4/8/2025			SW846-6020B	=
Nickel	U	0.002	mg/L	0.002	4/8/2025			SW846-6020B	=
Potassium	U	0.3	mg/L	0.3	4/8/2025			SW846-6020B	=
Rhodium	U	0.005	mg/L	0.005	4/8/2025			SW846-6020B	=
Selenium	U	0.005	mg/L	0.005	4/8/2025			SW846-6020B	=
Silver	U	0.001	mg/L	0.001	4/8/2025			SW846-6020B	=
Sodium	U	0.25	mg/L	0.25	4/8/2025			SW846-6020B	=
Tantalum	U*	0.005	mg/L	0.005	4/8/2025			SW846-6020B	=
Thallium	U	0.002	mg/L	0.002	4/8/2025			SW846-6020B	=
Uranium	U	0.0002	mg/L	0.0002	4/8/2025			SW846-6020B	=
Vanadium	U	0.02	mg/L	0.02	4/8/2025			SW846-6020B	=
Zinc	U	0.02	mg/L	0.02	4/8/2025			SW846-6020B	=
Mercury	U	0.0002	mg/L	0.0002	4/8/2025			SW846-7470A	=
PCB-1016	U	0.101	ug/L	0.101	4/8/2025			SW846-8082A	UJ
PCB-1221	U	0.101	ug/L	0.101	4/8/2025			SW846-8082A	=
PCB-1232	U	0.101	ug/L	0.101	4/8/2025			SW846-8082A	=
PCB-1242	U	0.101	ug/L	0.101	4/8/2025			SW846-8082A	=
PCB-1248	U	0.101	ug/L	0.101	4/8/2025			SW846-8082A	=
PCB-1254	U	0.101	ug/L	0.101	4/8/2025			SW846-8082A	=
PCB-1260	U	0.101	ug/L	0.101	4/8/2025			SW846-8082A	UJ
PCB-1268	U	0.101	ug/L	0.101	4/8/2025			SW846-8082A	=
Polychlorinated biphenyl	U	0.101	ug/L	0.101	4/8/2025			SW846-8082A	UJ
Radium-226	U	0.548	pCi/L	0.567	4/8/2025	0.526	0.53	AN-1418	=
Radium-228	U	0.439	pCi/L	4.15	4/8/2025	2.28	2.29	EPA-904.0-M	=
Strontium-90	U	-0.17	pCi/L	4.53	4/8/2025	2.33	2.33	EPA-905.0-M	=
Tritium	U	30.4	pCi/L	230	4/8/2025	131	131	EPA-906.0-M	=
Technetium-99	U	-11.7	pCi/L	20.7	4/8/2025	11.8	11.8	HASL 300, Tc-02-RC M	=

Paducah OREIS
GROUNDWATER MONITORING REPORT

Facility: C-746-U Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045

Sampling Point: QC **Period:** 2nd Quarter 2025

AKGWA Well Tag #: N/A **SAMPLE ID:** FB1UG3-25 **Sample Type:** FB

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
Thorium-230	U	-0.111	pCi/L	2.75	4/8/2025	1.15	1.16	HASL 300, Th-01-RC M	=
Thorium-232	U	0.186	pCi/L	2.25	4/8/2025	1.15	1.15	HASL 300, Th-01-RC M	=
Alpha activity	U	2.05	pCi/L	8.6	4/8/2025	4.6	4.61	SW846-9310	=
Beta activity	U	-2.98	pCi/L	10.8	4/8/2025	5.39	5.39	SW846-9310	=
1,2-Dibromo-3-chloropropane	U	0.0188	ug/L	0.0188	4/8/2025			SW846-8011	=
1,1,1,2-Tetrachloroethane	UY1	1	ug/L	1	4/8/2025			SW846-8260D	=
1,1,1-Trichloroethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
1,1,2,2-Tetrachloroethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
1,1,2-Trichloroethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
1,1-Dichloroethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
1,1-Dichloroethene	U	1	ug/L	1	4/8/2025			SW846-8260D	=
1,2,3-Trichloropropane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
1,2-Dibromoethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
1,2-Dichlorobenzene	UY1Y2	1	ug/L	1	4/8/2025			SW846-8260D	=
1,2-Dichloroethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
1,2-Dichloropropane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
1,4-Dichlorobenzene	UY1Y2	1	ug/L	1	4/8/2025			SW846-8260D	=
2-Butanone	U	5	ug/L	5	4/8/2025			SW846-8260D	=
2-Hexanone	U	5	ug/L	5	4/8/2025			SW846-8260D	=
4-Methyl-2-pentanone	U	5	ug/L	5	4/8/2025			SW846-8260D	=
Acetone	J	4.64	ug/L	5	4/8/2025			SW846-8260D	=
Acrolein	U	5	ug/L	5	4/8/2025			SW846-8260D	UJ
Acrylonitrile	U	5	ug/L	5	4/8/2025			SW846-8260D	=
Benzene	U	1	ug/L	1	4/8/2025			SW846-8260D	=
Bromochloromethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
Bromodichloromethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
Bromoform	UY1	1	ug/L	1	4/8/2025			SW846-8260D	=
Bromomethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
Carbon disulfide	U	5	ug/L	5	4/8/2025			SW846-8260D	=
Carbon tetrachloride	U	1	ug/L	1	4/8/2025			SW846-8260D	=
Chlorobenzene	UY1Y2	1	ug/L	1	4/8/2025			SW846-8260D	=
Chloroethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
Chloroform	U	1	ug/L	1	4/8/2025			SW846-8260D	=
Chloromethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
cis-1,2-Dichloroethene	U	1	ug/L	1	4/8/2025			SW846-8260D	=
cis-1,3-Dichloropropene	U	1	ug/L	1	4/8/2025			SW846-8260D	=
Dibromochloromethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
Dibromomethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
Ethylbenzene	UY1Y2	1	ug/L	1	4/8/2025			SW846-8260D	=
Iodomethane	U	5	ug/L	5	4/8/2025			SW846-8260D	=
Methylene chloride	U	5	ug/L	5	4/8/2025			SW846-8260D	=
Styrene	UY1Y2	1	ug/L	1	4/8/2025			SW846-8260D	=
Tetrachloroethene	UY1Y2	1	ug/L	1	4/8/2025			SW846-8260D	=

Paducah OREIS
GROUNDWATER MONITORING REPORT

Facility: C-746-U Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045

Sampling Point: QC **Period:** 2nd Quarter 2025

AKGWA Well Tag #: N/A **SAMPLE ID:** FB1UG3-25 **Sample Type:** FB

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
Toluene	UY1Y2	1	ug/L	1	4/8/2025			SW846-8260D	=
Total Xylene	UY1Y2	3	ug/L	3	4/8/2025			SW846-8260D	=
trans-1,2-Dichloroethene	U	1	ug/L	1	4/8/2025			SW846-8260D	=
trans-1,3-Dichloropropene	U	1	ug/L	1	4/8/2025			SW846-8260D	=
trans-1,4-Dichloro-2-butene	U	5	ug/L	5	4/8/2025			SW846-8260D	=
Trichloroethene	UY1	1	ug/L	1	4/8/2025			SW846-8260D	=
Trichlorofluoromethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
Vinyl acetate	U	5	ug/L	5	4/8/2025			SW846-8260D	=
Vinyl chloride	U	1	ug/L	1	4/8/2025			SW846-8260D	=

Paducah OREIS
GROUNDWATER MONITORING REPORT

Facility: C-746-U Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045

Sampling Point: QC **Period:** 2nd Quarter 2025

AKGWA Well Tag #: N/A **SAMPLE ID:** RI1UG3-25 **Sample Type:** RI

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
Iodide	U	0.5	mg/L	0.5	4/8/2025			EPA-300.0	=
Aluminum	U	0.05	mg/L	0.05	4/8/2025			SW846-6020B	=
Antimony	U	0.003	mg/L	0.003	4/8/2025			SW846-6020B	=
Arsenic	U	0.005	mg/L	0.005	4/8/2025			SW846-6020B	=
Barium	U	0.004	mg/L	0.004	4/8/2025			SW846-6020B	=
Beryllium	U	0.0005	mg/L	0.0005	4/8/2025			SW846-6020B	=
Boron	U	0.015	mg/L	0.015	4/8/2025			SW846-6020B	=
Cadmium	U	0.001	mg/L	0.001	4/8/2025			SW846-6020B	=
Calcium	U	0.2	mg/L	0.2	4/8/2025			SW846-6020B	=
Chromium	U	0.01	mg/L	0.01	4/8/2025			SW846-6020B	=
Cobalt	U	0.001	mg/L	0.001	4/8/2025			SW846-6020B	=
Copper	U	0.002	mg/L	0.002	4/8/2025			SW846-6020B	=
Iron	U	0.1	mg/L	0.1	4/8/2025			SW846-6020B	=
Lead	U	0.002	mg/L	0.002	4/8/2025			SW846-6020B	=
Magnesium	U	0.03	mg/L	0.03	4/8/2025			SW846-6020B	=
Manganese	UNW*	0.005	mg/L	0.005	4/8/2025			SW846-6020B	=
Molybdenum	U	0.001	mg/L	0.001	4/8/2025			SW846-6020B	=
Nickel	U	0.002	mg/L	0.002	4/8/2025			SW846-6020B	=
Potassium	U	0.3	mg/L	0.3	4/8/2025			SW846-6020B	=
Rhodium	U	0.005	mg/L	0.005	4/8/2025			SW846-6020B	=
Selenium	U	0.005	mg/L	0.005	4/8/2025			SW846-6020B	=
Silver	U	0.001	mg/L	0.001	4/8/2025			SW846-6020B	=
Sodium	U	0.25	mg/L	0.25	4/8/2025			SW846-6020B	=
Tantalum	U*	0.005	mg/L	0.005	4/8/2025			SW846-6020B	=
Thallium	U	0.002	mg/L	0.002	4/8/2025			SW846-6020B	=
Uranium	U	0.0002	mg/L	0.0002	4/8/2025			SW846-6020B	=
Vanadium	U	0.02	mg/L	0.02	4/8/2025			SW846-6020B	=
Zinc	U	0.02	mg/L	0.02	4/8/2025			SW846-6020B	=
Mercury	U	0.0002	mg/L	0.0002	4/8/2025			SW846-7470A	=
PCB-1016	U	0.102	ug/L	0.102	4/8/2025			SW846-8082A	UJ
PCB-1221	U	0.102	ug/L	0.102	4/8/2025			SW846-8082A	=
PCB-1232	U	0.102	ug/L	0.102	4/8/2025			SW846-8082A	=
PCB-1242	U	0.102	ug/L	0.102	4/8/2025			SW846-8082A	=
PCB-1248	U	0.102	ug/L	0.102	4/8/2025			SW846-8082A	=
PCB-1254	U	0.102	ug/L	0.102	4/8/2025			SW846-8082A	=
PCB-1260	U	0.102	ug/L	0.102	4/8/2025			SW846-8082A	UJ
PCB-1268	U	0.102	ug/L	0.102	4/8/2025			SW846-8082A	=
Polychlorinated biphenyl	U	0.102	ug/L	0.102	4/8/2025			SW846-8082A	UJ
Radium-226	U	0.242	pCi/L	0.981	4/8/2025	0.554	0.555	AN-1418	=
Radium-228	U	2.31	pCi/L	4.82	4/8/2025	2.85	2.92	EPA-904.0-M	=
Strontium-90	U	-0.123	pCi/L	4.17	4/8/2025	2.12	2.12	EPA-905.0-M	=
Tritium	U	67.4	pCi/L	223	4/8/2025	129	130	EPA-906.0-M	=
Technetium-99	U	8.54	pCi/L	21.2	4/8/2025	12.5	12.6	HASL 300, Tc-02-RC M	=

Paducah OREIS
GROUNDWATER MONITORING REPORT

Facility: C-746-U Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045

Sampling Point: QC **Period:** 2nd Quarter 2025

AKGWA Well Tag #: N/A **SAMPLE ID:** RI1UG3-25 **Sample Type:** RI

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
Thorium-230	U	-0.0237	pCi/L	1.57	4/8/2025	0.694	0.695	HASL 300, Th-01-RC M	=
Thorium-232	U	0.129	pCi/L	1.01	4/8/2025	0.565	0.566	HASL 300, Th-01-RC M	=
Alpha activity	U	-0.494	pCi/L	8.91	4/8/2025	4	4.01	SW846-9310	=
Beta activity	U	4.83	pCi/L	12.5	4/8/2025	7.31	7.35	SW846-9310	=
1,2-Dibromo-3-chloropropane	U	0.0189	ug/L	0.0189	4/8/2025			SW846-8011	=
1,1,1,2-Tetrachloroethane	UY1	1	ug/L	1	4/8/2025			SW846-8260D	=
1,1,1-Trichloroethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
1,1,2,2-Tetrachloroethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
1,1,2-Trichloroethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
1,1-Dichloroethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
1,1-Dichloroethene	U	1	ug/L	1	4/8/2025			SW846-8260D	=
1,2,3-Trichloropropane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
1,2-Dibromoethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
1,2-Dichlorobenzene	UY1Y2	1	ug/L	1	4/8/2025			SW846-8260D	=
1,2-Dichloroethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
1,2-Dichloropropane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
1,4-Dichlorobenzene	UY1Y2	1	ug/L	1	4/8/2025			SW846-8260D	=
2-Butanone	U	5	ug/L	5	4/8/2025			SW846-8260D	=
2-Hexanone	U	5	ug/L	5	4/8/2025			SW846-8260D	=
4-Methyl-2-pentanone	U	5	ug/L	5	4/8/2025			SW846-8260D	=
Acetone	U	5	ug/L	5	4/8/2025			SW846-8260D	=
Acrolein	U	5	ug/L	5	4/8/2025			SW846-8260D	UJ
Acrylonitrile	U	5	ug/L	5	4/8/2025			SW846-8260D	=
Benzene	U	1	ug/L	1	4/8/2025			SW846-8260D	=
Bromochloromethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
Bromodichloromethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
Bromoform	UY1	1	ug/L	1	4/8/2025			SW846-8260D	=
Bromomethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
Carbon disulfide	U	5	ug/L	5	4/8/2025			SW846-8260D	=
Carbon tetrachloride	U	1	ug/L	1	4/8/2025			SW846-8260D	=
Chlorobenzene	Y1Y2	3.59	ug/L	1	4/8/2025			SW846-8260D	=
Chloroethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
Chloroform	U	1	ug/L	1	4/8/2025			SW846-8260D	=
Chloromethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
cis-1,2-Dichloroethene	U	1	ug/L	1	4/8/2025			SW846-8260D	=
cis-1,3-Dichloropropene	U	1	ug/L	1	4/8/2025			SW846-8260D	=
Dibromochloromethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
Dibromomethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
Ethylbenzene	UY1Y2	1	ug/L	1	4/8/2025			SW846-8260D	=
Iodomethane	U	5	ug/L	5	4/8/2025			SW846-8260D	=
Methylene chloride	U	5	ug/L	5	4/8/2025			SW846-8260D	=
Styrene	UY1Y2	1	ug/L	1	4/8/2025			SW846-8260D	=
Tetrachloroethene	UY1Y2	1	ug/L	1	4/8/2025			SW846-8260D	=

Paducah OREIS
GROUNDWATER MONITORING REPORT

Facility: C-746-U Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045

Sampling Point: QC **Period:** 2nd Quarter 2025

AKGWA Well Tag #: N/A **SAMPLE ID:** RI1UG3-25 **Sample Type:** RI

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
Toluene	UY1Y2	1	ug/L	1	4/8/2025			SW846-8260D	=
Total Xylene	UY1Y2	3	ug/L	3	4/8/2025			SW846-8260D	=
trans-1,2-Dichloroethene	U	1	ug/L	1	4/8/2025			SW846-8260D	=
trans-1,3-Dichloropropene	U	1	ug/L	1	4/8/2025			SW846-8260D	=
trans-1,4-Dichloro-2-butene	U	5	ug/L	5	4/8/2025			SW846-8260D	=
Trichloroethene	UY1	1	ug/L	1	4/8/2025			SW846-8260D	=
Trichlorofluoromethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
Vinyl acetate	U	5	ug/L	5	4/8/2025			SW846-8260D	=
Vinyl chloride	U	1	ug/L	1	4/8/2025			SW846-8260D	=

Paducah OREIS
GROUNDWATER MONITORING REPORT

Facility: C-746-U Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045

Sampling Point: QC **Period:** 2nd Quarter 2025

AKGWA Well Tag #: N/A **SAMPLE ID:** TB1UG3-25 **Sample Type:** TB

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
1,2-Dibromo-3-chloropropane	U	0.019	ug/L	0.019	4/8/2025			SW846-8011	=
1,1,1,2-Tetrachloroethane	UY1	1	ug/L	1	4/8/2025			SW846-8260D	=
1,1,1-Trichloroethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
1,1,2,2-Tetrachloroethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
1,1,2-Trichloroethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
1,1-Dichloroethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
1,1-Dichloroethene	U	1	ug/L	1	4/8/2025			SW846-8260D	=
1,2,3-Trichloropropane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
1,2-Dibromoethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
1,2-Dichlorobenzene	UY1Y2	1	ug/L	1	4/8/2025			SW846-8260D	=
1,2-Dichloroethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
1,2-Dichloropropane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
1,4-Dichlorobenzene	UY1Y2	1	ug/L	1	4/8/2025			SW846-8260D	=
2-Butanone	U	5	ug/L	5	4/8/2025			SW846-8260D	=
2-Hexanone	U	5	ug/L	5	4/8/2025			SW846-8260D	=
4-Methyl-2-pentanone	U	5	ug/L	5	4/8/2025			SW846-8260D	=
Acetone	U	5	ug/L	5	4/8/2025			SW846-8260D	=
Acrolein	U	5	ug/L	5	4/8/2025			SW846-8260D	UJ
Acrylonitrile	U	5	ug/L	5	4/8/2025			SW846-8260D	=
Benzene	U	1	ug/L	1	4/8/2025			SW846-8260D	=
Bromochloromethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
Bromodichloromethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
Bromoform	UY1	1	ug/L	1	4/8/2025			SW846-8260D	=
Bromomethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
Carbon disulfide	U	5	ug/L	5	4/8/2025			SW846-8260D	=
Carbon tetrachloride	U	1	ug/L	1	4/8/2025			SW846-8260D	=
Chlorobenzene	Y1Y2	3.41	ug/L	1	4/8/2025			SW846-8260D	=
Chloroethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
Chloroform	U	1	ug/L	1	4/8/2025			SW846-8260D	=
Chloromethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
cis-1,2-Dichloroethene	U	1	ug/L	1	4/8/2025			SW846-8260D	=
cis-1,3-Dichloropropene	U	1	ug/L	1	4/8/2025			SW846-8260D	=
Dibromochloromethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
Dibromomethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
Ethylbenzene	UY1Y2	1	ug/L	1	4/8/2025			SW846-8260D	=
Iodomethane	U	5	ug/L	5	4/8/2025			SW846-8260D	=
Methylene chloride	U	5	ug/L	5	4/8/2025			SW846-8260D	=
Styrene	UY1Y2	1	ug/L	1	4/8/2025			SW846-8260D	=
Tetrachloroethene	UY1Y2	1	ug/L	1	4/8/2025			SW846-8260D	=
Toluene	UY1Y2	1	ug/L	1	4/8/2025			SW846-8260D	=
Total Xylene	UY1Y2	3	ug/L	3	4/8/2025			SW846-8260D	=
trans-1,2-Dichloroethene	U	1	ug/L	1	4/8/2025			SW846-8260D	=
trans-1,3-Dichloropropene	U	1	ug/L	1	4/8/2025			SW846-8260D	=

Paducah OREIS
GROUNDWATER MONITORING REPORT

Facility: C-746-U Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045

Sampling Point: QC **Period:** 2nd Quarter 2025

AKGWA Well Tag #: N/A **SAMPLE ID:** TB1UG3-25 **Sample Type:** TB

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
trans-1,4-Dichloro-2-butene	U	5	ug/L	5	4/8/2025			SW846-8260D	=
Trichloroethene	UY1	1	ug/L	1	4/8/2025			SW846-8260D	=
Trichlorofluoromethane	U	1	ug/L	1	4/8/2025			SW846-8260D	=
Vinyl acetate	U	5	ug/L	5	4/8/2025			SW846-8260D	=
Vinyl chloride	U	1	ug/L	1	4/8/2025			SW846-8260D	=

Paducah OREIS
GROUNDWATER MONITORING REPORT

Facility: C-746-U Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045

Sampling Point: QC **Period:** 2nd Quarter 2025

AKGWA Well Tag #: N/A **SAMPLE ID:** TB2UG3-25 **Sample Type:** TB

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
1,2-Dibromo-3-chloropropane	UY2	0.019	ug/L	0.019	4/9/2025			SW846-8011	=
1,1,1,2-Tetrachloroethane	U	1	ug/L	1	4/9/2025			SW846-8260D	=
1,1,1-Trichloroethane	U	1	ug/L	1	4/9/2025			SW846-8260D	=
1,1,2,2-Tetrachloroethane	U	1	ug/L	1	4/9/2025			SW846-8260D	=
1,1,2-Trichloroethane	U	1	ug/L	1	4/9/2025			SW846-8260D	=
1,1-Dichloroethane	U	1	ug/L	1	4/9/2025			SW846-8260D	=
1,1-Dichloroethene	U	1	ug/L	1	4/9/2025			SW846-8260D	=
1,2,3-Trichloropropane	U	1	ug/L	1	4/9/2025			SW846-8260D	=
1,2-Dibromoethane	U	1	ug/L	1	4/9/2025			SW846-8260D	=
1,2-Dichlorobenzene	U	1	ug/L	1	4/9/2025			SW846-8260D	=
1,2-Dichloroethane	U	1	ug/L	1	4/9/2025			SW846-8260D	=
1,2-Dichloropropane	U	1	ug/L	1	4/9/2025			SW846-8260D	=
1,4-Dichlorobenzene	U	1	ug/L	1	4/9/2025			SW846-8260D	=
2-Butanone	U	5	ug/L	5	4/9/2025			SW846-8260D	=
2-Hexanone	U	5	ug/L	5	4/9/2025			SW846-8260D	=
4-Methyl-2-pentanone	U	5	ug/L	5	4/9/2025			SW846-8260D	=
Acetone	U	5	ug/L	5	4/9/2025			SW846-8260D	=
Acrolein	U	5	ug/L	5	4/9/2025			SW846-8260D	UJ
Acrylonitrile	U	5	ug/L	5	4/9/2025			SW846-8260D	=
Benzene	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Bromochloromethane	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Bromodichloromethane	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Bromoform	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Bromomethane	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Carbon disulfide	U	5	ug/L	5	4/9/2025			SW846-8260D	=
Carbon tetrachloride	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Chlorobenzene		3.27	ug/L	1	4/9/2025			SW846-8260D	=
Chloroethane	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Chloroform	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Chloromethane	U	1	ug/L	1	4/9/2025			SW846-8260D	=
cis-1,2-Dichloroethene	U	1	ug/L	1	4/9/2025			SW846-8260D	=
cis-1,3-Dichloropropene	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Dibromochloromethane	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Dibromomethane	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Ethylbenzene	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Iodomethane	U	5	ug/L	5	4/9/2025			SW846-8260D	=
Methylene chloride	U	5	ug/L	5	4/9/2025			SW846-8260D	=
Styrene	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Tetrachloroethene	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Toluene	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Total Xylene	U	3	ug/L	3	4/9/2025			SW846-8260D	=
trans-1,2-Dichloroethene	U	1	ug/L	1	4/9/2025			SW846-8260D	=
trans-1,3-Dichloropropene	U	1	ug/L	1	4/9/2025			SW846-8260D	=

Paducah OREIS
GROUNDWATER MONITORING REPORT

Facility: C-746-U Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045

Sampling Point: QC **Period:** 2nd Quarter 2025

AKGWA Well Tag #: N/A **SAMPLE ID:** TB2UG3-25 **Sample Type:** TB

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
trans-1,4-Dichloro-2-butene	UY1	5	ug/L	5	4/9/2025			SW846-8260D	UJ
Trichloroethene	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Trichlorofluoromethane	U	1	ug/L	1	4/9/2025			SW846-8260D	=
Vinyl acetate	U	5	ug/L	5	4/9/2025			SW846-8260D	=
Vinyl chloride	U	1	ug/L	1	4/9/2025			SW846-8260D	=

Paducah OREIS
GROUNDWATER MONITORING REPORT

Facility: C-746-U Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045

Sampling Point: QC **Period:** 2nd Quarter 2025

AKGWA Well Tag #: N/A **SAMPLE ID:** TB3UG3-25 **Sample Type:** TB

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
1,2-Dibromo-3-chloropropane	U	0.019	ug/L	0.019	4/10/2025			SW846-8011	=
1,1,1,2-Tetrachloroethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
1,1,1-Trichloroethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
1,1,2,2-Tetrachloroethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
1,1,2-Trichloroethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
1,1-Dichloroethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
1,1-Dichloroethene	U	1	ug/L	1	4/10/2025			SW846-8260D	=
1,2,3-Trichloropropane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
1,2-Dibromoethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
1,2-Dichlorobenzene	U	1	ug/L	1	4/10/2025			SW846-8260D	=
1,2-Dichloroethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
1,2-Dichloropropane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
1,4-Dichlorobenzene	U	1	ug/L	1	4/10/2025			SW846-8260D	=
2-Butanone	U	5	ug/L	5	4/10/2025			SW846-8260D	=
2-Hexanone	U	5	ug/L	5	4/10/2025			SW846-8260D	=
4-Methyl-2-pentanone	U	5	ug/L	5	4/10/2025			SW846-8260D	=
Acetone	U	5	ug/L	5	4/10/2025			SW846-8260D	=
Acrolein	U	5	ug/L	5	4/10/2025			SW846-8260D	UJ
Acrylonitrile	U	5	ug/L	5	4/10/2025			SW846-8260D	=
Benzene	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Bromochloromethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Bromodichloromethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Bromoform	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Bromomethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Carbon disulfide	U	5	ug/L	5	4/10/2025			SW846-8260D	=
Carbon tetrachloride	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Chlorobenzene		3.29	ug/L	1	4/10/2025			SW846-8260D	=
Chloroethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Chloroform	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Chloromethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
cis-1,2-Dichloroethene	U	1	ug/L	1	4/10/2025			SW846-8260D	=
cis-1,3-Dichloropropene	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Dibromochloromethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Dibromomethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Ethylbenzene	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Iodomethane	U	5	ug/L	5	4/10/2025			SW846-8260D	=
Methylene chloride	J	1.6	ug/L	5	4/10/2025			SW846-8260D	=
Styrene	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Tetrachloroethene	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Toluene	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Total Xylene	U	3	ug/L	3	4/10/2025			SW846-8260D	=
trans-1,2-Dichloroethene	U	1	ug/L	1	4/10/2025			SW846-8260D	=
trans-1,3-Dichloropropene	U	1	ug/L	1	4/10/2025			SW846-8260D	=

Paducah OREIS
GROUNDWATER MONITORING REPORT

Facility: C-746-U Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045

Sampling Point: QC **Period:** 2nd Quarter 2025

AKGWA Well Tag #: N/A **SAMPLE ID:** TB3UG3-25 **Sample Type:** TB

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
trans-1,4-Dichloro-2-butene	UY1	5	ug/L	5	4/10/2025			SW846-8260D	UJ
Trichloroethene	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Trichlorofluoromethane	U	1	ug/L	1	4/10/2025			SW846-8260D	=
Vinyl acetate	U	5	ug/L	5	4/10/2025			SW846-8260D	=
Vinyl chloride	U	1	ug/L	1	4/10/2025			SW846-8260D	=

Qualifier Code Definitions	
*	Duplicate analysis not within control limits.
B	Analyte was detected in the associated blank.
H	Analysis performed outside holding time requirement.
J	Estimated quantitation.
L	LCS and/or LCSD recovery outside of control limits.
L1	LCS/LCSD RPD outside acceptance criteria.
N	Sample spike (MS/MSD) recovery not within control limits
N1	MS/MSD or PS/PSD RPD outside acceptance criteria.
Q	Quality issue exists with instrument calibration.
P	Difference between results from two GC columns outside control limits.
S	Sample surrogate recovery outside acceptance criteria.
T	Tracer recovery outside control limits of 30-110%.
U	Not detected. RADS: Value reported is < MDA and/or TPU.
W	Post-digestion spike recovery out of control limits.
W1	Post-digestion spike and post-digestion spike duplicate RPD out of control limits.
X	Other specific flags and footnotes may be required to properly define the results.
Y1	MS/MSD recovery outside acceptance criteria.
Y2	MS/MSD RPD outside acceptance criteria.

RGA Type Code Definitions	
LRGA	Lower Regional Gravel Aquifer
UCRS	Upper Continental Recharge System
URGA	Upper Regional Gravel Aquifer
NA	Not Applicable.

Sample Type Code Definitions	
REG	Regular
FR	Field Replicate (code used for Field Duplicate)
RI	Equipment Rinsate Blank
FB	Field Blank
TB	Trip Blank

Validation Code Definitions	
=	Validated result, no additional qualifier necessary
J	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
UJ	Analyte not detected above the reported detection limit, and the reported detection limit is approximated due to quality deficiency.
X	Not validated

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ATTACHMENT C1

GEL LABORATORIES CERTIFICATE OF ANALYSIS

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GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Four Rivers Nuclear Partnership, LLC
Address : 5600 Hobbs Road

Kevil, Kentucky 42053 — Report Date: July 8, 2025

Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: MW357UG3-25
Sample ID: 718137001
Matrix: WG
Collect Date: 08-APR-25
Receive Date: 09-APR-25
Collector: Client

Project: FRNP00607
Client ID: FRNP006

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis														
AN-1418 AlphaSpec Ra226, Liquid "As Received"														
Radium-226	U	0.138	+/-0.346	0.627	+/-0.347	5.00	pCi/L			CM4	04/25/25	0841	2784553	1
Th-01-RC M, Th Isotopes, Liquid "As Received"														
Thorium-230	U	-0.116	+/-0.807	1.86	+/-0.807	50.0	pCi/L			RM3	04/25/25	0837	2784554	2
Thorium-232	U	0.0787	+/-0.558	1.11	+/-0.558		pCi/L							
Rad Gas Flow Proportional Counting														
904.0Mod, Ra228, Liquid "As Received"														
Radium-228	U	-0.280	+/-2.25	4.30	+/-2.25	4.99	pCi/L			HH3	04/29/25	1047	2784948	3
905.0Mod, Sr90, liquid "As Received"														
Strontium-90	U	-1.79	+/-2.45	5.14	+/-2.45	8.00	pCi/L			CH7	04/28/25	1723	2778888	4
9310, Alpha/Beta Activity, liquid "As Received"														
Alpha	U	0.570	+/-3.56	7.54	+/-3.56	15.0	pCi/L			HH3	04/29/25	1352	2778884	5
Beta		24.4	+/-8.45	11.2	+/-9.37	50.0	pCi/L							
Rad Liquid Scintillation Analysis														
906.0M, Tritium Dist, Liquid "As Received"														
Tritium	U	9.75	+/-130	231	+/-130	300	pCi/L			IT1	05/05/25	0734	2788762	6
Tc-02-RC-MOD, Tc99, Liquid "As Received"														
Technetium-99		34.2	+/-13.4	21.6	+/-13.9	25.0	pCi/L			MJ3	05/04/25	2002	2784181	7

The following Analytical Methods were performed

Method	Description
1	Eichrom Industries, AN-1418
2	DOE EML HASL-300, Th-01-RC Modified
3	EPA 904.0/SW846 9320 Modified
4	EPA 905.0 Modified/DOE RP501 Rev. 1 Modified
5	EPA 900.0/SW846 9310
6	EPA 906.0 Modified
7	DOE EML HASL-300, Tc-02-RC Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	AN-1418 AlphaSpec Ra226, Liquid "As Received"	2784553	96.9	(30%-110%)
Thorium-229 Tracer	Th-01-RC M, Th Isotopes, Liquid "As Received"	2784554	76.6	(30%-110%)
Barium-133 Tracer	904.0Mod, Ra228, Liquid "As Received"	2784948	87.9	(30%-110%)
Strontium Carrier	905.0Mod, Sr90, liquid "As Received"	2778888	84.1	(30%-110%)
Technetium-99m Tracer	Tc-02-RC-MOD, Tc99, Liquid "As Received"	2784181	93.9	(30%-110%)

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Four Rivers Nuclear Partnership, LLC
Address : 5600 Hobbs Road

Kevil, Kentucky 42053

Report Date: July 8, 2025

Contact: Ms. Jaime Morrow

Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: MW357UG3-25
Sample ID: 718137001

Project: FRNP00607
Client ID: FRNP006

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Surrogate/Tracer Recovery		**Test**						**Batch ID**		**Recovery%**		**Acceptable Limits**		

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor
DL: Detection Limit
Lc/LC: Critical Level
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Four Rivers Nuclear Partnership, LLC
Address : 5600 Hobbs Road

Kevil, Kentucky 42053

Report Date: July 8, 2025

Contact: Ms. Jaime Morrow

Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: MW359UG3-25
Sample ID: 718137003
Matrix: WG
Collect Date: 08-APR-25
Receive Date: 09-APR-25
Collector: Client

Project: FRNP00607
Client ID: FRNP006

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis														
AN-1418 AlphaSpec Ra226, Liquid "As Received"														
Radium-226	U	0.398	+/-0.397	0.460	+/-0.400	5.00	pCi/L			CM4	04/25/25	0842	2784553	1
Th-01-RC M, Th Isotopes, Liquid "As Received"														
Thorium-230	U	1.02	+/-1.06	1.55	+/-1.08	50.0	pCi/L			RM3	04/25/25	0837	2784554	2
Thorium-232	U	-0.136	+/-0.348	1.01	+/-0.348		pCi/L							
Rad Gas Flow Proportional Counting														
904.0Mod, Ra228, Liquid "As Received"														
Radium-228		6.24	+/-3.05	4.51	+/-3.51	4.99	pCi/L			HH3	04/29/25	1047	2784948	3
905.0Mod, Sr90, liquid "As Received"														
Strontium-90	U	-0.177	+/-3.30	6.12	+/-3.30	8.00	pCi/L			CH7	04/28/25	1723	2778888	4
9310, Alpha/Beta Activity, liquid "As Received"														
Alpha	U	0.563	+/-4.65	9.40	+/-4.65	15.0	pCi/L			HH3	04/29/25	1352	2778884	5
Beta	U	-0.586	+/-6.09	11.4	+/-6.09	50.0	pCi/L							
Rad Liquid Scintillation Analysis														
906.0M, Tritium Dist, Liquid "As Received"														
Tritium	U	87.9	+/-136	232	+/-137	300	pCi/L			IT1	05/05/25	0816	2788762	6
Tc-02-RC-MOD, Tc99, Liquid "As Received"														
Technetium-99	U	-11.5	+/-11.9	20.9	+/-11.9	25.0	pCi/L			MJ3	05/04/25	2045	2784181	7

The following Analytical Methods were performed

Method	Description
1	Eichrom Industries, AN-1418
2	DOE EML HASL-300, Th-01-RC Modified
3	EPA 904.0/SW846 9320 Modified
4	EPA 905.0 Modified/DOE RP501 Rev. 1 Modified
5	EPA 900.0/SW846 9310
6	EPA 906.0 Modified
7	DOE EML HASL-300, Tc-02-RC Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	AN-1418 AlphaSpec Ra226, Liquid "As Received"	2784553	95.2	(30%-110%)
Thorium-229 Tracer	Th-01-RC M, Th Isotopes, Liquid "As Received"	2784554	83.2	(30%-110%)
Barium-133 Tracer	904.0Mod, Ra228, Liquid "As Received"	2784948	82	(30%-110%)
Strontium Carrier	905.0Mod, Sr90, liquid "As Received"	2778888	84.1	(30%-110%)
Technetium-99m Tracer	Tc-02-RC-MOD, Tc99, Liquid "As Received"	2784181	95.9	(30%-110%)

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Four Rivers Nuclear Partnership, LLC
Address : 5600 Hobbs Road

Kevil, Kentucky 42053

Report Date: July 8, 2025

Contact: Ms. Jaime Morrow

Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: MW359UG3-25
Sample ID: 718137003

Project: FRNP00607
Client ID: FRNP006

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Surrogate/Tracer Recovery		**Test**						**Batch ID**		**Recovery%**		**Acceptable Limits**		

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor
DL: Detection Limit
Lc/LC: Critical Level
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Four Rivers Nuclear Partnership, LLC
Address : 5600 Hobbs Road

Kevil, Kentucky 42053

Report Date: July 8, 2025

Contact: Ms. Jaime Morrow

Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: MW360UG3-25
Sample ID: 718137005
Matrix: WG
Collect Date: 08-APR-25
Receive Date: 09-APR-25
Collector: Client

Project: FRNP00607
Client ID: FRNP006

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis														
AN-1418 AlphaSpec Ra226, Liquid "As Received"														
Radium-226	U	0.128	+/-0.322	0.584	+/-0.323	5.00	pCi/L			CM4	04/25/25	0842	2784553	1
Th-01-RC M, Th Isotopes, Liquid "As Received"														
Thorium-230	U	0.0826	+/-0.794	1.65	+/-0.796	50.0	pCi/L			RM3	04/25/25	0837	2784554	2
Thorium-232	U	-0.104	+/-0.367	1.00	+/-0.368		pCi/L							
Rad Gas Flow Proportional Counting														
904.0Mod, Ra228, Liquid "As Received"														
Radium-228	U	3.24	+/-2.90	4.77	+/-3.04	4.99	pCi/L			HH3	04/29/25	1047	2784948	3
905.0Mod, Sr90, liquid "As Received"														
Strontium-90	U	-0.765	+/-1.92	3.97	+/-1.92	8.00	pCi/L			CH7	04/28/25	1722	2778888	4
9310, Alpha/Beta Activity, liquid "As Received"														
Alpha	U	-0.605	+/-5.14	10.9	+/-5.14	15.0	pCi/L			HH3	04/29/25	1352	2778884	5
Beta	U	4.57	+/-6.70	11.5	+/-6.75	50.0	pCi/L							
Rad Liquid Scintillation Analysis														
906.0M, Tritium Dist, Liquid "As Received"														
Tritium	U	55.4	+/-131	228	+/-132	300	pCi/L			IT1	05/05/25	0858	2788762	6
Tc-02-RC-MOD, Tc99, Liquid "As Received"														
Technetium-99	U	-3.56	+/-11.8	20.5	+/-11.8	25.0	pCi/L			MJ3	05/04/25	2127	2784181	7

The following Analytical Methods were performed

Method	Description
1	Eichrom Industries, AN-1418
2	DOE EML HASL-300, Th-01-RC Modified
3	EPA 904.0/SW846 9320 Modified
4	EPA 905.0 Modified/DOE RP501 Rev. 1 Modified
5	EPA 900.0/SW846 9310
6	EPA 906.0 Modified
7	DOE EML HASL-300, Tc-02-RC Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	AN-1418 AlphaSpec Ra226, Liquid "As Received"	2784553	100	(30%-110%)
Thorium-229 Tracer	Th-01-RC M, Th Isotopes, Liquid "As Received"	2784554	76.7	(30%-110%)
Barium-133 Tracer	904.0Mod, Ra228, Liquid "As Received"	2784948	87.9	(30%-110%)
Strontium Carrier	905.0Mod, Sr90, liquid "As Received"	2778888	88.6	(30%-110%)
Technetium-99m Tracer	Tc-02-RC-MOD, Tc99, Liquid "As Received"	2784181	95.6	(30%-110%)

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Certificate of Analysis

Company : Four Rivers Nuclear Partnership, LLC
Address : 5600 Hobbs Road

Kevil, Kentucky 42053

Report Date: July 8, 2025

Contact: Ms. Jaime Morrow

Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: MW360UG3-25
Sample ID: 718137005

Project: FRNP00607
Client ID: FRNP006

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Surrogate/Tracer Recovery		**Test**						**Batch ID**		**Recovery%**		**Acceptable Limits**		

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor
DL: Detection Limit
Lc/LC: Critical Level
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

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Report Date: July 8, 2025

Contact: Ms. Jaime Morrow

Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: MW361DUG3-25
Sample ID: 718137007
Matrix: WG
Collect Date: 08-APR-25
Receive Date: 09-APR-25
Collector: Client

Project: FRNP00607
Client ID: FRNP006

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis														
AN-1418 AlphaSpec Ra226, Liquid "As Received"														
Radium-226	U	0.348	+/-0.385	0.508	+/-0.388	5.00	pCi/L			CM4	04/25/25	0842	2784553	1
Th-01-RC M, Th Isotopes, Liquid "As Received"														
Thorium-230	U	0.613	+/-1.30	2.28	+/-1.31	50.0	pCi/L			RM3	04/25/25	0837	2784554	2
Thorium-232	U	0.240	+/-0.735	1.03	+/-0.736		pCi/L							
Rad Gas Flow Proportional Counting														
904.0Mod, Ra228, Liquid "As Received"														
Radium-228	U	1.76	+/-2.80	4.81	+/-2.84	4.99	pCi/L			HH3	04/29/25	1047	2784948	3
905.0Mod, Sr90, liquid "As Received"														
Strontium-90	U	-1.10	+/-3.05	5.93	+/-3.05	8.00	pCi/L			CH7	04/28/25	1723	2778888	4
9310, Alpha/Beta Activity, liquid "As Received"														
Alpha	U	0.367	+/-4.40	9.06	+/-4.40	15.0	pCi/L			HH3	04/29/25	1352	2778884	5
Beta		27.2	+/-9.14	12.3	+/-10.2	50.0	pCi/L							
Rad Liquid Scintillation Analysis														
906.0M, Tritium Dist, Liquid "As Received"														
Tritium	U	67.3	+/-134	231	+/-135	300	pCi/L			IT1	05/05/25	0940	2788762	6
Tc-02-RC-MOD, Tc99, Liquid "As Received"														
Technetium-99		43.0	+/-13.3	21.1	+/-14.2	25.0	pCi/L			MJ3	05/04/25	2209	2784181	7

The following Analytical Methods were performed

Method	Description
1	Eichrom Industries, AN-1418
2	DOE EML HASL-300, Th-01-RC Modified
3	EPA 904.0/SW846 9320 Modified
4	EPA 905.0 Modified/DOE RP501 Rev. 1 Modified
5	EPA 900.0/SW846 9310
6	EPA 906.0 Modified
7	DOE EML HASL-300, Tc-02-RC Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	AN-1418 AlphaSpec Ra226, Liquid "As Received"	2784553	94.1	(30%-110%)
Thorium-229 Tracer	Th-01-RC M, Th Isotopes, Liquid "As Received"	2784554	53.2	(30%-110%)
Barium-133 Tracer	904.0Mod, Ra228, Liquid "As Received"	2784948	88.3	(30%-110%)
Strontium Carrier	905.0Mod, Sr90, liquid "As Received"	2778888	81.8	(30%-110%)
Technetium-99m Tracer	Tc-02-RC-MOD, Tc99, Liquid "As Received"	2784181	94	(30%-110%)

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Report Date: July 8, 2025

Contact: Ms. Jaime Morrow

Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: MW361DUG3-25
Sample ID: 718137007

Project: FRNP00607
Client ID: FRNP006

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Surrogate/Tracer Recovery		**Test**						**Batch ID**		**Recovery%**		**Acceptable Limits**		

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor
DL: Detection Limit
Lc/LC: Critical Level
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

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Report Date: July 8, 2025

Contact: Ms. Jaime Morrow

Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: MW361UG3-25
Sample ID: 718137009
Matrix: WG
Collect Date: 08-APR-25
Receive Date: 09-APR-25
Collector: Client

Project: FRNP00607
Client ID: FRNP006

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis														
AN-1418 AlphaSpec Ra226, Liquid "As Received"														
Radium-226	U	0.425	+/-0.441	0.610	+/-0.444	5.00	pCi/L			CM4	04/25/25	0842	2784553	1
Th-01-RC M, Th Isotopes, Liquid "As Received"														
Thorium-230	U	-0.0766	+/-0.821	1.91	+/-0.822	50.0	pCi/L			RM3	04/25/25	0837	2784554	2
Thorium-232	U	-0.0764	+/-0.477	1.16	+/-0.478		pCi/L							
Rad Gas Flow Proportional Counting														
904.0Mod, Ra228, Liquid "As Received"														
Radium-228	U	2.77	+/-2.65	4.34	+/-2.76	4.99	pCi/L			HH3	04/29/25	1047	2784948	3
905.0Mod, Sr90, liquid "As Received"														
Strontium-90	U	0.188	+/-2.31	4.40	+/-2.31	8.00	pCi/L			CH7	04/28/25	1723	2778888	4
9310, Alpha/Beta Activity, liquid "As Received"														
Alpha	U	-1.56	+/-3.59	8.84	+/-3.59	15.0	pCi/L			HH3	04/29/25	1352	2778884	5
Beta		31.4	+/-10.0	13.4	+/-11.3	50.0	pCi/L							
Rad Liquid Scintillation Analysis														
906.0M, Tritium Dist, Liquid "As Received"														
Tritium	U	-12.3	+/-126	227	+/-126	300	pCi/L			IT1	05/05/25	1022	2788762	6
Tc-02-RC-MOD, Tc99, Liquid "As Received"														
Technetium-99		47.7	+/-13.7	21.5	+/-14.7	25.0	pCi/L			MJ3	05/04/25	2251	2784181	7

The following Analytical Methods were performed

Method	Description
1	Eichrom Industries, AN-1418
2	DOE EML HASL-300, Th-01-RC Modified
3	EPA 904.0/SW846 9320 Modified
4	EPA 905.0 Modified/DOE RP501 Rev. 1 Modified
5	EPA 900.0/SW846 9310
6	EPA 906.0 Modified
7	DOE EML HASL-300, Tc-02-RC Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	AN-1418 AlphaSpec Ra226, Liquid "As Received"	2784553	100	(30%-110%)
Thorium-229 Tracer	Th-01-RC M, Th Isotopes, Liquid "As Received"	2784554	62.8	(30%-110%)
Barium-133 Tracer	904.0Mod, Ra228, Liquid "As Received"	2784948	82	(30%-110%)
Strontium Carrier	905.0Mod, Sr90, liquid "As Received"	2778888	81.8	(30%-110%)
Technetium-99m Tracer	Tc-02-RC-MOD, Tc99, Liquid "As Received"	2784181	93.6	(30%-110%)

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Report Date: July 8, 2025

Contact: Ms. Jaime Morrow

Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: MW361UG3-25
Sample ID: 718137009

Project: FRNP00607
Client ID: FRNP006

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Surrogate/Tracer Recovery		**Test**						**Batch ID**		**Recovery%**		**Acceptable Limits**		

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor
DL: Detection Limit
Lc/LC: Critical Level
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

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Report Date: July 8, 2025

Contact: Ms. Jaime Morrow

Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: MW362UG3-25
Sample ID: 718137011
Matrix: WG
Collect Date: 08-APR-25
Receive Date: 09-APR-25
Collector: Client

Project: FRNP00607
Client ID: FRNP006

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis														
AN-1418 AlphaSpec Ra226, Liquid "As Received"														
Radium-226	U	0.191	+/-0.498	0.918	+/-0.499	5.00	pCi/L			CM4	04/26/25	0850	2784553	1
Th-01-RC M, Th Isotopes, Liquid "As Received"														
Thorium-230	U	0.132	+/-0.804	1.64	+/-0.806	50.0	pCi/L			RM3	04/25/25	0837	2784554	2
Thorium-232	U	-0.0692	+/-0.411	1.01	+/-0.412		pCi/L							
Rad Gas Flow Proportional Counting														
904.0Mod, Ra228, Liquid "As Received"														
Radium-228	U	0.457	+/-2.63	4.74	+/-2.63	4.99	pCi/L			HH3	04/29/25	1047	2784948	3
905.0Mod, Sr90, liquid "As Received"														
Strontium-90	U	3.98	+/-3.20	5.16	+/-3.26	8.00	pCi/L			CH7	04/28/25	1723	2778888	4
9310, Alpha/Beta Activity, liquid "As Received"														
Alpha	U	-0.295	+/-4.78	10.3	+/-4.78	15.0	pCi/L			HH3	04/29/25	1352	2778884	5
Beta	U	-0.128	+/-6.16	11.5	+/-6.16	50.0	pCi/L							
Rad Liquid Scintillation Analysis														
906.0M, Tritium Dist, Liquid "As Received"														
Tritium	U	43.7	+/-128	224	+/-129	300	pCi/L			IT1	05/05/25	1103	2788762	6
Tc-02-RC-MOD, Tc99, Liquid "As Received"														
Technetium-99	U	-12.5	+/-12.0	21.2	+/-12.0	25.0	pCi/L			MJ3	05/04/25	2333	2784181	7

The following Analytical Methods were performed

Method	Description
1	Eichrom Industries, AN-1418
2	DOE EML HASL-300, Th-01-RC Modified
3	EPA 904.0/SW846 9320 Modified
4	EPA 905.0 Modified/DOE RP501 Rev. 1 Modified
5	EPA 900.0/SW846 9310
6	EPA 906.0 Modified
7	DOE EML HASL-300, Tc-02-RC Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	AN-1418 AlphaSpec Ra226, Liquid "As Received"	2784553	91.8	(30%-110%)
Thorium-229 Tracer	Th-01-RC M, Th Isotopes, Liquid "As Received"	2784554	73.2	(30%-110%)
Barium-133 Tracer	904.0Mod, Ra228, Liquid "As Received"	2784948	85.8	(30%-110%)
Strontium Carrier	905.0Mod, Sr90, liquid "As Received"	2778888	90.9	(30%-110%)
Technetium-99m Tracer	Tc-02-RC-MOD, Tc99, Liquid "As Received"	2784181	95.3	(30%-110%)

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Report Date: July 8, 2025

Contact: Ms. Jaime Morrow

Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: MW362UG3-25
Sample ID: 718137011

Project: FRNP00607
Client ID: FRNP006

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Surrogate/Tracer Recovery		**Test**						**Batch ID**		**Recovery%**		**Acceptable Limits**		

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor
DL: Detection Limit
Lc/LC: Critical Level
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

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Report Date: July 8, 2025

Contact: Ms. Jaime Morrow

Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: FB1UG3-25
Sample ID: 718137013
Matrix: WATER
Collect Date: 08-APR-25
Receive Date: 09-APR-25
Collector: Client

Project: FRNP00607
Client ID: FRNP006

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis														
AN-1418 AlphaSpec Ra226, Liquid "As Received"														
Radium-226	U	0.548	+/-0.526	0.567	+/-0.530	5.00	pCi/L			CM4	04/26/25	0850	2784553	1
Th-01-RC M, Th Isotopes, Liquid "As Received"														
Thorium-230	U	-0.111	+/-1.15	2.75	+/-1.16	50.0	pCi/L			RM3	04/25/25	0837	2784554	2
Thorium-232	U	0.186	+/-1.15	2.25	+/-1.15		pCi/L							
Rad Gas Flow Proportional Counting														
904.0Mod, Ra228, Liquid "As Received"														
Radium-228	U	0.439	+/-2.28	4.15	+/-2.29	4.99	pCi/L			HH3	04/29/25	1048	2784948	3
905.0Mod, Sr90, liquid "As Received"														
Strontium-90	U	-0.170	+/-2.33	4.53	+/-2.33	8.00	pCi/L			CH7	04/28/25	1723	2778888	4
9310, Alpha/Beta Activity, liquid "As Received"														
Alpha	U	2.05	+/-4.60	8.60	+/-4.61	15.0	pCi/L			HH3	04/29/25	1352	2778884	5
Beta	U	-2.98	+/-5.39	10.8	+/-5.39	50.0	pCi/L							
Rad Liquid Scintillation Analysis														
906.0M, Tritium Dist, Liquid "As Received"														
Tritium	U	30.4	+/-131	230	+/-131	300	pCi/L			IT1	05/05/25	1145	2788762	6
Tc-02-RC-MOD, Tc99, Liquid "As Received"														
Technetium-99	U	-11.7	+/-11.8	20.7	+/-11.8	25.0	pCi/L			MJ3	05/05/25	0015	2784181	7

The following Analytical Methods were performed

Method	Description
1	Eichrom Industries, AN-1418
2	DOE EML HASL-300, Th-01-RC Modified
3	EPA 904.0/SW846 9320 Modified
4	EPA 905.0 Modified/DOE RP501 Rev. 1 Modified
5	EPA 900.0/SW846 9310
6	EPA 906.0 Modified
7	DOE EML HASL-300, Tc-02-RC Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	AN-1418 AlphaSpec Ra226, Liquid "As Received"	2784553	99.6	(30%-110%)
Thorium-229 Tracer	Th-01-RC M, Th Isotopes, Liquid "As Received"	2784554	32.6	(30%-110%)
Barium-133 Tracer	904.0Mod, Ra228, Liquid "As Received"	2784948	93.6	(30%-110%)
Strontium Carrier	905.0Mod, Sr90, liquid "As Received"	2778888	77.3	(30%-110%)
Technetium-99m Tracer	Tc-02-RC-MOD, Tc99, Liquid "As Received"	2784181	94.3	(30%-110%)

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Report Date: July 8, 2025

Contact: Ms. Jaime Morrow

Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: FB1UG3-25
Sample ID: 718137013

Project: FRNP00607
Client ID: FRNP006

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Surrogate/Tracer Recovery		**Test**						**Batch ID**		**Recovery%**		**Acceptable Limits**		

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

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MDC: Minimum Detectable Concentration
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PF: Prep Factor
RL: Reporting Limit
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Report Date: July 8, 2025

Contact: Ms. Jaime Morrow

Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: RI1UG3-25
Sample ID: 718137014
Matrix: WATER
Collect Date: 08-APR-25
Receive Date: 09-APR-25
Collector: Client

Project: FRNP00607
Client ID: FRNP006

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis														
AN-1418 AlphaSpec Ra226, Liquid "As Received"														
Radium-226	U	0.242	+/-0.554	0.981	+/-0.555	5.00	pCi/L			CM4	04/26/25	0850	2784553	1
Th-01-RC M, Th Isotopes, Liquid "As Received"														
Thorium-230	U	-0.0237	+/-0.694	1.57	+/-0.695	50.0	pCi/L			RM3	04/25/25	0837	2784554	2
Thorium-232	U	0.129	+/-0.565	1.01	+/-0.566		pCi/L							
Rad Gas Flow Proportional Counting														
904.0Mod, Ra228, Liquid "As Received"														
Radium-228	U	2.31	+/-2.85	4.82	+/-2.92	4.99	pCi/L			HH3	04/29/25	1043	2784948	3
905.0Mod, Sr90, liquid "As Received"														
Strontium-90	U	-0.123	+/-2.12	4.17	+/-2.12	8.00	pCi/L			CH7	04/28/25	1723	2778888	4
9310, Alpha/Beta Activity, liquid "As Received"														
Alpha	U	-0.494	+/-4.00	8.91	+/-4.01	15.0	pCi/L			HH3	04/30/25	1418	2778884	5
Beta	U	4.83	+/-7.31	12.5	+/-7.35	50.0	pCi/L							
Rad Liquid Scintillation Analysis														
906.0M, Tritium Dist, Liquid "As Received"														
Tritium	U	67.4	+/-129	223	+/-130	300	pCi/L			IT1	05/05/25	1227	2788762	6
Tc-02-RC-MOD, Tc99, Liquid "As Received"														
Technetium-99	U	8.54	+/-12.5	21.2	+/-12.6	25.0	pCi/L			MJ3	05/05/25	0058	2784181	7

The following Analytical Methods were performed

Method	Description
1	Eichrom Industries, AN-1418
2	DOE EML HASL-300, Th-01-RC Modified
3	EPA 904.0/SW846 9320 Modified
4	EPA 905.0 Modified/DOE RP501 Rev. 1 Modified
5	EPA 900.0/SW846 9310
6	EPA 906.0 Modified
7	DOE EML HASL-300, Tc-02-RC Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	AN-1418 AlphaSpec Ra226, Liquid "As Received"	2784553	84.5	(30%-110%)
Thorium-229 Tracer	Th-01-RC M, Th Isotopes, Liquid "As Received"	2784554	77.4	(30%-110%)
Barium-133 Tracer	904.0Mod, Ra228, Liquid "As Received"	2784948	86.7	(30%-110%)
Strontium Carrier	905.0Mod, Sr90, liquid "As Received"	2778888	79.5	(30%-110%)
Technetium-99m Tracer	Tc-02-RC-MOD, Tc99, Liquid "As Received"	2784181	92.5	(30%-110%)

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Report Date: July 8, 2025

Contact: Ms. Jaime Morrow

Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: RI1UG3-25
Sample ID: 718137014

Project: FRNP00607
Client ID: FRNP006

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Surrogate/Tracer Recovery		**Test**						**Batch ID**		**Recovery%**		**Acceptable Limits**		

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor
DL: Detection Limit
Lc/LC: Critical Level
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

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Report Date: July 8, 2025

Contact: Ms. Jaime Morrow

Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: MW358UG3-25
Sample ID: 718137016
Matrix: WG
Collect Date: 08-APR-25
Receive Date: 09-APR-25
Collector: Client

Project: FRNP00607
Client ID: FRNP006

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis														
AN-1418 AlphaSpec Ra226, Liquid "As Received"														
Radium-226	U	0.435	+/-0.488	0.592	+/-0.491	5.00	pCi/L			CM4	04/26/25	0850	2784553	1
Th-01-RC M, Th Isotopes, Liquid "As Received"														
Thorium-230	U	0.129	+/-0.720	1.45	+/-0.722	50.0	pCi/L			RM3	04/25/25	0837	2784554	2
Thorium-232	U	-0.194	+/-0.399	1.21	+/-0.399		pCi/L							
Rad Gas Flow Proportional Counting														
904.0Mod, Ra228, Liquid "As Received"														
Radium-228		8.99	+/-3.34	4.72	+/-4.18	4.99	pCi/L			HH3	04/29/25	1044	2784948	3
905.0Mod, Sr90, liquid "As Received"														
Strontium-90	U	1.40	+/-1.92	3.28	+/-1.93	8.00	pCi/L			CH7	04/30/25	1214	2779897	4
9310, Alpha/Beta Activity, liquid "As Received"														
Alpha	U	2.55	+/-3.92	6.96	+/-3.95	15.0	pCi/L			HH3	05/29/25	1019	2804081	5
Beta		40.4	+/-10.1	12.2	+/-12.1	50.0	pCi/L							
Rad Liquid Scintillation Analysis														
906.0M, Tritium Dist, Liquid "As Received"														
Tritium	U	10.6	+/-131	233	+/-131	300	pCi/L			IT1	05/05/25	1309	2788762	6
Tc-02-RC-MOD, Tc99, Liquid "As Received"														
Technetium-99		44.6	+/-12.9	20.4	+/-13.9	25.0	pCi/L			MJ3	05/05/25	0140	2784181	7

The following Analytical Methods were performed

Method	Description
1	Eichrom Industries, AN-1418
2	DOE EML HASL-300, Th-01-RC Modified
3	EPA 904.0/SW846 9320 Modified
4	EPA 905.0 Modified/DOE RP501 Rev. 1 Modified
5	EPA 900.0/SW846 9310
6	EPA 906.0 Modified
7	DOE EML HASL-300, Tc-02-RC Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	AN-1418 AlphaSpec Ra226, Liquid "As Received"	2784553	97.3	(30%-110%)
Thorium-229 Tracer	Th-01-RC M, Th Isotopes, Liquid "As Received"	2784554	74.7	(30%-110%)
Barium-133 Tracer	904.0Mod, Ra228, Liquid "As Received"	2784948	85.8	(30%-110%)
Strontium Carrier	905.0Mod, Sr90, liquid "As Received"	2779897	84.1	(30%-110%)
Technetium-99m Tracer	Tc-02-RC-MOD, Tc99, Liquid "As Received"	2784181	94.3	(30%-110%)

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Certificate of Analysis

Company : Four Rivers Nuclear Partnership, LLC
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Kevil, Kentucky 42053

Report Date: July 8, 2025

Contact: Ms. Jaime Morrow

Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: MW358UG3-25
Sample ID: 718137016

Project: FRNP00607
Client ID: FRNP006

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Surrogate/Tracer Recovery		**Test**						**Batch ID**		**Recovery%**		**Acceptable Limits**		

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor
DL: Detection Limit
Lc/LC: Critical Level
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

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Report Date: July 8, 2025

Company : Four Rivers Nuclear Partnership, LLC
Address : 5600 Hobbs Road

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID:	MW357UG3-25	Project:	FRNP00607
Sample ID:	718137001	Client ID:	FRNP006
Matrix:	WG		
Collect Date:	08-APR-25 10:08		
Receive Date:	09-APR-25		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
504.1/8011 Analysis of EDB/DBCP												
8011 VOA- 1,2-Dibromo-3-chloropropane "As Received"												
1,2-Dibromo-3-chloropropane	U	0.0190	0.00855	0.0190	ug/L	0.950	1	LOF	04/10/25	1542	2778983	1
Carbon Analysis												
9060A, Total Organic Carbon "As Received"												
Total Organic Carbon Average	J	0.432	0.330	2.00	mg/L		1	KB3	04/21/25	0258	2784361	3
Flow Injection Analysis												
9012B, Cyanide, Total "As Received"												
Cyanide, Total	UN	0.200	0.00167	0.200	mg/L	1.00	1	KLP1	04/21/25	1501	2781881	4
Halogen Analysis												
9020B, TOX (Organic Halogen) "As Received"												
Total Organic Halogens	J	3.40	3.33	10.0	ug/L		1	RMJ	04/25/25	0310	2785966	5
Ion Chromatography												
300.0, Iodide in Liquid "As Received"												
Iodide	U	0.500	0.167	0.500	mg/L		1	CH6	04/24/25	1412	2786988	6
SW846 9056A Anions (5 elements) "As Received"												
Chloride	JW	28.1	0.268	250	mg/L		4	RXB5	04/09/25	1300	2778850	7
Nitrate-N	J	1.12	0.132	10.0	mg/L		4					
Sulfate		33.7	0.532	1.60	mg/L		4					
Bromide		0.320	0.0670	0.200	mg/L		1	RXB5	04/10/25	0151	2778850	8
Fluoride	J	0.152	0.0330	4.00	mg/L		1					
Mercury Analysis-CVAA												
7470, Mercury Liquid "As Received"												
Mercury	U	0.000200	0.0000670	0.000200	mg/L	1.00	1	JP2	04/30/25	1034	2788802	9
Metals Analysis-ICP-MS												
6020, Metals (15+ elements) "As Received"												
Aluminum		0.0703	0.0193	0.0500	mg/L	1.00	1	BCD1	05/05/25	1914	2779940	10
Antimony	U	0.00300	0.00100	0.00300	mg/L	1.00	1					
Arsenic	U	0.00500	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0772	0.000670	0.00400	mg/L	1.00	1					
Beryllium	U	0.000500	0.000200	0.000500	mg/L	1.00	1					
Cadmium	U	0.00100	0.000300	0.00100	mg/L	1.00	1					
Calcium		24.9	0.0800	0.200	mg/L	1.00	1					
Chromium	U	0.0100	0.00300	0.0100	mg/L	1.00	1					
Cobalt	J	0.000461	0.000300	0.00100	mg/L	1.00	1					

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Address : 5600 Hobbs Road

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: MW357UG3-25 Project: FRNP00607
Sample ID: 718137001 Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP-MS												
6020, Metals (15+ elements) "As Received"												
Copper	J	0.00114	0.000300	0.00200	mg/L	1.00	1					
Iron		0.199	0.0330	0.100	mg/L	1.00	1					
Lead	U	0.00200	0.000500	0.00200	mg/L	1.00	1					
Magnesium		10.5	0.0100	0.0300	mg/L	1.00	1					
Molybdenum	U	0.00100	0.000200	0.00100	mg/L	1.00	1					
Nickel	U	0.00200	0.000600	0.00200	mg/L	1.00	1					
Potassium		1.73	0.0800	0.300	mg/L	1.00	1					
Selenium	U	0.00500	0.00150	0.00500	mg/L	1.00	1					
Silver	U	0.00100	0.000300	0.00100	mg/L	1.00	1					
Thallium	U	0.00200	0.000600	0.00200	mg/L	1.00	1					
Uranium	U	0.000200	0.0000670	0.000200	mg/L	1.00	1					
Vanadium	U	0.0200	0.00330	0.0200	mg/L	1.00	1					
Zinc	J	0.00349	0.00330	0.0200	mg/L	1.00	1	PRB	05/07/25	1124	2779940	11
Boron		0.284	0.0520	0.150	mg/L	1.00	10	PRB	05/07/25	1138	2779940	12
Sodium		42.0	0.0800	0.250	mg/L	1.00	1	PRB	05/07/25	1235	2779940	13
Rhodium	U	0.00500	0.00160	0.00500	mg/L	1.00	1	PRB	05/07/25	1318	2779940	14
Tantalum	U	0.00500	0.00100	0.00500	mg/L	1.00	1					
Manganese		0.0294	0.00100	0.00500	mg/L	1.00	1	PRB	05/07/25	1431	2779940	15
Semi-Volatiles-PCB												
8082A, PCB Liquids "As Received"												
Aroclor-1016	U	0.0997	0.0332	0.0997	ug/L	0.000997	1	JXM	04/29/25	1237	2787775	16
Aroclor-1221	U	0.0997	0.0332	0.0997	ug/L	0.000997	1					
Aroclor-1232	U	0.0997	0.0332	0.0997	ug/L	0.000997	1					
Aroclor-1242	U	0.0997	0.0332	0.0997	ug/L	0.000997	1					
Aroclor-1248	U	0.0997	0.0332	0.0997	ug/L	0.000997	1					
Aroclor-1254	U	0.0997	0.0332	0.0997	ug/L	0.000997	1					
Aroclor-1260	U	0.0997	0.0332	0.0997	ug/L	0.000997	1					
Aroclor-1268	U	0.0997	0.0332	0.0997	ug/L	0.000997	1					
Aroclor-Total	U	0.0997	0.0332	0.0997	ug/L	0.000997	1					
Solids Analysis												
160.1, Dissolved Solids "As Received"												
Total Dissolved Solids		191	2.38	10.0	mg/L			CH6	04/14/25	1201	2780960	17
Spectrometric Analysis												
410.4, Chem. Oxygen Demand "As Received"												

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Address : 5600 Hobbs Road

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: MW357UG3-25 Project: FRNP00607
Sample ID: 718137001 Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Spectrometric Analysis												
410.4, Chem. Oxygen Demand "As Received"												
COD	U	20.0	8.95	20.0	mg/L		1	HH2	04/12/25	0856	2779680	18
Volatile Organics												
8260D, Volatiles- full suite "As Received"												
1,1,1,2-Tetrachloroethane	UY1	1.00	0.333	1.00	ug/L		1	PXY1	04/12/25	0136	2780275	19
1,1,1-Trichloroethane	U	1.00	0.333	1.00	ug/L		1					
1,1,2,2-Tetrachloroethane	U	1.00	0.333	1.00	ug/L		1					
1,1,2-Trichloroethane	U	1.00	0.333	1.00	ug/L		1					
1,1-Dichloroethane	U	1.00	0.333	1.00	ug/L		1					
1,1-Dichloroethylene	U	1.00	0.333	1.00	ug/L		1					
1,2,3-Trichloropropane	U	1.00	0.333	1.00	ug/L		1					
1,2-Dibromoethane	U	1.00	0.333	1.00	ug/L		1					
1,2-Dichlorobenzene	UY1Y2	1.00	0.333	1.00	ug/L		1					
1,2-Dichloroethane	U	1.00	0.333	1.00	ug/L		1					
1,2-Dichloropropane	U	1.00	0.333	1.00	ug/L		1					
1,4-Dichlorobenzene	UY1Y2	1.00	0.333	1.00	ug/L		1					
2-Butanone	U	5.00	1.67	5.00	ug/L		1					
2-Hexanone	U	5.00	1.67	5.00	ug/L		1					
4-Methyl-2-pentanone	U	5.00	1.67	5.00	ug/L		1					
Acetone	U	5.00	1.74	5.00	ug/L		1					
Acrolein	U	5.00	1.67	5.00	ug/L		1					
Acrylonitrile	U	5.00	1.67	5.00	ug/L		1					
Benzene	U	1.00	0.333	1.00	ug/L		1					
Bromochloromethane	U	1.00	0.333	1.00	ug/L		1					
Bromodichloromethane	U	1.00	0.333	1.00	ug/L		1					
Bromoform	UY1	1.00	0.333	1.00	ug/L		1					
Bromomethane	U	1.00	0.337	1.00	ug/L		1					
Carbon disulfide	U	5.00	1.67	5.00	ug/L		1					
Carbon tetrachloride	U	1.00	0.333	1.00	ug/L		1					
Chlorobenzene	UY1Y2	1.00	0.333	1.00	ug/L		1					
Chloroethane	U	1.00	0.333	1.00	ug/L		1					
Chloroform	U	1.00	0.333	1.00	ug/L		1					
Chloromethane	U	1.00	0.333	1.00	ug/L		1					
Dibromochloromethane	U	1.00	0.333	1.00	ug/L		1					
Dibromomethane	U	1.00	0.333	1.00	ug/L		1					
Ethylbenzene	UY1Y2	1.00	0.333	1.00	ug/L		1					
Iodomethane	U	5.00	1.67	5.00	ug/L		1					

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Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: MW357UG3-25 Project: FRNP00607
Sample ID: 718137001 Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
8260D, Volatiles- full suite "As Received"												
Methylene chloride	U	5.00	0.500	5.00	ug/L		1					
Styrene	UY1Y2	1.00	0.333	1.00	ug/L		1					
Tetrachloroethylene	UY1Y2	1.00	0.333	1.00	ug/L		1					
Toluene	UY1Y2	1.00	0.333	1.00	ug/L		1					
Trichloroethylene	Y1	1.96	0.333	1.00	ug/L		1					
Trichlorofluoromethane	U	1.00	0.333	1.00	ug/L		1					
Vinyl acetate	U	5.00	1.67	5.00	ug/L		1					
Vinyl chloride	U	1.00	0.333	1.00	ug/L		1					
Xylenes (total)	UY1Y2	3.00	1.00	3.00	ug/L		1					
cis-1,2-Dichloroethylene	U	1.00	0.333	1.00	ug/L		1					
cis-1,3-Dichloropropylene	U	1.00	0.333	1.00	ug/L		1					
trans-1,2-Dichloroethylene	U	1.00	0.333	1.00	ug/L		1					
trans-1,3-Dichloropropylene	U	1.00	0.333	1.00	ug/L		1					
trans-1,4-Dichloro-2-butene	U	5.00	1.67	5.00	ug/L		1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3535A	SW3535A PCB SPE Extraction	DG3	04/28/25	1041	2787774
SW846 8011 PREP	8011 Prep	LOF	04/10/25	1305	2778965
SW846 3005A	ICP-MS 3005A PREP	HS2	04/29/25	1530	2779937
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	JM13	04/29/25	1120	2788801
SW846 9010C Distillation	SW846 9010C Prep	KLP1	04/21/25	1002	2781880

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	Kevil, Kentucky 42053
Contact:	Ms. Jaime Morrow
Project:	C-746-U Landfill Quarterly(UG25-03)

Client Sample ID:	MW357UG3-25	Project:	FRNP00607
Sample ID:	718137001	Client ID:	FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 8011	
2	SW846 8011	
3	SW846 9060A	
4	SW846 9012B	
5	SW846 9020B	
6	EPA 300.0	
7	SW846 9056A	
8	SW846 9056A	
9	SW846 7470A	
10	SW846 3005A/6020B	
11	SW846 3005A/6020B	
12	SW846 3005A/6020B	
13	SW846 3005A/6020B	
14	SW846 3005A/6020B	
15	SW846 3005A/6020B	
16	SW846 3535A/8082A	
17	EPA 160.1	
18	EPA 410.4	
19	SW846 8260D	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
1-Chloro-2-fluorobenzene	8011 VOA- 1,2-Dibromo-3-chloropropane "As Received"	6.93 ug/L	6.79	102	(56%-149%)
Decachlorobiphenyl	8082A, PCB Liquids "As Received"	0.215 ug/L	0.199	108	(30%-135%)
4cmx	8082A, PCB Liquids "As Received"	0.201 ug/L	0.199	101	(26%-108%)
Bromofluorobenzene	8260D, Volatiles- full suite "As Received"	56.4 ug/L	50.0	113	(85%-114%)
1,2-Dichloroethane-d4	8260D, Volatiles- full suite "As Received"	52.1 ug/L	50.0	104	(81%-118%)
Toluene-d8	8260D, Volatiles- full suite "As Received"	54.8 ug/L	50.0	110	(89%-112%)

Notes:

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	Kevil, Kentucky 42053
Contact:	Ms. Jaime Morrow
Project:	C-746-U Landfill Quarterly(UG25-03)

Client Sample ID:	MW357UG3-25	Project:	FRNP00607
Sample ID:	718137001	Client ID:	FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Company :	Four Rivers Nuclear Partnership, LLC
Address :	5600 Hobbs Road
	Kevil, Kentucky 42053
Contact:	Ms. Jaime Morrow
Project:	C-746-U Landfill Quarterly(UG25-03)

Client Sample ID:	MW357UG3-25	Project:	FRNP00607
Sample ID:	718137002	Client ID:	FRNP006
Matrix:	WG		
Collect Date:	08-APR-25 10:08		
Receive Date:	09-APR-25		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP-MS												
6020, Dissolved Metals (3 Elements) "As Received"												
Barium		0.0732	0.000670	0.00400	mg/L	1.00	1	BCD1	05/05/25	1941	2779940	1
Chromium	U	0.0100	0.00300	0.0100	mg/L	1.00	1					
Uranium	U	0.000200	0.0000670	0.000200	mg/L	1.00	1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 160	Laboratory Filtration	MM7	04/10/25	1510	2779116
SW846 3005A	ICP-MS 3005A PREP	HS2	04/29/25	1530	2779937

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 3005A/6020B	

Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Report Date: July 8, 2025

Company : Four Rivers Nuclear Partnership, LLC
Address : 5600 Hobbs Road

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID:	MW359UG3-25	Project:	FRNP00607
Sample ID:	718137003	Client ID:	FRNP006
Matrix:	WG		
Collect Date:	08-APR-25 12:42		
Receive Date:	09-APR-25		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
504.1/8011 Analysis of EDB/DBCP												
8011 VOA- 1,2-Dibromo-3-chloropropane "As Received"												
1,2-Dibromo-3-chloropropane	U	0.0191	0.00859	0.0191	ug/L	0.954	1	LOF	04/10/25	1725	2778983	1
Carbon Analysis												
9060A, Total Organic Carbon "As Received"												
Total Organic Carbon Average	J	0.649	0.330	2.00	mg/L		1	KB3	04/21/25	0451	2784361	3
Flow Injection Analysis												
9012B, Cyanide, Total "As Received"												
Cyanide, Total	JN	0.00467	0.00167	0.200	mg/L	1.00	1	KLP1	04/21/25	1504	2781881	4
Halogen Analysis												
9020B, TOX (Organic Halogen) "As Received"												
Total Organic Halogens	J	4.74	3.33	10.0	ug/L		1	RMJ	04/25/25	0457	2785966	5
Ion Chromatography												
300.0, Iodide in Liquid "As Received"												
Iodide	U	0.500	0.167	0.500	mg/L		1	CH6	04/24/25	1450	2786988	6
SW846 9056A Anions (5 elements) "As Received"												
Nitrate-N	J	0.614	0.132	10.0	mg/L		4	RXB5	04/09/25	1605	2778850	7
Sulfate		35.7	0.532	1.60	mg/L		4					
Bromide	U	0.200	0.0670	0.200	mg/L		1	RXB5	04/10/25	0324	2778850	8
Chloride	JW	0.623	0.0670	250	mg/L		1					
Fluoride	J	0.0786	0.0330	4.00	mg/L		1					
Mercury Analysis-CVAA												
7470, Mercury Liquid "As Received"												
Mercury	U	0.000200	0.0000670	0.000200	mg/L	1.00	1	JP2	04/30/25	1045	2788802	9
Metals Analysis-ICP-MS												
6020, Metals (15+ elements) "As Received"												
Aluminum	J	0.0491	0.0193	0.0500	mg/L	1.00	1	BCD1	05/05/25	2008	2779940	10
Antimony	U	0.00300	0.00100	0.00300	mg/L	1.00	1					
Arsenic	U	0.00500	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0254	0.000670	0.00400	mg/L	1.00	1					
Beryllium	U	0.000500	0.000200	0.000500	mg/L	1.00	1					
Cadmium	U	0.00100	0.000300	0.00100	mg/L	1.00	1					
Calcium		7.90	0.0800	0.200	mg/L	1.00	1					
Chromium	U	0.0100	0.00300	0.0100	mg/L	1.00	1					
Cobalt	U	0.00100	0.000300	0.00100	mg/L	1.00	1					

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Certificate of Analysis

Report Date: July 8, 2025

Company : Four Rivers Nuclear Partnership, LLC
Address : 5600 Hobbs Road

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: MW359UG3-25 Project: FRNP00607
Sample ID: 718137003 Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP-MS												
6020, Metals (15+ elements) "As Received"												
Copper	J	0.000807	0.000300	0.00200	mg/L	1.00	1					
Iron	J	0.0588	0.0330	0.100	mg/L	1.00	1					
Lead	U	0.00200	0.000500	0.00200	mg/L	1.00	1					
Magnesium		3.37	0.0100	0.0300	mg/L	1.00	1					
Molybdenum	J	0.000229	0.000200	0.00100	mg/L	1.00	1					
Nickel	J	0.00149	0.000600	0.00200	mg/L	1.00	1					
Potassium	J	0.204	0.0800	0.300	mg/L	1.00	1					
Selenium	U	0.00500	0.00150	0.00500	mg/L	1.00	1					
Silver	U	0.00100	0.000300	0.00100	mg/L	1.00	1					
Thallium	U	0.00200	0.000600	0.00200	mg/L	1.00	1					
Uranium	J	0.0000800	0.0000670	0.000200	mg/L	1.00	1					
Vanadium	U	0.0200	0.00330	0.0200	mg/L	1.00	1					
Boron	J	0.00619	0.00520	0.0150	mg/L	1.00	1	PRB	05/07/25	1146	2779940	11
Manganese	U	0.00500	0.00100	0.00500	mg/L	1.00	1					
Zinc	U	0.0200	0.00330	0.0200	mg/L	1.00	1					
Sodium		30.9	0.0800	0.250	mg/L	1.00	1	PRB	05/07/25	1241	2779940	12
Rhodium	U	0.00500	0.00160	0.00500	mg/L	1.00	1	PRB	05/07/25	1326	2779940	13
Tantalum	U	0.00500	0.00100	0.00500	mg/L	1.00	1					
Semi-Volatiles-PCB												
8082A, PCB Liquids "As Received"												
Aroclor-1016	U	0.100	0.0333	0.100	ug/L	0.00100	1	JXM	04/29/25	1252	2787775	14
Aroclor-1221	U	0.100	0.0333	0.100	ug/L	0.00100	1					
Aroclor-1232	U	0.100	0.0333	0.100	ug/L	0.00100	1					
Aroclor-1242	U	0.100	0.0333	0.100	ug/L	0.00100	1					
Aroclor-1248	U	0.100	0.0333	0.100	ug/L	0.00100	1					
Aroclor-1254	U	0.100	0.0333	0.100	ug/L	0.00100	1					
Aroclor-1260	U	0.100	0.0333	0.100	ug/L	0.00100	1					
Aroclor-1268	U	0.100	0.0333	0.100	ug/L	0.00100	1					
Aroclor-Total	U	0.100	0.0333	0.100	ug/L	0.00100	1					
Solids Analysis												
160.1, Dissolved Solids "As Received"												
Total Dissolved Solids	*	135	2.38	10.0	mg/L			CH6	04/15/25	1437	2781736	15
Spectrometric Analysis												
410.4, Chem. Oxygen Demand "As Received"												

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Report Date: July 8, 2025

Company : Four Rivers Nuclear Partnership, LLC
Address : 5600 Hobbs Road

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: MW359UG3-25 Project: FRNP00607
Sample ID: 718137003 Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Spectrometric Analysis												
410.4, Chem. Oxygen Demand "As Received"												
COD	U	20.0	8.95	20.0	mg/L		1	HH2	04/12/25	0856	2779680	16
Volatile Organics												
8260D, Volatiles- full suite "As Received"												
1,1,1,2-Tetrachloroethane	UY1	1.00	0.333	1.00	ug/L		1	PXY1	04/12/25	0203	2780275	17
1,1,1-Trichloroethane	U	1.00	0.333	1.00	ug/L		1					
1,1,2,2-Tetrachloroethane	U	1.00	0.333	1.00	ug/L		1					
1,1,2-Trichloroethane	U	1.00	0.333	1.00	ug/L		1					
1,1-Dichloroethane	U	1.00	0.333	1.00	ug/L		1					
1,1-Dichloroethylene	U	1.00	0.333	1.00	ug/L		1					
1,2,3-Trichloropropane	U	1.00	0.333	1.00	ug/L		1					
1,2-Dibromoethane	U	1.00	0.333	1.00	ug/L		1					
1,2-Dichlorobenzene	UY1Y2	1.00	0.333	1.00	ug/L		1					
1,2-Dichloroethane	U	1.00	0.333	1.00	ug/L		1					
1,2-Dichloropropane	U	1.00	0.333	1.00	ug/L		1					
1,4-Dichlorobenzene	UY1Y2	1.00	0.333	1.00	ug/L		1					
2-Butanone	U	5.00	1.67	5.00	ug/L		1					
2-Hexanone	U	5.00	1.67	5.00	ug/L		1					
4-Methyl-2-pentanone	U	5.00	1.67	5.00	ug/L		1					
Acetone	U	5.00	1.74	5.00	ug/L		1					
Acrolein	U	5.00	1.67	5.00	ug/L		1					
Acrylonitrile	U	5.00	1.67	5.00	ug/L		1					
Benzene	U	1.00	0.333	1.00	ug/L		1					
Bromochloromethane	U	1.00	0.333	1.00	ug/L		1					
Bromodichloromethane	U	1.00	0.333	1.00	ug/L		1					
Bromoform	UY1	1.00	0.333	1.00	ug/L		1					
Bromomethane	U	1.00	0.337	1.00	ug/L		1					
Carbon disulfide	U	5.00	1.67	5.00	ug/L		1					
Carbon tetrachloride	U	1.00	0.333	1.00	ug/L		1					
Chlorobenzene	UY1Y2	1.00	0.333	1.00	ug/L		1					
Chloroethane	U	1.00	0.333	1.00	ug/L		1					
Chloroform	U	1.00	0.333	1.00	ug/L		1					
Chloromethane	U	1.00	0.333	1.00	ug/L		1					
Dibromochloromethane	U	1.00	0.333	1.00	ug/L		1					
Dibromomethane	U	1.00	0.333	1.00	ug/L		1					
Ethylbenzene	UY1Y2	1.00	0.333	1.00	ug/L		1					
Iodomethane	U	5.00	1.67	5.00	ug/L		1					

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Company : Four Rivers Nuclear Partnership, LLC
Address : 5600 Hobbs Road

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: MW359UG3-25 Project: FRNP00607
Sample ID: 718137003 Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
8260D, Volatiles- full suite "As Received"												
Methylene chloride	U	5.00	0.500	5.00	ug/L		1					
Styrene	UY1Y2	1.00	0.333	1.00	ug/L		1					
Tetrachloroethylene	UY1Y2	1.00	0.333	1.00	ug/L		1					
Toluene	UY1Y2	1.00	0.333	1.00	ug/L		1					
Trichloroethylene	UY1	1.00	0.333	1.00	ug/L		1					
Trichlorofluoromethane	U	1.00	0.333	1.00	ug/L		1					
Vinyl acetate	U	5.00	1.67	5.00	ug/L		1					
Vinyl chloride	U	1.00	0.333	1.00	ug/L		1					
Xylenes (total)	UY1Y2	3.00	1.00	3.00	ug/L		1					
cis-1,2-Dichloroethylene	U	1.00	0.333	1.00	ug/L		1					
cis-1,3-Dichloropropylene	U	1.00	0.333	1.00	ug/L		1					
trans-1,2-Dichloroethylene	U	1.00	0.333	1.00	ug/L		1					
trans-1,3-Dichloropropylene	U	1.00	0.333	1.00	ug/L		1					
trans-1,4-Dichloro-2-butene	U	5.00	1.67	5.00	ug/L		1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 8011 PREP	8011 Prep	LOF	04/10/25	1305	2778965
SW846 3535A	SW3535A PCB SPE Extraction	DG3	04/28/25	1041	2787774
SW846 3005A	ICP-MS 3005A PREP	HS2	04/29/25	1530	2779937
SW846 9010C Distillation	SW846 9010C Prep	KLP1	04/21/25	1002	2781880
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	JM13	04/29/25	1120	2788801

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Address :	5600 Hobbs Road
	Kevil, Kentucky 42053
Contact:	Ms. Jaime Morrow
Project:	C-746-U Landfill Quarterly(UG25-03)

Client Sample ID:	MW359UG3-25	Project:	FRNP00607
Sample ID:	718137003	Client ID:	FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 8011	
2	SW846 8011	
3	SW846 9060A	
4	SW846 9012B	
5	SW846 9020B	
6	EPA 300.0	
7	SW846 9056A	
8	SW846 9056A	
9	SW846 7470A	
10	SW846 3005A/6020B	
11	SW846 3005A/6020B	
12	SW846 3005A/6020B	
13	SW846 3005A/6020B	
14	SW846 3535A/8082A	
15	EPA 160.1	
16	EPA 410.4	
17	SW846 8260D	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
1-Chloro-2-fluorobenzene	8011 VOA- 1,2-Dibromo-3-chloropropane "As Received"	5.94 ug/L	6.82	87	(56%-149%)
Decachlorobiphenyl	8082A, PCB Liquids "As Received"	0.198 ug/L	0.200	99	(30%-135%)
4cmx	8082A, PCB Liquids "As Received"	0.189 ug/L	0.200	95	(26%-108%)
Bromofluorobenzene	8260D, Volatiles- full suite "As Received"	54.7 ug/L	50.0	109	(85%-114%)
1,2-Dichloroethane-d4	8260D, Volatiles- full suite "As Received"	53.7 ug/L	50.0	107	(81%-118%)
Toluene-d8	8260D, Volatiles- full suite "As Received"	53.8 ug/L	50.0	108	(89%-112%)

Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: July 8, 2025

Company :	Four Rivers Nuclear Partnership, LLC
Address :	5600 Hobbs Road
	Kevil, Kentucky 42053
Contact:	Ms. Jaime Morrow
Project:	C-746-U Landfill Quarterly(UG25-03)

Client Sample ID:	MW359UG3-25	Project:	FRNP00607
Sample ID:	718137004	Client ID:	FRNP006
Matrix:	WG		
Collect Date:	08-APR-25 12:42		
Receive Date:	09-APR-25		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP-MS												
6020, Dissolved Metals (3 Elements) "As Received"												
Barium		0.0248	0.000670	0.00400	mg/L	1.00	1	BCD1	05/05/25	2012	2779940	1
Chromium	U	0.0100	0.00300	0.0100	mg/L	1.00	1					
Uranium	U	0.000200	0.0000670	0.000200	mg/L	1.00	1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	HS2	04/29/25	1530	2779937
EPA 160	Laboratory Filtration	MM7	04/10/25	1510	2779116

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 3005A/6020B	

Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Report Date: July 8, 2025

Company : Four Rivers Nuclear Partnership, LLC
Address : 5600 Hobbs Road

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID:	MW360UG3-25	Project:	FRNP00607
Sample ID:	718137005	Client ID:	FRNP006
Matrix:	WG		
Collect Date:	08-APR-25 07:36		
Receive Date:	09-APR-25		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
504.1/8011 Analysis of EDB/DBCP												
8011 VOA- 1,2-Dibromo-3-chloropropane "As Received"												
1,2-Dibromo-3-chloropropane	U	0.0187	0.00841	0.0187	ug/L	0.935	1	LOF	04/10/25	1759	2778983	1
Carbon Analysis												
9060A, Total Organic Carbon "As Received"												
Total Organic Carbon Average	J	0.726	0.330	2.00	mg/L		1	KB3	04/21/25	1828	2784686	3
Flow Injection Analysis												
9012B, Cyanide, Total "As Received"												
Cyanide, Total	JN	0.00241	0.00167	0.200	mg/L	1.00	1	KLP1	04/21/25	1505	2781881	4
Halogen Analysis												
9020B, TOX (Organic Halogen) "As Received"												
Total Organic Halogens	J	4.50	3.33	10.0	ug/L		1	RMJ	04/30/25	2126	2789621	5
Ion Chromatography												
300.0, Iodide in Liquid "As Received"												
Iodide	U	0.500	0.167	0.500	mg/L		1	CH6	04/24/25	1503	2786988	6
SW846 9056A Anions (5 elements) "As Received"												
Chloride	JW	5.32	0.268	250	mg/L		4	RXB5	04/09/25	1331	2778850	7
Sulfate		9.51	0.532	1.60	mg/L		4					
Nitrate-N	J	0.687	0.330	10.0	mg/L		10	RXB5	04/09/25	1839	2778850	8
Bromide	J	0.128	0.0670	0.200	mg/L		1	RXB5	04/10/25	0355	2778850	9
Fluoride	J	0.233	0.0330	4.00	mg/L		1					
Mercury Analysis-CVAA												
7470, Mercury Liquid "As Received"												
Mercury	U	0.000200	0.0000670	0.000200	mg/L	1.00	1	JP2	04/30/25	1046	2788802	10
Metals Analysis-ICP-MS												
6020, Metals (15+ elements) "As Received"												
Aluminum	J	0.0208	0.0193	0.0500	mg/L	1.00	1	BCD1	05/05/25	2016	2779940	11
Antimony	U	0.00300	0.00100	0.00300	mg/L	1.00	1					
Arsenic	U	0.00500	0.00200	0.00500	mg/L	1.00	1					
Barium		0.202	0.000670	0.00400	mg/L	1.00	1					
Beryllium	U	0.000500	0.000200	0.000500	mg/L	1.00	1					
Cadmium	U	0.00100	0.000300	0.00100	mg/L	1.00	1					
Calcium		20.0	0.0800	0.200	mg/L	1.00	1					
Chromium	U	0.0100	0.00300	0.0100	mg/L	1.00	1					
Cobalt		0.00151	0.000300	0.00100	mg/L	1.00	1					

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Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: MW360UG3-25 Project: FRNP00607
Sample ID: 718137005 Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP-MS												
6020, Metals (15+ elements) "As Received"												
Copper	J	0.00146	0.000300	0.00200	mg/L	1.00	1					
Iron	J	0.0959	0.0330	0.100	mg/L	1.00	1					
Lead	U	0.00200	0.000500	0.00200	mg/L	1.00	1					
Magnesium		8.23	0.0100	0.0300	mg/L	1.00	1					
Molybdenum	J	0.000214	0.000200	0.00100	mg/L	1.00	1					
Nickel	J	0.00164	0.000600	0.00200	mg/L	1.00	1					
Potassium		0.709	0.0800	0.300	mg/L	1.00	1					
Selenium	U	0.00500	0.00150	0.00500	mg/L	1.00	1					
Silver	U	0.00100	0.000300	0.00100	mg/L	1.00	1					
Thallium	U	0.00200	0.000600	0.00200	mg/L	1.00	1					
Uranium	J	0.0000950	0.0000670	0.000200	mg/L	1.00	1					
Vanadium	U	0.0200	0.00330	0.0200	mg/L	1.00	1					
Boron		0.0189	0.00520	0.0150	mg/L	1.00	1	PRB	05/07/25	1148	2779940	12
Manganese		0.0204	0.00100	0.00500	mg/L	1.00	1					
Zinc	J	0.00431	0.00330	0.0200	mg/L	1.00	1					
Sodium		64.7	0.400	1.25	mg/L	1.00	5	PRB	05/07/25	1242	2779940	13
Rhodium	U	0.00500	0.00160	0.00500	mg/L	1.00	1	PRB	05/07/25	1327	2779940	14
Tantalum	U	0.00500	0.00100	0.00500	mg/L	1.00	1					
Semi-Volatiles-PCB												
8082A, PCB Liquids "As Received"												
Aroclor-1016	U	0.101	0.0338	0.101	ug/L	0.00101	1	JXM	04/29/25	1308	2787775	15
Aroclor-1221	U	0.101	0.0338	0.101	ug/L	0.00101	1					
Aroclor-1232	U	0.101	0.0338	0.101	ug/L	0.00101	1					
Aroclor-1242	U	0.101	0.0338	0.101	ug/L	0.00101	1					
Aroclor-1248	U	0.101	0.0338	0.101	ug/L	0.00101	1					
Aroclor-1254	U	0.101	0.0338	0.101	ug/L	0.00101	1					
Aroclor-1260	U	0.101	0.0338	0.101	ug/L	0.00101	1					
Aroclor-1268	U	0.101	0.0338	0.101	ug/L	0.00101	1					
Aroclor-Total	U	0.101	0.0338	0.101	ug/L	0.00101	1					
Solids Analysis												
160.1, Dissolved Solids "As Received"												
Total Dissolved Solids		198	2.38	10.0	mg/L			CH6	04/14/25	1201	2780960	16
Spectrometric Analysis												
410.4, Chem. Oxygen Demand "As Received"												

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Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: MW360UG3-25 Project: FRNP00607
Sample ID: 718137005 Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Spectrometric Analysis												
410.4, Chem. Oxygen Demand "As Received"												
COD	U	20.0	8.95	20.0	mg/L		1	HH2	04/12/25	0856	2779680	17
Volatile Organics												
8260D, Volatiles- full suite "As Received"												
1,1,1,2-Tetrachloroethane	UY1	1.00	0.333	1.00	ug/L		1	PXY1	04/12/25	0229	2780275	18
1,1,1-Trichloroethane	U	1.00	0.333	1.00	ug/L		1					
1,1,2,2-Tetrachloroethane	U	1.00	0.333	1.00	ug/L		1					
1,1,2-Trichloroethane	U	1.00	0.333	1.00	ug/L		1					
1,1-Dichloroethane	U	1.00	0.333	1.00	ug/L		1					
1,1-Dichloroethylene	U	1.00	0.333	1.00	ug/L		1					
1,2,3-Trichloropropane	U	1.00	0.333	1.00	ug/L		1					
1,2-Dibromoethane	U	1.00	0.333	1.00	ug/L		1					
1,2-Dichlorobenzene	UY1Y2	1.00	0.333	1.00	ug/L		1					
1,2-Dichloroethane	U	1.00	0.333	1.00	ug/L		1					
1,2-Dichloropropane	U	1.00	0.333	1.00	ug/L		1					
1,4-Dichlorobenzene	UY1Y2	1.00	0.333	1.00	ug/L		1					
2-Butanone	U	5.00	1.67	5.00	ug/L		1					
2-Hexanone	U	5.00	1.67	5.00	ug/L		1					
4-Methyl-2-pentanone	U	5.00	1.67	5.00	ug/L		1					
Acetone	U	5.00	1.74	5.00	ug/L		1					
Acrolein	U	5.00	1.67	5.00	ug/L		1					
Acrylonitrile	U	5.00	1.67	5.00	ug/L		1					
Benzene	U	1.00	0.333	1.00	ug/L		1					
Bromochloromethane	U	1.00	0.333	1.00	ug/L		1					
Bromodichloromethane	U	1.00	0.333	1.00	ug/L		1					
Bromoform	UY1	1.00	0.333	1.00	ug/L		1					
Bromomethane	U	1.00	0.337	1.00	ug/L		1					
Carbon disulfide	U	5.00	1.67	5.00	ug/L		1					
Carbon tetrachloride	U	1.00	0.333	1.00	ug/L		1					
Chlorobenzene	UY1Y2	1.00	0.333	1.00	ug/L		1					
Chloroethane	U	1.00	0.333	1.00	ug/L		1					
Chloroform	U	1.00	0.333	1.00	ug/L		1					
Chloromethane	U	1.00	0.333	1.00	ug/L		1					
Dibromochloromethane	U	1.00	0.333	1.00	ug/L		1					
Dibromomethane	U	1.00	0.333	1.00	ug/L		1					
Ethylbenzene	UY1Y2	1.00	0.333	1.00	ug/L		1					
Iodomethane	U	5.00	1.67	5.00	ug/L		1					

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Certificate of Analysis

Report Date: July 8, 2025

Company : Four Rivers Nuclear Partnership, LLC
Address : 5600 Hobbs Road

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: MW360UG3-25 Project: FRNP00607
Sample ID: 718137005 Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
8260D, Volatiles- full suite "As Received"												
Methylene chloride	U	5.00	0.500	5.00	ug/L		1					
Styrene	UY1Y2	1.00	0.333	1.00	ug/L		1					
Tetrachloroethylene	UY1Y2	1.00	0.333	1.00	ug/L		1					
Toluene	UY1Y2	1.00	0.333	1.00	ug/L		1					
Trichloroethylene	JY1	0.740	0.333	1.00	ug/L		1					
Trichlorofluoromethane	U	1.00	0.333	1.00	ug/L		1					
Vinyl acetate	U	5.00	1.67	5.00	ug/L		1					
Vinyl chloride	U	1.00	0.333	1.00	ug/L		1					
Xylenes (total)	UY1Y2	3.00	1.00	3.00	ug/L		1					
cis-1,2-Dichloroethylene	U	1.00	0.333	1.00	ug/L		1					
cis-1,3-Dichloropropylene	U	1.00	0.333	1.00	ug/L		1					
trans-1,2-Dichloroethylene	U	1.00	0.333	1.00	ug/L		1					
trans-1,3-Dichloropropylene	U	1.00	0.333	1.00	ug/L		1					
trans-1,4-Dichloro-2-butene	U	5.00	1.67	5.00	ug/L		1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 8011 PREP	8011 Prep	LOF	04/10/25	1305	2778965
SW846 3535A	SW3535A PCB SPE Extraction	DG3	04/28/25	1041	2787774
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	JM13	04/29/25	1120	2788801
SW846 3005A	ICP-MS 3005A PREP	HS2	04/29/25	1530	2779937
SW846 9010C Distillation	SW846 9010C Prep	KLP1	04/21/25	1002	2781880

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Company :	Four Rivers Nuclear Partnership, LLC
Address :	5600 Hobbs Road
	Kevil, Kentucky 42053
Contact:	Ms. Jaime Morrow
Project:	C-746-U Landfill Quarterly(UG25-03)

Client Sample ID:	MW360UG3-25	Project:	FRNP00607
Sample ID:	718137005	Client ID:	FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 8011	
2	SW846 8011	
3	SW846 9060A	
4	SW846 9012B	
5	SW846 9020B	
6	EPA 300.0	
7	SW846 9056A	
8	SW846 9056A	
9	SW846 9056A	
10	SW846 7470A	
11	SW846 3005A/6020B	
12	SW846 3005A/6020B	
13	SW846 3005A/6020B	
14	SW846 3005A/6020B	
15	SW846 3535A/8082A	
16	EPA 160.1	
17	EPA 410.4	
18	SW846 8260D	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
1-Chloro-2-fluorobenzene	8011 VOA- 1,2-Dibromo-3-chloropropane "As Received"	6.03 ug/L	6.68	90	(56%-149%)
Decachlorobiphenyl	8082A, PCB Liquids "As Received"	0.238 ug/L	0.203	117	(30%-135%)
4cmx	8082A, PCB Liquids "As Received"	0.193 ug/L	0.203	95	(26%-108%)
Bromofluorobenzene	8260D, Volatiles- full suite "As Received"	55.5 ug/L	50.0	111	(85%-114%)
1,2-Dichloroethane-d4	8260D, Volatiles- full suite "As Received"	51.9 ug/L	50.0	104	(81%-118%)
Toluene-d8	8260D, Volatiles- full suite "As Received"	54.5 ug/L	50.0	109	(89%-112%)

Notes:

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Address :	5600 Hobbs Road
	Kevil, Kentucky 42053
Contact:	Ms. Jaime Morrow
Project:	C-746-U Landfill Quarterly(UG25-03)

Client Sample ID:	MW360UG3-25	Project:	FRNP00607
Sample ID:	718137005	Client ID:	FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: July 8, 2025

Company :	Four Rivers Nuclear Partnership, LLC
Address :	5600 Hobbs Road
	Kevil, Kentucky 42053
Contact:	Ms. Jaime Morrow
Project:	C-746-U Landfill Quarterly(UG25-03)

Client Sample ID:	MW360UG3-25	Project:	FRNP00607
Sample ID:	718137006	Client ID:	FRNP006
Matrix:	WG		
Collect Date:	08-APR-25 07:36		
Receive Date:	09-APR-25		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP-MS												
6020, Dissolved Metals (3 Elements) "As Received"												
Barium		0.201	0.000670	0.00400	mg/L	1.00	1	BCD1	05/05/25	2020	2779940	1
Chromium	U	0.0100	0.00300	0.0100	mg/L	1.00	1					
Uranium	J	0.0000910	0.0000670	0.000200	mg/L	1.00	1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	HS2	04/29/25	1530	2779937
EPA 160	Laboratory Filtration	MM7	04/10/25	1510	2779116

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 3005A/6020B	

Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Company : Four Rivers Nuclear Partnership, LLC
Address : 5600 Hobbs Road

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID:	MW361DUG3-25	Project:	FRNP00607
Sample ID:	718137007	Client ID:	FRNP006
Matrix:	WG		
Collect Date:	08-APR-25 08:20		
Receive Date:	09-APR-25		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
504.1/8011 Analysis of EDB/DBCP												
8011 VOA- 1,2-Dibromo-3-chloropropane "As Received"												
1,2-Dibromo-3-chloropropane	U	0.0187	0.00841	0.0187	ug/L	0.935	1	LOF	04/10/25	1833	2778983	1
Carbon Analysis												
9060A, Total Organic Carbon "As Received"												
Total Organic Carbon Average	J	0.454	0.330	2.00	mg/L		1	KB3	04/21/25	2003	2784686	3
Flow Injection Analysis												
9012B, Cyanide, Total "As Received"												
Cyanide, Total	JN	0.00666	0.00167	0.200	mg/L	1.00	1	KLP1	04/21/25	1506	2781881	4
Halogen Analysis												
9020B, TOX (Organic Halogen) "As Received"												
Total Organic Halogens	J	3.78	3.33	10.0	ug/L		1	RMJ	05/01/25	0102	2789621	5
Ion Chromatography												
300.0, Iodide in Liquid "As Received"												
Iodide	U	0.500	0.167	0.500	mg/L		1	CH6	04/24/25	1516	2786988	6
SW846 9056A Anions (5 elements) "As Received"												
Chloride	JW	33.3	0.335	250	mg/L		5	RXB5	04/09/25	1402	2778850	7
Nitrate-N	J	1.01	0.165	10.0	mg/L		5					
Sulfate		49.8	0.665	2.00	mg/L		5					
Bromide		0.397	0.0670	0.200	mg/L		1	RXB5	04/10/25	0426	2778850	8
Fluoride	J	0.150	0.0330	4.00	mg/L		1					
Mercury Analysis-CVAA												
7470, Mercury Liquid "As Received"												
Mercury	U	0.000200	0.0000670	0.000200	mg/L	1.00	1	JP2	04/30/25	1048	2788802	9
Metals Analysis-ICP-MS												
6020, Metals (15+ elements) "As Received"												
Aluminum	U	0.0500	0.0193	0.0500	mg/L	1.00	1	BCD1	05/05/25	2024	2779940	10
Antimony	U	0.00300	0.00100	0.00300	mg/L	1.00	1					
Arsenic	U	0.00500	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0595	0.000670	0.00400	mg/L	1.00	1					
Beryllium	U	0.000500	0.000200	0.000500	mg/L	1.00	1					
Cadmium	U	0.00100	0.000300	0.00100	mg/L	1.00	1					
Calcium		29.7	0.0800	0.200	mg/L	1.00	1					
Chromium	U	0.0100	0.00300	0.0100	mg/L	1.00	1					
Cobalt	U	0.00100	0.000300	0.00100	mg/L	1.00	1					

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Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: MW361DUG3-25 Project: FRNP00607
Sample ID: 718137007 Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP-MS												
6020, Metals (15+ elements) "As Received"												
Copper	J	0.00108	0.000300	0.00200	mg/L	1.00	1					
Iron	J	0.0567	0.0330	0.100	mg/L	1.00	1					
Lead	U	0.00200	0.000500	0.00200	mg/L	1.00	1					
Magnesium		12.7	0.0100	0.0300	mg/L	1.00	1					
Molybdenum	U	0.00100	0.000200	0.00100	mg/L	1.00	1					
Nickel	U	0.00200	0.000600	0.00200	mg/L	1.00	1					
Potassium		1.85	0.0800	0.300	mg/L	1.00	1					
Selenium	U	0.00500	0.00150	0.00500	mg/L	1.00	1					
Silver	U	0.00100	0.000300	0.00100	mg/L	1.00	1					
Thallium	U	0.00200	0.000600	0.00200	mg/L	1.00	1					
Uranium	U	0.000200	0.0000670	0.000200	mg/L	1.00	1					
Vanadium	U	0.0200	0.00330	0.0200	mg/L	1.00	1					
Manganese		0.0206	0.00100	0.00500	mg/L	1.00	1	PRB	05/07/25	1151	2779940	11
Zinc	J	0.00332	0.00330	0.0200	mg/L	1.00	1					
Boron		0.436	0.0260	0.0750	mg/L	1.00	5	PRB	05/07/25	1152	2779940	12
Sodium		41.6	0.0800	0.250	mg/L	1.00	1	PRB	05/07/25	1244	2779940	13
Rhodium	U	0.00500	0.00160	0.00500	mg/L	1.00	1	PRB	05/07/25	1328	2779940	14
Tantalum	U	0.00500	0.00100	0.00500	mg/L	1.00	1					
Semi-Volatiles-PCB												
8082A, PCB Liquids "As Received"												
Aroclor-1016	US	0.0958	0.0319	0.0958	ug/L	0.000958	1	JXM	04/29/25	1323	2787775	15
Aroclor-1221	US	0.0958	0.0319	0.0958	ug/L	0.000958	1					
Aroclor-1232	US	0.0958	0.0319	0.0958	ug/L	0.000958	1					
Aroclor-1242	US	0.0958	0.0319	0.0958	ug/L	0.000958	1					
Aroclor-1248	US	0.0958	0.0319	0.0958	ug/L	0.000958	1					
Aroclor-1254	JS	0.0411	0.0319	0.0958	ug/L	0.000958	1					
Aroclor-1260	US	0.0958	0.0319	0.0958	ug/L	0.000958	1					
Aroclor-1268	US	0.0958	0.0319	0.0958	ug/L	0.000958	1					
Aroclor-Total	JS	0.0411	0.0319	0.0958	ug/L	0.000958	1					
Solids Analysis												
160.1, Dissolved Solids "As Received"												
Total Dissolved Solids		207	2.38	10.0	mg/L			CH6	04/14/25	1201	2780960	16
Spectrometric Analysis												
410.4, Chem. Oxygen Demand "As Received"												

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Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: MW361DUG3-25 Project: FRNP00607
Sample ID: 718137007 Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Spectrometric Analysis												
410.4, Chem. Oxygen Demand "As Received"												
COD	U	20.0	8.95	20.0	mg/L		1	HH2	04/12/25	0856	2779680	17
Volatile Organics												
8260D, Volatiles- full suite "As Received"												
1,1,1,2-Tetrachloroethane	UY1	1.00	0.333	1.00	ug/L		1	PXY1	04/12/25	0255	2780275	18
1,1,1-Trichloroethane	U	1.00	0.333	1.00	ug/L		1					
1,1,2,2-Tetrachloroethane	U	1.00	0.333	1.00	ug/L		1					
1,1,2-Trichloroethane	U	1.00	0.333	1.00	ug/L		1					
1,1-Dichloroethane	U	1.00	0.333	1.00	ug/L		1					
1,1-Dichloroethylene	U	1.00	0.333	1.00	ug/L		1					
1,2,3-Trichloropropane	U	1.00	0.333	1.00	ug/L		1					
1,2-Dibromoethane	U	1.00	0.333	1.00	ug/L		1					
1,2-Dichlorobenzene	UY1Y2	1.00	0.333	1.00	ug/L		1					
1,2-Dichloroethane	U	1.00	0.333	1.00	ug/L		1					
1,2-Dichloropropane	U	1.00	0.333	1.00	ug/L		1					
1,4-Dichlorobenzene	UY1Y2	1.00	0.333	1.00	ug/L		1					
2-Butanone	U	5.00	1.67	5.00	ug/L		1					
2-Hexanone	U	5.00	1.67	5.00	ug/L		1					
4-Methyl-2-pentanone	U	5.00	1.67	5.00	ug/L		1					
Acetone	U	5.00	1.74	5.00	ug/L		1					
Acrolein	U	5.00	1.67	5.00	ug/L		1					
Acrylonitrile	U	5.00	1.67	5.00	ug/L		1					
Benzene	U	1.00	0.333	1.00	ug/L		1					
Bromochloromethane	U	1.00	0.333	1.00	ug/L		1					
Bromodichloromethane	U	1.00	0.333	1.00	ug/L		1					
Bromoform	UY1	1.00	0.333	1.00	ug/L		1					
Bromomethane	U	1.00	0.337	1.00	ug/L		1					
Carbon disulfide	U	5.00	1.67	5.00	ug/L		1					
Carbon tetrachloride	U	1.00	0.333	1.00	ug/L		1					
Chlorobenzene	UY1Y2	1.00	0.333	1.00	ug/L		1					
Chloroethane	U	1.00	0.333	1.00	ug/L		1					
Chloroform	U	1.00	0.333	1.00	ug/L		1					
Chloromethane	U	1.00	0.333	1.00	ug/L		1					
Dibromochloromethane	U	1.00	0.333	1.00	ug/L		1					
Dibromomethane	U	1.00	0.333	1.00	ug/L		1					
Ethylbenzene	UY1Y2	1.00	0.333	1.00	ug/L		1					
Iodomethane	U	5.00	1.67	5.00	ug/L		1					

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Client Sample ID: MW361DUG3-25 Project: FRNP00607
Sample ID: 718137007 Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
8260D, Volatiles- full suite "As Received"												
Methylene chloride	U	5.00	0.500	5.00	ug/L		1					
Styrene	UY1Y2	1.00	0.333	1.00	ug/L		1					
Tetrachloroethylene	UY1Y2	1.00	0.333	1.00	ug/L		1					
Toluene	UY1Y2	1.00	0.333	1.00	ug/L		1					
Trichloroethylene	Y1	1.22	0.333	1.00	ug/L		1					
Trichlorofluoromethane	U	1.00	0.333	1.00	ug/L		1					
Vinyl acetate	U	5.00	1.67	5.00	ug/L		1					
Vinyl chloride	U	1.00	0.333	1.00	ug/L		1					
Xylenes (total)	UY1Y2	3.00	1.00	3.00	ug/L		1					
cis-1,2-Dichloroethylene	U	1.00	0.333	1.00	ug/L		1					
cis-1,3-Dichloropropylene	U	1.00	0.333	1.00	ug/L		1					
trans-1,2-Dichloroethylene	U	1.00	0.333	1.00	ug/L		1					
trans-1,3-Dichloropropylene	U	1.00	0.333	1.00	ug/L		1					
trans-1,4-Dichloro-2-butene	U	5.00	1.67	5.00	ug/L		1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	JM13	04/29/25	1120	2788801
SW846 9010C Distillation	SW846 9010C Prep	KLP1	04/21/25	1002	2781880
SW846 8011 PREP	8011 Prep	LOF	04/10/25	1305	2778965
SW846 3535A	SW3535A PCB SPE Extraction	DG3	04/28/25	1041	2787774
SW846 3005A	ICP-MS 3005A PREP	HS2	04/29/25	1530	2779937

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Report Date: July 8, 2025

Company :	Four Rivers Nuclear Partnership, LLC
Address :	5600 Hobbs Road
	Kevil, Kentucky 42053
Contact:	Ms. Jaime Morrow
Project:	C-746-U Landfill Quarterly(UG25-03)

Client Sample ID:	MW361DUG3-25	Project:	FRNP00607
Sample ID:	718137007	Client ID:	FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 8011	
2	SW846 8011	
3	SW846 9060A	
4	SW846 9012B	
5	SW846 9020B	
6	EPA 300.0	
7	SW846 9056A	
8	SW846 9056A	
9	SW846 7470A	
10	SW846 3005A/6020B	
11	SW846 3005A/6020B	
12	SW846 3005A/6020B	
13	SW846 3005A/6020B	
14	SW846 3005A/6020B	
15	SW846 3535A/8082A	
16	EPA 160.1	
17	EPA 410.4	
18	SW846 8260D	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
1-Chloro-2-fluorobenzene	8011 VOA- 1,2-Dibromo-3-chloropropane "As Received"	5.95 ug/L	6.68	89	(56%-149%)
Decachlorobiphenyl	8082A, PCB Liquids "As Received"	0.281 ug/L	0.192	147*	(30%-135%)
4cmx	8082A, PCB Liquids "As Received"	0.148 ug/L	0.192	77	(26%-108%)
Bromofluorobenzene	8260D, Volatiles- full suite "As Received"	55.8 ug/L	50.0	112	(85%-114%)
1,2-Dichloroethane-d4	8260D, Volatiles- full suite "As Received"	53.5 ug/L	50.0	107	(81%-118%)
Toluene-d8	8260D, Volatiles- full suite "As Received"	53.6 ug/L	50.0	107	(89%-112%)

Notes:

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Report Date: July 8, 2025

Company :	Four Rivers Nuclear Partnership, LLC
Address :	5600 Hobbs Road
	Kevil, Kentucky 42053
Contact:	Ms. Jaime Morrow
Project:	C-746-U Landfill Quarterly(UG25-03)

Client Sample ID:	MW361DUG3-25	Project:	FRNP00607
Sample ID:	718137007	Client ID:	FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Company :	Four Rivers Nuclear Partnership, LLC
Address :	5600 Hobbs Road
	Kevil, Kentucky 42053
Contact:	Ms. Jaime Morrow
Project:	C-746-U Landfill Quarterly(UG25-03)

Client Sample ID:	MW361DUG3-25	Project:	FRNP00607
Sample ID:	718137008	Client ID:	FRNP006
Matrix:	WG		
Collect Date:	08-APR-25 08:20		
Receive Date:	09-APR-25		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP-MS												
6020, Dissolved Metals (3 Elements) "As Received"												
Barium		0.0575	0.000670	0.00400	mg/L	1.00	1	BCD1	05/05/25	2027	2779940	1
Chromium	U	0.0100	0.00300	0.0100	mg/L	1.00	1					
Uranium	U	0.000200	0.0000670	0.000200	mg/L	1.00	1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 160	Laboratory Filtration	MM7	04/10/25	1510	2779116
SW846 3005A	ICP-MS 3005A PREP	HS2	04/29/25	1530	2779937

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 3005A/6020B	

Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Company : Four Rivers Nuclear Partnership, LLC
Address : 5600 Hobbs Road

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID:	MW361UG3-25	Project:	FRNP00607
Sample ID:	718137009	Client ID:	FRNP006
Matrix:	WG		
Collect Date:	08-APR-25 08:20		
Receive Date:	09-APR-25		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
504.1/8011 Analysis of EDB/DBCP												
8011 VOA- 1,2-Dibromo-3-chloropropane "As Received"												
1,2-Dibromo-3-chloropropane	U	0.0188	0.00847	0.0188	ug/L	0.941	1	LOF	04/10/25	1907	2778983	1
Carbon Analysis												
9060A, Total Organic Carbon "As Received"												
Total Organic Carbon Average	J	0.468	0.330	2.00	mg/L		1	KB3	04/21/25	2034	2784686	3
Flow Injection Analysis												
9012B, Cyanide, Total "As Received"												
Cyanide, Total	UN	0.200	0.00167	0.200	mg/L	1.00	1	KLP1	04/21/25	1507	2781881	4
Halogen Analysis												
9020B, TOX (Organic Halogen) "As Received"												
Total Organic Halogens	U	10.0	3.33	10.0	ug/L		1	RMJ	05/02/25	0224	2790452	5
Ion Chromatography												
300.0, Iodide in Liquid "As Received"												
Iodide	U	0.500	0.167	0.500	mg/L		1	CH6	04/24/25	1529	2786988	6
SW846 9056A Anions (5 elements) "As Received"												
Chloride	JW	33.7	0.335	250	mg/L		5	RXB5	04/09/25	1432	2778850	7
Nitrate-N	J	1.09	0.165	10.0	mg/L		5					
Sulfate		50.5	0.665	2.00	mg/L		5					
Bromide		0.466	0.0670	0.200	mg/L		1	RXB5	04/10/25	0457	2778850	8
Fluoride	J	0.149	0.0330	4.00	mg/L		1					
Mercury Analysis-CVAA												
7470, Mercury Liquid "As Received"												
Mercury	U	0.000200	0.0000670	0.000200	mg/L	1.00	1	JP2	04/30/25	1050	2788802	9
Metals Analysis-ICP-MS												
6020, Metals (15+ elements) "As Received"												
Aluminum	U	0.0500	0.0193	0.0500	mg/L	1.00	1	BCD1	05/05/25	2031	2779940	10
Antimony	U	0.00300	0.00100	0.00300	mg/L	1.00	1					
Arsenic	U	0.00500	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0584	0.000670	0.00400	mg/L	1.00	1					
Beryllium	U	0.000500	0.000200	0.000500	mg/L	1.00	1					
Cadmium	U	0.00100	0.000300	0.00100	mg/L	1.00	1					
Calcium		29.6	0.0800	0.200	mg/L	1.00	1					
Chromium	U	0.0100	0.00300	0.0100	mg/L	1.00	1					
Cobalt	U	0.00100	0.000300	0.00100	mg/L	1.00	1					

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Company : Four Rivers Nuclear Partnership, LLC
Address : 5600 Hobbs Road

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: MW361UG3-25 Project: FRNP00607
Sample ID: 718137009 Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP-MS												
6020, Metals (15+ elements) "As Received"												
Copper		0.0150	0.000300	0.00200	mg/L	1.00	1					
Iron	J	0.0679	0.0330	0.100	mg/L	1.00	1					
Lead	U	0.00200	0.000500	0.00200	mg/L	1.00	1					
Magnesium		12.7	0.0100	0.0300	mg/L	1.00	1					
Molybdenum	U	0.00100	0.000200	0.00100	mg/L	1.00	1					
Nickel	U	0.00200	0.000600	0.00200	mg/L	1.00	1					
Potassium		1.85	0.0800	0.300	mg/L	1.00	1					
Selenium	U	0.00500	0.00150	0.00500	mg/L	1.00	1					
Silver	U	0.00100	0.000300	0.00100	mg/L	1.00	1					
Thallium	U	0.00200	0.000600	0.00200	mg/L	1.00	1					
Uranium	U	0.000200	0.0000670	0.000200	mg/L	1.00	1					
Vanadium	U	0.0200	0.00330	0.0200	mg/L	1.00	1					
Manganese		0.0212	0.00100	0.00500	mg/L	1.00	1	PRB	05/07/25	1154	2779940	11
Zinc	J	0.0113	0.00330	0.0200	mg/L	1.00	1					
Boron		0.433	0.0260	0.0750	mg/L	1.00	5	PRB	05/07/25	1155	2779940	12
Sodium		41.6	0.0800	0.250	mg/L	1.00	1	PRB	05/07/25	1245	2779940	13
Rhodium	U	0.00500	0.00160	0.00500	mg/L	1.00	1	PRB	05/07/25	1329	2779940	14
Tantalum	U	0.00500	0.00100	0.00500	mg/L	1.00	1					
Semi-Volatiles-PCB												
8082A, PCB Liquids "As Received"												
Aroclor-1016	U	0.0997	0.0332	0.0997	ug/L	0.000997	1	JXM	04/29/25	1339	2787775	15
Aroclor-1221	U	0.0997	0.0332	0.0997	ug/L	0.000997	1					
Aroclor-1232	U	0.0997	0.0332	0.0997	ug/L	0.000997	1					
Aroclor-1242	U	0.0997	0.0332	0.0997	ug/L	0.000997	1					
Aroclor-1248	U	0.0997	0.0332	0.0997	ug/L	0.000997	1					
Aroclor-1254	U	0.0997	0.0332	0.0997	ug/L	0.000997	1					
Aroclor-1260	U	0.0997	0.0332	0.0997	ug/L	0.000997	1					
Aroclor-1268	U	0.0997	0.0332	0.0997	ug/L	0.000997	1					
Aroclor-Total	U	0.0997	0.0332	0.0997	ug/L	0.000997	1					
Solids Analysis												
160.1, Dissolved Solids "As Received"												
Total Dissolved Solids		220	2.38	10.0	mg/L			CH6	04/14/25	1201	2780960	16
Spectrometric Analysis												
410.4, Chem. Oxygen Demand "As Received"												

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Address : 5600 Hobbs Road

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: MW361UG3-25 Project: FRNP00607
Sample ID: 718137009 Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Spectrometric Analysis												
410.4, Chem. Oxygen Demand "As Received"												
COD	U	20.0	8.95	20.0	mg/L		1	HH2	04/12/25	0856	2779680	17
Volatile Organics												
8260D, Volatiles- full suite "As Received"												
1,1,1,2-Tetrachloroethane	UY1	1.00	0.333	1.00	ug/L		1	PXY1	04/12/25	0321	2780275	18
1,1,1-Trichloroethane	U	1.00	0.333	1.00	ug/L		1					
1,1,2,2-Tetrachloroethane	U	1.00	0.333	1.00	ug/L		1					
1,1,2-Trichloroethane	U	1.00	0.333	1.00	ug/L		1					
1,1-Dichloroethane	U	1.00	0.333	1.00	ug/L		1					
1,1-Dichloroethylene	U	1.00	0.333	1.00	ug/L		1					
1,2,3-Trichloropropane	U	1.00	0.333	1.00	ug/L		1					
1,2-Dibromoethane	U	1.00	0.333	1.00	ug/L		1					
1,2-Dichlorobenzene	UY1Y2	1.00	0.333	1.00	ug/L		1					
1,2-Dichloroethane	U	1.00	0.333	1.00	ug/L		1					
1,2-Dichloropropane	U	1.00	0.333	1.00	ug/L		1					
1,4-Dichlorobenzene	UY1Y2	1.00	0.333	1.00	ug/L		1					
2-Butanone	U	5.00	1.67	5.00	ug/L		1					
2-Hexanone	U	5.00	1.67	5.00	ug/L		1					
4-Methyl-2-pentanone	U	5.00	1.67	5.00	ug/L		1					
Acetone	U	5.00	1.74	5.00	ug/L		1					
Acrolein	U	5.00	1.67	5.00	ug/L		1					
Acrylonitrile	U	5.00	1.67	5.00	ug/L		1					
Benzene	U	1.00	0.333	1.00	ug/L		1					
Bromochloromethane	U	1.00	0.333	1.00	ug/L		1					
Bromodichloromethane	U	1.00	0.333	1.00	ug/L		1					
Bromoform	UY1	1.00	0.333	1.00	ug/L		1					
Bromomethane	U	1.00	0.337	1.00	ug/L		1					
Carbon disulfide	U	5.00	1.67	5.00	ug/L		1					
Carbon tetrachloride	U	1.00	0.333	1.00	ug/L		1					
Chlorobenzene	UY1Y2	1.00	0.333	1.00	ug/L		1					
Chloroethane	U	1.00	0.333	1.00	ug/L		1					
Chloroform	U	1.00	0.333	1.00	ug/L		1					
Chloromethane	U	1.00	0.333	1.00	ug/L		1					
Dibromochloromethane	U	1.00	0.333	1.00	ug/L		1					
Dibromomethane	U	1.00	0.333	1.00	ug/L		1					
Ethylbenzene	UY1Y2	1.00	0.333	1.00	ug/L		1					
Iodomethane	U	5.00	1.67	5.00	ug/L		1					

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Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: MW361UG3-25 Project: FRNP00607
Sample ID: 718137009 Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
8260D, Volatiles- full suite "As Received"												
Methylene chloride	U	5.00	0.500	5.00	ug/L		1					
Styrene	UY1Y2	1.00	0.333	1.00	ug/L		1					
Tetrachloroethylene	UY1Y2	1.00	0.333	1.00	ug/L		1					
Toluene	UY1Y2	1.00	0.333	1.00	ug/L		1					
Trichloroethylene	Y1	1.00	0.333	1.00	ug/L		1					
Trichlorofluoromethane	U	1.00	0.333	1.00	ug/L		1					
Vinyl acetate	U	5.00	1.67	5.00	ug/L		1					
Vinyl chloride	U	1.00	0.333	1.00	ug/L		1					
Xylenes (total)	UY1Y2	3.00	1.00	3.00	ug/L		1					
cis-1,2-Dichloroethylene	U	1.00	0.333	1.00	ug/L		1					
cis-1,3-Dichloropropylene	U	1.00	0.333	1.00	ug/L		1					
trans-1,2-Dichloroethylene	U	1.00	0.333	1.00	ug/L		1					
trans-1,3-Dichloropropylene	U	1.00	0.333	1.00	ug/L		1					
trans-1,4-Dichloro-2-butene	U	5.00	1.67	5.00	ug/L		1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 8011 PREP	8011 Prep	LOF	04/10/25	1305	2778965
SW846 3005A	ICP-MS 3005A PREP	HS2	04/29/25	1530	2779937
SW846 3535A	SW3535A PCB SPE Extraction	DG3	04/28/25	1041	2787774
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	JM13	04/29/25	1120	2788801
SW846 9010C Distillation	SW846 9010C Prep	KLP1	04/21/25	1002	2781880

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Project:	C-746-U Landfill Quarterly(UG25-03)

Client Sample ID:	MW361UG3-25	Project:	FRNP00607
Sample ID:	718137009	Client ID:	FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 8011	
2	SW846 8011	
3	SW846 9060A	
4	SW846 9012B	
5	SW846 9020B	
6	EPA 300.0	
7	SW846 9056A	
8	SW846 9056A	
9	SW846 7470A	
10	SW846 3005A/6020B	
11	SW846 3005A/6020B	
12	SW846 3005A/6020B	
13	SW846 3005A/6020B	
14	SW846 3005A/6020B	
15	SW846 3535A/8082A	
16	EPA 160.1	
17	EPA 410.4	
18	SW846 8260D	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
1-Chloro-2-fluorobenzene	8011 VOA- 1,2-Dibromo-3-chloropropane "As Received"	6.19 ug/L	6.72	92	(56%-149%)
Decachlorobiphenyl	8082A, PCB Liquids "As Received"	0.230 ug/L	0.199	115	(30%-135%)
4cmx	8082A, PCB Liquids "As Received"	0.190 ug/L	0.199	95	(26%-108%)
Bromofluorobenzene	8260D, Volatiles- full suite "As Received"	56.3 ug/L	50.0	113	(85%-114%)
1,2-Dichloroethane-d4	8260D, Volatiles- full suite "As Received"	52.4 ug/L	50.0	105	(81%-118%)
Toluene-d8	8260D, Volatiles- full suite "As Received"	53.6 ug/L	50.0	107	(89%-112%)

Notes:

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Project:	C-746-U Landfill Quarterly(UG25-03)

Client Sample ID:	MW361UG3-25	Project:	FRNP00607
Sample ID:	718137009	Client ID:	FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Contact:	Ms. Jaime Morrow
Project:	C-746-U Landfill Quarterly(UG25-03)

Client Sample ID:	MW361UG3-25	Project:	FRNP00607
Sample ID:	718137010	Client ID:	FRNP006
Matrix:	WG		
Collect Date:	08-APR-25 08:20		
Receive Date:	09-APR-25		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP-MS												
6020, Dissolved Metals (3 Elements) "As Received"												
Barium		0.0579	0.000670	0.00400	mg/L	1.00	1	BCD1	05/05/25	2035	2779940	1
Chromium	U	0.0100	0.00300	0.0100	mg/L	1.00	1					
Uranium	U	0.000200	0.0000670	0.000200	mg/L	1.00	1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	HS2	04/29/25	1530	2779937
EPA 160	Laboratory Filtration	MM7	04/10/25	1510	2779116

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 3005A/6020B	

Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID:	MW362UG3-25	Project:	FRNP00607
Sample ID:	718137011	Client ID:	FRNP006
Matrix:	WG		
Collect Date:	08-APR-25 09:24		
Receive Date:	09-APR-25		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
504.1/8011 Analysis of EDB/DBCP												
8011 VOA- 1,2-Dibromo-3-chloropropane "As Received"												
1,2-Dibromo-3-chloropropane	U	0.0189	0.00851	0.0189	ug/L	0.945	1	LOF	04/10/25	1941	2778983	1
Carbon Analysis												
9060A, Total Organic Carbon "As Received"												
Total Organic Carbon Average	J	1.68	0.330	2.00	mg/L		1	KB3	04/21/25	2105	2784686	3
Flow Injection Analysis												
9012B, Cyanide, Total "As Received"												
Cyanide, Total	UN	0.200	0.00167	0.200	mg/L	1.00	1	KLP1	04/21/25	1508	2781881	4
Halogen Analysis												
9020B, TOX (Organic Halogen) "As Received"												
Total Organic Halogens	J	8.62	3.33	10.0	ug/L		1	RMJ	05/02/25	0349	2790452	5
Ion Chromatography												
300.0, Iodide in Liquid "As Received"												
Iodide	U	0.500	0.167	0.500	mg/L		1	CH6	04/24/25	1542	2786988	6
SW846 9056A Anions (5 elements) "As Received"												
Sulfate		31.6	0.532	1.60	mg/L		4	RXB5	04/09/25	1503	2778850	7
Nitrate-N	J	0.415	0.330	10.0	mg/L		10	RXB5	04/09/25	1910	2778850	8
Bromide	U	0.200	0.0670	0.200	mg/L		1	RXB5	04/10/25	0527	2778850	9
Chloride	JW	1.65	0.0670	250	mg/L		1					
Fluoride	J	0.493	0.0330	4.00	mg/L		1					
Mercury Analysis-CVAA												
7470, Mercury Liquid "As Received"												
Mercury	U	0.000200	0.0000670	0.000200	mg/L	1.00	1	JP2	04/30/25	1051	2788802	10
Metals Analysis-ICP-MS												
6020, Metals (15+ elements) "As Received"												
Aluminum		0.162	0.0193	0.0500	mg/L	1.00	1	BCD1	05/05/25	2039	2779940	11
Antimony	U	0.00300	0.00100	0.00300	mg/L	1.00	1					
Arsenic	U	0.00500	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0846	0.000670	0.00400	mg/L	1.00	1					
Beryllium	U	0.000500	0.000200	0.000500	mg/L	1.00	1					
Cadmium	U	0.00100	0.000300	0.00100	mg/L	1.00	1					
Calcium		19.6	0.0800	0.200	mg/L	1.00	1					
Chromium	U	0.0100	0.00300	0.0100	mg/L	1.00	1					
Cobalt	U	0.00100	0.000300	0.00100	mg/L	1.00	1					

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Certificate of Analysis

Report Date: July 8, 2025

Company : Four Rivers Nuclear Partnership, LLC
Address : 5600 Hobbs Road

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: MW362UG3-25 Project: FRNP00607
Sample ID: 718137011 Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP-MS												
6020, Metals (15+ elements) "As Received"												
Copper	J	0.00134	0.000300	0.00200	mg/L	1.00	1					
Iron		0.118	0.0330	0.100	mg/L	1.00	1					
Lead	U	0.00200	0.000500	0.00200	mg/L	1.00	1					
Magnesium		8.53	0.0100	0.0300	mg/L	1.00	1					
Molybdenum		0.00105	0.000200	0.00100	mg/L	1.00	1					
Nickel	J	0.000649	0.000600	0.00200	mg/L	1.00	1					
Potassium		0.367	0.0800	0.300	mg/L	1.00	1					
Selenium	U	0.00500	0.00150	0.00500	mg/L	1.00	1					
Silver	U	0.00100	0.000300	0.00100	mg/L	1.00	1					
Thallium	U	0.00200	0.000600	0.00200	mg/L	1.00	1					
Uranium		0.00243	0.0000670	0.000200	mg/L	1.00	1					
Vanadium	U	0.0200	0.00330	0.0200	mg/L	1.00	1					
Boron		0.0265	0.00520	0.0150	mg/L	1.00	1	PRB	05/07/25	1159	2779940	12
Manganese	J	0.00198	0.00100	0.00500	mg/L	1.00	1					
Zinc	U	0.0200	0.00330	0.0200	mg/L	1.00	1					
Sodium		129	0.400	1.25	mg/L	1.00	5	PRB	05/07/25	1246	2779940	13
Rhodium	U	0.00500	0.00160	0.00500	mg/L	1.00	1	PRB	05/07/25	1330	2779940	14
Tantalum	U	0.00500	0.00100	0.00500	mg/L	1.00	1					
Semi-Volatiles-PCB												
8082A, PCB Liquids "As Received"												
Aroclor-1016	U	0.102	0.0341	0.102	ug/L	0.00102	1	NS2	05/02/25	0200	2789118	15
Aroclor-1221	U	0.102	0.0341	0.102	ug/L	0.00102	1					
Aroclor-1232	U	0.102	0.0341	0.102	ug/L	0.00102	1					
Aroclor-1242	U	0.102	0.0341	0.102	ug/L	0.00102	1					
Aroclor-1248	U	0.102	0.0341	0.102	ug/L	0.00102	1					
Aroclor-1254	U	0.102	0.0341	0.102	ug/L	0.00102	1					
Aroclor-1260	U	0.102	0.0341	0.102	ug/L	0.00102	1					
Aroclor-1268	U	0.102	0.0341	0.102	ug/L	0.00102	1					
Aroclor-Total	U	0.102	0.0341	0.102	ug/L	0.00102	1					
Solids Analysis												
160.1, Dissolved Solids "As Received"												
Total Dissolved Solids		366	2.38	10.0	mg/L			CH6	04/14/25	1201	2780960	16
Spectrometric Analysis												
410.4, Chem. Oxygen Demand "As Received"												

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Company : Four Rivers Nuclear Partnership, LLC
Address : 5600 Hobbs Road

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: MW362UG3-25 Project: FRNP00607
Sample ID: 718137011 Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Spectrometric Analysis												
410.4, Chem. Oxygen Demand "As Received"												
COD	U	20.0	8.95	20.0	mg/L		1	HH2	04/12/25	0856	2779680	17
Volatile Organics												
8260D, Volatiles- full suite "As Received"												
1,1,1,2-Tetrachloroethane	UY1	1.00	0.333	1.00	ug/L		1	PXY1	04/12/25	0348	2780275	18
1,1,1-Trichloroethane	U	1.00	0.333	1.00	ug/L		1					
1,1,2,2-Tetrachloroethane	U	1.00	0.333	1.00	ug/L		1					
1,1,2-Trichloroethane	U	1.00	0.333	1.00	ug/L		1					
1,1-Dichloroethane	U	1.00	0.333	1.00	ug/L		1					
1,1-Dichloroethylene	U	1.00	0.333	1.00	ug/L		1					
1,2,3-Trichloropropane	U	1.00	0.333	1.00	ug/L		1					
1,2-Dibromoethane	U	1.00	0.333	1.00	ug/L		1					
1,2-Dichlorobenzene	UY1Y2	1.00	0.333	1.00	ug/L		1					
1,2-Dichloroethane	U	1.00	0.333	1.00	ug/L		1					
1,2-Dichloropropane	U	1.00	0.333	1.00	ug/L		1					
1,4-Dichlorobenzene	UY1Y2	1.00	0.333	1.00	ug/L		1					
2-Butanone	U	5.00	1.67	5.00	ug/L		1					
2-Hexanone	U	5.00	1.67	5.00	ug/L		1					
4-Methyl-2-pentanone	U	5.00	1.67	5.00	ug/L		1					
Acetone	U	5.00	1.74	5.00	ug/L		1					
Acrolein	U	5.00	1.67	5.00	ug/L		1					
Acrylonitrile	U	5.00	1.67	5.00	ug/L		1					
Benzene	U	1.00	0.333	1.00	ug/L		1					
Bromochloromethane	U	1.00	0.333	1.00	ug/L		1					
Bromodichloromethane	U	1.00	0.333	1.00	ug/L		1					
Bromoform	UY1	1.00	0.333	1.00	ug/L		1					
Bromomethane	U	1.00	0.337	1.00	ug/L		1					
Carbon disulfide	U	5.00	1.67	5.00	ug/L		1					
Carbon tetrachloride	U	1.00	0.333	1.00	ug/L		1					
Chlorobenzene	UY1Y2	1.00	0.333	1.00	ug/L		1					
Chloroethane	U	1.00	0.333	1.00	ug/L		1					
Chloroform	U	1.00	0.333	1.00	ug/L		1					
Chloromethane	U	1.00	0.333	1.00	ug/L		1					
Dibromochloromethane	U	1.00	0.333	1.00	ug/L		1					
Dibromomethane	U	1.00	0.333	1.00	ug/L		1					
Ethylbenzene	UY1Y2	1.00	0.333	1.00	ug/L		1					
Iodomethane	U	5.00	1.67	5.00	ug/L		1					

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Company : Four Rivers Nuclear Partnership, LLC
Address : 5600 Hobbs Road

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: MW362UG3-25 Project: FRNP00607
Sample ID: 718137011 Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
8260D, Volatiles- full suite "As Received"												
Methylene chloride	U	5.00	0.500	5.00	ug/L		1					
Styrene	UY1Y2	1.00	0.333	1.00	ug/L		1					
Tetrachloroethylene	UY1Y2	1.00	0.333	1.00	ug/L		1					
Toluene	UY1Y2	1.00	0.333	1.00	ug/L		1					
Trichloroethylene	UY1	1.00	0.333	1.00	ug/L		1					
Trichlorofluoromethane	U	1.00	0.333	1.00	ug/L		1					
Vinyl acetate	U	5.00	1.67	5.00	ug/L		1					
Vinyl chloride	U	1.00	0.333	1.00	ug/L		1					
Xylenes (total)	UY1Y2	3.00	1.00	3.00	ug/L		1					
cis-1,2-Dichloroethylene	U	1.00	0.333	1.00	ug/L		1					
cis-1,3-Dichloropropylene	U	1.00	0.333	1.00	ug/L		1					
trans-1,2-Dichloroethylene	U	1.00	0.333	1.00	ug/L		1					
trans-1,3-Dichloropropylene	U	1.00	0.333	1.00	ug/L		1					
trans-1,4-Dichloro-2-butene	U	5.00	1.67	5.00	ug/L		1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	JM13	04/29/25	1120	2788801
SW846 3005A	ICP-MS 3005A PREP	HS2	04/29/25	1530	2779937
SW846 9010C Distillation	SW846 9010C Prep	KLP1	04/21/25	1002	2781880
SW846 3535A	SW3535A PCB SPE Extraction	KW3	05/01/25	0945	2789110
SW846 8011 PREP	8011 Prep	LOF	04/10/25	1305	2778965

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	Kevil, Kentucky 42053
Contact:	Ms. Jaime Morrow
Project:	C-746-U Landfill Quarterly(UG25-03)

Client Sample ID:	MW362UG3-25	Project:	FRNP00607
Sample ID:	718137011	Client ID:	FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 8011	
2	SW846 8011	
3	SW846 9060A	
4	SW846 9012B	
5	SW846 9020B	
6	EPA 300.0	
7	SW846 9056A	
8	SW846 9056A	
9	SW846 9056A	
10	SW846 7470A	
11	SW846 3005A/6020B	
12	SW846 3005A/6020B	
13	SW846 3005A/6020B	
14	SW846 3005A/6020B	
15	SW846 3535A/8082A	
16	EPA 160.1	
17	EPA 410.4	
18	SW846 8260D	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
1-Chloro-2-fluorobenzene	8011 VOA- 1,2-Dibromo-3-chloropropane "As Received"	6.33 ug/L	6.75	94	(56%-149%)
Decachlorobiphenyl	8082A, PCB Liquids "As Received"	0.157 ug/L	0.205	77	(30%-135%)
4cmx	8082A, PCB Liquids "As Received"	0.197 ug/L	0.205	96	(26%-108%)
Bromofluorobenzene	8260D, Volatiles- full suite "As Received"	56.7 ug/L	50.0	113	(85%-114%)
1,2-Dichloroethane-d4	8260D, Volatiles- full suite "As Received"	52.2 ug/L	50.0	104	(81%-118%)
Toluene-d8	8260D, Volatiles- full suite "As Received"	53.6 ug/L	50.0	107	(89%-112%)

Notes:

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Company :	Four Rivers Nuclear Partnership, LLC
Address :	5600 Hobbs Road
	Kevil, Kentucky 42053
Contact:	Ms. Jaime Morrow
Project:	C-746-U Landfill Quarterly(UG25-03)

Client Sample ID:	MW362UG3-25	Project:	FRNP00607
Sample ID:	718137011	Client ID:	FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: July 8, 2025

Company :	Four Rivers Nuclear Partnership, LLC
Address :	5600 Hobbs Road
	Kevil, Kentucky 42053
Contact:	Ms. Jaime Morrow
Project:	C-746-U Landfill Quarterly(UG25-03)

Client Sample ID:	MW362UG3-25	Project:	FRNP00607
Sample ID:	718137012	Client ID:	FRNP006
Matrix:	WG		
Collect Date:	08-APR-25 09:24		
Receive Date:	09-APR-25		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP-MS												
6020, Dissolved Metals (3 Elements) "As Received"												
Barium		0.0850	0.000670	0.00400	mg/L	1.00	1	BCD1	05/05/25	2043	2779940	1
Chromium	U	0.0100	0.00300	0.0100	mg/L	1.00	1					
Uranium		0.00245	0.0000670	0.000200	mg/L	1.00	1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 160	Laboratory Filtration	MM7	04/10/25	1510	2779116
SW846 3005A	ICP-MS 3005A PREP	HS2	04/29/25	1530	2779937

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 3005A/6020B	

Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Company : Four Rivers Nuclear Partnership, LLC
Address : 5600 Hobbs Road

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: FB1UG3-25
Sample ID: 718137013
Matrix: WATER
Collect Date: 08-APR-25 08:22
Receive Date: 09-APR-25
Collector: Client

Project: FRNP00607
Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
504.1/8011 Analysis of EDB/DBCP												
8011 VOA- 1,2-Dibromo-3-chloropropane "As Received"												
1,2-Dibromo-3-chloropropane	U	0.0188	0.00848	0.0188	ug/L	0.942	1	LOF	04/10/25	2104	2778983	1
Ion Chromatography												
300.0, Iodide in Liquid "As Received"												
Iodide	U	0.500	0.167	0.500	mg/L		1	CH6	04/24/25	1620	2786988	3
Mercury Analysis-CVAA												
7470, Mercury Liquid "As Received"												
Mercury	U	0.000200	0.0000670	0.000200	mg/L	1.00	1	JP2	04/30/25	1053	2788802	4
Metals Analysis-ICP-MS												
6020, Metals (15+ elements) "As Received"												
Aluminum	U	0.0500	0.0193	0.0500	mg/L	1.00	1	BCD1	05/05/25	2054	2779940	5
Antimony	U	0.00300	0.00100	0.00300	mg/L	1.00	1					
Arsenic	U	0.00500	0.00200	0.00500	mg/L	1.00	1					
Barium	U	0.00400	0.000670	0.00400	mg/L	1.00	1					
Beryllium	U	0.000500	0.000200	0.000500	mg/L	1.00	1					
Cadmium	U	0.00100	0.000300	0.00100	mg/L	1.00	1					
Calcium	U	0.200	0.0800	0.200	mg/L	1.00	1					
Chromium	U	0.0100	0.00300	0.0100	mg/L	1.00	1					
Cobalt	U	0.00100	0.000300	0.00100	mg/L	1.00	1					
Copper	U	0.00200	0.000300	0.00200	mg/L	1.00	1					
Iron	U	0.100	0.0330	0.100	mg/L	1.00	1					
Lead	U	0.00200	0.000500	0.00200	mg/L	1.00	1					
Magnesium	U	0.0300	0.0100	0.0300	mg/L	1.00	1					
Molybdenum	U	0.00100	0.000200	0.00100	mg/L	1.00	1					
Nickel	U	0.00200	0.000600	0.00200	mg/L	1.00	1					
Potassium	U	0.300	0.0800	0.300	mg/L	1.00	1					
Selenium	U	0.00500	0.00150	0.00500	mg/L	1.00	1					
Silver	U	0.00100	0.000300	0.00100	mg/L	1.00	1					
Thallium	U	0.00200	0.000600	0.00200	mg/L	1.00	1					
Uranium	U	0.000200	0.0000670	0.000200	mg/L	1.00	1					
Vanadium	U	0.0200	0.00330	0.0200	mg/L	1.00	1					
Boron	U	0.0150	0.00520	0.0150	mg/L	1.00	1	PRB	05/07/25	1200	2779940	6
Manganese	U	0.00500	0.00100	0.00500	mg/L	1.00	1					
Zinc	U	0.0200	0.00330	0.0200	mg/L	1.00	1					
Sodium	U	0.250	0.0800	0.250	mg/L	1.00	1	PRB	05/07/25	1247	2779940	7

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Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: FB1UG3-25 Project: FRNP00607
Sample ID: 718137013 Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP-MS												
6020, Metals (15+ elements) "As Received"												
Rhodium	U	0.00500	0.00160	0.00500	mg/L	1.00	1	PRB	05/07/25	1331	2779940	8
Tantalum	U	0.00500	0.00100	0.00500	mg/L	1.00	1					
Semi-Volatiles-PCB												
8082A, PCB Liquids "As Received"												
Aroclor-1016	U	0.101	0.0335	0.101	ug/L	0.00101	1	NS2	05/02/25	0219	2789118	9
Aroclor-1221	U	0.101	0.0335	0.101	ug/L	0.00101	1					
Aroclor-1232	U	0.101	0.0335	0.101	ug/L	0.00101	1					
Aroclor-1242	U	0.101	0.0335	0.101	ug/L	0.00101	1					
Aroclor-1248	U	0.101	0.0335	0.101	ug/L	0.00101	1					
Aroclor-1254	U	0.101	0.0335	0.101	ug/L	0.00101	1					
Aroclor-1260	U	0.101	0.0335	0.101	ug/L	0.00101	1					
Aroclor-1268	U	0.101	0.0335	0.101	ug/L	0.00101	1					
Aroclor-Total	U	0.101	0.0335	0.101	ug/L	0.00101	1					
Volatile Organics												
8260D, Volatiles- full suite "As Received"												
1,1,1,2-Tetrachloroethane	UY1	1.00	0.333	1.00	ug/L		1	PXY1	04/12/25	0414	2780275	10
1,1,1-Trichloroethane	U	1.00	0.333	1.00	ug/L		1					
1,1,2,2-Tetrachloroethane	U	1.00	0.333	1.00	ug/L		1					
1,1,2-Trichloroethane	U	1.00	0.333	1.00	ug/L		1					
1,1-Dichloroethane	U	1.00	0.333	1.00	ug/L		1					
1,1-Dichloroethylene	U	1.00	0.333	1.00	ug/L		1					
1,2,3-Trichloropropane	U	1.00	0.333	1.00	ug/L		1					
1,2-Dibromoethane	U	1.00	0.333	1.00	ug/L		1					
1,2-Dichlorobenzene	UY1Y2	1.00	0.333	1.00	ug/L		1					
1,2-Dichloroethane	U	1.00	0.333	1.00	ug/L		1					
1,2-Dichloropropane	U	1.00	0.333	1.00	ug/L		1					
1,4-Dichlorobenzene	UY1Y2	1.00	0.333	1.00	ug/L		1					
2-Butanone	U	5.00	1.67	5.00	ug/L		1					
2-Hexanone	U	5.00	1.67	5.00	ug/L		1					
4-Methyl-2-pentanone	U	5.00	1.67	5.00	ug/L		1					
Acetone	J	4.64	1.74	5.00	ug/L		1					
Acrolein	U	5.00	1.67	5.00	ug/L		1					
Acrylonitrile	U	5.00	1.67	5.00	ug/L		1					
Benzene	U	1.00	0.333	1.00	ug/L		1					
Bromochloromethane	U	1.00	0.333	1.00	ug/L		1					

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Certificate of Analysis

Report Date: July 8, 2025

Company : Four Rivers Nuclear Partnership, LLC
Address : 5600 Hobbs Road

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: FB1UG3-25 Project: FRNP00607
Sample ID: 718137013 Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
8260D, Volatiles- full suite "As Received"												
Bromodichloromethane	U	1.00	0.333	1.00	ug/L		1					
Bromoform	UY1	1.00	0.333	1.00	ug/L		1					
Bromomethane	U	1.00	0.337	1.00	ug/L		1					
Carbon disulfide	U	5.00	1.67	5.00	ug/L		1					
Carbon tetrachloride	U	1.00	0.333	1.00	ug/L		1					
Chlorobenzene	UY1Y2	1.00	0.333	1.00	ug/L		1					
Chloroethane	U	1.00	0.333	1.00	ug/L		1					
Chloroform	U	1.00	0.333	1.00	ug/L		1					
Chloromethane	U	1.00	0.333	1.00	ug/L		1					
Dibromochloromethane	U	1.00	0.333	1.00	ug/L		1					
Dibromomethane	U	1.00	0.333	1.00	ug/L		1					
Ethylbenzene	UY1Y2	1.00	0.333	1.00	ug/L		1					
Iodomethane	U	5.00	1.67	5.00	ug/L		1					
Methylene chloride	U	5.00	0.500	5.00	ug/L		1					
Styrene	UY1Y2	1.00	0.333	1.00	ug/L		1					
Tetrachloroethylene	UY1Y2	1.00	0.333	1.00	ug/L		1					
Toluene	UY1Y2	1.00	0.333	1.00	ug/L		1					
Trichloroethylene	UY1	1.00	0.333	1.00	ug/L		1					
Trichlorofluoromethane	U	1.00	0.333	1.00	ug/L		1					
Vinyl acetate	U	5.00	1.67	5.00	ug/L		1					
Vinyl chloride	U	1.00	0.333	1.00	ug/L		1					
Xylenes (total)	UY1Y2	3.00	1.00	3.00	ug/L		1					
cis-1,2-Dichloroethylene	U	1.00	0.333	1.00	ug/L		1					
cis-1,3-Dichloropropylene	U	1.00	0.333	1.00	ug/L		1					
trans-1,2-Dichloroethylene	U	1.00	0.333	1.00	ug/L		1					
trans-1,3-Dichloropropylene	U	1.00	0.333	1.00	ug/L		1					
trans-1,4-Dichloro-2-butene	U	5.00	1.67	5.00	ug/L		1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	JM13	04/29/25	1120	2788801
SW846 3535A	SW3535A PCB SPE Extraction	KW3	05/01/25	0945	2789110
SW846 8011 PREP	8011 Prep	LOF	04/10/25	1305	2778965
SW846 3005A	ICP-MS 3005A PREP	HS2	04/29/25	1530	2779937

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Company :	Four Rivers Nuclear Partnership, LLC
Address :	5600 Hobbs Road
	Kevil, Kentucky 42053
Contact:	Ms. Jaime Morrow
Project:	C-746-U Landfill Quarterly(UG25-03)

Client Sample ID:	FB1UG3-25	Project:	FRNP00607
Sample ID:	718137013	Client ID:	FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 8011	
2	SW846 8011	
3	EPA 300.0	
4	SW846 7470A	
5	SW846 3005A/6020B	
6	SW846 3005A/6020B	
7	SW846 3005A/6020B	
8	SW846 3005A/6020B	
9	SW846 3535A/8082A	
10	SW846 8260D	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
1-Chloro-2-fluorobenzene	8011 VOA- 1,2-Dibromo-3-chloropropane "As Received"	6.09 ug/L	6.73	90	(56%-149%)
Decachlorobiphenyl	8082A, PCB Liquids "As Received"	0.183 ug/L	0.201	91	(30%-135%)
4cmx	8082A, PCB Liquids "As Received"	0.156 ug/L	0.201	78	(26%-108%)
Bromofluorobenzene	8260D, Volatiles- full suite "As Received"	55.9 ug/L	50.0	112	(85%-114%)
1,2-Dichloroethane-d4	8260D, Volatiles- full suite "As Received"	52.9 ug/L	50.0	106	(81%-118%)
Toluene-d8	8260D, Volatiles- full suite "As Received"	54.4 ug/L	50.0	109	(89%-112%)

Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: July 8, 2025

Company : Four Rivers Nuclear Partnership, LLC
Address : 5600 Hobbs Road

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID:	RI1UG3-25	Project:	FRNP00607
Sample ID:	718137014	Client ID:	FRNP006
Matrix:	WATER		
Collect Date:	08-APR-25 07:05		
Receive Date:	09-APR-25		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
504.1/8011 Analysis of EDB/DBCP												
8011 VOA- 1,2-Dibromo-3-chloropropane "As Received"												
1,2-Dibromo-3-chloropropane	U	0.0189	0.00849	0.0189	ug/L	0.943	1	LOF	04/10/25	2138	2778983	1
Ion Chromatography												
300.0, Iodide in Liquid "As Received"												
Iodide	U	0.500	0.167	0.500	mg/L		1	CH6	04/24/25	1633	2786988	3
Mercury Analysis-CVAA												
7470, Mercury Liquid "As Received"												
Mercury	U	0.000200	0.0000670	0.000200	mg/L	1.00	1	JP2	04/30/25	1055	2788802	4
Metals Analysis-ICP-MS												
6020, Metals (15+ elements) "As Received"												
Aluminum	U	0.0500	0.0193	0.0500	mg/L	1.00	1	BCD1	05/05/25	2058	2779940	5
Antimony	U	0.00300	0.00100	0.00300	mg/L	1.00	1					
Arsenic	U	0.00500	0.00200	0.00500	mg/L	1.00	1					
Barium	U	0.00400	0.000670	0.00400	mg/L	1.00	1					
Beryllium	U	0.000500	0.000200	0.000500	mg/L	1.00	1					
Cadmium	U	0.00100	0.000300	0.00100	mg/L	1.00	1					
Calcium	U	0.200	0.0800	0.200	mg/L	1.00	1					
Chromium	U	0.0100	0.00300	0.0100	mg/L	1.00	1					
Cobalt	U	0.00100	0.000300	0.00100	mg/L	1.00	1					
Copper	U	0.00200	0.000300	0.00200	mg/L	1.00	1					
Iron	U	0.100	0.0330	0.100	mg/L	1.00	1					
Lead	U	0.00200	0.000500	0.00200	mg/L	1.00	1					
Magnesium	U	0.0300	0.0100	0.0300	mg/L	1.00	1					
Molybdenum	U	0.00100	0.000200	0.00100	mg/L	1.00	1					
Nickel	U	0.00200	0.000600	0.00200	mg/L	1.00	1					
Potassium	U	0.300	0.0800	0.300	mg/L	1.00	1					
Selenium	U	0.00500	0.00150	0.00500	mg/L	1.00	1					
Silver	U	0.00100	0.000300	0.00100	mg/L	1.00	1					
Thallium	U	0.00200	0.000600	0.00200	mg/L	1.00	1					
Uranium	U	0.000200	0.0000670	0.000200	mg/L	1.00	1					
Vanadium	U	0.0200	0.00330	0.0200	mg/L	1.00	1					
Boron	U	0.0150	0.00520	0.0150	mg/L	1.00	1	PRB	05/07/25	1201	2779940	6
Manganese	U	0.00500	0.00100	0.00500	mg/L	1.00	1					
Zinc	U	0.0200	0.00330	0.0200	mg/L	1.00	1					
Sodium	U	0.250	0.0800	0.250	mg/L	1.00	1	PRB	05/07/25	1248	2779940	7

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Address : 5600 Hobbs Road

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: RI1UG3-25 Project: FRNP00607
Sample ID: 718137014 Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP-MS												
6020, Metals (15+ elements) "As Received"												
Rhodium	U	0.00500	0.00160	0.00500	mg/L	1.00	1	PRB	05/07/25	1332	2779940	8
Tantalum	U	0.00500	0.00100	0.00500	mg/L	1.00	1					
Semi-Volatiles-PCB												
8082A, PCB Liquids "As Received"												
Aroclor-1016	U	0.102	0.0341	0.102	ug/L	0.00102	1	NS2	05/02/25	0238	2789118	9
Aroclor-1221	U	0.102	0.0341	0.102	ug/L	0.00102	1					
Aroclor-1232	U	0.102	0.0341	0.102	ug/L	0.00102	1					
Aroclor-1242	U	0.102	0.0341	0.102	ug/L	0.00102	1					
Aroclor-1248	U	0.102	0.0341	0.102	ug/L	0.00102	1					
Aroclor-1254	U	0.102	0.0341	0.102	ug/L	0.00102	1					
Aroclor-1260	U	0.102	0.0341	0.102	ug/L	0.00102	1					
Aroclor-1268	U	0.102	0.0341	0.102	ug/L	0.00102	1					
Aroclor-Total	U	0.102	0.0341	0.102	ug/L	0.00102	1					
Volatile Organics												
8260D, Volatiles- full suite "As Received"												
1,1,1,2-Tetrachloroethane	UY1	1.00	0.333	1.00	ug/L		1	PXY1	04/12/25	0440	2780275	10
1,1,1-Trichloroethane	U	1.00	0.333	1.00	ug/L		1					
1,1,2,2-Tetrachloroethane	U	1.00	0.333	1.00	ug/L		1					
1,1,2-Trichloroethane	U	1.00	0.333	1.00	ug/L		1					
1,1-Dichloroethane	U	1.00	0.333	1.00	ug/L		1					
1,1-Dichloroethylene	U	1.00	0.333	1.00	ug/L		1					
1,2,3-Trichloropropane	U	1.00	0.333	1.00	ug/L		1					
1,2-Dibromoethane	U	1.00	0.333	1.00	ug/L		1					
1,2-Dichlorobenzene	UY1Y2	1.00	0.333	1.00	ug/L		1					
1,2-Dichloroethane	U	1.00	0.333	1.00	ug/L		1					
1,2-Dichloropropane	U	1.00	0.333	1.00	ug/L		1					
1,4-Dichlorobenzene	UY1Y2	1.00	0.333	1.00	ug/L		1					
2-Butanone	U	5.00	1.67	5.00	ug/L		1					
2-Hexanone	U	5.00	1.67	5.00	ug/L		1					
4-Methyl-2-pentanone	U	5.00	1.67	5.00	ug/L		1					
Acetone	U	5.00	1.74	5.00	ug/L		1					
Acrolein	U	5.00	1.67	5.00	ug/L		1					
Acrylonitrile	U	5.00	1.67	5.00	ug/L		1					
Benzene	U	1.00	0.333	1.00	ug/L		1					
Bromochloromethane	U	1.00	0.333	1.00	ug/L		1					

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Address : 5600 Hobbs Road

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: RI1UG3-25 Project: FRNP00607
Sample ID: 718137014 Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
8260D, Volatiles- full suite "As Received"												
Bromodichloromethane	U	1.00	0.333	1.00	ug/L		1					
Bromoform	UY1	1.00	0.333	1.00	ug/L		1					
Bromomethane	U	1.00	0.337	1.00	ug/L		1					
Carbon disulfide	U	5.00	1.67	5.00	ug/L		1					
Carbon tetrachloride	U	1.00	0.333	1.00	ug/L		1					
Chlorobenzene	Y1Y2	3.59	0.333	1.00	ug/L		1					
Chloroethane	U	1.00	0.333	1.00	ug/L		1					
Chloroform	U	1.00	0.333	1.00	ug/L		1					
Chloromethane	U	1.00	0.333	1.00	ug/L		1					
Dibromochloromethane	U	1.00	0.333	1.00	ug/L		1					
Dibromomethane	U	1.00	0.333	1.00	ug/L		1					
Ethylbenzene	UY1Y2	1.00	0.333	1.00	ug/L		1					
Iodomethane	U	5.00	1.67	5.00	ug/L		1					
Methylene chloride	U	5.00	0.500	5.00	ug/L		1					
Styrene	UY1Y2	1.00	0.333	1.00	ug/L		1					
Tetrachloroethylene	UY1Y2	1.00	0.333	1.00	ug/L		1					
Toluene	UY1Y2	1.00	0.333	1.00	ug/L		1					
Trichloroethylene	UY1	1.00	0.333	1.00	ug/L		1					
Trichlorofluoromethane	U	1.00	0.333	1.00	ug/L		1					
Vinyl acetate	U	5.00	1.67	5.00	ug/L		1					
Vinyl chloride	U	1.00	0.333	1.00	ug/L		1					
Xylenes (total)	UY1Y2	3.00	1.00	3.00	ug/L		1					
cis-1,2-Dichloroethylene	U	1.00	0.333	1.00	ug/L		1					
cis-1,3-Dichloropropylene	U	1.00	0.333	1.00	ug/L		1					
trans-1,2-Dichloroethylene	U	1.00	0.333	1.00	ug/L		1					
trans-1,3-Dichloropropylene	U	1.00	0.333	1.00	ug/L		1					
trans-1,4-Dichloro-2-butene	U	5.00	1.67	5.00	ug/L		1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	JM13	04/29/25	1120	2788801
SW846 3535A	SW3535A PCB SPE Extraction	KW3	05/01/25	0945	2789110
SW846 3005A	ICP-MS 3005A PREP	HS2	04/29/25	1530	2779937
SW846 8011 PREP	8011 Prep	LOF	04/10/25	1305	2778965

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Company :	Four Rivers Nuclear Partnership, LLC
Address :	5600 Hobbs Road
	Kevil, Kentucky 42053
Contact:	Ms. Jaime Morrow
Project:	C-746-U Landfill Quarterly(UG25-03)

Client Sample ID:	RI1UG3-25	Project:	FRNP00607
Sample ID:	718137014	Client ID:	FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 8011	
2	SW846 8011	
3	EPA 300.0	
4	SW846 7470A	
5	SW846 3005A/6020B	
6	SW846 3005A/6020B	
7	SW846 3005A/6020B	
8	SW846 3005A/6020B	
9	SW846 3535A/8082A	
10	SW846 8260D	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
1-Chloro-2-fluorobenzene	8011 VOA- 1,2-Dibromo-3-chloropropane "As Received"	6.42 ug/L	6.74	95	(56%-149%)
Decachlorobiphenyl	8082A, PCB Liquids "As Received"	0.198 ug/L	0.205	97	(30%-135%)
4cmx	8082A, PCB Liquids "As Received"	0.183 ug/L	0.205	89	(26%-108%)
Bromofluorobenzene	8260D, Volatiles- full suite "As Received"	55.1 ug/L	50.0	110	(85%-114%)
1,2-Dichloroethane-d4	8260D, Volatiles- full suite "As Received"	52.7 ug/L	50.0	105	(81%-118%)
Toluene-d8	8260D, Volatiles- full suite "As Received"	53.0 ug/L	50.0	106	(89%-112%)

Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: July 8, 2025

Company : Four Rivers Nuclear Partnership, LLC
Address : 5600 Hobbs Road

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: TB1UG3-25
Sample ID: 718137015
Matrix: WATER
Collect Date: 08-APR-25 07:00
Receive Date: 09-APR-25
Collector: Client

Project: FRNP00607
Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
504.1/8011 Analysis of EDB/DBCP												
8011 VOA- 1,2-Dibromo-3-chloropropane "As Received"												
1,2-Dibromo-3-chloropropane	U	0.0190	0.00854	0.0190	ug/L	0.949	1	LOF	04/10/25	2212	2778983	1
Volatile Organics												
8260D, Volatiles- full suite "As Received"												
1,1,1,2-Tetrachloroethane	UY1	1.00	0.333	1.00	ug/L		1	PXY1	04/12/25	0507	2780275	3
1,1,1-Trichloroethane	U	1.00	0.333	1.00	ug/L		1					
1,1,2,2-Tetrachloroethane	U	1.00	0.333	1.00	ug/L		1					
1,1,2-Trichloroethane	U	1.00	0.333	1.00	ug/L		1					
1,1-Dichloroethane	U	1.00	0.333	1.00	ug/L		1					
1,1-Dichloroethylene	U	1.00	0.333	1.00	ug/L		1					
1,2,3-Trichloropropane	U	1.00	0.333	1.00	ug/L		1					
1,2-Dibromoethane	U	1.00	0.333	1.00	ug/L		1					
1,2-Dichlorobenzene	UY1Y2	1.00	0.333	1.00	ug/L		1					
1,2-Dichloroethane	U	1.00	0.333	1.00	ug/L		1					
1,2-Dichloropropane	U	1.00	0.333	1.00	ug/L		1					
1,4-Dichlorobenzene	UY1Y2	1.00	0.333	1.00	ug/L		1					
2-Butanone	U	5.00	1.67	5.00	ug/L		1					
2-Hexanone	U	5.00	1.67	5.00	ug/L		1					
4-Methyl-2-pentanone	U	5.00	1.67	5.00	ug/L		1					
Acetone	U	5.00	1.74	5.00	ug/L		1					
Acrolein	U	5.00	1.67	5.00	ug/L		1					
Acrylonitrile	U	5.00	1.67	5.00	ug/L		1					
Benzene	U	1.00	0.333	1.00	ug/L		1					
Bromochloromethane	U	1.00	0.333	1.00	ug/L		1					
Bromodichloromethane	U	1.00	0.333	1.00	ug/L		1					
Bromoform	UY1	1.00	0.333	1.00	ug/L		1					
Bromomethane	U	1.00	0.337	1.00	ug/L		1					
Carbon disulfide	U	5.00	1.67	5.00	ug/L		1					
Carbon tetrachloride	U	1.00	0.333	1.00	ug/L		1					
Chlorobenzene	Y1Y2	3.41	0.333	1.00	ug/L		1					
Chloroethane	U	1.00	0.333	1.00	ug/L		1					
Chloroform	U	1.00	0.333	1.00	ug/L		1					
Chloromethane	U	1.00	0.333	1.00	ug/L		1					
Dibromochloromethane	U	1.00	0.333	1.00	ug/L		1					
Dibromomethane	U	1.00	0.333	1.00	ug/L		1					
Ethylbenzene	UY1Y2	1.00	0.333	1.00	ug/L		1					
Iodomethane	U	5.00	1.67	5.00	ug/L		1					

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Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: TB1UG3-25 Project: FRNP00607
Sample ID: 718137015 Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
8260D, Volatiles- full suite "As Received"												
Methylene chloride	U	5.00	0.500	5.00	ug/L		1					
Styrene	UY1Y2	1.00	0.333	1.00	ug/L		1					
Tetrachloroethylene	UY1Y2	1.00	0.333	1.00	ug/L		1					
Toluene	UY1Y2	1.00	0.333	1.00	ug/L		1					
Trichloroethylene	UY1	1.00	0.333	1.00	ug/L		1					
Trichlorofluoromethane	U	1.00	0.333	1.00	ug/L		1					
Vinyl acetate	U	5.00	1.67	5.00	ug/L		1					
Vinyl chloride	U	1.00	0.333	1.00	ug/L		1					
Xylenes (total)	UY1Y2	3.00	1.00	3.00	ug/L		1					
cis-1,2-Dichloroethylene	U	1.00	0.333	1.00	ug/L		1					
cis-1,3-Dichloropropylene	U	1.00	0.333	1.00	ug/L		1					
trans-1,2-Dichloroethylene	U	1.00	0.333	1.00	ug/L		1					
trans-1,3-Dichloropropylene	U	1.00	0.333	1.00	ug/L		1					
trans-1,4-Dichloro-2-butene	U	5.00	1.67	5.00	ug/L		1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 8011 PREP	8011 Prep	LOF	04/10/25	1305	2778965

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 8011	
2	SW846 8011	
3	SW846 8260D	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
1-Chloro-2-fluorobenzene	8011 VOA- 1,2-Dibromo-3-chloropropane "As Received"	5.97 ug/L	6.78	88	(56%-149%)
Bromofluorobenzene	8260D, Volatiles- full suite "As Received"	55.0 ug/L	50.0	110	(85%-114%)
1,2-Dichloroethane-d4	8260D, Volatiles- full suite "As Received"	52.1 ug/L	50.0	104	(81%-118%)
Toluene-d8	8260D, Volatiles- full suite "As Received"	54.4 ug/L	50.0	109	(89%-112%)

Notes:

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Certificate of Analysis

Report Date: July 8, 2025

Company :	Four Rivers Nuclear Partnership, LLC
Address :	5600 Hobbs Road
	Kevil, Kentucky 42053
Contact:	Ms. Jaime Morrow
Project:	C-746-U Landfill Quarterly(UG25-03)

Client Sample ID:	TB1UG3-25	Project:	FRNP00607
Sample ID:	718137015	Client ID:	FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Report Date: July 8, 2025

Company : Four Rivers Nuclear Partnership, LLC
Address : 5600 Hobbs Road

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID:	MW358UG3-25	Project:	FRNP00607
Sample ID:	718137016	Client ID:	FRNP006
Matrix:	WG		
Collect Date:	08-APR-25 12:01		
Receive Date:	09-APR-25		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
504.1/8011 Analysis of EDB/DBCP												
8011 VOA- 1,2-Dibromo-3-chloropropane "As Received"												
1,2-Dibromo-3-chloropropane	U	0.0188	0.00847	0.0188	ug/L	0.941	1	LOF	04/10/25	2246	2778983	2
Carbon Analysis												
9060A, Total Organic Carbon "As Received"												
Total Organic Carbon Average	J	0.460	0.330	2.00	mg/L		1	KB3	04/21/25	2137	2784686	3
Flow Injection Analysis												
9012B, Cyanide, Total "As Received"												
Cyanide, Total	JN	0.0559	0.00167	0.200	mg/L	1.00	1	KLP1	04/21/25	1509	2781881	4
Halogen Analysis												
9020B, TOX (Organic Halogen) "As Received"												
Total Organic Halogens	U	10.0	3.33	10.0	ug/L		1	RMJ	05/03/25	0021	2791180	5
Ion Chromatography												
300.0, Iodide in Liquid "As Received"												
Iodide	U	0.500	0.167	0.500	mg/L		1	CH6	04/24/25	1646	2786988	6
SW846 9056A Anions (5 elements) "As Received"												
Chloride	JW	35.6	0.268	250	mg/L		4	RXB5	04/09/25	1636	2778850	7
Nitrate-N	J	1.21	0.132	10.0	mg/L		4					
Sulfate		53.3	0.532	1.60	mg/L		4					
Bromide		0.401	0.0670	0.200	mg/L		1	RXB5	04/10/25	0558	2778850	8
Fluoride	J	0.163	0.0330	4.00	mg/L		1					
Mercury Analysis-CVAA												
7470, Mercury Liquid "As Received"												
Mercury	U	0.000200	0.0000670	0.000200	mg/L	1.00	1	JP2	04/30/25	1056	2788802	9
Metals Analysis-ICP-MS												
6020, Metals (15+ elements) "As Received"												
Aluminum	U	0.0500	0.0193	0.0500	mg/L	1.00	1	BCD1	05/05/25	2102	2779940	10
Antimony	U	0.00300	0.00100	0.00300	mg/L	1.00	1					
Arsenic	U	0.00500	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0489	0.000670	0.00400	mg/L	1.00	1					
Beryllium	U	0.000500	0.000200	0.000500	mg/L	1.00	1					
Cadmium	U	0.00100	0.000300	0.00100	mg/L	1.00	1					
Calcium		32.3	0.0800	0.200	mg/L	1.00	1					
Chromium	U	0.0100	0.00300	0.0100	mg/L	1.00	1					
Cobalt	J	0.000864	0.000300	0.00100	mg/L	1.00	1					

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Company : Four Rivers Nuclear Partnership, LLC
Address : 5600 Hobbs Road

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: MW358UG3-25 Project: FRNP00607
Sample ID: 718137016 Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP-MS												
6020, Metals (15+ elements) "As Received"												
Copper	J	0.000754	0.000300	0.00200	mg/L	1.00	1					
Iron		0.400	0.0330	0.100	mg/L	1.00	1					
Lead	U	0.00200	0.000500	0.00200	mg/L	1.00	1					
Magnesium		14.1	0.0100	0.0300	mg/L	1.00	1					
Molybdenum	U	0.00100	0.000200	0.00100	mg/L	1.00	1					
Nickel		0.00345	0.000600	0.00200	mg/L	1.00	1					
Potassium		2.27	0.0800	0.300	mg/L	1.00	1					
Selenium	U	0.00500	0.00150	0.00500	mg/L	1.00	1					
Silver	U	0.00100	0.000300	0.00100	mg/L	1.00	1					
Thallium	U	0.00200	0.000600	0.00200	mg/L	1.00	1					
Uranium	U	0.000200	0.0000670	0.000200	mg/L	1.00	1					
Vanadium	U	0.0200	0.00330	0.0200	mg/L	1.00	1					
Manganese		0.0881	0.00100	0.00500	mg/L	1.00	1	PRB	05/07/25	1202	2779940	11
Zinc	J	0.00343	0.00330	0.0200	mg/L	1.00	1					
Boron		0.479	0.0260	0.0750	mg/L	1.00	5	PRB	05/07/25	1203	2779940	12
Sodium		41.6	0.0800	0.250	mg/L	1.00	1	PRB	05/07/25	1249	2779940	13
Rhodium	U	0.00500	0.00160	0.00500	mg/L	1.00	1	PRB	05/07/25	1333	2779940	14
Tantalum	U	0.00500	0.00100	0.00500	mg/L	1.00	1					
Semi-Volatiles-PCB												
8082A, PCB Liquids "As Received"												
Aroclor-1016	U	0.102	0.0341	0.102	ug/L	0.00102	1	NS2	05/02/25	0257	2789118	15
Aroclor-1221	U	0.102	0.0341	0.102	ug/L	0.00102	1					
Aroclor-1232	U	0.102	0.0341	0.102	ug/L	0.00102	1					
Aroclor-1242	U	0.102	0.0341	0.102	ug/L	0.00102	1					
Aroclor-1248	U	0.102	0.0341	0.102	ug/L	0.00102	1					
Aroclor-1254	U	0.102	0.0341	0.102	ug/L	0.00102	1					
Aroclor-1260	U	0.102	0.0341	0.102	ug/L	0.00102	1					
Aroclor-1268	U	0.102	0.0341	0.102	ug/L	0.00102	1					
Aroclor-Total	U	0.102	0.0341	0.102	ug/L	0.00102	1					
Solids Analysis												
160.1, Dissolved Solids "As Received"												
Total Dissolved Solids		236	2.38	10.0	mg/L			CH6	04/14/25	1201	2780960	16
Spectrometric Analysis												
410.4, Chem. Oxygen Demand "As Received"												

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Company : Four Rivers Nuclear Partnership, LLC
Address : 5600 Hobbs Road

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: MW358UG3-25 Project: FRNP00607
Sample ID: 718137016 Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Spectrometric Analysis												
410.4, Chem. Oxygen Demand "As Received"												
COD	U	20.0	8.95	20.0	mg/L		1	HH2	04/12/25	0856	2779680	17
Volatile Organics												
8260D, Volatiles- full suite "As Received"												
1,1,1,2-Tetrachloroethane	UY1	1.00	0.333	1.00	ug/L		1	PXY1	04/12/25	0533	2780275	18
1,1,1-Trichloroethane	U	1.00	0.333	1.00	ug/L		1					
1,1,2,2-Tetrachloroethane	U	1.00	0.333	1.00	ug/L		1					
1,1,2-Trichloroethane	U	1.00	0.333	1.00	ug/L		1					
1,1-Dichloroethane	U	1.00	0.333	1.00	ug/L		1					
1,1-Dichloroethylene	U	1.00	0.333	1.00	ug/L		1					
1,2,3-Trichloropropane	U	1.00	0.333	1.00	ug/L		1					
1,2-Dibromoethane	U	1.00	0.333	1.00	ug/L		1					
1,2-Dichlorobenzene	UY1Y2	1.00	0.333	1.00	ug/L		1					
1,2-Dichloroethane	U	1.00	0.333	1.00	ug/L		1					
1,2-Dichloropropane	U	1.00	0.333	1.00	ug/L		1					
1,4-Dichlorobenzene	UY1Y2	1.00	0.333	1.00	ug/L		1					
2-Butanone	U	5.00	1.67	5.00	ug/L		1					
2-Hexanone	U	5.00	1.67	5.00	ug/L		1					
4-Methyl-2-pentanone	U	5.00	1.67	5.00	ug/L		1					
Acetone	U	5.00	1.74	5.00	ug/L		1					
Acrolein	U	5.00	1.67	5.00	ug/L		1					
Acrylonitrile	U	5.00	1.67	5.00	ug/L		1					
Benzene	U	1.00	0.333	1.00	ug/L		1					
Bromochloromethane	U	1.00	0.333	1.00	ug/L		1					
Bromodichloromethane	U	1.00	0.333	1.00	ug/L		1					
Bromoform	UY1	1.00	0.333	1.00	ug/L		1					
Bromomethane	U	1.00	0.337	1.00	ug/L		1					
Carbon disulfide	U	5.00	1.67	5.00	ug/L		1					
Carbon tetrachloride	U	1.00	0.333	1.00	ug/L		1					
Chlorobenzene	UY1Y2	1.00	0.333	1.00	ug/L		1					
Chloroethane	U	1.00	0.333	1.00	ug/L		1					
Chloroform	U	1.00	0.333	1.00	ug/L		1					
Chloromethane	U	1.00	0.333	1.00	ug/L		1					
Dibromochloromethane	U	1.00	0.333	1.00	ug/L		1					
Dibromomethane	U	1.00	0.333	1.00	ug/L		1					
Ethylbenzene	UY1Y2	1.00	0.333	1.00	ug/L		1					
Iodomethane	U	5.00	1.67	5.00	ug/L		1					

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Report Date: July 8, 2025

Company : Four Rivers Nuclear Partnership, LLC
Address : 5600 Hobbs Road

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: MW358UG3-25 Project: FRNP00607
Sample ID: 718137016 Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
8260D, Volatiles- full suite "As Received"												
Methylene chloride	U	5.00	0.500	5.00	ug/L		1					
Styrene	UY1Y2	1.00	0.333	1.00	ug/L		1					
Tetrachloroethylene	UY1Y2	1.00	0.333	1.00	ug/L		1					
Toluene	UY1Y2	1.00	0.333	1.00	ug/L		1					
Trichloroethylene	Y1	1.22	0.333	1.00	ug/L		1					
Trichlorofluoromethane	U	1.00	0.333	1.00	ug/L		1					
Vinyl acetate	U	5.00	1.67	5.00	ug/L		1					
Vinyl chloride	U	1.00	0.333	1.00	ug/L		1					
Xylenes (total)	UY1Y2	3.00	1.00	3.00	ug/L		1					
cis-1,2-Dichloroethylene	U	1.00	0.333	1.00	ug/L		1					
cis-1,3-Dichloropropylene	U	1.00	0.333	1.00	ug/L		1					
trans-1,2-Dichloroethylene	U	1.00	0.333	1.00	ug/L		1					
trans-1,3-Dichloropropylene	U	1.00	0.333	1.00	ug/L		1					
trans-1,4-Dichloro-2-butene	U	5.00	1.67	5.00	ug/L		1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	HS2	04/29/25	1530	2779937
SW846 8011 PREP	8011 Prep	LOF	04/10/25	1305	2778965
SW846 9010C Distillation	SW846 9010C Prep	KLP1	04/21/25	1002	2781880
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	JM13	04/29/25	1120	2788801
SW846 3535A	SW3535A PCB SPE Extraction	KW3	05/01/25	0945	2789110

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Contact:	Ms. Jaime Morrow
Project:	C-746-U Landfill Quarterly(UG25-03)

Client Sample ID:	MW358UG3-25	Project:	FRNP00607
Sample ID:	718137016	Client ID:	FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 8011	
2	SW846 8011	
3	SW846 9060A	
4	SW846 9012B	
5	SW846 9020B	
6	EPA 300.0	
7	SW846 9056A	
8	SW846 9056A	
9	SW846 7470A	
10	SW846 3005A/6020B	
11	SW846 3005A/6020B	
12	SW846 3005A/6020B	
13	SW846 3005A/6020B	
14	SW846 3005A/6020B	
15	SW846 3535A/8082A	
16	EPA 160.1	
17	EPA 410.4	
18	SW846 8260D	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
1-Chloro-2-fluorobenzene	8011 VOA- 1,2-Dibromo-3-chloropropane "As Received"	6.01 ug/L	6.72	89	(56%-149%)
Decachlorobiphenyl	8082A, PCB Liquids "As Received"	0.212 ug/L	0.205	104	(30%-135%)
4cmx	8082A, PCB Liquids "As Received"	0.197 ug/L	0.205	96	(26%-108%)
Bromofluorobenzene	8260D, Volatiles- full suite "As Received"	56.2 ug/L	50.0	112	(85%-114%)
1,2-Dichloroethane-d4	8260D, Volatiles- full suite "As Received"	52.7 ug/L	50.0	105	(81%-118%)
Toluene-d8	8260D, Volatiles- full suite "As Received"	54.3 ug/L	50.0	109	(89%-112%)

Notes:

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Contact:	Ms. Jaime Morrow
Project:	C-746-U Landfill Quarterly(UG25-03)

Client Sample ID:	MW358UG3-25	Project:	FRNP00607
Sample ID:	718137016	Client ID:	FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Company :	Four Rivers Nuclear Partnership, LLC
Address :	5600 Hobbs Road
	Kevil, Kentucky 42053
Contact:	Ms. Jaime Morrow
Project:	C-746-U Landfill Quarterly(UG25-03)

Client Sample ID:	MW358UG3-25	Project:	FRNP00607
Sample ID:	718137017	Client ID:	FRNP006
Matrix:	WG		
Collect Date:	08-APR-25 12:01		
Receive Date:	09-APR-25		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP-MS												
6020, Dissolved Metals (3 Elements) "As Received"												
Barium		0.0477	0.000670	0.00400	mg/L	1.00	1	BCD1	05/05/25	2106	2779940	1
Chromium	U	0.0100	0.00300	0.0100	mg/L	1.00	1					
Uranium	U	0.000200	0.0000670	0.000200	mg/L	1.00	1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	HS2	04/29/25	1530	2779937
EPA 160	Laboratory Filtration	MM7	04/10/25	1510	2779116

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 3005A/6020B	

Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Company : Four Rivers Nuclear Partnership, LLC
Address : 5600 Hobbs Road

Kevil, Kentucky 42053 — Report Date: July 8, 2025

Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: MW363UG3-25
Sample ID: 718400001
Matrix: WG
Collect Date: 09-APR-25
Receive Date: 10-APR-25
Collector: Client

Project: FRNP00607
Client ID: FRNP006

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis														
AN-1418 AlphaSpec Ra226, Liquid "As Received"														
Radium-226	U	0.0542	+/-0.373	0.771	+/-0.373	5.00	pCi/L			CM4	04/26/25	0850	2784553	1
Th-01-RC M, Th Isotopes, Liquid "As Received"														
Thorium-230	U	3.63	+/-4.36	6.35	+/-4.41	50.0	pCi/L			RM3	04/25/25	0837	2784554	2
Thorium-232	U	0.505	+/-2.20	3.94	+/-2.21		pCi/L							
Rad Gas Flow Proportional Counting														
904.0Mod, Ra228, Liquid "As Received"														
Radium-228	U	1.41	+/-2.64	4.63	+/-2.67	4.99	pCi/L			HH3	05/02/25	1144	2788606	3
905.0Mod, Sr90, liquid "As Received"														
Strontium-90	U	-1.57	+/-1.19	2.95	+/-1.19	8.00	pCi/L			CH7	04/26/25	1308	2779897	4
9310, Alpha/Beta Activity, liquid "As Received"														
Alpha	U	0.918	+/-4.61	9.38	+/-4.61	15.0	pCi/L			HH3	04/29/25	1407	2779922	5
Beta	U	3.41	+/-6.59	11.4	+/-6.61	50.0	pCi/L							
Rad Liquid Scintillation Analysis														
906.0M, Tritium Dist, Liquid "As Received"														
Tritium	U	166	+/-135	222	+/-139	300	pCi/L			MJ3	05/07/25	0138	2788792	6
Tc-02-RC-MOD, Tc99, Liquid "As Received"														
Technetium-99	U	-1.45	+/-12.0	21.3	+/-12.0	25.0	pCi/L			GS3	05/04/25	1532	2786732	7

The following Analytical Methods were performed

Method	Description
1	Eichrom Industries, AN-1418
2	DOE EML HASL-300, Th-01-RC Modified
3	EPA 904.0/SW846 9320 Modified
4	EPA 905.0 Modified/DOE RP501 Rev. 1 Modified
5	EPA 900.0/SW846 9310
6	EPA 906.0 Modified
7	DOE EML HASL-300, Tc-02-RC Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	AN-1418 AlphaSpec Ra226, Liquid "As Received"	2784553	93.9	(30%-110%)
Thorium-229 Tracer	Th-01-RC M, Th Isotopes, Liquid "As Received"	2784554	62	(30%-110%)
Barium-133 Tracer	904.0Mod, Ra228, Liquid "As Received"	2788606	76.2	(30%-110%)
Strontium Carrier	905.0Mod, Sr90, liquid "As Received"	2779897	90.9	(30%-110%)
Technetium-99m Tracer	Tc-02-RC-MOD, Tc99, Liquid "As Received"	2786732	96.1	(30%-110%)

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Certificate of Analysis

Company : Four Rivers Nuclear Partnership, LLC
Address : 5600 Hobbs Road

Kevil, Kentucky 42053

Report Date: July 8, 2025

Contact: Ms. Jaime Morrow

Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: MW363UG3-25
Sample ID: 718400001

Project: FRNP00607
Client ID: FRNP006

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Surrogate/Tracer Recovery		**Test**						**Batch ID**		**Recovery%**		**Acceptable Limits**		

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor
DL: Detection Limit
Lc/LC: Critical Level
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

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Report Date: July 8, 2025

Contact: Ms. Jaime Morrow

Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: MW364UG3-25
Sample ID: 718400003
Matrix: WG
Collect Date: 09-APR-25
Receive Date: 10-APR-25
Collector: Client

Project: FRNP00607
Client ID: FRNP006

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis														
AN-1418 AlphaSpec Ra226, Liquid "As Received"														
Radium-226	U	0.418	+/-0.488	0.674	+/-0.490	5.00	pCi/L			CM4	04/26/25	0850	2784553	1
Th-01-RC M, Th Isotopes, Liquid "As Received"														
Thorium-230	U	0.364	+/-0.790	1.39	+/-0.795	50.0	pCi/L			RM3	04/25/25	0837	2784554	2
Thorium-232	U	-0.0991	+/-0.342	0.936	+/-0.342		pCi/L							
Rad Gas Flow Proportional Counting														
904.0Mod, Ra228, Liquid "As Received"														
Radium-228	U	1.65	+/-2.60	4.55	+/-2.64	4.99	pCi/L			HH3	05/02/25	0946	2788606	3
905.0Mod, Sr90, liquid "As Received"														
Strontium-90	U	1.50	+/-1.62	2.69	+/-1.64	8.00	pCi/L			CH7	04/26/25	1308	2779897	4
9310, Alpha/Beta Activity, liquid "As Received"														
Alpha	U	2.01	+/-3.71	7.02	+/-3.73	15.0	pCi/L			HH3	04/27/25	1535	2779922	5
Beta		22.0	+/-8.15	11.0	+/-8.91	50.0	pCi/L							
Rad Liquid Scintillation Analysis														
906.0M, Tritium Dist, Liquid "As Received"														
Tritium	U	-31.1	+/-122	223	+/-122	300	pCi/L			MJ3	05/07/25	0220	2788792	6
Tc-02-RC-MOD, Tc99, Liquid "As Received"														
Technetium-99		49.9	+/-14.3	21.0	+/-15.3	25.0	pCi/L			GS3	05/04/25	1548	2786732	7

The following Analytical Methods were performed

Method	Description
1	Eichrom Industries, AN-1418
2	DOE EML HASL-300, Th-01-RC Modified
3	EPA 904.0/SW846 9320 Modified
4	EPA 905.0 Modified/DOE RP501 Rev. 1 Modified
5	EPA 900.0/SW846 9310
6	EPA 906.0 Modified
7	DOE EML HASL-300, Tc-02-RC Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	AN-1418 AlphaSpec Ra226, Liquid "As Received"	2784553	104	(30%-110%)
Thorium-229 Tracer	Th-01-RC M, Th Isotopes, Liquid "As Received"	2784554	78.2	(30%-110%)
Barium-133 Tracer	904.0Mod, Ra228, Liquid "As Received"	2788606	73.9	(30%-110%)
Strontium Carrier	905.0Mod, Sr90, liquid "As Received"	2779897	97.7	(30%-110%)
Technetium-99m Tracer	Tc-02-RC-MOD, Tc99, Liquid "As Received"	2786732	96.5	(30%-110%)

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Report Date: July 8, 2025

Contact: Ms. Jaime Morrow

Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: MW364UG3-25
Sample ID: 718400003

Project: FRNP00607
Client ID: FRNP006

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Surrogate/Tracer Recovery		**Test**						**Batch ID**		**Recovery%**		**Acceptable Limits**		

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor
DL: Detection Limit
Lc/LC: Critical Level
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

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Report Date: July 8, 2025

Contact: Ms. Jaime Morrow

Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: MW365UG3-25
Sample ID: 718400005
Matrix: WG
Collect Date: 09-APR-25
Receive Date: 10-APR-25
Collector: Client

Project: FRNP00607
Client ID: FRNP006

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis														
AN-1418 AlphaSpec Ra226, Liquid "As Received"														
Radium-226	U	0.795	+/-0.722	0.958	+/-0.729	5.00	pCi/L			CM4	04/26/25	0850	2784553	1
Th-01-RC M, Th Isotopes, Liquid "As Received"														
Thorium-230	U	0.745	+/-0.972	1.43	+/-0.982	50.0	pCi/L			RM3	04/25/25	0837	2784554	2
Thorium-232	U	-0.155	+/-0.403	1.17	+/-0.404		pCi/L							
Rad Gas Flow Proportional Counting														
904.0Mod, Ra228, Liquid "As Received"														
Radium-228	U	1.17	+/-2.74	4.86	+/-2.76	4.99	pCi/L			HH3	05/02/25	0946	2788606	3
905.0Mod, Sr90, liquid "As Received"														
Strontium-90	U	1.80	+/-1.74	2.83	+/-1.77	8.00	pCi/L			CH7	04/26/25	1308	2779897	4
9310, Alpha/Beta Activity, liquid "As Received"														
Alpha	U	-2.08	+/-3.24	9.60	+/-3.24	15.0	pCi/L			HH3	04/27/25	1533	2779922	5
Beta	U	2.69	+/-4.78	8.42	+/-4.80	50.0	pCi/L							
Rad Liquid Scintillation Analysis														
906.0M, Tritium Dist, Liquid "As Received"														
Tritium	U	-47.9	+/-117	216	+/-117	300	pCi/L			MJ3	05/07/25	0426	2788792	6
Tc-02-RC-MOD, Tc99, Liquid "As Received"														
Technetium-99	U	-11.8	+/-11.5	21.4	+/-11.5	25.0	pCi/L			GS3	05/04/25	1605	2786732	7

The following Analytical Methods were performed

Method	Description
1	Eichrom Industries, AN-1418
2	DOE EML HASL-300, Th-01-RC Modified
3	EPA 904.0/SW846 9320 Modified
4	EPA 905.0 Modified/DOE RP501 Rev. 1 Modified
5	EPA 900.0/SW846 9310
6	EPA 906.0 Modified
7	DOE EML HASL-300, Tc-02-RC Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	AN-1418 AlphaSpec Ra226, Liquid "As Received"	2784553	95.6	(30%-110%)
Thorium-229 Tracer	Th-01-RC M, Th Isotopes, Liquid "As Received"	2784554	68.1	(30%-110%)
Barium-133 Tracer	904.0Mod, Ra228, Liquid "As Received"	2788606	81.1	(30%-110%)
Strontium Carrier	905.0Mod, Sr90, liquid "As Received"	2779897	90.9	(30%-110%)
Technetium-99m Tracer	Tc-02-RC-MOD, Tc99, Liquid "As Received"	2786732	95.2	(30%-110%)

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Report Date: July 8, 2025

Contact: Ms. Jaime Morrow

Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: MW365UG3-25
Sample ID: 718400005

Project: FRNP00607
Client ID: FRNP006

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Surrogate/Tracer Recovery		**Test**						**Batch ID**		**Recovery%**		**Acceptable Limits**		

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor
DL: Detection Limit
Lc/LC: Critical Level
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

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Report Date: July 8, 2025

Contact: Ms. Jaime Morrow

Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: MW366UG3-25
Sample ID: 718400007
Matrix: WG
Collect Date: 09-APR-25
Receive Date: 10-APR-25
Collector: Client

Project: FRNP00607
Client ID: FRNP006

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis														
AN-1418 AlphaSpec Ra226, Liquid "As Received"														
Radium-226	U	0.264	+/-0.541	0.944	+/-0.542	5.00	pCi/L			CM4	04/26/25	0850	2784553	1
Th-01-RC M, Th Isotopes, Liquid "As Received"														
Thorium-230	U	1.47	+/-1.23	1.49	+/-1.25	50.0	pCi/L			RM3	04/25/25	0837	2784554	2
Thorium-232	U	-0.0659	+/-0.387	0.955	+/-0.388		pCi/L							
Rad Gas Flow Proportional Counting														
904.0Mod, Ra228, Liquid "As Received"														
Radium-228	U	1.44	+/-2.79	4.87	+/-2.82	4.99	pCi/L			HH3	05/02/25	0946	2788606	3
905.0Mod, Sr90, liquid "As Received"														
Strontium-90	U	1.68	+/-2.03	3.42	+/-2.04	8.00	pCi/L			CH7	04/26/25	1308	2779897	4
9310, Alpha/Beta Activity, liquid "As Received"														
Alpha	U	-1.03	+/-1.90	7.03	+/-1.91	15.0	pCi/L			HH3	04/27/25	1533	2779922	5
Beta		38.5	+/-8.62	8.06	+/-10.6	50.0	pCi/L							
Rad Liquid Scintillation Analysis														
906.0M, Tritium Dist, Liquid "As Received"														
Tritium	U	46.9	+/-119	207	+/-119	300	pCi/L			MJ3	05/07/25	0508	2788792	6
Tc-02-RC-MOD, Tc99, Liquid "As Received"														
Technetium-99		62.4	+/-15.0	21.3	+/-16.5	25.0	pCi/L			GS3	05/04/25	1621	2786732	7

The following Analytical Methods were performed

Method	Description
1	Eichrom Industries, AN-1418
2	DOE EML HASL-300, Th-01-RC Modified
3	EPA 904.0/SW846 9320 Modified
4	EPA 905.0 Modified/DOE RP501 Rev. 1 Modified
5	EPA 900.0/SW846 9310
6	EPA 906.0 Modified
7	DOE EML HASL-300, Tc-02-RC Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	AN-1418 AlphaSpec Ra226, Liquid "As Received"	2784553	90.8	(30%-110%)
Thorium-229 Tracer	Th-01-RC M, Th Isotopes, Liquid "As Received"	2784554	73.6	(30%-110%)
Barium-133 Tracer	904.0Mod, Ra228, Liquid "As Received"	2788606	86	(30%-110%)
Strontium Carrier	905.0Mod, Sr90, liquid "As Received"	2779897	105	(30%-110%)
Technetium-99m Tracer	Tc-02-RC-MOD, Tc99, Liquid "As Received"	2786732	95.5	(30%-110%)

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Report Date: July 8, 2025

Contact: Ms. Jaime Morrow

Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: MW366UG3-25
Sample ID: 718400007

Project: FRNP00607
Client ID: FRNP006

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Surrogate/Tracer Recovery		**Test**						**Batch ID**		**Recovery%**		**Acceptable Limits**		

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor
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Lc/LC: Critical Level
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

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Report Date: July 8, 2025

Contact: Ms. Jaime Morrow

Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: MW367UG3-25
Sample ID: 718400009
Matrix: WG
Collect Date: 09-APR-25
Receive Date: 10-APR-25
Collector: Client

Project: FRNP00607
Client ID: FRNP006

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis														
AN-1418 AlphaSpec Ra226, Liquid "As Received"														
Radium-226	U	0.641	+/-0.592	0.732	+/-0.597	5.00	pCi/L			CM4	05/04/25	1226	2790618	1
Th-01-RC M, Th Isotopes, Liquid "As Received"														
Thorium-230	U	1.13	+/-1.07	1.39	+/-1.08	50.0	pCi/L			RM3	04/25/25	0837	2784554	2
Thorium-232	U	0.155	+/-0.604	1.15	+/-0.604		pCi/L							
Rad Gas Flow Proportional Counting														
904.0Mod, Ra228, Liquid "As Received"														
Radium-228	U	4.07	+/-3.10	4.94	+/-3.30	4.99	pCi/L			HH3	05/02/25	0946	2788606	3
905.0Mod, Sr90, liquid "As Received"														
Strontium-90	U	-0.800	+/-1.41	2.98	+/-1.41	8.00	pCi/L			CH7	04/26/25	1308	2779897	4
9310, Alpha/Beta Activity, liquid "As Received"														
Alpha	U	0.694	+/-3.76	8.06	+/-3.76	15.0	pCi/L			HH3	04/29/25	1407	2779922	5
Beta		22.1	+/-8.28	11.7	+/-9.06	50.0	pCi/L							
Rad Liquid Scintillation Analysis														
906.0M, Tritium Dist, Liquid "As Received"														
Tritium	U	28.7	+/-122	215	+/-122	300	pCi/L			MJ3	05/07/25	0549	2788792	6
Tc-02-RC-MOD, Tc99, Liquid "As Received"														
Technetium-99		56.0	+/-24.6	38.1	+/-25.4	25.0	pCi/L			GS3	05/07/25	0727	2792486	7

The following Analytical Methods were performed

Method	Description
1	Eichrom Industries, AN-1418
2	DOE EML HASL-300, Th-01-RC Modified
3	EPA 904.0/SW846 9320 Modified
4	EPA 905.0 Modified/DOE RP501 Rev. 1 Modified
5	EPA 900.0/SW846 9310
6	EPA 906.0 Modified
7	DOE EML HASL-300, Tc-02-RC Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	AN-1418 AlphaSpec Ra226, Liquid "As Received"	2790618	105	(30%-110%)
Thorium-229 Tracer	Th-01-RC M, Th Isotopes, Liquid "As Received"	2784554	77.5	(30%-110%)
Barium-133 Tracer	904.0Mod, Ra228, Liquid "As Received"	2788606	81.9	(30%-110%)
Strontium Carrier	905.0Mod, Sr90, liquid "As Received"	2779897	93.2	(30%-110%)
Technetium-99m Tracer	Tc-02-RC-MOD, Tc99, Liquid "As Received"	2792486	98.3	(30%-110%)

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Report Date: July 8, 2025

Contact: Ms. Jaime Morrow

Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: MW367UG3-25
Sample ID: 718400009

Project: FRNP00607
Client ID: FRNP006

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Surrogate/Tracer Recovery		**Test**						**Batch ID**		**Recovery%**		**Acceptable Limits**		

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor
DL: Detection Limit
Lc/LC: Critical Level
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

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Report Date: July 8, 2025

Contact: Ms. Jaime Morrow

Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: MW368UG3-25
Sample ID: 718400011
Matrix: WG
Collect Date: 09-APR-25
Receive Date: 10-APR-25
Collector: Client

Project: FRNP00607
Client ID: FRNP006

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis														
AN-1418 AlphaSpec Ra226, Liquid "As Received"														
Radium-226	U	0.256	+/-0.399	0.671	+/-0.401	5.00	pCi/L			CM4	04/26/25	0850	2784553	1
Th-01-RC M, Th Isotopes, Liquid "As Received"														
Thorium-230	U	-0.0945	+/-0.952	2.12	+/-0.953	50.0	pCi/L			RM3	04/25/25	0837	2784554	2
Thorium-232	U	-0.409	+/-0.488	1.65	+/-0.489		pCi/L							
Rad Gas Flow Proportional Counting														
904.0Mod, Ra228, Liquid "As Received"														
Radium-228	U	-0.938	+/-2.20	4.70	+/-2.20	4.99	pCi/L			HH3	05/02/25	0944	2788606	3
905.0Mod, Sr90, liquid "As Received"														
Strontium-90	U	-0.515	+/-1.32	2.76	+/-1.32	8.00	pCi/L			CH7	04/26/25	1308	2779897	4
9310, Alpha/Beta Activity, liquid "As Received"														
Alpha	U	3.06	+/-4.60	8.17	+/-4.63	15.0	pCi/L			HH3	04/27/25	1534	2779922	5
Beta	U	-1.05	+/-3.67	7.54	+/-3.67	50.0	pCi/L							
Rad Liquid Scintillation Analysis														
906.0M, Tritium Dist, Liquid "As Received"														
Tritium	U	-19.4	+/-122	222	+/-122	300	pCi/L			MJ3	05/07/25	0631	2788792	6
Tc-02-RC-MOD, Tc99, Liquid "As Received"														
Technetium-99	U	-5.92	+/-12.0	21.7	+/-12.0	25.0	pCi/L			GS3	05/04/25	1655	2786732	7

The following Analytical Methods were performed

Method	Description
1	Eichrom Industries, AN-1418
2	DOE EML HASL-300, Th-01-RC Modified
3	EPA 904.0/SW846 9320 Modified
4	EPA 905.0 Modified/DOE RP501 Rev. 1 Modified
5	EPA 900.0/SW846 9310
6	EPA 906.0 Modified
7	DOE EML HASL-300, Tc-02-RC Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	AN-1418 AlphaSpec Ra226, Liquid "As Received"	2784553	95.2	(30%-110%)
Thorium-229 Tracer	Th-01-RC M, Th Isotopes, Liquid "As Received"	2784554	65.8	(30%-110%)
Barium-133 Tracer	904.0Mod, Ra228, Liquid "As Received"	2788606	70.4	(30%-110%)
Strontium Carrier	905.0Mod, Sr90, liquid "As Received"	2779897	97.7	(30%-110%)
Technetium-99m Tracer	Tc-02-RC-MOD, Tc99, Liquid "As Received"	2786732	94.5	(30%-110%)

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Report Date: July 8, 2025

Contact: Ms. Jaime Morrow

Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: MW368UG3-25
Sample ID: 718400011

Project: FRNP00607
Client ID: FRNP006

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Surrogate/Tracer Recovery		**Test**						**Batch ID**		**Recovery%**		**Acceptable Limits**		

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor
DL: Detection Limit
Lc/LC: Critical Level
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

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Company : Four Rivers Nuclear Partnership, LLC
Address : 5600 Hobbs Road

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID:	MW363UG3-25	Project:	FRNP00607
Sample ID:	718400001	Client ID:	FRNP006
Matrix:	WG		
Collect Date:	09-APR-25 08:01		
Receive Date:	10-APR-25		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
504.1/8011 Analysis of EDB/DBCP												
8011 VOA- 1,2-Dibromo-3-chloropropane "As Received"												
1,2-Dibromo-3-chloropropane	UY2	0.0188	0.00844	0.0188	ug/L	0.938	1	LOF	04/14/25	0805	2779649	1
Carbon Analysis												
9060A, Total Organic Carbon "As Received"												
Total Organic Carbon Average	J	0.793	0.330	2.00	mg/L		1	KB3	04/22/25	1753	2785590	3
Flow Injection Analysis												
9012B, Cyanide, Total "As Received"												
Cyanide, Total	UN1	0.200	0.00167	0.200	mg/L	1.00	1	KLP1	04/21/25	1129	2781931	4
Halogen Analysis												
9020B, TOX (Organic Halogen) "As Received"												
Total Organic Halogens	U	10.0	3.33	10.0	ug/L		1	RMJ	05/03/25	0045	2791180	5
Ion Chromatography												
300.0, Iodide in Liquid "As Received"												
Iodide	U	0.500	0.167	0.500	mg/L		1	CH6	04/24/25	1659	2786988	6
SW846 9056A Anions (5 elements) "As Received"												
Nitrate-N	J	2.84	0.132	10.0	mg/L		4	RXB5	04/10/25	1418	2779607	7
Bromide	UW	0.400	0.134	0.400	mg/L		2	RXB5	04/12/25	0042	2779607	8
Chloride	J	13.8	0.134	250	mg/L		2					
Fluoride	J	0.231	0.0660	4.00	mg/L		2					
Sulfate		32.6	0.266	0.800	mg/L		2					
Mercury Analysis-CVAA												
7470, Mercury Liquid "As Received"												
Mercury	U	0.000200	0.0000670	0.000200	mg/L	1.00	1	JP2	04/30/25	1058	2788802	9
Metals Analysis-ICP-MS												
6020, Metals (15+ elements) "As Received"												
Aluminum	U	0.0500	0.0193	0.0500	mg/L	1.00	1	BCD1	05/05/25	1715	2780347	10
Antimony	U	0.00300	0.00100	0.00300	mg/L	1.00	1					
Arsenic	U	0.00500	0.00200	0.00500	mg/L	1.00	1					
Barium		0.107	0.000670	0.00400	mg/L	1.00	1					
Beryllium	U	0.000500	0.000200	0.000500	mg/L	1.00	1					
Cadmium	U	0.00100	0.000300	0.00100	mg/L	1.00	1					
Calcium		20.6	0.0800	0.200	mg/L	1.00	1					
Chromium	U	0.0100	0.00300	0.0100	mg/L	1.00	1					
Cobalt		0.00101	0.000300	0.00100	mg/L	1.00	1					

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Report Date: July 8, 2025

Company : Four Rivers Nuclear Partnership, LLC
Address : 5600 Hobbs Road

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: MW363UG3-25 Project: FRNP00607
Sample ID: 718400001 Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP-MS												
6020, Metals (15+ elements) "As Received"												
Copper	J	0.00102	0.000300	0.00200	mg/L	1.00	1					
Iron	J	0.0447	0.0330	0.100	mg/L	1.00	1					
Lead	U	0.00200	0.000500	0.00200	mg/L	1.00	1					
Magnesium		8.19	0.0100	0.0300	mg/L	1.00	1					
Molybdenum	U	0.00100	0.000200	0.00100	mg/L	1.00	1					
Nickel		0.0146	0.000600	0.00200	mg/L	1.00	1					
Potassium		1.83	0.0800	0.300	mg/L	1.00	1					
Selenium	U	0.00500	0.00150	0.00500	mg/L	1.00	1					
Silver	U	0.00100	0.000300	0.00100	mg/L	1.00	1					
Thallium	U	0.00200	0.000600	0.00200	mg/L	1.00	1					
Uranium	U	0.000200	0.0000670	0.000200	mg/L	1.00	1					
Vanadium	U	0.0200	0.00330	0.0200	mg/L	1.00	1					
Rhodium	U	0.00500	0.00160	0.00500	mg/L	1.00	1	PRB	05/07/25	1754	2780347	11
Tantalum	U	0.00500	0.00100	0.00500	mg/L	1.00	1					
Manganese		0.174	0.00100	0.00500	mg/L	1.00	1	PRB	05/07/25	1944	2780347	12
Sodium		37.8	0.0800	0.250	mg/L	1.00	1					
Zinc	J	0.00539	0.00330	0.0200	mg/L	1.00	1					
Boron		0.0224	0.00520	0.0150	mg/L	1.00	1	PRB	05/08/25	0951	2780347	13
Semi-Volatiles-PCB												
8082A, PCB Liquids "As Received"												
Aroclor-1016	U	0.0979	0.0326	0.0979	ug/L	0.000979	1	NS2	05/02/25	0315	2789118	14
Aroclor-1221	U	0.0979	0.0326	0.0979	ug/L	0.000979	1					
Aroclor-1232	U	0.0979	0.0326	0.0979	ug/L	0.000979	1					
Aroclor-1242	U	0.0979	0.0326	0.0979	ug/L	0.000979	1					
Aroclor-1248	U	0.0979	0.0326	0.0979	ug/L	0.000979	1					
Aroclor-1254	U	0.0979	0.0326	0.0979	ug/L	0.000979	1					
Aroclor-1260	U	0.0979	0.0326	0.0979	ug/L	0.000979	1					
Aroclor-1268	U	0.0979	0.0326	0.0979	ug/L	0.000979	1					
Aroclor-Total	U	0.0979	0.0326	0.0979	ug/L	0.000979	1					
Solids Analysis												
160.1, Dissolved Solids "As Received"												
Total Dissolved Solids		215	2.38	10.0	mg/L			CH6	04/15/25	1206	2781742	15
Spectrometric Analysis												
410.4, Chem. Oxygen Demand "As Received"												

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Report Date: July 8, 2025

Company : Four Rivers Nuclear Partnership, LLC
Address : 5600 Hobbs Road

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: MW363UG3-25 Project: FRNP00607
Sample ID: 718400001 Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Spectrometric Analysis												
410.4, Chem. Oxygen Demand "As Received"												
COD	U	20.0	8.95	20.0	mg/L		1	HH2	04/22/25	1648	2781684	16
Volatile Organics												
8260D, Volatiles- full suite "As Received"												
1,1,1,2-Tetrachloroethane	U	1.00	0.333	1.00	ug/L		1	PXY1	04/16/25	1310	2782530	17
1,1,1-Trichloroethane	U	1.00	0.333	1.00	ug/L		1					
1,1,2,2-Tetrachloroethane	U	1.00	0.333	1.00	ug/L		1					
1,1,2-Trichloroethane	U	1.00	0.333	1.00	ug/L		1					
1,1-Dichloroethane	U	1.00	0.333	1.00	ug/L		1					
1,1-Dichloroethylene	U	1.00	0.333	1.00	ug/L		1					
1,2,3-Trichloropropane	U	1.00	0.333	1.00	ug/L		1					
1,2-Dibromoethane	U	1.00	0.333	1.00	ug/L		1					
1,2-Dichlorobenzene	U	1.00	0.333	1.00	ug/L		1					
1,2-Dichloroethane	U	1.00	0.333	1.00	ug/L		1					
1,2-Dichloropropane	U	1.00	0.333	1.00	ug/L		1					
1,4-Dichlorobenzene	U	1.00	0.333	1.00	ug/L		1					
2-Butanone	U	5.00	1.67	5.00	ug/L		1					
2-Hexanone	U	5.00	1.67	5.00	ug/L		1					
4-Methyl-2-pentanone	U	5.00	1.67	5.00	ug/L		1					
Acetone	U	5.00	1.74	5.00	ug/L		1					
Acrolein	U	5.00	1.67	5.00	ug/L		1					
Acrylonitrile	U	5.00	1.67	5.00	ug/L		1					
Benzene	U	1.00	0.333	1.00	ug/L		1					
Bromochloromethane	U	1.00	0.333	1.00	ug/L		1					
Bromodichloromethane	U	1.00	0.333	1.00	ug/L		1					
Bromoform	U	1.00	0.333	1.00	ug/L		1					
Bromomethane	U	1.00	0.337	1.00	ug/L		1					
Carbon disulfide	U	5.00	1.67	5.00	ug/L		1					
Carbon tetrachloride	U	1.00	0.333	1.00	ug/L		1					
Chlorobenzene	U	1.00	0.333	1.00	ug/L		1					
Chloroethane	U	1.00	0.333	1.00	ug/L		1					
Chloroform	U	1.00	0.333	1.00	ug/L		1					
Chloromethane	U	1.00	0.333	1.00	ug/L		1					
Dibromochloromethane	U	1.00	0.333	1.00	ug/L		1					
Dibromomethane	U	1.00	0.333	1.00	ug/L		1					
Ethylbenzene	U	1.00	0.333	1.00	ug/L		1					
Iodomethane	U	5.00	1.67	5.00	ug/L		1					

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Report Date: July 8, 2025

Company : Four Rivers Nuclear Partnership, LLC
Address : 5600 Hobbs Road

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: MW363UG3-25 Project: FRNP00607
Sample ID: 718400001 Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
8260D, Volatiles- full suite "As Received"												
Methylene chloride	U	5.00	0.500	5.00	ug/L		1					
Styrene	U	1.00	0.333	1.00	ug/L		1					
Tetrachloroethylene	U	1.00	0.333	1.00	ug/L		1					
Toluene	U	1.00	0.333	1.00	ug/L		1					
Trichloroethylene	J	0.370	0.333	1.00	ug/L		1					
Trichlorofluoromethane	U	1.00	0.333	1.00	ug/L		1					
Vinyl acetate	U	5.00	1.67	5.00	ug/L		1					
Vinyl chloride	U	1.00	0.333	1.00	ug/L		1					
Xylenes (total)	U	3.00	1.00	3.00	ug/L		1					
cis-1,2-Dichloroethylene	U	1.00	0.333	1.00	ug/L		1					
cis-1,3-Dichloropropylene	U	1.00	0.333	1.00	ug/L		1					
trans-1,2-Dichloroethylene	U	1.00	0.333	1.00	ug/L		1					
trans-1,3-Dichloropropylene	U	1.00	0.333	1.00	ug/L		1					
trans-1,4-Dichloro-2-butene	UY1	5.00	1.67	5.00	ug/L		1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	HC1	05/02/25	0915	2780343
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	JM13	04/29/25	1120	2788801
SW846 3535A	SW3535A PCB SPE Extraction	KW3	05/01/25	0945	2789110
SW846 8011 PREP	8011 Prep	LOF	04/13/25	1332	2779647
SW846 9010C Distillation	SW846 9010C Prep	KLP1	04/16/25	1306	2781930

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Company :	Four Rivers Nuclear Partnership, LLC
Address :	5600 Hobbs Road
	Kevil, Kentucky 42053
Contact:	Ms. Jaime Morrow
Project:	C-746-U Landfill Quarterly(UG25-03)

Client Sample ID:	MW363UG3-25	Project:	FRNP00607
Sample ID:	718400001	Client ID:	FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 8011	
2	SW846 8011	
3	SW846 9060A	
4	SW846 9012B	
5	SW846 9020B	
6	EPA 300.0	
7	SW846 9056A	
8	SW846 9056A	
9	SW846 7470A	
10	SW846 3005A/6020B	
11	SW846 3005A/6020B	
12	SW846 3005A/6020B	
13	SW846 3005A/6020B	
14	SW846 3535A/8082A	
15	EPA 160.1	
16	EPA 410.4	
17	SW846 8260D	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
1-Chloro-2-fluorobenzene	8011 VOA- 1,2-Dibromo-3-chloropropane "As Received"	5.81 ug/L	6.70	87	(56%-149%)
Decachlorobiphenyl	8082A, PCB Liquids "As Received"	0.196 ug/L	0.196	100	(30%-135%)
4cmx	8082A, PCB Liquids "As Received"	0.176 ug/L	0.196	90	(26%-108%)
Bromofluorobenzene	8260D, Volatiles- full suite "As Received"	54.5 ug/L	50.0	109	(85%-114%)
1,2-Dichloroethane-d4	8260D, Volatiles- full suite "As Received"	55.5 ug/L	50.0	111	(81%-118%)
Toluene-d8	8260D, Volatiles- full suite "As Received"	50.8 ug/L	50.0	102	(89%-112%)

Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: July 8, 2025

Company :	Four Rivers Nuclear Partnership, LLC
Address :	5600 Hobbs Road
	Kevil, Kentucky 42053
Contact:	Ms. Jaime Morrow
Project:	C-746-U Landfill Quarterly(UG25-03)

Client Sample ID:	MW363UG3-25	Project:	FRNP00607
Sample ID:	718400002	Client ID:	FRNP006
Matrix:	WG		
Collect Date:	09-APR-25 08:01		
Receive Date:	10-APR-25		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP-MS												
6020, Dissolved Metals (3 Elements) "As Received"												
Barium		0.105	0.000670	0.00400	mg/L	1.00	1	BCD1	05/05/25	1719	2780347	1
Chromium	U	0.0100	0.00300	0.0100	mg/L	1.00	1					
Uranium	U	0.000200	0.0000670	0.000200	mg/L	1.00	1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 160	Laboratory Filtration	MM7	04/11/25	1240	2779955
SW846 3005A	ICP-MS 3005A PREP	HC1	05/02/25	0915	2780343

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 3005A/6020B	

Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: July 8, 2025

Company : Four Rivers Nuclear Partnership, LLC
Address : 5600 Hobbs Road

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID:	MW364UG3-25	Project:	FRNP00607
Sample ID:	718400003	Client ID:	FRNP006
Matrix:	WG		
Collect Date:	09-APR-25 08:47		
Receive Date:	10-APR-25		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
504.1/8011 Analysis of EDB/DBCP												
8011 VOA- 1,2-Dibromo-3-chloropropane "As Received"												
1,2-Dibromo-3-chloropropane	UY2	0.0190	0.00857	0.0190	ug/L	0.952	1	LOF	04/14/25	0839	2779649	1
Carbon Analysis												
9060A, Total Organic Carbon "As Received"												
Total Organic Carbon Average	J	0.484	0.330	2.00	mg/L		1	KB3	04/22/25	1825	2785590	3
Flow Injection Analysis												
9012B, Cyanide, Total "As Received"												
Cyanide, Total	UN1	0.200	0.00167	0.200	mg/L	1.00	1	KLP1	04/21/25	1130	2781931	4
Halogen Analysis												
9020B, TOX (Organic Halogen) "As Received"												
Total Organic Halogens	U	10.0	3.33	10.0	ug/L		1	RMJ	05/01/25	2359	2790452	5
Ion Chromatography												
300.0, Iodide in Liquid "As Received"												
Iodide	U	0.500	0.167	0.500	mg/L		1	CH6	04/24/25	1712	2786988	6
SW846 9056A Anions (5 elements) "As Received"												
Chloride	J	37.2	0.335	250	mg/L		5	RXB5	04/10/25	1449	2779607	7
Nitrate-N	J	1.13	0.165	10.0	mg/L		5					
Sulfate		67.6	0.665	2.00	mg/L		5					
Bromide	W	0.455	0.0670	0.200	mg/L		1	RXB5	04/10/25	2302	2779607	8
Fluoride	U	4.00	0.0330	4.00	mg/L		1					
Mercury Analysis-CVAA												
7470, Mercury Liquid "As Received"												
Mercury	U	0.000200	0.0000670	0.000200	mg/L	1.00	1	JP2	04/30/25	1100	2788802	9
Metals Analysis-ICP-MS												
6020, Metals (15+ elements) "As Received"												
Aluminum	U	0.0500	0.0193	0.0500	mg/L	1.00	1	BCD1	05/05/25	1730	2780347	10
Antimony	U	0.00300	0.00100	0.00300	mg/L	1.00	1					
Arsenic	U	0.00500	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0518	0.000670	0.00400	mg/L	1.00	1					
Beryllium	U	0.000500	0.000200	0.000500	mg/L	1.00	1					
Cadmium	U	0.00100	0.000300	0.00100	mg/L	1.00	1					
Calcium		32.1	0.0800	0.200	mg/L	1.00	1					
Chromium	U	0.0100	0.00300	0.0100	mg/L	1.00	1					
Cobalt	U	0.00100	0.000300	0.00100	mg/L	1.00	1					

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Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: MW364UG3-25 Project: FRNP00607
Sample ID: 718400003 Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP-MS												
6020, Metals (15+ elements) "As Received"												
Copper	J	0.000844	0.000300	0.00200	mg/L	1.00	1					
Iron	U	0.100	0.0330	0.100	mg/L	1.00	1					
Lead	U	0.00200	0.000500	0.00200	mg/L	1.00	1					
Magnesium		13.7	0.0100	0.0300	mg/L	1.00	1					
Molybdenum	U	0.00100	0.000200	0.00100	mg/L	1.00	1					
Nickel	U	0.00200	0.000600	0.00200	mg/L	1.00	1					
Potassium		1.99	0.0800	0.300	mg/L	1.00	1					
Selenium	U	0.00500	0.00150	0.00500	mg/L	1.00	1					
Silver	U	0.00100	0.000300	0.00100	mg/L	1.00	1					
Thallium	U	0.00200	0.000600	0.00200	mg/L	1.00	1					
Uranium	U	0.000200	0.0000670	0.000200	mg/L	1.00	1					
Vanadium	U	0.0200	0.00330	0.0200	mg/L	1.00	1					
Rhodium	U	0.00500	0.00160	0.00500	mg/L	1.00	1	PRB	05/07/25	1755	2780347	11
Tantalum	U	0.00500	0.00100	0.00500	mg/L	1.00	1					
Manganese	J	0.00298	0.00100	0.00500	mg/L	1.00	1	PRB	05/07/25	1952	2780347	12
Sodium		41.5	0.0800	0.250	mg/L	1.00	1					
Zinc		0.0229	0.00330	0.0200	mg/L	1.00	1					
Boron		0.199	0.00520	0.0150	mg/L	1.00	1	PRB	05/08/25	0953	2780347	13
Semi-Volatiles-PCB												
8082A, PCB Liquids "As Received"												
Aroclor-1016	U	0.100	0.0333	0.100	ug/L	0.00100	1	NS2	05/02/25	0334	2789118	14
Aroclor-1221	U	0.100	0.0333	0.100	ug/L	0.00100	1					
Aroclor-1232	U	0.100	0.0333	0.100	ug/L	0.00100	1					
Aroclor-1242	U	0.100	0.0333	0.100	ug/L	0.00100	1					
Aroclor-1248	U	0.100	0.0333	0.100	ug/L	0.00100	1					
Aroclor-1254	U	0.100	0.0333	0.100	ug/L	0.00100	1					
Aroclor-1260	U	0.100	0.0333	0.100	ug/L	0.00100	1					
Aroclor-1268	U	0.100	0.0333	0.100	ug/L	0.00100	1					
Aroclor-Total	U	0.100	0.0333	0.100	ug/L	0.00100	1					
Solids Analysis												
160.1, Dissolved Solids "As Received"												
Total Dissolved Solids		248	2.38	10.0	mg/L			CH6	04/15/25	1206	2781742	15
Spectrometric Analysis												
410.4, Chem. Oxygen Demand "As Received"												

GEL LABORATORIES LLC

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Certificate of Analysis

Report Date: July 8, 2025

Company : Four Rivers Nuclear Partnership, LLC
Address : 5600 Hobbs Road

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: MW364UG3-25 Project: FRNP00607
Sample ID: 718400003 Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Spectrometric Analysis												
410.4, Chem. Oxygen Demand "As Received"												
COD	U	20.0	8.95	20.0	mg/L		1	HH2	04/22/25	1648	2781684	16
Volatile Organics												
8260D, Volatiles- full suite "As Received"												
1,1,1,2-Tetrachloroethane	U	1.00	0.333	1.00	ug/L		1	PXY1	04/16/25	1337	2782530	17
1,1,1-Trichloroethane	U	1.00	0.333	1.00	ug/L		1					
1,1,2,2-Tetrachloroethane	U	1.00	0.333	1.00	ug/L		1					
1,1,2-Trichloroethane	U	1.00	0.333	1.00	ug/L		1					
1,1-Dichloroethane	U	1.00	0.333	1.00	ug/L		1					
1,1-Dichloroethylene	U	1.00	0.333	1.00	ug/L		1					
1,2,3-Trichloropropane	U	1.00	0.333	1.00	ug/L		1					
1,2-Dibromoethane	U	1.00	0.333	1.00	ug/L		1					
1,2-Dichlorobenzene	U	1.00	0.333	1.00	ug/L		1					
1,2-Dichloroethane	U	1.00	0.333	1.00	ug/L		1					
1,2-Dichloropropane	U	1.00	0.333	1.00	ug/L		1					
1,4-Dichlorobenzene	U	1.00	0.333	1.00	ug/L		1					
2-Butanone	U	5.00	1.67	5.00	ug/L		1					
2-Hexanone	U	5.00	1.67	5.00	ug/L		1					
4-Methyl-2-pentanone	U	5.00	1.67	5.00	ug/L		1					
Acetone	U	5.00	1.74	5.00	ug/L		1					
Acrolein	U	5.00	1.67	5.00	ug/L		1					
Acrylonitrile	U	5.00	1.67	5.00	ug/L		1					
Benzene	U	1.00	0.333	1.00	ug/L		1					
Bromochloromethane	U	1.00	0.333	1.00	ug/L		1					
Bromodichloromethane	U	1.00	0.333	1.00	ug/L		1					
Bromoform	U	1.00	0.333	1.00	ug/L		1					
Bromomethane	U	1.00	0.337	1.00	ug/L		1					
Carbon disulfide	U	5.00	1.67	5.00	ug/L		1					
Carbon tetrachloride	U	1.00	0.333	1.00	ug/L		1					
Chlorobenzene	U	1.00	0.333	1.00	ug/L		1					
Chloroethane	U	1.00	0.333	1.00	ug/L		1					
Chloroform	U	1.00	0.333	1.00	ug/L		1					
Chloromethane	U	1.00	0.333	1.00	ug/L		1					
Dibromochloromethane	U	1.00	0.333	1.00	ug/L		1					
Dibromomethane	U	1.00	0.333	1.00	ug/L		1					
Ethylbenzene	U	1.00	0.333	1.00	ug/L		1					
Iodomethane	U	5.00	1.67	5.00	ug/L		1					

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Certificate of Analysis

Report Date: July 8, 2025

Company : Four Rivers Nuclear Partnership, LLC
Address : 5600 Hobbs Road

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: MW364UG3-25 Project: FRNP00607
Sample ID: 718400003 Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
8260D, Volatiles- full suite "As Received"												
Methylene chloride	U	5.00	0.500	5.00	ug/L		1					
Styrene	U	1.00	0.333	1.00	ug/L		1					
Tetrachloroethylene	U	1.00	0.333	1.00	ug/L		1					
Toluene	U	1.00	0.333	1.00	ug/L		1					
Trichloroethylene	J	0.900	0.333	1.00	ug/L		1					
Trichlorofluoromethane	U	1.00	0.333	1.00	ug/L		1					
Vinyl acetate	U	5.00	1.67	5.00	ug/L		1					
Vinyl chloride	U	1.00	0.333	1.00	ug/L		1					
Xylenes (total)	U	3.00	1.00	3.00	ug/L		1					
cis-1,2-Dichloroethylene	U	1.00	0.333	1.00	ug/L		1					
cis-1,3-Dichloropropylene	U	1.00	0.333	1.00	ug/L		1					
trans-1,2-Dichloroethylene	U	1.00	0.333	1.00	ug/L		1					
trans-1,3-Dichloropropylene	U	1.00	0.333	1.00	ug/L		1					
trans-1,4-Dichloro-2-butene	UY1	5.00	1.67	5.00	ug/L		1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3535A	SW3535A PCB SPE Extraction	KW3	05/01/25	0945	2789110
SW846 8011 PREP	8011 Prep	LOF	04/13/25	1332	2779647
SW846 9010C Distillation	SW846 9010C Prep	KLP1	04/16/25	1306	2781930
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	JM13	04/29/25	1120	2788801
SW846 3005A	ICP-MS 3005A PREP	HC1	05/02/25	0915	2780343

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Report Date: July 8, 2025

Company :	Four Rivers Nuclear Partnership, LLC
Address :	5600 Hobbs Road
	Kevil, Kentucky 42053
Contact:	Ms. Jaime Morrow
Project:	C-746-U Landfill Quarterly(UG25-03)

Client Sample ID:	MW364UG3-25	Project:	FRNP00607
Sample ID:	718400003	Client ID:	FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 8011	
2	SW846 8011	
3	SW846 9060A	
4	SW846 9012B	
5	SW846 9020B	
6	EPA 300.0	
7	SW846 9056A	
8	SW846 9056A	
9	SW846 7470A	
10	SW846 3005A/6020B	
11	SW846 3005A/6020B	
12	SW846 3005A/6020B	
13	SW846 3005A/6020B	
14	SW846 3535A/8082A	
15	EPA 160.1	
16	EPA 410.4	
17	SW846 8260D	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
1-Chloro-2-fluorobenzene	8011 VOA- 1,2-Dibromo-3-chloropropane "As Received"	6.43 ug/L	6.80	94	(56%-149%)
Decachlorobiphenyl	8082A, PCB Liquids "As Received"	0.194 ug/L	0.200	97	(30%-135%)
4cmx	8082A, PCB Liquids "As Received"	0.201 ug/L	0.200	100	(26%-108%)
Bromofluorobenzene	8260D, Volatiles- full suite "As Received"	53.2 ug/L	50.0	106	(85%-114%)
1,2-Dichloroethane-d4	8260D, Volatiles- full suite "As Received"	55.3 ug/L	50.0	111	(81%-118%)
Toluene-d8	8260D, Volatiles- full suite "As Received"	49.8 ug/L	50.0	100	(89%-112%)

Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: July 8, 2025

Company :	Four Rivers Nuclear Partnership, LLC
Address :	5600 Hobbs Road
	Kevil, Kentucky 42053
Contact:	Ms. Jaime Morrow
Project:	C-746-U Landfill Quarterly(UG25-03)

Client Sample ID:	MW364UG3-25	Project:	FRNP00607
Sample ID:	718400004	Client ID:	FRNP006
Matrix:	WG		
Collect Date:	09-APR-25 08:47		
Receive Date:	10-APR-25		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP-MS												
6020, Dissolved Metals (3 Elements) "As Received"												
Barium		0.0517	0.000670	0.00400	mg/L	1.00	1	BCD1	05/05/25	1757	2780347	1
Chromium	U	0.0100	0.00300	0.0100	mg/L	1.00	1					
Uranium	U	0.000200	0.0000670	0.000200	mg/L	1.00	1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 160	Laboratory Filtration	MM7	04/11/25	1240	2779955
SW846 3005A	ICP-MS 3005A PREP	HC1	05/02/25	0915	2780343

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 3005A/6020B	

Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Report Date: July 8, 2025

Company : Four Rivers Nuclear Partnership, LLC
Address : 5600 Hobbs Road

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID:	MW365UG3-25	Project:	FRNP00607
Sample ID:	718400005	Client ID:	FRNP006
Matrix:	WG		
Collect Date:	09-APR-25 09:32		
Receive Date:	10-APR-25		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
504.1/8011 Analysis of EDB/DBCP												
8011 VOA- 1,2-Dibromo-3-chloropropane "As Received"												
1,2-Dibromo-3-chloropropane	UY2	0.0188	0.00846	0.0188	ug/L	0.940	1	LOF	04/14/25	1021	2779649	1
Carbon Analysis												
9060A, Total Organic Carbon "As Received"												
Total Organic Carbon Average	J	1.22	0.330	2.00	mg/L		1	KB3	04/22/25	1959	2785590	3
Flow Injection Analysis												
9012B, Cyanide, Total "As Received"												
Cyanide, Total	UN1	0.200	0.00167	0.200	mg/L	1.00	1	KLP1	04/21/25	1133	2781931	4
Halogen Analysis												
9020B, TOX (Organic Halogen) "As Received"												
Total Organic Halogens		14.1	3.33	10.0	ug/L		1	RMJ	05/03/25	0300	2791180	5
Ion Chromatography												
300.0, Iodide in Liquid "As Received"												
Iodide	U	0.500	0.167	0.500	mg/L		1	CH6	04/24/25	1750	2786988	6
SW846 9056A Anions (5 elements) "As Received"												
Chloride	J	2.03	0.268	250	mg/L		4	RXB5	04/10/25	1519	2779607	7
Nitrate-N	J	1.05	0.132	10.0	mg/L		4					
Sulfate		50.9	0.532	1.60	mg/L		4					
Bromide	UW	0.200	0.0670	0.200	mg/L		1	RXB5	04/11/25	0137	2779607	8
Fluoride	J	0.330	0.0330	4.00	mg/L		1					
Mercury Analysis-CVAA												
7470, Mercury Liquid "As Received"												
Mercury	U	0.000200	0.0000670	0.000200	mg/L	1.00	1	JP2	04/30/25	1111	2788802	9
Metals Analysis-ICP-MS												
6020, Metals (15+ elements) "As Received"												
Aluminum	U	0.0500	0.0193	0.0500	mg/L	1.00	1	BCD1	05/05/25	1824	2780347	10
Antimony	U	0.00300	0.00100	0.00300	mg/L	1.00	1					
Arsenic	U	0.00500	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0765	0.000670	0.00400	mg/L	1.00	1					
Beryllium	U	0.000500	0.000200	0.000500	mg/L	1.00	1					
Cadmium	U	0.00100	0.000300	0.00100	mg/L	1.00	1					
Calcium		20.4	0.0800	0.200	mg/L	1.00	1					
Chromium	U	0.0100	0.00300	0.0100	mg/L	1.00	1					
Cobalt		0.00147	0.000300	0.00100	mg/L	1.00	1					

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Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: MW365UG3-25 Project: FRNP00607
Sample ID: 718400005 Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP-MS												
6020, Metals (15+ elements) "As Received"												
Copper		0.00255	0.000300	0.00200	mg/L	1.00	1					
Iron	U	0.100	0.0330	0.100	mg/L	1.00	1					
Lead	U	0.00200	0.000500	0.00200	mg/L	1.00	1					
Magnesium		9.40	0.0100	0.0300	mg/L	1.00	1					
Molybdenum	J	0.000273	0.000200	0.00100	mg/L	1.00	1					
Nickel		0.00488	0.000600	0.00200	mg/L	1.00	1					
Potassium	J	0.287	0.0800	0.300	mg/L	1.00	1					
Selenium	U	0.00500	0.00150	0.00500	mg/L	1.00	1					
Silver	U	0.00100	0.000300	0.00100	mg/L	1.00	1					
Thallium	U	0.00200	0.000600	0.00200	mg/L	1.00	1					
Uranium		0.000332	0.0000670	0.000200	mg/L	1.00	1					
Vanadium	U	0.0200	0.00330	0.0200	mg/L	1.00	1					
Rhodium	U	0.00500	0.00160	0.00500	mg/L	1.00	1	PRB	05/07/25	1802	2780347	11
Tantalum	U	0.00500	0.00100	0.00500	mg/L	1.00	1					
Manganese		0.0109	0.00100	0.00500	mg/L	1.00	1	PRB	05/07/25	2032	2780347	12
Zinc	J	0.00341	0.00330	0.0200	mg/L	1.00	1					
Sodium		57.6	0.400	1.25	mg/L	1.00	5	PRB	05/07/25	2035	2780347	13
Boron	J	0.00837	0.00520	0.0150	mg/L	1.00	1	PRB	05/08/25	1000	2780347	14
Semi-Volatiles-PCB												
8082A, PCB Liquids "As Received"												
Aroclor-1016	UY2	0.101	0.0336	0.101	ug/L	0.00101	1	YS1	05/05/25	2015	2791589	15
Aroclor-1221	U	0.101	0.0336	0.101	ug/L	0.00101	1					
Aroclor-1232	U	0.101	0.0336	0.101	ug/L	0.00101	1					
Aroclor-1242	J	0.0508	0.0336	0.101	ug/L	0.00101	1					
Aroclor-1248	U	0.101	0.0336	0.101	ug/L	0.00101	1					
Aroclor-1254	U	0.101	0.0336	0.101	ug/L	0.00101	1					
Aroclor-1260	UY1Y2	0.101	0.0336	0.101	ug/L	0.00101	1					
Aroclor-1268	U	0.101	0.0336	0.101	ug/L	0.00101	1					
Aroclor-Total	JY1Y2	0.0508	0.0336	0.101	ug/L	0.00101	1					
Solids Analysis												
160.1, Dissolved Solids "As Received"												
Total Dissolved Solids		242	2.38	10.0	mg/L			CH6	04/15/25	1206	2781742	16
Spectrometric Analysis												
410.4, Chem. Oxygen Demand "As Received"												

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Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: MW365UG3-25 Project: FRNP00607
Sample ID: 718400005 Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Spectrometric Analysis												
410.4, Chem. Oxygen Demand "As Received"												
COD	U	20.0	8.95	20.0	mg/L		1	HH2	04/22/25	1648	2781684	17
Volatile Organics												
8260D, Volatiles- full suite "As Received"												
1,1,1,2-Tetrachloroethane	U	1.00	0.333	1.00	ug/L		1	PXY1	04/16/25	1404	2782530	18
1,1,1-Trichloroethane	U	1.00	0.333	1.00	ug/L		1					
1,1,2,2-Tetrachloroethane	US	1.00	0.333	1.00	ug/L		1					
1,1,2-Trichloroethane	U	1.00	0.333	1.00	ug/L		1					
1,1-Dichloroethane	U	1.00	0.333	1.00	ug/L		1					
1,1-Dichloroethylene	U	1.00	0.333	1.00	ug/L		1					
1,2,3-Trichloropropane	US	1.00	0.333	1.00	ug/L		1					
1,2-Dibromoethane	U	1.00	0.333	1.00	ug/L		1					
1,2-Dichlorobenzene	US	1.00	0.333	1.00	ug/L		1					
1,2-Dichloroethane	U	1.00	0.333	1.00	ug/L		1					
1,2-Dichloropropane	U	1.00	0.333	1.00	ug/L		1					
1,4-Dichlorobenzene	US	1.00	0.333	1.00	ug/L		1					
2-Butanone	U	5.00	1.67	5.00	ug/L		1					
2-Hexanone	U	5.00	1.67	5.00	ug/L		1					
4-Methyl-2-pentanone	U	5.00	1.67	5.00	ug/L		1					
Acetone	U	5.00	1.74	5.00	ug/L		1					
Acrolein	U	5.00	1.67	5.00	ug/L		1					
Acrylonitrile	U	5.00	1.67	5.00	ug/L		1					
Benzene	U	1.00	0.333	1.00	ug/L		1					
Bromochloromethane	U	1.00	0.333	1.00	ug/L		1					
Bromodichloromethane	U	1.00	0.333	1.00	ug/L		1					
Bromoform	US	1.00	0.333	1.00	ug/L		1					
Bromomethane	U	1.00	0.337	1.00	ug/L		1					
Carbon disulfide	U	5.00	1.67	5.00	ug/L		1					
Carbon tetrachloride	U	1.00	0.333	1.00	ug/L		1					
Chlorobenzene	U	1.00	0.333	1.00	ug/L		1					
Chloroethane	U	1.00	0.333	1.00	ug/L		1					
Chloroform	U	1.00	0.333	1.00	ug/L		1					
Chloromethane	U	1.00	0.333	1.00	ug/L		1					
Dibromochloromethane	U	1.00	0.333	1.00	ug/L		1					
Dibromomethane	U	1.00	0.333	1.00	ug/L		1					
Ethylbenzene	U	1.00	0.333	1.00	ug/L		1					
Iodomethane	U	5.00	1.67	5.00	ug/L		1					

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Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: MW365UG3-25 Project: FRNP00607
Sample ID: 718400005 Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
8260D, Volatiles- full suite "As Received"												
Methylene chloride	U	5.00	0.500	5.00	ug/L		1					
Styrene	U	1.00	0.333	1.00	ug/L		1					
Tetrachloroethylene	U	1.00	0.333	1.00	ug/L		1					
Toluene	U	1.00	0.333	1.00	ug/L		1					
Trichloroethylene	U	1.00	0.333	1.00	ug/L		1					
Trichlorofluoromethane	U	1.00	0.333	1.00	ug/L		1					
Vinyl acetate	U	5.00	1.67	5.00	ug/L		1					
Vinyl chloride	U	1.00	0.333	1.00	ug/L		1					
Xylenes (total)	U	3.00	1.00	3.00	ug/L		1					
cis-1,2-Dichloroethylene	U	1.00	0.333	1.00	ug/L		1					
cis-1,3-Dichloropropylene	U	1.00	0.333	1.00	ug/L		1					
trans-1,2-Dichloroethylene	U	1.00	0.333	1.00	ug/L		1					
trans-1,3-Dichloropropylene	U	1.00	0.333	1.00	ug/L		1					
trans-1,4-Dichloro-2-butene	UY1S	5.00	1.67	5.00	ug/L		1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	HC1	05/02/25	0915	2780343
SW846 3535A	SW3535A PCB SPE Extraction	DXF4	05/05/25	0545	2791588
SW846 8011 PREP	8011 Prep	LOF	04/13/25	1332	2779647
SW846 9010C Distillation	SW846 9010C Prep	KLP1	04/16/25	1306	2781930
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	JM13	04/29/25	1120	2788801

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Certificate of Analysis

Report Date: July 8, 2025

Company :	Four Rivers Nuclear Partnership, LLC
Address :	5600 Hobbs Road
	Kevil, Kentucky 42053
Contact:	Ms. Jaime Morrow
Project:	C-746-U Landfill Quarterly(UG25-03)

Client Sample ID:	MW365UG3-25	Project:	FRNP00607
Sample ID:	718400005	Client ID:	FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 8011	
2	SW846 8011	
3	SW846 9060A	
4	SW846 9012B	
5	SW846 9020B	
6	EPA 300.0	
7	SW846 9056A	
8	SW846 9056A	
9	SW846 7470A	
10	SW846 3005A/6020B	
11	SW846 3005A/6020B	
12	SW846 3005A/6020B	
13	SW846 3005A/6020B	
14	SW846 3005A/6020B	
15	SW846 3535A/8082A	
16	EPA 160.1	
17	EPA 410.4	
18	SW846 8260D	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
1-Chloro-2-fluorobenzene	8011 VOA- 1,2-Dibromo-3-chloropropane "As Received"	6.07 ug/L	6.72	90	(56%-149%)
Decachlorobiphenyl	8082A, PCB Liquids "As Received"	0.176 ug/L	0.202	87	(30%-135%)
4cmx	8082A, PCB Liquids "As Received"	0.214 ug/L	0.202	106	(26%-108%)
Bromofluorobenzene	8260D, Volatiles- full suite "As Received"	57.8 ug/L	50.0	116*	(85%-114%)
1,2-Dichloroethane-d4	8260D, Volatiles- full suite "As Received"	55.5 ug/L	50.0	111	(81%-118%)
Toluene-d8	8260D, Volatiles- full suite "As Received"	50.7 ug/L	50.0	101	(89%-112%)

Notes:

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Company :	Four Rivers Nuclear Partnership, LLC
Address :	5600 Hobbs Road
	Kevil, Kentucky 42053
Contact:	Ms. Jaime Morrow
Project:	C-746-U Landfill Quarterly(UG25-03)

Client Sample ID:	MW365UG3-25	Project:	FRNP00607
Sample ID:	718400005	Client ID:	FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Report Date: July 8, 2025

Company :	Four Rivers Nuclear Partnership, LLC
Address :	5600 Hobbs Road
	Kevil, Kentucky 42053
Contact:	Ms. Jaime Morrow
Project:	C-746-U Landfill Quarterly(UG25-03)

Client Sample ID:	MW365UG3-25	Project:	FRNP00607
Sample ID:	718400006	Client ID:	FRNP006
Matrix:	WG		
Collect Date:	09-APR-25 09:32		
Receive Date:	10-APR-25		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP-MS												
6020, Dissolved Metals (3 Elements) "As Received"												
Barium		0.0769	0.000670	0.00400	mg/L	1.00	1	BCD1	05/05/25	1828	2780347	1
Chromium	U	0.0100	0.00300	0.0100	mg/L	1.00	1					
Uranium		0.000325	0.0000670	0.000200	mg/L	1.00	1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	HC1	05/02/25	0915	2780343
EPA 160	Laboratory Filtration	MM7	04/11/25	1240	2779955

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 3005A/6020B	

Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Report Date: July 8, 2025

Company : Four Rivers Nuclear Partnership, LLC
Address : 5600 Hobbs Road

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID:	MW366UG3-25	Project:	FRNP00607
Sample ID:	718400007	Client ID:	FRNP006
Matrix:	WG		
Collect Date:	09-APR-25 10:17		
Receive Date:	10-APR-25		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
504.1/8011 Analysis of EDB/DBCP												
8011 VOA- 1,2-Dibromo-3-chloropropane "As Received"												
1,2-Dibromo-3-chloropropane	UY2	0.0190	0.00854	0.0190	ug/L	0.949	1	LOF	04/14/25	1055	2779649	1
Carbon Analysis												
9060A, Total Organic Carbon "As Received"												
Total Organic Carbon Average	J	0.486	0.330	2.00	mg/L		1	KB3	04/22/25	2030	2785590	3
Flow Injection Analysis												
9012B, Cyanide, Total "As Received"												
Cyanide, Total	UN1	0.200	0.00167	0.200	mg/L	1.00	1	KLP1	04/21/25	1134	2781931	4
Halogen Analysis												
9020B, TOX (Organic Halogen) "As Received"												
Total Organic Halogens	J	9.40	3.33	10.0	ug/L		1	RMJ	05/03/25	0357	2791180	5
Ion Chromatography												
300.0, Iodide in Liquid "As Received"												
Iodide	U	0.500	0.167	0.500	mg/L		1	CH6	04/24/25	1803	2786988	6
SW846 9056A Anions (5 elements) "As Received"												
Chloride	J	42.0	0.335	250	mg/L		5	RXB5	04/10/25	1550	2779607	7
Nitrate-N	J	0.974	0.165	10.0	mg/L		5					
Sulfate		53.9	0.665	2.00	mg/L		5					
Bromide	W	0.576	0.0670	0.200	mg/L		1	RXB5	04/11/25	0208	2779607	8
Fluoride	J	0.161	0.0330	4.00	mg/L		1					
Mercury Analysis-CVAA												
7470, Mercury Liquid "As Received"												
Mercury	U	0.000200	0.0000670	0.000200	mg/L	1.00	1	JP2	04/30/25	1113	2788802	9
Metals Analysis-ICP-MS												
6020, Metals (15+ elements) "As Received"												
Aluminum	U	0.0500	0.0193	0.0500	mg/L	1.00	1	BCD1	05/05/25	1832	2780347	10
Antimony	U	0.00300	0.00100	0.00300	mg/L	1.00	1					
Arsenic	U	0.00500	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0959	0.000670	0.00400	mg/L	1.00	1					
Beryllium	U	0.000500	0.000200	0.000500	mg/L	1.00	1					
Cadmium	U	0.00100	0.000300	0.00100	mg/L	1.00	1					
Calcium		33.3	0.0800	0.200	mg/L	1.00	1					
Chromium	U	0.0100	0.00300	0.0100	mg/L	1.00	1					
Cobalt	U	0.00100	0.000300	0.00100	mg/L	1.00	1					

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Company : Four Rivers Nuclear Partnership, LLC
Address : 5600 Hobbs Road

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: MW366UG3-25 Project: FRNP00607
Sample ID: 718400007 Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP-MS												
6020, Metals (15+ elements) "As Received"												
Copper	J	0.000730	0.000300	0.00200	mg/L	1.00	1					
Iron	U	0.100	0.0330	0.100	mg/L	1.00	1					
Lead	U	0.00200	0.000500	0.00200	mg/L	1.00	1					
Magnesium		14.0	0.0100	0.0300	mg/L	1.00	1					
Molybdenum	U	0.00100	0.000200	0.00100	mg/L	1.00	1					
Nickel	J	0.000644	0.000600	0.00200	mg/L	1.00	1					
Potassium		2.10	0.0800	0.300	mg/L	1.00	1					
Selenium	J	0.00185	0.00150	0.00500	mg/L	1.00	1					
Silver	U	0.00100	0.000300	0.00100	mg/L	1.00	1					
Thallium	U	0.00200	0.000600	0.00200	mg/L	1.00	1					
Uranium	U	0.000200	0.0000670	0.000200	mg/L	1.00	1					
Vanadium	U	0.0200	0.00330	0.0200	mg/L	1.00	1					
Rhodium	U	0.00500	0.00160	0.00500	mg/L	1.00	1	PRB	05/07/25	1803	2780347	11
Tantalum	U	0.00500	0.00100	0.00500	mg/L	1.00	1					
Manganese	J	0.00339	0.00100	0.00500	mg/L	1.00	1	PRB	05/07/25	2038	2780347	12
Sodium		48.4	0.0800	0.250	mg/L	1.00	1					
Zinc	U	0.0200	0.00330	0.0200	mg/L	1.00	1					
Boron		0.109	0.00520	0.0150	mg/L	1.00	1	PRB	05/08/25	1001	2780347	13
Semi-Volatiles-PCB												
8082A, PCB Liquids "As Received"												
Aroclor-1016	UY2	0.103	0.0345	0.103	ug/L	0.00103	1	YS1	05/05/25	2027	2791589	14
Aroclor-1221	U	0.103	0.0345	0.103	ug/L	0.00103	1					
Aroclor-1232	U	0.103	0.0345	0.103	ug/L	0.00103	1					
Aroclor-1242	U	0.103	0.0345	0.103	ug/L	0.00103	1					
Aroclor-1248	U	0.103	0.0345	0.103	ug/L	0.00103	1					
Aroclor-1254	U	0.103	0.0345	0.103	ug/L	0.00103	1					
Aroclor-1260	UY1Y2	0.103	0.0345	0.103	ug/L	0.00103	1					
Aroclor-1268	U	0.103	0.0345	0.103	ug/L	0.00103	1					
Aroclor-Total	UY1Y2	0.103	0.0345	0.103	ug/L	0.00103	1					
Solids Analysis												
160.1, Dissolved Solids "As Received"												
Total Dissolved Solids		270	2.38	10.0	mg/L			CH6	04/15/25	1206	2781742	15
Spectrometric Analysis												
410.4, Chem. Oxygen Demand "As Received"												

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Company : Four Rivers Nuclear Partnership, LLC
Address : 5600 Hobbs Road

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: MW366UG3-25 Project: FRNP00607
Sample ID: 718400007 Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Spectrometric Analysis												
410.4, Chem. Oxygen Demand "As Received"												
COD	U	20.0	8.95	20.0	mg/L		1	HH2	04/22/25	1648	2781684	16
Volatile Organics												
8260D, Volatiles- full suite "As Received"												
1,1,1,2-Tetrachloroethane	U	1.00	0.333	1.00	ug/L		1	PXY1	04/16/25	1431	2782530	17
1,1,1-Trichloroethane	U	1.00	0.333	1.00	ug/L		1					
1,1,2,2-Tetrachloroethane	U	1.00	0.333	1.00	ug/L		1					
1,1,2-Trichloroethane	U	1.00	0.333	1.00	ug/L		1					
1,1-Dichloroethane	U	1.00	0.333	1.00	ug/L		1					
1,1-Dichloroethylene	U	1.00	0.333	1.00	ug/L		1					
1,2,3-Trichloropropane	U	1.00	0.333	1.00	ug/L		1					
1,2-Dibromoethane	U	1.00	0.333	1.00	ug/L		1					
1,2-Dichlorobenzene	U	1.00	0.333	1.00	ug/L		1					
1,2-Dichloroethane	U	1.00	0.333	1.00	ug/L		1					
1,2-Dichloropropane	U	1.00	0.333	1.00	ug/L		1					
1,4-Dichlorobenzene	U	1.00	0.333	1.00	ug/L		1					
2-Butanone	U	5.00	1.67	5.00	ug/L		1					
2-Hexanone	U	5.00	1.67	5.00	ug/L		1					
4-Methyl-2-pentanone	U	5.00	1.67	5.00	ug/L		1					
Acetone	U	5.00	1.74	5.00	ug/L		1					
Acrolein	U	5.00	1.67	5.00	ug/L		1					
Acrylonitrile	U	5.00	1.67	5.00	ug/L		1					
Benzene	U	1.00	0.333	1.00	ug/L		1					
Bromochloromethane	U	1.00	0.333	1.00	ug/L		1					
Bromodichloromethane	U	1.00	0.333	1.00	ug/L		1					
Bromoform	U	1.00	0.333	1.00	ug/L		1					
Bromomethane	U	1.00	0.337	1.00	ug/L		1					
Carbon disulfide	U	5.00	1.67	5.00	ug/L		1					
Carbon tetrachloride	U	1.00	0.333	1.00	ug/L		1					
Chlorobenzene	U	1.00	0.333	1.00	ug/L		1					
Chloroethane	U	1.00	0.333	1.00	ug/L		1					
Chloroform	U	1.00	0.333	1.00	ug/L		1					
Chloromethane	U	1.00	0.333	1.00	ug/L		1					
Dibromochloromethane	U	1.00	0.333	1.00	ug/L		1					
Dibromomethane	U	1.00	0.333	1.00	ug/L		1					
Ethylbenzene	U	1.00	0.333	1.00	ug/L		1					
Iodomethane	U	5.00	1.67	5.00	ug/L		1					

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Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: MW366UG3-25 Project: FRNP00607
Sample ID: 718400007 Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
8260D, Volatiles- full suite "As Received"												
Methylene chloride	U	5.00	0.500	5.00	ug/L		1					
Styrene	U	1.00	0.333	1.00	ug/L		1					
Tetrachloroethylene	U	1.00	0.333	1.00	ug/L		1					
Toluene	U	1.00	0.333	1.00	ug/L		1					
Trichloroethylene	J	0.390	0.333	1.00	ug/L		1					
Trichlorofluoromethane	U	1.00	0.333	1.00	ug/L		1					
Vinyl acetate	U	5.00	1.67	5.00	ug/L		1					
Vinyl chloride	U	1.00	0.333	1.00	ug/L		1					
Xylenes (total)	U	3.00	1.00	3.00	ug/L		1					
cis-1,2-Dichloroethylene	U	1.00	0.333	1.00	ug/L		1					
cis-1,3-Dichloropropylene	U	1.00	0.333	1.00	ug/L		1					
trans-1,2-Dichloroethylene	U	1.00	0.333	1.00	ug/L		1					
trans-1,3-Dichloropropylene	U	1.00	0.333	1.00	ug/L		1					
trans-1,4-Dichloro-2-butene	UY1	5.00	1.67	5.00	ug/L		1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3535A	SW3535A PCB SPE Extraction	DXF4	05/05/25	0545	2791588
SW846 9010C Distillation	SW846 9010C Prep	KLP1	04/16/25	1306	2781930
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	JM13	04/29/25	1120	2788801
SW846 3005A	ICP-MS 3005A PREP	HC1	05/02/25	0915	2780343
SW846 8011 PREP	8011 Prep	LOF	04/13/25	1332	2779647

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Company :	Four Rivers Nuclear Partnership, LLC
Address :	5600 Hobbs Road
	Kevil, Kentucky 42053
Contact:	Ms. Jaime Morrow
Project:	C-746-U Landfill Quarterly(UG25-03)

Client Sample ID:	MW366UG3-25	Project:	FRNP00607
Sample ID:	718400007	Client ID:	FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 8011	
2	SW846 8011	
3	SW846 9060A	
4	SW846 9012B	
5	SW846 9020B	
6	EPA 300.0	
7	SW846 9056A	
8	SW846 9056A	
9	SW846 7470A	
10	SW846 3005A/6020B	
11	SW846 3005A/6020B	
12	SW846 3005A/6020B	
13	SW846 3005A/6020B	
14	SW846 3535A/8082A	
15	EPA 160.1	
16	EPA 410.4	
17	SW846 8260D	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
1-Chloro-2-fluorobenzene	8011 VOA- 1,2-Dibromo-3-chloropropane "As Received"	6.37 ug/L	6.78	94	(56%-149%)
Decachlorobiphenyl	8082A, PCB Liquids "As Received"	0.168 ug/L	0.207	81	(30%-135%)
4cmx	8082A, PCB Liquids "As Received"	0.161 ug/L	0.207	78	(26%-108%)
Bromofluorobenzene	8260D, Volatiles- full suite "As Received"	53.8 ug/L	50.0	108	(85%-114%)
1,2-Dichloroethane-d4	8260D, Volatiles- full suite "As Received"	55.8 ug/L	50.0	112	(81%-118%)
Toluene-d8	8260D, Volatiles- full suite "As Received"	50.3 ug/L	50.0	101	(89%-112%)

Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Company :	Four Rivers Nuclear Partnership, LLC
Address :	5600 Hobbs Road
	Kevil, Kentucky 42053
Contact:	Ms. Jaime Morrow
Project:	C-746-U Landfill Quarterly(UG25-03)

Client Sample ID:	MW366UG3-25	Project:	FRNP00607
Sample ID:	718400008	Client ID:	FRNP006
Matrix:	WG		
Collect Date:	09-APR-25 10:17		
Receive Date:	10-APR-25		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP-MS												
6020, Dissolved Metals (3 Elements) "As Received"												
Barium		0.0942	0.000670	0.00400	mg/L	1.00	1	BCD1	05/05/25	1836	2780347	1
Chromium	U	0.0100	0.00300	0.0100	mg/L	1.00	1					
Uranium	U	0.000200	0.0000670	0.000200	mg/L	1.00	1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 160	Laboratory Filtration	MM7	04/11/25	1240	2779955
SW846 3005A	ICP-MS 3005A PREP	HC1	05/02/25	0915	2780343

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 3005A/6020B	

Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Company : Four Rivers Nuclear Partnership, LLC
Address : 5600 Hobbs Road

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID:	MW367UG3-25	Project:	FRNP00607
Sample ID:	718400009	Client ID:	FRNP006
Matrix:	WG		
Collect Date:	09-APR-25 12:04		
Receive Date:	10-APR-25		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
504.1/8011 Analysis of EDB/DBCP												
8011 VOA- 1,2-Dibromo-3-chloropropane "As Received"												
1,2-Dibromo-3-chloropropane	UY2	0.0190	0.00853	0.0190	ug/L	0.948	1	LOF	04/14/25	1129	2779649	1
Carbon Analysis												
9060A, Total Organic Carbon "As Received"												
Total Organic Carbon Average	J	0.487	0.330	2.00	mg/L		1	KB3	04/22/25	2102	2785590	3
Flow Injection Analysis												
9012B, Cyanide, Total "As Received"												
Cyanide, Total	UN1	0.200	0.00167	0.200	mg/L	1.00	1	KLP1	04/21/25	1141	2781931	4
Halogen Analysis												
9020B, TOX (Organic Halogen) "As Received"												
Total Organic Halogens	U	10.0	3.33	10.0	ug/L		1	RMJ	05/03/25	0522	2791180	5
Ion Chromatography												
300.0, Iodide in Liquid "As Received"												
Iodide	U	0.500	0.167	0.500	mg/L		1	CH6	04/24/25	1816	2786988	6
SW846 9056A Anions (5 elements) "As Received"												
Nitrate-N	J	0.383	0.0660	10.0	mg/L		2	RXB5	04/10/25	1621	2779607	7
Bromide	W	0.427	0.0670	0.200	mg/L		1	RXB5	04/11/25	0239	2779607	8
Fluoride	J	0.119	0.0330	4.00	mg/L		1					
Chloride	J	35.9	0.335	250	mg/L		5	RXB5	04/11/25	0309	2779607	9
Sulfate		48.5	0.665	2.00	mg/L		5					
Mercury Analysis-CVAA												
7470, Mercury Liquid "As Received"												
Mercury	U	0.000200	0.0000670	0.000200	mg/L	1.00	1	JP2	04/30/25	1114	2788802	10
Metals Analysis-ICP-MS												
6020, Metals (15+ elements) "As Received"												
Aluminum	U	0.0500	0.0193	0.0500	mg/L	1.00	1	BCD1	05/05/25	1840	2780347	11
Antimony	U	0.00300	0.00100	0.00300	mg/L	1.00	1					
Arsenic	U	0.00500	0.00200	0.00500	mg/L	1.00	1					
Barium		0.134	0.000670	0.00400	mg/L	1.00	1					
Beryllium	U	0.000500	0.000200	0.000500	mg/L	1.00	1					
Cadmium	U	0.00100	0.000300	0.00100	mg/L	1.00	1					
Calcium		28.7	0.0800	0.200	mg/L	1.00	1					
Chromium	U	0.0100	0.00300	0.0100	mg/L	1.00	1					
Cobalt	J	0.000474	0.000300	0.00100	mg/L	1.00	1					

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Certificate of Analysis

Report Date: July 8, 2025

Company : Four Rivers Nuclear Partnership, LLC
Address : 5600 Hobbs Road

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: MW367UG3-25 Project: FRNP00607
Sample ID: 718400009 Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP-MS												
6020, Metals (15+ elements) "As Received"												
Copper	J	0.00105	0.000300	0.00200	mg/L	1.00	1					
Iron		0.261	0.0330	0.100	mg/L	1.00	1					
Lead	U	0.00200	0.000500	0.00200	mg/L	1.00	1					
Magnesium		12.8	0.0100	0.0300	mg/L	1.00	1					
Molybdenum	U	0.00100	0.000200	0.00100	mg/L	1.00	1					
Nickel	J	0.000967	0.000600	0.00200	mg/L	1.00	1					
Potassium		3.05	0.0800	0.300	mg/L	1.00	1					
Selenium	U	0.00500	0.00150	0.00500	mg/L	1.00	1					
Silver	U	0.00100	0.000300	0.00100	mg/L	1.00	1					
Thallium	U	0.00200	0.000600	0.00200	mg/L	1.00	1					
Uranium	U	0.000200	0.0000670	0.000200	mg/L	1.00	1					
Vanadium	U	0.0200	0.00330	0.0200	mg/L	1.00	1					
Rhodium	U	0.00500	0.00160	0.00500	mg/L	1.00	1	PRB	05/07/25	1804	2780347	12
Tantalum	U	0.00500	0.00100	0.00500	mg/L	1.00	1					
Manganese		0.225	0.00100	0.00500	mg/L	1.00	1	PRB	05/07/25	2041	2780347	13
Sodium		37.2	0.0800	0.250	mg/L	1.00	1					
Zinc	J	0.00565	0.00330	0.0200	mg/L	1.00	1					
Boron		0.0599	0.00520	0.0150	mg/L	1.00	1	PRB	05/08/25	1002	2780347	14
Semi-Volatiles-PCB												
8082A, PCB Liquids "As Received"												
Aroclor-1016	UY2	0.104	0.0347	0.104	ug/L	0.00104	1	YS1	05/05/25	2039	2791589	15
Aroclor-1221	U	0.104	0.0347	0.104	ug/L	0.00104	1					
Aroclor-1232	U	0.104	0.0347	0.104	ug/L	0.00104	1					
Aroclor-1242	U	0.104	0.0347	0.104	ug/L	0.00104	1					
Aroclor-1248	U	0.104	0.0347	0.104	ug/L	0.00104	1					
Aroclor-1254	U	0.104	0.0347	0.104	ug/L	0.00104	1					
Aroclor-1260	UY1Y2	0.104	0.0347	0.104	ug/L	0.00104	1					
Aroclor-1268	U	0.104	0.0347	0.104	ug/L	0.00104	1					
Aroclor-Total	UY1Y2	0.104	0.0347	0.104	ug/L	0.00104	1					
Solids Analysis												
160.1, Dissolved Solids "As Received"												
Total Dissolved Solids		230	2.38	10.0	mg/L			CH6	04/15/25	1206	2781742	16
Spectrometric Analysis												
410.4, Chem. Oxygen Demand "As Received"												

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Company : Four Rivers Nuclear Partnership, LLC
Address : 5600 Hobbs Road

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: MW367UG3-25 Project: FRNP00607
Sample ID: 718400009 Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Spectrometric Analysis												
410.4, Chem. Oxygen Demand "As Received"												
COD	U	20.0	8.95	20.0	mg/L		1	HH2	04/22/25	1648	2781684	17
Volatile Organics												
8260D, Volatiles- full suite "As Received"												
1,1,1,2-Tetrachloroethane	U	1.00	0.333	1.00	ug/L		1	PXY1	04/16/25	1458	2782530	18
1,1,1-Trichloroethane	U	1.00	0.333	1.00	ug/L		1					
1,1,2,2-Tetrachloroethane	U	1.00	0.333	1.00	ug/L		1					
1,1,2-Trichloroethane	U	1.00	0.333	1.00	ug/L		1					
1,1-Dichloroethane	U	1.00	0.333	1.00	ug/L		1					
1,1-Dichloroethylene	U	1.00	0.333	1.00	ug/L		1					
1,2,3-Trichloropropane	U	1.00	0.333	1.00	ug/L		1					
1,2-Dibromoethane	U	1.00	0.333	1.00	ug/L		1					
1,2-Dichlorobenzene	U	1.00	0.333	1.00	ug/L		1					
1,2-Dichloroethane	U	1.00	0.333	1.00	ug/L		1					
1,2-Dichloropropane	U	1.00	0.333	1.00	ug/L		1					
1,4-Dichlorobenzene	U	1.00	0.333	1.00	ug/L		1					
2-Butanone	U	5.00	1.67	5.00	ug/L		1					
2-Hexanone	U	5.00	1.67	5.00	ug/L		1					
4-Methyl-2-pentanone	U	5.00	1.67	5.00	ug/L		1					
Acetone	U	5.00	1.74	5.00	ug/L		1					
Acrolein	U	5.00	1.67	5.00	ug/L		1					
Acrylonitrile	U	5.00	1.67	5.00	ug/L		1					
Benzene	U	1.00	0.333	1.00	ug/L		1					
Bromochloromethane	U	1.00	0.333	1.00	ug/L		1					
Bromodichloromethane	U	1.00	0.333	1.00	ug/L		1					
Bromoform	U	1.00	0.333	1.00	ug/L		1					
Bromomethane	U	1.00	0.337	1.00	ug/L		1					
Carbon disulfide	U	5.00	1.67	5.00	ug/L		1					
Carbon tetrachloride	U	1.00	0.333	1.00	ug/L		1					
Chlorobenzene	U	1.00	0.333	1.00	ug/L		1					
Chloroethane	U	1.00	0.333	1.00	ug/L		1					
Chloroform	U	1.00	0.333	1.00	ug/L		1					
Chloromethane	U	1.00	0.333	1.00	ug/L		1					
Dibromochloromethane	U	1.00	0.333	1.00	ug/L		1					
Dibromomethane	U	1.00	0.333	1.00	ug/L		1					
Ethylbenzene	U	1.00	0.333	1.00	ug/L		1					
Iodomethane	U	5.00	1.67	5.00	ug/L		1					

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Address : 5600 Hobbs Road

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: MW367UG3-25 Project: FRNP00607
Sample ID: 718400009 Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
8260D, Volatiles- full suite "As Received"												
Methylene chloride	U	5.00	0.500	5.00	ug/L		1					
Styrene	U	1.00	0.333	1.00	ug/L		1					
Tetrachloroethylene	U	1.00	0.333	1.00	ug/L		1					
Toluene	U	1.00	0.333	1.00	ug/L		1					
Trichloroethylene		3.39	0.333	1.00	ug/L		1					
Trichlorofluoromethane	U	1.00	0.333	1.00	ug/L		1					
Vinyl acetate	U	5.00	1.67	5.00	ug/L		1					
Vinyl chloride	U	1.00	0.333	1.00	ug/L		1					
Xylenes (total)	U	3.00	1.00	3.00	ug/L		1					
cis-1,2-Dichloroethylene	U	1.00	0.333	1.00	ug/L		1					
cis-1,3-Dichloropropylene	U	1.00	0.333	1.00	ug/L		1					
trans-1,2-Dichloroethylene	U	1.00	0.333	1.00	ug/L		1					
trans-1,3-Dichloropropylene	U	1.00	0.333	1.00	ug/L		1					
trans-1,4-Dichloro-2-butene	UY1	5.00	1.67	5.00	ug/L		1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	HC1	05/02/25	0915	2780343
SW846 8011 PREP	8011 Prep	LOF	04/13/25	1332	2779647
SW846 9010C Distillation	SW846 9010C Prep	KLP1	04/16/25	1306	2781930
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	JM13	04/29/25	1120	2788801
SW846 3535A	SW3535A PCB SPE Extraction	DXF4	05/05/25	0545	2791588

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	Kevil, Kentucky 42053
Contact:	Ms. Jaime Morrow
Project:	C-746-U Landfill Quarterly(UG25-03)

Client Sample ID:	MW367UG3-25	Project:	FRNP00607
Sample ID:	718400009	Client ID:	FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 8011	
2	SW846 8011	
3	SW846 9060A	
4	SW846 9012B	
5	SW846 9020B	
6	EPA 300.0	
7	SW846 9056A	
8	SW846 9056A	
9	SW846 9056A	
10	SW846 7470A	
11	SW846 3005A/6020B	
12	SW846 3005A/6020B	
13	SW846 3005A/6020B	
14	SW846 3005A/6020B	
15	SW846 3535A/8082A	
16	EPA 160.1	
17	EPA 410.4	
18	SW846 8260D	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
1-Chloro-2-fluorobenzene	8011 VOA- 1,2-Dibromo-3-chloropropane "As Received"	5.83 ug/L	6.77	86	(56%-149%)
Decachlorobiphenyl	8082A, PCB Liquids "As Received"	0.212 ug/L	0.208	102	(30%-135%)
4cmx	8082A, PCB Liquids "As Received"	0.208 ug/L	0.208	100	(26%-108%)
Bromofluorobenzene	8260D, Volatiles- full suite "As Received"	54.8 ug/L	50.0	110	(85%-114%)
1,2-Dichloroethane-d4	8260D, Volatiles- full suite "As Received"	54.7 ug/L	50.0	109	(81%-118%)
Toluene-d8	8260D, Volatiles- full suite "As Received"	51.1 ug/L	50.0	102	(89%-112%)

Notes:

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Company :	Four Rivers Nuclear Partnership, LLC
Address :	5600 Hobbs Road
	Kevil, Kentucky 42053
Contact:	Ms. Jaime Morrow
Project:	C-746-U Landfill Quarterly(UG25-03)

Client Sample ID:	MW367UG3-25	Project:	FRNP00607
Sample ID:	718400009	Client ID:	FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: July 8, 2025

Company :	Four Rivers Nuclear Partnership, LLC
Address :	5600 Hobbs Road
	Kevil, Kentucky 42053
Contact:	Ms. Jaime Morrow
Project:	C-746-U Landfill Quarterly(UG25-03)

Client Sample ID:	MW367UG3-25	Project:	FRNP00607
Sample ID:	718400010	Client ID:	FRNP006
Matrix:	WG		
Collect Date:	09-APR-25 12:04		
Receive Date:	10-APR-25		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP-MS												
6020, Dissolved Metals (3 Elements) "As Received"												
Barium		0.141	0.000670	0.00400	mg/L	1.00	1	BCD1	05/05/25	1843	2780347	1
Chromium	U	0.0100	0.00300	0.0100	mg/L	1.00	1					
Uranium	U	0.000200	0.0000670	0.000200	mg/L	1.00	1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 160	Laboratory Filtration	MM7	04/11/25	1240	2779955
SW846 3005A	ICP-MS 3005A PREP	HC1	05/02/25	0915	2780343

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 3005A/6020B	

Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Company : Four Rivers Nuclear Partnership, LLC
Address : 5600 Hobbs Road

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID:	MW368UG3-25	Project:	FRNP00607
Sample ID:	718400011	Client ID:	FRNP006
Matrix:	WG		
Collect Date:	09-APR-25 12:46		
Receive Date:	10-APR-25		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
504.1/8011 Analysis of EDB/DBCP												
8011 VOA- 1,2-Dibromo-3-chloropropane "As Received"												
1,2-Dibromo-3-chloropropane	UY2	0.0189	0.00851	0.0189	ug/L	0.945	1	LOF	04/14/25	1228	2779649	1
Carbon Analysis												
9060A, Total Organic Carbon "As Received"												
Total Organic Carbon Average	J	0.767	0.330	2.00	mg/L		1	KB3	04/22/25	2133	2785590	3
Flow Injection Analysis												
9012B, Cyanide, Total "As Received"												
Cyanide, Total	UN1	0.200	0.00167	0.200	mg/L	1.00	1	KLP1	04/21/25	1142	2781931	4
Halogen Analysis												
9020B, TOX (Organic Halogen) "As Received"												
Total Organic Halogens	U	10.0	3.33	10.0	ug/L		1	RMJ	05/03/25	0614	2791180	5
Ion Chromatography												
300.0, Iodide in Liquid "As Received"												
Iodide	U	0.500	0.167	0.500	mg/L		1	CH6	04/24/25	1855	2786988	6
SW846 9056A Anions (5 elements) "As Received"												
Sulfate		40.4	1.33	4.00	mg/L		10	RXB5	04/10/25	1652	2779607	7
Bromide	UW	0.200	0.0670	0.200	mg/L		1	RXB5	04/10/25	2130	2779607	8
Chloride	J	1.02	0.0670	250	mg/L		1					
Fluoride	J	0.208	0.0330	4.00	mg/L		1					
Nitrate-N	U	10.0	0.0330	10.0	mg/L		1					
Mercury Analysis-CVAA												
7470, Mercury Liquid "As Received"												
Mercury	U	0.000200	0.0000670	0.000200	mg/L	1.00	1	JP2	04/30/25	1116	2788802	9
Metals Analysis-ICP-MS												
6020, Metals (15+ elements) "As Received"												
Aluminum	J	0.0299	0.0193	0.0500	mg/L	1.00	1	BCD1	05/05/25	1847	2780347	10
Antimony	U	0.00300	0.00100	0.00300	mg/L	1.00	1					
Arsenic	J	0.00220	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0435	0.000670	0.00400	mg/L	1.00	1					
Beryllium	U	0.000500	0.000200	0.000500	mg/L	1.00	1					
Cadmium	U	0.00100	0.000300	0.00100	mg/L	1.00	1					
Calcium		43.5	0.0800	0.200	mg/L	1.00	1					
Chromium	U	0.0100	0.00300	0.0100	mg/L	1.00	1					
Cobalt	U	0.00100	0.000300	0.00100	mg/L	1.00	1					

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Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: MW368UG3-25 Project: FRNP00607
Sample ID: 718400011 Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP-MS												
6020, Metals (15+ elements) "As Received"												
Copper	J	0.000488	0.000300	0.00200	mg/L	1.00	1					
Iron	U	0.100	0.0330	0.100	mg/L	1.00	1					
Lead	U	0.00200	0.000500	0.00200	mg/L	1.00	1					
Magnesium		9.46	0.0100	0.0300	mg/L	1.00	1					
Molybdenum	J	0.000462	0.000200	0.00100	mg/L	1.00	1					
Nickel	U	0.00200	0.000600	0.00200	mg/L	1.00	1					
Potassium	J	0.209	0.0800	0.300	mg/L	1.00	1					
Selenium	U	0.00500	0.00150	0.00500	mg/L	1.00	1					
Silver	U	0.00100	0.000300	0.00100	mg/L	1.00	1					
Thallium	U	0.00200	0.000600	0.00200	mg/L	1.00	1					
Uranium		0.000219	0.0000670	0.000200	mg/L	1.00	1					
Vanadium	J	0.00331	0.00330	0.0200	mg/L	1.00	1					
Rhodium	U	0.00500	0.00160	0.00500	mg/L	1.00	1	PRB	05/07/25	1805	2780347	11
Tantalum	U	0.00500	0.00100	0.00500	mg/L	1.00	1					
Manganese	J	0.00179	0.00100	0.00500	mg/L	1.00	1	PRB	05/07/25	2044	2780347	12
Sodium		29.7	0.0800	0.250	mg/L	1.00	1					
Zinc	U	0.0200	0.00330	0.0200	mg/L	1.00	1					
Boron	U	0.0150	0.00520	0.0150	mg/L	1.00	1	PRB	05/08/25	1003	2780347	13
Semi-Volatiles-PCB												
8082A, PCB Liquids "As Received"												
Aroclor-1016	UY2	0.0985	0.0328	0.0985	ug/L	0.000985	1	YS1	05/05/25	2051	2791589	14
Aroclor-1221	U	0.0985	0.0328	0.0985	ug/L	0.000985	1					
Aroclor-1232	U	0.0985	0.0328	0.0985	ug/L	0.000985	1					
Aroclor-1242	U	0.0985	0.0328	0.0985	ug/L	0.000985	1					
Aroclor-1248	U	0.0985	0.0328	0.0985	ug/L	0.000985	1					
Aroclor-1254	U	0.0985	0.0328	0.0985	ug/L	0.000985	1					
Aroclor-1260	UY1Y2	0.0985	0.0328	0.0985	ug/L	0.000985	1					
Aroclor-1268	U	0.0985	0.0328	0.0985	ug/L	0.000985	1					
Aroclor-Total	UY1Y2	0.0985	0.0328	0.0985	ug/L	0.000985	1					
Solids Analysis												
160.1, Dissolved Solids "As Received"												
Total Dissolved Solids		235	2.38	10.0	mg/L			CH6	04/15/25	1206	2781742	15
Spectrometric Analysis												
410.4, Chem. Oxygen Demand "As Received"												

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Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: MW368UG3-25 Project: FRNP00607
Sample ID: 718400011 Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Spectrometric Analysis												
410.4, Chem. Oxygen Demand "As Received"												
COD		34.5	8.95	20.0	mg/L		1	HH2	04/22/25	1648	2781684	16
Volatile Organics												
8260D, Volatiles- full suite "As Received"												
1,1,1,2-Tetrachloroethane	U	1.00	0.333	1.00	ug/L		1	PXY1	04/16/25	1524	2782530	17
1,1,1-Trichloroethane	U	1.00	0.333	1.00	ug/L		1					
1,1,2,2-Tetrachloroethane	U	1.00	0.333	1.00	ug/L		1					
1,1,2-Trichloroethane	U	1.00	0.333	1.00	ug/L		1					
1,1-Dichloroethane	U	1.00	0.333	1.00	ug/L		1					
1,1-Dichloroethylene	U	1.00	0.333	1.00	ug/L		1					
1,2,3-Trichloropropane	U	1.00	0.333	1.00	ug/L		1					
1,2-Dibromoethane	U	1.00	0.333	1.00	ug/L		1					
1,2-Dichlorobenzene	U	1.00	0.333	1.00	ug/L		1					
1,2-Dichloroethane	U	1.00	0.333	1.00	ug/L		1					
1,2-Dichloropropane	U	1.00	0.333	1.00	ug/L		1					
1,4-Dichlorobenzene	U	1.00	0.333	1.00	ug/L		1					
2-Butanone	U	5.00	1.67	5.00	ug/L		1					
2-Hexanone	U	5.00	1.67	5.00	ug/L		1					
4-Methyl-2-pentanone	U	5.00	1.67	5.00	ug/L		1					
Acetone	U	5.00	1.74	5.00	ug/L		1					
Acrolein	U	5.00	1.67	5.00	ug/L		1					
Acrylonitrile	U	5.00	1.67	5.00	ug/L		1					
Benzene	U	1.00	0.333	1.00	ug/L		1					
Bromochloromethane	U	1.00	0.333	1.00	ug/L		1					
Bromodichloromethane	U	1.00	0.333	1.00	ug/L		1					
Bromoform	U	1.00	0.333	1.00	ug/L		1					
Bromomethane	U	1.00	0.337	1.00	ug/L		1					
Carbon disulfide	U	5.00	1.67	5.00	ug/L		1					
Carbon tetrachloride	U	1.00	0.333	1.00	ug/L		1					
Chlorobenzene	U	1.00	0.333	1.00	ug/L		1					
Chloroethane	U	1.00	0.333	1.00	ug/L		1					
Chloroform	U	1.00	0.333	1.00	ug/L		1					
Chloromethane	U	1.00	0.333	1.00	ug/L		1					
Dibromochloromethane	U	1.00	0.333	1.00	ug/L		1					
Dibromomethane	U	1.00	0.333	1.00	ug/L		1					
Ethylbenzene	U	1.00	0.333	1.00	ug/L		1					
Iodomethane	U	5.00	1.67	5.00	ug/L		1					

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Report Date: July 8, 2025

Company : Four Rivers Nuclear Partnership, LLC
Address : 5600 Hobbs Road

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: MW368UG3-25 Project: FRNP00607
Sample ID: 718400011 Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
8260D, Volatiles- full suite "As Received"												
Methylene chloride	U	5.00	0.500	5.00	ug/L		1					
Styrene	U	1.00	0.333	1.00	ug/L		1					
Tetrachloroethylene	U	1.00	0.333	1.00	ug/L		1					
Toluene	U	1.00	0.333	1.00	ug/L		1					
Trichloroethylene	U	1.00	0.333	1.00	ug/L		1					
Trichlorofluoromethane	U	1.00	0.333	1.00	ug/L		1					
Vinyl acetate	U	5.00	1.67	5.00	ug/L		1					
Vinyl chloride	U	1.00	0.333	1.00	ug/L		1					
Xylenes (total)	U	3.00	1.00	3.00	ug/L		1					
cis-1,2-Dichloroethylene	U	1.00	0.333	1.00	ug/L		1					
cis-1,3-Dichloropropylene	U	1.00	0.333	1.00	ug/L		1					
trans-1,2-Dichloroethylene	U	1.00	0.333	1.00	ug/L		1					
trans-1,3-Dichloropropylene	U	1.00	0.333	1.00	ug/L		1					
trans-1,4-Dichloro-2-butene	UY1	5.00	1.67	5.00	ug/L		1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	HC1	05/02/25	0915	2780343
SW846 9010C Distillation	SW846 9010C Prep	KLP1	04/16/25	1306	2781930
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	JM13	04/29/25	1120	2788801
SW846 3535A	SW3535A PCB SPE Extraction	DXF4	05/05/25	0545	2791588
SW846 8011 PREP	8011 Prep	LOF	04/13/25	1332	2779647

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Company :	Four Rivers Nuclear Partnership, LLC
Address :	5600 Hobbs Road
	Kevil, Kentucky 42053
Contact:	Ms. Jaime Morrow
Project:	C-746-U Landfill Quarterly(UG25-03)

Client Sample ID:	MW368UG3-25	Project:	FRNP00607
Sample ID:	718400011	Client ID:	FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 8011	
2	SW846 8011	
3	SW846 9060A	
4	SW846 9012B	
5	SW846 9020B	
6	EPA 300.0	
7	SW846 9056A	
8	SW846 9056A	
9	SW846 7470A	
10	SW846 3005A/6020B	
11	SW846 3005A/6020B	
12	SW846 3005A/6020B	
13	SW846 3005A/6020B	
14	SW846 3535A/8082A	
15	EPA 160.1	
16	EPA 410.4	
17	SW846 8260D	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
1-Chloro-2-fluorobenzene	8011 VOA- 1,2-Dibromo-3-chloropropane "As Received"	6.40 ug/L	6.75	95	(56%-149%)
Decachlorobiphenyl	8082A, PCB Liquids "As Received"	0.166 ug/L	0.197	84	(30%-135%)
4cmx	8082A, PCB Liquids "As Received"	0.159 ug/L	0.197	81	(26%-108%)
Bromofluorobenzene	8260D, Volatiles- full suite "As Received"	52.3 ug/L	50.0	105	(85%-114%)
1,2-Dichloroethane-d4	8260D, Volatiles- full suite "As Received"	54.7 ug/L	50.0	109	(81%-118%)
Toluene-d8	8260D, Volatiles- full suite "As Received"	50.8 ug/L	50.0	102	(89%-112%)

Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: July 8, 2025

Company :	Four Rivers Nuclear Partnership, LLC
Address :	5600 Hobbs Road
	Kevil, Kentucky 42053
Contact:	Ms. Jaime Morrow
Project:	C-746-U Landfill Quarterly(UG25-03)

Client Sample ID:	MW368UG3-25	Project:	FRNP00607
Sample ID:	718400012	Client ID:	FRNP006
Matrix:	WG		
Collect Date:	09-APR-25 12:46		
Receive Date:	10-APR-25		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP-MS												
6020, Dissolved Metals (3 Elements) "As Received"												
Barium		0.0433	0.000670	0.00400	mg/L	1.00	1	BCD1	05/05/25	1851	2780347	1
Chromium	U	0.0100	0.00300	0.0100	mg/L	1.00	1					
Uranium		0.000207	0.0000670	0.000200	mg/L	1.00	1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	HC1	05/02/25	0915	2780343
EPA 160	Laboratory Filtration	MM7	04/11/25	1240	2779955

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 3005A/6020B	

Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: July 8, 2025

Company : Four Rivers Nuclear Partnership, LLC
Address : 5600 Hobbs Road

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: TB2UG3-25
Sample ID: 718400013
Matrix: WATER
Collect Date: 09-APR-25 06:50
Receive Date: 10-APR-25
Collector: Client

Project: FRNP00607
Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
504.1/8011 Analysis of EDB/DBCP												
8011 VOA- 1,2-Dibromo-3-chloropropane "As Received"												
1,2-Dibromo-3-chloropropane	UY2	0.0190	0.00856	0.0190	ug/L	0.951	1	LOF	04/14/25	1254	2779649	1
Volatile Organics												
8260D, Volatiles- full suite "As Received"												
1,1,1,2-Tetrachloroethane	U	1.00	0.333	1.00	ug/L		1	PXY1	04/16/25	1551	2782530	3
1,1,1-Trichloroethane	U	1.00	0.333	1.00	ug/L		1					
1,1,2,2-Tetrachloroethane	U	1.00	0.333	1.00	ug/L		1					
1,1,2-Trichloroethane	U	1.00	0.333	1.00	ug/L		1					
1,1-Dichloroethane	U	1.00	0.333	1.00	ug/L		1					
1,1-Dichloroethylene	U	1.00	0.333	1.00	ug/L		1					
1,2,3-Trichloropropane	U	1.00	0.333	1.00	ug/L		1					
1,2-Dibromoethane	U	1.00	0.333	1.00	ug/L		1					
1,2-Dichlorobenzene	U	1.00	0.333	1.00	ug/L		1					
1,2-Dichloroethane	U	1.00	0.333	1.00	ug/L		1					
1,2-Dichloropropane	U	1.00	0.333	1.00	ug/L		1					
1,4-Dichlorobenzene	U	1.00	0.333	1.00	ug/L		1					
2-Butanone	U	5.00	1.67	5.00	ug/L		1					
2-Hexanone	U	5.00	1.67	5.00	ug/L		1					
4-Methyl-2-pentanone	U	5.00	1.67	5.00	ug/L		1					
Acetone	U	5.00	1.74	5.00	ug/L		1					
Acrolein	U	5.00	1.67	5.00	ug/L		1					
Acrylonitrile	U	5.00	1.67	5.00	ug/L		1					
Benzene	U	1.00	0.333	1.00	ug/L		1					
Bromochloromethane	U	1.00	0.333	1.00	ug/L		1					
Bromodichloromethane	U	1.00	0.333	1.00	ug/L		1					
Bromoform	U	1.00	0.333	1.00	ug/L		1					
Bromomethane	U	1.00	0.337	1.00	ug/L		1					
Carbon disulfide	U	5.00	1.67	5.00	ug/L		1					
Carbon tetrachloride	U	1.00	0.333	1.00	ug/L		1					
Chlorobenzene		3.27	0.333	1.00	ug/L		1					
Chloroethane	U	1.00	0.333	1.00	ug/L		1					
Chloroform	U	1.00	0.333	1.00	ug/L		1					
Chloromethane	U	1.00	0.333	1.00	ug/L		1					
Dibromochloromethane	U	1.00	0.333	1.00	ug/L		1					
Dibromomethane	U	1.00	0.333	1.00	ug/L		1					
Ethylbenzene	U	1.00	0.333	1.00	ug/L		1					
Iodomethane	U	5.00	1.67	5.00	ug/L		1					

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Certificate of Analysis

Report Date: July 8, 2025

Company : Four Rivers Nuclear Partnership, LLC
Address : 5600 Hobbs Road

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: TB2UG3-25 Project: FRNP00607
Sample ID: 718400013 Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
8260D, Volatiles- full suite "As Received"												
Methylene chloride	U	5.00	0.500	5.00	ug/L		1					
Styrene	U	1.00	0.333	1.00	ug/L		1					
Tetrachloroethylene	U	1.00	0.333	1.00	ug/L		1					
Toluene	U	1.00	0.333	1.00	ug/L		1					
Trichloroethylene	U	1.00	0.333	1.00	ug/L		1					
Trichlorofluoromethane	U	1.00	0.333	1.00	ug/L		1					
Vinyl acetate	U	5.00	1.67	5.00	ug/L		1					
Vinyl chloride	U	1.00	0.333	1.00	ug/L		1					
Xylenes (total)	U	3.00	1.00	3.00	ug/L		1					
cis-1,2-Dichloroethylene	U	1.00	0.333	1.00	ug/L		1					
cis-1,3-Dichloropropylene	U	1.00	0.333	1.00	ug/L		1					
trans-1,2-Dichloroethylene	U	1.00	0.333	1.00	ug/L		1					
trans-1,3-Dichloropropylene	U	1.00	0.333	1.00	ug/L		1					
trans-1,4-Dichloro-2-butene	UY1	5.00	1.67	5.00	ug/L		1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 8011 PREP	8011 Prep	LOF	04/13/25	1332	2779647

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 8011	
2	SW846 8011	
3	SW846 8260D	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
1-Chloro-2-fluorobenzene	8011 VOA- 1,2-Dibromo-3-chloropropane "As Received"	7.02 ug/L	6.79	103	(56%-149%)
Bromofluorobenzene	8260D, Volatiles- full suite "As Received"	57.1 ug/L	50.0	114	(85%-114%)
1,2-Dichloroethane-d4	8260D, Volatiles- full suite "As Received"	55.0 ug/L	50.0	110	(81%-118%)
Toluene-d8	8260D, Volatiles- full suite "As Received"	50.8 ug/L	50.0	102	(89%-112%)

Notes:

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Certificate of Analysis

Report Date: July 8, 2025

Company :	Four Rivers Nuclear Partnership, LLC
Address :	5600 Hobbs Road
	Kevil, Kentucky 42053
Contact:	Ms. Jaime Morrow
Project:	C-746-U Landfill Quarterly(UG25-03)

Client Sample ID:	TB2UG3-25	Project:	FRNP00607
Sample ID:	718400013	Client ID:	FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Certificate of Analysis

Company : Four Rivers Nuclear Partnership, LLC
Address : 5600 Hobbs Road

Kevil, Kentucky 42053

Report Date: July 8, 2025

Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: MW369UG3-25
Sample ID: 718665001
Matrix: WG
Collect Date: 10-APR-25
Receive Date: 11-APR-25
Collector: Client

Project: FRNP00607
Client ID: FRNP006

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis														
AN-1418 AlphaSpec Ra226, Liquid "As Received"														
Radium-226	U	0.209	+/-0.832	1.45	+/-0.833	5.00	pCi/L			CM4	04/29/25	1603	2784556	1
Th-01-RC M, Th Isotopes, Liquid "As Received"														
Thorium-230	U	0.576	+/-1.79	3.32	+/-1.80	50.0	pCi/L			RM3	04/26/25	1214	2784557	2
Thorium-232	U	-0.152	+/-0.929	2.28	+/-0.931		pCi/L							
Rad Gas Flow Proportional Counting														
904.0Mod, Ra228, Liquid "As Received"														
Radium-228	U	0.382	+/-2.50	4.68	+/-2.50	4.99	pCi/L			JE1	04/23/25	1121	2780419	3
905.0Mod, Sr90, liquid "As Received"														
Strontium-90	U	0.924	+/-1.52	2.65	+/-1.53	8.00	pCi/L			CH7	04/27/25	1715	2780411	4
9310, Alpha/Beta Activity, liquid "As Received"														
Alpha	U	-1.35	+/-2.70	7.30	+/-2.70	15.0	pCi/L			HH3	04/30/25	1508	2780428	5
Beta		24.9	+/-8.16	10.6	+/-9.15	50.0	pCi/L							
Rad Liquid Scintillation Analysis														
906.0M, Tritium Dist, Liquid "As Received"														
Tritium	U	-25.7	+/-130	234	+/-130	300	pCi/L			MJ3	05/07/25	1755	2790936	6
Tc-02-RC-MOD, Tc99, Liquid "As Received"														
Technetium-99		29.6	+/-13.0	20.3	+/-13.4	25.0	pCi/L			GS3	05/04/25	1728	2786732	7

The following Analytical Methods were performed

Method	Description
1	Eichrom Industries, AN-1418
2	DOE EML HASL-300, Th-01-RC Modified
3	EPA 904.0/SW846 9320 Modified
4	EPA 905.0 Modified/DOE RP501 Rev. 1 Modified
5	EPA 900.0/SW846 9310
6	EPA 906.0 Modified
7	DOE EML HASL-300, Tc-02-RC Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	AN-1418 AlphaSpec Ra226, Liquid "As Received"	2784556	96.5	(30%-110%)
Thorium-229 Tracer	Th-01-RC M, Th Isotopes, Liquid "As Received"	2784557	80.5	(30%-110%)
Barium-133 Tracer	904.0Mod, Ra228, Liquid "As Received"	2780419	79.6	(30%-110%)
Strontium Carrier	905.0Mod, Sr90, liquid "As Received"	2780411	81.8	(30%-110%)
Technetium-99m Tracer	Tc-02-RC-MOD, Tc99, Liquid "As Received"	2786732	100	(30%-110%)

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Report Date: July 8, 2025

Contact: Ms. Jaime Morrow

Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: MW369UG3-25
Sample ID: 718665001

Project: FRNP00607
Client ID: FRNP006

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Surrogate/Tracer Recovery		**Test**						**Batch ID**		**Recovery%**		**Acceptable Limits**		

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor
DL: Detection Limit
Lc/LC: Critical Level
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

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Certificate of Analysis

Company : Four Rivers Nuclear Partnership, LLC
Address : 5600 Hobbs Road

Kevil, Kentucky 42053

Report Date: July 8, 2025

Contact: Ms. Jaime Morrow

Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: MW370UG3-25
Sample ID: 718665003
Matrix: WG
Collect Date: 10-APR-25
Receive Date: 11-APR-25
Collector: Client

Project: FRNP00607
Client ID: FRNP006

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis														
AN-1418 AlphaSpec Ra226, Liquid "As Received"														
Radium-226	U	0.858	+/-1.17	1.24	+/-1.17	5.00	pCi/L			CM4	04/29/25	1603	2784556	1
Th-01-RC M, Th Isotopes, Liquid "As Received"														
Thorium-230	U	0.837	+/-1.78	3.07	+/-1.80	50.0	pCi/L			RM3	04/26/25	1214	2784557	2
Thorium-232	U	-0.141	+/-0.831	2.05	+/-0.833		pCi/L							
Rad Gas Flow Proportional Counting														
904.0Mod, Ra228, Liquid "As Received"														
Radium-228	U	0.0600	+/-2.75	4.99	+/-2.75	4.99	pCi/L			JE1	04/23/25	1123	2780419	3
905.0Mod, Sr90, liquid "As Received"														
Strontium-90	U	-1.16	+/-1.31	2.72	+/-1.31	8.00	pCi/L			CH7	04/27/25	1715	2780411	4
9310, Alpha/Beta Activity, liquid "As Received"														
Alpha	U	4.35	+/-5.62	9.55	+/-5.67	15.0	pCi/L			HH3	04/30/25	1508	2780428	5
Beta	U	9.18	+/-7.05	11.2	+/-7.22	50.0	pCi/L							
Rad Liquid Scintillation Analysis														
906.0M, Tritium Dist, Liquid "As Received"														
Tritium	U	-77.9	+/-125	231	+/-125	300	pCi/L			MJ3	05/07/25	1837	2790936	6
Tc-02-RC-MOD, Tc99, Liquid "As Received"														
Technetium-99	U	3.98	+/-12.1	20.9	+/-12.1	25.0	pCi/L			GS3	05/04/25	1745	2786732	7

The following Analytical Methods were performed

Method	Description
1	Eichrom Industries, AN-1418
2	DOE EML HASL-300, Th-01-RC Modified
3	EPA 904.0/SW846 9320 Modified
4	EPA 905.0 Modified/DOE RP501 Rev. 1 Modified
5	EPA 900.0/SW846 9310
6	EPA 906.0 Modified
7	DOE EML HASL-300, Tc-02-RC Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	AN-1418 AlphaSpec Ra226, Liquid "As Received"	2784556	96.3	(30%-110%)
Thorium-229 Tracer	Th-01-RC M, Th Isotopes, Liquid "As Received"	2784557	91.8	(30%-110%)
Barium-133 Tracer	904.0Mod, Ra228, Liquid "As Received"	2780419	86.6	(30%-110%)
Strontium Carrier	905.0Mod, Sr90, liquid "As Received"	2780411	90.9	(30%-110%)
Technetium-99m Tracer	Tc-02-RC-MOD, Tc99, Liquid "As Received"	2786732	97.1	(30%-110%)

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Certificate of Analysis

Company : Four Rivers Nuclear Partnership, LLC
Address : 5600 Hobbs Road

Kevil, Kentucky 42053

Report Date: July 8, 2025

Contact: Ms. Jaime Morrow

Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: MW370UG3-25
Sample ID: 718665003

Project: FRNP00607
Client ID: FRNP006

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Surrogate/Tracer Recovery		**Test**						**Batch ID**		**Recovery%**		**Acceptable Limits**		

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor
DL: Detection Limit
Lc/LC: Critical Level
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

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Kevil, Kentucky 42053

Report Date: July 8, 2025

Contact: Ms. Jaime Morrow

Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: MW371UG3-25
Sample ID: 718665005
Matrix: WG
Collect Date: 10-APR-25
Receive Date: 11-APR-25
Collector: Client

Project: FRNP00607
Client ID: FRNP006

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis														
AN-1418 AlphaSpec Ra226, Liquid "As Received"														
Radium-226	U	0.333	+/-0.357	0.485	+/-0.360	5.00	pCi/L			CM4	04/29/25	0818	2784556	1
Th-01-RC M, Th Isotopes, Liquid "As Received"														
Thorium-230	U	1.00	+/-1.83	2.96	+/-1.84	50.0	pCi/L			RM3	04/26/25	1224	2784557	2
Thorium-232	U	0.171	+/-1.19	2.38	+/-1.20		pCi/L							
Rad Gas Flow Proportional Counting														
904.0Mod, Ra228, Liquid "As Received"														
Radium-228	U	2.12	+/-2.77	4.71	+/-2.83	4.99	pCi/L			JE1	04/23/25	1351	2780419	3
905.0Mod, Sr90, liquid "As Received"														
Strontium-90	U	1.47	+/-1.46	2.40	+/-1.48	8.00	pCi/L			CH7	04/27/25	1715	2780411	4
9310, Alpha/Beta Activity, liquid "As Received"														
Alpha	U	0.730	+/-5.17	10.3	+/-5.17	15.0	pCi/L			HH3	04/30/25	1508	2780428	5
Beta	U	0.216	+/-5.81	10.8	+/-5.81	50.0	pCi/L							
Rad Liquid Scintillation Analysis														
906.0M, Tritium Dist, Liquid "As Received"														
Tritium	U	123	+/-141	236	+/-143	300	pCi/L			MJ3	05/07/25	1919	2790936	6
Tc-02-RC-MOD, Tc99, Liquid "As Received"														
Technetium-99	U	3.39	+/-12.3	21.3	+/-12.3	25.0	pCi/L			GS3	05/04/25	1801	2786732	7

The following Analytical Methods were performed

Method	Description
1	Eichrom Industries, AN-1418
2	DOE EML HASL-300, Th-01-RC Modified
3	EPA 904.0/SW846 9320 Modified
4	EPA 905.0 Modified/DOE RP501 Rev. 1 Modified
5	EPA 900.0/SW846 9310
6	EPA 906.0 Modified
7	DOE EML HASL-300, Tc-02-RC Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	AN-1418 AlphaSpec Ra226, Liquid "As Received"	2784556	96.1	(30%-110%)
Thorium-229 Tracer	Th-01-RC M, Th Isotopes, Liquid "As Received"	2784557	86.6	(30%-110%)
Barium-133 Tracer	904.0Mod, Ra228, Liquid "As Received"	2780419	80.9	(30%-110%)
Strontium Carrier	905.0Mod, Sr90, liquid "As Received"	2780411	77.3	(30%-110%)
Technetium-99m Tracer	Tc-02-RC-MOD, Tc99, Liquid "As Received"	2786732	95.5	(30%-110%)

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Report Date: July 8, 2025

Contact: Ms. Jaime Morrow

Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: MW371UG3-25
Sample ID: 718665005

Project: FRNP00607
Client ID: FRNP006

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Surrogate/Tracer Recovery		**Test**						**Batch ID**		**Recovery%**		**Acceptable Limits**		

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor
DL: Detection Limit
Lc/LC: Critical Level
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

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Report Date: July 8, 2025

Contact: Ms. Jaime Morrow

Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: MW372UG3-25
Sample ID: 718665007
Matrix: WG
Collect Date: 10-APR-25
Receive Date: 11-APR-25
Collector: Client

Project: FRNP00607
Client ID: FRNP006

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis														
AN-1418 AlphaSpec Ra226, Liquid "As Received"														
Radium-226	U	-0.0354	+/-0.582	1.23	+/-0.583	5.00	pCi/L			CM4	04/29/25	1603	2784556	1
Th-01-RC M, Th Isotopes, Liquid "As Received"														
Thorium-230	U	0.574	+/-1.67	3.11	+/-1.68	50.0	pCi/L			RM3	04/26/25	1224	2784557	2
Thorium-232	U	0.0608	+/-1.09	2.35	+/-1.09		pCi/L							
Rad Gas Flow Proportional Counting														
904.0Mod, Ra228, Liquid "As Received"														
Radium-228	U	2.87	+/-2.87	4.76	+/-2.97	4.99	pCi/L			JE1	04/23/25	1123	2780419	3
905.0Mod, Sr90, liquid "As Received"														
Strontium-90	U	-0.317	+/-1.69	3.22	+/-1.69	8.00	pCi/L			CH7	04/27/25	1715	2780411	4
9310, Alpha/Beta Activity, liquid "As Received"														
Alpha	U	-0.950	+/-4.30	9.69	+/-4.30	15.0	pCi/L			HH3	04/30/25	1508	2780428	5
Beta		16.4	+/-8.18	12.2	+/-8.61	50.0	pCi/L							
Rad Liquid Scintillation Analysis														
906.0M, Tritium Dist, Liquid "As Received"														
Tritium	U	99.4	+/-139	237	+/-141	300	pCi/L			MJ3	05/07/25	2001	2790936	6
Tc-02-RC-MOD, Tc99, Liquid "As Received"														
Technetium-99	U	6.43	+/-12.6	21.5	+/-12.6	25.0	pCi/L			GS3	05/04/25	1818	2786732	7

The following Analytical Methods were performed

Method	Description
1	Eichrom Industries, AN-1418
2	DOE EML HASL-300, Th-01-RC Modified
3	EPA 904.0/SW846 9320 Modified
4	EPA 905.0 Modified/DOE RP501 Rev. 1 Modified
5	EPA 900.0/SW846 9310
6	EPA 906.0 Modified
7	DOE EML HASL-300, Tc-02-RC Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	AN-1418 AlphaSpec Ra226, Liquid "As Received"	2784556	94.2	(30%-110%)
Thorium-229 Tracer	Th-01-RC M, Th Isotopes, Liquid "As Received"	2784557	92.8	(30%-110%)
Barium-133 Tracer	904.0Mod, Ra228, Liquid "As Received"	2780419	86.5	(30%-110%)
Strontium Carrier	905.0Mod, Sr90, liquid "As Received"	2780411	81.8	(30%-110%)
Technetium-99m Tracer	Tc-02-RC-MOD, Tc99, Liquid "As Received"	2786732	94.5	(30%-110%)

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Report Date: July 8, 2025

Contact: Ms. Jaime Morrow

Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: MW372UG3-25
Sample ID: 718665007

Project: FRNP00607
Client ID: FRNP006

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Surrogate/Tracer Recovery		**Test**						**Batch ID**		**Recovery%**		**Acceptable Limits**		

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor
DL: Detection Limit
Lc/LC: Critical Level
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

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Report Date: July 8, 2025

Contact: Ms. Jaime Morrow

Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: MW373UG3-25
Sample ID: 718665009
Matrix: WG
Collect Date: 10-APR-25
Receive Date: 11-APR-25
Collector: Client

Project: FRNP00607
Client ID: FRNP006

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis														
AN-1418 AlphaSpec Ra226, Liquid "As Received"														
Radium-226	U	0.509	+/-0.985	1.35	+/-0.987	5.00	pCi/L			CM4	04/29/25	1603	2784556	1
Th-01-RC M, Th Isotopes, Liquid "As Received"														
Thorium-230	U	3.43	+/-3.03	4.34	+/-3.07	50.0	pCi/L			RM3	04/26/25	1339	2784557	2
Thorium-232	U	0.613	+/-1.29	1.91	+/-1.29		pCi/L							
Rad Gas Flow Proportional Counting														
904.0Mod, Ra228, Liquid "As Received"														
Radium-228	U	-0.250	+/-2.63	4.98	+/-2.63	4.99	pCi/L			JE1	04/23/25	1123	2780419	3
905.0Mod, Sr90, liquid "As Received"														
Strontium-90	U	-0.457	+/-1.31	2.66	+/-1.31	8.00	pCi/L			CH7	04/27/25	1715	2780411	4
9310, Alpha/Beta Activity, liquid "As Received"														
Alpha	U	-2.42	+/-3.76	10.0	+/-3.77	15.0	pCi/L			HH3	04/30/25	1508	2780428	5
Beta	U	7.50	+/-7.93	13.2	+/-8.03	50.0	pCi/L							
Rad Liquid Scintillation Analysis														
906.0M, Tritium Dist, Liquid "As Received"														
Tritium	U	32.9	+/-139	243	+/-139	300	pCi/L			MJ3	05/07/25	2043	2790936	6
Tc-02-RC-MOD, Tc99, Liquid "As Received"														
Technetium-99	U	5.28	+/-11.5	19.9	+/-11.6	25.0	pCi/L			GS3	05/07/25	0744	2792486	7

The following Analytical Methods were performed

Method	Description
1	Eichrom Industries, AN-1418
2	DOE EML HASL-300, Th-01-RC Modified
3	EPA 904.0/SW846 9320 Modified
4	EPA 905.0 Modified/DOE RP501 Rev. 1 Modified
5	EPA 900.0/SW846 9310
6	EPA 906.0 Modified
7	DOE EML HASL-300, Tc-02-RC Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	AN-1418 AlphaSpec Ra226, Liquid "As Received"	2784556	100	(30%-110%)
Thorium-229 Tracer	Th-01-RC M, Th Isotopes, Liquid "As Received"	2784557	96.5	(30%-110%)
Barium-133 Tracer	904.0Mod, Ra228, Liquid "As Received"	2780419	85.5	(30%-110%)
Strontium Carrier	905.0Mod, Sr90, liquid "As Received"	2780411	79.5	(30%-110%)
Technetium-99m Tracer	Tc-02-RC-MOD, Tc99, Liquid "As Received"	2792486	94.6	(30%-110%)

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Report Date: July 8, 2025

Contact: Ms. Jaime Morrow

Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: MW373UG3-25
Sample ID: 718665009

Project: FRNP00607
Client ID: FRNP006

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Surrogate/Tracer Recovery		**Test**						**Batch ID**		**Recovery%**		**Acceptable Limits**		

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor
DL: Detection Limit
Lc/LC: Critical Level
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

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Report Date: July 8, 2025

Contact: Ms. Jaime Morrow

Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: MW374UG3-25
Sample ID: 718665011
Matrix: WG
Collect Date: 10-APR-25
Receive Date: 11-APR-25
Collector: Client

Project: FRNP00607
Client ID: FRNP006

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis														
AN-1418 AlphaSpec Ra226, Liquid "As Received"														
Radium-226	U	0.389	+/-0.993	1.67	+/-0.994	5.00	pCi/L			CM4	04/29/25	1603	2784556	1
Th-01-RC M, Th Isotopes, Liquid "As Received"														
Thorium-230	U	2.67	+/-2.75	3.53	+/-2.79	50.0	pCi/L			RM3	04/26/25	1339	2784557	2
Thorium-232	U	-0.279	+/-1.04	2.80	+/-1.04		pCi/L							
Rad Gas Flow Proportional Counting														
904.0Mod, Ra228, Liquid "As Received"														
Radium-228	U	1.43	+/-2.68	4.80	+/-2.70	4.99	pCi/L			JE1	04/23/25	1123	2780419	3
905.0Mod, Sr90, liquid "As Received"														
Strontium-90	U	1.80	+/-1.64	2.68	+/-1.67	8.00	pCi/L			CH7	04/27/25	1713	2780411	4
9310, Alpha/Beta Activity, liquid "As Received"														
Alpha	U	0.395	+/-4.91	10.1	+/-4.91	15.0	pCi/L			HH3	04/30/25	1508	2780428	5
Beta	U	4.84	+/-6.72	11.5	+/-6.77	50.0	pCi/L							
Rad Liquid Scintillation Analysis														
906.0M, Tritium Dist, Liquid "As Received"														
Tritium	U	42.0	+/-140	244	+/-140	300	pCi/L			MJ3	05/07/25	2125	2790936	6
Tc-02-RC-MOD, Tc99, Liquid "As Received"														
Technetium-99	U	-2.17	+/-12.2	21.6	+/-12.2	25.0	pCi/L			GS3	05/04/25	1851	2786732	7

The following Analytical Methods were performed

Method	Description
1	Eichrom Industries, AN-1418
2	DOE EML HASL-300, Th-01-RC Modified
3	EPA 904.0/SW846 9320 Modified
4	EPA 905.0 Modified/DOE RP501 Rev. 1 Modified
5	EPA 900.0/SW846 9310
6	EPA 906.0 Modified
7	DOE EML HASL-300, Tc-02-RC Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	AN-1418 AlphaSpec Ra226, Liquid "As Received"	2784556	94.1	(30%-110%)
Thorium-229 Tracer	Th-01-RC M, Th Isotopes, Liquid "As Received"	2784557	73.5	(30%-110%)
Barium-133 Tracer	904.0Mod, Ra228, Liquid "As Received"	2780419	79.5	(30%-110%)
Strontium Carrier	905.0Mod, Sr90, liquid "As Received"	2780411	81.8	(30%-110%)
Technetium-99m Tracer	Tc-02-RC-MOD, Tc99, Liquid "As Received"	2786732	93.8	(30%-110%)

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Report Date: July 8, 2025

Contact: Ms. Jaime Morrow

Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: MW374UG3-25
Sample ID: 718665011

Project: FRNP00607
Client ID: FRNP006

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Surrogate/Tracer Recovery		**Test**						**Batch ID**		**Recovery%**		**Acceptable Limits**		

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor
DL: Detection Limit
Lc/LC: Critical Level
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

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Report Date: July 8, 2025

Contact: Ms. Jaime Morrow

Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: MW375UG3-25
Sample ID: 718665013
Matrix: WG
Collect Date: 10-APR-25
Receive Date: 11-APR-25
Collector: Client

Project: FRNP00607
Client ID: FRNP006

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis														
AN-1418 AlphaSpec Ra226, Liquid "As Received"														
Radium-226	U	0.399	+/-0.422	0.620	+/-0.425	5.00	pCi/L			CM4	04/29/25	0818	2784556	1
Th-01-RC M, Th Isotopes, Liquid "As Received"														
Thorium-230	U	0.445	+/-1.58	3.01	+/-1.59	50.0	pCi/L			RM3	04/26/25	1339	2784557	2
Thorium-232	U	-0.0434	+/-0.798	1.62	+/-0.800		pCi/L							
Rad Gas Flow Proportional Counting														
904.0Mod, Ra228, Liquid "As Received"														
Radium-228	U	0.908	+/-2.60	4.64	+/-2.61	4.99	pCi/L			JE1	04/23/25	1123	2780419	3
905.0Mod, Sr90, liquid "As Received"														
Strontium-90	U	1.66	+/-1.96	3.31	+/-1.98	8.00	pCi/L			CH7	04/28/25	1618	2780411	4
9310, Alpha/Beta Activity, liquid "As Received"														
Alpha	U	0.166	+/-4.34	9.15	+/-4.34	15.0	pCi/L			HH3	04/30/25	1508	2780428	5
Beta	U	2.76	+/-6.11	10.8	+/-6.13	50.0	pCi/L							
Rad Liquid Scintillation Analysis														
906.0M, Tritium Dist, Liquid "As Received"														
Tritium	U	-53.4	+/-137	250	+/-137	300	pCi/L			MJ3	05/07/25	2206	2790936	6
Tc-02-RC-MOD, Tc99, Liquid "As Received"														
Technetium-99	U	-2.72	+/-11.8	21.0	+/-11.8	25.0	pCi/L			GS3	05/04/25	1908	2786732	7

The following Analytical Methods were performed

Method	Description
1	Eichrom Industries, AN-1418
2	DOE EML HASL-300, Th-01-RC Modified
3	EPA 904.0/SW846 9320 Modified
4	EPA 905.0 Modified/DOE RP501 Rev. 1 Modified
5	EPA 900.0/SW846 9310
6	EPA 906.0 Modified
7	DOE EML HASL-300, Tc-02-RC Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	AN-1418 AlphaSpec Ra226, Liquid "As Received"	2784556	94.4	(30%-110%)
Thorium-229 Tracer	Th-01-RC M, Th Isotopes, Liquid "As Received"	2784557	91	(30%-110%)
Barium-133 Tracer	904.0Mod, Ra228, Liquid "As Received"	2780419	81.5	(30%-110%)
Strontium Carrier	905.0Mod, Sr90, liquid "As Received"	2780411	84.1	(30%-110%)
Technetium-99m Tracer	Tc-02-RC-MOD, Tc99, Liquid "As Received"	2786732	97.1	(30%-110%)

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Report Date: July 8, 2025

Contact: Ms. Jaime Morrow

Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: MW375UG3-25
Sample ID: 718665013

Project: FRNP00607
Client ID: FRNP006

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Surrogate/Tracer Recovery		**Test**						**Batch ID**		**Recovery%**		**Acceptable Limits**		

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor
DL: Detection Limit
Lc/LC: Critical Level
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

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Certificate of Analysis

Report Date: July 8, 2025

Company : Four Rivers Nuclear Partnership, LLC
Address : 5600 Hobbs Road

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID:	MW369UG3-25	Project:	FRNP00607
Sample ID:	718665001	Client ID:	FRNP006
Matrix:	WG		
Collect Date:	10-APR-25 07:21		
Receive Date:	11-APR-25		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
504.1/8011 Analysis of EDB/DBCP												
8011 VOA- 1,2-Dibromo-3-chloropropane "As Received"												
1,2-Dibromo-3-chloropropane	U	0.0189	0.00850	0.0189	ug/L	0.944	1	LOF	04/15/25	0406	2780753	1
Carbon Analysis												
9060A, Total Organic Carbon "As Received"												
Total Organic Carbon Average	J	1.03	0.330	2.00	mg/L		1	KB3	04/24/25	0357	2786227	3
Flow Injection Analysis												
9012B, Cyanide, Total "As Received"												
Cyanide, Total	UN1	0.200	0.00167	0.200	mg/L	1.00	1	KLP1	04/21/25	1143	2781931	4
Halogen Analysis												
9020B, TOX (Organic Halogen) "As Received"												
Total Organic Halogens	BJ	3.60	3.33	10.0	ug/L		1	RMJ	05/08/25	0454	2792472	5
Ion Chromatography												
300.0, Iodide in Liquid "As Received"												
Iodide	U	0.500	0.167	0.500	mg/L		1	CH6	04/24/25	1908	2786988	6
SW846 9056A Anions (5 elements) "As Received"												
Bromide		0.471	0.0670	0.200	mg/L		1	RXB5	04/11/25	1150	2780251	7
Fluoride	J	0.199	0.0330	4.00	mg/L		1					
Sulfate		18.0	0.133	0.400	mg/L		1					
Chloride	J	36.4	0.335	250	mg/L		5	RXB5	04/11/25	2054	2780251	8
Nitrate-N	J	1.04	0.165	10.0	mg/L		5					
Mercury Analysis-CVAA												
7470, Mercury Liquid "As Received"												
Mercury	U	0.000200	0.0000670	0.000200	mg/L	1.00	1	JP2	05/05/25	0940	2790989	9
Metals Analysis-ICP-MS												
6020, Metals (15+ elements) "As Received"												
Aluminum	U	0.0500	0.0193	0.0500	mg/L	1.00	1	BCD1	05/05/25	1558	2790406	10
Antimony	U	0.00300	0.00100	0.00300	mg/L	1.00	1					
Arsenic	U	0.00500	0.00200	0.00500	mg/L	1.00	1					
Barium		0.505	0.000670	0.00400	mg/L	1.00	1					
Beryllium	U	0.000500	0.000200	0.000500	mg/L	1.00	1					
Cadmium	U	0.00100	0.000300	0.00100	mg/L	1.00	1					
Chromium	U	0.0100	0.00300	0.0100	mg/L	1.00	1					
Cobalt		0.00139	0.000300	0.00100	mg/L	1.00	1					
Copper	J	0.00138	0.000300	0.00200	mg/L	1.00	1					

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Company : Four Rivers Nuclear Partnership, LLC
Address : 5600 Hobbs Road

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: MW369UG3-25 Project: FRNP00607
Sample ID: 718665001 Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP-MS												
6020, Metals (15+ elements) "As Received"												
Iron	J	0.0379	0.0330	0.100	mg/L	1.00	1					
Lead	U	0.00200	0.000500	0.00200	mg/L	1.00	1					
Magnesium		10.8	0.0100	0.0300	mg/L	1.00	1					
Molybdenum	U	0.00100	0.000200	0.00100	mg/L	1.00	1					
Nickel	J	0.00153	0.000600	0.00200	mg/L	1.00	1					
Potassium		0.994	0.0800	0.300	mg/L	1.00	1					
Selenium	J	0.00183	0.00150	0.00500	mg/L	1.00	1					
Silver	U	0.00100	0.000300	0.00100	mg/L	1.00	1					
Thallium	U	0.00200	0.000600	0.00200	mg/L	1.00	1					
Vanadium	U	0.0200	0.00330	0.0200	mg/L	1.00	1					
Rhodium	U	0.00500	0.00160	0.00500	mg/L	1.00	1	PRB	05/07/25	1811	2790406	11
Tantalum	U	0.00500	0.00100	0.00500	mg/L	1.00	1					
Calcium		25.3	0.0800	0.200	mg/L	1.00	1	PRB	05/07/25	2058	2790406	12
Manganese		0.0102	0.00100	0.00500	mg/L	1.00	1					
Sodium		48.6	0.0800	0.250	mg/L	1.00	1					
Uranium	U	0.000200	0.0000670	0.000200	mg/L	1.00	1					
Zinc	J	0.00570	0.00330	0.0200	mg/L	1.00	1					
Boron		0.0355	0.00520	0.0150	mg/L	1.00	1	PRB	05/08/25	1008	2790406	13
Semi-Volatiles-PCB												
8082A, PCB Liquids "As Received"												
Aroclor-1016	UY2	0.100	0.0334	0.100	ug/L	0.00100	1	YS1	05/05/25	2103	2791589	14
Aroclor-1221	U	0.100	0.0334	0.100	ug/L	0.00100	1					
Aroclor-1232	U	0.100	0.0334	0.100	ug/L	0.00100	1					
Aroclor-1242	U	0.100	0.0334	0.100	ug/L	0.00100	1					
Aroclor-1248	U	0.100	0.0334	0.100	ug/L	0.00100	1					
Aroclor-1254	U	0.100	0.0334	0.100	ug/L	0.00100	1					
Aroclor-1260	UY1Y2	0.100	0.0334	0.100	ug/L	0.00100	1					
Aroclor-1268	U	0.100	0.0334	0.100	ug/L	0.00100	1					
Aroclor-Total	UY1Y2	0.100	0.0334	0.100	ug/L	0.00100	1					
Solids Analysis												
160.1, Dissolved Solids "As Received"												
Total Dissolved Solids		235	2.38	10.0	mg/L			CH6	04/16/25	1431	2782539	15
Spectrometric Analysis												
410.4, Chem. Oxygen Demand "As Received"												

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Company : Four Rivers Nuclear Partnership, LLC
Address : 5600 Hobbs Road

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: MW369UG3-25 Project: FRNP00607
Sample ID: 718665001 Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Spectrometric Analysis												
410.4, Chem. Oxygen Demand "As Received"												
COD	U	20.0	8.95	20.0	mg/L		1	HH2	04/22/25	1648	2781684	16
Volatile Organics												
8260D, Volatiles- full suite "As Received"												
1,1,1,2-Tetrachloroethane	U	1.00	0.333	1.00	ug/L		1	PXY1	04/17/25	1650	2783250	17
1,1,1-Trichloroethane	U	1.00	0.333	1.00	ug/L		1					
1,1,2,2-Tetrachloroethane	U	1.00	0.333	1.00	ug/L		1					
1,1,2-Trichloroethane	U	1.00	0.333	1.00	ug/L		1					
1,1-Dichloroethane	U	1.00	0.333	1.00	ug/L		1					
1,1-Dichloroethylene	U	1.00	0.333	1.00	ug/L		1					
1,2,3-Trichloropropane	U	1.00	0.333	1.00	ug/L		1					
1,2-Dibromoethane	U	1.00	0.333	1.00	ug/L		1					
1,2-Dichlorobenzene	U	1.00	0.333	1.00	ug/L		1					
1,2-Dichloroethane	U	1.00	0.333	1.00	ug/L		1					
1,2-Dichloropropane	U	1.00	0.333	1.00	ug/L		1					
1,4-Dichlorobenzene	U	1.00	0.333	1.00	ug/L		1					
2-Butanone	U	5.00	1.67	5.00	ug/L		1					
2-Hexanone	U	5.00	1.67	5.00	ug/L		1					
4-Methyl-2-pentanone	U	5.00	1.67	5.00	ug/L		1					
Acetone	U	5.00	1.74	5.00	ug/L		1					
Acrolein	U	5.00	1.67	5.00	ug/L		1					
Acrylonitrile	U	5.00	1.67	5.00	ug/L		1					
Benzene	U	1.00	0.333	1.00	ug/L		1					
Bromochloromethane	U	1.00	0.333	1.00	ug/L		1					
Bromodichloromethane	U	1.00	0.333	1.00	ug/L		1					
Bromoform	U	1.00	0.333	1.00	ug/L		1					
Bromomethane	U	1.00	0.337	1.00	ug/L		1					
Carbon disulfide	U	5.00	1.67	5.00	ug/L		1					
Carbon tetrachloride	U	1.00	0.333	1.00	ug/L		1					
Chlorobenzene	U	1.00	0.333	1.00	ug/L		1					
Chloroethane	U	1.00	0.333	1.00	ug/L		1					
Chloroform	U	1.00	0.333	1.00	ug/L		1					
Chloromethane	U	1.00	0.333	1.00	ug/L		1					
Dibromochloromethane	U	1.00	0.333	1.00	ug/L		1					
Dibromomethane	U	1.00	0.333	1.00	ug/L		1					
Ethylbenzene	U	1.00	0.333	1.00	ug/L		1					
Iodomethane	U	5.00	1.67	5.00	ug/L		1					

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Company : Four Rivers Nuclear Partnership, LLC
Address : 5600 Hobbs Road

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: MW369UG3-25 Project: FRNP00607
Sample ID: 718665001 Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
8260D, Volatiles- full suite "As Received"												
Methylene chloride	J	0.660	0.500	5.00	ug/L		1					
Styrene	U	1.00	0.333	1.00	ug/L		1					
Tetrachloroethylene	U	1.00	0.333	1.00	ug/L		1					
Toluene	U	1.00	0.333	1.00	ug/L		1					
Trichloroethylene		1.51	0.333	1.00	ug/L		1					
Trichlorofluoromethane	U	1.00	0.333	1.00	ug/L		1					
Vinyl acetate	U	5.00	1.67	5.00	ug/L		1					
Vinyl chloride	U	1.00	0.333	1.00	ug/L		1					
Xylenes (total)	U	3.00	1.00	3.00	ug/L		1					
cis-1,2-Dichloroethylene	U	1.00	0.333	1.00	ug/L		1					
cis-1,3-Dichloropropylene	U	1.00	0.333	1.00	ug/L		1					
trans-1,2-Dichloroethylene	U	1.00	0.333	1.00	ug/L		1					
trans-1,3-Dichloropropylene	U	1.00	0.333	1.00	ug/L		1					
trans-1,4-Dichloro-2-butene	UY1	5.00	1.67	5.00	ug/L		1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010C Distillation	SW846 9010C Prep	KLP1	04/16/25	1306	2781930
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	JM13	05/02/25	0830	2790988
SW846 8011 PREP	8011 Prep	LOF	04/14/25	1716	2780752
SW846 3535A	SW3535A PCB SPE Extraction	DXF4	05/05/25	0545	2791588
SW846 3005A	ICP-MS 3005A PREP	HS2	05/02/25	1420	2790405

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Company :	Four Rivers Nuclear Partnership, LLC
Address :	5600 Hobbs Road
	Kevil, Kentucky 42053
Contact:	Ms. Jaime Morrow
Project:	C-746-U Landfill Quarterly(UG25-03)

Client Sample ID:	MW369UG3-25	Project:	FRNP00607
Sample ID:	718665001	Client ID:	FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 8011	
2	SW846 8011	
3	SW846 9060A	
4	SW846 9012B	
5	SW846 9020B	
6	EPA 300.0	
7	SW846 9056A	
8	SW846 9056A	
9	SW846 7470A	
10	SW846 3005A/6020B	
11	SW846 3005A/6020B	
12	SW846 3005A/6020B	
13	SW846 3005A/6020B	
14	SW846 3535A/8082A	
15	EPA 160.1	
16	EPA 410.4	
17	SW846 8260D	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
1-Chloro-2-fluorobenzene	8011 VOA- 1,2-Dibromo-3-chloropropane "As Received"	6.67 ug/L	6.74	99	(56%-149%)
Decachlorobiphenyl	8082A, PCB Liquids "As Received"	0.172 ug/L	0.201	86	(30%-135%)
4cmx	8082A, PCB Liquids "As Received"	0.176 ug/L	0.201	88	(26%-108%)
1,2-Dichloroethane-d4	8260D, Volatiles- full suite "As Received"	55.7 ug/L	50.0	111	(81%-118%)
Bromofluorobenzene	8260D, Volatiles- full suite "As Received"	53.3 ug/L	50.0	107	(85%-114%)
Toluene-d8	8260D, Volatiles- full suite "As Received"	49.7 ug/L	50.0	99	(89%-112%)

Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: July 8, 2025

Company :	Four Rivers Nuclear Partnership, LLC
Address :	5600 Hobbs Road
	Kevil, Kentucky 42053
Contact:	Ms. Jaime Morrow
Project:	C-746-U Landfill Quarterly(UG25-03)

Client Sample ID:	MW369UG3-25	Project:	FRNP00607
Sample ID:	718665002	Client ID:	FRNP006
Matrix:	WG		
Collect Date:	10-APR-25 07:21		
Receive Date:	11-APR-25		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP-MS												
6020, Dissolved Metals (3 Elements) "As Received"												
Barium		0.525	0.000670	0.00400	mg/L	1.00	1	PRB	05/09/25	0115	2781464	1
Chromium	U	0.0100	0.00300	0.0100	mg/L	1.00	1					
Uranium	J	0.000160	0.0000670	0.000200	mg/L	1.00	1	PRB	05/09/25	1048	2781464	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	HS2	05/07/25	1600	2781463
EPA 160	Laboratory Filtration	MM7	04/14/25	1500	2780882

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 3005A/6020B	
2	SW846 3005A/6020B	

Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Company : Four Rivers Nuclear Partnership, LLC
Address : 5600 Hobbs Road

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID:	MW370UG3-25	Project:	FRNP00607
Sample ID:	718665003	Client ID:	FRNP006
Matrix:	WG		
Collect Date:	10-APR-25 08:06		
Receive Date:	11-APR-25		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
504.1/8011 Analysis of EDB/DBCP												
8011 VOA- 1,2-Dibromo-3-chloropropane "As Received"												
1,2-Dibromo-3-chloropropane	U	0.0190	0.00856	0.0190	ug/L	0.951	1	LOF	04/15/25	0439	2780753	1
Carbon Analysis												
9060A, Total Organic Carbon "As Received"												
Total Organic Carbon Average	J	1.11	0.330	2.00	mg/L		1	KB3	04/24/25	0429	2786227	3
Flow Injection Analysis												
9012B, Cyanide, Total "As Received"												
Cyanide, Total	UN1	0.200	0.00167	0.200	mg/L	1.00	1	KLP1	04/21/25	1144	2781931	4
Halogen Analysis												
9020B, TOX (Organic Halogen) "As Received"												
Total Organic Halogens	B	12.6	3.33	10.0	ug/L		1	RMJ	05/08/25	2108	2792472	5
Ion Chromatography												
300.0, Iodide in Liquid "As Received"												
Iodide	U	0.500	0.167	0.500	mg/L		1	CH6	04/24/25	1920	2786988	6
SW846 9056A Anions (5 elements) "As Received"												
Bromide		0.524	0.0670	0.200	mg/L		1	RXB5	04/11/25	1221	2780251	7
Fluoride	J	0.183	0.0330	4.00	mg/L		1					
Chloride	J	41.5	0.335	250	mg/L		5	RXB5	04/11/25	2125	2780251	8
Nitrate-N	J	1.07	0.165	10.0	mg/L		5					
Sulfate		20.2	0.665	2.00	mg/L		5					
Mercury Analysis-CVAA												
7470, Mercury Liquid "As Received"												
Mercury	U	0.000200	0.0000670	0.000200	mg/L	1.00	1	JP2	05/05/25	0941	2790989	9
Metals Analysis-ICP-MS												
6020, Metals (15+ elements) "As Received"												
Aluminum	U	0.0500	0.0193	0.0500	mg/L	1.00	1	BCD1	05/05/25	1602	2790406	10
Antimony	U	0.00300	0.00100	0.00300	mg/L	1.00	1					
Arsenic	U	0.00500	0.00200	0.00500	mg/L	1.00	1					
Barium		0.203	0.000670	0.00400	mg/L	1.00	1					
Beryllium	U	0.000500	0.000200	0.000500	mg/L	1.00	1					
Cadmium	U	0.00100	0.000300	0.00100	mg/L	1.00	1					
Chromium	U	0.0100	0.00300	0.0100	mg/L	1.00	1					
Cobalt	U	0.00100	0.000300	0.00100	mg/L	1.00	1					
Copper	J	0.000850	0.000300	0.00200	mg/L	1.00	1					

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Address : 5600 Hobbs Road

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: MW370UG3-25 Project: FRNP00607
Sample ID: 718665003 Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP-MS												
6020, Metals (15+ elements) "As Received"												
Iron	U	0.100	0.0330	0.100	mg/L	1.00	1					
Lead	U	0.00200	0.000500	0.00200	mg/L	1.00	1					
Magnesium		12.4	0.0100	0.0300	mg/L	1.00	1					
Molybdenum	U	0.00100	0.000200	0.00100	mg/L	1.00	1					
Nickel	U	0.00200	0.000600	0.00200	mg/L	1.00	1					
Potassium		2.44	0.0800	0.300	mg/L	1.00	1					
Selenium	U	0.00500	0.00150	0.00500	mg/L	1.00	1					
Silver	U	0.00100	0.000300	0.00100	mg/L	1.00	1					
Thallium	U	0.00200	0.000600	0.00200	mg/L	1.00	1					
Vanadium	U	0.0200	0.00330	0.0200	mg/L	1.00	1					
Rhodium	U	0.00500	0.00160	0.00500	mg/L	1.00	1	PRB	05/07/25	1812	2790406	11
Tantalum	U	0.00500	0.00100	0.00500	mg/L	1.00	1					
Calcium		29.5	0.0800	0.200	mg/L	1.00	1	PRB	05/07/25	2100	2790406	12
Manganese	J	0.00373	0.00100	0.00500	mg/L	1.00	1					
Sodium		45.0	0.0800	0.250	mg/L	1.00	1					
Uranium	U	0.000200	0.0000670	0.000200	mg/L	1.00	1					
Zinc	J	0.00530	0.00330	0.0200	mg/L	1.00	1					
Boron		0.0859	0.00520	0.0150	mg/L	1.00	1	PRB	05/08/25	1009	2790406	13
Semi-Volatiles-PCB												
8082A, PCB Liquids "As Received"												
Aroclor-1016	UY2	0.0971	0.0323	0.0971	ug/L	0.000971	1	YS1	05/05/25	2115	2791589	14
Aroclor-1221	U	0.0971	0.0323	0.0971	ug/L	0.000971	1					
Aroclor-1232	U	0.0971	0.0323	0.0971	ug/L	0.000971	1					
Aroclor-1242	U	0.0971	0.0323	0.0971	ug/L	0.000971	1					
Aroclor-1248	U	0.0971	0.0323	0.0971	ug/L	0.000971	1					
Aroclor-1254	U	0.0971	0.0323	0.0971	ug/L	0.000971	1					
Aroclor-1260	UY1Y2	0.0971	0.0323	0.0971	ug/L	0.000971	1					
Aroclor-1268	U	0.0971	0.0323	0.0971	ug/L	0.000971	1					
Aroclor-Total	UY1Y2	0.0971	0.0323	0.0971	ug/L	0.000971	1					
Solids Analysis												
160.1, Dissolved Solids "As Received"												
Total Dissolved Solids		226	2.38	10.0	mg/L			CH6	04/16/25	1431	2782539	15
Spectrometric Analysis												
410.4, Chem. Oxygen Demand "As Received"												

GEL LABORATORIES LLC

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Certificate of Analysis

Report Date: July 8, 2025

Company : Four Rivers Nuclear Partnership, LLC
Address : 5600 Hobbs Road

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: MW370UG3-25 Project: FRNP00607
Sample ID: 718665003 Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Spectrometric Analysis												
410.4, Chem. Oxygen Demand "As Received"												
COD	U	20.0	8.95	20.0	mg/L		1	HH2	04/22/25	1648	2781684	16
Volatile Organics												
8260D, Volatiles- full suite "As Received"												
1,1,1,2-Tetrachloroethane	U	1.00	0.333	1.00	ug/L		1	PXY1	04/17/25	1342	2783250	17
1,1,1-Trichloroethane	U	1.00	0.333	1.00	ug/L		1					
1,1,2,2-Tetrachloroethane	U	1.00	0.333	1.00	ug/L		1					
1,1,2-Trichloroethane	U	1.00	0.333	1.00	ug/L		1					
1,1-Dichloroethane	U	1.00	0.333	1.00	ug/L		1					
1,1-Dichloroethylene	U	1.00	0.333	1.00	ug/L		1					
1,2,3-Trichloropropane	U	1.00	0.333	1.00	ug/L		1					
1,2-Dibromoethane	U	1.00	0.333	1.00	ug/L		1					
1,2-Dichlorobenzene	U	1.00	0.333	1.00	ug/L		1					
1,2-Dichloroethane	U	1.00	0.333	1.00	ug/L		1					
1,2-Dichloropropane	U	1.00	0.333	1.00	ug/L		1					
1,4-Dichlorobenzene	U	1.00	0.333	1.00	ug/L		1					
2-Butanone	U	5.00	1.67	5.00	ug/L		1					
2-Hexanone	U	5.00	1.67	5.00	ug/L		1					
4-Methyl-2-pentanone	U	5.00	1.67	5.00	ug/L		1					
Acetone	U	5.00	1.74	5.00	ug/L		1					
Acrolein	U	5.00	1.67	5.00	ug/L		1					
Acrylonitrile	U	5.00	1.67	5.00	ug/L		1					
Benzene	U	1.00	0.333	1.00	ug/L		1					
Bromochloromethane	U	1.00	0.333	1.00	ug/L		1					
Bromodichloromethane	U	1.00	0.333	1.00	ug/L		1					
Bromoform	U	1.00	0.333	1.00	ug/L		1					
Bromomethane	U	1.00	0.337	1.00	ug/L		1					
Carbon disulfide	U	5.00	1.67	5.00	ug/L		1					
Carbon tetrachloride	U	1.00	0.333	1.00	ug/L		1					
Chlorobenzene	U	1.00	0.333	1.00	ug/L		1					
Chloroethane	U	1.00	0.333	1.00	ug/L		1					
Chloroform	U	1.00	0.333	1.00	ug/L		1					
Chloromethane	U	1.00	0.333	1.00	ug/L		1					
Dibromochloromethane	U	1.00	0.333	1.00	ug/L		1					
Dibromomethane	U	1.00	0.333	1.00	ug/L		1					
Ethylbenzene	U	1.00	0.333	1.00	ug/L		1					
Iodomethane	U	5.00	1.67	5.00	ug/L		1					

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Company : Four Rivers Nuclear Partnership, LLC
Address : 5600 Hobbs Road

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: MW370UG3-25 Project: FRNP00607
Sample ID: 718665003 Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
8260D, Volatiles- full suite "As Received"												
Methylene chloride	J	0.660	0.500	5.00	ug/L		1					
Styrene	U	1.00	0.333	1.00	ug/L		1					
Tetrachloroethylene	U	1.00	0.333	1.00	ug/L		1					
Toluene	U	1.00	0.333	1.00	ug/L		1					
Trichloroethylene		2.00	0.333	1.00	ug/L		1					
Trichlorofluoromethane	U	1.00	0.333	1.00	ug/L		1					
Vinyl acetate	U	5.00	1.67	5.00	ug/L		1					
Vinyl chloride	U	1.00	0.333	1.00	ug/L		1					
Xylenes (total)	U	3.00	1.00	3.00	ug/L		1					
cis-1,2-Dichloroethylene	U	1.00	0.333	1.00	ug/L		1					
cis-1,3-Dichloropropylene	U	1.00	0.333	1.00	ug/L		1					
trans-1,2-Dichloroethylene	U	1.00	0.333	1.00	ug/L		1					
trans-1,3-Dichloropropylene	U	1.00	0.333	1.00	ug/L		1					
trans-1,4-Dichloro-2-butene	UY1	5.00	1.67	5.00	ug/L		1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3535A	SW3535A PCB SPE Extraction	DXF4	05/05/25	0545	2791588
SW846 8011 PREP	8011 Prep	LOF	04/14/25	1716	2780752
SW846 3005A	ICP-MS 3005A PREP	HS2	05/02/25	1420	2790405
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	JM13	05/02/25	0830	2790988
SW846 9010C Distillation	SW846 9010C Prep	KLP1	04/16/25	1306	2781930

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Address :	5600 Hobbs Road
	Kevil, Kentucky 42053
Contact:	Ms. Jaime Morrow
Project:	C-746-U Landfill Quarterly(UG25-03)

Client Sample ID:	MW370UG3-25	Project:	FRNP00607
Sample ID:	718665003	Client ID:	FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 8011	
2	SW846 8011	
3	SW846 9060A	
4	SW846 9012B	
5	SW846 9020B	
6	EPA 300.0	
7	SW846 9056A	
8	SW846 9056A	
9	SW846 7470A	
10	SW846 3005A/6020B	
11	SW846 3005A/6020B	
12	SW846 3005A/6020B	
13	SW846 3005A/6020B	
14	SW846 3535A/8082A	
15	EPA 160.1	
16	EPA 410.4	
17	SW846 8260D	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
1-Chloro-2-fluorobenzene	8011 VOA- 1,2-Dibromo-3-chloropropane "As Received"	6.28 ug/L	6.79	92	(56%-149%)
Decachlorobiphenyl	8082A, PCB Liquids "As Received"	0.194 ug/L	0.194	100	(30%-135%)
4cmx	8082A, PCB Liquids "As Received"	0.193 ug/L	0.194	99	(26%-108%)
Bromofluorobenzene	8260D, Volatiles- full suite "As Received"	54.2 ug/L	50.0	108	(85%-114%)
1,2-Dichloroethane-d4	8260D, Volatiles- full suite "As Received"	56.7 ug/L	50.0	113	(81%-118%)
Toluene-d8	8260D, Volatiles- full suite "As Received"	50.5 ug/L	50.0	101	(89%-112%)

Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Company :	Four Rivers Nuclear Partnership, LLC
Address :	5600 Hobbs Road
	Kevil, Kentucky 42053
Contact:	Ms. Jaime Morrow
Project:	C-746-U Landfill Quarterly(UG25-03)

Client Sample ID:	MW370UG3-25	Project:	FRNP00607
Sample ID:	718665004	Client ID:	FRNP006
Matrix:	WG		
Collect Date:	10-APR-25 08:06		
Receive Date:	11-APR-25		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP-MS												
6020, Dissolved Metals (3 Elements) "As Received"												
Barium		0.207	0.000670	0.00400	mg/L	1.00	1	PRB	05/09/25	0118	2781464	1
Chromium	U	0.0100	0.00300	0.0100	mg/L	1.00	1					
Uranium	U	0.000200	0.0000670	0.000200	mg/L	1.00	1	PRB	05/09/25	1049	2781464	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 160	Laboratory Filtration	MM7	04/14/25	1500	2780882
SW846 3005A	ICP-MS 3005A PREP	HS2	05/07/25	1600	2781463

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 3005A/6020B	
2	SW846 3005A/6020B	

Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Report Date: July 8, 2025

Company : Four Rivers Nuclear Partnership, LLC
Address : 5600 Hobbs Road

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: MW371UG3-25
Sample ID: 718665005
Matrix: WG
Collect Date: 10-APR-25 08:48
Receive Date: 11-APR-25
Collector: Client

Project: FRNP00607
Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
504.1/8011 Analysis of EDB/DBCP												
8011 VOA- 1,2-Dibromo-3-chloropropane "As Received"												
1,2-Dibromo-3-chloropropane	U	0.0191	0.00858	0.0191	ug/L	0.954	1	LOF	04/15/25	0513	2780753	1
Carbon Analysis												
9060A, Total Organic Carbon "As Received"												
Total Organic Carbon Average	J	1.67	0.330	2.00	mg/L		1	KB3	04/24/25	0501	2786227	3
Flow Injection Analysis												
9012B, Cyanide, Total "As Received"												
Cyanide, Total	UN1	0.200	0.00167	0.200	mg/L	1.00	1	KLP1	04/21/25	1145	2781931	4
Halogen Analysis												
9020B, TOX (Organic Halogen) "As Received"												
Total Organic Halogens	BJ	3.82	3.33	10.0	ug/L		1	RMJ	05/08/25	2151	2792472	5
Ion Chromatography												
300.0, Iodide in Liquid "As Received"												
Iodide	U	0.500	0.167	0.500	mg/L		1	CH6	04/24/25	1933	2786988	6
SW846 9056A Anions (5 elements) "As Received"												
Bromide	U	0.200	0.0670	0.200	mg/L		1	RXB5	04/11/25	1252	2780251	7
Chloride	J	0.786	0.0670	250	mg/L		1					
Fluoride	J	0.204	0.0330	4.00	mg/L		1					
Nitrate-N	U	10.0	0.0330	10.0	mg/L		1					
Sulfate		19.9	0.266	0.800	mg/L		2	RXB5	04/11/25	2155	2780251	8
Mercury Analysis-CVAA												
7470, Mercury Liquid "As Received"												
Mercury	U	0.000200	0.0000670	0.000200	mg/L	1.00	1	JP2	05/05/25	0943	2790989	9
Metals Analysis-ICP-MS												
6020, Metals (15+ elements) "As Received"												
Aluminum	J	0.0429	0.0193	0.0500	mg/L	1.00	1	BCD1	05/05/25	1605	2790406	10
Antimony	U	0.00300	0.00100	0.00300	mg/L	1.00	1					
Arsenic	J	0.00206	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0971	0.000670	0.00400	mg/L	1.00	1					
Beryllium	U	0.000500	0.000200	0.000500	mg/L	1.00	1					
Cadmium	U	0.00100	0.000300	0.00100	mg/L	1.00	1					
Chromium	U	0.0100	0.00300	0.0100	mg/L	1.00	1					
Cobalt	U	0.00100	0.000300	0.00100	mg/L	1.00	1					
Copper	J	0.00102	0.000300	0.00200	mg/L	1.00	1					

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Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: MW371UG3-25 Project: FRNP00607
Sample ID: 718665005 Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP-MS												
6020, Metals (15+ elements) "As Received"												
Iron	J	0.0438	0.0330	0.100	mg/L	1.00	1					
Lead	U	0.00200	0.000500	0.00200	mg/L	1.00	1					
Magnesium		9.03	0.0100	0.0300	mg/L	1.00	1					
Molybdenum	J	0.000539	0.000200	0.00100	mg/L	1.00	1					
Nickel	J	0.00105	0.000600	0.00200	mg/L	1.00	1					
Potassium	J	0.219	0.0800	0.300	mg/L	1.00	1					
Selenium	U	0.00500	0.00150	0.00500	mg/L	1.00	1					
Silver	U	0.00100	0.000300	0.00100	mg/L	1.00	1					
Thallium	U	0.00200	0.000600	0.00200	mg/L	1.00	1					
Vanadium	J	0.00406	0.00330	0.0200	mg/L	1.00	1					
Rhodium	U	0.00500	0.00160	0.00500	mg/L	1.00	1	PRB	05/07/25	1813	2790406	11
Tantalum	U	0.00500	0.00100	0.00500	mg/L	1.00	1					
Manganese	J	0.00247	0.00100	0.00500	mg/L	1.00	1	PRB	05/07/25	2103	2790406	12
Sodium		11.8	0.0800	0.250	mg/L	1.00	1					
Uranium		0.000530	0.0000670	0.000200	mg/L	1.00	1					
Zinc	U	0.0200	0.00330	0.0200	mg/L	1.00	1					
Calcium		57.6	0.400	1.00	mg/L	1.00	5	PRB	05/07/25	2106	2790406	13
Boron	J	0.00655	0.00520	0.0150	mg/L	1.00	1	PRB	05/08/25	1010	2790406	14
Semi-Volatiles-PCB												
8082A, PCB Liquids "As Received"												
Aroclor-1016	UY2	0.0989	0.0329	0.0989	ug/L	0.000989	1	YS1	05/05/25	2127	2791589	15
Aroclor-1221	U	0.0989	0.0329	0.0989	ug/L	0.000989	1					
Aroclor-1232	U	0.0989	0.0329	0.0989	ug/L	0.000989	1					
Aroclor-1242	U	0.0989	0.0329	0.0989	ug/L	0.000989	1					
Aroclor-1248	U	0.0989	0.0329	0.0989	ug/L	0.000989	1					
Aroclor-1254	U	0.0989	0.0329	0.0989	ug/L	0.000989	1					
Aroclor-1260	UY1Y2	0.0989	0.0329	0.0989	ug/L	0.000989	1					
Aroclor-1268	U	0.0989	0.0329	0.0989	ug/L	0.000989	1					
Aroclor-Total	UY1Y2	0.0989	0.0329	0.0989	ug/L	0.000989	1					
Solids Analysis												
160.1, Dissolved Solids "As Received"												
Total Dissolved Solids		194	2.38	10.0	mg/L			CH6	04/16/25	1431	2782539	16
Spectrometric Analysis												
410.4, Chem. Oxygen Demand "As Received"												

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Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: MW371UG3-25 Project: FRNP00607
Sample ID: 718665005 Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Spectrometric Analysis												
410.4, Chem. Oxygen Demand "As Received"												
COD	U	20.0	8.95	20.0	mg/L		1	HH2	04/22/25	1648	2781684	17
Volatile Organics												
8260D, Volatiles- full suite "As Received"												
1,1,1,2-Tetrachloroethane	U	1.00	0.333	1.00	ug/L		1	PXY1	04/17/25	1409	2783250	18
1,1,1-Trichloroethane	U	1.00	0.333	1.00	ug/L		1					
1,1,2,2-Tetrachloroethane	U	1.00	0.333	1.00	ug/L		1					
1,1,2-Trichloroethane	U	1.00	0.333	1.00	ug/L		1					
1,1-Dichloroethane	U	1.00	0.333	1.00	ug/L		1					
1,1-Dichloroethylene	U	1.00	0.333	1.00	ug/L		1					
1,2,3-Trichloropropane	U	1.00	0.333	1.00	ug/L		1					
1,2-Dibromoethane	U	1.00	0.333	1.00	ug/L		1					
1,2-Dichlorobenzene	U	1.00	0.333	1.00	ug/L		1					
1,2-Dichloroethane	U	1.00	0.333	1.00	ug/L		1					
1,2-Dichloropropane	U	1.00	0.333	1.00	ug/L		1					
1,4-Dichlorobenzene	U	1.00	0.333	1.00	ug/L		1					
2-Butanone	U	5.00	1.67	5.00	ug/L		1					
2-Hexanone	U	5.00	1.67	5.00	ug/L		1					
4-Methyl-2-pentanone	U	5.00	1.67	5.00	ug/L		1					
Acetone	U	5.00	1.74	5.00	ug/L		1					
Acrolein	U	5.00	1.67	5.00	ug/L		1					
Acrylonitrile	U	5.00	1.67	5.00	ug/L		1					
Benzene	U	1.00	0.333	1.00	ug/L		1					
Bromochloromethane	U	1.00	0.333	1.00	ug/L		1					
Bromodichloromethane	U	1.00	0.333	1.00	ug/L		1					
Bromoform	U	1.00	0.333	1.00	ug/L		1					
Bromomethane	U	1.00	0.337	1.00	ug/L		1					
Carbon disulfide	U	5.00	1.67	5.00	ug/L		1					
Carbon tetrachloride	U	1.00	0.333	1.00	ug/L		1					
Chlorobenzene	U	1.00	0.333	1.00	ug/L		1					
Chloroethane	U	1.00	0.333	1.00	ug/L		1					
Chloroform	U	1.00	0.333	1.00	ug/L		1					
Chloromethane	U	1.00	0.333	1.00	ug/L		1					
Dibromochloromethane	U	1.00	0.333	1.00	ug/L		1					
Dibromomethane	U	1.00	0.333	1.00	ug/L		1					
Ethylbenzene	U	1.00	0.333	1.00	ug/L		1					
Iodomethane	U	5.00	1.67	5.00	ug/L		1					

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Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: MW371UG3-25 Project: FRNP00607
Sample ID: 718665005 Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
8260D, Volatiles- full suite "As Received"												
Methylene chloride	J	0.640	0.500	5.00	ug/L		1					
Styrene	U	1.00	0.333	1.00	ug/L		1					
Tetrachloroethylene	U	1.00	0.333	1.00	ug/L		1					
Toluene	U	1.00	0.333	1.00	ug/L		1					
Trichloroethylene	U	1.00	0.333	1.00	ug/L		1					
Trichlorofluoromethane	U	1.00	0.333	1.00	ug/L		1					
Vinyl acetate	U	5.00	1.67	5.00	ug/L		1					
Vinyl chloride	U	1.00	0.333	1.00	ug/L		1					
Xylenes (total)	U	3.00	1.00	3.00	ug/L		1					
cis-1,2-Dichloroethylene	U	1.00	0.333	1.00	ug/L		1					
cis-1,3-Dichloropropylene	U	1.00	0.333	1.00	ug/L		1					
trans-1,2-Dichloroethylene	U	1.00	0.333	1.00	ug/L		1					
trans-1,3-Dichloropropylene	U	1.00	0.333	1.00	ug/L		1					
trans-1,4-Dichloro-2-butene	UY1	5.00	1.67	5.00	ug/L		1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 8011 PREP	8011 Prep	LOF	04/14/25	1716	2780752
SW846 3535A	SW3535A PCB SPE Extraction	DXF4	05/05/25	0545	2791588
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	JM13	05/02/25	0830	2790988
SW846 9010C Distillation	SW846 9010C Prep	KLP1	04/16/25	1306	2781930
SW846 3005A	ICP-MS 3005A PREP	HS2	05/02/25	1420	2790405

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Certificate of Analysis

Report Date: July 8, 2025

Company :	Four Rivers Nuclear Partnership, LLC
Address :	5600 Hobbs Road
	Kevil, Kentucky 42053
Contact:	Ms. Jaime Morrow
Project:	C-746-U Landfill Quarterly(UG25-03)

Client Sample ID:	MW371UG3-25	Project:	FRNP00607
Sample ID:	718665005	Client ID:	FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 8011	
2	SW846 8011	
3	SW846 9060A	
4	SW846 9012B	
5	SW846 9020B	
6	EPA 300.0	
7	SW846 9056A	
8	SW846 9056A	
9	SW846 7470A	
10	SW846 3005A/6020B	
11	SW846 3005A/6020B	
12	SW846 3005A/6020B	
13	SW846 3005A/6020B	
14	SW846 3005A/6020B	
15	SW846 3535A/8082A	
16	EPA 160.1	
17	EPA 410.4	
18	SW846 8260D	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
1-Chloro-2-fluorobenzene	8011 VOA- 1,2-Dibromo-3-chloropropane "As Received"	6.31 ug/L	6.81	93	(56%-149%)
Decachlorobiphenyl	8082A, PCB Liquids "As Received"	0.167 ug/L	0.198	84	(30%-135%)
4cmx	8082A, PCB Liquids "As Received"	0.190 ug/L	0.198	96	(26%-108%)
Bromofluorobenzene	8260D, Volatiles- full suite "As Received"	53.4 ug/L	50.0	107	(85%-114%)
1,2-Dichloroethane-d4	8260D, Volatiles- full suite "As Received"	55.2 ug/L	50.0	110	(81%-118%)
Toluene-d8	8260D, Volatiles- full suite "As Received"	49.1 ug/L	50.0	98	(89%-112%)

Notes:

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Company :	Four Rivers Nuclear Partnership, LLC
Address :	5600 Hobbs Road
	Kevil, Kentucky 42053
Contact:	Ms. Jaime Morrow
Project:	C-746-U Landfill Quarterly(UG25-03)

Client Sample ID:	MW371UG3-25	Project:	FRNP00607
Sample ID:	718665005	Client ID:	FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Report Date: July 8, 2025

Company :	Four Rivers Nuclear Partnership, LLC
Address :	5600 Hobbs Road
	Kevil, Kentucky 42053
Contact:	Ms. Jaime Morrow
Project:	C-746-U Landfill Quarterly(UG25-03)

Client Sample ID:	MW371UG3-25	Project:	FRNP00607
Sample ID:	718665006	Client ID:	FRNP006
Matrix:	WG		
Collect Date:	10-APR-25 08:48		
Receive Date:	11-APR-25		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP-MS												
6020, Dissolved Metals (3 Elements) "As Received"												
Barium		0.0954	0.000670	0.00400	mg/L	1.00	1	PRB	05/09/25	0121	2781464	1
Chromium	U	0.0100	0.00300	0.0100	mg/L	1.00	1					
Uranium		0.000421	0.0000670	0.000200	mg/L	1.00	1	PRB	05/09/25	1050	2781464	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 160	Laboratory Filtration	MM7	04/14/25	1500	2780882
SW846 3005A	ICP-MS 3005A PREP	HS2	05/07/25	1600	2781463

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 3005A/6020B	
2	SW846 3005A/6020B	

Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Report Date: July 8, 2025

Company : Four Rivers Nuclear Partnership, LLC
Address : 5600 Hobbs Road

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID:	MW372UG3-25	Project:	FRNP00607
Sample ID:	718665007	Client ID:	FRNP006
Matrix:	WG		
Collect Date:	10-APR-25 09:23		
Receive Date:	11-APR-25		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
504.1/8011 Analysis of EDB/DBCP												
8011 VOA- 1,2-Dibromo-3-chloropropane "As Received"												
1,2-Dibromo-3-chloropropane	U	0.0189	0.00850	0.0189	ug/L	0.945	1	LOF	04/15/25	0547	2780753	1
Carbon Analysis												
9060A, Total Organic Carbon "As Received"												
Total Organic Carbon Average	J	1.30	0.330	2.00	mg/L		1	KB3	04/24/25	0533	2786227	3
Flow Injection Analysis												
9012B, Cyanide, Total "As Received"												
Cyanide, Total	JN1	0.00223	0.00167	0.200	mg/L	1.00	1	KLP1	04/21/25	1146	2781931	4
Halogen Analysis												
9020B, TOX (Organic Halogen) "As Received"												
Total Organic Halogens	BJ	7.12	3.33	10.0	ug/L		1	RMJ	05/08/25	2327	2792472	5
Ion Chromatography												
300.0, Iodide in Liquid "As Received"												
Iodide	U	0.500	0.167	0.500	mg/L		1	CH6	04/24/25	1946	2786988	6
SW846 9056A Anions (5 elements) "As Received"												
Bromide		0.488	0.0670	0.200	mg/L		1	RXB5	04/11/25	1322	2780251	7
Fluoride	J	0.190	0.0330	4.00	mg/L		1					
Chloride	J	34.4	0.268	250	mg/L		4	RXB5	04/11/25	2226	2780251	8
Nitrate-N	J	0.603	0.132	10.0	mg/L		4					
Sulfate		161	2.66	8.00	mg/L		20	RXB5	04/11/25	2257	2780251	9
Mercury Analysis-CVAA												
7470, Mercury Liquid "As Received"												
Mercury	U	0.000200	0.0000670	0.000200	mg/L	1.00	1	JP2	05/05/25	0944	2790989	10
Metals Analysis-ICP-MS												
6020, Metals (15+ elements) "As Received"												
Aluminum	U	0.0500	0.0193	0.0500	mg/L	1.00	1	BCD1	05/05/25	1609	2790406	11
Antimony	U	0.00300	0.00100	0.00300	mg/L	1.00	1					
Arsenic	U	0.00500	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0598	0.000670	0.00400	mg/L	1.00	1					
Beryllium	U	0.000500	0.000200	0.000500	mg/L	1.00	1					
Cadmium	U	0.00100	0.000300	0.00100	mg/L	1.00	1					
Chromium	U	0.0100	0.00300	0.0100	mg/L	1.00	1					
Cobalt	J	0.000386	0.000300	0.00100	mg/L	1.00	1					
Copper	J	0.000896	0.000300	0.00200	mg/L	1.00	1					

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Company : Four Rivers Nuclear Partnership, LLC
Address : 5600 Hobbs Road

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: MW372UG3-25 Project: FRNP00607
Sample ID: 718665007 Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP-MS												
6020, Metals (15+ elements) "As Received"												
Iron	J	0.0907	0.0330	0.100	mg/L	1.00	1					
Lead	U	0.00200	0.000500	0.00200	mg/L	1.00	1					
Magnesium		24.2	0.0100	0.0300	mg/L	1.00	1					
Molybdenum	J	0.000241	0.000200	0.00100	mg/L	1.00	1					
Nickel	J	0.000831	0.000600	0.00200	mg/L	1.00	1					
Potassium		2.47	0.0800	0.300	mg/L	1.00	1					
Selenium	U	0.00500	0.00150	0.00500	mg/L	1.00	1					
Silver	U	0.00100	0.000300	0.00100	mg/L	1.00	1					
Thallium	U	0.00200	0.000600	0.00200	mg/L	1.00	1					
Vanadium	U	0.0200	0.00330	0.0200	mg/L	1.00	1					
Rhodium	U	0.00500	0.00160	0.00500	mg/L	1.00	1	PRB	05/07/25	1814	2790406	12
Tantalum	U	0.00500	0.00100	0.00500	mg/L	1.00	1					
Manganese	J	0.00479	0.00100	0.00500	mg/L	1.00	1	PRB	05/07/25	2115	2790406	13
Uranium	U	0.000200	0.0000670	0.000200	mg/L	1.00	1					
Zinc	J	0.00365	0.00330	0.0200	mg/L	1.00	1					
Calcium		66.4	1.60	4.00	mg/L	1.00	20	PRB	05/07/25	2149	2790406	14
Sodium		59.1	1.60	5.00	mg/L	1.00	20					
Boron		1.43	0.104	0.300	mg/L	1.00	20	PRB	05/08/25	1017	2790406	15
Semi-Volatiles-PCB												
8082A, PCB Liquids "As Received"												
Aroclor-1016	UY2	0.101	0.0336	0.101	ug/L	0.00101	1	YS1	05/05/25	2139	2791589	16
Aroclor-1221	U	0.101	0.0336	0.101	ug/L	0.00101	1					
Aroclor-1232	U	0.101	0.0336	0.101	ug/L	0.00101	1					
Aroclor-1242	U	0.101	0.0336	0.101	ug/L	0.00101	1					
Aroclor-1248	U	0.101	0.0336	0.101	ug/L	0.00101	1					
Aroclor-1254	U	0.101	0.0336	0.101	ug/L	0.00101	1					
Aroclor-1260	UY1Y2	0.101	0.0336	0.101	ug/L	0.00101	1					
Aroclor-1268	U	0.101	0.0336	0.101	ug/L	0.00101	1					
Aroclor-Total	UY1Y2	0.101	0.0336	0.101	ug/L	0.00101	1					
Solids Analysis												
160.1, Dissolved Solids "As Received"												
Total Dissolved Solids		474	2.38	10.0	mg/L			CH6	04/16/25	1431	2782539	17
Spectrometric Analysis												
410.4, Chem. Oxygen Demand "As Received"												

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Certificate of Analysis

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Address : 5600 Hobbs Road

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: MW372UG3-25 Project: FRNP00607
Sample ID: 718665007 Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Spectrometric Analysis												
410.4, Chem. Oxygen Demand "As Received"												
COD	U	20.0	8.95	20.0	mg/L		1	HH2	04/22/25	1648	2781684	18
Volatile Organics												
8260D, Volatiles- full suite "As Received"												
1,1,1,2-Tetrachloroethane	U	1.00	0.333	1.00	ug/L		1	PXY1	04/17/25	1436	2783250	19
1,1,1-Trichloroethane	U	1.00	0.333	1.00	ug/L		1					
1,1,2,2-Tetrachloroethane	U	1.00	0.333	1.00	ug/L		1					
1,1,2-Trichloroethane	U	1.00	0.333	1.00	ug/L		1					
1,1-Dichloroethane	U	1.00	0.333	1.00	ug/L		1					
1,1-Dichloroethylene	U	1.00	0.333	1.00	ug/L		1					
1,2,3-Trichloropropane	U	1.00	0.333	1.00	ug/L		1					
1,2-Dibromoethane	U	1.00	0.333	1.00	ug/L		1					
1,2-Dichlorobenzene	U	1.00	0.333	1.00	ug/L		1					
1,2-Dichloroethane	U	1.00	0.333	1.00	ug/L		1					
1,2-Dichloropropane	U	1.00	0.333	1.00	ug/L		1					
1,4-Dichlorobenzene	U	1.00	0.333	1.00	ug/L		1					
2-Butanone	U	5.00	1.67	5.00	ug/L		1					
2-Hexanone	U	5.00	1.67	5.00	ug/L		1					
4-Methyl-2-pentanone	U	5.00	1.67	5.00	ug/L		1					
Acetone	U	5.00	1.74	5.00	ug/L		1					
Acrolein	U	5.00	1.67	5.00	ug/L		1					
Acrylonitrile	U	5.00	1.67	5.00	ug/L		1					
Benzene	U	1.00	0.333	1.00	ug/L		1					
Bromochloromethane	U	1.00	0.333	1.00	ug/L		1					
Bromodichloromethane	U	1.00	0.333	1.00	ug/L		1					
Bromoform	U	1.00	0.333	1.00	ug/L		1					
Bromomethane	U	1.00	0.337	1.00	ug/L		1					
Carbon disulfide	U	5.00	1.67	5.00	ug/L		1					
Carbon tetrachloride	U	1.00	0.333	1.00	ug/L		1					
Chlorobenzene	U	1.00	0.333	1.00	ug/L		1					
Chloroethane	U	1.00	0.333	1.00	ug/L		1					
Chloroform	U	1.00	0.333	1.00	ug/L		1					
Chloromethane	U	1.00	0.333	1.00	ug/L		1					
Dibromochloromethane	U	1.00	0.333	1.00	ug/L		1					
Dibromomethane	U	1.00	0.333	1.00	ug/L		1					
Ethylbenzene	U	1.00	0.333	1.00	ug/L		1					
Iodomethane	U	5.00	1.67	5.00	ug/L		1					

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Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: MW372UG3-25 Project: FRNP00607
Sample ID: 718665007 Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
8260D, Volatiles- full suite "As Received"												
Methylene chloride	J	0.920	0.500	5.00	ug/L		1					
Styrene	U	1.00	0.333	1.00	ug/L		1					
Tetrachloroethylene	U	1.00	0.333	1.00	ug/L		1					
Toluene	U	1.00	0.333	1.00	ug/L		1					
Trichloroethylene		2.73	0.333	1.00	ug/L		1					
Trichlorofluoromethane	U	1.00	0.333	1.00	ug/L		1					
Vinyl acetate	U	5.00	1.67	5.00	ug/L		1					
Vinyl chloride	U	1.00	0.333	1.00	ug/L		1					
Xylenes (total)	U	3.00	1.00	3.00	ug/L		1					
cis-1,2-Dichloroethylene	U	1.00	0.333	1.00	ug/L		1					
cis-1,3-Dichloropropylene	U	1.00	0.333	1.00	ug/L		1					
trans-1,2-Dichloroethylene	U	1.00	0.333	1.00	ug/L		1					
trans-1,3-Dichloropropylene	U	1.00	0.333	1.00	ug/L		1					
trans-1,4-Dichloro-2-butene	UY1	5.00	1.67	5.00	ug/L		1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	HS2	05/02/25	1420	2790405
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	JM13	05/02/25	0830	2790988
SW846 9010C Distillation	SW846 9010C Prep	KLP1	04/16/25	1306	2781930
SW846 8011 PREP	8011 Prep	LOF	04/14/25	1716	2780752
SW846 3535A	SW3535A PCB SPE Extraction	DXF4	05/05/25	0545	2791588

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Company :	Four Rivers Nuclear Partnership, LLC
Address :	5600 Hobbs Road
	Kevil, Kentucky 42053
Contact:	Ms. Jaime Morrow
Project:	C-746-U Landfill Quarterly(UG25-03)

Client Sample ID:	MW372UG3-25	Project:	FRNP00607
Sample ID:	718665007	Client ID:	FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 8011	
2	SW846 8011	
3	SW846 9060A	
4	SW846 9012B	
5	SW846 9020B	
6	EPA 300.0	
7	SW846 9056A	
8	SW846 9056A	
9	SW846 9056A	
10	SW846 7470A	
11	SW846 3005A/6020B	
12	SW846 3005A/6020B	
13	SW846 3005A/6020B	
14	SW846 3005A/6020B	
15	SW846 3005A/6020B	
16	SW846 3535A/8082A	
17	EPA 160.1	
18	EPA 410.4	
19	SW846 8260D	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
1-Chloro-2-fluorobenzene	8011 VOA- 1,2-Dibromo-3-chloropropane "As Received"	5.87 ug/L	6.75	87	(56%-149%)
Decachlorobiphenyl	8082A, PCB Liquids "As Received"	0.157 ug/L	0.202	78	(30%-135%)
4cmx	8082A, PCB Liquids "As Received"	0.165 ug/L	0.202	82	(26%-108%)
Bromofluorobenzene	8260D, Volatiles- full suite "As Received"	54.1 ug/L	50.0	108	(85%-114%)
1,2-Dichloroethane-d4	8260D, Volatiles- full suite "As Received"	55.2 ug/L	50.0	110	(81%-118%)
Toluene-d8	8260D, Volatiles- full suite "As Received"	50.0 ug/L	50.0	100	(89%-112%)

Notes:

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Contact:	Ms. Jaime Morrow
Project:	C-746-U Landfill Quarterly(UG25-03)

Client Sample ID:	MW372UG3-25	Project:	FRNP00607
Sample ID:	718665007	Client ID:	FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Company :	Four Rivers Nuclear Partnership, LLC
Address :	5600 Hobbs Road
	Kevil, Kentucky 42053
Contact:	Ms. Jaime Morrow
Project:	C-746-U Landfill Quarterly(UG25-03)

Client Sample ID:	MW372UG3-25	Project:	FRNP00607
Sample ID:	718665008	Client ID:	FRNP006
Matrix:	WG		
Collect Date:	10-APR-25 09:23		
Receive Date:	11-APR-25		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP-MS												
6020, Dissolved Metals (3 Elements) "As Received"												
Barium		0.0605	0.000670	0.00400	mg/L	1.00	1	PRB	05/09/25	0124	2781464	1
Chromium	U	0.0100	0.00300	0.0100	mg/L	1.00	1					
Uranium	U	0.000200	0.0000670	0.000200	mg/L	1.00	1	PRB	05/09/25	1051	2781464	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 160	Laboratory Filtration	MM7	04/14/25	1500	2780882
SW846 3005A	ICP-MS 3005A PREP	HS2	05/07/25	1600	2781463

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 3005A/6020B	
2	SW846 3005A/6020B	

Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Certificate of Analysis

Report Date: July 8, 2025

Company : Four Rivers Nuclear Partnership, LLC
Address : 5600 Hobbs Road

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID:	MW373UG3-25	Project:	FRNP00607
Sample ID:	718665009	Client ID:	FRNP006
Matrix:	WG		
Collect Date:	10-APR-25 10:08		
Receive Date:	11-APR-25		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
504.1/8011 Analysis of EDB/DBCP												
8011 VOA- 1,2-Dibromo-3-chloropropane "As Received"												
1,2-Dibromo-3-chloropropane	U	0.0189	0.00853	0.0189	ug/L	0.947	1	LOF	04/15/25	0621	2780753	2
Carbon Analysis												
9060A, Total Organic Carbon "As Received"												
Total Organic Carbon Average	J	1.60	0.330	2.00	mg/L		1	KB3	04/24/25	0605	2786227	3
Flow Injection Analysis												
9012B, Cyanide, Total "As Received"												
Cyanide, Total	JN1	0.00796	0.00167	0.200	mg/L	1.00	1	KLP1	04/21/25	1147	2781931	4
Halogen Analysis												
9020B, TOX (Organic Halogen) "As Received"												
Total Organic Halogens	B	11.0	3.33	10.0	ug/L		1	RMJ	05/08/25	0220	2792472	5
Ion Chromatography												
300.0, Iodide in Liquid "As Received"												
Iodide	U	0.500	0.167	0.500	mg/L		1	CH6	04/24/25	1959	2786988	6
SW846 9056A Anions (5 elements) "As Received"												
Bromide		0.462	0.0670	0.200	mg/L		1	RXB5	04/11/25	1353	2780251	7
Fluoride	J	0.217	0.0330	4.00	mg/L		1					
Chloride	J	30.1	0.335	250	mg/L		5	RXB5	04/12/25	0030	2780251	8
Nitrate-N	J	0.627	0.165	10.0	mg/L		5					
Sulfate		225	2.66	8.00	mg/L		20	RXB5	04/12/25	0202	2780251	9
Mercury Analysis-CVAA												
7470, Mercury Liquid "As Received"												
Mercury	U	0.000200	0.0000670	0.000200	mg/L	1.00	1	JP2	05/05/25	0946	2790989	10
Metals Analysis-ICP-MS												
6020, Metals (15+ elements) "As Received"												
Aluminum	U	0.0500	0.0193	0.0500	mg/L	1.00	1	BCD1	05/05/25	1621	2790406	11
Antimony	U	0.00300	0.00100	0.00300	mg/L	1.00	1					
Arsenic	U	0.00500	0.00200	0.00500	mg/L	1.00	1					
Barium		0.0318	0.000670	0.00400	mg/L	1.00	1					
Beryllium	U	0.000500	0.000200	0.000500	mg/L	1.00	1					
Cadmium	U	0.00100	0.000300	0.00100	mg/L	1.00	1					
Chromium	U	0.0100	0.00300	0.0100	mg/L	1.00	1					
Cobalt	U	0.00100	0.000300	0.00100	mg/L	1.00	1					
Copper	J	0.000767	0.000300	0.00200	mg/L	1.00	1					

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Report Date: July 8, 2025

Company : Four Rivers Nuclear Partnership, LLC
Address : 5600 Hobbs Road

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: MW373UG3-25 Project: FRNP00607
Sample ID: 718665009 Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP-MS												
6020, Metals (15+ elements) "As Received"												
Iron	J	0.0482	0.0330	0.100	mg/L	1.00	1					
Lead	U	0.00200	0.000500	0.00200	mg/L	1.00	1					
Magnesium		31.6	0.0100	0.0300	mg/L	1.00	1					
Molybdenum	U	0.00100	0.000200	0.00100	mg/L	1.00	1					
Nickel	J	0.000819	0.000600	0.00200	mg/L	1.00	1					
Potassium		2.97	0.0800	0.300	mg/L	1.00	1					
Selenium	U	0.00500	0.00150	0.00500	mg/L	1.00	1					
Silver	U	0.00100	0.000300	0.00100	mg/L	1.00	1					
Thallium	U	0.00200	0.000600	0.00200	mg/L	1.00	1					
Vanadium	U	0.0200	0.00330	0.0200	mg/L	1.00	1					
Rhodium	U	0.00500	0.00160	0.00500	mg/L	1.00	1	PRB	05/07/25	1818	2790406	12
Tantalum	U	0.00500	0.00100	0.00500	mg/L	1.00	1					
Manganese		0.0211	0.00100	0.00500	mg/L	1.00	1	PRB	05/07/25	2117	2790406	13
Uranium	J	0.0000910	0.0000670	0.000200	mg/L	1.00	1					
Zinc	U	0.0200	0.00330	0.0200	mg/L	1.00	1					
Calcium		86.9	1.60	4.00	mg/L	1.00	20	PRB	05/07/25	2131	2790406	14
Sodium		75.3	1.60	5.00	mg/L	1.00	20					
Boron		2.47	0.104	0.300	mg/L	1.00	20	PRB	05/08/25	1011	2790406	15
Semi-Volatiles-PCB												
8082A, PCB Liquids "As Received"												
Aroclor-1016	UY2	0.100	0.0333	0.100	ug/L	0.00100	1	YS1	05/05/25	2215	2791589	16
Aroclor-1221	U	0.100	0.0333	0.100	ug/L	0.00100	1					
Aroclor-1232	U	0.100	0.0333	0.100	ug/L	0.00100	1					
Aroclor-1242	U	0.100	0.0333	0.100	ug/L	0.00100	1					
Aroclor-1248	U	0.100	0.0333	0.100	ug/L	0.00100	1					
Aroclor-1254	U	0.100	0.0333	0.100	ug/L	0.00100	1					
Aroclor-1260	UY1Y2	0.100	0.0333	0.100	ug/L	0.00100	1					
Aroclor-1268	U	0.100	0.0333	0.100	ug/L	0.00100	1					
Aroclor-Total	UY1Y2	0.100	0.0333	0.100	ug/L	0.00100	1					
Solids Analysis												
160.1, Dissolved Solids "As Received"												
Total Dissolved Solids		635	2.38	10.0	mg/L			CH6	04/16/25	1431	2782539	17
Spectrometric Analysis												
410.4, Chem. Oxygen Demand "As Received"												

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Company : Four Rivers Nuclear Partnership, LLC
Address : 5600 Hobbs Road

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: MW373UG3-25 Project: FRNP00607
Sample ID: 718665009 Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Spectrometric Analysis												
410.4, Chem. Oxygen Demand "As Received"												
COD	U	20.0	8.95	20.0	mg/L		1	HH2	04/22/25	1648	2781684	18
Volatile Organics												
8260D, Volatiles- full suite "As Received"												
1,1,1,2-Tetrachloroethane	U	1.00	0.333	1.00	ug/L		1	PXY1	04/17/25	1503	2783250	19
1,1,1-Trichloroethane	U	1.00	0.333	1.00	ug/L		1					
1,1,2,2-Tetrachloroethane	U	1.00	0.333	1.00	ug/L		1					
1,1,2-Trichloroethane	U	1.00	0.333	1.00	ug/L		1					
1,1-Dichloroethane	U	1.00	0.333	1.00	ug/L		1					
1,1-Dichloroethylene	U	1.00	0.333	1.00	ug/L		1					
1,2,3-Trichloropropane	U	1.00	0.333	1.00	ug/L		1					
1,2-Dibromoethane	U	1.00	0.333	1.00	ug/L		1					
1,2-Dichlorobenzene	U	1.00	0.333	1.00	ug/L		1					
1,2-Dichloroethane	U	1.00	0.333	1.00	ug/L		1					
1,2-Dichloropropane	U	1.00	0.333	1.00	ug/L		1					
1,4-Dichlorobenzene	U	1.00	0.333	1.00	ug/L		1					
2-Butanone	U	5.00	1.67	5.00	ug/L		1					
2-Hexanone	U	5.00	1.67	5.00	ug/L		1					
4-Methyl-2-pentanone	U	5.00	1.67	5.00	ug/L		1					
Acetone	U	5.00	1.74	5.00	ug/L		1					
Acrolein	U	5.00	1.67	5.00	ug/L		1					
Acrylonitrile	U	5.00	1.67	5.00	ug/L		1					
Benzene	U	1.00	0.333	1.00	ug/L		1					
Bromochloromethane	U	1.00	0.333	1.00	ug/L		1					
Bromodichloromethane	U	1.00	0.333	1.00	ug/L		1					
Bromoform	U	1.00	0.333	1.00	ug/L		1					
Bromomethane	U	1.00	0.337	1.00	ug/L		1					
Carbon disulfide	U	5.00	1.67	5.00	ug/L		1					
Carbon tetrachloride	U	1.00	0.333	1.00	ug/L		1					
Chlorobenzene	U	1.00	0.333	1.00	ug/L		1					
Chloroethane	U	1.00	0.333	1.00	ug/L		1					
Chloroform	U	1.00	0.333	1.00	ug/L		1					
Chloromethane	U	1.00	0.333	1.00	ug/L		1					
Dibromochloromethane	U	1.00	0.333	1.00	ug/L		1					
Dibromomethane	U	1.00	0.333	1.00	ug/L		1					
Ethylbenzene	U	1.00	0.333	1.00	ug/L		1					
Iodomethane	U	5.00	1.67	5.00	ug/L		1					

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Company : Four Rivers Nuclear Partnership, LLC
Address : 5600 Hobbs Road

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: MW373UG3-25 Project: FRNP00607
Sample ID: 718665009 Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
8260D, Volatiles- full suite "As Received"												
Methylene chloride	J	0.760	0.500	5.00	ug/L		1					
Styrene	U	1.00	0.333	1.00	ug/L		1					
Tetrachloroethylene	U	1.00	0.333	1.00	ug/L		1					
Toluene	U	1.00	0.333	1.00	ug/L		1					
Trichloroethylene		2.50	0.333	1.00	ug/L		1					
Trichlorofluoromethane	U	1.00	0.333	1.00	ug/L		1					
Vinyl acetate	U	5.00	1.67	5.00	ug/L		1					
Vinyl chloride	U	1.00	0.333	1.00	ug/L		1					
Xylenes (total)	UY1	3.00	1.00	3.00	ug/L		1					
cis-1,2-Dichloroethylene	U	1.00	0.333	1.00	ug/L		1					
cis-1,3-Dichloropropylene	U	1.00	0.333	1.00	ug/L		1					
trans-1,2-Dichloroethylene	U	1.00	0.333	1.00	ug/L		1					
trans-1,3-Dichloropropylene	U	1.00	0.333	1.00	ug/L		1					
trans-1,4-Dichloro-2-butene	UY1	5.00	1.67	5.00	ug/L		1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010C Distillation	SW846 9010C Prep	KLP1	04/16/25	1306	2781930
SW846 8011 PREP	8011 Prep	LOF	04/14/25	1716	2780752
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	JM13	05/02/25	0830	2790988
SW846 3535A	SW3535A PCB SPE Extraction	DXF4	05/05/25	0545	2791588
SW846 3005A	ICP-MS 3005A PREP	HS2	05/02/25	1420	2790405

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Address :	5600 Hobbs Road
	Kevil, Kentucky 42053
Contact:	Ms. Jaime Morrow
Project:	C-746-U Landfill Quarterly(UG25-03)

Client Sample ID:	MW373UG3-25	Project:	FRNP00607
Sample ID:	718665009	Client ID:	FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 8011	
2	SW846 8011	
3	SW846 9060A	
4	SW846 9012B	
5	SW846 9020B	
6	EPA 300.0	
7	SW846 9056A	
8	SW846 9056A	
9	SW846 9056A	
10	SW846 7470A	
11	SW846 3005A/6020B	
12	SW846 3005A/6020B	
13	SW846 3005A/6020B	
14	SW846 3005A/6020B	
15	SW846 3005A/6020B	
16	SW846 3535A/8082A	
17	EPA 160.1	
18	EPA 410.4	
19	SW846 8260D	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
1-Chloro-2-fluorobenzene	8011 VOA- 1,2-Dibromo-3-chloropropane "As Received"	6.37 ug/L	6.77	94	(56%-149%)
Decachlorobiphenyl	8082A, PCB Liquids "As Received"	0.190 ug/L	0.200	95	(30%-135%)
4cmx	8082A, PCB Liquids "As Received"	0.186 ug/L	0.200	93	(26%-108%)
Bromofluorobenzene	8260D, Volatiles- full suite "As Received"	51.3 ug/L	50.0	103	(85%-114%)
1,2-Dichloroethane-d4	8260D, Volatiles- full suite "As Received"	55.1 ug/L	50.0	110	(81%-118%)
Toluene-d8	8260D, Volatiles- full suite "As Received"	49.6 ug/L	50.0	99	(89%-112%)

Notes:

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Company :	Four Rivers Nuclear Partnership, LLC
Address :	5600 Hobbs Road
	Kevil, Kentucky 42053
Contact:	Ms. Jaime Morrow
Project:	C-746-U Landfill Quarterly(UG25-03)

Client Sample ID:	MW373UG3-25	Project:	FRNP00607
Sample ID:	718665009	Client ID:	FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Company :	Four Rivers Nuclear Partnership, LLC
Address :	5600 Hobbs Road
	Kevil, Kentucky 42053
Contact:	Ms. Jaime Morrow
Project:	C-746-U Landfill Quarterly(UG25-03)

Client Sample ID:	MW373UG3-25	Project:	FRNP00607
Sample ID:	718665010	Client ID:	FRNP006
Matrix:	WG		
Collect Date:	10-APR-25 10:08		
Receive Date:	11-APR-25		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP-MS												
6020, Dissolved Metals (3 Elements) "As Received"												
Barium		0.0318	0.000670	0.00400	mg/L	1.00	1	PRB	05/09/25	0042	2781464	1
Chromium	U	0.0100	0.00300	0.0100	mg/L	1.00	1					
Uranium	J	0.0000710	0.0000670	0.000200	mg/L	1.00	1	PRB	05/09/25	1114	2781464	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 160	Laboratory Filtration	MM7	04/14/25	1500	2780882
SW846 3005A	ICP-MS 3005A PREP	HS2	05/07/25	1600	2781463

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 3005A/6020B	
2	SW846 3005A/6020B	

Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Company : Four Rivers Nuclear Partnership, LLC
Address : 5600 Hobbs Road

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: MW374UG3-25
Sample ID: 718665011
Matrix: WG
Collect Date: 10-APR-25 11:04
Receive Date: 11-APR-25
Collector: Client

Project: FRNP00607
Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
504.1/8011 Analysis of EDB/DBCP												
8011 VOA- 1,2-Dibromo-3-chloropropane "As Received"												
1,2-Dibromo-3-chloropropane	U	0.0187	0.00841	0.0187	ug/L	0.935	1	LOF	04/15/25	0803	2780753	2
Carbon Analysis												
9060A, Total Organic Carbon "As Received"												
Total Organic Carbon Average		2.50	0.330	2.00	mg/L		1	KB3	04/24/25	0742	2786227	3
Flow Injection Analysis												
9012B, Cyanide, Total "As Received"												
Cyanide, Total	JN1	0.00250	0.00167	0.200	mg/L	1.00	1	KLP1	04/21/25	1150	2781931	4
Halogen Analysis												
9020B, TOX (Organic Halogen) "As Received"												
Total Organic Halogens	BHJ	4.24	3.33	10.0	ug/L		1	RMJ	05/09/25	0007	2792472	5
Ion Chromatography												
300.0, Iodide in Liquid "As Received"												
Iodide	U	0.500	0.167	0.500	mg/L		1	CH6	04/24/25	2129	2786990	6
SW846 9056A Anions (5 elements) "As Received"												
Bromide		0.478	0.0670	0.200	mg/L		1	RXB5	04/11/25	1424	2780251	7
Fluoride	J	0.197	0.0330	4.00	mg/L		1					
Sulfate		17.9	0.133	0.400	mg/L		1					
Chloride	J	45.4	0.335	250	mg/L		5	RXB5	04/12/25	0335	2780251	8
Nitrate-N	J	1.15	0.165	10.0	mg/L		5					
Mercury Analysis-CVAA												
7470, Mercury Liquid "As Received"												
Mercury	U	0.000200	0.0000670	0.000200	mg/L	1.00	1	JP2	05/05/25	0954	2790989	9
Metals Analysis-ICP-MS												
6020, Metals (15+ elements) "As Received"												
Aluminum		0.0533	0.0193	0.0500	mg/L	1.00	1	BCD1	05/05/25	1648	2790406	10
Antimony	U	0.00300	0.00100	0.00300	mg/L	1.00	1					
Arsenic	J	0.00201	0.00200	0.00500	mg/L	1.00	1					
Barium		0.133	0.000670	0.00400	mg/L	1.00	1					
Beryllium	U	0.000500	0.000200	0.000500	mg/L	1.00	1					
Cadmium	U	0.00100	0.000300	0.00100	mg/L	1.00	1					
Chromium	U	0.0100	0.00300	0.0100	mg/L	1.00	1					
Cobalt	J	0.000305	0.000300	0.00100	mg/L	1.00	1					
Copper	J	0.000518	0.000300	0.00200	mg/L	1.00	1					

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Company : Four Rivers Nuclear Partnership, LLC
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Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: MW374UG3-25 Project: FRNP00607
Sample ID: 718665011 Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP-MS												
6020, Metals (15+ elements) "As Received"												
Iron		0.649	0.0330	0.100	mg/L	1.00	1					
Lead	U	0.00200	0.000500	0.00200	mg/L	1.00	1					
Magnesium		6.28	0.0100	0.0300	mg/L	1.00	1					
Molybdenum	J	0.000263	0.000200	0.00100	mg/L	1.00	1					
Nickel	U	0.00200	0.000600	0.00200	mg/L	1.00	1					
Potassium		0.377	0.0800	0.300	mg/L	1.00	1					
Selenium		0.0131	0.00150	0.00500	mg/L	1.00	1					
Silver	U	0.00100	0.000300	0.00100	mg/L	1.00	1					
Thallium	U	0.00200	0.000600	0.00200	mg/L	1.00	1					
Vanadium	U	0.0200	0.00330	0.0200	mg/L	1.00	1					
Rhodium	U	0.00500	0.00160	0.00500	mg/L	1.00	1	PRB	05/07/25	1823	2790406	11
Tantalum	U	0.00500	0.00100	0.00500	mg/L	1.00	1					
Calcium		24.0	0.0800	0.200	mg/L	1.00	1	PRB	05/07/25	2152	2790406	12
Manganese		0.0673	0.00100	0.00500	mg/L	1.00	1					
Uranium		0.000808	0.0000670	0.000200	mg/L	1.00	1					
Zinc	U	0.0200	0.00330	0.0200	mg/L	1.00	1					
Sodium		125	0.400	1.25	mg/L	1.00	5	PRB	05/07/25	2155	2790406	13
Boron	J	0.00920	0.00520	0.0150	mg/L	1.00	1	PRB	05/08/25	1020	2790406	14
Semi-Volatiles-PCB												
8082A, PCB Liquids "As Received"												
Aroclor-1016	UY2S	0.0994	0.0331	0.0994	ug/L	0.000994	1	YS1	05/05/25	2251	2791589	15
Aroclor-1221	US	0.0994	0.0331	0.0994	ug/L	0.000994	1					
Aroclor-1232	US	0.0994	0.0331	0.0994	ug/L	0.000994	1					
Aroclor-1242	US	0.0994	0.0331	0.0994	ug/L	0.000994	1					
Aroclor-1248	US	0.0994	0.0331	0.0994	ug/L	0.000994	1					
Aroclor-1254	US	0.0994	0.0331	0.0994	ug/L	0.000994	1					
Aroclor-1260	UY1Y2S	0.0994	0.0331	0.0994	ug/L	0.000994	1					
Aroclor-1268	US	0.0994	0.0331	0.0994	ug/L	0.000994	1					
Aroclor-Total	UY1Y2S	0.0994	0.0331	0.0994	ug/L	0.000994	1					
Solids Analysis												
160.1, Dissolved Solids "As Received"												
Total Dissolved Solids		384	2.38	10.0	mg/L			CH6	04/16/25	1431	2782539	16
Spectrometric Analysis												
410.4, Chem. Oxygen Demand "As Received"												

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Certificate of Analysis

Report Date: July 8, 2025

Company : Four Rivers Nuclear Partnership, LLC
Address : 5600 Hobbs Road

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: MW374UG3-25 Project: FRNP00607
Sample ID: 718665011 Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Spectrometric Analysis												
410.4, Chem. Oxygen Demand "As Received"												
COD	U	20.0	8.95	20.0	mg/L		1	HH2	04/22/25	1648	2781684	17
Volatile Organics												
8260D, Volatiles- full suite "As Received"												
1,1,1,2-Tetrachloroethane	U	1.00	0.333	1.00	ug/L		1	PXY1	04/17/25	1530	2783250	18
1,1,1-Trichloroethane	U	1.00	0.333	1.00	ug/L		1					
1,1,2,2-Tetrachloroethane	U	1.00	0.333	1.00	ug/L		1					
1,1,2-Trichloroethane	U	1.00	0.333	1.00	ug/L		1					
1,1-Dichloroethane	U	1.00	0.333	1.00	ug/L		1					
1,1-Dichloroethylene	U	1.00	0.333	1.00	ug/L		1					
1,2,3-Trichloropropane	U	1.00	0.333	1.00	ug/L		1					
1,2-Dibromoethane	U	1.00	0.333	1.00	ug/L		1					
1,2-Dichlorobenzene	U	1.00	0.333	1.00	ug/L		1					
1,2-Dichloroethane	U	1.00	0.333	1.00	ug/L		1					
1,2-Dichloropropane	U	1.00	0.333	1.00	ug/L		1					
1,4-Dichlorobenzene	U	1.00	0.333	1.00	ug/L		1					
2-Butanone	U	5.00	1.67	5.00	ug/L		1					
2-Hexanone	U	5.00	1.67	5.00	ug/L		1					
4-Methyl-2-pentanone	U	5.00	1.67	5.00	ug/L		1					
Acetone	U	5.00	1.74	5.00	ug/L		1					
Acrolein	U	5.00	1.67	5.00	ug/L		1					
Acrylonitrile	U	5.00	1.67	5.00	ug/L		1					
Benzene	U	1.00	0.333	1.00	ug/L		1					
Bromochloromethane	U	1.00	0.333	1.00	ug/L		1					
Bromodichloromethane	U	1.00	0.333	1.00	ug/L		1					
Bromoform	U	1.00	0.333	1.00	ug/L		1					
Bromomethane	U	1.00	0.337	1.00	ug/L		1					
Carbon disulfide	U	5.00	1.67	5.00	ug/L		1					
Carbon tetrachloride	U	1.00	0.333	1.00	ug/L		1					
Chlorobenzene	U	1.00	0.333	1.00	ug/L		1					
Chloroethane	U	1.00	0.333	1.00	ug/L		1					
Chloroform	U	1.00	0.333	1.00	ug/L		1					
Chloromethane	U	1.00	0.333	1.00	ug/L		1					
Dibromochloromethane	U	1.00	0.333	1.00	ug/L		1					
Dibromomethane	U	1.00	0.333	1.00	ug/L		1					
Ethylbenzene	U	1.00	0.333	1.00	ug/L		1					
Iodomethane	U	5.00	1.67	5.00	ug/L		1					

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Company : Four Rivers Nuclear Partnership, LLC
Address : 5600 Hobbs Road

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: MW374UG3-25 Project: FRNP00607
Sample ID: 718665011 Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
8260D, Volatiles- full suite "As Received"												
Methylene chloride	J	1.20	0.500	5.00	ug/L		1					
Styrene	U	1.00	0.333	1.00	ug/L		1					
Tetrachloroethylene	U	1.00	0.333	1.00	ug/L		1					
Toluene	U	1.00	0.333	1.00	ug/L		1					
Trichloroethylene	U	1.00	0.333	1.00	ug/L		1					
Trichlorofluoromethane	U	1.00	0.333	1.00	ug/L		1					
Vinyl acetate	U	5.00	1.67	5.00	ug/L		1					
Vinyl chloride	U	1.00	0.333	1.00	ug/L		1					
Xylenes (total)	U	3.00	1.00	3.00	ug/L		1					
cis-1,2-Dichloroethylene	U	1.00	0.333	1.00	ug/L		1					
cis-1,3-Dichloropropylene	U	1.00	0.333	1.00	ug/L		1					
trans-1,2-Dichloroethylene	U	1.00	0.333	1.00	ug/L		1					
trans-1,3-Dichloropropylene	U	1.00	0.333	1.00	ug/L		1					
trans-1,4-Dichloro-2-butene	UY1	5.00	1.67	5.00	ug/L		1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	JM13	05/02/25	0830	2790988
SW846 3005A	ICP-MS 3005A PREP	HS2	05/02/25	1420	2790405
SW846 8011 PREP	8011 Prep	LOF	04/14/25	1716	2780752
SW846 3535A	SW3535A PCB SPE Extraction	DXF4	05/05/25	0545	2791588
SW846 9010C Distillation	SW846 9010C Prep	KLP1	04/16/25	1306	2781930

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	Kevil, Kentucky 42053
Contact:	Ms. Jaime Morrow
Project:	C-746-U Landfill Quarterly(UG25-03)

Client Sample ID:	MW374UG3-25	Project:	FRNP00607
Sample ID:	718665011	Client ID:	FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 8011	
2	SW846 8011	
3	SW846 9060A	
4	SW846 9012B	
5	SW846 9020B	
6	EPA 300.0	
7	SW846 9056A	
8	SW846 9056A	
9	SW846 7470A	
10	SW846 3005A/6020B	
11	SW846 3005A/6020B	
12	SW846 3005A/6020B	
13	SW846 3005A/6020B	
14	SW846 3005A/6020B	
15	SW846 3535A/8082A	
16	EPA 160.1	
17	EPA 410.4	
18	SW846 8260D	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
1-Chloro-2-fluorobenzene	8011 VOA- 1,2-Dibromo-3-chloropropane "As Received"	6.60 ug/L	6.68	99	(56%-149%)
Decachlorobiphenyl	8082A, PCB Liquids "As Received"	0.154 ug/L	0.199	77	(30%-135%)
4cmx	8082A, PCB Liquids "As Received"	0.219 ug/L	0.199	110*	(26%-108%)
Bromofluorobenzene	8260D, Volatiles- full suite "As Received"	51.8 ug/L	50.0	104	(85%-114%)
1,2-Dichloroethane-d4	8260D, Volatiles- full suite "As Received"	56.1 ug/L	50.0	112	(81%-118%)
Toluene-d8	8260D, Volatiles- full suite "As Received"	49.6 ug/L	50.0	99	(89%-112%)

Notes:

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Contact:	Ms. Jaime Morrow
Project:	C-746-U Landfill Quarterly(UG25-03)

Client Sample ID:	MW374UG3-25	Project:	FRNP00607
Sample ID:	718665011	Client ID:	FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Company :	Four Rivers Nuclear Partnership, LLC
Address :	5600 Hobbs Road
	Kevil, Kentucky 42053
Contact:	Ms. Jaime Morrow
Project:	C-746-U Landfill Quarterly(UG25-03)

Client Sample ID:	MW374UG3-25	Project:	FRNP00607
Sample ID:	718665012	Client ID:	FRNP006
Matrix:	WG		
Collect Date:	10-APR-25 11:04		
Receive Date:	11-APR-25		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP-MS												
6020, Dissolved Metals (3 Elements) "As Received"												
Barium		0.124	0.000670	0.00400	mg/L	1.00	1	PRB	05/09/25	0056	2781464	1
Chromium	U	0.0100	0.00300	0.0100	mg/L	1.00	1					
Uranium		0.000764	0.0000670	0.000200	mg/L	1.00	1	PRB	05/09/25	1112	2781464	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 160	Laboratory Filtration	MM7	04/14/25	1500	2780882
SW846 3005A	ICP-MS 3005A PREP	HS2	05/07/25	1600	2781463

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 3005A/6020B	
2	SW846 3005A/6020B	

Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Company : Four Rivers Nuclear Partnership, LLC
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Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID:	MW375UG3-25	Project:	FRNP00607
Sample ID:	718665013	Client ID:	FRNP006
Matrix:	WG		
Collect Date:	10-APR-25 12:34		
Receive Date:	11-APR-25		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
504.1/8011 Analysis of EDB/DBCP												
8011 VOA- 1,2-Dibromo-3-chloropropane "As Received"												
1,2-Dibromo-3-chloropropane	U	0.0190	0.00856	0.0190	ug/L	0.951	1	LOF	04/15/25	0926	2780753	2
Carbon Analysis												
9060A, Total Organic Carbon "As Received"												
Total Organic Carbon Average	J	0.881	0.330	2.00	mg/L		1	KB3	04/24/25	0834	2786227	3
Flow Injection Analysis												
9012B, Cyanide, Total "As Received"												
Cyanide, Total	UN1	0.200	0.00167	0.200	mg/L	1.00	1	KLP1	04/21/25	1157	2781931	4
Halogen Analysis												
9020B, TOX (Organic Halogen) "As Received"												
Total Organic Halogens	B	18.4	3.33	10.0	ug/L		1	RMJ	05/08/25	0918	2792472	5
Ion Chromatography												
300.0, Iodide in Liquid "As Received"												
Iodide	U	0.500	0.167	0.500	mg/L		1	CH6	04/24/25	2142	2786990	6
SW846 9056A Anions (5 elements) "As Received"												
Bromide	U	0.200	0.0670	0.200	mg/L		1	RXB5	04/11/25	1455	2780251	7
Chloride	J	3.21	0.0670	250	mg/L		1					
Fluoride	J	0.293	0.0330	4.00	mg/L		1					
Nitrate-N	J	0.854	0.0660	10.0	mg/L		2	RXB5	04/12/25	0406	2780251	8
Sulfate		22.0	0.266	0.800	mg/L		2					
Mercury Analysis-CVAA												
7470, Mercury Liquid "As Received"												
Mercury	U	0.000200	0.0000670	0.000200	mg/L	1.00	1	JP2	05/05/25	0959	2790989	9
Metals Analysis-ICP-MS												
6020, Metals (15+ elements) "As Received"												
Aluminum	J	0.0249	0.0193	0.0500	mg/L	1.00	1	BCD1	05/05/25	1652	2790406	10
Antimony	U	0.00300	0.00100	0.00300	mg/L	1.00	1					
Arsenic	U	0.00500	0.00200	0.00500	mg/L	1.00	1					
Barium		0.162	0.000670	0.00400	mg/L	1.00	1					
Beryllium	U	0.000500	0.000200	0.000500	mg/L	1.00	1					
Cadmium	U	0.00100	0.000300	0.00100	mg/L	1.00	1					
Chromium	U	0.0100	0.00300	0.0100	mg/L	1.00	1					
Cobalt	J	0.000575	0.000300	0.00100	mg/L	1.00	1					
Copper	J	0.000597	0.000300	0.00200	mg/L	1.00	1					

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Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: MW375UG3-25 Project: FRNP00607
Sample ID: 718665013 Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP-MS												
6020, Metals (15+ elements) "As Received"												
Iron		0.101	0.0330	0.100	mg/L	1.00	1					
Lead	U	0.00200	0.000500	0.00200	mg/L	1.00	1					
Magnesium		5.34	0.0100	0.0300	mg/L	1.00	1					
Molybdenum	U	0.00100	0.000200	0.00100	mg/L	1.00	1					
Nickel	J	0.000897	0.000600	0.00200	mg/L	1.00	1					
Potassium	J	0.276	0.0800	0.300	mg/L	1.00	1					
Selenium	J	0.00225	0.00150	0.00500	mg/L	1.00	1					
Silver	U	0.00100	0.000300	0.00100	mg/L	1.00	1					
Thallium	U	0.00200	0.000600	0.00200	mg/L	1.00	1					
Vanadium	U	0.0200	0.00330	0.0200	mg/L	1.00	1					
Rhodium	U	0.00500	0.00160	0.00500	mg/L	1.00	1	PRB	05/07/25	1824	2790406	11
Tantalum	U	0.00500	0.00100	0.00500	mg/L	1.00	1					
Calcium		13.3	0.0800	0.200	mg/L	1.00	1	PRB	05/07/25	2158	2790406	12
Manganese		0.0117	0.00100	0.00500	mg/L	1.00	1					
Uranium	U	0.000200	0.0000670	0.000200	mg/L	1.00	1					
Zinc	J	0.00338	0.00330	0.0200	mg/L	1.00	1					
Sodium		51.6	0.400	1.25	mg/L	1.00	5	PRB	05/07/25	2201	2790406	13
Boron	J	0.00780	0.00520	0.0150	mg/L	1.00	1	PRB	05/08/25	1021	2790406	14
Semi-Volatiles-PCB												
8082A, PCB Liquids "As Received"												
Aroclor-1016	UY2	0.0991	0.0330	0.0991	ug/L	0.000991	1	YS1	05/05/25	2303	2791589	15
Aroclor-1221	U	0.0991	0.0330	0.0991	ug/L	0.000991	1					
Aroclor-1232	U	0.0991	0.0330	0.0991	ug/L	0.000991	1					
Aroclor-1242	U	0.0991	0.0330	0.0991	ug/L	0.000991	1					
Aroclor-1248	U	0.0991	0.0330	0.0991	ug/L	0.000991	1					
Aroclor-1254	U	0.0991	0.0330	0.0991	ug/L	0.000991	1					
Aroclor-1260	UY1Y2	0.0991	0.0330	0.0991	ug/L	0.000991	1					
Aroclor-1268	U	0.0991	0.0330	0.0991	ug/L	0.000991	1					
Aroclor-Total	UY1Y2	0.0991	0.0330	0.0991	ug/L	0.000991	1					
Solids Analysis												
160.1, Dissolved Solids "As Received"												
Total Dissolved Solids		195	2.38	10.0	mg/L			CH6	04/16/25	1431	2782539	16
Spectrometric Analysis												
410.4, Chem. Oxygen Demand "As Received"												

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Client Sample ID: MW375UG3-25 Project: FRNP00607
Sample ID: 718665013 Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Spectrometric Analysis												
410.4, Chem. Oxygen Demand "As Received"												
COD	U	20.0	8.95	20.0	mg/L		1	HH2	04/22/25	1648	2781684	17
Volatile Organics												
8260D, Volatiles- full suite "As Received"												
1,1,1,2-Tetrachloroethane	U	1.00	0.333	1.00	ug/L		1	PXY1	04/17/25	1556	2783250	18
1,1,1-Trichloroethane	U	1.00	0.333	1.00	ug/L		1					
1,1,2,2-Tetrachloroethane	U	1.00	0.333	1.00	ug/L		1					
1,1,2-Trichloroethane	U	1.00	0.333	1.00	ug/L		1					
1,1-Dichloroethane	U	1.00	0.333	1.00	ug/L		1					
1,1-Dichloroethylene	U	1.00	0.333	1.00	ug/L		1					
1,2,3-Trichloropropane	U	1.00	0.333	1.00	ug/L		1					
1,2-Dibromoethane	U	1.00	0.333	1.00	ug/L		1					
1,2-Dichlorobenzene	U	1.00	0.333	1.00	ug/L		1					
1,2-Dichloroethane	U	1.00	0.333	1.00	ug/L		1					
1,2-Dichloropropane	U	1.00	0.333	1.00	ug/L		1					
1,4-Dichlorobenzene	U	1.00	0.333	1.00	ug/L		1					
2-Butanone	U	5.00	1.67	5.00	ug/L		1					
2-Hexanone	U	5.00	1.67	5.00	ug/L		1					
4-Methyl-2-pentanone	U	5.00	1.67	5.00	ug/L		1					
Acetone	U	5.00	1.74	5.00	ug/L		1					
Acrolein	U	5.00	1.67	5.00	ug/L		1					
Acrylonitrile	U	5.00	1.67	5.00	ug/L		1					
Benzene	U	1.00	0.333	1.00	ug/L		1					
Bromochloromethane	U	1.00	0.333	1.00	ug/L		1					
Bromodichloromethane	U	1.00	0.333	1.00	ug/L		1					
Bromoform	U	1.00	0.333	1.00	ug/L		1					
Bromomethane	U	1.00	0.337	1.00	ug/L		1					
Carbon disulfide	U	5.00	1.67	5.00	ug/L		1					
Carbon tetrachloride	U	1.00	0.333	1.00	ug/L		1					
Chlorobenzene	U	1.00	0.333	1.00	ug/L		1					
Chloroethane	U	1.00	0.333	1.00	ug/L		1					
Chloroform	U	1.00	0.333	1.00	ug/L		1					
Chloromethane	U	1.00	0.333	1.00	ug/L		1					
Dibromochloromethane	U	1.00	0.333	1.00	ug/L		1					
Dibromomethane	U	1.00	0.333	1.00	ug/L		1					
Ethylbenzene	U	1.00	0.333	1.00	ug/L		1					
Iodomethane	U	5.00	1.67	5.00	ug/L		1					

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Address : 5600 Hobbs Road

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: MW375UG3-25 Project: FRNP00607
Sample ID: 718665013 Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
8260D, Volatiles- full suite "As Received"												
Methylene chloride	J	1.32	0.500	5.00	ug/L		1					
Styrene	U	1.00	0.333	1.00	ug/L		1					
Tetrachloroethylene	U	1.00	0.333	1.00	ug/L		1					
Toluene	U	1.00	0.333	1.00	ug/L		1					
Trichloroethylene	U	1.00	0.333	1.00	ug/L		1					
Trichlorofluoromethane	U	1.00	0.333	1.00	ug/L		1					
Vinyl acetate	U	5.00	1.67	5.00	ug/L		1					
Vinyl chloride	U	1.00	0.333	1.00	ug/L		1					
Xylenes (total)	U	3.00	1.00	3.00	ug/L		1					
cis-1,2-Dichloroethylene	U	1.00	0.333	1.00	ug/L		1					
cis-1,3-Dichloropropylene	U	1.00	0.333	1.00	ug/L		1					
trans-1,2-Dichloroethylene	U	1.00	0.333	1.00	ug/L		1					
trans-1,3-Dichloropropylene	U	1.00	0.333	1.00	ug/L		1					
trans-1,4-Dichloro-2-butene	UY1	5.00	1.67	5.00	ug/L		1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	HS2	05/02/25	1420	2790405
SW846 8011 PREP	8011 Prep	LOF	04/14/25	1716	2780752
SW846 9010C Distillation	SW846 9010C Prep	KLP1	04/16/25	1306	2781930
SW846 3535A	SW3535A PCB SPE Extraction	DXF4	05/05/25	0545	2791588
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	JM13	05/02/25	0830	2790988

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Company :	Four Rivers Nuclear Partnership, LLC
Address :	5600 Hobbs Road
	Kevil, Kentucky 42053
Contact:	Ms. Jaime Morrow
Project:	C-746-U Landfill Quarterly(UG25-03)

Client Sample ID:	MW375UG3-25	Project:	FRNP00607
Sample ID:	718665013	Client ID:	FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 8011	
2	SW846 8011	
3	SW846 9060A	
4	SW846 9012B	
5	SW846 9020B	
6	EPA 300.0	
7	SW846 9056A	
8	SW846 9056A	
9	SW846 7470A	
10	SW846 3005A/6020B	
11	SW846 3005A/6020B	
12	SW846 3005A/6020B	
13	SW846 3005A/6020B	
14	SW846 3005A/6020B	
15	SW846 3535A/8082A	
16	EPA 160.1	
17	EPA 410.4	
18	SW846 8260D	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
1-Chloro-2-fluorobenzene	8011 VOA- 1,2-Dibromo-3-chloropropane "As Received"	6.67 ug/L	6.79	98	(56%-149%)
Decachlorobiphenyl	8082A, PCB Liquids "As Received"	0.158 ug/L	0.198	80	(30%-135%)
4cmx	8082A, PCB Liquids "As Received"	0.205 ug/L	0.198	104	(26%-108%)
Bromofluorobenzene	8260D, Volatiles- full suite "As Received"	55.2 ug/L	50.0	110	(85%-114%)
1,2-Dichloroethane-d4	8260D, Volatiles- full suite "As Received"	55.7 ug/L	50.0	111	(81%-118%)
Toluene-d8	8260D, Volatiles- full suite "As Received"	50.5 ug/L	50.0	101	(89%-112%)

Notes:

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Contact:	Ms. Jaime Morrow
Project:	C-746-U Landfill Quarterly(UG25-03)

Client Sample ID:	MW375UG3-25	Project:	FRNP00607
Sample ID:	718665013	Client ID:	FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Report Date: July 8, 2025

Company :	Four Rivers Nuclear Partnership, LLC
Address :	5600 Hobbs Road
	Kevil, Kentucky 42053
Contact:	Ms. Jaime Morrow
Project:	C-746-U Landfill Quarterly(UG25-03)

Client Sample ID:	MW375UG3-25	Project:	FRNP00607
Sample ID:	718665014	Client ID:	FRNP006
Matrix:	WG		
Collect Date:	10-APR-25 12:34		
Receive Date:	11-APR-25		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP-MS												
6020, Dissolved Metals (3 Elements) "As Received"												
Barium		0.159	0.000670	0.00400	mg/L	1.00	1	PRB	05/09/25	0059	2781464	1
Chromium	U	0.0100	0.00300	0.0100	mg/L	1.00	1					
Uranium	U	0.000200	0.0000670	0.000200	mg/L	1.00	1	PRB	05/09/25	1113	2781464	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	HS2	05/07/25	1600	2781463
EPA 160	Laboratory Filtration	MM7	04/14/25	1500	2780882

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 3005A/6020B	
2	SW846 3005A/6020B	

Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Report Date: July 8, 2025

Company : Four Rivers Nuclear Partnership, LLC
Address : 5600 Hobbs Road

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: TB3UG3-25
Sample ID: 718665015
Matrix: WATER
Collect Date: 10-APR-25 06:45
Receive Date: 11-APR-25
Collector: Client

Project: FRNP00607
Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
504.1/8011 Analysis of EDB/DBCP												
8011 VOA- 1,2-Dibromo-3-chloropropane "As Received"												
1,2-Dibromo-3-chloropropane	U	0.0190	0.00856	0.0190	ug/L	0.951	1	LOF	04/15/25	1000	2780753	1
Volatile Organics												
8260D, Volatiles- full suite "As Received"												
1,1,1,2-Tetrachloroethane	U	1.00	0.333	1.00	ug/L		1	PXY1	04/17/25	1623	2783250	3
1,1,1-Trichloroethane	U	1.00	0.333	1.00	ug/L		1					
1,1,2,2-Tetrachloroethane	U	1.00	0.333	1.00	ug/L		1					
1,1,2-Trichloroethane	U	1.00	0.333	1.00	ug/L		1					
1,1-Dichloroethane	U	1.00	0.333	1.00	ug/L		1					
1,1-Dichloroethylene	U	1.00	0.333	1.00	ug/L		1					
1,2,3-Trichloropropane	U	1.00	0.333	1.00	ug/L		1					
1,2-Dibromoethane	U	1.00	0.333	1.00	ug/L		1					
1,2-Dichlorobenzene	U	1.00	0.333	1.00	ug/L		1					
1,2-Dichloroethane	U	1.00	0.333	1.00	ug/L		1					
1,2-Dichloropropane	U	1.00	0.333	1.00	ug/L		1					
1,4-Dichlorobenzene	U	1.00	0.333	1.00	ug/L		1					
2-Butanone	U	5.00	1.67	5.00	ug/L		1					
2-Hexanone	U	5.00	1.67	5.00	ug/L		1					
4-Methyl-2-pentanone	U	5.00	1.67	5.00	ug/L		1					
Acetone	U	5.00	1.74	5.00	ug/L		1					
Acrolein	U	5.00	1.67	5.00	ug/L		1					
Acrylonitrile	U	5.00	1.67	5.00	ug/L		1					
Benzene	U	1.00	0.333	1.00	ug/L		1					
Bromochloromethane	U	1.00	0.333	1.00	ug/L		1					
Bromodichloromethane	U	1.00	0.333	1.00	ug/L		1					
Bromoform	U	1.00	0.333	1.00	ug/L		1					
Bromomethane	U	1.00	0.337	1.00	ug/L		1					
Carbon disulfide	U	5.00	1.67	5.00	ug/L		1					
Carbon tetrachloride	U	1.00	0.333	1.00	ug/L		1					
Chlorobenzene		3.29	0.333	1.00	ug/L		1					
Chloroethane	U	1.00	0.333	1.00	ug/L		1					
Chloroform	U	1.00	0.333	1.00	ug/L		1					
Chloromethane	U	1.00	0.333	1.00	ug/L		1					
Dibromochloromethane	U	1.00	0.333	1.00	ug/L		1					
Dibromomethane	U	1.00	0.333	1.00	ug/L		1					
Ethylbenzene	U	1.00	0.333	1.00	ug/L		1					
Iodomethane	U	5.00	1.67	5.00	ug/L		1					

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Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-03)

Client Sample ID: TB3UG3-25 Project: FRNP00607
Sample ID: 718665015 Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
8260D, Volatiles- full suite "As Received"												
Methylene chloride	J	1.60	0.500	5.00	ug/L		1					
Styrene	U	1.00	0.333	1.00	ug/L		1					
Tetrachloroethylene	U	1.00	0.333	1.00	ug/L		1					
Toluene	U	1.00	0.333	1.00	ug/L		1					
Trichloroethylene	U	1.00	0.333	1.00	ug/L		1					
Trichlorofluoromethane	U	1.00	0.333	1.00	ug/L		1					
Vinyl acetate	U	5.00	1.67	5.00	ug/L		1					
Vinyl chloride	U	1.00	0.333	1.00	ug/L		1					
Xylenes (total)	U	3.00	1.00	3.00	ug/L		1					
cis-1,2-Dichloroethylene	U	1.00	0.333	1.00	ug/L		1					
cis-1,3-Dichloropropylene	U	1.00	0.333	1.00	ug/L		1					
trans-1,2-Dichloroethylene	U	1.00	0.333	1.00	ug/L		1					
trans-1,3-Dichloropropylene	U	1.00	0.333	1.00	ug/L		1					
trans-1,4-Dichloro-2-butene	UY1	5.00	1.67	5.00	ug/L		1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 8011 PREP	8011 Prep	LOF	04/14/25	1716	2780752

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 8011	
2	SW846 8011	
3	SW846 8260D	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
1-Chloro-2-fluorobenzene	8011 VOA- 1,2-Dibromo-3-chloropropane "As Received"	7.01 ug/L	6.79	103	(56%-149%)
Bromofluorobenzene	8260D, Volatiles- full suite "As Received"	51.1 ug/L	50.0	102	(85%-114%)
1,2-Dichloroethane-d4	8260D, Volatiles- full suite "As Received"	55.8 ug/L	50.0	112	(81%-118%)
Toluene-d8	8260D, Volatiles- full suite "As Received"	49.8 ug/L	50.0	100	(89%-112%)

Notes:

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	Kevil, Kentucky 42053
Contact:	Ms. Jaime Morrow
Project:	C-746-U Landfill Quarterly(UG25-03)

Client Sample ID:	TB3UG3-25	Project:	FRNP00607
Sample ID:	718665015	Client ID:	FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

APPENDIX D

STATISTICAL ANALYSES AND QUALIFICATION STATEMENT

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GROUNDWATER STATISTICAL COMMENTS

Introduction

The statistical analyses conducted on the second quarter 2025 groundwater data collected from the C-746-U Contained Landfill monitoring wells (MWs) were performed in accordance with Permit GSTR0001, Standard Requirement 3, using the U.S. Environmental Protection Agency guidance document, *EPA Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities, Interim Final Guidance* (1989). A statistician qualification statement has been provided for this analysis.

The statistical evaluation was conducted separately for the three groundwater systems: the Upper Continental Recharge System (UCRS), the Upper Regional Gravel Aquifer (URGA), and the Lower Regional Gravel Aquifer (LRGA). For each groundwater system, data from wells considered to represent background conditions were compared with test wells (downgradient or sidegradient wells) (Exhibit D.1). The second quarter 2025 data used to conduct the statistical analyses were collected in April 2025. The statistical analyses for this report first used data from the first eight quarters that had been sampled for each parameter to develop the historical background value, beginning with the first two baseline sampling events in 2002, when available. Then a second set of statistical analyses, using the last eight quarters, was run on analytes that had at least one downgradient well that had exceeded the historical background. The sampling dates associated with both the historical and the current background data are listed next to the result in the statistical analysis sheets of this appendix.

Statistical Analysis Process

Constituents of concern that have Kentucky maximum contaminant levels (MCLs) and results that do not exceed their respective MCL are not included in the statistical evaluation. Parameters that have MCLs can be found in 401 *KAR* 47:030 § 6, *Maximum Groundwater Contaminant Levels*. For parameters with no established MCL and those parameters that exceed their MCLs, the most recent results are compared to historical background concentrations, as follows: the data are divided into censored and uncensored observations. The one-sided tolerance interval statistical test is conducted only on parameters that have at least one uncensored (detected) observation. The current result is compared to the results of the one-sided tolerance interval statistical test to determine if the current data exceed the historical background concentration calculated using the first eight quarters of data. The tolerance interval statistical analysis is conducted separately for each parameter in each well (no pooling of downgradient data).

For the statistical analysis of pH, a two-sided tolerance interval statistical test is conducted. The test well results are compared to both an upper tolerance limit (UTL) and lower tolerance limit (LTL) to determine if statistically significant deviations in concentrations exist with respect to upgradient (background) well data from the first eight quarters.

Statistical analyses are performed on the first eight quarters of historical background data, not on the data for the current quarter. Once a statistical result is obtained using the background data, the result for the current quarter is compared to that value. If the value is exceeded, the well is considered to have an exceedance of the statistically derived historical background concentration.

Exhibit D.1. Station Identification for Monitoring Wells Analyzed

Station	Type[a]	Groundwater Unit
MW357	TW	URGA
MW358	TW	LRGA
MW359[b]	TW	UCRS
MW360	TW	URGA
MW361	TW	LRGA
MW362[b]	TW	UCRS
MW363	TW	URGA
MW364	TW	LRGA
MW365[b]	TW	UCRS
MW366	TW	URGA
MW367	TW	LRGA
MW368[b]	TW	UCRS
MW369	BG	URGA
MW370	BG	LRGA
MW371[b]	BG	UCRS
MW372	BG	URGA
MW373	BG	LRGA
MW374[b]	BG	UCRS
MW375[b]	SG	UCRS
MW376[b,c]	SG	UCRS
MW377[b,c]	SG	UCRS

[a] BG: upgradient or background wells; TW: downgradient or test wells; SG: sidegradient wells.

[b] The gradients in UCRS wells are downward, and, hydrogeologically, UCRS wells are not considered upgradient, downgradient, or sidegradient from the C-746-U Contained Landfill. The UCRS wells identified as upgradient, sidegradient, or downgradient are those wells located in the same general direction as the LRGA and URGA wells considered to be upgradient, sidegradient, or downgradient.

[c] Well was dry this quarter, and a groundwater sample could not be collected.

For those parameters that are determined to exceed the historical background concentration, a second one-sided tolerance interval statistical test, or a two-sided tolerance interval statistical test in the case of pH, is conducted. The second one-sided tolerance interval statistical test is conducted to determine whether the current concentration in downgradient wells exceeds the current background, as determined by a comparison against the statistically derived UTL using the most recent eight quarters of data for the relevant background wells. For the statistical analysis of pH, a two-sided tolerance interval statistical test is conducted, if required. The test well pH results are compared to both UTL and LTL to determine if the current pH is different from the current background level to a statistically significant level. The tolerance interval statistical analysis is conducted separately for each parameter in each well (no pooling of downgradient data).

Statistical analyses are performed on the last eight quarters of current background data, not on the data for the current quarter. Once a statistical result is obtained using the background data, the result for the current quarter is compared to that value. If the value is exceeded, the well has an exceedance of the statistically derived current background concentration.

A stepwise list of the one-sided tolerance interval statistical procedure applied to the data is summarized below.[1]

1. The tolerance limit is calculated for the background data (first using the first eight quarters, then using the last eight quarters, if required).

    - For each parameter, the background data are used to establish a baseline. On this data set, the mean (X) and the standard deviation (S) are computed.

    - The data set is checked for normality using coefficient of variation (CV). If CV ≤ 1.0, then the data are assumed to be normally distributed. Data sets with CV > 1.0 are assumed to be log-normally distributed; for data sets with CV > 1.0, the data are log-transformed and analyzed.

    - The factor (K) for one-sided UTL with 95% minimum coverage is determined (Table 5, Appendix B, *EPA Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities, Interim Final Guidance*, 1989) based on the number of background data points.

    - The one-sided UTL is calculated using the following equation:

        $$TL = X + (K \times S)$$

2. Each observation from downgradient wells is compared to the calculated one-sided UTL in Step 1. If an observation value exceeds the tolerance limit, then there is statistically significant evidence that the well concentration exceeds the historical background.

Type of Data Used

Exhibit D.1 presents the upgradient or background wells (identified as "BG"), the downgradient or test wells (identified as "TW"), and the sidegradient wells (identified as "SG") for the C-746-U Contained Landfill. Exhibit D.2 presents the parameters from the available data set for which a statistical test was performed using the one-sided tolerance interval.

Exhibits D.3, D.4, and D.5 list the number of analyses (observations), nondetects (censored observations), and detects (uncensored observations) by parameter in the UCRS, the URGA, and the LRGA, respectively. Those parameters displayed with bold-face type indicate the one-sided tolerance interval statistical test was performed. The data presented in Exhibits D.3, D.4, and D.5 were collected during the current quarter, second quarter 2025. The observations are representative of the current quarter data. Background data are presented in Attachments D1 and D2. The sampling dates associated with background data are listed next to the result in Attachments D1 and D2. When field duplicate data are available, the higher of the two readings is retained for further evaluation. When a data point has been rejected following data validation or data assessment, this result is not used, and the next available data point is used for the background or current quarter data.

[1] For pH, two-sided tolerance limits (upper and lower) were calculated with an adjusted K factor using the following equations: UTL = X + (K × S) and LTL = X - (K × S).

Exhibit D.2. List of Parameters Tested Using the One-Sided Upper Tolerance Level Test with Historical Background

Parameters
Aluminum
Boron
Bromide
Calcium
Chemical Oxygen Demand (COD)
Chloride
Cobalt
Conductivity
Copper
Cyanide
Dissolved Oxygen
Dissolved Solids
Iron
Magnesium
Manganese
Methylene Chloride
Molybdenum
Nickel
Oxidation-Reduction Potential[a]
Polychlorinated biphenyl (PCB) Total
PCB-1242
PCB-1254
pH[b]
Potassium
Sodium
Sulfate
Technetium-99
Total Organic Carbon (TOC)
Total Organic Halides (TOX)
Vanadium
Zinc

[a] Oxidation-Reduction Potential calibrated as Eh.
[b] For pH, the test well results were compared to both UTL and LTL to determine if the current result differs to a statistically significant degree from the historical background values.

Exhibit D.3. Summary of Censored and Uncensored Data—UCRS

Parameters	Observations	Censored Observation	Uncensored Observation	Statistical Analysis?
1,1,1,2-Tetrachloroethane	7	7	0	No
1,1,2,2-Tetrachloroethane	7	7	0	No
1,1,2-Trichloroethane	7	7	0	No
1,1-Dichloroethane	7	7	0	No
1,2,3-Trichloropropane	7	7	0	No
1,2-Dibromo-3-chloropropane	7	7	0	No
1,2-Dibromoethane	7	7	0	No
1,2-Dichlorobenzene	7	7	0	No
1,2-Dichloropropane	7	7	0	No
2-Butanone	7	7	0	No
2-Hexanone	7	7	0	No
4-Methyl-2-pentanone	7	7	0	No
Acetone	7	7	0	No
Acrolein	7	7	0	No
Acrylonitrile	7	7	0	No
Aluminum	**7**	**1**	**6**	**Yes**
Antimony	7	7	0	No
Beryllium	7	7	0	No
Boron	**7**	**2**	**5**	**Yes**
Bromide	**7**	**6**	**1**	**Yes**
Bromochloromethane	7	7	0	No
Bromodichloromethane	7	7	0	No
Bromoform	7	7	0	No
Bromomethane	7	7	0	No
Calcium	**7**	**0**	**7**	**Yes**
Carbon disulfide	7	7	0	No
COD	**7**	**6**	**1**	**Yes**
Chloride	**7**	**0**	**7**	**Yes**
Chlorobenzene	7	7	0	No
Chloroethane	7	7	0	No
Chloroform	7	7	0	No
Chloromethane	7	7	0	No
cis-1,2-Dichloroethene	7	7	0	No
cis-1,3-Dichloropropene	7	7	0	No
Cobalt	**7**	**4**	**3**	**Yes**
Conductivity	**7**	**0**	**7**	**Yes**
Copper	**7**	**0**	**7**	**Yes**
Cyanide	**7**	**5**	**2**	**Yes**
Dibromochloromethane	7	7	0	No
Dibromomethane	7	7	0	No
Dimethylbenzene, Total	7	7	0	No
Dissolved Oxygen	**7**	**0**	**7**	**Yes**
Dissolved Solids	**7**	**0**	**7**	**Yes**
Ethylbenzene	7	7	0	No
Iodide	7	7	0	No
Iodomethane	7	7	0	No
Iron	**7**	**2**	**5**	**Yes**
Magnesium	**7**	**0**	**7**	**Yes**
Manganese	**7**	**1**	**6**	**Yes**
Methylene chloride	**7**	**4**	**3**	**Yes**
Molybdenum	**7**	**1**	**6**	**Yes**
Nickel	**7**	**2**	**5**	**Yes**
Oxidation-Reduction Potential	**7**	**0**	**7**	**Yes**

Exhibit D.3. Summary of Censored and Uncensored Data—UCRS (Continued)

Parameters	Observations	Censored Observation	Uncensored Observation	Statistical Analysis?
PCB, Total	**7**	**6**	**1**	**Yes**
PCB-1016	7	7	0	No
PCB-1221	7	7	0	No
PCB-1232	7	7	0	No
PCB-1242	**7**	**6**	**1**	**Yes**
PCB-1248	7	7	0	No
PCB-1254	7	7	0	No
PCB-1260	7	7	0	No
PCB-1268	7	7	0	No
pH	**7**	**0**	**7**	**Yes**
Potassium	**7**	**0**	**7**	**Yes**
Radium-226	7	7	0	No
Rhodium	7	7	0	No
Sodium	**7**	**0**	**7**	**Yes**
Styrene	7	7	0	No
Sulfate	**7**	**0**	**7**	**Yes**
Tantalum	7	7	0	No
Technetium-99	7	7	0	No
Tetrachloroethene	7	7	0	No
Thallium	7	7	0	No
Thorium-230	7	7	0	No
Toluene	7	7	0	No
TOC	**7**	**0**	**7**	**Yes**
TOX	**7**	**3**	**4**	**Yes**
trans-1,2-Dichloroethene	7	7	0	No
trans-1,3-Dichloropropene	7	7	0	No
trans-1,4-Dichloro-2-Butene	7	7	0	No
Trichlorofluoromethane	7	7	0	No
Vanadium	**7**	**5**	**2**	**Yes**
Vinyl Acetate	7	7	0	No
Zinc	**7**	**5**	**2**	**Yes**

NOTE: Bold text denotes parameters with at least one uncensored observation.

Exhibit D.4. Summary of Censored and Uncensored Data—URGA

Parameters	Observations	Censored Observation	Uncensored Observation	Statistical Analysis?
1,1,1,2-Tetrachloroethane	6	6	0	No
1,1,2,2-Tetrachloroethane	6	6	0	No
1,1,2-Trichloroethane	6	6	0	No
1,1-Dichloroethane	6	6	0	No
1,2,3-Trichloropropane	6	6	0	No
1,2-Dibromo-3-chloropropane	6	6	0	No
1,2-Dibromoethane	6	6	0	No
1,2-Dichlorobenzene	6	6	0	No
1,2-Dichloropropane	6	6	0	No
2-Butanone	6	6	0	No
2-Hexanone	6	6	0	No
4-Methyl-2-pentanone	6	6	0	No
Acetone	6	6	0	No
Acrolein	6	6	0	No
Acrylonitrile	6	6	0	No
Aluminum	**6**	**4**	**2**	**Yes**
Antimony	6	6	0	No
Beryllium	6	6	0	No
Boron	**6**	**0**	**6**	**Yes**
Bromide	**6**	**1**	**5**	**Yes**
Bromochloromethane	6	6	0	No
Bromodichloromethane	6	6	0	No
Bromoform	6	6	0	No
Bromomethane	6	6	0	No
Calcium	**6**	**0**	**6**	**Yes**
Carbon disulfide	6	6	0	No
COD	6	6	0	No
Chloride	**6**	**0**	**6**	**Yes**
Chlorobenzene	6	6	0	No
Chloroethane	6	6	0	No
Chloroform	6	6	0	No
Chloromethane	6	6	0	No
cis-1,2-Dichloroethene	6	6	0	No
cis-1,3-Dichloropropene	6	6	0	No
Cobalt	**6**	**1**	**5**	**Yes**
Conductivity	**6**	**0**	**6**	**Yes**
Copper	**6**	**0**	**6**	**Yes**
Cyanide	**6**	**4**	**2**	**Yes**
Dibromochloromethane	6	6	0	No
Dibromomethane	6	6	0	No
Dimethylbenzene, Total	6	6	0	No
Dissolved Oxygen	**6**	**0**	**6**	**Yes**
Dissolved Solids	**6**	**0**	**6**	**Yes**
Ethylbenzene	6	6	0	No
Iodide	6	6	0	No
Iodomethane	6	6	0	No
Iron	**6**	**1**	**5**	**Yes**
Magnesium	**6**	**0**	**6**	**Yes**
Manganese	**6**	**0**	**6**	**Yes**
Methylene chloride	**6**	**4**	**2**	**Yes**
Molybdenum	**6**	**4**	**2**	**Yes**
Nickel	**6**	**1**	**5**	**Yes**
Oxidation-Reduction Potential	**6**	**0**	**6**	**Yes**

Exhibit D.4. Summary of Censored and Uncensored Data—URGA (Continued)

Parameters	Observations	Censored Observation	Uncensored Observation	Statistical Analysis?
PCB, Total	6	6	0	No
PCB-1016	6	6	0	No
PCB-1221	6	6	0	No
PCB-1232	6	6	0	No
PCB-1242	6	6	0	No
PCB-1248	6	6	0	No
PCB-1254	6	6	0	No
PCB-1260	6	6	0	No
PCB-1268	6	6	0	No
pH	**6**	**0**	**6**	**Yes**
Potassium	**6**	**0**	**6**	**Yes**
Radium-226	6	6	0	No
Rhodium	6	6	0	No
Sodium	**6**	**0**	**6**	**Yes**
Styrene	6	6	0	No
Sulfate	**6**	**0**	**6**	**Yes**
Tantalum	6	6	0	No
Technetium-99	**6**	**3**	**3**	**Yes**
Tetrachloroethene	6	6	0	No
Thallium	6	6	0	No
Thorium-230	6	6	0	No
Toluene	6	6	0	No
TOC	**6**	**0**	**6**	**Yes**
TOX	**6**	**3**	**3**	**Yes**
trans-1,2-Dichloroethene	6	6	0	No
trans-1,3-Dichloropropene	6	6	0	No
trans-1,4-Dichloro-2-Butene	6	6	0	No
Trichlorofluoromethane	6	6	0	No
Vanadium	6	6	0	No
Vinyl Acetate	6	6	0	No
Zinc	**6**	**1**	**5**	**Yes**

NOTE: Bold text denotes parameters with at least one uncensored observation.

Exhibit D.5. Summary of Censored and Uncensored Data—LRGA

Parameters	Observations	Censored Observation	Uncensored Observation	Statistical Analysis?
1,1,1,2-Tetrachloroethane	6	6	0	No
1,1,2,2-Tetrachloroethane	6	6	0	No
1,1,2-Trichloroethane	6	6	0	No
1,1-Dichloroethane	6	6	0	No
1,2,3-Trichloropropane	6	6	0	No
1,2-Dibromo-3-chloropropane	6	6	0	No
1,2-Dibromoethane	6	6	0	No
1,2-Dichlorobenzene	6	6	0	No
1,2-Dichloropropane	6	6	0	No
2-Butanone	6	6	0	No
2-Hexanone	6	6	0	No
4-Methyl-2-pentanone	6	6	0	No
Acetone	6	6	0	No
Acrolein	6	6	0	No
Acrylonitrile	6	6	0	No
Aluminum	6	6	0	No
Antimony	6	6	0	No
Beryllium	6	6	0	No
Boron	**6**	**0**	**6**	**Yes**
Bromide	**6**	**0**	**6**	**Yes**
Bromochloromethane	6	6	0	No
Bromodichloromethane	6	6	0	No
Bromoform	6	6	0	No
Bromomethane	6	6	0	No
Calcium	**6**	**0**	**6**	**Yes**
Carbon disulfide	6	6	0	No
COD	6	6	0	No
Chloride	**6**	**0**	**6**	**Yes**
Chlorobenzene	6	6	0	No
Chloroethane	6	6	0	No
Chloroform	6	6	0	No
Chloromethane	6	6	0	No
cis-1,2-Dichloroethene	6	6	0	No
cis-1,3-Dichloropropene	6	6	0	No
Cobalt	**6**	**4**	**2**	**Yes**
Conductivity	**6**	**0**	**6**	**Yes**
Copper	**6**	**0**	**6**	**Yes**
Cyanide	**6**	**3**	**3**	**Yes**
Dibromochloromethane	6	6	0	No
Dibromomethane	6	6	0	No
Dimethylbenzene, Total	6	6	0	No
Dissolved Oxygen	**6**	**0**	**6**	**Yes**
Dissolved Solids	**6**	**0**	**6**	**Yes**
Ethylbenzene	6	6	0	No
Iodide	6	6	0	No
Iodomethane	6	6	0	No
Iron	**6**	**2**	**4**	**Yes**
Magnesium	**6**	**0**	**6**	**Yes**
Manganese	**6**	**0**	**6**	**Yes**
Methylene chloride	**6**	**4**	**2**	**Yes**
Molybdenum	6	6	0	No
Nickel	**6**	**3**	**3**	**Yes**
Oxidation-Reduction Potential	**6**	**0**	**6**	**Yes**

Exhibit D.5. Summary of Censored and Uncensored Data—LRGA (Continued)

Parameters	Observations	Censored Observation	Uncensored Observation	Statistical Analysis?
PCB, Total	**6**	**5**	**1**	**Yes**
PCB-1016	6	6	0	No
PCB-1221	6	6	0	No
PCB-1232	6	6	0	No
PCB-1242	6	6	0	No
PCB-1248	6	6	0	No
PCB-1254	**6**	**5**	**1**	**Yes**
PCB-1260	6	6	0	No
PCB-1268	6	6	0	No
pH	**6**	**0**	**6**	**Yes**
Potassium	**6**	**0**	**6**	**Yes**
Radium-226	6	6	0	No
Rhodium	6	6	0	No
Sodium	**6**	**0**	**6**	**Yes**
Styrene	6	6	0	No
Sulfate	**6**	**0**	**6**	**Yes**
Tantalum	6	6	0	No
Technetium-99	**6**	**2**	**4**	**Yes**
Tetrachloroethene	6	6	0	No
Thallium	6	6	0	No
Thorium-230	6	6	0	No
Toluene	6	6	0	No
TOC	**6**	**0**	**6**	**Yes**
TOX	**6**	**3**	**3**	**Yes**
trans-1,2-Dichloroethene	6	6	0	No
trans-1,3-Dichloropropene	6	6	0	No
trans-1,4-Dichloro-2-Butene	6	6	0	No
Trichlorofluoromethane	6	6	0	No
Vanadium	6	6	0	No
Vinyl Acetate	6	6	0	No
Zinc	**6**	**1**	**5**	**Yes**

NOTE: Bold text denotes parameters with at least one uncensored observation.

Discussion of Results from Historical Background Comparison

For the UCRS, URGA, and LRGA, the concentrations of this quarter were compared to the results of the one-sided tolerance interval test calculated using historical background and are presented in Attachment D1. The statistician qualification statement is presented in Attachment D3. For the UCRS, URGA, and LRGA, the test was applied to 29, 26, and 26 parameters, respectively, including those listed in bold print in Exhibits D.3, D.4, and D.5, which include those constituents that exceeded their MCL. A summary of exceedances when compared to statistically derive historical upgradient background by well number is shown in Exhibit D.6.

UCRS

Because gradients in the UCRS are downward (vertical), there are no hydrogeologically downgradient UCRS wells; however, it should be noted that this quarter's results identified historical background exceedances for dissolved oxygen, oxidation-reduction potential, and sulfate.

URGA

This quarter's results identified historical background exceedances for calcium, conductivity, dissolved oxygen, dissolved solids, magnesium, oxidation-reduction potential, and sulfate.

LRGA

This quarter's results identified historical background exceedances for calcium, conductivity, cyanide, dissolved oxygen, dissolved solids, oxidation-reduction potential, and technetium-99.

Statistical Summary

Summaries of the results of the statistical tests conducted on data obtained from wells in the UCRS, the URGA, and in the LRGA in comparison to historical data are presented in Exhibit D.7, Exhibit D.8, and Exhibit D.9, respectively.

Exhibit D.6. Summary of Exceedances of Statistically Derived Historical Background Concentrations

UCRS	URGA	LRGA
MW359: Dissolved oxygen, oxidation-reduction potential,* and sulfate **MW362:** Dissolved oxygen, oxidation-reduction potential,* and sulfate **MW365:** Dissolved oxygen, oxidation-reduction potential,* and sulfate **MW368:** Oxidation-reduction potential and sulfate **MW371:** Dissolved oxygen, oxidation-reduction potential,* and sulfate **MW374:** Dissolved oxygen, oxidation-reduction potential,* and sulfate **MW375:** Dissolved oxygen, oxidation-reduction potential,* and sulfate	**MW357:** Oxidation-reduction potential* **MW360:** Oxidation-reduction potential* **MW363:** Oxidation-reduction potential* **MW366:** Dissolved oxygen and oxidation-reduction potential* **MW369:** Oxidation-reduction potential* **MW372:** Calcium, conductivity, dissolved solids, magnesium, oxidation-reduction potential,* and sulfate	**MW358:** Cyanide and oxidation-reduction potential* **MW361:** Oxidation-reduction potential* and technetium-99 **MW364:** Oxidation-reduction potential* and technetium-99 **MW367:** Oxidation-reduction potential* and technetium-99 **MW370:** Dissolved oxygen and oxidation-reduction potential* **MW373:** Calcium, conductivity, dissolved solids, and oxidation-reduction potential*

*Oxidation-reduction potential calibrated as Eh.

Exhibit D.7. Test Summaries for Qualified Parameters for Historical Background—UCRS

Parameter	Performed Test	CV Normality Test[a]	Results of Tolerance Interval Test Conducted
Aluminum	Tolerance Interval	2.08	No exceedance of statistically derived historical background concentration.
Boron	Tolerance Interval	1.24	No exceedance of statistically derived historical background concentration.
Bromide	Tolerance Interval	0.34	No exceedance of statistically derived historical background concentration.
Calcium	Tolerance Interval	0.40	No exceedance of statistically derived historical background concentration.
COD	Tolerance Interval	0.97	No exceedance of statistically derived historical background concentration.
Chloride	Tolerance Interval	0.95	No exceedance of statistically derived historical background concentration.
Cobalt	Tolerance Interval	1.31	No exceedance of statistically derived historical background concentration.
Conductivity	Tolerance Interval	0.45	No exceedance of statistically derived historical background concentration.
Copper	Tolerance Interval	1.27	No exceedance of statistically derived historical background concentration.
Cyanide	Tolerance Interval	0.47	No exceedance of statistically derived historical background concentration.
Dissolved Oxygen	Tolerance Interval	0.55	Current results exceed statistically derived historical background concentration in MW359, MW362, MW365, MW371, MW374, and MW375.
Dissolved Solids	Tolerance Interval	0.42	No exceedance of statistically derived historical background concentration.
Iron	Tolerance Interval	0.98	No exceedance of statistically derived historical background concentration.
Magnesium	Tolerance Interval	0.27	No exceedance of statistically derived historical background concentration.
Manganese	Tolerance Interval	0.89	No exceedance of statistically derived historical background concentration.
Methylene Chloride	Tolerance Interval	0.29	No exceedance of statistically derived historical background concentration.
Molybdenum	Tolerance Interval	1.65	No exceedance of statistically derived historical background concentration.
Nickel	Tolerance Interval	0.98	No exceedance of statistically derived historical background concentration.
Oxidation-Reduction Potential[b]	Tolerance Interval	3.54	Current results exceed statistically derived historical background concentration in MW359, MW362, MW365, MW368, MW371, MW374, and MW375.
PCB, Total	Tolerance Interval	0.92	No exceedance of statistically derived historical background concentration.
PCB-1242	Tolerance Interval	1.41	No exceedance of statistically derived historical background concentration.
pH	Tolerance Interval	0.04	No exceedance of statistically derived historical background concentration.
Potassium	Tolerance Interval	0.72	No exceedance of statistically derived historical background concentration.
Sodium	Tolerance Interval	0.40	No exceedance of statistically derived historical background concentration.

Exhibit D.7. Test Summaries for Qualified Parameters for Historical Background—UCRS (Continued)

Parameter	Performed Test	CV Normality Test[a]	Results of Tolerance Interval Test Conducted
Sulfate	Tolerance Interval	0.49	Current results exceed statistically derived historical background concentration in MW359, MW362, MW365, MW368, MW371, MW374, and MW375.
TOC	Tolerance Interval	1.38	No exceedance of statistically derived historical background concentration.
TOX	Tolerance Interval	1.08	No exceedance of statistically derived historical background concentration.
Vanadium	Tolerance Interval	1.32	No exceedance of statistically derived historical background concentration.
Zinc	Tolerance Interval	1.38	No exceedance of statistically derived historical background concentration.

[a] If CV is > 1.0, used log-transformed data.
[b] Oxidation-reduction potential calibrated as Eh.

Exhibit D.8. Test Summaries for Qualified Parameters for Historical Background—URGA

Parameter	Performed Test	CV Normality Test[a]	Results of Tolerance Interval Test Conducted
Aluminum	Tolerance Interval	1.24	No exceedance of statistically derived historical background concentration.
Boron	Tolerance Interval	0.84	No exceedance of statistically derived historical background concentration.
Bromide	Tolerance Interval	0.00	No exceedance of statistically derived historical background concentration.
Calcium	Tolerance Interval	0.29	Current results exceed statistically derived historical background concentration in MW372.
Chloride	Tolerance Interval	0.10	No exceedance of statistically derived historical background concentration.
Cobalt	Tolerance Interval	0.84	No exceedance of statistically derived historical background concentration.
Conductivity	Tolerance Interval	0.12	Current results exceed statistically derived historical background concentration in MW372.
Copper	Tolerance Interval	0.40	No exceedance of statistically derived historical background concentration.
Cyanide	Tolerance Interval	0.00	No exceedance of statistically derived historical background concentration.
Dissolved Oxygen	Tolerance Interval	0.76	Current results exceed statistically derived historical background concentration in MW366.
Dissolved Solids	Tolerance Interval	0.16	Current results exceed statistically derived historical background concentration in MW372.
Iron	Tolerance Interval	0.95	No exceedance of statistically derived historical background concentration.
Magnesium	Tolerance Interval	0.27	Current results exceed statistically derived historical background concentration in MW372.
Manganese	Tolerance Interval	0.66	No exceedance of statistically derived historical background concentration.
Methylene Chloride	Tolerance Interval	0.36	No exceedance of statistically derived historical background concentration.
Molybdenum	Tolerance Interval	1.20	No exceedance of statistically derived historical background concentration.
Nickel	Tolerance Interval	0.91	No exceedance of statistically derived historical background concentration.
Oxidation-Reduction Potential[b]	Tolerance Interval	1.26	Current results exceed statistically derived historical background concentration in MW357, MW360, MW363, MW366, MW369, and MW372.
pH	Tolerance Interval	0.03	No exceedance of statistically derived historical background concentration.
Potassium	Tolerance Interval	0.29	No exceedance of statistically derived historical background concentration.
Sodium	Tolerance Interval	0.26	No exceedance of statistically derived historical background concentration.

Exhibit D.8. Test Summaries for Qualified Parameters for Historical Background—URGA (Continued)

Parameter	Performed Test	CV Normality Test[a]	Results of Tolerance Interval Test Conducted
Sulfate	Tolerance Interval	0.75	Current results exceed statistically derived historical background concentration in MW372.
Technetium-99	Tolerance Interval	0.87	No exceedance of statistically derived historical background concentration.
TOC	Tolerance Interval	1.23	No exceedance of statistically derived historical background concentration.
TOX	Tolerance Interval	0.95	No exceedance of statistically derived historical background concentration.
Zinc	Tolerance Interval	1.49	No exceedance of statistically derived historical background concentration.

[a] If CV is > 1.0, used log-transformed data.
[b] Oxidation-reduction potential calibrated as Eh.

Exhibit D.9. Test Summaries for Qualified Parameters for Historical Background—LRGA

Parameter	Performed Test	CV Normality Test[a]	Results of Tolerance Interval Test Conducted
Boron	Tolerance Interval	0.68	No exceedance of statistically derived historical background concentration.
Bromide	Tolerance Interval	0.00	No exceedance of statistically derived historical background concentration.
Calcium	Tolerance Interval	0.31	Current results exceed statistically derived historical background concentration in MW373.
Chloride	Tolerance Interval	0.16	No exceedance of statistically derived historical background concentration.
Cobalt	Tolerance Interval	1.16	No exceedance of statistically derived historical background concentration.
Conductivity	Tolerance Interval	0.26	Current results exceed statistically derived historical background concentration in MW373.
Copper	Tolerance Interval	0.40	No exceedance of statistically derived historical background concentration.
Cyanide	Tolerance Interval	0.00	Current results exceed statistically derived historical background concentration in MW358.
Dissolved Oxygen	Tolerance Interval	0.83	Current results exceed statistically derived historical background concentration in MW370.
Dissolved Solids	Tolerance Interval	0.30	Current results exceed statistically derived historical background concentration in MW373.
Iron	Tolerance Interval	0.96	No exceedance of statistically derived historical background concentration.
Magnesium	Tolerance Interval	0.34	No exceedance of statistically derived historical background concentration.
Manganese	Tolerance Interval	0.62	No exceedance of statistically derived historical background concentration.
Methylene Chloride	Tolerance Interval	0.40	No exceedance of statistically derived historical background concentration.
Nickel	Tolerance Interval	0.90	No exceedance of statistically derived historical background concentration.
Oxidation-Reduction Potential[b]	Tolerance Interval	1.31	Current results exceed statistically derived historical background concentration in MW358, MW361, MW364, MW367, MW370, and MW373.
PCB, Total	Tolerance Interval	1.00	No exceedance of statistically derived historical background concentration.
PCB-1254	Tolerance Interval	1.41	No exceedance of statistically derived historical background concentration.
pH	Tolerance Interval	0.03	No exceedance of statistically derived historical background concentration.
Potassium	Tolerance Interval	0.18	No exceedance of statistically derived historical background concentration.
Sodium	Tolerance Interval	0.30	No exceedance of statistically derived historical background concentration.
Sulfate	Tolerance Interval	1.59	No exceedance of statistically derived historical background concentration.
Technetium-99	Tolerance Interval	1.73	Current results exceed statistically derived historical background concentration in MW361, MW364, and MW367.
TOC	Tolerance Interval	1.96	No exceedance of statistically derived historical background concentration.
TOX	Tolerance Interval	0.98	No exceedance of statistically derived historical background concentration.
Zinc	Tolerance Interval	0.67	No exceedance of statistically derived historical background concentration.

[a] If CV is > 1.0, used log-transformed data.
[b] Oxidation-reduction potential calibrated as Eh.

Discussion of Results from Current Background Comparison

For concentrations in wells in the UCRS, URGA, and LRGA that exceeded the tolerance limit test using historical background, the concentrations were compared to the results of the one-sided tolerance interval test compared to current background, and are presented in Attachment D2. The statistician qualification statement is presented in Attachment D3. For the UCRS, URGA, and LRGA, the test was applied to 3, 7, and 7 parameters, respectively, because these parameter concentrations exceeded the historical background tolerance limit.

UCRS

Because gradients in the UCRS are downward (vertical), there are no hydrogeologically downgradient UCRS wells. It should be noted; however, that this quarter's results identified current a background UTL exceedance in downgradient well for sulfate.

URGA

This quarter's results identified a current background UTL exceedance in a downgradient well for dissolved oxygen.

LRGA

This quarter's results identified current background UTL exceedances in downgradient wells for technetium-99.

Statistical Summary

Summaries of the statistical tests conducted on data obtained from wells in the UCRS, the URGA, and the LRGA are presented in Exhibit D.10, Exhibit D.11, and Exhibit D.12, respectively.

Exhibit D.10. Test Summaries for Qualified Parameters for Current Background—UCRS

Parameter	Performed Test	CV Normality Test	Results of Tolerance Interval Test Conducted
Dissolved Oxygen	Tolerance Interval	0.64	None of the test wells exceeded the UTL, which is evidence that concentrations in these wells are not different from current background concentrations to a statistically significant level.
Oxidation-Reduction Potential*	Tolerance Interval	0.11	None of the test wells exceeded the UTL, which is evidence that concentrations in these wells are not different from current background concentrations to a statistically significant level.
Sulfate	Tolerance Interval	0.66	MW365 exceeded the UTL, which is evidence of elevated concentration with respect to current background data.

*Oxidation-reduction potential calibrated as Eh.

Exhibit D.11. Test Summaries for Qualified Parameters for Current Background—URGA

Parameter	Performed Test	CV Normality Test	Results of Tolerance Interval Test Conducted
Calcium	Tolerance Interval	0.63	None of the test wells exceeded the UTL, which is evidence that concentrations in these wells are not different from current background concentrations to a statistically significant level.
Conductivity	Tolerance Interval	0.37	None of the test wells exceeded the UTL, which is evidence that concentrations in these wells are not different from current background concentrations to a statistically significant level.
Dissolved Oxygen	Tolerance Interval	0.33	MW366 exceeded the UTL, which is evidence of elevated concentration with respect to current background data.
Dissolved Solids	Tolerance Interval	0.42	None of the test wells exceeded the UTL, which is evidence that concentrations in these wells are not different from current background concentrations to a statistically significant level.
Magnesium	Tolerance Interval	0.58	None of the test wells exceeded the UTL, which is evidence that concentrations in these wells are not different from current background concentrations to a statistically significant level.
Oxidation-Reduction Potential*	Tolerance Interval	0.12	None of the test wells exceeded the UTL, which is evidence that concentrations in these wells are not different from current background concentrations to a statistically significant level.
Sulfate	Tolerance Interval	0.93	None of the test wells exceeded the UTL, which is evidence that concentrations in these wells are not different from current background concentrations to a statistically significant level.

*Oxidation-reduction potential calibrated as Eh.

Exhibit D.12. Test Summaries for Qualified Parameters for Current Background—LRGA

Parameter	Performed Test	CV Normality Test	Results of Tolerance Interval Test Conducted
Calcium	Tolerance Interval	0.49	None of the test wells exceeded the UTL, which is evidence that concentrations in these wells are not different from current background concentrations to a statistically significant level.
Conductivity	Tolerance Interval	0.36	None of the test wells exceeded the UTL, which is evidence that concentrations in these wells are not different from current background concentrations to a statistically significant level.
Cyanide	Tolerance Interval	0.26	None of the test wells exceeded the UTL, which is evidence that concentrations in these wells are not different from current background concentrations to a statistically significant level.
Dissolved Oxygen	Tolerance Interval	0.49	None of the test wells exceeded the UTL, which is evidence that concentrations in these wells are not different from current background concentrations to a statistically significant level.
Dissolved Solids	Tolerance Interval	0.42	None of the test wells exceeded the UTL, which is evidence that concentrations in these wells are not different from current background concentrations to a statistically significant level.
Oxidation-Reduction Potential*	Tolerance Interval	0.17	None of the test wells exceeded the UTL, which is evidence that concentrations in these wells are not different from current background concentrations to a statistically significant level.
Technetium-99	Tolerance Interval	0.97	MW361, MW364, and MW367 exceeded the UTL, which is evidence of elevated concentration with respect to current background data.

*Oxidation-reduction potential calibrated as Eh.

ATTACHMENT D1

COMPARISON OF CURRENT DATA TO ONE-SIDED UPPER TOLERANCE INTERVAL TEST CALCULATED USING HISTORICAL BACKGROUND DATA

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C-746-U Second Quarter 2025 Statistical Analysis Historical Background Comparison

Aluminum UNITS: mg/L UCRS

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	**X=** 3.300	**S=** 6.859	**CV(1)=** 2.078	**K factor**=** 2.523	**TL(1)=** 2.06E+01	**LL(1)=** N/A
Statistics-Transformed Background Data	**X=** -0.371	**S=** 1.678	**CV(2)=** -4.521	**K factor**=** 2.523	**TL(2)=** 3.86E+00	**LL(2)=** N/A

Because CV(1) is greater than 1, the natural logarithm of background and test well results were calculated utilizing TL(2) for comparison.

Historical Background Data from Upgradient Wells with Transformed Result

Well Number: MW371

Date Collected	Result	LN(Result)
3/18/2002	2.24E+00	8.06E-01
4/22/2002	2.00E-01	-1.61E+00
7/15/2002	2.00E-01	-1.61E+00
10/8/2002	2.00E-01	-1.61E+00
1/8/2003	2.00E-01	-1.61E+00
4/3/2003	2.00E-01	-1.61E+00
7/9/2003	2.00E-01	-1.61E+00
10/6/2003	2.00E-01	-1.61E+00

Well Number: MW374

Date Collected	Result	LN(Result)
10/8/2002	2.13E+01	3.06E+00
1/7/2003	2.00E+01	3.00E+00
4/2/2003	4.11E+00	1.41E+00
7/9/2003	1.41E+00	3.44E-01
10/7/2003	1.09E+00	8.62E-02
1/6/2004	8.54E-01	-1.58E-01
4/7/2004	2.00E-01	-1.61E+00
7/14/2004	2.00E-01	-1.61E+00

Dry/Partially Dry Wells

Well No.	Gradient
MW376	Sidegradient
MW377	Sidegradient

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW359	Downgradient	Yes	4.91E-02	N/A	-3.01E+00	NO
MW362	Downgradient	Yes	1.62E-01	N/A	-1.82E+00	NO
MW365	Downgradient	No	5.00E-02	N/A	-3.00E+00	N/A
MW368	Downgradient	Yes	2.99E-02	N/A	-3.51E+00	NO
MW371	Upgradient	Yes	4.29E-02	N/A	-3.15E+00	NO
MW374	Upgradient	Yes	5.33E-02	N/A	-2.93E+00	NO
MW375	Sidegradient	Yes	2.49E-02	N/A	-3.69E+00	NO

N/A - Results identified as Non-Detects during laboratory analysis or data validation and were not included in the statistical evaluation. Additionally for parameters that have MCLs, where the result for a well did not exceed the MCL value, that well was not included in the statistical evaluation.

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.

S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5

TL Upper Tolerance Limit, TL = X + (K * S), LL Lower Tolerance Limit, LL = X - (K * S)

X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,Interim Guidance, EPA, 1989, based on total number of background results - The K-factor for pH to account for a two-sided tolerance interval instead of a one-sided tolerance limit. The K-factor for pH was computed using a formula from NIST/SEMATECH e-Handbook of Statistical Methods, http://www.itl.nist.gov/div898/handbook/,2009.*

C-746-U Second Quarter 2025 Statistical Analysis Historical Background Comparison

Boron **UNITS: mg/L** **UCRS**

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	**X=** 0.650	**S=** 0.805	**CV(1)=** 1.238	**K factor**=** 2.523	**TL(1)=** 2.68E+00	**LL(1)=**N/A
Statistics-Transformed Background Data	**X=** -1.034	**S=** 1.030	**CV(2)=** -0.996	**K factor**=** 2.523	**TL(2)=** 1.56E+00	**LL(2)=**N/A

Historical Background Data from Upgradient Wells with Transformed Result

Well Number:	MW371	
Date Collected	Result	LN(Result)
3/18/2002	2.00E+00	6.93E-01
4/22/2002	2.00E+00	6.93E-01
7/15/2002	2.00E+00	6.93E-01
10/8/2002	2.00E-01	-1.61E+00
1/8/2003	2.00E-01	-1.61E+00
4/3/2003	2.00E-01	-1.61E+00
7/9/2003	2.00E-01	-1.61E+00
10/6/2003	2.00E-01	-1.61E+00

Well Number:	MW374	
Date Collected	Result	LN(Result)
10/8/2002	2.00E+00	6.93E-01
1/7/2003	2.00E-01	-1.61E+00
4/2/2003	2.00E-01	-1.61E+00
7/9/2003	2.00E-01	-1.61E+00
10/7/2003	2.00E-01	-1.61E+00
1/6/2004	2.00E-01	-1.61E+00
4/7/2004	2.00E-01	-1.61E+00
7/14/2004	2.00E-01	-1.61E+00

Dry/Partially Dry Wells

Well No.	Gradient
MW376	Sidegradient
MW377	Sidegradient

Because CV(1) is greater than 1, the natural logarithm of background and test well results were calculated utilizing TL(2) for comparison.

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW359	Downgradient	No	6.19E-03	N/A	-5.08E+00	N/A
MW362	Downgradient	Yes	2.65E-02	N/A	-3.63E+00	NO
MW365	Downgradient	Yes	8.37E-03	N/A	-4.78E+00	NO
MW368	Downgradient	No	1.50E-02	N/A	-4.20E+00	N/A
MW371	Upgradient	Yes	6.55E-03	N/A	-5.03E+00	NO
MW374	Upgradient	Yes	9.20E-03	N/A	-4.69E+00	NO
MW375	Sidegradient	Yes	7.80E-03	N/A	-4.85E+00	NO

N/A - Results identified as Non-Detects during laboratory analysis or data validation and were not included in the statistical evaluation. Additionally for parameters that have MCLs, where the result for a well did not exceed the MCL value, that well was not included in the statistical evaluation.

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.

S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5

TL Upper Tolerance Limit, TL = X + (K * S), LL Lower Tolerance Limit, LL = X - (K * S)

X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,Interim Guidance, EPA, 1989, based on total number of background results - The K-factor for pH to account for a two-sided tolerance interval instead of a one-sided tolerance limit. The K-factor for pH was computed using a formula from NIST/SEMATECH e-Handbook of Statistical Methods, http://www.itl.nist.gov/div898/handbook/,2009.*

C-746-U Second Quarter 2025 Statistical Analysis Historical Background Comparison

Bromide **UNITS: mg/L** **UCRS**

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	**X=** 1.394	**S=** 0.474	**CV(1)=** 0.340	**K factor**=** 2.523	**TL(1)=** 2.59E+00	**LL(1)=** N/A
Statistics-Transformed Background Data	**X=** 0.279	**S=** 0.332	**CV(2)=** 1.190	**K factor**=** 2.523	**TL(2)=** 1.12E+00	**LL(2)=** N/A

Historical Background Data from Upgradient Wells with Transformed Result

Well Number: MW371

Date Collected	Result	LN(Result)
3/18/2002	1.00E+00	0.00E+00
4/22/2002	1.00E+00	0.00E+00
7/15/2002	1.00E+00	0.00E+00
10/8/2002	1.00E+00	0.00E+00
1/8/2003	1.00E+00	0.00E+00
4/3/2003	1.00E+00	0.00E+00
7/9/2003	1.00E+00	0.00E+00
10/6/2003	1.00E+00	0.00E+00

Well Number: MW374

Date Collected	Result	LN(Result)
10/8/2002	2.10E+00	7.42E-01
1/7/2003	2.10E+00	7.42E-01
4/2/2003	1.90E+00	6.42E-01
7/9/2003	1.00E+00	0.00E+00
10/7/2003	1.90E+00	6.42E-01
1/6/2004	1.90E+00	6.42E-01
4/7/2004	1.80E+00	5.88E-01
7/14/2004	1.60E+00	4.70E-01

Dry/Partially Dry Wells

Well No.	Gradient
MW376	Sidegradient
MW377	Sidegradient

Because CV(1) is less than or equal to 1, assume normal distribution and continue with statistical analysis utilizing TL(1).

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW359	Downgradient	No	2.00E-01	N/A	-1.61E+00	N/A
MW362	Downgradient	No	2.00E-01	N/A	-1.61E+00	N/A
MW365	Downgradient	No	2.00E-01	N/A	-1.61E+00	N/A
MW368	Downgradient	No	2.00E-01	N/A	-1.61E+00	N/A
MW371	Upgradient	No	2.00E-01	N/A	-1.61E+00	N/A
MW374	Upgradient	Yes	4.78E-01	NO	-7.38E-01	N/A
MW375	Sidegradient	No	2.00E-01	N/A	-1.61E+00	N/A

N/A - Results identified as Non-Detects during laboratory analysis or data validation and were not included in the statistical evaluation. Additionally for parameters that have MCLs, where the result for a well did not exceed the MCL value, that well was not included in the statistical evaluation.

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.

S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5

TL Upper Tolerance Limit, TL = X + (K * S), LL Lower Tolerance Limit, LL = X - (K * S)

X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,Interim Guidance, EPA, 1989, based on total number of background results - The K-factor for pH to account for a two-sided tolerance interval instead of a one-sided tolerance limit. The K-factor for pH was computed using a formula from NIST/SEMATECH e-Handbook of Statistical Methods, http://www.itl.nist.gov/div898/handbook/,2009.*

C-746-U Second Quarter 2025 Statistical Analysis Historical Background Comparison

Calcium UNITS: mg/L UCRS

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	**X=** 34.100	**S=** 13.637	**CV(1)=** 0.400	**K factor**=** 2.523	**TL(1)=** 6.85E+01	**LL(1)=** N/A
Statistics-Transformed Background Data	**X=** 3.466	**S=** 0.356	**CV(2)=** 0.103	**K factor**=** 2.523	**TL(2)=** 4.36E+00	**LL(2)=** N/A

Historical Background Data from Upgradient Wells with Transformed Result

Well Number: MW371

Date Collected	Result	LN(Result)
3/18/2002	1.72E+01	2.84E+00
4/22/2002	2.24E+01	3.11E+00
7/15/2002	2.55E+01	3.24E+00
10/8/2002	2.64E+01	3.27E+00
1/8/2003	2.72E+01	3.30E+00
4/3/2003	3.03E+01	3.41E+00
7/9/2003	2.59E+01	3.25E+00
10/6/2003	2.70E+01	3.30E+00

Well Number: MW374

Date Collected	Result	LN(Result)
10/8/2002	6.73E+01	4.21E+00
1/7/2003	6.06E+01	4.10E+00
4/2/2003	4.72E+01	3.85E+00
7/9/2003	3.47E+01	3.55E+00
10/7/2003	3.71E+01	3.61E+00
1/6/2004	3.77E+01	3.63E+00
4/7/2004	3.22E+01	3.47E+00
7/14/2004	2.69E+01	3.29E+00

Dry/Partially Dry Wells

Well No.	Gradient
MW376	Sidegradient
MW377	Sidegradient

Because CV(1) is less than or equal to 1, assume normal distribution and continue with statistical analysis utilizing TL(1).

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW359	Downgradient	Yes	7.90E+00	NO	2.07E+00	N/A
MW362	Downgradient	Yes	1.96E+01	NO	2.98E+00	N/A
MW365	Downgradient	Yes	2.04E+01	NO	3.02E+00	N/A
MW368	Downgradient	Yes	4.35E+01	NO	3.77E+00	N/A
MW371	Upgradient	Yes	5.76E+01	NO	4.05E+00	N/A
MW374	Upgradient	Yes	2.40E+01	NO	3.18E+00	N/A
MW375	Sidegradient	Yes	1.33E+01	NO	2.59E+00	N/A

N/A - Results identified as Non-Detects during laboratory analysis or data validation and were not included in the statistical evaluation. Additionally for parameters that have MCLs, where the result for a well did not exceed the MCL value, that well was not included in the statistical evaluation.

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.

S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5

TL Upper Tolerance Limit, TL = X + (K * S), LL Lower Tolerance Limit, LL = X - (K * S)

X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,Interim Guidance, EPA, 1989, based on total number of background results - The K-factor for pH to account for a two-sided tolerance interval instead of a one-sided tolerance limit. The K-factor for pH was computed using a formula from NIST/SEMATECH e-Handbook of Statistical Methods, http://www.itl.nist.gov/div898/handbook/,2009.*

C-746-U Second Quarter 2025 Statistical Analysis Historical Background Comparison
Chemical Oxygen Demand (COD) UNITS: mg/L UCRS

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	**X=** 72.938	**S=** 70.749	**CV(1)=** 0.970	**K factor**=** 2.523	**TL(1)=** 2.51E+02	**LL(1)=** N/A
Statistics-Transformed Background Data	**X=** 4.000	**S=** 0.702	**CV(2)=** 0.175	**K factor**=** 2.523	**TL(2)=** 5.77E+00	**LL(2)=** N/A

Historical Background Data from Upgradient Wells with Transformed Result

Well Number: MW371

Date Collected	Result	LN(Result)
3/18/2002	3.50E+01	3.56E+00
4/22/2002	3.50E+01	3.56E+00
7/15/2002	3.50E+01	3.56E+00
10/8/2002	3.50E+01	3.56E+00
1/8/2003	3.50E+01	3.56E+00
4/3/2003	3.50E+01	3.56E+00
7/9/2003	3.50E+01	3.56E+00
10/6/2003	3.50E+01	3.56E+00

Well Number: MW374

Date Collected	Result	LN(Result)
10/8/2002	2.60E+02	5.56E+00
1/7/2003	2.14E+02	5.37E+00
4/2/2003	1.47E+02	4.99E+00
7/9/2003	7.20E+01	4.28E+00
10/7/2003	5.60E+01	4.03E+00
1/6/2004	6.80E+01	4.22E+00
4/7/2004	3.50E+01	3.56E+00
7/14/2004	3.50E+01	3.56E+00

Dry/Partially Dry Wells

Well No.	Gradient
MW376	Sidegradient
MW377	Sidegradient

Because CV(1) is less than or equal to 1, assume normal distribution and continue with statistical analysis utilizing TL(1).

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW359	Downgradient	No	2.00E+01	N/A	3.00E+00	N/A
MW362	Downgradient	No	2.00E+01	N/A	3.00E+00	N/A
MW365	Downgradient	No	2.00E+01	N/A	3.00E+00	N/A
MW368	Downgradient	Yes	3.45E+01	NO	3.54E+00	N/A
MW371	Upgradient	No	2.00E+01	N/A	3.00E+00	N/A
MW374	Upgradient	No	2.00E+01	N/A	3.00E+00	N/A
MW375	Sidegradient	No	2.00E+01	N/A	3.00E+00	N/A

N/A - Results identified as Non-Detects during laboratory analysis or data validation and were not included in the statistical evaluation. Additionally for parameters that have MCLs, where the result for a well did not exceed the MCL value, that well was not included in the statistical evaluation.

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.

S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5

TL Upper Tolerance Limit, TL = X + (K * S), LL Lower Tolerance Limit, LL = X - (K * S)

X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,Interim Guidance, EPA, 1989, based on total number of background results - The K-factor for pH to account for a two-sided tolerance interval instead of a one-sided tolerance limit. The K-factor for pH was computed using a formula from NIST/SEMATECH e-Handbook of Statistical Methods, http://www.itl.nist.gov/div898/handbook/,2009.*

C-746-U Second Quarter 2025 Statistical Analysis Historical Background Comparison

Chloride UNITS: mg/L UCRS

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	**X=** 91.300	**S=** 86.959	**CV(1)=** 0.952	**K factor**=** 2.523	**TL(1)=** 3.11E+02	**LL(1)=** N/A
Statistics-Transformed Background Data	**X=** 3.620	**S=** 1.590	**CV(2)=** 0.439	**K factor**=** 2.523	**TL(2)=** 7.63E+00	**LL(2)=** N/A

Historical Background Data from Upgradient Wells with Transformed Result

Well Number:	MW371	
Date Collected	Result	LN(Result)
7/15/2002	8.30E+00	2.12E+00
10/8/2002	7.60E+00	2.03E+00
1/8/2003	7.70E+00	2.04E+00
4/3/2003	8.80E+00	2.17E+00
7/9/2003	8.10E+00	2.09E+00
10/6/2003	8.60E+00	2.15E+00
1/7/2004	7.60E+00	2.03E+00
4/6/2004	7.60E+00	2.03E+00

Well Number:	MW374	
Date Collected	Result	LN(Result)
10/8/2002	1.99E+02	5.29E+00
1/7/2003	2.00E+02	5.30E+00
4/2/2003	1.72E+02	5.15E+00
7/9/2003	1.79E+02	5.19E+00
10/7/2003	1.76E+02	5.17E+00
1/6/2004	1.70E+02	5.14E+00
4/7/2004	1.56E+02	5.05E+00
7/14/2004	1.45E+02	4.97E+00

Dry/Partially Dry Wells

Well No.	Gradient
MW376	Sidegradient
MW377	Sidegradient

Because CV(1) is less than or equal to 1, assume normal distribution and continue with statistical analysis utilizing TL(1).

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW359	Downgradient	Yes	6.23E-01	NO	-4.73E-01	N/A
MW362	Downgradient	Yes	1.65E+00	NO	5.01E-01	N/A
MW365	Downgradient	Yes	2.03E+00	NO	7.08E-01	N/A
MW368	Downgradient	Yes	1.02E+00	NO	1.98E-02	N/A
MW371	Upgradient	Yes	7.86E-01	NO	-2.41E-01	N/A
MW374	Upgradient	Yes	4.54E+01	NO	3.82E+00	N/A
MW375	Sidegradient	Yes	3.21E+00	NO	1.17E+00	N/A

N/A - Results identified as Non-Detects during laboratory analysis or data validation and were not included in the statistical evaluation. Additionally for parameters that have MCLs, where the result for a well did not exceed the MCL value, that well was not included in the statistical evaluation.

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.

S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5

TL Upper Tolerance Limit, TL = X + (K * S), LL Lower Tolerance Limit, LL = X - (K * S)

X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,Interim Guidance, EPA, 1989, based on total number of background results - The K-factor for pH to account for a two-sided tolerance interval instead of a one-sided tolerance limit. The K-factor for pH was computed using a formula from NIST/SEMATECH e-Handbook of Statistical Methods, http://www.itl.nist.gov/div898/handbook/,2009.*

C-746-U Second Quarter 2025 Statistical Analysis Historical Background Comparison

Cobalt UNITS: mg/L UCRS

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	**X=** 0.007	**S=** 0.009	**CV(1)=** 1.314	**K factor**=** 2.523	**TL(1)=** 3.12E-02	**LL(1)=**N/A
Statistics-Transformed Background Data	**X=** -5.843	**S=** 1.392	**CV(2)=** -0.238	**K factor**=** 2.523	**TL(2)=** -2.33E+00	**LL(2)=**N/A

Historical Background Data from Upgradient Wells with Transformed Result

Well Number: MW371

Date Collected	Result	LN(Result)
3/18/2002	2.50E-02	-3.69E+00
4/22/2002	2.50E-02	-3.69E+00
7/15/2002	2.50E-02	-3.69E+00
10/8/2002	1.00E-03	-6.91E+00
1/8/2003	1.00E-03	-6.91E+00
4/3/2003	1.00E-03	-6.91E+00
7/9/2003	1.00E-03	-6.91E+00
10/6/2003	1.00E-03	-6.91E+00

Well Number: MW374

Date Collected	Result	LN(Result)
10/8/2002	1.00E-02	-4.61E+00
1/7/2003	1.00E-02	-4.61E+00
4/2/2003	1.00E-02	-4.61E+00
7/9/2003	1.61E-03	-6.43E+00
10/7/2003	1.00E-03	-6.91E+00
1/6/2004	1.00E-03	-6.91E+00
4/7/2004	1.00E-03	-6.91E+00
7/14/2004	1.00E-03	-6.91E+00

Dry/Partially Dry Wells

Well No.	Gradient
MW376	Sidegradient
MW377	Sidegradient

Because CV(1) is greater than 1, the natural logarithm of background and test well results were calculated utilizing TL(2) for comparison.

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW359	Downgradient	No	1.00E-03	N/A	-6.91E+00	N/A
MW362	Downgradient	No	1.00E-03	N/A	-6.91E+00	N/A
MW365	Downgradient	Yes	1.47E-03	N/A	-6.52E+00	NO
MW368	Downgradient	No	1.00E-03	N/A	-6.91E+00	N/A
MW371	Upgradient	No	1.00E-03	N/A	-6.91E+00	N/A
MW374	Upgradient	Yes	3.05E-04	N/A	-8.10E+00	NO
MW375	Sidegradient	Yes	5.75E-04	N/A	-7.46E+00	NO

N/A - Results identified as Non-Detects during laboratory analysis or data validation and were not included in the statistical evaluation. Additionally for parameters that have MCLs, where the result for a well did not exceed the MCL value, that well was not included in the statistical evaluation.

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.

S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5

TL Upper Tolerance Limit, TL = X + (K * S), LL Lower Tolerance Limit, LL = X - (K * S)

X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,Interim Guidance, EPA, 1989, based on total number of background results - The K-factor for pH to account for a two-sided tolerance interval instead of a one-sided tolerance limit. The K-factor for pH was computed using a formula from NIST/SEMATECH e-Handbook of Statistical Methods, http://www.itl.nist.gov/div898/handbook/,2009.*

C-746-U Second Quarter 2025 Statistical Analysis Historical Background Comparison

Conductivity UNITS: umho/cm UCRS

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	**X=** 918.744	**S=** 417.257	**CV(1)=** 0.454	**K factor**=** 2.523	**TL(1)=** 1.97E+03	**LL(1)=** N/A
Statistics-Transformed Background Data	**X=** 6.705	**S=** 0.550	**CV(2)=** 0.082	**K factor**=** 2.523	**TL(2)=** 8.09E+00	**LL(2)=** N/A

Historical Background Data from Upgradient Wells with Transformed Result

Well Number: MW371

Date Collected	Result	LN(Result)
3/18/2002	5.41E+02	6.29E+00
4/22/2002	6.43E+02	6.47E+00
7/15/2002	6.32E+02	6.45E+00
10/8/2002	6.31E+02	6.45E+00
1/8/2003	6.80E+02	6.52E+00
4/3/2003	7.49E+02	6.62E+00
7/9/2003	7.34E+02	6.60E+00
10/6/2003	7.53E+02	6.62E+00

Well Number: MW374

Date Collected	Result	LN(Result)
3/18/2002	1.01E+03	6.91E+00
10/8/2002	1.68E+03	7.43E+00
1/7/2003	1.72E+03	7.45E+00
4/2/2003	1.72E+02	5.15E+00
7/9/2003	1.23E+03	7.12E+00
10/7/2003	1.21E+03	7.10E+00
1/6/2004	1.17E+03	7.07E+00
4/7/2004	1.15E+03	7.04E+00

Dry/Partially Dry Wells

Well No.	Gradient
MW376	Sidegradient
MW377	Sidegradient

Because CV(1) is less than or equal to 1, assume normal distribution and continue with statistical analysis utilizing TL(1).

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW359	Downgradient	Yes	2.30E+02	NO	5.44E+00	N/A
MW362	Downgradient	Yes	5.80E+02	NO	6.36E+00	N/A
MW365	Downgradient	Yes	4.65E+02	NO	6.14E+00	N/A
MW368	Downgradient	Yes	4.64E+02	NO	6.14E+00	N/A
MW371	Upgradient	Yes	5.15E+02	NO	6.24E+00	N/A
MW374	Upgradient	Yes	7.27E+02	NO	6.59E+00	N/A
MW375	Sidegradient	Yes	4.34E+02	NO	6.07E+00	N/A

N/A - Results identified as Non-Detects during laboratory analysis or data validation and were not included in the statistical evaluation. Additionally for parameters that have MCLs, where the result for a well did not exceed the MCL value, that well was not included in the statistical evaluation.

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.

S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5

TL Upper Tolerance Limit, TL = X + (K * S), LL Lower Tolerance Limit, LL = X - (K * S)

X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,Interim Guidance, EPA, 1989, based on total number of background results - The K-factor for pH to account for a two-sided tolerance interval instead of a one-sided tolerance limit. The K-factor for pH was computed using a formula from NIST/SEMATECH e-Handbook of Statistical Methods, http://www.itl.nist.gov/div898/handbook/,2009.*

C-746-U Second Quarter 2025 Statistical Analysis Historical Background Comparison

Copper UNITS: mg/L UCRS

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	**X=** 0.056	**S=** 0.072	**CV(1)=** 1.275	**K factor**=** 2.523	**TL(1)=** 2.37E-01	**LL(1)=**N/A
Statistics-Transformed Background Data	**X=** -3.395	**S=** 0.915	**CV(2)=** -0.270	**K factor**=** 2.523	**TL(2)=** -1.09E+00	**LL(2)=**N/A

Because CV(1) is greater than 1, the natural logarithm of background and test well results were calculated utilizing TL(2) for comparison.

Historical Background Data from Upgradient Wells with Transformed Result

Well Number: MW371

Date Collected	Result	LN(Result)
3/18/2002	2.50E-02	-3.69E+00
4/22/2002	2.50E-02	-3.69E+00
7/15/2002	5.00E-02	-3.00E+00
10/8/2002	2.00E-02	-3.91E+00
1/8/2003	2.00E-02	-3.91E+00
4/3/2003	2.00E-02	-3.91E+00
7/9/2003	2.00E-02	-3.91E+00
10/6/2003	2.00E-02	-3.91E+00

Well Number: MW374

Date Collected	Result	LN(Result)
10/8/2002	2.00E-01	-1.61E+00
1/7/2003	2.00E-01	-1.61E+00
4/2/2003	2.00E-01	-1.61E+00
7/9/2003	2.00E-02	-3.91E+00
10/7/2003	2.00E-02	-3.91E+00
1/6/2004	2.00E-02	-3.91E+00
4/7/2004	2.00E-02	-3.91E+00
7/14/2004	2.00E-02	-3.91E+00

Dry/Partially Dry Wells

Well No.	Gradient
MW376	Sidegradient
MW377	Sidegradient

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW359	Downgradient	Yes	8.07E-04	N/A	-7.12E+00	NO
MW362	Downgradient	Yes	1.34E-03	N/A	-6.62E+00	NO
MW365	Downgradient	Yes	2.55E-03	N/A	-5.97E+00	NO
MW368	Downgradient	Yes	4.88E-04	N/A	-7.63E+00	NO
MW371	Upgradient	Yes	1.02E-03	N/A	-6.89E+00	NO
MW374	Upgradient	Yes	5.18E-04	N/A	-7.57E+00	NO
MW375	Sidegradient	Yes	5.97E-04	N/A	-7.42E+00	NO

N/A - Results identified as Non-Detects during laboratory analysis or data validation and were not included in the statistical evaluation. Additionally for parameters that have MCLs, where the result for a well did not exceed the MCL value, that well was not included in the statistical evaluation.

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.

S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5

TL Upper Tolerance Limit, TL = X + (K * S), LL Lower Tolerance Limit, LL = X - (K * S)

X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,Interim Guidance, EPA, 1989, based on total number of background results - The K-factor for pH to account for a two-sided tolerance interval instead of a one-sided tolerance limit. The K-factor for pH was computed using a formula from NIST/SEMATECH e-Handbook of Statistical Methods, http://www.itl.nist.gov/div898/handbook/,2009.*

C-746-U Second Quarter 2025 Statistical Analysis Historical Background Comparison

Cyanide UNITS: mg/L UCRS

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	**X=** 0.026	**S=** 0.012	**CV(1)=** 0.472	**K factor**=** 2.523	**TL(1)=** 5.61E-02	**LL(1)=** N/A
Statistics-Transformed Background Data	**X=** -3.740	**S=** 0.369	**CV(2)=** -0.099	**K factor**=** 2.523	**TL(2)=** -2.81E+00	**LL(2)=** N/A

Historical Background Data from Upgradient Wells with Transformed Result

Well Number:	MW371	
Date Collected	Result	LN(Result)
3/18/2002	2.00E-02	-3.91E+00
4/22/2002	2.00E-02	-3.91E+00
7/15/2002	2.00E-02	-3.91E+00
10/8/2002	2.00E-02	-3.91E+00
4/3/2003	2.00E-02	-3.91E+00
7/9/2003	2.00E-02	-3.91E+00
10/6/2003	2.00E-02	-3.91E+00
1/7/2004	2.00E-02	-3.91E+00

Well Number:	MW374	
Date Collected	Result	LN(Result)
10/8/2002	2.00E-02	-3.91E+00
4/2/2003	2.00E-02	-3.91E+00
7/9/2003	2.00E-02	-3.91E+00
10/7/2003	2.00E-02	-3.91E+00
1/6/2004	2.00E-02	-3.91E+00
4/7/2004	5.00E-02	-3.00E+00
7/14/2004	5.00E-02	-3.00E+00
10/7/2004	5.00E-02	-3.00E+00

Dry/Partially Dry Wells

Well No.	Gradient
MW376	Sidegradient
MW377	Sidegradient

Because CV(1) is less than or equal to 1, assume normal distribution and continue with statistical analysis utilizing TL(1).

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW359	Downgradient	Yes	4.67E-03	NO	-5.37E+00	N/A
MW362	Downgradient	No	2.00E-01	N/A	-1.61E+00	N/A
MW365	Downgradient	No	2.00E-01	N/A	-1.61E+00	N/A
MW368	Downgradient	No	2.00E-01	N/A	-1.61E+00	N/A
MW371	Upgradient	No	2.00E-01	N/A	-1.61E+00	N/A
MW374	Upgradient	Yes	2.50E-03	NO	-5.99E+00	N/A
MW375	Sidegradient	No	2.00E-01	N/A	-1.61E+00	N/A

N/A - Results identified as Non-Detects during laboratory analysis or data validation and were not included in the statistical evaluation. Additionally for parameters that have MCLs, where the result for a well did not exceed the MCL value, that well was not included in the statistical evaluation.

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.

S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5

TL Upper Tolerance Limit, TL = X + (K * S), LL Lower Tolerance Limit, LL = X - (K * S)

X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,Interim Guidance, EPA, 1989, based on total number of background results - The K-factor for pH to account for a two-sided tolerance interval instead of a one-sided tolerance limit. The K-factor for pH was computed using a formula from NIST/SEMATECH e-Handbook of Statistical Methods, http://www.itl.nist.gov/div898/handbook/,2009.*

C-746-U Second Quarter 2025 Statistical Analysis Historical Background Comparison

Dissolved Oxygen UNITS: mg/L UCRS

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	**X=** 1.138	**S=** 0.621	**CV(1)=** 0.546	**K factor**=** 2.523	**TL(1)=** 2.70E+00	**LL(1)=** N/A
Statistics-Transformed Background Data	**X=** -0.013	**S=** 0.577	**CV(2)=** -43.069	**K factor**=** 2.523	**TL(2)=** 1.44E+00	**LL(2)=** N/A

Historical Background Data from Upgradient Wells with Transformed Result

Well Number: MW371

Date Collected	Result	LN(Result)
3/18/2002	2.26E+00	8.15E-01
4/22/2002	1.15E+00	1.40E-01
7/15/2002	9.40E-01	-6.19E-02
10/8/2002	7.40E-01	-3.01E-01
1/8/2003	2.62E+00	9.63E-01
4/3/2003	1.50E+00	4.05E-01
7/9/2003	1.66E+00	5.07E-01
10/6/2003	1.28E+00	2.47E-01

Well Number: MW374

Date Collected	Result	LN(Result)
3/18/2002	6.00E-01	-5.11E-01
10/8/2002	6.70E-01	-4.00E-01
1/7/2003	2.30E-01	-1.47E+00
4/2/2003	6.50E-01	-4.31E-01
7/9/2003	9.20E-01	-8.34E-02
10/7/2003	9.90E-01	-1.01E-02
1/6/2004	1.11E+00	1.04E-01
4/7/2004	8.80E-01	-1.28E-01

Dry/Partially Dry Wells

Well No.	Gradient
MW376	Sidegradient
MW377	Sidegradient

Because CV(1) is less than or equal to 1, assume normal distribution and continue with statistical analysis utilizing TL(1).

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW359	Downgradient	Yes	4.81E+00	YES	1.57E+00	N/A
MW362	Downgradient	Yes	7.06E+00	YES	1.95E+00	N/A
MW365	Downgradient	Yes	4.86E+00	YES	1.58E+00	N/A
MW368	Downgradient	Yes	2.24E+00	NO	8.06E-01	N/A
MW371	Upgradient	Yes	5.89E+00	YES	1.77E+00	N/A
MW374	Upgradient	Yes	2.82E+00	YES	1.04E+00	N/A
MW375	Sidegradient	Yes	4.00E+00	YES	1.39E+00	N/A

N/A - Results identified as Non-Detects during laboratory analysis or data validation and were not included in the statistical evaluation. Additionally for parameters that have MCLs, where the result for a well did not exceed the MCL value, that well was not included in the statistical evaluation.

Conclusion of Statistical Analysis on Historical Data

The test well(s) listed exceeded the Upper Tolerance Limit, which is evidence of elevated concentration with respect to historical background data.

Wells with Exceedances

MW359
MW362
MW365
MW371
MW374
MW375

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.

S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5

TL Upper Tolerance Limit, TL = X + (K * S), LL Lower Tolerance Limit, LL = X - (K * S)

X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,Interim Guidance, EPA, 1989, based on total number of background results - The K-factor for pH to account for a two-sided tolerance interval instead of a one-sided tolerance limit. The K-factor for pH was computed using a formula from NIST/SEMATECH e-Handbook of Statistical Methods, http://www.itl.nist.gov/div898/handbook/,2009.*

C-746-U Second Quarter 2025 Statistical Analysis Historical Background Comparison

Dissolved Solids UNITS: mg/L UCRS

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	**X=** 590.000	**S=** 248.068	**CV(1)=** 0.420	**K factor**=** 2.523	**TL(1)=** 1.22E+03	**LL(1)=** N/A
Statistics-Transformed Background Data	**X=** 6.308	**S=** 0.383	**CV(2)=** 0.061	**K factor**=** 2.523	**TL(2)=** 7.27E+00	**LL(2)=** N/A

Historical Background Data from Upgradient Wells with Transformed Result

Well Number:	MW371	
Date Collected	Result	LN(Result)
3/18/2002	2.74E+02	5.61E+00
4/22/2002	4.09E+02	6.01E+00
7/15/2002	4.18E+02	6.04E+00
10/8/2002	4.24E+02	6.05E+00
1/8/2003	4.31E+02	6.07E+00
4/3/2003	4.44E+02	6.10E+00
7/9/2003	4.45E+02	6.10E+00
10/6/2003	4.38E+02	6.08E+00

Well Number:	MW374	
Date Collected	Result	LN(Result)
10/8/2002	1.14E+03	7.04E+00
1/7/2003	1.10E+03	7.00E+00
4/2/2003	8.63E+02	6.76E+00
7/9/2003	6.82E+02	6.53E+00
10/7/2003	5.89E+02	6.38E+00
1/6/2004	6.03E+02	6.40E+00
4/7/2004	6.01E+02	6.40E+00
7/14/2004	5.82E+02	6.37E+00

Dry/Partially Dry Wells

Well No.	Gradient
MW376	Sidegradient
MW377	Sidegradient

Because CV(1) is less than or equal to 1, assume normal distribution and continue with statistical analysis utilizing TL(1).

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW359	Downgradient	Yes	1.35E+02	NO	4.91E+00	N/A
MW362	Downgradient	Yes	3.66E+02	NO	5.90E+00	N/A
MW365	Downgradient	Yes	2.42E+02	NO	5.49E+00	N/A
MW368	Downgradient	Yes	2.35E+02	NO	5.46E+00	N/A
MW371	Upgradient	Yes	1.94E+02	NO	5.27E+00	N/A
MW374	Upgradient	Yes	3.84E+02	NO	5.95E+00	N/A
MW375	Sidegradient	Yes	1.95E+02	NO	5.27E+00	N/A

N/A - Results identified as Non-Detects during laboratory analysis or data validation and were not included in the statistical evaluation. Additionally for parameters that have MCLs, where the result for a well did not exceed the MCL value, that well was not included in the statistical evaluation.

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.

S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5

TL Upper Tolerance Limit, TL = X + (K * S), LL Lower Tolerance Limit, LL = X - (K * S)

X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,Interim Guidance, EPA, 1989, based on total number of background results - The K-factor for pH to account for a two-sided tolerance interval instead of a one-sided tolerance limit. The K-factor for pH was computed using a formula from NIST/SEMATECH e-Handbook of Statistical Methods, http://www.itl.nist.gov/div898/handbook/,2009.*

C-746-U Second Quarter 2025 Statistical Analysis Historical Background Comparison

Iron **UNITS: mg/L** **UCRS**

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	**X=** 6.612	**S=** 6.487	**CV(1)=** 0.981	**K factor**=** 2.523	**TL(1)=** 2.30E+01	**LL(1)=** N/A
Statistics-Transformed Background Data	**X=** 1.363	**S=** 1.147	**CV(2)=** 0.841	**K factor**=** 2.523	**TL(2)=** 4.26E+00	**LL(2)=** N/A

Historical Background Data from Upgradient Wells with Transformed Result

Well Number: MW371

Date Collected	Result	LN(Result)
3/18/2002	1.31E+00	2.70E-01
4/22/2002	9.13E-01	-9.10E-02
7/15/2002	8.81E-01	-1.27E-01
10/8/2002	3.86E+00	1.35E+00
1/8/2003	1.88E+00	6.31E-01
4/3/2003	3.18E+00	1.16E+00
7/9/2003	4.84E-01	-7.26E-01
10/6/2003	2.72E+00	1.00E+00

Well Number: MW374

Date Collected	Result	LN(Result)
10/8/2002	2.30E+01	3.14E+00
1/7/2003	1.39E+01	2.63E+00
4/2/2003	1.40E+01	2.64E+00
7/9/2003	1.42E+01	2.65E+00
10/7/2003	7.92E+00	2.07E+00
1/6/2004	7.86E+00	2.06E+00
4/7/2004	4.82E+00	1.57E+00
7/14/2004	4.87E+00	1.58E+00

Dry/Partially Dry Wells

Well No.	Gradient
MW376	Sidegradient
MW377	Sidegradient

Because CV(1) is less than or equal to 1, assume normal distribution and continue with statistical analysis utilizing TL(1).

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW359	Downgradient	Yes	5.88E-02	NO	-2.83E+00	N/A
MW362	Downgradient	Yes	1.18E-01	NO	-2.14E+00	N/A
MW365	Downgradient	No	1.00E-01	N/A	-2.30E+00	N/A
MW368	Downgradient	No	1.00E-01	N/A	-2.30E+00	N/A
MW371	Upgradient	Yes	4.38E-02	NO	-3.13E+00	N/A
MW374	Upgradient	Yes	6.49E-01	NO	-4.32E-01	N/A
MW375	Sidegradient	Yes	1.01E-01	NO	-2.29E+00	N/A

N/A - Results identified as Non-Detects during laboratory analysis or data validation and were not included in the statistical evaluation. Additionally for parameters that have MCLs, where the result for a well did not exceed the MCL value, that well was not included in the statistical evaluation.

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.

S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5

TL Upper Tolerance Limit, TL = X + (K * S), LL Lower Tolerance Limit, LL = X - (K * S)

X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,Interim Guidance, EPA, 1989, based on total number of background results - The K-factor for pH to account for a two-sided tolerance interval instead of a one-sided tolerance limit. The K-factor for pH was computed using a formula from NIST/SEMATECH e-Handbook of Statistical Methods, http://www.itl.nist.gov/div898/handbook/,2009.*

C-746-U Second Quarter 2025 Statistical Analysis Historical Background Comparison

Magnesium UNITS: mg/L UCRS

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	**X=** 11.347	**S=** 3.019	**CV(1)=** 0.266	**K factor**=** 2.523	**TL(1)=** 1.90E+01	**LL(1)=** N/A
Statistics-Transformed Background Data	**X=** 2.401	**S=** 0.237	**CV(2)=** 0.099	**K factor**=** 2.523	**TL(2)=** 3.00E+00	**LL(2)=** N/A

Historical Background Data from Upgradient Wells with Transformed Result

Well Number: MW371

Date Collected	Result	LN(Result)
3/18/2002	7.10E+00	1.96E+00
4/22/2002	9.77E+00	2.28E+00
7/15/2002	1.04E+01	2.34E+00
10/8/2002	1.02E+01	2.32E+00
1/8/2003	1.07E+01	2.37E+00
4/3/2003	1.19E+01	2.48E+00
7/9/2003	1.08E+01	2.38E+00
10/6/2003	1.09E+01	2.39E+00

Well Number: MW374

Date Collected	Result	LN(Result)
10/8/2002	2.00E+01	3.00E+00
1/7/2003	1.61E+01	2.78E+00
4/2/2003	1.31E+01	2.57E+00
7/9/2003	1.03E+01	2.33E+00
10/7/2003	1.11E+01	2.41E+00
1/6/2004	1.10E+01	2.40E+00
4/7/2004	9.69E+00	2.27E+00
7/14/2004	8.49E+00	2.14E+00

Dry/Partially Dry Wells

Well No.	Gradient
MW376	Sidegradient
MW377	Sidegradient

Because CV(1) is less than or equal to 1, assume normal distribution and continue with statistical analysis utilizing TL(1).

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW359	Downgradient	Yes	3.37E+00	NO	1.21E+00	N/A
MW362	Downgradient	Yes	8.53E+00	NO	2.14E+00	N/A
MW365	Downgradient	Yes	9.40E+00	NO	2.24E+00	N/A
MW368	Downgradient	Yes	9.46E+00	NO	2.25E+00	N/A
MW371	Upgradient	Yes	9.03E+00	NO	2.20E+00	N/A
MW374	Upgradient	Yes	6.28E+00	NO	1.84E+00	N/A
MW375	Sidegradient	Yes	5.34E+00	NO	1.68E+00	N/A

N/A - Results identified as Non-Detects during laboratory analysis or data validation and were not included in the statistical evaluation. Additionally for parameters that have MCLs, where the result for a well did not exceed the MCL value, that well was not included in the statistical evaluation.

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.

S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5

TL Upper Tolerance Limit, TL = X + (K * S), LL Lower Tolerance Limit, LL = X - (K * S)

X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,Interim Guidance, EPA, 1989, based on total number of background results - The K-factor for pH to account for a two-sided tolerance interval instead of a one-sided tolerance limit. The K-factor for pH was computed using a formula from NIST/SEMATECH e-Handbook of Statistical Methods, http://www.itl.nist.gov/div898/handbook/,2009.*

C-746-U Second Quarter 2025 Statistical Analysis Historical Background Comparison

Manganese UNITS: mg/L UCRS

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	**X=** 0.248	**S=** 0.222	**CV(1)=** 0.894	**K factor**=** 2.523	**TL(1)=** 8.09E-01	**LL(1)=** N/A
Statistics-Transformed Background Data	**X=** -1.873	**S=** 1.068	**CV(2)=** -0.570	**K factor**=** 2.523	**TL(2)=** 8.21E-01	**LL(2)=** N/A

Historical Background Data from Upgradient Wells with Transformed Result

Well Number: MW371

Date Collected	Result	LN(Result)
3/18/2002	6.30E-02	-2.76E+00
4/22/2002	6.70E-02	-2.70E+00
7/15/2002	7.40E-02	-2.60E+00
10/8/2002	5.21E-02	-2.95E+00
1/8/2003	3.85E-02	-3.26E+00
4/3/2003	5.51E-02	-2.90E+00
7/9/2003	5.46E-02	-2.91E+00
10/6/2003	5.43E-02	-2.91E+00

Well Number: MW374

Date Collected	Result	LN(Result)
10/8/2002	5.96E-01	-5.18E-01
1/7/2003	5.65E-01	-5.71E-01
4/2/2003	6.75E-01	-3.93E-01
7/9/2003	3.97E-01	-9.24E-01
10/7/2003	3.12E-01	-1.16E+00
1/6/2004	2.99E-01	-1.21E+00
4/7/2004	3.29E-01	-1.11E+00
7/14/2004	3.42E-01	-1.07E+00

Dry/Partially Dry Wells

Well No.	Gradient
MW376	Sidegradient
MW377	Sidegradient

Because CV(1) is less than or equal to 1, assume normal distribution and continue with statistical analysis utilizing TL(1).

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW359	Downgradient	No	5.00E-03	N/A	-5.30E+00	N/A
MW362	Downgradient	Yes	1.98E-03	NO	-6.22E+00	N/A
MW365	Downgradient	Yes	1.09E-02	NO	-4.52E+00	N/A
MW368	Downgradient	Yes	1.79E-03	NO	-6.33E+00	N/A
MW371	Upgradient	Yes	2.47E-03	NO	-6.00E+00	N/A
MW374	Upgradient	Yes	6.73E-02	NO	-2.70E+00	N/A
MW375	Sidegradient	Yes	1.17E-02	NO	-4.45E+00	N/A

N/A - Results identified as Non-Detects during laboratory analysis or data validation and were not included in the statistical evaluation. Additionally for parameters that have MCLs, where the result for a well did not exceed the MCL value, that well was not included in the statistical evaluation.

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.

S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5

TL Upper Tolerance Limit, TL = X + (K * S), LL Lower Tolerance Limit, LL = X - (K * S)

X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,Interim Guidance, EPA, 1989, based on total number of background results - The K-factor for pH to account for a two-sided tolerance interval instead of a one-sided tolerance limit. The K-factor for pH was computed using a formula from NIST/SEMATECH e-Handbook of Statistical Methods, http://www.itl.nist.gov/div898/handbook/,2009.*

C-746-U Second Quarter 2025 Statistical Analysis Historical Background Comparison

Methylene chloride UNITS: ug/L UCRS

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	**X=** 5.125	**S=** 1.500	**CV(1)=** 0.293	**K factor**=** 2.523	**TL(1)=** 8.91E+00	**LL(1)=** N/A
Statistics-Transformed Background Data	**X=** 1.595	**S=** 0.296	**CV(2)=** 0.186	**K factor**=** 2.523	**TL(2)=** 2.34E+00	**LL(2)=** N/A

Historical Background Data from Upgradient Wells with Transformed Result

Well Number:	MW371	
Date Collected	Result	LN(Result)
3/18/2002	2.00E+00	6.93E-01
4/22/2002	5.00E+00	1.61E+00
7/15/2002	1.00E+01	2.30E+00
10/8/2002	5.00E+00	1.61E+00
1/8/2003	5.00E+00	1.61E+00
4/3/2003	5.00E+00	1.61E+00
7/9/2003	5.00E+00	1.61E+00
10/6/2003	5.00E+00	1.61E+00

Well Number:	MW374	
Date Collected	Result	LN(Result)
10/8/2002	5.00E+00	1.61E+00
1/7/2003	5.00E+00	1.61E+00
4/2/2003	5.00E+00	1.61E+00
7/9/2003	5.00E+00	1.61E+00
10/7/2003	5.00E+00	1.61E+00
1/6/2004	5.00E+00	1.61E+00
4/7/2004	5.00E+00	1.61E+00
7/14/2004	5.00E+00	1.61E+00

Dry/Partially Dry Wells

Well No.	Gradient
MW376	Sidegradient
MW377	Sidegradient

Because CV(1) is less than or equal to 1, assume normal distribution and continue with statistical analysis utilizing TL(1).

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW359	Downgradient	No	5.00E+00	N/A	1.61E+00	N/A
MW362	Downgradient	No	5.00E+00	N/A	1.61E+00	N/A
MW365	Downgradient	No	5.00E+00	N/A	1.61E+00	N/A
MW368	Downgradient	No	5.00E+00	N/A	1.61E+00	N/A
MW371	Upgradient	Yes	6.40E-01	NO	-4.46E-01	N/A
MW374	Upgradient	Yes	1.20E+00	NO	1.82E-01	N/A
MW375	Sidegradient	Yes	1.32E+00	NO	2.78E-01	N/A

N/A - Results identified as Non-Detects during laboratory analysis or data validation and were not included in the statistical evaluation. Additionally for parameters that have MCLs, where the result for a well did not exceed the MCL value, that well was not included in the statistical evaluation.

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.

S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5

TL Upper Tolerance Limit, TL = X + (K * S), LL Lower Tolerance Limit, LL = X - (K * S)

X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,Interim Guidance, EPA, 1989, based on total number of background results - The K-factor for pH to account for a two-sided tolerance interval instead of a one-sided tolerance limit. The K-factor for pH was computed using a formula from NIST/SEMATECH e-Handbook of Statistical Methods, http://www.itl.nist.gov/div898/handbook/,2009.*

C-746-U Second Quarter 2025 Statistical Analysis Historical Background Comparison

Molybdenum **UNITS: mg/L** **UCRS**

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	**X=** 0.006	**S=** 0.010	**CV(1)=** 1.650	**K factor**=** 2.523	**TL(1)=** 2.99E-02	**LL(1)=**N/A
Statistics-Transformed Background Data	**X=** -6.108	**S=** 1.239	**CV(2)=** -0.203	**K factor**=** 2.523	**TL(2)=** -2.98E+00	**LL(2)=**N/A

Historical Background Data from Upgradient Wells with Transformed Result

Well Number:	MW371	
Date Collected	Result	LN(Result)
3/18/2002	2.50E-02	-3.69E+00
4/22/2002	2.50E-02	-3.69E+00
7/15/2002	2.50E-02	-3.69E+00
10/8/2002	1.00E-03	-6.91E+00
1/8/2003	1.21E-03	-6.72E+00
4/3/2003	1.00E-03	-6.91E+00
7/9/2003	1.11E-03	-6.80E+00
10/6/2003	1.00E-03	-6.91E+00

Well Number:	MW374	
Date Collected	Result	LN(Result)
10/8/2002	2.22E-03	-6.11E+00
1/7/2003	2.01E-03	-6.21E+00
4/2/2003	1.59E-03	-6.44E+00
7/9/2003	2.42E-03	-6.02E+00
10/7/2003	1.00E-03	-6.91E+00
1/6/2004	1.00E-03	-6.91E+00
4/7/2004	1.00E-03	-6.91E+00
7/14/2004	1.00E-03	-6.91E+00

Dry/Partially Dry Wells

Well No.	Gradient
MW376	Sidegradient
MW377	Sidegradient

Because CV(1) is greater than 1, the natural logarithm of background and test well results were calculated utilizing TL(2) for comparison.

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW359	Downgradient	Yes	2.29E-04	N/A	-8.38E+00	NO
MW362	Downgradient	Yes	1.05E-03	N/A	-6.86E+00	NO
MW365	Downgradient	Yes	2.73E-04	N/A	-8.21E+00	NO
MW368	Downgradient	Yes	4.62E-04	N/A	-7.68E+00	NO
MW371	Upgradient	Yes	5.39E-04	N/A	-7.53E+00	NO
MW374	Upgradient	Yes	2.63E-04	N/A	-8.24E+00	NO
MW375	Sidegradient	No	1.00E-03	N/A	-6.91E+00	N/A

N/A - Results identified as Non-Detects during laboratory analysis or data validation and were not included in the statistical evaluation. Additionally for parameters that have MCLs, where the result for a well did not exceed the MCL value, that well was not included in the statistical evaluation.

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.

S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5

TL Upper Tolerance Limit, TL = X + (K * S), LL Lower Tolerance Limit, LL = X - (K * S)

X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,Interim Guidance, EPA, 1989, based on total number of background results - The K-factor for pH to account for a two-sided tolerance interval instead of a one-sided tolerance limit. The K-factor for pH was computed using a formula from NIST/SEMATECH e-Handbook of Statistical Methods, http://www.itl.nist.gov/div898/handbook/,2009.*

C-746-U Second Quarter 2025 Statistical Analysis Historical Background Comparison

Nickel **UNITS: mg/L** **UCRS**

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	**X=** 0.023	**S=** 0.022	**CV(1)=** 0.980	**K factor**=** 2.523	**TL(1)=** 7.82E-02	**LL(1)=** N/A
Statistics-Transformed Background Data	**X=** -4.349	**S=** 1.109	**CV(2)=** -0.255	**K factor**=** 2.523	**TL(2)=** -1.55E+00	**LL(2)=** N/A

Historical Background Data from Upgradient Wells with Transformed Result

Well Number:	MW371	
Date Collected	Result	LN(Result)
3/18/2002	5.00E-02	-3.00E+00
4/22/2002	5.00E-02	-3.00E+00
7/15/2002	5.00E-02	-3.00E+00
10/8/2002	1.24E-02	-4.39E+00
1/8/2003	5.00E-03	-5.30E+00
4/3/2003	5.00E-03	-5.30E+00
7/9/2003	5.00E-03	-5.30E+00
10/6/2003	5.00E-03	-5.30E+00

Well Number:	MW374	
Date Collected	Result	LN(Result)
10/8/2002	5.00E-02	-3.00E+00
1/7/2003	5.00E-02	-3.00E+00
4/2/2003	5.00E-02	-3.00E+00
7/9/2003	7.94E-03	-4.84E+00
10/7/2003	5.00E-03	-5.30E+00
1/6/2004	5.00E-03	-5.30E+00
4/7/2004	5.00E-03	-5.30E+00
7/14/2004	5.00E-03	-5.30E+00

Dry/Partially Dry Wells

Well No.	Gradient
MW376	Sidegradient
MW377	Sidegradient

Because CV(1) is less than or equal to 1, assume normal distribution and continue with statistical analysis utilizing TL(1).

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW359	Downgradient	Yes	1.49E-03	NO	-6.51E+00	N/A
MW362	Downgradient	Yes	6.49E-04	NO	-7.34E+00	N/A
MW365	Downgradient	Yes	4.88E-03	NO	-5.32E+00	N/A
MW368	Downgradient	No	2.00E-03	N/A	-6.21E+00	N/A
MW371	Upgradient	Yes	1.05E-03	NO	-6.86E+00	N/A
MW374	Upgradient	No	2.00E-03	N/A	-6.21E+00	N/A
MW375	Sidegradient	Yes	8.97E-04	NO	-7.02E+00	N/A

N/A - Results identified as Non-Detects during laboratory analysis or data validation and were not included in the statistical evaluation. Additionally for parameters that have MCLs, where the result for a well did not exceed the MCL value, that well was not included in the statistical evaluation.

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.

S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5

TL Upper Tolerance Limit, TL = X + (K * S), LL Lower Tolerance Limit, LL = X - (K * S)

X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,Interim Guidance, EPA, 1989, based on total number of background results - The K-factor for pH to account for a two-sided tolerance interval instead of a one-sided tolerance limit. The K-factor for pH was computed using a formula from NIST/SEMATECH e-Handbook of Statistical Methods, http://www.itl.nist.gov/div898/handbook/,2009.*

C-746-U Second Quarter 2025 Statistical Analysis Historical Background Comparison
Oxidation-Reduction Potential UNITS: mV UCRS

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	**X=** 22.281	**S=** 78.889	**CV(1)=** 3.541	**K factor**=** 2.523	**TL(1)=** 2.21E+02	**LL(1)=** N/A
Statistics-Transformed Background Data	**X=** 3.642	**S=** 1.729	**CV(2)=** 0.475	**K factor**=** 2.523	**TL(2)=** 5.11E+00	**LL(2)=** N/A

Historical Background Data from Upgradient Wells with Transformed Result

Well Number:	MW371	
Date Collected	Result	LN(Result)
3/18/2002	7.50E+01	4.32E+00
4/22/2002	1.65E+02	5.11E+00
7/15/2002	6.50E+01	4.17E+00
4/3/2003	-1.90E+01	#Func!
7/9/2003	1.14E+02	4.74E+00
10/6/2003	-2.20E+01	#Func!
1/7/2004	2.05E+01	3.02E+00
4/6/2004	1.13E+02	4.73E+00

Well Number:	MW374	
Date Collected	Result	LN(Result)
3/18/2002	1.35E+02	4.91E+00
4/2/2003	-5.60E+01	#Func!
7/9/2003	-6.80E+01	#Func!
10/7/2003	-5.00E+01	#Func!
1/6/2004	-8.50E+01	#Func!
4/7/2004	6.00E+00	1.79E+00
7/14/2004	-3.80E+01	#Func!
10/7/2004	1.00E+00	0.00E+00

Dry/Partially Dry Wells

Well No.	Gradient
MW376	Sidegradient
MW377	Sidegradient

Because CV(1) is greater than 1, the natural logarithm of background and test well results were calculated utilizing TL(2) for comparison.

#Because the natural log was not possible for all background values, the TL was considered equal to the maximum background value.

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW359	Downgradient	Yes	2.32E+02	N/A	5.45E+00	YES
MW362	Downgradient	Yes	4.61E+02	N/A	6.13E+00	YES
MW365	Downgradient	Yes	4.49E+02	N/A	6.11E+00	YES
MW368	Downgradient	Yes	3.87E+02	N/A	5.96E+00	YES
MW371	Upgradient	Yes	3.97E+02	N/A	5.98E+00	YES
MW374	Upgradient	Yes	3.77E+02	N/A	5.93E+00	YES
MW375	Sidegradient	Yes	3.76E+02	N/A	5.93E+00	YES

N/A - Results identified as Non-Detects during laboratory analysis or data validation and were not included in the statistical evaluation. Additionally for parameters that have MCLs, where the result for a well did not exceed the MCL value, that well was not included in the statistical evaluation.

Conclusion of Statistical Analysis on Historical Data

The test well(s) listed exceeded the Upper Tolerance Limit, which is evidence of elevated concentration with respect to historical background data.

Wells with Exceedances

MW359
MW362
MW365
MW368
MW371
MW374
MW375

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.

S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5

TL Upper Tolerance Limit, TL = X + (K * S), LL Lower Tolerance Limit, LL = X - (K * S)

X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,Interim Guidance, EPA, 1989, based on total number of background results - The K-factor for pH to account for a two-sided tolerance interval instead of a one-sided tolerance limit. The K-factor for pH was computed using a formula from NIST/SEMATECH e-Handbook of Statistical Methods, http://www.itl.nist.gov/div898/handbook/,2009.*

C-746-U Second Quarter 2025 Statistical Analysis Historical Background Comparison

PCB, Total UNITS: ug/L UCRS

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	**X=** 0.224	**S=** 0.207	**CV(1)=** 0.922	**K factor**=** 2.523	**TL(1)=** 7.46E-01	**LL(1)=** N/A
Statistics-Transformed Background Data	**X=** -1.647	**S=** 0.440	**CV(2)=** -0.267	**K factor**=** 2.523	**TL(2)=** -5.37E-01	**LL(2)=** N/A

Historical Background Data from Upgradient Wells with Transformed Result

Well Number: MW371

Date Collected	Result	LN(Result)
3/18/2002	1.00E+00	0.00E+00
4/22/2002	1.70E-01	-1.77E+00
7/15/2002	1.70E-01	-1.77E+00
7/9/2003	1.70E-01	-1.77E+00
10/6/2003	1.70E-01	-1.77E+00
7/13/2004	1.80E-01	-1.71E+00
7/25/2005	1.70E-01	-1.77E+00
4/5/2006	1.80E-01	-1.71E+00

Well Number: MW374

Date Collected	Result	LN(Result)
7/9/2003	1.70E-01	-1.77E+00
10/7/2003	1.70E-01	-1.77E+00
7/14/2004	1.80E-01	-1.71E+00
7/26/2005	1.70E-01	-1.77E+00
4/6/2006	1.80E-01	-1.71E+00
7/10/2006	1.70E-01	-1.77E+00
10/12/2006	1.70E-01	-1.77E+00
1/8/2007	1.70E-01	-1.77E+00

Dry/Partially Dry Wells

Well No.	Gradient
MW376	Sidegradient
MW377	Sidegradient

Because CV(1) is less than or equal to 1, assume normal distribution and continue with statistical analysis utilizing TL(1).

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW359	Downgradient	No	1.00E-01	N/A	-2.30E+00	N/A
MW362	Downgradient	No	1.02E-01	N/A	-2.28E+00	N/A
MW365	Downgradient	Yes	5.08E-02	NO	-2.98E+00	N/A
MW368	Downgradient	No	9.85E-02	N/A	-2.32E+00	N/A
MW371	Upgradient	No	9.89E-02	N/A	-2.31E+00	N/A
MW374	Upgradient	No	9.94E-02	N/A	-2.31E+00	N/A
MW375	Sidegradient	No	9.91E-02	N/A	-2.31E+00	N/A

N/A - Results identified as Non-Detects during laboratory analysis or data validation and were not included in the statistical evaluation. Additionally for parameters that have MCLs, where the result for a well did not exceed the MCL value, that well was not included in the statistical evaluation.

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.

S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5

TL Upper Tolerance Limit, TL = X + (K * S), LL Lower Tolerance Limit, LL = X - (K * S)

X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,Interim Guidance, EPA, 1989, based on total number of background results - The K-factor for pH to account for a two-sided tolerance interval instead of a one-sided tolerance limit. The K-factor for pH was computed using a formula from NIST/SEMATECH e-Handbook of Statistical Methods, http://www.itl.nist.gov/div898/handbook/,2009.*

C-746-U Second Quarter 2025 Statistical Analysis Historical Background Comparison

PCB-1242 UNITS: ug/L UCRS

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	**X=** 0.159	**S=** 0.224	**CV(1)=** 1.409	**K factor**=** 2.523	**TL(1)=** 7.26E-01	**LL(1)=**N/A
Statistics-Transformed Background Data	**X=** -2.134	**S=** 0.579	**CV(2)=** -0.272	**K factor**=** 2.523	**TL(2)=** -6.72E-01	**LL(2)=**N/A

Because CV(1) is greater than 1, the natural logarithm of background and test well results were calculated utilizing TL(2) for comparison.

Historical Background Data from Upgradient Wells with Transformed Result

Well Number:	MW371	
Date Collected	Result	LN(Result)
3/18/2002	1.00E+00	0.00E+00
4/22/2002	1.10E-01	-2.21E+00
7/15/2002	1.10E-01	-2.21E+00
7/9/2003	1.30E-01	-2.04E+00
10/6/2003	9.00E-02	-2.41E+00
7/13/2004	1.00E-01	-2.30E+00
7/25/2005	9.00E-02	-2.41E+00
4/5/2006	1.00E-01	-2.30E+00

Well Number:	MW374	
Date Collected	Result	LN(Result)
7/9/2003	1.30E-01	-2.04E+00
10/7/2003	9.00E-02	-2.41E+00
7/14/2004	1.00E-01	-2.30E+00
7/26/2005	1.00E-01	-2.30E+00
4/6/2006	1.00E-01	-2.30E+00
7/10/2006	1.00E-01	-2.30E+00
10/12/2006	1.00E-01	-2.30E+00
1/8/2007	1.00E-01	-2.30E+00

Dry/Partially Dry Wells

Well No.	Gradient
MW376	Sidegradient
MW377	Sidegradient

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW359	Downgradient	No	1.00E-01	N/A	-2.30E+00	N/A
MW362	Downgradient	No	1.02E-01	N/A	-2.28E+00	N/A
MW365	Downgradient	Yes	5.08E-02	N/A	-2.98E+00	NO
MW368	Downgradient	No	9.85E-02	N/A	-2.32E+00	N/A
MW371	Upgradient	No	9.89E-02	N/A	-2.31E+00	N/A
MW374	Upgradient	No	9.94E-02	N/A	-2.31E+00	N/A
MW375	Sidegradient	No	9.91E-02	N/A	-2.31E+00	N/A

N/A - Results identified as Non-Detects during laboratory analysis or data validation and were not included in the statistical evaluation. Additionally for parameters that have MCLs, where the result for a well did not exceed the MCL value, that well was not included in the statistical evaluation.

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.

S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5

TL Upper Tolerance Limit, TL = X + (K * S), LL Lower Tolerance Limit, LL = X - (K * S)

X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,Interim Guidance, EPA, 1989, based on total number of background results - The K-factor for pH to account for a two-sided tolerance interval instead of a one-sided tolerance limit. The K-factor for pH was computed using a formula from NIST/SEMATECH e-Handbook of Statistical Methods, http://www.itl.nist.gov/div898/handbook/,2009.*

C-746-U Second Quarter 2025 Statistical Analysis Historical Background Comparison

pH UNITS: Std Unit UCRS

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	**X=** 6.619	**S=** 0.295	**CV(1)=** 0.045	**K factor**=** 2.904	**TL(1)=** 7.48E+00	**LL(1)=** 5.76E+00
Statistics-Transformed Background Data	**X=** 1.889	**S=** 0.046	**CV(2)=** 0.024	**K factor**=** 2.904	**TL(2)=** 2.02E+00	**LL(2)=** 1.75E+00

Historical Background Data from Upgradient Wells with Transformed Result

Well Number:	MW371	
Date Collected	Result	LN(Result)
3/18/2002	6.30E+00	1.84E+00
4/22/2002	6.50E+00	1.87E+00
7/15/2002	6.50E+00	1.87E+00
10/8/2002	6.60E+00	1.89E+00
1/8/2003	6.60E+00	1.89E+00
4/3/2003	6.90E+00	1.93E+00
7/9/2003	6.70E+00	1.90E+00
10/6/2003	7.00E+00	1.95E+00

Well Number:	MW374	
Date Collected	Result	LN(Result)
3/18/2002	5.75E+00	1.75E+00
10/8/2002	6.60E+00	1.89E+00
1/7/2003	6.82E+00	1.92E+00
4/2/2003	6.86E+00	1.93E+00
7/9/2003	6.70E+00	1.90E+00
10/7/2003	6.60E+00	1.89E+00
1/6/2004	6.90E+00	1.93E+00
4/7/2004	6.58E+00	1.88E+00

Dry/Partially Dry Wells

Well No.	Gradient
MW376	Sidegradient
MW377	Sidegradient

Because CV(1) is less than or equal to 1, assume normal distribution and continue with statistical analysis utilizing TL(1).

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)? Result <LL(1)?	LN(Result)	LN(Result) >TL(2)? LN(Result) <LL(2)?
MW359	Downgradient	Yes	6.16E+00	NO	1.82E+00	N/A
MW362	Downgradient	Yes	6.91E+00	NO	1.93E+00	N/A
MW365	Downgradient	Yes	6.16E+00	NO	1.82E+00	N/A
MW368	Downgradient	Yes	5.98E+00	NO	1.79E+00	N/A
MW371	Upgradient	Yes	6.55E+00	NO	1.88E+00	N/A
MW374	Upgradient	Yes	6.65E+00	NO	1.89E+00	N/A
MW375	Sidegradient	Yes	6.60E+00	NO	1.89E+00	N/A

N/A - Results identified as Non-Detects during laboratory analysis or data validation and were not included in the statistical evaluation. Additionally for parameters that have MCLs, where the result for a well did not exceed the MCL value, that well was not included in the statistical evaluation.

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.

S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5

TL Upper Tolerance Limit, TL = X + (K * S), LL Lower Tolerance Limit, LL = X - (K * S)

X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,Interim Guidance, EPA, 1989, based on total number of background results - The K-factor for pH to account for a two-sided tolerance interval instead of a one-sided tolerance limit. The K-factor for pH was computed using a formula from NIST/SEMATECH e-Handbook of Statistical Methods, http://www.itl.nist.gov/div898/handbook/,2009.*

C-746-U Second Quarter 2025 Statistical Analysis Historical Background Comparison

Potassium **UNITS: mg/L** **UCRS**

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	**X=** 1.262	**S=** 0.907	**CV(1)=** 0.718	**K factor**=** 2.523	**TL(1)=** 3.55E+00	**LL(1)=** N/A
Statistics-Transformed Background Data	**X=** -0.023	**S=** 0.752	**CV(2)=** -32.218	**K factor**=** 2.523	**TL(2)=** 1.87E+00	**LL(2)=** N/A

Historical Background Data from Upgradient Wells with Transformed Result

Well Number: MW371

Date Collected	Result	LN(Result)
3/18/2002	2.00E+00	6.93E-01
4/22/2002	2.00E+00	6.93E-01
7/15/2002	2.00E+00	6.93E-01
10/8/2002	4.08E-01	-8.96E-01
1/8/2003	3.84E-01	-9.57E-01
4/3/2003	3.68E-01	-1.00E+00
7/9/2003	5.87E-01	-5.33E-01
10/6/2003	3.82E-01	-9.62E-01

Well Number: MW374

Date Collected	Result	LN(Result)
10/8/2002	3.04E+00	1.11E+00
1/7/2003	2.83E+00	1.04E+00
4/2/2003	2.00E+00	6.93E-01
7/9/2003	1.09E+00	8.62E-02
10/7/2003	8.02E-01	-2.21E-01
1/6/2004	8.97E-01	-1.09E-01
4/7/2004	6.89E-01	-3.73E-01
7/14/2004	7.16E-01	-3.34E-01

Dry/Partially Dry Wells

Well No.	Gradient
MW376	Sidegradient
MW377	Sidegradient

Because CV(1) is less than or equal to 1, assume normal distribution and continue with statistical analysis utilizing TL(1).

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW359	Downgradient	Yes	2.04E-01	NO	-1.59E+00	N/A
MW362	Downgradient	Yes	3.67E-01	NO	-1.00E+00	N/A
MW365	Downgradient	Yes	2.87E-01	NO	-1.25E+00	N/A
MW368	Downgradient	Yes	2.09E-01	NO	-1.57E+00	N/A
MW371	Upgradient	Yes	2.19E-01	NO	-1.52E+00	N/A
MW374	Upgradient	Yes	3.77E-01	NO	-9.76E-01	N/A
MW375	Sidegradient	Yes	2.76E-01	NO	-1.29E+00	N/A

N/A - Results identified as Non-Detects during laboratory analysis or data validation and were not included in the statistical evaluation. Additionally for parameters that have MCLs, where the result for a well did not exceed the MCL value, that well was not included in the statistical evaluation.

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.

S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5

TL Upper Tolerance Limit, TL = X + (K * S), LL Lower Tolerance Limit, LL = X - (K * S)

X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,Interim Guidance, EPA, 1989, based on total number of background results - The K-factor for pH to account for a two-sided tolerance interval instead of a one-sided tolerance limit. The K-factor for pH was computed using a formula from NIST/SEMATECH e-Handbook of Statistical Methods, http://www.itl.nist.gov/div898/handbook/,2009.*

C-746-U Second Quarter 2025 Statistical Analysis Historical Background Comparison

Sodium **UNITS: mg/L** **UCRS**

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	**X=** 183.063	**S=** 73.222	**CV(1)=** 0.400	**K factor**=** 2.523	**TL(1)=** 3.68E+02	**LL(1)=** N/A
Statistics-Transformed Background Data	**X=** 5.146	**S=** 0.356	**CV(2)=** 0.069	**K factor**=** 2.523	**TL(2)=** 6.04E+00	**LL(2)=** N/A

Historical Background Data from Upgradient Wells with Transformed Result

Well Number: MW371

Date Collected	Result	LN(Result)
3/18/2002	1.29E+02	4.86E+00
4/22/2002	1.31E+02	4.88E+00
7/15/2002	1.27E+02	4.84E+00
10/8/2002	1.23E+02	4.81E+00
1/8/2003	1.28E+02	4.85E+00
4/3/2003	1.44E+02	4.97E+00
7/9/2003	1.26E+02	4.84E+00
10/6/2003	1.20E+02	4.79E+00

Well Number: MW374

Date Collected	Result	LN(Result)
10/8/2002	3.36E+02	5.82E+00
1/7/2003	3.29E+02	5.80E+00
4/2/2003	2.87E+02	5.66E+00
7/9/2003	1.81E+02	5.20E+00
10/7/2003	1.82E+02	5.20E+00
1/6/2004	2.06E+02	5.33E+00
4/7/2004	1.82E+02	5.20E+00
7/14/2004	1.98E+02	5.29E+00

Dry/Partially Dry Wells

Well No.	Gradient
MW376	Sidegradient
MW377	Sidegradient

Because CV(1) is less than or equal to 1, assume normal distribution and continue with statistical analysis utilizing TL(1).

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW359	Downgradient	Yes	3.09E+01	NO	3.43E+00	N/A
MW362	Downgradient	Yes	1.29E+02	NO	4.86E+00	N/A
MW365	Downgradient	Yes	5.76E+01	NO	4.05E+00	N/A
MW368	Downgradient	Yes	2.97E+01	NO	3.39E+00	N/A
MW371	Upgradient	Yes	1.18E+01	NO	2.47E+00	N/A
MW374	Upgradient	Yes	1.25E+02	NO	4.83E+00	N/A
MW375	Sidegradient	Yes	5.16E+01	NO	3.94E+00	N/A

N/A - Results identified as Non-Detects during laboratory analysis or data validation and were not included in the statistical evaluation. Additionally for parameters that have MCLs, where the result for a well did not exceed the MCL value, that well was not included in the statistical evaluation.

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.

S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5

TL Upper Tolerance Limit, TL = X + (K * S), LL Lower Tolerance Limit, LL = X - (K * S)

X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,Interim Guidance, EPA, 1989, based on total number of background results - The K-factor for pH to account for a two-sided tolerance interval instead of a one-sided tolerance limit. The K-factor for pH was computed using a formula from NIST/SEMATECH e-Handbook of Statistical Methods, http://www.itl.nist.gov/div898/handbook/,2009.*

C-746-U Second Quarter 2025 Statistical Analysis Historical Background Comparison

Sulfate **UNITS: mg/L** **UCRS**

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	**X=** 6.469	**S=** 3.153	**CV(1)=** 0.487	**K factor**=** 2.523	**TL(1)=** 1.44E+01	**LL(1)=** N/A
Statistics-Transformed Background Data	**X=** 1.794	**S=** 0.357	**CV(2)=** 0.199	**K factor**=** 2.523	**TL(2)=** 2.69E+00	**LL(2)=** N/A

Historical Background Data from Upgradient Wells with Transformed Result

Well Number: MW371

Date Collected	Result	LN(Result)
3/18/2002	1.63E+01	2.79E+00
4/22/2002	8.60E+00	2.15E+00
7/15/2002	6.70E+00	1.90E+00
10/8/2002	5.00E+00	1.61E+00
1/8/2003	5.00E+00	1.61E+00
4/3/2003	5.00E+00	1.61E+00
7/9/2003	5.00E+00	1.61E+00
10/6/2003	5.00E+00	1.61E+00

Well Number: MW374

Date Collected	Result	LN(Result)
10/8/2002	5.00E+00	1.61E+00
1/7/2003	5.00E+00	1.61E+00
4/2/2003	5.00E+00	1.61E+00
7/9/2003	5.60E+00	1.72E+00
10/7/2003	5.00E+00	1.61E+00
1/6/2004	5.00E+00	1.61E+00
4/7/2004	1.13E+01	2.42E+00
7/14/2004	5.00E+00	1.61E+00

Dry/Partially Dry Wells

Well No.	Gradient
MW376	Sidegradient
MW377	Sidegradient

Because CV(1) is less than or equal to 1, assume normal distribution and continue with statistical analysis utilizing TL(1).

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW359	Downgradient	Yes	3.57E+01	YES	3.58E+00	N/A
MW362	Downgradient	Yes	3.16E+01	YES	3.45E+00	N/A
MW365	Downgradient	Yes	5.09E+01	YES	3.93E+00	N/A
MW368	Downgradient	Yes	4.04E+01	YES	3.70E+00	N/A
MW371	Upgradient	Yes	1.99E+01	YES	2.99E+00	N/A
MW374	Upgradient	Yes	1.79E+01	YES	2.88E+00	N/A
MW375	Sidegradient	Yes	2.20E+01	YES	3.09E+00	N/A

N/A - Results identified as Non-Detects during laboratory analysis or data validation and were not included in the statistical evaluation. Additionally for parameters that have MCLs, where the result for a well did not exceed the MCL value, that well was not included in the statistical evaluation.

Conclusion of Statistical Analysis on Historical Data

The test well(s) listed exceeded the Upper Tolerance Limit, which is evidence of elevated concentration with respect to historical background data.

Wells with Exceedances

MW359
MW362
MW365
MW368
MW371
MW374
MW375

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.

S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5

TL Upper Tolerance Limit, TL = X + (K * S), LL Lower Tolerance Limit, LL = X - (K * S)

X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,Interim Guidance, EPA, 1989, based on total number of background results - The K-factor for pH to account for a two-sided tolerance interval instead of a one-sided tolerance limit. The K-factor for pH was computed using a formula from NIST/SEMATECH e-Handbook of Statistical Methods, http://www.itl.nist.gov/div898/handbook/,2009.*

C-746-U Second Quarter 2025 Statistical Analysis Historical Background Comparison

Total Organic Carbon (TOC) UNITS: mg/L UCRS

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	**X=** 17.631	**S=** 24.314	**CV(1)=** 1.379	**K factor**=** 2.523	**TL(1)=** 7.90E+01	**LL(1)=**N/A
Statistics-Transformed Background Data	**X=** 2.318	**S=** 0.979	**CV(2)=** 0.422	**K factor**=** 2.523	**TL(2)=** 4.79E+00	**LL(2)=**N/A

Because CV(1) is greater than 1, the natural logarithm of background and test well results were calculated utilizing TL(2) for comparison.

Historical Background Data from Upgradient Wells with Transformed Result

Well Number: MW371

Date Collected	Result	LN(Result)
3/18/2002	1.11E+01	2.41E+00
4/22/2002	7.00E+00	1.95E+00
7/15/2002	4.10E+00	1.41E+00
10/8/2002	6.00E+00	1.79E+00
1/8/2003	5.30E+00	1.67E+00
4/3/2003	5.30E+00	1.67E+00
7/9/2003	2.90E+00	1.06E+00
10/6/2003	3.20E+00	1.16E+00

Well Number: MW374

Date Collected	Result	LN(Result)
10/8/2002	9.00E+01	4.50E+00
1/7/2003	6.40E+01	4.16E+00
4/2/2003	2.50E+01	3.22E+00
7/9/2003	1.60E+01	2.77E+00
10/7/2003	1.30E+01	2.56E+00
1/6/2004	1.00E+01	2.30E+00
4/7/2004	7.20E+00	1.97E+00
7/14/2004	1.20E+01	2.48E+00

Dry/Partially Dry Wells

Well No.	Gradient
MW376	Sidegradient
MW377	Sidegradient

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW359	Downgradient	Yes	6.49E-01	N/A	-4.32E-01	NO
MW362	Downgradient	Yes	1.68E+00	N/A	5.19E-01	NO
MW365	Downgradient	Yes	1.22E+00	N/A	1.99E-01	NO
MW368	Downgradient	Yes	7.67E-01	N/A	-2.65E-01	NO
MW371	Upgradient	Yes	1.67E+00	N/A	5.13E-01	NO
MW374	Upgradient	Yes	2.50E+00	N/A	9.16E-01	NO
MW375	Sidegradient	Yes	8.81E-01	N/A	-1.27E-01	NO

N/A - Results identified as Non-Detects during laboratory analysis or data validation and were not included in the statistical evaluation. Additionally for parameters that have MCLs, where the result for a well did not exceed the MCL value, that well was not included in the statistical evaluation.

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.

S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5

TL Upper Tolerance Limit, TL = X + (K * S), LL Lower Tolerance Limit, LL = X - (K * S)

X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,Interim Guidance, EPA, 1989, based on total number of background results - The K-factor for pH to account for a two-sided tolerance interval instead of a one-sided tolerance limit. The K-factor for pH was computed using a formula from NIST/SEMATECH e-Handbook of Statistical Methods, http://www.itl.nist.gov/div898/handbook/,2009.*

C-746-U Second Quarter 2025 Statistical Analysis Historical Background Comparison
Total Organic Halides (TOX) UNITS: ug/L UCRS

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	**X=** 214.094	**S=** 231.089	**CV(1)=** 1.079	**K factor**=** 2.523	**TL(1)=** 7.97E+02	**LL(1)=** N/A
Statistics-Transformed Background Data	**X=** 4.867	**S=** 1.065	**CV(2)=** 0.219	**K factor**=** 2.523	**TL(2)=** 7.55E+00	**LL(2)=** N/A

Because CV(1) is greater than 1, the natural logarithm of background and test well results were calculated utilizing TL(2) for comparison.

Historical Background Data from Upgradient Wells with Transformed Result

Well Number: MW371

Date Collected	Result	LN(Result)
3/18/2002	5.00E+01	3.91E+00
4/22/2002	1.05E+02	4.65E+00
7/15/2002	7.00E+01	4.25E+00
10/8/2002	5.20E+01	3.95E+00
1/8/2003	2.02E+01	3.01E+00
4/3/2003	1.04E+02	4.64E+00
7/9/2003	3.42E+01	3.53E+00
10/6/2003	4.61E+01	3.83E+00

Well Number: MW374

Date Collected	Result	LN(Result)
10/8/2002	9.03E+02	6.81E+00
1/7/2003	5.39E+02	6.29E+00
4/2/2003	2.95E+02	5.69E+00
7/9/2003	2.72E+02	5.61E+00
10/7/2003	1.97E+02	5.28E+00
1/6/2004	3.30E+02	5.80E+00
4/7/2004	1.83E+02	5.21E+00
7/14/2004	2.25E+02	5.42E+00

Dry/Partially Dry Wells

Well No.	Gradient
MW376	Sidegradient
MW377	Sidegradient

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW359	Downgradient	Yes	4.74E+00	N/A	1.56E+00	NO
MW362	Downgradient	Yes	8.62E+00	N/A	2.15E+00	NO
MW365	Downgradient	Yes	1.41E+01	N/A	2.65E+00	NO
MW368	Downgradient	No	1.00E+01	N/A	2.30E+00	N/A
MW371	Upgradient	No	3.82E+00	N/A	1.34E+00	N/A
MW374	Upgradient	No	4.24E+00	N/A	1.44E+00	N/A
MW375	Sidegradient	Yes	1.84E+01	N/A	2.91E+00	NO

N/A - Results identified as Non-Detects during laboratory analysis or data validation and were not included in the statistical evaluation. Additionally for parameters that have MCLs, where the result for a well did not exceed the MCL value, that well was not included in the statistical evaluation.

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.

S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5

TL Upper Tolerance Limit, TL = X + (K * S), LL Lower Tolerance Limit, LL = X - (K * S)

X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,Interim Guidance, EPA, 1989, based on total number of background results - The K-factor for pH to account for a two-sided tolerance interval instead of a one-sided tolerance limit. The K-factor for pH was computed using a formula from NIST/SEMATECH e-Handbook of Statistical Methods, http://www.itl.nist.gov/div898/handbook/,2009.*

C-746-U Second Quarter 2025 Statistical Analysis Historical Background Comparison

Vanadium UNITS: mg/L UCRS

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	**X=** 0.055	**S=** 0.072	**CV(1)=** 1.319	**K factor**=** 2.523	**TL(1)=** 2.37E-01	**LL(1)=**N/A
Statistics-Transformed Background Data	**X=** -3.438	**S=** 0.912	**CV(2)=** -0.265	**K factor**=** 2.523	**TL(2)=** -1.14E+00	**LL(2)=**N/A

Because CV(1) is greater than 1, the natural logarithm of background and test well results were calculated utilizing TL(2) for comparison.

Historical Background Data from Upgradient Wells with Transformed Result

Well Number: MW371

Date Collected	Result	LN(Result)
3/18/2002	2.50E-02	-3.69E+00
4/22/2002	2.50E-02	-3.69E+00
7/15/2002	2.50E-02	-3.69E+00
10/8/2002	2.00E-02	-3.91E+00
1/8/2003	2.00E-02	-3.91E+00
4/3/2003	2.00E-02	-3.91E+00
7/9/2003	2.00E-02	-3.91E+00
10/6/2003	2.00E-02	-3.91E+00

Well Number: MW374

Date Collected	Result	LN(Result)
10/8/2002	2.00E-01	-1.61E+00
1/7/2003	2.00E-01	-1.61E+00
4/2/2003	2.00E-01	-1.61E+00
7/9/2003	2.00E-02	-3.91E+00
10/7/2003	2.00E-02	-3.91E+00
1/6/2004	2.00E-02	-3.91E+00
4/7/2004	2.00E-02	-3.91E+00
7/14/2004	2.00E-02	-3.91E+00

Dry/Partially Dry Wells

Well No.	Gradient
MW376	Sidegradient
MW377	Sidegradient

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW359	Downgradient	No	2.00E-02	N/A	-3.91E+00	N/A
MW362	Downgradient	No	2.00E-02	N/A	-3.91E+00	N/A
MW365	Downgradient	No	2.00E-02	N/A	-3.91E+00	N/A
MW368	Downgradient	Yes	3.31E-03	N/A	-5.71E+00	NO
MW371	Upgradient	Yes	4.06E-03	N/A	-5.51E+00	NO
MW374	Upgradient	No	2.00E-02	N/A	-3.91E+00	N/A
MW375	Sidegradient	No	2.00E-02	N/A	-3.91E+00	N/A

N/A - Results identified as Non-Detects during laboratory analysis or data validation and were not included in the statistical evaluation. Additionally for parameters that have MCLs, where the result for a well did not exceed the MCL value, that well was not included in the statistical evaluation.

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.

S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5

TL Upper Tolerance Limit, TL = X + (K * S), LL Lower Tolerance Limit, LL = X - (K * S)

X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,Interim Guidance, EPA, 1989, based on total number of background results - The K-factor for pH to account for a two-sided tolerance interval instead of a one-sided tolerance limit. The K-factor for pH was computed using a formula from NIST/SEMATECH e-Handbook of Statistical Methods, http://www.itl.nist.gov/div898/handbook/,2009.*

C-746-U Second Quarter 2025 Statistical Analysis Historical Background Comparison

Zinc **UNITS: mg/L** **UCRS**

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	**X=** 0.060	**S=** 0.083	**CV(1)=** 1.380	**K factor**=** 2.523	**TL(1)=** 2.70E-01	**LL(1)=**N/A
Statistics-Transformed Background Data	**X=** -3.259	**S=** 0.840	**CV(2)=** -0.258	**K factor**=** 2.523	**TL(2)=** -1.14E+00	**LL(2)=**N/A

Historical Background Data from Upgradient Wells with Transformed Result

Well Number: MW371

Date Collected	Result	LN(Result)
3/18/2002	1.00E-01	-2.30E+00
4/22/2002	1.00E-01	-2.30E+00
7/15/2002	1.00E-01	-2.30E+00
10/8/2002	2.50E-02	-3.69E+00
1/8/2003	3.50E-02	-3.35E+00
4/3/2003	3.50E-02	-3.35E+00
7/9/2003	3.76E-02	-3.28E+00
10/6/2003	2.00E-02	-3.91E+00

Well Number: MW374

Date Collected	Result	LN(Result)
10/8/2002	2.50E-02	-3.69E+00
1/7/2003	3.50E-01	-1.05E+00
4/2/2003	3.50E-02	-3.35E+00
7/9/2003	2.00E-02	-3.91E+00
10/7/2003	2.00E-02	-3.91E+00
1/6/2004	2.00E-02	-3.91E+00
4/7/2004	2.00E-02	-3.91E+00
7/14/2004	2.00E-02	-3.91E+00

Dry/Partially Dry Wells

Well No.	Gradient
MW376	Sidegradient
MW377	Sidegradient

Because CV(1) is greater than 1, the natural logarithm of background and test well results were calculated utilizing TL(2) for comparison.

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW359	Downgradient	No	2.00E-02	N/A	-3.91E+00	N/A
MW362	Downgradient	No	2.00E-02	N/A	-3.91E+00	N/A
MW365	Downgradient	Yes	3.41E-03	N/A	-5.68E+00	NO
MW368	Downgradient	No	2.00E-02	N/A	-3.91E+00	N/A
MW371	Upgradient	No	2.00E-02	N/A	-3.91E+00	N/A
MW374	Upgradient	No	2.00E-02	N/A	-3.91E+00	N/A
MW375	Sidegradient	Yes	3.38E-03	N/A	-5.69E+00	NO

N/A - Results identified as Non-Detects during laboratory analysis or data validation and were not included in the statistical evaluation. Additionally for parameters that have MCLs, where the result for a well did not exceed the MCL value, that well was not included in the statistical evaluation.

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.

S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5

TL Upper Tolerance Limit, TL = X + (K * S), LL Lower Tolerance Limit, LL = X - (K * S)

X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,Interim Guidance, EPA, 1989, based on total number of background results - The K-factor for pH to account for a two-sided tolerance interval instead of a one-sided tolerance limit. The K-factor for pH was computed using a formula from NIST/SEMATECH e-Handbook of Statistical Methods, http://www.itl.nist.gov/div898/handbook/,2009.*

C-746-U Second Quarter 2025 Statistical Analysis Historical Background Comparison

Aluminum UNITS: mg/L URGA

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	**X=** 0.625	**S=** 0.774	**CV(1)=** 1.239	**K factor**=** 2.523	**TL(1)=** 2.58E+00	**LL(1)=**N/A
Statistics-Transformed Background Data	**X=** -0.973	**S=** 0.935	**CV(2)=** -0.961	**K factor**=** 2.523	**TL(2)=** 1.39E+00	**LL(2)=**N/A

Because CV(1) is greater than 1, the natural logarithm of background and test well results were calculated utilizing TL(2) for comparison.

Historical Background Data from Upgradient Wells with Transformed Result

Well Number:	MW369	
Date Collected	Result	LN(Result)
3/18/2002	2.55E-01	-1.37E+00
4/22/2002	2.00E-01	-1.61E+00
7/15/2002	3.22E-01	-1.13E+00
10/8/2002	2.00E-01	-1.61E+00
1/8/2003	2.00E-01	-1.61E+00
4/3/2003	2.00E-01	-1.61E+00
7/8/2003	2.00E-01	-1.61E+00
10/6/2003	6.89E-01	-3.73E-01

Well Number:	MW372	
Date Collected	Result	LN(Result)
3/19/2002	2.61E+00	9.59E-01
4/23/2002	2.00E-01	-1.61E+00
7/16/2002	1.14E+00	1.31E-01
10/8/2002	8.62E-01	-1.49E-01
1/7/2003	2.32E+00	8.42E-01
4/2/2003	2.00E-01	-1.61E+00
7/9/2003	2.00E-01	-1.61E+00
10/7/2003	2.00E-01	-1.61E+00

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW357	Downgradient	Yes	7.03E-02	N/A	-2.65E+00	NO
MW360	Downgradient	Yes	2.08E-02	N/A	-3.87E+00	NO
MW363	Downgradient	No	5.00E-02	N/A	-3.00E+00	N/A
MW366	Downgradient	No	5.00E-02	N/A	-3.00E+00	N/A
MW369	Upgradient	No	5.00E-02	N/A	-3.00E+00	N/A
MW372	Upgradient	No	5.00E-02	N/A	-3.00E+00	N/A

N/A - Results identified as Non-Detects during laboratory analysis or data validation and were not included in the statistical evaluation. Additionally for parameters that have MCLs, where the result for a well did not exceed the MCL value, that well was not included in the statistical evaluation.

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.

S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5

TL Upper Tolerance Limit, TL = X + (K * S), LL Lower Tolerance Limit, LL = X - (K * S)

X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,Interim Guidance, EPA, 1989, based on total number of background results - The K-factor for pH to account for a two-sided tolerance interval instead of a one-sided tolerance limit. The K-factor for pH was computed using a formula from NIST/SEMATECH e-Handbook of Statistical Methods, http://www.itl.nist.gov/div898/handbook/,2009.*

C-746-U Second Quarter 2025 Statistical Analysis Historical Background Comparison

Boron **UNITS: mg/L** **URGA**

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	**X=** 0.985	**S=** 0.825	**CV(1)=** 0.838	**K factor**=** 2.523	**TL(1)=** 3.07E+00	**LL(1)=** N/A
Statistics-Transformed Background Data	**X=** -0.430	**S=** 0.990	**CV(2)=** -2.302	**K factor**=** 2.523	**TL(2)=** 2.07E+00	**LL(2)=** N/A

Because CV(1) is less than or equal to 1, assume normal distribution and continue with statistical analysis utilizing TL(1).

Historical Background Data from Upgradient Wells with Transformed Result

Well Number: MW369

Date Collected	Result	LN(Result)
3/18/2002	2.00E+00	6.93E-01
4/22/2002	2.00E+00	6.93E-01
7/15/2002	2.00E+00	6.93E-01
10/8/2002	2.00E-01	-1.61E+00
1/8/2003	2.00E-01	-1.61E+00
4/3/2003	2.00E-01	-1.61E+00
7/8/2003	2.00E-01	-1.61E+00
10/6/2003	2.00E-01	-1.61E+00

Well Number: MW372

Date Collected	Result	LN(Result)
3/19/2002	2.00E+00	6.93E-01
4/23/2002	2.00E+00	6.93E-01
7/16/2002	2.00E+00	6.93E-01
10/8/2002	4.92E-01	-7.09E-01
1/7/2003	4.92E-01	-7.09E-01
4/2/2003	6.00E-01	-5.11E-01
7/9/2003	5.70E-01	-5.62E-01
10/7/2003	6.04E-01	-5.04E-01

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW357	Downgradient	Yes	2.84E-01	NO	-1.26E+00	N/A
MW360	Downgradient	Yes	1.89E-02	NO	-3.97E+00	N/A
MW363	Downgradient	Yes	2.24E-02	NO	-3.80E+00	N/A
MW366	Downgradient	Yes	1.09E-01	NO	-2.22E+00	N/A
MW369	Upgradient	Yes	3.55E-02	NO	-3.34E+00	N/A
MW372	Upgradient	Yes	1.43E+00	NO	3.58E-01	N/A

N/A - Results identified as Non-Detects during laboratory analysis or data validation and were not included in the statistical evaluation. Additionally for parameters that have MCLs, where the result for a well did not exceed the MCL value, that well was not included in the statistical evaluation.

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.

S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5

TL Upper Tolerance Limit, TL = X + (K * S), LL Lower Tolerance Limit, LL = X - (K * S)

X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,Interim Guidance, EPA, 1989, based on total number of background results - The K-factor for pH to account for a two-sided tolerance interval instead of a one-sided tolerance limit. The K-factor for pH was computed using a formula from NIST/SEMATECH e-Handbook of Statistical Methods, http://www.itl.nist.gov/div898/handbook/,2009.*

C-746-U Second Quarter 2025 Statistical Analysis Historical Background Comparison

Bromide **UNITS: mg/L** **URGA**

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	**X=** 1.000	**S=** 0.000	**CV(1)=** 0.000	**K factor**=** 2.523	**TL(1)=** 1.00E+00	**LL(1)=** N/A
Statistics-Transformed Background Data	**X=** 0.000	**S=** 0.000	**CV(2)=** #Num!	**K factor**=** 2.523	**TL(2)=** 0.00E+00	**LL(2)=** N/A

Because CV(1) is less than or equal to 1, assume normal distribution and continue with statistical analysis utilizing TL(1).

Historical Background Data from Upgradient Wells with Transformed Result

Well Number: MW369

Date Collected	Result	LN(Result)
3/18/2002	1.00E+00	0.00E+00
4/22/2002	1.00E+00	0.00E+00
7/15/2002	1.00E+00	0.00E+00
10/8/2002	1.00E+00	0.00E+00
1/8/2003	1.00E+00	0.00E+00
4/3/2003	1.00E+00	0.00E+00
7/8/2003	1.00E+00	0.00E+00
10/6/2003	1.00E+00	0.00E+00

Well Number: MW372

Date Collected	Result	LN(Result)
3/19/2002	1.00E+00	0.00E+00
4/23/2002	1.00E+00	0.00E+00
7/16/2002	1.00E+00	0.00E+00
10/8/2002	1.00E+00	0.00E+00
1/7/2003	1.00E+00	0.00E+00
4/2/2003	1.00E+00	0.00E+00
7/9/2003	1.00E+00	0.00E+00
10/7/2003	1.00E+00	0.00E+00

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW357	Downgradient	Yes	3.20E-01	NO	-1.14E+00	N/A
MW360	Downgradient	Yes	1.28E-01	NO	-2.06E+00	N/A
MW363	Downgradient	No	4.00E-01	N/A	-9.16E-01	N/A
MW366	Downgradient	Yes	5.76E-01	NO	-5.52E-01	N/A
MW369	Upgradient	Yes	4.71E-01	NO	-7.53E-01	N/A
MW372	Upgradient	Yes	4.88E-01	NO	-7.17E-01	N/A

N/A - Results identified as Non-Detects during laboratory analysis or data validation and were not included in the statistical evaluation. Additionally for parameters that have MCLs, where the result for a well did not exceed the MCL value, that well was not included in the statistical evaluation.

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.

S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5

TL Upper Tolerance Limit, TL = X + (K * S), LL Lower Tolerance Limit, LL = X - (K * S)

X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,Interim Guidance, EPA, 1989, based on total number of background results - The K-factor for pH to account for a two-sided tolerance interval instead of a one-sided tolerance limit. The K-factor for pH was computed using a formula from NIST/SEMATECH e-Handbook of Statistical Methods, http://www.itl.nist.gov/div898/handbook/,2009.*

C-746-U Second Quarter 2025 Statistical Analysis Historical Background Comparison

Calcium UNITS: mg/L URGA

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	**X=** 32.763	**S=** 9.391	**CV(1)=** 0.287	**K factor**=** 2.523	**TL(1)=** 5.65E+01	**LL(1)=** N/A
Statistics-Transformed Background Data	**X=** 3.449	**S=** 0.299	**CV(2)=** 0.087	**K factor**=** 2.523	**TL(2)=** 4.20E+00	**LL(2)=** N/A

Because CV(1) is less than or equal to 1, assume normal distribution and continue with statistical analysis utilizing TL(1).

Historical Background Data from Upgradient Wells with Transformed Result

Well Number: MW369

Date Collected	Result	LN(Result)
3/18/2002	2.95E+01	3.38E+00
4/22/2002	2.98E+01	3.39E+00
7/15/2002	2.53E+01	3.23E+00
10/8/2002	2.19E+01	3.09E+00
1/8/2003	2.09E+01	3.04E+00
4/3/2003	2.22E+01	3.10E+00
7/8/2003	2.29E+01	3.13E+00
10/6/2003	2.17E+01	3.08E+00

Well Number: MW372

Date Collected	Result	LN(Result)
3/19/2002	4.15E+01	3.73E+00
4/23/2002	4.36E+01	3.78E+00
7/16/2002	4.04E+01	3.70E+00
10/8/2002	3.88E+01	3.66E+00
1/7/2003	4.11E+01	3.72E+00
4/2/2003	4.29E+01	3.76E+00
7/9/2003	3.51E+01	3.56E+00
10/7/2003	4.66E+01	3.84E+00

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW357	Downgradient	Yes	2.49E+01	NO	3.21E+00	N/A
MW360	Downgradient	Yes	2.00E+01	NO	3.00E+00	N/A
MW363	Downgradient	Yes	2.06E+01	NO	3.03E+00	N/A
MW366	Downgradient	Yes	3.33E+01	NO	3.51E+00	N/A
MW369	Upgradient	Yes	2.53E+01	NO	3.23E+00	N/A
MW372	Upgradient	Yes	6.64E+01	YES	4.20E+00	N/A

N/A - Results identified as Non-Detects during laboratory analysis or data validation and were not included in the statistical evaluation. Additionally for parameters that have MCLs, where the result for a well did not exceed the MCL value, that well was not included in the statistical evaluation.

Conclusion of Statistical Analysis on Historical Data

The test well(s) listed exceeded the Upper Tolerance Limit, which is evidence of elevated concentration with respect to historical background data.

Wells with Exceedances

MW372

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.

S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5

TL Upper Tolerance Limit, TL = X + (K * S), LL Lower Tolerance Limit, LL = X - (K * S)

X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,Interim Guidance, EPA, 1989, based on total number of background results - The K-factor for pH to account for a two-sided tolerance interval instead of a one-sided tolerance limit. The K-factor for pH was computed using a formula from NIST/SEMATECH e-Handbook of Statistical Methods, http://www.itl.nist.gov/div898/handbook/,2009.*

C-746-U Second Quarter 2025 Statistical Analysis Historical Background Comparison

Chloride UNITS: mg/L URGA

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	**X=** 44.119	**S=** 4.554	**CV(1)=** 0.103	**K factor**=** 2.523	**TL(1)=** 5.56E+01	**LL(1)=** N/A
Statistics-Transformed Background Data	**X=** 3.782	**S=** 0.099	**CV(2)=** 0.026	**K factor**=** 2.523	**TL(2)=** 4.03E+00	**LL(2)=** N/A

Because CV(1) is less than or equal to 1, assume normal distribution and continue with statistical analysis utilizing TL(1).

Historical Background Data from Upgradient Wells with Transformed Result

Well Number: MW369

Date Collected	Result	LN(Result)
7/15/2002	4.83E+01	3.88E+00
10/8/2002	4.77E+01	3.86E+00
1/8/2003	4.57E+01	3.82E+00
4/3/2003	4.74E+01	3.86E+00
7/8/2003	5.59E+01	4.02E+00
10/6/2003	4.74E+01	3.86E+00
1/7/2004	4.55E+01	3.82E+00
4/7/2004	4.34E+01	3.77E+00

Well Number: MW372

Date Collected	Result	LN(Result)
7/16/2002	3.98E+01	3.68E+00
10/8/2002	4.10E+01	3.71E+00
1/7/2003	3.94E+01	3.67E+00
4/2/2003	3.92E+01	3.67E+00
7/9/2003	3.98E+01	3.68E+00
10/7/2003	4.00E+01	3.69E+00
1/5/2004	4.34E+01	3.77E+00
4/5/2004	4.20E+01	3.74E+00

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW357	Downgradient	Yes	2.81E+01	NO	3.34E+00	N/A
MW360	Downgradient	Yes	5.32E+00	NO	1.67E+00	N/A
MW363	Downgradient	Yes	1.38E+01	NO	2.62E+00	N/A
MW366	Downgradient	Yes	4.20E+01	NO	3.74E+00	N/A
MW369	Upgradient	Yes	3.64E+01	NO	3.59E+00	N/A
MW372	Upgradient	Yes	3.44E+01	NO	3.54E+00	N/A

N/A - Results identified as Non-Detects during laboratory analysis or data validation and were not included in the statistical evaluation. Additionally for parameters that have MCLs, where the result for a well did not exceed the MCL value, that well was not included in the statistical evaluation.

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.

S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5

TL Upper Tolerance Limit, TL = X + (K * S), LL Lower Tolerance Limit, LL = X - (K * S)

X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,Interim Guidance, EPA, 1989, based on total number of background results - The K-factor for pH to account for a two-sided tolerance interval instead of a one-sided tolerance limit. The K-factor for pH was computed using a formula from NIST/SEMATECH e-Handbook of Statistical Methods, http://www.itl.nist.gov/div898/handbook/,2009.*

C-746-U Second Quarter 2025 Statistical Analysis Historical Background Comparison

Cobalt UNITS: mg/L URGA

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	**X=** 0.025	**S=** 0.021	**CV(1)=** 0.845	**K factor**=** 2.523	**TL(1)=** 7.73E-02	**LL(1)=** N/A
Statistics-Transformed Background Data	**X=** -4.090	**S=** 1.006	**CV(2)=** -0.246	**K factor**=** 2.523	**TL(2)=** -1.55E+00	**LL(2)=** N/A

Because CV(1) is less than or equal to 1, assume normal distribution and continue with statistical analysis utilizing TL(1).

Historical Background Data from Upgradient Wells with Transformed Result

Well Number: MW369

Date Collected	Result	LN(Result)
3/18/2002	2.50E-02	-3.69E+00
4/22/2002	2.50E-02	-3.69E+00
7/15/2002	2.50E-02	-3.69E+00
10/8/2002	9.38E-03	-4.67E+00
1/8/2003	5.48E-03	-5.21E+00
4/3/2003	5.87E-03	-5.14E+00
7/8/2003	5.41E-02	-2.92E+00
10/6/2003	6.89E-02	-2.68E+00

Well Number: MW372

Date Collected	Result	LN(Result)
3/19/2002	2.50E-02	-3.69E+00
4/23/2002	2.50E-02	-3.69E+00
7/16/2002	2.50E-02	-3.69E+00
10/8/2002	1.58E-03	-6.45E+00
1/7/2003	1.47E-02	-4.22E+00
4/2/2003	1.16E-02	-4.46E+00
7/9/2003	6.53E-02	-2.73E+00
10/7/2003	7.88E-03	-4.84E+00

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW357	Downgradient	Yes	4.61E-04	NO	-7.68E+00	N/A
MW360	Downgradient	Yes	1.51E-03	NO	-6.50E+00	N/A
MW363	Downgradient	Yes	1.01E-03	NO	-6.90E+00	N/A
MW366	Downgradient	No	1.00E-03	N/A	-6.91E+00	N/A
MW369	Upgradient	Yes	1.39E-03	NO	-6.58E+00	N/A
MW372	Upgradient	Yes	3.86E-04	NO	-7.86E+00	N/A

N/A - Results identified as Non-Detects during laboratory analysis or data validation and were not included in the statistical evaluation. Additionally for parameters that have MCLs, where the result for a well did not exceed the MCL value, that well was not included in the statistical evaluation.

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.

S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5

TL Upper Tolerance Limit, TL = X + (K * S), LL Lower Tolerance Limit, LL = X - (K * S)

X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,Interim Guidance, EPA, 1989, based on total number of background results - The K-factor for pH to account for a two-sided tolerance interval instead of a one-sided tolerance limit. The K-factor for pH was computed using a formula from NIST/SEMATECH e-Handbook of Statistical Methods, http://www.itl.nist.gov/div898/handbook/,2009.*

C-746-U Second Quarter 2025 Statistical Analysis Historical Background Comparison

Conductivity UNITS: umho/cm URGA

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	**X=** 482.856	**S=** 57.603	**CV(1)=** 0.119	**K factor**=** 2.523	**TL(1)=** 6.28E+02	**LL(1)=** N/A
Statistics-Transformed Background Data	**X=** 6.173	**S=** 0.123	**CV(2)=** 0.020	**K factor**=** 2.523	**TL(2)=** 6.48E+00	**LL(2)=** N/A

Because CV(1) is less than or equal to 1, assume normal distribution and continue with statistical analysis utilizing TL(1).

Historical Background Data from Upgradient Wells with Transformed Result

Well Number: MW369

Date Collected	Result	LN(Result)
3/18/2002	3.88E+02	5.96E+00
4/22/2002	4.04E+02	6.00E+00
7/15/2002	3.94E+02	5.98E+00
10/8/2002	4.03E+02	6.00E+00
1/8/2003	5.20E+02	6.25E+00
4/3/2003	4.87E+02	6.19E+00
7/8/2003	4.78E+02	6.17E+00
10/6/2003	4.76E+02	6.17E+00

Well Number: MW372

Date Collected	Result	LN(Result)
3/19/2002	5.08E+02	6.23E+00
4/23/2002	5.01E+02	6.22E+00
7/16/2002	5.07E+02	6.23E+00
10/8/2002	4.95E+02	6.20E+00
1/7/2003	5.09E+02	6.23E+00
4/2/2003	5.15E+02	6.24E+00
7/9/2003	5.76E+02	6.36E+00
10/7/2003	5.65E+02	6.34E+00

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW357	Downgradient	Yes	4.15E+02	NO	6.03E+00	N/A
MW360	Downgradient	Yes	4.01E+02	NO	5.99E+00	N/A
MW363	Downgradient	Yes	3.46E+02	NO	5.85E+00	N/A
MW366	Downgradient	Yes	4.80E+02	NO	6.17E+00	N/A
MW369	Upgradient	Yes	3.87E+02	NO	5.96E+00	N/A
MW372	Upgradient	Yes	7.44E+02	YES	6.61E+00	N/A

N/A - Results identified as Non-Detects during laboratory analysis or data validation and were not included in the statistical evaluation. Additionally for parameters that have MCLs, where the result for a well did not exceed the MCL value, that well was not included in the statistical evaluation.

Conclusion of Statistical Analysis on Historical Data

The test well(s) listed exceeded the Upper Tolerance Limit, which is evidence of elevated concentration with respect to historical background data.

Wells with Exceedances

MW372

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.

S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5

TL Upper Tolerance Limit, TL = X + (K * S), LL Lower Tolerance Limit, LL = X - (K * S)

X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,Interim Guidance, EPA, 1989, based on total number of background results - The K-factor for pH to account for a two-sided tolerance interval instead of a one-sided tolerance limit. The K-factor for pH was computed using a formula from NIST/SEMATECH e-Handbook of Statistical Methods, http://www.itl.nist.gov/div898/handbook/,2009.*

C-746-U Second Quarter 2025 Statistical Analysis Historical Background Comparison

Copper UNITS: mg/L URGA

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	**X=** 0.025	**S=** 0.010	**CV(1)=** 0.400	**K factor**=** 2.523	**TL(1)=** 5.02E-02	**LL(1)=** N/A
Statistics-Transformed Background Data	**X=** -3.742	**S=** 0.307	**CV(2)=** -0.082	**K factor**=** 2.523	**TL(2)=** -2.97E+00	**LL(2)=** N/A

Because CV(1) is less than or equal to 1, assume normal distribution and continue with statistical analysis utilizing TL(1).

Historical Background Data from Upgradient Wells with Transformed Result

Well Number: MW369

Date Collected	Result	LN(Result)
3/18/2002	2.50E-02	-3.69E+00
4/22/2002	2.50E-02	-3.69E+00
7/15/2002	5.00E-02	-3.00E+00
10/8/2002	2.00E-02	-3.91E+00
1/8/2003	2.00E-02	-3.91E+00
4/3/2003	2.00E-02	-3.91E+00
7/8/2003	2.00E-02	-3.91E+00
10/6/2003	2.00E-02	-3.91E+00

Well Number: MW372

Date Collected	Result	LN(Result)
3/19/2002	2.50E-02	-3.69E+00
4/23/2002	2.50E-02	-3.69E+00
7/16/2002	5.00E-02	-3.00E+00
10/8/2002	2.00E-02	-3.91E+00
1/7/2003	2.00E-02	-3.91E+00
4/2/2003	2.00E-02	-3.91E+00
7/9/2003	2.00E-02	-3.91E+00
10/7/2003	2.00E-02	-3.91E+00

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW357	Downgradient	Yes	1.14E-03	NO	-6.78E+00	N/A
MW360	Downgradient	Yes	1.46E-03	NO	-6.53E+00	N/A
MW363	Downgradient	Yes	1.02E-03	NO	-6.89E+00	N/A
MW366	Downgradient	Yes	7.30E-04	NO	-7.22E+00	N/A
MW369	Upgradient	Yes	1.38E-03	NO	-6.59E+00	N/A
MW372	Upgradient	Yes	8.96E-04	NO	-7.02E+00	N/A

N/A - Results identified as Non-Detects during laboratory analysis or data validation and were not included in the statistical evaluation. Additionally for parameters that have MCLs, where the result for a well did not exceed the MCL value, that well was not included in the statistical evaluation.

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.

S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5

TL Upper Tolerance Limit, TL = X + (K * S), LL Lower Tolerance Limit, LL = X - (K * S)

X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,Interim Guidance, EPA, 1989, based on total number of background results - The K-factor for pH to account for a two-sided tolerance interval instead of a one-sided tolerance limit. The K-factor for pH was computed using a formula from NIST/SEMATECH e-Handbook of Statistical Methods, http://www.itl.nist.gov/div898/handbook/,2009.*

C-746-U Second Quarter 2025 Statistical Analysis Historical Background Comparison

Cyanide UNITS: mg/L URGA

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	**X=** 0.020	**S=** 0.000	**CV(1)=** 0.000	**K factor**=** 2.523	**TL(1)=** 2.00E-02	**LL(1)=** N/A
Statistics-Transformed Background Data	**X=** -3.912	**S=** 0.000	**CV(2)=** 0.000	**K factor**=** 2.523	**TL(2)=** -3.91E+00	**LL(2)=** N/A

Because CV(1) is less than or equal to 1, assume normal distribution and continue with statistical analysis utilizing TL(1).

Historical Background Data from Upgradient Wells with Transformed Result

Well Number: MW369

Date Collected	Result	LN(Result)
3/18/2002	2.00E-02	-3.91E+00
4/22/2002	2.00E-02	-3.91E+00
7/15/2002	2.00E-02	-3.91E+00
10/8/2002	2.00E-02	-3.91E+00
4/3/2003	2.00E-02	-3.91E+00
7/8/2003	2.00E-02	-3.91E+00
10/6/2003	2.00E-02	-3.91E+00
1/7/2004	2.00E-02	-3.91E+00

Well Number: MW372

Date Collected	Result	LN(Result)
3/19/2002	2.00E-02	-3.91E+00
4/23/2002	2.00E-02	-3.91E+00
7/16/2002	2.00E-02	-3.91E+00
10/8/2002	2.00E-02	-3.91E+00
4/2/2003	2.00E-02	-3.91E+00
7/9/2003	2.00E-02	-3.91E+00
10/7/2003	2.00E-02	-3.91E+00
1/5/2004	2.00E-02	-3.91E+00

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW357	Downgradient	No	2.00E-01	N/A	-1.61E+00	N/A
MW360	Downgradient	Yes	2.41E-03	NO	-6.03E+00	N/A
MW363	Downgradient	No	2.00E-01	N/A	-1.61E+00	N/A
MW366	Downgradient	No	2.00E-01	N/A	-1.61E+00	N/A
MW369	Upgradient	No	2.00E-01	N/A	-1.61E+00	N/A
MW372	Upgradient	Yes	2.23E-03	NO	-6.11E+00	N/A

N/A - Results identified as Non-Detects during laboratory analysis or data validation and were not included in the statistical evaluation. Additionally for parameters that have MCLs, where the result for a well did not exceed the MCL value, that well was not included in the statistical evaluation.

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.

S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5

TL Upper Tolerance Limit, TL = X + (K * S), LL Lower Tolerance Limit, LL = X - (K * S)

X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,Interim Guidance, EPA, 1989, based on total number of background results - The K-factor for pH to account for a two-sided tolerance interval instead of a one-sided tolerance limit. The K-factor for pH was computed using a formula from NIST/SEMATECH e-Handbook of Statistical Methods, http://www.itl.nist.gov/div898/handbook/,2009.*

C-746-U Second Quarter 2025 Statistical Analysis Historical Background Comparison

Dissolved Oxygen UNITS: mg/L URGA

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	**X=** 1.781	**S=** 1.351	**CV(1)=** 0.759	**K factor**=** 2.523	**TL(1)=** 5.19E+00	**LL(1)=** N/A
Statistics-Transformed Background Data	**X=** 0.228	**S=** 1.065	**CV(2)=** 4.665	**K factor**=** 2.523	**TL(2)=** 2.92E+00	**LL(2)=** N/A

Because CV(1) is less than or equal to 1, assume normal distribution and continue with statistical analysis utilizing TL(1).

Historical Background Data from Upgradient Wells with Transformed Result

Well Number: MW369

Date Collected	Result	LN(Result)
3/18/2002	5.41E+00	1.69E+00
4/22/2002	1.57E+00	4.51E-01
7/15/2002	8.00E-01	-2.23E-01
10/8/2002	1.09E+00	8.62E-02
1/8/2003	2.69E+00	9.90E-01
4/3/2003	2.04E+00	7.13E-01
7/8/2003	1.19E+00	1.74E-01
10/6/2003	1.78E+00	5.77E-01

Well Number: MW372

Date Collected	Result	LN(Result)
3/19/2002	3.89E+00	1.36E+00
4/23/2002	5.00E-02	-3.00E+00
7/16/2002	1.33E+00	2.85E-01
10/8/2002	2.66E+00	9.78E-01
1/7/2003	4.00E-01	-9.16E-01
4/2/2003	9.10E-01	-9.43E-02
7/9/2003	1.42E+00	3.51E-01
10/7/2003	1.26E+00	2.31E-01

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW357	Downgradient	Yes	5.00E+00	NO	1.61E+00	N/A
MW360	Downgradient	Yes	2.66E+00	NO	9.78E-01	N/A
MW363	Downgradient	Yes	2.16E+00	NO	7.70E-01	N/A
MW366	Downgradient	Yes	5.60E+00	YES	1.72E+00	N/A
MW369	Upgradient	Yes	2.40E+00	NO	8.75E-01	N/A
MW372	Upgradient	Yes	2.10E+00	NO	7.42E-01	N/A

N/A - Results identified as Non-Detects during laboratory analysis or data validation and were not included in the statistical evaluation. Additionally for parameters that have MCLs, where the result for a well did not exceed the MCL value, that well was not included in the statistical evaluation.

Conclusion of Statistical Analysis on Historical Data

The test well(s) listed exceeded the Upper Tolerance Limit, which is evidence of elevated concentration with respect to historical background data.

Wells with Exceedances

MW366

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.

S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5

TL Upper Tolerance Limit, TL = X + (K * S), LL Lower Tolerance Limit, LL = X - (K * S)

X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,Interim Guidance, EPA, 1989, based on total number of background results - The K-factor for pH to account for a two-sided tolerance interval instead of a one-sided tolerance limit. The K-factor for pH was computed using a formula from NIST/SEMATECH e-Handbook of Statistical Methods, http://www.itl.nist.gov/div898/handbook/,2009.*

C-746-U Second Quarter 2025 Statistical Analysis Historical Background Comparison

Dissolved Solids **UNITS: mg/L** **URGA**

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	**X=** 285.188	**S=** 44.908	**CV(1)=** 0.157	**K factor**=** 2.523	**TL(1)=** 3.98E+02	**LL(1)=** N/A
Statistics-Transformed Background Data	**X=** 5.640	**S=** 0.175	**CV(2)=** 0.031	**K factor**=** 2.523	**TL(2)=** 6.08E+00	**LL(2)=** N/A

Because CV(1) is less than or equal to 1, assume normal distribution and continue with statistical analysis utilizing TL(1).

Historical Background Data from Upgradient Wells with Transformed Result

Well Number: MW369

Date Collected	Result	LN(Result)
3/18/2002	1.73E+02	5.15E+00
4/22/2002	2.46E+02	5.51E+00
7/15/2002	2.32E+02	5.45E+00
10/8/2002	2.75E+02	5.62E+00
1/8/2003	2.69E+02	5.59E+00
4/3/2003	2.50E+02	5.52E+00
7/8/2003	2.95E+02	5.69E+00
10/6/2003	2.76E+02	5.62E+00

Well Number: MW372

Date Collected	Result	LN(Result)
3/19/2002	2.95E+02	5.69E+00
4/23/2002	3.22E+02	5.77E+00
7/16/2002	3.29E+02	5.80E+00
10/8/2002	2.90E+02	5.67E+00
1/7/2003	3.16E+02	5.76E+00
4/2/2003	3.11E+02	5.74E+00
7/9/2003	3.47E+02	5.85E+00
10/7/2003	3.37E+02	5.82E+00

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW357	Downgradient	Yes	1.91E+02	NO	5.25E+00	N/A
MW360	Downgradient	Yes	1.98E+02	NO	5.29E+00	N/A
MW363	Downgradient	Yes	2.15E+02	NO	5.37E+00	N/A
MW366	Downgradient	Yes	2.70E+02	NO	5.60E+00	N/A
MW369	Upgradient	Yes	2.35E+02	NO	5.46E+00	N/A
MW372	Upgradient	Yes	4.74E+02	YES	6.16E+00	N/A

N/A - Results identified as Non-Detects during laboratory analysis or data validation and were not included in the statistical evaluation. Additionally for parameters that have MCLs, where the result for a well did not exceed the MCL value, that well was not included in the statistical evaluation.

Conclusion of Statistical Analysis on Historical Data

The test well(s) listed exceeded the Upper Tolerance Limit, which is evidence of elevated concentration with respect to historical background data.

Wells with Exceedances

MW372

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.

S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5

TL Upper Tolerance Limit, TL = X + (K * S), LL Lower Tolerance Limit, LL = X - (K * S)

X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,Interim Guidance, EPA, 1989, based on total number of background results - The K-factor for pH to account for a two-sided tolerance interval instead of a one-sided tolerance limit. The K-factor for pH was computed using a formula from NIST/SEMATECH e-Handbook of Statistical Methods, http://www.itl.nist.gov/div898/handbook/,2009.*

C-746-U Second Quarter 2025 Statistical Analysis Historical Background Comparison

Iron **UNITS: mg/L** **URGA**

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	**X=** 7.385	**S=** 6.991	**CV(1)=** 0.947	**K factor**=** 2.523	**TL(1)=** 2.50E+01	**LL(1)=** N/A
Statistics-Transformed Background Data	**X=** 1.358	**S=** 1.323	**CV(2)=** 0.974	**K factor**=** 2.523	**TL(2)=** 4.70E+00	**LL(2)=** N/A

Because CV(1) is less than or equal to 1, assume normal distribution and continue with statistical analysis utilizing TL(1).

Historical Background Data from Upgradient Wells with Transformed Result

Well Number: MW369

Date Collected	Result	LN(Result)
3/18/2002	6.56E-01	-4.22E-01
4/22/2002	6.95E-01	-3.64E-01
7/15/2002	7.10E+00	1.96E+00
10/8/2002	2.15E+01	3.07E+00
1/8/2003	1.85E+01	2.92E+00
4/3/2003	1.49E+01	2.70E+00
7/8/2003	1.13E+01	2.42E+00
10/6/2003	1.49E+01	2.70E+00

Well Number: MW372

Date Collected	Result	LN(Result)
3/19/2002	5.95E+00	1.78E+00
4/23/2002	7.92E-01	-2.33E-01
7/16/2002	1.78E+00	5.77E-01
10/8/2002	7.76E-01	-2.54E-01
1/7/2003	3.55E+00	1.27E+00
4/2/2003	5.02E+00	1.61E+00
7/9/2003	1.00E+01	2.30E+00
10/7/2003	7.33E-01	-3.11E-01

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW357	Downgradient	Yes	1.99E-01	NO	-1.61E+00	N/A
MW360	Downgradient	Yes	9.59E-02	NO	-2.34E+00	N/A
MW363	Downgradient	Yes	4.47E-02	NO	-3.11E+00	N/A
MW366	Downgradient	No	1.00E-01	N/A	-2.30E+00	N/A
MW369	Upgradient	Yes	3.79E-02	NO	-3.27E+00	N/A
MW372	Upgradient	Yes	9.07E-02	NO	-2.40E+00	N/A

N/A - Results identified as Non-Detects during laboratory analysis or data validation and were not included in the statistical evaluation. Additionally for parameters that have MCLs, where the result for a well did not exceed the MCL value, that well was not included in the statistical evaluation.

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.

S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5

TL Upper Tolerance Limit, TL = X + (K * S), LL Lower Tolerance Limit, LL = X - (K * S)

X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,Interim Guidance, EPA, 1989, based on total number of background results - The K-factor for pH to account for a two-sided tolerance interval instead of a one-sided tolerance limit. The K-factor for pH was computed using a formula from NIST/SEMATECH e-Handbook of Statistical Methods, http://www.itl.nist.gov/div898/handbook/,2009.*

C-746-U Second Quarter 2025 Statistical Analysis Historical Background Comparison

Magnesium **UNITS: mg/L** **URGA**

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	**X=** 12.864	**S=** 3.505	**CV(1)=** 0.272	**K factor**=** 2.523	**TL(1)=** 2.17E+01	**LL(1)=** N/A
Statistics-Transformed Background Data	**X=** 2.517	**S=** 0.290	**CV(2)=** 0.115	**K factor**=** 2.523	**TL(2)=** 3.25E+00	**LL(2)=** N/A

Because CV(1) is less than or equal to 1, assume normal distribution and continue with statistical analysis utilizing TL(1).

Historical Background Data from Upgradient Wells with Transformed Result

Well Number: MW369

Date Collected	Result	LN(Result)
3/18/2002	1.14E+01	2.43E+00
4/22/2002	1.20E+01	2.48E+00
7/15/2002	1.00E+01	2.30E+00
10/8/2002	8.62E+00	2.15E+00
1/8/2003	7.89E+00	2.07E+00
4/3/2003	7.97E+00	2.08E+00
7/8/2003	1.03E+01	2.33E+00
10/6/2003	9.14E+00	2.21E+00

Well Number: MW372

Date Collected	Result	LN(Result)
3/19/2002	1.57E+01	2.75E+00
4/23/2002	1.66E+01	2.81E+00
7/16/2002	1.54E+01	2.73E+00
10/8/2002	1.58E+01	2.76E+00
1/7/2003	1.58E+01	2.76E+00
4/2/2003	1.64E+01	2.80E+00
7/9/2003	1.52E+01	2.72E+00
10/7/2003	1.76E+01	2.87E+00

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW357	Downgradient	Yes	1.05E+01	NO	2.35E+00	N/A
MW360	Downgradient	Yes	8.23E+00	NO	2.11E+00	N/A
MW363	Downgradient	Yes	8.19E+00	NO	2.10E+00	N/A
MW366	Downgradient	Yes	1.40E+01	NO	2.64E+00	N/A
MW369	Upgradient	Yes	1.08E+01	NO	2.38E+00	N/A
MW372	Upgradient	Yes	2.42E+01	YES	3.19E+00	N/A

N/A - Results identified as Non-Detects during laboratory analysis or data validation and were not included in the statistical evaluation. Additionally for parameters that have MCLs, where the result for a well did not exceed the MCL value, that well was not included in the statistical evaluation.

Conclusion of Statistical Analysis on Historical Data

The test well(s) listed exceeded the Upper Tolerance Limit, which is evidence of elevated concentration with respect to historical background data.

Wells with Exceedances

MW372

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.

S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5

TL Upper Tolerance Limit, TL = X + (K * S), LL Lower Tolerance Limit, LL = X - (K * S)

X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,Interim Guidance, EPA, 1989, based on total number of background results - The K-factor for pH to account for a two-sided tolerance interval instead of a one-sided tolerance limit. The K-factor for pH was computed using a formula from NIST/SEMATECH e-Handbook of Statistical Methods, http://www.itl.nist.gov/div898/handbook/,2009.*

C-746-U Second Quarter 2025 Statistical Analysis Historical Background Comparison

Manganese **UNITS: mg/L** **URGA**

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	**X=** 0.413	**S=** 0.274	**CV(1)=** 0.664	**K factor**=** 2.523	**TL(1)=** 1.11E+00	**LL(1)=** N/A
Statistics-Transformed Background Data	**X=** -1.226	**S=** 1.008	**CV(2)=** -0.822	**K factor**=** 2.523	**TL(2)=** 1.32E+00	**LL(2)=** N/A

Because CV(1) is less than or equal to 1, assume normal distribution and continue with statistical analysis utilizing TL(1).

Historical Background Data from Upgradient Wells with Transformed Result

Well Number: MW369

Date Collected	Result	LN(Result)
3/18/2002	3.40E-02	-3.38E+00
4/22/2002	6.20E-02	-2.78E+00
7/15/2002	4.36E-01	-8.30E-01
10/8/2002	8.67E-01	-1.43E-01
1/8/2003	8.28E-01	-1.89E-01
4/3/2003	6.72E-01	-3.97E-01
7/8/2003	3.21E-01	-1.14E+00
10/6/2003	7.14E-01	-3.37E-01

Well Number: MW372

Date Collected	Result	LN(Result)
3/19/2002	2.05E-01	-1.58E+00
4/23/2002	3.45E-01	-1.06E+00
7/16/2002	2.10E-01	-1.56E+00
10/8/2002	5.39E-02	-2.92E+00
1/7/2003	5.37E-01	-6.22E-01
4/2/2003	4.15E-01	-8.79E-01
7/9/2003	6.54E-01	-4.25E-01
10/7/2003	2.54E-01	-1.37E+00

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW357	Downgradient	Yes	2.94E-02	NO	-3.53E+00	N/A
MW360	Downgradient	Yes	2.04E-02	NO	-3.89E+00	N/A
MW363	Downgradient	Yes	1.74E-01	NO	-1.75E+00	N/A
MW366	Downgradient	Yes	3.39E-03	NO	-5.69E+00	N/A
MW369	Upgradient	Yes	1.02E-02	NO	-4.59E+00	N/A
MW372	Upgradient	Yes	4.79E-03	NO	-5.34E+00	N/A

N/A - Results identified as Non-Detects during laboratory analysis or data validation and were not included in the statistical evaluation. Additionally for parameters that have MCLs, where the result for a well did not exceed the MCL value, that well was not included in the statistical evaluation.

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.

S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5

TL Upper Tolerance Limit, TL = X + (K * S), LL Lower Tolerance Limit, LL = X - (K * S)

X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,Interim Guidance, EPA, 1989, based on total number of background results - The K-factor for pH to account for a two-sided tolerance interval instead of a one-sided tolerance limit. The K-factor for pH was computed using a formula from NIST/SEMATECH e-Handbook of Statistical Methods, http://www.itl.nist.gov/div898/handbook/,2009.*

C-746-U Second Quarter 2025 Statistical Analysis Historical Background Comparison

Methylene chloride UNITS: ug/L URGA

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	**X=** 5.438	**S=** 1.931	**CV(1)=** 0.355	**K factor**=** 2.523	**TL(1)=** 1.03E+01	**LL(1)=** N/A
Statistics-Transformed Background Data	**X=** 1.639	**S=** 0.345	**CV(2)=** 0.211	**K factor**=** 2.523	**TL(2)=** 2.51E+00	**LL(2)=** N/A

Because CV(1) is less than or equal to 1, assume normal distribution and continue with statistical analysis utilizing TL(1).

Historical Background Data from Upgradient Wells with Transformed Result

Well Number: MW369

Date Collected	Result	LN(Result)
3/18/2002	2.00E+00	6.93E-01
4/22/2002	5.00E+00	1.61E+00
7/15/2002	1.00E+01	2.30E+00
10/8/2002	5.00E+00	1.61E+00
1/8/2003	5.00E+00	1.61E+00
4/3/2003	5.00E+00	1.61E+00
7/8/2003	5.00E+00	1.61E+00
10/6/2003	5.00E+00	1.61E+00

Well Number: MW372

Date Collected	Result	LN(Result)
3/19/2002	5.00E+00	1.61E+00
4/23/2002	5.00E+00	1.61E+00
7/16/2002	1.00E+01	2.30E+00
10/8/2002	5.00E+00	1.61E+00
1/7/2003	5.00E+00	1.61E+00
4/2/2003	5.00E+00	1.61E+00
7/9/2003	5.00E+00	1.61E+00
10/7/2003	5.00E+00	1.61E+00

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW357	Downgradient	No	5.00E+00	N/A	1.61E+00	N/A
MW360	Downgradient	No	5.00E+00	N/A	1.61E+00	N/A
MW363	Downgradient	No	5.00E+00	N/A	1.61E+00	N/A
MW366	Downgradient	No	5.00E+00	N/A	1.61E+00	N/A
MW369	Upgradient	Yes	6.60E-01	NO	-4.16E-01	N/A
MW372	Upgradient	Yes	9.20E-01	NO	-8.34E-02	N/A

N/A - Results identified as Non-Detects during laboratory analysis or data validation and were not included in the statistical evaluation. Additionally for parameters that have MCLs, where the result for a well did not exceed the MCL value, that well was not included in the statistical evaluation.

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.

S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5

TL Upper Tolerance Limit, TL = X + (K * S), LL Lower Tolerance Limit, LL = X - (K * S)

X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,Interim Guidance, EPA, 1989, based on total number of background results - The K-factor for pH to account for a two-sided tolerance interval instead of a one-sided tolerance limit. The K-factor for pH was computed using a formula from NIST/SEMATECH e-Handbook of Statistical Methods, http://www.itl.nist.gov/div898/handbook/,2009.*

C-746-U Second Quarter 2025 Statistical Analysis Historical Background Comparison

Molybdenum UNITS: mg/L URGA

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	**X=** 0.010	**S=** 0.012	**CV(1)=** 1.199	**K factor**=** 2.523	**TL(1)=** 4.03E-02	**LL(1)=**N/A
Statistics-Transformed Background Data	**X=** -5.698	**S=** 1.607	**CV(2)=** -0.282	**K factor**=** 2.523	**TL(2)=** -1.64E+00	**LL(2)=**N/A

Because CV(1) is greater than 1, the natural logarithm of background and test well results were calculated utilizing TL(2) for comparison.

Historical Background Data from Upgradient Wells with Transformed Result

Well Number: MW369

Date Collected	Result	LN(Result)
3/18/2002	2.50E-02	-3.69E+00
4/22/2002	2.50E-02	-3.69E+00
7/15/2002	2.50E-02	-3.69E+00
10/8/2002	1.00E-03	-6.91E+00
1/8/2003	1.00E-03	-6.91E+00
4/3/2003	1.00E-03	-6.91E+00
7/8/2003	1.00E-03	-6.91E+00
10/6/2003	1.00E-03	-6.91E+00

Well Number: MW372

Date Collected	Result	LN(Result)
3/19/2002	2.50E-02	-3.69E+00
4/23/2002	2.50E-02	-3.69E+00
7/16/2002	2.50E-02	-3.69E+00
10/8/2002	1.00E-03	-6.91E+00
1/7/2003	1.00E-03	-6.91E+00
4/2/2003	1.00E-03	-6.91E+00
7/9/2003	1.05E-03	-6.86E+00
10/7/2003	1.00E-03	-6.91E+00

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW357	Downgradient	No	1.00E-03	N/A	-6.91E+00	N/A
MW360	Downgradient	Yes	2.14E-04	N/A	-8.45E+00	NO
MW363	Downgradient	No	1.00E-03	N/A	-6.91E+00	N/A
MW366	Downgradient	No	1.00E-03	N/A	-6.91E+00	N/A
MW369	Upgradient	No	1.00E-03	N/A	-6.91E+00	N/A
MW372	Upgradient	Yes	2.41E-04	N/A	-8.33E+00	NO

N/A - Results identified as Non-Detects during laboratory analysis or data validation and were not included in the statistical evaluation. Additionally for parameters that have MCLs, where the result for a well did not exceed the MCL value, that well was not included in the statistical evaluation.

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.

S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5

TL Upper Tolerance Limit, TL = X + (K * S), LL Lower Tolerance Limit, LL = X - (K * S)

X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,Interim Guidance, EPA, 1989, based on total number of background results - The K-factor for pH to account for a two-sided tolerance interval instead of a one-sided tolerance limit. The K-factor for pH was computed using a formula from NIST/SEMATECH e-Handbook of Statistical Methods, http://www.itl.nist.gov/div898/handbook/,2009.*

C-746-U Second Quarter 2025 Statistical Analysis Historical Background Comparison

Nickel **UNITS: mg/L** **URGA**

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	**X=** 0.024	**S=** 0.021	**CV(1)=** 0.910	**K factor**=** 2.523	**TL(1)=** 7.77E-02	**LL(1)=** N/A
Statistics-Transformed Background Data	**X=** -4.246	**S=** 1.075	**CV(2)=** -0.253	**K factor**=** 2.523	**TL(2)=** -1.53E+00	**LL(2)=** N/A

Because CV(1) is less than or equal to 1, assume normal distribution and continue with statistical analysis utilizing TL(1).

Historical Background Data from Upgradient Wells with Transformed Result

Well Number: MW369

Date Collected	Result	LN(Result)
3/18/2002	5.00E-02	-3.00E+00
4/22/2002	5.00E-02	-3.00E+00
7/15/2002	5.00E-02	-3.00E+00
10/8/2002	5.00E-03	-5.30E+00
1/8/2003	5.00E-03	-5.30E+00
4/3/2003	5.00E-03	-5.30E+00
7/8/2003	1.30E-02	-4.34E+00
10/6/2003	1.04E-02	-4.57E+00

Well Number: MW372

Date Collected	Result	LN(Result)
3/19/2002	5.00E-02	-3.00E+00
4/23/2002	5.00E-02	-3.00E+00
7/16/2002	5.00E-02	-3.00E+00
10/8/2002	5.00E-03	-5.30E+00
1/7/2003	5.00E-03	-5.30E+00
4/2/2003	5.00E-03	-5.30E+00
7/9/2003	1.90E-02	-3.96E+00
10/7/2003	5.00E-03	-5.30E+00

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW357	Downgradient	No	2.00E-03	N/A	-6.21E+00	N/A
MW360	Downgradient	Yes	1.64E-03	NO	-6.41E+00	N/A
MW363	Downgradient	Yes	1.46E-02	NO	-4.23E+00	N/A
MW366	Downgradient	Yes	6.44E-04	NO	-7.35E+00	N/A
MW369	Upgradient	Yes	1.53E-03	NO	-6.48E+00	N/A
MW372	Upgradient	Yes	8.31E-04	NO	-7.09E+00	N/A

N/A - Results identified as Non-Detects during laboratory analysis or data validation and were not included in the statistical evaluation. Additionally for parameters that have MCLs, where the result for a well did not exceed the MCL value, that well was not included in the statistical evaluation.

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.

S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5

TL Upper Tolerance Limit, TL = X + (K * S), LL Lower Tolerance Limit, LL = X - (K * S)

X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,Interim Guidance, EPA, 1989, based on total number of background results - The K-factor for pH to account for a two-sided tolerance interval instead of a one-sided tolerance limit. The K-factor for pH was computed using a formula from NIST/SEMATECH e-Handbook of Statistical Methods, http://www.itl.nist.gov/div898/handbook/,2009.*

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Oxidation-Reduction Potential UNITS: mV URGA

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	**X=** 74.563	**S=** 94.243	**CV(1)=** 1.264	**K factor**=** 2.523	**TL(1)=** 3.12E+02	**LL(1)=**N/A
Statistics-Transformed Background Data	**X=** 4.554	**S=** 0.784	**CV(2)=** 0.172	**K factor**=** 2.523	**TL(2)=** 5.37E+00	**LL(2)=**N/A

Because CV(1) is greater than 1, the natural logarithm of background and test well results were calculated utilizing TL(2) for comparison.

#Because the natural log was not possible for all background values, the TL was considered equal to the maximum background value.

Historical Background Data from Upgradient Wells with Transformed Result

Well Number: MW369

Date Collected	Result	LN(Result)
3/18/2002	2.15E+02	5.37E+00
4/22/2002	1.10E+02	4.70E+00
7/15/2002	2.00E+01	3.00E+00
1/8/2003	-5.00E+00	#Func!
4/3/2003	-1.80E+01	#Func!
7/8/2003	-6.70E+01	#Func!
10/6/2003	-1.00E+00	#Func!
1/7/2004	5.50E+01	4.01E+00

Well Number: MW372

Date Collected	Result	LN(Result)
3/19/2002	2.10E+02	5.35E+00
4/23/2002	6.50E+01	4.17E+00
7/16/2002	2.15E+02	5.37E+00
10/8/2002	1.85E+02	5.22E+00
1/7/2003	4.50E+01	3.81E+00
4/2/2003	6.50E+01	4.17E+00
7/9/2003	-3.90E+01	#Func!
10/7/2003	1.38E+02	4.93E+00

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW357	Downgradient	Yes	4.89E+02	N/A	6.19E+00	YES
MW360	Downgradient	Yes	5.03E+02	N/A	6.22E+00	YES
MW363	Downgradient	Yes	4.92E+02	N/A	6.20E+00	YES
MW366	Downgradient	Yes	4.89E+02	N/A	6.19E+00	YES
MW369	Upgradient	Yes	4.25E+02	N/A	6.05E+00	YES
MW372	Upgradient	Yes	4.20E+02	N/A	6.04E+00	YES

N/A - Results identified as Non-Detects during laboratory analysis or data validation and were not included in the statistical evaluation. Additionally for parameters that have MCLs, where the result for a well did not exceed the MCL value, that well was not included in the statistical evaluation.

Conclusion of Statistical Analysis on Historical Data

The test well(s) listed exceeded the Upper Tolerance Limit, which is evidence of elevated concentration with respect to historical background data.

Wells with Exceedances

MW357
MW360
MW363
MW366
MW369
MW372

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.

S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5

TL Upper Tolerance Limit, TL = X + (K * S), LL Lower Tolerance Limit, LL = X - (K * S)

X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,Interim Guidance, EPA, 1989, based on total number of background results - The K-factor for pH to account for a two-sided tolerance interval instead of a one-sided tolerance limit. The K-factor for pH was computed using a formula from NIST/SEMATECH e-Handbook of Statistical Methods, http://www.itl.nist.gov/div898/handbook/,2009.*

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pH UNITS: Std Unit URGA

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	**X=** 6.274	**S=** 0.194	**CV(1)=** 0.031	**K factor**=** 2.904	**TL(1)=** 6.84E+00	**LL(1)=** 5.71E+00
Statistics-Transformed Background Data	**X=** 1.836	**S=** 0.031	**CV(2)=** 0.017	**K factor**=** 2.904	**TL(2)=** 1.93E+00	**LL(2)=** 1.75E+00

Because CV(1) is less than or equal to 1, assume normal distribution and continue with statistical analysis utilizing TL(1).

Historical Background Data from Upgradient Wells with Transformed Result

Well Number: MW369

Date Collected	Result	LN(Result)
3/18/2002	6.10E+00	1.81E+00
4/22/2002	6.10E+00	1.81E+00
7/15/2002	6.10E+00	1.81E+00
10/8/2002	6.50E+00	1.87E+00
1/8/2003	6.50E+00	1.87E+00
4/3/2003	6.60E+00	1.89E+00
7/8/2003	6.50E+00	1.87E+00
10/6/2003	6.50E+00	1.87E+00

Well Number: MW372

Date Collected	Result	LN(Result)
3/19/2002	6.10E+00	1.81E+00
4/23/2002	6.12E+00	1.81E+00
7/16/2002	6.10E+00	1.81E+00
10/8/2002	6.06E+00	1.80E+00
1/7/2003	6.26E+00	1.83E+00
4/2/2003	6.15E+00	1.82E+00
7/9/2003	6.30E+00	1.84E+00
10/7/2003	6.40E+00	1.86E+00

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)? Result <LL(1)?	LN(Result)	LN(Result) >TL(2)? LN(Result) <LL(2)?
MW357	Downgradient	Yes	6.17E+00	NO	1.82E+00	N/A
MW360	Downgradient	Yes	6.10E+00	NO	1.81E+00	N/A
MW363	Downgradient	Yes	6.07E+00	NO	1.80E+00	N/A
MW366	Downgradient	Yes	6.20E+00	NO	1.82E+00	N/A
MW369	Upgradient	Yes	6.08E+00	NO	1.81E+00	N/A
MW372	Upgradient	Yes	6.10E+00	NO	1.81E+00	N/A

N/A - Results identified as Non-Detects during laboratory analysis or data validation and were not included in the statistical evaluation. Additionally for parameters that have MCLs, where the result for a well did not exceed the MCL value, that well was not included in the statistical evaluation.

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.

S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5

TL Upper Tolerance Limit, TL = X + (K * S), LL Lower Tolerance Limit, LL = X - (K * S)

X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,Interim Guidance, EPA, 1989, based on total number of background results - The K-factor for pH to account for a two-sided tolerance interval instead of a one-sided tolerance limit. The K-factor for pH was computed using a formula from NIST/SEMATECH e-Handbook of Statistical Methods, http://www.itl.nist.gov/div898/handbook/,2009.*

C-746-U Second Quarter 2025 Statistical Analysis Historical Background Comparison

Potassium **UNITS: mg/L** **URGA**

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	**X=** 1.663	**S=** 0.488	**CV(1)=** 0.293	**K factor**=** 2.523	**TL(1)=** 2.89E+00	**LL(1)=** N/A
Statistics-Transformed Background Data	**X=** 0.456	**S=** 0.362	**CV(2)=** 0.794	**K factor**=** 2.523	**TL(2)=** 1.37E+00	**LL(2)=** N/A

Because CV(1) is less than or equal to 1, assume normal distribution and continue with statistical analysis utilizing TL(1).

Historical Background Data from Upgradient Wells with Transformed Result

Well Number: MW369

Date Collected	Result	LN(Result)
3/18/2002	2.00E+00	6.93E-01
4/22/2002	2.21E+00	7.93E-01
7/15/2002	2.00E+00	6.93E-01
10/8/2002	9.66E-01	-3.46E-02
1/8/2003	7.27E-01	-3.19E-01
4/3/2003	8.00E-01	-2.23E-01
7/8/2003	1.62E+00	4.82E-01
10/6/2003	1.14E+00	1.31E-01

Well Number: MW372

Date Collected	Result	LN(Result)
3/19/2002	2.04E+00	7.13E-01
4/23/2002	2.03E+00	7.08E-01
7/16/2002	2.00E+00	6.93E-01
10/8/2002	1.54E+00	4.32E-01
1/7/2003	1.88E+00	6.31E-01
4/2/2003	2.09E+00	7.37E-01
7/9/2003	1.78E+00	5.77E-01
10/7/2003	1.79E+00	5.82E-01

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW357	Downgradient	Yes	1.73E+00	NO	5.48E-01	N/A
MW360	Downgradient	Yes	7.09E-01	NO	-3.44E-01	N/A
MW363	Downgradient	Yes	1.83E+00	NO	6.04E-01	N/A
MW366	Downgradient	Yes	2.10E+00	NO	7.42E-01	N/A
MW369	Upgradient	Yes	9.94E-01	NO	-6.02E-03	N/A
MW372	Upgradient	Yes	2.47E+00	NO	9.04E-01	N/A

N/A - Results identified as Non-Detects during laboratory analysis or data validation and were not included in the statistical evaluation. Additionally for parameters that have MCLs, where the result for a well did not exceed the MCL value, that well was not included in the statistical evaluation.

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.

S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5

TL Upper Tolerance Limit, TL = X + (K * S), LL Lower Tolerance Limit, LL = X - (K * S)

X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,Interim Guidance, EPA, 1989, based on total number of background results - The K-factor for pH to account for a two-sided tolerance interval instead of a one-sided tolerance limit. The K-factor for pH was computed using a formula from NIST/SEMATECH e-Handbook of Statistical Methods, http://www.itl.nist.gov/div898/handbook/,2009.*

C-746-U Second Quarter 2025 Statistical Analysis Historical Background Comparison

Sodium **UNITS: mg/L** **URGA**

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	**X=** 45.100	**S=** 11.875	**CV(1)=** 0.263	**K factor**=** 2.523	**TL(1)=** 7.51E+01	**LL(1)=** N/A
Statistics-Transformed Background Data	**X=** 3.780	**S=** 0.242	**CV(2)=** 0.064	**K factor**=** 2.523	**TL(2)=** 4.39E+00	**LL(2)=** N/A

Because CV(1) is less than or equal to 1, assume normal distribution and continue with statistical analysis utilizing TL(1).

Historical Background Data from Upgradient Wells with Transformed Result

Well Number: MW369

Date Collected	Result	LN(Result)
3/18/2002	3.57E+01	3.58E+00
4/22/2002	3.76E+01	3.63E+00
7/15/2002	4.24E+01	3.75E+00
10/8/2002	6.69E+01	4.20E+00
1/8/2003	6.79E+01	4.22E+00
4/3/2003	6.18E+01	4.12E+00
7/8/2003	4.56E+01	3.82E+00
10/6/2003	5.91E+01	4.08E+00

Well Number: MW372

Date Collected	Result	LN(Result)
3/19/2002	3.72E+01	3.62E+00
4/23/2002	3.86E+01	3.65E+00
7/16/2002	3.56E+01	3.57E+00
10/8/2002	3.75E+01	3.62E+00
1/7/2003	3.41E+01	3.53E+00
4/2/2003	3.44E+01	3.54E+00
7/9/2003	4.41E+01	3.79E+00
10/7/2003	4.31E+01	3.76E+00

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW357	Downgradient	Yes	4.20E+01	NO	3.74E+00	N/A
MW360	Downgradient	Yes	6.47E+01	NO	4.17E+00	N/A
MW363	Downgradient	Yes	3.78E+01	NO	3.63E+00	N/A
MW366	Downgradient	Yes	4.84E+01	NO	3.88E+00	N/A
MW369	Upgradient	Yes	4.86E+01	NO	3.88E+00	N/A
MW372	Upgradient	Yes	5.91E+01	NO	4.08E+00	N/A

N/A - Results identified as Non-Detects during laboratory analysis or data validation and were not included in the statistical evaluation. Additionally for parameters that have MCLs, where the result for a well did not exceed the MCL value, that well was not included in the statistical evaluation.

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.

S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5

TL Upper Tolerance Limit, TL = X + (K * S), LL Lower Tolerance Limit, LL = X - (K * S)

X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,Interim Guidance, EPA, 1989, based on total number of background results - The K-factor for pH to account for a two-sided tolerance interval instead of a one-sided tolerance limit. The K-factor for pH was computed using a formula from NIST/SEMATECH e-Handbook of Statistical Methods, http://www.itl.nist.gov/div898/handbook/,2009.*

C-746-U Second Quarter 2025 Statistical Analysis Historical Background Comparison

Sulfate **UNITS: mg/L** **URGA**

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	**X=** 45.031	**S=** 33.919	**CV(1)=** 0.753	**K factor**=** 2.523	**TL(1)=** 1.31E+02	**LL(1)=** N/A
Statistics-Transformed Background Data	**X=** 3.420	**S=** 0.981	**CV(2)=** 0.287	**K factor**=** 2.523	**TL(2)=** 5.89E+00	**LL(2)=** N/A

Because CV(1) is less than or equal to 1, assume normal distribution and continue with statistical analysis utilizing TL(1).

Historical Background Data from Upgradient Wells with Transformed Result

Well Number: MW369

Date Collected	Result	LN(Result)
3/18/2002	1.55E+01	2.74E+00
4/22/2002	1.58E+01	2.76E+00
7/15/2002	1.38E+01	2.62E+00
10/8/2002	6.90E+00	1.93E+00
1/8/2003	1.05E+01	2.35E+00
4/3/2003	1.05E+01	2.35E+00
7/8/2003	1.09E+01	2.39E+00
10/6/2003	1.63E+01	2.79E+00

Well Number: MW372

Date Collected	Result	LN(Result)
3/19/2002	7.17E+01	4.27E+00
4/23/2002	7.47E+01	4.31E+00
7/16/2002	7.41E+01	4.31E+00
10/8/2002	7.05E+01	4.26E+00
1/7/2003	7.58E+01	4.33E+00
4/2/2003	8.18E+01	4.40E+00
7/9/2003	8.36E+01	4.43E+00
10/7/2003	8.81E+01	4.48E+00

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW357	Downgradient	Yes	3.37E+01	NO	3.52E+00	N/A
MW360	Downgradient	Yes	9.51E+00	NO	2.25E+00	N/A
MW363	Downgradient	Yes	3.26E+01	NO	3.48E+00	N/A
MW366	Downgradient	Yes	5.39E+01	NO	3.99E+00	N/A
MW369	Upgradient	Yes	1.80E+01	NO	2.89E+00	N/A
MW372	Upgradient	Yes	1.61E+02	YES	5.08E+00	N/A

N/A - Results identified as Non-Detects during laboratory analysis or data validation and were not included in the statistical evaluation. Additionally for parameters that have MCLs, where the result for a well did not exceed the MCL value, that well was not included in the statistical evaluation.

Conclusion of Statistical Analysis on Historical Data

The test well(s) listed exceeded the Upper Tolerance Limit, which is evidence of elevated concentration with respect to historical background data.

Wells with Exceedances

MW372

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.

S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5

TL Upper Tolerance Limit, TL = X + (K * S), LL Lower Tolerance Limit, LL = X - (K * S)

X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,Interim Guidance, EPA, 1989, based on total number of background results - The K-factor for pH to account for a two-sided tolerance interval instead of a one-sided tolerance limit. The K-factor for pH was computed using a formula from NIST/SEMATECH e-Handbook of Statistical Methods, http://www.itl.nist.gov/div898/handbook/,2009.*

C-746-U Second Quarter 2025 Statistical Analysis Historical Background Comparison

Technetium-99 UNITS: pCi/L URGA

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	**X=** 20.821	**S=** 18.044	**CV(1)=** 0.867	**K factor**=** 2.523	**TL(1)=** 6.63E+01	**LL(1)=** N/A
Statistics-Transformed Background Data	**X=** 2.770	**S=** 1.150	**CV(2)=** 0.415	**K factor**=** 2.523	**TL(2)=** 3.97E+00	**LL(2)=** N/A

Because CV(1) is less than or equal to 1, assume normal distribution and continue with statistical analysis utilizing TL(1).

#Because the natural log was not possible for all background values, the TL was considered equal to the maximum background value.

Historical Background Data from Upgradient Wells with Transformed Result

Well Number: MW369

Date Collected	Result	LN(Result)
3/18/2002	4.17E+01	3.73E+00
4/22/2002	5.31E+01	3.97E+00
7/15/2002	1.81E+01	2.90E+00
10/8/2002	1.64E+01	2.80E+00
1/8/2003	3.49E+00	1.25E+00
4/3/2003	9.34E+00	2.23E+00
7/8/2003	1.75E+01	2.86E+00
10/6/2003	1.70E+01	2.83E+00

Well Number: MW372

Date Collected	Result	LN(Result)
3/19/2002	4.48E+01	3.80E+00
4/23/2002	8.02E-01	-2.21E-01
7/16/2002	1.98E+01	2.99E+00
10/8/2002	4.61E+01	3.83E+00
1/7/2003	-9.73E-01	#Func!
4/2/2003	9.07E+00	2.20E+00
7/9/2003	0.00E+00	#Func!
10/7/2003	3.69E+01	3.61E+00

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW357	Downgradient	Yes	3.42E+01	NO	3.53E+00	N/A
MW360	Downgradient	No	-3.56E+00	N/A	#Error	N/A
MW363	Downgradient	No	-1.45E+00	N/A	#Error	N/A
MW366	Downgradient	Yes	6.24E+01	NO	4.13E+00	N/A
MW369	Upgradient	Yes	2.96E+01	NO	3.39E+00	N/A
MW372	Upgradient	No	6.43E+00	N/A	1.86E+00	N/A

N/A - Results identified as Non-Detects during laboratory analysis or data validation and were not included in the statistical evaluation. Additionally for parameters that have MCLs, where the result for a well did not exceed the MCL value, that well was not included in the statistical evaluation.

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.

S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5

TL Upper Tolerance Limit, TL = X + (K * S), LL Lower Tolerance Limit, LL = X - (K * S)

X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,Interim Guidance, EPA, 1989, based on total number of background results - The K-factor for pH to account for a two-sided tolerance interval instead of a one-sided tolerance limit. The K-factor for pH was computed using a formula from NIST/SEMATECH e-Handbook of Statistical Methods, http://www.itl.nist.gov/div898/handbook/,2009.*

C-746-U Second Quarter 2025 Statistical Analysis Historical Background Comparison

Total Organic Carbon (TOC) UNITS: mg/L URGA

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	**X=** 3.513	**S=** 4.307	**CV(1)=** 1.226	**K factor**=** 2.523	**TL(1)=** 1.44E+01	**LL(1)=**N/A
Statistics-Transformed Background Data	**X=** 0.851	**S=** 0.828	**CV(2)=** 0.973	**K factor**=** 2.523	**TL(2)=** 2.94E+00	**LL(2)=**N/A

Because CV(1) is greater than 1, the natural logarithm of background and test well results were calculated utilizing TL(2) for comparison.

Historical Background Data from Upgradient Wells with Transformed Result

Well Number: MW369

Date Collected	Result	LN(Result)
3/18/2002	1.70E+00	5.31E-01
4/22/2002	1.60E+00	4.70E-01
7/15/2002	3.10E+00	1.13E+00
10/8/2002	1.77E+01	2.87E+00
1/8/2003	9.00E+00	2.20E+00
4/3/2003	4.00E+00	1.39E+00
7/8/2003	4.90E+00	1.59E+00
10/6/2003	2.40E+00	8.75E-01

Well Number: MW372

Date Collected	Result	LN(Result)
3/19/2002	1.00E+00	0.00E+00
4/23/2002	1.20E+00	1.82E-01
7/16/2002	1.00E+00	0.00E+00
10/8/2002	1.00E+00	0.00E+00
1/7/2003	1.60E+00	4.70E-01
4/2/2003	1.50E+00	4.05E-01
7/9/2003	3.00E+00	1.10E+00
10/7/2003	1.50E+00	4.05E-01

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW357	Downgradient	Yes	4.32E-01	N/A	-8.39E-01	NO
MW360	Downgradient	Yes	7.26E-01	N/A	-3.20E-01	NO
MW363	Downgradient	Yes	7.93E-01	N/A	-2.32E-01	NO
MW366	Downgradient	Yes	4.86E-01	N/A	-7.22E-01	NO
MW369	Upgradient	Yes	1.03E+00	N/A	2.96E-02	NO
MW372	Upgradient	Yes	1.30E+00	N/A	2.62E-01	NO

N/A - Results identified as Non-Detects during laboratory analysis or data validation and were not included in the statistical evaluation. Additionally for parameters that have MCLs, where the result for a well did not exceed the MCL value, that well was not included in the statistical evaluation.

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.

S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5

TL Upper Tolerance Limit, TL = X + (K * S), LL Lower Tolerance Limit, LL = X - (K * S)

X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,Interim Guidance, EPA, 1989, based on total number of background results - The K-factor for pH to account for a two-sided tolerance interval instead of a one-sided tolerance limit. The K-factor for pH was computed using a formula from NIST/SEMATECH e-Handbook of Statistical Methods, http://www.itl.nist.gov/div898/handbook/,2009.*

C-746-U Second Quarter 2025 Statistical Analysis Historical Background Comparison
Total Organic Halides (TOX) UNITS: ug/L URGA

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	**X=** 67.963	**S=** 64.316	**CV(1)=** 0.946	**K factor**=** 2.523	**TL(1)=** 2.30E+02	**LL(1)=** N/A
Statistics-Transformed Background Data	**X=** 3.772	**S=** 1.023	**CV(2)=** 0.271	**K factor**=** 2.523	**TL(2)=** 6.35E+00	**LL(2)=** N/A

Because CV(1) is less than or equal to 1, assume normal distribution and continue with statistical analysis utilizing TL(1).

Historical Background Data from Upgradient Wells with Transformed Result

Well Number: MW369

Date Collected	Result	LN(Result)
3/18/2002	5.00E+01	3.91E+00
4/22/2002	5.00E+01	3.91E+00
7/15/2002	8.10E+01	4.39E+00
10/8/2002	2.02E+02	5.31E+00
1/8/2003	1.77E+02	5.18E+00
4/3/2003	9.31E+01	4.53E+00
7/8/2003	1.75E+01	2.86E+00
10/6/2003	3.75E+01	3.62E+00

Well Number: MW372

Date Collected	Result	LN(Result)
3/19/2002	1.84E+02	5.21E+00
4/23/2002	5.00E+01	3.91E+00
7/16/2002	5.00E+01	3.91E+00
10/8/2002	5.00E+01	3.91E+00
1/7/2003	1.00E+01	2.30E+00
4/2/2003	1.27E+01	2.54E+00
7/9/2003	1.00E+01	2.30E+00
10/7/2003	1.26E+01	2.53E+00

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW357	Downgradient	Yes	3.40E+00	NO	1.22E+00	N/A
MW360	Downgradient	Yes	4.50E+00	NO	1.50E+00	N/A
MW363	Downgradient	No	1.00E+01	N/A	2.30E+00	N/A
MW366	Downgradient	Yes	9.40E+00	NO	2.24E+00	N/A
MW369	Upgradient	No	3.60E+00	N/A	1.28E+00	N/A
MW372	Upgradient	No	7.12E+00	N/A	1.96E+00	N/A

N/A - Results identified as Non-Detects during laboratory analysis or data validation and were not included in the statistical evaluation. Additionally for parameters that have MCLs, where the result for a well did not exceed the MCL value, that well was not included in the statistical evaluation.

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.

S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5

TL Upper Tolerance Limit, TL = X + (K * S), LL Lower Tolerance Limit, LL = X - (K * S)

X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,Interim Guidance, EPA, 1989, based on total number of background results - The K-factor for pH to account for a two-sided tolerance interval instead of a one-sided tolerance limit. The K-factor for pH was computed using a formula from NIST/SEMATECH e-Handbook of Statistical Methods, http://www.itl.nist.gov/div898/handbook/,2009.*

C-746-U Second Quarter 2025 Statistical Analysis Historical Background Comparison

Zinc **UNITS: mg/L** **URGA**

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	**X=** 0.116	**S=** 0.173	**CV(1)=** 1.490	**K factor**=** 2.523	**TL(1)=** 5.52E-01	**LL(1)=**N/A
Statistics-Transformed Background Data	**X=** -2.729	**S=** 1.014	**CV(2)=** -0.371	**K factor**=** 2.523	**TL(2)=** -1.72E-01	**LL(2)=**N/A

Because CV(1) is greater than 1, the natural logarithm of background and test well results were calculated utilizing TL(2) for comparison.

Historical Background Data from Upgradient Wells with Transformed Result

Well Number: MW369

Date Collected	Result	LN(Result)
3/18/2002	1.00E-01	-2.30E+00
4/22/2002	1.00E-01	-2.30E+00
7/15/2002	1.00E-01	-2.30E+00
10/8/2002	2.50E-02	-3.69E+00
1/8/2003	3.50E-02	-3.35E+00
4/3/2003	3.50E-02	-3.35E+00
7/8/2003	2.00E-02	-3.91E+00
10/6/2003	2.00E-02	-3.91E+00

Well Number: MW372

Date Collected	Result	LN(Result)
3/19/2002	7.25E-01	-3.22E-01
4/23/2002	1.00E-01	-2.30E+00
7/16/2002	1.00E-01	-2.30E+00
10/8/2002	2.50E-02	-3.69E+00
1/7/2003	3.50E-02	-3.35E+00
4/2/2003	3.50E-02	-3.35E+00
7/9/2003	2.00E-01	-1.61E+00
10/7/2003	2.00E-01	-1.61E+00

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW357	Downgradient	Yes	3.49E-03	N/A	-5.66E+00	NO
MW360	Downgradient	Yes	4.31E-03	N/A	-5.45E+00	NO
MW363	Downgradient	Yes	5.39E-03	N/A	-5.22E+00	NO
MW366	Downgradient	No	2.00E-02	N/A	-3.91E+00	N/A
MW369	Upgradient	Yes	5.70E-03	N/A	-5.17E+00	NO
MW372	Upgradient	Yes	3.65E-03	N/A	-5.61E+00	NO

N/A - Results identified as Non-Detects during laboratory analysis or data validation and were not included in the statistical evaluation. Additionally for parameters that have MCLs, where the result for a well did not exceed the MCL value, that well was not included in the statistical evaluation.

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.

S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5

TL Upper Tolerance Limit, TL = X + (K * S), LL Lower Tolerance Limit, LL = X - (K * S)

X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,Interim Guidance, EPA, 1989, based on total number of background results - The K-factor for pH to account for a two-sided tolerance interval instead of a one-sided tolerance limit. The K-factor for pH was computed using a formula from NIST/SEMATECH e-Handbook of Statistical Methods, http://www.itl.nist.gov/div898/handbook/,2009.*

C-746-U Second Quarter 2025 Statistical Analysis Historical Background Comparison

Boron UNITS: mg/L LRGA

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	**X=** 1.140	**S=** 0.780	**CV(1)=** 0.684	**K factor**=** 2.523	**TL(1)=** 3.11E+00	**LL(1)=** N/A
Statistics-Transformed Background Data	**X=** -0.235	**S=** 1.006	**CV(2)=** -4.287	**K factor**=** 2.523	**TL(2)=** 2.30E+00	**LL(2)=** N/A

Because CV(1) is less than or equal to 1, assume normal distribution and continue with statistical analysis utilizing TL(1).

Historical Background Data from Upgradient Wells with Transformed Result

Well Number: MW370

Date Collected	Result	LN(Result)
3/17/2002	2.00E+00	6.93E-01
4/23/2002	2.00E+00	6.93E-01
7/15/2002	2.00E+00	6.93E-01
10/8/2002	2.00E-01	-1.61E+00
1/8/2003	2.00E-01	-1.61E+00
4/3/2003	2.00E-01	-1.61E+00
7/9/2003	2.00E-01	-1.61E+00
10/6/2003	2.00E-01	-1.61E+00

Well Number: MW373

Date Collected	Result	LN(Result)
3/18/2002	2.00E+00	6.93E-01
4/23/2002	2.00E+00	6.93E-01
7/16/2002	2.00E+00	6.93E-01
10/8/2002	7.90E-01	-2.36E-01
1/7/2003	8.07E-01	-2.14E-01
4/2/2003	1.13E+00	1.22E-01
7/9/2003	1.28E+00	2.47E-01
10/7/2003	1.24E+00	2.15E-01

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW358	Downgradient	Yes	4.79E-01	NO	-7.36E-01	N/A
MW361	Downgradient	Yes	4.36E-01	NO	-8.30E-01	N/A
MW364	Downgradient	Yes	1.99E-01	NO	-1.61E+00	N/A
MW367	Downgradient	Yes	5.99E-02	NO	-2.82E+00	N/A
MW370	Upgradient	Yes	8.59E-02	NO	-2.45E+00	N/A
MW373	Upgradient	Yes	2.47E+00	NO	9.04E-01	N/A

N/A - Results identified as Non-Detects during laboratory analysis or data validation and were not included in the statistical evaluation. Additionally for parameters that have MCLs, where the result for a well did not exceed the MCL value, that well was not included in the statistical evaluation.

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.

S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5

TL Upper Tolerance Limit, TL = X + (K * S), LL Lower Tolerance Limit, LL = X - (K * S)

X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,Interim Guidance, EPA, 1989, based on total number of background results - The K-factor for pH to account for a two-sided tolerance interval instead of a one-sided tolerance limit. The K-factor for pH was computed using a formula from NIST/SEMATECH e-Handbook of Statistical Methods, http://www.itl.nist.gov/div898/handbook/,2009.*

C-746-U Second Quarter 2025 Statistical Analysis Historical Background Comparison

Bromide **UNITS: mg/L** **LRGA**

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	**X=** 1.000	**S=** 0.000	**CV(1)=** 0.000	**K factor**=** 2.523	**TL(1)=** 1.00E+00	**LL(1)=** N/A
Statistics-Transformed Background Data	**X=** 0.000	**S=** 0.000	**CV(2)=** #Num!	**K factor**=** 2.523	**TL(2)=** 0.00E+00	**LL(2)=** N/A

Because CV(1) is less than or equal to 1, assume normal distribution and continue with statistical analysis utilizing TL(1).

Historical Background Data from Upgradient Wells with Transformed Result

Well Number: MW370

Date Collected	Result	LN(Result)
3/17/2002	1.00E+00	0.00E+00
4/23/2002	1.00E+00	0.00E+00
7/15/2002	1.00E+00	0.00E+00
10/8/2002	1.00E+00	0.00E+00
1/8/2003	1.00E+00	0.00E+00
4/3/2003	1.00E+00	0.00E+00
7/9/2003	1.00E+00	0.00E+00
10/6/2003	1.00E+00	0.00E+00

Well Number: MW373

Date Collected	Result	LN(Result)
3/18/2002	1.00E+00	0.00E+00
4/23/2002	1.00E+00	0.00E+00
7/16/2002	1.00E+00	0.00E+00
10/8/2002	1.00E+00	0.00E+00
1/7/2003	1.00E+00	0.00E+00
4/2/2003	1.00E+00	0.00E+00
7/9/2003	1.00E+00	0.00E+00
10/7/2003	1.00E+00	0.00E+00

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW358	Downgradient	Yes	4.01E-01	NO	-9.14E-01	N/A
MW361	Downgradient	Yes	4.66E-01	NO	-7.64E-01	N/A
MW364	Downgradient	Yes	4.55E-01	NO	-7.87E-01	N/A
MW367	Downgradient	Yes	4.27E-01	NO	-8.51E-01	N/A
MW370	Upgradient	Yes	5.24E-01	NO	-6.46E-01	N/A
MW373	Upgradient	Yes	4.62E-01	NO	-7.72E-01	N/A

N/A - Results identified as Non-Detects during laboratory analysis or data validation and were not included in the statistical evaluation. Additionally for parameters that have MCLs, where the result for a well did not exceed the MCL value, that well was not included in the statistical evaluation.

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.

S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5

TL Upper Tolerance Limit, TL = X + (K * S), LL Lower Tolerance Limit, LL = X - (K * S)

X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,Interim Guidance, EPA, 1989, based on total number of background results - The K-factor for pH to account for a two-sided tolerance interval instead of a one-sided tolerance limit. The K-factor for pH was computed using a formula from NIST/SEMATECH e-Handbook of Statistical Methods, http://www.itl.nist.gov/div898/handbook/,2009.*

C-746-U Second Quarter 2025 Statistical Analysis Historical Background Comparison

Calcium UNITS: mg/L LRGA

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	**X=** 43.413	**S=** 13.444	**CV(1)=** 0.310	**K factor**=** 2.523	**TL(1)=** 7.73E+01	**LL(1)=** N/A
Statistics-Transformed Background Data	**X=** 3.723	**S=** 0.323	**CV(2)=** 0.087	**K factor**=** 2.523	**TL(2)=** 4.54E+00	**LL(2)=** N/A

Because CV(1) is less than or equal to 1, assume normal distribution and continue with statistical analysis utilizing TL(1).

Historical Background Data from Upgradient Wells with Transformed Result

Well Number: MW370

Date Collected	Result	LN(Result)
3/17/2002	3.48E+01	3.55E+00
4/23/2002	4.34E+01	3.77E+00
7/15/2002	3.32E+01	3.50E+00
10/8/2002	2.92E+01	3.37E+00
1/8/2003	3.13E+01	3.44E+00
4/3/2003	3.24E+01	3.48E+00
7/9/2003	2.29E+01	3.13E+00
10/6/2003	2.80E+01	3.33E+00

Well Number: MW373

Date Collected	Result	LN(Result)
3/18/2002	6.19E+01	4.13E+00
4/23/2002	5.92E+01	4.08E+00
7/16/2002	4.76E+01	3.86E+00
10/8/2002	4.61E+01	3.83E+00
1/7/2003	4.92E+01	3.90E+00
4/2/2003	5.78E+01	4.06E+00
7/9/2003	5.27E+01	3.96E+00
10/7/2003	6.49E+01	4.17E+00

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW358	Downgradient	Yes	3.23E+01	NO	3.48E+00	N/A
MW361	Downgradient	Yes	2.97E+01	NO	3.39E+00	N/A
MW364	Downgradient	Yes	3.21E+01	NO	3.47E+00	N/A
MW367	Downgradient	Yes	2.87E+01	NO	3.36E+00	N/A
MW370	Upgradient	Yes	2.95E+01	NO	3.38E+00	N/A
MW373	Upgradient	Yes	8.69E+01	YES	4.46E+00	N/A

N/A - Results identified as Non-Detects during laboratory analysis or data validation and were not included in the statistical evaluation. Additionally for parameters that have MCLs, where the result for a well did not exceed the MCL value, that well was not included in the statistical evaluation.

Conclusion of Statistical Analysis on Historical Data

The test well(s) listed exceeded the Upper Tolerance Limit, which is evidence of elevated concentration with respect to historical background data.

Wells with Exceedances

MW373

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.

S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5

TL Upper Tolerance Limit, TL = X + (K * S), LL Lower Tolerance Limit, LL = X - (K * S)

X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,Interim Guidance, EPA, 1989, based on total number of background results - The K-factor for pH to account for a two-sided tolerance interval instead of a one-sided tolerance limit. The K-factor for pH was computed using a formula from NIST/SEMATECH e-Handbook of Statistical Methods, http://www.itl.nist.gov/div898/handbook/,2009.*

C-746-U Second Quarter 2025 Statistical Analysis Historical Background Comparison

Chloride UNITS: mg/L LRGA

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	**X=** 45.919	**S=** 7.524	**CV(1)=** 0.164	**K factor**=** 2.523	**TL(1)=** 6.49E+01	**LL(1)=** N/A
Statistics-Transformed Background Data	**X=** 3.814	**S=** 0.165	**CV(2)=** 0.043	**K factor**=** 2.523	**TL(2)=** 4.23E+00	**LL(2)=** N/A

Because CV(1) is less than or equal to 1, assume normal distribution and continue with statistical analysis utilizing TL(1).

Historical Background Data from Upgradient Wells with Transformed Result

Well Number: MW370

Date Collected	Result	LN(Result)
7/15/2002	5.55E+01	4.02E+00
10/8/2002	5.36E+01	3.98E+00
1/8/2003	5.29E+01	3.97E+00
4/3/2003	5.36E+01	3.98E+00
7/9/2003	5.19E+01	3.95E+00
10/6/2003	5.30E+01	3.97E+00
1/7/2004	5.30E+01	3.97E+00
4/7/2004	5.16E+01	3.94E+00

Well Number: MW373

Date Collected	Result	LN(Result)
7/16/2002	4.06E+01	3.70E+00
10/8/2002	3.88E+01	3.66E+00
1/7/2003	3.90E+01	3.66E+00
4/2/2003	3.84E+01	3.65E+00
7/9/2003	3.81E+01	3.64E+00
10/7/2003	3.80E+01	3.64E+00
1/6/2004	3.79E+01	3.63E+00
4/7/2004	3.88E+01	3.66E+00

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW358	Downgradient	Yes	3.56E+01	NO	3.57E+00	N/A
MW361	Downgradient	Yes	3.37E+01	NO	3.52E+00	N/A
MW364	Downgradient	Yes	3.72E+01	NO	3.62E+00	N/A
MW367	Downgradient	Yes	3.59E+01	NO	3.58E+00	N/A
MW370	Upgradient	Yes	4.15E+01	NO	3.73E+00	N/A
MW373	Upgradient	Yes	3.01E+01	NO	3.40E+00	N/A

N/A - Results identified as Non-Detects during laboratory analysis or data validation and were not included in the statistical evaluation. Additionally for parameters that have MCLs, where the result for a well did not exceed the MCL value, that well was not included in the statistical evaluation.

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.

S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5

TL Upper Tolerance Limit, TL = X + (K * S), LL Lower Tolerance Limit, LL = X - (K * S)

X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,Interim Guidance, EPA, 1989, based on total number of background results - The K-factor for pH to account for a two-sided tolerance interval instead of a one-sided tolerance limit. The K-factor for pH was computed using a formula from NIST/SEMATECH e-Handbook of Statistical Methods, http://www.itl.nist.gov/div898/handbook/,2009.*

C-746-U Second Quarter 2025 Statistical Analysis Historical Background Comparison

Cobalt UNITS: mg/L LRGA

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	**X=** 0.027	**S=** 0.032	**CV(1)=** 1.165	**K factor**=** 2.523	**TL(1)=** 1.08E-01	**LL(1)=**N/A
Statistics-Transformed Background Data	**X=** -4.058	**S=** 1.011	**CV(2)=** -0.249	**K factor**=** 2.523	**TL(2)=** -1.51E+00	**LL(2)=**N/A

Because CV(1) is greater than 1, the natural logarithm of background and test well results were calculated utilizing TL(2) for comparison.

Historical Background Data from Upgradient Wells with Transformed Result

Well Number: MW370

Date Collected	Result	LN(Result)
3/17/2002	2.50E-02	-3.69E+00
4/23/2002	2.50E-02	-3.69E+00
7/15/2002	2.50E-02	-3.69E+00
10/8/2002	1.74E-02	-4.05E+00
1/8/2003	1.05E-02	-4.56E+00
4/3/2003	9.31E-03	-4.68E+00
7/9/2003	1.37E-01	-1.99E+00
10/6/2003	4.63E-02	-3.07E+00

Well Number: MW373

Date Collected	Result	LN(Result)
3/18/2002	2.50E-02	-3.69E+00
4/23/2002	3.40E-02	-3.38E+00
7/16/2002	2.50E-02	-3.69E+00
10/8/2002	4.11E-03	-5.49E+00
1/7/2003	3.44E-03	-5.67E+00
4/2/2003	3.68E-03	-5.60E+00
7/9/2003	4.05E-02	-3.21E+00
10/7/2003	8.43E-03	-4.78E+00

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW358	Downgradient	Yes	8.64E-04	N/A	-7.05E+00	NO
MW361	Downgradient	No	1.00E-03	N/A	-6.91E+00	N/A
MW364	Downgradient	No	1.00E-03	N/A	-6.91E+00	N/A
MW367	Downgradient	Yes	4.74E-04	N/A	-7.65E+00	NO
MW370	Upgradient	No	1.00E-03	N/A	-6.91E+00	N/A
MW373	Upgradient	No	1.00E-03	N/A	-6.91E+00	N/A

N/A - Results identified as Non-Detects during laboratory analysis or data validation and were not included in the statistical evaluation. Additionally for parameters that have MCLs, where the result for a well did not exceed the MCL value, that well was not included in the statistical evaluation.

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.

S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5

TL Upper Tolerance Limit, TL = X + (K * S), LL Lower Tolerance Limit, LL = X - (K * S)

X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,Interim Guidance, EPA, 1989, based on total number of background results - The K-factor for pH to account for a two-sided tolerance interval instead of a one-sided tolerance limit. The K-factor for pH was computed using a formula from NIST/SEMATECH e-Handbook of Statistical Methods, http://www.itl.nist.gov/div898/handbook/,2009.*

C-746-U Second Quarter 2025 Statistical Analysis Historical Background Comparison

Conductivity UNITS: umho/cm LRGA

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	**X=** 608.719	**S=** 156.157	**CV(1)=** 0.257	**K factor**=** 2.523	**TL(1)=** 1.00E+03	**LL(1)=** N/A
Statistics-Transformed Background Data	**X=** 6.380	**S=** 0.260	**CV(2)=** 0.041	**K factor**=** 2.523	**TL(2)=** 7.04E+00	**LL(2)=** N/A

Because CV(1) is less than or equal to 1, assume normal distribution and continue with statistical analysis utilizing TL(1).

Historical Background Data from Upgradient Wells with Transformed Result

Well Number: MW370

Date Collected	Result	LN(Result)
3/17/2002	4.06E+02	6.01E+00
4/23/2002	5.43E+02	6.30E+00
7/15/2002	4.76E+02	6.17E+00
10/8/2002	4.41E+02	6.09E+00
1/8/2003	4.86E+02	6.19E+00
4/3/2003	4.66E+02	6.14E+00
7/9/2003	4.79E+02	6.17E+00
10/6/2003	4.35E+02	6.08E+00

Well Number: MW373

Date Collected	Result	LN(Result)
3/18/2002	6.61E+02	6.49E+00
4/23/2002	8.01E+02	6.69E+00
7/16/2002	7.74E+02	6.65E+00
10/8/2002	6.80E+02	6.52E+00
1/7/2003	6.87E+02	6.53E+00
4/2/2003	7.63E+02	6.64E+00
7/9/2003	8.28E+02	6.72E+00
10/7/2003	8.14E+02	6.70E+00

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW358	Downgradient	Yes	4.40E+02	NO	6.09E+00	N/A
MW361	Downgradient	Yes	4.29E+02	NO	6.06E+00	N/A
MW364	Downgradient	Yes	4.59E+02	NO	6.13E+00	N/A
MW367	Downgradient	Yes	4.90E+02	NO	6.19E+00	N/A
MW370	Upgradient	Yes	4.49E+02	NO	6.11E+00	N/A
MW373	Upgradient	Yes	1.00E+03	YES	6.91E+00	N/A

N/A - Results identified as Non-Detects during laboratory analysis or data validation and were not included in the statistical evaluation. Additionally for parameters that have MCLs, where the result for a well did not exceed the MCL value, that well was not included in the statistical evaluation.

Conclusion of Statistical Analysis on Historical Data

The test well(s) listed exceeded the Upper Tolerance Limit, which is evidence of elevated concentration with respect to historical background data.

Wells with Exceedances

MW373

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.

S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5

TL Upper Tolerance Limit, TL = X + (K * S), LL Lower Tolerance Limit, LL = X - (K * S)

X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,Interim Guidance, EPA, 1989, based on total number of background results - The K-factor for pH to account for a two-sided tolerance interval instead of a one-sided tolerance limit. The K-factor for pH was computed using a formula from NIST/SEMATECH e-Handbook of Statistical Methods, http://www.itl.nist.gov/div898/handbook/,2009.*

C-746-U Second Quarter 2025 Statistical Analysis Historical Background Comparison

Copper UNITS: mg/L LRGA

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	**X=** 0.025	**S=** 0.010	**CV(1)=** 0.399	**K factor**=** 2.523	**TL(1)=** 5.03E-02	**LL(1)=** N/A
Statistics-Transformed Background Data	**X=** -3.739	**S=** 0.308	**CV(2)=** -0.082	**K factor**=** 2.523	**TL(2)=** -2.96E+00	**LL(2)=** N/A

Because CV(1) is less than or equal to 1, assume normal distribution and continue with statistical analysis utilizing TL(1).

Historical Background Data from Upgradient Wells with Transformed Result

Well Number: MW370

Date Collected	Result	LN(Result)
3/17/2002	2.50E-02	-3.69E+00
4/23/2002	2.50E-02	-3.69E+00
7/15/2002	5.00E-02	-3.00E+00
10/8/2002	2.00E-02	-3.91E+00
1/8/2003	2.00E-02	-3.91E+00
4/3/2003	2.00E-02	-3.91E+00
7/9/2003	2.00E-02	-3.91E+00
10/6/2003	2.00E-02	-3.91E+00

Well Number: MW373

Date Collected	Result	LN(Result)
3/18/2002	2.60E-02	-3.65E+00
4/23/2002	2.50E-02	-3.69E+00
7/16/2002	5.00E-02	-3.00E+00
10/8/2002	2.00E-02	-3.91E+00
1/7/2003	2.00E-02	-3.91E+00
4/2/2003	2.00E-02	-3.91E+00
7/9/2003	2.00E-02	-3.91E+00
10/7/2003	2.00E-02	-3.91E+00

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW358	Downgradient	Yes	7.54E-04	NO	-7.19E+00	N/A
MW361	Downgradient	Yes	1.50E-02	NO	-4.20E+00	N/A
MW364	Downgradient	Yes	8.44E-04	NO	-7.08E+00	N/A
MW367	Downgradient	Yes	1.05E-03	NO	-6.86E+00	N/A
MW370	Upgradient	Yes	8.50E-04	NO	-7.07E+00	N/A
MW373	Upgradient	Yes	7.67E-04	NO	-7.17E+00	N/A

N/A - Results identified as Non-Detects during laboratory analysis or data validation and were not included in the statistical evaluation. Additionally for parameters that have MCLs, where the result for a well did not exceed the MCL value, that well was not included in the statistical evaluation.

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.

S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5

TL Upper Tolerance Limit, TL = X + (K * S), LL Lower Tolerance Limit, LL = X - (K * S)

X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,Interim Guidance, EPA, 1989, based on total number of background results - The K-factor for pH to account for a two-sided tolerance interval instead of a one-sided tolerance limit. The K-factor for pH was computed using a formula from NIST/SEMATECH e-Handbook of Statistical Methods, http://www.itl.nist.gov/div898/handbook/,2009.*

C-746-U Second Quarter 2025 Statistical Analysis Historical Background Comparison

Cyanide UNITS: mg/L LRGA

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	**X=** 0.020	**S=** 0.000	**CV(1)=** 0.000	**K factor**=** 2.523	**TL(1)=** 2.00E-02	**LL(1)=** N/A
Statistics-Transformed Background Data	**X=** -3.912	**S=** 0.000	**CV(2)=** 0.000	**K factor**=** 2.523	**TL(2)=** -3.91E+00	**LL(2)=** N/A

Historical Background Data from Upgradient Wells with Transformed Result

Because CV(1) is less than or equal to 1, assume normal distribution and continue with statistical analysis utilizing TL(1).

Well Number: MW370

Date Collected	Result	LN(Result)
3/17/2002	2.00E-02	-3.91E+00
4/23/2002	2.00E-02	-3.91E+00
7/15/2002	2.00E-02	-3.91E+00
10/8/2002	2.00E-02	-3.91E+00
4/3/2003	2.00E-02	-3.91E+00
7/9/2003	2.00E-02	-3.91E+00
10/6/2003	2.00E-02	-3.91E+00
1/7/2004	2.00E-02	-3.91E+00

Well Number: MW373

Date Collected	Result	LN(Result)
3/18/2002	2.00E-02	-3.91E+00
4/23/2002	2.00E-02	-3.91E+00
7/16/2002	2.00E-02	-3.91E+00
10/8/2002	2.00E-02	-3.91E+00
4/2/2003	2.00E-02	-3.91E+00
7/9/2003	2.00E-02	-3.91E+00
10/7/2003	2.00E-02	-3.91E+00
1/6/2004	2.00E-02	-3.91E+00

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW358	Downgradient	Yes	5.59E-02	YES	-2.88E+00	N/A
MW361	Downgradient	Yes	6.66E-03	NO	-5.01E+00	N/A
MW364	Downgradient	No	2.00E-01	N/A	-1.61E+00	N/A
MW367	Downgradient	No	2.00E-01	N/A	-1.61E+00	N/A
MW370	Upgradient	No	2.00E-01	N/A	-1.61E+00	N/A
MW373	Upgradient	Yes	7.96E-03	NO	-4.83E+00	N/A

N/A - Results identified as Non-Detects during laboratory analysis or data validation and were not included in the statistical evaluation. Additionally for parameters that have MCLs, where the result for a well did not exceed the MCL value, that well was not included in the statistical evaluation.

Conclusion of Statistical Analysis on Historical Data

The test well(s) listed exceeded the Upper Tolerance Limit, which is evidence of elevated concentration with respect to historical background data.

Wells with Exceedances

MW358

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.

S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5

TL Upper Tolerance Limit, TL = X + (K * S), LL Lower Tolerance Limit, LL = X - (K * S)

X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,Interim Guidance, EPA, 1989, based on total number of background results - The K-factor for pH to account for a two-sided tolerance interval instead of a one-sided tolerance limit. The K-factor for pH was computed using a formula from NIST/SEMATECH e-Handbook of Statistical Methods, http://www.itl.nist.gov/div898/handbook/,2009.*

C-746-U Second Quarter 2025 Statistical Analysis Historical Background Comparison

Dissolved Oxygen UNITS: mg/L LRGA

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	**X=** 1.387	**S=** 1.153	**CV(1)=** 0.831	**K factor**=** 2.523	**TL(1)=** 4.30E+00	**LL(1)=** N/A
Statistics-Transformed Background Data	**X=** -0.115	**S=** 1.207	**CV(2)=** -10.514	**K factor**=** 2.523	**TL(2)=** 2.93E+00	**LL(2)=** N/A

Because CV(1) is less than or equal to 1, assume normal distribution and continue with statistical analysis utilizing TL(1).

Historical Background Data from Upgradient Wells with Transformed Result

Well Number: MW370

Date Collected	Result	LN(Result)
3/17/2002	4.32E+00	1.46E+00
4/23/2002	1.24E+00	2.15E-01
7/15/2002	7.50E-01	-2.88E-01
10/8/2002	9.40E-01	-6.19E-02
1/8/2003	3.08E+00	1.12E+00
4/3/2003	1.45E+00	3.72E-01
7/9/2003	1.22E+00	1.99E-01
10/6/2003	1.07E+00	6.77E-02

Well Number: MW373

Date Collected	Result	LN(Result)
3/18/2002	3.04E+00	1.11E+00
4/23/2002	3.00E-02	-3.51E+00
7/16/2002	2.30E-01	-1.47E+00
10/8/2002	8.60E-01	-1.51E-01
1/7/2003	2.10E-01	-1.56E+00
4/2/2003	1.19E+00	1.74E-01
7/9/2003	1.10E+00	9.53E-02
10/7/2003	1.46E+00	3.78E-01

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW358	Downgradient	Yes	3.50E+00	NO	1.25E+00	N/A
MW361	Downgradient	Yes	4.25E+00	NO	1.45E+00	N/A
MW364	Downgradient	Yes	3.91E+00	NO	1.36E+00	N/A
MW367	Downgradient	Yes	3.05E+00	NO	1.12E+00	N/A
MW370	Upgradient	Yes	4.54E+00	YES	1.51E+00	N/A
MW373	Upgradient	Yes	2.90E+00	NO	1.06E+00	N/A

N/A - Results identified as Non-Detects during laboratory analysis or data validation and were not included in the statistical evaluation. Additionally for parameters that have MCLs, where the result for a well did not exceed the MCL value, that well was not included in the statistical evaluation.

Conclusion of Statistical Analysis on Historical Data

The test well(s) listed exceeded the Upper Tolerance Limit, which is evidence of elevated concentration with respect to historical background data.

Wells with Exceedances

MW370

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.

S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5

TL Upper Tolerance Limit, TL = X + (K * S), LL Lower Tolerance Limit, LL = X - (K * S)

X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,Interim Guidance, EPA, 1989, based on total number of background results - The K-factor for pH to account for a two-sided tolerance interval instead of a one-sided tolerance limit. The K-factor for pH was computed using a formula from NIST/SEMATECH e-Handbook of Statistical Methods, http://www.itl.nist.gov/div898/handbook/,2009.*

C-746-U Second Quarter 2025 Statistical Analysis Historical Background Comparison

Dissolved Solids UNITS: mg/L LRGA

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	**X=** 356.188	**S=** 106.752	**CV(1)=** 0.300	**K factor**=** 2.523	**TL(1)=** 6.26E+02	**LL(1)=** N/A
Statistics-Transformed Background Data	**X=** 5.831	**S=** 0.311	**CV(2)=** 0.053	**K factor**=** 2.523	**TL(2)=** 6.62E+00	**LL(2)=** N/A

Because CV(1) is less than or equal to 1, assume normal distribution and continue with statistical analysis utilizing TL(1).

Historical Background Data from Upgradient Wells with Transformed Result

Well Number: MW370

Date Collected	Result	LN(Result)
3/17/2002	2.36E+02	5.46E+00
4/23/2002	3.37E+02	5.82E+00
7/15/2002	2.66E+02	5.58E+00
10/8/2002	2.40E+02	5.48E+00
1/8/2003	2.82E+02	5.64E+00
4/3/2003	2.38E+02	5.47E+00
7/9/2003	2.48E+02	5.51E+00
10/6/2003	2.24E+02	5.41E+00

Well Number: MW373

Date Collected	Result	LN(Result)
3/18/2002	4.27E+02	6.06E+00
4/23/2002	5.07E+02	6.23E+00
7/16/2002	4.64E+02	6.14E+00
10/8/2002	4.08E+02	6.01E+00
1/7/2003	4.04E+02	6.00E+00
4/2/2003	4.50E+02	6.11E+00
7/9/2003	4.87E+02	6.19E+00
10/7/2003	4.81E+02	6.18E+00

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW358	Downgradient	Yes	2.36E+02	NO	5.46E+00	N/A
MW361	Downgradient	Yes	2.20E+02	NO	5.39E+00	N/A
MW364	Downgradient	Yes	2.48E+02	NO	5.51E+00	N/A
MW367	Downgradient	Yes	2.30E+02	NO	5.44E+00	N/A
MW370	Upgradient	Yes	2.26E+02	NO	5.42E+00	N/A
MW373	Upgradient	Yes	6.35E+02	YES	6.45E+00	N/A

N/A - Results identified as Non-Detects during laboratory analysis or data validation and were not included in the statistical evaluation. Additionally for parameters that have MCLs, where the result for a well did not exceed the MCL value, that well was not included in the statistical evaluation.

Conclusion of Statistical Analysis on Historical Data

The test well(s) listed exceeded the Upper Tolerance Limit, which is evidence of elevated concentration with respect to historical background data.

Wells with Exceedances

MW373

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.

S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5

TL Upper Tolerance Limit, TL = X + (K * S), LL Lower Tolerance Limit, LL = X - (K * S)

X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,Interim Guidance, EPA, 1989, based on total number of background results - The K-factor for pH to account for a two-sided tolerance interval instead of a one-sided tolerance limit. The K-factor for pH was computed using a formula from NIST/SEMATECH e-Handbook of Statistical Methods, http://www.itl.nist.gov/div898/handbook/,2009.*

C-746-U Second Quarter 2025 Statistical Analysis Historical Background Comparison

Iron **UNITS: mg/L** **LRGA**

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	**X=** 9.230	**S=** 8.841	**CV(1)=** 0.958	**K factor**=** 2.523	**TL(1)=** 3.15E+01	**LL(1)=** N/A
Statistics-Transformed Background Data	**X=** 1.942	**S=** 0.713	**CV(2)=** 0.367	**K factor**=** 2.523	**TL(2)=** 3.74E+00	**LL(2)=** N/A

Because CV(1) is less than or equal to 1, assume normal distribution and continue with statistical analysis utilizing TL(1).

Historical Background Data from Upgradient Wells with Transformed Result

Well Number: MW370

Date Collected	Result	LN(Result)
3/17/2002	9.34E+00	2.23E+00
4/23/2002	4.33E+00	1.47E+00
7/15/2002	3.52E+00	1.26E+00
10/8/2002	7.45E+00	2.01E+00
1/8/2003	7.04E+00	1.95E+00
4/3/2003	4.64E+00	1.53E+00
7/9/2003	1.58E+01	2.76E+00
10/6/2003	6.49E+00	1.87E+00

Well Number: MW373

Date Collected	Result	LN(Result)
3/18/2002	3.76E+01	3.63E+00
4/23/2002	1.90E+01	2.94E+00
7/16/2002	1.07E+01	2.37E+00
10/8/2002	3.75E+00	1.32E+00
1/7/2003	3.87E+00	1.35E+00
4/2/2003	3.50E+00	1.25E+00
7/9/2003	7.72E+00	2.04E+00
10/7/2003	2.93E+00	1.08E+00

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW358	Downgradient	Yes	4.00E-01	NO	-9.16E-01	N/A
MW361	Downgradient	Yes	6.79E-02	NO	-2.69E+00	N/A
MW364	Downgradient	No	1.00E-01	N/A	-2.30E+00	N/A
MW367	Downgradient	Yes	2.61E-01	NO	-1.34E+00	N/A
MW370	Upgradient	No	1.00E-01	N/A	-2.30E+00	N/A
MW373	Upgradient	Yes	4.82E-02	NO	-3.03E+00	N/A

N/A - Results identified as Non-Detects during laboratory analysis or data validation and were not included in the statistical evaluation. Additionally for parameters that have MCLs, where the result for a well did not exceed the MCL value, that well was not included in the statistical evaluation.

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.

S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5

TL Upper Tolerance Limit, TL = X + (K * S), LL Lower Tolerance Limit, LL = X - (K * S)

X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,Interim Guidance, EPA, 1989, based on total number of background results - The K-factor for pH to account for a two-sided tolerance interval instead of a one-sided tolerance limit. The K-factor for pH was computed using a formula from NIST/SEMATECH e-Handbook of Statistical Methods, http://www.itl.nist.gov/div898/handbook/,2009.*

C-746-U Second Quarter 2025 Statistical Analysis Historical Background Comparison

Magnesium UNITS: mg/L LRGA

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	**X=** 17.544	**S=** 5.911	**CV(1)=** 0.337	**K factor**=** 2.523	**TL(1)=** 3.25E+01	**LL(1)=** N/A
Statistics-Transformed Background Data	**X=** 2.810	**S=** 0.343	**CV(2)=** 0.122	**K factor**=** 2.523	**TL(2)=** 3.68E+00	**LL(2)=** N/A

Because CV(1) is less than or equal to 1, assume normal distribution and continue with statistical analysis utilizing TL(1).

Historical Background Data from Upgradient Wells with Transformed Result

Well Number: MW370

Date Collected	Result	LN(Result)
3/17/2002	1.21E+01	2.49E+00
4/23/2002	1.51E+01	2.71E+00
7/15/2002	1.24E+01	2.52E+00
10/8/2002	1.22E+01	2.50E+00
1/8/2003	1.15E+01	2.44E+00
4/3/2003	1.23E+01	2.51E+00
7/9/2003	1.00E+01	2.30E+00
10/6/2003	1.21E+01	2.49E+00

Well Number: MW373

Date Collected	Result	LN(Result)
3/18/2002	2.48E+01	3.21E+00
4/23/2002	2.27E+01	3.12E+00
7/16/2002	1.88E+01	2.93E+00
10/8/2002	2.11E+01	3.05E+00
1/7/2003	1.99E+01	2.99E+00
4/2/2003	2.55E+01	3.24E+00
7/9/2003	2.33E+01	3.15E+00
10/7/2003	2.69E+01	3.29E+00

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW358	Downgradient	Yes	1.41E+01	NO	2.65E+00	N/A
MW361	Downgradient	Yes	1.27E+01	NO	2.54E+00	N/A
MW364	Downgradient	Yes	1.37E+01	NO	2.62E+00	N/A
MW367	Downgradient	Yes	1.28E+01	NO	2.55E+00	N/A
MW370	Upgradient	Yes	1.24E+01	NO	2.52E+00	N/A
MW373	Upgradient	Yes	3.16E+01	NO	3.45E+00	N/A

N/A - Results identified as Non-Detects during laboratory analysis or data validation and were not included in the statistical evaluation. Additionally for parameters that have MCLs, where the result for a well did not exceed the MCL value, that well was not included in the statistical evaluation.

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.

S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5

TL Upper Tolerance Limit, TL = X + (K * S), LL Lower Tolerance Limit, LL = X - (K * S)

X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,Interim Guidance, EPA, 1989, based on total number of background results - The K-factor for pH to account for a two-sided tolerance interval instead of a one-sided tolerance limit. The K-factor for pH was computed using a formula from NIST/SEMATECH e-Handbook of Statistical Methods, http://www.itl.nist.gov/div898/handbook/,2009.*

C-746-U Second Quarter 2025 Statistical Analysis Historical Background Comparison

Manganese UNITS: mg/L LRGA

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	**X=** 1.080	**S=** 0.674	**CV(1)=** 0.624	**K factor**=** 2.523	**TL(1)=** 2.78E+00	**LL(1)=** N/A
Statistics-Transformed Background Data	**X=** -0.114	**S=** 0.658	**CV(2)=** -5.762	**K factor**=** 2.523	**TL(2)=** 1.55E+00	**LL(2)=** N/A

Because CV(1) is less than or equal to 1, assume normal distribution and continue with statistical analysis utilizing TL(1).

Historical Background Data from Upgradient Wells with Transformed Result

Well Number: MW370

Date Collected	Result	LN(Result)
3/17/2002	2.44E-01	-1.41E+00
4/23/2002	1.82E+00	5.99E-01
7/15/2002	1.22E+00	1.99E-01
10/8/2002	9.88E-01	-1.21E-02
1/8/2003	7.29E-01	-3.16E-01
4/3/2003	6.37E-01	-4.51E-01
7/9/2003	2.51E+00	9.20E-01
10/6/2003	1.05E+00	4.88E-02

Well Number: MW373

Date Collected	Result	LN(Result)
3/18/2002	3.55E-01	-1.04E+00
4/23/2002	2.16E+00	7.70E-01
7/16/2002	1.39E+00	3.29E-01
10/8/2002	7.17E-01	-3.33E-01
1/7/2003	5.87E-01	-5.33E-01
4/2/2003	5.45E-01	-6.07E-01
7/9/2003	1.76E+00	5.65E-01
10/7/2003	5.70E-01	-5.62E-01

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW358	Downgradient	Yes	8.81E-02	NO	-2.43E+00	N/A
MW361	Downgradient	Yes	2.12E-02	NO	-3.85E+00	N/A
MW364	Downgradient	Yes	2.98E-03	NO	-5.82E+00	N/A
MW367	Downgradient	Yes	2.25E-01	NO	-1.49E+00	N/A
MW370	Upgradient	Yes	3.73E-03	NO	-5.59E+00	N/A
MW373	Upgradient	Yes	2.11E-02	NO	-3.86E+00	N/A

N/A - Results identified as Non-Detects during laboratory analysis or data validation and were not included in the statistical evaluation. Additionally for parameters that have MCLs, where the result for a well did not exceed the MCL value, that well was not included in the statistical evaluation.

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.

S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5

TL Upper Tolerance Limit, TL = X + (K * S), LL Lower Tolerance Limit, LL = X - (K * S)

X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,Interim Guidance, EPA, 1989, based on total number of background results - The K-factor for pH to account for a two-sided tolerance interval instead of a one-sided tolerance limit. The K-factor for pH was computed using a formula from NIST/SEMATECH e-Handbook of Statistical Methods, http://www.itl.nist.gov/div898/handbook/,2009.*

C-746-U Second Quarter 2025 Statistical Analysis Historical Background Comparison

Methylene chloride UNITS: ug/L LRGA

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	**X=** 5.375	**S=** 2.156	**CV(1)=** 0.401	**K factor**=** 2.523	**TL(1)=** 1.08E+01	**LL(1)=** N/A
Statistics-Transformed Background Data	**X=** 1.603	**S=** 0.428	**CV(2)=** 0.267	**K factor**=** 2.523	**TL(2)=** 2.68E+00	**LL(2)=** N/A

Because CV(1) is less than or equal to 1, assume normal distribution and continue with statistical analysis utilizing TL(1).

Historical Background Data from Upgradient Wells with Transformed Result

Well Number: MW370

Date Collected	Result	LN(Result)
3/17/2002	2.00E+00	6.93E-01
4/23/2002	5.00E+00	1.61E+00
7/15/2002	1.00E+01	2.30E+00
10/8/2002	5.00E+00	1.61E+00
1/8/2003	5.00E+00	1.61E+00
4/3/2003	5.00E+00	1.61E+00
7/9/2003	5.00E+00	1.61E+00
10/6/2003	5.00E+00	1.61E+00

Well Number: MW373

Date Collected	Result	LN(Result)
3/18/2002	2.00E+00	6.93E-01
4/23/2002	7.00E+00	1.95E+00
7/16/2002	1.00E+01	2.30E+00
10/8/2002	5.00E+00	1.61E+00
1/7/2003	5.00E+00	1.61E+00
4/2/2003	5.00E+00	1.61E+00
7/9/2003	5.00E+00	1.61E+00
10/7/2003	5.00E+00	1.61E+00

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW358	Downgradient	No	5.00E+00	N/A	1.61E+00	N/A
MW361	Downgradient	No	5.00E+00	N/A	1.61E+00	N/A
MW364	Downgradient	No	5.00E+00	N/A	1.61E+00	N/A
MW367	Downgradient	No	5.00E+00	N/A	1.61E+00	N/A
MW370	Upgradient	Yes	6.60E-01	NO	-4.16E-01	N/A
MW373	Upgradient	Yes	7.60E-01	NO	-2.74E-01	N/A

N/A - Results identified as Non-Detects during laboratory analysis or data validation and were not included in the statistical evaluation. Additionally for parameters that have MCLs, where the result for a well did not exceed the MCL value, that well was not included in the statistical evaluation.

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.

S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5

TL Upper Tolerance Limit, TL = X + (K * S), LL Lower Tolerance Limit, LL = X - (K * S)

X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,Interim Guidance, EPA, 1989, based on total number of background results - The K-factor for pH to account for a two-sided tolerance interval instead of a one-sided tolerance limit. The K-factor for pH was computed using a formula from NIST/SEMATECH e-Handbook of Statistical Methods, http://www.itl.nist.gov/div898/handbook/,2009.*

C-746-U Second Quarter 2025 Statistical Analysis Historical Background Comparison

Nickel UNITS: mg/L LRGA

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	**X=** 0.024	**S=** 0.022	**CV(1)=** 0.901	**K factor**=** 2.523	**TL(1)=** 7.82E-02	**LL(1)=** N/A
Statistics-Transformed Background Data	**X=** -4.239	**S=** 1.087	**CV(2)=** -0.256	**K factor**=** 2.523	**TL(2)=** -1.50E+00	**LL(2)=** N/A

Because CV(1) is less than or equal to 1, assume normal distribution and continue with statistical analysis utilizing TL(1).

Historical Background Data from Upgradient Wells with Transformed Result

Well Number: MW370

Date Collected	Result	LN(Result)
3/17/2002	5.00E-02	-3.00E+00
4/23/2002	5.00E-02	-3.00E+00
7/15/2002	5.00E-02	-3.00E+00
10/8/2002	5.00E-03	-5.30E+00
1/8/2003	5.00E-03	-5.30E+00
4/3/2003	5.00E-03	-5.30E+00
7/9/2003	2.64E-02	-3.63E+00
10/6/2003	9.71E-03	-4.63E+00

Well Number: MW373

Date Collected	Result	LN(Result)
3/18/2002	5.00E-02	-3.00E+00
4/23/2002	5.00E-02	-3.00E+00
7/16/2002	5.00E-02	-3.00E+00
10/8/2002	5.00E-03	-5.30E+00
1/7/2003	5.00E-03	-5.30E+00
4/2/2003	5.00E-03	-5.30E+00
7/9/2003	1.12E-02	-4.49E+00
10/7/2003	5.00E-03	-5.30E+00

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW358	Downgradient	Yes	3.45E-03	NO	-5.67E+00	N/A
MW361	Downgradient	No	2.00E-03	N/A	-6.21E+00	N/A
MW364	Downgradient	No	2.00E-03	N/A	-6.21E+00	N/A
MW367	Downgradient	Yes	9.67E-04	NO	-6.94E+00	N/A
MW370	Upgradient	No	2.00E-03	N/A	-6.21E+00	N/A
MW373	Upgradient	Yes	8.19E-04	NO	-7.11E+00	N/A

N/A - Results identified as Non-Detects during laboratory analysis or data validation and were not included in the statistical evaluation. Additionally for parameters that have MCLs, where the result for a well did not exceed the MCL value, that well was not included in the statistical evaluation.

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.

S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5

TL Upper Tolerance Limit, TL = X + (K * S), LL Lower Tolerance Limit, LL = X - (K * S)

X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,Interim Guidance, EPA, 1989, based on total number of background results - The K-factor for pH to account for a two-sided tolerance interval instead of a one-sided tolerance limit. The K-factor for pH was computed using a formula from NIST/SEMATECH e-Handbook of Statistical Methods, http://www.itl.nist.gov/div898/handbook/,2009.*

C-746-U Second Quarter 2025 Statistical Analysis Historical Background Comparison
Oxidation-Reduction Potential UNITS: mV LRGA

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	**X=** 46.688	**S=** 60.986	**CV(1)=** 1.306	**K factor**=** 2.523	**TL(1)=** 2.01E+02	**LL(1)=**N/A
Statistics-Transformed Background Data	**X=** 3.829	**S=** 1.151	**CV(2)=** 0.301	**K factor**=** 2.523	**TL(2)=** 4.94E+00	**LL(2)=**N/A

Historical Background Data from Upgradient Wells with Transformed Result

Well Number: MW370

Date Collected	Result	LN(Result)
3/17/2002	1.40E+02	4.94E+00
4/23/2002	-1.50E+01	#Func!
7/15/2002	5.00E+00	1.61E+00
4/3/2003	4.90E+01	3.89E+00
7/9/2003	-3.50E+01	#Func!
10/6/2003	4.00E+01	3.69E+00
1/7/2004	1.01E+02	4.62E+00
4/7/2004	1.05E+02	4.65E+00

Well Number: MW373

Date Collected	Result	LN(Result)
3/18/2002	1.40E+02	4.94E+00
4/23/2002	-2.00E+01	#Func!
10/8/2002	1.00E+01	2.30E+00
1/7/2003	1.00E+01	2.30E+00
4/2/2003	6.70E+01	4.20E+00
7/9/2003	-2.90E+01	#Func!
10/7/2003	1.27E+02	4.84E+00
1/6/2004	5.20E+01	3.95E+00

Because CV(1) is greater than 1, the natural logarithm of background and test well results were calculated utilizing TL(2) for comparison.

#Because the natural log was not possible for all background values, the TL was considered equal to the maximum background value.

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW358	Downgradient	Yes	1.75E+02	N/A	5.16E+00	YES
MW361	Downgradient	Yes	5.07E+02	N/A	6.23E+00	YES
MW364	Downgradient	Yes	4.99E+02	N/A	6.21E+00	YES
MW367	Downgradient	Yes	4.18E+02	N/A	6.04E+00	YES
MW370	Upgradient	Yes	4.04E+02	N/A	6.00E+00	YES
MW373	Upgradient	Yes	4.14E+02	N/A	6.03E+00	YES

N/A - Results identified as Non-Detects during laboratory analysis or data validation and were not included in the statistical evaluation. Additionally for parameters that have MCLs, where the result for a well did not exceed the MCL value, that well was not included in the statistical evaluation.

Conclusion of Statistical Analysis on Historical Data

The test well(s) listed exceeded the Upper Tolerance Limit, which is evidence of elevated concentration with respect to historical background data.

Wells with Exceedances

MW358
MW361
MW364
MW367
MW370
MW373

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.

S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5

TL Upper Tolerance Limit, TL = X + (K * S), LL Lower Tolerance Limit, LL = X - (K * S)

X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,Interim Guidance, EPA, 1989, based on total number of background results - The K-factor for pH to account for a two-sided tolerance interval instead of a one-sided tolerance limit. The K-factor for pH was computed using a formula from NIST/SEMATECH e-Handbook of Statistical Methods, http://www.itl.nist.gov/div898/handbook/,2009.*

C-746-U Second Quarter 2025 Statistical Analysis Historical Background Comparison

PCB, Total UNITS: ug/L LRGA

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	**X=** 0.280	**S=** 0.281	**CV(1)=** 1.005	**K factor**=** 2.523	**TL(1)=** 9.89E-01	**LL(1)=**N/A
Statistics-Transformed Background Data	**X=** -1.516	**S=** 0.593	**CV(2)=** -0.391	**K factor**=** 2.523	**TL(2)=** -2.01E-02	**LL(2)=**N/A

Because CV(1) is greater than 1, the natural logarithm of background and test well results were calculated utilizing TL(2) for comparison.

Historical Background Data from Upgradient Wells with Transformed Result

Well Number: MW370

Date Collected	Result	LN(Result)
3/17/2002	1.00E+00	0.00E+00
4/23/2002	1.70E-01	-1.77E+00
7/15/2002	1.70E-01	-1.77E+00
7/9/2003	1.70E-01	-1.77E+00
10/6/2003	1.88E-01	-1.67E+00
7/13/2004	1.80E-01	-1.71E+00
7/20/2005	1.80E-01	-1.71E+00
4/5/2006	1.80E-01	-1.71E+00

Well Number: MW373

Date Collected	Result	LN(Result)
3/18/2002	1.00E+00	0.00E+00
4/23/2002	1.70E-01	-1.77E+00
7/16/2002	1.70E-01	-1.77E+00
7/9/2003	1.90E-01	-1.66E+00
10/7/2003	1.70E-01	-1.77E+00
7/14/2004	1.80E-01	-1.71E+00
7/26/2005	1.80E-01	-1.71E+00
4/5/2006	1.80E-01	-1.71E+00

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW358	Downgradient	No	1.02E-01	N/A	-2.28E+00	N/A
MW361	Downgradient	Yes	4.11E-02	N/A	-3.19E+00	NO
MW364	Downgradient	No	1.00E-01	N/A	-2.30E+00	N/A
MW367	Downgradient	No	1.04E-01	N/A	-2.26E+00	N/A
MW370	Upgradient	No	9.71E-02	N/A	-2.33E+00	N/A
MW373	Upgradient	No	1.00E-01	N/A	-2.30E+00	N/A

N/A - Results identified as Non-Detects during laboratory analysis or data validation and were not included in the statistical evaluation. Additionally for parameters that have MCLs, where the result for a well did not exceed the MCL value, that well was not included in the statistical evaluation.

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.

S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5

TL Upper Tolerance Limit, TL = X + (K * S), LL Lower Tolerance Limit, LL = X - (K * S)

X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,Interim Guidance, EPA, 1989, based on total number of background results - The K-factor for pH to account for a two-sided tolerance interval instead of a one-sided tolerance limit. The K-factor for pH was computed using a formula from NIST/SEMATECH e-Handbook of Statistical Methods, http://www.itl.nist.gov/div898/handbook/,2009.*

C-746-U Second Quarter 2025 Statistical Analysis Historical Background Comparison

PCB-1254 UNITS: ug/L LRGA

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	**X=** 0.218	**S=** 0.307	**CV(1)=** 1.414	**K factor**=** 2.523	**TL(1)=** 9.93E-01	**LL(1)=**N/A
Statistics-Transformed Background Data	**X=** -2.017	**S=** 0.852	**CV(2)=** -0.423	**K factor**=** 2.523	**TL(2)=** 1.34E-01	**LL(2)=**N/A

Because CV(1) is greater than 1, the natural logarithm of background and test well results were calculated utilizing TL(2) for comparison.

Historical Background Data from Upgradient Wells with Transformed Result

Well Number: MW370

Date Collected	Result	LN(Result)
3/17/2002	1.00E+00	0.00E+00
4/23/2002	1.30E-01	-2.04E+00
7/15/2002	1.30E-01	-2.04E+00
7/9/2003	1.70E-01	-1.77E+00
10/6/2003	1.00E-01	-2.30E+00
7/13/2004	7.00E-02	-2.66E+00
7/20/2005	7.00E-02	-2.66E+00
4/5/2006	7.00E-02	-2.66E+00

Well Number: MW373

Date Collected	Result	LN(Result)
3/18/2002	1.00E+00	0.00E+00
4/23/2002	1.30E-01	-2.04E+00
7/16/2002	1.30E-01	-2.04E+00
7/9/2003	1.70E-01	-1.77E+00
10/7/2003	1.00E-01	-2.30E+00
7/14/2004	7.00E-02	-2.66E+00
7/26/2005	7.00E-02	-2.66E+00
4/5/2006	7.00E-02	-2.66E+00

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW358	Downgradient	No	1.02E-01	N/A	-2.28E+00	N/A
MW361	Downgradient	Yes	4.11E-02	N/A	-3.19E+00	NO
MW364	Downgradient	No	1.00E-01	N/A	-2.30E+00	N/A
MW367	Downgradient	No	1.04E-01	N/A	-2.26E+00	N/A
MW370	Upgradient	No	9.71E-02	N/A	-2.33E+00	N/A
MW373	Upgradient	No	1.00E-01	N/A	-2.30E+00	N/A

N/A - Results identified as Non-Detects during laboratory analysis or data validation and were not included in the statistical evaluation. Additionally for parameters that have MCLs, where the result for a well did not exceed the MCL value, that well was not included in the statistical evaluation.

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.

S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5

TL Upper Tolerance Limit, TL = X + (K * S), LL Lower Tolerance Limit, LL = X - (K * S)

X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,Interim Guidance, EPA, 1989, based on total number of background results - The K-factor for pH to account for a two-sided tolerance interval instead of a one-sided tolerance limit. The K-factor for pH was computed using a formula from NIST/SEMATECH e-Handbook of Statistical Methods, http://www.itl.nist.gov/div898/handbook/,2009.*

C-746-U Second Quarter 2025 Statistical Analysis Historical Background Comparison

pH UNITS: Std Unit LRGA

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	**X=** 6.283	**S=** 0.159	**CV(1)=** 0.025	**K factor**=** 2.904	**TL(1)=** 6.74E+00	**LL(1)=** 5.82E+00
Statistics-Transformed Background Data	**X=** 1.837	**S=** 0.025	**CV(2)=** 0.014	**K factor**=** 2.904	**TL(2)=** 1.91E+00	**LL(2)=** 1.76E+00

Because CV(1) is less than or equal to 1, assume normal distribution and continue with statistical analysis utilizing TL(1).

Historical Background Data from Upgradient Wells with Transformed Result

Well Number:	MW370	
Date Collected	Result	LN(Result)
3/17/2002	6.30E+00	1.84E+00
4/23/2002	6.40E+00	1.86E+00
7/15/2002	6.30E+00	1.84E+00
10/8/2002	6.30E+00	1.84E+00
1/8/2003	6.40E+00	1.86E+00
4/3/2003	6.50E+00	1.87E+00
7/9/2003	6.30E+00	1.84E+00
10/6/2003	6.50E+00	1.87E+00

Well Number:	MW373	
Date Collected	Result	LN(Result)
3/18/2002	6.00E+00	1.79E+00
4/23/2002	6.30E+00	1.84E+00
7/16/2002	6.45E+00	1.86E+00
10/8/2002	6.18E+00	1.82E+00
1/7/2003	6.35E+00	1.85E+00
4/2/2003	6.14E+00	1.81E+00
7/9/2003	6.10E+00	1.81E+00
10/7/2003	6.00E+00	1.79E+00

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)? Result <LL(1)?	LN(Result)	LN(Result) >TL(2)? LN(Result) <LL(2)?
MW358	Downgradient	Yes	6.25E+00	NO	1.83E+00	N/A
MW361	Downgradient	Yes	6.11E+00	NO	1.81E+00	N/A
MW364	Downgradient	Yes	5.92E+00	NO	1.78E+00	N/A
MW367	Downgradient	Yes	6.08E+00	NO	1.81E+00	N/A
MW370	Upgradient	Yes	6.01E+00	NO	1.79E+00	N/A
MW373	Upgradient	Yes	6.01E+00	NO	1.79E+00	N/A

N/A - Results identified as Non-Detects during laboratory analysis or data validation and were not included in the statistical evaluation. Additionally for parameters that have MCLs, where the result for a well did not exceed the MCL value, that well was not included in the statistical evaluation.

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.

S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5

TL Upper Tolerance Limit, TL = X + (K * S), LL Lower Tolerance Limit, LL = X - (K * S)

X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,Interim Guidance, EPA, 1989, based on total number of background results - The K-factor for pH to account for a two-sided tolerance interval instead of a one-sided tolerance limit. The K-factor for pH was computed using a formula from NIST/SEMATECH e-Handbook of Statistical Methods, http://www.itl.nist.gov/div898/handbook/,2009.*

C-746-U Second Quarter 2025 Statistical Analysis Historical Background Comparison

Potassium UNITS: mg/L LRGA

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	**X=** 2.823	**S=** 0.522	**CV(1)=** 0.185	**K factor**=** 2.523	**TL(1)=** 4.14E+00	**LL(1)=** N/A
Statistics-Transformed Background Data	**X=** 1.024	**S=** 0.167	**CV(2)=** 0.163	**K factor**=** 2.523	**TL(2)=** 1.45E+00	**LL(2)=** N/A

Because CV(1) is less than or equal to 1, assume normal distribution and continue with statistical analysis utilizing TL(1).

Historical Background Data from Upgradient Wells with Transformed Result

Well Number: MW370

Date Collected	Result	LN(Result)
3/17/2002	3.22E+00	1.17E+00
4/23/2002	3.43E+00	1.23E+00
7/15/2002	2.98E+00	1.09E+00
10/8/2002	2.46E+00	9.00E-01
1/8/2003	2.41E+00	8.80E-01
4/3/2003	2.43E+00	8.88E-01
7/9/2003	2.44E+00	8.92E-01
10/6/2003	2.48E+00	9.08E-01

Well Number: MW373

Date Collected	Result	LN(Result)
3/18/2002	4.34E+00	1.47E+00
4/23/2002	3.04E+00	1.11E+00
7/16/2002	2.93E+00	1.08E+00
10/8/2002	2.30E+00	8.33E-01
1/7/2003	2.45E+00	8.96E-01
4/2/2003	2.70E+00	9.93E-01
7/9/2003	2.68E+00	9.86E-01
10/7/2003	2.88E+00	1.06E+00

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW358	Downgradient	Yes	2.27E+00	NO	8.20E-01	N/A
MW361	Downgradient	Yes	1.85E+00	NO	6.15E-01	N/A
MW364	Downgradient	Yes	1.99E+00	NO	6.88E-01	N/A
MW367	Downgradient	Yes	3.05E+00	NO	1.12E+00	N/A
MW370	Upgradient	Yes	2.44E+00	NO	8.92E-01	N/A
MW373	Upgradient	Yes	2.97E+00	NO	1.09E+00	N/A

N/A - Results identified as Non-Detects during laboratory analysis or data validation and were not included in the statistical evaluation. Additionally for parameters that have MCLs, where the result for a well did not exceed the MCL value, that well was not included in the statistical evaluation.

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.

S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5

TL Upper Tolerance Limit, TL = X + (K * S), LL Lower Tolerance Limit, LL = X - (K * S)

X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,Interim Guidance, EPA, 1989, based on total number of background results - The K-factor for pH to account for a two-sided tolerance interval instead of a one-sided tolerance limit. The K-factor for pH was computed using a formula from NIST/SEMATECH e-Handbook of Statistical Methods, http://www.itl.nist.gov/div898/handbook/,2009.*

C-746-U Second Quarter 2025 Statistical Analysis Historical Background Comparison

Sodium UNITS: mg/L LRGA

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	**X=** 51.544	**S=** 15.227	**CV(1)=** 0.295	**K factor**=** 2.523	**TL(1)=** 9.00E+01	**LL(1)=** N/A
Statistics-Transformed Background Data	**X=** 3.906	**S=** 0.272	**CV(2)=** 0.070	**K factor**=** 2.523	**TL(2)=** 4.59E+00	**LL(2)=** N/A

Because CV(1) is less than or equal to 1, assume normal distribution and continue with statistical analysis utilizing TL(1).

Historical Background Data from Upgradient Wells with Transformed Result

Well Number: MW370

Date Collected	Result	LN(Result)
3/17/2002	3.18E+01	3.46E+00
4/23/2002	5.00E+01	3.91E+00
7/15/2002	4.47E+01	3.80E+00
10/8/2002	4.00E+01	3.69E+00
1/8/2003	4.46E+01	3.80E+00
4/3/2003	4.19E+01	3.74E+00
7/9/2003	4.00E+01	3.69E+00
10/6/2003	3.81E+01	3.64E+00

Well Number: MW373

Date Collected	Result	LN(Result)
3/18/2002	4.34E+01	3.77E+00
4/23/2002	7.98E+01	4.38E+00
7/16/2002	8.77E+01	4.47E+00
10/8/2002	6.16E+01	4.12E+00
1/7/2003	5.93E+01	4.08E+00
4/2/2003	6.21E+01	4.13E+00
7/9/2003	5.01E+01	3.91E+00
10/7/2003	4.96E+01	3.90E+00

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW358	Downgradient	Yes	4.16E+01	NO	3.73E+00	N/A
MW361	Downgradient	Yes	4.16E+01	NO	3.73E+00	N/A
MW364	Downgradient	Yes	4.15E+01	NO	3.73E+00	N/A
MW367	Downgradient	Yes	3.72E+01	NO	3.62E+00	N/A
MW370	Upgradient	Yes	4.50E+01	NO	3.81E+00	N/A
MW373	Upgradient	Yes	7.53E+01	NO	4.32E+00	N/A

N/A - Results identified as Non-Detects during laboratory analysis or data validation and were not included in the statistical evaluation. Additionally for parameters that have MCLs, where the result for a well did not exceed the MCL value, that well was not included in the statistical evaluation.

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.

S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5

TL Upper Tolerance Limit, TL = X + (K * S), LL Lower Tolerance Limit, LL = X - (K * S)

X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,Interim Guidance, EPA, 1989, based on total number of background results - The K-factor for pH to account for a two-sided tolerance interval instead of a one-sided tolerance limit. The K-factor for pH was computed using a formula from NIST/SEMATECH e-Handbook of Statistical Methods, http://www.itl.nist.gov/div898/handbook/,2009.*

C-746-U Second Quarter 2025 Statistical Analysis Historical Background Comparison

Sulfate **UNITS: mg/L** **LRGA**

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	**X=** 122.381	**S=** 195.095	**CV(1)=** 1.594	**K factor**=** 2.523	**TL(1)=** 6.15E+02	**LL(1)=**N/A
Statistics-Transformed Background Data	**X=** 3.985	**S=** 1.323	**CV(2)=** 0.332	**K factor**=** 2.523	**TL(2)=** 7.32E+00	**LL(2)=**N/A

Because CV(1) is greater than 1, the natural logarithm of background and test well results were calculated utilizing TL(2) for comparison.

Historical Background Data from Upgradient Wells with Transformed Result

Well Number: MW370

Date Collected	Result	LN(Result)
3/17/2002	1.74E+01	2.86E+00
4/23/2002	3.79E+01	3.63E+00
7/15/2002	1.57E+01	2.75E+00
10/8/2002	1.34E+01	2.60E+00
1/8/2003	1.44E+01	2.67E+00
4/3/2003	1.81E+01	2.90E+00
7/9/2003	9.60E+00	2.26E+00
10/6/2003	1.65E+01	2.80E+00

Well Number: MW373

Date Collected	Result	LN(Result)
3/18/2002	1.63E+02	5.10E+00
4/23/2002	8.10E+02	6.70E+00
7/16/2002	1.09E+02	4.70E+00
10/8/2002	1.11E+02	4.71E+00
1/7/2003	1.14E+02	4.73E+00
4/2/2003	1.33E+02	4.89E+00
7/9/2003	1.82E+02	5.20E+00
10/7/2003	1.93E+02	5.26E+00

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW358	Downgradient	Yes	5.33E+01	N/A	3.98E+00	NO
MW361	Downgradient	Yes	5.05E+01	N/A	3.92E+00	NO
MW364	Downgradient	Yes	6.76E+01	N/A	4.21E+00	NO
MW367	Downgradient	Yes	4.85E+01	N/A	3.88E+00	NO
MW370	Upgradient	Yes	2.02E+01	N/A	3.01E+00	NO
MW373	Upgradient	Yes	2.25E+02	N/A	5.42E+00	NO

N/A - Results identified as Non-Detects during laboratory analysis or data validation and were not included in the statistical evaluation. Additionally for parameters that have MCLs, where the result for a well did not exceed the MCL value, that well was not included in the statistical evaluation.

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.

S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5

TL Upper Tolerance Limit, TL = X + (K * S), LL Lower Tolerance Limit, LL = X - (K * S)

X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,Interim Guidance, EPA, 1989, based on total number of background results - The K-factor for pH to account for a two-sided tolerance interval instead of a one-sided tolerance limit. The K-factor for pH was computed using a formula from NIST/SEMATECH e-Handbook of Statistical Methods, http://www.itl.nist.gov/div898/handbook/,2009.*

C-746-U Second Quarter 2025 Statistical Analysis Historical Background Comparison

Technetium-99 UNITS: pCi/L LRGA

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	**X=** 7.655	**S=** 13.274	**CV(1)=** 1.734	**K factor**=** 2.523	**TL(1)=** 4.11E+01	**LL(1)=**N/A
Statistics-Transformed Background Data	**X=** 1.946	**S=** 0.939	**CV(2)=** 0.483	**K factor**=** 2.523	**TL(2)=** 3.83E+00	**LL(2)=**N/A

Because CV(1) is greater than 1, the natural logarithm of background and test well results were calculated utilizing TL(2) for comparison.

#Because the natural log was not possible for all background values, the TL was considered equal to the maximum background value.

Historical Background Data from Upgradient Wells with Transformed Result

Well Number: MW370

Date Collected	Result	LN(Result)
3/17/2002	1.08E+01	2.38E+00
4/23/2002	8.53E+00	2.14E+00
7/15/2002	5.09E+00	1.63E+00
10/8/2002	4.78E+00	1.56E+00
1/8/2003	-5.12E+00	#Func!
4/3/2003	5.11E+00	1.63E+00
7/9/2003	4.25E+00	1.45E+00
10/6/2003	6.54E+00	1.88E+00

Well Number: MW373

Date Collected	Result	LN(Result)
3/18/2002	1.65E+01	2.80E+00
4/23/2002	3.49E+00	1.25E+00
7/16/2002	1.42E+00	3.51E-01
10/8/2002	-6.06E+00	#Func!
1/7/2003	-8.41E+00	#Func!
4/2/2003	2.63E+01	3.27E+00
7/9/2003	3.06E+00	1.12E+00
10/7/2003	4.62E+01	3.83E+00

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW358	Downgradient	Yes	4.46E+01	N/A	3.80E+00	NO
MW361	Downgradient	Yes	4.77E+01	N/A	3.86E+00	YES
MW364	Downgradient	Yes	4.99E+01	N/A	3.91E+00	YES
MW367	Downgradient	Yes	5.60E+01	N/A	4.03E+00	YES
MW370	Upgradient	No	3.98E+00	N/A	1.38E+00	N/A
MW373	Upgradient	No	5.28E+00	N/A	1.66E+00	N/A

N/A - Results identified as Non-Detects during laboratory analysis or data validation and were not included in the statistical evaluation. Additionally for parameters that have MCLs, where the result for a well did not exceed the MCL value, that well was not included in the statistical evaluation.

Conclusion of Statistical Analysis on Historical Data

The test well(s) listed exceeded the Upper Tolerance Limit, which is evidence of elevated concentration with respect to historical background data.

Wells with Exceedances

MW361
MW364
MW367

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.

S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5

TL Upper Tolerance Limit, TL = X + (K * S), LL Lower Tolerance Limit, LL = X - (K * S)

X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,Interim Guidance, EPA, 1989, based on total number of background results - The K-factor for pH to account for a two-sided tolerance interval instead of a one-sided tolerance limit. The K-factor for pH was computed using a formula from NIST/SEMATECH e-Handbook of Statistical Methods, http://www.itl.nist.gov/div898/handbook/,2009.*

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Total Organic Carbon (TOC) UNITS: mg/L LRGA

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	**X=** 6.169	**S=** 12.072	**CV(1)=** 1.957	**K factor**=** 2.523	**TL(1)=** 3.66E+01	**LL(1)=** N/A
Statistics-Transformed Background Data	**X=** 1.069	**S=** 1.014	**CV(2)=** 0.948	**K factor**=** 2.523	**TL(2)=** 3.63E+00	**LL(2)=** N/A

Because CV(1) is greater than 1, the natural logarithm of background and test well results were calculated utilizing TL(2) for comparison.

Historical Background Data from Upgradient Wells with Transformed Result

Well Number: MW370

Date Collected	Result	LN(Result)
3/17/2002	1.20E+00	1.82E-01
4/23/2002	4.30E+00	1.46E+00
7/15/2002	2.60E+00	9.56E-01
10/8/2002	2.30E+00	8.33E-01
1/8/2003	3.00E+00	1.10E+00
4/3/2003	1.20E+00	1.82E-01
7/9/2003	2.60E+00	9.56E-01
10/6/2003	1.70E+00	5.31E-01

Well Number: MW373

Date Collected	Result	LN(Result)
3/18/2002	1.10E+00	9.53E-02
4/23/2002	1.75E+01	2.86E+00
7/16/2002	4.90E+01	3.89E+00
10/8/2002	2.90E+00	1.06E+00
1/7/2003	3.90E+00	1.36E+00
4/2/2003	2.50E+00	9.16E-01
7/9/2003	1.70E+00	5.31E-01
10/7/2003	1.20E+00	1.82E-01

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW358	Downgradient	Yes	4.60E-01	N/A	-7.77E-01	NO
MW361	Downgradient	Yes	4.68E-01	N/A	-7.59E-01	NO
MW364	Downgradient	Yes	4.84E-01	N/A	-7.26E-01	NO
MW367	Downgradient	Yes	4.87E-01	N/A	-7.19E-01	NO
MW370	Upgradient	Yes	1.11E+00	N/A	1.04E-01	NO
MW373	Upgradient	Yes	1.60E+00	N/A	4.70E-01	NO

N/A - Results identified as Non-Detects during laboratory analysis or data validation and were not included in the statistical evaluation. Additionally for parameters that have MCLs, where the result for a well did not exceed the MCL value, that well was not included in the statistical evaluation.

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.

S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5

TL Upper Tolerance Limit, TL = X + (K * S), LL Lower Tolerance Limit, LL = X - (K * S)

X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,Interim Guidance, EPA, 1989, based on total number of background results - The K-factor for pH to account for a two-sided tolerance interval instead of a one-sided tolerance limit. The K-factor for pH was computed using a formula from NIST/SEMATECH e-Handbook of Statistical Methods, http://www.itl.nist.gov/div898/handbook/,2009.*

C-746-U Second Quarter 2025 Statistical Analysis Historical Background Comparison
Total Organic Halides (TOX) UNITS: ug/L LRGA

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	**X=** 79.819	**S=** 78.470	**CV(1)=** 0.983	**K factor**=** 2.523	**TL(1)=** 2.78E+02	**LL(1)=** N/A
Statistics-Transformed Background Data	**X=** 3.971	**S=** 0.950	**CV(2)=** 0.239	**K factor**=** 2.523	**TL(2)=** 6.37E+00	**LL(2)=** N/A

Because CV(1) is less than or equal to 1, assume normal distribution and continue with statistical analysis utilizing TL(1).

Historical Background Data from Upgradient Wells with Transformed Result

Well Number: MW370

Date Collected	Result	LN(Result)
3/17/2002	5.00E+01	3.91E+00
4/23/2002	2.28E+02	5.43E+00
7/15/2002	8.80E+01	4.48E+00
10/8/2002	5.80E+01	4.06E+00
1/8/2003	7.24E+01	4.28E+00
4/3/2003	2.66E+01	3.28E+00
7/9/2003	1.64E+01	2.80E+00
10/6/2003	3.11E+01	3.44E+00

Well Number: MW373

Date Collected	Result	LN(Result)
3/18/2002	5.00E+01	3.91E+00
4/23/2002	2.76E+02	5.62E+00
7/16/2002	1.77E+02	5.18E+00
10/8/2002	7.60E+01	4.33E+00
1/7/2003	4.59E+01	3.83E+00
4/2/2003	5.78E+01	4.06E+00
7/9/2003	1.00E+01	2.30E+00
10/7/2003	1.39E+01	2.63E+00

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW358	Downgradient	No	1.00E+01	N/A	2.30E+00	N/A
MW361	Downgradient	Yes	3.78E+00	NO	1.33E+00	N/A
MW364	Downgradient	No	1.00E+01	N/A	2.30E+00	N/A
MW367	Downgradient	No	1.00E+01	N/A	2.30E+00	N/A
MW370	Upgradient	Yes	1.26E+01	NO	2.53E+00	N/A
MW373	Upgradient	Yes	1.10E+01	NO	2.40E+00	N/A

N/A - Results identified as Non-Detects during laboratory analysis or data validation and were not included in the statistical evaluation. Additionally for parameters that have MCLs, where the result for a well did not exceed the MCL value, that well was not included in the statistical evaluation.

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.

S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5

TL Upper Tolerance Limit, TL = X + (K * S), LL Lower Tolerance Limit, LL = X - (K * S)

X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,Interim Guidance, EPA, 1989, based on total number of background results - The K-factor for pH to account for a two-sided tolerance interval instead of a one-sided tolerance limit. The K-factor for pH was computed using a formula from NIST/SEMATECH e-Handbook of Statistical Methods, http://www.itl.nist.gov/div898/handbook/,2009.*

C-746-U Second Quarter 2025 Statistical Analysis Historical Background Comparison

Zinc **UNITS: mg/L** **LRGA**

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	**X=** 0.055	**S=** 0.037	**CV(1)=** 0.673	**K factor**=** 2.523	**TL(1)=** 1.47E-01	**LL(1)=** N/A
Statistics-Transformed Background Data	**X=** -3.131	**S=** 0.691	**CV(2)=** -0.221	**K factor**=** 2.523	**TL(2)=** -1.39E+00	**LL(2)=** N/A

Because CV(1) is less than or equal to 1, assume normal distribution and continue with statistical analysis utilizing TL(1).

Historical Background Data from Upgradient Wells with Transformed Result

Well Number: MW370

Date Collected	Result	LN(Result)
3/17/2002	1.00E-01	-2.30E+00
4/23/2002	1.00E-01	-2.30E+00
7/15/2002	1.00E-01	-2.30E+00
10/8/2002	2.50E-02	-3.69E+00
1/8/2003	3.50E-02	-3.35E+00
4/3/2003	3.50E-02	-3.35E+00
7/9/2003	2.00E-02	-3.91E+00
10/6/2003	2.00E-02	-3.91E+00

Well Number: MW373

Date Collected	Result	LN(Result)
3/18/2002	1.00E-01	-2.30E+00
4/23/2002	1.00E-01	-2.30E+00
7/16/2002	1.00E-01	-2.30E+00
10/8/2002	2.50E-02	-3.69E+00
1/7/2003	3.50E-02	-3.35E+00
4/2/2003	3.50E-02	-3.35E+00
7/9/2003	2.34E-02	-3.76E+00
10/7/2003	2.00E-02	-3.91E+00

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW358	Downgradient	Yes	3.43E-03	NO	-5.68E+00	N/A
MW361	Downgradient	Yes	1.13E-02	NO	-4.48E+00	N/A
MW364	Downgradient	Yes	2.29E-02	NO	-3.78E+00	N/A
MW367	Downgradient	Yes	5.65E-03	NO	-5.18E+00	N/A
MW370	Upgradient	Yes	5.30E-03	NO	-5.24E+00	N/A
MW373	Upgradient	No	2.00E-02	N/A	-3.91E+00	N/A

N/A - Results identified as Non-Detects during laboratory analysis or data validation and were not included in the statistical evaluation. Additionally for parameters that have MCLs, where the result for a well did not exceed the MCL value, that well was not included in the statistical evaluation.

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.

S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5

TL Upper Tolerance Limit, TL = X + (K * S), LL Lower Tolerance Limit, LL = X - (K * S)

X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,Interim Guidance, EPA, 1989, based on total number of background results - The K-factor for pH to account for a two-sided tolerance interval instead of a one-sided tolerance limit. The K-factor for pH was computed using a formula from NIST/SEMATECH e-Handbook of Statistical Methods, http://www.itl.nist.gov/div898/handbook/,2009.*

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ATTACHMENT D2

COMPARISON OF CURRENT DATA TO ONE-SIDED UPPER TOLERANCE INTERVAL TEST CALCULATED USING CURRENT BACKGROUND DATA

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C-746-U Second Quarter 2025 Statistical Analysis — Current Background Comparison

Dissolved Oxygen — **UNITS: mg/L** — **UCRS**

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is statistically significant evidence of elevated concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	**X=** 2.748	**S=** 1.768	**CV(1)=** 0.644	**K factor**=** 2.523	**TL(1)=** 7.21E+00	**LL(1)=** N/A
Statistics-Transformed Background Data	**X=** 0.849	**S=** 0.572	**CV(2)=** 0.673	**K factor**=** 2.523	**TL(2)=** 2.29E+00	**LL(2)=** N/A

Because CV(1) is less than or equal to 1, assume normal distribution and continue with statistical analysis utilizing TL(1).

Current Background Data from Upgradient Wells with Transformed Result

Well Number: MW371

Date Collected	Result	LN(Result)
4/25/2023	7.75E+00	2.05E+00
7/25/2023	3.30E+00	1.19E+00
10/11/2023	1.33E+00	2.85E-01
1/24/2024	1.97E+00	6.78E-01
4/10/2024	3.03E+00	1.11E+00
7/30/2024	4.00E+00	1.39E+00
10/10/2024	1.55E+00	4.38E-01
1/28/2025	5.23E+00	1.65E+00

Well Number: MW374

Date Collected	Result	LN(Result)
4/25/2023	2.30E+00	8.33E-01
7/25/2023	1.01E+00	9.95E-03
10/11/2023	1.84E+00	6.10E-01
1/25/2024	2.20E+00	7.88E-01
4/10/2024	1.33E+00	2.85E-01
7/30/2024	1.10E+00	9.53E-02
10/10/2024	2.50E+00	9.16E-01
1/28/2025	3.52E+00	1.26E+00

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW359	Downgradient	Yes	4.81E+00	NO	1.57E+00	N/A
MW362	Downgradient	Yes	7.06E+00	NO	1.95E+00	N/A
MW365	Downgradient	Yes	4.86E+00	NO	1.58E+00	N/A
MW371	Upgradient	Yes	5.89E+00	NO	1.77E+00	N/A
MW374	Upgradient	Yes	2.82E+00	NO	1.04E+00	N/A
MW375	Sidegradient	Yes	4.00E+00	NO	1.39E+00	N/A

Conclusion of Statistical Analysis on Current Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from current background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.

S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5

TL Upper Tolerance Limit, TL = X + (K * S), LL Lower Tolerance Limit, LL = X - (K * S)

X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,Interim Guidance, EPA, 1989, based on total number of background results - The K-factor for pH to account for a two-sided tolerance interval instead of a one-sided tolerance limit. The K-factor for pH was computed using a formula from NIST/SEMATECH e-Handbook of Statistical Methods, http://www.itl.nist.gov/div898/handbook/,2009.*

C-746-U Second Quarter 2025 Statistical Analysis — Current Background Comparison

Oxidation-Reduction Potential — UNITS: mV — UCRS

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is statistically significant evidence of elevated concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	**X=** 411.063	**S=** 44.309	**CV(1)=** 0.108	**K factor**=** 2.523	**TL(1)=** 5.23E+02	**LL(1)=** N/A
Statistics-Transformed Background Data	**X=** 6.013	**S=** 0.105	**CV(2)=** 0.017	**K factor**=** 2.523	**TL(2)=** 6.28E+00	**LL(2)=** N/A

Because CV(1) is less than or equal to 1, assume normal distribution and continue with statistical analysis utilizing TL(1).

Current Background Data from Upgradient Wells with Transformed Result

Well Number: MW371

Date Collected	Result	LN(Result)
4/25/2023	4.04E+02	6.00E+00
7/25/2023	3.72E+02	5.92E+00
10/11/2023	3.76E+02	5.93E+00
1/24/2024	4.52E+02	6.11E+00
4/10/2024	3.60E+02	5.89E+00
7/30/2024	4.47E+02	6.10E+00
10/10/2024	4.54E+02	6.12E+00
1/28/2025	5.15E+02	6.24E+00

Well Number: MW374

Date Collected	Result	LN(Result)
4/25/2023	4.21E+02	6.04E+00
7/25/2023	3.51E+02	5.86E+00
10/11/2023	3.98E+02	5.99E+00
1/25/2024	4.55E+02	6.12E+00
4/10/2024	3.69E+02	5.91E+00
7/30/2024	4.11E+02	6.02E+00
10/10/2024	4.10E+02	6.02E+00
1/28/2025	3.82E+02	5.95E+00

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW359	Downgradient	Yes	2.32E+02	NO	5.45E+00	N/A
MW362	Downgradient	Yes	4.61E+02	NO	6.13E+00	N/A
MW365	Downgradient	Yes	4.49E+02	NO	6.11E+00	N/A
MW368	Downgradient	Yes	3.87E+02	NO	5.96E+00	N/A
MW371	Upgradient	Yes	3.97E+02	NO	5.98E+00	N/A
MW374	Upgradient	Yes	3.77E+02	NO	5.93E+00	N/A
MW375	Sidegradient	Yes	3.76E+02	NO	5.93E+00	N/A

Conclusion of Statistical Analysis on Current Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from current background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.

S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5

TL Upper Tolerance Limit, TL = X + (K * S), LL Lower Tolerance Limit, LL = X - (K * S)

X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,Interim Guidance, EPA, 1989, based on total number of background results - The K-factor for pH to account for a two-sided tolerance interval instead of a one-sided tolerance limit. The K-factor for pH was computed using a formula from NIST/SEMATECH e-Handbook of Statistical Methods, http://www.itl.nist.gov/div898/handbook/,2009.*

C-746-U Second Quarter 2025 Statistical Analysis — Current Background Comparison

Sulfate — **UNITS: mg/L** — **UCRS**

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is statistically significant evidence of elevated concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	**X=** 17.553	**S=** 11.547	**CV(1)=** 0.658	**K factor**=** 2.523	**TL(1)=** 4.67E+01	**LL(1)=** N/A
Statistics-Transformed Background Data	**X=** 2.742	**S=** 0.464	**CV(2)=** 0.169	**K factor**=** 2.523	**TL(2)=** 3.91E+00	**LL(2)=** N/A

Because CV(1) is less than or equal to 1, assume normal distribution and continue with statistical analysis utilizing TL(1).

Current Background Data from Upgradient Wells with Transformed Result

Well Number: MW371

Date Collected	Result	LN(Result)
4/25/2023	5.69E+01	4.04E+00
7/25/2023	2.86E+01	3.35E+00
10/11/2023	1.58E+01	2.76E+00
1/24/2024	9.84E+00	2.29E+00
4/10/2024	9.92E+00	2.29E+00
7/30/2024	1.04E+01	2.34E+00
10/10/2024	8.19E+00	2.10E+00
1/28/2025	1.08E+01	2.38E+00

Well Number: MW374

Date Collected	Result	LN(Result)
4/25/2023	1.65E+01	2.80E+00
7/25/2023	1.56E+01	2.75E+00
10/11/2023	1.42E+01	2.65E+00
1/25/2024	1.54E+01	2.73E+00
4/10/2024	1.76E+01	2.87E+00
7/30/2024	1.71E+01	2.84E+00
10/10/2024	1.82E+01	2.90E+00
1/28/2025	1.58E+01	2.76E+00

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW359	Downgradient	Yes	3.57E+01	NO	3.58E+00	N/A
MW362	Downgradient	Yes	3.16E+01	NO	3.45E+00	N/A
MW365	Downgradient	Yes	5.09E+01	YES	3.93E+00	N/A
MW368	Downgradient	Yes	4.04E+01	NO	3.70E+00	N/A
MW371	Upgradient	Yes	1.99E+01	NO	2.99E+00	N/A
MW374	Upgradient	Yes	1.79E+01	NO	2.88E+00	N/A
MW375	Sidegradient	Yes	2.20E+01	NO	3.09E+00	N/A

Conclusion of Statistical Analysis on Current Data

The test well(s) listed exceeded the Upper Tolerance Limit, which is evidence of elevated concentration with respect to current background data.

Wells with Exceedances

MW365

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.

S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5

TL Upper Tolerance Limit, TL = X + (K * S), LL Lower Tolerance Limit, LL = X - (K * S)

X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,Interim Guidance, EPA, 1989, based on total number of background results - The K-factor for pH to account for a two-sided tolerance interval instead of a one-sided tolerance limit. The K-factor for pH was computed using a formula from NIST/SEMATECH e-Handbook of Statistical Methods, http://www.itl.nist.gov/div898/handbook/,2009.*

C-746-U Second Quarter 2025 Statistical Analysis Current Background Comparison

Calcium **UNITS: mg/L** **URGA**

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is statistically significant evidence of elevated concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	**X=** 40.463	**S=** 25.643	**CV(1)=** 0.634	**K factor**=** 2.523	**TL(1)=** 1.05E+02	**LL(1)=** N/A
Statistics-Transformed Background Data	**X=** 3.466	**S=** 0.735	**CV(2)=** 0.212	**K factor**=** 2.523	**TL(2)=** 5.32E+00	**LL(2)=** N/A

Because CV(1) is less than or equal to 1, assume normal distribution and continue with statistical analysis utilizing TL(1).

Current Background Data from Upgradient Wells with Transformed Result

Well Number: MW369

Date Collected	Result	LN(Result)
4/24/2023	1.60E+01	2.77E+00
7/25/2023	1.57E+01	2.75E+00
10/11/2023	1.60E+01	2.77E+00
1/24/2024	1.64E+01	2.80E+00
4/10/2024	1.49E+01	2.70E+00
7/17/2024	1.51E+01	2.71E+00
10/10/2024	1.55E+01	2.74E+00
1/28/2025	1.62E+01	2.79E+00

Well Number: MW372

Date Collected	Result	LN(Result)
4/25/2023	6.20E+01	4.13E+00
7/25/2023	6.10E+01	4.11E+00
10/11/2023	6.46E+01	4.17E+00
1/25/2024	7.14E+01	4.27E+00
4/11/2024	6.53E+01	4.18E+00
7/17/2024	6.59E+01	4.19E+00
10/10/2024	6.45E+01	4.17E+00
1/28/2025	6.69E+01	4.20E+00

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW372	Upgradient	Yes	6.64E+01	NO	4.20E+00	N/A

Conclusion of Statistical Analysis on Current Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from current background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.

S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5

TL Upper Tolerance Limit, TL = X + (K * S), LL Lower Tolerance Limit, LL = X - (K * S)

X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,Interim Guidance, EPA, 1989, based on total number of background results - The K-factor for pH to account for a two-sided tolerance interval instead of a one-sided tolerance limit. The K-factor for pH was computed using a formula from NIST/SEMATECH e-Handbook of Statistical Methods, http://www.itl.nist.gov/div898/handbook/,2009.*

C-746-U Second Quarter 2025 Statistical Analysis Current Background Comparison

Conductivity UNITS: umho/cm URGA

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is statistically significant evidence of elevated concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	**X=** 554.188	**S=** 206.169	**CV(1)=** 0.372	**K factor**=** 2.523	**TL(1)=** 1.07E+03	**LL(1)=** N/A
Statistics-Transformed Background Data	**X=** 6.248	**S=** 0.391	**CV(2)=** 0.063	**K factor**=** 2.523	**TL(2)=** 7.23E+00	**LL(2)=** N/A

Because CV(1) is less than or equal to 1, assume normal distribution and continue with statistical analysis utilizing TL(1).

Current Background Data from Upgradient Wells with Transformed Result

Well Number: MW369

Date Collected	Result	LN(Result)
4/24/2023	3.75E+02	5.93E+00
7/25/2023	3.50E+02	5.86E+00
10/11/2023	3.45E+02	5.84E+00
1/24/2024	3.41E+02	5.83E+00
4/10/2024	3.47E+02	5.85E+00
7/30/2024	3.36E+02	5.82E+00
10/10/2024	4.08E+02	6.01E+00
1/28/2025	3.43E+02	5.84E+00

Well Number: MW372

Date Collected	Result	LN(Result)
4/25/2023	7.33E+02	6.60E+00
7/25/2023	7.59E+02	6.63E+00
10/11/2023	7.47E+02	6.62E+00
1/25/2024	7.27E+02	6.59E+00
4/11/2024	7.58E+02	6.63E+00
7/30/2024	7.49E+02	6.62E+00
10/10/2024	7.91E+02	6.67E+00
1/28/2025	7.58E+02	6.63E+00

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW372	Upgradient	Yes	7.44E+02	NO	6.61E+00	N/A

Conclusion of Statistical Analysis on Current Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from current background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.

S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5

TL Upper Tolerance Limit, TL = X + (K * S), LL Lower Tolerance Limit, LL = X - (K * S)

X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,Interim Guidance, EPA, 1989, based on total number of background results - The K-factor for pH to account for a two-sided tolerance interval instead of a one-sided tolerance limit. The K-factor for pH was computed using a formula from NIST/SEMATECH e-Handbook of Statistical Methods, http://www.itl.nist.gov/div898/handbook/,2009.*

C-746-U Second Quarter 2025 Statistical Analysis — Current Background Comparison

Dissolved Oxygen — **UNITS: mg/L** — **URGA**

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is statistically significant evidence of elevated concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	**X=** 2.664	**S=** 0.876	**CV(1)=** 0.329	**K factor**=** 2.523	**TL(1)=** 4.88E+00	**LL(1)=** N/A
Statistics-Transformed Background Data	**X=** 0.932	**S=** 0.318	**CV(2)=** 0.341	**K factor**=** 2.523	**TL(2)=** 1.73E+00	**LL(2)=** N/A

Because CV(1) is less than or equal to 1, assume normal distribution and continue with statistical analysis utilizing TL(1).

Current Background Data from Upgradient Wells with Transformed Result

Well Number: MW369

Date Collected	Result	LN(Result)
4/24/2023	2.06E+00	7.23E-01
7/25/2023	2.85E+00	1.05E+00
10/11/2023	3.49E+00	1.25E+00
1/24/2024	2.42E+00	8.84E-01
4/10/2024	2.39E+00	8.71E-01
7/30/2024	3.00E+00	1.10E+00
10/10/2024	3.44E+00	1.24E+00
1/28/2025	4.72E+00	1.55E+00

Well Number: MW372

Date Collected	Result	LN(Result)
4/25/2023	1.81E+00	5.93E-01
7/25/2023	1.91E+00	6.47E-01
10/11/2023	3.24E+00	1.18E+00
1/25/2024	1.70E+00	5.31E-01
4/11/2024	2.12E+00	7.51E-01
7/30/2024	1.57E+00	4.51E-01
10/10/2024	2.20E+00	7.88E-01
1/28/2025	3.71E+00	1.31E+00

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW366	Downgradient	Yes	5.60E+00	YES	1.72E+00	N/A

Conclusion of Statistical Analysis on Current Data

The test well(s) listed exceeded the Upper Tolerance Limit, which is evidence of elevated concentration with respect to current background data.

Wells with Exceedances

MW366

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.

S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5

TL Upper Tolerance Limit, TL = X + (K * S), LL Lower Tolerance Limit, LL = X - (K * S)

X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,Interim Guidance, EPA, 1989, based on total number of background results - The K-factor for pH to account for a two-sided tolerance interval instead of a one-sided tolerance limit. The K-factor for pH was computed using a formula from NIST/SEMATECH e-Handbook of Statistical Methods, http://www.itl.nist.gov/div898/handbook/,2009.*

C-746-U Second Quarter 2025 Statistical Analysis — Current Background Comparison

Dissolved Solids — **UNITS: mg/L** — **URGA**

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is statistically significant evidence of elevated concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	**X=** 319.375	**S=** 133.384	**CV(1)=** 0.418	**K factor**=** 2.523	**TL(1)=** 6.56E+02	**LL(1)=** N/A
Statistics-Transformed Background Data	**X=** 5.677	**S=** 0.443	**CV(2)=** 0.078	**K factor**=** 2.523	**TL(2)=** 6.79E+00	**LL(2)=** N/A

Because CV(1) is less than or equal to 1, assume normal distribution and continue with statistical analysis utilizing TL(1).

Current Background Data from Upgradient Wells with Transformed Result

Well Number: MW369

Date Collected	Result	LN(Result)
4/24/2023	1.93E+02	5.26E+00
7/25/2023	1.75E+02	5.16E+00
10/11/2023	1.92E+02	5.26E+00
1/24/2024	1.89E+02	5.24E+00
4/10/2024	1.86E+02	5.23E+00
7/30/2024	2.13E+02	5.36E+00
10/10/2024	1.78E+02	5.18E+00
1/28/2025	2.05E+02	5.32E+00

Well Number: MW372

Date Collected	Result	LN(Result)
4/25/2023	4.28E+02	6.06E+00
7/25/2023	4.23E+02	6.05E+00
10/11/2023	4.47E+02	6.10E+00
1/25/2024	4.38E+02	6.08E+00
4/11/2024	4.59E+02	6.13E+00
7/30/2024	4.96E+02	6.21E+00
10/10/2024	4.42E+02	6.09E+00
1/28/2025	4.46E+02	6.10E+00

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW372	Upgradient	Yes	4.74E+02	NO	6.16E+00	N/A

Conclusion of Statistical Analysis on Current Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from current background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.

S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5

TL Upper Tolerance Limit, TL = X + (K * S), LL Lower Tolerance Limit, LL = X - (K * S)

X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,Interim Guidance, EPA, 1989, based on total number of background results - The K-factor for pH to account for a two-sided tolerance interval instead of a one-sided tolerance limit. The K-factor for pH was computed using a formula from NIST/SEMATECH e-Handbook of Statistical Methods, http://www.itl.nist.gov/div898/handbook/,2009.*

C-746-U Second Quarter 2025 Statistical Analysis Current Background Comparison

Magnesium UNITS: mg/L URGA

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is statistically significant evidence of elevated concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	**X=** 14.723	**S=** 8.485	**CV(1)=** 0.576	**K factor**=** 2.523	**TL(1)=** 3.61E+01	**LL(1)=** N/A
Statistics-Transformed Background Data	**X=** 2.504	**S=** 0.648	**CV(2)=** 0.259	**K factor**=** 2.523	**TL(2)=** 4.14E+00	**LL(2)=** N/A

Because CV(1) is less than or equal to 1, assume normal distribution and continue with statistical analysis utilizing TL(1).

Current Background Data from Upgradient Wells with Transformed Result

Well Number: MW369

Date Collected	Result	LN(Result)
4/24/2023	6.87E+00	1.93E+00
7/25/2023	6.17E+00	1.82E+00
10/11/2023	6.42E+00	1.86E+00
1/24/2024	7.13E+00	1.96E+00
4/10/2024	6.41E+00	1.86E+00
7/17/2024	6.22E+00	1.83E+00
10/10/2024	6.34E+00	1.85E+00
1/28/2025	6.91E+00	1.93E+00

Well Number: MW372

Date Collected	Result	LN(Result)
4/25/2023	2.35E+01	3.16E+00
7/25/2023	2.11E+01	3.05E+00
10/11/2023	2.16E+01	3.07E+00
1/25/2024	2.51E+01	3.22E+00
4/11/2024	2.25E+01	3.11E+00
7/17/2024	2.26E+01	3.12E+00
10/10/2024	2.24E+01	3.11E+00
1/28/2025	2.43E+01	3.19E+00

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW372	Upgradient	Yes	2.42E+01	NO	3.19E+00	N/A

Conclusion of Statistical Analysis on Current Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from current background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.

S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5

TL Upper Tolerance Limit, TL = X + (K * S), LL Lower Tolerance Limit, LL = X - (K * S)

X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,Interim Guidance, EPA, 1989, based on total number of background results - The K-factor for pH to account for a two-sided tolerance interval instead of a one-sided tolerance limit. The K-factor for pH was computed using a formula from NIST/SEMATECH e-Handbook of Statistical Methods, http://www.itl.nist.gov/div898/handbook/,2009.*

C-746-U Second Quarter 2025 Statistical Analysis — Current Background Comparison

Oxidation-Reduction Potential — UNITS: mV — URGA

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is statistically significant evidence of elevated concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	**X=** 421.125	**S=** 49.898	**CV(1)=** 0.118	**K factor**=** 2.523	**TL(1)=** 5.47E+02	**LL(1)=** N/A
Statistics-Transformed Background Data	**X=** 6.036	**S=** 0.125	**CV(2)=** 0.021	**K factor**=** 2.523	**TL(2)=** 6.35E+00	**LL(2)=** N/A

Because CV(1) is less than or equal to 1, assume normal distribution and continue with statistical analysis utilizing TL(1).

Current Background Data from Upgradient Wells with Transformed Result

Well Number: MW369

Date Collected	Result	LN(Result)
4/24/2023	4.39E+02	6.08E+00
7/25/2023	4.06E+02	6.01E+00
10/11/2023	3.85E+02	5.95E+00
1/24/2024	4.23E+02	6.05E+00
4/10/2024	3.12E+02	5.74E+00
7/30/2024	4.62E+02	6.14E+00
10/10/2024	4.69E+02	6.15E+00
1/28/2025	4.63E+02	6.14E+00

Well Number: MW372

Date Collected	Result	LN(Result)
4/25/2023	4.70E+02	6.15E+00
7/25/2023	3.87E+02	5.96E+00
10/11/2023	3.40E+02	5.83E+00
1/25/2024	4.83E+02	6.18E+00
4/11/2024	3.81E+02	5.94E+00
7/30/2024	4.52E+02	6.11E+00
10/10/2024	4.56E+02	6.12E+00
1/28/2025	4.10E+02	6.02E+00

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW357	Downgradient	Yes	4.89E+02	NO	6.19E+00	N/A
MW360	Downgradient	Yes	5.03E+02	NO	6.22E+00	N/A
MW363	Downgradient	Yes	4.92E+02	NO	6.20E+00	N/A
MW366	Downgradient	Yes	4.89E+02	NO	6.19E+00	N/A
MW369	Upgradient	Yes	4.25E+02	NO	6.05E+00	N/A
MW372	Upgradient	Yes	4.20E+02	NO	6.04E+00	N/A

Conclusion of Statistical Analysis on Current Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from current background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.

S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5

TL Upper Tolerance Limit, TL = X + (K * S), LL Lower Tolerance Limit, LL = X - (K * S)

X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,Interim Guidance, EPA, 1989, based on total number of background results - The K-factor for pH to account for a two-sided tolerance interval instead of a one-sided tolerance limit. The K-factor for pH was computed using a formula from NIST/SEMATECH e-Handbook of Statistical Methods, http://www.itl.nist.gov/div898/handbook/,2009.*

C-746-U Second Quarter 2025 Statistical Analysis Current Background Comparison

Sulfate **UNITS: mg/L** **URGA**

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is statistically significant evidence of elevated concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	**X=** 78.203	**S=** 72.515	**CV(1)=** 0.927	**K factor**=** 2.523	**TL(1)=** 2.61E+02	**LL(1)=** N/A
Statistics-Transformed Background Data	**X=** 3.547	**S=** 1.500	**CV(2)=** 0.423	**K factor**=** 2.523	**TL(2)=** 7.33E+00	**LL(2)=** N/A

Because CV(1) is less than or equal to 1, assume normal distribution and continue with statistical analysis utilizing TL(1).

Current Background Data from Upgradient Wells with Transformed Result

Well Number: MW369

Date Collected	Result	LN(Result)
4/24/2023	7.00E+00	1.95E+00
7/25/2023	7.91E+00	2.07E+00
10/11/2023	8.72E+00	2.17E+00
1/24/2024	8.49E+00	2.14E+00
4/10/2024	7.81E+00	2.06E+00
7/30/2024	7.92E+00	2.07E+00
10/10/2024	8.91E+00	2.19E+00
1/28/2025	8.48E+00	2.14E+00

Well Number: MW372

Date Collected	Result	LN(Result)
4/25/2023	1.51E+02	5.02E+00
7/25/2023	1.45E+02	4.98E+00
10/11/2023	1.43E+02	4.96E+00
1/25/2024	1.48E+02	5.00E+00
4/11/2024	1.40E+02	4.94E+00
7/30/2024	1.64E+02	5.10E+00
10/10/2024	1.46E+02	4.98E+00
1/28/2025	1.49E+02	5.00E+00

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW372	Upgradient	Yes	1.61E+02	NO	5.08E+00	N/A

Conclusion of Statistical Analysis on Current Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from current background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.

S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5

TL Upper Tolerance Limit, TL = X + (K * S), LL Lower Tolerance Limit, LL = X - (K * S)

X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,Interim Guidance, EPA, 1989, based on total number of background results - The K-factor for pH to account for a two-sided tolerance interval instead of a one-sided tolerance limit. The K-factor for pH was computed using a formula from NIST/SEMATECH e-Handbook of Statistical Methods, http://www.itl.nist.gov/div898/handbook/,2009.*

C-746-U Second Quarter 2025 Statistical Analysis Current Background Comparison

Calcium UNITS: mg/L LRGA

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is statistically significant evidence of elevated concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	**X=** 55.550	**S=** 27.425	**CV(1)=** 0.494	**K factor**=** 2.523	**TL(1)=** 1.25E+02	**LL(1)=** N/A
Statistics-Transformed Background Data	**X=** 3.889	**S=** 0.532	**CV(2)=** 0.137	**K factor**=** 2.523	**TL(2)=** 5.23E+00	**LL(2)=** N/A

Because CV(1) is less than or equal to 1, assume normal distribution and continue with statistical analysis utilizing TL(1).

Current Background Data from Upgradient Wells with Transformed Result

Well Number: MW370

Date Collected	Result	LN(Result)
4/24/2023	3.09E+01	3.43E+00
7/25/2023	2.93E+01	3.38E+00
10/11/2023	2.90E+01	3.37E+00
1/24/2024	3.00E+01	3.40E+00
4/10/2024	2.84E+01	3.35E+00
7/17/2024	2.90E+01	3.37E+00
10/10/2024	2.85E+01	3.35E+00
1/28/2025	2.92E+01	3.37E+00

Well Number: MW373

Date Collected	Result	LN(Result)
4/25/2023	7.11E+01	4.26E+00
7/25/2023	7.87E+01	4.37E+00
10/11/2023	7.90E+01	4.37E+00
1/25/2024	8.40E+01	4.43E+00
4/10/2024	8.35E+01	4.42E+00
7/17/2024	8.59E+01	4.45E+00
10/10/2024	8.13E+01	4.40E+00
1/28/2025	9.10E+01	4.51E+00

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW373	Upgradient	Yes	8.69E+01	NO	4.46E+00	N/A

Conclusion of Statistical Analysis on Current Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from current background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.

S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5

TL Upper Tolerance Limit, TL = X + (K * S), LL Lower Tolerance Limit, LL = X - (K * S)

X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,Interim Guidance, EPA, 1989, based on total number of background results - The K-factor for pH to account for a two-sided tolerance interval instead of a one-sided tolerance limit. The K-factor for pH was computed using a formula from NIST/SEMATECH e-Handbook of Statistical Methods, http://www.itl.nist.gov/div898/handbook/,2009.*

C-746-U Second Quarter 2025 Statistical Analysis Current Background Comparison

Conductivity UNITS: umho/cm LRGA

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is statistically significant evidence of elevated concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	**X=** 681.250	**S=** 242.661	**CV(1)=** 0.356	**K factor**=** 2.523	**TL(1)=** 1.29E+03	**LL(1)=** N/A
Statistics-Transformed Background Data	**X=** 6.461	**S=** 0.372	**CV(2)=** 0.058	**K factor**=** 2.523	**TL(2)=** 7.40E+00	**LL(2)=** N/A

Because CV(1) is less than or equal to 1, assume normal distribution and continue with statistical analysis utilizing TL(1).

Current Background Data from Upgradient Wells with Transformed Result

Well Number: MW370

Date Collected	Result	LN(Result)
4/24/2023	4.70E+02	6.15E+00
7/25/2023	4.68E+02	6.15E+00
10/11/2023	4.50E+02	6.11E+00
1/24/2024	4.37E+02	6.08E+00
4/10/2024	4.09E+02	6.01E+00
7/30/2024	4.39E+02	6.08E+00
10/10/2024	4.99E+02	6.21E+00
1/28/2025	4.16E+02	6.03E+00

Well Number: MW373

Date Collected	Result	LN(Result)
4/25/2023	8.31E+02	6.72E+00
7/25/2023	9.10E+02	6.81E+00
10/11/2023	8.98E+02	6.80E+00
1/25/2024	9.09E+02	6.81E+00
4/10/2024	9.30E+02	6.84E+00
7/30/2024	9.43E+02	6.85E+00
10/10/2024	9.46E+02	6.85E+00
1/28/2025	9.45E+02	6.85E+00

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW373	Upgradient	Yes	1.00E+03	NO	6.91E+00	N/A

Conclusion of Statistical Analysis on Current Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from current background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.

S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5

TL Upper Tolerance Limit, TL = X + (K * S), LL Lower Tolerance Limit, LL = X - (K * S)

X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,Interim Guidance, EPA, 1989, based on total number of background results - The K-factor for pH to account for a two-sided tolerance interval instead of a one-sided tolerance limit. The K-factor for pH was computed using a formula from NIST/SEMATECH e-Handbook of Statistical Methods, http://www.itl.nist.gov/div898/handbook/,2009.*

C-746-U Second Quarter 2025 Statistical Analysis — Current Background Comparison

Cyanide — **UNITS: ug/L** — **LRGA**

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is statistically significant evidence of elevated concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	**X=** 187.726	**S=** 49.098	**CV(1)=** 0.262	**K factor**=** 2.523	**TL(1)=** 3.12E+02	**LL(1)=** N/A
Statistics-Transformed Background Data	**X=** 5.047	**S=** 1.004	**CV(2)=** 0.199	**K factor**=** 2.523	**TL(2)=** 7.58E+00	**LL(2)=** N/A

Because CV(1) is less than or equal to 1, assume normal distribution and continue with statistical analysis utilizing TL(1).

Current Background Data from Upgradient Wells with Transformed Result

Well Number: MW370

Date Collected	Result	LN(Result)
4/24/2023	2.00E+02	5.30E+00
7/25/2023	2.00E+02	5.30E+00
10/11/2023	2.00E+02	5.30E+00
1/24/2024	2.00E+02	5.30E+00
4/10/2024	2.00E+02	5.30E+00
7/30/2024	2.00E+02	5.30E+00
10/10/2024	2.00E+02	5.30E+00
1/28/2025	2.00E+02	5.30E+00

Well Number: MW373

Date Collected	Result	LN(Result)
4/25/2023	2.00E+02	5.30E+00
7/25/2023	3.61E+00	1.28E+00
10/11/2023	2.00E+02	5.30E+00
1/25/2024	2.00E+02	5.30E+00
4/10/2024	2.00E+02	5.30E+00
7/17/2024	2.00E+02	5.30E+00
10/10/2024	2.00E+02	5.30E+00
1/28/2025	2.00E+02	5.30E+00

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW358	Downgradient	Yes	5.59E-02	NO	-2.88E+00	N/A

Conclusion of Statistical Analysis on Current Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from current background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.

S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5

TL Upper Tolerance Limit, TL = X + (K * S), LL Lower Tolerance Limit, LL = X - (K * S)

X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,Interim Guidance, EPA, 1989, based on total number of background results - The K-factor for pH to account for a two-sided tolerance interval instead of a one-sided tolerance limit. The K-factor for pH was computed using a formula from NIST/SEMATECH e-Handbook of Statistical Methods, http://www.itl.nist.gov/div898/handbook/,2009.*

C-746-U Second Quarter 2025 Statistical Analysis Current Background Comparison

Dissolved Oxygen UNITS: mg/L LRGA

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is statistically significant evidence of elevated concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	**X=** 3.109	**S=** 1.521	**CV(1)=** 0.489	**K factor**=** 2.523	**TL(1)=** 6.95E+00	**LL(1)=** N/A
Statistics-Transformed Background Data	**X=** 1.011	**S=** 0.526	**CV(2)=** 0.521	**K factor**=** 2.523	**TL(2)=** 2.34E+00	**LL(2)=** N/A

Because CV(1) is less than or equal to 1, assume normal distribution and continue with statistical analysis utilizing TL(1).

Current Background Data from Upgradient Wells with Transformed Result

Well Number: MW370

Date Collected	Result	LN(Result)
4/24/2023	4.26E+00	1.45E+00
7/25/2023	4.01E+00	1.39E+00
10/11/2023	4.64E+00	1.53E+00
1/24/2024	4.65E+00	1.54E+00
4/10/2024	3.09E+00	1.13E+00
7/30/2024	4.22E+00	1.44E+00
10/10/2024	4.30E+00	1.46E+00
1/28/2025	6.23E+00	1.83E+00

Well Number: MW373

Date Collected	Result	LN(Result)
4/25/2023	2.00E+00	6.93E-01
7/25/2023	1.69E+00	5.25E-01
10/11/2023	2.00E+00	6.93E-01
1/25/2024	1.30E+00	2.62E-01
4/10/2024	2.61E+00	9.59E-01
7/30/2024	1.14E+00	1.31E-01
10/10/2024	1.52E+00	4.19E-01
1/28/2025	2.08E+00	7.32E-01

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW370	Upgradient	Yes	4.54E+00	NO	1.51E+00	N/A

Conclusion of Statistical Analysis on Current Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from current background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.

S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5

TL Upper Tolerance Limit, TL = X + (K * S), LL Lower Tolerance Limit, LL = X - (K * S)

X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,Interim Guidance, EPA, 1989, based on total number of background results - The K-factor for pH to account for a two-sided tolerance interval instead of a one-sided tolerance limit. The K-factor for pH was computed using a formula from NIST/SEMATECH e-Handbook of Statistical Methods, http://www.itl.nist.gov/div898/handbook/,2009.*

C-746-U Second Quarter 2025 Statistical Analysis — Current Background Comparison

Dissolved Solids — **UNITS: mg/L** — **LRGA**

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is statistically significant evidence of elevated concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	**X=** 382.688	**S=** 161.799	**CV(1)=** 0.423	**K factor**=** 2.523	**TL(1)=** 7.91E+02	**LL(1)=** N/A
Statistics-Transformed Background Data	**X=** 5.856	**S=** 0.447	**CV(2)=** 0.076	**K factor**=** 2.523	**TL(2)=** 6.98E+00	**LL(2)=** N/A

Because CV(1) is less than or equal to 1, assume normal distribution and continue with statistical analysis utilizing TL(1).

Current Background Data from Upgradient Wells with Transformed Result

Well Number: MW370

Date Collected	Result	LN(Result)
4/24/2023	2.35E+02	5.46E+00
7/25/2023	2.11E+02	5.35E+00
10/11/2023	2.30E+02	5.44E+00
1/24/2024	2.35E+02	5.46E+00
4/10/2024	2.32E+02	5.45E+00
7/30/2024	2.47E+02	5.51E+00
10/10/2024	2.21E+02	5.40E+00
1/28/2025	2.12E+02	5.36E+00

Well Number: MW373

Date Collected	Result	LN(Result)
4/25/2023	4.72E+02	6.16E+00
7/25/2023	5.14E+02	6.24E+00
10/11/2023	5.29E+02	6.27E+00
1/25/2024	5.36E+02	6.28E+00
4/10/2024	5.50E+02	6.31E+00
7/17/2024	5.85E+02	6.37E+00
10/10/2024	5.52E+02	6.31E+00
1/28/2025	5.62E+02	6.33E+00

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW373	Upgradient	Yes	6.35E+02	NO	6.45E+00	N/A

Conclusion of Statistical Analysis on Current Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from current background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.

S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5

TL Upper Tolerance Limit, TL = X + (K * S), LL Lower Tolerance Limit, LL = X - (K * S)

X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,Interim Guidance, EPA, 1989, based on total number of background results - The K-factor for pH to account for a two-sided tolerance interval instead of a one-sided tolerance limit. The K-factor for pH was computed using a formula from NIST/SEMATECH e-Handbook of Statistical Methods, http://www.itl.nist.gov/div898/handbook/,2009.*

C-746-U Second Quarter 2025 Statistical Analysis — Current Background Comparison

Oxidation-Reduction Potential — UNITS: mV — LRGA

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is statistically significant evidence of elevated concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	**X=** 439.313	**S=** 73.446	**CV(1)=** 0.167	**K factor**=** 2.523	**TL(1)=** 6.25E+02	**LL(1)=** N/A
Statistics-Transformed Background Data	**X=** 6.072	**S=** 0.166	**CV(2)=** 0.027	**K factor**=** 2.523	**TL(2)=** 6.49E+00	**LL(2)=** N/A

Because CV(1) is less than or equal to 1, assume normal distribution and continue with statistical analysis utilizing TL(1).

Current Background Data from Upgradient Wells with Transformed Result

Well Number: MW370

Date Collected	Result	LN(Result)
4/24/2023	4.60E+02	6.13E+00
7/25/2023	3.88E+02	5.96E+00
10/11/2023	3.27E+02	5.79E+00
1/24/2024	5.30E+02	6.27E+00
4/10/2024	3.45E+02	5.84E+00
7/30/2024	4.64E+02	6.14E+00
10/10/2024	4.96E+02	6.21E+00
1/28/2025	6.02E+02	6.40E+00

Well Number: MW373

Date Collected	Result	LN(Result)
4/25/2023	4.57E+02	6.12E+00
7/25/2023	3.84E+02	5.95E+00
10/11/2023	3.57E+02	5.88E+00
1/25/2024	4.93E+02	6.20E+00
4/10/2024	3.83E+02	5.95E+00
7/30/2024	4.37E+02	6.08E+00
10/10/2024	4.78E+02	6.17E+00
1/28/2025	4.28E+02	6.06E+00

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW358	Downgradient	Yes	1.75E+02	NO	5.16E+00	N/A
MW361	Downgradient	Yes	5.07E+02	NO	6.23E+00	N/A
MW364	Downgradient	Yes	4.99E+02	NO	6.21E+00	N/A
MW367	Downgradient	Yes	4.18E+02	NO	6.04E+00	N/A
MW370	Upgradient	Yes	4.04E+02	NO	6.00E+00	N/A
MW373	Upgradient	Yes	4.14E+02	NO	6.03E+00	N/A

Conclusion of Statistical Analysis on Current Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from current background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.

S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5

TL Upper Tolerance Limit, TL = X + (K * S), LL Lower Tolerance Limit, LL = X - (K * S)

X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,Interim Guidance, EPA, 1989, based on total number of background results - The K-factor for pH to account for a two-sided tolerance interval instead of a one-sided tolerance limit. The K-factor for pH was computed using a formula from NIST/SEMATECH e-Handbook of Statistical Methods, http://www.itl.nist.gov/div898/handbook/,2009.*

C-746-U Second Quarter 2025 Statistical Analysis Current Background Comparison

Technetium-99 UNITS: pCi/L LRGA

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is statistically significant evidence of elevated concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	**X=** 11.030	**S=** 10.718	**CV(1)=** 0.972	**K factor**=** 2.523	**TL(1)=** 3.81E+01	**LL(1)=** N/A
Statistics-Transformed Background Data	**X=** 2.560	**S=** 0.664	**CV(2)=** 0.259	**K factor**=** 2.523	**TL(2)=** 3.34E+00	**LL(2)=** N/A

Because CV(1) is less than or equal to 1, assume normal distribution and continue with statistical analysis utilizing TL(1).

#Because the natural log was not possible for all background values, the TL was considered equal to the maximum background value.

Current Background Data from Upgradient Wells with Transformed Result

Well Number: MW370

Date Collected	Result	LN(Result)
4/24/2023	2.83E+01	3.34E+00
7/25/2023	2.03E+01	3.01E+00
10/11/2023	1.86E+01	2.92E+00
1/24/2024	1.03E+01	2.33E+00
4/10/2024	2.29E+01	3.13E+00
7/17/2024	-4.19E+00	#Func!
10/10/2024	2.06E+01	3.03E+00
1/28/2025	1.10E+01	2.40E+00

Well Number: MW373

Date Collected	Result	LN(Result)
4/25/2023	1.40E+01	2.64E+00
7/25/2023	1.33E+01	2.59E+00
10/11/2023	1.47E+01	2.69E+00
1/25/2024	6.70E+00	1.90E+00
4/10/2024	2.12E+00	7.51E-01
7/17/2024	-8.77E+00	#Func!
10/10/2024	1.28E+01	2.55E+00
1/28/2025	-6.18E+00	#Func!

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW361	Downgradient	Yes	4.77E+01	YES	3.86E+00	N/A
MW364	Downgradient	Yes	4.99E+01	YES	3.91E+00	N/A
MW367	Downgradient	Yes	5.60E+01	YES	4.03E+00	N/A

Conclusion of Statistical Analysis on Current Data

The test well(s) listed exceeded the Upper Tolerance Limit, which is evidence of elevated concentration with respect to current background data.

Wells with Exceedances

MW361
MW364
MW367

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.

S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5

TL Upper Tolerance Limit, TL = X + (K * S), LL Lower Tolerance Limit, LL = X - (K * S)

X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,Interim Guidance, EPA, 1989, based on total number of background results - The K-factor for pH to account for a two-sided tolerance interval instead of a one-sided tolerance limit. The K-factor for pH was computed using a formula from NIST/SEMATECH e-Handbook of Statistical Methods, http://www.itl.nist.gov/div898/handbook/,2009.*

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ATTACHMENT D3

STATISTICIAN QUALIFICATION STATEMENT

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FOUR RIVERS
NUCLEAR PARTNERSHIP, LLC

Four Rivers Nuclear Partnership, LLC
5511 Hobbs Road
Kevil, KY 42053
www.fourriversnuclearpartnership.com

July 17, 2025

Mr. Dennis Greene
Four Rivers Nuclear Partnership, LLC
5511 Hobbs Road
Kevil, KY 42053

Dear Mr. Greene:

As an Environmental Scientist, with a bachelor's degree in Earth Sciences/Geology, I have over 30 years of experience in reviewing and assessing laboratory analytical results associated with environmental sampling and investigation activities. For the generation of these statistical analyses, my work was reviewed by a qualified independent technical reviewer with Four Rivers Nuclear Partnership, LLC.

For this project, the statistical analyses conducted on the second quarter 2025 monitoring well data collected from the C-746-S&T and C-746-U Landfills were performed in accordance with guidance provided in the U.S. Environmental Protection Agency guidance document, *EPA Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities, Interim Final Guidance* (1989).

Sincerely,

Bryan Smith

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APPENDIX E

GROUNDWATER FLOW RATE AND DIRECTION

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GROUNDWATER FLOW RATE AND DIRECTION

Determination of groundwater flow rate and direction of flow in the uppermost aquifer whenever the monitoring wells (MWs) are sampled is a requirement of 401 *KAR* 48.300, Section 11. The uppermost aquifer below the C-746-U Landfill is the Regional Gravel Aquifer (RGA). Water level measurements currently are recorded in several wells at the landfill on a quarterly basis. These measurements were used to plot the potentiometric surface of the RGA for the second quarter 2025 and determine groundwater flow rate and direction.

Water levels during this reporting period were measured on April 21, 2025. As shown on Figure E.1, all UCRS wells had sufficient water to permit water level measurement during this reporting period.

The UCRS has a strong vertical hydraulic gradient; therefore, the available UCRS wells screened over different elevations are not sufficient for mapping the potentiometric surface. As shown in Table E.1, the RGA data were converted to elevations to plot the potentiometric surfaces within the Upper Regional Gravel Aquifer (URGA) and Lower Regional Gravel Aquifer (LRGA). (At the request of the Commonwealth of Kentucky, the RGA is differentiated into two zones, the URGA and LRGA.) Based on the potentiometric maps (Figures E.2 and E.3), the hydraulic gradients for the URGA and LRGA at the C-746-U Landfill, as measured along the defined groundwater flow directions, were 3.50×10^{-4} ft/ft and 3.45×10^{-4} ft/ft, respectively. Water level measurements in wells at the C-746-U Landfill and in wells of the surrounding region (MW98, MW100, MW125, MW139, MW165A, MW173, MW193, MW197, and MW200), along with the C-746-S&T Landfill wells, were used to contour the general RGA potentiometric surface (Figure E.4). The hydraulic gradient for the RGA, as a whole, in the vicinity of the C-746-U Landfill was 2.70×10^{-4} ft/ft. The hydraulic gradients are shown in Table E.2.

The average linear groundwater flow velocity (v) is determined by multiplying the hydraulic gradient (i) by the hydraulic conductivity (K) [resulting in the specific discharge (q)] and dividing by the effective porosity (n_e). The RGA hydraulic conductivity values used are reported in the Administrative Application for the New Solid Waste Landfill Permit No. SW07300045NWC1 and range from 4.25×10^2 to 7.25×10^2 ft/day (1.50×10^{-1} to 2.56×10^{-1} cm/s). RGA (both URGA and LRGA) effective porosity is assumed to be 25%. Flow velocities were calculated for the URGA and LRGA using the low and high values for hydraulic conductivity, as shown in the Table E.3.

Regional groundwater flow near the C-746-U Landfill typically trends northeastward toward the Ohio River. As demonstrated on the potentiometric map for April 2025, RGA groundwater flow from the landfill area was directed to the south. This inconsistency appears to be related to flooding on the Ohio River due to historic rainfall events. The Paducah Site and the Jackson Purchase region experienced a significant flood event on the Ohio River beginning on April 1, 2025, and peaking on April 7–17, 2025. High river stage was 333.61 on April 15, 2025, at Paducah, Kentucky (The previous river stage had been 301.04 ft on March 31. 2025). This sustained high river stage exceeded the potentiometric surface of the RGA from the Ohio River all the way back to the Paducah Site. Groundwater was unable to discharge to the Ohio River (because of the high river stage) and the RGA gradient (and groundwater flow direction) reversed for a period of approximately two weeks. The groundwater measurements date of April 21, 2025, took place during this two-week period.

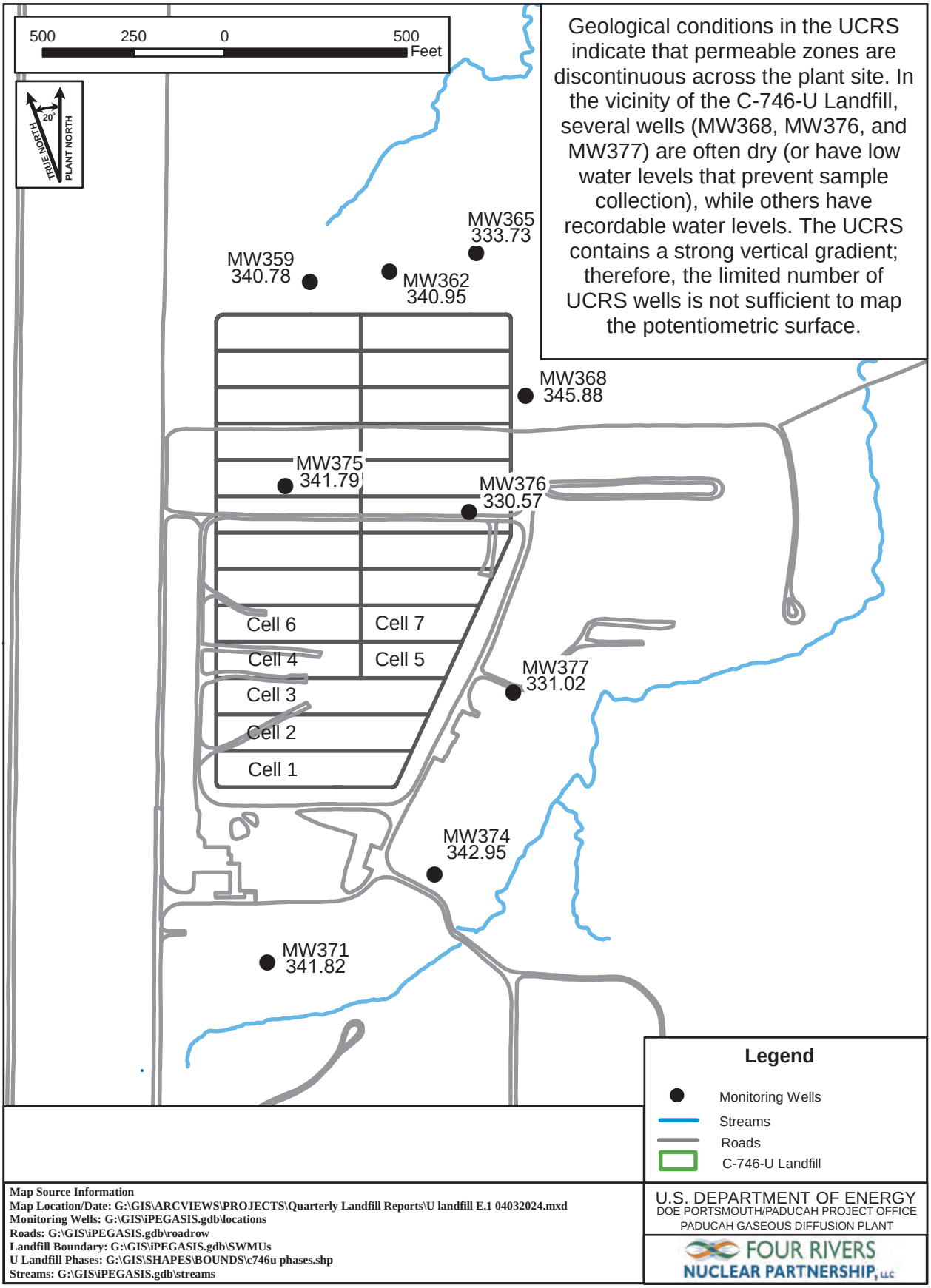

Figure E.1. Potentiometric Measurements of the Upper Continental Recharge System at the C-746-U Landfill, April 21, 2025

Table E.1. C-746-U Landfill Second Quarter 2025 (April) Water Levels

C-746-U Landfill (April 2025) Water Levels										
Date	Time	Well	Formation	Datum Elev (ft amsl)	BP (in Hg)	Delta BP (ft H20)	Raw Data		*Corrected Data	
							DTW (ft)	Elev (ft amsl)	DTW (ft)	Elev (ft amsl)
4/21/2025	12:51	MW357	URGA	368.77	30.06	-0.03	39.76	329.01	39.73	329.04
4/21/2025	12:53	MW358	LRGA	368.92	30.06	-0.03	39.90	329.02	39.87	329.05
4/21/2025	12:52	MW359	UCRS	368.91	30.06	-0.03	28.16	340.75	28.13	340.78
4/21/2025	12:47	MW360	URGA	362.07	30.06	-0.03	32.10	329.97	32.07	330.00
4/21/2025	12:49	MW361	LRGA	361.32	30.06	-0.03	32.40	328.92	32.37	328.95
4/21/2025	12:48	MW362	UCRS	361.85	30.06	-0.03	20.93	340.92	20.90	340.95
4/21/2025	12:37	MW363	URGA	368.56	30.06	-0.03	39.72	328.84	39.69	328.87
4/21/2025	12:39	MW364	LRGA	368.17	30.06	-0.03	39.45	328.72	39.42	328.75
4/21/2025	12:38	MW365	UCRS	368.14	30.06	-0.03	34.44	333.70	34.41	333.73
4/21/2025	12:42	MW366	URGA	368.95	30.06	-0.03	40.50	328.45	40.47	328.48
4/21/2025	12:44	MW367	LRGA	369.37	30.06	-0.03	40.64	328.73	40.61	328.76
4/21/2025	12:43	MW368	UCRS	368.98	30.06	-0.03	23.13	345.85	23.10	345.88
4/21/2025	9:36	MW369	URGA	364.23	30.01	0.02	35.65	328.58	35.67	328.56
4/21/2025	9:38	MW370	LRGA	365.12	30.01	0.02	36.54	328.58	36.56	328.56
4/21/2025	9:37	MW371	UCRS	364.64	30.01	0.02	22.80	341.84	22.82	341.82
4/21/2025	9:32	MW372	URGA	359.42	30.01	0.02	30.90	328.52	30.92	328.50
4/21/2025	9:34	MW373	LRGA	359.73	30.01	0.02	31.20	328.53	31.22	328.51
4/21/2025	9:33	MW374	UCRS	359.44	30.01	0.02	16.47	342.97	16.49	342.95
4/21/2025	9:24	MW375	UCRS	370.36	30.01	0.02	28.55	341.81	28.57	341.79
4/21/2025	9:27	MW376	UCRS	370.39	30.01	0.02	39.80	330.59	39.82	330.57
4/21/2025	9:29	MW377	UCRS	365.74	30.01	0.02	34.70	331.04	34.72	331.02
Reference Barometric Pressure			**30.03**							

Elev = elevation
amsl = above mean sea level
BP = barometric pressure
DTW = depth to water in feet below datum
URGA = Upper Regional Gravel Aquifer
LRGA = Lower Regional Gravel Aquifer
UCRS = Upper Continental Recharge System
*Assumes a barometric efficiency of 1.0

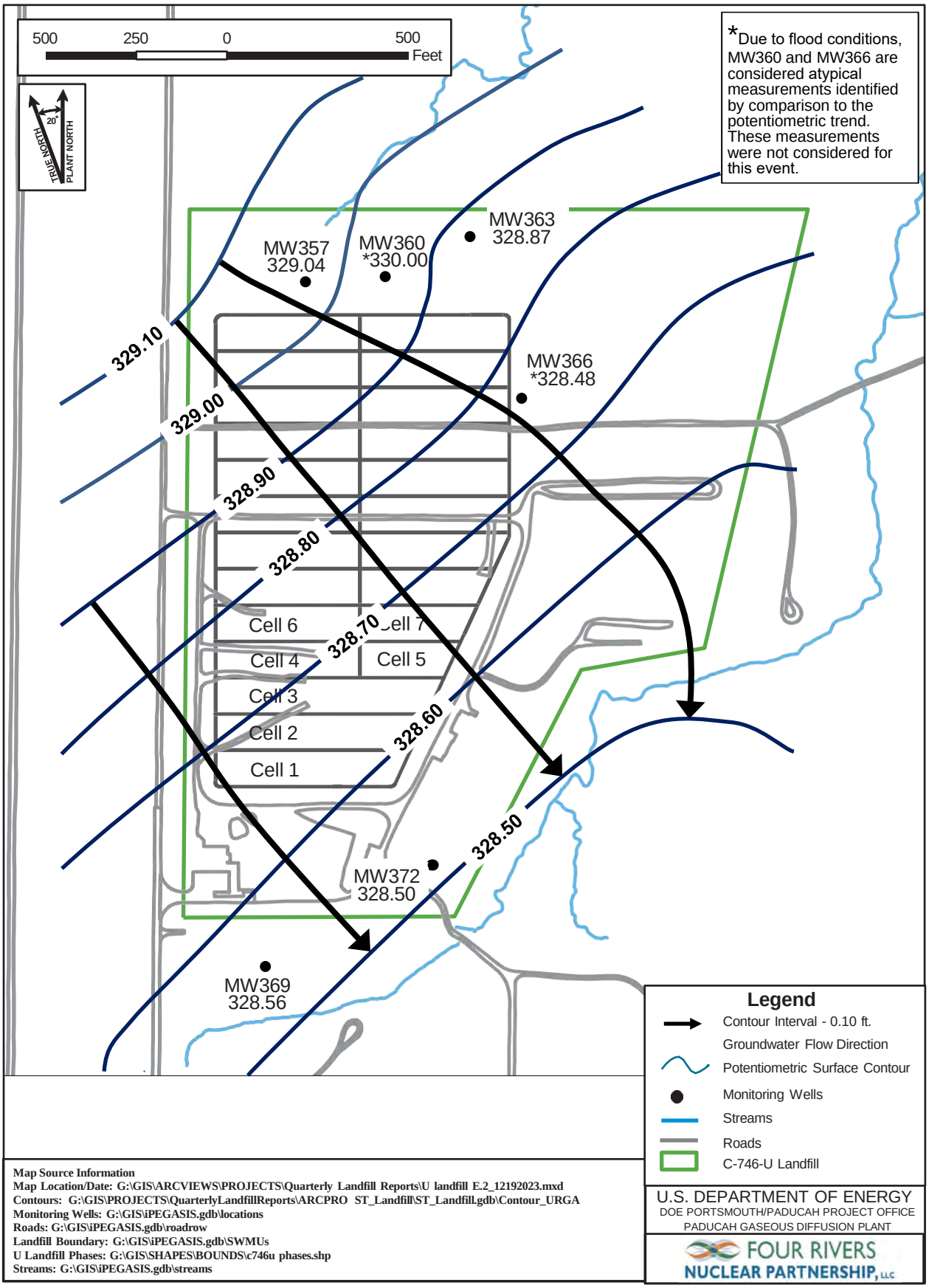

Figure E.2. Potentiometric Surface of the Upper Regional Gravel Aquifer at the C-746-U Landfill, April 21, 2025

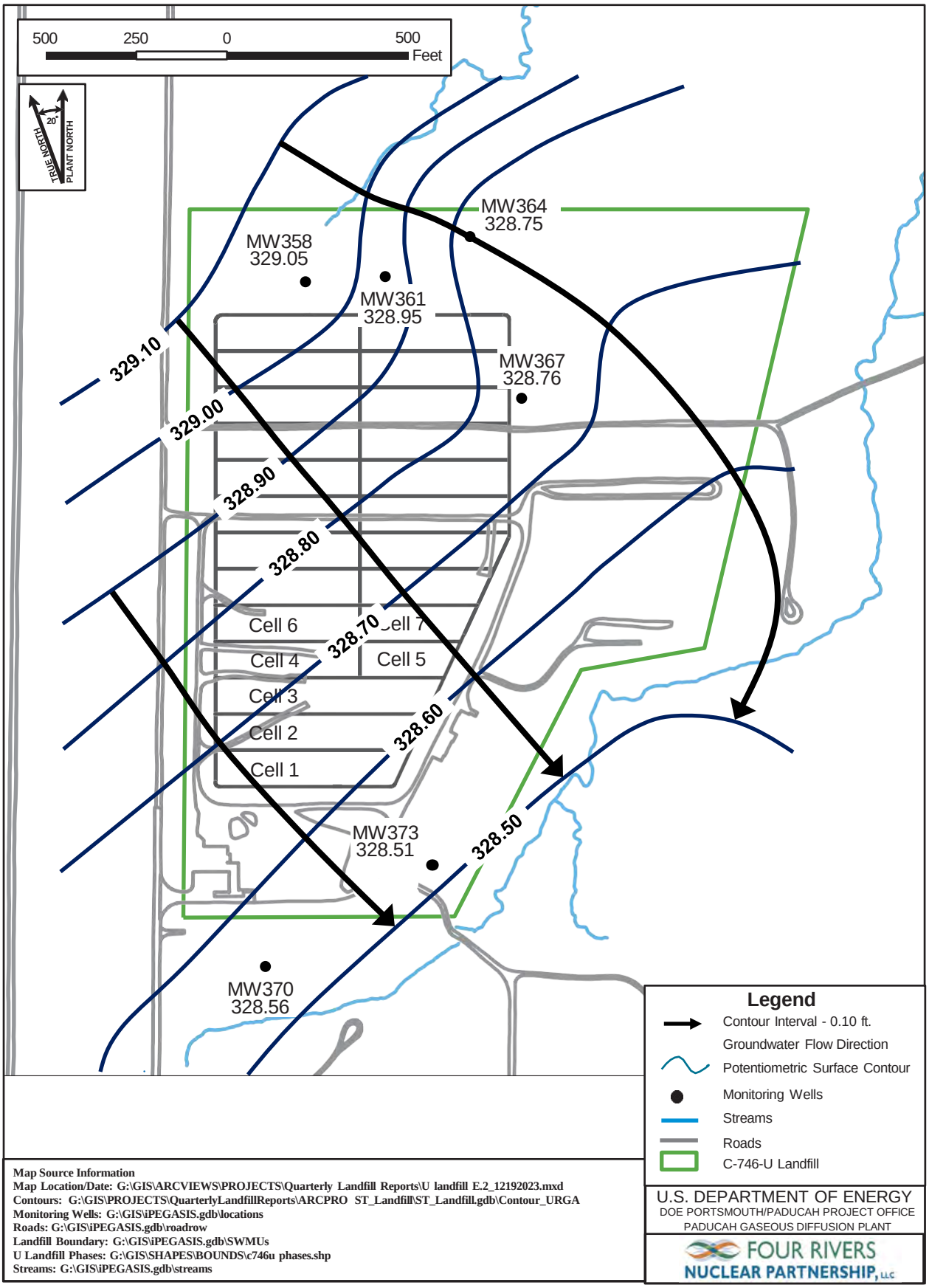

Figure E.3. Potentiometric Surface of the Lower Regional Gravel Aquifer at the C-746-U Landfill, April 21, 2025

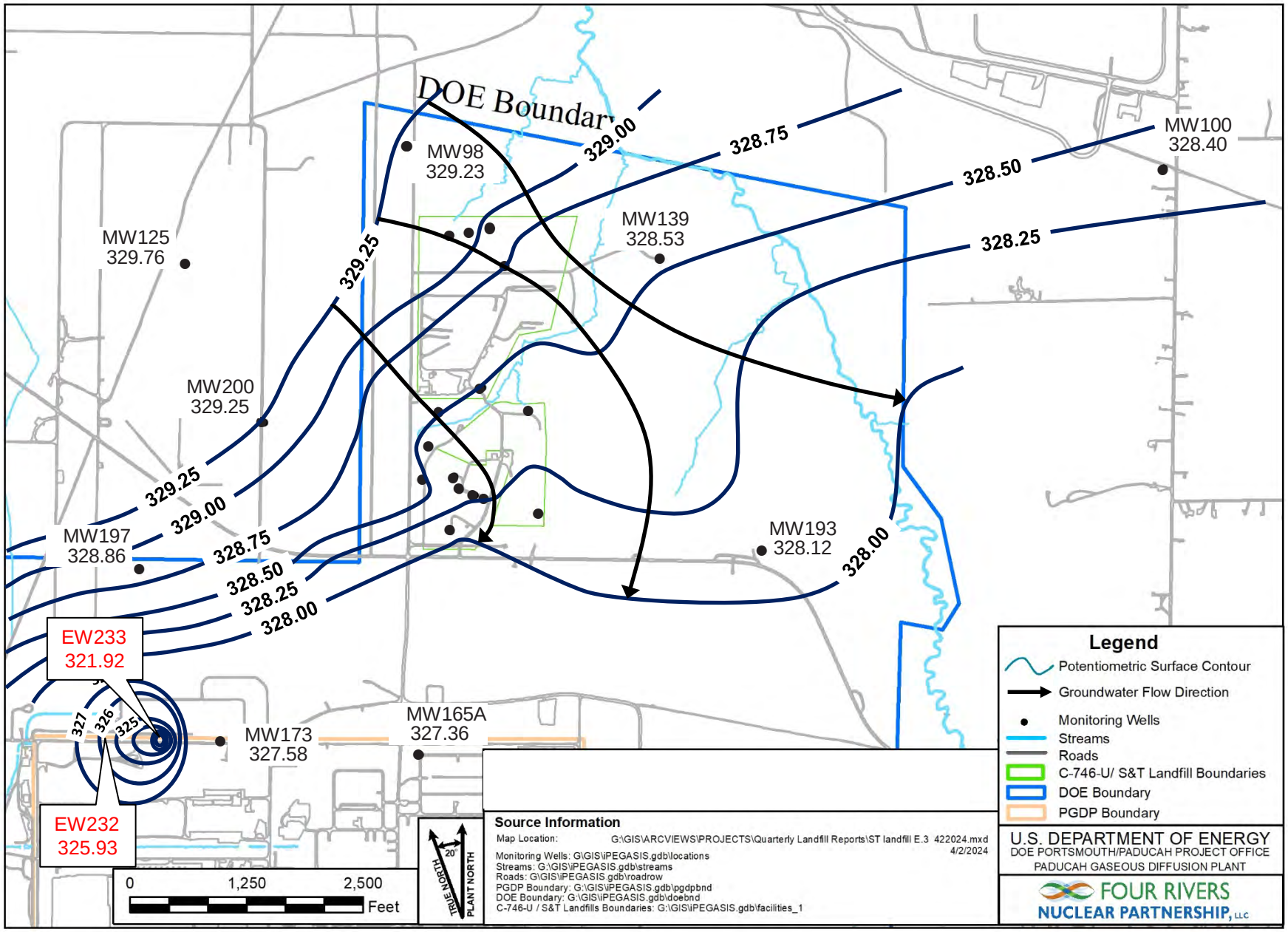

Figure E.4. Vicinity Potentiometric Surface of the Regional Gravel Aquifer, April 21, 2025

Table E.2. C-746-U Landfill Hydraulic Gradients

	ft/ft
Beneath Landfill—Upper RGA	3.50×10^{-4}
Beneath Landfill—Lower RGA	3.45×10^{-4}
Vicinity	2.70×10^{-4}

Table E.3. C-746-U Landfill Groundwater Flow Rate

Hydraulic Conductivity (K)		Specific Discharge (q)		Average Linear Velocity (v)	
ft/day	cm/s	ft/day	cm/s	ft/day	cm/s
Upper RGA					
7.25×10^{2}	2.56×10^{-1}	2.54×10^{-1}	8.97×10^{-5}	1.02	3.59×10^{-4}
4.25×10^{2}	1.50×10^{-1}	1.49×10^{-1}	5.25×10^{-5}	5.96×10^{-1}	2.10×10^{-4}
Lower RGA					
7.25×10^{2}	2.56×10^{-1}	2.50×10^{-1}	8.83×10^{-5}	1.00	3.53×10^{-4}
4.25×10^{2}	1.50×10^{-1}	1.47×10^{-1}	5.17×10^{-5}	5.86×10^{-1}	2.07×10^{-4}
Vicinity					
7.25×10^{2}	2.56×10^{-1}	1.96×10^{-1}	6.91×10^{-5}	7.83×10^{-1}	2.76×10^{-4}
4.25×10^{2}	1.50×10^{-1}	1.15×10^{-1}	4.05×10^{-5}	4.59×10^{-1}	1.62×10^{-4}

Table E.4. Regional Second Quarter 2025 (April) Water Levels

Regional (April 2025) Water Levels										
Date	Time	Well	Aquifer	Datum Elev (ft amsl)	BP (in Hg)	Delta BP (ft H20)	Raw Data		*Corrected Data	
							DTW (ft)	Elev (ft amsl)	DTW (ft)	Elev (ft amsl)
4/21/2025	12:55	MW98	RGA	370.55	30.05	-0.02	41.34	329.21	41.32	329.23
4/21/2025	13:36	MW100	RGA	373.39	30.05	-0.02	45.01	328.38	44.99	328.40
4/21/2025	13:15	MW125	RGA	375.57	30.05	-0.02	45.83	329.74	45.81	329.76
4/21/2025	12:31	MW139	RGA	363.75	30.06	-0.03	35.25	328.50	35.22	328.53
4/21/2025	13:03	MW165A	RGA	380.94	30.05	-0.02	53.60	327.34	53.58	327.36
4/21/2025	14:05	MW173	RGA	373.63	30.05	-0.02	46.07	327.56	46.05	327.58
4/21/2025	13:30	MW193	RGA	368.30	30.05	-0.02	40.20	328.10	40.18	328.12
4/21/2025	13:22	MW197	RGA	368.39	30.05	-0.02	39.55	328.84	39.53	328.86
4/21/2025	13:10	MW200	RGA	378.70	30.05	-0.02	49.47	329.23	49.45	329.25
Reference Barometric Pressure			**30.66**							

Elev = elevation
amsl = above mean sea level
BP = barometric pressure
DTW = depth to water in feet below datum
URGA = Upper Regional Gravel Aquifer
LRGA = Lower Regional Gravel Aquifer
UCRS = Upper Continental Recharge System
*Assumes a barometric efficiency of 1.0

APPENDIX F

NOTIFICATIONS

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NOTIFICATIONS

In accordance with 401 *KAR* 48:300 § 7, *Sampling and Analysis*, the notification for parameters that exceed (or did not exceed) the maximum contaminant level (MCL) has been submitted to the Kentucky Division of Waste Management. There were no MCL exceedances in the current reporting period. The parameters submitted are listed on page F-4. The notification for parameters that do not have MCLs, but had statistically significant increased concentrations relative to historical background concentrations, is provided below.

Statistical Analysis of Parameters Notification

The statistical analyses conducted on the second quarter 2025 groundwater data collected from the C-746-U Landfill monitoring wells were performed in accordance with *Groundwater Monitoring Plan for the Solid Waste Permitted Landfills (C-746-S Residential Landfill, C-746-T Inert Landfill, and C-746-U Contained Landfill) at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky* (LATA Kentucky 2014).

The following are the permit required parameters in 40 *CFR* § 302.4, Appendix A, which had statistically significant, increased concentrations relative to historical background concentrations.

	Parameter	**Monitoring Well**
Upper Continental Recharge System	None	
Upper Regional Gravel Aquifer	None	
Lower Regional Gravel Aquifer	Technetium-99	MW361, MW364, MW367

NOTE: Although technetium-99 is not cited in 40 *CFR* § 302.4, Appendix A, *Sequential CAS Registry Number List of CERCLA Hazardous Substances*, this radionuclide is being reported along with the parameters of this regulation.

6/2/2025

Four Rivers Nuclear Partnership, LLC
PROJECT ENVIRONMENTAL MEASUREMENTS SYSTEM
C-746-U LANDFILL
SOLID WASTE PERMIT NUMBER SW07300014, SW07300015, SW07300045
MAXIMUM CONTAMINANT LEVEL (MCL) EXCEEDANCE REPORT
Quarterly Groundwater Sampling

AKGWA	Station	Analysis	Method	Results	Units	MCL

No exceedances reported.

NOTE 1: MCLs are defined in 401 KAR 47:030.

NOTE 2: MW369, MW370, MW372, and MW373 are down-gradient wells for the C-746-S and C-746-T Landfills and upgradient for the C-746-U Landfill. These wells are sampled with the C-746-U Landfill monitoring well network. These wells are reported on the exceedance reports for C-746-S, C-746-T, and C-746-U.

APPENDIX G

CHART OF MCL AND UTL EXCEEDANCES

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Chart of MCL and Historical UTL Exceedances for the C-746-U Contained Landfill

Groundwater Flow System	UCRS									URGA						LRGA					
Gradient	D	S	S	S	D	D	D	U	U	D	D	D	D	U	U	D	D	D	D	U	U
Monitoring Well	368	375	376	377	359	362	365	371	374	366	360	363	357	369	372	367	361	364	358	370	373
ACETONE																					
Quarter 3, 2002										✱	✱	✱									
Quarter 4, 2002										✱	✱	✱									
Quarter 1, 2003											✱	✱									
Quarter 2, 2003											✱	✱									
Quarter 3, 2003	✱						✱			✱	✱	✱			✱			✱			
Quarter 4, 2003						✱	✱				✱			✱							
Quarter 3, 2004						✱										✱					
Quarter 3, 2005						✱															
Quarter 4, 2005						✱															
ALPHA ACTIVITY																					
Quarter 1, 2004																					■
Quarter 2, 2004						■															
Quarter 3, 2009						■															
ALUMINUM																					
Quarter 3, 2003											✱										
BETA ACTIVITY																					
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Quarter 4, 2008										■					■				■		
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Quarter 3, 2020															■					■	
Quarter 4, 2020																				■	
BROMIDE																					
Quarter 2, 2004													✱								

Chart of MCL and Historical UTL Exceedances for the C-746-U Contained Landfill (Continued)

Groundwater Flow System	UCRS									URGA						LRGA					
Gradient	D	S	S	S	D	D	D	U	U	D	D	D	D	U	U	D	D	D	D	U	U
Monitoring Well	368	375	376	377	359	362	365	371	374	366	360	363	357	369	372	367	361	364	358	370	373
CALCIUM																					
Quarter 3, 2003										*											
Quarter 2, 2005																					*
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Quarter 1, 2011															*						
CHEMICAL OXYGEN DEMAND																					
Quarter 3, 2002										*	*	*	*	*	*						
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Quarter 1, 2006																				*	
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Quarter 2, 2016														*							

Chart of MCL and Historical UTL Exceedances for the C-746-U Contained Landfill (Continued)

Groundwater Flow System	UCRS									URGA						LRGA					
Gradient	D	S	S	S	D	D	D	U	U	D	D	D	D	U	U	D	D	D	D	U	U
Monitoring Well	368	375	376	377	359	362	365	371	374	366	360	363	357	369	372	367	361	364	358	370	373
CONDUCTIVITY																					
Quarter 4, 2002										*											
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CYANIDE																					
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DISSOLVED OXYGEN																					
Quarter 1, 2003					*	*				*											
Quarter 3, 2003					*					*											
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Quarter 2, 2007					*			*													
Quarter 3, 2007					*			*	*												
Quarter 1, 2008					*														*		
Quarter 2, 2008								*	*												
Quarter 3, 2008								*													

Chart of MCL and Historical UTL Exceedances for the C-746-U Contained Landfill (Continued)

Groundwater Flow System	UCRS									URGA						LRGA					
Gradient	D	S	S	S	D	D	D	U	U	D	D	D	D	U	U	D	D	D	D	U	U
Monitoring Well	368	375	376	377	359	362	365	371	374	366	360	363	357	369	372	367	361	364	358	370	373
DISSOLVED OXYGEN																					
Quarter 1, 2009							*														
Quarter 2, 2009					*			*	*												
Quarter 3, 2009						*		*	*												
Quarter 1, 2010					*		*														
Quarter 2, 2010					*	*		*	*											*	*
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Quarter 4, 2010							*					*								*	
Quarter 1, 2011						*															
Quarter 2, 2011					*	*	*	*	*					*							
Quarter 3, 2011						*			*												
Quarter 1, 2012							*		*												
Quarter 2, 2012	*			*	*	*		*	*												
Quarter 3, 2012						*															
Quarter 4, 2012									*												
Quarter 1, 2013						*			*												
Quarter 2, 2013							*		*												
Quarter 3, 2013	*				*		*	*	*												
Quarter 4, 2013									*											*	
Quarter 2, 2014	*				*	*	*	*	*									*			
Quarter 3, 2014	*				*	*	*														
Quarter 4, 2014						*															
Quarter 2, 2015					*	*	*	*													
Quarter 3, 2015					*	*		*													
Quarter 4, 2015	*					*	*														
Quarter 1, 2016	*				*		*														
Quarter 2, 2016	*	*			*	*	*	*	*											*	*
Quarter 3, 2016					*	*	*	*					*								
Quarter 4, 2016						*			*												
Quarter 1, 2017							*						*								
Quarter 2, 2017	*				*	*	*	*													
Quarter 3, 2017	*	*			*	*	*	*										*			
Quarter 4, 2017						*	*											*			
Quarter 1, 2018					*	*	*	*												*	
Quarter 2, 2018					*	*	*	*													
Quarter 3, 2018	*				*	*	*	*													
Quarter 4, 2018						*															
Quarter 1, 2019					*	*	*	*													
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Quarter 2, 2020					*	*		*													
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Quarter 4, 2020	*						*														
Quarter 1, 2021					*		*													*	
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Quarter 3, 2021	*				*	*	*	*												*	
Quarter 4, 2021					*		*	*												*	
Quarter 1, 2022	*				*	*	*	*					*				*			*	
Quarter 2, 2022	*				*	*	*	*	*												
Quarter 3, 2022	*	*			*	*	*	*					*				*			*	
Quarter 4, 2022		*					*	*												*	
Quarter 2, 2023	*				*	*	*	*									*				
Quarter 3, 2023						*	*	*													
Quarter 4, 2023		*				*	*													*	
Quarter 1, 2024																				*	
Quarter 2, 2024	*					*	*	*													
Quarter 3, 2024	*				*	*	*	*									*				
Quarter 4, 2024					*	*	*														
Quarter 1, 2025	*				*	*	*	*	*									*		*	
Quarter 2, 2025		*			*	*	*	*	*	*										*	
DISSOLVED SOLIDS																					
Quarter 4, 2002										*											
Quarter 1, 2003										*											
Quarter 2, 2003										*											
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Quarter 1, 2007															*						
Quarter 2, 2007															*						
Quarter 4, 2008															*						
Quarter 1, 2009															*						
Quarter 2, 2009															*						
Quarter 3, 2009															*						
Quarter 4, 2009															*						
Quarter 1, 2010															*						
Quarter 2, 2010															*						
Quarter 3, 2010															*						
Quarter 4, 2010															*						
Quarter 1, 2011															*						
Quarter 2, 2011															*						
Quarter 3, 2011															*						
Quarter 4, 2011															*						
Quarter 1, 2012														*	*						
Quarter 2, 2012															*						*
Quarter 3, 2012															*						*
Quarter 4, 2012															*						
Quarter 1, 2013															*						
Quarter 2, 2013															*						
Quarter 3, 2013															*						
Quarter 4, 2013															*						

Chart of MCL and Historical UTL Exceedances for the C-746-U Contained Landfill (Continued)

Groundwater Flow System	UCRS									URGA						LRGA					
Gradient	D	S	S	S	D	D	D	U	U	D	D	D	D	U	U	D	D	D	D	U	U
Monitoring Well	368	375	376	377	359	362	365	371	374	366	360	363	357	369	372	367	361	364	358	370	373
DISSOLVED SOLIDS																					
Quarter 1, 2014															✱						
Quarter 2, 2014															✱						
Quarter 4, 2014															✱						
Quarter 2, 2015															✱						
Quarter 3, 2015															✱						
Quarter 4, 2015															✱						
Quarter 1, 2016															✱						
Quarter 3, 2019															✱						
Quarter 4, 2019															✱						
Quarter 1, 2020															✱						
Quarter 2, 2020															✱						
Quarter 3, 2020															✱						
Quarter 4, 2020															✱						
Quarter 1, 2021															✱						
Quarter 2, 2021															✱						
Quarter 3, 2021															✱						
Quarter 4, 2021															✱						
Quarter 1, 2022															✱						
Quarter 2, 2022															✱						
Quarter 3, 2022															✱						
Quarter 4, 2022															✱						
Quarter 1, 2023															✱						
Quarter 2, 2023															✱						
Quarter 3, 2023															✱						
Quarter 1, 2024															✱						
Quarter 2, 2024															✱						
Quarter 3, 2024															✱						
Quarter 4, 2024															✱						
Quarter 1, 2025															✱						
Quarter 2, 2025															✱						✱
IODIDE																					
Quarter 2, 2003																✱					
Quarter 3, 2003	✱									✱											
Quarter 4, 2003							✱														
Quarter 3, 2010						✱		✱					✱				✱				
IODINE-131																					
Quarter 3, 2010																		■			
IODOMETHANE																					
Quarter 4, 2003						✱															
IRON																					
Quarter 4, 2002						✱															
Quarter 3, 2003																✱					
Quarter 4, 2003										✱						✱					
Quarter 1, 2004										✱						✱					
Quarter 2, 2004										✱											
Quarter 3, 2004										✱											
Quarter 3, 2005																✱					
MAGNESIUM																					
Quarter 2, 2005															✱						✱
Quarter 3, 2005						✱															✱
Quarter 2, 2006															✱						✱
Quarter 3, 2006															✱						
Quarter 1, 2007															✱						
Quarter 2, 2008															✱						
Quarter 2, 2009															✱						
Quarter 3, 2009															✱						
Quarter 4, 2009															✱						
Quarter 1, 2010															✱						
Quarter 2, 2010															✱						
Quarter 3, 2010															✱						
Quarter 1, 2011															✱						
Quarter 2, 2011															✱						
Quarter 3, 2011															✱						
Quarter 4, 2011															✱						
Quarter 1, 2012															✱						
Quarter 2, 2012															✱						
Quarter 3, 2012															✱						
Quarter 4, 2012															✱						
Quarter 1, 2013															✱						
Quarter 2, 2013															✱						
Quarter 3, 2013															✱						
Quarter 4, 2013															✱						
Quarter 2, 2014															✱						
Quarter 4, 2014															✱						
Quarter 2, 2015															✱						
Quarter 3, 2015															✱						
Quarter 4, 2015															✱						
Quarter 1, 2016															✱						
Quarter 2, 2016															✱						
Quarter 3, 2016	✱																				
Quarter 4, 2016	✱																				
Quarter 2, 2017	✱																				
Quarter 3, 2017	✱																				
Quarter 1, 2018	✱																				
Quarter 3, 2018	✱																				
Quarter 3, 2019	✱																				
Quarter 4, 2019															✱						
Quarter 2, 2020															✱						
Quarter 4, 2020															✱						
Quarter 1, 2021															✱						
Quarter 2, 2021															✱						
Quarter 3, 2021															✱						
Quarter 4, 2021															✱						
Quarter 1, 2022															✱						
Quarter 2, 2022															✱						
Quarter 3, 2022								✱							✱						
Quarter 1, 2023								✱							✱						
Quarter 2, 2023															✱						
Quarter 1, 2024								✱							✱						
Quarter 2, 2024															✱						
Quarter 3, 2024															✱						
Quarter 4, 2024															✱						
Quarter 1, 2025															✱						✱
Quarter 2, 2025															✱						

Chart of MCL and Historical UTL Exceedances for the C-746-U Contained Landfill (Continued)

Groundwater Flow System	UCRS									URGA						LRGA					
Gradient	D	S	S	S	D	D	D	U	U	D	D	D	D	U	U	D	D	D	D	U	U
Monitoring Well	368	375	376	377	359	362	365	371	374	366	360	363	357	369	372	367	361	364	358	370	373
MANGANESE																					
Quarter 3, 2002										*		*									
Quarter 4, 2002		*				*	*			*		*		*							
Quarter 2, 2003										*		*									
Quarter 3, 2003										*		*	*			*	*	*	*		
Quarter 4, 2003										*	*	*	*				*	*			
Quarter 1, 2004										*	*	*				*	*	*			
Quarter 2, 2004							*			*	*	*						*			
Quarter 3, 2004							*			*	*	*				*					
Quarter 4, 2004										*		*				*					
Quarter 1, 2005										*		*									
Quarter 2, 2005										*		*									
Quarter 3, 2005										*		*				*					
Quarter 4, 2005										*						*					
Quarter 1, 2006										*						*					
Quarter 2, 2006							*			*											
Quarter 3, 2006										*						*					
Quarter 4, 2006										*											
Quarter 1, 2007										*											
Quarter 2, 2007							*			*											
Quarter 3, 2007							*														
Quarter 3, 2008							*														
Quarter 4, 2008							*														
Quarter 3, 2009							*														
Quarter 3, 2011							*														
Quarter 2, 2016														*							
Quarter 3, 2016									*												
Quarter 1, 2022																			*		
NICKEL																					
Quarter 3, 2003										*											
Quarter 1, 2022																			*		
Quarter 4, 2022																			*		
Quarter 1, 2023																			*		
Quarter 2, 2023																			*		
Quarter 4, 2023												*									
Quarter 1, 2024																			*		
NITRATE AS NITROGEN																					
Quarter 4, 2021												■									
OXIDATION-REDUCTION POTENTIAL																					
Quarter 4, 2002																	*		*		
Quarter 1, 2003																	*		*		
Quarter 2, 2003																			*		
Quarter 3, 2003	*																				
Quarter 4, 2003					*																
Quarter 2, 2004													*				*				*
Quarter 3, 2004					*			*					*	*	*		*			*	*
Quarter 4, 2004												*									*
Quarter 1, 2005																	*			*	*
Quarter 2, 2005								*					*				*			*	
Quarter 3, 2005					*	*		*			*	*	*				*		*	*	*
Quarter 4, 2005		*						*					*				*			*	
Quarter 1, 2006					*			*	*								*				*
Quarter 2, 2006					*		*	*					*				*			*	
Quarter 3, 2006					*			*					*				*			*	
Quarter 4, 2006					*		*			*		*	*				*			*	*
Quarter 1, 2007		*			*			*					*				*			*	*
Quarter 2, 2007					*								*				*			*	*
Quarter 3, 2007					*			*									*			*	
Quarter 4, 2007																	*			*	*
Quarter 1, 2008					*			*				*	*						*	*	
Quarter 2, 2008					*			*		*			*	*				*		*	*
Quarter 3, 2008					*		*	*	*	*		*	*	*			*	*	*	*	*
Quarter 4, 2008								*		*		*	*				*	*		*	*
Quarter 1, 2009							*	*		*		*	*					*		*	
Quarter 2, 2009					*		*	*		*		*	*				*	*		*	*
Quarter 3, 2009		*			*	*	*	*	*	*		*	*	*			*	*	*	*	*
Quarter 4, 2009		*				*	*	*	*	*		*	*				*	*	*	*	*
Quarter 1, 2010		*			*		*	*		*			*			*	*	*		*	
Quarter 2, 2010					*	*		*		*	*	*	*			*	*	*	*	*	*
Quarter 3, 2010		*			*	*	*	*	*	*	*		*	*	*		*	*	*	*	*
Quarter 4, 2010		*				*	*	*	*	*	*	*	*	*		*	*	*	*	*	*
Quarter 1, 2011						*		*		*	*	*	*	*		*	*	*	*	*	
Quarter 2, 2011		*			*	*	*	*	*	*	*	*	*	*		*	*	*	*	*	*
Quarter 3, 2011		*				*		*	*	*		*	*	*		*	*	*	*	*	*
Quarter 4, 2011		*				*		*	*	*	*	*	*	*		*	*	*		*	*
Quarter 1, 2012		*				*	*	*	*	*	*	*	*	*		*	*	*	*	*	*
Quarter 2, 2012	*	*		*	*	*	*	*	*	*	*	*	*	*		*	*	*	*	*	*
Quarter 3, 2012		*				*		*		*		*	*	*		*	*	*	*	*	*
Quarter 4, 2012		*				*		*	*	*	*	*	*	*		*	*	*	*	*	*
Quarter 1, 2013		*				*		*	*	*	*	*	*	*		*	*	*		*	
Quarter 2, 2013		*						*	*	*	*	*	*	*	*	*	*	*	*	*	*
Quarter 3, 2013	*	*			*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Quarter 4, 2013		*				*		*	*	*	*	*	*	*	*	*	*	*	*	*	*
Quarter 1, 2014		*						*	*	*	*	*	*	*	*	*	*	*	*	*	*
Quarter 2, 2014	*	*			*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Quarter 3, 2014	*	*			*	*	*	*	*	*		*	*	*		*	*	*	*	*	*
Quarter 4, 2014		*				*		*	*	*		*	*	*		*	*	*	*	*	*
Quarter 1, 2015		*				*		*	*	*	*	*	*	*	*	*	*	*	*	*	*
Quarter 2, 2015	*	*			*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Quarter 3, 2015		*			*	*		*	*	*	*	*	*	*	*	*	*	*	*	*	*
Quarter 4, 2015	*	*				*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*

Chart of MCL and Historical UTL Exceedances for the C-746-U Contained Landfill (Continued)

Groundwater Flow System	UCRS									URGA						LRGA					
Gradient	D	S	S	S	D	D	D	U	U	D	D	D	D	U	U	D	D	D	D	U	U
Monitoring Well	368	375	376	377	359	362	365	371	374	366	360	363	357	369	372	367	361	364	358	370	373
OXIDATION-REDUCTION POTENTIAL																					
Quarter 1, 2016	*	*			*		*	*		*		*	*	*	*	*	*	*	*	*	*
Quarter 2, 2016	*	*			*	*	*	*	*	*		*	*	*	*	*	*	*	*	*	*
Quarter 3, 2016	*	*			*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Quarter 4, 2016	*	*				*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Quarter 1, 2017	*	*				*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Quarter 2, 2017	*	*			*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Quarter 3, 2017	*	*			*	*	*	*	*	*		*	*	*	*	*	*	*	*	*	*
Quarter 4, 2017		*				*	*	*	*	*		*	*	*	*		*	*		*	*
Quarter 1, 2018	*	*			*	*	*	*	*	*		*	*	*	*	*	*	*		*	*
Quarter 2, 2018	*	*			*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Quarter 3, 2018	*	*			*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Quarter 4, 2018		*				*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Quarter 1, 2019	*	*			*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Quarter 2, 2019	*	*			*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Quarter 3, 2019	*	*			*	*	*	*	*	*	*	*	*	*	*	*	*	*		*	*
Quarter 4, 2019	*	*			*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Quarter 1, 2020	*	*			*	*	*	*	*	*	*	*	*	*	*	*	*	*		*	*
Quarter 2, 2020	*	*			*	*	*	*	*	*	*	*	*	*	*	*	*	*		*	*
Quarter 3, 2020	*	*			*	*	*	*	*	*	*	*	*	*	*	*	*	*		*	*
Quarter 4, 2020	*	*				*	*	*	*	*	*		*	*	*	*	*	*		*	*
Quarter 1, 2021	*	*			*	*	*	*		*	*	*	*	*	*	*	*	*		*	*
Quarter 2, 2021	*	*			*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Quarter 3, 2021	*	*			*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Quarter 4, 2021	*	*			*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Quarter 1, 2022	*	*			*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Quarter 2, 2022	*	*			*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Quarter 3, 2022	*	*			*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Quarter 4, 2022		*				*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Quarter 1, 2023		*				*		*	*	*	*	*	*	*	*	*	*	*		*	*
Quarter 2, 2023	*	*			*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Quarter 3, 2023		*				*	*	*	*	*	*	*	*	*	*	*	*	*		*	*
Quarter 4, 2023		*				*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Quarter 1, 2024		*				*		*	*	*	*	*	*	*	*	*	*	*	*	*	*
Quarter 2, 2024	*	*				*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Quarter 3, 2024	*	*			*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Quarter 4, 2024		*			*	*	*	*	*	*	*	*		*	*	*	*	*	*	*	*
Quarter 1, 2025	*	*			*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Quarter 2, 2025	*	*			*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
PCB, TOTAL																					
Quarter 4, 2003																	*				
Quarter 3, 2004												*									
Quarter 3, 2005							*														
Quarter 2, 2006							*														
Quarter 3, 2006							*														
Quarter 1, 2007							*														
Quarter 2, 2007							*														
Quarter 3, 2007							*														
Quarter 1, 2008							*														
Quarter 2, 2008							*														
Quarter 4, 2008							*														
Quarter 3, 2009							*														
Quarter 1, 2010							*														
Quarter 2, 2010							*														
Quarter 4, 2010							*														
PCB-1016																					
Quarter 3, 2004												*									
Quarter 2, 2006							*					*									
Quarter 1, 2007							*														
Quarter 2, 2007							*														
Quarter 3, 2007							*														
Quarter 2, 2008							*														
Quarter 4, 2008							*														
Quarter 3, 2009							*														
Quarter 1, 2010							*														
Quarter 2, 2010							*														
Quarter 4, 2010							*														
PCB-1242																					
Quarter 3, 2006							*					*									
Quarter 4, 2006										*											
Quarter 1, 2008							*														
Quarter 2, 2012							*														
PCB-1248																					
Quarter 2, 2008							*														
PCB-1260																					
Quarter 2, 2006							*														
pH																					
Quarter 3, 2002										*											
Quarter 4, 2002										*											
Quarter 1, 2003										*											
Quarter 2, 2003										*											
Quarter 3, 2003	*						*			*											
Quarter 4, 2003							*									*					
Quarter 1, 2004							*									*					
Quarter 3, 2005						*												*	*		
Quarter 4, 2005						*													*		
Quarter 3, 2006																*					
Quarter 2, 2011														*							
Quarter 3, 2011														*							
Quarter 4, 2011														*							
Quarter 1, 2012																*	*				
Quarter 2, 2012												*									
Quarter 1, 2013										*		*				*					
Quarter 3, 2015																	*				
Quarter 2, 2016																				*	*
Quarter 3, 2016																				*	
Quarter 2, 2017																	*				

Chart of MCL and Historical UTL Exceedances for the C-746-U Contained Landfill (Continued)

Groundwater Flow System	UCRS									URGA						LRGA					
Gradient	D	S	S	S	D	D	D	U	U	D	D	D	D	U	U	D	D	D	D	U	U
Monitoring Well	368	375	376	377	359	362	365	371	374	366	360	363	357	369	372	367	361	364	358	370	373
pH																					
Quarter 3, 2018					✱					✱		✱					✱	✱	✱		
Quarter 4, 2018																✱		✱			
Quarter 3, 2019																✱					
Quarter 1, 2021																✱		✱		✱	
Quarter 3, 2021																					✱
Quarter 4, 2021																✱					✱
Quarter 1, 2025																✱					
POTASSIUM																					
Quarter 1, 2014																✱					
RADIUM-228																					
Quarter 2, 2005														■							
Quarter 4, 2005						■						■						■			
SELENIUM																					
Quarter 4, 2003									■												
SODIUM																					
Quarter 3, 2002										✱	✱		✱								
Quarter 4, 2002										✱	✱			✱							
Quarter 1, 2003										✱											
Quarter 2, 2003										✱	✱										
Quarter 3, 2003											✱										
Quarter 1, 2007											✱										
Quarter 1, 2012														✱							
Quarter 1, 2014															✱						
Quarter 3, 2014											✱										
Quarter 4, 2014											✱										
Quarter 4, 2015											✱										
Quarter 1, 2016											✱										
Quarter 2, 2016											✱										
Quarter 3, 2016											✱										
Quarter 4, 2016											✱										
Quarter 1, 2017											✱										
Quarter 2, 2017											✱										
Quarter 3, 2017											✱										
Quarter 4, 2017											✱										
Quarter 1, 2018											✱										
Quarter 3, 2018											✱										
STRONTIUM-90																					
Quarter 4, 2008							■														
SULFATE																					
Quarter 1, 2003							✱														
Quarter 2, 2003						✱	✱														
Quarter 3, 2003	✱					✱															
Quarter 4, 2003					✱		✱														
Quarter 1, 2004					✱	✱	✱														
Quarter 2, 2004					✱	✱	✱														
Quarter 3, 2004					✱	✱	✱														
Quarter 1, 2005					✱	✱			✱												
Quarter 2, 2005					✱		✱		✱						✱						
Quarter 3, 2005					✱	✱	✱														
Quarter 4, 2005															✱						
Quarter 1, 2006					✱				✱												
Quarter 2, 2006						✱	✱		✱						✱						
Quarter 3, 2006							✱														
Quarter 1, 2007							✱														
Quarter 2, 2007							✱														
Quarter 3, 2007							✱														
Quarter 4, 2007		✱																			
Quarter 1, 2008		✱			✱		✱		✱												
Quarter 2, 2008		✱			✱	✱	✱														
Quarter 3, 2008		✱			✱	✱	✱														
Quarter 4, 2008		✱				✱	✱														
Quarter 1, 2009		✱					✱														
Quarter 2, 2009		✱			✱	✱	✱														
Quarter 3, 2009		✱			✱	✱	✱								✱						
Quarter 4, 2009		✱			✱	✱									✱						
Quarter 1, 2010		✱			✱	✱	✱								✱						
Quarter 2, 2010		✱			✱	✱	✱								✱						
Quarter 3, 2010		✱			✱	✱	✱								✱						
Quarter 4, 2010		✱				✱	✱								✱						
Quarter 1, 2011		✱																			
Quarter 2, 2011		✱			✱	✱	✱								✱						
Quarter 3, 2011		✱				✱	✱	✱							✱						
Quarter 4, 2011		✱				✱									✱						
Quarter 1, 2012		✱					✱	✱							✱						
Quarter 2, 2012	✱	✱		✱	✱	✱	✱	✱	✱						✱						
Quarter 3, 2012		✱				✱									✱						
Quarter 4, 2012		✱													✱						
Quarter 1, 2013		✱				✱									✱						
Quarter 2, 2013		✱													✱						
Quarter 3, 2013	✱	✱		✱	✱	✱	✱								✱						
Quarter 4, 2013		✱													✱						
Quarter 1, 2014		✱													✱						
Quarter 2, 2014	✱	✱			✱		✱	✱							✱						
Quarter 3, 2014	✱	✱			✱	✱	✱	✱							✱						
Quarter 4, 2014		✱				✱															
Quarter 1, 2015		✱																			

Chart of MCL and Historical UTL Exceedances for the C-746-U Contained Landfill (Continued)

Groundwater Flow System	UCRS									URGA						LRGA					
Gradient	D	S	S	S	D	D	D	U	U	D	D	D	D	U	U	D	D	D	D	U	U
Monitoring Well	368	375	376	377	359	362	365	371	374	366	360	363	357	369	372	367	361	364	358	370	373
SULFATE																					
Quarter 2, 2015	*	*			*		*								*						
Quarter 3, 2015		*			*	*		*							*						
Quarter 4, 2015	*	*				*	*	*													
Quarter 1, 2016	*	*			*	*	*														
Quarter 2, 2016	*	*			*	*	*														
Quarter 3, 2016	*	*			*	*	*	*													
Quarter 4, 2016	*	*				*	*	*													
Quarter 1, 2017	*	*				*	*														
Quarter 2, 2017	*	*			*	*	*														
Quarter 3, 2017	*	*			*	*	*														
Quarter 4, 2017		*				*	*														
Quarter 1, 2018	*	*			*	*	*														
Quarter 2, 2018	*	*			*	*	*	*													
Quarter 3, 2018	*	*			*	*	*	*													
Quarter 4, 2018		*				*	*	*													
Quarter 1, 2019	*	*			*	*	*														
Quarter 2, 2019	*	*			*	*	*	*													
Quarter 3, 2019	*	*			*	*	*	*													
Quarter 4, 2019	*	*			*	*	*	*													
Quarter 1, 2020	*	*			*	*	*	*													
Quarter 2, 2020	*	*			*	*	*	*													
Quarter 3, 2020	*	*			*	*	*	*													
Quarter 4, 2020	*	*				*	*	*													
Quarter 1, 2021	*	*			*	*	*	*							*						
Quarter 2, 2021	*	*			*	*	*	*							*						
Quarter 3, 2021	*	*			*	*	*	*							*						
Quarter 4, 2021	*	*			*	*	*								*						
Quarter 1, 2022	*	*			*	*	*								*						
Quarter 2, 2022	*	*			*	*	*	*	*						*						
Quarter 3, 2022	*	*			*	*	*	*	*						*						
Quarter 4, 2022		*				*	*														
Quarter 1, 2023		*				*									*						
Quarter 2, 2023	*	*			*	*	*	*	*						*						
Quarter 3, 2023		*				*	*	*	*						*						
Quarter 4, 2023		*				*	*	*							*						
Quarter 1, 2024		*							*						*						
Quarter 2, 2024	*	*				*	*		*						*						
Quarter 3, 2024	*	*			*	*	*		*						*						
Quarter 4, 2024		*			*	*	*		*						*						
Quarter 1, 2025	*	*			*	*	*		*						*						
Quarter 2, 2025	*	*			*	*	*	*	*						*						
TECHNETIUM-99																					
Quarter 4, 2002																	*	*	*		
Quarter 2, 2003							*						*			*	*	*	*		*
Quarter 3, 2003																	*				
Quarter 4, 2003																	*				*
Quarter 1, 2004															*		*				*
Quarter 2, 2004															*						*
Quarter 3, 2004															*						*
Quarter 4, 2004															*		*				*
Quarter 3, 2005																	*				
Quarter 1, 2006															*						*
Quarter 2, 2006		*							*												*
Quarter 3, 2006																					*
Quarter 4, 2006															*						*
Quarter 1, 2007																					*
Quarter 2, 2007													*		*					*	
Quarter 3, 2007															*		*	*			
Quarter 4, 2007										*					*				*		*
Quarter 1, 2008															*					*	*
Quarter 2, 2008							*	*						*		*			*		
Quarter 3, 2008															*						
Quarter 4, 2008										*							*		*		
Quarter 1, 2009										*											
Quarter 2, 2009																		*			
Quarter 3, 2009								*		*					*						
Quarter 4, 2009										*					*			*	*		
Quarter 2, 2010										*						*	*	*	*		
Quarter 3, 2010										*					*						
Quarter 4, 2010																		*			
Quarter 1, 2011		*								*							*				
Quarter 2, 2011																*	*	*	*		
Quarter 1, 2012																	*	*			
Quarter 2, 2012								*										*			
Quarter 3, 2012																	*	*			
Quarter 4, 2012															*			*			*
Quarter 1, 2013																		*			*
Quarter 2, 2013																					*
Quarter 3, 2013										*											*
Quarter 4, 2013															*		*	*			*
Quarter 1, 2014															*		*	*			
Quarter 2, 2014																		*			
Quarter 3, 2014																	*	*	*		
Quarter 4, 2014															*						
Quarter 1, 2015															*			*			
Quarter 2, 2015																*					
Quarter 3, 2015																		*	*	*	
Quarter 4, 2015															*		*			*	
Quarter 1, 2016																*	*	*	*		*
Quarter 2, 2016																*	*	*	*	*	
Quarter 3, 2016																	*		*	*	
Quarter 4, 2016										*				*			*	*			
Quarter 1, 2017																	*		*	*	
Quarter 2, 2017																				*	
Quarter 3, 2017																		*		*	
Quarter 4, 2017														*	*		*	*		*	
Quarter 1, 2018																				*	

Chart of MCL and Historical UTL Exceedances for the C-746-U Contained Landfill (Continued)

Groundwater Flow System	UCRS									URGA						LRGA					
Gradient	D	S	S	S	D	D	D	U	U	D	D	D	D	U	U	D	D	D	D	U	U
Monitoring Well	368	375	376	377	359	362	365	371	374	366	360	363	357	369	372	367	361	364	358	370	373
TECHNETIUM-99																					
Quarter 2, 2018														✱		✱				✱	
Quarter 3, 2018															✱					✱	
Quarter 4, 2018															✱		✱	✱	✱	✱	
Quarter 1, 2019																✱				✱	
Quarter 2, 2019														✱						✱	
Quarter 3, 2019															✱			✱		✱	
Quarter 4, 2019															✱		✱	✱		✱	
Quarter 1, 2020															✱		✱	✱		✱	
Quarter 2, 2020																✱		✱	✱	✱	
Quarter 3, 2020															✱		✱	✱	✱	✱	
Quarter 4, 2020															✱		✱	✱		✱	
Quarter 1, 2021																				✱	
Quarter 2, 2021										✱						✱	✱	✱	✱		
Quarter 3, 2021														✱	✱			✱			
Quarter 4, 2021																	✱	✱			
Quarter 1, 2022										✱							✱	✱			
Quarter 2, 2022										✱					✱			✱			
Quarter 3, 2022															✱		✱	✱			
Quarter 4, 2022															✱						
Quarter 1, 2023										✱					✱		✱	✱			
Quarter 2, 2023										✱								✱			
Quarter 3, 2023																	✱	✱	✱		
Quarter 4, 2023														✱			✱	✱			
Quarter 1, 2024																	✱	✱			
Quarter 2, 2024														✱							
Quarter 3, 2024										✱								✱			
Quarter 4, 2024										✱				✱	✱			✱			
Quarter 1, 2025										✱							✱	✱			
Quarter 2, 2025																✱	✱	✱			
THORIUM-230																					
Quarter 4, 2015																✱					
Quarter 2, 2016										✱											
Quarter 4, 2016	✱											✱				✱			✱		
Quarter 4, 2017													✱								
Quarter 2, 2018										✱			✱								
Quarter 2, 2021									✱												
Quarter 1, 2025					✱																
TOLUENE																					
Quarter 2, 2014										✱				✱							
TOTAL ORGANIC CARBON																					
Quarter 3, 2002										✱	✱	✱		✱							✱
Quarter 4, 2002										✱	✱			✱							
Quarter 1, 2003											✱										
Quarter 3, 2003	✱									✱	✱					✱					
Quarter 4, 2003										✱	✱										
Quarter 1, 2004											✱										
Quarter 3, 2005						✱				✱					✱	✱			✱		
Quarter 4, 2005						✱												✱	✱		
Quarter 1, 2006																			✱		
TOTAL ORGANIC HALIDES																					
Quarter 4, 2002										✱											
Quarter 1, 2003										✱											
Quarter 2, 2003										✱											
Quarter 1, 2004																✱					
TRICHLOROETHENE																					
Quarter 3, 2002														■						■	
Quarter 4, 2002															■					■	
Quarter 1, 2003																				■	■
Quarter 2, 2003															■					■	
Quarter 3, 2003							■													■	■
Quarter 4, 2003															■					■	■
Quarter 1, 2004															■					■	■
Quarter 2, 2004															■					■	■
Quarter 3, 2004															■					■	■
Quarter 4, 2004															■					■	■
Quarter 1, 2005															■					■	■
Quarter 2, 2005															■					■	■
Quarter 3, 2005															■					■	■
Quarter 4, 2005															■					■	■
Quarter 1, 2006															■					■	■
Quarter 2, 2006															■					■	■
Quarter 3, 2006															■					■	■
Quarter 4, 2006															■						■
Quarter 1, 2007															■					■	■
Quarter 2, 2007															■						■
Quarter 3, 2007															■						■
Quarter 4, 2007															■						■
Quarter 1, 2008															■						■
Quarter 2, 2008															■				■		■
Quarter 3, 2008															■						■
Quarter 4, 2008															■						■
Quarter 1, 2009															■						■
Quarter 2, 2009															■						■
Quarter 3, 2009															■						■
Quarter 4, 2009						■	■				■		■	■	■		■				■
Quarter 1, 2010													■		■						■
Quarter 2, 2010													■		■						■
Quarter 3, 2010													■		■						■
Quarter 4, 2010													■		■						■
Quarter 2, 2011															■				■		■
Quarter 3, 2011													■		■				■		■
Quarter 4, 2011													■		■						■
Quarter 1, 2012													■		■		■		▨		■
Quarter 2, 2012															■						■

Chart of MCL and Historical UTL Exceedances for the C-746-U Contained Landfill (Continued)

Groundwater Flow System	UCRS									URGA						LRGA					
Gradient	D	S	S	S	D	D	D	U	U	D	D	D	D	U	U	D	D	D	D	U	U
Monitoring Well	368	375	376	377	359	362	365	371	374	366	360	363	357	369	372	367	361	364	358	370	373
TRICHLOROETHENE																					
Quarter 3, 2012															■						■
Quarter 4, 2012														■	■						■
Quarter 1, 2013													■		■						■
Quarter 2, 2013													■		■		■		■		■
Quarter 3, 2013																	■	■			
Quarter 3, 2013													■		■						■
Quarter 4, 2013													■		■				■		■
Quarter 1, 2014													■		■				■		■
Quarter 2, 2014															■		■		■		
Quarter 3, 2014													■		■				■		■
Quarter 4, 2014													■		■				■		■
Quarter 1, 2015													■		■						■
Quarter 2, 2015					■										■				■		■
Quarter 3, 2015													■		■		■				■
Quarter 4, 2015													■		■						■
Quarter 1, 2016													■		■		■	■			■
Quarter 2, 2016												■	■		■		■		■		■
Quarter 3, 2016													■		■		■	■			■
Quarter 4, 2016													■		■		■	■	■		■
Quarter 1, 2017													■		■			■			■
Quarter 2, 2017															■		■	■			■
Quarter 3, 2017															■		■	■			■
Quarter 4, 2017										■			■	■			■	■			■
Quarter 1, 2018															■		■	■			■
Quarter 2, 2018													■		■	■	■	■	■		■
Quarter 3, 2018										■					■		■	■			■
Quarter 4, 2018										■			■		■		■	■	■		■
Quarter 1, 2019										■					■	■	■	■			
Quarter 2, 2019										■						■	■	■			■
Quarter 3, 2019																	■	■	■		
Quarter 4, 2019																	■	■			
Quarter 1, 2020															■		■	■			
Quarter 2, 2020																■		■			
Quarter 3, 2020																	■	■			
Quarter 4, 2020																	■	■			
Quarter 1, 2021																	■	■			
Quarter 2, 2021																		■			■
Quarter 3, 2021																	■	■			
Quarter 4, 2021																	■	■			■
Quarter 1, 2022																	■				■
Quarter 2, 2022																	■				■
Quarter 3, 2022																	■				
Quarter 1, 2023													■	■	■		■				■
Quarter 2, 2023															■						
Quarter 3, 2023											■		■		■					■	
TURBIDITY																					
Quarter 1, 2003										✱											
URANIUM																					
Quarter 4, 2002		✱			✱	✱	✱			✱	✱	✱	✱	✱	✱	✱		✱	✱	✱	✱
Quarter 4, 2006																					✱
ZINC																					
Quarter 3, 2005																			✱		

✱ Statistical test results indicate an elevated concentration (i.e., a statistical exceedance).

■ MCL Exceedance

■ Previously reported as an MCL exceedance; however, result was equal to MCL

UCRS Upper Continental Recharge System

URGA Upper Regional Gravel Aquifer

LRGA Lower Regional Gravel Aquifer

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APPENDIX H

METHANE MONITORING DATA

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CP3-WM-0017-F04 - C-746-U LANDFILL METHANE MONITORING REPORT

PADUCAH GASEOUS DIFFUSION PLANT

Permit #: 073-00045

McCracken County, Kentucky

Date:	May 21, 2025	Time:	1336	Monitor:	Michael Hideg

Weather Conditions: Mostly sunny, Approximately 76º, humidity: 40%

Monitoring Equipment: Multi RAE – Serial # 11881

Monitoring Location		Reading (% LEL)
C-746-U1	Checked at close to ground level	0
C-746-U2	Checked at close to ground level	0
C-746-U-T-14	Checked at close to ground level	0
C-746-U15	Checked at close to ground level	0
MG1	Checked inside casing	0
MG2	Checked inside casing	0
MG3	Checked inside casing	0
MG4	Checked inside casing	0
Suspect or Problem Areas	No problems noted	None

Remarks: N/A

Performed by: MICHAEL HIDEG (Affiliate) Digitally signed by MICHAEL HIDEG (Affiliate) Date: 2025.05.29 09:26:35 -05'00'

Signature **Date**

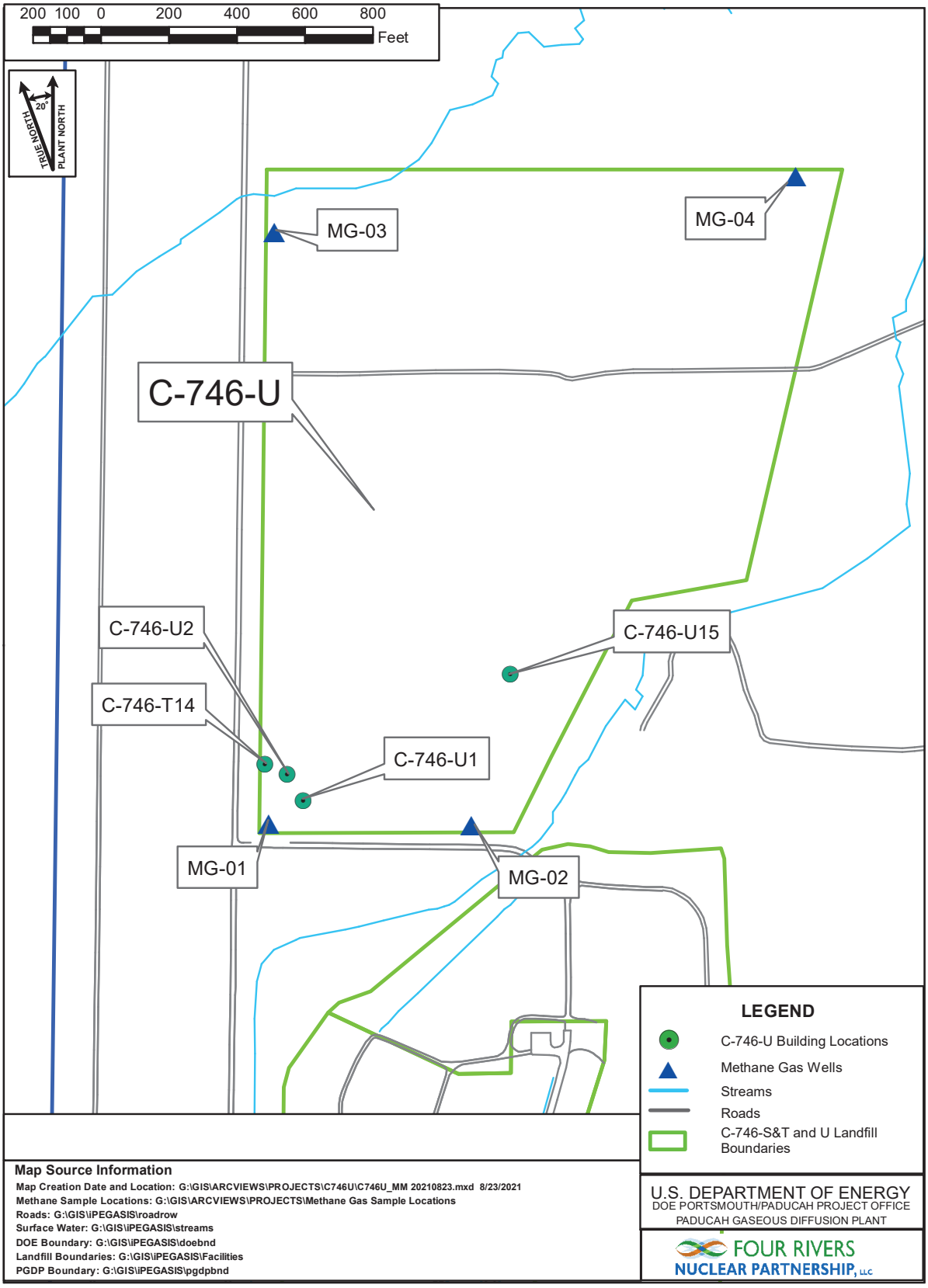

Figure H.1. C-746-U Landfill Methane Monitoring Locations

APPENDIX I

SURFACE WATER ANALYSES AND LABORATORY REPORTS

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Paducah OREIS
SURFACE WATER MONITORING REPORT

Facility: C-746-U Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045

Sampling Point: L150 INSTREAM **Period:** 2nd Quarter 2025

SAMPLE ID: L150US3-25 Sample Type: REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
Chloride	W	41	mg/L	2	4/3/2025			EPA-300.0	X
Sulfate	W	27.6	mg/L	4	4/3/2025			EPA-300.0	X
Conductivity		547	µmhos/cm		4/3/2025			FS	X
pH		7.69	Std Unit		4/3/2025			FS	X
Iron		0.495	mg/L	0.1	4/3/2025			EPA-200.8	X
Sodium		32.9	mg/L	0.25	4/3/2025			EPA-200.8	X
Uranium		0.000862	mg/L	0.0002	4/3/2025			EPA-200.8	X
Alpha activity	U	0.213	pCi/L	8.02	4/3/2025	3.41	3.42	SW846-9310	X
Beta activity	U	5.69	pCi/L	14.6	4/3/2025	8.53	8.59	SW846-9310	X
Dissolved Solids		290	mg/L	10	4/3/2025			EPA-160.1	X
Suspended Solids	*	74.7	mg/L	4.55	4/3/2025			EPA-160.2	X
Chemical Oxygen Demand (COD)		32.3	mg/L	20	4/3/2025			EPA-410.4	X
Total Solids		330	mg/L	10	4/3/2025			SM-2540B	X
Total Organic Carbon (TOC)		10.3	mg/L	1	4/3/2025			SW846-9060A	X

Paducah OREIS
SURFACE WATER MONITORING REPORT

Facility: C-746-U Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045

Sampling Point: L154 INSTREAM **Period:** 2nd Quarter 2025

SAMPLE ID: L154US3-25 Sample Type: REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
Chloride	W	5.09	mg/L	0.2	4/3/2025			EPA-300.0	X
Sulfate	W	1.56	mg/L	0.4	4/3/2025			EPA-300.0	X
Conductivity		248	µmhos/cm		4/3/2025			FS	X
pH		7.14	Std Unit		4/3/2025			FS	X
Iron		0.784	mg/L	0.1	4/3/2025			EPA-200.8	X
Sodium		4.32	mg/L	0.25	4/3/2025			EPA-200.8	X
Uranium		0.000828	mg/L	0.0002	4/3/2025			EPA-200.8	X
Alpha activity	U	1.86	pCi/L	6.39	4/3/2025	3.51	3.52	SW846-9310	X
Beta activity		14.1	pCi/L	13.1	4/3/2025	8.33	8.66	SW846-9310	X
Dissolved Solids		130	mg/L	10	4/3/2025			EPA-160.1	X
Suspended Solids	*	36	mg/L	3.85	4/3/2025			EPA-160.2	X
Chemical Oxygen Demand (COD)		41.7	mg/L	20	4/3/2025			EPA-410.4	X
Total Solids		165	mg/L	10	4/3/2025			SM-2540B	X
Total Organic Carbon (TOC)		16.1	mg/L	1	4/3/2025			SW846-9060A	X

Paducah OREIS
SURFACE WATER MONITORING REPORT

Facility: C-746-U Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045

Sampling Point: L351 DOWNSTREAM **Period:** 2nd Quarter 2025

SAMPLE ID: L351US3-25 Sample Type: REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
Chloride	W	5.27	mg/L	0.2	4/3/2025			EPA-300.0	X
Sulfate	W	3.92	mg/L	0.4	4/3/2025			EPA-300.0	X
Conductivity		249	µmhos/cm		4/3/2025			FS	X
pH		7.46	Std Unit		4/3/2025			FS	X
Iron		0.796	mg/L	0.1	4/3/2025			EPA-200.8	X
Sodium		4.69	mg/L	0.25	4/3/2025			EPA-200.8	X
Uranium		0.00108	mg/L	0.0002	4/3/2025			EPA-200.8	X
Alpha activity	U	2.97	pCi/L	6.83	4/3/2025	4.01	4.04	SW846-9310	X
Beta activity	U	5.64	pCi/L	12.2	4/3/2025	7.19	7.25	SW846-9310	X
Dissolved Solids		133	mg/L	10	4/3/2025			EPA-160.1	X
Suspended Solids	*	31.2	mg/L	5	4/3/2025			EPA-160.2	X
Chemical Oxygen Demand (COD)		32.3	mg/L	20	4/3/2025			EPA-410.4	X
Total Solids		160	mg/L	10	4/3/2025			SM-2540B	X
Total Organic Carbon (TOC)		13.6	mg/L	1	4/3/2025			SW846-9060A	X

Qualifier Code Definitions	
*	Duplicate analysis not within control limits.
B	Analyte was detected in the associated blank.
H	Analysis performed outside holding time requirement.
J	Estimated quantitation.
L	LCS and/or LCSD recovery outside of control limits.
L1	LCS/LCSD RPD outside acceptance criteria.
N	Sample spike (MS/MSD) recovery not within control limits
N1	MS/MSD or PS/PSD RPD outside acceptance criteria.
Q	Quality issue exists with instrument calibration.
P	Difference between results from two GC columns outside control limits.
S	Sample surrogate recovery outside acceptance criteria.
T	Tracer recovery outside control limits of 30-110%.
U	Not detected. RADS: Value reported is < MDA and/or TPU.
W	Post-digestion spike recovery out of control limits.
W1	Post-digestion spike and post-digestion spike duplicate RPD out of control limits.
X	Other specific flags and footnotes may be required to properly define the results.
Y1	MS/MSD recovery outside acceptance criteria.
Y2	MS/MSD RPD outside acceptance criteria.

Sample Type Code Definitions	
REG	Regular
FR	Field Replicate (code used for Field Duplicate)
RI	Equipment Rinsate Blank
FB	Field Blank
TB	Trip Blank

Validation Code Definitions	
=	Validated result, no additional qualifier necessary
J	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
UJ	Analyte not detected above the reported detection limit, and the reported detection limit is approximated due to quality deficiency.
X	Not validated

ATTACHMENT I1

GEL LABORATORIES CERTIFICATE OF ANALYSIS

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GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Four Rivers Nuclear Partnership, LLC
Address : 5600 Hobbs Road

Kevil, Kentucky 42053

Report Date: July 8, 2025

Contact: Ms. Jaime Morrow

Project: C-746-U Landfill Surface Water Quarterly (US25-03)

Client Sample ID: L150US3-25
Sample ID: 717328001
Matrix: WS
Collect Date: 03-APR-25
Receive Date: 04-APR-25
Collector: Client

Project: FRNP00612
Client ID: FRNP006

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
GFPC, Gross A/B, liquid "As Received"														
Alpha	U	0.213	+/-3.41	8.02	+/-3.42	15.0	pCi/L			HH3	04/27/25	1345	2776606	1
Beta	U	5.69	+/-8.53	14.6	+/-8.59	50.0	pCi/L							

The following Analytical Methods were performed

Method	Description
1	EPA 900.0/SW846 9310

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits

Notes:

The MDC is a sample specific MDC.
TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor
DL: Detection Limit
Lc/LC: Critical Level
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Four Rivers Nuclear Partnership, LLC
Address : 5600 Hobbs Road

Kevil, Kentucky 42053

Report Date: July 8, 2025

Contact: Ms. Jaime Morrow

Project: C-746-U Landfill Surface Water Quarterly (US25-03)

Client Sample ID: L154US3-25
Sample ID: 717328002
Matrix: WS
Collect Date: 03-APR-25
Receive Date: 04-APR-25
Collector: Client

Project: FRNP00612
Client ID: FRNP006

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
GFPC, Gross A/B, liquid "As Received"														
Alpha	U	1.86	+/-3.51	6.39	+/-3.52	15.0	pCi/L			HH3	04/28/25	1713	2776606	1
Beta		14.1	+/-8.33	13.1	+/-8.66	50.0	pCi/L							

The following Analytical Methods were performed

Method	Description
1	EPA 900.0/SW846 9310

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits

Notes:

The MDC is a sample specific MDC.
TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor
DL: Detection Limit
Lc/LC: Critical Level
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

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Company : Four Rivers Nuclear Partnership, LLC
Address : 5600 Hobbs Road

Kevil, Kentucky 42053

Report Date: July 8, 2025

Contact: Ms. Jaime Morrow

Project: C-746-U Landfill Surface Water Quarterly (US25-03)

Client Sample ID: L351US3-25
Sample ID: 717328003
Matrix: WS
Collect Date: 03-APR-25
Receive Date: 04-APR-25
Collector: Client

Project: FRNP00612
Client ID: FRNP006

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
GFPC, Gross A/B, liquid "As Received"														
Alpha	U	2.97	+/-4.01	6.83	+/-4.04	15.0	pCi/L			HH3	04/27/25	1346	2776606	1
Beta	U	5.64	+/-7.19	12.2	+/-7.25	50.0	pCi/L							

The following Analytical Methods were performed

Method	Description
1	EPA 900.0/SW846 9310

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits

Notes:

The MDC is a sample specific MDC.
TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor
DL: Detection Limit
Lc/LC: Critical Level
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

GEL LABORATORIES LLC

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Certificate of Analysis

Report Date: July 8, 2025

Company : Four Rivers Nuclear Partnership, LLC
Address : 5600 Hobbs Road

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Surface Water Quarterly (US25-03)

Client Sample ID:	L150US3-25	Project:	FRNP00612
Sample ID:	717328001	Client ID:	FRNP006
Matrix:	WS		
Collect Date:	03-APR-25 09:08		
Receive Date:	04-APR-25		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Carbon Analysis												
9060A, Total Organic Carbon "As Received"												
Total Organic Carbon Average		10.3	0.330	1.00	mg/L		1	KB3	04/18/25	1113	2783146	1
Ion Chromatography												
EPA 300.0 Anions (Chloride and Sulfate) "As Received"												
Chloride	W	41.0	0.670	2.00	mg/L		10	CWW	04/05/25	0639	2776597	2
Sulfate	W	27.6	1.33	4.00	mg/L		10					
Metals Analysis-ICP-MS												
200.8/200.2 MIMICP Metals- Fe Na U "As Received"												
Sodium		32.9	0.0800	0.250	mg/L	1.00	1	BAJ	05/01/25	0608	2786829	3
Iron		0.495	0.0330	0.100	mg/L	1.00	1	BAJ	05/02/25	1245	2786829	4
Uranium		0.000862	0.0000670	0.000200	mg/L	1.00	1					
Solids Analysis												
EPA 160.1 Solids, Dissolved "As Received"												
Total Dissolved Solids		290	2.38	10.0	mg/L			CH6	04/09/25	1544	2778514	5
EPA 160.2 Total Suspended Liq "As Received"												
Total Suspended Solids	*	74.7	1.04	4.55	mg/L			CH6	04/10/25	1056	2779499	6
SM 2540 B Solids, Total "As Received"												
Total Solids		330	6.29	10.0	mg/L			CH6	04/10/25	1205	2779507	7
Spectrometric Analysis												
EPA 410.4 Chem. Oxygen Demand "As Received"												
COD		32.3	8.95	20.0	mg/L		1	HH2	04/10/25	1456	2777208	8

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 200.2	ICP-MS 200.2 PREP	BB2	04/26/25	1445	2786828

GEL LABORATORIES LLC

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Certificate of Analysis

Report Date: July 8, 2025

Company :	Four Rivers Nuclear Partnership, LLC
Address :	5600 Hobbs Road
	Kevil, Kentucky 42053
Contact:	Ms. Jaime Morrow
Project:	C-746-U Landfill Surface Water Quarterly (US25-03)

Client Sample ID:	L150US3-25	Project:	FRNP00612
Sample ID:	717328001	Client ID:	FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9060A	
2	EPA 300.0	
3	EPA 200.8	
4	EPA 200.8	
5	EPA 160.1	
6	EPA 160.2	
7	SM 2540B	
8	EPA 410.4	

Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: July 8, 2025

Company : Four Rivers Nuclear Partnership, LLC
Address : 5600 Hobbs Road

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Surface Water Quarterly (US25-03)

Client Sample ID:	L154US3-25	Project:	FRNP00612
Sample ID:	717328002	Client ID:	FRNP006
Matrix:	WS		
Collect Date:	03-APR-25 09:20		
Receive Date:	04-APR-25		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Carbon Analysis												
9060A, Total Organic Carbon "As Received"												
Total Organic Carbon Average		16.1	0.330	1.00	mg/L		1	KB3	04/18/25	1310	2783146	1
Ion Chromatography												
EPA 300.0 Anions (Chloride and Sulfate) "As Received"												
Chloride	W	5.09	0.0670	0.200	mg/L		1	CWW	04/05/25	0815	2776597	2
Sulfate	W	1.56	0.133	0.400	mg/L		1					
Metals Analysis-ICP-MS												
200.8/200.2 MIMICP Metals- Fe Na U "As Received"												
Sodium		4.32	0.0800	0.250	mg/L	1.00	1	BAJ	05/01/25	0609	2786829	3
Iron		0.784	0.0330	0.100	mg/L	1.00	1	BAJ	05/02/25	1247	2786829	4
Uranium		0.000828	0.0000670	0.000200	mg/L	1.00	1					
Solids Analysis												
EPA 160.1 Solids, Dissolved "As Received"												
Total Dissolved Solids		130	2.38	10.0	mg/L			CH6	04/09/25	1544	2778514	5
EPA 160.2 Total Suspended Liq "As Received"												
Total Suspended Solids	*	36.0	0.877	3.85	mg/L			CH6	04/10/25	1056	2779499	6
SM 2540 B Solids, Total "As Received"												
Total Solids		165	6.29	10.0	mg/L			CH6	04/10/25	1205	2779507	7
Spectrometric Analysis												
EPA 410.4 Chem. Oxygen Demand "As Received"												
COD		41.7	8.95	20.0	mg/L		1	HH2	04/10/25	1456	2777208	8

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 200.2	ICP-MS 200.2 PREP	BB2	04/26/25	1445	2786828

GEL LABORATORIES LLC

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Certificate of Analysis

Report Date: July 8, 2025

Company :	Four Rivers Nuclear Partnership, LLC
Address :	5600 Hobbs Road
	Kevil, Kentucky 42053
Contact:	Ms. Jaime Morrow
Project:	C-746-U Landfill Surface Water Quarterly (US25-03)

Client Sample ID:	L154US3-25	Project:	FRNP00612
Sample ID:	717328002	Client ID:	FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9060A	
2	EPA 300.0	
3	EPA 200.8	
4	EPA 200.8	
5	EPA 160.1	
6	EPA 160.2	
7	SM 2540B	
8	EPA 410.4	

Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

GEL LABORATORIES LLC

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Certificate of Analysis

Report Date: July 8, 2025

Company : Four Rivers Nuclear Partnership, LLC
Address : 5600 Hobbs Road

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Surface Water Quarterly (US25-03)

Client Sample ID:	L351US3-25	Project:	FRNP00612
Sample ID:	717328003	Client ID:	FRNP006
Matrix:	WS		
Collect Date:	03-APR-25 08:55		
Receive Date:	04-APR-25		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Carbon Analysis												
9060A, Total Organic Carbon "As Received"												
Total Organic Carbon Average		13.6	0.330	1.00	mg/L		1	KB3	04/18/25	1342	2783146	1
Ion Chromatography												
EPA 300.0 Anions (Chloride and Sulfate) "As Received"												
Chloride	W	5.27	0.0670	0.200	mg/L		1	CWW	04/05/25	0847	2776597	2
Sulfate	W	3.92	0.133	0.400	mg/L		1					
Metals Analysis-ICP-MS												
200.8/200.2 MIMICP Metals- Fe Na U "As Received"												
Sodium		4.69	0.0800	0.250	mg/L	1.00	1	BAJ	05/01/25	0612	2786829	3
Iron		0.796	0.0330	0.100	mg/L	1.00	1	BAJ	05/02/25	1248	2786829	4
Uranium		0.00108	0.0000670	0.000200	mg/L	1.00	1					
Solids Analysis												
EPA 160.1 Solids, Dissolved "As Received"												
Total Dissolved Solids		133	2.38	10.0	mg/L			CH6	04/09/25	1544	2778514	5
EPA 160.2 Total Suspended Liq "As Received"												
Total Suspended Solids	*	31.2	1.14	5.00	mg/L			CH6	04/10/25	1056	2779499	6
SM 2540 B Solids, Total "As Received"												
Total Solids		160	6.29	10.0	mg/L			CH6	04/10/25	1205	2779507	7
Spectrometric Analysis												
EPA 410.4 Chem. Oxygen Demand "As Received"												
COD		32.3	8.95	20.0	mg/L		1	HH2	04/10/25	1456	2777208	8

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 200.2	ICP-MS 200.2 PREP	BB2	04/26/25	1445	2786828

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Certificate of Analysis

Report Date: July 8, 2025

Company :	Four Rivers Nuclear Partnership, LLC
Address :	5600 Hobbs Road
	Kevil, Kentucky 42053
Contact:	Ms. Jaime Morrow
Project:	C-746-U Landfill Surface Water Quarterly (US25-03)

Client Sample ID:	L351US3-25	Project:	FRNP00612
Sample ID:	717328003	Client ID:	FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9060A	
2	EPA 300.0	
3	EPA 200.8	
4	EPA 200.8	
5	EPA 160.1	
6	EPA 160.2	
7	SM 2540B	
8	EPA 410.4	

Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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APPENDIX J

ANALYTICAL LABORATORY CERTIFICATION

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Accredited Laboratory

A2LA has accredited

GEL LABORATORIES, LLC

Charleston, SC

for technical competence in the field of

Environmental Testing

In recognition of the successful completion of the A2LA evaluation process that includes an assessment of the laboratory's compliance with ISO/IEC 17025:2017, the 2009 and 2016 TNI Environmental Testing Laboratory Standard, the requirements of the Department of Defense Environmental Laboratory Accreditation Program (DoD ELAP), and the requirements of the Department of Energy Consolidated Audit Program (DOECAP) as detailed in Version 5.4 of the DoD/DOE Quality System Manual for Environmental Laboratories (QSM), accreditation is granted to this laboratory to perform recognized EPA methods as defined on the associated A2LA Environmental Scope of Accreditation. This accreditation demonstrates technical competence for this defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communiqué dated April 2017).

Presented this 26th day of June 2023.

Mr. Trace McInturff, Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 2567.01
Valid to June 30, 2025

For the tests to which this accreditation applies, please refer to the laboratory's Environmental Scope of Accreditation.

Accredited Laboratory

A2LA has accredited

GEL LABORATORIES, LLC

Charleston, SC

for technical competence in the field of

Environmental Testing

In recognition of the successful completion of the A2LA evaluation process that includes an assessment of the laboratory's compliance with ISO/IEC 17025:2017, the 2016 TNI Environmental Testing Laboratory Standard, and the requirements of the Department of Defense Environmental Laboratory Accreditation Program (DoD ELAP) and Department of Energy Consolidated Audit Program (DOECAP) as detailed in version 6.0 of the DoD Quality System Manual for Environmental Laboratories (QSM), the A2LA *R206 – Specific Requirements – Environmental Testing Laboratory Accreditation Program*, the A2LA *R220 – Specific Requirements – A2LA DoD Environmental Laboratory Accreditation Program*, and the A2LA *R252 – Specific Requirements – A2LA DOECAP Environmental Laboratory Accreditation Program*, accreditation is granted to this laboratory to perform recognized EPA methods as defined on the associated A2LA Environmental Scope of Accreditation. This accreditation demonstrates technical competence for this defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communiqué dated *April 2017*).

Presented this 9th day of May 2025.

Mr. Trace McInturff, Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 2567.01
Valid to June 30, 2027

For the tests to which this accreditation applies, please refer to the laboratory's Environmental Scope of Accreditation.

APPENDIX K

LABORATORY ANALYTICAL METHODS

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LABORATORY ANALYTICAL METHODS

Analytical Method	Preparation Method	Product
SM 2540B		Solids, Total
SW846 8260D		Volatile Organic Compounds (VOC) by Gas Chromatograph/Mass Spectrometer
SW846 8011	SW846 8011 PREP	Analysis of 1,2-Dibromoethane (EDB), 1,2-Dibromo-3-Chloropropane (DBCP) and 1,2,3-Trichloropropane in Water by GC/ECD Using Methods 504.1 or 8011
SW846 8082A	SW846 3535A	Analysis of Polychlorinated Biphenyls by GC/ECD by ECD
SW846 6020B	SW846 3005A	Determination of Metals by ICP-MS
SW846 7470A	SW846 7470A Prep	Mercury Analysis Using the Perkin Elmer Automated Mercury Analyzer
SW846 9060A		Carbon, Total Organic
SW846 9012B	SW846 9010C Distillation	Cyanide, Total
EPA 300.0		Ion Chromatography Iodide
SW846 9056A		Ion Chromatography
EPA 160.1		Solids, Total Dissolved
EPA 160.2		Solids, Total Suspended
EPA 200.8	EPA 200.2	Determination of Metals by ICP-MS
EPA 410.4		COD
Eichrom Industries, AN-1418		AlphaSpec Ra226, Liquid
DOE EML HASL-300, Th-01-RC Modified		Th-01-RC M, Th Isotopes, Liquid
EPA 904.0 Modified		904.0Mod, Ra228, Liquid
SW846 9310		9310, Alpha/Beta Activity, liquid
EPA 905.0 Modified		905.0Mod, Sr90, liquid
DOE EML HASL-300, Tc-02-RC Modified		Tc-02-RC-MOD, Tc99, Liquid
EPA 906.0 Modified		906.0M, Tritium Dist, Liquid
SW846 9020B		Total Organic Halogens (TOX)

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APPENDIX L

MICRO-PURGING STABILITY PARAMETERS

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Micro-Purge Stability Parameters
for the C-746-U Contained Landfill

	Temperature (°F)	Conductivity (µmhos/cm)	pH (Std Unit)	Dissolved oxygen (mg/L)	Turbidity (NTU)
MW357					
Date Collected: 4/8/2025					
1001	56.9	421	6.48	6.06	10.09
1004	57.0	418	6.19	5.09	9.60
1007	57.2	415	6.17	5.00	9.80
MW359					
Date Collected: 4/8/2025					
1235	59.4	231	6.20	5.22	5.78
1238	59.5	233	6.16	4.87	5.56
1241	59.4	230	6.16	4.81	5.43
MW361					
Date Collected: 4/8/2025					
0813	53.8	426	6.16	5.65	7.33
0816	53.6	428	6.14	4.30	6.70
0819	53.9	429	6.11	4.25	6.36
MW363					
Date Collected: 4/9/2025					
0754	53.2	341	6.10	3.68	4.70
0757	53.5	345	6.09	2.23	4.82
0800	53.7	346	6.07	2.16	4.73
MW365					
Date Collected: 4/9/2025					
0925	57.9	467	6.25	4.99	5.04
0928	58.1	466	6.15	4.89	5.20
0931	58.0	465	6.16	4.86	5.44
MW367					
Date Collected: 4/9/2025					
1157	61.3	501	6.15	4.11	4.68
1200	61.2	493	6.10	3.09	4.41
1203	61.2	490	6.08	3.05	4.22
MW369					
Date Collected: 4/10/2025					
0714	59.6	384	6.44	3.15	5.70
0717	59.6	386	6.12	2.49	5.47
0720	59.7	387	6.08	2.40	5.27
MW371					
Date Collected: 4/10/2025					
0841	61.7	523	6.53	6.27	9.00
0844	61.6	516	6.54	5.97	9.10
0847	61.6	515	6.55	5.89	9.50
MW373					
Date Collected: 4/10/2025					
1001	64.2	951	6.10	3.70	6.34
1004	64.0	1001	6.04	3.00	6.19
1007	63.3	1003	6.01	2.90	6.10
MW375					
Date Collected: 4/10/2025					
1227	64.4	436	6.61	4.00	6.50
1230	63.9	433	6.59	4.01	6.52
1233	64.2	434	6.60	4.00	6.49

	Temperature (°F)	Conductivity (µmhos/cm)	pH (Std Unit)	Dissolved oxygen (mg/L)	Turbidity (NTU)
MW358					
Date Collected: 4/8/2025					
1154	59.7	440	6.34	4.21	16.07
1157	59.4	441	6.27	3.58	7.10
1200	59.1	440	6.25	3.50	7.00
MW360					
Date Collected: 4/8/2025					
0729	53.1	398	6.17	3.11	6.85
0732	53.0	399	6.12	2.70	6.90
0735	53.1	401	6.10	2.66	7.10
MW362					
Date Collected: 4/8/2025					
0917	53.9	578	6.83	7.65	17.86
0920	54.4	575	6.88	7.16	18.98
0923	54.5	580	6.91	7.06	18.33
MW364					
Date Collected: 4/9/2025					
0840	57.1	444	5.96	5.00	4.63
0843	57.3	450	5.94	4.00	4.04
0846	57.5	459	5.92	3.91	3.96
MW366					
Date Collected: 4/9/2025					
1010	63.0	455	6.29	7.23	15.16
1013	62.1	478	6.24	5.64	11.23
1016	62.0	480	6.20	5.60	11.04
MW368					
Date Collected: 4/9/2025					
1239	61.6	462	6.06	2.77	6.82
1242	61.7	463	5.99	2.31	6.77
1245	61.6	464	5.98	2.24	6.59
MW370					
Date Collected: 4/10/2025					
0759	61.1	443	6.07	5.40	4.24
0802	60.9	448	6.02	4.60	4.20
0805	60.9	449	6.01	4.54	4.33
MW372					
Date Collected: 4/10/2025					
0916	62.9	732	6.16	3.90	9.69
0919	62.5	740	6.17	2.16	4.56
0922	62.4	744	6.10	2.10	4.63
MW374					
Date Collected: 4/10/2025					
1057	63.7	737	6.65	3.44	9.89
1100	63.5	730	6.64	2.94	10.21
1103	63.4	727	6.65	2.82	10.59

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