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November 19, 2025

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Mr. Todd Hendricks
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Dear Mr. Anderson and Mr. Hendricks:

**C-746-U CONTAINED LANDFILL THIRD QUARTER CALENDAR YEAR 2025 (JULY–SEPTEMBER) COMPLIANCE MONITORING REPORT, PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY, FRNP-RPT-0387/V3, PERMIT NUMBER SW07300014, SW07300015, SW07300045, AGENCY INTEREST ID NO. 3059**

The subject report for the third quarter 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 third 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).

A statistically significant difference was indicated for pH in MW364. This statistical difference was indicated by a decreasing Mann-Kendall trend below the lower tolerance limit, which is considered a Type 2 Exceedance—Source Unknown. Continued evaluation of pH levels through future quarterly monitoring events is recommended. This report also serves as the statistical

exceedance notification for the third quarter 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: 2025.11.19 14:56:25 -06'00'

April Ladd
Paducah Site Lead
Portsmouth/Paducah Project Office

Enclosure:
*C-746-U Contained Landfill Third Quarter Calendar Year 2025 (July–September) Compliance Monitoring Report, Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, FRNP-RPT-0387/V3

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FRNP-RPT-0387/V3

# C-746-U Contained Landfill
# Third Quarter Calendar Year 2025
# (July–September)
# Compliance Monitoring Report,
# Paducah Gaseous Diffusion Plant,
# Paducah, Kentucky

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FRNP-RPT-0387/V3

# C-746-U Contained Landfill
# Third Quarter Calendar Year 2025
# (July–September)
# Compliance Monitoring Report,
# Paducah Gaseous Diffusion Plant,
# Paducah, Kentucky

Date Issued—November 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 Third Quarter Calendar Year 2025 (July–September) 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.

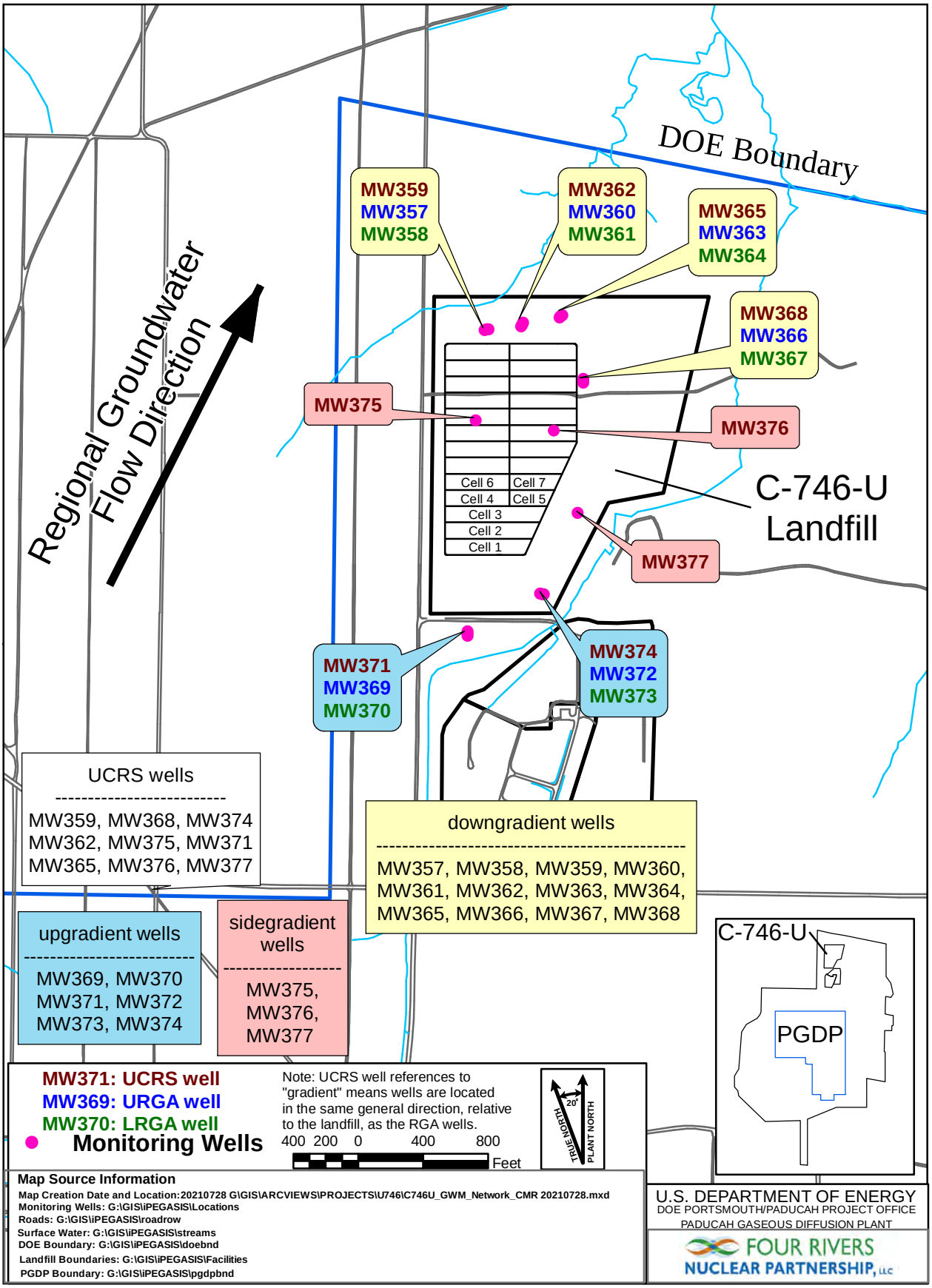


**Figure 1. C-746-U Landfill Groundwater Monitoring Well Network**

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 or LTL 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 third 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 third quarter 2025 was conducted on July 16–21, 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 July 22–23, 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. The hydraulic gradient for the RGA in the vicinity of the C-746-U Contained Landfill in July 2025 was $5.24 \times 10^{-4}$ ft/ft (see Appendix E, Table E.2). The hydraulic gradients for both the URGA and LRGA at the C-746-U Contained Landfill were $7.94 \times 10^{-4}$ ft/ft. (see Appendix E, Table E.2). Calculated groundwater flow rates (average linear velocity) at the C-746-U Contained Landfill range from 1.35 to 2.30 ft/day for both the URGA and 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 July 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 July 1 and July 8, 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 third 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- or LTL-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 or LTL 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.

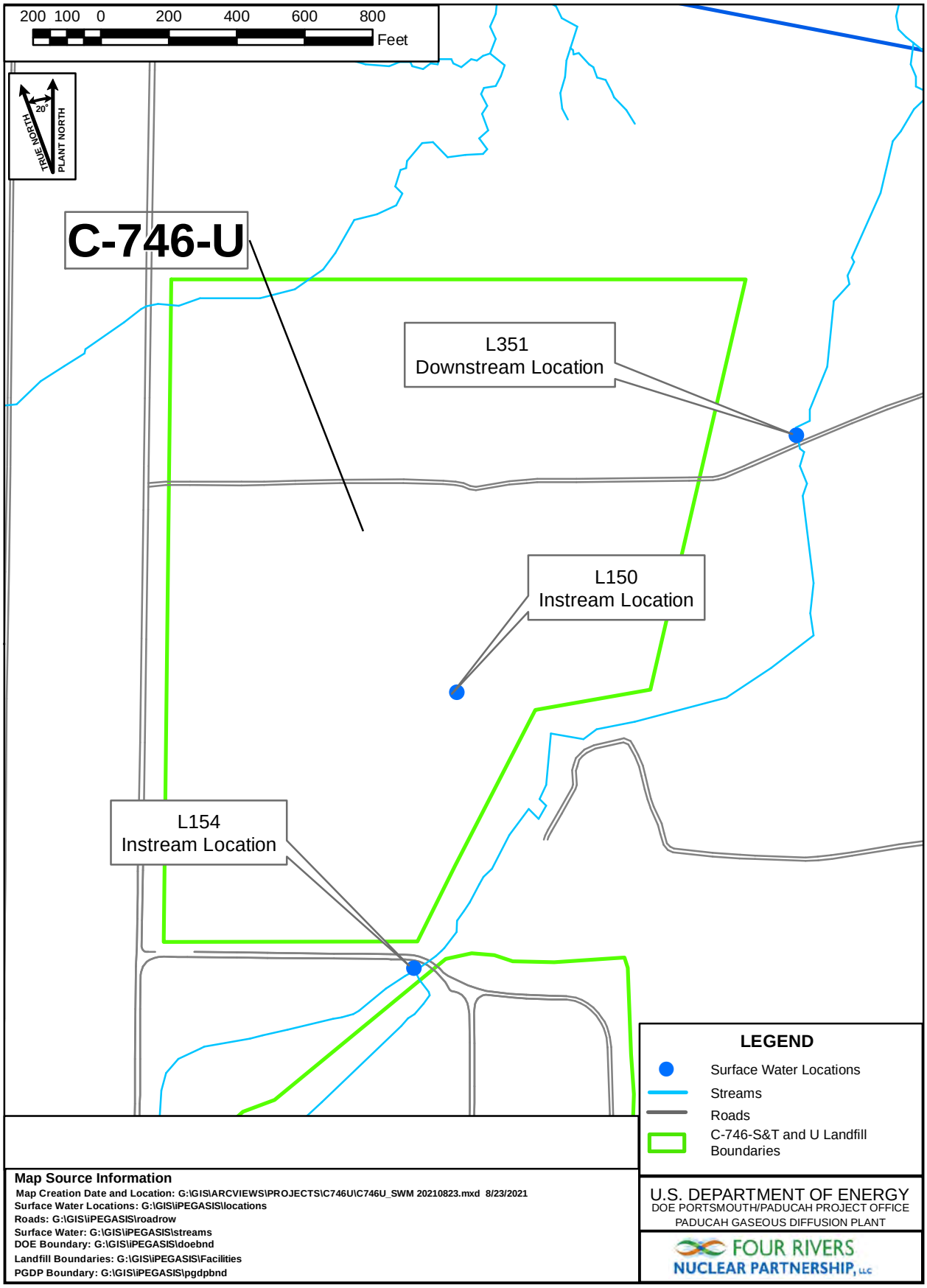


**Figure 2. C-746-U Landfill Surface Water Monitoring Locations**

**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: Oxidation-reduction potential[b] |
| MW362: Dissolved oxygen, oxidation-reduction potential,[b] and sulfate | MW360: Oxidation-reduction potential[b] | MW361: Dissolved oxygen, oxidation-reduction potential,[b] and pH |
| MW365: Dissolved oxygen, oxidation-reduction potential,[b] and sulfate | MW363: Oxidation-reduction potential[b] | MW364: Oxidation-reduction potential,[b] pH, and technetium-99 |
| MW368: Dissolved oxygen, oxidation-reduction potential,[b] and sulfate | MW366: Oxidation-reduction potential[b] and technetium-99 | MW367: Oxidation-reduction potential[b] and pH |
| MW371: Calcium, dissolved oxygen, oxidation-reduction potential,[b] and sulfate | MW369: Dissolved oxygen and oxidation-reduction potential[b] | MW370: Dissolved oxygen and oxidation-reduction potential[b] |
| MW374: Oxidation-reduction potential[b] and sulfate | MW372: Calcium, conductivity, dissolved solids, magnesium, oxidation-reduction potential,[b] and sulfate | MW373: Calcium, conductivity, dissolved solids, magnesium, 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 or LTL 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 technetium-99 in LRGA well MW364 and pH 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 |
|---|---|
| None | MW361: pH |
| | MW364: pH and Technetium-99 |
| | MW367: pH |

Technetium-99 in downgradient LRGA well MW364, as well as pH 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. With the exception of pH in MW364, no trend was indicated for any of the aforementioned preliminary Type 2 exceedances in wells MW361, MW364, and MW367, and are thus considered to be Type 1 exceedances—not attributable to the C-746-U Landfill. The pH level in MW364 was below the lower tolerance limit and the Mann-Kendall trend analysis showed a decreasing trend, which indicated a statistically significant difference as compared to background pH levels; and is thereby considered to be a Type 2 exceedance—source unknown.

**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 | pH | 8 | 0.05 | 0.360 | -4 | No trend |
| | MW364 | pH | 8 | 0.05 | 0.016 | -19 | Decreasing |
| | MW364 | Technetium-99 | 8 | 0.05 | 0.119 | -8 | No trend |
| | MW367 | pH | 8 | 0.05 | 0.274 | -6 | 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 or LTL identified exceedances of both the historical and current backgrounds for sulfate in MW359, MW362, MW365, and MW368 (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 |
|---|
| MW359, MW362, MW365, and MW368: Sulfate |

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

With the exception of pH in MW364, 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. The decreasing Mann-Kendall trend for pH in MW364 indicates a Type 2 exceedance—source unknown.

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# 2. DATA EVALUATION/STATISTICAL SYNOPSIS

The statistical analyses conducted on the third 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 (or decreasing trend for pH) 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, 28 parameters, including those with MCLs, required statistical analysis in the UCRS. During the third quarter, calcium, 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 wells MW359, MW362, MW365, and MW368, and are listed on Table 5.

### 2.1.2 Upper Regional Gravel Aquifer

In this quarter, 29 parameters, including those with MCLs, required statistical analysis in the URGA. During the third quarter, calcium, conductivity, dissolved oxygen, dissolved solids, magnesium, oxidation-reduction potential, sulfate, and technetium-99 displayed concentrations that exceeded their respective historical UTL and are listed in Table 2. There were no constituents that exceeded the current background UTL in downgradient URGA wells in the third quarter.

### 2.1.3 Lower Regional Gravel Aquifer

In this quarter, 27 parameters, including those with MCLs, required statistical analysis in the LRGA. During the third quarter, calcium, conductivity, dissolved oxygen, dissolved solids, magnesium, oxidation-reduction potential, pH, and technetium-99 displayed concentrations that exceeded their respective historical UTL and are listed in Table 2. Technetium-99 exceeded the current background UTL in

downgradient LRGA well. MW364 and pH differed from the historical background value 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 Third Quarter Calendar Year 2025 (July–September) Compliance Monitoring Report, Paducah Gaseous Diffusion Plant, Paducah, Kentucky*
(FRNP-RPT-0387/V3)

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

| _____ | _____ | _____ |
|---|---|---|
| Kenneth R. Davis | PG113927 | 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 3rd 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: July 2025; Surface water: July 2025; Methane: July 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:** 3rd Quarter 2025

**AKGWA Well Tag #:** 8004-4798 **SAMPLE ID:** MW357UG4-25 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 | 7/16/2025 | | | EPA-300.0 | = |
| Bromide | | 0.316 | mg/L | 0.2 | 7/16/2025 | | | SW846-9056A | = |
| Chloride | JW | 26.8 | mg/L | 250 | 7/16/2025 | | | SW846-9056A | = |
| Fluoride | J | 0.138 | mg/L | 4 | 7/16/2025 | | | SW846-9056A | = |
| Nitrate as Nitrogen | HJ | 1.24 | mg/L | 10 | 7/16/2025 | | | SW846-9056A | J |
| Sulfate | | 33.3 | mg/L | 2 | 7/16/2025 | | | SW846-9056A | = |
| Barometric Pressure Reading | | 29.98 | Inches/Hg | | 7/16/2025 | | | FS | X |
| Conductivity | | 385 | µmhos/cm | | 7/16/2025 | | | FS | X |
| Depth to Water | | 41.57 | ft | | 7/16/2025 | | | FS | X |
| Dissolved Oxygen | | 4.33 | mg/L | | 7/16/2025 | | | FS | X |
| Eh (approx) | | 488 | mV | | 7/16/2025 | | | FS | X |
| pH | | 5.84 | Std Unit | | 7/16/2025 | | | FS | X |
| Temperature | | 69.1 | deg F | | 7/16/2025 | | | FS | X |
| Turbidity | | 3.03 | NTU | | 7/16/2025 | | | FS | X |
| Aluminum | J | 0.0223 | mg/L | 0.05 | 7/16/2025 | | | SW846-6020B | = |
| Antimony | U | 0.003 | mg/L | 0.003 | 7/16/2025 | | | SW846-6020B | = |
| Arsenic | U | 0.005 | mg/L | 0.005 | 7/16/2025 | | | SW846-6020B | = |
| Barium | | 0.0801 | mg/L | 0.004 | 7/16/2025 | | | SW846-6020B | = |
| Beryllium | U | 0.0005 | mg/L | 0.0005 | 7/16/2025 | | | SW846-6020B | = |
| Boron | | 0.269 | mg/L | 0.075 | 7/16/2025 | | | SW846-6020B | = |
| Cadmium | U | 0.001 | mg/L | 0.001 | 7/16/2025 | | | SW846-6020B | = |
| Calcium | | 22.4 | mg/L | 0.2 | 7/16/2025 | | | SW846-6020B | = |
| Chromium | U | 0.01 | mg/L | 0.01 | 7/16/2025 | | | SW846-6020B | = |
| Cobalt | U | 0.001 | mg/L | 0.001 | 7/16/2025 | | | SW846-6020B | = |
| Copper | J | 0.000846 | mg/L | 0.002 | 7/16/2025 | | | SW846-6020B | = |
| Iron | J | 0.0808 | mg/L | 0.1 | 7/16/2025 | | | SW846-6020B | = |
| Lead | U | 0.002 | mg/L | 0.002 | 7/16/2025 | | | SW846-6020B | = |
| Magnesium | | 9.58 | mg/L | 0.03 | 7/16/2025 | | | SW846-6020B | = |
| Manganese | J | 0.00229 | mg/L | 0.005 | 7/16/2025 | | | SW846-6020B | = |
| Molybdenum | U | 0.001 | mg/L | 0.001 | 7/16/2025 | | | SW846-6020B | = |
| Nickel | U | 0.002 | mg/L | 0.002 | 7/16/2025 | | | SW846-6020B | = |
| Potassium | | 1.54 | mg/L | 0.3 | 7/16/2025 | | | SW846-6020B | = |
| Rhodium | U | 0.005 | mg/L | 0.005 | 7/16/2025 | | | SW846-6020B | = |
| Selenium | U | 0.005 | mg/L | 0.005 | 7/16/2025 | | | SW846-6020B | = |
| Silver | U | 0.001 | mg/L | 0.001 | 7/16/2025 | | | SW846-6020B | = |
| Sodium | | 37.5 | mg/L | 0.25 | 7/16/2025 | | | SW846-6020B | = |
| Tantalum | U | 0.005 | mg/L | 0.005 | 7/16/2025 | | | SW846-6020B | = |
| Thallium | U | 0.002 | mg/L | 0.002 | 7/16/2025 | | | SW846-6020B | = |
| Uranium | U | 0.0002 | mg/L | 0.0002 | 7/16/2025 | | | SW846-6020B | = |
| Vanadium | U | 0.02 | mg/L | 0.02 | 7/16/2025 | | | SW846-6020B | = |
| Zinc | J | 0.00502 | mg/L | 0.02 | 7/16/2025 | | | SW846-6020B | = |
| Mercury | U | 0.0002 | mg/L | 0.0002 | 7/16/2025 | | | SW846-7470A | = |
| Barium, Dissolved | | 0.0844 | mg/L | 0.004 | 7/16/2025 | | | SW846-6020B | J |
| Chromium, Dissolved | U | 0.01 | mg/L | 0.01 | 7/16/2025 | | | SW846-6020B | UJ |
| Uranium, Dissolved | U | 0.0002 | mg/L | 0.0002 | 7/16/2025 | | | SW846-6020B | UJ |
| PCB-1016 | U | 0.0847 | ug/L | 0.0847 | 7/16/2025 | | | SW846-8082A | = |
| PCB-1221 | U | 0.0847 | ug/L | 0.0847 | 7/16/2025 | | | 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:** 3rd Quarter 2025

**AKGWA Well Tag #:** 8004-4798 **SAMPLE ID:** MW357UG4-25 Sample Type: REG

| Parameter | Qualifier | Result | Units | Reporting Limit | Date Collected | Rad Error (+/-) | TPU | Method | Validation Code |
|---|---|---|---|---|---|---|---|---|---|
| PCB-1232 | U | 0.0847 | ug/L | 0.0847 | 7/16/2025 | | | SW846-8082A | = |
| PCB-1242 | U | 0.0847 | ug/L | 0.0847 | 7/16/2025 | | | SW846-8082A | = |
| PCB-1248 | U | 0.0847 | ug/L | 0.0847 | 7/16/2025 | | | SW846-8082A | = |
| PCB-1254 | U | 0.0847 | ug/L | 0.0847 | 7/16/2025 | | | SW846-8082A | = |
| PCB-1260 | U | 0.0847 | ug/L | 0.0847 | 7/16/2025 | | | SW846-8082A | UJ |
| PCB-1268 | U | 0.0847 | ug/L | 0.0847 | 7/16/2025 | | | SW846-8082A | = |
| Polychlorinated biphenyl | U | 0.0847 | ug/L | 0.0847 | 7/16/2025 | | | SW846-8082A | UJ |
| Radium-226 | | 0.488 | pCi/L | 0.477 | 7/16/2025 | 0.408 | 0.413 | AN-1418 | = |
| Radium-228 | U | -0.564 | pCi/L | 4.52 | 7/16/2025 | 2.4 | 2.4 | EPA-904.0-M | = |
| Strontium-90 | U | -2.96 | pCi/L | 6.72 | 7/16/2025 | 3.31 | 3.31 | EPA-905.0-M | UJ |
| Tritium | U | -0.577 | pCi/L | 219 | 7/16/2025 | 110 | 110 | EPA-906.0-M | = |
| Technetium-99 | | 38.5 | pCi/L | 21.9 | 7/16/2025 | 13.8 | 14.5 | HASL 300, Tc-02-RC M | J |
| Thorium-230 | U | 0.414 | pCi/L | 1.33 | 7/16/2025 | 0.777 | 0.782 | HASL 300, Th-01-RC M | = |
| Thorium-232 | U | -0.0217 | pCi/L | 0.625 | 7/16/2025 | 0.295 | 0.296 | HASL 300, Th-01-RC M | = |
| Alpha activity | U | 3.22 | pCi/L | 5.89 | 7/16/2025 | 3.74 | 3.78 | SW846-9310 | UJ |
| Beta activity | | 28.7 | pCi/L | 9.77 | 7/16/2025 | 8.42 | 9.61 | SW846-9310 | = |
| 1,2-Dibromo-3-chloropropane | U | 0.0195 | ug/L | 0.0195 | 7/16/2025 | | | SW846-8011 | = |
| 1,1,1,2-Tetrachloroethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 1,1,1-Trichloroethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 1,1,2,2-Tetrachloroethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 1,1,2-Trichloroethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 1,1-Dichloroethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 1,1-Dichloroethene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 1,2,3-Trichloropropane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 1,2-Dibromoethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 1,2-Dichlorobenzene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 1,2-Dichloroethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 1,2-Dichloropropane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 1,4-Dichlorobenzene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 2-Butanone | U | 5 | ug/L | 5 | 7/16/2025 | | | SW846-8260D | = |
| 2-Hexanone | U | 5 | ug/L | 5 | 7/16/2025 | | | SW846-8260D | = |
| 4-Methyl-2-pentanone | U | 5 | ug/L | 5 | 7/16/2025 | | | SW846-8260D | = |
| Acetone | U | 5 | ug/L | 5 | 7/16/2025 | | | SW846-8260D | = |
| Acrolein | U | 5 | ug/L | 5 | 7/16/2025 | | | SW846-8260D | = |
| Acrylonitrile | U | 5 | ug/L | 5 | 7/16/2025 | | | SW846-8260D | = |
| Benzene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Bromochloromethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Bromodichloromethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Bromoform | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Bromomethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Carbon disulfide | U | 5 | ug/L | 5 | 7/16/2025 | | | SW846-8260D | = |
| Carbon tetrachloride | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Chlorobenzene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Chloroethane | U | 1 | ug/L | 1 | 7/16/2025 | | | 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:** 3rd Quarter 2025

**AKGWA Well Tag #:** 8004-4798 **SAMPLE ID:** MW357UG4-25 Sample Type: REG

| Parameter | Qualifier | Result | Units | Reporting Limit | Date Collected | Rad Error (+/-) | TPU | Method | Validation Code |
|---|---|---|---|---|---|---|---|---|---|
| Chloroform | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Chloromethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| cis-1,2-Dichloroethene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| cis-1,3-Dichloropropene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Dibromochloromethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Dibromomethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Ethylbenzene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Iodomethane | U | 5 | ug/L | 5 | 7/16/2025 | | | SW846-8260D | = |
| Methylene chloride | J | 0.81 | ug/L | 5 | 7/16/2025 | | | SW846-8260D | = |
| Styrene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Tetrachloroethene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Toluene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Total Xylene | U | 3 | ug/L | 3 | 7/16/2025 | | | SW846-8260D | = |
| trans-1,2-Dichloroethene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| trans-1,3-Dichloropropene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| trans-1,4-Dichloro-2-butene | U | 5 | ug/L | 5 | 7/16/2025 | | | SW846-8260D | = |
| Trichloroethene | | 2.17 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Trichlorofluoromethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Vinyl acetate | U | 5 | ug/L | 5 | 7/16/2025 | | | SW846-8260D | = |
| Vinyl chloride | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Dissolved Solids | | 196 | mg/L | 10 | 7/16/2025 | | | EPA-160.1 | = |
| Chemical Oxygen Demand (COD) | U | 20 | mg/L | 20 | 7/16/2025 | | | EPA-410.4 | = |
| Cyanide | UNN1 | 0.2 | mg/L | 0.2 | 7/16/2025 | | | SW846-9012B | = |
| Total Organic Halides (TOX) | | 13.3 | ug/L | 10 | 7/16/2025 | | | SW846-9020B | = |
| Total Organic Carbon (TOC) | J | 0.374 | mg/L | 2 | 7/16/2025 | | | 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:** 3rd Quarter 2025

**AKGWA Well Tag #:** 8004-4799 **SAMPLE ID:** MW358DUG4-25 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 | 7/16/2025 | | | EPA-300.0 | = |
| Bromide | | 0.421 | mg/L | 0.2 | 7/16/2025 | | | SW846-9056A | = |
| Chloride | JW | 36.2 | mg/L | 250 | 7/16/2025 | | | SW846-9056A | = |
| Fluoride | J | 0.138 | mg/L | 4 | 7/16/2025 | | | SW846-9056A | = |
| Nitrate as Nitrogen | HJ | 1.17 | mg/L | 10 | 7/16/2025 | | | SW846-9056A | J |
| Sulfate | | 53.7 | mg/L | 2 | 7/16/2025 | | | SW846-9056A | = |
| Aluminum | U | 0.05 | mg/L | 0.05 | 7/16/2025 | | | SW846-6020B | = |
| Antimony | U | 0.003 | mg/L | 0.003 | 7/16/2025 | | | SW846-6020B | = |
| Arsenic | U | 0.005 | mg/L | 0.005 | 7/16/2025 | | | SW846-6020B | = |
| Barium | | 0.0455 | mg/L | 0.004 | 7/16/2025 | | | SW846-6020B | = |
| Beryllium | U | 0.0005 | mg/L | 0.0005 | 7/16/2025 | | | SW846-6020B | = |
| Boron | | 0.374 | mg/L | 0.075 | 7/16/2025 | | | SW846-6020B | = |
| Cadmium | U | 0.001 | mg/L | 0.001 | 7/16/2025 | | | SW846-6020B | = |
| Calcium | | 28.5 | mg/L | 0.2 | 7/16/2025 | | | SW846-6020B | = |
| Chromium | U | 0.01 | mg/L | 0.01 | 7/16/2025 | | | SW846-6020B | = |
| Cobalt | J | 0.000563 | mg/L | 0.001 | 7/16/2025 | | | SW846-6020B | = |
| Copper | J | 0.000721 | mg/L | 0.002 | 7/16/2025 | | | SW846-6020B | = |
| Iron | | 0.237 | mg/L | 0.1 | 7/16/2025 | | | SW846-6020B | = |
| Lead | U | 0.002 | mg/L | 0.002 | 7/16/2025 | | | SW846-6020B | = |
| Magnesium | | 12.4 | mg/L | 0.03 | 7/16/2025 | | | SW846-6020B | = |
| Manganese | | 0.0295 | mg/L | 0.005 | 7/16/2025 | | | SW846-6020B | = |
| Molybdenum | U | 0.001 | mg/L | 0.001 | 7/16/2025 | | | SW846-6020B | = |
| Nickel | | 0.00392 | mg/L | 0.002 | 7/16/2025 | | | SW846-6020B | = |
| Potassium | | 2.03 | mg/L | 0.3 | 7/16/2025 | | | SW846-6020B | = |
| Rhodium | U | 0.005 | mg/L | 0.005 | 7/16/2025 | | | SW846-6020B | = |
| Selenium | U | 0.005 | mg/L | 0.005 | 7/16/2025 | | | SW846-6020B | = |
| Silver | U | 0.001 | mg/L | 0.001 | 7/16/2025 | | | SW846-6020B | = |
| Sodium | | 36.4 | mg/L | 0.25 | 7/16/2025 | | | SW846-6020B | = |
| Tantalum | U | 0.005 | mg/L | 0.005 | 7/16/2025 | | | SW846-6020B | = |
| Thallium | U | 0.002 | mg/L | 0.002 | 7/16/2025 | | | SW846-6020B | = |
| Uranium | U | 0.0002 | mg/L | 0.0002 | 7/16/2025 | | | SW846-6020B | = |
| Vanadium | U | 0.02 | mg/L | 0.02 | 7/16/2025 | | | SW846-6020B | = |
| Zinc | J | 0.00333 | mg/L | 0.02 | 7/16/2025 | | | SW846-6020B | = |
| Mercury | U | 0.0002 | mg/L | 0.0002 | 7/16/2025 | | | SW846-7470A | = |
| Barium, Dissolved | | 0.0473 | mg/L | 0.004 | 7/16/2025 | | | SW846-6020B | J |
| Chromium, Dissolved | U | 0.01 | mg/L | 0.01 | 7/16/2025 | | | SW846-6020B | UJ |
| Uranium, Dissolved | U | 0.0002 | mg/L | 0.0002 | 7/16/2025 | | | SW846-6020B | UJ |
| PCB-1016 | U | 0.0903 | ug/L | 0.0903 | 7/16/2025 | | | SW846-8082A | = |
| PCB-1221 | U | 0.0903 | ug/L | 0.0903 | 7/16/2025 | | | SW846-8082A | = |
| PCB-1232 | U | 0.0903 | ug/L | 0.0903 | 7/16/2025 | | | SW846-8082A | = |
| PCB-1242 | U | 0.0903 | ug/L | 0.0903 | 7/16/2025 | | | SW846-8082A | = |
| PCB-1248 | U | 0.0903 | ug/L | 0.0903 | 7/16/2025 | | | SW846-8082A | = |
| PCB-1254 | U | 0.0903 | ug/L | 0.0903 | 7/16/2025 | | | SW846-8082A | = |
| PCB-1260 | U | 0.0903 | ug/L | 0.0903 | 7/16/2025 | | | SW846-8082A | UJ |
| PCB-1268 | U | 0.0903 | ug/L | 0.0903 | 7/16/2025 | | | SW846-8082A | = |
| Polychlorinated biphenyl | U | 0.0903 | ug/L | 0.0903 | 7/16/2025 | | | SW846-8082A | UJ |
| Radium-226 | U | 0.328 | pCi/L | 0.436 | 7/16/2025 | 0.326 | 0.329 | AN-1418 | = |

**Paducah OREIS**
**GROUNDWATER MONITORING REPORT**

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

**Sampling Point:** MW358 DOWN **RGA Type:** LRGA **Period:** 3rd Quarter 2025

**AKGWA Well Tag #:** 8004-4799 **SAMPLE ID:** MW358DUG4-25 Sample Type: FR

| Parameter | Qualifier | Result | Units | Reporting Limit | Date Collected | Rad Error (+/-) | TPU | Method | Validation Code |
|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | U | 3.46 | pCi/L | 4.58 | 7/16/2025 | 2.81 | 2.97 | EPA-904.0-M | = |
| Strontium-90 | U | -0.0407 | pCi/L | 4.14 | 7/16/2025 | 2.12 | 2.12 | EPA-905.0-M | UJ |
| Tritium | U | -35.2 | pCi/L | 221 | 7/16/2025 | 104 | 104 | EPA-906.0-M | = |
| Technetium-99 | | 35.6 | pCi/L | 24.3 | 7/16/2025 | 15.1 | 15.7 | HASL 300, Tc-02-RC M | J |
| Thorium-230 | U | 0.249 | pCi/L | 1.35 | 7/16/2025 | 0.728 | 0.731 | HASL 300, Th-01-RC M | = |
| Thorium-232 | U | -0.0999 | pCi/L | 0.946 | 7/16/2025 | 0.346 | 0.346 | HASL 300, Th-01-RC M | = |
| Alpha activity | U | 3.52 | pCi/L | 7.28 | 7/16/2025 | 4.39 | 4.43 | SW846-9310 | UJ |
| Beta activity | | 36.4 | pCi/L | 10.1 | 7/16/2025 | 9.21 | 10.9 | SW846-9310 | = |
| 1,2-Dibromo-3-chloropropane | U | 0.0197 | ug/L | 0.0197 | 7/16/2025 | | | SW846-8011 | = |
| 1,1,1,2-Tetrachloroethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 1,1,1-Trichloroethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 1,1,2,2-Tetrachloroethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 1,1,2-Trichloroethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 1,1-Dichloroethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 1,1-Dichloroethene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 1,2,3-Trichloropropane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 1,2-Dibromoethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 1,2-Dichlorobenzene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 1,2-Dichloroethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 1,2-Dichloropropane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 1,4-Dichlorobenzene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 2-Butanone | U | 5 | ug/L | 5 | 7/16/2025 | | | SW846-8260D | = |
| 2-Hexanone | U | 5 | ug/L | 5 | 7/16/2025 | | | SW846-8260D | = |
| 4-Methyl-2-pentanone | U | 5 | ug/L | 5 | 7/16/2025 | | | SW846-8260D | = |
| Acetone | U | 5 | ug/L | 5 | 7/16/2025 | | | SW846-8260D | = |
| Acrolein | U | 5 | ug/L | 5 | 7/16/2025 | | | SW846-8260D | = |
| Acrylonitrile | U | 5 | ug/L | 5 | 7/16/2025 | | | SW846-8260D | = |
| Benzene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Bromochloromethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Bromodichloromethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Bromoform | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Bromomethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Carbon disulfide | U | 5 | ug/L | 5 | 7/16/2025 | | | SW846-8260D | = |
| Carbon tetrachloride | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Chlorobenzene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Chloroethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Chloroform | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Chloromethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| cis-1,2-Dichloroethene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| cis-1,3-Dichloropropene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Dibromochloromethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Dibromomethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Ethylbenzene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Iodomethane | U | 5 | ug/L | 5 | 7/16/2025 | | | 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:** 3rd Quarter 2025

**AKGWA Well Tag #:** 8004-4799 **SAMPLE ID:** MW358DUG4-25 Sample Type: FR

| Parameter | Qualifier | Result | Units | Reporting Limit | Date Collected | Rad Error (+/-) | TPU | Method | Validation Code |
|---|---|---|---|---|---|---|---|---|---|
| Methylene chloride | J | 0.75 | ug/L | 5 | 7/16/2025 | | | SW846-8260D | = |
| Styrene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Tetrachloroethene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Toluene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Total Xylene | U | 3 | ug/L | 3 | 7/16/2025 | | | SW846-8260D | = |
| trans-1,2-Dichloroethene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| trans-1,3-Dichloropropene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| trans-1,4-Dichloro-2-butene | U | 5 | ug/L | 5 | 7/16/2025 | | | SW846-8260D | = |
| Trichloroethene | | 3.36 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Trichlorofluoromethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Vinyl acetate | U | 5 | ug/L | 5 | 7/16/2025 | | | SW846-8260D | = |
| Vinyl chloride | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Dissolved Solids | | 234 | mg/L | 10 | 7/16/2025 | | | EPA-160.1 | = |
| Chemical Oxygen Demand (COD) | U | 20 | mg/L | 20 | 7/16/2025 | | | EPA-410.4 | = |
| Cyanide | UNN1 | 0.2 | mg/L | 0.2 | 7/16/2025 | | | SW846-9012B | = |
| Total Organic Halides (TOX) | | 12.3 | ug/L | 10 | 7/16/2025 | | | SW846-9020B | = |
| Total Organic Carbon (TOC) | J | 0.717 | mg/L | 2 | 7/16/2025 | | | 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:** 3rd Quarter 2025

**AKGWA Well Tag #:** 8004-4799 **SAMPLE ID:** MW358UG4-25 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 | 7/16/2025 | | | EPA-300.0 | = |
| Bromide | | 0.422 | mg/L | 0.2 | 7/16/2025 | | | SW846-9056A | = |
| Chloride | JW | 36.1 | mg/L | 250 | 7/16/2025 | | | SW846-9056A | = |
| Fluoride | J | 0.139 | mg/L | 4 | 7/16/2025 | | | SW846-9056A | = |
| Nitrate as Nitrogen | HJ | 1.17 | mg/L | 10 | 7/16/2025 | | | SW846-9056A | J |
| Sulfate | | 53.7 | mg/L | 2 | 7/16/2025 | | | SW846-9056A | = |
| Barometric Pressure Reading | | 29.96 | Inches/Hg | | 7/16/2025 | | | FS | X |
| Conductivity | | 446 | µmhos/cm | | 7/16/2025 | | | FS | X |
| Depth to Water | | 41.74 | ft | | 7/16/2025 | | | FS | X |
| Dissolved Oxygen | | 1.35 | mg/L | | 7/16/2025 | | | FS | X |
| Eh (approx) | | 186 | mV | | 7/16/2025 | | | FS | X |
| pH | | 5.94 | Std Unit | | 7/16/2025 | | | FS | X |
| Temperature | | 65.6 | deg F | | 7/16/2025 | | | FS | X |
| Turbidity | | 4.55 | NTU | | 7/16/2025 | | | FS | X |
| Aluminum | U | 0.05 | mg/L | 0.05 | 7/16/2025 | | | SW846-6020B | = |
| Antimony | U | 0.003 | mg/L | 0.003 | 7/16/2025 | | | SW846-6020B | = |
| Arsenic | U | 0.005 | mg/L | 0.005 | 7/16/2025 | | | SW846-6020B | = |
| Barium | | 0.0454 | mg/L | 0.004 | 7/16/2025 | | | SW846-6020B | = |
| Beryllium | U | 0.0005 | mg/L | 0.0005 | 7/16/2025 | | | SW846-6020B | = |
| Boron | | 0.396 | mg/L | 0.075 | 7/16/2025 | | | SW846-6020B | = |
| Cadmium | U | 0.001 | mg/L | 0.001 | 7/16/2025 | | | SW846-6020B | = |
| Calcium | | 27.8 | mg/L | 0.2 | 7/16/2025 | | | SW846-6020B | = |
| Chromium | U | 0.01 | mg/L | 0.01 | 7/16/2025 | | | SW846-6020B | = |
| Cobalt | J | 0.000573 | mg/L | 0.001 | 7/16/2025 | | | SW846-6020B | = |
| Copper | J | 0.000451 | mg/L | 0.002 | 7/16/2025 | | | SW846-6020B | = |
| Iron | | 0.239 | mg/L | 0.1 | 7/16/2025 | | | SW846-6020B | = |
| Lead | U | 0.002 | mg/L | 0.002 | 7/16/2025 | | | SW846-6020B | = |
| Magnesium | | 12 | mg/L | 0.03 | 7/16/2025 | | | SW846-6020B | = |
| Manganese | | 0.0314 | mg/L | 0.005 | 7/16/2025 | | | SW846-6020B | = |
| Molybdenum | U | 0.001 | mg/L | 0.001 | 7/16/2025 | | | SW846-6020B | = |
| Nickel | J | 0.00197 | mg/L | 0.002 | 7/16/2025 | | | SW846-6020B | = |
| Potassium | | 1.98 | mg/L | 0.3 | 7/16/2025 | | | SW846-6020B | = |
| Rhodium | U | 0.005 | mg/L | 0.005 | 7/16/2025 | | | SW846-6020B | = |
| Selenium | U | 0.005 | mg/L | 0.005 | 7/16/2025 | | | SW846-6020B | = |
| Silver | U | 0.001 | mg/L | 0.001 | 7/16/2025 | | | SW846-6020B | = |
| Sodium | | 35.5 | mg/L | 0.25 | 7/16/2025 | | | SW846-6020B | = |
| Tantalum | U | 0.005 | mg/L | 0.005 | 7/16/2025 | | | SW846-6020B | = |
| Thallium | U | 0.002 | mg/L | 0.002 | 7/16/2025 | | | SW846-6020B | = |
| Uranium | U | 0.0002 | mg/L | 0.0002 | 7/16/2025 | | | SW846-6020B | = |
| Vanadium | U | 0.02 | mg/L | 0.02 | 7/16/2025 | | | SW846-6020B | = |
| Zinc | U | 0.02 | mg/L | 0.02 | 7/16/2025 | | | SW846-6020B | = |
| Mercury | U | 0.0002 | mg/L | 0.0002 | 7/16/2025 | | | SW846-7470A | = |
| Barium, Dissolved | | 0.0481 | mg/L | 0.004 | 7/16/2025 | | | SW846-6020B | J |
| Chromium, Dissolved | U | 0.01 | mg/L | 0.01 | 7/16/2025 | | | SW846-6020B | UJ |
| Uranium, Dissolved | U | 0.0002 | mg/L | 0.0002 | 7/16/2025 | | | SW846-6020B | UJ |
| PCB-1016 | U | 0.0903 | ug/L | 0.0903 | 7/16/2025 | | | SW846-8082A | = |
| PCB-1221 | U | 0.0903 | ug/L | 0.0903 | 7/16/2025 | | | 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:** 3rd Quarter 2025

**AKGWA Well Tag #:** 8004-4799 **SAMPLE ID:** MW358UG4-25 Sample Type: REG

| Parameter | Qualifier | Result | Units | Reporting Limit | Date Collected | Rad Error (+/-) | TPU | Method | Validation Code |
|---|---|---|---|---|---|---|---|---|---|
| PCB-1232 | U | 0.0903 | ug/L | 0.0903 | 7/16/2025 | | | SW846-8082A | = |
| PCB-1242 | U | 0.0903 | ug/L | 0.0903 | 7/16/2025 | | | SW846-8082A | = |
| PCB-1248 | U | 0.0903 | ug/L | 0.0903 | 7/16/2025 | | | SW846-8082A | = |
| PCB-1254 | U | 0.0903 | ug/L | 0.0903 | 7/16/2025 | | | SW846-8082A | = |
| PCB-1260 | U | 0.0903 | ug/L | 0.0903 | 7/16/2025 | | | SW846-8082A | UJ |
| PCB-1268 | U | 0.0903 | ug/L | 0.0903 | 7/16/2025 | | | SW846-8082A | = |
| Polychlorinated biphenyl | U | 0.0903 | ug/L | 0.0903 | 7/16/2025 | | | SW846-8082A | UJ |
| Radium-226 | U | 0.312 | pCi/L | 0.484 | 7/16/2025 | 0.339 | 0.342 | AN-1418 | = |
| Radium-228 | U | 1.41 | pCi/L | 4.38 | 7/16/2025 | 2.52 | 2.55 | EPA-904.0-M | = |
| Strontium-90 | U | 0.569 | pCi/L | 4.37 | 7/16/2025 | 2.38 | 2.38 | EPA-905.0-M | UJ |
| Tritium | U | -9.52 | pCi/L | 212 | 7/16/2025 | 106 | 106 | EPA-906.0-M | = |
| Technetium-99 | | 35.2 | pCi/L | 23.4 | 7/16/2025 | 14.5 | 15.1 | HASL 300, Tc-02-RC M | J |
| Thorium-230 | U | 0.281 | pCi/L | 1.41 | 7/16/2025 | 0.768 | 0.772 | HASL 300, Th-01-RC M | = |
| Thorium-232 | U | 0.0676 | pCi/L | 0.996 | 7/16/2025 | 0.497 | 0.497 | HASL 300, Th-01-RC M | = |
| Alpha activity | U | -0.0657 | pCi/L | 6.32 | 7/16/2025 | 2.49 | 2.5 | SW846-9310 | UJ |
| Beta activity | | 32.7 | pCi/L | 9.94 | 7/16/2025 | 8.82 | 10.3 | SW846-9310 | = |
| 1,2-Dibromo-3-chloropropane | U | 0.019 | ug/L | 0.019 | 7/16/2025 | | | SW846-8011 | = |
| 1,1,1,2-Tetrachloroethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 1,1,1-Trichloroethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 1,1,2,2-Tetrachloroethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 1,1,2-Trichloroethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 1,1-Dichloroethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 1,1-Dichloroethene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 1,2,3-Trichloropropane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 1,2-Dibromoethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 1,2-Dichlorobenzene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 1,2-Dichloroethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 1,2-Dichloropropane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 1,4-Dichlorobenzene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 2-Butanone | U | 5 | ug/L | 5 | 7/16/2025 | | | SW846-8260D | = |
| 2-Hexanone | U | 5 | ug/L | 5 | 7/16/2025 | | | SW846-8260D | = |
| 4-Methyl-2-pentanone | U | 5 | ug/L | 5 | 7/16/2025 | | | SW846-8260D | = |
| Acetone | U | 5 | ug/L | 5 | 7/16/2025 | | | SW846-8260D | = |
| Acrolein | U | 5 | ug/L | 5 | 7/16/2025 | | | SW846-8260D | = |
| Acrylonitrile | U | 5 | ug/L | 5 | 7/16/2025 | | | SW846-8260D | = |
| Benzene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Bromochloromethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Bromodichloromethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Bromoform | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Bromomethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Carbon disulfide | U | 5 | ug/L | 5 | 7/16/2025 | | | SW846-8260D | = |
| Carbon tetrachloride | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Chlorobenzene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Chloroethane | U | 1 | ug/L | 1 | 7/16/2025 | | | 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:** 3rd Quarter 2025

**AKGWA Well Tag #:** 8004-4799 **SAMPLE ID:** MW358UG4-25 Sample Type: REG

| Parameter | Qualifier | Result | Units | Reporting Limit | Date Collected | Rad Error (+/-) | TPU | Method | Validation Code |
|---|---|---|---|---|---|---|---|---|---|
| Chloroform | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Chloromethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| cis-1,2-Dichloroethene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| cis-1,3-Dichloropropene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Dibromochloromethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Dibromomethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Ethylbenzene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Iodomethane | U | 5 | ug/L | 5 | 7/16/2025 | | | SW846-8260D | = |
| Methylene chloride | J | 0.7 | ug/L | 5 | 7/16/2025 | | | SW846-8260D | = |
| Styrene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Tetrachloroethene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Toluene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Total Xylene | U | 3 | ug/L | 3 | 7/16/2025 | | | SW846-8260D | = |
| trans-1,2-Dichloroethene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| trans-1,3-Dichloropropene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| trans-1,4-Dichloro-2-butene | U | 5 | ug/L | 5 | 7/16/2025 | | | SW846-8260D | = |
| Trichloroethene | | 3.2 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Trichlorofluoromethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Vinyl acetate | U | 5 | ug/L | 5 | 7/16/2025 | | | SW846-8260D | = |
| Vinyl chloride | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Dissolved Solids | | 265 | mg/L | 10 | 7/16/2025 | | | EPA-160.1 | = |
| Chemical Oxygen Demand (COD) | U | 20 | mg/L | 20 | 7/16/2025 | | | EPA-410.4 | = |
| Cyanide | UNN1 | 0.2 | mg/L | 0.2 | 7/16/2025 | | | SW846-9012B | = |
| Total Organic Halides (TOX) | | 14.1 | ug/L | 10 | 7/16/2025 | | | SW846-9020B | = |
| Total Organic Carbon (TOC) | J | 0.807 | mg/L | 2 | 7/16/2025 | | | 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:** 3rd Quarter 2025

**AKGWA Well Tag #:** 8004-0981 **SAMPLE ID:** MW359UG4-25 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 | 7/16/2025 | | | EPA-300.0 | = |
| Bromide | U | 0.2 | mg/L | 0.2 | 7/16/2025 | | | SW846-9056A | = |
| Chloride | JW | 0.713 | mg/L | 250 | 7/16/2025 | | | SW846-9056A | = |
| Fluoride | J | 0.0623 | mg/L | 4 | 7/16/2025 | | | SW846-9056A | = |
| Nitrate as Nitrogen | HJ | 0.593 | mg/L | 10 | 7/16/2025 | | | SW846-9056A | J |
| Sulfate | | 36.2 | mg/L | 1.6 | 7/16/2025 | | | SW846-9056A | = |
| Barometric Pressure Reading | | 29.95 | Inches/Hg | | 7/16/2025 | | | FS | X |
| Conductivity | | 195 | µmhos/cm | | 7/16/2025 | | | FS | X |
| Depth to Water | | 30.68 | ft | | 7/16/2025 | | | FS | X |
| Dissolved Oxygen | | 3.99 | mg/L | | 7/16/2025 | | | FS | X |
| Eh (approx) | | 437 | mV | | 7/16/2025 | | | FS | X |
| pH | | 5.96 | Std Unit | | 7/16/2025 | | | FS | X |
| Temperature | | 71 | deg F | | 7/16/2025 | | | FS | X |
| Turbidity | | 3.27 | NTU | | 7/16/2025 | | | FS | X |
| Aluminum | J | 0.0458 | mg/L | 0.05 | 7/16/2025 | | | SW846-6020B | = |
| Antimony | U | 0.003 | mg/L | 0.003 | 7/16/2025 | | | SW846-6020B | = |
| Arsenic | U | 0.005 | mg/L | 0.005 | 7/16/2025 | | | SW846-6020B | = |
| Barium | | 0.021 | mg/L | 0.004 | 7/16/2025 | | | SW846-6020B | = |
| Beryllium | U | 0.0005 | mg/L | 0.0005 | 7/16/2025 | | | SW846-6020B | = |
| Boron | J | 0.00626 | mg/L | 0.015 | 7/16/2025 | | | SW846-6020B | = |
| Cadmium | U | 0.001 | mg/L | 0.001 | 7/16/2025 | | | SW846-6020B | = |
| Calcium | | 4.88 | mg/L | 0.2 | 7/16/2025 | | | SW846-6020B | = |
| Chromium | U | 0.01 | mg/L | 0.01 | 7/16/2025 | | | SW846-6020B | = |
| Cobalt | U | 0.001 | mg/L | 0.001 | 7/16/2025 | | | SW846-6020B | = |
| Copper | J | 0.00142 | mg/L | 0.002 | 7/16/2025 | | | SW846-6020B | = |
| Iron | J | 0.058 | mg/L | 0.1 | 7/16/2025 | | | SW846-6020B | = |
| Lead | U | 0.002 | mg/L | 0.002 | 7/16/2025 | | | SW846-6020B | = |
| Magnesium | | 2.79 | mg/L | 0.03 | 7/16/2025 | | | SW846-6020B | = |
| Manganese | J | 0.00102 | mg/L | 0.005 | 7/16/2025 | | | SW846-6020B | = |
| Molybdenum | U | 0.001 | mg/L | 0.001 | 7/16/2025 | | | SW846-6020B | = |
| Nickel | J | 0.00085 | mg/L | 0.002 | 7/16/2025 | | | SW846-6020B | = |
| Potassium | J | 0.108 | mg/L | 0.3 | 7/16/2025 | | | SW846-6020B | = |
| Rhodium | U | 0.005 | mg/L | 0.005 | 7/16/2025 | | | SW846-6020B | = |
| Selenium | U | 0.005 | mg/L | 0.005 | 7/16/2025 | | | SW846-6020B | = |
| Silver | U | 0.001 | mg/L | 0.001 | 7/16/2025 | | | SW846-6020B | = |
| Sodium | | 29.5 | mg/L | 0.25 | 7/16/2025 | | | SW846-6020B | = |
| Tantalum | U | 0.005 | mg/L | 0.005 | 7/16/2025 | | | SW846-6020B | = |
| Thallium | U | 0.002 | mg/L | 0.002 | 7/16/2025 | | | SW846-6020B | = |
| Uranium | U | 0.0002 | mg/L | 0.0002 | 7/16/2025 | | | SW846-6020B | = |
| Vanadium | J | 0.00409 | mg/L | 0.02 | 7/16/2025 | | | SW846-6020B | = |
| Zinc | J | 0.00566 | mg/L | 0.02 | 7/16/2025 | | | SW846-6020B | = |
| Mercury | U | 0.0002 | mg/L | 0.0002 | 7/16/2025 | | | SW846-7470A | = |
| Barium, Dissolved | | 0.0205 | mg/L | 0.004 | 7/16/2025 | | | SW846-6020B | J |
| Chromium, Dissolved | U | 0.01 | mg/L | 0.01 | 7/16/2025 | | | SW846-6020B | UJ |
| Uranium, Dissolved | U | 0.0002 | mg/L | 0.0002 | 7/16/2025 | | | SW846-6020B | UJ |
| PCB-1016 | U | 0.0866 | ug/L | 0.0866 | 7/16/2025 | | | SW846-8082A | = |
| PCB-1221 | U | 0.0866 | ug/L | 0.0866 | 7/16/2025 | | | 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:** 3rd Quarter 2025

**AKGWA Well Tag #:** 8004-0981 **SAMPLE ID:** MW359UG4-25 Sample Type: REG

| Parameter | Qualifier | Result | Units | Reporting Limit | Date Collected | Rad Error (+/-) | TPU | Method | Validation Code |
|---|---|---|---|---|---|---|---|---|---|
| PCB-1232 | U | 0.0866 | ug/L | 0.0866 | 7/16/2025 | | | SW846-8082A | = |
| PCB-1242 | U | 0.0866 | ug/L | 0.0866 | 7/16/2025 | | | SW846-8082A | = |
| PCB-1248 | U | 0.0866 | ug/L | 0.0866 | 7/16/2025 | | | SW846-8082A | = |
| PCB-1254 | U | 0.0866 | ug/L | 0.0866 | 7/16/2025 | | | SW846-8082A | = |
| PCB-1260 | U | 0.0866 | ug/L | 0.0866 | 7/16/2025 | | | SW846-8082A | UJ |
| PCB-1268 | U | 0.0866 | ug/L | 0.0866 | 7/16/2025 | | | SW846-8082A | = |
| Polychlorinated biphenyl | U | 0.0866 | ug/L | 0.0866 | 7/16/2025 | | | SW846-8082A | UJ |
| Radium-226 | U | 0.36 | pCi/L | 0.406 | 7/16/2025 | 0.33 | 0.333 | AN-1418 | = |
| Radium-228 | U | 3.95 | pCi/L | 4.58 | 7/16/2025 | 2.9 | 3.1 | EPA-904.0-M | = |
| Strontium-90 | U | 2.45 | pCi/L | 6.06 | 7/16/2025 | 3.53 | 3.55 | EPA-905.0-M | UJ |
| Tritium | U | -56.2 | pCi/L | 215 | 7/16/2025 | 97.3 | 97.3 | EPA-906.0-M | = |
| Technetium-99 | U | -2.27 | pCi/L | 22.8 | 7/16/2025 | 13.2 | 13.2 | HASL 300, Tc-02-RC M | UJ |
| Thorium-230 | U | 0.351 | pCi/L | 2.27 | 7/16/2025 | 1.2 | 1.2 | HASL 300, Th-01-RC M | = |
| Thorium-232 | U | 0.203 | pCi/L | 1.48 | 7/16/2025 | 0.844 | 0.845 | HASL 300, Th-01-RC M | = |
| Alpha activity | U | 3.07 | pCi/L | 5.56 | 7/16/2025 | 3.53 | 3.57 | SW846-9310 | UJ |
| Beta activity | U | 1.74 | pCi/L | 9.78 | 7/16/2025 | 5.38 | 5.39 | SW846-9310 | = |
| 1,2-Dibromo-3-chloropropane | U | 0.0189 | ug/L | 0.0189 | 7/16/2025 | | | SW846-8011 | = |
| 1,1,1,2-Tetrachloroethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 1,1,1-Trichloroethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 1,1,2,2-Tetrachloroethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 1,1,2-Trichloroethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 1,1-Dichloroethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 1,1-Dichloroethene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 1,2,3-Trichloropropane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 1,2-Dibromoethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 1,2-Dichlorobenzene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 1,2-Dichloroethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 1,2-Dichloropropane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 1,4-Dichlorobenzene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 2-Butanone | U | 5 | ug/L | 5 | 7/16/2025 | | | SW846-8260D | = |
| 2-Hexanone | U | 5 | ug/L | 5 | 7/16/2025 | | | SW846-8260D | = |
| 4-Methyl-2-pentanone | U | 5 | ug/L | 5 | 7/16/2025 | | | SW846-8260D | = |
| Acetone | U | 5 | ug/L | 5 | 7/16/2025 | | | SW846-8260D | = |
| Acrolein | U | 5 | ug/L | 5 | 7/16/2025 | | | SW846-8260D | = |
| Acrylonitrile | U | 5 | ug/L | 5 | 7/16/2025 | | | SW846-8260D | = |
| Benzene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Bromochloromethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Bromodichloromethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Bromoform | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Bromomethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Carbon disulfide | U | 5 | ug/L | 5 | 7/16/2025 | | | SW846-8260D | = |
| Carbon tetrachloride | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Chlorobenzene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Chloroethane | U | 1 | ug/L | 1 | 7/16/2025 | | | 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:** 3rd Quarter 2025

**AKGWA Well Tag #:** 8004-0981 **SAMPLE ID:** MW359UG4-25 Sample Type: REG

| Parameter | Qualifier | Result | Units | Reporting Limit | Date Collected | Rad Error (+/-) | TPU | Method | Validation Code |
|---|---|---|---|---|---|---|---|---|---|
| Chloroform | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Chloromethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| cis-1,2-Dichloroethene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| cis-1,3-Dichloropropene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Dibromochloromethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Dibromomethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Ethylbenzene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Iodomethane | U | 5 | ug/L | 5 | 7/16/2025 | | | SW846-8260D | = |
| Methylene chloride | J | 0.75 | ug/L | 5 | 7/16/2025 | | | SW846-8260D | = |
| Styrene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Tetrachloroethene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Toluene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Total Xylene | U | 3 | ug/L | 3 | 7/16/2025 | | | SW846-8260D | = |
| trans-1,2-Dichloroethene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| trans-1,3-Dichloropropene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| trans-1,4-Dichloro-2-butene | U | 5 | ug/L | 5 | 7/16/2025 | | | SW846-8260D | = |
| Trichloroethene | | 3.73 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Trichlorofluoromethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Vinyl acetate | U | 5 | ug/L | 5 | 7/16/2025 | | | SW846-8260D | = |
| Vinyl chloride | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Dissolved Solids | | 146 | mg/L | 10 | 7/16/2025 | | | EPA-160.1 | = |
| Chemical Oxygen Demand (COD) | U | 20 | mg/L | 20 | 7/16/2025 | | | EPA-410.4 | = |
| Cyanide | UNN1 | 0.2 | mg/L | 0.2 | 7/16/2025 | | | SW846-9012B | = |
| Total Organic Halides (TOX) | J | 8.52 | ug/L | 10 | 7/16/2025 | | | SW846-9020B | = |
| Total Organic Carbon (TOC) | J | 0.767 | mg/L | 2 | 7/16/2025 | | | 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:** 3rd Quarter 2025

**AKGWA Well Tag #:** 8004-4800 **SAMPLE ID:** MW360UG4-25 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 | 7/16/2025 | | | EPA-300.0 | = |
| Bromide | J | 0.139 | mg/L | 0.2 | 7/16/2025 | | | SW846-9056A | = |
| Chloride | JW | 5.53 | mg/L | 250 | 7/16/2025 | | | SW846-9056A | = |
| Fluoride | J | 0.225 | mg/L | 4 | 7/16/2025 | | | SW846-9056A | = |
| Nitrate as Nitrogen | HJ | 0.781 | mg/L | 10 | 7/16/2025 | | | SW846-9056A | J |
| Sulfate | | 9.94 | mg/L | 0.4 | 7/16/2025 | | | SW846-9056A | = |
| Barometric Pressure Reading | | 29.96 | Inches/Hg | | 7/16/2025 | | | FS | X |
| Conductivity | | 385 | µmhos/cm | | 7/16/2025 | | | FS | X |
| Depth to Water | | 34.89 | ft | | 7/16/2025 | | | FS | X |
| Dissolved Oxygen | | 1.84 | mg/L | | 7/16/2025 | | | FS | X |
| Eh (approx) | | 495 | mV | | 7/16/2025 | | | FS | X |
| pH | | 6.47 | Std Unit | | 7/16/2025 | | | FS | X |
| Temperature | | 63 | deg F | | 7/16/2025 | | | FS | X |
| Turbidity | | 4.06 | NTU | | 7/16/2025 | | | FS | X |
| Aluminum | | 0.0571 | mg/L | 0.05 | 7/16/2025 | | | SW846-6020B | = |
| Antimony | U | 0.003 | mg/L | 0.003 | 7/16/2025 | | | SW846-6020B | = |
| Arsenic | U | 0.005 | mg/L | 0.005 | 7/16/2025 | | | SW846-6020B | = |
| Barium | | 0.191 | mg/L | 0.004 | 7/16/2025 | | | SW846-6020B | = |
| Beryllium | U | 0.0005 | mg/L | 0.0005 | 7/16/2025 | | | SW846-6020B | = |
| Boron | | 0.0218 | mg/L | 0.015 | 7/16/2025 | | | SW846-6020B | J |
| Cadmium | U | 0.001 | mg/L | 0.001 | 7/16/2025 | | | SW846-6020B | = |
| Calcium | | 17.8 | mg/L | 0.2 | 7/16/2025 | | | SW846-6020B | = |
| Chromium | U | 0.01 | mg/L | 0.01 | 7/16/2025 | | | SW846-6020B | = |
| Cobalt | J | 0.000549 | mg/L | 0.001 | 7/16/2025 | | | SW846-6020B | = |
| Copper | J | 0.00182 | mg/L | 0.002 | 7/16/2025 | | | SW846-6020B | = |
| Iron | | 0.12 | mg/L | 0.1 | 7/16/2025 | | | SW846-6020B | = |
| Lead | U | 0.002 | mg/L | 0.002 | 7/16/2025 | | | SW846-6020B | = |
| Magnesium | | 7.32 | mg/L | 0.03 | 7/16/2025 | | | SW846-6020B | = |
| Manganese | | 0.00524 | mg/L | 0.005 | 7/16/2025 | | | SW846-6020B | = |
| Molybdenum | U | 0.001 | mg/L | 0.001 | 7/16/2025 | | | SW846-6020B | = |
| Nickel | J | 0.00159 | mg/L | 0.002 | 7/16/2025 | | | SW846-6020B | = |
| Potassium | | 0.663 | mg/L | 0.3 | 7/16/2025 | | | SW846-6020B | = |
| Rhodium | U | 0.005 | mg/L | 0.005 | 7/16/2025 | | | SW846-6020B | = |
| Selenium | J | 0.00192 | mg/L | 0.005 | 7/16/2025 | | | SW846-6020B | = |
| Silver | U | 0.001 | mg/L | 0.001 | 7/16/2025 | | | SW846-6020B | = |
| Sodium | | 54.6 | mg/L | 1.25 | 7/16/2025 | | | SW846-6020B | = |
| Tantalum | U | 0.005 | mg/L | 0.005 | 7/16/2025 | | | SW846-6020B | = |
| Thallium | U | 0.002 | mg/L | 0.002 | 7/16/2025 | | | SW846-6020B | = |
| Uranium | J | 0.000078 | mg/L | 0.0002 | 7/16/2025 | | | SW846-6020B | = |
| Vanadium | U | 0.02 | mg/L | 0.02 | 7/16/2025 | | | SW846-6020B | = |
| Zinc | J | 0.00754 | mg/L | 0.02 | 7/16/2025 | | | SW846-6020B | = |
| Mercury | U | 0.0002 | mg/L | 0.0002 | 7/16/2025 | | | SW846-7470A | = |
| Barium, Dissolved | | 0.192 | mg/L | 0.004 | 7/16/2025 | | | SW846-6020B | J |
| Chromium, Dissolved | U | 0.01 | mg/L | 0.01 | 7/16/2025 | | | SW846-6020B | UJ |
| Uranium, Dissolved | J | 0.00007 | mg/L | 0.0002 | 7/16/2025 | | | SW846-6020B | J |
| PCB-1016 | U | 0.0864 | ug/L | 0.0864 | 7/16/2025 | | | SW846-8082A | = |
| PCB-1221 | U | 0.0864 | ug/L | 0.0864 | 7/16/2025 | | | 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:** 3rd Quarter 2025

**AKGWA Well Tag #:** 8004-4800 **SAMPLE ID:** MW360UG4-25 Sample Type: REG

| Parameter | Qualifier | Result | Units | Reporting Limit | Date Collected | Rad Error (+/-) | TPU | Method | Validation Code |
|---|---|---|---|---|---|---|---|---|---|
| PCB-1232 | U | 0.0864 | ug/L | 0.0864 | 7/16/2025 | | | SW846-8082A | = |
| PCB-1242 | U | 0.0864 | ug/L | 0.0864 | 7/16/2025 | | | SW846-8082A | = |
| PCB-1248 | U | 0.0864 | ug/L | 0.0864 | 7/16/2025 | | | SW846-8082A | = |
| PCB-1254 | U | 0.0864 | ug/L | 0.0864 | 7/16/2025 | | | SW846-8082A | = |
| PCB-1260 | U | 0.0864 | ug/L | 0.0864 | 7/16/2025 | | | SW846-8082A | UJ |
| PCB-1268 | U | 0.0864 | ug/L | 0.0864 | 7/16/2025 | | | SW846-8082A | = |
| Polychlorinated biphenyl | U | 0.0864 | ug/L | 0.0864 | 7/16/2025 | | | SW846-8082A | UJ |
| Radium-226 | U | 0.333 | pCi/L | 0.443 | 7/16/2025 | 0.341 | 0.343 | AN-1418 | = |
| Radium-228 | U | 2.29 | pCi/L | 4.65 | 7/16/2025 | 2.75 | 2.83 | EPA-904.0-M | = |
| Strontium-90 | U | 1.91 | pCi/L | 5.63 | 7/16/2025 | 3.24 | 3.25 | EPA-905.0-M | UJ |
| Tritium | U | 58.8 | pCi/L | 220 | 7/16/2025 | 122 | 122 | EPA-906.0-M | = |
| Technetium-99 | U | 5.08 | pCi/L | 22.4 | 7/16/2025 | 13.2 | 13.2 | HASL 300, Tc-02-RC M | UJ |
| Thorium-230 | U | 0.718 | pCi/L | 1.17 | 7/16/2025 | 0.83 | 0.84 | HASL 300, Th-01-RC M | = |
| Thorium-232 | U | -0.0931 | pCi/L | 0.868 | 7/16/2025 | 0.316 | 0.316 | HASL 300, Th-01-RC M | = |
| Alpha activity | U | -1.48 | pCi/L | 6.53 | 7/16/2025 | 1.93 | 1.93 | SW846-9310 | UJ |
| Beta activity | U | 4.54 | pCi/L | 9.18 | 7/16/2025 | 5.44 | 5.49 | SW846-9310 | = |
| 1,2-Dibromo-3-chloropropane | U | 0.019 | ug/L | 0.019 | 7/16/2025 | | | SW846-8011 | = |
| 1,1,1,2-Tetrachloroethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 1,1,1-Trichloroethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 1,1,2,2-Tetrachloroethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 1,1,2-Trichloroethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 1,1-Dichloroethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 1,1-Dichloroethene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 1,2,3-Trichloropropane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 1,2-Dibromoethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 1,2-Dichlorobenzene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 1,2-Dichloroethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 1,2-Dichloropropane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 1,4-Dichlorobenzene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 2-Butanone | U | 5 | ug/L | 5 | 7/16/2025 | | | SW846-8260D | = |
| 2-Hexanone | U | 5 | ug/L | 5 | 7/16/2025 | | | SW846-8260D | = |
| 4-Methyl-2-pentanone | U | 5 | ug/L | 5 | 7/16/2025 | | | SW846-8260D | = |
| Acetone | U | 5 | ug/L | 5 | 7/16/2025 | | | SW846-8260D | = |
| Acrolein | U | 5 | ug/L | 5 | 7/16/2025 | | | SW846-8260D | = |
| Acrylonitrile | U | 5 | ug/L | 5 | 7/16/2025 | | | SW846-8260D | = |
| Benzene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Bromochloromethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Bromodichloromethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Bromoform | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Bromomethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Carbon disulfide | U | 5 | ug/L | 5 | 7/16/2025 | | | SW846-8260D | = |
| Carbon tetrachloride | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Chlorobenzene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Chloroethane | U | 1 | ug/L | 1 | 7/16/2025 | | | 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:** 3rd Quarter 2025

**AKGWA Well Tag #:** 8004-4800 **SAMPLE ID:** MW360UG4-25 Sample Type: REG

| Parameter | Qualifier | Result | Units | Reporting Limit | Date Collected | Rad Error (+/-) | TPU | Method | Validation Code |
|---|---|---|---|---|---|---|---|---|---|
| Chloroform | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Chloromethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| cis-1,2-Dichloroethene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| cis-1,3-Dichloropropene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Dibromochloromethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Dibromomethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Ethylbenzene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Iodomethane | U | 5 | ug/L | 5 | 7/16/2025 | | | SW846-8260D | = |
| Methylene chloride | J | 0.58 | ug/L | 5 | 7/16/2025 | | | SW846-8260D | = |
| Styrene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Tetrachloroethene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Toluene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Total Xylene | U | 3 | ug/L | 3 | 7/16/2025 | | | SW846-8260D | = |
| trans-1,2-Dichloroethene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| trans-1,3-Dichloropropene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| trans-1,4-Dichloro-2-butene | U | 5 | ug/L | 5 | 7/16/2025 | | | SW846-8260D | = |
| Trichloroethene | | 2.28 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Trichlorofluoromethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Vinyl acetate | U | 5 | ug/L | 5 | 7/16/2025 | | | SW846-8260D | = |
| Vinyl chloride | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Dissolved Solids | | 217 | mg/L | 10 | 7/16/2025 | | | EPA-160.1 | = |
| Chemical Oxygen Demand (COD) | U | 20 | mg/L | 20 | 7/16/2025 | | | EPA-410.4 | = |
| Cyanide | UNN1 | 0.2 | mg/L | 0.2 | 7/16/2025 | | | SW846-9012B | = |
| Total Organic Halides (TOX) | J | 8.2 | ug/L | 10 | 7/16/2025 | | | SW846-9020B | = |
| Total Organic Carbon (TOC) | J | 0.927 | mg/L | 2 | 7/16/2025 | | | 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:** 3rd Quarter 2025

**AKGWA Well Tag #:** 8004-4795 **SAMPLE ID:** MW361UG4-25 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 | 7/16/2025 | | | EPA-300.0 | = |
| Bromide | | 0.447 | mg/L | 0.2 | 7/16/2025 | | | SW846-9056A | = |
| Chloride | JW | 36.7 | mg/L | 250 | 7/16/2025 | | | SW846-9056A | J |
| Fluoride | J | 0.111 | mg/L | 4 | 7/16/2025 | | | SW846-9056A | = |
| Nitrate as Nitrogen | HJ | 1.23 | mg/L | 10 | 7/16/2025 | | | SW846-9056A | J |
| Sulfate | | 67.5 | mg/L | 2 | 7/16/2025 | | | SW846-9056A | = |
| Barometric Pressure Reading | | 29.99 | Inches/Hg | | 7/16/2025 | | | FS | X |
| Conductivity | | 475 | µmhos/cm | | 7/16/2025 | | | FS | X |
| Depth to Water | | 34.12 | ft | | 7/16/2025 | | | FS | X |
| Dissolved Oxygen | | 4.58 | mg/L | | 7/16/2025 | | | FS | X |
| Eh (approx) | | 513 | mV | | 7/16/2025 | | | FS | X |
| pH | | 5.75 | Std Unit | | 7/16/2025 | | | FS | X |
| Temperature | | 64.2 | deg F | | 7/16/2025 | | | FS | X |
| Turbidity | | 3 | NTU | | 7/16/2025 | | | FS | X |
| Aluminum | U | 0.05 | mg/L | 0.05 | 7/16/2025 | | | SW846-6020B | = |
| Antimony | U | 0.003 | mg/L | 0.003 | 7/16/2025 | | | SW846-6020B | = |
| Arsenic | U | 0.005 | mg/L | 0.005 | 7/16/2025 | | | SW846-6020B | = |
| Barium | | 0.059 | mg/L | 0.004 | 7/16/2025 | | | SW846-6020B | = |
| Beryllium | U | 0.0005 | mg/L | 0.0005 | 7/16/2025 | | | SW846-6020B | = |
| Boron | | 0.232 | mg/L | 0.075 | 7/16/2025 | | | SW846-6020B | = |
| Cadmium | U | 0.001 | mg/L | 0.001 | 7/16/2025 | | | SW846-6020B | = |
| Calcium | | 30.2 | mg/L | 0.2 | 7/16/2025 | | | SW846-6020B | = |
| Chromium | U | 0.01 | mg/L | 0.01 | 7/16/2025 | | | SW846-6020B | = |
| Cobalt | U | 0.001 | mg/L | 0.001 | 7/16/2025 | | | SW846-6020B | = |
| Copper | J | 0.000577 | mg/L | 0.002 | 7/16/2025 | | | SW846-6020B | = |
| Iron | U | 0.1 | mg/L | 0.1 | 7/16/2025 | | | SW846-6020B | = |
| Lead | U | 0.002 | mg/L | 0.002 | 7/16/2025 | | | SW846-6020B | = |
| Magnesium | | 13.2 | mg/L | 0.03 | 7/16/2025 | | | SW846-6020B | = |
| Manganese | J | 0.00213 | mg/L | 0.005 | 7/16/2025 | | | SW846-6020B | = |
| Molybdenum | U | 0.001 | mg/L | 0.001 | 7/16/2025 | | | SW846-6020B | = |
| Nickel | U | 0.002 | mg/L | 0.002 | 7/16/2025 | | | SW846-6020B | = |
| Potassium | | 2.08 | mg/L | 0.3 | 7/16/2025 | | | SW846-6020B | = |
| Rhodium | U | 0.005 | mg/L | 0.005 | 7/16/2025 | | | SW846-6020B | = |
| Selenium | U | 0.005 | mg/L | 0.005 | 7/16/2025 | | | SW846-6020B | = |
| Silver | U | 0.001 | mg/L | 0.001 | 7/16/2025 | | | SW846-6020B | = |
| Sodium | | 40.3 | mg/L | 0.25 | 7/16/2025 | | | SW846-6020B | = |
| Tantalum | U | 0.005 | mg/L | 0.005 | 7/16/2025 | | | SW846-6020B | = |
| Thallium | U | 0.002 | mg/L | 0.002 | 7/16/2025 | | | SW846-6020B | = |
| Uranium | U | 0.0002 | mg/L | 0.0002 | 7/16/2025 | | | SW846-6020B | = |
| Vanadium | U | 0.02 | mg/L | 0.02 | 7/16/2025 | | | SW846-6020B | = |
| Zinc | U | 0.02 | mg/L | 0.02 | 7/16/2025 | | | SW846-6020B | = |
| Mercury | U | 0.0002 | mg/L | 0.0002 | 7/16/2025 | | | SW846-7470A | = |
| Barium, Dissolved | | 0.06 | mg/L | 0.004 | 7/16/2025 | | | SW846-6020B | J |
| Chromium, Dissolved | U | 0.01 | mg/L | 0.01 | 7/16/2025 | | | SW846-6020B | UJ |
| Uranium, Dissolved | U | 0.0002 | mg/L | 0.0002 | 7/16/2025 | | | SW846-6020B | UJ |
| PCB-1016 | U | 0.1 | ug/L | 0.1 | 7/16/2025 | | | SW846-8082A | = |
| PCB-1221 | U | 0.1 | ug/L | 0.1 | 7/16/2025 | | | 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:** 3rd Quarter 2025

**AKGWA Well Tag #:** 8004-4795 **SAMPLE ID:** MW361UG4-25 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 | 7/16/2025 | | | SW846-8082A | = |
| PCB-1242 | U | 0.1 | ug/L | 0.1 | 7/16/2025 | | | SW846-8082A | = |
| PCB-1248 | U | 0.1 | ug/L | 0.1 | 7/16/2025 | | | SW846-8082A | = |
| PCB-1254 | U | 0.1 | ug/L | 0.1 | 7/16/2025 | | | SW846-8082A | = |
| PCB-1260 | U | 0.1 | ug/L | 0.1 | 7/16/2025 | | | SW846-8082A | UJ |
| PCB-1268 | U | 0.1 | ug/L | 0.1 | 7/16/2025 | | | SW846-8082A | = |
| Polychlorinated biphenyl | U | 0.1 | ug/L | 0.1 | 7/16/2025 | | | SW846-8082A | UJ |
| Radium-226 | U | 0.218 | pCi/L | 0.508 | 7/16/2025 | 0.327 | 0.328 | AN-1418 | = |
| Radium-228 | U | 3.66 | pCi/L | 4.77 | 7/16/2025 | 2.99 | 3.15 | EPA-904.0-M | = |
| Strontium-90 | U | -0.989 | pCi/L | 4.65 | 7/16/2025 | 2.29 | 2.29 | EPA-905.0-M | UJ |
| Tritium | U | -36.1 | pCi/L | 209 | 7/16/2025 | 99.2 | 99.2 | EPA-906.0-M | = |
| Technetium-99 | | 32.1 | pCi/L | 22.8 | 7/16/2025 | 14.1 | 14.6 | HASL 300, Tc-02-RC M | J |
| Thorium-230 | U | -0.112 | pCi/L | 1.43 | 7/16/2025 | 0.588 | 0.589 | HASL 300, Th-01-RC M | = |
| Thorium-232 | U | -0.0617 | pCi/L | 0.857 | 7/16/2025 | 0.344 | 0.345 | HASL 300, Th-01-RC M | = |
| Alpha activity | U | -0.14 | pCi/L | 8.44 | 7/16/2025 | 3.64 | 3.64 | SW846-9310 | UJ |
| Beta activity | | 21.4 | pCi/L | 9.97 | 7/16/2025 | 7.7 | 8.45 | SW846-9310 | = |
| 1,2-Dibromo-3-chloropropane | U | 0.0191 | ug/L | 0.0191 | 7/16/2025 | | | SW846-8011 | = |
| 1,1,1,2-Tetrachloroethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 1,1,1-Trichloroethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 1,1,2,2-Tetrachloroethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 1,1,2-Trichloroethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 1,1-Dichloroethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 1,1-Dichloroethene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 1,2,3-Trichloropropane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 1,2-Dibromoethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 1,2-Dichlorobenzene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 1,2-Dichloroethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 1,2-Dichloropropane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 1,4-Dichlorobenzene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 2-Butanone | U | 5 | ug/L | 5 | 7/16/2025 | | | SW846-8260D | = |
| 2-Hexanone | U | 5 | ug/L | 5 | 7/16/2025 | | | SW846-8260D | = |
| 4-Methyl-2-pentanone | U | 5 | ug/L | 5 | 7/16/2025 | | | SW846-8260D | = |
| Acetone | U | 5 | ug/L | 5 | 7/16/2025 | | | SW846-8260D | = |
| Acrolein | U | 5 | ug/L | 5 | 7/16/2025 | | | SW846-8260D | = |
| Acrylonitrile | U | 5 | ug/L | 5 | 7/16/2025 | | | SW846-8260D | = |
| Benzene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Bromochloromethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Bromodichloromethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Bromoform | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Bromomethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Carbon disulfide | U | 5 | ug/L | 5 | 7/16/2025 | | | SW846-8260D | = |
| Carbon tetrachloride | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Chlorobenzene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Chloroethane | U | 1 | ug/L | 1 | 7/16/2025 | | | 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:** 3rd Quarter 2025

**AKGWA Well Tag #:** 8004-4795 **SAMPLE ID:** MW361UG4-25 Sample Type: REG

| Parameter | Qualifier | Result | Units | Reporting Limit | Date Collected | Rad Error (+/-) | TPU | Method | Validation Code |
|---|---|---|---|---|---|---|---|---|---|
| Chloroform | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Chloromethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| cis-1,2-Dichloroethene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| cis-1,3-Dichloropropene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Dibromochloromethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Dibromomethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Ethylbenzene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Iodomethane | U | 5 | ug/L | 5 | 7/16/2025 | | | SW846-8260D | = |
| Methylene chloride | J | 0.65 | ug/L | 5 | 7/16/2025 | | | SW846-8260D | = |
| Styrene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Tetrachloroethene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Toluene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Total Xylene | U | 3 | ug/L | 3 | 7/16/2025 | | | SW846-8260D | = |
| trans-1,2-Dichloroethene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| trans-1,3-Dichloropropene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| trans-1,4-Dichloro-2-butene | U | 5 | ug/L | 5 | 7/16/2025 | | | SW846-8260D | = |
| Trichloroethene | | 3.67 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Trichlorofluoromethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Vinyl acetate | U | 5 | ug/L | 5 | 7/16/2025 | | | SW846-8260D | = |
| Vinyl chloride | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Dissolved Solids | | 282 | mg/L | 10 | 7/16/2025 | | | EPA-160.1 | = |
| Chemical Oxygen Demand (COD) | U | 20 | mg/L | 20 | 7/16/2025 | | | EPA-410.4 | = |
| Cyanide | UNN1 | 0.2 | mg/L | 0.2 | 7/16/2025 | | | SW846-9012B | UJ |
| Total Organic Halides (TOX) | J | 9.48 | ug/L | 10 | 7/16/2025 | | | SW846-9020B | = |
| Total Organic Carbon (TOC) | J | 0.419 | mg/L | 2 | 7/16/2025 | | | 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:** 3rd Quarter 2025

**AKGWA Well Tag #:** 8004-0986 **SAMPLE ID:** MW362UG4-25 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 | 7/16/2025 | | | EPA-300.0 | = |
| Bromide | U | 0.2 | mg/L | 0.2 | 7/16/2025 | | | SW846-9056A | = |
| Chloride | JW | 1.47 | mg/L | 250 | 7/16/2025 | | | SW846-9056A | = |
| Fluoride | J | 0.543 | mg/L | 4 | 7/16/2025 | | | SW846-9056A | = |
| Nitrate as Nitrogen | HJ | 0.34 | mg/L | 10 | 7/16/2025 | | | SW846-9056A | J |
| Sulfate | | 31.6 | mg/L | 1.6 | 7/16/2025 | | | SW846-9056A | = |
| Barometric Pressure Reading | | 30 | Inches/Hg | | 7/16/2025 | | | FS | X |
| Conductivity | | 628 | µmhos/cm | | 7/16/2025 | | | FS | X |
| Depth to Water | | 20.84 | ft | | 7/16/2025 | | | FS | X |
| Dissolved Oxygen | | 4.94 | mg/L | | 7/16/2025 | | | FS | X |
| Eh (approx) | | 470 | mV | | 7/16/2025 | | | FS | X |
| pH | | 6.99 | Std Unit | | 7/16/2025 | | | FS | X |
| Temperature | | 65.3 | deg F | | 7/16/2025 | | | FS | X |
| Turbidity | | 6.13 | NTU | | 7/16/2025 | | | FS | X |
| Aluminum | | 0.151 | mg/L | 0.05 | 7/16/2025 | | | SW846-6020B | = |
| Antimony | U | 0.003 | mg/L | 0.003 | 7/16/2025 | | | SW846-6020B | = |
| Arsenic | U | 0.005 | mg/L | 0.005 | 7/16/2025 | | | SW846-6020B | = |
| Barium | | 0.0804 | mg/L | 0.004 | 7/16/2025 | | | SW846-6020B | = |
| Beryllium | U | 0.0005 | mg/L | 0.0005 | 7/16/2025 | | | SW846-6020B | = |
| Boron | | 0.0243 | mg/L | 0.015 | 7/16/2025 | | | SW846-6020B | = |
| Cadmium | U | 0.001 | mg/L | 0.001 | 7/16/2025 | | | SW846-6020B | = |
| Calcium | | 17 | mg/L | 0.2 | 7/16/2025 | | | SW846-6020B | = |
| Chromium | U | 0.01 | mg/L | 0.01 | 7/16/2025 | | | SW846-6020B | = |
| Cobalt | U | 0.001 | mg/L | 0.001 | 7/16/2025 | | | SW846-6020B | = |
| Copper | J | 0.00174 | mg/L | 0.002 | 7/16/2025 | | | SW846-6020B | = |
| Iron | | 0.12 | mg/L | 0.1 | 7/16/2025 | | | SW846-6020B | = |
| Lead | U | 0.002 | mg/L | 0.002 | 7/16/2025 | | | SW846-6020B | = |
| Magnesium | | 7.17 | mg/L | 0.03 | 7/16/2025 | | | SW846-6020B | = |
| Manganese | J | 0.00275 | mg/L | 0.005 | 7/16/2025 | | | SW846-6020B | = |
| Molybdenum | | 0.00102 | mg/L | 0.001 | 7/16/2025 | | | SW846-6020B | J |
| Nickel | J | 0.000886 | mg/L | 0.002 | 7/16/2025 | | | SW846-6020B | = |
| Potassium | | 0.301 | mg/L | 0.3 | 7/16/2025 | | | SW846-6020B | = |
| Rhodium | U | 0.005 | mg/L | 0.005 | 7/16/2025 | | | SW846-6020B | = |
| Selenium | U | 0.005 | mg/L | 0.005 | 7/16/2025 | | | SW846-6020B | = |
| Silver | U | 0.001 | mg/L | 0.001 | 7/16/2025 | | | SW846-6020B | = |
| Sodium | | 107 | mg/L | 1.25 | 7/16/2025 | | | SW846-6020B | = |
| Tantalum | U | 0.005 | mg/L | 0.005 | 7/16/2025 | | | SW846-6020B | = |
| Thallium | U | 0.002 | mg/L | 0.002 | 7/16/2025 | | | SW846-6020B | = |
| Uranium | | 0.00218 | mg/L | 0.0002 | 7/16/2025 | | | SW846-6020B | = |
| Vanadium | U | 0.02 | mg/L | 0.02 | 7/16/2025 | | | SW846-6020B | = |
| Zinc | U | 0.02 | mg/L | 0.02 | 7/16/2025 | | | SW846-6020B | = |
| Mercury | U | 0.0002 | mg/L | 0.0002 | 7/16/2025 | | | SW846-7470A | = |
| Barium, Dissolved | | 0.0817 | mg/L | 0.004 | 7/16/2025 | | | SW846-6020B | J |
| Chromium, Dissolved | U | 0.01 | mg/L | 0.01 | 7/16/2025 | | | SW846-6020B | UJ |
| Uranium, Dissolved | | 0.00236 | mg/L | 0.0002 | 7/16/2025 | | | SW846-6020B | J |
| PCB-1016 | US | 0.084 | ug/L | 0.084 | 7/16/2025 | | | SW846-8082A | UJ |
| PCB-1221 | US | 0.084 | ug/L | 0.084 | 7/16/2025 | | | SW846-8082A | UJ |

**Paducah OREIS**
**GROUNDWATER MONITORING REPORT**

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

**Sampling Point:** MW362 DOWN **RGA Type:** UCRS **Period:** 3rd Quarter 2025

**AKGWA Well Tag #:** 8004-0986 **SAMPLE ID:** MW362UG4-25 Sample Type: REG

| Parameter | Qualifier | Result | Units | Reporting Limit | Date Collected | Rad Error (+/-) | TPU | Method | Validation Code |
|---|---|---|---|---|---|---|---|---|---|
| PCB-1232 | US | 0.084 | ug/L | 0.084 | 7/16/2025 | | | SW846-8082A | UJ |
| PCB-1242 | US | 0.084 | ug/L | 0.084 | 7/16/2025 | | | SW846-8082A | UJ |
| PCB-1248 | US | 0.084 | ug/L | 0.084 | 7/16/2025 | | | SW846-8082A | UJ |
| PCB-1254 | US | 0.084 | ug/L | 0.084 | 7/16/2025 | | | SW846-8082A | UJ |
| PCB-1260 | US | 0.084 | ug/L | 0.084 | 7/16/2025 | | | SW846-8082A | UJ |
| PCB-1268 | US | 0.084 | ug/L | 0.084 | 7/16/2025 | | | SW846-8082A | UJ |
| Polychlorinated biphenyl | US | 0.084 | ug/L | 0.084 | 7/16/2025 | | | SW846-8082A | UJ |
| Radium-226 | | 0.498 | pCi/L | 0.397 | 7/16/2025 | 0.374 | 0.379 | AN-1418 | = |
| Radium-228 | U | 2.4 | pCi/L | 4.6 | 7/16/2025 | 2.74 | 2.82 | EPA-904.0-M | = |
| Strontium-90 | U | 0.256 | pCi/L | 2.61 | 7/16/2025 | 1.32 | 1.32 | EPA-905.0-M | UJ |
| Tritium | U | -46.1 | pCi/L | 218 | 7/16/2025 | 100 | 100 | EPA-906.0-M | = |
| Technetium-99 | U | -9.26 | pCi/L | 22.4 | 7/16/2025 | 12.7 | 12.7 | HASL 300, Tc-02-RC M | UJ |
| Thorium-230 | U | 0.455 | pCi/L | 1.85 | 7/16/2025 | 1.03 | 1.03 | HASL 300, Th-01-RC M | = |
| Thorium-232 | U | 0.0775 | pCi/L | 1.1 | 7/16/2025 | 0.552 | 0.552 | HASL 300, Th-01-RC M | = |
| Alpha activity | U | -1.69 | pCi/L | 7.48 | 7/16/2025 | 2.21 | 2.22 | SW846-9310 | UJ |
| Beta activity | U | 6.19 | pCi/L | 9.56 | 7/16/2025 | 5.86 | 5.95 | SW846-9310 | = |
| 1,2-Dibromo-3-chloropropane | U | 0.0191 | ug/L | 0.0191 | 7/16/2025 | | | SW846-8011 | = |
| 1,1,1,2-Tetrachloroethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 1,1,1-Trichloroethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 1,1,2,2-Tetrachloroethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 1,1,2-Trichloroethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 1,1-Dichloroethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 1,1-Dichloroethene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 1,2,3-Trichloropropane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 1,2-Dibromoethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 1,2-Dichlorobenzene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 1,2-Dichloroethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 1,2-Dichloropropane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 1,4-Dichlorobenzene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 2-Butanone | U | 5 | ug/L | 5 | 7/16/2025 | | | SW846-8260D | = |
| 2-Hexanone | U | 5 | ug/L | 5 | 7/16/2025 | | | SW846-8260D | = |
| 4-Methyl-2-pentanone | U | 5 | ug/L | 5 | 7/16/2025 | | | SW846-8260D | = |
| Acetone | U | 5 | ug/L | 5 | 7/16/2025 | | | SW846-8260D | = |
| Acrolein | U | 5 | ug/L | 5 | 7/16/2025 | | | SW846-8260D | = |
| Acrylonitrile | U | 5 | ug/L | 5 | 7/16/2025 | | | SW846-8260D | = |
| Benzene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Bromochloromethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Bromodichloromethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Bromoform | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Bromomethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Carbon disulfide | U | 5 | ug/L | 5 | 7/16/2025 | | | SW846-8260D | = |
| Carbon tetrachloride | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Chlorobenzene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Chloroethane | U | 1 | ug/L | 1 | 7/16/2025 | | | 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:** 3rd Quarter 2025

**AKGWA Well Tag #:** 8004-0986 **SAMPLE ID:** MW362UG4-25 Sample Type: REG

| Parameter | Qualifier | Result | Units | Reporting Limit | Date Collected | Rad Error (+/-) | TPU | Method | Validation Code |
|---|---|---|---|---|---|---|---|---|---|
| Chloroform | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Chloromethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| cis-1,2-Dichloroethene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| cis-1,3-Dichloropropene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Dibromochloromethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Dibromomethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Ethylbenzene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Iodomethane | U | 5 | ug/L | 5 | 7/16/2025 | | | SW846-8260D | = |
| Methylene chloride | J | 0.7 | ug/L | 5 | 7/16/2025 | | | SW846-8260D | = |
| Styrene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Tetrachloroethene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Toluene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Total Xylene | U | 3 | ug/L | 3 | 7/16/2025 | | | SW846-8260D | = |
| trans-1,2-Dichloroethene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| trans-1,3-Dichloropropene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| trans-1,4-Dichloro-2-butene | U | 5 | ug/L | 5 | 7/16/2025 | | | SW846-8260D | = |
| Trichloroethene | | 1.56 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Trichlorofluoromethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Vinyl acetate | U | 5 | ug/L | 5 | 7/16/2025 | | | SW846-8260D | = |
| Vinyl chloride | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Dissolved Solids | | 385 | mg/L | 10 | 7/16/2025 | | | EPA-160.1 | = |
| Chemical Oxygen Demand (COD) | U | 20 | mg/L | 20 | 7/16/2025 | | | EPA-410.4 | = |
| Cyanide | UNN1 | 0.2 | mg/L | 0.2 | 7/16/2025 | | | SW846-9012B | = |
| Total Organic Halides (TOX) | | 23.4 | ug/L | 10 | 7/16/2025 | | | SW846-9020B | = |
| Total Organic Carbon (TOC) | J | 1.7 | mg/L | 2 | 7/16/2025 | | | 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:** 3rd Quarter 2025

**AKGWA Well Tag #:** 8004-4796 **SAMPLE ID:** MW363UG4-25 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 | 7/17/2025 | | | EPA-300.0 | = |
| Bromide | U | 0.2 | mg/L | 0.2 | 7/17/2025 | | | SW846-9056A | = |
| Chloride | J | 10.7 | mg/L | 250 | 7/17/2025 | | | SW846-9056A | = |
| Fluoride | J | 0.163 | mg/L | 4 | 7/17/2025 | | | SW846-9056A | = |
| Nitrate as Nitrogen | J | 3.54 | mg/L | 10 | 7/17/2025 | | | SW846-9056A | = |
| Sulfate | | 34.9 | mg/L | 2 | 7/17/2025 | | | SW846-9056A | = |
| Barometric Pressure Reading | | 29.97 | Inches/Hg | | 7/17/2025 | | | FS | X |
| Conductivity | | 340 | µmhos/cm | | 7/17/2025 | | | FS | X |
| Depth to Water | | 41.5 | ft | | 7/17/2025 | | | FS | X |
| Dissolved Oxygen | | 1.03 | mg/L | | 7/17/2025 | | | FS | X |
| Eh (approx) | | 486 | mV | | 7/17/2025 | | | FS | X |
| pH | | 5.93 | Std Unit | | 7/17/2025 | | | FS | X |
| Temperature | | 64.7 | deg F | | 7/17/2025 | | | FS | X |
| Turbidity | | 4.2 | NTU | | 7/17/2025 | | | FS | X |
| Aluminum | U | 0.05 | mg/L | 0.05 | 7/17/2025 | | | SW846-6020B | = |
| Antimony | U | 0.003 | mg/L | 0.003 | 7/17/2025 | | | SW846-6020B | = |
| Arsenic | U | 0.005 | mg/L | 0.005 | 7/17/2025 | | | SW846-6020B | = |
| Barium | | 0.116 | mg/L | 0.004 | 7/17/2025 | | | SW846-6020B | = |
| Beryllium | U | 0.0005 | mg/L | 0.0005 | 7/17/2025 | | | SW846-6020B | = |
| Boron | | 0.0216 | mg/L | 0.015 | 7/17/2025 | | | SW846-6020B | = |
| Cadmium | U | 0.001 | mg/L | 0.001 | 7/17/2025 | | | SW846-6020B | = |
| Calcium | | 21 | mg/L | 0.2 | 7/17/2025 | | | SW846-6020B | = |
| Chromium | U | 0.01 | mg/L | 0.01 | 7/17/2025 | | | SW846-6020B | = |
| Cobalt | J | 0.000892 | mg/L | 0.001 | 7/17/2025 | | | SW846-6020B | = |
| Copper | J | 0.00129 | mg/L | 0.002 | 7/17/2025 | | | SW846-6020B | = |
| Iron | J | 0.044 | mg/L | 0.1 | 7/17/2025 | | | SW846-6020B | = |
| Lead | U | 0.002 | mg/L | 0.002 | 7/17/2025 | | | SW846-6020B | = |
| Magnesium | | 8.24 | mg/L | 0.03 | 7/17/2025 | | | SW846-6020B | = |
| Manganese | | 0.14 | mg/L | 0.005 | 7/17/2025 | | | SW846-6020B | = |
| Molybdenum | U | 0.001 | mg/L | 0.001 | 7/17/2025 | | | SW846-6020B | = |
| Nickel | | 0.00906 | mg/L | 0.002 | 7/17/2025 | | | SW846-6020B | = |
| Potassium | | 1.83 | mg/L | 0.3 | 7/17/2025 | | | SW846-6020B | = |
| Rhodium | U | 0.005 | mg/L | 0.005 | 7/17/2025 | | | SW846-6020B | = |
| Selenium | U | 0.005 | mg/L | 0.005 | 7/17/2025 | | | SW846-6020B | = |
| Silver | U | 0.001 | mg/L | 0.001 | 7/17/2025 | | | SW846-6020B | = |
| Sodium | | 39.2 | mg/L | 0.25 | 7/17/2025 | | | SW846-6020B | = |
| Tantalum | UN | 0.005 | mg/L | 0.005 | 7/17/2025 | | | SW846-6020B | = |
| Thallium | U | 0.002 | mg/L | 0.002 | 7/17/2025 | | | SW846-6020B | = |
| Uranium | U | 0.0002 | mg/L | 0.0002 | 7/17/2025 | | | SW846-6020B | = |
| Vanadium | U | 0.02 | mg/L | 0.02 | 7/17/2025 | | | SW846-6020B | = |
| Zinc | J | 0.0151 | mg/L | 0.02 | 7/17/2025 | | | SW846-6020B | = |
| Mercury | U | 0.0002 | mg/L | 0.0002 | 7/17/2025 | | | SW846-7470A | = |
| Barium, Dissolved | | 0.108 | mg/L | 0.004 | 7/17/2025 | | | SW846-6020B | J |
| Chromium, Dissolved | U | 0.01 | mg/L | 0.01 | 7/17/2025 | | | SW846-6020B | UJ |
| Uranium, Dissolved | U | 0.0002 | mg/L | 0.0002 | 7/17/2025 | | | SW846-6020B | UJ |
| PCB-1016 | U | 0.0839 | ug/L | 0.0839 | 7/17/2025 | | | SW846-8082A | = |
| PCB-1221 | U | 0.0839 | ug/L | 0.0839 | 7/17/2025 | | | 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:** 3rd Quarter 2025

**AKGWA Well Tag #:** 8004-4796 **SAMPLE ID:** MW363UG4-25 Sample Type: REG

| Parameter | Qualifier | Result | Units | Reporting Limit | Date Collected | Rad Error (+/-) | TPU | Method | Validation Code |
|---|---|---|---|---|---|---|---|---|---|
| PCB-1232 | U | 0.0839 | ug/L | 0.0839 | 7/17/2025 | | | SW846-8082A | = |
| PCB-1242 | U | 0.0839 | ug/L | 0.0839 | 7/17/2025 | | | SW846-8082A | = |
| PCB-1248 | U | 0.0839 | ug/L | 0.0839 | 7/17/2025 | | | SW846-8082A | = |
| PCB-1254 | U | 0.0839 | ug/L | 0.0839 | 7/17/2025 | | | SW846-8082A | = |
| PCB-1260 | U | 0.0839 | ug/L | 0.0839 | 7/17/2025 | | | SW846-8082A | UJ |
| PCB-1268 | U | 0.0839 | ug/L | 0.0839 | 7/17/2025 | | | SW846-8082A | = |
| Polychlorinated biphenyl | U | 0.0839 | ug/L | 0.0839 | 7/17/2025 | | | SW846-8082A | UJ |
| Radium-226 | U | -0.0514 | pCi/L | 0.538 | 7/17/2025 | 0.222 | 0.222 | AN-1418 | = |
| Radium-228 | U | 2.45 | pCi/L | 4.78 | 7/17/2025 | 2.84 | 2.92 | EPA-904.0-M | = |
| Strontium-90 | U | 1.6 | pCi/L | 3.17 | 7/17/2025 | 1.89 | 1.9 | EPA-905.0-M | UJ |
| Tritium | U | -0.0626 | pCi/L | 214 | 7/17/2025 | 108 | 108 | EPA-906.0-M | = |
| Technetium-99 | U | 6.05 | pCi/L | 19.7 | 7/17/2025 | 11.6 | 11.7 | HASL 300, Tc-02-RC M | = |
| Thorium-230 | U | -0.381 | pCi/L | 2.38 | 7/17/2025 | 0.857 | 0.858 | HASL 300, Th-01-RC M | = |
| Thorium-232 | U | -0.158 | pCi/L | 1.62 | 7/17/2025 | 0.604 | 0.606 | HASL 300, Th-01-RC M | = |
| Alpha activity | U | 4.22 | pCi/L | 8.67 | 7/17/2025 | 5.23 | 5.28 | SW846-9310 | = |
| Beta activity | U | 7.56 | pCi/L | 11 | 7/17/2025 | 6.78 | 6.89 | SW846-9310 | = |
| 1,2-Dibromo-3-chloropropane | U | 0.0191 | ug/L | 0.0191 | 7/17/2025 | | | SW846-8011 | = |
| 1,1,1,2-Tetrachloroethane | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| 1,1,1-Trichloroethane | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| 1,1,2,2-Tetrachloroethane | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| 1,1,2-Trichloroethane | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| 1,1-Dichloroethane | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| 1,1-Dichloroethene | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| 1,2,3-Trichloropropane | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| 1,2-Dibromoethane | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| 1,2-Dichlorobenzene | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| 1,2-Dichloroethane | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| 1,2-Dichloropropane | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| 1,4-Dichlorobenzene | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| 2-Butanone | U | 5 | ug/L | 5 | 7/17/2025 | | | SW846-8260D | = |
| 2-Hexanone | U | 5 | ug/L | 5 | 7/17/2025 | | | SW846-8260D | = |
| 4-Methyl-2-pentanone | U | 5 | ug/L | 5 | 7/17/2025 | | | SW846-8260D | = |
| Acetone | U | 5 | ug/L | 5 | 7/17/2025 | | | SW846-8260D | = |
| Acrolein | U | 5 | ug/L | 5 | 7/17/2025 | | | SW846-8260D | = |
| Acrylonitrile | U | 5 | ug/L | 5 | 7/17/2025 | | | SW846-8260D | = |
| Benzene | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Bromochloromethane | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Bromodichloromethane | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Bromoform | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Bromomethane | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | UJ |
| Carbon disulfide | U | 5 | ug/L | 5 | 7/17/2025 | | | SW846-8260D | = |
| Carbon tetrachloride | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Chlorobenzene | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Chloroethane | U | 1 | ug/L | 1 | 7/17/2025 | | | 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:** 3rd Quarter 2025

**AKGWA Well Tag #:** 8004-4796 **SAMPLE ID:** MW363UG4-25 Sample Type: REG

| Parameter | Qualifier | Result | Units | Reporting Limit | Date Collected | Rad Error (+/-) | TPU | Method | Validation Code |
|---|---|---|---|---|---|---|---|---|---|
| Chloroform | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Chloromethane | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | UJ |
| cis-1,2-Dichloroethene | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| cis-1,3-Dichloropropene | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Dibromochloromethane | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Dibromomethane | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Ethylbenzene | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Iodomethane | U | 5 | ug/L | 5 | 7/17/2025 | | | SW846-8260D | = |
| Methylene chloride | BJ | 1.22 | ug/L | 5 | 7/17/2025 | | | SW846-8260D | U |
| Styrene | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Tetrachloroethene | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Toluene | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Total Xylene | U | 3 | ug/L | 3 | 7/17/2025 | | | SW846-8260D | = |
| trans-1,2-Dichloroethene | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| trans-1,3-Dichloropropene | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| trans-1,4-Dichloro-2-butene | U | 5 | ug/L | 5 | 7/17/2025 | | | SW846-8260D | = |
| Trichloroethene | | 3.84 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Trichlorofluoromethane | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Vinyl acetate | U | 5 | ug/L | 5 | 7/17/2025 | | | SW846-8260D | = |
| Vinyl chloride | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Dissolved Solids | * | 218 | mg/L | 10 | 7/17/2025 | | | EPA-160.1 | = |
| Chemical Oxygen Demand (COD) | U | 20 | mg/L | 20 | 7/17/2025 | | | EPA-410.4 | = |
| Cyanide | U | 0.2 | mg/L | 0.2 | 7/17/2025 | | | SW846-9012B | = |
| Total Organic Halides (TOX) | J | 7.2 | ug/L | 10 | 7/17/2025 | | | SW846-9020B | = |
| Total Organic Carbon (TOC) | J | 0.742 | mg/L | 2 | 7/17/2025 | | | 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:** 3rd Quarter 2025

**AKGWA Well Tag #:** 8004-4797 **SAMPLE ID:** MW364UG4-25 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 | 7/17/2025 | | | EPA-300.0 | = |
| Bromide | | 0.471 | mg/L | 0.2 | 7/17/2025 | | | SW846-9056A | = |
| Chloride | J | 36.2 | mg/L | 250 | 7/17/2025 | | | SW846-9056A | = |
| Fluoride | J | 0.121 | mg/L | 4 | 7/17/2025 | | | SW846-9056A | = |
| Nitrate as Nitrogen | J | 1.2 | mg/L | 10 | 7/17/2025 | | | SW846-9056A | = |
| Sulfate | | 67.2 | mg/L | 2 | 7/17/2025 | | | SW846-9056A | = |
| Barometric Pressure Reading | | 30.01 | Inches/Hg | | 7/17/2025 | | | FS | X |
| Conductivity | | 471 | µmhos/cm | | 7/17/2025 | | | FS | X |
| Depth to Water | | 41.18 | ft | | 7/17/2025 | | | FS | X |
| Dissolved Oxygen | | 3.48 | mg/L | | 7/17/2025 | | | FS | X |
| Eh (approx) | | 395 | mV | | 7/17/2025 | | | FS | X |
| pH | | 5.69 | Std Unit | | 7/17/2025 | | | FS | X |
| Temperature | | 63.8 | deg F | | 7/17/2025 | | | FS | X |
| Turbidity | | 4.96 | NTU | | 7/17/2025 | | | FS | X |
| Aluminum | J | 0.0313 | mg/L | 0.05 | 7/17/2025 | | | SW846-6020B | = |
| Antimony | U | 0.003 | mg/L | 0.003 | 7/17/2025 | | | SW846-6020B | = |
| Arsenic | U | 0.005 | mg/L | 0.005 | 7/17/2025 | | | SW846-6020B | = |
| Barium | | 0.0547 | mg/L | 0.004 | 7/17/2025 | | | SW846-6020B | = |
| Beryllium | U | 0.0005 | mg/L | 0.0005 | 7/17/2025 | | | SW846-6020B | = |
| Boron | | 0.196 | mg/L | 0.015 | 7/17/2025 | | | SW846-6020B | = |
| Cadmium | U | 0.001 | mg/L | 0.001 | 7/17/2025 | | | SW846-6020B | = |
| Calcium | | 32.4 | mg/L | 0.2 | 7/17/2025 | | | SW846-6020B | = |
| Chromium | U | 0.01 | mg/L | 0.01 | 7/17/2025 | | | SW846-6020B | = |
| Cobalt | U | 0.001 | mg/L | 0.001 | 7/17/2025 | | | SW846-6020B | = |
| Copper | J | 0.0013 | mg/L | 0.002 | 7/17/2025 | | | SW846-6020B | = |
| Iron | J | 0.0736 | mg/L | 0.1 | 7/17/2025 | | | SW846-6020B | = |
| Lead | U | 0.002 | mg/L | 0.002 | 7/17/2025 | | | SW846-6020B | = |
| Magnesium | | 13.9 | mg/L | 0.03 | 7/17/2025 | | | SW846-6020B | = |
| Manganese | | 0.0124 | mg/L | 0.005 | 7/17/2025 | | | SW846-6020B | = |
| Molybdenum | U | 0.001 | mg/L | 0.001 | 7/17/2025 | | | SW846-6020B | = |
| Nickel | J | 0.000636 | mg/L | 0.002 | 7/17/2025 | | | SW846-6020B | = |
| Potassium | | 1.99 | mg/L | 0.3 | 7/17/2025 | | | SW846-6020B | = |
| Rhodium | U | 0.005 | mg/L | 0.005 | 7/17/2025 | | | SW846-6020B | = |
| Selenium | U | 0.005 | mg/L | 0.005 | 7/17/2025 | | | SW846-6020B | = |
| Silver | U | 0.001 | mg/L | 0.001 | 7/17/2025 | | | SW846-6020B | = |
| Sodium | | 41.7 | mg/L | 0.25 | 7/17/2025 | | | SW846-6020B | = |
| Tantalum | UN | 0.005 | mg/L | 0.005 | 7/17/2025 | | | SW846-6020B | J |
| Thallium | U | 0.002 | mg/L | 0.002 | 7/17/2025 | | | SW846-6020B | = |
| Uranium | U | 0.0002 | mg/L | 0.0002 | 7/17/2025 | | | SW846-6020B | = |
| Vanadium | U | 0.02 | mg/L | 0.02 | 7/17/2025 | | | SW846-6020B | = |
| Zinc | J | 0.0157 | mg/L | 0.02 | 7/17/2025 | | | SW846-6020B | = |
| Mercury | U | 0.0002 | mg/L | 0.0002 | 7/17/2025 | | | SW846-7470A | = |
| Barium, Dissolved | | 0.0531 | mg/L | 0.004 | 7/17/2025 | | | SW846-6020B | J |
| Chromium, Dissolved | U | 0.01 | mg/L | 0.01 | 7/17/2025 | | | SW846-6020B | UJ |
| Uranium, Dissolved | U | 0.0002 | mg/L | 0.0002 | 7/17/2025 | | | SW846-6020B | UJ |
| PCB-1016 | U | 0.0842 | ug/L | 0.0842 | 7/17/2025 | | | SW846-8082A | = |
| PCB-1221 | U | 0.0842 | ug/L | 0.0842 | 7/17/2025 | | | 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:** 3rd Quarter 2025

**AKGWA Well Tag #:** 8004-4797 **SAMPLE ID:** MW364UG4-25 Sample Type: REG

| Parameter | Qualifier | Result | Units | Reporting Limit | Date Collected | Rad Error (+/-) | TPU | Method | Validation Code |
|---|---|---|---|---|---|---|---|---|---|
| PCB-1232 | U | 0.0842 | ug/L | 0.0842 | 7/17/2025 | | | SW846-8082A | = |
| PCB-1242 | U | 0.0842 | ug/L | 0.0842 | 7/17/2025 | | | SW846-8082A | = |
| PCB-1248 | U | 0.0842 | ug/L | 0.0842 | 7/17/2025 | | | SW846-8082A | = |
| PCB-1254 | U | 0.0842 | ug/L | 0.0842 | 7/17/2025 | | | SW846-8082A | = |
| PCB-1260 | U | 0.0842 | ug/L | 0.0842 | 7/17/2025 | | | SW846-8082A | UJ |
| PCB-1268 | U | 0.0842 | ug/L | 0.0842 | 7/17/2025 | | | SW846-8082A | = |
| Polychlorinated biphenyl | U | 0.0842 | ug/L | 0.0842 | 7/17/2025 | | | SW846-8082A | UJ |
| Radium-226 | U | 0.247 | pCi/L | 0.48 | 7/17/2025 | 0.311 | 0.313 | AN-1418 | = |
| Radium-228 | U | 3.04 | pCi/L | 4.74 | 7/17/2025 | 2.89 | 3.01 | EPA-904.0-M | = |
| Strontium-90 | U | -1.19 | pCi/L | 3.53 | 7/17/2025 | 1.57 | 1.57 | EPA-905.0-M | UJ |
| Tritium | U | 32.1 | pCi/L | 219 | 7/17/2025 | 116 | 117 | EPA-906.0-M | = |
| Technetium-99 | | 46.3 | pCi/L | 21.6 | 7/17/2025 | 13.6 | 14.6 | HASL 300, Tc-02-RC M | = |
| Thorium-230 | U | -0.425 | pCi/L | 2.03 | 7/17/2025 | 0.695 | 0.695 | HASL 300, Th-01-RC M | = |
| Thorium-232 | U | 0.152 | pCi/L | 1.15 | 7/17/2025 | 0.65 | 0.65 | HASL 300, Th-01-RC M | = |
| Alpha activity | U | 4.26 | pCi/L | 7.36 | 7/17/2025 | 4.65 | 4.7 | SW846-9310 | = |
| Beta activity | | 38.7 | pCi/L | 10.2 | 7/17/2025 | 9.47 | 11.3 | SW846-9310 | = |
| 1,2-Dibromo-3-chloropropane | U | 0.0191 | ug/L | 0.0191 | 7/17/2025 | | | SW846-8011 | = |
| 1,1,1,2-Tetrachloroethane | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| 1,1,1-Trichloroethane | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| 1,1,2,2-Tetrachloroethane | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| 1,1,2-Trichloroethane | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| 1,1-Dichloroethane | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| 1,1-Dichloroethene | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| 1,2,3-Trichloropropane | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| 1,2-Dibromoethane | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| 1,2-Dichlorobenzene | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| 1,2-Dichloroethane | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| 1,2-Dichloropropane | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| 1,4-Dichlorobenzene | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| 2-Butanone | U | 5 | ug/L | 5 | 7/17/2025 | | | SW846-8260D | = |
| 2-Hexanone | U | 5 | ug/L | 5 | 7/17/2025 | | | SW846-8260D | = |
| 4-Methyl-2-pentanone | U | 5 | ug/L | 5 | 7/17/2025 | | | SW846-8260D | = |
| Acetone | U | 5 | ug/L | 5 | 7/17/2025 | | | SW846-8260D | = |
| Acrolein | U | 5 | ug/L | 5 | 7/17/2025 | | | SW846-8260D | = |
| Acrylonitrile | U | 5 | ug/L | 5 | 7/17/2025 | | | SW846-8260D | = |
| Benzene | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Bromochloromethane | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Bromodichloromethane | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Bromoform | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Bromomethane | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | UJ |
| Carbon disulfide | U | 5 | ug/L | 5 | 7/17/2025 | | | SW846-8260D | = |
| Carbon tetrachloride | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Chlorobenzene | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Chloroethane | U | 1 | ug/L | 1 | 7/17/2025 | | | 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:** 3rd Quarter 2025

**AKGWA Well Tag #:** 8004-4797 **SAMPLE ID:** MW364UG4-25 Sample Type: REG

| Parameter | Qualifier | Result | Units | Reporting Limit | Date Collected | Rad Error (+/-) | TPU | Method | Validation Code |
|---|---|---|---|---|---|---|---|---|---|
| Chloroform | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Chloromethane | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | UJ |
| cis-1,2-Dichloroethene | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| cis-1,3-Dichloropropene | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Dibromochloromethane | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Dibromomethane | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Ethylbenzene | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Iodomethane | U | 5 | ug/L | 5 | 7/17/2025 | | | SW846-8260D | = |
| Methylene chloride | BJ | 0.69 | ug/L | 5 | 7/17/2025 | | | SW846-8260D | U |
| Styrene | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Tetrachloroethene | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Toluene | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Total Xylene | U | 3 | ug/L | 3 | 7/17/2025 | | | SW846-8260D | = |
| trans-1,2-Dichloroethene | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| trans-1,3-Dichloropropene | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| trans-1,4-Dichloro-2-butene | U | 5 | ug/L | 5 | 7/17/2025 | | | SW846-8260D | = |
| Trichloroethene | | 1.79 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Trichlorofluoromethane | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Vinyl acetate | U | 5 | ug/L | 5 | 7/17/2025 | | | SW846-8260D | = |
| Vinyl chloride | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Dissolved Solids | * | 262 | mg/L | 10 | 7/17/2025 | | | EPA-160.1 | J |
| Chemical Oxygen Demand (COD) | U | 20 | mg/L | 20 | 7/17/2025 | | | EPA-410.4 | = |
| Cyanide | U | 0.2 | mg/L | 0.2 | 7/17/2025 | | | SW846-9012B | = |
| Total Organic Halides (TOX) | J | 5.66 | ug/L | 10 | 7/17/2025 | | | SW846-9020B | = |
| Total Organic Carbon (TOC) | J | 0.45 | mg/L | 2 | 7/17/2025 | | | 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:** 3rd Quarter 2025

**AKGWA Well Tag #:** 8004-0984 **SAMPLE ID:** MW365UG4-25 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 | 7/17/2025 | | | EPA-300.0 | = |
| Bromide | U | 0.2 | mg/L | 0.2 | 7/17/2025 | | | SW846-9056A | = |
| Chloride | J | 1.78 | mg/L | 250 | 7/17/2025 | | | SW846-9056A | = |
| Fluoride | J | 0.28 | mg/L | 4 | 7/17/2025 | | | SW846-9056A | = |
| Nitrate as Nitrogen | J | 1.03 | mg/L | 10 | 7/17/2025 | | | SW846-9056A | = |
| Sulfate | | 49.8 | mg/L | 2 | 7/17/2025 | | | SW846-9056A | = |
| Barometric Pressure Reading | | 30 | Inches/Hg | | 7/17/2025 | | | FS | X |
| Conductivity | | 417 | µmhos/cm | | 7/17/2025 | | | FS | X |
| Depth to Water | | 34.35 | ft | | 7/17/2025 | | | FS | X |
| Dissolved Oxygen | | 4.54 | mg/L | | 7/17/2025 | | | FS | X |
| Eh (approx) | | 457 | mV | | 7/17/2025 | | | FS | X |
| pH | | 6.08 | Std Unit | | 7/17/2025 | | | FS | X |
| Temperature | | 66.1 | deg F | | 7/17/2025 | | | FS | X |
| Turbidity | | 4.25 | NTU | | 7/17/2025 | | | FS | X |
| Aluminum | J | 0.0217 | mg/L | 0.05 | 7/17/2025 | | | SW846-6020B | = |
| Antimony | U | 0.003 | mg/L | 0.003 | 7/17/2025 | | | SW846-6020B | = |
| Arsenic | U | 0.005 | mg/L | 0.005 | 7/17/2025 | | | SW846-6020B | = |
| Barium | | 0.09 | mg/L | 0.004 | 7/17/2025 | | | SW846-6020B | = |
| Beryllium | U | 0.0005 | mg/L | 0.0005 | 7/17/2025 | | | SW846-6020B | = |
| Boron | J | 0.00636 | mg/L | 0.015 | 7/17/2025 | | | SW846-6020B | = |
| Cadmium | U | 0.001 | mg/L | 0.001 | 7/17/2025 | | | SW846-6020B | = |
| Calcium | | 20.8 | mg/L | 0.2 | 7/17/2025 | | | SW846-6020B | = |
| Chromium | U | 0.01 | mg/L | 0.01 | 7/17/2025 | | | SW846-6020B | = |
| Cobalt | | 0.00153 | mg/L | 0.001 | 7/17/2025 | | | SW846-6020B | = |
| Copper | | 0.00307 | mg/L | 0.002 | 7/17/2025 | | | SW846-6020B | = |
| Iron | J | 0.0373 | mg/L | 0.1 | 7/17/2025 | | | SW846-6020B | = |
| Lead | U | 0.002 | mg/L | 0.002 | 7/17/2025 | | | SW846-6020B | = |
| Magnesium | | 9.54 | mg/L | 0.03 | 7/17/2025 | | | SW846-6020B | = |
| Manganese | | 0.0103 | mg/L | 0.005 | 7/17/2025 | | | SW846-6020B | = |
| Molybdenum | J | 0.000231 | mg/L | 0.001 | 7/17/2025 | | | SW846-6020B | U |
| Nickel | | 0.0051 | mg/L | 0.002 | 7/17/2025 | | | SW846-6020B | = |
| Potassium | J | 0.264 | mg/L | 0.3 | 7/17/2025 | | | SW846-6020B | = |
| Rhodium | U | 0.005 | mg/L | 0.005 | 7/17/2025 | | | SW846-6020B | = |
| Selenium | U | 0.005 | mg/L | 0.005 | 7/17/2025 | | | SW846-6020B | = |
| Silver | U | 0.001 | mg/L | 0.001 | 7/17/2025 | | | SW846-6020B | = |
| Sodium | | 51.4 | mg/L | 2.5 | 7/17/2025 | | | SW846-6020B | = |
| Tantalum | UN | 0.005 | mg/L | 0.005 | 7/17/2025 | | | SW846-6020B | = |
| Thallium | U | 0.002 | mg/L | 0.002 | 7/17/2025 | | | SW846-6020B | = |
| Uranium | | 0.000332 | mg/L | 0.0002 | 7/17/2025 | | | SW846-6020B | = |
| Vanadium | U | 0.02 | mg/L | 0.02 | 7/17/2025 | | | SW846-6020B | = |
| Zinc | J | 0.00555 | mg/L | 0.02 | 7/17/2025 | | | SW846-6020B | = |
| Mercury | U | 0.0002 | mg/L | 0.0002 | 7/17/2025 | | | SW846-7470A | = |
| Barium, Dissolved | | 0.0856 | mg/L | 0.004 | 7/17/2025 | | | SW846-6020B | J |
| Chromium, Dissolved | U | 0.01 | mg/L | 0.01 | 7/17/2025 | | | SW846-6020B | UJ |
| Uranium, Dissolved | | 0.000328 | mg/L | 0.0002 | 7/17/2025 | | | SW846-6020B | J |
| PCB-1016 | U | 0.0839 | ug/L | 0.0839 | 7/17/2025 | | | SW846-8082A | = |
| PCB-1221 | U | 0.0839 | ug/L | 0.0839 | 7/17/2025 | | | 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:** 3rd Quarter 2025

**AKGWA Well Tag #:** 8004-0984 **SAMPLE ID:** MW365UG4-25 Sample Type: REG

| Parameter | Qualifier | Result | Units | Reporting Limit | Date Collected | Rad Error (+/-) | TPU | Method | Validation Code |
|---|---|---|---|---|---|---|---|---|---|
| PCB-1232 | U | 0.0839 | ug/L | 0.0839 | 7/17/2025 | | | SW846-8082A | = |
| PCB-1242 | U | 0.0839 | ug/L | 0.0839 | 7/17/2025 | | | SW846-8082A | = |
| PCB-1248 | U | 0.0839 | ug/L | 0.0839 | 7/17/2025 | | | SW846-8082A | = |
| PCB-1254 | U | 0.0839 | ug/L | 0.0839 | 7/17/2025 | | | SW846-8082A | = |
| PCB-1260 | U | 0.0839 | ug/L | 0.0839 | 7/17/2025 | | | SW846-8082A | UJ |
| PCB-1268 | U | 0.0839 | ug/L | 0.0839 | 7/17/2025 | | | SW846-8082A | = |
| Polychlorinated biphenyl | U | 0.0839 | ug/L | 0.0839 | 7/17/2025 | | | SW846-8082A | UJ |
| Radium-226 | UT | 0.185 | pCi/L | 0.345 | 7/17/2025 | 0.253 | 0.254 | AN-1418 | U |
| Radium-228 | U | 2.48 | pCi/L | 4.91 | 7/17/2025 | 2.91 | 2.99 | EPA-904.0-M | = |
| Strontium-90 | U | -1.66 | pCi/L | 5.72 | 7/17/2025 | 2.89 | 2.89 | EPA-905.0-M | UJ |
| Tritium | U | 24.4 | pCi/L | 214 | 7/17/2025 | 113 | 113 | EPA-906.0-M | = |
| Technetium-99 | U | -10.6 | pCi/L | 21.5 | 7/17/2025 | 12.3 | 12.3 | HASL 300, Tc-02-RC M | = |
| Thorium-230 | U | -0.0451 | pCi/L | 1.76 | 7/17/2025 | 0.767 | 0.768 | HASL 300, Th-01-RC M | = |
| Thorium-232 | U | 0.256 | pCi/L | 1.36 | 7/17/2025 | 0.765 | 0.766 | HASL 300, Th-01-RC M | = |
| Alpha activity | U | 2.14 | pCi/L | 6.41 | 7/17/2025 | 3.52 | 3.54 | SW846-9310 | = |
| Beta activity | U | 6.91 | pCi/L | 10 | 7/17/2025 | 6.18 | 6.29 | SW846-9310 | = |
| 1,2-Dibromo-3-chloropropane | U | 0.0187 | ug/L | 0.0187 | 7/17/2025 | | | SW846-8011 | = |
| 1,1,1,2-Tetrachloroethane | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| 1,1,1-Trichloroethane | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| 1,1,2,2-Tetrachloroethane | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| 1,1,2-Trichloroethane | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| 1,1-Dichloroethane | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| 1,1-Dichloroethene | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| 1,2,3-Trichloropropane | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| 1,2-Dibromoethane | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| 1,2-Dichlorobenzene | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| 1,2-Dichloroethane | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| 1,2-Dichloropropane | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| 1,4-Dichlorobenzene | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| 2-Butanone | U | 5 | ug/L | 5 | 7/17/2025 | | | SW846-8260D | = |
| 2-Hexanone | U | 5 | ug/L | 5 | 7/17/2025 | | | SW846-8260D | = |
| 4-Methyl-2-pentanone | U | 5 | ug/L | 5 | 7/17/2025 | | | SW846-8260D | = |
| Acetone | U | 5 | ug/L | 5 | 7/17/2025 | | | SW846-8260D | = |
| Acrolein | U | 5 | ug/L | 5 | 7/17/2025 | | | SW846-8260D | = |
| Acrylonitrile | U | 5 | ug/L | 5 | 7/17/2025 | | | SW846-8260D | = |
| Benzene | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Bromochloromethane | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Bromodichloromethane | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Bromoform | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Bromomethane | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | UJ |
| Carbon disulfide | U | 5 | ug/L | 5 | 7/17/2025 | | | SW846-8260D | = |
| Carbon tetrachloride | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Chlorobenzene | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Chloroethane | U | 1 | ug/L | 1 | 7/17/2025 | | | 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:** 3rd Quarter 2025

**AKGWA Well Tag #:** 8004-0984 **SAMPLE ID:** MW365UG4-25 Sample Type: REG

| Parameter | Qualifier | Result | Units | Reporting Limit | Date Collected | Rad Error (+/-) | TPU | Method | Validation Code |
|---|---|---|---|---|---|---|---|---|---|
| Chloroform | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Chloromethane | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | UJ |
| cis-1,2-Dichloroethene | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| cis-1,3-Dichloropropene | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Dibromochloromethane | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Dibromomethane | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Ethylbenzene | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Iodomethane | U | 5 | ug/L | 5 | 7/17/2025 | | | SW846-8260D | = |
| Methylene chloride | BJ | 1.29 | ug/L | 5 | 7/17/2025 | | | SW846-8260D | U |
| Styrene | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Tetrachloroethene | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Toluene | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Total Xylene | U | 3 | ug/L | 3 | 7/17/2025 | | | SW846-8260D | = |
| trans-1,2-Dichloroethene | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| trans-1,3-Dichloropropene | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| trans-1,4-Dichloro-2-butene | U | 5 | ug/L | 5 | 7/17/2025 | | | SW846-8260D | = |
| Trichloroethene | | 2.13 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Trichlorofluoromethane | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Vinyl acetate | U | 5 | ug/L | 5 | 7/17/2025 | | | SW846-8260D | = |
| Vinyl chloride | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Dissolved Solids | * | 272 | mg/L | 10 | 7/17/2025 | | | EPA-160.1 | = |
| Chemical Oxygen Demand (COD) | U | 20 | mg/L | 20 | 7/17/2025 | | | EPA-410.4 | = |
| Cyanide | J | 0.00373 | mg/L | 0.2 | 7/17/2025 | | | SW846-9012B | = |
| Total Organic Halides (TOX) | | 19.9 | ug/L | 10 | 7/17/2025 | | | SW846-9020B | = |
| Total Organic Carbon (TOC) | J | 1.2 | mg/L | 2 | 7/17/2025 | | | 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:** 3rd Quarter 2025

**AKGWA Well Tag #:** 8004-0982 **SAMPLE ID:** MW366UG4-25 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 | 7/17/2025 | | | EPA-300.0 | = |
| Bromide | | 0.495 | mg/L | 0.2 | 7/17/2025 | | | SW846-9056A | = |
| Chloride | J | 40.4 | mg/L | 250 | 7/17/2025 | | | SW846-9056A | = |
| Fluoride | J | 0.144 | mg/L | 4 | 7/17/2025 | | | SW846-9056A | = |
| Nitrate as Nitrogen | J | 1.04 | mg/L | 10 | 7/17/2025 | | | SW846-9056A | = |
| Sulfate | | 53.4 | mg/L | 2 | 7/17/2025 | | | SW846-9056A | = |
| Barometric Pressure Reading | | 30 | Inches/Hg | | 7/17/2025 | | | FS | X |
| Conductivity | | 495 | µmhos/cm | | 7/17/2025 | | | FS | X |
| Depth to Water | | 41.71 | ft | | 7/17/2025 | | | FS | X |
| Dissolved Oxygen | | 3.78 | mg/L | | 7/17/2025 | | | FS | X |
| Eh (approx) | | 467 | mV | | 7/17/2025 | | | FS | X |
| pH | | 5.87 | Std Unit | | 7/17/2025 | | | FS | X |
| Temperature | | 66.1 | deg F | | 7/17/2025 | | | FS | X |
| Turbidity | | 3.65 | NTU | | 7/17/2025 | | | FS | X |
| Aluminum | U | 0.05 | mg/L | 0.05 | 7/17/2025 | | | SW846-6020B | = |
| Antimony | U | 0.003 | mg/L | 0.003 | 7/17/2025 | | | SW846-6020B | = |
| Arsenic | U | 0.005 | mg/L | 0.005 | 7/17/2025 | | | SW846-6020B | = |
| Barium | | 0.105 | mg/L | 0.004 | 7/17/2025 | | | SW846-6020B | = |
| Beryllium | U | 0.0005 | mg/L | 0.0005 | 7/17/2025 | | | SW846-6020B | = |
| Boron | | 0.119 | mg/L | 0.015 | 7/17/2025 | | | SW846-6020B | = |
| Cadmium | U | 0.001 | mg/L | 0.001 | 7/17/2025 | | | SW846-6020B | = |
| Calcium | | 33.5 | mg/L | 0.2 | 7/17/2025 | | | SW846-6020B | = |
| Chromium | U | 0.01 | mg/L | 0.01 | 7/17/2025 | | | SW846-6020B | = |
| Cobalt | U | 0.001 | mg/L | 0.001 | 7/17/2025 | | | SW846-6020B | = |
| Copper | J | 0.000802 | mg/L | 0.002 | 7/17/2025 | | | SW846-6020B | = |
| Iron | U | 0.1 | mg/L | 0.1 | 7/17/2025 | | | SW846-6020B | = |
| Lead | U | 0.002 | mg/L | 0.002 | 7/17/2025 | | | SW846-6020B | = |
| Magnesium | | 14.3 | mg/L | 0.03 | 7/17/2025 | | | SW846-6020B | = |
| Manganese | J | 0.0013 | mg/L | 0.005 | 7/17/2025 | | | SW846-6020B | = |
| Molybdenum | U | 0.001 | mg/L | 0.001 | 7/17/2025 | | | SW846-6020B | = |
| Nickel | J | 0.000759 | mg/L | 0.002 | 7/17/2025 | | | SW846-6020B | = |
| Potassium | | 1.98 | mg/L | 0.3 | 7/17/2025 | | | SW846-6020B | = |
| Rhodium | U | 0.005 | mg/L | 0.005 | 7/17/2025 | | | SW846-6020B | = |
| Selenium | J | 0.00208 | mg/L | 0.005 | 7/17/2025 | | | SW846-6020B | = |
| Silver | U | 0.001 | mg/L | 0.001 | 7/17/2025 | | | SW846-6020B | = |
| Sodium | | 47.9 | mg/L | 0.25 | 7/17/2025 | | | SW846-6020B | = |
| Tantalum | UN | 0.005 | mg/L | 0.005 | 7/17/2025 | | | SW846-6020B | = |
| Thallium | U | 0.002 | mg/L | 0.002 | 7/17/2025 | | | SW846-6020B | = |
| Uranium | U | 0.0002 | mg/L | 0.0002 | 7/17/2025 | | | SW846-6020B | = |
| Vanadium | U | 0.02 | mg/L | 0.02 | 7/17/2025 | | | SW846-6020B | = |
| Zinc | J | 0.00495 | mg/L | 0.02 | 7/17/2025 | | | SW846-6020B | = |
| Mercury | U | 0.0002 | mg/L | 0.0002 | 7/17/2025 | | | SW846-7470A | = |
| Barium, Dissolved | | 0.0975 | mg/L | 0.004 | 7/17/2025 | | | SW846-6020B | J |
| Chromium, Dissolved | U | 0.01 | mg/L | 0.01 | 7/17/2025 | | | SW846-6020B | UJ |
| Uranium, Dissolved | U | 0.0002 | mg/L | 0.0002 | 7/17/2025 | | | SW846-6020B | UJ |
| PCB-1016 | U | 0.0873 | ug/L | 0.0873 | 7/17/2025 | | | SW846-8082A | = |
| PCB-1221 | U | 0.0873 | ug/L | 0.0873 | 7/17/2025 | | | 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:** 3rd Quarter 2025

**AKGWA Well Tag #:** 8004-0982 **SAMPLE ID:** MW366UG4-25 Sample Type: REG

| Parameter | Qualifier | Result | Units | Reporting Limit | Date Collected | Rad Error (+/-) | TPU | Method | Validation Code |
|---|---|---|---|---|---|---|---|---|---|
| PCB-1232 | U | 0.0873 | ug/L | 0.0873 | 7/17/2025 | | | SW846-8082A | = |
| PCB-1242 | U | 0.0873 | ug/L | 0.0873 | 7/17/2025 | | | SW846-8082A | = |
| PCB-1248 | U | 0.0873 | ug/L | 0.0873 | 7/17/2025 | | | SW846-8082A | = |
| PCB-1254 | U | 0.0873 | ug/L | 0.0873 | 7/17/2025 | | | SW846-8082A | = |
| PCB-1260 | U | 0.0873 | ug/L | 0.0873 | 7/17/2025 | | | SW846-8082A | UJ |
| PCB-1268 | U | 0.0873 | ug/L | 0.0873 | 7/17/2025 | | | SW846-8082A | = |
| Polychlorinated biphenyl | U | 0.0873 | ug/L | 0.0873 | 7/17/2025 | | | SW846-8082A | UJ |
| Radium-226 | UT | 0.242 | pCi/L | 0.385 | 7/17/2025 | 0.273 | 0.274 | AN-1418 | U |
| Radium-228 | U | 2.66 | pCi/L | 4.7 | 7/17/2025 | 2.82 | 2.91 | EPA-904.0-M | = |
| Strontium-90 | U | -0.619 | pCi/L | 6.19 | 7/17/2025 | 3.31 | 3.31 | EPA-905.0-M | UJ |
| Tritium | U | -46.7 | pCi/L | 217 | 7/17/2025 | 100 | 100 | EPA-906.0-M | = |
| Technetium-99 | | 71.9 | pCi/L | 21.3 | 7/17/2025 | 13.9 | 16.1 | HASL 300, Tc-02-RC M | = |
| Thorium-230 | U | 0.743 | pCi/L | 2.57 | 7/17/2025 | 1.49 | 1.5 | HASL 300, Th-01-RC M | = |
| Thorium-232 | U | -0.237 | pCi/L | 1.86 | 7/17/2025 | 0.649 | 0.651 | HASL 300, Th-01-RC M | = |
| Alpha activity | U | 2.94 | pCi/L | 8.42 | 7/17/2025 | 4.8 | 4.83 | SW846-9310 | = |
| Beta activity | | 42.5 | pCi/L | 9.9 | 7/17/2025 | 9.47 | 11.7 | SW846-9310 | = |
| 1,2-Dibromo-3-chloropropane | U | 0.019 | ug/L | 0.019 | 7/17/2025 | | | SW846-8011 | = |
| 1,1,1,2-Tetrachloroethane | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| 1,1,1-Trichloroethane | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| 1,1,2,2-Tetrachloroethane | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| 1,1,2-Trichloroethane | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| 1,1-Dichloroethane | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| 1,1-Dichloroethene | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| 1,2,3-Trichloropropane | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| 1,2-Dibromoethane | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| 1,2-Dichlorobenzene | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| 1,2-Dichloroethane | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| 1,2-Dichloropropane | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| 1,4-Dichlorobenzene | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| 2-Butanone | U | 5 | ug/L | 5 | 7/17/2025 | | | SW846-8260D | = |
| 2-Hexanone | U | 5 | ug/L | 5 | 7/17/2025 | | | SW846-8260D | = |
| 4-Methyl-2-pentanone | U | 5 | ug/L | 5 | 7/17/2025 | | | SW846-8260D | = |
| Acetone | U | 5 | ug/L | 5 | 7/17/2025 | | | SW846-8260D | = |
| Acrolein | U | 5 | ug/L | 5 | 7/17/2025 | | | SW846-8260D | = |
| Acrylonitrile | U | 5 | ug/L | 5 | 7/17/2025 | | | SW846-8260D | = |
| Benzene | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Bromochloromethane | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Bromodichloromethane | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Bromoform | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Bromomethane | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | UJ |
| Carbon disulfide | U | 5 | ug/L | 5 | 7/17/2025 | | | SW846-8260D | = |
| Carbon tetrachloride | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Chlorobenzene | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Chloroethane | U | 1 | ug/L | 1 | 7/17/2025 | | | 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:** 3rd Quarter 2025

**AKGWA Well Tag #:** 8004-0982 **SAMPLE ID:** MW366UG4-25 Sample Type: REG

| Parameter | Qualifier | Result | Units | Reporting Limit | Date Collected | Rad Error (+/-) | TPU | Method | Validation Code |
|---|---|---|---|---|---|---|---|---|---|
| Chloroform | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Chloromethane | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | UJ |
| cis-1,2-Dichloroethene | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| cis-1,3-Dichloropropene | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Dibromochloromethane | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Dibromomethane | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Ethylbenzene | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Iodomethane | U | 5 | ug/L | 5 | 7/17/2025 | | | SW846-8260D | = |
| Methylene chloride | BJ | 1.34 | ug/L | 5 | 7/17/2025 | | | SW846-8260D | U |
| Styrene | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Tetrachloroethene | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Toluene | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Total Xylene | U | 3 | ug/L | 3 | 7/17/2025 | | | SW846-8260D | = |
| trans-1,2-Dichloroethene | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| trans-1,3-Dichloropropene | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| trans-1,4-Dichloro-2-butene | U | 5 | ug/L | 5 | 7/17/2025 | | | SW846-8260D | = |
| Trichloroethene | | 1.93 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Trichlorofluoromethane | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Vinyl acetate | U | 5 | ug/L | 5 | 7/17/2025 | | | SW846-8260D | = |
| Vinyl chloride | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Dissolved Solids | * | 282 | mg/L | 10 | 7/17/2025 | | | EPA-160.1 | = |
| Chemical Oxygen Demand (COD) | U | 20 | mg/L | 20 | 7/17/2025 | | | EPA-410.4 | = |
| Cyanide | U | 0.2 | mg/L | 0.2 | 7/17/2025 | | | SW846-9012B | = |
| Total Organic Halides (TOX) | J | 4.7 | ug/L | 10 | 7/17/2025 | | | SW846-9020B | = |
| Total Organic Carbon (TOC) | J | 0.483 | mg/L | 2 | 7/17/2025 | | | 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:** 3rd Quarter 2025

**AKGWA Well Tag #:** 8004-4793 **SAMPLE ID:** MW367UG4-25 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 | 7/17/2025 | | | EPA-300.0 | = |
| Bromide | | 0.259 | mg/L | 0.2 | 7/17/2025 | | | SW846-9056A | = |
| Chloride | J | 19.1 | mg/L | 250 | 7/17/2025 | | | SW846-9056A | = |
| Fluoride | J | 0.0794 | mg/L | 4 | 7/17/2025 | | | SW846-9056A | = |
| Nitrate as Nitrogen | U | 10 | mg/L | 10 | 7/17/2025 | | | SW846-9056A | = |
| Sulfate | | 30.6 | mg/L | 1.6 | 7/17/2025 | | | SW846-9056A | = |
| Barometric Pressure Reading | | 30.01 | Inches/Hg | | 7/17/2025 | | | FS | X |
| Conductivity | | 306 | µmhos/cm | | 7/17/2025 | | | FS | X |
| Depth to Water | | 42.11 | ft | | 7/17/2025 | | | FS | X |
| Dissolved Oxygen | | 1.02 | mg/L | | 7/17/2025 | | | FS | X |
| Eh (approx) | | 322 | mV | | 7/17/2025 | | | FS | X |
| pH | | 5.66 | Std Unit | | 7/17/2025 | | | FS | X |
| Temperature | | 69.7 | deg F | | 7/17/2025 | | | FS | X |
| Turbidity | | 5.13 | NTU | | 7/17/2025 | | | FS | X |
| Aluminum | U | 0.05 | mg/L | 0.05 | 7/17/2025 | | | SW846-6020B | = |
| Antimony | U | 0.003 | mg/L | 0.003 | 7/17/2025 | | | SW846-6020B | = |
| Arsenic | U | 0.005 | mg/L | 0.005 | 7/17/2025 | | | SW846-6020B | = |
| Barium | | 0.129 | mg/L | 0.004 | 7/17/2025 | | | SW846-6020B | = |
| Beryllium | U | 0.0005 | mg/L | 0.0005 | 7/17/2025 | | | SW846-6020B | = |
| Boron | | 0.0267 | mg/L | 0.015 | 7/17/2025 | | | SW846-6020B | = |
| Cadmium | U | 0.001 | mg/L | 0.001 | 7/17/2025 | | | SW846-6020B | = |
| Calcium | | 18.7 | mg/L | 0.2 | 7/17/2025 | | | SW846-6020B | = |
| Chromium | U | 0.01 | mg/L | 0.01 | 7/17/2025 | | | SW846-6020B | = |
| Cobalt | | 0.0054 | mg/L | 0.001 | 7/17/2025 | | | SW846-6020B | = |
| Copper | J | 0.000833 | mg/L | 0.002 | 7/17/2025 | | | SW846-6020B | = |
| Iron | | 0.628 | mg/L | 0.1 | 7/17/2025 | | | SW846-6020B | = |
| Lead | U | 0.002 | mg/L | 0.002 | 7/17/2025 | | | SW846-6020B | = |
| Magnesium | | 9.41 | mg/L | 0.03 | 7/17/2025 | | | SW846-6020B | = |
| Manganese | | 1.05 | mg/L | 0.05 | 7/17/2025 | | | SW846-6020B | = |
| Molybdenum | U | 0.001 | mg/L | 0.001 | 7/17/2025 | | | SW846-6020B | = |
| Nickel | | 0.00288 | mg/L | 0.002 | 7/17/2025 | | | SW846-6020B | = |
| Potassium | | 2.97 | mg/L | 0.3 | 7/17/2025 | | | SW846-6020B | = |
| Rhodium | U | 0.005 | mg/L | 0.005 | 7/17/2025 | | | SW846-6020B | = |
| Selenium | U | 0.005 | mg/L | 0.005 | 7/17/2025 | | | SW846-6020B | = |
| Silver | U | 0.001 | mg/L | 0.001 | 7/17/2025 | | | SW846-6020B | = |
| Sodium | | 24.1 | mg/L | 0.25 | 7/17/2025 | | | SW846-6020B | = |
| Tantalum | UN | 0.005 | mg/L | 0.005 | 7/17/2025 | | | SW846-6020B | = |
| Thallium | U | 0.002 | mg/L | 0.002 | 7/17/2025 | | | SW846-6020B | = |
| Uranium | U | 0.0002 | mg/L | 0.0002 | 7/17/2025 | | | SW846-6020B | = |
| Vanadium | U | 0.02 | mg/L | 0.02 | 7/17/2025 | | | SW846-6020B | = |
| Zinc | J | 0.0112 | mg/L | 0.02 | 7/17/2025 | | | SW846-6020B | = |
| Mercury | U | 0.0002 | mg/L | 0.0002 | 7/17/2025 | | | SW846-7470A | = |
| Barium, Dissolved | | 0.123 | mg/L | 0.004 | 7/17/2025 | | | SW846-6020B | J |
| Chromium, Dissolved | U | 0.01 | mg/L | 0.01 | 7/17/2025 | | | SW846-6020B | UJ |
| Uranium, Dissolved | U | 0.0002 | mg/L | 0.0002 | 7/17/2025 | | | SW846-6020B | UJ |
| PCB-1016 | U | 0.0845 | ug/L | 0.0845 | 7/17/2025 | | | SW846-8082A | = |
| PCB-1221 | U | 0.0845 | ug/L | 0.0845 | 7/17/2025 | | | 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:** 3rd Quarter 2025

**AKGWA Well Tag #:** 8004-4793 **SAMPLE ID:** MW367UG4-25 Sample Type: REG

| Parameter | Qualifier | Result | Units | Reporting Limit | Date Collected | Rad Error (+/-) | TPU | Method | Validation Code |
|---|---|---|---|---|---|---|---|---|---|
| PCB-1232 | U | 0.0845 | ug/L | 0.0845 | 7/17/2025 | | | SW846-8082A | = |
| PCB-1242 | U | 0.0845 | ug/L | 0.0845 | 7/17/2025 | | | SW846-8082A | = |
| PCB-1248 | U | 0.0845 | ug/L | 0.0845 | 7/17/2025 | | | SW846-8082A | = |
| PCB-1254 | U | 0.0845 | ug/L | 0.0845 | 7/17/2025 | | | SW846-8082A | = |
| PCB-1260 | U | 0.0845 | ug/L | 0.0845 | 7/17/2025 | | | SW846-8082A | UJ |
| PCB-1268 | U | 0.0845 | ug/L | 0.0845 | 7/17/2025 | | | SW846-8082A | = |
| Polychlorinated biphenyl | U | 0.0845 | ug/L | 0.0845 | 7/17/2025 | | | SW846-8082A | UJ |
| Radium-226 | UT | 0.478 | pCi/L | 0.909 | 7/17/2025 | 0.633 | 0.633 | AN-1418 | U |
| Radium-228 | U | 3.49 | pCi/L | 4.86 | 7/17/2025 | 3.06 | 3.22 | EPA-904.0-M | = |
| Strontium-90 | U | 0.117 | pCi/L | 3.57 | 7/17/2025 | 1.85 | 1.85 | EPA-905.0-M | UJ |
| Tritium | U | -52 | pCi/L | 215 | 7/17/2025 | 98.6 | 98.6 | EPA-906.0-M | = |
| Technetium-99 | U | 10.7 | pCi/L | 22.1 | 7/17/2025 | 13.2 | 13.2 | HASL 300, Tc-02-RC M | = |
| Thorium-230 | U | 0.21 | pCi/L | 1.88 | 7/17/2025 | 0.95 | 0.953 | HASL 300, Th-01-RC M | = |
| Thorium-232 | U | 0.0865 | pCi/L | 1.2 | 7/17/2025 | 0.601 | 0.601 | HASL 300, Th-01-RC M | = |
| Alpha activity | U | 6.26 | pCi/L | 6.39 | 7/17/2025 | 4.76 | 4.87 | SW846-9310 | = |
| Beta activity | | 9.75 | pCi/L | 9.2 | 7/17/2025 | 6.12 | 6.33 | SW846-9310 | = |
| 1,2-Dibromo-3-chloropropane | U | 0.019 | ug/L | 0.019 | 7/17/2025 | | | SW846-8011 | = |
| 1,1,1,2-Tetrachloroethane | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| 1,1,1-Trichloroethane | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| 1,1,2,2-Tetrachloroethane | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| 1,1,2-Trichloroethane | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| 1,1-Dichloroethane | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| 1,1-Dichloroethene | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| 1,2,3-Trichloropropane | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| 1,2-Dibromoethane | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| 1,2-Dichlorobenzene | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| 1,2-Dichloroethane | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| 1,2-Dichloropropane | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| 1,4-Dichlorobenzene | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| 2-Butanone | U | 5 | ug/L | 5 | 7/17/2025 | | | SW846-8260D | = |
| 2-Hexanone | U | 5 | ug/L | 5 | 7/17/2025 | | | SW846-8260D | = |
| 4-Methyl-2-pentanone | U | 5 | ug/L | 5 | 7/17/2025 | | | SW846-8260D | = |
| Acetone | U | 5 | ug/L | 5 | 7/17/2025 | | | SW846-8260D | = |
| Acrolein | U | 5 | ug/L | 5 | 7/17/2025 | | | SW846-8260D | = |
| Acrylonitrile | U | 5 | ug/L | 5 | 7/17/2025 | | | SW846-8260D | = |
| Benzene | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Bromochloromethane | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Bromodichloromethane | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Bromoform | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Bromomethane | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | UJ |
| Carbon disulfide | U | 5 | ug/L | 5 | 7/17/2025 | | | SW846-8260D | = |
| Carbon tetrachloride | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Chlorobenzene | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Chloroethane | U | 1 | ug/L | 1 | 7/17/2025 | | | 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:** 3rd Quarter 2025

**AKGWA Well Tag #:** 8004-4793 **SAMPLE ID:** MW367UG4-25 Sample Type: REG

| Parameter | Qualifier | Result | Units | Reporting Limit | Date Collected | Rad Error (+/-) | TPU | Method | Validation Code |
|---|---|---|---|---|---|---|---|---|---|
| Chloroform | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Chloromethane | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | UJ |
| cis-1,2-Dichloroethene | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| cis-1,3-Dichloropropene | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Dibromochloromethane | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Dibromomethane | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Ethylbenzene | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Iodomethane | U | 5 | ug/L | 5 | 7/17/2025 | | | SW846-8260D | = |
| Methylene chloride | BJ | 0.77 | ug/L | 5 | 7/17/2025 | | | SW846-8260D | U |
| Styrene | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Tetrachloroethene | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Toluene | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Total Xylene | U | 3 | ug/L | 3 | 7/17/2025 | | | SW846-8260D | = |
| trans-1,2-Dichloroethene | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| trans-1,3-Dichloropropene | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| trans-1,4-Dichloro-2-butene | U | 5 | ug/L | 5 | 7/17/2025 | | | SW846-8260D | = |
| Trichloroethene | | 2.4 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Trichlorofluoromethane | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Vinyl acetate | U | 5 | ug/L | 5 | 7/17/2025 | | | SW846-8260D | = |
| Vinyl chloride | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Dissolved Solids | * | 166 | mg/L | 10 | 7/17/2025 | | | EPA-160.1 | = |
| Chemical Oxygen Demand (COD) | U | 20 | mg/L | 20 | 7/17/2025 | | | EPA-410.4 | = |
| Cyanide | J | 0.00317 | mg/L | 0.2 | 7/17/2025 | | | SW846-9012B | = |
| Total Organic Halides (TOX) | J | 6.28 | ug/L | 10 | 7/17/2025 | | | SW846-9020B | = |
| Total Organic Carbon (TOC) | J | 0.346 | mg/L | 2 | 7/17/2025 | | | 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:** 3rd Quarter 2025

**AKGWA Well Tag #:** 8004-0983 **SAMPLE ID:** MW368UG4-25 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 | 7/17/2025 | | | EPA-300.0 | = |
| Bromide | U | 0.2 | mg/L | 0.2 | 7/17/2025 | | | SW846-9056A | = |
| Chloride | J | 2.22 | mg/L | 250 | 7/17/2025 | | | SW846-9056A | = |
| Fluoride | J | 0.173 | mg/L | 4 | 7/17/2025 | | | SW846-9056A | = |
| Nitrate as Nitrogen | U | 10 | mg/L | 10 | 7/17/2025 | | | SW846-9056A | = |
| Sulfate | | 111 | mg/L | 4 | 7/17/2025 | | | SW846-9056A | = |
| Barometric Pressure Reading | | 29.99 | Inches/Hg | | 7/17/2025 | | | FS | X |
| Conductivity | | 589 | µmhos/cm | | 7/17/2025 | | | FS | X |
| Depth to Water | | 28.01 | ft | | 7/17/2025 | | | FS | X |
| Dissolved Oxygen | | 3.33 | mg/L | | 7/17/2025 | | | FS | X |
| Eh (approx) | | 333 | mV | | 7/17/2025 | | | FS | X |
| pH | | 6.1 | Std Unit | | 7/17/2025 | | | FS | X |
| Temperature | | 65.3 | deg F | | 7/17/2025 | | | FS | X |
| Turbidity | | 4.44 | NTU | | 7/17/2025 | | | FS | X |
| Aluminum | U | 0.05 | mg/L | 0.05 | 7/17/2025 | | | SW846-6020B | = |
| Antimony | U | 0.003 | mg/L | 0.003 | 7/17/2025 | | | SW846-6020B | = |
| Arsenic | J | 0.00309 | mg/L | 0.005 | 7/17/2025 | | | SW846-6020B | = |
| Barium | | 0.062 | mg/L | 0.004 | 7/17/2025 | | | SW846-6020B | = |
| Beryllium | U | 0.0005 | mg/L | 0.0005 | 7/17/2025 | | | SW846-6020B | = |
| Boron | U | 0.015 | mg/L | 0.015 | 7/17/2025 | | | SW846-6020B | = |
| Cadmium | U | 0.001 | mg/L | 0.001 | 7/17/2025 | | | SW846-6020B | = |
| Calcium | | 51.1 | mg/L | 2 | 7/17/2025 | | | SW846-6020B | = |
| Chromium | U | 0.01 | mg/L | 0.01 | 7/17/2025 | | | SW846-6020B | = |
| Cobalt | U | 0.001 | mg/L | 0.001 | 7/17/2025 | | | SW846-6020B | = |
| Copper | J | 0.000508 | mg/L | 0.002 | 7/17/2025 | | | SW846-6020B | = |
| Iron | U | 0.1 | mg/L | 0.1 | 7/17/2025 | | | SW846-6020B | = |
| Lead | U | 0.002 | mg/L | 0.002 | 7/17/2025 | | | SW846-6020B | = |
| Magnesium | | 13 | mg/L | 0.03 | 7/17/2025 | | | SW846-6020B | = |
| Manganese | | 0.0077 | mg/L | 0.005 | 7/17/2025 | | | SW846-6020B | = |
| Molybdenum | J | 0.000429 | mg/L | 0.001 | 7/17/2025 | | | SW846-6020B | U |
| Nickel | J | 0.000796 | mg/L | 0.002 | 7/17/2025 | | | SW846-6020B | = |
| Potassium | | 0.373 | mg/L | 0.3 | 7/17/2025 | | | SW846-6020B | = |
| Rhodium | U | 0.005 | mg/L | 0.005 | 7/17/2025 | | | SW846-6020B | = |
| Selenium | U | 0.005 | mg/L | 0.005 | 7/17/2025 | | | SW846-6020B | = |
| Silver | U | 0.001 | mg/L | 0.001 | 7/17/2025 | | | SW846-6020B | = |
| Sodium | | 50.8 | mg/L | 2.5 | 7/17/2025 | | | SW846-6020B | = |
| Tantalum | UN | 0.005 | mg/L | 0.005 | 7/17/2025 | | | SW846-6020B | = |
| Thallium | U | 0.002 | mg/L | 0.002 | 7/17/2025 | | | SW846-6020B | = |
| Uranium | | 0.000202 | mg/L | 0.0002 | 7/17/2025 | | | SW846-6020B | = |
| Vanadium | U | 0.02 | mg/L | 0.02 | 7/17/2025 | | | SW846-6020B | = |
| Zinc | J | 0.00526 | mg/L | 0.02 | 7/17/2025 | | | SW846-6020B | = |
| Mercury | U | 0.0002 | mg/L | 0.0002 | 7/17/2025 | | | SW846-7470A | = |
| Barium, Dissolved | | 0.0612 | mg/L | 0.004 | 7/17/2025 | | | SW846-6020B | J |
| Chromium, Dissolved | U | 0.01 | mg/L | 0.01 | 7/17/2025 | | | SW846-6020B | UJ |
| Uranium, Dissolved | | 0.000201 | mg/L | 0.0002 | 7/17/2025 | | | SW846-6020B | J |
| PCB-1016 | U | 0.0838 | ug/L | 0.0838 | 7/17/2025 | | | SW846-8082A | = |
| PCB-1221 | U | 0.0838 | ug/L | 0.0838 | 7/17/2025 | | | 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:** 3rd Quarter 2025

**AKGWA Well Tag #:** 8004-0983 **SAMPLE ID:** MW368UG4-25 Sample Type: REG

| Parameter | Qualifier | Result | Units | Reporting Limit | Date Collected | Rad Error (+/-) | TPU | Method | Validation Code |
|---|---|---|---|---|---|---|---|---|---|
| PCB-1232 | U | 0.0838 | ug/L | 0.0838 | 7/17/2025 | | | SW846-8082A | = |
| PCB-1242 | U | 0.0838 | ug/L | 0.0838 | 7/17/2025 | | | SW846-8082A | = |
| PCB-1248 | U | 0.0838 | ug/L | 0.0838 | 7/17/2025 | | | SW846-8082A | = |
| PCB-1254 | U | 0.0838 | ug/L | 0.0838 | 7/17/2025 | | | SW846-8082A | = |
| PCB-1260 | U | 0.0838 | ug/L | 0.0838 | 7/17/2025 | | | SW846-8082A | UJ |
| PCB-1268 | U | 0.0838 | ug/L | 0.0838 | 7/17/2025 | | | SW846-8082A | = |
| Polychlorinated biphenyl | U | 0.0838 | ug/L | 0.0838 | 7/17/2025 | | | SW846-8082A | UJ |
| Radium-226 | U | 0.498 | pCi/L | 0.696 | 7/17/2025 | 0.603 | 0.603 | AN-1418 | = |
| Radium-228 | U | 1.54 | pCi/L | 4.7 | 7/17/2025 | 2.69 | 2.72 | EPA-904.0-M | = |
| Strontium-90 | U | 0.568 | pCi/L | 3.52 | 7/17/2025 | 1.9 | 1.91 | EPA-905.0-M | UJ |
| Tritium | U | 42.1 | pCi/L | 220 | 7/17/2025 | 119 | 119 | EPA-906.0-M | = |
| Technetium-99 | U | 0.35 | pCi/L | 21.6 | 7/17/2025 | 12.6 | 12.6 | HASL 300, Tc-02-RC M | = |
| Thorium-230 | U | 0.445 | pCi/L | 1.87 | 7/17/2025 | 1.05 | 1.06 | HASL 300, Th-01-RC M | = |
| Thorium-232 | U | -0.19 | pCi/L | 1.46 | 7/17/2025 | 0.508 | 0.509 | HASL 300, Th-01-RC M | = |
| Alpha activity | U | 3.71 | pCi/L | 8.21 | 7/17/2025 | 4.88 | 4.91 | SW846-9310 | = |
| Beta activity | U | 1.42 | pCi/L | 8.13 | 7/17/2025 | 4.45 | 4.46 | SW846-9310 | = |
| 1,2-Dibromo-3-chloropropane | U | 0.019 | ug/L | 0.019 | 7/17/2025 | | | SW846-8011 | = |
| 1,1,1,2-Tetrachloroethane | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| 1,1,1-Trichloroethane | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| 1,1,2,2-Tetrachloroethane | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| 1,1,2-Trichloroethane | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| 1,1-Dichloroethane | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| 1,1-Dichloroethene | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| 1,2,3-Trichloropropane | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| 1,2-Dibromoethane | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| 1,2-Dichlorobenzene | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| 1,2-Dichloroethane | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| 1,2-Dichloropropane | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| 1,4-Dichlorobenzene | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| 2-Butanone | U | 5 | ug/L | 5 | 7/17/2025 | | | SW846-8260D | = |
| 2-Hexanone | U | 5 | ug/L | 5 | 7/17/2025 | | | SW846-8260D | = |
| 4-Methyl-2-pentanone | U | 5 | ug/L | 5 | 7/17/2025 | | | SW846-8260D | = |
| Acetone | U | 5 | ug/L | 5 | 7/17/2025 | | | SW846-8260D | = |
| Acrolein | U | 5 | ug/L | 5 | 7/17/2025 | | | SW846-8260D | = |
| Acrylonitrile | U | 5 | ug/L | 5 | 7/17/2025 | | | SW846-8260D | = |
| Benzene | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Bromochloromethane | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Bromodichloromethane | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Bromoform | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Bromomethane | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | UJ |
| Carbon disulfide | U | 5 | ug/L | 5 | 7/17/2025 | | | SW846-8260D | = |
| Carbon tetrachloride | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Chlorobenzene | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Chloroethane | U | 1 | ug/L | 1 | 7/17/2025 | | | 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:** 3rd Quarter 2025

**AKGWA Well Tag #:** 8004-0983 **SAMPLE ID:** MW368UG4-25 Sample Type: REG

| Parameter | Qualifier | Result | Units | Reporting Limit | Date Collected | Rad Error (+/-) | TPU | Method | Validation Code |
|---|---|---|---|---|---|---|---|---|---|
| Chloroform | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Chloromethane | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | UJ |
| cis-1,2-Dichloroethene | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| cis-1,3-Dichloropropene | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Dibromochloromethane | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Dibromomethane | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Ethylbenzene | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Iodomethane | U | 5 | ug/L | 5 | 7/17/2025 | | | SW846-8260D | = |
| Methylene chloride | BJ | 0.72 | ug/L | 5 | 7/17/2025 | | | SW846-8260D | U |
| Styrene | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Tetrachloroethene | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Toluene | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Total Xylene | U | 3 | ug/L | 3 | 7/17/2025 | | | SW846-8260D | = |
| trans-1,2-Dichloroethene | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| trans-1,3-Dichloropropene | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| trans-1,4-Dichloro-2-butene | U | 5 | ug/L | 5 | 7/17/2025 | | | SW846-8260D | = |
| Trichloroethene | J | 0.82 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Trichlorofluoromethane | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Vinyl acetate | U | 5 | ug/L | 5 | 7/17/2025 | | | SW846-8260D | = |
| Vinyl chloride | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Dissolved Solids | * | 385 | mg/L | 10 | 7/17/2025 | | | EPA-160.1 | = |
| Chemical Oxygen Demand (COD) | U | 20 | mg/L | 20 | 7/17/2025 | | | EPA-410.4 | = |
| Cyanide | J | 0.00262 | mg/L | 0.2 | 7/17/2025 | | | SW846-9012B | = |
| Total Organic Halides (TOX) | J | 4.3 | ug/L | 10 | 7/17/2025 | | | SW846-9020B | = |
| Total Organic Carbon (TOC) | J | 0.825 | mg/L | 2 | 7/17/2025 | | | 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:** 3rd Quarter 2025

**AKGWA Well Tag #:** 8004-4820 **SAMPLE ID:** MW369UG4-25 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 | 7/21/2025 | | | EPA-300.0 | = |
| Bromide | | 0.37 | mg/L | 0.2 | 7/21/2025 | | | SW846-9056A | = |
| Chloride | JN | 28.9 | mg/L | 250 | 7/21/2025 | | | SW846-9056A | = |
| Fluoride | J | 0.167 | mg/L | 4 | 7/21/2025 | | | SW846-9056A | = |
| Nitrate as Nitrogen | J | 0.981 | mg/L | 10 | 7/21/2025 | | | SW846-9056A | = |
| Sulfate | | 8.76 | mg/L | 0.4 | 7/21/2025 | | | SW846-9056A | = |
| Barometric Pressure Reading | | 30 | Inches/Hg | | 7/21/2025 | | | FS | X |
| Conductivity | | 353 | µmhos/cm | | 7/21/2025 | | | FS | X |
| Depth to Water | | 35.68 | ft | | 7/21/2025 | | | FS | X |
| Dissolved Oxygen | | 5.6 | mg/L | | 7/21/2025 | | | FS | X |
| Eh (approx) | | 421 | mV | | 7/21/2025 | | | FS | X |
| pH | | 6.35 | Std Unit | | 7/21/2025 | | | FS | X |
| Temperature | | 65.7 | deg F | | 7/21/2025 | | | FS | X |
| Turbidity | | 4.39 | NTU | | 7/21/2025 | | | FS | X |
| Aluminum | J | 0.0289 | mg/L | 0.05 | 7/21/2025 | | | SW846-6020B | = |
| Antimony | U | 0.003 | mg/L | 0.003 | 7/21/2025 | | | SW846-6020B | = |
| Arsenic | U | 0.005 | mg/L | 0.005 | 7/21/2025 | | | SW846-6020B | = |
| Barium | | 0.329 | mg/L | 0.004 | 7/21/2025 | | | SW846-6020B | = |
| Beryllium | U | 0.0005 | mg/L | 0.0005 | 7/21/2025 | | | SW846-6020B | = |
| Boron | | 0.018 | mg/L | 0.015 | 7/21/2025 | | | SW846-6020B | = |
| Cadmium | U | 0.001 | mg/L | 0.001 | 7/21/2025 | | | SW846-6020B | = |
| Calcium | | 15.8 | mg/L | 0.2 | 7/21/2025 | | | SW846-6020B | J |
| Chromium | U | 0.01 | mg/L | 0.01 | 7/21/2025 | | | SW846-6020B | = |
| Cobalt | | 0.00435 | mg/L | 0.001 | 7/21/2025 | | | SW846-6020B | = |
| Copper | | 0.00222 | mg/L | 0.002 | 7/21/2025 | | | SW846-6020B | = |
| Iron | | 0.154 | mg/L | 0.1 | 7/21/2025 | | | SW846-6020B | = |
| Lead | U | 0.002 | mg/L | 0.002 | 7/21/2025 | | | SW846-6020B | = |
| Magnesium | | 6.67 | mg/L | 0.03 | 7/21/2025 | | | SW846-6020B | = |
| Manganese | J | 0.00479 | mg/L | 0.005 | 7/21/2025 | | | SW846-6020B | = |
| Molybdenum | J | 0.000445 | mg/L | 0.001 | 7/21/2025 | | | SW846-6020B | = |
| Nickel | | 0.00413 | mg/L | 0.002 | 7/21/2025 | | | SW846-6020B | = |
| Potassium | | 0.575 | mg/L | 0.3 | 7/21/2025 | | | SW846-6020B | = |
| Rhodium | U | 0.005 | mg/L | 0.005 | 7/21/2025 | | | SW846-6020B | = |
| Selenium | J | 0.00251 | mg/L | 0.005 | 7/21/2025 | | | SW846-6020B | = |
| Silver | U | 0.001 | mg/L | 0.001 | 7/21/2025 | | | SW846-6020B | = |
| Sodium | | 49.3 | mg/L | 0.25 | 7/21/2025 | | | SW846-6020B | = |
| Tantalum | U | 0.005 | mg/L | 0.005 | 7/21/2025 | | | SW846-6020B | = |
| Thallium | U | 0.002 | mg/L | 0.002 | 7/21/2025 | | | SW846-6020B | = |
| Uranium | U | 0.0002 | mg/L | 0.0002 | 7/21/2025 | | | SW846-6020B | = |
| Vanadium | U | 0.02 | mg/L | 0.02 | 7/21/2025 | | | SW846-6020B | = |
| Zinc | J | 0.0116 | mg/L | 0.02 | 7/21/2025 | | | SW846-6020B | = |
| Mercury | U | 0.0002 | mg/L | 0.0002 | 7/21/2025 | | | SW846-7470A | = |
| Barium, Dissolved | | 0.335 | mg/L | 0.004 | 7/21/2025 | | | SW846-6020B | J |
| Chromium, Dissolved | U | 0.01 | mg/L | 0.01 | 7/21/2025 | | | SW846-6020B | UJ |
| Uranium, Dissolved | U | 0.0002 | mg/L | 0.0002 | 7/21/2025 | | | SW846-6020B | UJ |
| PCB-1016 | U | 0.0951 | ug/L | 0.0951 | 7/21/2025 | | | SW846-8082A | = |
| PCB-1221 | U | 0.0951 | ug/L | 0.0951 | 7/21/2025 | | | 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:** 3rd Quarter 2025

**AKGWA Well Tag #:** 8004-4820 **SAMPLE ID:** MW369UG4-25 Sample Type: REG

| Parameter | Qualifier | Result | Units | Reporting Limit | Date Collected | Rad Error (+/-) | TPU | Method | Validation Code |
|---|---|---|---|---|---|---|---|---|---|
| PCB-1232 | U | 0.0951 | ug/L | 0.0951 | 7/21/2025 | | | SW846-8082A | = |
| PCB-1242 | U | 0.0951 | ug/L | 0.0951 | 7/21/2025 | | | SW846-8082A | = |
| PCB-1248 | U | 0.0951 | ug/L | 0.0951 | 7/21/2025 | | | SW846-8082A | = |
| PCB-1254 | U | 0.0951 | ug/L | 0.0951 | 7/21/2025 | | | SW846-8082A | = |
| PCB-1260 | U | 0.0951 | ug/L | 0.0951 | 7/21/2025 | | | SW846-8082A | UJ |
| PCB-1268 | U | 0.0951 | ug/L | 0.0951 | 7/21/2025 | | | SW846-8082A | = |
| Polychlorinated biphenyl | U | 0.0951 | ug/L | 0.0951 | 7/21/2025 | | | SW846-8082A | UJ |
| Radium-226 | U | 0.545 | pCi/L | 0.811 | 7/21/2025 | 0.635 | 0.636 | AN-1418 | = |
| Radium-228 | U | 2.74 | pCi/L | 4.74 | 7/21/2025 | 2.86 | 2.96 | EPA-904.0-M | = |
| Strontium-90 | U | -2.76 | pCi/L | 5.05 | 7/21/2025 | 2.38 | 2.38 | EPA-905.0-M | UJ |
| Tritium | U | 8.01 | pCi/L | 218 | 7/21/2025 | 114 | 114 | EPA-906.0-M | = |
| Technetium-99 | | 52.2 | pCi/L | 20.4 | 7/21/2025 | 13.2 | 14.4 | HASL 300, Tc-02-RC M | = |
| Thorium-230 | U | -0.44 | pCi/L | 2.3 | 7/21/2025 | 0.802 | 0.803 | HASL 300, Th-01-RC M | = |
| Thorium-232 | U | 0.242 | pCi/L | 1.04 | 7/21/2025 | 0.74 | 0.741 | HASL 300, Th-01-RC M | = |
| Alpha activity | U | -0.199 | pCi/L | 6.74 | 7/21/2025 | 2.76 | 2.77 | SW846-9310 | = |
| Beta activity | | 26.6 | pCi/L | 9.18 | 7/21/2025 | 7.76 | 8.91 | SW846-9310 | = |
| 1,2-Dibromo-3-chloropropane | U | 0.0189 | ug/L | 0.0189 | 7/21/2025 | | | SW846-8011 | = |
| 1,1,1,2-Tetrachloroethane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| 1,1,1-Trichloroethane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| 1,1,2,2-Tetrachloroethane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| 1,1,2-Trichloroethane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| 1,1-Dichloroethane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| 1,1-Dichloroethene | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| 1,2,3-Trichloropropane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| 1,2-Dibromoethane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| 1,2-Dichlorobenzene | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| 1,2-Dichloroethane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| 1,2-Dichloropropane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| 1,4-Dichlorobenzene | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| 2-Butanone | | 6 | ug/L | 5 | 7/21/2025 | | | SW846-8260D | = |
| 2-Hexanone | J | 1.7 | ug/L | 5 | 7/21/2025 | | | SW846-8260D | = |
| 4-Methyl-2-pentanone | U | 5 | ug/L | 5 | 7/21/2025 | | | SW846-8260D | = |
| Acetone | | 19.5 | ug/L | 5 | 7/21/2025 | | | SW846-8260D | = |
| Acrolein | U | 5 | ug/L | 5 | 7/21/2025 | | | SW846-8260D | = |
| Acrylonitrile | U | 5 | ug/L | 5 | 7/21/2025 | | | SW846-8260D | = |
| Benzene | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Bromochloromethane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Bromodichloromethane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Bromoform | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Bromomethane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Carbon disulfide | U | 5 | ug/L | 5 | 7/21/2025 | | | SW846-8260D | = |
| Carbon tetrachloride | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Chlorobenzene | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Chloroethane | U | 1 | ug/L | 1 | 7/21/2025 | | | 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:** 3rd Quarter 2025

**AKGWA Well Tag #:** 8004-4820 **SAMPLE ID:** MW369UG4-25 Sample Type: REG

| Parameter | Qualifier | Result | Units | Reporting Limit | Date Collected | Rad Error (+/-) | TPU | Method | Validation Code |
|---|---|---|---|---|---|---|---|---|---|
| Chloroform | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Chloromethane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| cis-1,2-Dichloroethene | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| cis-1,3-Dichloropropene | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Dibromochloromethane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Dibromomethane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Ethylbenzene | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Iodomethane | U | 5 | ug/L | 5 | 7/21/2025 | | | SW846-8260D | = |
| Methylene chloride | U | 5 | ug/L | 5 | 7/21/2025 | | | SW846-8260D | = |
| Styrene | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Tetrachloroethene | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Toluene | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Total Xylene | U | 3 | ug/L | 3 | 7/21/2025 | | | SW846-8260D | = |
| trans-1,2-Dichloroethene | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| trans-1,3-Dichloropropene | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| trans-1,4-Dichloro-2-butene | U | 5 | ug/L | 5 | 7/21/2025 | | | SW846-8260D | = |
| Trichloroethene | | 1.77 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Trichlorofluoromethane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Vinyl acetate | U | 5 | ug/L | 5 | 7/21/2025 | | | SW846-8260D | = |
| Vinyl chloride | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Dissolved Solids | * | 202 | mg/L | 10 | 7/21/2025 | | | EPA-160.1 | = |
| Chemical Oxygen Demand (COD) | U | 20 | mg/L | 20 | 7/21/2025 | | | EPA-410.4 | = |
| Cyanide | UNN1 | 0.2 | mg/L | 0.2 | 7/21/2025 | | | SW846-9012B | = |
| Total Organic Halides (TOX) | J | 8.23 | ug/L | 10 | 7/21/2025 | | | SW846-9020B | = |
| Total Organic Carbon (TOC) | J | 0.653 | mg/L | 2 | 7/21/2025 | | | 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:** 3rd Quarter 2025

**AKGWA Well Tag #:** 8004-4818 **SAMPLE ID:** MW370UG4-25 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 | 7/21/2025 | | | EPA-300.0 | = |
| Bromide | | 0.517 | mg/L | 0.2 | 7/21/2025 | | | SW846-9056A | = |
| Chloride | JN | 41.7 | mg/L | 250 | 7/21/2025 | | | SW846-9056A | J |
| Fluoride | J | 0.146 | mg/L | 4 | 7/21/2025 | | | SW846-9056A | = |
| Nitrate as Nitrogen | J | 1.09 | mg/L | 10 | 7/21/2025 | | | SW846-9056A | = |
| Sulfate | | 19.4 | mg/L | 2 | 7/21/2025 | | | SW846-9056A | = |
| Barometric Pressure Reading | | 30 | Inches/Hg | | 7/21/2025 | | | FS | X |
| Conductivity | | 429 | µmhos/cm | | 7/21/2025 | | | FS | X |
| Depth to Water | | 36.56 | ft | | 7/21/2025 | | | FS | X |
| Dissolved Oxygen | | 4.84 | mg/L | | 7/21/2025 | | | FS | X |
| Eh (approx) | | 420 | mV | | 7/21/2025 | | | FS | X |
| pH | | 6.02 | Std Unit | | 7/21/2025 | | | FS | X |
| Temperature | | 67.3 | deg F | | 7/21/2025 | | | FS | X |
| Turbidity | | 3.9 | NTU | | 7/21/2025 | | | FS | X |
| Aluminum | U | 0.05 | mg/L | 0.05 | 7/21/2025 | | | SW846-6020B | = |
| Antimony | U | 0.003 | mg/L | 0.003 | 7/21/2025 | | | SW846-6020B | = |
| Arsenic | U | 0.005 | mg/L | 0.005 | 7/21/2025 | | | SW846-6020B | = |
| Barium | | 0.22 | mg/L | 0.004 | 7/21/2025 | | | SW846-6020B | = |
| Beryllium | U | 0.0005 | mg/L | 0.0005 | 7/21/2025 | | | SW846-6020B | = |
| Boron | | 0.0726 | mg/L | 0.015 | 7/21/2025 | | | SW846-6020B | = |
| Cadmium | U | 0.001 | mg/L | 0.001 | 7/21/2025 | | | SW846-6020B | = |
| Calcium | | 28.6 | mg/L | 0.2 | 7/21/2025 | | | SW846-6020B | J |
| Chromium | U | 0.01 | mg/L | 0.01 | 7/21/2025 | | | SW846-6020B | = |
| Cobalt | U | 0.001 | mg/L | 0.001 | 7/21/2025 | | | SW846-6020B | = |
| Copper | J | 0.00109 | mg/L | 0.002 | 7/21/2025 | | | SW846-6020B | = |
| Iron | U | 0.1 | mg/L | 0.1 | 7/21/2025 | | | SW846-6020B | = |
| Lead | U | 0.002 | mg/L | 0.002 | 7/21/2025 | | | SW846-6020B | = |
| Magnesium | | 12.5 | mg/L | 0.03 | 7/21/2025 | | | SW846-6020B | = |
| Manganese | U | 0.005 | mg/L | 0.005 | 7/21/2025 | | | SW846-6020B | = |
| Molybdenum | U | 0.001 | mg/L | 0.001 | 7/21/2025 | | | SW846-6020B | = |
| Nickel | U | 0.002 | mg/L | 0.002 | 7/21/2025 | | | SW846-6020B | = |
| Potassium | | 2.53 | mg/L | 0.3 | 7/21/2025 | | | SW846-6020B | = |
| Rhodium | U | 0.005 | mg/L | 0.005 | 7/21/2025 | | | SW846-6020B | = |
| Selenium | U | 0.005 | mg/L | 0.005 | 7/21/2025 | | | SW846-6020B | = |
| Silver | U | 0.001 | mg/L | 0.001 | 7/21/2025 | | | SW846-6020B | = |
| Sodium | | 44.4 | mg/L | 0.25 | 7/21/2025 | | | SW846-6020B | = |
| Tantalum | U | 0.005 | mg/L | 0.005 | 7/21/2025 | | | SW846-6020B | = |
| Thallium | U | 0.002 | mg/L | 0.002 | 7/21/2025 | | | SW846-6020B | = |
| Uranium | U | 0.0002 | mg/L | 0.0002 | 7/21/2025 | | | SW846-6020B | = |
| Vanadium | U | 0.02 | mg/L | 0.02 | 7/21/2025 | | | SW846-6020B | = |
| Zinc | J | 0.00608 | mg/L | 0.02 | 7/21/2025 | | | SW846-6020B | = |
| Mercury | U | 0.0002 | mg/L | 0.0002 | 7/21/2025 | | | SW846-7470A | = |
| Barium, Dissolved | | 0.211 | mg/L | 0.004 | 7/21/2025 | | | SW846-6020B | J |
| Chromium, Dissolved | U | 0.01 | mg/L | 0.01 | 7/21/2025 | | | SW846-6020B | UJ |
| Uranium, Dissolved | U | 0.0002 | mg/L | 0.0002 | 7/21/2025 | | | SW846-6020B | UJ |
| PCB-1016 | U | 0.1 | ug/L | 0.1 | 7/21/2025 | | | SW846-8082A | = |
| PCB-1221 | U | 0.1 | ug/L | 0.1 | 7/21/2025 | | | 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:** 3rd Quarter 2025

**AKGWA Well Tag #:** 8004-4818 **SAMPLE ID:** MW370UG4-25 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 | 7/21/2025 | | | SW846-8082A | = |
| PCB-1242 | U | 0.1 | ug/L | 0.1 | 7/21/2025 | | | SW846-8082A | = |
| PCB-1248 | U | 0.1 | ug/L | 0.1 | 7/21/2025 | | | SW846-8082A | = |
| PCB-1254 | U | 0.1 | ug/L | 0.1 | 7/21/2025 | | | SW846-8082A | = |
| PCB-1260 | U | 0.1 | ug/L | 0.1 | 7/21/2025 | | | SW846-8082A | UJ |
| PCB-1268 | U | 0.1 | ug/L | 0.1 | 7/21/2025 | | | SW846-8082A | = |
| Polychlorinated biphenyl | U | 0.1 | ug/L | 0.1 | 7/21/2025 | | | SW846-8082A | UJ |
| Radium-226 | U | 0.192 | pCi/L | 0.782 | 7/21/2025 | 0.473 | 0.473 | AN-1418 | = |
| Radium-228 | U | -1.5 | pCi/L | 4.73 | 7/21/2025 | 2.19 | 2.19 | EPA-904.0-M | = |
| Strontium-90 | U | -0.187 | pCi/L | 5.09 | 7/21/2025 | 2.7 | 2.7 | EPA-905.0-M | UJ |
| Tritium | U | -15.9 | pCi/L | 217 | 7/21/2025 | 110 | 110 | EPA-906.0-M | = |
| Technetium-99 | U | 8.12 | pCi/L | 20.5 | 7/21/2025 | 12.1 | 12.2 | HASL 300, Tc-02-RC M | = |
| Thorium-230 | U | -0.129 | pCi/L | 1.61 | 7/21/2025 | 0.665 | 0.665 | HASL 300, Th-01-RC M | = |
| Thorium-232 | U | 0.165 | pCi/L | 0.768 | 7/21/2025 | 0.524 | 0.525 | HASL 300, Th-01-RC M | = |
| Alpha activity | U | -0.744 | pCi/L | 7.82 | 7/21/2025 | 3.14 | 3.14 | SW846-9310 | = |
| Beta activity | U | 9.36 | pCi/L | 10.5 | 7/21/2025 | 6.66 | 6.84 | SW846-9310 | = |
| 1,2-Dibromo-3-chloropropane | U | 0.019 | ug/L | 0.019 | 7/21/2025 | | | SW846-8011 | = |
| 1,1,1,2-Tetrachloroethane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| 1,1,1-Trichloroethane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| 1,1,2,2-Tetrachloroethane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| 1,1,2-Trichloroethane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| 1,1-Dichloroethane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| 1,1-Dichloroethene | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| 1,2,3-Trichloropropane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| 1,2-Dibromoethane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| 1,2-Dichlorobenzene | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| 1,2-Dichloroethane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| 1,2-Dichloropropane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| 1,4-Dichlorobenzene | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| 2-Butanone | U | 5 | ug/L | 5 | 7/21/2025 | | | SW846-8260D | = |
| 2-Hexanone | U | 5 | ug/L | 5 | 7/21/2025 | | | SW846-8260D | = |
| 4-Methyl-2-pentanone | U | 5 | ug/L | 5 | 7/21/2025 | | | SW846-8260D | = |
| Acetone | | 6.19 | ug/L | 5 | 7/21/2025 | | | SW846-8260D | = |
| Acrolein | U | 5 | ug/L | 5 | 7/21/2025 | | | SW846-8260D | = |
| Acrylonitrile | U | 5 | ug/L | 5 | 7/21/2025 | | | SW846-8260D | = |
| Benzene | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Bromochloromethane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Bromodichloromethane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Bromoform | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Bromomethane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Carbon disulfide | U | 5 | ug/L | 5 | 7/21/2025 | | | SW846-8260D | = |
| Carbon tetrachloride | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Chlorobenzene | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Chloroethane | U | 1 | ug/L | 1 | 7/21/2025 | | | 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:** 3rd Quarter 2025

**AKGWA Well Tag #:** 8004-4818 **SAMPLE ID:** MW370UG4-25 Sample Type: REG

| Parameter | Qualifier | Result | Units | Reporting Limit | Date Collected | Rad Error (+/-) | TPU | Method | Validation Code |
|---|---|---|---|---|---|---|---|---|---|
| Chloroform | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Chloromethane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| cis-1,2-Dichloroethene | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| cis-1,3-Dichloropropene | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Dibromochloromethane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Dibromomethane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Ethylbenzene | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Iodomethane | U | 5 | ug/L | 5 | 7/21/2025 | | | SW846-8260D | = |
| Methylene chloride | U | 5 | ug/L | 5 | 7/21/2025 | | | SW846-8260D | = |
| Styrene | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Tetrachloroethene | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Toluene | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Total Xylene | U | 3 | ug/L | 3 | 7/21/2025 | | | SW846-8260D | = |
| trans-1,2-Dichloroethene | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| trans-1,3-Dichloropropene | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| trans-1,4-Dichloro-2-butene | U | 5 | ug/L | 5 | 7/21/2025 | | | SW846-8260D | = |
| Trichloroethene | | 1.61 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Trichlorofluoromethane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Vinyl acetate | U | 5 | ug/L | 5 | 7/21/2025 | | | SW846-8260D | = |
| Vinyl chloride | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Dissolved Solids | * | 225 | mg/L | 10 | 7/21/2025 | | | EPA-160.1 | J |
| Chemical Oxygen Demand (COD) | U | 20 | mg/L | 20 | 7/21/2025 | | | EPA-410.4 | = |
| Cyanide | UNN1 | 0.2 | mg/L | 0.2 | 7/21/2025 | | | SW846-9012B | UJ |
| Total Organic Halides (TOX) | J | 7.06 | ug/L | 10 | 7/21/2025 | | | SW846-9020B | = |
| Total Organic Carbon (TOC) | J | 0.61 | mg/L | 2 | 7/21/2025 | | | 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:** 3rd Quarter 2025

**AKGWA Well Tag #:** 8004-4819 **SAMPLE ID:** MW371UG4-25 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 | 7/21/2025 | | | EPA-300.0 | = |
| Bromide | U | 0.2 | mg/L | 0.2 | 7/21/2025 | | | SW846-9056A | = |
| Chloride | JN | 1.68 | mg/L | 250 | 7/21/2025 | | | SW846-9056A | = |
| Fluoride | J | 0.15 | mg/L | 4 | 7/21/2025 | | | SW846-9056A | = |
| Nitrate as Nitrogen | J | 0.217 | mg/L | 10 | 7/21/2025 | | | SW846-9056A | = |
| Sulfate | | 42.8 | mg/L | 1.6 | 7/21/2025 | | | SW846-9056A | = |
| Barometric Pressure Reading | | 29.99 | Inches/Hg | | 7/21/2025 | | | FS | X |
| Conductivity | | 504 | µmhos/cm | | 7/21/2025 | | | FS | X |
| Depth to Water | | 22.29 | ft | | 7/21/2025 | | | FS | X |
| Dissolved Oxygen | | 5.67 | mg/L | | 7/21/2025 | | | FS | X |
| Eh (approx) | | 356 | mV | | 7/21/2025 | | | FS | X |
| pH | | 6.47 | Std Unit | | 7/21/2025 | | | FS | X |
| Temperature | | 64.9 | deg F | | 7/21/2025 | | | FS | X |
| Turbidity | | 4.81 | NTU | | 7/21/2025 | | | FS | X |
| Aluminum | J | 0.0209 | mg/L | 0.05 | 7/21/2025 | | | SW846-6020B | = |
| Antimony | U | 0.003 | mg/L | 0.003 | 7/21/2025 | | | SW846-6020B | = |
| Arsenic | U | 0.005 | mg/L | 0.005 | 7/21/2025 | | | SW846-6020B | = |
| Barium | | 0.15 | mg/L | 0.004 | 7/21/2025 | | | SW846-6020B | = |
| Beryllium | U | 0.0005 | mg/L | 0.0005 | 7/21/2025 | | | SW846-6020B | = |
| Boron | J | 0.00809 | mg/L | 0.015 | 7/21/2025 | | | SW846-6020B | = |
| Cadmium | U | 0.001 | mg/L | 0.001 | 7/21/2025 | | | SW846-6020B | = |
| Calcium | | 70.8 | mg/L | 2 | 7/21/2025 | | | SW846-6020B | = |
| Chromium | U | 0.01 | mg/L | 0.01 | 7/21/2025 | | | SW846-6020B | = |
| Cobalt | U | 0.001 | mg/L | 0.001 | 7/21/2025 | | | SW846-6020B | = |
| Copper | J | 0.00131 | mg/L | 0.002 | 7/21/2025 | | | SW846-6020B | = |
| Iron | J | 0.0443 | mg/L | 0.1 | 7/21/2025 | | | SW846-6020B | = |
| Lead | U | 0.002 | mg/L | 0.002 | 7/21/2025 | | | SW846-6020B | = |
| Magnesium | | 11.9 | mg/L | 0.03 | 7/21/2025 | | | SW846-6020B | = |
| Manganese | J | 0.00118 | mg/L | 0.005 | 7/21/2025 | | | SW846-6020B | = |
| Molybdenum | J | 0.000509 | mg/L | 0.001 | 7/21/2025 | | | SW846-6020B | = |
| Nickel | J | 0.00121 | mg/L | 0.002 | 7/21/2025 | | | SW846-6020B | = |
| Potassium | | 0.323 | mg/L | 0.3 | 7/21/2025 | | | SW846-6020B | = |
| Rhodium | U | 0.005 | mg/L | 0.005 | 7/21/2025 | | | SW846-6020B | = |
| Selenium | U | 0.005 | mg/L | 0.005 | 7/21/2025 | | | SW846-6020B | = |
| Silver | U | 0.001 | mg/L | 0.001 | 7/21/2025 | | | SW846-6020B | = |
| Sodium | | 27.2 | mg/L | 0.25 | 7/21/2025 | | | SW846-6020B | = |
| Tantalum | U | 0.005 | mg/L | 0.005 | 7/21/2025 | | | SW846-6020B | = |
| Thallium | U | 0.002 | mg/L | 0.002 | 7/21/2025 | | | SW846-6020B | = |
| Uranium | | 0.00101 | mg/L | 0.0002 | 7/21/2025 | | | SW846-6020B | = |
| Vanadium | J | 0.00613 | mg/L | 0.02 | 7/21/2025 | | | SW846-6020B | = |
| Zinc | J | 0.00539 | mg/L | 0.02 | 7/21/2025 | | | SW846-6020B | = |
| Mercury | U | 0.0002 | mg/L | 0.0002 | 7/21/2025 | | | SW846-7470A | = |
| Barium, Dissolved | | 0.142 | mg/L | 0.004 | 7/21/2025 | | | SW846-6020B | J |
| Chromium, Dissolved | U | 0.01 | mg/L | 0.01 | 7/21/2025 | | | SW846-6020B | UJ |
| Uranium, Dissolved | | 0.000966 | mg/L | 0.0002 | 7/21/2025 | | | SW846-6020B | J |
| PCB-1016 | U | 0.0972 | ug/L | 0.0972 | 7/21/2025 | | | SW846-8082A | = |
| PCB-1221 | U | 0.0972 | ug/L | 0.0972 | 7/21/2025 | | | 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:** 3rd Quarter 2025

**AKGWA Well Tag #:** 8004-4819 **SAMPLE ID:** MW371UG4-25 Sample Type: REG

| Parameter | Qualifier | Result | Units | Reporting Limit | Date Collected | Rad Error (+/-) | TPU | Method | Validation Code |
|---|---|---|---|---|---|---|---|---|---|
| PCB-1232 | U | 0.0972 | ug/L | 0.0972 | 7/21/2025 | | | SW846-8082A | = |
| PCB-1242 | U | 0.0972 | ug/L | 0.0972 | 7/21/2025 | | | SW846-8082A | = |
| PCB-1248 | U | 0.0972 | ug/L | 0.0972 | 7/21/2025 | | | SW846-8082A | = |
| PCB-1254 | U | 0.0972 | ug/L | 0.0972 | 7/21/2025 | | | SW846-8082A | = |
| PCB-1260 | U | 0.0972 | ug/L | 0.0972 | 7/21/2025 | | | SW846-8082A | UJ |
| PCB-1268 | U | 0.0972 | ug/L | 0.0972 | 7/21/2025 | | | SW846-8082A | = |
| Polychlorinated biphenyl | U | 0.0972 | ug/L | 0.0972 | 7/21/2025 | | | SW846-8082A | UJ |
| Radium-226 | U | 0.626 | pCi/L | 0.936 | 7/21/2025 | 0.702 | 0.703 | AN-1418 | = |
| Radium-228 | U | 1.68 | pCi/L | 4.87 | 7/21/2025 | 2.8 | 2.84 | EPA-904.0-M | = |
| Strontium-90 | U | 0.627 | pCi/L | 3.72 | 7/21/2025 | 2.04 | 2.04 | EPA-905.0-M | UJ |
| Tritium | U | -55.8 | pCi/L | 218 | 7/21/2025 | 103 | 103 | EPA-906.0-M | = |
| Technetium-99 | U | -1.37 | pCi/L | 20.3 | 7/21/2025 | 11.7 | 11.7 | HASL 300, Tc-02-RC M | = |
| Thorium-230 | U | 0.38 | pCi/L | 1.74 | 7/21/2025 | 0.962 | 0.967 | HASL 300, Th-01-RC M | = |
| Thorium-232 | U | 0.355 | pCi/L | 1.09 | 7/21/2025 | 0.74 | 0.742 | HASL 300, Th-01-RC M | = |
| Alpha activity | U | 1.48 | pCi/L | 7.16 | 7/21/2025 | 3.63 | 3.64 | SW846-9310 | = |
| Beta activity | U | 3 | pCi/L | 9.18 | 7/21/2025 | 5.25 | 5.27 | SW846-9310 | = |
| 1,2-Dibromo-3-chloropropane | U | 0.0189 | ug/L | 0.0189 | 7/21/2025 | | | SW846-8011 | = |
| 1,1,1,2-Tetrachloroethane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| 1,1,1-Trichloroethane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| 1,1,2,2-Tetrachloroethane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| 1,1,2-Trichloroethane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| 1,1-Dichloroethane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| 1,1-Dichloroethene | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| 1,2,3-Trichloropropane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| 1,2-Dibromoethane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| 1,2-Dichlorobenzene | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| 1,2-Dichloroethane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| 1,2-Dichloropropane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| 1,4-Dichlorobenzene | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| 2-Butanone | U | 5 | ug/L | 5 | 7/21/2025 | | | SW846-8260D | = |
| 2-Hexanone | U | 5 | ug/L | 5 | 7/21/2025 | | | SW846-8260D | = |
| 4-Methyl-2-pentanone | U | 5 | ug/L | 5 | 7/21/2025 | | | SW846-8260D | = |
| Acetone | U | 5 | ug/L | 5 | 7/21/2025 | | | SW846-8260D | = |
| Acrolein | U | 5 | ug/L | 5 | 7/21/2025 | | | SW846-8260D | = |
| Acrylonitrile | U | 5 | ug/L | 5 | 7/21/2025 | | | SW846-8260D | = |
| Benzene | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Bromochloromethane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Bromodichloromethane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Bromoform | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Bromomethane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Carbon disulfide | U | 5 | ug/L | 5 | 7/21/2025 | | | SW846-8260D | = |
| Carbon tetrachloride | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Chlorobenzene | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Chloroethane | U | 1 | ug/L | 1 | 7/21/2025 | | | 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:** 3rd Quarter 2025

**AKGWA Well Tag #:** 8004-4819 **SAMPLE ID:** MW371UG4-25 Sample Type: REG

| Parameter | Qualifier | Result | Units | Reporting Limit | Date Collected | Rad Error (+/-) | TPU | Method | Validation Code |
|---|---|---|---|---|---|---|---|---|---|
| Chloroform | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Chloromethane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| cis-1,2-Dichloroethene | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| cis-1,3-Dichloropropene | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Dibromochloromethane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Dibromomethane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Ethylbenzene | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Iodomethane | U | 5 | ug/L | 5 | 7/21/2025 | | | SW846-8260D | = |
| Methylene chloride | U | 5 | ug/L | 5 | 7/21/2025 | | | SW846-8260D | = |
| Styrene | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Tetrachloroethene | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Toluene | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Total Xylene | U | 3 | ug/L | 3 | 7/21/2025 | | | SW846-8260D | = |
| trans-1,2-Dichloroethene | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| trans-1,3-Dichloropropene | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| trans-1,4-Dichloro-2-butene | U | 5 | ug/L | 5 | 7/21/2025 | | | SW846-8260D | = |
| Trichloroethene | J | 0.62 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Trichlorofluoromethane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Vinyl acetate | U | 5 | ug/L | 5 | 7/21/2025 | | | SW846-8260D | = |
| Vinyl chloride | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Dissolved Solids | * | 315 | mg/L | 10 | 7/21/2025 | | | EPA-160.1 | = |
| Chemical Oxygen Demand (COD) | U | 20 | mg/L | 20 | 7/21/2025 | | | EPA-410.4 | = |
| Cyanide | UNN1 | 0.2 | mg/L | 0.2 | 7/21/2025 | | | SW846-9012B | = |
| Total Organic Halides (TOX) | J | 5.67 | ug/L | 10 | 7/21/2025 | | | SW846-9020B | = |
| Total Organic Carbon (TOC) | J | 1.32 | mg/L | 2 | 7/21/2025 | | | 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:** 3rd Quarter 2025

**AKGWA Well Tag #:** 8004-4808 **SAMPLE ID:** MW372UG4-25 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 | 7/21/2025 | | | EPA-300.0 | = |
| Bromide | | 0.529 | mg/L | 0.4 | 7/21/2025 | | | SW846-9056A | = |
| Chloride | JN | 36 | mg/L | 4 | 7/21/2025 | | | SW846-9056A | = |
| Fluoride | J | 0.174 | mg/L | 4 | 7/21/2025 | | | SW846-9056A | = |
| Nitrate as Nitrogen | J | 0.905 | mg/L | 10 | 7/21/2025 | | | SW846-9056A | = |
| Sulfate | | 156 | mg/L | 8 | 7/21/2025 | | | SW846-9056A | = |
| Barometric Pressure Reading | | 29.98 | Inches/Hg | | 7/21/2025 | | | FS | X |
| Conductivity | | 720 | µmhos/cm | | 7/21/2025 | | | FS | X |
| Depth to Water | | 30.84 | ft | | 7/21/2025 | | | FS | X |
| Dissolved Oxygen | | 3.51 | mg/L | | 7/21/2025 | | | FS | X |
| Eh (approx) | | 421 | mV | | 7/21/2025 | | | FS | X |
| pH | | 6.12 | Std Unit | | 7/21/2025 | | | FS | X |
| Temperature | | 64.7 | deg F | | 7/21/2025 | | | FS | X |
| Turbidity | | 3.88 | NTU | | 7/21/2025 | | | FS | X |
| Aluminum | U | 0.05 | mg/L | 0.05 | 7/21/2025 | | | SW846-6020B | = |
| Antimony | U | 0.003 | mg/L | 0.003 | 7/21/2025 | | | SW846-6020B | = |
| Arsenic | U | 0.005 | mg/L | 0.005 | 7/21/2025 | | | SW846-6020B | = |
| Barium | | 0.0566 | mg/L | 0.004 | 7/21/2025 | | | SW846-6020B | = |
| Beryllium | U | 0.0005 | mg/L | 0.0005 | 7/21/2025 | | | SW846-6020B | = |
| Boron | | 1.14 | mg/L | 0.3 | 7/21/2025 | | | SW846-6020B | = |
| Cadmium | U | 0.001 | mg/L | 0.001 | 7/21/2025 | | | SW846-6020B | = |
| Calcium | | 67.4 | mg/L | 2 | 7/21/2025 | | | SW846-6020B | = |
| Chromium | U | 0.01 | mg/L | 0.01 | 7/21/2025 | | | SW846-6020B | = |
| Cobalt | U | 0.001 | mg/L | 0.001 | 7/21/2025 | | | SW846-6020B | = |
| Copper | J | 0.000839 | mg/L | 0.002 | 7/21/2025 | | | SW846-6020B | = |
| Iron | J | 0.047 | mg/L | 0.1 | 7/21/2025 | | | SW846-6020B | = |
| Lead | U | 0.002 | mg/L | 0.002 | 7/21/2025 | | | SW846-6020B | = |
| Magnesium | | 23.4 | mg/L | 0.03 | 7/21/2025 | | | SW846-6020B | = |
| Manganese | J | 0.00134 | mg/L | 0.005 | 7/21/2025 | | | SW846-6020B | = |
| Molybdenum | J | 0.000245 | mg/L | 0.001 | 7/21/2025 | | | SW846-6020B | = |
| Nickel | J | 0.000707 | mg/L | 0.002 | 7/21/2025 | | | SW846-6020B | = |
| Potassium | | 2.17 | mg/L | 0.3 | 7/21/2025 | | | SW846-6020B | = |
| Rhodium | U | 0.005 | mg/L | 0.005 | 7/21/2025 | | | SW846-6020B | = |
| Selenium | J | 0.0021 | mg/L | 0.005 | 7/21/2025 | | | SW846-6020B | = |
| Silver | U | 0.001 | mg/L | 0.001 | 7/21/2025 | | | SW846-6020B | = |
| Sodium | | 63 | mg/L | 2.5 | 7/21/2025 | | | SW846-6020B | = |
| Tantalum | U | 0.005 | mg/L | 0.005 | 7/21/2025 | | | SW846-6020B | = |
| Thallium | U | 0.002 | mg/L | 0.002 | 7/21/2025 | | | SW846-6020B | = |
| Uranium | U | 0.0002 | mg/L | 0.0002 | 7/21/2025 | | | SW846-6020B | = |
| Vanadium | U | 0.02 | mg/L | 0.02 | 7/21/2025 | | | SW846-6020B | = |
| Zinc | J | 0.00486 | mg/L | 0.02 | 7/21/2025 | | | SW846-6020B | = |
| Mercury | U | 0.0002 | mg/L | 0.0002 | 7/21/2025 | | | SW846-7470A | = |
| Barium, Dissolved | | 0.0544 | mg/L | 0.004 | 7/21/2025 | | | SW846-6020B | J |
| Chromium, Dissolved | U | 0.01 | mg/L | 0.01 | 7/21/2025 | | | SW846-6020B | UJ |
| Uranium, Dissolved | U | 0.0002 | mg/L | 0.0002 | 7/21/2025 | | | SW846-6020B | UJ |
| PCB-1016 | U | 0.0955 | ug/L | 0.0955 | 7/21/2025 | | | SW846-8082A | = |
| PCB-1221 | U | 0.0955 | ug/L | 0.0955 | 7/21/2025 | | | 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:** 3rd Quarter 2025

**AKGWA Well Tag #:** 8004-4808 **SAMPLE ID:** MW372UG4-25 Sample Type: REG

| Parameter | Qualifier | Result | Units | Reporting Limit | Date Collected | Rad Error (+/-) | TPU | Method | Validation Code |
|---|---|---|---|---|---|---|---|---|---|
| PCB-1232 | U | 0.0955 | ug/L | 0.0955 | 7/21/2025 | | | SW846-8082A | = |
| PCB-1242 | U | 0.0955 | ug/L | 0.0955 | 7/21/2025 | | | SW846-8082A | = |
| PCB-1248 | U | 0.0955 | ug/L | 0.0955 | 7/21/2025 | | | SW846-8082A | = |
| PCB-1254 | U | 0.0955 | ug/L | 0.0955 | 7/21/2025 | | | SW846-8082A | = |
| PCB-1260 | U | 0.0955 | ug/L | 0.0955 | 7/21/2025 | | | SW846-8082A | UJ |
| PCB-1268 | U | 0.0955 | ug/L | 0.0955 | 7/21/2025 | | | SW846-8082A | = |
| Polychlorinated biphenyl | U | 0.0955 | ug/L | 0.0955 | 7/21/2025 | | | SW846-8082A | UJ |
| Radium-226 | U | 0.316 | pCi/L | 0.596 | 7/21/2025 | 0.396 | 0.398 | AN-1418 | = |
| Radium-228 | U | 3.75 | pCi/L | 4.83 | 7/21/2025 | 2.98 | 3.16 | EPA-904.0-M | = |
| Strontium-90 | U | 0.203 | pCi/L | 2.65 | 7/21/2025 | 1.46 | 1.46 | EPA-905.0-M | UJ |
| Tritium | U | -23.9 | pCi/L | 218 | 7/21/2025 | 109 | 109 | EPA-906.0-M | = |
| Technetium-99 | | 51.5 | pCi/L | 20.1 | 7/21/2025 | 13 | 14.2 | HASL 300, Tc-02-RC M | = |
| Thorium-230 | U | -0.481 | pCi/L | 2.11 | 7/21/2025 | 0.71 | 0.711 | HASL 300, Th-01-RC M | = |
| Thorium-232 | U | -0.0769 | pCi/L | 1.17 | 7/21/2025 | 0.477 | 0.478 | HASL 300, Th-01-RC M | = |
| Alpha activity | U | 2.66 | pCi/L | 6.24 | 7/21/2025 | 3.67 | 3.7 | SW846-9310 | = |
| Beta activity | | 43.6 | pCi/L | 9.12 | 7/21/2025 | 9.36 | 11.7 | SW846-9310 | = |
| 1,2-Dibromo-3-chloropropane | U | 0.0192 | ug/L | 0.0192 | 7/21/2025 | | | SW846-8011 | = |
| 1,1,1,2-Tetrachloroethane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| 1,1,1-Trichloroethane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| 1,1,2,2-Tetrachloroethane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| 1,1,2-Trichloroethane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| 1,1-Dichloroethane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| 1,1-Dichloroethene | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| 1,2,3-Trichloropropane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| 1,2-Dibromoethane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| 1,2-Dichlorobenzene | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| 1,2-Dichloroethane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| 1,2-Dichloropropane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| 1,4-Dichlorobenzene | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| 2-Butanone | U | 5 | ug/L | 5 | 7/21/2025 | | | SW846-8260D | = |
| 2-Hexanone | U | 5 | ug/L | 5 | 7/21/2025 | | | SW846-8260D | = |
| 4-Methyl-2-pentanone | U | 5 | ug/L | 5 | 7/21/2025 | | | SW846-8260D | = |
| Acetone | U | 5 | ug/L | 5 | 7/21/2025 | | | SW846-8260D | = |
| Acrolein | U | 5 | ug/L | 5 | 7/21/2025 | | | SW846-8260D | = |
| Acrylonitrile | U | 5 | ug/L | 5 | 7/21/2025 | | | SW846-8260D | = |
| Benzene | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Bromochloromethane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Bromodichloromethane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Bromoform | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Bromomethane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Carbon disulfide | U | 5 | ug/L | 5 | 7/21/2025 | | | SW846-8260D | = |
| Carbon tetrachloride | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Chlorobenzene | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Chloroethane | U | 1 | ug/L | 1 | 7/21/2025 | | | 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:** 3rd Quarter 2025

**AKGWA Well Tag #:** 8004-4808 **SAMPLE ID:** MW372UG4-25 Sample Type: REG

| Parameter | Qualifier | Result | Units | Reporting Limit | Date Collected | Rad Error (+/-) | TPU | Method | Validation Code |
|---|---|---|---|---|---|---|---|---|---|
| Chloroform | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Chloromethane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| cis-1,2-Dichloroethene | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| cis-1,3-Dichloropropene | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Dibromochloromethane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Dibromomethane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Ethylbenzene | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Iodomethane | U | 5 | ug/L | 5 | 7/21/2025 | | | SW846-8260D | = |
| Methylene chloride | U | 5 | ug/L | 5 | 7/21/2025 | | | SW846-8260D | = |
| Styrene | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Tetrachloroethene | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Toluene | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Total Xylene | U | 3 | ug/L | 3 | 7/21/2025 | | | SW846-8260D | = |
| trans-1,2-Dichloroethene | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| trans-1,3-Dichloropropene | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| trans-1,4-Dichloro-2-butene | U | 5 | ug/L | 5 | 7/21/2025 | | | SW846-8260D | = |
| Trichloroethene | | 1.12 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Trichlorofluoromethane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Vinyl acetate | U | 5 | ug/L | 5 | 7/21/2025 | | | SW846-8260D | = |
| Vinyl chloride | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Dissolved Solids | * | 492 | mg/L | 10 | 7/21/2025 | | | EPA-160.1 | = |
| Chemical Oxygen Demand (COD) | U | 20 | mg/L | 20 | 7/21/2025 | | | EPA-410.4 | = |
| Cyanide | UNN1 | 0.2 | mg/L | 0.2 | 7/21/2025 | | | SW846-9012B | = |
| Total Organic Halides (TOX) | J | 5.93 | ug/L | 10 | 7/21/2025 | | | SW846-9020B | = |
| Total Organic Carbon (TOC) | J | 0.764 | mg/L | 2 | 7/21/2025 | | | 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:** 3rd Quarter 2025

**AKGWA Well Tag #:** 8004-4792 **SAMPLE ID:** MW373UG4-25 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 | 7/21/2025 | | | EPA-300.0 | = |
| Bromide | | 0.463 | mg/L | 0.4 | 7/21/2025 | | | SW846-9056A | = |
| Chloride | JN | 29.9 | mg/L | 4 | 7/21/2025 | | | SW846-9056A | = |
| Fluoride | J | 0.173 | mg/L | 4 | 7/21/2025 | | | SW846-9056A | = |
| Nitrate as Nitrogen | J | 0.596 | mg/L | 10 | 7/21/2025 | | | SW846-9056A | = |
| Sulfate | | 246 | mg/L | 8 | 7/21/2025 | | | SW846-9056A | = |
| Barometric Pressure Reading | | 29.98 | Inches/Hg | | 7/21/2025 | | | FS | X |
| Conductivity | | 1008 | µmhos/cm | | 7/21/2025 | | | FS | X |
| Depth to Water | | 31.11 | ft | | 7/21/2025 | | | FS | X |
| Dissolved Oxygen | | 1.24 | mg/L | | 7/21/2025 | | | FS | X |
| Eh (approx) | | 445 | mV | | 7/21/2025 | | | FS | X |
| pH | | 6.69 | Std Unit | | 7/21/2025 | | | FS | X |
| Temperature | | 68.6 | deg F | | 7/21/2025 | | | FS | X |
| Turbidity | | 4 | NTU | | 7/21/2025 | | | FS | X |
| Aluminum | U | 0.05 | mg/L | 0.05 | 7/21/2025 | | | SW846-6020B | = |
| Antimony | U | 0.003 | mg/L | 0.003 | 7/21/2025 | | | SW846-6020B | = |
| Arsenic | U | 0.005 | mg/L | 0.005 | 7/21/2025 | | | SW846-6020B | = |
| Barium | | 0.0304 | mg/L | 0.004 | 7/21/2025 | | | SW846-6020B | = |
| Beryllium | U | 0.0005 | mg/L | 0.0005 | 7/21/2025 | | | SW846-6020B | = |
| Boron | | 2.76 | mg/L | 0.375 | 7/21/2025 | | | SW846-6020B | = |
| Cadmium | U | 0.001 | mg/L | 0.001 | 7/21/2025 | | | SW846-6020B | = |
| Calcium | | 87.7 | mg/L | 4 | 7/21/2025 | | | SW846-6020B | = |
| Chromium | U | 0.01 | mg/L | 0.01 | 7/21/2025 | | | SW846-6020B | = |
| Cobalt | J | 0.000381 | mg/L | 0.001 | 7/21/2025 | | | SW846-6020B | = |
| Copper | J | 0.00127 | mg/L | 0.002 | 7/21/2025 | | | SW846-6020B | = |
| Iron | J | 0.0408 | mg/L | 0.1 | 7/21/2025 | | | SW846-6020B | = |
| Lead | U | 0.002 | mg/L | 0.002 | 7/21/2025 | | | SW846-6020B | = |
| Magnesium | | 33 | mg/L | 0.03 | 7/21/2025 | | | SW846-6020B | = |
| Manganese | | 0.0472 | mg/L | 0.005 | 7/21/2025 | | | SW846-6020B | = |
| Molybdenum | J | 0.000226 | mg/L | 0.001 | 7/21/2025 | | | SW846-6020B | = |
| Nickel | J | 0.00151 | mg/L | 0.002 | 7/21/2025 | | | SW846-6020B | = |
| Potassium | | 2.93 | mg/L | 0.3 | 7/21/2025 | | | SW846-6020B | = |
| Rhodium | U | 0.005 | mg/L | 0.005 | 7/21/2025 | | | SW846-6020B | = |
| Selenium | U | 0.005 | mg/L | 0.005 | 7/21/2025 | | | SW846-6020B | = |
| Silver | U | 0.001 | mg/L | 0.001 | 7/21/2025 | | | SW846-6020B | = |
| Sodium | | 72.8 | mg/L | 5 | 7/21/2025 | | | SW846-6020B | = |
| Tantalum | U | 0.005 | mg/L | 0.005 | 7/21/2025 | | | SW846-6020B | = |
| Thallium | U | 0.002 | mg/L | 0.002 | 7/21/2025 | | | SW846-6020B | = |
| Uranium | J | 0.000099 | mg/L | 0.0002 | 7/21/2025 | | | SW846-6020B | = |
| Vanadium | U | 0.02 | mg/L | 0.02 | 7/21/2025 | | | SW846-6020B | = |
| Zinc | J | 0.00634 | mg/L | 0.02 | 7/21/2025 | | | SW846-6020B | = |
| Mercury | U | 0.0002 | mg/L | 0.0002 | 7/21/2025 | | | SW846-7470A | = |
| Barium, Dissolved | | 0.0294 | mg/L | 0.004 | 7/21/2025 | | | SW846-6020B | J |
| Chromium, Dissolved | U | 0.01 | mg/L | 0.01 | 7/21/2025 | | | SW846-6020B | UJ |
| Uranium, Dissolved | J | 0.00008 | mg/L | 0.0002 | 7/21/2025 | | | SW846-6020B | J |
| PCB-1016 | U | 0.0947 | ug/L | 0.0947 | 7/21/2025 | | | SW846-8082A | = |
| PCB-1221 | U | 0.0947 | ug/L | 0.0947 | 7/21/2025 | | | 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:** 3rd Quarter 2025

**AKGWA Well Tag #:** 8004-4792 **SAMPLE ID:** MW373UG4-25 Sample Type: REG

| Parameter | Qualifier | Result | Units | Reporting Limit | Date Collected | Rad Error (+/-) | TPU | Method | Validation Code |
|---|---|---|---|---|---|---|---|---|---|
| PCB-1232 | U | 0.0947 | ug/L | 0.0947 | 7/21/2025 | | | SW846-8082A | = |
| PCB-1242 | U | 0.0947 | ug/L | 0.0947 | 7/21/2025 | | | SW846-8082A | = |
| PCB-1248 | U | 0.0947 | ug/L | 0.0947 | 7/21/2025 | | | SW846-8082A | = |
| PCB-1254 | U | 0.0947 | ug/L | 0.0947 | 7/21/2025 | | | SW846-8082A | = |
| PCB-1260 | U | 0.0947 | ug/L | 0.0947 | 7/21/2025 | | | SW846-8082A | UJ |
| PCB-1268 | U | 0.0947 | ug/L | 0.0947 | 7/21/2025 | | | SW846-8082A | = |
| Polychlorinated biphenyl | U | 0.0947 | ug/L | 0.0947 | 7/21/2025 | | | SW846-8082A | UJ |
| Radium-226 | U | -0.0652 | pCi/L | 0.683 | 7/21/2025 | 0.281 | 0.281 | AN-1418 | = |
| Radium-228 | U | 0.768 | pCi/L | 4.05 | 7/21/2025 | 2.17 | 2.18 | EPA-904.0-M | = |
| Strontium-90 | U | -0.668 | pCi/L | 3.79 | 7/21/2025 | 1.78 | 1.78 | EPA-905.0-M | UJ |
| Tritium | U | -15.2 | pCi/L | 218 | 7/21/2025 | 110 | 110 | EPA-906.0-M | = |
| Technetium-99 | U | 7.58 | pCi/L | 20.7 | 7/21/2025 | 12.3 | 12.3 | HASL 300, Tc-02-RC M | = |
| Thorium-230 | U | -0.361 | pCi/L | 1.63 | 7/21/2025 | 0.547 | 0.547 | HASL 300, Th-01-RC M | = |
| Thorium-232 | U | -0.196 | pCi/L | 1.23 | 7/21/2025 | 0.404 | 0.404 | HASL 300, Th-01-RC M | = |
| Alpha activity | U | 3.46 | pCi/L | 7.61 | 7/21/2025 | 4.51 | 4.54 | SW846-9310 | = |
| Beta activity | U | 8.36 | pCi/L | 9.63 | 7/21/2025 | 6.17 | 6.32 | SW846-9310 | = |
| 1,2-Dibromo-3-chloropropane | U | 0.0188 | ug/L | 0.0188 | 7/21/2025 | | | SW846-8011 | = |
| 1,1,1,2-Tetrachloroethane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| 1,1,1-Trichloroethane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| 1,1,2,2-Tetrachloroethane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| 1,1,2-Trichloroethane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| 1,1-Dichloroethane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| 1,1-Dichloroethene | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| 1,2,3-Trichloropropane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| 1,2-Dibromoethane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| 1,2-Dichlorobenzene | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| 1,2-Dichloroethane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| 1,2-Dichloropropane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| 1,4-Dichlorobenzene | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| 2-Butanone | U | 5 | ug/L | 5 | 7/21/2025 | | | SW846-8260D | = |
| 2-Hexanone | U | 5 | ug/L | 5 | 7/21/2025 | | | SW846-8260D | = |
| 4-Methyl-2-pentanone | U | 5 | ug/L | 5 | 7/21/2025 | | | SW846-8260D | = |
| Acetone | U | 5 | ug/L | 5 | 7/21/2025 | | | SW846-8260D | = |
| Acrolein | U | 5 | ug/L | 5 | 7/21/2025 | | | SW846-8260D | = |
| Acrylonitrile | U | 5 | ug/L | 5 | 7/21/2025 | | | SW846-8260D | = |
| Benzene | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Bromochloromethane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Bromodichloromethane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Bromoform | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Bromomethane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Carbon disulfide | U | 5 | ug/L | 5 | 7/21/2025 | | | SW846-8260D | = |
| Carbon tetrachloride | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Chlorobenzene | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Chloroethane | U | 1 | ug/L | 1 | 7/21/2025 | | | 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:** 3rd Quarter 2025

**AKGWA Well Tag #:** 8004-4792 **SAMPLE ID:** MW373UG4-25 Sample Type: REG

| Parameter | Qualifier | Result | Units | Reporting Limit | Date Collected | Rad Error (+/-) | TPU | Method | Validation Code |
|---|---|---|---|---|---|---|---|---|---|
| Chloroform | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Chloromethane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| cis-1,2-Dichloroethene | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| cis-1,3-Dichloropropene | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Dibromochloromethane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Dibromomethane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Ethylbenzene | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Iodomethane | U | 5 | ug/L | 5 | 7/21/2025 | | | SW846-8260D | = |
| Methylene chloride | U | 5 | ug/L | 5 | 7/21/2025 | | | SW846-8260D | = |
| Styrene | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Tetrachloroethene | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Toluene | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Total Xylene | U | 3 | ug/L | 3 | 7/21/2025 | | | SW846-8260D | = |
| trans-1,2-Dichloroethene | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| trans-1,3-Dichloropropene | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| trans-1,4-Dichloro-2-butene | U | 5 | ug/L | 5 | 7/21/2025 | | | SW846-8260D | = |
| Trichloroethene | | 3 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Trichlorofluoromethane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Vinyl acetate | U | 5 | ug/L | 5 | 7/21/2025 | | | SW846-8260D | = |
| Vinyl chloride | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Dissolved Solids | * | 666 | mg/L | 10 | 7/21/2025 | | | EPA-160.1 | = |
| Chemical Oxygen Demand (COD) | U | 20 | mg/L | 20 | 7/21/2025 | | | EPA-410.4 | = |
| Cyanide | UNN1 | 0.2 | mg/L | 0.2 | 7/21/2025 | | | SW846-9012B | = |
| Total Organic Halides (TOX) | | 14.5 | ug/L | 10 | 7/21/2025 | | | SW846-9020B | = |
| Total Organic Carbon (TOC) | J | 1.06 | mg/L | 2 | 7/21/2025 | | | 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:** 3rd Quarter 2025

**AKGWA Well Tag #:** 8004-0990 **SAMPLE ID:** MW374UG4-25 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 | 7/21/2025 | | | EPA-300.0 | = |
| Bromide | J | 0.529 | mg/L | 0.8 | 7/21/2025 | | | SW846-9056A | = |
| Chloride | JN | 42 | mg/L | 250 | 7/21/2025 | | | SW846-9056A | = |
| Fluoride | J | 0.169 | mg/L | 4 | 7/21/2025 | | | SW846-9056A | = |
| Nitrate as Nitrogen | J | 1.29 | mg/L | 10 | 7/21/2025 | | | SW846-9056A | = |
| Sulfate | | 19.1 | mg/L | 1.6 | 7/21/2025 | | | SW846-9056A | = |
| Barometric Pressure Reading | | 29.96 | Inches/Hg | | 7/21/2025 | | | FS | X |
| Conductivity | | 695 | µmhos/cm | | 7/21/2025 | | | FS | X |
| Depth to Water | | 16.04 | ft | | 7/21/2025 | | | FS | X |
| Dissolved Oxygen | | 1.92 | mg/L | | 7/21/2025 | | | FS | X |
| Eh (approx) | | 431 | mV | | 7/21/2025 | | | FS | X |
| pH | | 6.78 | Std Unit | | 7/21/2025 | | | FS | X |
| Temperature | | 66.6 | deg F | | 7/21/2025 | | | FS | X |
| Turbidity | | 6.47 | NTU | | 7/21/2025 | | | FS | X |
| Aluminum | J | 0.0288 | mg/L | 0.05 | 7/21/2025 | | | SW846-6020B | = |
| Antimony | U | 0.003 | mg/L | 0.003 | 7/21/2025 | | | SW846-6020B | = |
| Arsenic | U | 0.005 | mg/L | 0.005 | 7/21/2025 | | | SW846-6020B | = |
| Barium | | 0.13 | mg/L | 0.004 | 7/21/2025 | | | SW846-6020B | = |
| Beryllium | U | 0.0005 | mg/L | 0.0005 | 7/21/2025 | | | SW846-6020B | = |
| Boron | J | 0.0114 | mg/L | 0.015 | 7/21/2025 | | | SW846-6020B | = |
| Cadmium | U | 0.001 | mg/L | 0.001 | 7/21/2025 | | | SW846-6020B | = |
| Calcium | | 22.1 | mg/L | 0.2 | 7/21/2025 | | | SW846-6020B | J |
| Chromium | U | 0.01 | mg/L | 0.01 | 7/21/2025 | | | SW846-6020B | = |
| Cobalt | U | 0.001 | mg/L | 0.001 | 7/21/2025 | | | SW846-6020B | = |
| Copper | J | 0.000515 | mg/L | 0.002 | 7/21/2025 | | | SW846-6020B | = |
| Iron | | 0.35 | mg/L | 0.1 | 7/21/2025 | | | SW846-6020B | = |
| Lead | U | 0.002 | mg/L | 0.002 | 7/21/2025 | | | SW846-6020B | = |
| Magnesium | | 6.07 | mg/L | 0.03 | 7/21/2025 | | | SW846-6020B | = |
| Manganese | | 0.0689 | mg/L | 0.005 | 7/21/2025 | | | SW846-6020B | = |
| Molybdenum | J | 0.000233 | mg/L | 0.001 | 7/21/2025 | | | SW846-6020B | = |
| Nickel | U | 0.002 | mg/L | 0.002 | 7/21/2025 | | | SW846-6020B | = |
| Potassium | J | 0.286 | mg/L | 0.3 | 7/21/2025 | | | SW846-6020B | = |
| Rhodium | U | 0.005 | mg/L | 0.005 | 7/21/2025 | | | SW846-6020B | = |
| Selenium | | 0.015 | mg/L | 0.005 | 7/21/2025 | | | SW846-6020B | = |
| Silver | U | 0.001 | mg/L | 0.001 | 7/21/2025 | | | SW846-6020B | = |
| Sodium | | 119 | mg/L | 5 | 7/21/2025 | | | SW846-6020B | = |
| Tantalum | U | 0.005 | mg/L | 0.005 | 7/21/2025 | | | SW846-6020B | = |
| Thallium | U | 0.002 | mg/L | 0.002 | 7/21/2025 | | | SW846-6020B | = |
| Uranium | | 0.000781 | mg/L | 0.0002 | 7/21/2025 | | | SW846-6020B | = |
| Vanadium | U | 0.02 | mg/L | 0.02 | 7/21/2025 | | | SW846-6020B | = |
| Zinc | U | 0.02 | mg/L | 0.02 | 7/21/2025 | | | SW846-6020B | = |
| Mercury | U | 0.0002 | mg/L | 0.0002 | 7/21/2025 | | | SW846-7470A | = |
| Barium, Dissolved | | 0.121 | mg/L | 0.004 | 7/21/2025 | | | SW846-6020B | J |
| Chromium, Dissolved | U | 0.01 | mg/L | 0.01 | 7/21/2025 | | | SW846-6020B | UJ |
| Uranium, Dissolved | | 0.000755 | mg/L | 0.0002 | 7/21/2025 | | | SW846-6020B | J |
| PCB-1016 | U | 0.0994 | ug/L | 0.0994 | 7/21/2025 | | | SW846-8082A | = |
| PCB-1221 | U | 0.0994 | ug/L | 0.0994 | 7/21/2025 | | | 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:** 3rd Quarter 2025

**AKGWA Well Tag #:** 8004-0990 **SAMPLE ID:** MW374UG4-25 Sample Type: REG

| Parameter | Qualifier | Result | Units | Reporting Limit | Date Collected | Rad Error (+/-) | TPU | Method | Validation Code |
|---|---|---|---|---|---|---|---|---|---|
| PCB-1232 | U | 0.0994 | ug/L | 0.0994 | 7/21/2025 | | | SW846-8082A | = |
| PCB-1242 | U | 0.0994 | ug/L | 0.0994 | 7/21/2025 | | | SW846-8082A | = |
| PCB-1248 | U | 0.0994 | ug/L | 0.0994 | 7/21/2025 | | | SW846-8082A | = |
| PCB-1254 | U | 0.0994 | ug/L | 0.0994 | 7/21/2025 | | | SW846-8082A | = |
| PCB-1260 | U | 0.0994 | ug/L | 0.0994 | 7/21/2025 | | | SW846-8082A | UJ |
| PCB-1268 | U | 0.0994 | ug/L | 0.0994 | 7/21/2025 | | | SW846-8082A | = |
| Polychlorinated biphenyl | U | 0.0994 | ug/L | 0.0994 | 7/21/2025 | | | SW846-8082A | UJ |
| Radium-226 | U | 0.553 | pCi/L | 0.585 | 7/21/2025 | 0.479 | 0.484 | AN-1418 | = |
| Radium-228 | U | 0.543 | pCi/L | 4.88 | 7/21/2025 | 2.53 | 2.54 | EPA-904.0-M | = |
| Strontium-90 | U | 3.66 | pCi/L | 5.5 | 7/21/2025 | 3.35 | 3.4 | EPA-905.0-M | UJ |
| Tritium | U | 58.4 | pCi/L | 218 | 7/21/2025 | 122 | 122 | EPA-906.0-M | = |
| Technetium-99 | U | 0.321 | pCi/L | 20.5 | 7/21/2025 | 11.9 | 11.9 | HASL 300, Tc-02-RC M | = |
| Thorium-230 | U | 0.485 | pCi/L | 2.69 | 7/21/2025 | 1.44 | 1.45 | HASL 300, Th-01-RC M | = |
| Thorium-232 | U | 0.218 | pCi/L | 1.57 | 7/21/2025 | 0.898 | 0.9 | HASL 300, Th-01-RC M | = |
| Alpha activity | U | -0.0239 | pCi/L | 6.66 | 7/21/2025 | 2.63 | 2.63 | SW846-9310 | = |
| Beta activity | U | 3.76 | pCi/L | 9.5 | 7/21/2025 | 5.5 | 5.54 | SW846-9310 | = |
| 1,2-Dibromo-3-chloropropane | U | 0.0193 | ug/L | 0.0193 | 7/21/2025 | | | SW846-8011 | = |
| 1,1,1,2-Tetrachloroethane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| 1,1,1-Trichloroethane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| 1,1,2,2-Tetrachloroethane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| 1,1,2-Trichloroethane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| 1,1-Dichloroethane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| 1,1-Dichloroethene | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| 1,2,3-Trichloropropane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| 1,2-Dibromoethane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| 1,2-Dichlorobenzene | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| 1,2-Dichloroethane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| 1,2-Dichloropropane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| 1,4-Dichlorobenzene | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| 2-Butanone | U | 5 | ug/L | 5 | 7/21/2025 | | | SW846-8260D | = |
| 2-Hexanone | U | 5 | ug/L | 5 | 7/21/2025 | | | SW846-8260D | = |
| 4-Methyl-2-pentanone | U | 5 | ug/L | 5 | 7/21/2025 | | | SW846-8260D | = |
| Acetone | U | 5 | ug/L | 5 | 7/21/2025 | | | SW846-8260D | = |
| Acrolein | U | 5 | ug/L | 5 | 7/21/2025 | | | SW846-8260D | = |
| Acrylonitrile | U | 5 | ug/L | 5 | 7/21/2025 | | | SW846-8260D | = |
| Benzene | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Bromochloromethane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Bromodichloromethane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Bromoform | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Bromomethane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Carbon disulfide | U | 5 | ug/L | 5 | 7/21/2025 | | | SW846-8260D | = |
| Carbon tetrachloride | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Chlorobenzene | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Chloroethane | U | 1 | ug/L | 1 | 7/21/2025 | | | 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:** 3rd Quarter 2025

**AKGWA Well Tag #:** 8004-0990 **SAMPLE ID:** MW374UG4-25 Sample Type: REG

| Parameter | Qualifier | Result | Units | Reporting Limit | Date Collected | Rad Error (+/-) | TPU | Method | Validation Code |
|---|---|---|---|---|---|---|---|---|---|
| Chloroform | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Chloromethane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| cis-1,2-Dichloroethene | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| cis-1,3-Dichloropropene | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Dibromochloromethane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Dibromomethane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Ethylbenzene | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Iodomethane | U | 5 | ug/L | 5 | 7/21/2025 | | | SW846-8260D | = |
| Methylene chloride | U | 5 | ug/L | 5 | 7/21/2025 | | | SW846-8260D | = |
| Styrene | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Tetrachloroethene | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Toluene | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Total Xylene | U | 3 | ug/L | 3 | 7/21/2025 | | | SW846-8260D | = |
| trans-1,2-Dichloroethene | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| trans-1,3-Dichloropropene | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| trans-1,4-Dichloro-2-butene | U | 5 | ug/L | 5 | 7/21/2025 | | | SW846-8260D | = |
| Trichloroethene | J | 0.61 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Trichlorofluoromethane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Vinyl acetate | U | 5 | ug/L | 5 | 7/21/2025 | | | SW846-8260D | = |
| Vinyl chloride | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Dissolved Solids | * | 381 | mg/L | 10 | 7/21/2025 | | | EPA-160.1 | = |
| Chemical Oxygen Demand (COD) | J | 14.4 | mg/L | 20 | 7/21/2025 | | | EPA-410.4 | = |
| Cyanide | UNN1 | 0.2 | mg/L | 0.2 | 7/21/2025 | | | SW846-9012B | = |
| Total Organic Halides (TOX) | | 12.9 | ug/L | 10 | 7/21/2025 | | | SW846-9020B | = |
| Total Organic Carbon (TOC) | J | 1.89 | mg/L | 2 | 7/21/2025 | | | 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:** 3rd Quarter 2025

**AKGWA Well Tag #:** 8004-0985 **SAMPLE ID:** MW375UG4-25 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 | 7/21/2025 | | | EPA-300.0 | = |
| Bromide | U | 0.2 | mg/L | 0.2 | 7/21/2025 | | | SW846-9056A | = |
| Chloride | JN | 3.31 | mg/L | 250 | 7/21/2025 | | | SW846-9056A | = |
| Fluoride | J | 0.275 | mg/L | 4 | 7/21/2025 | | | SW846-9056A | = |
| Nitrate as Nitrogen | J | 0.888 | mg/L | 10 | 7/21/2025 | | | SW846-9056A | = |
| Sulfate | | 21.7 | mg/L | 0.8 | 7/21/2025 | | | SW846-9056A | = |
| Barometric Pressure Reading | | 29.98 | Inches/Hg | | 7/21/2025 | | | FS | X |
| Conductivity | | 331 | µmhos/cm | | 7/21/2025 | | | FS | X |
| Depth to Water | | 30.56 | ft | | 7/21/2025 | | | FS | X |
| Dissolved Oxygen | | 3.06 | mg/L | | 7/21/2025 | | | FS | X |
| Eh (approx) | | 453 | mV | | 7/21/2025 | | | FS | X |
| pH | | 6.7 | Std Unit | | 7/21/2025 | | | FS | X |
| Temperature | | 64.7 | deg F | | 7/21/2025 | | | FS | X |
| Turbidity | | 4.83 | NTU | | 7/21/2025 | | | FS | X |
| Aluminum | J | 0.0221 | mg/L | 0.05 | 7/21/2025 | | | SW846-6020B | = |
| Antimony | U | 0.003 | mg/L | 0.003 | 7/21/2025 | | | SW846-6020B | = |
| Arsenic | U | 0.005 | mg/L | 0.005 | 7/21/2025 | | | SW846-6020B | = |
| Barium | | 0.168 | mg/L | 0.004 | 7/21/2025 | | | SW846-6020B | = |
| Beryllium | U | 0.0005 | mg/L | 0.0005 | 7/21/2025 | | | SW846-6020B | = |
| Boron | J | 0.00858 | mg/L | 0.015 | 7/21/2025 | | | SW846-6020B | = |
| Cadmium | U | 0.001 | mg/L | 0.001 | 7/21/2025 | | | SW846-6020B | = |
| Calcium | | 12.9 | mg/L | 0.2 | 7/21/2025 | | | SW846-6020B | J |
| Chromium | U | 0.01 | mg/L | 0.01 | 7/21/2025 | | | SW846-6020B | = |
| Cobalt | U | 0.001 | mg/L | 0.001 | 7/21/2025 | | | SW846-6020B | = |
| Copper | J | 0.00122 | mg/L | 0.002 | 7/21/2025 | | | SW846-6020B | = |
| Iron | J | 0.0376 | mg/L | 0.1 | 7/21/2025 | | | SW846-6020B | = |
| Lead | U | 0.002 | mg/L | 0.002 | 7/21/2025 | | | SW846-6020B | = |
| Magnesium | | 5.25 | mg/L | 0.03 | 7/21/2025 | | | SW846-6020B | = |
| Manganese | J | 0.0016 | mg/L | 0.005 | 7/21/2025 | | | SW846-6020B | = |
| Molybdenum | U | 0.001 | mg/L | 0.001 | 7/21/2025 | | | SW846-6020B | = |
| Nickel | J | 0.000914 | mg/L | 0.002 | 7/21/2025 | | | SW846-6020B | = |
| Potassium | J | 0.255 | mg/L | 0.3 | 7/21/2025 | | | SW846-6020B | = |
| Rhodium | U | 0.005 | mg/L | 0.005 | 7/21/2025 | | | SW846-6020B | = |
| Selenium | J | 0.00222 | mg/L | 0.005 | 7/21/2025 | | | SW846-6020B | = |
| Silver | U | 0.001 | mg/L | 0.001 | 7/21/2025 | | | SW846-6020B | = |
| Sodium | | 53 | mg/L | 2.5 | 7/21/2025 | | | SW846-6020B | = |
| Tantalum | U | 0.005 | mg/L | 0.005 | 7/21/2025 | | | SW846-6020B | = |
| Thallium | U | 0.002 | mg/L | 0.002 | 7/21/2025 | | | SW846-6020B | = |
| Uranium | U | 0.0002 | mg/L | 0.0002 | 7/21/2025 | | | SW846-6020B | = |
| Vanadium | U | 0.02 | mg/L | 0.02 | 7/21/2025 | | | SW846-6020B | = |
| Zinc | J | 0.0146 | mg/L | 0.02 | 7/21/2025 | | | SW846-6020B | = |
| Mercury | U | 0.0002 | mg/L | 0.0002 | 7/21/2025 | | | SW846-7470A | = |
| Barium, Dissolved | | 0.156 | mg/L | 0.004 | 7/21/2025 | | | SW846-6020B | J |
| Chromium, Dissolved | U | 0.01 | mg/L | 0.01 | 7/21/2025 | | | SW846-6020B | UJ |
| Uranium, Dissolved | U | 0.0002 | mg/L | 0.0002 | 7/21/2025 | | | SW846-6020B | UJ |
| PCB-1016 | U | 0.0962 | ug/L | 0.0962 | 7/21/2025 | | | SW846-8082A | = |
| PCB-1221 | U | 0.0962 | ug/L | 0.0962 | 7/21/2025 | | | 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:** 3rd Quarter 2025

**AKGWA Well Tag #:** 8004-0985 **SAMPLE ID:** MW375UG4-25 Sample Type: REG

| Parameter | Qualifier | Result | Units | Reporting Limit | Date Collected | Rad Error (+/-) | TPU | Method | Validation Code |
|---|---|---|---|---|---|---|---|---|---|
| PCB-1232 | U | 0.0962 | ug/L | 0.0962 | 7/21/2025 | | | SW846-8082A | = |
| PCB-1242 | U | 0.0962 | ug/L | 0.0962 | 7/21/2025 | | | SW846-8082A | = |
| PCB-1248 | U | 0.0962 | ug/L | 0.0962 | 7/21/2025 | | | SW846-8082A | = |
| PCB-1254 | U | 0.0962 | ug/L | 0.0962 | 7/21/2025 | | | SW846-8082A | = |
| PCB-1260 | U | 0.0962 | ug/L | 0.0962 | 7/21/2025 | | | SW846-8082A | UJ |
| PCB-1268 | U | 0.0962 | ug/L | 0.0962 | 7/21/2025 | | | SW846-8082A | = |
| Polychlorinated biphenyl | U | 0.0962 | ug/L | 0.0962 | 7/21/2025 | | | SW846-8082A | UJ |
| Radium-226 | UT | -0.108 | pCi/L | 0.795 | 7/21/2025 | 0.266 | 0.266 | AN-1418 | U |
| Radium-228 | U | 0.591 | pCi/L | 4.74 | 7/21/2025 | 2.6 | 2.61 | EPA-904.0-M | = |
| Strontium-90 | U | 0.244 | pCi/L | 7.6 | 7/21/2025 | 4.1 | 4.1 | EPA-905.0-M | UJ |
| Tritium | U | -3.18 | pCi/L | 218 | 7/21/2025 | 112 | 112 | EPA-906.0-M | = |
| Technetium-99 | U | 0.737 | pCi/L | 21.2 | 7/21/2025 | 12.3 | 12.3 | HASL 300, Tc-02-RC M | = |
| Thorium-230 | U | 0.451 | pCi/L | 1.88 | 7/21/2025 | 1.06 | 1.07 | HASL 300, Th-01-RC M | = |
| Thorium-232 | U | 0.45 | pCi/L | 0.942 | 7/21/2025 | 0.808 | 0.811 | HASL 300, Th-01-RC M | = |
| Alpha activity | U | 0.94 | pCi/L | 6.45 | 7/21/2025 | 3.06 | 3.07 | SW846-9310 | = |
| Beta activity | U | -0.136 | pCi/L | 9.16 | 7/21/2025 | 4.75 | 4.75 | SW846-9310 | = |
| 1,2-Dibromo-3-chloropropane | U | 0.019 | ug/L | 0.019 | 7/21/2025 | | | SW846-8011 | = |
| 1,1,1,2-Tetrachloroethane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| 1,1,1-Trichloroethane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| 1,1,2,2-Tetrachloroethane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| 1,1,2-Trichloroethane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| 1,1-Dichloroethane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| 1,1-Dichloroethene | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| 1,2,3-Trichloropropane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| 1,2-Dibromoethane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| 1,2-Dichlorobenzene | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| 1,2-Dichloroethane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| 1,2-Dichloropropane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| 1,4-Dichlorobenzene | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| 2-Butanone | U | 5 | ug/L | 5 | 7/21/2025 | | | SW846-8260D | = |
| 2-Hexanone | U | 5 | ug/L | 5 | 7/21/2025 | | | SW846-8260D | = |
| 4-Methyl-2-pentanone | U | 5 | ug/L | 5 | 7/21/2025 | | | SW846-8260D | = |
| Acetone | U | 5 | ug/L | 5 | 7/21/2025 | | | SW846-8260D | = |
| Acrolein | U | 5 | ug/L | 5 | 7/21/2025 | | | SW846-8260D | = |
| Acrylonitrile | U | 5 | ug/L | 5 | 7/21/2025 | | | SW846-8260D | = |
| Benzene | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Bromochloromethane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Bromodichloromethane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Bromoform | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Bromomethane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Carbon disulfide | U | 5 | ug/L | 5 | 7/21/2025 | | | SW846-8260D | = |
| Carbon tetrachloride | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Chlorobenzene | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Chloroethane | U | 1 | ug/L | 1 | 7/21/2025 | | | 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:** 3rd Quarter 2025

**AKGWA Well Tag #:** 8004-0985 **SAMPLE ID:** MW375UG4-25 Sample Type: REG

| Parameter | Qualifier | Result | Units | Reporting Limit | Date Collected | Rad Error (+/-) | TPU | Method | Validation Code |
|---|---|---|---|---|---|---|---|---|---|
| Chloroform | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Chloromethane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| cis-1,2-Dichloroethene | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| cis-1,3-Dichloropropene | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Dibromochloromethane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Dibromomethane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Ethylbenzene | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Iodomethane | U | 5 | ug/L | 5 | 7/21/2025 | | | SW846-8260D | = |
| Methylene chloride | U | 5 | ug/L | 5 | 7/21/2025 | | | SW846-8260D | = |
| Styrene | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Tetrachloroethene | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Toluene | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Total Xylene | U | 3 | ug/L | 3 | 7/21/2025 | | | SW846-8260D | = |
| trans-1,2-Dichloroethene | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| trans-1,3-Dichloropropene | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| trans-1,4-Dichloro-2-butene | U | 5 | ug/L | 5 | 7/21/2025 | | | SW846-8260D | = |
| Trichloroethene | J | 0.9 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Trichlorofluoromethane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Vinyl acetate | U | 5 | ug/L | 5 | 7/21/2025 | | | SW846-8260D | = |
| Vinyl chloride | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Dissolved Solids | * | 200 | mg/L | 10 | 7/21/2025 | | | EPA-160.1 | = |
| Chemical Oxygen Demand (COD) | U | 20 | mg/L | 20 | 7/21/2025 | | | EPA-410.4 | = |
| Cyanide | UNN1 | 0.2 | mg/L | 0.2 | 7/21/2025 | | | SW846-9012B | = |
| Total Organic Halides (TOX) | | 10.2 | ug/L | 10 | 7/21/2025 | | | SW846-9020B | = |
| Total Organic Carbon (TOC) | J | 0.59 | mg/L | 2 | 7/21/2025 | | | SW846-9060A | = |

**Paducah OREIS**
**GROUNDWATER MONITORING REPORT**

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

**Sampling Point:** QC **Period:** 3rd Quarter 2025

**AKGWA Well Tag #:** N/A **SAMPLE ID:** FB1UG4-25 **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 | 7/16/2025 | | | EPA-300.0 | = |
| Aluminum | U | 0.05 | mg/L | 0.05 | 7/16/2025 | | | SW846-6020B | = |
| Antimony | U | 0.003 | mg/L | 0.003 | 7/16/2025 | | | SW846-6020B | = |
| Arsenic | U | 0.005 | mg/L | 0.005 | 7/16/2025 | | | SW846-6020B | = |
| Barium | U | 0.004 | mg/L | 0.004 | 7/16/2025 | | | SW846-6020B | = |
| Beryllium | U | 0.0005 | mg/L | 0.0005 | 7/16/2025 | | | SW846-6020B | = |
| Boron | U | 0.015 | mg/L | 0.015 | 7/16/2025 | | | SW846-6020B | = |
| Cadmium | U | 0.001 | mg/L | 0.001 | 7/16/2025 | | | SW846-6020B | = |
| Calcium | U | 0.2 | mg/L | 0.2 | 7/16/2025 | | | SW846-6020B | = |
| Chromium | U | 0.01 | mg/L | 0.01 | 7/16/2025 | | | SW846-6020B | = |
| Cobalt | U | 0.001 | mg/L | 0.001 | 7/16/2025 | | | SW846-6020B | = |
| Copper | U | 0.002 | mg/L | 0.002 | 7/16/2025 | | | SW846-6020B | = |
| Iron | U | 0.1 | mg/L | 0.1 | 7/16/2025 | | | SW846-6020B | = |
| Lead | U | 0.002 | mg/L | 0.002 | 7/16/2025 | | | SW846-6020B | = |
| Magnesium | U | 0.03 | mg/L | 0.03 | 7/16/2025 | | | SW846-6020B | = |
| Manganese | U | 0.005 | mg/L | 0.005 | 7/16/2025 | | | SW846-6020B | = |
| Molybdenum | U | 0.001 | mg/L | 0.001 | 7/16/2025 | | | SW846-6020B | = |
| Nickel | U | 0.002 | mg/L | 0.002 | 7/16/2025 | | | SW846-6020B | = |
| Potassium | U | 0.3 | mg/L | 0.3 | 7/16/2025 | | | SW846-6020B | = |
| Rhodium | U | 0.005 | mg/L | 0.005 | 7/16/2025 | | | SW846-6020B | = |
| Selenium | U | 0.005 | mg/L | 0.005 | 7/16/2025 | | | SW846-6020B | = |
| Silver | U | 0.001 | mg/L | 0.001 | 7/16/2025 | | | SW846-6020B | = |
| Sodium | U | 0.25 | mg/L | 0.25 | 7/16/2025 | | | SW846-6020B | = |
| Tantalum | U | 0.005 | mg/L | 0.005 | 7/16/2025 | | | SW846-6020B | = |
| Thallium | U | 0.002 | mg/L | 0.002 | 7/16/2025 | | | SW846-6020B | = |
| Uranium | U | 0.0002 | mg/L | 0.0002 | 7/16/2025 | | | SW846-6020B | = |
| Vanadium | U | 0.02 | mg/L | 0.02 | 7/16/2025 | | | SW846-6020B | = |
| Zinc | U | 0.02 | mg/L | 0.02 | 7/16/2025 | | | SW846-6020B | = |
| Mercury | U | 0.0002 | mg/L | 0.0002 | 7/16/2025 | | | SW846-7470A | = |
| PCB-1016 | U | 0.0862 | ug/L | 0.0862 | 7/16/2025 | | | SW846-8082A | = |
| PCB-1221 | U | 0.0862 | ug/L | 0.0862 | 7/16/2025 | | | SW846-8082A | = |
| PCB-1232 | U | 0.0862 | ug/L | 0.0862 | 7/16/2025 | | | SW846-8082A | = |
| PCB-1242 | U | 0.0862 | ug/L | 0.0862 | 7/16/2025 | | | SW846-8082A | = |
| PCB-1248 | U | 0.0862 | ug/L | 0.0862 | 7/16/2025 | | | SW846-8082A | = |
| PCB-1254 | U | 0.0862 | ug/L | 0.0862 | 7/16/2025 | | | SW846-8082A | = |
| PCB-1260 | U | 0.0862 | ug/L | 0.0862 | 7/16/2025 | | | SW846-8082A | UJ |
| PCB-1268 | U | 0.0862 | ug/L | 0.0862 | 7/16/2025 | | | SW846-8082A | = |
| Polychlorinated biphenyl | U | 0.0862 | ug/L | 0.0862 | 7/16/2025 | | | SW846-8082A | UJ |
| Radium-226 | U | 0.407 | pCi/L | 0.42 | 7/16/2025 | 0.359 | 0.362 | AN-1418 | = |
| Radium-228 | U | 3.35 | pCi/L | 4.49 | 7/16/2025 | 2.77 | 2.92 | EPA-904.0-M | = |
| Strontium-90 | U | -0.997 | pCi/L | 4.68 | 7/16/2025 | 2.37 | 2.37 | EPA-905.0-M | UJ |
| Tritium | U | 40.5 | pCi/L | 220 | 7/16/2025 | 118 | 119 | EPA-906.0-M | = |
| Technetium-99 | U | -3.14 | pCi/L | 21.8 | 7/16/2025 | 12.5 | 12.5 | HASL 300, Tc-02-RC M | UJ |

## Paducah OREIS
## GROUNDWATER MONITORING REPORT

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

**Sampling Point:** QC **Period:** 3rd Quarter 2025

**AKGWA Well Tag #:** N/A **SAMPLE ID:** FB1UG4-25 **Sample Type:** FB

| Parameter | Qualifier | Result | Units | Reporting Limit | Date Collected | Rad Error (+/-) | TPU | Method | Validation Code |
|---|---|---|---|---|---|---|---|---|---|
| Thorium-230 | U | -0.925 | pCi/L | 2.62 | 7/16/2025 | 0.683 | 0.684 | HASL 300, Th-01-RC M | UJ |
| Thorium-232 | U | -0.42 | pCi/L | 2.07 | 7/16/2025 | 0.643 | 0.644 | HASL 300, Th-01-RC M | = |
| Alpha activity | U | 0.605 | pCi/L | 5.6 | 7/16/2025 | 2.53 | 2.54 | SW846-9310 | UJ |
| Beta activity | U | -3.93 | pCi/L | 9.69 | 7/16/2025 | 4.47 | 4.47 | SW846-9310 | = |
| 1,2-Dibromo-3-chloropropane | U | 0.0191 | ug/L | 0.0191 | 7/16/2025 | | | SW846-8011 | = |
| 1,1,1,2-Tetrachloroethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 1,1,1-Trichloroethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 1,1,2,2-Tetrachloroethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 1,1,2-Trichloroethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 1,1-Dichloroethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 1,1-Dichloroethene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 1,2,3-Trichloropropane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 1,2-Dibromoethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 1,2-Dichlorobenzene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 1,2-Dichloroethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 1,2-Dichloropropane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 1,4-Dichlorobenzene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 2-Butanone | U | 5 | ug/L | 5 | 7/16/2025 | | | SW846-8260D | = |
| 2-Hexanone | U | 5 | ug/L | 5 | 7/16/2025 | | | SW846-8260D | = |
| 4-Methyl-2-pentanone | U | 5 | ug/L | 5 | 7/16/2025 | | | SW846-8260D | = |
| Acetone | | 5.4 | ug/L | 5 | 7/16/2025 | | | SW846-8260D | = |
| Acrolein | U | 5 | ug/L | 5 | 7/16/2025 | | | SW846-8260D | = |
| Acrylonitrile | U | 5 | ug/L | 5 | 7/16/2025 | | | SW846-8260D | = |
| Benzene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Bromochloromethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Bromodichloromethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Bromoform | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Bromomethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Carbon disulfide | U | 5 | ug/L | 5 | 7/16/2025 | | | SW846-8260D | = |
| Carbon tetrachloride | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Chlorobenzene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Chloroethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Chloroform | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Chloromethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| cis-1,2-Dichloroethene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| cis-1,3-Dichloropropene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Dibromochloromethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Dibromomethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Ethylbenzene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Iodomethane | U | 5 | ug/L | 5 | 7/16/2025 | | | SW846-8260D | = |
| Methylene chloride | J | 0.82 | ug/L | 5 | 7/16/2025 | | | SW846-8260D | = |
| Styrene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Tetrachloroethene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |

**Paducah OREIS**
**GROUNDWATER MONITORING REPORT**

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

**Sampling Point:** QC **Period:** 3rd Quarter 2025

**AKGWA Well Tag #:** N/A **SAMPLE ID:** FB1UG4-25 **Sample Type:** FB

| Parameter | Qualifier | Result | Units | Reporting Limit | Date Collected | Rad Error (+/-) | TPU | Method | Validation Code |
|---|---|---|---|---|---|---|---|---|---|
| Toluene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Total Xylene | U | 3 | ug/L | 3 | 7/16/2025 | | | SW846-8260D | = |
| trans-1,2-Dichloroethene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| trans-1,3-Dichloropropene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| trans-1,4-Dichloro-2-butene | U | 5 | ug/L | 5 | 7/16/2025 | | | SW846-8260D | = |
| Trichloroethene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Trichlorofluoromethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Vinyl acetate | U | 5 | ug/L | 5 | 7/16/2025 | | | SW846-8260D | = |
| Vinyl chloride | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |

**Paducah OREIS**
**GROUNDWATER MONITORING REPORT**

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

**Sampling Point:** QC **Period:** 3rd Quarter 2025

**AKGWA Well Tag #:** N/A **SAMPLE ID:** RI1UG4-25 **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 | 7/16/2025 | | | EPA-300.0 | = |
| Aluminum | U | 0.05 | mg/L | 0.05 | 7/16/2025 | | | SW846-6020B | = |
| Antimony | U | 0.003 | mg/L | 0.003 | 7/16/2025 | | | SW846-6020B | = |
| Arsenic | U | 0.005 | mg/L | 0.005 | 7/16/2025 | | | SW846-6020B | = |
| Barium | U | 0.004 | mg/L | 0.004 | 7/16/2025 | | | SW846-6020B | = |
| Beryllium | U | 0.0005 | mg/L | 0.0005 | 7/16/2025 | | | SW846-6020B | = |
| Boron | U | 0.015 | mg/L | 0.015 | 7/16/2025 | | | SW846-6020B | = |
| Cadmium | U | 0.001 | mg/L | 0.001 | 7/16/2025 | | | SW846-6020B | = |
| Calcium | U | 0.2 | mg/L | 0.2 | 7/16/2025 | | | SW846-6020B | = |
| Chromium | U | 0.01 | mg/L | 0.01 | 7/16/2025 | | | SW846-6020B | = |
| Cobalt | U | 0.001 | mg/L | 0.001 | 7/16/2025 | | | SW846-6020B | = |
| Copper | U | 0.002 | mg/L | 0.002 | 7/16/2025 | | | SW846-6020B | = |
| Iron | U | 0.1 | mg/L | 0.1 | 7/16/2025 | | | SW846-6020B | = |
| Lead | U | 0.002 | mg/L | 0.002 | 7/16/2025 | | | SW846-6020B | = |
| Magnesium | U | 0.03 | mg/L | 0.03 | 7/16/2025 | | | SW846-6020B | = |
| Manganese | U | 0.005 | mg/L | 0.005 | 7/16/2025 | | | SW846-6020B | = |
| Molybdenum | U | 0.001 | mg/L | 0.001 | 7/16/2025 | | | SW846-6020B | = |
| Nickel | U | 0.002 | mg/L | 0.002 | 7/16/2025 | | | SW846-6020B | = |
| Potassium | U | 0.3 | mg/L | 0.3 | 7/16/2025 | | | SW846-6020B | = |
| Rhodium | U | 0.005 | mg/L | 0.005 | 7/16/2025 | | | SW846-6020B | = |
| Selenium | U | 0.005 | mg/L | 0.005 | 7/16/2025 | | | SW846-6020B | = |
| Silver | U | 0.001 | mg/L | 0.001 | 7/16/2025 | | | SW846-6020B | = |
| Sodium | U | 0.25 | mg/L | 0.25 | 7/16/2025 | | | SW846-6020B | = |
| Tantalum | U | 0.005 | mg/L | 0.005 | 7/16/2025 | | | SW846-6020B | = |
| Thallium | U | 0.002 | mg/L | 0.002 | 7/16/2025 | | | SW846-6020B | = |
| Uranium | U | 0.0002 | mg/L | 0.0002 | 7/16/2025 | | | SW846-6020B | = |
| Vanadium | U | 0.02 | mg/L | 0.02 | 7/16/2025 | | | SW846-6020B | = |
| Zinc | U | 0.02 | mg/L | 0.02 | 7/16/2025 | | | SW846-6020B | = |
| Mercury | U | 0.0002 | mg/L | 0.0002 | 7/16/2025 | | | SW846-7470A | = |
| PCB-1016 | U | 0.0956 | ug/L | 0.0956 | 7/16/2025 | | | SW846-8082A | UJ |
| PCB-1221 | U | 0.0956 | ug/L | 0.0956 | 7/16/2025 | | | SW846-8082A | = |
| PCB-1232 | U | 0.0956 | ug/L | 0.0956 | 7/16/2025 | | | SW846-8082A | = |
| PCB-1242 | U | 0.0956 | ug/L | 0.0956 | 7/16/2025 | | | SW846-8082A | = |
| PCB-1248 | U | 0.0956 | ug/L | 0.0956 | 7/16/2025 | | | SW846-8082A | = |
| PCB-1254 | U | 0.0956 | ug/L | 0.0956 | 7/16/2025 | | | SW846-8082A | = |
| PCB-1260 | U | 0.0956 | ug/L | 0.0956 | 7/16/2025 | | | SW846-8082A | UJ |
| PCB-1268 | U | 0.0956 | ug/L | 0.0956 | 7/16/2025 | | | SW846-8082A | = |
| Polychlorinated biphenyl | U | 0.0956 | ug/L | 0.0956 | 7/16/2025 | | | SW846-8082A | UJ |
| Radium-226 | U | 0.143 | pCi/L | 0.542 | 7/16/2025 | 0.307 | 0.307 | AN-1418 | = |
| Radium-228 | U | 2.86 | pCi/L | 4.49 | 7/16/2025 | 2.76 | 2.88 | EPA-904.0-M | = |
| Strontium-90 | U | -2.12 | pCi/L | 3.87 | 7/16/2025 | 1.57 | 1.57 | EPA-905.0-M | UJ |
| Tritium | U | 17.7 | pCi/L | 217 | 7/16/2025 | 113 | 113 | EPA-906.0-M | = |
| Technetium-99 | U | -8.18 | pCi/L | 22.5 | 7/16/2025 | 12.8 | 12.8 | HASL 300, Tc-02-RC M | UJ |

**Paducah OREIS**
**GROUNDWATER MONITORING REPORT**

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

**Sampling Point:** QC **Period:** 3rd Quarter 2025

**AKGWA Well Tag #:** N/A **SAMPLE ID:** RI1UG4-25 **Sample Type:** RI

| Parameter | Qualifier | Result | Units | Reporting Limit | Date Collected | Rad Error (+/-) | TPU | Method | Validation Code |
|---|---|---|---|---|---|---|---|---|---|
| Thorium-230 | U | -0.117 | pCi/L | 1.71 | 7/16/2025 | 0.715 | 0.715 | HASL 300, Th-01-RC M | = |
| Thorium-232 | U | -0.166 | pCi/L | 1.26 | 7/16/2025 | 0.436 | 0.437 | HASL 300, Th-01-RC M | = |
| Alpha activity | U | 2.42 | pCi/L | 7.75 | 7/16/2025 | 4.25 | 4.27 | SW846-9310 | UJ |
| Beta activity | U | -4.75 | pCi/L | 12.4 | 7/16/2025 | 6.15 | 6.15 | SW846-9310 | = |
| 1,2-Dibromo-3-chloropropane | U | 0.019 | ug/L | 0.019 | 7/16/2025 | | | SW846-8011 | = |
| 1,1,1,2-Tetrachloroethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 1,1,1-Trichloroethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 1,1,2,2-Tetrachloroethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 1,1,2-Trichloroethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 1,1-Dichloroethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 1,1-Dichloroethene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 1,2,3-Trichloropropane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 1,2-Dibromoethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 1,2-Dichlorobenzene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 1,2-Dichloroethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 1,2-Dichloropropane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 1,4-Dichlorobenzene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 2-Butanone | U | 5 | ug/L | 5 | 7/16/2025 | | | SW846-8260D | = |
| 2-Hexanone | U | 5 | ug/L | 5 | 7/16/2025 | | | SW846-8260D | = |
| 4-Methyl-2-pentanone | U | 5 | ug/L | 5 | 7/16/2025 | | | SW846-8260D | = |
| Acetone | U | 5 | ug/L | 5 | 7/16/2025 | | | SW846-8260D | = |
| Acrolein | U | 5 | ug/L | 5 | 7/16/2025 | | | SW846-8260D | = |
| Acrylonitrile | U | 5 | ug/L | 5 | 7/16/2025 | | | SW846-8260D | = |
| Benzene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Bromochloromethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Bromodichloromethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Bromoform | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Bromomethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Carbon disulfide | U | 5 | ug/L | 5 | 7/16/2025 | | | SW846-8260D | = |
| Carbon tetrachloride | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Chlorobenzene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Chloroethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Chloroform | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Chloromethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| cis-1,2-Dichloroethene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| cis-1,3-Dichloropropene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Dibromochloromethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Dibromomethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Ethylbenzene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Iodomethane | U | 5 | ug/L | 5 | 7/16/2025 | | | SW846-8260D | = |
| Methylene chloride | J | 0.99 | ug/L | 5 | 7/16/2025 | | | SW846-8260D | = |
| Styrene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Tetrachloroethene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |

**Paducah OREIS**
**GROUNDWATER MONITORING REPORT**

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

**Sampling Point:** QC **Period:** 3rd Quarter 2025

**AKGWA Well Tag #:** N/A **SAMPLE ID:** RI1UG4-25 **Sample Type:** RI

| Parameter | Qualifier | Result | Units | Reporting Limit | Date Collected | Rad Error (+/-) | TPU | Method | Validation Code |
|---|---|---|---|---|---|---|---|---|---|
| Toluene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Total Xylene | U | 3 | ug/L | 3 | 7/16/2025 | | | SW846-8260D | = |
| trans-1,2-Dichloroethene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| trans-1,3-Dichloropropene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| trans-1,4-Dichloro-2-butene | U | 5 | ug/L | 5 | 7/16/2025 | | | SW846-8260D | = |
| Trichloroethene | J | 0.5 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Trichlorofluoromethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Vinyl acetate | U | 5 | ug/L | 5 | 7/16/2025 | | | SW846-8260D | = |
| Vinyl chloride | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |

**Paducah OREIS**
**GROUNDWATER MONITORING REPORT**

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

**Sampling Point:** QC **Period:** 3rd Quarter 2025

**AKGWA Well Tag #:** N/A **SAMPLE ID:** TB1UG4-25 **Sample Type:** TB

| Parameter | Qualifier | Result | Units | Reporting Limit | Date Collected | Rad Error (+/-) | TPU | Method | Validation Code |
|---|---|---|---|---|---|---|---|---|---|
| 1,2-Dibromo-3-chloropropane | U | 0.0192 | ug/L | 0.0192 | 7/16/2025 | | | SW846-8011 | = |
| 1,1,1,2-Tetrachloroethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 1,1,1-Trichloroethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 1,1,2,2-Tetrachloroethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 1,1,2-Trichloroethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 1,1-Dichloroethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 1,1-Dichloroethene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 1,2,3-Trichloropropane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 1,2-Dibromoethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 1,2-Dichlorobenzene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 1,2-Dichloroethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 1,2-Dichloropropane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 1,4-Dichlorobenzene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| 2-Butanone | U | 5 | ug/L | 5 | 7/16/2025 | | | SW846-8260D | = |
| 2-Hexanone | U | 5 | ug/L | 5 | 7/16/2025 | | | SW846-8260D | = |
| 4-Methyl-2-pentanone | U | 5 | ug/L | 5 | 7/16/2025 | | | SW846-8260D | = |
| Acetone | J | 4.63 | ug/L | 5 | 7/16/2025 | | | SW846-8260D | = |
| Acrolein | U | 5 | ug/L | 5 | 7/16/2025 | | | SW846-8260D | = |
| Acrylonitrile | U | 5 | ug/L | 5 | 7/16/2025 | | | SW846-8260D | = |
| Benzene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Bromochloromethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Bromodichloromethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Bromoform | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Bromomethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Carbon disulfide | U | 5 | ug/L | 5 | 7/16/2025 | | | SW846-8260D | = |
| Carbon tetrachloride | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Chlorobenzene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Chloroethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Chloroform | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Chloromethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| cis-1,2-Dichloroethene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| cis-1,3-Dichloropropene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Dibromochloromethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Dibromomethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Ethylbenzene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Iodomethane | U | 5 | ug/L | 5 | 7/16/2025 | | | SW846-8260D | = |
| Methylene chloride | J | 0.88 | ug/L | 5 | 7/16/2025 | | | SW846-8260D | = |
| Styrene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Tetrachloroethene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Toluene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Total Xylene | U | 3 | ug/L | 3 | 7/16/2025 | | | SW846-8260D | = |
| trans-1,2-Dichloroethene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| trans-1,3-Dichloropropene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |

**Paducah OREIS**
**GROUNDWATER MONITORING REPORT**

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

**Sampling Point:** QC **Period:** 3rd Quarter 2025

**AKGWA Well Tag #:** N/A **SAMPLE ID:** TB1UG4-25 **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 | 7/16/2025 | | | SW846-8260D | = |
| Trichloroethene | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Trichlorofluoromethane | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |
| Vinyl acetate | U | 5 | ug/L | 5 | 7/16/2025 | | | SW846-8260D | = |
| Vinyl chloride | U | 1 | ug/L | 1 | 7/16/2025 | | | SW846-8260D | = |

**Paducah OREIS**
**GROUNDWATER MONITORING REPORT**

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

**Sampling Point:** QC **Period:** 3rd Quarter 2025

**AKGWA Well Tag #:** N/A **SAMPLE ID:** TB2UG4-25 **Sample Type:** TB

| Parameter | Qualifier | Result | Units | Reporting Limit | Date Collected | Rad Error (+/-) | TPU | Method | Validation Code |
|---|---|---|---|---|---|---|---|---|---|
| 1,2-Dibromo-3-chloropropane | U | 0.0187 | ug/L | 0.0187 | 7/17/2025 | | | SW846-8011 | = |
| 1,1,1,2-Tetrachloroethane | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| 1,1,1-Trichloroethane | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| 1,1,2,2-Tetrachloroethane | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| 1,1,2-Trichloroethane | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| 1,1-Dichloroethane | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| 1,1-Dichloroethene | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| 1,2,3-Trichloropropane | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| 1,2-Dibromoethane | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| 1,2-Dichlorobenzene | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| 1,2-Dichloroethane | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| 1,2-Dichloropropane | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| 1,4-Dichlorobenzene | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| 2-Butanone | U | 5 | ug/L | 5 | 7/17/2025 | | | SW846-8260D | = |
| 2-Hexanone | U | 5 | ug/L | 5 | 7/17/2025 | | | SW846-8260D | = |
| 4-Methyl-2-pentanone | U | 5 | ug/L | 5 | 7/17/2025 | | | SW846-8260D | = |
| Acetone | J | 4.25 | ug/L | 5 | 7/17/2025 | | | SW846-8260D | = |
| Acrolein | U | 5 | ug/L | 5 | 7/17/2025 | | | SW846-8260D | = |
| Acrylonitrile | U | 5 | ug/L | 5 | 7/17/2025 | | | SW846-8260D | = |
| Benzene | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Bromochloromethane | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Bromodichloromethane | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Bromoform | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Bromomethane | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | UJ |
| Carbon disulfide | U | 5 | ug/L | 5 | 7/17/2025 | | | SW846-8260D | = |
| Carbon tetrachloride | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Chlorobenzene | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Chloroethane | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Chloroform | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Chloromethane | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | UJ |
| cis-1,2-Dichloroethene | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| cis-1,3-Dichloropropene | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Dibromochloromethane | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Dibromomethane | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Ethylbenzene | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Iodomethane | U | 5 | ug/L | 5 | 7/17/2025 | | | SW846-8260D | = |
| Methylene chloride | BJ | 1.62 | ug/L | 5 | 7/17/2025 | | | SW846-8260D | U |
| Styrene | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Tetrachloroethene | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Toluene | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Total Xylene | U | 3 | ug/L | 3 | 7/17/2025 | | | SW846-8260D | = |
| trans-1,2-Dichloroethene | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| trans-1,3-Dichloropropene | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |

**Paducah OREIS**
**GROUNDWATER MONITORING REPORT**

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

**Sampling Point:** QC **Period:** 3rd Quarter 2025

**AKGWA Well Tag #:** N/A **SAMPLE ID:** TB2UG4-25 **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 | 7/17/2025 | | | SW846-8260D | = |
| Trichloroethene | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Trichlorofluoromethane | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |
| Vinyl acetate | U | 5 | ug/L | 5 | 7/17/2025 | | | SW846-8260D | = |
| Vinyl chloride | U | 1 | ug/L | 1 | 7/17/2025 | | | SW846-8260D | = |

**Paducah OREIS**
**GROUNDWATER MONITORING REPORT**

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

**Sampling Point:** QC **Period:** 3rd Quarter 2025

**AKGWA Well Tag #:** N/A **SAMPLE ID:** TB3UG4-25 **Sample Type:** TB

| Parameter | Qualifier | Result | Units | Reporting Limit | Date Collected | Rad Error (+/-) | TPU | Method | Validation Code |
|---|---|---|---|---|---|---|---|---|---|
| 1,2-Dibromo-3-chloropropane | U | 0.0192 | ug/L | 0.0192 | 7/21/2025 | | | SW846-8011 | = |
| 1,1,1,2-Tetrachloroethane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| 1,1,1-Trichloroethane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| 1,1,2,2-Tetrachloroethane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| 1,1,2-Trichloroethane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| 1,1-Dichloroethane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| 1,1-Dichloroethene | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| 1,2,3-Trichloropropane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| 1,2-Dibromoethane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| 1,2-Dichlorobenzene | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| 1,2-Dichloroethane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| 1,2-Dichloropropane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| 1,4-Dichlorobenzene | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| 2-Butanone | U | 5 | ug/L | 5 | 7/21/2025 | | | SW846-8260D | = |
| 2-Hexanone | U | 5 | ug/L | 5 | 7/21/2025 | | | SW846-8260D | = |
| 4-Methyl-2-pentanone | U | 5 | ug/L | 5 | 7/21/2025 | | | SW846-8260D | = |
| Acetone | U | 5 | ug/L | 5 | 7/21/2025 | | | SW846-8260D | = |
| Acrolein | U | 5 | ug/L | 5 | 7/21/2025 | | | SW846-8260D | = |
| Acrylonitrile | U | 5 | ug/L | 5 | 7/21/2025 | | | SW846-8260D | = |
| Benzene | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Bromochloromethane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Bromodichloromethane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Bromoform | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Bromomethane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Carbon disulfide | U | 5 | ug/L | 5 | 7/21/2025 | | | SW846-8260D | = |
| Carbon tetrachloride | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Chlorobenzene | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Chloroethane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Chloroform | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Chloromethane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| cis-1,2-Dichloroethene | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| cis-1,3-Dichloropropene | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Dibromochloromethane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Dibromomethane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Ethylbenzene | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Iodomethane | U | 5 | ug/L | 5 | 7/21/2025 | | | SW846-8260D | = |
| Methylene chloride | U | 5 | ug/L | 5 | 7/21/2025 | | | SW846-8260D | = |
| Styrene | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Tetrachloroethene | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Toluene | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Total Xylene | U | 3 | ug/L | 3 | 7/21/2025 | | | SW846-8260D | = |
| trans-1,2-Dichloroethene | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| trans-1,3-Dichloropropene | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |

**Paducah OREIS**
**GROUNDWATER MONITORING REPORT**

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

**Sampling Point:** QC **Period:** 3rd Quarter 2025

**AKGWA Well Tag #:** N/A **SAMPLE ID:** TB3UG4-25 **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 | 7/21/2025 | | | SW846-8260D | = |
| Trichloroethene | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Trichlorofluoromethane | U | 1 | ug/L | 1 | 7/21/2025 | | | SW846-8260D | = |
| Vinyl acetate | U | 5 | ug/L | 5 | 7/21/2025 | | | SW846-8260D | = |
| Vinyl chloride | U | 1 | ug/L | 1 | 7/21/2025 | | | 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 value. |
| L | LCS and/or LCSD recovery outside of control limits. |
| L1 | LCS/LCSD RPD outside acceptance criteria. |
| N | MS and/or MSD recovery outside of control limits. |
| N1 | MS/MSD RPD outside of 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.) |
| W | Post-digestion spike recovery outside of control limits. |
| W1 | Post-digestion spike and post-digestion spike duplicate RPD outside of control limits. |
| X | Other specific flags and footnotes may be required to properly define the results. |
| Y1 | MS and/or MSD recovery outside of control limits. |
| 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: October 1, 2025
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: MW357UG4-25
Sample ID: 733567001
Matrix: WG
Collect Date: 16-JUL-25
Receive Date: 17-JUL-25
Collector: Client
Project: FRNP00714
Client ID: FRNP007

| 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 | | 0.488 | +/-0.408 | 0.477 | +/-0.413 | 5.00 | pCi/L | | | CM4 | 08/05/25 | 0846 | 2839978 | 1 |
| *Th-01-RC M, Th Isotopes, Liquid "As Received"* | | | | | | | | | | | | | | |
| Thorium-230 | U | 0.414 | +/-0.777 | 1.33 | +/-0.782 | 50.0 | pCi/L | | | RM3 | 07/24/25 | 0840 | 2831407 | 2 |
| Thorium-232 | U | -0.0217 | +/-0.295 | 0.625 | +/-0.296 | | pCi/L | | | | | | | |
| **Rad Gas Flow Proportional Counting** | | | | | | | | | | | | | | |
| *904.0Mod, Ra228, Liquid "As Received"* | | | | | | | | | | | | | | |
| Radium-228 | U | -0.564 | +/-2.40 | 4.52 | +/-2.40 | 4.99 | pCi/L | | | CH7 | 09/02/25 | 1338 | 2852111 | 3 |
| *905.0Mod, Sr90, liquid "As Received"* | | | | | | | | | | | | | | |
| Strontium-90 | U | -2.96 | +/-3.31 | 6.72 | +/-3.31 | 8.00 | pCi/L | | | IJ1 | 07/24/25 | 1331 | 2831822 | 4 |
| *9310, Alpha/Beta Activity, liquid "As Received"* | | | | | | | | | | | | | | |
| Alpha | U | 3.22 | +/-3.74 | 5.89 | +/-3.78 | 15.0 | pCi/L | | | ST2 | 07/22/25 | 1235 | 2831778 | 5 |
| Beta | | 28.7 | +/-8.42 | 9.77 | +/-9.61 | 50.0 | pCi/L | | | | | | | |
| **Rad Liquid Scintillation Analysis** | | | | | | | | | | | | | | |
| *906.0M, Tritium Dist, Liquid "As Received"* | | | | | | | | | | | | | | |
| Tritium | U | -0.577 | +/-110 | 219 | +/-110 | 300 | pCi/L | | | IT1 | 07/20/25 | 1910 | 2831330 | 6 |
| *Tc-02-RC-MOD, Tc99, Liquid "As Received"* | | | | | | | | | | | | | | |
| Technetium-99 | | 38.5 | +/-13.8 | 21.9 | +/-14.5 | 25.0 | pCi/L | | | GS3 | 08/10/25 | 1113 | 2831325 | 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" | 2839978 | 93 | (30%-110%) |
| Thorium-229 Tracer | Th-01-RC M, Th Isotopes, Liquid "As Received" | 2831407 | 91.5 | (30%-110%) |
| Barium-133 Tracer | 904.0Mod, Ra228, Liquid "As Received" | 2852111 | 82.2 | (30%-110%) |
| Strontium Carrier | 905.0Mod, Sr90, liquid "As Received" | 2831822 | 82.4 | (30%-110%) |
| Technetium-99m Tracer | Tc-02-RC-MOD, Tc99, Liquid "As Received" | 2831325 | 101 | (30%-110%) |

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# *Certificate of Analysis*

Company : Four Rivers Nuclear Partnership, LLC
Address : 5600 Hobbs Road
Kevil, Kentucky 42053

Report Date: October 1, 2025

Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: MW357UG4-25
Sample ID: 733567001

Project: FRNP00714
Client ID: FRNP007

| 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,
Address : LLC
5600 Hobbs Road

Kevil, Kentucky 42053

Report Date: October 1, 2025

Contact: Ms. Jaime Morrow

Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: MW358DUG4-25
Sample ID: 733567003
Matrix: WG
Collect Date: 16-JUL-25
Receive Date: 17-JUL-25
Collector: Client

Project: FRNP00714
Client ID: FRNP007

| 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 | 0.328 | +/-0.326 | 0.436 | +/-0.329 | 5.00 | pCi/L | | | CM4 | 08/05/25 | 0846 | 2839978 | 1 |
| *Th-01-RC M, Th Isotopes, Liquid "As Received"* | | | | | | | | | | | | | | |
| Thorium-230 | U | 0.249 | +/-0.728 | 1.35 | +/-0.731 | 50.0 | pCi/L | | | RM3 | 07/24/25 | 0840 | 2831407 | 2 |
| Thorium-232 | U | -0.0999 | +/-0.346 | 0.946 | +/-0.346 | | pCi/L | | | | | | | |
| **Rad Gas Flow Proportional Counting** | | | | | | | | | | | | | | |
| *904.0Mod, Ra228, Liquid "As Received"* | | | | | | | | | | | | | | |
| Radium-228 | U | 3.46 | +/-2.81 | 4.58 | +/-2.97 | 4.99 | pCi/L | | | CH7 | 09/02/25 | 1329 | 2852111 | 3 |
| *905.0Mod, Sr90, liquid "As Received"* | | | | | | | | | | | | | | |
| Strontium-90 | U | -0.0407 | +/-2.12 | 4.14 | +/-2.12 | 8.00 | pCi/L | | | IJ1 | 07/24/25 | 1556 | 2831822 | 4 |
| *9310, Alpha/Beta Activity, liquid "As Received"* | | | | | | | | | | | | | | |
| Alpha | U | 3.52 | +/-4.39 | 7.28 | +/-4.43 | 15.0 | pCi/L | | | ST2 | 07/22/25 | 1235 | 2831778 | 5 |
| Beta | | 36.4 | +/-9.21 | 10.1 | +/-10.9 | 50.0 | pCi/L | | | | | | | |
| **Rad Liquid Scintillation Analysis** | | | | | | | | | | | | | | |
| *906.0M, Tritium Dist, Liquid "As Received"* | | | | | | | | | | | | | | |
| Tritium | U | -35.2 | +/-104 | 221 | +/-104 | 300 | pCi/L | | | IT1 | 07/20/25 | 1931 | 2831330 | 6 |
| *Tc-02-RC-MOD, Tc99, Liquid "As Received"* | | | | | | | | | | | | | | |
| Technetium-99 | | 35.6 | +/-15.1 | 24.3 | +/-15.7 | 25.0 | pCi/L | | | GS3 | 08/10/25 | 1144 | 2831325 | 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" | 2839978 | 107 | (30%-110%) |
| Thorium-229 Tracer | Th-01-RC M, Th Isotopes, Liquid "As Received" | 2831407 | 82.8 | (30%-110%) |
| Barium-133 Tracer | 904.0Mod, Ra228, Liquid "As Received" | 2852111 | 91.1 | (30%-110%) |
| Strontium Carrier | 905.0Mod, Sr90, liquid "As Received" | 2831822 | 84.7 | (30%-110%) |
| Technetium-99m Tracer | Tc-02-RC-MOD, Tc99, Liquid "As Received" | 2831325 | 91.3 | (30%-110%) |

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# *Certificate of Analysis*

Company : Four Rivers Nuclear Partnership, LLC
Address : 5600 Hobbs Road
Kevil, Kentucky 42053

Report Date: October 1, 2025

Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: MW358DUG4-25
Sample ID: 733567003

Project: FRNP00714
Client ID: FRNP007

| 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,
Address : LLC
5600 Hobbs Road

Kevil, Kentucky 42053

Report Date: October 1, 2025

Contact: Ms. Jaime Morrow

Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: MW358UG4-25
Sample ID: 733567005
Matrix: WG
Collect Date: 16-JUL-25
Receive Date: 17-JUL-25
Collector: Client

Project: FRNP00714
Client ID: FRNP007

| 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 | 0.312 | +/-0.339 | 0.484 | +/-0.342 | 5.00 | pCi/L | | | CM4 | 08/05/25 | 0846 | 2839978 | 1 |
| *Th-01-RC M, Th Isotopes, Liquid "As Received"* | | | | | | | | | | | | | | |
| Thorium-230 | U | 0.281 | +/-0.768 | 1.41 | +/-0.772 | 50.0 | pCi/L | | | RM3 | 07/25/25 | 0814 | 2831407 | 2 |
| Thorium-232 | U | 0.0676 | +/-0.497 | 0.996 | +/-0.497 | | pCi/L | | | | | | | |
| **Rad Gas Flow Proportional Counting** | | | | | | | | | | | | | | |
| *904.0Mod, Ra228, Liquid "As Received"* | | | | | | | | | | | | | | |
| Radium-228 | U | 1.41 | +/-2.52 | 4.38 | +/-2.55 | 4.99 | pCi/L | | | CH7 | 09/02/25 | 1533 | 2852111 | 3 |
| *905.0Mod, Sr90, liquid "As Received"* | | | | | | | | | | | | | | |
| Strontium-90 | U | 0.569 | +/-2.38 | 4.37 | +/-2.38 | 8.00 | pCi/L | | | IJ1 | 07/24/25 | 1331 | 2831822 | 4 |
| *9310, Alpha/Beta Activity, liquid "As Received"* | | | | | | | | | | | | | | |
| Alpha | U | -0.0657 | +/-2.49 | 6.32 | +/-2.50 | 15.0 | pCi/L | | | ST2 | 07/22/25 | 1235 | 2831778 | 5 |
| Beta | | 32.7 | +/-8.82 | 9.94 | +/-10.3 | 50.0 | pCi/L | | | | | | | |
| **Rad Liquid Scintillation Analysis** | | | | | | | | | | | | | | |
| *906.0M, Tritium Dist, Liquid "As Received"* | | | | | | | | | | | | | | |
| Tritium | U | -9.52 | +/-106 | 212 | +/-106 | 300 | pCi/L | | | IT1 | 07/20/25 | 1953 | 2831330 | 6 |
| *Tc-02-RC-MOD, Tc99, Liquid "As Received"* | | | | | | | | | | | | | | |
| Technetium-99 | | 35.2 | +/-14.5 | 23.4 | +/-15.1 | 25.0 | pCi/L | | | GS3 | 08/10/25 | 1216 | 2831325 | 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" | 2839978 | 99.8 | (30%-110%) |
| Thorium-229 Tracer | Th-01-RC M, Th Isotopes, Liquid "As Received" | 2831407 | 78.5 | (30%-110%) |
| Barium-133 Tracer | 904.0Mod, Ra228, Liquid "As Received" | 2852111 | 87.3 | (30%-110%) |
| Strontium Carrier | 905.0Mod, Sr90, liquid "As Received" | 2831822 | 96.5 | (30%-110%) |
| Technetium-99m Tracer | Tc-02-RC-MOD, Tc99, Liquid "As Received" | 2831325 | 96.4 | (30%-110%) |

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# *Certificate of Analysis*

Company : Four Rivers Nuclear Partnership, LLC
Address : 5600 Hobbs Road
Kevil, Kentucky 42053

Report Date: October 1, 2025

Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: MW358UG4-25
Sample ID: 733567005

Project: FRNP00714
Client ID: FRNP007

| 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,
Address : LLC
5600 Hobbs Road

Kevil, Kentucky 42053

Report Date: October 1, 2025

Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: MW359UG4-25
Sample ID: 733567007
Matrix: WG
Collect Date: 16-JUL-25
Receive Date: 17-JUL-25
Collector: Client

Project: FRNP00714
Client ID: FRNP007

| 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 | 0.360 | +/-0.330 | 0.406 | +/-0.333 | 5.00 | pCi/L | | | CM4 | 08/05/25 | 0846 | 2839978 | 1 |
| *Th-01-RC M, Th Isotopes, Liquid "As Received"* | | | | | | | | | | | | | | |
| Thorium-230 | U | 0.351 | +/-1.20 | 2.27 | +/-1.20 | 50.0 | pCi/L | | | RM3 | 07/24/25 | 0840 | 2831407 | 2 |
| Thorium-232 | U | 0.203 | +/-0.844 | 1.48 | +/-0.845 | | pCi/L | | | | | | | |
| **Rad Gas Flow Proportional Counting** | | | | | | | | | | | | | | |
| *904.0Mod, Ra228, Liquid "As Received"* | | | | | | | | | | | | | | |
| Radium-228 | U | 3.95 | +/-2.90 | 4.58 | +/-3.10 | 4.99 | pCi/L | | | CH7 | 09/02/25 | 1338 | 2852111 | 3 |
| *905.0Mod, Sr90, liquid "As Received"* | | | | | | | | | | | | | | |
| Strontium-90 | U | 2.45 | +/-3.53 | 6.06 | +/-3.55 | 8.00 | pCi/L | | | IJ1 | 07/24/25 | 1331 | 2831822 | 4 |
| *9310, Alpha/Beta Activity, liquid "As Received"* | | | | | | | | | | | | | | |
| Alpha | U | 3.07 | +/-3.53 | 5.56 | +/-3.57 | 15.0 | pCi/L | | | ST2 | 07/22/25 | 1235 | 2831778 | 5 |
| Beta | U | 1.74 | +/-5.38 | 9.78 | +/-5.39 | 50.0 | pCi/L | | | | | | | |
| **Rad Liquid Scintillation Analysis** | | | | | | | | | | | | | | |
| *906.0M, Tritium Dist, Liquid "As Received"* | | | | | | | | | | | | | | |
| Tritium | U | -56.2 | +/-97.3 | 215 | +/-97.3 | 300 | pCi/L | | | IT1 | 07/20/25 | 2015 | 2831330 | 6 |
| *Tc-02-RC-MOD, Tc99, Liquid "As Received"* | | | | | | | | | | | | | | |
| Technetium-99 | U | -2.27 | +/-13.2 | 22.8 | +/-13.2 | 25.0 | pCi/L | | | GS3 | 08/10/25 | 1248 | 2831325 | 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" | 2839978 | 110 | (30%-110%) |
| Thorium-229 Tracer | Th-01-RC M, Th Isotopes, Liquid "As Received" | 2831407 | 49.2 | (30%-110%) |
| Barium-133 Tracer | 904.0Mod, Ra228, Liquid "As Received" | 2852111 | 79 | (30%-110%) |
| Strontium Carrier | 905.0Mod, Sr90, liquid "As Received" | 2831822 | 82.4 | (30%-110%) |
| Technetium-99m Tracer | Tc-02-RC-MOD, Tc99, Liquid "As Received" | 2831325 | 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: October 1, 2025

Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: MW359UG4-25
Sample ID: 733567007

Project: FRNP00714
Client ID: FRNP007

| 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,
Address : LLC
5600 Hobbs Road

Kevil, Kentucky 42053

Report Date: October 1, 2025

Contact: Ms. Jaime Morrow

Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: MW360UG4-25
Sample ID: 733567009
Matrix: WG
Collect Date: 16-JUL-25
Receive Date: 17-JUL-25
Collector: Client

Project: FRNP00714
Client ID: FRNP007

| 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 | +/-0.341 | 0.443 | +/-0.343 | 5.00 | pCi/L | | | CM4 | 08/05/25 | 0846 | 2839978 | 1 |
| *Th-01-RC M, Th Isotopes, Liquid "As Received"* | | | | | | | | | | | | | | |
| Thorium-230 | U | 0.718 | +/-0.830 | 1.17 | +/-0.840 | 50.0 | pCi/L | | | RM3 | 07/24/25 | 0840 | 2831407 | 2 |
| Thorium-232 | U | -0.0931 | +/-0.316 | 0.868 | +/-0.316 | | pCi/L | | | | | | | |
| **Rad Gas Flow Proportional Counting** | | | | | | | | | | | | | | |
| *904.0Mod, Ra228, Liquid "As Received"* | | | | | | | | | | | | | | |
| Radium-228 | U | 2.29 | +/-2.75 | 4.65 | +/-2.83 | 4.99 | pCi/L | | | CH7 | 09/02/25 | 1330 | 2852111 | 3 |
| *905.0Mod, Sr90, liquid "As Received"* | | | | | | | | | | | | | | |
| Strontium-90 | U | 1.91 | +/-3.24 | 5.63 | +/-3.25 | 8.00 | pCi/L | | | IJ1 | 07/24/25 | 1331 | 2831822 | 4 |
| *9310, Alpha/Beta Activity, liquid "As Received"* | | | | | | | | | | | | | | |
| Alpha | U | -1.48 | +/-1.93 | 6.53 | +/-1.93 | 15.0 | pCi/L | | | ST2 | 07/22/25 | 1235 | 2831778 | 5 |
| Beta | U | 4.54 | +/-5.44 | 9.18 | +/-5.49 | 50.0 | pCi/L | | | | | | | |
| **Rad Liquid Scintillation Analysis** | | | | | | | | | | | | | | |
| *906.0M, Tritium Dist, Liquid "As Received"* | | | | | | | | | | | | | | |
| Tritium | U | 58.8 | +/-122 | 220 | +/-122 | 300 | pCi/L | | | IT1 | 07/20/25 | 2036 | 2831330 | 6 |
| *Tc-02-RC-MOD, Tc99, Liquid "As Received"* | | | | | | | | | | | | | | |
| Technetium-99 | U | 5.08 | +/-13.2 | 22.4 | +/-13.2 | 25.0 | pCi/L | | | GS3 | 08/10/25 | 1319 | 2831325 | 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" | 2839978 | 98.7 | (30%-110%) |
| Thorium-229 Tracer | Th-01-RC M, Th Isotopes, Liquid "As Received" | 2831407 | 93.7 | (30%-110%) |
| Barium-133 Tracer | 904.0Mod, Ra228, Liquid "As Received" | 2852111 | 91.9 | (30%-110%) |
| Strontium Carrier | 905.0Mod, Sr90, liquid "As Received" | 2831822 | 84.7 | (30%-110%) |
| Technetium-99m Tracer | Tc-02-RC-MOD, Tc99, Liquid "As Received" | 2831325 | 99.3 | (30%-110%) |

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# *Certificate of Analysis*

Company : Four Rivers Nuclear Partnership, LLC
Address : 5600 Hobbs Road
Kevil, Kentucky 42053

Report Date: October 1, 2025

Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: MW360UG4-25
Sample ID: 733567009

Project: FRNP00714
Client ID: FRNP007

| 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,
Address : LLC
5600 Hobbs Road

Kevil, Kentucky 42053

Report Date: October 1, 2025

Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: MW361UG4-25
Sample ID: 733567011
Matrix: WG
Collect Date: 16-JUL-25
Receive Date: 17-JUL-25
Collector: Client

Project: FRNP00714
Client ID: FRNP007

| 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 | 0.218 | +/-0.327 | 0.508 | +/-0.328 | 5.00 | pCi/L | | | CM4 | 08/05/25 | 0846 | 2839978 | 1 |
| *Th-01-RC M, Th Isotopes, Liquid "As Received"* | | | | | | | | | | | | | | |
| Thorium-230 | U | -0.112 | +/-0.588 | 1.43 | +/-0.589 | 50.0 | pCi/L | | | RM3 | 07/25/25 | 0814 | 2831407 | 2 |
| Thorium-232 | U | -0.0617 | +/-0.344 | 0.857 | +/-0.345 | | pCi/L | | | | | | | |
| **Rad Gas Flow Proportional Counting** | | | | | | | | | | | | | | |
| *904.0Mod, Ra228, Liquid "As Received"* | | | | | | | | | | | | | | |
| Radium-228 | U | 3.66 | +/-2.99 | 4.77 | +/-3.15 | 4.99 | pCi/L | | | CH7 | 09/02/25 | 1732 | 2852111 | 3 |
| *905.0Mod, Sr90, liquid "As Received"* | | | | | | | | | | | | | | |
| Strontium-90 | U | -0.989 | +/-2.29 | 4.65 | +/-2.29 | 8.00 | pCi/L | | | IJ1 | 07/24/25 | 1332 | 2831822 | 4 |
| *9310, Alpha/Beta Activity, liquid "As Received"* | | | | | | | | | | | | | | |
| Alpha | U | -0.140 | +/-3.64 | 8.44 | +/-3.64 | 15.0 | pCi/L | | | ST2 | 07/22/25 | 1434 | 2831778 | 5 |
| Beta | | 21.4 | +/-7.70 | 9.97 | +/-8.45 | 50.0 | pCi/L | | | | | | | |
| **Rad Liquid Scintillation Analysis** | | | | | | | | | | | | | | |
| *906.0M, Tritium Dist, Liquid "As Received"* | | | | | | | | | | | | | | |
| Tritium | U | -36.1 | +/-99.2 | 209 | +/-99.2 | 300 | pCi/L | | | IT1 | 07/20/25 | 2058 | 2831330 | 6 |
| *Tc-02-RC-MOD, Tc99, Liquid "As Received"* | | | | | | | | | | | | | | |
| Technetium-99 | | 32.1 | +/-14.1 | 22.8 | +/-14.6 | 25.0 | pCi/L | | | GS3 | 08/10/25 | 1351 | 2831325 | 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" | 2839978 | 86.3 | (30%-110%) |
| Thorium-229 Tracer | Th-01-RC M, Th Isotopes, Liquid "As Received" | 2831407 | 87.5 | (30%-110%) |
| Barium-133 Tracer | 904.0Mod, Ra228, Liquid "As Received" | 2852111 | 86 | (30%-110%) |
| Strontium Carrier | 905.0Mod, Sr90, liquid "As Received" | 2831822 | 89.4 | (30%-110%) |
| Technetium-99m Tracer | Tc-02-RC-MOD, Tc99, Liquid "As Received" | 2831325 | 97.2 | (30%-110%) |

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# *Certificate of Analysis*

Company : Four Rivers Nuclear Partnership, LLC
Address : 5600 Hobbs Road
Kevil, Kentucky 42053

Report Date: October 1, 2025

Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: MW361UG4-25
Sample ID: 733567011

Project: FRNP00714
Client ID: FRNP007

| 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,
Address : LLC
5600 Hobbs Road

Kevil, Kentucky 42053

Report Date: October 1, 2025

Contact: Ms. Jaime Morrow

Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: MW362UG4-25
Sample ID: 733567013
Matrix: WG
Collect Date: 16-JUL-25
Receive Date: 17-JUL-25
Collector: Client

Project: FRNP00714
Client ID: FRNP007

| 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 | | 0.498 | +/-0.374 | 0.397 | +/-0.379 | 5.00 | pCi/L | | | CM4 | 08/05/25 | 0846 | 2839978 | 1 |
| *Th-01-RC M, Th Isotopes, Liquid "As Received"* | | | | | | | | | | | | | | |
| Thorium-230 | U | 0.455 | +/-1.03 | 1.85 | +/-1.03 | 50.0 | pCi/L | | | RM3 | 07/24/25 | 0840 | 2831407 | 2 |
| Thorium-232 | U | 0.0775 | +/-0.552 | 1.10 | +/-0.552 | | pCi/L | | | | | | | |
| **Rad Gas Flow Proportional Counting** | | | | | | | | | | | | | | |
| *904.0Mod, Ra228, Liquid "As Received"* | | | | | | | | | | | | | | |
| Radium-228 | U | 2.40 | +/-2.74 | 4.60 | +/-2.82 | 4.99 | pCi/L | | | CH7 | 09/02/25 | 1338 | 2852111 | 3 |
| *905.0Mod, Sr90, liquid "As Received"* | | | | | | | | | | | | | | |
| Strontium-90 | U | 0.256 | +/-1.32 | 2.61 | +/-1.32 | 8.00 | pCi/L | | | IJ1 | 07/24/25 | 1556 | 2831822 | 4 |
| *9310, Alpha/Beta Activity, liquid "As Received"* | | | | | | | | | | | | | | |
| Alpha | U | -1.69 | +/-2.21 | 7.48 | +/-2.22 | 15.0 | pCi/L | | | ST2 | 07/22/25 | 1235 | 2831778 | 5 |
| Beta | U | 6.19 | +/-5.86 | 9.56 | +/-5.95 | 50.0 | pCi/L | | | | | | | |
| **Rad Liquid Scintillation Analysis** | | | | | | | | | | | | | | |
| *906.0M, Tritium Dist, Liquid "As Received"* | | | | | | | | | | | | | | |
| Tritium | U | -46.1 | +/-100 | 218 | +/-100 | 300 | pCi/L | | | IT1 | 07/20/25 | 2119 | 2831330 | 6 |
| *Tc-02-RC-MOD, Tc99, Liquid "As Received"* | | | | | | | | | | | | | | |
| Technetium-99 | U | -9.26 | +/-12.7 | 22.4 | +/-12.7 | 25.0 | pCi/L | | | GS3 | 08/10/25 | 1422 | 2831325 | 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" | 2839978 | 95.7 | (30%-110%) |
| Thorium-229 Tracer | Th-01-RC M, Th Isotopes, Liquid "As Received" | 2831407 | 76 | (30%-110%) |
| Barium-133 Tracer | 904.0Mod, Ra228, Liquid "As Received" | 2852111 | 100 | (30%-110%) |
| Strontium Carrier | 905.0Mod, Sr90, liquid "As Received" | 2831822 | 94.1 | (30%-110%) |
| Technetium-99m Tracer | Tc-02-RC-MOD, Tc99, Liquid "As Received" | 2831325 | 97.7 | (30%-110%) |

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# *Certificate of Analysis*

Company : Four Rivers Nuclear Partnership, LLC
Address : 5600 Hobbs Road
Kevil, Kentucky 42053

Report Date: October 1, 2025

Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: MW362UG4-25
Sample ID: 733567013

Project: FRNP00714
Client ID: FRNP007

| 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,
Address : LLC
5600 Hobbs Road

Kevil, Kentucky 42053

Report Date: October 1, 2025

Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: FB1UG4-25
Sample ID: 733567015
Matrix: WATER
Collect Date: 16-JUL-25
Receive Date: 17-JUL-25
Collector: Client

Project: FRNP00714
Client ID: FRNP007

| 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 | 0.407 | +/-0.359 | 0.420 | +/-0.362 | 5.00 | pCi/L | | | CM4 | 08/05/25 | 0846 | 2839978 | 1 |
| *Th-01-RC M, Th Isotopes, Liquid "As Received"* | | | | | | | | | | | | | | |
| Thorium-230 | U | -0.925 | +/-0.683 | 2.62 | +/-0.684 | 50.0 | pCi/L | | | RM3 | 07/24/25 | 0843 | 2831407 | 2 |
| Thorium-232 | U | -0.420 | +/-0.643 | 2.07 | +/-0.644 | | pCi/L | | | | | | | |
| **Rad Gas Flow Proportional Counting** | | | | | | | | | | | | | | |
| *904.0Mod, Ra228, Liquid "As Received"* | | | | | | | | | | | | | | |
| Radium-228 | U | 3.35 | +/-2.77 | 4.49 | +/-2.92 | 4.99 | pCi/L | | | CH7 | 09/02/25 | 1330 | 2852111 | 3 |
| *905.0Mod, Sr90, liquid "As Received"* | | | | | | | | | | | | | | |
| Strontium-90 | U | -0.997 | +/-2.37 | 4.68 | +/-2.37 | 8.00 | pCi/L | | | IJ1 | 07/24/25 | 1328 | 2831822 | 4 |
| *9310, Alpha/Beta Activity, liquid "As Received"* | | | | | | | | | | | | | | |
| Alpha | U | 0.605 | +/-2.53 | 5.60 | +/-2.54 | 15.0 | pCi/L | | | ST2 | 07/22/25 | 1235 | 2831778 | 5 |
| Beta | U | -3.93 | +/-4.47 | 9.69 | +/-4.47 | 50.0 | pCi/L | | | | | | | |
| **Rad Liquid Scintillation Analysis** | | | | | | | | | | | | | | |
| *906.0M, Tritium Dist, Liquid "As Received"* | | | | | | | | | | | | | | |
| Tritium | U | 40.5 | +/-118 | 220 | +/-119 | 300 | pCi/L | | | IT1 | 07/20/25 | 2141 | 2831330 | 6 |
| *Tc-02-RC-MOD, Tc99, Liquid "As Received"* | | | | | | | | | | | | | | |
| Technetium-99 | U | -3.14 | +/-12.5 | 21.8 | +/-12.5 | 25.0 | pCi/L | | | GS3 | 08/10/25 | 1454 | 2831325 | 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" | 2839978 | 94.8 | (30%-110%) |
| Thorium-229 Tracer | Th-01-RC M, Th Isotopes, Liquid "As Received" | 2831407 | 64.1 | (30%-110%) |
| Barium-133 Tracer | 904.0Mod, Ra228, Liquid "As Received" | 2852111 | 79.8 | (30%-110%) |
| Strontium Carrier | 905.0Mod, Sr90, liquid "As Received" | 2831822 | 101 | (30%-110%) |
| Technetium-99m Tracer | Tc-02-RC-MOD, Tc99, Liquid "As Received" | 2831325 | 102 | (30%-110%) |

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# *Certificate of Analysis*

Company : Four Rivers Nuclear Partnership, LLC
Address : 5600 Hobbs Road
Kevil, Kentucky 42053

Report Date: October 1, 2025

Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: FB1UG4-25
Sample ID: 733567015

Project: FRNP00714
Client ID: FRNP007

| 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,
Address : LLC
5600 Hobbs Road

Kevil, Kentucky 42053

Report Date: October 1, 2025

Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: RI1UG4-25
Sample ID: 733567016
Matrix: WATER
Collect Date: 16-JUL-25
Receive Date: 17-JUL-25
Collector: Client

Project: FRNP00714
Client ID: FRNP007

| 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 | 0.143 | +/-0.307 | 0.542 | +/-0.307 | 5.00 | pCi/L | | | CM4 | 08/05/25 | 0846 | 2839978 | 1 |
| *Th-01-RC M, Th Isotopes, Liquid "As Received"* | | | | | | | | | | | | | | |
| Thorium-230 | U | -0.117 | +/-0.715 | 1.71 | +/-0.715 | 50.0 | pCi/L | | | RM3 | 07/24/25 | 0843 | 2831407 | 2 |
| Thorium-232 | U | -0.166 | +/-0.436 | 1.26 | +/-0.437 | | pCi/L | | | | | | | |
| **Rad Gas Flow Proportional Counting** | | | | | | | | | | | | | | |
| *904.0Mod, Ra228, Liquid "As Received"* | | | | | | | | | | | | | | |
| Radium-228 | U | 2.86 | +/-2.76 | 4.49 | +/-2.88 | 4.99 | pCi/L | | | CH7 | 09/02/25 | 1338 | 2852111 | 3 |
| *905.0Mod, Sr90, liquid "As Received"* | | | | | | | | | | | | | | |
| Strontium-90 | U | -2.12 | +/-1.57 | 3.87 | +/-1.57 | 8.00 | pCi/L | | | IJ1 | 07/24/25 | 1328 | 2831822 | 4 |
| *9310, Alpha/Beta Activity, liquid "As Received"* | | | | | | | | | | | | | | |
| Alpha | U | 2.42 | +/-4.25 | 7.75 | +/-4.27 | 15.0 | pCi/L | | | ST2 | 07/22/25 | 1235 | 2831778 | 5 |
| Beta | U | -4.75 | +/-6.15 | 12.4 | +/-6.15 | 50.0 | pCi/L | | | | | | | |
| **Rad Liquid Scintillation Analysis** | | | | | | | | | | | | | | |
| *906.0M, Tritium Dist, Liquid "As Received"* | | | | | | | | | | | | | | |
| Tritium | U | 17.7 | +/-113 | 217 | +/-113 | 300 | pCi/L | | | IT1 | 07/20/25 | 2203 | 2831330 | 6 |
| *Tc-02-RC-MOD, Tc99, Liquid "As Received"* | | | | | | | | | | | | | | |
| Technetium-99 | U | -8.18 | +/-12.8 | 22.5 | +/-12.8 | 25.0 | pCi/L | | | GS3 | 08/10/25 | 1526 | 2831325 | 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" | 2839978 | 98.9 | (30%-110%) |
| Thorium-229 Tracer | Th-01-RC M, Th Isotopes, Liquid "As Received" | 2831407 | 90.1 | (30%-110%) |
| Barium-133 Tracer | 904.0Mod, Ra228, Liquid "As Received" | 2852111 | 78.6 | (30%-110%) |
| Strontium Carrier | 905.0Mod, Sr90, liquid "As Received" | 2831822 | 91.8 | (30%-110%) |
| Technetium-99m Tracer | Tc-02-RC-MOD, Tc99, Liquid "As Received" | 2831325 | 98.6 | (30%-110%) |

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# *Certificate of Analysis*

Company : Four Rivers Nuclear Partnership, LLC
Address : 5600 Hobbs Road
Kevil, Kentucky 42053

Report Date: October 1, 2025

Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: RI1UG4-25
Sample ID: 733567016

Project: FRNP00714
Client ID: FRNP007

| 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: October 1, 2025

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

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: MW357UG4-25
Sample ID: 733567001
Matrix: WG
Collect Date: 16-JUL-25 10:28
Receive Date: 17-JUL-25
Collector: Client

Project: FRNP00714
Client ID: FRNP007

| 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 | 0.0195 | 0.00878 | 0.0195 | ug/L | 0.975 | 1 | BM1 | 07/21/25 | 1328 | 2832586 | 1 |
| Carbon Analysis | | | | | | | | | | | | |
| 9060A, Total Organic Carbon "As Received" | | | | | | | | | | | | |
| Total Organic Carbon Average | J | 0.374 | 0.330 | 2.00 | mg/L | | 1 | KB3 | 07/23/25 | 0228 | 2833167 | 3 |
| Flow Injection Analysis | | | | | | | | | | | | |
| 9012B, Cyanide, Total "As Received" | | | | | | | | | | | | |
| Cyanide, Total | UN | 0.200 | 0.00167 | 0.200 | mg/L | 1.00 | 1 | KLP1 | 07/23/25 | 1206 | 2831410 | 4 |
| Halogen Analysis | | | | | | | | | | | | |
| 9020B, TOX (Organic Halogen) "As Received" | | | | | | | | | | | | |
| Total Organic Halogens | | 13.3 | 3.33 | 10.0 | ug/L | | 1 | JW2 | 08/12/25 | 1510 | 2844911 | 5 |
| Ion Chromatography | | | | | | | | | | | | |
| 300.0, Iodide in Liquid "As Received" | | | | | | | | | | | | |
| Iodide | U | 0.500 | 0.167 | 0.500 | mg/L | | 1 | TXT1 | 07/17/25 | 1530 | 2831375 | 6 |
| SW846 9056A Anions (5 elements) "As Received" | | | | | | | | | | | | |
| Bromide | | 0.316 | 0.0670 | 0.200 | mg/L | | 1 | CH6 | 07/17/25 | 1606 | 2831374 | 7 |
| Fluoride | J | 0.138 | 0.0330 | 4.00 | mg/L | | 1 | | | | | |
| Chloride | JW | 26.8 | 0.335 | 250 | mg/L | | 5 | CH6 | 07/19/25 | 1336 | 2831374 | 8 |
| Nitrate-N | HJ | 1.24 | 0.165 | 10.0 | mg/L | | 5 | | | | | |
| Sulfate | | 33.3 | 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 | 08/05/25 | 1011 | 2840733 | 9 |
| Metals Analysis-ICP-MS | | | | | | | | | | | | |
| 6020, Metals (15+ elements) "As Received" | | | | | | | | | | | | |
| Aluminum | J | 0.0223 | 0.0193 | 0.0500 | mg/L | 1.00 | 1 | PRB | 08/13/25 | 2044 | 2831391 | 10 |
| Arsenic | U | 0.00500 | 0.00200 | 0.00500 | mg/L | 1.00 | 1 | | | | | |
| Barium | | 0.0801 | 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 | | 22.4 | 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 | J | 0.000846 | 0.000300 | 0.00200 | mg/L | 1.00 | 1 | | | | | |

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# *Certificate of Analysis*

Report Date: October 1, 2025

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

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: MW357UG4-25 Project: FRNP00714
Sample ID: 733567001 Client ID: FRNP007

| 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 | 0.0808 | 0.0330 | 0.100 | mg/L | 1.00 | 1 | | | | | |
| Lead | U | 0.00200 | 0.000500 | 0.00200 | mg/L | 1.00 | 1 | | | | | |
| Magnesium | | 9.58 | 0.0100 | 0.0300 | mg/L | 1.00 | 1 | | | | | |
| Manganese | J | 0.00229 | 0.00100 | 0.00500 | 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 | | 1.54 | 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 | | | | | |
| Sodium | | 37.5 | 0.0800 | 0.250 | 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 | 0.00502 | 0.00330 | 0.0200 | mg/L | 1.00 | 1 | | | | | |
| Antimony | U | 0.00300 | 0.00100 | 0.00300 | mg/L | 1.00 | 1 | PRB | 08/14/25 | 0127 | 2831391 | 11 |
| Boron | | 0.269 | 0.0260 | 0.0750 | mg/L | 1.00 | 5 | PRB | 08/13/25 | 1952 | 2831391 | 12 |
| Tantalum | U | 0.00500 | 0.00100 | 0.00500 | mg/L | 1.00 | 1 | JD2 | 08/14/25 | 1447 | 2831391 | 13 |
| Rhodium | U | 0.00500 | 0.00160 | 0.00500 | mg/L | 1.00 | 1 | PRB | 08/13/25 | 0122 | 2831391 | 14 |
| **Semi-Volatiles-PCB** | | | | | | | | | | | | |
| **8082A, PCB Liquids "As Received"** | | | | | | | | | | | | |
| Aroclor-1016 | U | 0.0847 | 0.0282 | 0.0847 | ug/L | 0.000847 | 1 | JXM | 08/13/25 | 2127 | 2845347 | 15 |
| Aroclor-1221 | U | 0.0847 | 0.0282 | 0.0847 | ug/L | 0.000847 | 1 | | | | | |
| Aroclor-1232 | U | 0.0847 | 0.0282 | 0.0847 | ug/L | 0.000847 | 1 | | | | | |
| Aroclor-1242 | U | 0.0847 | 0.0282 | 0.0847 | ug/L | 0.000847 | 1 | | | | | |
| Aroclor-1248 | U | 0.0847 | 0.0282 | 0.0847 | ug/L | 0.000847 | 1 | | | | | |
| Aroclor-1254 | U | 0.0847 | 0.0282 | 0.0847 | ug/L | 0.000847 | 1 | | | | | |
| Aroclor-1260 | U | 0.0847 | 0.0282 | 0.0847 | ug/L | 0.000847 | 1 | | | | | |
| Aroclor-1268 | U | 0.0847 | 0.0282 | 0.0847 | ug/L | 0.000847 | 1 | | | | | |
| Aroclor-Total | U | 0.0847 | 0.0282 | 0.0847 | ug/L | 0.000847 | 1 | | | | | |
| **Solids Analysis** | | | | | | | | | | | | |
| **160.1, Dissolved Solids "As Received"** | | | | | | | | | | | | |
| Total Dissolved Solids | | 196 | 2.38 | 10.0 | mg/L | | | SC1 | 07/23/25 | 1734 | 2834464 | 16 |
| **Spectrometric Analysis** | | | | | | | | | | | | |
| **410.4, Chem. Oxygen Demand "As Received"** | | | | | | | | | | | | |

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# *Certificate of Analysis*

Report Date: October 1, 2025

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

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: MW357UG4-25 Project: FRNP00714
Sample ID: 733567001 Client ID: FRNP007

| 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 | BR2 | 07/25/25 | 1538 | 2835351 | 17 |
| Volatile Organics | | | | | | | | | | | | |
| 8260D, Volatiles- full suite "As Received" | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | U | 1.00 | 0.333 | 1.00 | ug/L | | 1 | KA1 | 07/23/25 | 1126 | 2834558 | 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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# *Certificate of Analysis*

Report Date: October 1, 2025

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

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: MW357UG4-25 Project: FRNP00714
Sample ID: 733567001 Client ID: FRNP007

| Parameter | Qualifier | Result | DL | RL | Units | PF | DF | Analyst | Date | Time | Batch | Method |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Volatile Organics | | | | | | | | | | | | |
| 8260D, Volatiles- full suite "As Received" | | | | | | | | | | | | |
| Methylene chloride | J | 0.810 | 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 | | 2.17 | 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 | 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 | PB1 | 08/04/25 | 1200 | 2840692 |
| SW846 3535A | SW3535A PCB SPE Extraction | KW3 | 08/13/25 | 1010 | 2845346 |
| SW846 3005A | ICP-MS 3005A PREP | LF1 | 07/18/25 | 0945 | 2831390 |
| SW846 8011 PREP | 8011 Prep | BM1 | 07/21/25 | 0725 | 2832585 |
| SW846 9010C Distillation | SW846 9010C Prep | CH9 | 07/22/25 | 1452 | 2831409 |

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# *Certificate of Analysis*

Report Date: October 1, 2025

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

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: MW357UG4-25 Project: FRNP00714
Sample ID: 733567001 Client ID: FRNP007

| 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" | 6.84 ug/L | 6.97 | 98 | (56%-149%) |
| Decachlorobiphenyl | 8082A, PCB Liquids "As Received" | 0.0964 ug/L | 0.169 | 57 | (30%-135%) |
| 4cmx | 8082A, PCB Liquids "As Received" | 0.121 ug/L | 0.169 | 72 | (26%-108%) |
| Bromofluorobenzene | 8260D, Volatiles- full suite "As Received" | 44.4 ug/L | 50.0 | 89 | (85%-114%) |
| 1,2-Dichloroethane-d4 | 8260D, Volatiles- full suite "As Received" | 47.3 ug/L | 50.0 | 95 | (81%-118%) |
| Toluene-d8 | 8260D, Volatiles- full suite "As Received" | 48.6 ug/L | 50.0 | 97 | (89%-112%) |

**Notes:**

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# *Certificate of Analysis*

Report Date: October 1, 2025

| | |
|---|---|
| Company : | Four Rivers Nuclear Partnership, LLC |
| Address : | 5600 Hobbs Road |
| | Kevil, Kentucky 42053 |
| Contact: | Ms. Jaime Morrow |
| Project: | C-746-U Landfill Quarterly(UG25-04) |

| | | | |
|---|---|---|---|
| Client Sample ID: | MW357UG4-25 | Project: | FRNP00714 |
| Sample ID: | 733567001 | Client ID: | FRNP007 |

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

*Column headers are defined as follows:*

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

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# *Certificate of Analysis*

Report Date: October 1, 2025

| | |
|---|---|
| Company : | Four Rivers Nuclear Partnership, LLC |
| Address : | 5600 Hobbs Road |
| | Kevil, Kentucky 42053 |
| Contact: | Ms. Jaime Morrow |
| Project: | C-746-U Landfill Quarterly(UG25-04) |

| | | | |
|---|---|---|---|
| Client Sample ID: | MW357UG4-25 | Project: | FRNP00714 |
| Sample ID: | 733567002 | Client ID: | FRNP007 |
| Matrix: | WG | | |
| Collect Date: | 16-JUL-25 10:28 | | |
| Receive Date: | 17-JUL-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 | | 0.0844 | 0.000670 | 0.00400 | mg/L | 1.00 | 1 | BCD1 | 08/05/25 | 0015 | 2832058 | 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 | BCD1 | 08/05/25 | 1317 | 2832058 | 2 |

The following Prep Methods were performed:

| Method | Description | Analyst | Date | Time | Prep Batch |
|---|---|---|---|---|---|
| SW846 3005A | ICP-MS 3005A PREP | HC1 | 07/19/25 | 1535 | 2832056 |
| EPA 160 | Laboratory Filtration | HS2 | 07/18/25 | 1000 | 2831476 |

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: October 1, 2025

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

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: MW358DUG4-25
Sample ID: 733567003
Matrix: WG
Collect Date: 16-JUL-25 12:32
Receive Date: 17-JUL-25
Collector: Client

Project: FRNP00714
Client ID: FRNP007

| 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 | 0.0197 | 0.00886 | 0.0197 | ug/L | 0.984 | 1 | BM1 | 07/21/25 | 1402 | 2832586 | 1 |
| Carbon Analysis | | | | | | | | | | | | |
| 9060A, Total Organic Carbon "As Received" | | | | | | | | | | | | |
| Total Organic Carbon Average | J | 0.717 | 0.330 | 2.00 | mg/L | | 1 | KB3 | 07/23/25 | 0402 | 2833167 | 3 |
| Flow Injection Analysis | | | | | | | | | | | | |
| 9012B, Cyanide, Total "As Received" | | | | | | | | | | | | |
| Cyanide, Total | UN | 0.200 | 0.00167 | 0.200 | mg/L | 1.00 | 1 | KLP1 | 07/23/25 | 1207 | 2831410 | 4 |
| Halogen Analysis | | | | | | | | | | | | |
| 9020B, TOX (Organic Halogen) "As Received" | | | | | | | | | | | | |
| Total Organic Halogens | | 12.3 | 3.33 | 10.0 | ug/L | | 1 | JW2 | 08/12/25 | 1603 | 2844911 | 5 |
| Ion Chromatography | | | | | | | | | | | | |
| 300.0, Iodide in Liquid "As Received" | | | | | | | | | | | | |
| Iodide | U | 0.500 | 0.167 | 0.500 | mg/L | | 1 | TXT1 | 07/17/25 | 1542 | 2831375 | 6 |
| SW846 9056A Anions (5 elements) "As Received" | | | | | | | | | | | | |
| Bromide | | 0.421 | 0.0670 | 0.200 | mg/L | | 1 | CH6 | 07/17/25 | 1637 | 2831374 | 7 |
| Fluoride | J | 0.138 | 0.0330 | 4.00 | mg/L | | 1 | | | | | |
| Chloride | JW | 36.2 | 0.335 | 250 | mg/L | | 5 | CH6 | 07/19/25 | 1407 | 2831374 | 8 |
| Nitrate-N | HJ | 1.17 | 0.165 | 10.0 | mg/L | | 5 | | | | | |
| Sulfate | | 53.7 | 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 | 08/05/25 | 1013 | 2840733 | 9 |
| Metals Analysis-ICP-MS | | | | | | | | | | | | |
| 6020, Metals (15+ elements) "As Received" | | | | | | | | | | | | |
| Aluminum | U | 0.0500 | 0.0193 | 0.0500 | mg/L | 1.00 | 1 | PRB | 08/13/25 | 2047 | 2831391 | 10 |
| Arsenic | U | 0.00500 | 0.00200 | 0.00500 | mg/L | 1.00 | 1 | | | | | |
| Barium | | 0.0455 | 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 | | 28.5 | 0.0800 | 0.200 | mg/L | 1.00 | 1 | | | | | |
| Chromium | U | 0.0100 | 0.00300 | 0.0100 | mg/L | 1.00 | 1 | | | | | |
| Cobalt | J | 0.000563 | 0.000300 | 0.00100 | mg/L | 1.00 | 1 | | | | | |
| Copper | J | 0.000721 | 0.000300 | 0.00200 | mg/L | 1.00 | 1 | | | | | |

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# *Certificate of Analysis*

Report Date: October 1, 2025

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

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: MW358DUG4-25 Project: FRNP00714
Sample ID: 733567003 Client ID: FRNP007

| Parameter | Qualifier | Result | DL | RL | Units | PF | DF | Analyst | Date | Time | Batch | Method |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Metals Analysis-ICP-MS | | | | | | | | | | | | |
| 6020, Metals (15+ elements) "As Received" | | | | | | | | | | | | |
| Iron | | 0.237 | 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 | | | | | |
| Manganese | | 0.0295 | 0.00100 | 0.00500 | mg/L | 1.00 | 1 | | | | | |
| Molybdenum | U | 0.00100 | 0.000200 | 0.00100 | mg/L | 1.00 | 1 | | | | | |
| Nickel | | 0.00392 | 0.000600 | 0.00200 | mg/L | 1.00 | 1 | | | | | |
| Potassium | | 2.03 | 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 | | | | | |
| Sodium | | 36.4 | 0.0800 | 0.250 | 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 | 0.00333 | 0.00330 | 0.0200 | mg/L | 1.00 | 1 | | | | | |
| Antimony | U | 0.00300 | 0.00100 | 0.00300 | mg/L | 1.00 | 1 | PRB | 08/14/25 | 0130 | 2831391 | 11 |
| Boron | | 0.374 | 0.0260 | 0.0750 | mg/L | 1.00 | 5 | PRB | 08/13/25 | 1955 | 2831391 | 12 |
| Tantalum | U | 0.00500 | 0.00100 | 0.00500 | mg/L | 1.00 | 1 | JD2 | 08/14/25 | 1448 | 2831391 | 13 |
| Rhodium | U | 0.00500 | 0.00160 | 0.00500 | mg/L | 1.00 | 1 | PRB | 08/13/25 | 0125 | 2831391 | 14 |
| Semi-Volatiles-PCB | | | | | | | | | | | | |
| 8082A, PCB Liquids "As Received" | | | | | | | | | | | | |
| Aroclor-1016 | U | 0.0903 | 0.0301 | 0.0903 | ug/L | 0.000903 | 1 | JXM | 08/13/25 | 2142 | 2845347 | 15 |
| Aroclor-1221 | U | 0.0903 | 0.0301 | 0.0903 | ug/L | 0.000903 | 1 | | | | | |
| Aroclor-1232 | U | 0.0903 | 0.0301 | 0.0903 | ug/L | 0.000903 | 1 | | | | | |
| Aroclor-1242 | U | 0.0903 | 0.0301 | 0.0903 | ug/L | 0.000903 | 1 | | | | | |
| Aroclor-1248 | U | 0.0903 | 0.0301 | 0.0903 | ug/L | 0.000903 | 1 | | | | | |
| Aroclor-1254 | U | 0.0903 | 0.0301 | 0.0903 | ug/L | 0.000903 | 1 | | | | | |
| Aroclor-1260 | U | 0.0903 | 0.0301 | 0.0903 | ug/L | 0.000903 | 1 | | | | | |
| Aroclor-1268 | U | 0.0903 | 0.0301 | 0.0903 | ug/L | 0.000903 | 1 | | | | | |
| Aroclor-Total | U | 0.0903 | 0.0301 | 0.0903 | ug/L | 0.000903 | 1 | | | | | |
| Solids Analysis | | | | | | | | | | | | |
| 160.1, Dissolved Solids "As Received" | | | | | | | | | | | | |
| Total Dissolved Solids | | 234 | 2.38 | 10.0 | mg/L | | | SC1 | 07/23/25 | 1734 | 2834464 | 16 |
| 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(UG25-04)

Client Sample ID: MW358DUG4-25 Project: FRNP00714
Sample ID: 733567003 Client ID: FRNP007

| 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 | BR2 | 07/25/25 | 1538 | 2835351 | 17 |
| Volatile Organics | | | | | | | | | | | | |
| 8260D, Volatiles- full suite "As Received" | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | U | 1.00 | 0.333 | 1.00 | ug/L | | 1 | KA1 | 07/23/25 | 1155 | 2834558 | 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 | | | | | |

**GEL LABORATORIES LLC**
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# *Certificate of Analysis*

Report Date: October 1, 2025

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

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: MW358DUG4-25 Project: FRNP00714
Sample ID: 733567003 Client ID: FRNP007

| Parameter | Qualifier | Result | DL | RL | Units | PF | DF | Analyst Date | Time | Batch | Method |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Volatile Organics | | | | | | | | | | | |
| 8260D, Volatiles- full suite "As Received" | | | | | | | | | | | |
| Methylene chloride | J | 0.750 | 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 | | 3.36 | 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 | 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 | LF1 | 07/18/25 | 0945 | 2831390 |
| SW846 8011 PREP | 8011 Prep | BM1 | 07/21/25 | 0725 | 2832585 |
| SW846 7470A Prep | EPA 7470A Mercury Prep Liquid | PB1 | 08/04/25 | 1200 | 2840692 |
| SW846 9010C Distillation | SW846 9010C Prep | CH9 | 07/22/25 | 1452 | 2831409 |
| SW846 3535A | SW3535A PCB SPE Extraction | KW3 | 08/13/25 | 1010 | 2845346 |

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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(UG25-04)

Client Sample ID: MW358DUG4-25 Project: FRNP00714
Sample ID: 733567003 Client ID: FRNP007

| 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" | 7.13 ug/L | 7.03 | 101 | (56%-149%) |
| Decachlorobiphenyl | 8082A, PCB Liquids "As Received" | 0.111 ug/L | 0.181 | 62 | (30%-135%) |
| 4cmx | 8082A, PCB Liquids "As Received" | 0.143 ug/L | 0.181 | 79 | (26%-108%) |
| Bromofluorobenzene | 8260D, Volatiles- full suite "As Received" | 45.6 ug/L | 50.0 | 91 | (85%-114%) |
| 1,2-Dichloroethane-d4 | 8260D, Volatiles- full suite "As Received" | 48.3 ug/L | 50.0 | 97 | (81%-118%) |
| Toluene-d8 | 8260D, Volatiles- full suite "As Received" | 49.5 ug/L | 50.0 | 99 | (89%-112%) |

**Notes:**

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# *Certificate of Analysis*

Report Date: October 1, 2025

| | |
|---|---|
| Company : | Four Rivers Nuclear Partnership, LLC |
| Address : | 5600 Hobbs Road |
| | Kevil, Kentucky 42053 |
| Contact: | Ms. Jaime Morrow |
| Project: | C-746-U Landfill Quarterly(UG25-04) |

| | | | |
|---|---|---|---|
| Client Sample ID: | MW358DUG4-25 | Project: | FRNP00714 |
| Sample ID: | 733567003 | Client ID: | FRNP007 |

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

*Column headers are defined as follows:*

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

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# *Certificate of Analysis*

Report Date: October 1, 2025

| | |
|---|---|
| Company : | Four Rivers Nuclear Partnership, LLC |
| Address : | 5600 Hobbs Road |
| | Kevil, Kentucky 42053 |
| Contact: | Ms. Jaime Morrow |
| Project: | C-746-U Landfill Quarterly(UG25-04) |

| | | | |
|---|---|---|---|
| Client Sample ID: | MW358DUG4-25 | Project: | FRNP00714 |
| Sample ID: | 733567004 | Client ID: | FRNP007 |
| Matrix: | WG | | |
| Collect Date: | 16-JUL-25 12:32 | | |
| Receive Date: | 17-JUL-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 | | 0.0473 | 0.000670 | 0.00400 | mg/L | 1.00 | 1 | BCD1 | 08/05/25 | 0033 | 2832058 | 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 | BCD1 | 08/05/25 | 1323 | 2832058 | 2 |

The following Prep Methods were performed:

| Method | Description | Analyst | Date | Time | Prep Batch |
|---|---|---|---|---|---|
| EPA 160 | Laboratory Filtration | HS2 | 07/18/25 | 1000 | 2831476 |
| SW846 3005A | ICP-MS 3005A PREP | HC1 | 07/19/25 | 1535 | 2832056 |

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: October 1, 2025

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

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: MW358UG4-25
Sample ID: 733567005
Matrix: WG
Collect Date: 16-JUL-25 12:32
Receive Date: 17-JUL-25
Collector: Client

Project: FRNP00714
Client ID: FRNP007

| 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 | 0.952 | 1 | BM1 | 07/21/25 | 1437 | 2832586 | 1 |
| Carbon Analysis | | | | | | | | | | | | |
| 9060A, Total Organic Carbon "As Received" | | | | | | | | | | | | |
| Total Organic Carbon Average | J | 0.807 | 0.330 | 2.00 | mg/L | | 1 | KB3 | 07/23/25 | 0433 | 2833167 | 3 |
| Flow Injection Analysis | | | | | | | | | | | | |
| 9012B, Cyanide, Total "As Received" | | | | | | | | | | | | |
| Cyanide, Total | UN | 0.200 | 0.00167 | 0.200 | mg/L | 1.00 | 1 | KLP1 | 07/23/25 | 1208 | 2831410 | 4 |
| Halogen Analysis | | | | | | | | | | | | |
| 9020B, TOX (Organic Halogen) "As Received" | | | | | | | | | | | | |
| Total Organic Halogens | | 14.1 | 3.33 | 10.0 | ug/L | | 1 | JW2 | 08/12/25 | 1636 | 2844911 | 5 |
| Ion Chromatography | | | | | | | | | | | | |
| 300.0, Iodide in Liquid "As Received" | | | | | | | | | | | | |
| Iodide | U | 0.500 | 0.167 | 0.500 | mg/L | | 1 | TXT1 | 07/17/25 | 1555 | 2831375 | 6 |
| SW846 9056A Anions (5 elements) "As Received" | | | | | | | | | | | | |
| Bromide | | 0.422 | 0.0670 | 0.200 | mg/L | | 1 | CH6 | 07/17/25 | 1708 | 2831374 | 7 |
| Fluoride | J | 0.139 | 0.0330 | 4.00 | mg/L | | 1 | | | | | |
| Chloride | JW | 36.1 | 0.335 | 250 | mg/L | | 5 | CH6 | 07/19/25 | 1438 | 2831374 | 8 |
| Nitrate-N | HJ | 1.17 | 0.165 | 10.0 | mg/L | | 5 | | | | | |
| Sulfate | | 53.7 | 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 | 08/05/25 | 1014 | 2840733 | 9 |
| Metals Analysis-ICP-MS | | | | | | | | | | | | |
| 6020, Metals (15+ elements) "As Received" | | | | | | | | | | | | |
| Aluminum | U | 0.0500 | 0.0193 | 0.0500 | mg/L | 1.00 | 1 | PRB | 08/13/25 | 2050 | 2831391 | 10 |
| Arsenic | U | 0.00500 | 0.00200 | 0.00500 | mg/L | 1.00 | 1 | | | | | |
| Barium | | 0.0454 | 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 | | 27.8 | 0.0800 | 0.200 | mg/L | 1.00 | 1 | | | | | |
| Chromium | U | 0.0100 | 0.00300 | 0.0100 | mg/L | 1.00 | 1 | | | | | |
| Cobalt | J | 0.000573 | 0.000300 | 0.00100 | mg/L | 1.00 | 1 | | | | | |
| Copper | J | 0.000451 | 0.000300 | 0.00200 | mg/L | 1.00 | 1 | | | | | |

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# *Certificate of Analysis*

Report Date: October 1, 2025

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

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: MW358UG4-25 Project: FRNP00714
Sample ID: 733567005 Client ID: FRNP007

| Parameter | Qualifier | Result | DL | RL | Units | PF | DF | Analyst | Date | Time | Batch | Method |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Metals Analysis-ICP-MS | | | | | | | | | | | | |
| 6020, Metals (15+ elements) "As Received" | | | | | | | | | | | | |
| Iron | | 0.239 | 0.0330 | 0.100 | mg/L | 1.00 | 1 | | | | | |
| Lead | U | 0.00200 | 0.000500 | 0.00200 | mg/L | 1.00 | 1 | | | | | |
| Magnesium | | 12.0 | 0.0100 | 0.0300 | mg/L | 1.00 | 1 | | | | | |
| Manganese | | 0.0314 | 0.00100 | 0.00500 | mg/L | 1.00 | 1 | | | | | |
| Molybdenum | U | 0.00100 | 0.000200 | 0.00100 | mg/L | 1.00 | 1 | | | | | |
| Nickel | J | 0.00197 | 0.000600 | 0.00200 | mg/L | 1.00 | 1 | | | | | |
| Potassium | | 1.98 | 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 | | | | | |
| Sodium | | 35.5 | 0.0800 | 0.250 | 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 | U | 0.0200 | 0.00330 | 0.0200 | mg/L | 1.00 | 1 | | | | | |
| Antimony | U | 0.00300 | 0.00100 | 0.00300 | mg/L | 1.00 | 1 | PRB | 08/14/25 | 0133 | 2831391 | 11 |
| Boron | | 0.396 | 0.0260 | 0.0750 | mg/L | 1.00 | 5 | PRB | 08/13/25 | 1958 | 2831391 | 12 |
| Tantalum | U | 0.00500 | 0.00100 | 0.00500 | mg/L | 1.00 | 1 | JD2 | 08/14/25 | 1449 | 2831391 | 13 |
| Rhodium | U | 0.00500 | 0.00160 | 0.00500 | mg/L | 1.00 | 1 | PRB | 08/13/25 | 0128 | 2831391 | 14 |
| Semi-Volatiles-PCB | | | | | | | | | | | | |
| 8082A, PCB Liquids "As Received" | | | | | | | | | | | | |
| Aroclor-1016 | U | 0.0903 | 0.0301 | 0.0903 | ug/L | 0.000903 | 1 | JXM | 08/13/25 | 2157 | 2845347 | 15 |
| Aroclor-1221 | U | 0.0903 | 0.0301 | 0.0903 | ug/L | 0.000903 | 1 | | | | | |
| Aroclor-1232 | U | 0.0903 | 0.0301 | 0.0903 | ug/L | 0.000903 | 1 | | | | | |
| Aroclor-1242 | U | 0.0903 | 0.0301 | 0.0903 | ug/L | 0.000903 | 1 | | | | | |
| Aroclor-1248 | U | 0.0903 | 0.0301 | 0.0903 | ug/L | 0.000903 | 1 | | | | | |
| Aroclor-1254 | U | 0.0903 | 0.0301 | 0.0903 | ug/L | 0.000903 | 1 | | | | | |
| Aroclor-1260 | U | 0.0903 | 0.0301 | 0.0903 | ug/L | 0.000903 | 1 | | | | | |
| Aroclor-1268 | U | 0.0903 | 0.0301 | 0.0903 | ug/L | 0.000903 | 1 | | | | | |
| Aroclor-Total | U | 0.0903 | 0.0301 | 0.0903 | ug/L | 0.000903 | 1 | | | | | |
| Solids Analysis | | | | | | | | | | | | |
| 160.1, Dissolved Solids "As Received" | | | | | | | | | | | | |
| Total Dissolved Solids | | 265 | 2.38 | 10.0 | mg/L | | | SC1 | 07/23/25 | 1734 | 2834464 | 16 |
| Spectrometric Analysis | | | | | | | | | | | | |
| 410.4, Chem. Oxygen Demand "As Received" | | | | | | | | | | | | |

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# *Certificate of Analysis*

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Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: MW358UG4-25 Project: FRNP00714
Sample ID: 733567005 Client ID: FRNP007

| 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 | BR2 | 07/25/25 | 1538 | 2835351 | 17 |
| Volatile Organics | | | | | | | | | | | | |
| 8260D, Volatiles- full suite "As Received" | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | U | 1.00 | 0.333 | 1.00 | ug/L | | 1 | KA1 | 07/23/25 | 1225 | 2834558 | 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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# *Certificate of Analysis*

Report Date: October 1, 2025

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Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: MW358UG4-25 Project: FRNP00714
Sample ID: 733567005 Client ID: FRNP007

| Parameter | Qualifier | Result | DL | RL | Units | PF | DF | Analyst Date | Time | Batch | Method |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Volatile Organics | | | | | | | | | | | |
| 8260D, Volatiles- full suite "As Received" | | | | | | | | | | | |
| Methylene chloride | J | 0.700 | 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 | | 3.20 | 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 | 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 | KW3 | 08/13/25 | 1010 | 2845346 |
| SW846 3005A | ICP-MS 3005A PREP | LF1 | 07/18/25 | 0945 | 2831390 |
| SW846 8011 PREP | 8011 Prep | BM1 | 07/21/25 | 0725 | 2832585 |
| SW846 7470A Prep | EPA 7470A Mercury Prep Liquid | PB1 | 08/04/25 | 1200 | 2840692 |
| SW846 9010C Distillation | SW846 9010C Prep | CH9 | 07/22/25 | 1452 | 2831409 |

**GEL LABORATORIES LLC**
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# *Certificate of Analysis*

Report Date: October 1, 2025

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

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: MW358UG4-25 Project: FRNP00714
Sample ID: 733567005 Client ID: FRNP007

| 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" | 7.10 ug/L | 6.80 | 104 | (56%-149%) |
| Decachlorobiphenyl | 8082A, PCB Liquids "As Received" | 0.0960 ug/L | 0.181 | 53 | (30%-135%) |
| 4cmx | 8082A, PCB Liquids "As Received" | 0.131 ug/L | 0.181 | 72 | (26%-108%) |
| Bromofluorobenzene | 8260D, Volatiles- full suite "As Received" | 44.7 ug/L | 50.0 | 89 | (85%-114%) |
| 1,2-Dichloroethane-d4 | 8260D, Volatiles- full suite "As Received" | 48.4 ug/L | 50.0 | 97 | (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(UG25-04) |

| | | | |
|---|---|---|---|
| Client Sample ID: | MW358UG4-25 | Project: | FRNP00714 |
| Sample ID: | 733567005 | Client ID: | FRNP007 |

| 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: October 1, 2025

| | |
|---|---|
| Company : | Four Rivers Nuclear Partnership, LLC |
| Address : | 5600 Hobbs Road |
| | Kevil, Kentucky 42053 |
| Contact: | Ms. Jaime Morrow |
| Project: | C-746-U Landfill Quarterly(UG25-04) |

| | | | |
|---|---|---|---|
| Client Sample ID: | MW358UG4-25 | Project: | FRNP00714 |
| Sample ID: | 733567006 | Client ID: | FRNP007 |
| Matrix: | WG | | |
| Collect Date: | 16-JUL-25 12:32 | | |
| Receive Date: | 17-JUL-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 | | 0.0481 | 0.000670 | 0.00400 | mg/L | 1.00 | 1 | BCD1 | 08/05/25 | 0036 | 2832058 | 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 | BCD1 | 08/05/25 | 1324 | 2832058 | 2 |

The following Prep Methods were performed:

| Method | Description | Analyst | Date | Time | Prep Batch |
|---|---|---|---|---|---|
| EPA 160 | Laboratory Filtration | HS2 | 07/18/25 | 1000 | 2831476 |
| SW846 3005A | ICP-MS 3005A PREP | HC1 | 07/19/25 | 1535 | 2832056 |

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: October 1, 2025

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

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: MW359UG4-25
Sample ID: 733567007
Matrix: WG
Collect Date: 16-JUL-25 13:42
Receive Date: 17-JUL-25
Collector: Client

Project: FRNP00714
Client ID: FRNP007

| 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 | BM1 | 07/21/25 | 1512 | 2832586 | 1 |
| Carbon Analysis | | | | | | | | | | | | |
| 9060A, Total Organic Carbon "As Received" | | | | | | | | | | | | |
| Total Organic Carbon Average | J | 0.767 | 0.330 | 2.00 | mg/L | | 1 | KB3 | 07/23/25 | 2146 | 2834580 | 3 |
| Flow Injection Analysis | | | | | | | | | | | | |
| 9012B, Cyanide, Total "As Received" | | | | | | | | | | | | |
| Cyanide, Total | UN | 0.200 | 0.00167 | 0.200 | mg/L | 1.00 | 1 | KLP1 | 07/23/25 | 1209 | 2831410 | 4 |
| Halogen Analysis | | | | | | | | | | | | |
| 9020B, TOX (Organic Halogen) "As Received" | | | | | | | | | | | | |
| Total Organic Halogens | J | 8.52 | 3.33 | 10.0 | ug/L | | 1 | JW2 | 08/12/25 | 1726 | 2844911 | 5 |
| Ion Chromatography | | | | | | | | | | | | |
| 300.0, Iodide in Liquid "As Received" | | | | | | | | | | | | |
| Iodide | U | 0.500 | 0.167 | 0.500 | mg/L | | 1 | TXT1 | 07/17/25 | 1608 | 2831375 | 6 |
| SW846 9056A Anions (5 elements) "As Received" | | | | | | | | | | | | |
| Bromide | U | 0.200 | 0.0670 | 0.200 | mg/L | | 1 | CH6 | 07/17/25 | 1738 | 2831374 | 7 |
| Chloride | JW | 0.713 | 0.0670 | 250 | mg/L | | 1 | | | | | |
| Fluoride | J | 0.0623 | 0.0330 | 4.00 | mg/L | | 1 | | | | | |
| Nitrate-N | HJ | 0.593 | 0.132 | 10.0 | mg/L | | 4 | CH6 | 07/19/25 | 1509 | 2831374 | 8 |
| Sulfate | | 36.2 | 0.532 | 1.60 | mg/L | | 4 | | | | | |
| Mercury Analysis-CVAA | | | | | | | | | | | | |
| 7470, Mercury Liquid "As Received" | | | | | | | | | | | | |
| Mercury | U | 0.000200 | 0.0000670 | 0.000200 | mg/L | 1.00 | 1 | JP2 | 08/05/25 | 1016 | 2840733 | 9 |
| Metals Analysis-ICP-MS | | | | | | | | | | | | |
| 6020, Metals (15+ elements) "As Received" | | | | | | | | | | | | |
| Aluminum | J | 0.0458 | 0.0193 | 0.0500 | mg/L | 1.00 | 1 | PRB | 08/13/25 | 2001 | 2831391 | 10 |
| Arsenic | U | 0.00500 | 0.00200 | 0.00500 | mg/L | 1.00 | 1 | | | | | |
| Barium | | 0.0210 | 0.000670 | 0.00400 | mg/L | 1.00 | 1 | | | | | |
| Beryllium | U | 0.000500 | 0.000200 | 0.000500 | mg/L | 1.00 | 1 | | | | | |
| Boron | J | 0.00626 | 0.00520 | 0.0150 | mg/L | 1.00 | 1 | | | | | |
| Cadmium | U | 0.00100 | 0.000300 | 0.00100 | mg/L | 1.00 | 1 | | | | | |
| Calcium | | 4.88 | 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: October 1, 2025

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

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: MW359UG4-25 Project: FRNP00714
Sample ID: 733567007 Client ID: FRNP007

| 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 | 0.00142 | 0.000300 | 0.00200 | mg/L | 1.00 | 1 | | | | | |
| Iron | J | 0.0580 | 0.0330 | 0.100 | mg/L | 1.00 | 1 | | | | | |
| Lead | U | 0.00200 | 0.000500 | 0.00200 | mg/L | 1.00 | 1 | | | | | |
| Magnesium | | 2.79 | 0.0100 | 0.0300 | mg/L | 1.00 | 1 | | | | | |
| Manganese | J | 0.00102 | 0.00100 | 0.00500 | mg/L | 1.00 | 1 | | | | | |
| Molybdenum | U | 0.00100 | 0.000200 | 0.00100 | mg/L | 1.00 | 1 | | | | | |
| Nickel | J | 0.000850 | 0.000600 | 0.00200 | mg/L | 1.00 | 1 | | | | | |
| Potassium | J | 0.108 | 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 | | | | | |
| Sodium | | 29.5 | 0.0800 | 0.250 | 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 | J | 0.00409 | 0.00330 | 0.0200 | mg/L | 1.00 | 1 | | | | | |
| Zinc | J | 0.00566 | 0.00330 | 0.0200 | mg/L | 1.00 | 1 | | | | | |
| Antimony | U | 0.00300 | 0.00100 | 0.00300 | mg/L | 1.00 | 1 | PRB | 08/14/25 | 0044 | 2831391 | 11 |
| Tantalum | U | 0.00500 | 0.00100 | 0.00500 | mg/L | 1.00 | 1 | JD2 | 08/14/25 | 1450 | 2831391 | 12 |
| Rhodium | U | 0.00500 | 0.00160 | 0.00500 | mg/L | 1.00 | 1 | PRB | 08/13/25 | 0131 | 2831391 | 13 |
| Semi-Volatiles-PCB | | | | | | | | | | | | |
| 8082A, PCB Liquids "As Received" | | | | | | | | | | | | |
| Aroclor-1016 | U | 0.0866 | 0.0289 | 0.0866 | ug/L | 0.000866 | 1 | JXM | 08/13/25 | 2213 | 2845347 | 14 |
| Aroclor-1221 | U | 0.0866 | 0.0289 | 0.0866 | ug/L | 0.000866 | 1 | | | | | |
| Aroclor-1232 | U | 0.0866 | 0.0289 | 0.0866 | ug/L | 0.000866 | 1 | | | | | |
| Aroclor-1242 | U | 0.0866 | 0.0289 | 0.0866 | ug/L | 0.000866 | 1 | | | | | |
| Aroclor-1248 | U | 0.0866 | 0.0289 | 0.0866 | ug/L | 0.000866 | 1 | | | | | |
| Aroclor-1254 | U | 0.0866 | 0.0289 | 0.0866 | ug/L | 0.000866 | 1 | | | | | |
| Aroclor-1260 | U | 0.0866 | 0.0289 | 0.0866 | ug/L | 0.000866 | 1 | | | | | |
| Aroclor-1268 | U | 0.0866 | 0.0289 | 0.0866 | ug/L | 0.000866 | 1 | | | | | |
| Aroclor-Total | U | 0.0866 | 0.0289 | 0.0866 | ug/L | 0.000866 | 1 | | | | | |
| Solids Analysis | | | | | | | | | | | | |
| 160.1, Dissolved Solids "As Received" | | | | | | | | | | | | |
| Total Dissolved Solids | | 146 | 2.38 | 10.0 | mg/L | | | SC1 | 07/23/25 | 1734 | 2834464 | 15 |
| Spectrometric Analysis | | | | | | | | | | | | |
| 410.4, Chem. Oxygen Demand "As Received" | | | | | | | | | | | | |

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# *Certificate of Analysis*

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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(UG25-04)

Client Sample ID: MW359UG4-25 Project: FRNP00714
Sample ID: 733567007 Client ID: FRNP007

| 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 | BR2 | 07/25/25 | 1538 | 2835351 | 16 |
| Volatile Organics | | | | | | | | | | | | |
| 8260D, Volatiles- full suite "As Received" | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | U | 1.00 | 0.333 | 1.00 | ug/L | | 1 | KA1 | 07/23/25 | 1255 | 2834558 | 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*

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Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: MW359UG4-25 Project: FRNP00714
Sample ID: 733567007 Client ID: FRNP007

| Parameter | Qualifier | Result | DL | RL | Units | PF | DF | Analyst | Date | Time | Batch | Method |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Volatile Organics | | | | | | | | | | | | |
| 8260D, Volatiles- full suite "As Received" | | | | | | | | | | | | |
| Methylene chloride | J | 0.750 | 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 | | 3.73 | 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 | 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 | BM1 | 07/21/25 | 0725 | 2832585 |
| SW846 3535A | SW3535A PCB SPE Extraction | KW3 | 08/13/25 | 1010 | 2845346 |
| SW846 3005A | ICP-MS 3005A PREP | LF1 | 07/18/25 | 0945 | 2831390 |
| SW846 9010C Distillation | SW846 9010C Prep | CH9 | 07/22/25 | 1452 | 2831409 |
| SW846 7470A Prep | EPA 7470A Mercury Prep Liquid | PB1 | 08/04/25 | 1200 | 2840692 |

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# *Certificate of Analysis*

Report Date: October 1, 2025

| | |
|---|---|
| Company : | Four Rivers Nuclear Partnership, LLC |
| Address : | 5600 Hobbs Road |
| | Kevil, Kentucky 42053 |
| Contact: | Ms. Jaime Morrow |
| Project: | C-746-U Landfill Quarterly(UG25-04) |

| | | | |
|---|---|---|---|
| Client Sample ID: | MW359UG4-25 | Project: | FRNP00714 |
| Sample ID: | 733567007 | Client ID: | FRNP007 |

| 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" | 7.12 ug/L | 6.74 | 106 | (56%-149%) |
| Decachlorobiphenyl | 8082A, PCB Liquids "As Received" | 0.0739 ug/L | 0.173 | 43 | (30%-135%) |
| 4cmx | 8082A, PCB Liquids "As Received" | 0.129 ug/L | 0.173 | 74 | (26%-108%) |
| Bromofluorobenzene | 8260D, Volatiles- full suite "As Received" | 46.5 ug/L | 50.0 | 93 | (85%-114%) |
| 1,2-Dichloroethane-d4 | 8260D, Volatiles- full suite "As Received" | 48.2 ug/L | 50.0 | 96 | (81%-118%) |
| Toluene-d8 | 8260D, Volatiles- full suite "As Received" | 49.6 ug/L | 50.0 | 99 | (89%-112%) |

**Notes:**

*Column headers are defined as follows:*

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

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# *Certificate of Analysis*

Report Date: October 1, 2025

| | |
|---|---|
| Company : | Four Rivers Nuclear Partnership, LLC |
| Address : | 5600 Hobbs Road |
| | Kevil, Kentucky 42053 |
| Contact: | Ms. Jaime Morrow |
| Project: | C-746-U Landfill Quarterly(UG25-04) |

| | | | |
|---|---|---|---|
| Client Sample ID: | MW359UG4-25 | Project: | FRNP00714 |
| Sample ID: | 733567008 | Client ID: | FRNP007 |
| Matrix: | WG | | |
| Collect Date: | 16-JUL-25 13:42 | | |
| Receive Date: | 17-JUL-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 | | 0.0205 | 0.000670 | 0.00400 | mg/L | 1.00 | 1 | BCD1 | 08/05/25 | 0039 | 2832058 | 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 | BCD1 | 08/05/25 | 1325 | 2832058 | 2 |

The following Prep Methods were performed:

| Method | Description | Analyst | Date | Time | Prep Batch |
|---|---|---|---|---|---|
| SW846 3005A | ICP-MS 3005A PREP | HC1 | 07/19/25 | 1535 | 2832056 |
| EPA 160 | Laboratory Filtration | HS2 | 07/18/25 | 1000 | 2831476 |

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(UG25-04)

Client Sample ID: MW360UG4-25
Sample ID: 733567009
Matrix: WG
Collect Date: 16-JUL-25 07:44
Receive Date: 17-JUL-25
Collector: Client

Project: FRNP00714
Client ID: FRNP007

| 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 | BM1 | 07/21/25 | 1546 | 2832586 | 1 |
| Carbon Analysis | | | | | | | | | | | | |
| 9060A, Total Organic Carbon "As Received" | | | | | | | | | | | | |
| Total Organic Carbon Average | J | 0.927 | 0.330 | 2.00 | mg/L | | 1 | KB3 | 07/23/25 | 2217 | 2834580 | 3 |
| Flow Injection Analysis | | | | | | | | | | | | |
| 9012B, Cyanide, Total "As Received" | | | | | | | | | | | | |
| Cyanide, Total | UN | 0.200 | 0.00167 | 0.200 | mg/L | 1.00 | 1 | KLP1 | 07/23/25 | 1210 | 2831410 | 4 |
| Halogen Analysis | | | | | | | | | | | | |
| 9020B, TOX (Organic Halogen) "As Received" | | | | | | | | | | | | |
| Total Organic Halogens | J | 8.20 | 3.33 | 10.0 | ug/L | | 1 | JW2 | 08/12/25 | 1758 | 2844911 | 5 |
| Ion Chromatography | | | | | | | | | | | | |
| 300.0, Iodide in Liquid "As Received" | | | | | | | | | | | | |
| Iodide | U | 0.500 | 0.167 | 0.500 | mg/L | | 1 | TXT1 | 07/17/25 | 1621 | 2831375 | 6 |
| SW846 9056A Anions (5 elements) "As Received" | | | | | | | | | | | | |
| Bromide | J | 0.139 | 0.0670 | 0.200 | mg/L | | 1 | CH6 | 07/17/25 | 1809 | 2831374 | 7 |
| Chloride | JW | 5.53 | 0.0670 | 250 | mg/L | | 1 | | | | | |
| Fluoride | J | 0.225 | 0.0330 | 4.00 | mg/L | | 1 | | | | | |
| Sulfate | | 9.94 | 0.133 | 0.400 | mg/L | | 1 | | | | | |
| Nitrate-N | HJ | 0.781 | 0.0660 | 10.0 | mg/L | | 2 | CH6 | 07/19/25 | 1540 | 2831374 | 8 |
| Mercury Analysis-CVAA | | | | | | | | | | | | |
| 7470, Mercury Liquid "As Received" | | | | | | | | | | | | |
| Mercury | U | 0.000200 | 0.0000670 | 0.000200 | mg/L | 1.00 | 1 | JP2 | 08/05/25 | 1017 | 2840733 | 9 |
| Metals Analysis-ICP-MS | | | | | | | | | | | | |
| 6020, Metals (15+ elements) "As Received" | | | | | | | | | | | | |
| Aluminum | | 0.0571 | 0.0193 | 0.0500 | mg/L | 1.00 | 1 | PRB | 08/13/25 | 2058 | 2831391 | 10 |
| Arsenic | U | 0.00500 | 0.00200 | 0.00500 | mg/L | 1.00 | 1 | | | | | |
| Barium | | 0.191 | 0.000670 | 0.00400 | mg/L | 1.00 | 1 | | | | | |
| Beryllium | U | 0.000500 | 0.000200 | 0.000500 | mg/L | 1.00 | 1 | | | | | |
| Boron | | 0.0218 | 0.00520 | 0.0150 | mg/L | 1.00 | 1 | | | | | |
| Cadmium | U | 0.00100 | 0.000300 | 0.00100 | mg/L | 1.00 | 1 | | | | | |
| Calcium | | 17.8 | 0.0800 | 0.200 | mg/L | 1.00 | 1 | | | | | |
| Chromium | U | 0.0100 | 0.00300 | 0.0100 | mg/L | 1.00 | 1 | | | | | |
| Cobalt | J | 0.000549 | 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(UG25-04)

Client Sample ID: MW360UG4-25 Project: FRNP00714
Sample ID: 733567009 Client ID: FRNP007

| 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 | 0.00182 | 0.000300 | 0.00200 | mg/L | 1.00 | 1 | | | | | |
| Iron | | 0.120 | 0.0330 | 0.100 | mg/L | 1.00 | 1 | | | | | |
| Lead | U | 0.00200 | 0.000500 | 0.00200 | mg/L | 1.00 | 1 | | | | | |
| Magnesium | | 7.32 | 0.0100 | 0.0300 | mg/L | 1.00 | 1 | | | | | |
| Manganese | | 0.00524 | 0.00100 | 0.00500 | mg/L | 1.00 | 1 | | | | | |
| Molybdenum | U | 0.00100 | 0.000200 | 0.00100 | mg/L | 1.00 | 1 | | | | | |
| Nickel | J | 0.00159 | 0.000600 | 0.00200 | mg/L | 1.00 | 1 | | | | | |
| Potassium | | 0.663 | 0.0800 | 0.300 | mg/L | 1.00 | 1 | | | | | |
| Selenium | J | 0.00192 | 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 | 0.0000780 | 0.0000670 | 0.000200 | mg/L | 1.00 | 1 | | | | | |
| Vanadium | U | 0.0200 | 0.00330 | 0.0200 | mg/L | 1.00 | 1 | | | | | |
| Zinc | J | 0.00754 | 0.00330 | 0.0200 | mg/L | 1.00 | 1 | | | | | |
| Antimony | U | 0.00300 | 0.00100 | 0.00300 | mg/L | 1.00 | 1 | PRB | 08/14/25 | 0141 | 2831391 | 11 |
| Sodium | | 54.6 | 0.400 | 1.25 | mg/L | 1.00 | 5 | PRB | 08/13/25 | 2010 | 2831391 | 12 |
| Tantalum | U | 0.00500 | 0.00100 | 0.00500 | mg/L | 1.00 | 1 | JD2 | 08/14/25 | 1451 | 2831391 | 13 |
| Rhodium | U | 0.00500 | 0.00160 | 0.00500 | mg/L | 1.00 | 1 | PRB | 08/13/25 | 0134 | 2831391 | 14 |
| Semi-Volatiles-PCB | | | | | | | | | | | | |
| 8082A, PCB Liquids "As Received" | | | | | | | | | | | | |
| Aroclor-1016 | U | 0.0864 | 0.0288 | 0.0864 | ug/L | 0.000864 | 1 | JXM | 08/13/25 | 2228 | 2845347 | 15 |
| Aroclor-1221 | U | 0.0864 | 0.0288 | 0.0864 | ug/L | 0.000864 | 1 | | | | | |
| Aroclor-1232 | U | 0.0864 | 0.0288 | 0.0864 | ug/L | 0.000864 | 1 | | | | | |
| Aroclor-1242 | U | 0.0864 | 0.0288 | 0.0864 | ug/L | 0.000864 | 1 | | | | | |
| Aroclor-1248 | U | 0.0864 | 0.0288 | 0.0864 | ug/L | 0.000864 | 1 | | | | | |
| Aroclor-1254 | U | 0.0864 | 0.0288 | 0.0864 | ug/L | 0.000864 | 1 | | | | | |
| Aroclor-1260 | U | 0.0864 | 0.0288 | 0.0864 | ug/L | 0.000864 | 1 | | | | | |
| Aroclor-1268 | U | 0.0864 | 0.0288 | 0.0864 | ug/L | 0.000864 | 1 | | | | | |
| Aroclor-Total | U | 0.0864 | 0.0288 | 0.0864 | ug/L | 0.000864 | 1 | | | | | |
| Solids Analysis | | | | | | | | | | | | |
| 160.1, Dissolved Solids "As Received" | | | | | | | | | | | | |
| Total Dissolved Solids | | 217 | 2.38 | 10.0 | mg/L | | | SC1 | 07/23/25 | 1734 | 2834464 | 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(UG25-04)

Client Sample ID: MW360UG4-25 Project: FRNP00714
Sample ID: 733567009 Client ID: FRNP007

| 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 | BR2 | 07/25/25 | 1538 | 2835351 | 17 |
| Volatile Organics | | | | | | | | | | | | |
| 8260D, Volatiles- full suite "As Received" | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | U | 1.00 | 0.333 | 1.00 | ug/L | | 1 | KA1 | 07/23/25 | 1324 | 2834558 | 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(UG25-04)

Client Sample ID: MW360UG4-25 Project: FRNP00714
Sample ID: 733567009 Client ID: FRNP007

| Parameter | Qualifier | Result | DL | RL | Units | PF | DF | Analyst | Date | Time | Batch | Method |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Volatile Organics | | | | | | | | | | | | |
| 8260D, Volatiles- full suite "As Received" | | | | | | | | | | | | |
| Methylene chloride | J | 0.580 | 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 | | 2.28 | 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 | 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 | BM1 | 07/21/25 | 0725 | 2832585 |
| SW846 3535A | SW3535A PCB SPE Extraction | KW3 | 08/13/25 | 1010 | 2845346 |
| SW846 3005A | ICP-MS 3005A PREP | LF1 | 07/18/25 | 0945 | 2831390 |
| SW846 7470A Prep | EPA 7470A Mercury Prep Liquid | PB1 | 08/04/25 | 1200 | 2840692 |
| SW846 9010C Distillation | SW846 9010C Prep | CH9 | 07/22/25 | 1452 | 2831409 |

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Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: MW360UG4-25 Project: FRNP00714
Sample ID: 733567009 Client ID: FRNP007

| 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" | 6.76 ug/L | 6.78 | 100 | (56%-149%) |
| Decachlorobiphenyl | 8082A, PCB Liquids "As Received" | 0.0704 ug/L | 0.173 | 41 | (30%-135%) |
| 4cmx | 8082A, PCB Liquids "As Received" | 0.108 ug/L | 0.173 | 63 | (26%-108%) |
| Bromofluorobenzene | 8260D, Volatiles- full suite "As Received" | 45.2 ug/L | 50.0 | 90 | (85%-114%) |
| 1,2-Dichloroethane-d4 | 8260D, Volatiles- full suite "As Received" | 48.6 ug/L | 50.0 | 97 | (81%-118%) |
| Toluene-d8 | 8260D, Volatiles- full suite "As Received" | 49.0 ug/L | 50.0 | 98 | (89%-112%) |

**Notes:**

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| Contact: | Ms. Jaime Morrow |
| Project: | C-746-U Landfill Quarterly(UG25-04) |

| | | | |
|---|---|---|---|
| Client Sample ID: | MW360UG4-25 | Project: | FRNP00714 |
| Sample ID: | 733567009 | Client ID: | FRNP007 |

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

*Column headers are defined as follows:*

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

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| Address : | 5600 Hobbs Road |
| | Kevil, Kentucky 42053 |
| Contact: | Ms. Jaime Morrow |
| Project: | C-746-U Landfill Quarterly(UG25-04) |

| | | | |
|---|---|---|---|
| Client Sample ID: | MW360UG4-25 | Project: | FRNP00714 |
| Sample ID: | 733567010 | Client ID: | FRNP007 |
| Matrix: | WG | | |
| Collect Date: | 16-JUL-25 07:44 | | |
| Receive Date: | 17-JUL-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 | | 0.192 | 0.000670 | 0.00400 | mg/L | 1.00 | 1 | BCD1 | 08/05/25 | 0041 | 2832058 | 1 |
| Chromium | U | 0.0100 | 0.00300 | 0.0100 | mg/L | 1.00 | 1 | | | | | |
| Uranium | J | 0.0000700 | 0.0000670 | 0.000200 | mg/L | 1.00 | 1 | BCD1 | 08/05/25 | 1326 | 2832058 | 2 |

The following Prep Methods were performed:

| Method | Description | Analyst | Date | Time | Prep Batch |
|---|---|---|---|---|---|
| SW846 3005A | ICP-MS 3005A PREP | HC1 | 07/19/25 | 1535 | 2832056 |
| EPA 160 | Laboratory Filtration | HS2 | 07/18/25 | 1000 | 2831476 |

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: October 1, 2025

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

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: MW361UG4-25
Sample ID: 733567011
Matrix: WG
Collect Date: 16-JUL-25 08:35
Receive Date: 17-JUL-25
Collector: Client

Project: FRNP00714
Client ID: FRNP007

| 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 | 0.955 | 1 | BM1 | 07/21/25 | 1621 | 2832586 | 1 |
| Carbon Analysis | | | | | | | | | | | | |
| 9060A, Total Organic Carbon "As Received" | | | | | | | | | | | | |
| Total Organic Carbon Average | J | 0.419 | 0.330 | 2.00 | mg/L | | 1 | KB3 | 07/23/25 | 2249 | 2834580 | 3 |
| Flow Injection Analysis | | | | | | | | | | | | |
| 9012B, Cyanide, Total "As Received" | | | | | | | | | | | | |
| Cyanide, Total | UN | 0.200 | 0.00167 | 0.200 | mg/L | 1.00 | 1 | KLP1 | 07/23/25 | 1212 | 2831410 | 4 |
| Halogen Analysis | | | | | | | | | | | | |
| 9020B, TOX (Organic Halogen) "As Received" | | | | | | | | | | | | |
| Total Organic Halogens | J | 9.48 | 3.33 | 10.0 | ug/L | | 1 | JW2 | 08/12/25 | 1336 | 2844911 | 5 |
| Ion Chromatography | | | | | | | | | | | | |
| 300.0, Iodide in Liquid "As Received" | | | | | | | | | | | | |
| Iodide | U | 0.500 | 0.167 | 0.500 | mg/L | | 1 | TXT1 | 07/17/25 | 1634 | 2831375 | 6 |
| SW846 9056A Anions (5 elements) "As Received" | | | | | | | | | | | | |
| Bromide | | 0.447 | 0.0670 | 0.200 | mg/L | | 1 | CH6 | 07/19/25 | 1204 | 2831374 | 7 |
| Fluoride | J | 0.111 | 0.0330 | 4.00 | mg/L | | 1 | | | | | |
| Chloride | JW | 36.7 | 0.335 | 250 | mg/L | | 5 | CH6 | 07/19/25 | 1610 | 2831374 | 8 |
| Nitrate-N | HJ | 1.23 | 0.165 | 10.0 | mg/L | | 5 | | | | | |
| Sulfate | | 67.5 | 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 | 08/05/25 | 1023 | 2840733 | 9 |
| Metals Analysis-ICP-MS | | | | | | | | | | | | |
| 6020, Metals (15+ elements) "As Received" | | | | | | | | | | | | |
| Aluminum | U | 0.0500 | 0.0193 | 0.0500 | mg/L | 1.00 | 1 | PRB | 08/13/25 | 2101 | 2831391 | 10 |
| Arsenic | U | 0.00500 | 0.00200 | 0.00500 | mg/L | 1.00 | 1 | | | | | |
| Barium | | 0.0590 | 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 | | 30.2 | 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 | J | 0.000577 | 0.000300 | 0.00200 | mg/L | 1.00 | 1 | | | | | |

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# *Certificate of Analysis*

Report Date: October 1, 2025

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

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: MW361UG4-25 Project: FRNP00714
Sample ID: 733567011 Client ID: FRNP007

| 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 | | 13.2 | 0.0100 | 0.0300 | mg/L | 1.00 | 1 | | | | | |
| Manganese | J | 0.00213 | 0.00100 | 0.00500 | 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 | | 2.08 | 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 | | | | | |
| Sodium | | 40.3 | 0.0800 | 0.250 | 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 | U | 0.0200 | 0.00330 | 0.0200 | mg/L | 1.00 | 1 | | | | | |
| Antimony | U | 0.00300 | 0.00100 | 0.00300 | mg/L | 1.00 | 1 | PRB | 08/14/25 | 0144 | 2831391 | 11 |
| Boron | | 0.232 | 0.0260 | 0.0750 | mg/L | 1.00 | 5 | PRB | 08/13/25 | 2013 | 2831391 | 12 |
| Tantalum | U | 0.00500 | 0.00100 | 0.00500 | mg/L | 1.00 | 1 | JD2 | 08/14/25 | 1453 | 2831391 | 13 |
| Rhodium | U | 0.00500 | 0.00160 | 0.00500 | mg/L | 1.00 | 1 | PRB | 08/13/25 | 0143 | 2831391 | 14 |
| Semi-Volatiles-PCB | | | | | | | | | | | | |
| 8082A, PCB Liquids "As Received" | | | | | | | | | | | | |
| Aroclor-1016 | U | 0.100 | 0.0333 | 0.100 | ug/L | 0.00100 | 1 | JXM | 08/13/25 | 2243 | 2845347 | 15 |
| 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 | | 282 | 2.38 | 10.0 | mg/L | | | SC1 | 07/23/25 | 1734 | 2834464 | 16 |
| Spectrometric Analysis | | | | | | | | | | | | |
| 410.4, Chem. Oxygen Demand "As Received" | | | | | | | | | | | | |

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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(UG25-04)

Client Sample ID: MW361UG4-25 Project: FRNP00714
Sample ID: 733567011 Client ID: FRNP007

| 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 | BR2 | 07/25/25 | 1538 | 2835351 | 17 |
| Volatile Organics | | | | | | | | | | | | |
| 8260D, Volatiles- full suite "As Received" | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | U | 1.00 | 0.333 | 1.00 | ug/L | | 1 | KA1 | 07/23/25 | 1354 | 2834558 | 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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Report Date: October 1, 2025

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Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: MW361UG4-25 Project: FRNP00714
Sample ID: 733567011 Client ID: FRNP007

| Parameter | Qualifier | Result | DL | RL | Units | PF | DF | Analyst | Date | Time | Batch | Method |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Volatile Organics | | | | | | | | | | | | |
| 8260D, Volatiles- full suite "As Received" | | | | | | | | | | | | |
| Methylene chloride | J | 0.650 | 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 | | 3.67 | 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 | U | 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 | CH9 | 07/22/25 | 1452 | 2831409 |
| SW846 3005A | ICP-MS 3005A PREP | LF1 | 07/18/25 | 0945 | 2831390 |
| SW846 8011 PREP | 8011 Prep | BM1 | 07/21/25 | 0725 | 2832585 |
| SW846 3535A | SW3535A PCB SPE Extraction | KW3 | 08/13/25 | 1010 | 2845346 |
| SW846 7470A Prep | EPA 7470A Mercury Prep Liquid | PB1 | 08/04/25 | 1200 | 2840692 |

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Kevil, Kentucky 42053
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Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: MW361UG4-25 Project: FRNP00714
Sample ID: 733567011 Client ID: FRNP007

| 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" | 6.41 ug/L | 6.82 | 94 | (56%-149%) |
| Decachlorobiphenyl | 8082A, PCB Liquids "As Received" | 0.119 ug/L | 0.200 | 59 | (30%-135%) |
| 4cmx | 8082A, PCB Liquids "As Received" | 0.127 ug/L | 0.200 | 64 | (26%-108%) |
| Bromofluorobenzene | 8260D, Volatiles- full suite "As Received" | 45.8 ug/L | 50.0 | 92 | (85%-114%) |
| 1,2-Dichloroethane-d4 | 8260D, Volatiles- full suite "As Received" | 50.1 ug/L | 50.0 | 100 | (81%-118%) |
| Toluene-d8 | 8260D, Volatiles- full suite "As Received" | 49.5 ug/L | 50.0 | 99 | (89%-112%) |

**Notes:**

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# *Certificate of Analysis*

Report Date: October 1, 2025

| | |
|---|---|
| Company : | Four Rivers Nuclear Partnership, LLC |
| Address : | 5600 Hobbs Road |
| | Kevil, Kentucky 42053 |
| Contact: | Ms. Jaime Morrow |
| Project: | C-746-U Landfill Quarterly(UG25-04) |

| | | | |
|---|---|---|---|
| Client Sample ID: | MW361UG4-25 | Project: | FRNP00714 |
| Sample ID: | 733567011 | Client ID: | FRNP007 |

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

*Column headers are defined as follows:*

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

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Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: MW361UG4-25
Sample ID: 733567012
Matrix: WG
Collect Date: 16-JUL-25 08:35
Receive Date: 17-JUL-25
Collector: Client

Project: FRNP00714
Client ID: FRNP007

| 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 | | 0.0600 | 0.000670 | 0.00400 | mg/L | 1.00 | 1 | BCD1 | 08/05/25 | 0044 | 2832058 | 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 | BCD1 | 08/05/25 | 1326 | 2832058 | 2 |

The following Prep Methods were performed:

| Method | Description | Analyst | Date | Time | Prep Batch |
|---|---|---|---|---|---|
| SW846 3005A | ICP-MS 3005A PREP | HC1 | 07/19/25 | 1535 | 2832056 |
| EPA 160 | Laboratory Filtration | HS2 | 07/18/25 | 1000 | 2831476 |

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

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Address : 5600 Hobbs Road

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Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: MW362UG4-25
Sample ID: 733567013
Matrix: WG
Collect Date: 16-JUL-25 09:37
Receive Date: 17-JUL-25
Collector: Client

Project: FRNP00714
Client ID: FRNP007

| 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 | 0.00860 | 0.0191 | ug/L | 0.956 | 1 | BM1 | 07/21/25 | 1855 | 2832586 | 1 |
| Carbon Analysis | | | | | | | | | | | | |
| 9060A, Total Organic Carbon "As Received" | | | | | | | | | | | | |
| Total Organic Carbon Average | J | 1.70 | 0.330 | 2.00 | mg/L | | 1 | KB3 | 07/24/25 | 0022 | 2834580 | 2 |
| Flow Injection Analysis | | | | | | | | | | | | |
| 9012B, Cyanide, Total "As Received" | | | | | | | | | | | | |
| Cyanide, Total | UN | 0.200 | 0.00167 | 0.200 | mg/L | 1.00 | 1 | KLP1 | 07/23/25 | 1221 | 2831410 | 3 |
| Halogen Analysis | | | | | | | | | | | | |
| 9020B, TOX (Organic Halogen) "As Received" | | | | | | | | | | | | |
| Total Organic Halogens | | 23.4 | 3.33 | 10.0 | ug/L | | 1 | JW2 | 08/12/25 | 1844 | 2844911 | 4 |
| Ion Chromatography | | | | | | | | | | | | |
| 300.0, Iodide in Liquid "As Received" | | | | | | | | | | | | |
| Iodide | U | 0.500 | 0.167 | 0.500 | mg/L | | 1 | TXT1 | 07/17/25 | 1738 | 2831375 | 5 |
| SW846 9056A Anions (5 elements) "As Received" | | | | | | | | | | | | |
| Bromide | U | 0.200 | 0.0670 | 0.200 | mg/L | | 1 | CH6 | 07/17/25 | 1911 | 2831374 | 6 |
| Chloride | JW | 1.47 | 0.0670 | 250 | mg/L | | 1 | | | | | |
| Fluoride | J | 0.543 | 0.0330 | 4.00 | mg/L | | 1 | | | | | |
| Nitrate-N | HJ | 0.340 | 0.132 | 10.0 | mg/L | | 4 | CH6 | 07/19/25 | 1845 | 2831374 | 7 |
| Sulfate | | 31.6 | 0.532 | 1.60 | mg/L | | 4 | | | | | |
| Mercury Analysis-CVAA | | | | | | | | | | | | |
| 7470, Mercury Liquid "As Received" | | | | | | | | | | | | |
| Mercury | U | 0.000200 | 0.0000670 | 0.000200 | mg/L | 1.00 | 1 | JP2 | 08/05/25 | 1029 | 2840733 | 8 |
| Metals Analysis-ICP-MS | | | | | | | | | | | | |
| 6020, Metals (15+ elements) "As Received" | | | | | | | | | | | | |
| Aluminum | | 0.151 | 0.0193 | 0.0500 | mg/L | 1.00 | 1 | PRB | 08/13/25 | 2121 | 2831391 | 9 |
| Arsenic | U | 0.00500 | 0.00200 | 0.00500 | mg/L | 1.00 | 1 | | | | | |
| Barium | | 0.0804 | 0.000670 | 0.00400 | mg/L | 1.00 | 1 | | | | | |
| Beryllium | U | 0.000500 | 0.000200 | 0.000500 | mg/L | 1.00 | 1 | | | | | |
| Boron | | 0.0243 | 0.00520 | 0.0150 | mg/L | 1.00 | 1 | | | | | |
| Cadmium | U | 0.00100 | 0.000300 | 0.00100 | mg/L | 1.00 | 1 | | | | | |
| Calcium | | 17.0 | 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: October 1, 2025

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

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: MW362UG4-25 Project: FRNP00714
Sample ID: 733567013 Client ID: FRNP007

| 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 | 0.00174 | 0.000300 | 0.00200 | mg/L | 1.00 | 1 | | | | | |
| Iron | | 0.120 | 0.0330 | 0.100 | mg/L | 1.00 | 1 | | | | | |
| Lead | U | 0.00200 | 0.000500 | 0.00200 | mg/L | 1.00 | 1 | | | | | |
| Magnesium | | 7.17 | 0.0100 | 0.0300 | mg/L | 1.00 | 1 | | | | | |
| Manganese | J | 0.00275 | 0.00100 | 0.00500 | mg/L | 1.00 | 1 | | | | | |
| Molybdenum | | 0.00102 | 0.000200 | 0.00100 | mg/L | 1.00 | 1 | | | | | |
| Nickel | J | 0.000886 | 0.000600 | 0.00200 | mg/L | 1.00 | 1 | | | | | |
| Potassium | | 0.301 | 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 | | 0.00218 | 0.0000670 | 0.000200 | mg/L | 1.00 | 1 | | | | | |
| Vanadium | U | 0.0200 | 0.00330 | 0.0200 | mg/L | 1.00 | 1 | | | | | |
| Zinc | U | 0.0200 | 0.00330 | 0.0200 | mg/L | 1.00 | 1 | | | | | |
| Sodium | | 107 | 0.400 | 1.25 | mg/L | 1.00 | 5 | PRB | 08/13/25 | 2034 | 2831391 | 10 |
| Tantalum | U | 0.00500 | 0.00100 | 0.00500 | mg/L | 1.00 | 1 | JD2 | 08/14/25 | 1458 | 2831391 | 11 |
| Antimony | U | 0.00300 | 0.00100 | 0.00300 | mg/L | 1.00 | 1 | PRB | 08/14/25 | 1247 | 2831391 | 12 |
| Rhodium | U | 0.00500 | 0.00160 | 0.00500 | mg/L | 1.00 | 1 | PRB | 08/13/25 | 0158 | 2831391 | 13 |
| Semi-Volatiles-PCB | | | | | | | | | | | | |
| 8082A, PCB Liquids "As Received" | | | | | | | | | | | | |
| Aroclor-1016 | US | 0.0840 | 0.0280 | 0.0840 | ug/L | 0.000840 | 1 | JXM | 08/14/25 | 0027 | 2845347 | 14 |
| Aroclor-1221 | US | 0.0840 | 0.0280 | 0.0840 | ug/L | 0.000840 | 1 | | | | | |
| Aroclor-1232 | US | 0.0840 | 0.0280 | 0.0840 | ug/L | 0.000840 | 1 | | | | | |
| Aroclor-1242 | US | 0.0840 | 0.0280 | 0.0840 | ug/L | 0.000840 | 1 | | | | | |
| Aroclor-1248 | US | 0.0840 | 0.0280 | 0.0840 | ug/L | 0.000840 | 1 | | | | | |
| Aroclor-1254 | US | 0.0840 | 0.0280 | 0.0840 | ug/L | 0.000840 | 1 | | | | | |
| Aroclor-1260 | US | 0.0840 | 0.0280 | 0.0840 | ug/L | 0.000840 | 1 | | | | | |
| Aroclor-1268 | US | 0.0840 | 0.0280 | 0.0840 | ug/L | 0.000840 | 1 | | | | | |
| Aroclor-Total | US | 0.0840 | 0.0280 | 0.0840 | ug/L | 0.000840 | 1 | | | | | |
| Solids Analysis | | | | | | | | | | | | |
| 160.1, Dissolved Solids "As Received" | | | | | | | | | | | | |
| Total Dissolved Solids | | 385 | 2.38 | 10.0 | mg/L | | | SC1 | 07/23/25 | 1734 | 2834464 | 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(UG25-04)

Client Sample ID: MW362UG4-25 Project: FRNP00714
Sample ID: 733567013 Client ID: FRNP007

| 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 | BR2 | 07/25/25 | 1538 | 2835351 | 16 |
| Volatile Organics | | | | | | | | | | | | |
| 8260D, Volatiles- full suite "As Received" | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | U | 1.00 | 0.333 | 1.00 | ug/L | | 1 | KA1 | 07/23/25 | 1424 | 2834558 | 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(UG25-04)

Client Sample ID: MW362UG4-25 Project: FRNP00714
Sample ID: 733567013 Client ID: FRNP007

| Parameter | Qualifier | Result | DL | RL | Units | PF | DF | Analyst | Date | Time | Batch | Method |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Volatile Organics | | | | | | | | | | | | |
| 8260D, Volatiles- full suite "As Received" | | | | | | | | | | | | |
| Methylene chloride | J | 0.700 | 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 | | 1.56 | 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 | 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 | BM1 | 07/21/25 | 0725 | 2832585 |
| SW846 3535A | SW3535A PCB SPE Extraction | KW3 | 08/13/25 | 1010 | 2845346 |
| SW846 3005A | ICP-MS 3005A PREP | LF1 | 07/18/25 | 0945 | 2831390 |
| SW846 9010C Distillation | SW846 9010C Prep | CH9 | 07/22/25 | 1452 | 2831409 |
| SW846 7470A Prep | EPA 7470A Mercury Prep Liquid | PB1 | 08/04/25 | 1200 | 2840692 |

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Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: MW362UG4-25 Project: FRNP00714
Sample ID: 733567013 Client ID: FRNP007

| 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 9060A | |
| 3 | SW846 9012B | |
| 4 | SW846 9020B | |
| 5 | EPA 300.0 | |
| 6 | SW846 9056A | |
| 7 | SW846 9056A | |
| 8 | SW846 7470A | |
| 9 | SW846 3005A/6020B | |
| 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" | 7.09 ug/L | 6.83 | 104 | (56%-149%) |
| Decachlorobiphenyl | 8082A, PCB Liquids "As Received" | 0.0468 ug/L | 0.168 | 28* | (30%-135%) |
| 4cmx | 8082A, PCB Liquids "As Received" | 0.113 ug/L | 0.168 | 67 | (26%-108%) |
| Bromofluorobenzene | 8260D, Volatiles- full suite "As Received" | 45.3 ug/L | 50.0 | 91 | (85%-114%) |
| 1,2-Dichloroethane-d4 | 8260D, Volatiles- full suite "As Received" | 48.4 ug/L | 50.0 | 97 | (81%-118%) |
| Toluene-d8 | 8260D, Volatiles- full suite "As Received" | 49.6 ug/L | 50.0 | 99 | (89%-112%) |

**Notes:**

*Column headers are defined as follows:*

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

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# *Certificate of Analysis*

Report Date: October 1, 2025

| | |
|---|---|
| Company : | Four Rivers Nuclear Partnership, LLC |
| Address : | 5600 Hobbs Road |
| | Kevil, Kentucky 42053 |
| Contact: | Ms. Jaime Morrow |
| Project: | C-746-U Landfill Quarterly(UG25-04) |

| | | | |
|---|---|---|---|
| Client Sample ID: | MW362UG4-25 | Project: | FRNP00714 |
| Sample ID: | 733567014 | Client ID: | FRNP007 |
| Matrix: | WG | | |
| Collect Date: | 16-JUL-25 09:37 | | |
| Receive Date: | 17-JUL-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 | | 0.0817 | 0.000670 | 0.00400 | mg/L | 1.00 | 1 | BCD1 | 08/05/25 | 0046 | 2832058 | 1 |
| Chromium | U | 0.0100 | 0.00300 | 0.0100 | mg/L | 1.00 | 1 | | | | | |
| Uranium | | 0.00236 | 0.0000670 | 0.000200 | mg/L | 1.00 | 1 | BCD1 | 08/05/25 | 1327 | 2832058 | 2 |

The following Prep Methods were performed:

| Method | Description | Analyst | Date | Time | Prep Batch |
|---|---|---|---|---|---|
| SW846 3005A | ICP-MS 3005A PREP | HC1 | 07/19/25 | 1535 | 2832056 |
| EPA 160 | Laboratory Filtration | HS2 | 07/18/25 | 1000 | 2831476 |

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(UG25-04)

Client Sample ID: FB1UG4-25
Sample ID: 733567015
Matrix: WATER
Collect Date: 16-JUL-25 12:34
Receive Date: 17-JUL-25
Collector: Client

Project: FRNP00714
Client ID: FRNP007

| 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 | 0.00862 | 0.0191 | ug/L | 0.957 | 1 | BM1 | 07/21/25 | 1929 | 2832586 | 1 |
| Ion Chromatography | | | | | | | | | | | | |
| 300.0, Iodide in Liquid "As Received" | | | | | | | | | | | | |
| Iodide | U | 0.500 | 0.167 | 0.500 | mg/L | | 1 | TXT1 | 07/17/25 | 1751 | 2831375 | 2 |
| Mercury Analysis-CVAA | | | | | | | | | | | | |
| 7470, Mercury Liquid "As Received" | | | | | | | | | | | | |
| Mercury | U | 0.000200 | 0.0000670 | 0.000200 | mg/L | 1.00 | 1 | JP2 | 08/05/25 | 1031 | 2840733 | 3 |
| Metals Analysis-ICP-MS | | | | | | | | | | | | |
| 6020, Metals (15+ elements) "As Received" | | | | | | | | | | | | |
| Aluminum | U | 0.0500 | 0.0193 | 0.0500 | mg/L | 1.00 | 1 | PRB | 08/14/25 | 1656 | 2831391 | 4 |
| 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 | | | | | |
| Manganese | U | 0.00500 | 0.00100 | 0.00500 | 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 | | | | | |
| Sodium | U | 0.250 | 0.0800 | 0.250 | 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 | U | 0.0200 | 0.00330 | 0.0200 | mg/L | 1.00 | 1 | | | | | |
| Tantalum | U | 0.00500 | 0.00100 | 0.00500 | mg/L | 1.00 | 1 | JD2 | 08/14/25 | 1459 | 2831391 | 5 |

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

# *Certificate of Analysis*

Report Date: October 1, 2025

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

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: FB1UG4-25 Project: FRNP00714
Sample ID: 733567015 Client ID: FRNP007

| 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 | 08/13/25 | 0201 | 2831391 | 6 |
| Boron | U | 0.0150 | 0.00520 | 0.0150 | mg/L | 1.00 | 1 | PRB | 08/15/25 | 1430 | 2831391 | 7 |
| Semi-Volatiles-PCB | | | | | | | | | | | | |
| 8082A, PCB Liquids "As Received" | | | | | | | | | | | | |
| Aroclor-1016 | U | 0.0862 | 0.0287 | 0.0862 | ug/L | 0.000862 | 1 | JXM | 08/14/25 | 0042 | 2845347 | 8 |
| Aroclor-1221 | U | 0.0862 | 0.0287 | 0.0862 | ug/L | 0.000862 | 1 | | | | | |
| Aroclor-1232 | U | 0.0862 | 0.0287 | 0.0862 | ug/L | 0.000862 | 1 | | | | | |
| Aroclor-1242 | U | 0.0862 | 0.0287 | 0.0862 | ug/L | 0.000862 | 1 | | | | | |
| Aroclor-1248 | U | 0.0862 | 0.0287 | 0.0862 | ug/L | 0.000862 | 1 | | | | | |
| Aroclor-1254 | U | 0.0862 | 0.0287 | 0.0862 | ug/L | 0.000862 | 1 | | | | | |
| Aroclor-1260 | U | 0.0862 | 0.0287 | 0.0862 | ug/L | 0.000862 | 1 | | | | | |
| Aroclor-1268 | U | 0.0862 | 0.0287 | 0.0862 | ug/L | 0.000862 | 1 | | | | | |
| Aroclor-Total | U | 0.0862 | 0.0287 | 0.0862 | ug/L | 0.000862 | 1 | | | | | |
| Volatile Organics | | | | | | | | | | | | |
| 8260D, Volatiles- full suite "As Received" | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | U | 1.00 | 0.333 | 1.00 | ug/L | | 1 | KA1 | 07/23/25 | 1453 | 2834558 | 9 |
| 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 | | 5.40 | 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 | | | | | |

**GEL LABORATORIES LLC**
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# *Certificate of Analysis*

Report Date: October 1, 2025

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

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: FB1UG4-25 Project: FRNP00714
Sample ID: 733567015 Client ID: FRNP007

| 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 | 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 | | | | | |
| Methylene chloride | J | 0.820 | 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 | 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 | PB1 | 08/04/25 | 1200 | 2840692 |
| SW846 3005A | ICP-MS 3005A PREP | LF1 | 07/18/25 | 0945 | 2831390 |
| SW846 3535A | SW3535A PCB SPE Extraction | KW3 | 08/13/25 | 1010 | 2845346 |
| SW846 8011 PREP | 8011 Prep | BM1 | 07/21/25 | 0725 | 2832585 |

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

# *Certificate of Analysis*

Report Date: October 1, 2025

| | |
|---|---|
| Company : | Four Rivers Nuclear Partnership, LLC |
| Address : | 5600 Hobbs Road |
| | Kevil, Kentucky 42053 |
| Contact: | Ms. Jaime Morrow |
| Project: | C-746-U Landfill Quarterly(UG25-04) |

| | | | |
|---|---|---|---|
| Client Sample ID: | FB1UG4-25 | Project: | FRNP00714 |
| Sample ID: | 733567015 | Client ID: | FRNP007 |

| 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 | EPA 300.0 | |
| 3 | SW846 7470A | |
| 4 | SW846 3005A/6020B | |
| 5 | SW846 3005A/6020B | |
| 6 | SW846 3005A/6020B | |
| 7 | SW846 3005A/6020B | |
| 8 | SW846 3535A/8082A | |
| 9 | SW846 8260D | |

| Surrogate/Tracer Recovery | Test | Result | Nominal | Recovery% | Acceptable Limits |
|---|---|---|---|---|---|
| 1-Chloro-2-fluorobenzene | 8011 VOA- 1,2-Dibromo-3-chloropropane "As Received" | 6.98 ug/L | 6.84 | 102 | (56%-149%) |
| Decachlorobiphenyl | 8082A, PCB Liquids "As Received" | 0.117 ug/L | 0.172 | 68 | (30%-135%) |
| 4cmx | 8082A, PCB Liquids "As Received" | 0.128 ug/L | 0.172 | 74 | (26%-108%) |
| Bromofluorobenzene | 8260D, Volatiles- full suite "As Received" | 45.5 ug/L | 50.0 | 91 | (85%-114%) |
| 1,2-Dichloroethane-d4 | 8260D, Volatiles- full suite "As Received" | 48.7 ug/L | 50.0 | 97 | (81%-118%) |
| 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
DL: Detection Limit
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Lc/LC: Critical Level
PF: Prep Factor
RL: Reporting Limit
SQL: Sample Quantitation Limit

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# *Certificate of Analysis*

Report Date: October 1, 2025

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

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: RI1UG4-25
Sample ID: 733567016
Matrix: WATER
Collect Date: 16-JUL-25 07:00
Receive Date: 17-JUL-25
Collector: Client

Project: FRNP00714
Client ID: FRNP007

| 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 | BM1 | 07/21/25 | 2004 | 2832586 | 1 |
| Ion Chromatography | | | | | | | | | | | | |
| 300.0, Iodide in Liquid "As Received" | | | | | | | | | | | | |
| Iodide | U | 0.500 | 0.167 | 0.500 | mg/L | | 1 | TXT1 | 07/17/25 | 1804 | 2831375 | 2 |
| Mercury Analysis-CVAA | | | | | | | | | | | | |
| 7470, Mercury Liquid "As Received" | | | | | | | | | | | | |
| Mercury | U | 0.000200 | 0.0000670 | 0.000200 | mg/L | 1.00 | 1 | JP2 | 08/05/25 | 1032 | 2840733 | 3 |
| Metals Analysis-ICP-MS | | | | | | | | | | | | |
| 6020, Metals (15+ elements) "As Received" | | | | | | | | | | | | |
| Aluminum | U | 0.0500 | 0.0193 | 0.0500 | mg/L | 1.00 | 1 | PRB | 08/14/25 | 1659 | 2831391 | 4 |
| 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 | | | | | |
| Manganese | U | 0.00500 | 0.00100 | 0.00500 | 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 | | | | | |
| Sodium | U | 0.250 | 0.0800 | 0.250 | 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 | U | 0.0200 | 0.00330 | 0.0200 | mg/L | 1.00 | 1 | | | | | |
| Tantalum | U | 0.00500 | 0.00100 | 0.00500 | mg/L | 1.00 | 1 | JD2 | 08/14/25 | 1459 | 2831391 | 5 |

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# *Certificate of Analysis*

Report Date: October 1, 2025

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

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: RI1UG4-25 Project: FRNP00714
Sample ID: 733567016 Client ID: FRNP007

| 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 | 08/13/25 | 0204 | 2831391 | 6 |
| Boron | U | 0.0150 | 0.00520 | 0.0150 | mg/L | 1.00 | 1 | PRB | 08/15/25 | 1429 | 2831391 | 7 |
| Semi-Volatiles-PCB | | | | | | | | | | | | |
| 8082A, PCB Liquids "As Received" | | | | | | | | | | | | |
| Aroclor-1016 | U | 0.0956 | 0.0318 | 0.0956 | ug/L | 0.000956 | 1 | JXM | 08/18/25 | 1426 | 2848182 | 8 |
| Aroclor-1221 | U | 0.0956 | 0.0318 | 0.0956 | ug/L | 0.000956 | 1 | | | | | |
| Aroclor-1232 | U | 0.0956 | 0.0318 | 0.0956 | ug/L | 0.000956 | 1 | | | | | |
| Aroclor-1242 | U | 0.0956 | 0.0318 | 0.0956 | ug/L | 0.000956 | 1 | | | | | |
| Aroclor-1248 | U | 0.0956 | 0.0318 | 0.0956 | ug/L | 0.000956 | 1 | | | | | |
| Aroclor-1254 | U | 0.0956 | 0.0318 | 0.0956 | ug/L | 0.000956 | 1 | | | | | |
| Aroclor-1260 | U | 0.0956 | 0.0318 | 0.0956 | ug/L | 0.000956 | 1 | | | | | |
| Aroclor-1268 | U | 0.0956 | 0.0318 | 0.0956 | ug/L | 0.000956 | 1 | | | | | |
| Aroclor-Total | U | 0.0956 | 0.0318 | 0.0956 | ug/L | 0.000956 | 1 | | | | | |
| Volatile Organics | | | | | | | | | | | | |
| 8260D, Volatiles- full suite "As Received" | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | U | 1.00 | 0.333 | 1.00 | ug/L | | 1 | KA1 | 07/23/25 | 1522 | 2834558 | 9 |
| 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 | | | | | |

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# *Certificate of Analysis*

Report Date: October 1, 2025

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

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: RI1UG4-25 Project: FRNP00714
Sample ID: 733567016 Client ID: FRNP007

| 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 | 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 | | | | | |
| Methylene chloride | J | 0.990 | 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 | 0.500 | 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 | 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 | LF1 | 07/18/25 | 0945 | 2831390 |
| SW846 3535A | SW3535A PCB SPE Extraction | KW3 | 08/13/25 | 1010 | 2845346 |
| SW846 8011 PREP | 8011 Prep | BM1 | 07/21/25 | 0725 | 2832585 |
| SW846 7470A Prep | EPA 7470A Mercury Prep Liquid | PB1 | 08/04/25 | 1200 | 2840692 |
| SW846 3535A | SW3535A PCB SPE Extraction | DXF4 | 08/18/25 | 0547 | 2848168 |

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# *Certificate of Analysis*

Report Date: October 1, 2025

| | |
|---|---|
| Company : | Four Rivers Nuclear Partnership, LLC |
| Address : | 5600 Hobbs Road |
| | Kevil, Kentucky 42053 |
| Contact: | Ms. Jaime Morrow |
| Project: | C-746-U Landfill Quarterly(UG25-04) |

| | | | |
|---|---|---|---|
| Client Sample ID: | RI1UG4-25 | Project: | FRNP00714 |
| Sample ID: | 733567016 | Client ID: | FRNP007 |

| 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 | EPA 300.0 | |
| 3 | SW846 7470A | |
| 4 | SW846 3005A/6020B | |
| 5 | SW846 3005A/6020B | |
| 6 | SW846 3005A/6020B | |
| 7 | SW846 3005A/6020B | |
| 8 | SW846 3535A/8082A | |
| 9 | SW846 8260D | |

| Surrogate/Tracer Recovery | Test | Result | Nominal | Recovery% | Acceptable Limits |
|---|---|---|---|---|---|
| 1-Chloro-2-fluorobenzene | 8011 VOA- 1,2-Dibromo-3-chloropropane "As Received" | 6.99 ug/L | 6.79 | 103 | (56%-149%) |
| 4cmx | 8082A, PCB Liquids "As Received" | 0.0977 ug/L | 0.191 | 51 | (26%-108%) |
| Decachlorobiphenyl | 8082A, PCB Liquids "As Received" | 0.121 ug/L | 0.191 | 63 | (30%-135%) |
| Bromofluorobenzene | 8260D, Volatiles- full suite "As Received" | 45.7 ug/L | 50.0 | 91 | (85%-114%) |
| 1,2-Dichloroethane-d4 | 8260D, Volatiles- full suite "As Received" | 48.8 ug/L | 50.0 | 98 | (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: October 1, 2025

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

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: TB1UG4-25
Sample ID: 733567017
Matrix: WATER
Collect Date: 16-JUL-25 06:55
Receive Date: 17-JUL-25
Collector: Client

Project: FRNP00714
Client ID: FRNP007

| 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 | 0.0192 | 0.00863 | 0.0192 | ug/L | 0.958 | 1 | BM1 | 07/21/25 | 2038 | 2832586 | 1 |
| Volatile Organics | | | | | | | | | | | | |
| 8260D, Volatiles- full suite "As Received" | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | U | 1.00 | 0.333 | 1.00 | ug/L | | 1 | KA1 | 07/23/25 | 1552 | 2834558 | 2 |
| 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 | J | 4.63 | 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: October 1, 2025

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

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: TB1UG4-25 Project: FRNP00714
Sample ID: 733567017 Client ID: FRNP007

| Parameter | Qualifier | Result | DL | RL | Units | PF | DF | Analyst Date | Time | Batch | Method |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Volatile Organics | | | | | | | | | | | |
| 8260D, Volatiles- full suite "As Received" | | | | | | | | | | | |
| Methylene chloride | J | 0.880 | 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 | 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 | BM1 | 07/21/25 | 0725 | 2832585 |

The following Analytical Methods were performed:

| Method | Description | Analyst Comments |
|---|---|---|
| 1 | SW846 8011 | |
| 2 | SW846 8260D | |

| Surrogate/Tracer Recovery | Test | Result | Nominal | Recovery% | Acceptable Limits |
|---|---|---|---|---|---|
| 1-Chloro-2-fluorobenzene | 8011 VOA- 1,2-Dibromo-3-chloropropane "As Received" | 7.21 ug/L | 6.85 | 105 | (56%-149%) |
| Bromofluorobenzene | 8260D, Volatiles- full suite "As Received" | 44.8 ug/L | 50.0 | 90 | (85%-114%) |
| 1,2-Dichloroethane-d4 | 8260D, Volatiles- full suite "As Received" | 48.6 ug/L | 50.0 | 97 | (81%-118%) |
| Toluene-d8 | 8260D, Volatiles- full suite "As Received" | 49.5 ug/L | 50.0 | 99 | (89%-112%) |

**Notes:**

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# *Certificate of Analysis*

Report Date: October 1, 2025

| | |
|---|---|
| Company : | Four Rivers Nuclear Partnership, LLC |
| Address : | 5600 Hobbs Road |
| | Kevil, Kentucky 42053 |
| Contact: | Ms. Jaime Morrow |
| Project: | C-746-U Landfill Quarterly(UG25-04) |

| | | | |
|---|---|---|---|
| Client Sample ID: | TB1UG4-25 | Project: | FRNP00714 |
| Sample ID: | 733567017 | Client ID: | FRNP007 |

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

*Column headers are defined as follows:*

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

# ATTACHMENT C2

# GEL LABORATORIES CERTIFICATE OF ANALYSIS

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# *Certificate of Analysis*

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

Kevil, Kentucky 42053 Report Date: October 1, 2025

Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: MW363UG4-25
Sample ID: 733816001
Matrix: WG
Collect Date: 17-JUL-25
Receive Date: 18-JUL-25
Collector: Client

Project: FRNP00714
Client ID: FRNP007

| 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 | -0.0514 | +/-0.222 | 0.538 | +/-0.222 | 5.00 | pCi/L | | | CM4 | 08/05/25 | 0846 | 2834726 | 1 |
| *Th-01-RC M, Th Isotopes, Liquid "As Received"* | | | | | | | | | | | | | | |
| Thorium-230 | U | -0.381 | +/-0.857 | 2.38 | +/-0.858 | 50.0 | pCi/L | | | CM4 | 08/01/25 | 0834 | 2834727 | 2 |
| Thorium-232 | U | -0.158 | +/-0.604 | 1.62 | +/-0.606 | | pCi/L | | | | | | | |
| **Rad Gas Flow Proportional Counting** | | | | | | | | | | | | | | |
| *904.0Mod, Ra228, Liquid "As Received"* | | | | | | | | | | | | | | |
| Radium-228 | U | 2.45 | +/-2.84 | 4.78 | +/-2.92 | 4.99 | pCi/L | | | HH3 | 08/05/25 | 1053 | 2834438 | 3 |
| *905.0Mod, Sr90, liquid "As Received"* | | | | | | | | | | | | | | |
| Strontium-90 | U | 1.60 | +/-1.89 | 3.17 | +/-1.90 | 8.00 | pCi/L | | | IJ1 | 07/24/25 | 1328 | 2831822 | 4 |
| *9310, Alpha/Beta Activity, liquid "As Received"* | | | | | | | | | | | | | | |
| Alpha | U | 4.22 | +/-5.23 | 8.67 | +/-5.28 | 15.0 | pCi/L | | | ST2 | 07/22/25 | 1623 | 2832754 | 5 |
| Beta | U | 7.56 | +/-6.78 | 11.0 | +/-6.89 | 50.0 | pCi/L | | | | | | | |
| **Rad Liquid Scintillation Analysis** | | | | | | | | | | | | | | |
| *906.0M, Tritium Dist, Liquid "As Received"* | | | | | | | | | | | | | | |
| Tritium | U | -0.0626 | +/-108 | 214 | +/-108 | 300 | pCi/L | | | IT1 | 07/21/25 | 1648 | 2832171 | 6 |
| *Tc-02-RC-MOD, Tc99, Liquid "As Received"* | | | | | | | | | | | | | | |
| Technetium-99 | U | 6.05 | +/-11.6 | 19.7 | +/-11.7 | 25.0 | pCi/L | | | GS3 | 08/10/25 | 1528 | 2832222 | 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" | 2834726 | 93.2 | (30%-110%) |
| Thorium-229 Tracer | Th-01-RC M, Th Isotopes, Liquid "As Received" | 2834727 | 63.4 | (30%-110%) |
| Barium-133 Tracer | 904.0Mod, Ra228, Liquid "As Received" | 2834438 | 78.4 | (30%-110%) |
| Strontium Carrier | 905.0Mod, Sr90, liquid "As Received" | 2831822 | 96.5 | (30%-110%) |
| Technetium-99m Tracer | Tc-02-RC-MOD, Tc99, Liquid "As Received" | 2832222 | 102 | (30%-110%) |

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# *Certificate of Analysis*

Company : Four Rivers Nuclear Partnership, LLC
Address : 5600 Hobbs Road
Kevil, Kentucky 42053

Report Date: October 1, 2025

Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: MW363UG4-25
Sample ID: 733816001

Project: FRNP00714
Client ID: FRNP007

| 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,
Address : LLC
5600 Hobbs Road

Kevil, Kentucky 42053

Report Date: October 1, 2025

Contact: Ms. Jaime Morrow

Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: MW364UG4-25
Sample ID: 733816003
Matrix: WG
Collect Date: 17-JUL-25
Receive Date: 18-JUL-25
Collector: Client

Project: FRNP00714
Client ID: FRNP007

| 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 | 0.247 | +/-0.311 | 0.480 | +/-0.313 | 5.00 | pCi/L | | | CM4 | 08/05/25 | 0846 | 2834726 | 1 |
| *Th-01-RC M, Th Isotopes, Liquid "As Received"* | | | | | | | | | | | | | | |
| Thorium-230 | U | -0.425 | +/-0.695 | 2.03 | +/-0.695 | 50.0 | pCi/L | | | CM4 | 08/01/25 | 0834 | 2834727 | 2 |
| Thorium-232 | U | 0.152 | +/-0.650 | 1.15 | +/-0.650 | | pCi/L | | | | | | | |
| **Rad Gas Flow Proportional Counting** | | | | | | | | | | | | | | |
| *904.0Mod, Ra228, Liquid "As Received"* | | | | | | | | | | | | | | |
| Radium-228 | U | 3.04 | +/-2.89 | 4.74 | +/-3.01 | 4.99 | pCi/L | | | HH3 | 08/05/25 | 1051 | 2834438 | 3 |
| *905.0Mod, Sr90, liquid "As Received"* | | | | | | | | | | | | | | |
| Strontium-90 | U | -1.19 | +/-1.57 | 3.53 | +/-1.57 | 8.00 | pCi/L | | | IJ1 | 07/24/25 | 1328 | 2831822 | 4 |
| *9310, Alpha/Beta Activity, liquid "As Received"* | | | | | | | | | | | | | | |
| Alpha | U | 4.26 | +/-4.65 | 7.36 | +/-4.70 | 15.0 | pCi/L | | | ST2 | 07/22/25 | 1356 | 2832754 | 5 |
| Beta | | 38.7 | +/-9.47 | 10.2 | +/-11.3 | 50.0 | pCi/L | | | | | | | |
| **Rad Liquid Scintillation Analysis** | | | | | | | | | | | | | | |
| *906.0M, Tritium Dist, Liquid "As Received"* | | | | | | | | | | | | | | |
| Tritium | U | 32.1 | +/-116 | 219 | +/-117 | 300 | pCi/L | | | IT1 | 07/21/25 | 1709 | 2832171 | 6 |
| *Tc-02-RC-MOD, Tc99, Liquid "As Received"* | | | | | | | | | | | | | | |
| Technetium-99 | | 46.3 | +/-13.6 | 21.6 | +/-14.6 | 25.0 | pCi/L | | | GS3 | 08/10/25 | 1605 | 2832222 | 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" | 2834726 | 106 | (30%-110%) |
| Thorium-229 Tracer | Th-01-RC M, Th Isotopes, Liquid "As Received" | 2834727 | 79.2 | (30%-110%) |
| Barium-133 Tracer | 904.0Mod, Ra228, Liquid "As Received" | 2834438 | 75 | (30%-110%) |
| Strontium Carrier | 905.0Mod, Sr90, liquid "As Received" | 2831822 | 94.1 | (30%-110%) |
| Technetium-99m Tracer | Tc-02-RC-MOD, Tc99, Liquid "As Received" | 2832222 | 93.6 | (30%-110%) |

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# *Certificate of Analysis*

Company : Four Rivers Nuclear Partnership, LLC
Address : 5600 Hobbs Road
Kevil, Kentucky 42053

Report Date: October 1, 2025

Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: MW364UG4-25
Sample ID: 733816003

Project: FRNP00714
Client ID: FRNP007

| 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

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## *Certificate of Analysis*

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

Kevil, Kentucky 42053

Report Date: October 1, 2025

Contact: Ms. Jaime Morrow

Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: MW365UG4-25
Sample ID: 733816005
Matrix: WG
Collect Date: 17-JUL-25
Receive Date: 18-JUL-25
Collector: Client

Project: FRNP00714
Client ID: FRNP007

| 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 | UT | 0.185 | +/-0.253 | 0.345 | +/-0.254 | 5.00 | pCi/L | | | CM4 | 08/05/25 | 0846 | 2834726 | 1 |
| *Th-01-RC M, Th Isotopes, Liquid "As Received"* | | | | | | | | | | | | | | |
| Thorium-230 | U | -0.0451 | +/-0.767 | 1.76 | +/-0.768 | 50.0 | pCi/L | | | CM4 | 08/01/25 | 0834 | 2834727 | 2 |
| Thorium-232 | U | 0.256 | +/-0.765 | 1.36 | +/-0.766 | | pCi/L | | | | | | | |
| **Rad Gas Flow Proportional Counting** | | | | | | | | | | | | | | |
| *904.0Mod, Ra228, Liquid "As Received"* | | | | | | | | | | | | | | |
| Radium-228 | U | 2.48 | +/-2.91 | 4.91 | +/-2.99 | 4.99 | pCi/L | | | HH3 | 08/05/25 | 1053 | 2834438 | 3 |
| *905.0Mod, Sr90, liquid "As Received"* | | | | | | | | | | | | | | |
| Strontium-90 | U | -1.66 | +/-2.89 | 5.72 | +/-2.89 | 8.00 | pCi/L | | | IJ1 | 07/24/25 | 1328 | 2831822 | 4 |
| *9310, Alpha/Beta Activity, liquid "As Received"* | | | | | | | | | | | | | | |
| Alpha | U | 2.14 | +/-3.52 | 6.41 | +/-3.54 | 15.0 | pCi/L | | | ST2 | 07/22/25 | 1356 | 2832754 | 5 |
| Beta | U | 6.91 | +/-6.18 | 10.0 | +/-6.29 | 50.0 | pCi/L | | | | | | | |
| **Rad Liquid Scintillation Analysis** | | | | | | | | | | | | | | |
| *906.0M, Tritium Dist, Liquid "As Received"* | | | | | | | | | | | | | | |
| Tritium | U | 24.4 | +/-113 | 214 | +/-113 | 300 | pCi/L | | | IT1 | 07/21/25 | 1731 | 2832171 | 6 |
| *Tc-02-RC-MOD, Tc99, Liquid "As Received"* | | | | | | | | | | | | | | |
| Technetium-99 | U | -10.6 | +/-12.3 | 21.5 | +/-12.3 | 25.0 | pCi/L | | | GS3 | 08/10/25 | 1642 | 2832222 | 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" | 2834726 | 111 * | (30%-110%) |
| Thorium-229 Tracer | Th-01-RC M, Th Isotopes, Liquid "As Received" | 2834727 | 84.4 | (30%-110%) |
| Barium-133 Tracer | 904.0Mod, Ra228, Liquid "As Received" | 2834438 | 80.6 | (30%-110%) |
| Strontium Carrier | 905.0Mod, Sr90, liquid "As Received" | 2831822 | 89.4 | (30%-110%) |
| Technetium-99m Tracer | Tc-02-RC-MOD, Tc99, Liquid "As Received" | 2832222 | 92.8 | (30%-110%) |

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# *Certificate of Analysis*

Company : Four Rivers Nuclear Partnership, LLC
Address : 5600 Hobbs Road
Kevil, Kentucky 42053

Report Date: October 1, 2025

Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: MW365UG4-25
Sample ID: 733816005

Project: FRNP00714
Client ID: FRNP007

| 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,
Address : LLC
5600 Hobbs Road

Kevil, Kentucky 42053

Report Date: October 1, 2025

Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: MW366UG4-25
Sample ID: 733816007
Matrix: WG
Collect Date: 17-JUL-25
Receive Date: 18-JUL-25
Collector: Client

Project: FRNP00714
Client ID: FRNP007

| 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 | UT | 0.242 | +/-0.273 | 0.385 | +/-0.274 | 5.00 | pCi/L | | | CM4 | 08/05/25 | 0846 | 2834726 | 1 |
| *Th-01-RC M, Th Isotopes, Liquid "As Received"* | | | | | | | | | | | | | | |
| Thorium-230 | U | 0.743 | +/-1.49 | 2.57 | +/-1.50 | 50.0 | pCi/L | | | CM4 | 08/01/25 | 0837 | 2834727 | 2 |
| Thorium-232 | U | -0.237 | +/-0.649 | 1.86 | +/-0.651 | | pCi/L | | | | | | | |
| **Rad Gas Flow Proportional Counting** | | | | | | | | | | | | | | |
| *904.0Mod, Ra228, Liquid "As Received"* | | | | | | | | | | | | | | |
| Radium-228 | U | 2.66 | +/-2.82 | 4.70 | +/-2.91 | 4.99 | pCi/L | | | HH3 | 08/05/25 | 1254 | 2834438 | 3 |
| *905.0Mod, Sr90, liquid "As Received"* | | | | | | | | | | | | | | |
| Strontium-90 | U | -0.619 | +/-3.31 | 6.19 | +/-3.31 | 8.00 | pCi/L | | | IJ1 | 07/24/25 | 1328 | 2831822 | 4 |
| *9310, Alpha/Beta Activity, liquid "As Received"* | | | | | | | | | | | | | | |
| Alpha | U | 2.94 | +/-4.80 | 8.42 | +/-4.83 | 15.0 | pCi/L | | | ST2 | 07/22/25 | 1623 | 2832754 | 5 |
| Beta | | 42.5 | +/-9.47 | 9.90 | +/-11.7 | 50.0 | pCi/L | | | | | | | |
| **Rad Liquid Scintillation Analysis** | | | | | | | | | | | | | | |
| *906.0M, Tritium Dist, Liquid "As Received"* | | | | | | | | | | | | | | |
| Tritium | U | -46.7 | +/-100 | 217 | +/-100 | 300 | pCi/L | | | IT1 | 07/21/25 | 1753 | 2832171 | 6 |
| *Tc-02-RC-MOD, Tc99, Liquid "As Received"* | | | | | | | | | | | | | | |
| Technetium-99 | | 71.9 | +/-13.9 | 21.3 | +/-16.1 | 25.0 | pCi/L | | | GS3 | 08/10/25 | 1718 | 2832222 | 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" | 2834726 | 112 * | (30%-110%) |
| Thorium-229 Tracer | Th-01-RC M, Th Isotopes, Liquid "As Received" | 2834727 | 60.3 | (30%-110%) |
| Barium-133 Tracer | 904.0Mod, Ra228, Liquid "As Received" | 2834438 | 77.3 | (30%-110%) |
| Strontium Carrier | 905.0Mod, Sr90, liquid "As Received" | 2831822 | 91.8 | (30%-110%) |
| Technetium-99m Tracer | Tc-02-RC-MOD, Tc99, Liquid "As Received" | 2832222 | 93.6 | (30%-110%) |

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Company : Four Rivers Nuclear Partnership, LLC
Address : 5600 Hobbs Road
Kevil, Kentucky 42053

Report Date: October 1, 2025

Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: MW366UG4-25
Sample ID: 733816007

Project: FRNP00714
Client ID: FRNP007

| 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,
Address : LLC
5600 Hobbs Road

Kevil, Kentucky 42053

Report Date: October 1, 2025

Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: MW367UG4-25
Sample ID: 733816009
Matrix: WG
Collect Date: 17-JUL-25
Receive Date: 18-JUL-25
Collector: Client

Project: FRNP00714
Client ID: FRNP007

| 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 | UT | 0.478 | +/-0.633 | 0.909 | +/-0.633 | 5.00 | pCi/L | | | CM4 | 08/06/25 | 0847 | 2834726 | 1 |
| *Th-01-RC M, Th Isotopes, Liquid "As Received"* | | | | | | | | | | | | | | |
| Thorium-230 | U | 0.210 | +/-0.950 | 1.88 | +/-0.953 | 50.0 | pCi/L | | | CM4 | 08/01/25 | 0837 | 2834727 | 2 |
| Thorium-232 | U | 0.0865 | +/-0.601 | 1.20 | +/-0.601 | | pCi/L | | | | | | | |
| **Rad Gas Flow Proportional Counting** | | | | | | | | | | | | | | |
| *904.0Mod, Ra228, Liquid "As Received"* | | | | | | | | | | | | | | |
| Radium-228 | U | 3.49 | +/-3.06 | 4.86 | +/-3.22 | 4.99 | pCi/L | | | HH3 | 08/05/25 | 1053 | 2834438 | 3 |
| *905.0Mod, Sr90, liquid "As Received"* | | | | | | | | | | | | | | |
| Strontium-90 | U | 0.117 | +/-1.85 | 3.57 | +/-1.85 | 8.00 | pCi/L | | | IJ1 | 07/24/25 | 1328 | 2831822 | 4 |
| *9310, Alpha/Beta Activity, liquid "As Received"* | | | | | | | | | | | | | | |
| Alpha | U | 6.26 | +/-4.76 | 6.39 | +/-4.87 | 15.0 | pCi/L | | | ST2 | 07/22/25 | 1356 | 2832754 | 5 |
| Beta | | 9.75 | +/-6.12 | 9.20 | +/-6.33 | 50.0 | pCi/L | | | | | | | |
| **Rad Liquid Scintillation Analysis** | | | | | | | | | | | | | | |
| *906.0M, Tritium Dist, Liquid "As Received"* | | | | | | | | | | | | | | |
| Tritium | U | -52.0 | +/-98.6 | 215 | +/-98.6 | 300 | pCi/L | | | IT1 | 07/21/25 | 1814 | 2832171 | 6 |
| *Tc-02-RC-MOD, Tc99, Liquid "As Received"* | | | | | | | | | | | | | | |
| Technetium-99 | U | 10.7 | +/-13.2 | 22.1 | +/-13.2 | 25.0 | pCi/L | | | GS3 | 08/10/25 | 1755 | 2832222 | 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" | 2834726 | 112 * | (30%-110%) |
| Thorium-229 Tracer | Th-01-RC M, Th Isotopes, Liquid "As Received" | 2834727 | 85.1 | (30%-110%) |
| Barium-133 Tracer | 904.0Mod, Ra228, Liquid "As Received" | 2834438 | 71.1 | (30%-110%) |
| Strontium Carrier | 905.0Mod, Sr90, liquid "As Received" | 2831822 | 98.8 | (30%-110%) |
| Technetium-99m Tracer | Tc-02-RC-MOD, Tc99, Liquid "As Received" | 2832222 | 91.6 | (30%-110%) |

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# *Certificate of Analysis*

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Kevil, Kentucky 42053

Report Date: October 1, 2025

Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: MW367UG4-25
Sample ID: 733816009

Project: FRNP00714
Client ID: FRNP007

| 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,
Address : LLC
5600 Hobbs Road

Kevil, Kentucky 42053

Report Date: October 1, 2025

Contact: Ms. Jaime Morrow

Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: MW368UG4-25
Sample ID: 733816011
Matrix: WG
Collect Date: 17-JUL-25
Receive Date: 18-JUL-25
Collector: Client

Project: FRNP00714
Client ID: FRNP007

| 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 | 0.498 | +/-0.603 | 0.696 | +/-0.603 | 5.00 | pCi/L | | | CM4 | 08/06/25 | 0847 | 2834726 | 1 |
| *Th-01-RC M, Th Isotopes, Liquid "As Received"* | | | | | | | | | | | | | | |
| Thorium-230 | U | 0.445 | +/-1.05 | 1.87 | +/-1.06 | 50.0 | pCi/L | | | CM4 | 08/01/25 | 0837 | 2834727 | 2 |
| Thorium-232 | U | -0.190 | +/-0.508 | 1.46 | +/-0.509 | | pCi/L | | | | | | | |
| **Rad Gas Flow Proportional Counting** | | | | | | | | | | | | | | |
| *904.0Mod, Ra228, Liquid "As Received"* | | | | | | | | | | | | | | |
| Radium-228 | U | 1.54 | +/-2.69 | 4.70 | +/-2.72 | 4.99 | pCi/L | | | HH3 | 08/05/25 | 1051 | 2834438 | 3 |
| *905.0Mod, Sr90, liquid "As Received"* | | | | | | | | | | | | | | |
| Strontium-90 | U | 0.568 | +/-1.90 | 3.52 | +/-1.91 | 8.00 | pCi/L | | | IJ1 | 07/24/25 | 1556 | 2831822 | 4 |
| *9310, Alpha/Beta Activity, liquid "As Received"* | | | | | | | | | | | | | | |
| Alpha | U | 3.71 | +/-4.88 | 8.21 | +/-4.91 | 15.0 | pCi/L | | | ST2 | 07/22/25 | 1623 | 2832754 | 5 |
| Beta | U | 1.42 | +/-4.45 | 8.13 | +/-4.46 | 50.0 | pCi/L | | | | | | | |
| **Rad Liquid Scintillation Analysis** | | | | | | | | | | | | | | |
| *906.0M, Tritium Dist, Liquid "As Received"* | | | | | | | | | | | | | | |
| Tritium | U | 42.1 | +/-119 | 220 | +/-119 | 300 | pCi/L | | | IT1 | 07/21/25 | 1836 | 2832171 | 6 |
| *Tc-02-RC-MOD, Tc99, Liquid "As Received"* | | | | | | | | | | | | | | |
| Technetium-99 | U | 0.350 | +/-12.6 | 21.6 | +/-12.6 | 25.0 | pCi/L | | | GS3 | 08/10/25 | 1832 | 2832222 | 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" | 2834726 | 105 | (30%-110%) |
| Thorium-229 Tracer | Th-01-RC M, Th Isotopes, Liquid "As Received" | 2834727 | 89.9 | (30%-110%) |
| Barium-133 Tracer | 904.0Mod, Ra228, Liquid "As Received" | 2834438 | 74.8 | (30%-110%) |
| Strontium Carrier | 905.0Mod, Sr90, liquid "As Received" | 2831822 | 98.8 | (30%-110%) |
| Technetium-99m Tracer | Tc-02-RC-MOD, Tc99, Liquid "As Received" | 2832222 | 93.2 | (30%-110%) |

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Report Date: October 1, 2025

Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: MW368UG4-25
Sample ID: 733816011

Project: FRNP00714
Client ID: FRNP007

| 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: October 1, 2025

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

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: MW363UG4-25
Sample ID: 733816001
Matrix: WG
Collect Date: 17-JUL-25 07:42
Receive Date: 18-JUL-25
Collector: Client

Project: FRNP00714
Client ID: FRNP007

| 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 | 0.00861 | 0.0191 | ug/L | 0.957 | 1 | BM1 | 07/22/25 | 1319 | 2832590 | 1 |
| Carbon Analysis | | | | | | | | | | | | |
| 9060A, Total Organic Carbon "As Received" | | | | | | | | | | | | |
| Total Organic Carbon Average | J | 0.742 | 0.330 | 2.00 | mg/L | | 1 | KB3 | 07/24/25 | 0420 | 2834580 | 3 |
| Flow Injection Analysis | | | | | | | | | | | | |
| 9012B, Cyanide, Total "As Received" | | | | | | | | | | | | |
| Cyanide, Total | U | 0.200 | 0.00167 | 0.200 | mg/L | 1.00 | 1 | KLP1 | 07/22/25 | 1334 | 2832718 | 4 |
| Halogen Analysis | | | | | | | | | | | | |
| 9020B, TOX (Organic Halogen) "As Received" | | | | | | | | | | | | |
| Total Organic Halogens | J | 7.20 | 3.33 | 10.0 | ug/L | | 1 | RMJ | 08/13/25 | 0120 | 2845228 | 5 |
| Ion Chromatography | | | | | | | | | | | | |
| 300.0, Iodide in Liquid "As Received" | | | | | | | | | | | | |
| Iodide | U | 0.500 | 0.167 | 0.500 | mg/L | | 1 | TXT1 | 07/18/25 | 1550 | 2832329 | 6 |
| SW846 9056A Anions (5 elements) "As Received" | | | | | | | | | | | | |
| Bromide | U | 0.200 | 0.0670 | 0.200 | mg/L | | 1 | CH6 | 07/18/25 | 1406 | 2832209 | 7 |
| Fluoride | J | 0.163 | 0.0330 | 4.00 | mg/L | | 1 | | | | | |
| Chloride | J | 10.7 | 0.335 | 250 | mg/L | | 5 | CH6 | 07/18/25 | 2149 | 2832209 | 8 |
| Nitrate-N | J | 3.54 | 0.165 | 10.0 | mg/L | | 5 | | | | | |
| Sulfate | | 34.9 | 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 | 08/08/25 | 1033 | 2842625 | 9 |
| Metals Analysis-ICP-MS | | | | | | | | | | | | |
| 6020, Metals (15+ elements) "As Received" | | | | | | | | | | | | |
| Aluminum | U | 0.0500 | 0.0193 | 0.0500 | mg/L | 1.00 | 1 | PRB | 08/10/25 | 1903 | 2832820 | 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 | | 0.116 | 0.000670 | 0.00400 | mg/L | 1.00 | 1 | | | | | |
| Beryllium | U | 0.000500 | 0.000200 | 0.000500 | mg/L | 1.00 | 1 | | | | | |
| Boron | | 0.0216 | 0.00520 | 0.0150 | mg/L | 1.00 | 1 | | | | | |
| Cadmium | U | 0.00100 | 0.000300 | 0.00100 | mg/L | 1.00 | 1 | | | | | |
| Calcium | | 21.0 | 0.0800 | 0.200 | mg/L | 1.00 | 1 | | | | | |
| Chromium | U | 0.0100 | 0.00300 | 0.0100 | mg/L | 1.00 | 1 | | | | | |

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# *Certificate of Analysis*

Report Date: October 1, 2025

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

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: MW363UG4-25 Project: FRNP00714
Sample ID: 733816001 Client ID: FRNP007

| Parameter | Qualifier | Result | DL | RL | Units | PF | DF | Analyst | Date | Time | Batch | Method |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Metals Analysis-ICP-MS | | | | | | | | | | | | |
| 6020, Metals (15+ elements) "As Received" | | | | | | | | | | | | |
| Cobalt | J | 0.000892 | 0.000300 | 0.00100 | mg/L | 1.00 | 1 | | | | | |
| Copper | J | 0.00129 | 0.000300 | 0.00200 | mg/L | 1.00 | 1 | | | | | |
| Iron | J | 0.0440 | 0.0330 | 0.100 | mg/L | 1.00 | 1 | | | | | |
| Lead | U | 0.00200 | 0.000500 | 0.00200 | mg/L | 1.00 | 1 | | | | | |
| Magnesium | | 8.24 | 0.0100 | 0.0300 | mg/L | 1.00 | 1 | | | | | |
| Manganese | | 0.140 | 0.00100 | 0.00500 | mg/L | 1.00 | 1 | | | | | |
| Molybdenum | U | 0.00100 | 0.000200 | 0.00100 | mg/L | 1.00 | 1 | | | | | |
| Nickel | | 0.00906 | 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 | | | | | |
| Sodium | | 39.2 | 0.0800 | 0.250 | 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 | 08/11/25 | 1208 | 2832820 | 11 |
| Zinc | J | 0.0151 | 0.00330 | 0.0200 | mg/L | 1.00 | 1 | | | | | |
| Tantalum | UN | 0.00500 | 0.00100 | 0.00500 | mg/L | 1.00 | 1 | JD2 | 08/14/25 | 1504 | 2832820 | 12 |
| Semi-Volatiles-PCB | | | | | | | | | | | | |
| 8082A, PCB Liquids "As Received" | | | | | | | | | | | | |
| Aroclor-1016 | U | 0.0839 | 0.0279 | 0.0839 | ug/L | 0.000839 | 1 | JXM | 08/14/25 | 0113 | 2845347 | 13 |
| Aroclor-1221 | U | 0.0839 | 0.0279 | 0.0839 | ug/L | 0.000839 | 1 | | | | | |
| Aroclor-1232 | U | 0.0839 | 0.0279 | 0.0839 | ug/L | 0.000839 | 1 | | | | | |
| Aroclor-1242 | U | 0.0839 | 0.0279 | 0.0839 | ug/L | 0.000839 | 1 | | | | | |
| Aroclor-1248 | U | 0.0839 | 0.0279 | 0.0839 | ug/L | 0.000839 | 1 | | | | | |
| Aroclor-1254 | U | 0.0839 | 0.0279 | 0.0839 | ug/L | 0.000839 | 1 | | | | | |
| Aroclor-1260 | U | 0.0839 | 0.0279 | 0.0839 | ug/L | 0.000839 | 1 | | | | | |
| Aroclor-1268 | U | 0.0839 | 0.0279 | 0.0839 | ug/L | 0.000839 | 1 | | | | | |
| Aroclor-Total | U | 0.0839 | 0.0279 | 0.0839 | ug/L | 0.000839 | 1 | | | | | |
| Solids Analysis | | | | | | | | | | | | |
| 160.1, Dissolved Solids "As Received" | | | | | | | | | | | | |
| Total Dissolved Solids | * | 218 | 2.38 | 10.0 | mg/L | | | SC1 | 07/23/25 | 1623 | 2834468 | 14 |
| Spectrometric Analysis | | | | | | | | | | | | |
| 410.4, Chem. Oxygen Demand "As Received" | | | | | | | | | | | | |

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# *Certificate of Analysis*

Report Date: October 1, 2025

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

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: MW363UG4-25 Project: FRNP00714
Sample ID: 733816001 Client ID: FRNP007

| 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 | BR2 | 07/25/25 | 1538 | 2835351 | 15 |
| Volatile Organics | | | | | | | | | | | | |
| 8260D, Volatiles- full suite "As Received" | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | U | 1.00 | 0.333 | 1.00 | ug/L | | 1 | AXH5 | 07/24/25 | 1206 | 2835360 | 16 |
| 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(UG25-04)

Client Sample ID: MW363UG4-25 Project: FRNP00714
Sample ID: 733816001 Client ID: FRNP007

| Parameter | Qualifier | Result | DL | RL | Units | PF | DF | Analyst | Date | Time | Batch | Method |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Volatile Organics | | | | | | | | | | | | |
| 8260D, Volatiles- full suite "As Received" | | | | | | | | | | | | |
| Methylene chloride | BJ | 1.22 | 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 | | 3.84 | 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 | 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 | PB1 | 08/07/25 | 1120 | 2842623 |
| SW846 3535A | SW3535A PCB SPE Extraction | KW3 | 08/13/25 | 1010 | 2845346 |
| SW846 9010C Distillation | SW846 9010C Prep | AM5 | 07/21/25 | 1622 | 2832717 |
| SW846 8011 PREP | 8011 Prep | LL2 | 07/22/25 | 1039 | 2832589 |
| SW846 3005A | ICP-MS 3005A PREP | ES3 | 07/21/25 | 1535 | 2832819 |

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Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: MW363UG4-25 Project: FRNP00714
Sample ID: 733816001 Client ID: FRNP007

| 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 3535A/8082A | |
| 14 | EPA 160.1 | |
| 15 | EPA 410.4 | |
| 16 | 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 | 6.83 | 91 | (56%-149%) |
| Decachlorobiphenyl | 8082A, PCB Liquids "As Received" | 0.0793 ug/L | 0.168 | 47 | (30%-135%) |
| 4cmx | 8082A, PCB Liquids "As Received" | 0.0966 ug/L | 0.168 | 58 | (26%-108%) |
| Bromofluorobenzene | 8260D, Volatiles- full suite "As Received" | 47.3 ug/L | 50.0 | 95 | (85%-114%) |
| 1,2-Dichloroethane-d4 | 8260D, Volatiles- full suite "As Received" | 48.5 ug/L | 50.0 | 97 | (81%-118%) |
| Toluene-d8 | 8260D, Volatiles- full suite "As Received" | 49.2 ug/L | 50.0 | 98 | (89%-112%) |

**Notes:**

*Column headers are defined as follows:*

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

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# *Certificate of Analysis*

Report Date: October 1, 2025

| | |
|---|---|
| Company : | Four Rivers Nuclear Partnership, LLC |
| Address : | 5600 Hobbs Road |
| | Kevil, Kentucky 42053 |
| Contact: | Ms. Jaime Morrow |
| Project: | C-746-U Landfill Quarterly(UG25-04) |

| | | | |
|---|---|---|---|
| Client Sample ID: | MW363UG4-25 | Project: | FRNP00714 |
| Sample ID: | 733816002 | Client ID: | FRNP007 |
| Matrix: | WG | | |
| Collect Date: | 17-JUL-25 07:42 | | |
| Receive Date: | 18-JUL-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 | | 0.108 | 0.000670 | 0.00400 | mg/L | 1.00 | 1 | BAJ | 08/08/25 | 2323 | 2836397 | 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 | 07/25/25 | 1420 | 2833442 |
| SW846 3005A | ICP-MS 3005A PREP | JB7 | 07/28/25 | 1530 | 2836395 |

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(UG25-04)

Client Sample ID: MW364UG4-25
Sample ID: 733816003
Matrix: WG
Collect Date: 17-JUL-25 08:35
Receive Date: 18-JUL-25
Collector: Client

Project: FRNP00714
Client ID: FRNP007

| 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 | 0.00860 | 0.0191 | ug/L | 0.955 | 1 | BM1 | 07/22/25 | 1354 | 2832590 | 1 |
| Carbon Analysis | | | | | | | | | | | | |
| 9060A, Total Organic Carbon "As Received" | | | | | | | | | | | | |
| Total Organic Carbon Average | J | 0.450 | 0.330 | 2.00 | mg/L | | 1 | KB3 | 07/24/25 | 0451 | 2834580 | 3 |
| Flow Injection Analysis | | | | | | | | | | | | |
| 9012B, Cyanide, Total "As Received" | | | | | | | | | | | | |
| Cyanide, Total | U | 0.200 | 0.00167 | 0.200 | mg/L | 1.00 | 1 | KLP1 | 07/22/25 | 1341 | 2832718 | 4 |
| Halogen Analysis | | | | | | | | | | | | |
| 9020B, TOX (Organic Halogen) "As Received" | | | | | | | | | | | | |
| Total Organic Halogens | J | 5.66 | 3.33 | 10.0 | ug/L | | 1 | RMJ | 08/12/25 | 2316 | 2845228 | 5 |
| Ion Chromatography | | | | | | | | | | | | |
| 300.0, Iodide in Liquid "As Received" | | | | | | | | | | | | |
| Iodide | U | 0.500 | 0.167 | 0.500 | mg/L | | 1 | TXT1 | 07/18/25 | 1603 | 2832329 | 6 |
| SW846 9056A Anions (5 elements) "As Received" | | | | | | | | | | | | |
| Bromide | | 0.471 | 0.0670 | 0.200 | mg/L | | 1 | CH6 | 07/18/25 | 1437 | 2832209 | 7 |
| Fluoride | J | 0.121 | 0.0330 | 4.00 | mg/L | | 1 | | | | | |
| Chloride | J | 36.2 | 0.335 | 250 | mg/L | | 5 | CH6 | 07/18/25 | 2219 | 2832209 | 8 |
| Nitrate-N | J | 1.20 | 0.165 | 10.0 | mg/L | | 5 | | | | | |
| Sulfate | | 67.2 | 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 | 08/08/25 | 1034 | 2842625 | 9 |
| Metals Analysis-ICP-MS | | | | | | | | | | | | |
| 6020, Metals (15+ elements) "As Received" | | | | | | | | | | | | |
| Aluminum | J | 0.0313 | 0.0193 | 0.0500 | mg/L | 1.00 | 1 | PRB | 08/10/25 | 1906 | 2832820 | 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 | | 0.0547 | 0.000670 | 0.00400 | mg/L | 1.00 | 1 | | | | | |
| Beryllium | U | 0.000500 | 0.000200 | 0.000500 | mg/L | 1.00 | 1 | | | | | |
| Boron | | 0.196 | 0.00520 | 0.0150 | mg/L | 1.00 | 1 | | | | | |
| Cadmium | U | 0.00100 | 0.000300 | 0.00100 | mg/L | 1.00 | 1 | | | | | |
| Calcium | | 32.4 | 0.0800 | 0.200 | mg/L | 1.00 | 1 | | | | | |
| Chromium | U | 0.0100 | 0.00300 | 0.0100 | mg/L | 1.00 | 1 | | | | | |

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Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: MW364UG4-25 Project: FRNP00714
Sample ID: 733816003 Client ID: FRNP007

| Parameter | Qualifier | Result | DL | RL | Units | PF | DF | Analyst | Date | Time | Batch | Method |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Metals Analysis-ICP-MS | | | | | | | | | | | | |
| 6020, Metals (15+ elements) "As Received" | | | | | | | | | | | | |
| Cobalt | U | 0.00100 | 0.000300 | 0.00100 | mg/L | 1.00 | 1 | | | | | |
| Copper | J | 0.00130 | 0.000300 | 0.00200 | mg/L | 1.00 | 1 | | | | | |
| Iron | J | 0.0736 | 0.0330 | 0.100 | mg/L | 1.00 | 1 | | | | | |
| Lead | U | 0.00200 | 0.000500 | 0.00200 | mg/L | 1.00 | 1 | | | | | |
| Magnesium | | 13.9 | 0.0100 | 0.0300 | mg/L | 1.00 | 1 | | | | | |
| Manganese | | 0.0124 | 0.00100 | 0.00500 | mg/L | 1.00 | 1 | | | | | |
| Molybdenum | U | 0.00100 | 0.000200 | 0.00100 | mg/L | 1.00 | 1 | | | | | |
| Nickel | J | 0.000636 | 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 | | | | | |
| Sodium | | 41.7 | 0.0800 | 0.250 | 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 | 08/11/25 | 1211 | 2832820 | 11 |
| Zinc | J | 0.0157 | 0.00330 | 0.0200 | mg/L | 1.00 | 1 | | | | | |
| Tantalum | UN | 0.00500 | 0.00100 | 0.00500 | mg/L | 1.00 | 1 | JD2 | 08/14/25 | 1505 | 2832820 | 12 |
| Semi-Volatiles-PCB | | | | | | | | | | | | |
| 8082A, PCB Liquids "As Received" | | | | | | | | | | | | |
| Aroclor-1016 | U | 0.0842 | 0.0280 | 0.0842 | ug/L | 0.000842 | 1 | JXM | 08/14/25 | 0128 | 2845347 | 13 |
| Aroclor-1221 | U | 0.0842 | 0.0280 | 0.0842 | ug/L | 0.000842 | 1 | | | | | |
| Aroclor-1232 | U | 0.0842 | 0.0280 | 0.0842 | ug/L | 0.000842 | 1 | | | | | |
| Aroclor-1242 | U | 0.0842 | 0.0280 | 0.0842 | ug/L | 0.000842 | 1 | | | | | |
| Aroclor-1248 | U | 0.0842 | 0.0280 | 0.0842 | ug/L | 0.000842 | 1 | | | | | |
| Aroclor-1254 | U | 0.0842 | 0.0280 | 0.0842 | ug/L | 0.000842 | 1 | | | | | |
| Aroclor-1260 | U | 0.0842 | 0.0280 | 0.0842 | ug/L | 0.000842 | 1 | | | | | |
| Aroclor-1268 | U | 0.0842 | 0.0280 | 0.0842 | ug/L | 0.000842 | 1 | | | | | |
| Aroclor-Total | U | 0.0842 | 0.0280 | 0.0842 | ug/L | 0.000842 | 1 | | | | | |
| Solids Analysis | | | | | | | | | | | | |
| 160.1, Dissolved Solids "As Received" | | | | | | | | | | | | |
| Total Dissolved Solids | * | 262 | 2.38 | 10.0 | mg/L | | | SC1 | 07/23/25 | 1623 | 2834468 | 14 |
| Spectrometric Analysis | | | | | | | | | | | | |
| 410.4, Chem. Oxygen Demand "As Received" | | | | | | | | | | | | |

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

# *Certificate of Analysis*

Report Date: October 1, 2025

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

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: MW364UG4-25 Project: FRNP00714
Sample ID: 733816003 Client ID: FRNP007

| 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 | BR2 | 07/25/25 | 1538 | 2835351 | 15 |
| Volatile Organics | | | | | | | | | | | | |
| 8260D, Volatiles- full suite "As Received" | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | U | 1.00 | 0.333 | 1.00 | ug/L | | 1 | AXH5 | 07/24/25 | 1232 | 2835360 | 16 |
| 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: October 1, 2025

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

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: MW364UG4-25 Project: FRNP00714
Sample ID: 733816003 Client ID: FRNP007

| Parameter | Qualifier | Result | DL | RL | Units | PF | DF | Analyst | Date | Time | Batch | Method |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Volatile Organics | | | | | | | | | | | | |
| 8260D, Volatiles- full suite "As Received" | | | | | | | | | | | | |
| Methylene chloride | BJ | 0.690 | 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 | | 1.79 | 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 | 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 | KW3 | 08/13/25 | 1010 | 2845346 |
| SW846 7470A Prep | EPA 7470A Mercury Prep Liquid | PB1 | 08/07/25 | 1120 | 2842623 |
| SW846 3005A | ICP-MS 3005A PREP | ES3 | 07/21/25 | 1535 | 2832819 |
| SW846 9010C Distillation | SW846 9010C Prep | AM5 | 07/21/25 | 1622 | 2832717 |
| SW846 8011 PREP | 8011 Prep | LL2 | 07/22/25 | 1039 | 2832589 |

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Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: MW364UG4-25 Project: FRNP00714
Sample ID: 733816003 Client ID: FRNP007

| 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 3535A/8082A | |
| 14 | EPA 160.1 | |
| 15 | EPA 410.4 | |
| 16 | SW846 8260D | |

| Surrogate/Tracer Recovery | Test | Result | Nominal | Recovery% | Acceptable Limits |
|---|---|---|---|---|---|
| 1-Chloro-2-fluorobenzene | 8011 VOA- 1,2-Dibromo-3-chloropropane "As Received" | 6.38 ug/L | 6.82 | 93 | (56%-149%) |
| Decachlorobiphenyl | 8082A, PCB Liquids "As Received" | 0.0667 ug/L | 0.168 | 40 | (30%-135%) |
| 4cmx | 8082A, PCB Liquids "As Received" | 0.109 ug/L | 0.168 | 65 | (26%-108%) |
| Bromofluorobenzene | 8260D, Volatiles- full suite "As Received" | 46.9 ug/L | 50.0 | 94 | (85%-114%) |
| 1,2-Dichloroethane-d4 | 8260D, Volatiles- full suite "As Received" | 49.4 ug/L | 50.0 | 99 | (81%-118%) |
| Toluene-d8 | 8260D, Volatiles- full suite "As Received" | 49.1 ug/L | 50.0 | 98 | (89%-112%) |

**Notes:**

*Column headers are defined as follows:*

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

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# *Certificate of Analysis*

Report Date: October 1, 2025

| | |
|---|---|
| Company : | Four Rivers Nuclear Partnership, LLC |
| Address : | 5600 Hobbs Road |
| | Kevil, Kentucky 42053 |
| Contact: | Ms. Jaime Morrow |
| Project: | C-746-U Landfill Quarterly(UG25-04) |

| | | | |
|---|---|---|---|
| Client Sample ID: | MW364UG4-25 | Project: | FRNP00714 |
| Sample ID: | 733816004 | Client ID: | FRNP007 |
| Matrix: | WG | | |
| Collect Date: | 17-JUL-25 08:35 | | |
| Receive Date: | 18-JUL-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 | | 0.0531 | 0.000670 | 0.00400 | mg/L | 1.00 | 1 | BAJ | 08/08/25 | 2326 | 2836397 | 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 | JB7 | 07/28/25 | 1530 | 2836395 |
| EPA 160 | Laboratory Filtration | MM7 | 07/25/25 | 1420 | 2833442 |

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: October 1, 2025

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

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: MW365UG4-25
Sample ID: 733816005
Matrix: WG
Collect Date: 17-JUL-25 09:37
Receive Date: 18-JUL-25
Collector: Client

Project: FRNP00714
Client ID: FRNP007

| 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 | 0.00843 | 0.0187 | ug/L | 0.937 | 1 | BM1 | 07/22/25 | 1539 | 2832590 | 1 |
| Carbon Analysis | | | | | | | | | | | | |
| 9060A, Total Organic Carbon "As Received" | | | | | | | | | | | | |
| Total Organic Carbon Average | J | 1.20 | 0.330 | 2.00 | mg/L | | 1 | KB3 | 07/24/25 | 0625 | 2834580 | 3 |
| Flow Injection Analysis | | | | | | | | | | | | |
| 9012B, Cyanide, Total "As Received" | | | | | | | | | | | | |
| Cyanide, Total | J | 0.00373 | 0.00167 | 0.200 | mg/L | 1.00 | 1 | KLP1 | 07/22/25 | 1344 | 2832718 | 4 |
| Halogen Analysis | | | | | | | | | | | | |
| 9020B, TOX (Organic Halogen) "As Received" | | | | | | | | | | | | |
| Total Organic Halogens | | 19.9 | 3.33 | 10.0 | ug/L | | 1 | RMJ | 08/13/25 | 0224 | 2845228 | 5 |
| Ion Chromatography | | | | | | | | | | | | |
| 300.0, Iodide in Liquid "As Received" | | | | | | | | | | | | |
| Iodide | U | 0.500 | 0.167 | 0.500 | mg/L | | 1 | TXT1 | 07/18/25 | 1642 | 2832329 | 6 |
| SW846 9056A Anions (5 elements) "As Received" | | | | | | | | | | | | |
| Bromide | U | 0.200 | 0.0670 | 0.200 | mg/L | | 1 | CH6 | 07/18/25 | 1507 | 2832209 | 7 |
| Chloride | J | 1.78 | 0.0670 | 250 | mg/L | | 1 | | | | | |
| Fluoride | J | 0.280 | 0.0330 | 4.00 | mg/L | | 1 | | | | | |
| Nitrate-N | J | 1.03 | 0.165 | 10.0 | mg/L | | 5 | CH6 | 07/18/25 | 2352 | 2832209 | 8 |
| Sulfate | | 49.8 | 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 | 08/08/25 | 1041 | 2842625 | 9 |
| Metals Analysis-ICP-MS | | | | | | | | | | | | |
| 6020, Metals (15+ elements) "As Received" | | | | | | | | | | | | |
| Aluminum | J | 0.0217 | 0.0193 | 0.0500 | mg/L | 1.00 | 1 | PRB | 08/10/25 | 1925 | 2832820 | 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 | | 0.0900 | 0.000670 | 0.00400 | mg/L | 1.00 | 1 | | | | | |
| Beryllium | U | 0.000500 | 0.000200 | 0.000500 | mg/L | 1.00 | 1 | | | | | |
| Boron | J | 0.00636 | 0.00520 | 0.0150 | mg/L | 1.00 | 1 | | | | | |
| Cadmium | U | 0.00100 | 0.000300 | 0.00100 | mg/L | 1.00 | 1 | | | | | |
| Calcium | | 20.8 | 0.0800 | 0.200 | mg/L | 1.00 | 1 | | | | | |
| Chromium | U | 0.0100 | 0.00300 | 0.0100 | mg/L | 1.00 | 1 | | | | | |

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Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: MW365UG4-25 Project: FRNP00714
Sample ID: 733816005 Client ID: FRNP007

| Parameter | Qualifier | Result | DL | RL | Units | PF | DF | Analyst | Date | Time | Batch | Method |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Metals Analysis-ICP-MS | | | | | | | | | | | | |
| 6020, Metals (15+ elements) "As Received" | | | | | | | | | | | | |
| Cobalt | | 0.00153 | 0.000300 | 0.00100 | mg/L | 1.00 | 1 | | | | | |
| Copper | | 0.00307 | 0.000300 | 0.00200 | mg/L | 1.00 | 1 | | | | | |
| Iron | J | 0.0373 | 0.0330 | 0.100 | mg/L | 1.00 | 1 | | | | | |
| Lead | U | 0.00200 | 0.000500 | 0.00200 | mg/L | 1.00 | 1 | | | | | |
| Magnesium | | 9.54 | 0.0100 | 0.0300 | mg/L | 1.00 | 1 | | | | | |
| Manganese | | 0.0103 | 0.00100 | 0.00500 | mg/L | 1.00 | 1 | | | | | |
| Nickel | | 0.00510 | 0.000600 | 0.00200 | mg/L | 1.00 | 1 | | | | | |
| Potassium | J | 0.264 | 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 | | | | | |
| Molybdenum | J | 0.000231 | 0.000200 | 0.00100 | mg/L | 1.00 | 1 | PRB | 08/11/25 | 0645 | 2832820 | 11 |
| Uranium | | 0.000332 | 0.0000670 | 0.000200 | mg/L | 1.00 | 1 | | | | | |
| Rhodium | U | 0.00500 | 0.00160 | 0.00500 | mg/L | 1.00 | 1 | PRB | 08/11/25 | 1232 | 2832820 | 12 |
| Zinc | J | 0.00555 | 0.00330 | 0.0200 | mg/L | 1.00 | 1 | | | | | |
| Tantalum | UN | 0.00500 | 0.00100 | 0.00500 | mg/L | 1.00 | 1 | JD2 | 08/14/25 | 1511 | 2832820 | 13 |
| Sodium | | 51.4 | 0.800 | 2.50 | mg/L | 1.00 | 10 | PRB | 08/11/25 | 1235 | 2832820 | 14 |
| Semi-Volatiles-PCB | | | | | | | | | | | | |
| 8082A, PCB Liquids "As Received" | | | | | | | | | | | | |
| Aroclor-1016 | U | 0.0839 | 0.0279 | 0.0839 | ug/L | 0.000839 | 1 | JXM | 08/14/25 | 0144 | 2845347 | 15 |
| Aroclor-1221 | U | 0.0839 | 0.0279 | 0.0839 | ug/L | 0.000839 | 1 | | | | | |
| Aroclor-1232 | U | 0.0839 | 0.0279 | 0.0839 | ug/L | 0.000839 | 1 | | | | | |
| Aroclor-1242 | U | 0.0839 | 0.0279 | 0.0839 | ug/L | 0.000839 | 1 | | | | | |
| Aroclor-1248 | U | 0.0839 | 0.0279 | 0.0839 | ug/L | 0.000839 | 1 | | | | | |
| Aroclor-1254 | U | 0.0839 | 0.0279 | 0.0839 | ug/L | 0.000839 | 1 | | | | | |
| Aroclor-1260 | U | 0.0839 | 0.0279 | 0.0839 | ug/L | 0.000839 | 1 | | | | | |
| Aroclor-1268 | U | 0.0839 | 0.0279 | 0.0839 | ug/L | 0.000839 | 1 | | | | | |
| Aroclor-Total | U | 0.0839 | 0.0279 | 0.0839 | ug/L | 0.000839 | 1 | | | | | |
| Solids Analysis | | | | | | | | | | | | |
| 160.1, Dissolved Solids "As Received" | | | | | | | | | | | | |
| Total Dissolved Solids | * | 272 | 2.38 | 10.0 | mg/L | | | SC1 | 07/23/25 | 1623 | 2834468 | 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(UG25-04)

Client Sample ID: MW365UG4-25 Project: FRNP00714
Sample ID: 733816005 Client ID: FRNP007

| 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 | BR2 | 07/25/25 | 1538 | 2835351 | 17 |
| Volatile Organics | | | | | | | | | | | | |
| 8260D, Volatiles- full suite "As Received" | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | U | 1.00 | 0.333 | 1.00 | ug/L | | 1 | AXH5 | 07/24/25 | 1258 | 2835360 | 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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# *Certificate of Analysis*

Report Date: October 1, 2025

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

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: MW365UG4-25 Project: FRNP00714
Sample ID: 733816005 Client ID: FRNP007

| Parameter | Qualifier | Result | DL | RL | Units | PF | DF | Analyst | Date | Time | Batch | Method |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Volatile Organics | | | | | | | | | | | | |
| 8260D, Volatiles- full suite "As Received" | | | | | | | | | | | | |
| Methylene chloride | BJ | 1.29 | 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 | | 2.13 | 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 | 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 | ES3 | 07/21/25 | 1535 | 2832819 |
| SW846 8011 PREP | 8011 Prep | LL2 | 07/22/25 | 1039 | 2832589 |
| SW846 9010C Distillation | SW846 9010C Prep | AM5 | 07/21/25 | 1622 | 2832717 |
| SW846 7470A Prep | EPA 7470A Mercury Prep Liquid | PB1 | 08/07/25 | 1120 | 2842623 |
| SW846 3535A | SW3535A PCB SPE Extraction | KW3 | 08/13/25 | 1010 | 2845346 |

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Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: MW365UG4-25 Project: FRNP00714
Sample ID: 733816005 Client ID: FRNP007

| 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" | 7.04 ug/L | 6.69 | 105 | (56%-149%) |
| Decachlorobiphenyl | 8082A, PCB Liquids "As Received" | 0.0504 ug/L | 0.168 | 30 | (30%-135%) |
| 4cmx | 8082A, PCB Liquids "As Received" | 0.0972 ug/L | 0.168 | 58 | (26%-108%) |
| Bromofluorobenzene | 8260D, Volatiles- full suite "As Received" | 47.2 ug/L | 50.0 | 94 | (85%-114%) |
| 1,2-Dichloroethane-d4 | 8260D, Volatiles- full suite "As Received" | 48.8 ug/L | 50.0 | 98 | (81%-118%) |
| Toluene-d8 | 8260D, Volatiles- full suite "As Received" | 48.8 ug/L | 50.0 | 98 | (89%-112%) |

**Notes:**

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# *Certificate of Analysis*

Report Date: October 1, 2025

| | |
|---|---|
| Company : | Four Rivers Nuclear Partnership, LLC |
| Address : | 5600 Hobbs Road |
| | Kevil, Kentucky 42053 |
| Contact: | Ms. Jaime Morrow |
| Project: | C-746-U Landfill Quarterly(UG25-04) |

| | | | |
|---|---|---|---|
| Client Sample ID: | MW365UG4-25 | Project: | FRNP00714 |
| Sample ID: | 733816005 | Client ID: | FRNP007 |

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

*Column headers are defined as follows:*

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

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# *Certificate of Analysis*

Report Date: October 1, 2025

| | |
|---|---|
| Company : | Four Rivers Nuclear Partnership, LLC |
| Address : | 5600 Hobbs Road |
| | Kevil, Kentucky 42053 |
| Contact: | Ms. Jaime Morrow |
| Project: | C-746-U Landfill Quarterly(UG25-04) |

| | | | |
|---|---|---|---|
| Client Sample ID: | MW365UG4-25 | Project: | FRNP00714 |
| Sample ID: | 733816006 | Client ID: | FRNP007 |
| Matrix: | WG | | |
| Collect Date: | 17-JUL-25 09:37 | | |
| Receive Date: | 18-JUL-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 | | 0.0856 | 0.000670 | 0.00400 | mg/L | 1.00 | 1 | BAJ | 08/08/25 | 2340 | 2836397 | 1 |
| Chromium | U | 0.0100 | 0.00300 | 0.0100 | mg/L | 1.00 | 1 | | | | | |
| Uranium | | 0.000328 | 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 | JB7 | 07/28/25 | 1530 | 2836395 |
| EPA 160 | Laboratory Filtration | MM7 | 07/25/25 | 1420 | 2833442 |

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: October 1, 2025

Company : Four Rivers Nuclear Partnership, LLC
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Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: MW366UG4-25
Sample ID: 733816007
Matrix: WG
Collect Date: 17-JUL-25 10:28
Receive Date: 18-JUL-25
Collector: Client

Project: FRNP00714
Client ID: FRNP007

| 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 | BM1 | 07/22/25 | 1613 | 2832590 | 1 |
| Carbon Analysis | | | | | | | | | | | | |
| 9060A, Total Organic Carbon "As Received" | | | | | | | | | | | | |
| Total Organic Carbon Average | J | 0.483 | 0.330 | 2.00 | mg/L | | 1 | KB3 | 07/24/25 | 0656 | 2834580 | 3 |
| Flow Injection Analysis | | | | | | | | | | | | |
| 9012B, Cyanide, Total "As Received" | | | | | | | | | | | | |
| Cyanide, Total | U | 0.200 | 0.00167 | 0.200 | mg/L | 1.00 | 1 | KLP1 | 07/22/25 | 1345 | 2832718 | 4 |
| Halogen Analysis | | | | | | | | | | | | |
| 9020B, TOX (Organic Halogen) "As Received" | | | | | | | | | | | | |
| Total Organic Halogens | J | 4.70 | 3.33 | 10.0 | ug/L | | 1 | RMJ | 08/13/25 | 0312 | 2845228 | 5 |
| Ion Chromatography | | | | | | | | | | | | |
| 300.0, Iodide in Liquid "As Received" | | | | | | | | | | | | |
| Iodide | U | 0.500 | 0.167 | 0.500 | mg/L | | 1 | TXT1 | 07/18/25 | 1654 | 2832329 | 6 |
| SW846 9056A Anions (5 elements) "As Received" | | | | | | | | | | | | |
| Bromide | | 0.495 | 0.0670 | 0.200 | mg/L | | 1 | CH6 | 07/18/25 | 1538 | 2832209 | 7 |
| Fluoride | J | 0.144 | 0.0330 | 4.00 | mg/L | | 1 | | | | | |
| Chloride | J | 40.4 | 0.335 | 250 | mg/L | | 5 | CH6 | 07/19/25 | 0023 | 2832209 | 8 |
| Nitrate-N | J | 1.04 | 0.165 | 10.0 | mg/L | | 5 | | | | | |
| Sulfate | | 53.4 | 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 | 08/08/25 | 1042 | 2842625 | 9 |
| Metals Analysis-ICP-MS | | | | | | | | | | | | |
| 6020, Metals (15+ elements) "As Received" | | | | | | | | | | | | |
| Aluminum | U | 0.0500 | 0.0193 | 0.0500 | mg/L | 1.00 | 1 | PRB | 08/10/25 | 1928 | 2832820 | 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 | | 0.105 | 0.000670 | 0.00400 | mg/L | 1.00 | 1 | | | | | |
| Beryllium | U | 0.000500 | 0.000200 | 0.000500 | mg/L | 1.00 | 1 | | | | | |
| Boron | | 0.119 | 0.00520 | 0.0150 | mg/L | 1.00 | 1 | | | | | |
| Cadmium | U | 0.00100 | 0.000300 | 0.00100 | mg/L | 1.00 | 1 | | | | | |
| Calcium | | 33.5 | 0.0800 | 0.200 | mg/L | 1.00 | 1 | | | | | |
| Chromium | U | 0.0100 | 0.00300 | 0.0100 | mg/L | 1.00 | 1 | | | | | |

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# *Certificate of Analysis*

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Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: MW366UG4-25 Project: FRNP00714
Sample ID: 733816007 Client ID: FRNP007

| Parameter | Qualifier | Result | DL | RL | Units | PF | DF | Analyst | Date | Time | Batch | Method |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Metals Analysis-ICP-MS | | | | | | | | | | | | |
| 6020, Metals (15+ elements) "As Received" | | | | | | | | | | | | |
| Cobalt | U | 0.00100 | 0.000300 | 0.00100 | mg/L | 1.00 | 1 | | | | | |
| Copper | J | 0.000802 | 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 | | 14.3 | 0.0100 | 0.0300 | mg/L | 1.00 | 1 | | | | | |
| Manganese | J | 0.00130 | 0.00100 | 0.00500 | mg/L | 1.00 | 1 | | | | | |
| Nickel | J | 0.000759 | 0.000600 | 0.00200 | mg/L | 1.00 | 1 | | | | | |
| Potassium | | 1.98 | 0.0800 | 0.300 | mg/L | 1.00 | 1 | | | | | |
| Selenium | J | 0.00208 | 0.00150 | 0.00500 | mg/L | 1.00 | 1 | | | | | |
| Silver | U | 0.00100 | 0.000300 | 0.00100 | mg/L | 1.00 | 1 | | | | | |
| Sodium | | 47.9 | 0.0800 | 0.250 | 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 | | | | | |
| Molybdenum | U | 0.00100 | 0.000200 | 0.00100 | mg/L | 1.00 | 1 | PRB | 08/11/25 | 0648 | 2832820 | 11 |
| Uranium | U | 0.000200 | 0.0000670 | 0.000200 | mg/L | 1.00 | 1 | | | | | |
| Rhodium | U | 0.00500 | 0.00160 | 0.00500 | mg/L | 1.00 | 1 | PRB | 08/11/25 | 1238 | 2832820 | 12 |
| Zinc | J | 0.00495 | 0.00330 | 0.0200 | mg/L | 1.00 | 1 | | | | | |
| Tantalum | UN | 0.00500 | 0.00100 | 0.00500 | mg/L | 1.00 | 1 | JD2 | 08/14/25 | 1512 | 2832820 | 13 |
| Semi-Volatiles-PCB | | | | | | | | | | | | |
| 8082A, PCB Liquids "As Received" | | | | | | | | | | | | |
| Aroclor-1016 | U | 0.0873 | 0.0291 | 0.0873 | ug/L | 0.000873 | 1 | JXM | 08/14/25 | 0159 | 2845347 | 14 |
| Aroclor-1221 | U | 0.0873 | 0.0291 | 0.0873 | ug/L | 0.000873 | 1 | | | | | |
| Aroclor-1232 | U | 0.0873 | 0.0291 | 0.0873 | ug/L | 0.000873 | 1 | | | | | |
| Aroclor-1242 | U | 0.0873 | 0.0291 | 0.0873 | ug/L | 0.000873 | 1 | | | | | |
| Aroclor-1248 | U | 0.0873 | 0.0291 | 0.0873 | ug/L | 0.000873 | 1 | | | | | |
| Aroclor-1254 | U | 0.0873 | 0.0291 | 0.0873 | ug/L | 0.000873 | 1 | | | | | |
| Aroclor-1260 | U | 0.0873 | 0.0291 | 0.0873 | ug/L | 0.000873 | 1 | | | | | |
| Aroclor-1268 | U | 0.0873 | 0.0291 | 0.0873 | ug/L | 0.000873 | 1 | | | | | |
| Aroclor-Total | U | 0.0873 | 0.0291 | 0.0873 | ug/L | 0.000873 | 1 | | | | | |
| Solids Analysis | | | | | | | | | | | | |
| 160.1, Dissolved Solids "As Received" | | | | | | | | | | | | |
| Total Dissolved Solids | * | 282 | 2.38 | 10.0 | mg/L | | | SC1 | 07/23/25 | 1623 | 2834468 | 15 |
| Spectrometric Analysis | | | | | | | | | | | | |
| 410.4, Chem. Oxygen Demand "As Received" | | | | | | | | | | | | |

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Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: MW366UG4-25 Project: FRNP00714
Sample ID: 733816007 Client ID: FRNP007

| 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 | BR2 | 07/25/25 | 1538 | 2835351 | 16 |
| Volatile Organics | | | | | | | | | | | | |
| 8260D, Volatiles- full suite "As Received" | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | U | 1.00 | 0.333 | 1.00 | ug/L | | 1 | AXH5 | 07/24/25 | 1325 | 2835360 | 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 | | | | | |

**GEL LABORATORIES LLC**
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# *Certificate of Analysis*

Report Date: October 1, 2025

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

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: MW366UG4-25 Project: FRNP00714
Sample ID: 733816007 Client ID: FRNP007

| Parameter | Qualifier | Result | DL | RL | Units | PF | DF | Analyst | Date | Time | Batch | Method |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Volatile Organics | | | | | | | | | | | | |
| 8260D, Volatiles- full suite "As Received" | | | | | | | | | | | | |
| Methylene chloride | BJ | 1.34 | 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 | | 1.93 | 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 | U | 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 | AM5 | 07/21/25 | 1622 | 2832717 |
| SW846 8011 PREP | 8011 Prep | LL2 | 07/22/25 | 1039 | 2832589 |
| SW846 7470A Prep | EPA 7470A Mercury Prep Liquid | PB1 | 08/07/25 | 1120 | 2842623 |
| SW846 3005A | ICP-MS 3005A PREP | ES3 | 07/21/25 | 1535 | 2832819 |
| SW846 3535A | SW3535A PCB SPE Extraction | KW3 | 08/13/25 | 1010 | 2845346 |

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Address : 5600 Hobbs Road

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: MW366UG4-25 Project: FRNP00714
Sample ID: 733816007 Client ID: FRNP007

| 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" | 6.26 ug/L | 6.78 | 92 | (56%-149%) |
| Decachlorobiphenyl | 8082A, PCB Liquids "As Received" | 0.105 ug/L | 0.175 | 60 | (30%-135%) |
| 4cmx | 8082A, PCB Liquids "As Received" | 0.115 ug/L | 0.175 | 66 | (26%-108%) |
| Bromofluorobenzene | 8260D, Volatiles- full suite "As Received" | 47.1 ug/L | 50.0 | 94 | (85%-114%) |
| 1,2-Dichloroethane-d4 | 8260D, Volatiles- full suite "As Received" | 48.6 ug/L | 50.0 | 97 | (81%-118%) |
| Toluene-d8 | 8260D, Volatiles- full suite "As Received" | 49.0 ug/L | 50.0 | 98 | (89%-112%) |

**Notes:**

*Column headers are defined as follows:*

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

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# *Certificate of Analysis*

Report Date: October 1, 2025

| | |
|---|---|
| Company : | Four Rivers Nuclear Partnership, LLC |
| Address : | 5600 Hobbs Road |
| | Kevil, Kentucky 42053 |
| Contact: | Ms. Jaime Morrow |
| Project: | C-746-U Landfill Quarterly(UG25-04) |

| | | | |
|---|---|---|---|
| Client Sample ID: | MW366UG4-25 | Project: | FRNP00714 |
| Sample ID: | 733816008 | Client ID: | FRNP007 |
| Matrix: | WG | | |
| Collect Date: | 17-JUL-25 10:28 | | |
| Receive Date: | 18-JUL-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 | | 0.0975 | 0.000670 | 0.00400 | mg/L | 1.00 | 1 | BAJ | 08/08/25 | 2342 | 2836397 | 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 | JB7 | 07/28/25 | 1530 | 2836395 |
| EPA 160 | Laboratory Filtration | MM7 | 07/25/25 | 1420 | 2833442 |

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: October 1, 2025

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

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: MW367UG4-25
Sample ID: 733816009
Matrix: WG
Collect Date: 17-JUL-25 11:33
Receive Date: 18-JUL-25
Collector: Client

Project: FRNP00714
Client ID: FRNP007

| 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 | 0.952 | 1 | BM1 | 07/22/25 | 1648 | 2832590 | 1 |
| Carbon Analysis | | | | | | | | | | | | |
| 9060A, Total Organic Carbon "As Received" | | | | | | | | | | | | |
| Total Organic Carbon Average | J | 0.346 | 0.330 | 2.00 | mg/L | | 1 | KB3 | 07/24/25 | 0747 | 2834580 | 2 |
| Flow Injection Analysis | | | | | | | | | | | | |
| 9012B, Cyanide, Total "As Received" | | | | | | | | | | | | |
| Cyanide, Total | J | 0.00317 | 0.00167 | 0.200 | mg/L | 1.00 | 1 | KLP1 | 07/22/25 | 1346 | 2832718 | 3 |
| Halogen Analysis | | | | | | | | | | | | |
| 9020B, TOX (Organic Halogen) "As Received" | | | | | | | | | | | | |
| Total Organic Halogens | J | 6.28 | 3.33 | 10.0 | ug/L | | 1 | RMJ | 08/13/25 | 0417 | 2845228 | 4 |
| Ion Chromatography | | | | | | | | | | | | |
| 300.0, Iodide in Liquid "As Received" | | | | | | | | | | | | |
| Iodide | U | 0.500 | 0.167 | 0.500 | mg/L | | 1 | TXT1 | 07/18/25 | 1707 | 2832329 | 5 |
| SW846 9056A Anions (5 elements) "As Received" | | | | | | | | | | | | |
| Bromide | | 0.259 | 0.0670 | 0.200 | mg/L | | 1 | CH6 | 07/18/25 | 1609 | 2832209 | 6 |
| Fluoride | J | 0.0794 | 0.0330 | 4.00 | mg/L | | 1 | | | | | |
| Chloride | J | 19.1 | 0.268 | 250 | mg/L | | 4 | CH6 | 07/19/25 | 0054 | 2832209 | 7 |
| Nitrate-N | U | 10.0 | 0.132 | 10.0 | mg/L | | 4 | | | | | |
| Sulfate | | 30.6 | 0.532 | 1.60 | mg/L | | 4 | | | | | |
| Mercury Analysis-CVAA | | | | | | | | | | | | |
| 7470, Mercury Liquid "As Received" | | | | | | | | | | | | |
| Mercury | U | 0.000200 | 0.0000670 | 0.000200 | mg/L | 1.00 | 1 | JP2 | 08/08/25 | 1044 | 2842625 | 8 |
| Metals Analysis-ICP-MS | | | | | | | | | | | | |
| 6020, Metals (15+ elements) "As Received" | | | | | | | | | | | | |
| Aluminum | U | 0.0500 | 0.0193 | 0.0500 | mg/L | 1.00 | 1 | PRB | 08/10/25 | 1931 | 2832820 | 9 |
| 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 | | 0.129 | 0.000670 | 0.00400 | mg/L | 1.00 | 1 | | | | | |
| Beryllium | U | 0.000500 | 0.000200 | 0.000500 | mg/L | 1.00 | 1 | | | | | |
| Boron | | 0.0267 | 0.00520 | 0.0150 | mg/L | 1.00 | 1 | | | | | |
| Cadmium | U | 0.00100 | 0.000300 | 0.00100 | mg/L | 1.00 | 1 | | | | | |
| Calcium | | 18.7 | 0.0800 | 0.200 | mg/L | 1.00 | 1 | | | | | |
| Chromium | U | 0.0100 | 0.00300 | 0.0100 | mg/L | 1.00 | 1 | | | | | |

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# *Certificate of Analysis*

Report Date: October 1, 2025

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

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: MW367UG4-25 Project: FRNP00714
Sample ID: 733816009 Client ID: FRNP007

| Parameter | Qualifier | Result | DL | RL | Units | PF | DF | Analyst | Date | Time | Batch | Method |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Metals Analysis-ICP-MS | | | | | | | | | | | | |
| 6020, Metals (15+ elements) "As Received" | | | | | | | | | | | | |
| Cobalt | | 0.00540 | 0.000300 | 0.00100 | mg/L | 1.00 | 1 | | | | | |
| Copper | J | 0.000833 | 0.000300 | 0.00200 | mg/L | 1.00 | 1 | | | | | |
| Iron | | 0.628 | 0.0330 | 0.100 | mg/L | 1.00 | 1 | | | | | |
| Lead | U | 0.00200 | 0.000500 | 0.00200 | mg/L | 1.00 | 1 | | | | | |
| Magnesium | | 9.41 | 0.0100 | 0.0300 | mg/L | 1.00 | 1 | | | | | |
| Nickel | | 0.00288 | 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 | | | | | |
| Sodium | | 24.1 | 0.0800 | 0.250 | 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 | | | | | |
| Molybdenum | U | 0.00100 | 0.000200 | 0.00100 | mg/L | 1.00 | 1 | PRB | 08/11/25 | 0651 | 2832820 | 10 |
| Uranium | U | 0.000200 | 0.0000670 | 0.000200 | mg/L | 1.00 | 1 | | | | | |
| Rhodium | U | 0.00500 | 0.00160 | 0.00500 | mg/L | 1.00 | 1 | PRB | 08/11/25 | 1241 | 2832820 | 11 |
| Zinc | J | 0.0112 | 0.00330 | 0.0200 | mg/L | 1.00 | 1 | | | | | |
| Tantalum | UN | 0.00500 | 0.00100 | 0.00500 | mg/L | 1.00 | 1 | JD2 | 08/14/25 | 1513 | 2832820 | 12 |
| Manganese | | 1.05 | 0.0100 | 0.0500 | mg/L | 1.00 | 10 | PRB | 08/11/25 | 1244 | 2832820 | 13 |
| Semi-Volatiles-PCB | | | | | | | | | | | | |
| 8082A, PCB Liquids "As Received" | | | | | | | | | | | | |
| Aroclor-1016 | U | 0.0845 | 0.0281 | 0.0845 | ug/L | 0.000845 | 1 | JXM | 08/14/25 | 0215 | 2845347 | 14 |
| Aroclor-1221 | U | 0.0845 | 0.0281 | 0.0845 | ug/L | 0.000845 | 1 | | | | | |
| Aroclor-1232 | U | 0.0845 | 0.0281 | 0.0845 | ug/L | 0.000845 | 1 | | | | | |
| Aroclor-1242 | U | 0.0845 | 0.0281 | 0.0845 | ug/L | 0.000845 | 1 | | | | | |
| Aroclor-1248 | U | 0.0845 | 0.0281 | 0.0845 | ug/L | 0.000845 | 1 | | | | | |
| Aroclor-1254 | U | 0.0845 | 0.0281 | 0.0845 | ug/L | 0.000845 | 1 | | | | | |
| Aroclor-1260 | U | 0.0845 | 0.0281 | 0.0845 | ug/L | 0.000845 | 1 | | | | | |
| Aroclor-1268 | U | 0.0845 | 0.0281 | 0.0845 | ug/L | 0.000845 | 1 | | | | | |
| Aroclor-Total | U | 0.0845 | 0.0281 | 0.0845 | ug/L | 0.000845 | 1 | | | | | |
| Solids Analysis | | | | | | | | | | | | |
| 160.1, Dissolved Solids "As Received" | | | | | | | | | | | | |
| Total Dissolved Solids | * | 166 | 2.38 | 10.0 | mg/L | | | SC1 | 07/23/25 | 1623 | 2834468 | 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(UG25-04)

Client Sample ID: MW367UG4-25 Project: FRNP00714
Sample ID: 733816009 Client ID: FRNP007

| 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 | BR2 | 07/25/25 | 1538 | 2835351 | 16 |
| Volatile Organics | | | | | | | | | | | | |
| 8260D, Volatiles- full suite "As Received" | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | U | 1.00 | 0.333 | 1.00 | ug/L | | 1 | AXH5 | 07/24/25 | 1351 | 2835360 | 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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Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: MW367UG4-25 Project: FRNP00714
Sample ID: 733816009 Client ID: FRNP007

| Parameter | Qualifier | Result | DL | RL | Units | PF | DF | Analyst | Date | Time | Batch | Method |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Volatile Organics | | | | | | | | | | | | |
| 8260D, Volatiles- full suite "As Received" | | | | | | | | | | | | |
| Methylene chloride | BJ | 0.770 | 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 | | 2.40 | 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 | 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 | LL2 | 07/22/25 | 1039 | 2832589 |
| SW846 7470A Prep | EPA 7470A Mercury Prep Liquid | PB1 | 08/07/25 | 1120 | 2842623 |
| SW846 9010C Distillation | SW846 9010C Prep | AM5 | 07/21/25 | 1622 | 2832717 |
| SW846 3005A | ICP-MS 3005A PREP | ES3 | 07/21/25 | 1535 | 2832819 |
| SW846 3535A | SW3535A PCB SPE Extraction | KW3 | 08/13/25 | 1010 | 2845346 |

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# *Certificate of Analysis*

Report Date: October 1, 2025

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

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: MW367UG4-25 Project: FRNP00714
Sample ID: 733816009 Client ID: FRNP007

| 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 9060A | |
| 3 | SW846 9012B | |
| 4 | SW846 9020B | |
| 5 | EPA 300.0 | |
| 6 | SW846 9056A | |
| 7 | SW846 9056A | |
| 8 | SW846 7470A | |
| 9 | SW846 3005A/6020B | |
| 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" | 6.44 ug/L | 6.80 | 95 | (56%-149%) |
| Decachlorobiphenyl | 8082A, PCB Liquids "As Received" | 0.0688 ug/L | 0.169 | 41 | (30%-135%) |
| 4cmx | 8082A, PCB Liquids "As Received" | 0.0772 ug/L | 0.169 | 46 | (26%-108%) |
| Bromofluorobenzene | 8260D, Volatiles- full suite "As Received" | 48.0 ug/L | 50.0 | 96 | (85%-114%) |
| 1,2-Dichloroethane-d4 | 8260D, Volatiles- full suite "As Received" | 49.4 ug/L | 50.0 | 99 | (81%-118%) |
| Toluene-d8 | 8260D, Volatiles- full suite "As Received" | 49.2 ug/L | 50.0 | 98 | (89%-112%) |

**Notes:**

*Column headers are defined as follows:*

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

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# *Certificate of Analysis*

Report Date: October 1, 2025

| | |
|---|---|
| Company : | Four Rivers Nuclear Partnership, LLC |
| Address : | 5600 Hobbs Road |
| | Kevil, Kentucky 42053 |
| Contact: | Ms. Jaime Morrow |
| Project: | C-746-U Landfill Quarterly(UG25-04) |

| | | | |
|---|---|---|---|
| Client Sample ID: | MW367UG4-25 | Project: | FRNP00714 |
| Sample ID: | 733816010 | Client ID: | FRNP007 |
| Matrix: | WG | | |
| Collect Date: | 17-JUL-25 11:33 | | |
| Receive Date: | 18-JUL-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 | | 0.123 | 0.000670 | 0.00400 | mg/L | 1.00 | 1 | BAJ | 08/08/25 | 2345 | 2836397 | 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 | JB7 | 07/28/25 | 1530 | 2836395 |
| EPA 160 | Laboratory Filtration | MM7 | 07/25/25 | 1420 | 2833442 |

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: October 1, 2025

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

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: MW368UG4-25
Sample ID: 733816011
Matrix: WG
Collect Date: 17-JUL-25 13:05
Receive Date: 18-JUL-25
Collector: Client

Project: FRNP00714
Client ID: FRNP007

| 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 | BM1 | 07/22/25 | 1722 | 2832590 | 1 |
| Carbon Analysis | | | | | | | | | | | | |
| 9060A, Total Organic Carbon "As Received" | | | | | | | | | | | | |
| Total Organic Carbon Average | J | 0.825 | 0.330 | 2.00 | mg/L | | 1 | KB3 | 07/24/25 | 0819 | 2834580 | 3 |
| Flow Injection Analysis | | | | | | | | | | | | |
| 9012B, Cyanide, Total "As Received" | | | | | | | | | | | | |
| Cyanide, Total | J | 0.00262 | 0.00167 | 0.200 | mg/L | 1.00 | 1 | KLP1 | 07/22/25 | 1347 | 2832718 | 4 |
| Halogen Analysis | | | | | | | | | | | | |
| 9020B, TOX (Organic Halogen) "As Received" | | | | | | | | | | | | |
| Total Organic Halogens | J | 4.30 | 3.33 | 10.0 | ug/L | | 1 | RMJ | 08/13/25 | 0458 | 2845228 | 5 |
| Ion Chromatography | | | | | | | | | | | | |
| 300.0, Iodide in Liquid "As Received" | | | | | | | | | | | | |
| Iodide | U | 0.500 | 0.167 | 0.500 | mg/L | | 1 | TXT1 | 07/18/25 | 1720 | 2832329 | 6 |
| SW846 9056A Anions (5 elements) "As Received" | | | | | | | | | | | | |
| Bromide | U | 0.200 | 0.0670 | 0.200 | mg/L | | 1 | CH6 | 07/18/25 | 1640 | 2832209 | 7 |
| Chloride | J | 2.22 | 0.0670 | 250 | mg/L | | 1 | | | | | |
| Fluoride | J | 0.173 | 0.0330 | 4.00 | mg/L | | 1 | | | | | |
| Nitrate-N | U | 10.0 | 0.132 | 10.0 | mg/L | | 4 | CH6 | 07/19/25 | 0226 | 2832209 | 8 |
| Sulfate | | 111 | 1.33 | 4.00 | mg/L | | 10 | CH6 | 07/19/25 | 0257 | 2832209 | 9 |
| Mercury Analysis-CVAA | | | | | | | | | | | | |
| 7470, Mercury Liquid "As Received" | | | | | | | | | | | | |
| Mercury | U | 0.000200 | 0.0000670 | 0.000200 | mg/L | 1.00 | 1 | JP2 | 08/08/25 | 1046 | 2842625 | 10 |
| Metals Analysis-ICP-MS | | | | | | | | | | | | |
| 6020, Metals (15+ elements) "As Received" | | | | | | | | | | | | |
| Aluminum | U | 0.0500 | 0.0193 | 0.0500 | mg/L | 1.00 | 1 | PRB | 08/10/25 | 1934 | 2832820 | 11 |
| Antimony | U | 0.00300 | 0.00100 | 0.00300 | mg/L | 1.00 | 1 | | | | | |
| Arsenic | J | 0.00309 | 0.00200 | 0.00500 | mg/L | 1.00 | 1 | | | | | |
| Barium | | 0.0620 | 0.000670 | 0.00400 | mg/L | 1.00 | 1 | | | | | |
| Beryllium | U | 0.000500 | 0.000200 | 0.000500 | mg/L | 1.00 | 1 | | | | | |
| Boron | U | 0.0150 | 0.00520 | 0.0150 | 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 | | | | | |

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# *Certificate of Analysis*

Report Date: October 1, 2025

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

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: MW368UG4-25 Project: FRNP00714
Sample ID: 733816011 Client ID: FRNP007

| 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 | 0.000508 | 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 | | 13.0 | 0.0100 | 0.0300 | mg/L | 1.00 | 1 | | | | | |
| Manganese | | 0.00770 | 0.00100 | 0.00500 | mg/L | 1.00 | 1 | | | | | |
| Nickel | J | 0.000796 | 0.000600 | 0.00200 | mg/L | 1.00 | 1 | | | | | |
| Potassium | | 0.373 | 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 | | | | | |
| Molybdenum | J | 0.000429 | 0.000200 | 0.00100 | mg/L | 1.00 | 1 | PRB | 08/11/25 | 0654 | 2832820 | 12 |
| Uranium | | 0.000202 | 0.0000670 | 0.000200 | mg/L | 1.00 | 1 | | | | | |
| Rhodium | U | 0.00500 | 0.00160 | 0.00500 | mg/L | 1.00 | 1 | PRB | 08/11/25 | 1247 | 2832820 | 13 |
| Zinc | J | 0.00526 | 0.00330 | 0.0200 | mg/L | 1.00 | 1 | | | | | |
| Tantalum | UN | 0.00500 | 0.00100 | 0.00500 | mg/L | 1.00 | 1 | JD2 | 08/14/25 | 1514 | 2832820 | 14 |
| Calcium | | 51.1 | 0.800 | 2.00 | mg/L | 1.00 | 10 | PRB | 08/11/25 | 1250 | 2832820 | 15 |
| Sodium | | 50.8 | 0.800 | 2.50 | mg/L | 1.00 | 10 | | | | | |
| Semi-Volatiles-PCB | | | | | | | | | | | | |
| 8082A, PCB Liquids "As Received" | | | | | | | | | | | | |
| Aroclor-1016 | U | 0.0838 | 0.0279 | 0.0838 | ug/L | 0.000838 | 1 | JXM | 08/14/25 | 0230 | 2845347 | 16 |
| Aroclor-1221 | U | 0.0838 | 0.0279 | 0.0838 | ug/L | 0.000838 | 1 | | | | | |
| Aroclor-1232 | U | 0.0838 | 0.0279 | 0.0838 | ug/L | 0.000838 | 1 | | | | | |
| Aroclor-1242 | U | 0.0838 | 0.0279 | 0.0838 | ug/L | 0.000838 | 1 | | | | | |
| Aroclor-1248 | U | 0.0838 | 0.0279 | 0.0838 | ug/L | 0.000838 | 1 | | | | | |
| Aroclor-1254 | U | 0.0838 | 0.0279 | 0.0838 | ug/L | 0.000838 | 1 | | | | | |
| Aroclor-1260 | U | 0.0838 | 0.0279 | 0.0838 | ug/L | 0.000838 | 1 | | | | | |
| Aroclor-1268 | U | 0.0838 | 0.0279 | 0.0838 | ug/L | 0.000838 | 1 | | | | | |
| Aroclor-Total | U | 0.0838 | 0.0279 | 0.0838 | ug/L | 0.000838 | 1 | | | | | |
| Solids Analysis | | | | | | | | | | | | |
| 160.1, Dissolved Solids "As Received" | | | | | | | | | | | | |
| Total Dissolved Solids | * | 385 | 2.38 | 10.0 | mg/L | | | SC1 | 07/23/25 | 1623 | 2834468 | 17 |
| Spectrometric Analysis | | | | | | | | | | | | |
| 410.4, Chem. Oxygen Demand "As Received" | | | | | | | | | | | | |

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# *Certificate of Analysis*

Report Date: October 1, 2025

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

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: MW368UG4-25 Project: FRNP00714
Sample ID: 733816011 Client ID: FRNP007

| 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 | BR2 | 07/25/25 | 1538 | 2835351 | 18 |
| Volatile Organics | | | | | | | | | | | | |
| 8260D, Volatiles- full suite "As Received" | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | U | 1.00 | 0.333 | 1.00 | ug/L | | 1 | AXH5 | 07/24/25 | 1417 | 2835360 | 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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# *Certificate of Analysis*

Report Date: October 1, 2025

Company : Four Rivers Nuclear Partnership, LLC
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Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: MW368UG4-25 Project: FRNP00714
Sample ID: 733816011 Client ID: FRNP007

| Parameter | Qualifier | Result | DL | RL | Units | PF | DF | Analyst | Date | Time | Batch | Method |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Volatile Organics | | | | | | | | | | | | |
| 8260D, Volatiles- full suite "As Received" | | | | | | | | | | | | |
| Methylene chloride | BJ | 0.720 | 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 | 0.820 | 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 | U | 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 | AM5 | 07/21/25 | 1622 | 2832717 |
| SW846 7470A Prep | EPA 7470A Mercury Prep Liquid | PB1 | 08/07/25 | 1120 | 2842623 |
| SW846 3535A | SW3535A PCB SPE Extraction | KW3 | 08/13/25 | 1010 | 2845346 |
| SW846 3005A | ICP-MS 3005A PREP | ES3 | 07/21/25 | 1535 | 2832819 |
| SW846 8011 PREP | 8011 Prep | LL2 | 07/22/25 | 1039 | 2832589 |

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# *Certificate of Analysis*

Report Date: October 1, 2025

| | |
|---|---|
| Company : | Four Rivers Nuclear Partnership, LLC |
| Address : | 5600 Hobbs Road |
| | Kevil, Kentucky 42053 |
| Contact: | Ms. Jaime Morrow |
| Project: | C-746-U Landfill Quarterly(UG25-04) |

| | | | |
|---|---|---|---|
| Client Sample ID: | MW368UG4-25 | Project: | FRNP00714 |
| Sample ID: | 733816011 | Client ID: | FRNP007 |

| 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" | 6.42 ug/L | 6.79 | 94 | (56%-149%) |
| Decachlorobiphenyl | 8082A, PCB Liquids "As Received" | 0.0722 ug/L | 0.168 | 43 | (30%-135%) |
| 4cmx | 8082A, PCB Liquids "As Received" | 0.0974 ug/L | 0.168 | 58 | (26%-108%) |
| Bromofluorobenzene | 8260D, Volatiles- full suite "As Received" | 47.3 ug/L | 50.0 | 95 | (85%-114%) |
| 1,2-Dichloroethane-d4 | 8260D, Volatiles- full suite "As Received" | 49.1 ug/L | 50.0 | 98 | (81%-118%) |
| Toluene-d8 | 8260D, Volatiles- full suite "As Received" | 49.0 ug/L | 50.0 | 98 | (89%-112%) |

**Notes:**

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# *Certificate of Analysis*

Report Date: October 1, 2025

| | |
|---|---|
| Company : | Four Rivers Nuclear Partnership, LLC |
| Address : | 5600 Hobbs Road |
| | Kevil, Kentucky 42053 |
| Contact: | Ms. Jaime Morrow |
| Project: | C-746-U Landfill Quarterly(UG25-04) |

| | | | |
|---|---|---|---|
| Client Sample ID: | MW368UG4-25 | Project: | FRNP00714 |
| Sample ID: | 733816011 | Client ID: | FRNP007 |

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

*Column headers are defined as follows:*

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

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# *Certificate of Analysis*

Report Date: October 1, 2025

| | |
|---|---|
| Company : | Four Rivers Nuclear Partnership, LLC |
| Address : | 5600 Hobbs Road |
| | Kevil, Kentucky 42053 |
| Contact: | Ms. Jaime Morrow |
| Project: | C-746-U Landfill Quarterly(UG25-04) |

| | | | |
|---|---|---|---|
| Client Sample ID: | MW368UG4-25 | Project: | FRNP00714 |
| Sample ID: | 733816012 | Client ID: | FRNP007 |
| Matrix: | WG | | |
| Collect Date: | 17-JUL-25 13:05 | | |
| Receive Date: | 18-JUL-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 | | 0.0612 | 0.000670 | 0.00400 | mg/L | 1.00 | 1 | BAJ | 08/08/25 | 2348 | 2836397 | 1 |
| Chromium | U | 0.0100 | 0.00300 | 0.0100 | mg/L | 1.00 | 1 | | | | | |
| Uranium | | 0.000201 | 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 | 07/25/25 | 1420 | 2833442 |
| SW846 3005A | ICP-MS 3005A PREP | JB7 | 07/28/25 | 1530 | 2836395 |

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: October 1, 2025

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

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: TB2UG4-25
Sample ID: 733816013
Matrix: WATER
Collect Date: 17-JUL-25 06:35
Receive Date: 18-JUL-25
Collector: Client

Project: FRNP00714
Client ID: FRNP007

| 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 | 0.934 | 1 | BM1 | 07/22/25 | 1757 | 2832590 | 1 |
| Volatile Organics | | | | | | | | | | | | |
| 8260D, Volatiles- full suite "As Received" | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | U | 1.00 | 0.333 | 1.00 | ug/L | | 1 | AXH5 | 07/24/25 | 1443 | 2835360 | 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 | J | 4.25 | 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: October 1, 2025

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

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: TB2UG4-25 Project: FRNP00714
Sample ID: 733816013 Client ID: FRNP007

| Parameter | Qualifier | Result | DL | RL | Units | PF | DF | Analyst | Date | Time | Batch | Method |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Volatile Organics | | | | | | | | | | | | |
| 8260D, Volatiles- full suite "As Received" | | | | | | | | | | | | |
| Methylene chloride | BJ | 1.62 | 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 | 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 | LL2 | 07/22/25 | 1039 | 2832589 |

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" | 6.11 ug/L | 6.67 | 92 | (56%-149%) |
| Bromofluorobenzene | 8260D, Volatiles- full suite "As Received" | 47.4 ug/L | 50.0 | 95 | (85%-114%) |
| 1,2-Dichloroethane-d4 | 8260D, Volatiles- full suite "As Received" | 50.2 ug/L | 50.0 | 100 | (81%-118%) |
| Toluene-d8 | 8260D, Volatiles- full suite "As Received" | 48.8 ug/L | 50.0 | 98 | (89%-112%) |

**Notes:**

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# *Certificate of Analysis*

Report Date: October 1, 2025

| | |
|---|---|
| Company : | Four Rivers Nuclear Partnership, LLC |
| Address : | 5600 Hobbs Road |
| | Kevil, Kentucky 42053 |
| Contact: | Ms. Jaime Morrow |
| Project: | C-746-U Landfill Quarterly(UG25-04) |

| | | | |
|---|---|---|---|
| Client Sample ID: | TB2UG4-25 | Project: | FRNP00714 |
| Sample ID: | 733816013 | Client ID: | FRNP007 |

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

*Column headers are defined as follows:*

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

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# ATTACHMENT C3

# GEL LABORATORIES CERTIFICATE OF ANALYSIS

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# *Certificate of Analysis*

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

Kevil, Kentucky 42053 Report Date: October 1, 2025

Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: MW369UG4-25
Sample ID: 734228001
Matrix: WG
Collect Date: 21-JUL-25
Receive Date: 22-JUL-25
Collector: Client

Project: FRNP00714
Client ID: FRNP007

| 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 | 0.545 | +/-0.635 | 0.811 | +/-0.636 | 5.00 | pCi/L | | | CM4 | 08/06/25 | 0847 | 2834726 | 1 |
| *Th-01-RC M, Th Isotopes, Liquid "As Received"* | | | | | | | | | | | | | | |
| Thorium-230 | U | -0.440 | +/-0.802 | 2.30 | +/-0.803 | 50.0 | pCi/L | | | CM4 | 08/01/25 | 0837 | 2834727 | 2 |
| Thorium-232 | U | 0.242 | +/-0.740 | 1.04 | +/-0.741 | | pCi/L | | | | | | | |
| **Rad Gas Flow Proportional Counting** | | | | | | | | | | | | | | |
| *904.0Mod, Ra228, Liquid "As Received"* | | | | | | | | | | | | | | |
| Radium-228 | U | 2.74 | +/-2.86 | 4.74 | +/-2.96 | 4.99 | pCi/L | | | HH3 | 08/05/25 | 1053 | 2834438 | 3 |
| *905.0Mod, Sr90, liquid "As Received"* | | | | | | | | | | | | | | |
| Strontium-90 | U | -2.76 | +/-2.38 | 5.05 | +/-2.38 | 8.00 | pCi/L | | | DH1 | 07/31/25 | 1435 | 2834444 | 4 |
| *9310, Alpha/Beta Activity, liquid "As Received"* | | | | | | | | | | | | | | |
| Alpha | U | -0.199 | +/-2.76 | 6.74 | +/-2.77 | 15.0 | pCi/L | | | CT3 | 07/26/25 | 0745 | 2834425 | 5 |
| Beta | | 26.6 | +/-7.76 | 9.18 | +/-8.91 | 50.0 | pCi/L | | | | | | | |
| **Rad Liquid Scintillation Analysis** | | | | | | | | | | | | | | |
| *906.0M, Tritium Dist, Liquid "As Received"* | | | | | | | | | | | | | | |
| Tritium | U | 8.01 | +/-114 | 218 | +/-114 | 300 | pCi/L | | | MG6 | 07/25/25 | 1036 | 2834083 | 6 |
| *Tc-02-RC-MOD, Tc99, Liquid "As Received"* | | | | | | | | | | | | | | |
| Technetium-99 | | 52.2 | +/-13.2 | 20.4 | +/-14.4 | 25.0 | pCi/L | | | GS3 | 08/17/25 | 0858 | 2836874 | 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" | 2834726 | 108 | (30%-110%) |
| Thorium-229 Tracer | Th-01-RC M, Th Isotopes, Liquid "As Received" | 2834727 | 68.7 | (30%-110%) |
| Barium-133 Tracer | 904.0Mod, Ra228, Liquid "As Received" | 2834438 | 73.9 | (30%-110%) |
| Strontium Carrier | 905.0Mod, Sr90, liquid "As Received" | 2834444 | 101 | (30%-110%) |
| Technetium-99m Tracer | Tc-02-RC-MOD, Tc99, Liquid "As Received" | 2836874 | 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: October 1, 2025

Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: MW369UG4-25
Sample ID: 734228001

Project: FRNP00714
Client ID: FRNP007

| 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,
Address : LLC
5600 Hobbs Road

Kevil, Kentucky 42053

Report Date: October 1, 2025

Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: MW370UG4-25
Sample ID: 734228003
Matrix: WG
Collect Date: 21-JUL-25
Receive Date: 22-JUL-25
Collector: Client

Project: FRNP00714
Client ID: FRNP007

| 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 | 0.192 | +/-0.473 | 0.782 | +/-0.473 | 5.00 | pCi/L | | | CM4 | 08/06/25 | 0847 | 2834726 | 1 |
| *Th-01-RC M, Th Isotopes, Liquid "As Received"* | | | | | | | | | | | | | | |
| Thorium-230 | U | -0.129 | +/-0.665 | 1.61 | +/-0.665 | 50.0 | pCi/L | | | CM4 | 08/01/25 | 0838 | 2834727 | 2 |
| Thorium-232 | U | 0.165 | +/-0.524 | 0.768 | +/-0.525 | | pCi/L | | | | | | | |
| **Rad Gas Flow Proportional Counting** | | | | | | | | | | | | | | |
| *904.0Mod, Ra228, Liquid "As Received"* | | | | | | | | | | | | | | |
| Radium-228 | U | -1.50 | +/-2.19 | 4.73 | +/-2.19 | 4.99 | pCi/L | | | HH3 | 08/05/25 | 1051 | 2834438 | 3 |
| *905.0Mod, Sr90, liquid "As Received"* | | | | | | | | | | | | | | |
| Strontium-90 | U | -0.187 | +/-2.70 | 5.09 | +/-2.70 | 8.00 | pCi/L | | | DH1 | 07/31/25 | 1435 | 2834444 | 4 |
| *9310, Alpha/Beta Activity, liquid "As Received"* | | | | | | | | | | | | | | |
| Alpha | U | -0.744 | +/-3.14 | 7.82 | +/-3.14 | 15.0 | pCi/L | | | CT3 | 07/24/25 | 1139 | 2834425 | 5 |
| Beta | U | 9.36 | +/-6.66 | 10.5 | +/-6.84 | 50.0 | pCi/L | | | | | | | |
| **Rad Liquid Scintillation Analysis** | | | | | | | | | | | | | | |
| *906.0M, Tritium Dist, Liquid "As Received"* | | | | | | | | | | | | | | |
| Tritium | U | -15.9 | +/-110 | 217 | +/-110 | 300 | pCi/L | | | MG6 | 07/25/25 | 1058 | 2834083 | 6 |
| *Tc-02-RC-MOD, Tc99, Liquid "As Received"* | | | | | | | | | | | | | | |
| Technetium-99 | U | 8.12 | +/-12.1 | 20.5 | +/-12.2 | 25.0 | pCi/L | | | GS3 | 08/17/25 | 0935 | 2836874 | 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" | 2834726 | 104 | (30%-110%) |
| Thorium-229 Tracer | Th-01-RC M, Th Isotopes, Liquid "As Received" | 2834727 | 97.5 | (30%-110%) |
| Barium-133 Tracer | 904.0Mod, Ra228, Liquid "As Received" | 2834438 | 73.7 | (30%-110%) |
| Strontium Carrier | 905.0Mod, Sr90, liquid "As Received" | 2834444 | 94.1 | (30%-110%) |
| Technetium-99m Tracer | Tc-02-RC-MOD, Tc99, Liquid "As Received" | 2836874 | 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: October 1, 2025

Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: MW370UG4-25
Sample ID: 734228003

Project: FRNP00714
Client ID: FRNP007

| 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,
Address : LLC
5600 Hobbs Road

Kevil, Kentucky 42053

Report Date: October 1, 2025

Contact: Ms. Jaime Morrow

Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: MW371UG4-25
Sample ID: 734228005
Matrix: WG
Collect Date: 21-JUL-25
Receive Date: 22-JUL-25
Collector: Client

Project: FRNP00714
Client ID: FRNP007

| 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 | 0.626 | +/-0.702 | 0.936 | +/-0.703 | 5.00 | pCi/L | | | CM4 | 08/06/25 | 0847 | 2834726 | 1 |
| *Th-01-RC M, Th Isotopes, Liquid "As Received"* | | | | | | | | | | | | | | |
| Thorium-230 | U | 0.380 | +/-0.962 | 1.74 | +/-0.967 | 50.0 | pCi/L | | | CM4 | 08/01/25 | 0838 | 2834727 | 2 |
| Thorium-232 | U | 0.355 | +/-0.740 | 1.09 | +/-0.742 | | pCi/L | | | | | | | |
| **Rad Gas Flow Proportional Counting** | | | | | | | | | | | | | | |
| *904.0Mod, Ra228, Liquid "As Received"* | | | | | | | | | | | | | | |
| Radium-228 | U | 1.68 | +/-2.80 | 4.87 | +/-2.84 | 4.99 | pCi/L | | | HH3 | 08/05/25 | 1053 | 2834438 | 3 |
| *905.0Mod, Sr90, liquid "As Received"* | | | | | | | | | | | | | | |
| Strontium-90 | U | 0.627 | +/-2.04 | 3.72 | +/-2.04 | 8.00 | pCi/L | | | DH1 | 07/31/25 | 1435 | 2834444 | 4 |
| *9310, Alpha/Beta Activity, liquid "As Received"* | | | | | | | | | | | | | | |
| Alpha | U | 1.48 | +/-3.63 | 7.16 | +/-3.64 | 15.0 | pCi/L | | | CT3 | 07/24/25 | 1139 | 2834425 | 5 |
| Beta | U | 3.00 | +/-5.25 | 9.18 | +/-5.27 | 50.0 | pCi/L | | | | | | | |
| **Rad Liquid Scintillation Analysis** | | | | | | | | | | | | | | |
| *906.0M, Tritium Dist, Liquid "As Received"* | | | | | | | | | | | | | | |
| Tritium | U | -55.8 | +/-103 | 218 | +/-103 | 300 | pCi/L | | | MG6 | 07/25/25 | 1119 | 2834083 | 6 |
| *Tc-02-RC-MOD, Tc99, Liquid "As Received"* | | | | | | | | | | | | | | |
| Technetium-99 | U | -1.37 | +/-11.7 | 20.3 | +/-11.7 | 25.0 | pCi/L | | | GS3 | 08/17/25 | 1012 | 2836874 | 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" | 2834726 | 107 | (30%-110%) |
| Thorium-229 Tracer | Th-01-RC M, Th Isotopes, Liquid "As Received" | 2834727 | 86.1 | (30%-110%) |
| Barium-133 Tracer | 904.0Mod, Ra228, Liquid "As Received" | 2834438 | 82.6 | (30%-110%) |
| Strontium Carrier | 905.0Mod, Sr90, liquid "As Received" | 2834444 | 108 | (30%-110%) |
| Technetium-99m Tracer | Tc-02-RC-MOD, Tc99, Liquid "As Received" | 2836874 | 98.3 | (30%-110%) |

**GEL LABORATORIES LLC**
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# *Certificate of Analysis*

Company : Four Rivers Nuclear Partnership, LLC
Address : 5600 Hobbs Road
Kevil, Kentucky 42053

Report Date: October 1, 2025

Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: MW371UG4-25
Sample ID: 734228005

Project: FRNP00714
Client ID: FRNP007

| 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,
Address : LLC
5600 Hobbs Road

Kevil, Kentucky 42053

Report Date: October 1, 2025

Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: MW372UG4-25
Sample ID: 734228007
Matrix: WG
Collect Date: 21-JUL-25
Receive Date: 22-JUL-25
Collector: Client

Project: FRNP00714
Client ID: FRNP007

| 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 | 0.316 | +/-0.396 | 0.596 | +/-0.398 | 5.00 | pCi/L | | | CM4 | 08/05/25 | 0857 | 2834726 | 1 |
| *Th-01-RC M, Th Isotopes, Liquid "As Received"* | | | | | | | | | | | | | | |
| Thorium-230 | U | -0.481 | +/-0.710 | 2.11 | +/-0.711 | 50.0 | pCi/L | | | CM4 | 08/01/25 | 0838 | 2834727 | 2 |
| Thorium-232 | U | -0.0769 | +/-0.477 | 1.17 | +/-0.478 | | pCi/L | | | | | | | |
| **Rad Gas Flow Proportional Counting** | | | | | | | | | | | | | | |
| *904.0Mod, Ra228, Liquid "As Received"* | | | | | | | | | | | | | | |
| Radium-228 | U | 3.75 | +/-2.98 | 4.83 | +/-3.16 | 4.99 | pCi/L | | | HH3 | 08/05/25 | 1053 | 2834438 | 3 |
| *905.0Mod, Sr90, liquid "As Received"* | | | | | | | | | | | | | | |
| Strontium-90 | U | 0.203 | +/-1.46 | 2.65 | +/-1.46 | 8.00 | pCi/L | | | DH1 | 08/05/25 | 1745 | 2834444 | 4 |
| *9310, Alpha/Beta Activity, liquid "As Received"* | | | | | | | | | | | | | | |
| Alpha | U | 2.66 | +/-3.67 | 6.24 | +/-3.70 | 15.0 | pCi/L | | | CT3 | 07/24/25 | 1139 | 2834425 | 5 |
| Beta | | 43.6 | +/-9.36 | 9.12 | +/-11.7 | 50.0 | pCi/L | | | | | | | |
| **Rad Liquid Scintillation Analysis** | | | | | | | | | | | | | | |
| *906.0M, Tritium Dist, Liquid "As Received"* | | | | | | | | | | | | | | |
| Tritium | U | -23.9 | +/-109 | 218 | +/-109 | 300 | pCi/L | | | MG6 | 07/25/25 | 1141 | 2834083 | 6 |
| *Tc-02-RC-MOD, Tc99, Liquid "As Received"* | | | | | | | | | | | | | | |
| Technetium-99 | | 51.5 | +/-13.0 | 20.1 | +/-14.2 | 25.0 | pCi/L | | | GS3 | 08/17/25 | 1048 | 2836874 | 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" | 2834726 | 108 | (30%-110%) |
| Thorium-229 Tracer | Th-01-RC M, Th Isotopes, Liquid "As Received" | 2834727 | 76.4 | (30%-110%) |
| Barium-133 Tracer | 904.0Mod, Ra228, Liquid "As Received" | 2834438 | 86.6 | (30%-110%) |
| Strontium Carrier | 905.0Mod, Sr90, liquid "As Received" | 2834444 | 108 | (30%-110%) |
| Technetium-99m Tracer | Tc-02-RC-MOD, Tc99, Liquid "As Received" | 2836874 | 99.1 | (30%-110%) |

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# *Certificate of Analysis*

Company : Four Rivers Nuclear Partnership, LLC
Address : 5600 Hobbs Road
Kevil, Kentucky 42053

Report Date: October 1, 2025

Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: MW372UG4-25
Sample ID: 734228007

Project: FRNP00714
Client ID: FRNP007

| 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,
Address : LLC
5600 Hobbs Road

Kevil, Kentucky 42053

Report Date: October 1, 2025

Contact: Ms. Jaime Morrow

Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: MW373UG4-25
Sample ID: 734228009
Matrix: WG
Collect Date: 21-JUL-25
Receive Date: 22-JUL-25
Collector: Client

Project: FRNP00714
Client ID: FRNP007

| 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 | -0.0652 | +/-0.281 | 0.683 | +/-0.281 | 5.00 | pCi/L | | | CM4 | 08/05/25 | 0857 | 2834726 | 1 |
| *Th-01-RC M, Th Isotopes, Liquid "As Received"* | | | | | | | | | | | | | | |
| Thorium-230 | U | -0.361 | +/-0.547 | 1.63 | +/-0.547 | 50.0 | pCi/L | | | CM4 | 08/01/25 | 0838 | 2834727 | 2 |
| Thorium-232 | U | -0.196 | +/-0.404 | 1.23 | +/-0.404 | | pCi/L | | | | | | | |
| **Rad Gas Flow Proportional Counting** | | | | | | | | | | | | | | |
| *904.0Mod, Ra228, Liquid "As Received"* | | | | | | | | | | | | | | |
| Radium-228 | U | 0.768 | +/-2.17 | 4.05 | +/-2.18 | 4.99 | pCi/L | | | HH3 | 08/05/25 | 1051 | 2834438 | 3 |
| *905.0Mod, Sr90, liquid "As Received"* | | | | | | | | | | | | | | |
| Strontium-90 | U | -0.668 | +/-1.78 | 3.79 | +/-1.78 | 8.00 | pCi/L | | | DH1 | 07/31/25 | 1435 | 2834444 | 4 |
| *9310, Alpha/Beta Activity, liquid "As Received"* | | | | | | | | | | | | | | |
| Alpha | U | 3.46 | +/-4.51 | 7.61 | +/-4.54 | 15.0 | pCi/L | | | CT3 | 07/26/25 | 0745 | 2834425 | 5 |
| Beta | U | 8.36 | +/-6.17 | 9.63 | +/-6.32 | 50.0 | pCi/L | | | | | | | |
| **Rad Liquid Scintillation Analysis** | | | | | | | | | | | | | | |
| *906.0M, Tritium Dist, Liquid "As Received"* | | | | | | | | | | | | | | |
| Tritium | U | -15.2 | +/-110 | 218 | +/-110 | 300 | pCi/L | | | MG6 | 07/25/25 | 1203 | 2834083 | 6 |
| *Tc-02-RC-MOD, Tc99, Liquid "As Received"* | | | | | | | | | | | | | | |
| Technetium-99 | U | 7.58 | +/-12.3 | 20.7 | +/-12.3 | 25.0 | pCi/L | | | GS3 | 08/17/25 | 1125 | 2836874 | 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" | 2834726 | 97.7 | (30%-110%) |
| Thorium-229 Tracer | Th-01-RC M, Th Isotopes, Liquid "As Received" | 2834727 | 98.6 | (30%-110%) |
| Barium-133 Tracer | 904.0Mod, Ra228, Liquid "As Received" | 2834438 | 81.9 | (30%-110%) |
| Strontium Carrier | 905.0Mod, Sr90, liquid "As Received" | 2834444 | 87.1 | (30%-110%) |
| Technetium-99m Tracer | Tc-02-RC-MOD, Tc99, Liquid "As Received" | 2836874 | 97.5 | (30%-110%) |

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# *Certificate of Analysis*

Company : Four Rivers Nuclear Partnership, LLC
Address : 5600 Hobbs Road
Kevil, Kentucky 42053

Report Date: October 1, 2025

Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: MW373UG4-25
Sample ID: 734228009

Project: FRNP00714
Client ID: FRNP007

| 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,
Address : LLC
5600 Hobbs Road

Kevil, Kentucky 42053

Report Date: October 1, 2025

Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: MW374UG4-25
Sample ID: 734228011
Matrix: WG
Collect Date: 21-JUL-25
Receive Date: 22-JUL-25
Collector: Client

Project: FRNP00714
Client ID: FRNP007

| 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 | 0.553 | +/-0.479 | 0.585 | +/-0.484 | 5.00 | pCi/L | | | CM4 | 08/05/25 | 0857 | 2834726 | 1 |
| *Th-01-RC M, Th Isotopes, Liquid "As Received"* | | | | | | | | | | | | | | |
| Thorium-230 | U | 0.485 | +/-1.44 | 2.69 | +/-1.45 | 50.0 | pCi/L | | | CM4 | 08/01/25 | 0838 | 2834727 | 2 |
| Thorium-232 | U | 0.218 | +/-0.898 | 1.57 | +/-0.900 | | pCi/L | | | | | | | |
| **Rad Gas Flow Proportional Counting** | | | | | | | | | | | | | | |
| *904.0Mod, Ra228, Liquid "As Received"* | | | | | | | | | | | | | | |
| Radium-228 | U | 0.543 | +/-2.53 | 4.88 | +/-2.54 | 4.99 | pCi/L | | | HH3 | 08/05/25 | 1052 | 2834438 | 3 |
| *905.0Mod, Sr90, liquid "As Received"* | | | | | | | | | | | | | | |
| Strontium-90 | U | 3.66 | +/-3.35 | 5.50 | +/-3.40 | 8.00 | pCi/L | | | DH1 | 07/31/25 | 1435 | 2834444 | 4 |
| *9310, Alpha/Beta Activity, liquid "As Received"* | | | | | | | | | | | | | | |
| Alpha | U | -0.0239 | +/-2.63 | 6.66 | +/-2.63 | 15.0 | pCi/L | | | CT3 | 07/24/25 | 1139 | 2834425 | 5 |
| Beta | U | 3.76 | +/-5.50 | 9.50 | +/-5.54 | 50.0 | pCi/L | | | | | | | |
| **Rad Liquid Scintillation Analysis** | | | | | | | | | | | | | | |
| *906.0M, Tritium Dist, Liquid "As Received"* | | | | | | | | | | | | | | |
| Tritium | U | 58.4 | +/-122 | 218 | +/-122 | 300 | pCi/L | | | MG6 | 07/25/25 | 1224 | 2834083 | 6 |
| *Tc-02-RC-MOD, Tc99, Liquid "As Received"* | | | | | | | | | | | | | | |
| Technetium-99 | U | 0.321 | +/-11.9 | 20.5 | +/-11.9 | 25.0 | pCi/L | | | GS3 | 08/17/25 | 1202 | 2836874 | 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" | 2834726 | 96.9 | (30%-110%) |
| Thorium-229 Tracer | Th-01-RC M, Th Isotopes, Liquid "As Received" | 2834727 | 56.5 | (30%-110%) |
| Barium-133 Tracer | 904.0Mod, Ra228, Liquid "As Received" | 2834438 | 70.6 | (30%-110%) |
| Strontium Carrier | 905.0Mod, Sr90, liquid "As Received" | 2834444 | 96.5 | (30%-110%) |
| Technetium-99m Tracer | Tc-02-RC-MOD, Tc99, Liquid "As Received" | 2836874 | 96 | (30%-110%) |

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Report Date: October 1, 2025

Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: MW374UG4-25
Sample ID: 734228011

Project: FRNP00714
Client ID: FRNP007

| 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,
Address : LLC
5600 Hobbs Road

Kevil, Kentucky 42053

Report Date: October 1, 2025

Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: MW375UG4-25
Sample ID: 734228013
Matrix: WG
Collect Date: 21-JUL-25
Receive Date: 22-JUL-25
Collector: Client

Project: FRNP00714
Client ID: FRNP007

| 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 | UT | -0.108 | +/-0.266 | 0.795 | +/-0.266 | 5.00 | pCi/L | | | CM4 | 08/06/25 | 0847 | 2834726 | 1 |
| *Th-01-RC M, Th Isotopes, Liquid "As Received"* | | | | | | | | | | | | | | |
| Thorium-230 | U | 0.451 | +/-1.06 | 1.88 | +/-1.07 | 50.0 | pCi/L | | | CM4 | 08/01/25 | 0838 | 2834727 | 2 |
| Thorium-232 | U | 0.450 | +/-0.808 | 0.942 | +/-0.811 | | pCi/L | | | | | | | |
| **Rad Gas Flow Proportional Counting** | | | | | | | | | | | | | | |
| *904.0Mod, Ra228, Liquid "As Received"* | | | | | | | | | | | | | | |
| Radium-228 | U | 0.591 | +/-2.60 | 4.74 | +/-2.61 | 4.99 | pCi/L | | | HH3 | 08/05/25 | 1054 | 2834438 | 3 |
| *905.0Mod, Sr90, liquid "As Received"* | | | | | | | | | | | | | | |
| Strontium-90 | U | 0.244 | +/-4.10 | 7.60 | +/-4.10 | 8.00 | pCi/L | | | DH1 | 07/31/25 | 1431 | 2834444 | 4 |
| *9310, Alpha/Beta Activity, liquid "As Received"* | | | | | | | | | | | | | | |
| Alpha | U | 0.940 | +/-3.06 | 6.45 | +/-3.07 | 15.0 | pCi/L | | | CT3 | 07/24/25 | 1139 | 2834425 | 5 |
| Beta | U | -0.136 | +/-4.75 | 9.16 | +/-4.75 | 50.0 | pCi/L | | | | | | | |
| **Rad Liquid Scintillation Analysis** | | | | | | | | | | | | | | |
| *906.0M, Tritium Dist, Liquid "As Received"* | | | | | | | | | | | | | | |
| Tritium | U | -3.18 | +/-112 | 218 | +/-112 | 300 | pCi/L | | | MG6 | 07/25/25 | 1246 | 2834083 | 6 |
| *Tc-02-RC-MOD, Tc99, Liquid "As Received"* | | | | | | | | | | | | | | |
| Technetium-99 | U | 0.737 | +/-12.3 | 21.2 | +/-12.3 | 25.0 | pCi/L | | | GS3 | 08/17/25 | 1239 | 2836874 | 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" | 2834726 | 112 * | (30%-110%) |
| Thorium-229 Tracer | Th-01-RC M, Th Isotopes, Liquid "As Received" | 2834727 | 75.2 | (30%-110%) |
| Barium-133 Tracer | 904.0Mod, Ra228, Liquid "As Received" | 2834438 | 78.2 | (30%-110%) |
| Strontium Carrier | 905.0Mod, Sr90, liquid "As Received" | 2834444 | 65.9 | (30%-110%) |
| Technetium-99m Tracer | Tc-02-RC-MOD, Tc99, Liquid "As Received" | 2836874 | 94.6 | (30%-110%) |

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# *Certificate of Analysis*

Company : Four Rivers Nuclear Partnership, LLC
Address : 5600 Hobbs Road
Kevil, Kentucky 42053

Report Date: October 1, 2025

Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: MW375UG4-25
Sample ID: 734228013

Project: FRNP00714
Client ID: FRNP007

| 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(UG25-04)

Client Sample ID: MW369UG4-25
Sample ID: 734228001
Matrix: WG
Collect Date: 21-JUL-25 08:22
Receive Date: 22-JUL-25
Collector: Client

Project: FRNP00714
Client ID: FRNP007

| 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 | 0.946 | 1 | BM1 | 07/23/25 | 1300 | 2834440 | 1 |
| Carbon Analysis | | | | | | | | | | | | |
| 9060A, Total Organic Carbon "As Received" | | | | | | | | | | | | |
| Total Organic Carbon Average | J | 0.653 | 0.330 | 2.00 | mg/L | | 1 | KB3 | 07/24/25 | 1432 | 2834582 | 3 |
| Flow Injection Analysis | | | | | | | | | | | | |
| 9012B, Cyanide, Total "As Received" | | | | | | | | | | | | |
| Cyanide, Total | UN | 0.200 | 0.00167 | 0.200 | mg/L | 1.00 | 1 | KLP1 | 07/30/25 | 1429 | 2837416 | 4 |
| Halogen Analysis | | | | | | | | | | | | |
| 9020B, TOX (Organic Halogen) "As Received" | | | | | | | | | | | | |
| Total Organic Halogens | J | 8.23 | 3.33 | 10.0 | ug/L | | 1 | JW2 | 08/14/25 | 1654 | 2846300 | 5 |
| Ion Chromatography | | | | | | | | | | | | |
| 300.0, Iodide in Liquid "As Received" | | | | | | | | | | | | |
| Iodide | U | 0.500 | 0.167 | 0.500 | mg/L | | 1 | TXT1 | 07/22/25 | 1528 | 2834230 | 6 |
| SW846 9056A Anions (5 elements) "As Received" | | | | | | | | | | | | |
| Bromide | | 0.370 | 0.0670 | 0.200 | mg/L | | 1 | CH6 | 07/22/25 | 1323 | 2833994 | 7 |
| Fluoride | J | 0.167 | 0.0330 | 4.00 | mg/L | | 1 | | | | | |
| Sulfate | | 8.76 | 0.133 | 0.400 | mg/L | | 1 | | | | | |
| Chloride | JN | 28.9 | 0.268 | 250 | mg/L | | 4 | CH6 | 07/22/25 | 1801 | 2833994 | 8 |
| Nitrate-N | J | 0.981 | 0.132 | 10.0 | mg/L | | 4 | | | | | |
| Mercury Analysis-CVAA | | | | | | | | | | | | |
| 7470, Mercury Liquid "As Received" | | | | | | | | | | | | |
| Mercury | U | 0.000200 | 0.0000670 | 0.000200 | mg/L | 1.00 | 1 | JP2 | 08/12/25 | 1213 | 2844906 | 9 |
| Metals Analysis-ICP-MS | | | | | | | | | | | | |
| 6020, Metals (15+ elements) "As Received" | | | | | | | | | | | | |
| Aluminum | J | 0.0289 | 0.0193 | 0.0500 | mg/L | 1.00 | 1 | PRB | 08/18/25 | 2135 | 2834375 | 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 | | 0.329 | 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 | | 15.8 | 0.0800 | 0.200 | mg/L | 1.00 | 1 | | | | | |
| Chromium | U | 0.0100 | 0.00300 | 0.0100 | mg/L | 1.00 | 1 | | | | | |
| Cobalt | | 0.00435 | 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(UG25-04)

Client Sample ID: MW369UG4-25 Project: FRNP00714
Sample ID: 734228001 Client ID: FRNP007

| Parameter | Qualifier | Result | DL | RL | Units | PF | DF | Analyst | Date | Time | Batch | Method |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Metals Analysis-ICP-MS | | | | | | | | | | | | |
| 6020, Metals (15+ elements) "As Received" | | | | | | | | | | | | |
| Copper | | 0.00222 | 0.000300 | 0.00200 | mg/L | 1.00 | 1 | | | | | |
| Iron | | 0.154 | 0.0330 | 0.100 | mg/L | 1.00 | 1 | | | | | |
| Lead | U | 0.00200 | 0.000500 | 0.00200 | mg/L | 1.00 | 1 | | | | | |
| Magnesium | | 6.67 | 0.0100 | 0.0300 | mg/L | 1.00 | 1 | | | | | |
| Manganese | J | 0.00479 | 0.00100 | 0.00500 | mg/L | 1.00 | 1 | | | | | |
| Molybdenum | J | 0.000445 | 0.000200 | 0.00100 | mg/L | 1.00 | 1 | | | | | |
| Nickel | | 0.00413 | 0.000600 | 0.00200 | mg/L | 1.00 | 1 | | | | | |
| Potassium | | 0.575 | 0.0800 | 0.300 | mg/L | 1.00 | 1 | | | | | |
| Selenium | J | 0.00251 | 0.00150 | 0.00500 | mg/L | 1.00 | 1 | | | | | |
| Silver | U | 0.00100 | 0.000300 | 0.00100 | mg/L | 1.00 | 1 | | | | | |
| Sodium | | 49.3 | 0.0800 | 0.250 | 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 | 0.0116 | 0.00330 | 0.0200 | mg/L | 1.00 | 1 | | | | | |
| Boron | | 0.0180 | 0.00520 | 0.0150 | mg/L | 1.00 | 1 | PRB | 08/19/25 | 1246 | 2834375 | 11 |
| Rhodium | U | 0.00500 | 0.00160 | 0.00500 | mg/L | 1.00 | 1 | PRB | 08/19/25 | 1550 | 2834375 | 12 |
| Tantalum | U | 0.00500 | 0.00100 | 0.00500 | mg/L | 1.00 | 1 | | | | | |
| Semi-Volatiles-PCB | | | | | | | | | | | | |
| 8082A, PCB Liquids "As Received" | | | | | | | | | | | | |
| Aroclor-1016 | U | 0.0951 | 0.0317 | 0.0951 | ug/L | 0.000951 | 1 | NS2 | 08/14/25 | 1436 | 2846197 | 13 |
| Aroclor-1221 | U | 0.0951 | 0.0317 | 0.0951 | ug/L | 0.000951 | 1 | | | | | |
| Aroclor-1232 | U | 0.0951 | 0.0317 | 0.0951 | ug/L | 0.000951 | 1 | | | | | |
| Aroclor-1242 | U | 0.0951 | 0.0317 | 0.0951 | ug/L | 0.000951 | 1 | | | | | |
| Aroclor-1248 | U | 0.0951 | 0.0317 | 0.0951 | ug/L | 0.000951 | 1 | | | | | |
| Aroclor-1254 | U | 0.0951 | 0.0317 | 0.0951 | ug/L | 0.000951 | 1 | | | | | |
| Aroclor-1260 | U | 0.0951 | 0.0317 | 0.0951 | ug/L | 0.000951 | 1 | | | | | |
| Aroclor-1268 | U | 0.0951 | 0.0317 | 0.0951 | ug/L | 0.000951 | 1 | | | | | |
| Aroclor-Total | U | 0.0951 | 0.0317 | 0.0951 | ug/L | 0.000951 | 1 | | | | | |
| Solids Analysis | | | | | | | | | | | | |
| 160.1, Dissolved Solids "As Received" | | | | | | | | | | | | |
| Total Dissolved Solids | * | 202 | 2.38 | 10.0 | mg/L | | | SC1 | 07/24/25 | 1035 | 2835211 | 14 |
| Spectrometric Analysis | | | | | | | | | | | | |
| 410.4, Chem. Oxygen Demand "As Received" | | | | | | | | | | | | |

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# *Certificate of Analysis*

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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(UG25-04)

Client Sample ID: MW369UG4-25 Project: FRNP00714
Sample ID: 734228001 Client ID: FRNP007

| 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 | BR2 | 07/28/25 | 1657 | 2836939 | 15 |
| Volatile Organics | | | | | | | | | | | | |
| 8260D, Volatiles- full suite "As Received" | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | U | 1.00 | 0.333 | 1.00 | ug/L | | 1 | KA1 | 07/27/25 | 1325 | 2836580 | 16 |
| 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 | | 6.00 | 1.67 | 5.00 | ug/L | | 1 | | | | | |
| 2-Hexanone | J | 1.70 | 1.67 | 5.00 | ug/L | | 1 | | | | | |
| 4-Methyl-2-pentanone | U | 5.00 | 1.67 | 5.00 | ug/L | | 1 | | | | | |
| Acetone | | 19.5 | 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: October 1, 2025

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

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: MW369UG4-25 Project: FRNP00714
Sample ID: 734228001 Client ID: FRNP007

| 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 | | 1.77 | 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 | 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 | PB1 | 08/11/25 | 1450 | 2844904 |
| SW846 9010C Distillation | SW846 9010C Prep | KLP1 | 07/30/25 | 1211 | 2837415 |
| SW846 3005A | ICP-MS 3005A PREP | HC1 | 07/23/25 | 1510 | 2834374 |
| SW846 8011 PREP | 8011 Prep | BM1 | 07/23/25 | 0940 | 2834437 |
| SW846 3535A | SW3535A PCB SPE Extraction | DG3 | 08/14/25 | 0708 | 2846188 |

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Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: MW369UG4-25 Project: FRNP00714
Sample ID: 734228001 Client ID: FRNP007

| 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 3535A/8082A | |
| 14 | EPA 160.1 | |
| 15 | EPA 410.4 | |
| 16 | SW846 8260D | |

| Surrogate/Tracer Recovery | Test | Result | Nominal | Recovery% | Acceptable Limits |
|---|---|---|---|---|---|
| 1-Chloro-2-fluorobenzene | 8011 VOA- 1,2-Dibromo-3-chloropropane "As Received" | 6.29 ug/L | 6.76 | 93 | (56%-149%) |
| Decachlorobiphenyl | 8082A, PCB Liquids "As Received" | 0.0659 ug/L | 0.190 | 35 | (30%-135%) |
| 4cmx | 8082A, PCB Liquids "As Received" | 0.113 ug/L | 0.190 | 60 | (26%-108%) |
| Bromofluorobenzene | 8260D, Volatiles- full suite "As Received" | 45.2 ug/L | 50.0 | 90 | (85%-114%) |
| 1,2-Dichloroethane-d4 | 8260D, Volatiles- full suite "As Received" | 47.3 ug/L | 50.0 | 95 | (81%-118%) |
| Toluene-d8 | 8260D, Volatiles- full suite "As Received" | 48.7 ug/L | 50.0 | 97 | (89%-112%) |

**Notes:**

*Column headers are defined as follows:*

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

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# *Certificate of Analysis*

Report Date: October 1, 2025

| | |
|---|---|
| Company : | Four Rivers Nuclear Partnership, LLC |
| Address : | 5600 Hobbs Road |
| | Kevil, Kentucky 42053 |
| Contact: | Ms. Jaime Morrow |
| Project: | C-746-U Landfill Quarterly(UG25-04) |

| | | | |
|---|---|---|---|
| Client Sample ID: | MW369UG4-25 | Project: | FRNP00714 |
| Sample ID: | 734228002 | Client ID: | FRNP007 |
| Matrix: | WG | | |
| Collect Date: | 21-JUL-25 08:22 | | |
| Receive Date: | 22-JUL-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 | | 0.335 | 0.000670 | 0.00400 | mg/L | 1.00 | 1 | PRB | 08/18/25 | 2225 | 2836994 | 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 | 07/28/25 | 1115 | 2834346 |
| SW846 3005A | ICP-MS 3005A PREP | JB7 | 07/29/25 | 1545 | 2836993 |

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(UG25-04)

Client Sample ID: MW370UG4-25
Sample ID: 734228003
Matrix: WG
Collect Date: 21-JUL-25 09:13
Receive Date: 22-JUL-25
Collector: Client

Project: FRNP00714
Client ID: FRNP007

| 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 | 0.952 | 1 | BM1 | 07/23/25 | 1335 | 2834440 | 1 |
| Carbon Analysis | | | | | | | | | | | | |
| 9060A, Total Organic Carbon "As Received" | | | | | | | | | | | | |
| Total Organic Carbon Average | J | 0.610 | 0.330 | 2.00 | mg/L | | 1 | KB3 | 07/24/25 | 1503 | 2834582 | 3 |
| Flow Injection Analysis | | | | | | | | | | | | |
| 9012B, Cyanide, Total "As Received" | | | | | | | | | | | | |
| Cyanide, Total | UN | 0.200 | 0.00167 | 0.200 | mg/L | 1.00 | 1 | KLP1 | 07/30/25 | 1430 | 2837416 | 4 |
| Halogen Analysis | | | | | | | | | | | | |
| 9020B, TOX (Organic Halogen) "As Received" | | | | | | | | | | | | |
| Total Organic Halogens | J | 7.06 | 3.33 | 10.0 | ug/L | | 1 | JW2 | 08/14/25 | 1453 | 2846300 | 5 |
| Ion Chromatography | | | | | | | | | | | | |
| 300.0, Iodide in Liquid "As Received" | | | | | | | | | | | | |
| Iodide | U | 0.500 | 0.167 | 0.500 | mg/L | | 1 | TXT1 | 07/22/25 | 1540 | 2834230 | 6 |
| SW846 9056A Anions (5 elements) "As Received" | | | | | | | | | | | | |
| Bromide | | 0.517 | 0.0670 | 0.200 | mg/L | | 1 | CH6 | 07/22/25 | 1354 | 2833994 | 7 |
| Fluoride | J | 0.146 | 0.0330 | 4.00 | mg/L | | 1 | | | | | |
| Chloride | JN | 41.7 | 0.335 | 250 | mg/L | | 5 | CH6 | 07/22/25 | 1933 | 2833994 | 8 |
| Nitrate-N | J | 1.09 | 0.165 | 10.0 | mg/L | | 5 | | | | | |
| Sulfate | | 19.4 | 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 | 08/12/25 | 1215 | 2844906 | 9 |
| Metals Analysis-ICP-MS | | | | | | | | | | | | |
| 6020, Metals (15+ elements) "As Received" | | | | | | | | | | | | |
| Aluminum | U | 0.0500 | 0.0193 | 0.0500 | mg/L | 1.00 | 1 | PRB | 08/18/25 | 2137 | 2834375 | 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 | | 0.220 | 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 | | 28.6 | 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: October 1, 2025

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

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: MW370UG4-25 Project: FRNP00714
Sample ID: 734228003 Client ID: FRNP007

| 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 | 0.00109 | 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 | | 12.5 | 0.0100 | 0.0300 | mg/L | 1.00 | 1 | | | | | |
| Manganese | U | 0.00500 | 0.00100 | 0.00500 | 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 | | 2.53 | 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 | | | | | |
| Sodium | | 44.4 | 0.0800 | 0.250 | 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 | 0.00608 | 0.00330 | 0.0200 | mg/L | 1.00 | 1 | | | | | |
| Boron | | 0.0726 | 0.00520 | 0.0150 | mg/L | 1.00 | 1 | PRB | 08/19/25 | 1247 | 2834375 | 11 |
| Rhodium | U | 0.00500 | 0.00160 | 0.00500 | mg/L | 1.00 | 1 | PRB | 08/19/25 | 1551 | 2834375 | 12 |
| 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 | NS2 | 08/14/25 | 1455 | 2846197 | 13 |
| 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 | * | 225 | 2.38 | 10.0 | mg/L | | | SC1 | 07/24/25 | 1035 | 2835211 | 14 |
| **Spectrometric Analysis** | | | | | | | | | | | | |
| **410.4, Chem. Oxygen Demand "As Received"** | | | | | | | | | | | | |

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# *Certificate of Analysis*

Report Date: October 1, 2025

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

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: MW370UG4-25 Project: FRNP00714
Sample ID: 734228003 Client ID: FRNP007

| 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 | BR2 | 07/28/25 | 1657 | 2836939 | 15 |
| Volatile Organics | | | | | | | | | | | | |
| 8260D, Volatiles- full suite "As Received" | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | U | 1.00 | 0.333 | 1.00 | ug/L | | 1 | KA1 | 07/27/25 | 1357 | 2836580 | 16 |
| 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 | | 6.19 | 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: October 1, 2025

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Address : 5600 Hobbs Road

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: MW370UG4-25 Project: FRNP00714
Sample ID: 734228003 Client ID: FRNP007

| 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 | | 1.61 | 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 | U | 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 | 07/30/25 | 1211 | 2837415 |
| SW846 3005A | ICP-MS 3005A PREP | HC1 | 07/23/25 | 1510 | 2834374 |
| SW846 7470A Prep | EPA 7470A Mercury Prep Liquid | PB1 | 08/11/25 | 1450 | 2844904 |
| SW846 8011 PREP | 8011 Prep | BM1 | 07/23/25 | 0940 | 2834437 |
| SW846 3535A | SW3535A PCB SPE Extraction | DG3 | 08/14/25 | 0708 | 2846188 |

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# *Certificate of Analysis*

Report Date: October 1, 2025

| | |
|---|---|
| Company : | Four Rivers Nuclear Partnership, LLC |
| Address : | 5600 Hobbs Road |
| | Kevil, Kentucky 42053 |
| Contact: | Ms. Jaime Morrow |
| Project: | C-746-U Landfill Quarterly(UG25-04) |

| | | | |
|---|---|---|---|
| Client Sample ID: | MW370UG4-25 | Project: | FRNP00714 |
| Sample ID: | 734228003 | Client ID: | FRNP007 |

| 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 3535A/8082A | |
| 14 | EPA 160.1 | |
| 15 | EPA 410.4 | |
| 16 | SW846 8260D | |

| Surrogate/Tracer Recovery | Test | Result | Nominal | Recovery% | Acceptable Limits |
|---|---|---|---|---|---|
| 1-Chloro-2-fluorobenzene | 8011 VOA- 1,2-Dibromo-3-chloropropane "As Received" | 7.45 ug/L | 6.80 | 110 | (56%-149%) |
| Decachlorobiphenyl | 8082A, PCB Liquids "As Received" | 0.139 ug/L | 0.200 | 70 | (30%-135%) |
| 4cmx | 8082A, PCB Liquids "As Received" | 0.160 ug/L | 0.200 | 80 | (26%-108%) |
| Bromofluorobenzene | 8260D, Volatiles- full suite "As Received" | 46.2 ug/L | 50.0 | 92 | (85%-114%) |
| 1,2-Dichloroethane-d4 | 8260D, Volatiles- full suite "As Received" | 48.8 ug/L | 50.0 | 98 | (81%-118%) |
| Toluene-d8 | 8260D, Volatiles- full suite "As Received" | 49.4 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: October 1, 2025

| | |
|---|---|
| Company : | Four Rivers Nuclear Partnership, LLC |
| Address : | 5600 Hobbs Road |
| | Kevil, Kentucky 42053 |
| Contact: | Ms. Jaime Morrow |
| Project: | C-746-U Landfill Quarterly(UG25-04) |

| | | | |
|---|---|---|---|
| Client Sample ID: | MW370UG4-25 | Project: | FRNP00714 |
| Sample ID: | 734228004 | Client ID: | FRNP007 |
| Matrix: | WG | | |
| Collect Date: | 21-JUL-25 09:13 | | |
| Receive Date: | 22-JUL-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 | | 0.211 | 0.000670 | 0.00400 | mg/L | 1.00 | 1 | PRB | 08/18/25 | 2228 | 2836994 | 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 | JB7 | 07/29/25 | 1545 | 2836993 |
| EPA 160 | Laboratory Filtration | MM7 | 07/28/25 | 1115 | 2834346 |

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: October 1, 2025

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

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: MW371UG4-25
Sample ID: 734228005
Matrix: WG
Collect Date: 21-JUL-25 10:17
Receive Date: 22-JUL-25
Collector: Client

Project: FRNP00714
Client ID: FRNP007

| 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 | 0.00852 | 0.0189 | ug/L | 0.946 | 1 | BM1 | 07/23/25 | 1519 | 2834440 | 1 |
| Carbon Analysis | | | | | | | | | | | | |
| 9060A, Total Organic Carbon "As Received" | | | | | | | | | | | | |
| Total Organic Carbon Average | J | 1.32 | 0.330 | 2.00 | mg/L | | 1 | KB3 | 07/24/25 | 1637 | 2834582 | 2 |
| Flow Injection Analysis | | | | | | | | | | | | |
| 9012B, Cyanide, Total "As Received" | | | | | | | | | | | | |
| Cyanide, Total | UN | 0.200 | 0.00167 | 0.200 | mg/L | 1.00 | 1 | KLP1 | 07/30/25 | 1433 | 2837416 | 3 |
| Halogen Analysis | | | | | | | | | | | | |
| 9020B, TOX (Organic Halogen) "As Received" | | | | | | | | | | | | |
| Total Organic Halogens | J | 5.67 | 3.33 | 10.0 | ug/L | | 1 | JW2 | 08/14/25 | 1744 | 2846300 | 4 |
| Ion Chromatography | | | | | | | | | | | | |
| 300.0, Iodide in Liquid "As Received" | | | | | | | | | | | | |
| Iodide | U | 0.500 | 0.167 | 0.500 | mg/L | | 1 | TXT1 | 07/22/25 | 1619 | 2834230 | 5 |
| SW846 9056A Anions (5 elements) "As Received" | | | | | | | | | | | | |
| Bromide | U | 0.200 | 0.0670 | 0.200 | mg/L | | 1 | CH6 | 07/22/25 | 1424 | 2833994 | 6 |
| Chloride | JN | 1.68 | 0.0670 | 250 | mg/L | | 1 | | | | | |
| Fluoride | J | 0.150 | 0.0330 | 4.00 | mg/L | | 1 | | | | | |
| Nitrate-N | J | 0.217 | 0.132 | 10.0 | mg/L | | 4 | CH6 | 07/22/25 | 2106 | 2833994 | 7 |
| Sulfate | | 42.8 | 0.532 | 1.60 | mg/L | | 4 | | | | | |
| Mercury Analysis-CVAA | | | | | | | | | | | | |
| 7470, Mercury Liquid "As Received" | | | | | | | | | | | | |
| Mercury | U | 0.000200 | 0.0000670 | 0.000200 | mg/L | 1.00 | 1 | JP2 | 08/12/25 | 1221 | 2844906 | 8 |
| Metals Analysis-ICP-MS | | | | | | | | | | | | |
| 6020, Metals (15+ elements) "As Received" | | | | | | | | | | | | |
| Aluminum | J | 0.0209 | 0.0193 | 0.0500 | mg/L | 1.00 | 1 | PRB | 08/18/25 | 2109 | 2834375 | 9 |
| 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 | | 0.150 | 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 | 0.00131 | 0.000300 | 0.00200 | mg/L | 1.00 | 1 | | | | | |

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# *Certificate of Analysis*

Report Date: October 1, 2025

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

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: MW371UG4-25 Project: FRNP00714
Sample ID: 734228005 Client ID: FRNP007

| 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 | 0.0443 | 0.0330 | 0.100 | mg/L | 1.00 | 1 | | | | | |
| Lead | U | 0.00200 | 0.000500 | 0.00200 | mg/L | 1.00 | 1 | | | | | |
| Magnesium | | 11.9 | 0.0100 | 0.0300 | mg/L | 1.00 | 1 | | | | | |
| Manganese | J | 0.00118 | 0.00100 | 0.00500 | mg/L | 1.00 | 1 | | | | | |
| Molybdenum | J | 0.000509 | 0.000200 | 0.00100 | mg/L | 1.00 | 1 | | | | | |
| Nickel | J | 0.00121 | 0.000600 | 0.00200 | mg/L | 1.00 | 1 | | | | | |
| Potassium | | 0.323 | 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 | | | | | |
| Sodium | | 27.2 | 0.0800 | 0.250 | mg/L | 1.00 | 1 | | | | | |
| Thallium | U | 0.00200 | 0.000600 | 0.00200 | mg/L | 1.00 | 1 | | | | | |
| Uranium | | 0.00101 | 0.0000670 | 0.000200 | mg/L | 1.00 | 1 | | | | | |
| Vanadium | J | 0.00613 | 0.00330 | 0.0200 | mg/L | 1.00 | 1 | | | | | |
| Zinc | J | 0.00539 | 0.00330 | 0.0200 | mg/L | 1.00 | 1 | | | | | |
| Boron | J | 0.00809 | 0.00520 | 0.0150 | mg/L | 1.00 | 1 | PRB | 08/19/25 | 1318 | 2834375 | 10 |
| Calcium | | 70.8 | 0.800 | 2.00 | mg/L | 1.00 | 10 | PRB | 08/19/25 | 1359 | 2834375 | 11 |
| Rhodium | U | 0.00500 | 0.00160 | 0.00500 | mg/L | 1.00 | 1 | PRB | 08/19/25 | 1557 | 2834375 | 12 |
| Tantalum | U | 0.00500 | 0.00100 | 0.00500 | mg/L | 1.00 | 1 | | | | | |
| Semi-Volatiles-PCB | | | | | | | | | | | | |
| 8082A, PCB Liquids "As Received" | | | | | | | | | | | | |
| Aroclor-1016 | U | 0.0972 | 0.0324 | 0.0972 | ug/L | 0.000972 | 1 | NS2 | 08/14/25 | 1552 | 2846197 | 13 |
| Aroclor-1221 | U | 0.0972 | 0.0324 | 0.0972 | ug/L | 0.000972 | 1 | | | | | |
| Aroclor-1232 | U | 0.0972 | 0.0324 | 0.0972 | ug/L | 0.000972 | 1 | | | | | |
| Aroclor-1242 | U | 0.0972 | 0.0324 | 0.0972 | ug/L | 0.000972 | 1 | | | | | |
| Aroclor-1248 | U | 0.0972 | 0.0324 | 0.0972 | ug/L | 0.000972 | 1 | | | | | |
| Aroclor-1254 | U | 0.0972 | 0.0324 | 0.0972 | ug/L | 0.000972 | 1 | | | | | |
| Aroclor-1260 | U | 0.0972 | 0.0324 | 0.0972 | ug/L | 0.000972 | 1 | | | | | |
| Aroclor-1268 | U | 0.0972 | 0.0324 | 0.0972 | ug/L | 0.000972 | 1 | | | | | |
| Aroclor-Total | U | 0.0972 | 0.0324 | 0.0972 | ug/L | 0.000972 | 1 | | | | | |
| Solids Analysis | | | | | | | | | | | | |
| 160.1, Dissolved Solids "As Received" | | | | | | | | | | | | |
| Total Dissolved Solids | * | 315 | 2.38 | 10.0 | mg/L | | | SC1 | 07/24/25 | 1035 | 2835211 | 14 |
| 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(UG25-04)

Client Sample ID: MW371UG4-25 Project: FRNP00714
Sample ID: 734228005 Client ID: FRNP007

| 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 | BR2 | 07/28/25 | 1657 | 2836939 | 15 |
| Volatile Organics | | | | | | | | | | | | |
| 8260D, Volatiles- full suite "As Received" | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | U | 1.00 | 0.333 | 1.00 | ug/L | | 1 | KA1 | 07/27/25 | 1428 | 2836580 | 16 |
| 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(UG25-04)

Client Sample ID: MW371UG4-25 Project: FRNP00714
Sample ID: 734228005 Client ID: FRNP007

| 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 | 0.620 | 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 | U | 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 | 07/30/25 | 1211 | 2837415 |
| SW846 3005A | ICP-MS 3005A PREP | HC1 | 07/23/25 | 1510 | 2834374 |
| SW846 8011 PREP | 8011 Prep | BM1 | 07/23/25 | 0940 | 2834437 |
| SW846 3535A | SW3535A PCB SPE Extraction | DG3 | 08/14/25 | 0708 | 2846188 |
| SW846 7470A Prep | EPA 7470A Mercury Prep Liquid | PB1 | 08/11/25 | 1450 | 2844904 |

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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(UG25-04) |

| | | | |
|---|---|---|---|
| Client Sample ID: | MW371UG4-25 | Project: | FRNP00714 |
| Sample ID: | 734228005 | Client ID: | FRNP007 |

| 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 9060A | |
| 3 | SW846 9012B | |
| 4 | SW846 9020B | |
| 5 | EPA 300.0 | |
| 6 | SW846 9056A | |
| 7 | SW846 9056A | |
| 8 | SW846 7470A | |
| 9 | SW846 3005A/6020B | |
| 10 | SW846 3005A/6020B | |
| 11 | SW846 3005A/6020B | |
| 12 | SW846 3005A/6020B | |
| 13 | SW846 3535A/8082A | |
| 14 | EPA 160.1 | |
| 15 | EPA 410.4 | |
| 16 | SW846 8260D | |

| Surrogate/Tracer Recovery | Test | Result | Nominal | Recovery% | Acceptable Limits |
|---|---|---|---|---|---|
| 1-Chloro-2-fluorobenzene | 8011 VOA- 1,2-Dibromo-3-chloropropane "As Received" | 7.15 ug/L | 6.76 | 106 | (56%-149%) |
| Decachlorobiphenyl | 8082A, PCB Liquids "As Received" | 0.112 ug/L | 0.194 | 58 | (30%-135%) |
| 4cmx | 8082A, PCB Liquids "As Received" | 0.139 ug/L | 0.194 | 71 | (26%-108%) |
| Bromofluorobenzene | 8260D, Volatiles- full suite "As Received" | 46.0 ug/L | 50.0 | 92 | (85%-114%) |
| 1,2-Dichloroethane-d4 | 8260D, Volatiles- full suite "As Received" | 48.3 ug/L | 50.0 | 97 | (81%-118%) |
| Toluene-d8 | 8260D, Volatiles- full suite "As Received" | 49.0 ug/L | 50.0 | 98 | (89%-112%) |

**Notes:**

*Column headers are defined as follows:*

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

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| | |
|---|---|
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| Address : | 5600 Hobbs Road |
| | Kevil, Kentucky 42053 |
| Contact: | Ms. Jaime Morrow |
| Project: | C-746-U Landfill Quarterly(UG25-04) |

| | | | |
|---|---|---|---|
| Client Sample ID: | MW371UG4-25 | Project: | FRNP00714 |
| Sample ID: | 734228006 | Client ID: | FRNP007 |
| Matrix: | WG | | |
| Collect Date: | 21-JUL-25 10:17 | | |
| Receive Date: | 22-JUL-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 | | 0.142 | 0.000670 | 0.00400 | mg/L | 1.00 | 1 | PRB | 08/18/25 | 2247 | 2836994 | 1 |
| Chromium | U | 0.0100 | 0.00300 | 0.0100 | mg/L | 1.00 | 1 | | | | | |
| Uranium | | 0.000966 | 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 | JB7 | 07/29/25 | 1545 | 2836993 |
| EPA 160 | Laboratory Filtration | MM7 | 07/28/25 | 1115 | 2834346 |

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
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Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: MW372UG4-25
Sample ID: 734228007
Matrix: WG
Collect Date: 21-JUL-25 11:08
Receive Date: 22-JUL-25
Collector: Client

Project: FRNP00714
Client ID: FRNP007

| 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 | 0.0192 | 0.00863 | 0.0192 | ug/L | 0.959 | 1 | BM1 | 07/23/25 | 1553 | 2834440 | 1 |
| Carbon Analysis | | | | | | | | | | | | |
| 9060A, Total Organic Carbon "As Received" | | | | | | | | | | | | |
| Total Organic Carbon Average | J | 0.764 | 0.330 | 2.00 | mg/L | | 1 | KB3 | 07/24/25 | 1709 | 2834582 | 2 |
| Flow Injection Analysis | | | | | | | | | | | | |
| 9012B, Cyanide, Total "As Received" | | | | | | | | | | | | |
| Cyanide, Total | UN | 0.200 | 0.00167 | 0.200 | mg/L | 1.00 | 1 | KLP1 | 07/30/25 | 1434 | 2837416 | 3 |
| Halogen Analysis | | | | | | | | | | | | |
| 9020B, TOX (Organic Halogen) "As Received" | | | | | | | | | | | | |
| Total Organic Halogens | J | 5.93 | 3.33 | 10.0 | ug/L | | 1 | JW2 | 08/14/25 | 1818 | 2846300 | 4 |
| Ion Chromatography | | | | | | | | | | | | |
| 300.0, Iodide in Liquid "As Received" | | | | | | | | | | | | |
| Iodide | U | 0.500 | 0.167 | 0.500 | mg/L | | 1 | TXT1 | 07/22/25 | 1632 | 2834230 | 5 |
| SW846 9056A Anions (5 elements) "As Received" | | | | | | | | | | | | |
| Fluoride | J | 0.174 | 0.0330 | 4.00 | mg/L | | 1 | CH6 | 07/22/25 | 1455 | 2833994 | 6 |
| Bromide | | 0.529 | 0.134 | 0.400 | mg/L | | 2 | CH6 | 07/22/25 | 2137 | 2833994 | 7 |
| Nitrate-N | J | 0.905 | 0.0660 | 10.0 | mg/L | | 2 | | | | | |
| Chloride | JN | 36.0 | 1.34 | 250 | mg/L | | 20 | CH6 | 07/23/25 | 0143 | 2833994 | 8 |
| Sulfate | | 156 | 2.66 | 8.00 | mg/L | | 20 | | | | | |
| Mercury Analysis-CVAA | | | | | | | | | | | | |
| 7470, Mercury Liquid "As Received" | | | | | | | | | | | | |
| Mercury | U | 0.000200 | 0.0000670 | 0.000200 | mg/L | 1.00 | 1 | JP2 | 08/12/25 | 1223 | 2844906 | 9 |
| Metals Analysis-ICP-MS | | | | | | | | | | | | |
| 6020, Metals (15+ elements) "As Received" | | | | | | | | | | | | |
| Aluminum | U | 0.0500 | 0.0193 | 0.0500 | mg/L | 1.00 | 1 | PRB | 08/18/25 | 2112 | 2834375 | 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 | | 0.0566 | 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 | 0.000839 | 0.000300 | 0.00200 | mg/L | 1.00 | 1 | | | | | |

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Client Sample ID: MW372UG4-25 Project: FRNP00714
Sample ID: 734228007 Client ID: FRNP007

| 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 | 0.0470 | 0.0330 | 0.100 | mg/L | 1.00 | 1 | | | | | |
| Lead | U | 0.00200 | 0.000500 | 0.00200 | mg/L | 1.00 | 1 | | | | | |
| Magnesium | | 23.4 | 0.0100 | 0.0300 | mg/L | 1.00 | 1 | | | | | |
| Manganese | J | 0.00134 | 0.00100 | 0.00500 | mg/L | 1.00 | 1 | | | | | |
| Molybdenum | J | 0.000245 | 0.000200 | 0.00100 | mg/L | 1.00 | 1 | | | | | |
| Nickel | J | 0.000707 | 0.000600 | 0.00200 | mg/L | 1.00 | 1 | | | | | |
| Potassium | | 2.17 | 0.0800 | 0.300 | mg/L | 1.00 | 1 | | | | | |
| Selenium | J | 0.00210 | 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 | 0.00486 | 0.00330 | 0.0200 | mg/L | 1.00 | 1 | | | | | |
| Boron | | 1.14 | 0.104 | 0.300 | mg/L | 1.00 | 20 | PRB | 08/19/25 | 1319 | 2834375 | 11 |
| Calcium | | 67.4 | 0.800 | 2.00 | mg/L | 1.00 | 10 | PRB | 08/19/25 | 1400 | 2834375 | 12 |
| Sodium | | 63.0 | 0.800 | 2.50 | mg/L | 1.00 | 10 | | | | | |
| Rhodium | U | 0.00500 | 0.00160 | 0.00500 | mg/L | 1.00 | 1 | PRB | 08/19/25 | 1558 | 2834375 | 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 | 0.0955 | 0.0318 | 0.0955 | ug/L | 0.000955 | 1 | NS2 | 08/14/25 | 1611 | 2846197 | 14 |
| Aroclor-1221 | U | 0.0955 | 0.0318 | 0.0955 | ug/L | 0.000955 | 1 | | | | | |
| Aroclor-1232 | U | 0.0955 | 0.0318 | 0.0955 | ug/L | 0.000955 | 1 | | | | | |
| Aroclor-1242 | U | 0.0955 | 0.0318 | 0.0955 | ug/L | 0.000955 | 1 | | | | | |
| Aroclor-1248 | U | 0.0955 | 0.0318 | 0.0955 | ug/L | 0.000955 | 1 | | | | | |
| Aroclor-1254 | U | 0.0955 | 0.0318 | 0.0955 | ug/L | 0.000955 | 1 | | | | | |
| Aroclor-1260 | U | 0.0955 | 0.0318 | 0.0955 | ug/L | 0.000955 | 1 | | | | | |
| Aroclor-1268 | U | 0.0955 | 0.0318 | 0.0955 | ug/L | 0.000955 | 1 | | | | | |
| Aroclor-Total | U | 0.0955 | 0.0318 | 0.0955 | ug/L | 0.000955 | 1 | | | | | |
| Solids Analysis | | | | | | | | | | | | |
| 160.1, Dissolved Solids "As Received" | | | | | | | | | | | | |
| Total Dissolved Solids | * | 492 | 2.38 | 10.0 | mg/L | | | SC1 | 07/24/25 | 1035 | 2835211 | 15 |
| Spectrometric Analysis | | | | | | | | | | | | |
| 410.4, Chem. Oxygen Demand "As Received" | | | | | | | | | | | | |

**GEL LABORATORIES LLC**
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# *Certificate of Analysis*

Report Date: October 1, 2025

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

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: MW372UG4-25 Project: FRNP00714
Sample ID: 734228007 Client ID: FRNP007

| 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 | BR2 | 07/28/25 | 1658 | 2836939 | 16 |
| Volatile Organics | | | | | | | | | | | | |
| 8260D, Volatiles- full suite "As Received" | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | U | 1.00 | 0.333 | 1.00 | ug/L | | 1 | KA1 | 07/27/25 | 1459 | 2836580 | 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: October 1, 2025

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

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: MW372UG4-25 Project: FRNP00714
Sample ID: 734228007 Client ID: FRNP007

| 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 | | 1.12 | 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 | 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 | BM1 | 07/23/25 | 0940 | 2834437 |
| SW846 7470A Prep | EPA 7470A Mercury Prep Liquid | PB1 | 08/11/25 | 1450 | 2844904 |
| SW846 3005A | ICP-MS 3005A PREP | HC1 | 07/23/25 | 1510 | 2834374 |
| SW846 9010C Distillation | SW846 9010C Prep | KLP1 | 07/30/25 | 1211 | 2837415 |
| SW846 3535A | SW3535A PCB SPE Extraction | DG3 | 08/14/25 | 0708 | 2846188 |

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# *Certificate of Analysis*

Report Date: October 1, 2025

| | |
|---|---|
| Company : | Four Rivers Nuclear Partnership, LLC |
| Address : | 5600 Hobbs Road |
| | Kevil, Kentucky 42053 |
| Contact: | Ms. Jaime Morrow |
| Project: | C-746-U Landfill Quarterly(UG25-04) |

| | | | |
|---|---|---|---|
| Client Sample ID: | MW372UG4-25 | Project: | FRNP00714 |
| Sample ID: | 734228007 | Client ID: | FRNP007 |

| 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 9060A | |
| 3 | SW846 9012B | |
| 4 | SW846 9020B | |
| 5 | EPA 300.0 | |
| 6 | SW846 9056A | |
| 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" | 6.72 ug/L | 6.85 | 98 | (56%-149%) |
| Decachlorobiphenyl | 8082A, PCB Liquids "As Received" | 0.150 ug/L | 0.191 | 79 | (30%-135%) |
| 4cmx | 8082A, PCB Liquids "As Received" | 0.137 ug/L | 0.191 | 72 | (26%-108%) |
| Bromofluorobenzene | 8260D, Volatiles- full suite "As Received" | 45.2 ug/L | 50.0 | 90 | (85%-114%) |
| 1,2-Dichloroethane-d4 | 8260D, Volatiles- full suite "As Received" | 48.4 ug/L | 50.0 | 97 | (81%-118%) |
| Toluene-d8 | 8260D, Volatiles- full suite "As Received" | 48.6 ug/L | 50.0 | 97 | (89%-112%) |

**Notes:**

*Column headers are defined as follows:*

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

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# *Certificate of Analysis*

Report Date: October 1, 2025

| | |
|---|---|
| Company : | Four Rivers Nuclear Partnership, LLC |
| Address : | 5600 Hobbs Road |
| | Kevil, Kentucky 42053 |
| Contact: | Ms. Jaime Morrow |
| Project: | C-746-U Landfill Quarterly(UG25-04) |

| | | | |
|---|---|---|---|
| Client Sample ID: | MW372UG4-25 | Project: | FRNP00714 |
| Sample ID: | 734228008 | Client ID: | FRNP007 |
| Matrix: | WG | | |
| Collect Date: | 21-JUL-25 11:08 | | |
| Receive Date: | 22-JUL-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 | | 0.0544 | 0.000670 | 0.00400 | mg/L | 1.00 | 1 | PRB | 08/18/25 | 2250 | 2836994 | 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 | 07/28/25 | 1115 | 2834346 |
| SW846 3005A | ICP-MS 3005A PREP | JB7 | 07/29/25 | 1545 | 2836993 |

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: October 1, 2025

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

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: MW373UG4-25
Sample ID: 734228009
Matrix: WG
Collect Date: 21-JUL-25 12:26
Receive Date: 22-JUL-25
Collector: Client

Project: FRNP00714
Client ID: FRNP007

| 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 | BM1 | 07/23/25 | 1628 | 2834440 | 1 |
| Carbon Analysis | | | | | | | | | | | | |
| 9060A, Total Organic Carbon "As Received" | | | | | | | | | | | | |
| Total Organic Carbon Average | J | 1.06 | 0.330 | 2.00 | mg/L | | 1 | KB3 | 07/24/25 | 1740 | 2834582 | 3 |
| Flow Injection Analysis | | | | | | | | | | | | |
| 9012B, Cyanide, Total "As Received" | | | | | | | | | | | | |
| Cyanide, Total | UN | 0.200 | 0.00167 | 0.200 | mg/L | 1.00 | 1 | KLP1 | 07/30/25 | 1435 | 2837416 | 4 |
| Halogen Analysis | | | | | | | | | | | | |
| 9020B, TOX (Organic Halogen) "As Received" | | | | | | | | | | | | |
| Total Organic Halogens | | 14.5 | 3.33 | 10.0 | ug/L | | 1 | JW2 | 08/14/25 | 1909 | 2846300 | 5 |
| Ion Chromatography | | | | | | | | | | | | |
| 300.0, Iodide in Liquid "As Received" | | | | | | | | | | | | |
| Iodide | U | 0.500 | 0.167 | 0.500 | mg/L | | 1 | TXT1 | 07/22/25 | 1645 | 2834230 | 6 |
| SW846 9056A Anions (5 elements) "As Received" | | | | | | | | | | | | |
| Fluoride | J | 0.173 | 0.0330 | 4.00 | mg/L | | 1 | CH6 | 07/22/25 | 1526 | 2833994 | 7 |
| Bromide | | 0.463 | 0.134 | 0.400 | mg/L | | 2 | CH6 | 07/22/25 | 2207 | 2833994 | 8 |
| Nitrate-N | J | 0.596 | 0.0660 | 10.0 | mg/L | | 2 | | | | | |
| Chloride | JN | 29.9 | 1.34 | 250 | mg/L | | 20 | CH6 | 07/23/25 | 0214 | 2833994 | 9 |
| Sulfate | | 246 | 2.66 | 8.00 | mg/L | | 20 | | | | | |
| Mercury Analysis-CVAA | | | | | | | | | | | | |
| 7470, Mercury Liquid "As Received" | | | | | | | | | | | | |
| Mercury | U | 0.000200 | 0.0000670 | 0.000200 | mg/L | 1.00 | 1 | JP2 | 08/12/25 | 1224 | 2844906 | 10 |
| Metals Analysis-ICP-MS | | | | | | | | | | | | |
| 6020, Metals (15+ elements) "As Received" | | | | | | | | | | | | |
| Aluminum | U | 0.0500 | 0.0193 | 0.0500 | mg/L | 1.00 | 1 | PRB | 08/18/25 | 2115 | 2834375 | 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 | | 0.0304 | 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 | 0.000381 | 0.000300 | 0.00100 | mg/L | 1.00 | 1 | | | | | |
| Copper | J | 0.00127 | 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(UG25-04)

Client Sample ID: MW373UG4-25 Project: FRNP00714
Sample ID: 734228009 Client ID: FRNP007

| 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 | 0.0408 | 0.0330 | 0.100 | mg/L | 1.00 | 1 | | | | | |
| Lead | U | 0.00200 | 0.000500 | 0.00200 | mg/L | 1.00 | 1 | | | | | |
| Magnesium | | 33.0 | 0.0100 | 0.0300 | mg/L | 1.00 | 1 | | | | | |
| Manganese | | 0.0472 | 0.00100 | 0.00500 | mg/L | 1.00 | 1 | | | | | |
| Molybdenum | J | 0.000226 | 0.000200 | 0.00100 | mg/L | 1.00 | 1 | | | | | |
| Nickel | J | 0.00151 | 0.000600 | 0.00200 | mg/L | 1.00 | 1 | | | | | |
| Potassium | | 2.93 | 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 | 0.0000990 | 0.0000670 | 0.000200 | mg/L | 1.00 | 1 | | | | | |
| Vanadium | U | 0.0200 | 0.00330 | 0.0200 | mg/L | 1.00 | 1 | | | | | |
| Zinc | J | 0.00634 | 0.00330 | 0.0200 | mg/L | 1.00 | 1 | | | | | |
| Boron | | 2.76 | 0.130 | 0.375 | mg/L | 1.00 | 25 | PRB | 08/19/25 | 1321 | 2834375 | 12 |
| Calcium | | 87.7 | 1.60 | 4.00 | mg/L | 1.00 | 20 | PRB | 08/19/25 | 1402 | 2834375 | 13 |
| Sodium | | 72.8 | 1.60 | 5.00 | mg/L | 1.00 | 20 | | | | | |
| Rhodium | U | 0.00500 | 0.00160 | 0.00500 | mg/L | 1.00 | 1 | PRB | 08/19/25 | 1559 | 2834375 | 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 | 0.0947 | 0.0315 | 0.0947 | ug/L | 0.000947 | 1 | NS2 | 08/14/25 | 1655 | 2846197 | 15 |
| Aroclor-1221 | U | 0.0947 | 0.0315 | 0.0947 | ug/L | 0.000947 | 1 | | | | | |
| Aroclor-1232 | U | 0.0947 | 0.0315 | 0.0947 | ug/L | 0.000947 | 1 | | | | | |
| Aroclor-1242 | U | 0.0947 | 0.0315 | 0.0947 | ug/L | 0.000947 | 1 | | | | | |
| Aroclor-1248 | U | 0.0947 | 0.0315 | 0.0947 | ug/L | 0.000947 | 1 | | | | | |
| Aroclor-1254 | U | 0.0947 | 0.0315 | 0.0947 | ug/L | 0.000947 | 1 | | | | | |
| Aroclor-1260 | U | 0.0947 | 0.0315 | 0.0947 | ug/L | 0.000947 | 1 | | | | | |
| Aroclor-1268 | U | 0.0947 | 0.0315 | 0.0947 | ug/L | 0.000947 | 1 | | | | | |
| Aroclor-Total | U | 0.0947 | 0.0315 | 0.0947 | ug/L | 0.000947 | 1 | | | | | |
| Solids Analysis | | | | | | | | | | | | |
| 160.1, Dissolved Solids "As Received" | | | | | | | | | | | | |
| Total Dissolved Solids | * | 666 | 2.38 | 10.0 | mg/L | | | SC1 | 07/24/25 | 1035 | 2835211 | 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(UG25-04)

Client Sample ID: MW373UG4-25 Project: FRNP00714
Sample ID: 734228009 Client ID: FRNP007

| 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 | BR2 | 07/28/25 | 1658 | 2836939 | 17 |
| Volatile Organics | | | | | | | | | | | | |
| 8260D, Volatiles- full suite "As Received" | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | U | 1.00 | 0.333 | 1.00 | ug/L | | 1 | KA1 | 07/27/25 | 1531 | 2836580 | 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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# *Certificate of Analysis*

Report Date: October 1, 2025

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

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: MW373UG4-25 Project: FRNP00714
Sample ID: 734228009 Client ID: FRNP007

| 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 | | 3.00 | 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 | 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 | HC1 | 07/23/25 | 1510 | 2834374 |
| SW846 7470A Prep | EPA 7470A Mercury Prep Liquid | PB1 | 08/11/25 | 1450 | 2844904 |
| SW846 8011 PREP | 8011 Prep | BM1 | 07/23/25 | 0940 | 2834437 |
| SW846 3535A | SW3535A PCB SPE Extraction | DG3 | 08/14/25 | 0708 | 2846188 |
| SW846 9010C Distillation | SW846 9010C Prep | KLP1 | 07/30/25 | 1211 | 2837415 |

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Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: MW373UG4-25 Project: FRNP00714
Sample ID: 734228009 Client ID: FRNP007

| 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" | 6.75 ug/L | 6.73 | 100 | (56%-149%) |
| Decachlorobiphenyl | 8082A, PCB Liquids "As Received" | 0.113 ug/L | 0.189 | 60 | (30%-135%) |
| 4cmx | 8082A, PCB Liquids "As Received" | 0.137 ug/L | 0.189 | 72 | (26%-108%) |
| Bromofluorobenzene | 8260D, Volatiles- full suite "As Received" | 45.7 ug/L | 50.0 | 91 | (85%-114%) |
| 1,2-Dichloroethane-d4 | 8260D, Volatiles- full suite "As Received" | 48.6 ug/L | 50.0 | 97 | (81%-118%) |
| Toluene-d8 | 8260D, Volatiles- full suite "As Received" | 49.2 ug/L | 50.0 | 98 | (89%-112%) |

**Notes:**

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# *Certificate of Analysis*

Report Date: October 1, 2025

| | |
|---|---|
| Company : | Four Rivers Nuclear Partnership, LLC |
| Address : | 5600 Hobbs Road |
| | Kevil, Kentucky 42053 |
| Contact: | Ms. Jaime Morrow |
| Project: | C-746-U Landfill Quarterly(UG25-04) |

| | | | |
|---|---|---|---|
| Client Sample ID: | MW373UG4-25 | Project: | FRNP00714 |
| Sample ID: | 734228009 | Client ID: | FRNP007 |

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

*Column headers are defined as follows:*

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

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# *Certificate of Analysis*

Report Date: October 1, 2025

| | |
|---|---|
| Company : | Four Rivers Nuclear Partnership, LLC |
| Address : | 5600 Hobbs Road |
| | Kevil, Kentucky 42053 |
| Contact: | Ms. Jaime Morrow |
| Project: | C-746-U Landfill Quarterly(UG25-04) |

| | | | |
|---|---|---|---|
| Client Sample ID: | MW373UG4-25 | Project: | FRNP00714 |
| Sample ID: | 734228010 | Client ID: | FRNP007 |
| Matrix: | WG | | |
| Collect Date: | 21-JUL-25 12:26 | | |
| Receive Date: | 22-JUL-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 | | 0.0294 | 0.000670 | 0.00400 | mg/L | 1.00 | 1 | PRB | 08/18/25 | 2253 | 2836994 | 1 |
| Chromium | U | 0.0100 | 0.00300 | 0.0100 | mg/L | 1.00 | 1 | | | | | |
| Uranium | J | 0.0000800 | 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 | JB7 | 07/29/25 | 1545 | 2836993 |
| EPA 160 | Laboratory Filtration | MM7 | 07/28/25 | 1115 | 2834346 |

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: October 1, 2025

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

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: MW374UG4-25
Sample ID: 734228011
Matrix: WG
Collect Date: 21-JUL-25 13:13
Receive Date: 22-JUL-25
Collector: Client

Project: FRNP00714
Client ID: FRNP007

| 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 | 0.0193 | 0.00867 | 0.0193 | ug/L | 0.963 | 1 | BM1 | 07/23/25 | 1753 | 2834440 | 1 |
| Carbon Analysis | | | | | | | | | | | | |
| 9060A, Total Organic Carbon "As Received" | | | | | | | | | | | | |
| Total Organic Carbon Average | J | 1.89 | 0.330 | 2.00 | mg/L | | 1 | KB3 | 07/24/25 | 1812 | 2834582 | 3 |
| Flow Injection Analysis | | | | | | | | | | | | |
| 9012B, Cyanide, Total "As Received" | | | | | | | | | | | | |
| Cyanide, Total | UN | 0.200 | 0.00167 | 0.200 | mg/L | 1.00 | 1 | KLP1 | 07/30/25 | 1436 | 2837416 | 4 |
| Halogen Analysis | | | | | | | | | | | | |
| 9020B, TOX (Organic Halogen) "As Received" | | | | | | | | | | | | |
| Total Organic Halogens | | 12.9 | 3.33 | 10.0 | ug/L | | 1 | JW2 | 08/14/25 | 1942 | 2846300 | 5 |
| Ion Chromatography | | | | | | | | | | | | |
| 300.0, Iodide in Liquid "As Received" | | | | | | | | | | | | |
| Iodide | U | 0.500 | 0.167 | 0.500 | mg/L | | 1 | TXT1 | 07/22/25 | 1657 | 2834230 | 6 |
| SW846 9056A Anions (5 elements) "As Received" | | | | | | | | | | | | |
| Fluoride | J | 0.169 | 0.0330 | 4.00 | mg/L | | 1 | CH6 | 07/22/25 | 1557 | 2833994 | 7 |
| Bromide | J | 0.529 | 0.268 | 0.800 | mg/L | | 4 | CH6 | 07/22/25 | 2238 | 2833994 | 8 |
| Nitrate-N | J | 1.29 | 0.132 | 10.0 | mg/L | | 4 | | | | | |
| Sulfate | | 19.1 | 0.532 | 1.60 | mg/L | | 4 | | | | | |
| Chloride | JN | 42.0 | 0.335 | 250 | mg/L | | 5 | CH6 | 07/24/25 | 0309 | 2833994 | 9 |
| Mercury Analysis-CVAA | | | | | | | | | | | | |
| 7470, Mercury Liquid "As Received" | | | | | | | | | | | | |
| Mercury | U | 0.000200 | 0.0000670 | 0.000200 | mg/L | 1.00 | 1 | JP2 | 08/12/25 | 1229 | 2844906 | 10 |
| Metals Analysis-ICP-MS | | | | | | | | | | | | |
| 6020, Metals (15+ elements) "As Received" | | | | | | | | | | | | |
| Aluminum | J | 0.0288 | 0.0193 | 0.0500 | mg/L | 1.00 | 1 | PRB | 08/18/25 | 2118 | 2834375 | 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 | | 0.130 | 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 | | 22.1 | 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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# *Certificate of Analysis*

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Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: MW374UG4-25 Project: FRNP00714
Sample ID: 734228011 Client ID: FRNP007

| 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 | 0.000515 | 0.000300 | 0.00200 | mg/L | 1.00 | 1 | | | | | |
| Iron | | 0.350 | 0.0330 | 0.100 | mg/L | 1.00 | 1 | | | | | |
| Lead | U | 0.00200 | 0.000500 | 0.00200 | mg/L | 1.00 | 1 | | | | | |
| Magnesium | | 6.07 | 0.0100 | 0.0300 | mg/L | 1.00 | 1 | | | | | |
| Manganese | | 0.0689 | 0.00100 | 0.00500 | mg/L | 1.00 | 1 | | | | | |
| Molybdenum | J | 0.000233 | 0.000200 | 0.00100 | mg/L | 1.00 | 1 | | | | | |
| Nickel | U | 0.00200 | 0.000600 | 0.00200 | mg/L | 1.00 | 1 | | | | | |
| Potassium | J | 0.286 | 0.0800 | 0.300 | mg/L | 1.00 | 1 | | | | | |
| Selenium | | 0.0150 | 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 | | 0.000781 | 0.0000670 | 0.000200 | mg/L | 1.00 | 1 | | | | | |
| Vanadium | U | 0.0200 | 0.00330 | 0.0200 | mg/L | 1.00 | 1 | | | | | |
| Zinc | U | 0.0200 | 0.00330 | 0.0200 | mg/L | 1.00 | 1 | | | | | |
| Boron | J | 0.0114 | 0.00520 | 0.0150 | mg/L | 1.00 | 1 | PRB | 08/19/25 | 1323 | 2834375 | 12 |
| Sodium | | 119 | 1.60 | 5.00 | mg/L | 1.00 | 20 | PRB | 08/19/25 | 1403 | 2834375 | 13 |
| Rhodium | U | 0.00500 | 0.00160 | 0.00500 | mg/L | 1.00 | 1 | PRB | 08/19/25 | 1600 | 2834375 | 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 | 0.0994 | 0.0331 | 0.0994 | ug/L | 0.000994 | 1 | NS2 | 08/14/25 | 1714 | 2846197 | 15 |
| Aroclor-1221 | U | 0.0994 | 0.0331 | 0.0994 | ug/L | 0.000994 | 1 | | | | | |
| Aroclor-1232 | U | 0.0994 | 0.0331 | 0.0994 | ug/L | 0.000994 | 1 | | | | | |
| Aroclor-1242 | U | 0.0994 | 0.0331 | 0.0994 | ug/L | 0.000994 | 1 | | | | | |
| Aroclor-1248 | U | 0.0994 | 0.0331 | 0.0994 | ug/L | 0.000994 | 1 | | | | | |
| Aroclor-1254 | U | 0.0994 | 0.0331 | 0.0994 | ug/L | 0.000994 | 1 | | | | | |
| Aroclor-1260 | U | 0.0994 | 0.0331 | 0.0994 | ug/L | 0.000994 | 1 | | | | | |
| Aroclor-1268 | U | 0.0994 | 0.0331 | 0.0994 | ug/L | 0.000994 | 1 | | | | | |
| Aroclor-Total | U | 0.0994 | 0.0331 | 0.0994 | ug/L | 0.000994 | 1 | | | | | |
| Solids Analysis | | | | | | | | | | | | |
| 160.1, Dissolved Solids "As Received" | | | | | | | | | | | | |
| Total Dissolved Solids | * | 381 | 2.38 | 10.0 | mg/L | | | SC1 | 07/24/25 | 1035 | 2835211 | 16 |
| Spectrometric Analysis | | | | | | | | | | | | |
| 410.4, Chem. Oxygen Demand "As Received" | | | | | | | | | | | | |

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Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: MW374UG4-25 Project: FRNP00714
Sample ID: 734228011 Client ID: FRNP007

| Parameter | Qualifier | Result | DL | RL | Units | PF | DF | Analyst | Date | Time | Batch | Method |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Spectrometric Analysis | | | | | | | | | | | | |
| 410.4, Chem. Oxygen Demand "As Received" | | | | | | | | | | | | |
| COD | J | 14.4 | 8.95 | 20.0 | mg/L | | 1 | BR2 | 07/28/25 | 1658 | 2836939 | 17 |
| Volatile Organics | | | | | | | | | | | | |
| 8260D, Volatiles- full suite "As Received" | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | U | 1.00 | 0.333 | 1.00 | ug/L | | 1 | KA1 | 07/27/25 | 1603 | 2836580 | 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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# *Certificate of Analysis*

Report Date: October 1, 2025

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

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: MW374UG4-25 Project: FRNP00714
Sample ID: 734228011 Client ID: FRNP007

| 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 | 0.610 | 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 | 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 | HC1 | 07/23/25 | 1510 | 2834374 |
| SW846 3535A | SW3535A PCB SPE Extraction | DG3 | 08/14/25 | 0708 | 2846188 |
| SW846 7470A Prep | EPA 7470A Mercury Prep Liquid | PB1 | 08/11/25 | 1450 | 2844904 |
| SW846 8011 PREP | 8011 Prep | BM1 | 07/23/25 | 0940 | 2834437 |
| SW846 9010C Distillation | SW846 9010C Prep | KLP1 | 07/30/25 | 1211 | 2837415 |

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# *Certificate of Analysis*

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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(UG25-04)

Client Sample ID: MW374UG4-25 Project: FRNP00714
Sample ID: 734228011 Client ID: FRNP007

| 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" | 5.70 ug/L | 6.88 | 83 | (56%-149%) |
| Decachlorobiphenyl | 8082A, PCB Liquids "As Received" | 0.101 ug/L | 0.199 | 51 | (30%-135%) |
| 4cmx | 8082A, PCB Liquids "As Received" | 0.140 ug/L | 0.199 | 70 | (26%-108%) |
| Bromofluorobenzene | 8260D, Volatiles- full suite "As Received" | 45.8 ug/L | 50.0 | 92 | (85%-114%) |
| 1,2-Dichloroethane-d4 | 8260D, Volatiles- full suite "As Received" | 48.4 ug/L | 50.0 | 97 | (81%-118%) |
| Toluene-d8 | 8260D, Volatiles- full suite "As Received" | 48.2 ug/L | 50.0 | 96 | (89%-112%) |

**Notes:**

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# *Certificate of Analysis*

Report Date: October 1, 2025

| | |
|---|---|
| Company : | Four Rivers Nuclear Partnership, LLC |
| Address : | 5600 Hobbs Road |
| | Kevil, Kentucky 42053 |
| Contact: | Ms. Jaime Morrow |
| Project: | C-746-U Landfill Quarterly(UG25-04) |

| | | | |
|---|---|---|---|
| Client Sample ID: | MW374UG4-25 | Project: | FRNP00714 |
| Sample ID: | 734228011 | Client ID: | FRNP007 |

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

*Column headers are defined as follows:*

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

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# *Certificate of Analysis*

Report Date: October 1, 2025

| | |
|---|---|
| Company : | Four Rivers Nuclear Partnership, LLC |
| Address : | 5600 Hobbs Road |
| | Kevil, Kentucky 42053 |
| Contact: | Ms. Jaime Morrow |
| Project: | C-746-U Landfill Quarterly(UG25-04) |

| | | | |
|---|---|---|---|
| Client Sample ID: | MW374UG4-25 | Project: | FRNP00714 |
| Sample ID: | 734228012 | Client ID: | FRNP007 |
| Matrix: | WG | | |
| Collect Date: | 21-JUL-25 13:13 | | |
| Receive Date: | 22-JUL-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 | | 0.121 | 0.000670 | 0.00400 | mg/L | 1.00 | 1 | PRB | 08/18/25 | 2256 | 2836994 | 1 |
| Chromium | U | 0.0100 | 0.00300 | 0.0100 | mg/L | 1.00 | 1 | | | | | |
| Uranium | | 0.000755 | 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 | JB7 | 07/29/25 | 1545 | 2836993 |
| EPA 160 | Laboratory Filtration | MM7 | 07/28/25 | 1115 | 2834346 |

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: October 1, 2025

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

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: MW375UG4-25
Sample ID: 734228013
Matrix: WG
Collect Date: 21-JUL-25 07:30
Receive Date: 22-JUL-25
Collector: Client

Project: FRNP00714
Client ID: FRNP007

| 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 | BM1 | 07/23/25 | 1827 | 2834440 | 1 |
| Carbon Analysis | | | | | | | | | | | | |
| 9060A, Total Organic Carbon "As Received" | | | | | | | | | | | | |
| Total Organic Carbon Average | J | 0.590 | 0.330 | 2.00 | mg/L | | 1 | KB3 | 07/24/25 | 1902 | 2834582 | 3 |
| Flow Injection Analysis | | | | | | | | | | | | |
| 9012B, Cyanide, Total "As Received" | | | | | | | | | | | | |
| Cyanide, Total | UN | 0.200 | 0.00167 | 0.200 | mg/L | 1.00 | 1 | KLP1 | 07/30/25 | 1439 | 2837416 | 4 |
| Halogen Analysis | | | | | | | | | | | | |
| 9020B, TOX (Organic Halogen) "As Received" | | | | | | | | | | | | |
| Total Organic Halogens | | 10.2 | 3.33 | 10.0 | ug/L | | 1 | JW2 | 08/14/25 | 2033 | 2846300 | 5 |
| Ion Chromatography | | | | | | | | | | | | |
| 300.0, Iodide in Liquid "As Received" | | | | | | | | | | | | |
| Iodide | U | 0.500 | 0.167 | 0.500 | mg/L | | 1 | TXT1 | 07/22/25 | 1736 | 2834230 | 6 |
| SW846 9056A Anions (5 elements) "As Received" | | | | | | | | | | | | |
| Bromide | U | 0.200 | 0.0670 | 0.200 | mg/L | | 1 | CH6 | 07/22/25 | 1628 | 2833994 | 7 |
| Chloride | JN | 3.31 | 0.0670 | 250 | mg/L | | 1 | | | | | |
| Fluoride | J | 0.275 | 0.0330 | 4.00 | mg/L | | 1 | | | | | |
| Nitrate-N | J | 0.888 | 0.0660 | 10.0 | mg/L | | 2 | CH6 | 07/22/25 | 2309 | 2833994 | 8 |
| Sulfate | | 21.7 | 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 | 08/12/25 | 1231 | 2844906 | 9 |
| Metals Analysis-ICP-MS | | | | | | | | | | | | |
| 6020, Metals (15+ elements) "As Received" | | | | | | | | | | | | |
| Aluminum | J | 0.0221 | 0.0193 | 0.0500 | mg/L | 1.00 | 1 | PRB | 08/18/25 | 2120 | 2834375 | 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 | | 0.168 | 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 | | 12.9 | 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: October 1, 2025

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

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: MW375UG4-25 Project: FRNP00714
Sample ID: 734228013 Client ID: FRNP007

| 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 | 0.00122 | 0.000300 | 0.00200 | mg/L | 1.00 | 1 | | | | | |
| Iron | J | 0.0376 | 0.0330 | 0.100 | mg/L | 1.00 | 1 | | | | | |
| Lead | U | 0.00200 | 0.000500 | 0.00200 | mg/L | 1.00 | 1 | | | | | |
| Magnesium | | 5.25 | 0.0100 | 0.0300 | mg/L | 1.00 | 1 | | | | | |
| Manganese | J | 0.00160 | 0.00100 | 0.00500 | mg/L | 1.00 | 1 | | | | | |
| Molybdenum | U | 0.00100 | 0.000200 | 0.00100 | mg/L | 1.00 | 1 | | | | | |
| Nickel | J | 0.000914 | 0.000600 | 0.00200 | mg/L | 1.00 | 1 | | | | | |
| Potassium | J | 0.255 | 0.0800 | 0.300 | mg/L | 1.00 | 1 | | | | | |
| Selenium | J | 0.00222 | 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 | 0.0146 | 0.00330 | 0.0200 | mg/L | 1.00 | 1 | | | | | |
| Boron | J | 0.00858 | 0.00520 | 0.0150 | mg/L | 1.00 | 1 | PRB | 08/19/25 | 1324 | 2834375 | 11 |
| Sodium | | 53.0 | 0.800 | 2.50 | mg/L | 1.00 | 10 | PRB | 08/19/25 | 1405 | 2834375 | 12 |
| Rhodium | U | 0.00500 | 0.00160 | 0.00500 | mg/L | 1.00 | 1 | PRB | 08/19/25 | 1601 | 2834375 | 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 | 0.0962 | 0.0320 | 0.0962 | ug/L | 0.000962 | 1 | NS2 | 08/14/25 | 1733 | 2846197 | 14 |
| Aroclor-1221 | U | 0.0962 | 0.0320 | 0.0962 | ug/L | 0.000962 | 1 | | | | | |
| Aroclor-1232 | U | 0.0962 | 0.0320 | 0.0962 | ug/L | 0.000962 | 1 | | | | | |
| Aroclor-1242 | U | 0.0962 | 0.0320 | 0.0962 | ug/L | 0.000962 | 1 | | | | | |
| Aroclor-1248 | U | 0.0962 | 0.0320 | 0.0962 | ug/L | 0.000962 | 1 | | | | | |
| Aroclor-1254 | U | 0.0962 | 0.0320 | 0.0962 | ug/L | 0.000962 | 1 | | | | | |
| Aroclor-1260 | U | 0.0962 | 0.0320 | 0.0962 | ug/L | 0.000962 | 1 | | | | | |
| Aroclor-1268 | U | 0.0962 | 0.0320 | 0.0962 | ug/L | 0.000962 | 1 | | | | | |
| Aroclor-Total | U | 0.0962 | 0.0320 | 0.0962 | ug/L | 0.000962 | 1 | | | | | |
| Solids Analysis | | | | | | | | | | | | |
| 160.1, Dissolved Solids "As Received" | | | | | | | | | | | | |
| Total Dissolved Solids | * | 200 | 2.38 | 10.0 | mg/L | | | SC1 | 07/24/25 | 1035 | 2835211 | 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(UG25-04)

Client Sample ID: MW375UG4-25 Project: FRNP00714
Sample ID: 734228013 Client ID: FRNP007

| 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 | BR2 | 07/28/25 | 1658 | 2836939 | 16 |
| Volatile Organics | | | | | | | | | | | | |
| 8260D, Volatiles- full suite "As Received" | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | U | 1.00 | 0.333 | 1.00 | ug/L | | 1 | KA1 | 07/27/25 | 1634 | 2836580 | 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*

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Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: MW375UG4-25 Project: FRNP00714
Sample ID: 734228013 Client ID: FRNP007

| 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 | 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 | BM1 | 07/23/25 | 0940 | 2834437 |
| SW846 3005A | ICP-MS 3005A PREP | HC1 | 07/23/25 | 1510 | 2834374 |
| SW846 9010C Distillation | SW846 9010C Prep | KLP1 | 07/30/25 | 1211 | 2837415 |
| SW846 3535A | SW3535A PCB SPE Extraction | DG3 | 08/14/25 | 0708 | 2846188 |
| SW846 7470A Prep | EPA 7470A Mercury Prep Liquid | PB1 | 08/11/25 | 1450 | 2844904 |

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# *Certificate of Analysis*

Report Date: October 1, 2025

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

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: MW375UG4-25 Project: FRNP00714
Sample ID: 734228013 Client ID: FRNP007

| 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" | 6.06 ug/L | 6.79 | 89 | (56%-149%) |
| Decachlorobiphenyl | 8082A, PCB Liquids "As Received" | 0.155 ug/L | 0.192 | 81 | (30%-135%) |
| 4cmx | 8082A, PCB Liquids "As Received" | 0.136 ug/L | 0.192 | 71 | (26%-108%) |
| Bromofluorobenzene | 8260D, Volatiles- full suite "As Received" | 45.6 ug/L | 50.0 | 91 | (85%-114%) |
| 1,2-Dichloroethane-d4 | 8260D, Volatiles- full suite "As Received" | 48.3 ug/L | 50.0 | 97 | (81%-118%) |
| Toluene-d8 | 8260D, Volatiles- full suite "As Received" | 49.4 ug/L | 50.0 | 99 | (89%-112%) |

**Notes:**

*Column headers are defined as follows:*

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

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# *Certificate of Analysis*

Report Date: October 1, 2025

| | |
|---|---|
| Company : | Four Rivers Nuclear Partnership, LLC |
| Address : | 5600 Hobbs Road |
| | Kevil, Kentucky 42053 |
| Contact: | Ms. Jaime Morrow |
| Project: | C-746-U Landfill Quarterly(UG25-04) |

| | | | |
|---|---|---|---|
| Client Sample ID: | MW375UG4-25 | Project: | FRNP00714 |
| Sample ID: | 734228014 | Client ID: | FRNP007 |
| Matrix: | WG | | |
| Collect Date: | 21-JUL-25 07:30 | | |
| Receive Date: | 22-JUL-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 | | 0.156 | 0.000670 | 0.00400 | mg/L | 1.00 | 1 | PRB | 08/18/25 | 2259 | 2836994 | 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 | JB7 | 07/29/25 | 1545 | 2836993 |
| EPA 160 | Laboratory Filtration | MM7 | 07/28/25 | 1115 | 2834346 |

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: October 1, 2025

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

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Quarterly(UG25-04)

Client Sample ID: TB3UG4-25
Sample ID: 734228015
Matrix: WATER
Collect Date: 21-JUL-25 06:40
Receive Date: 22-JUL-25
Collector: Client

Project: FRNP00714
Client ID: FRNP007

| 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 | 0.0192 | 0.00866 | 0.0192 | ug/L | 0.962 | 1 | BM1 | 07/23/25 | 1902 | 2834440 | 1 |
| Volatile Organics | | | | | | | | | | | | |
| 8260D, Volatiles- full suite "As Received" | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | U | 1.00 | 0.333 | 1.00 | ug/L | | 1 | KA1 | 07/27/25 | 1705 | 2836580 | 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 | 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(UG25-04)

Client Sample ID: TB3UG4-25 Project: FRNP00714
Sample ID: 734228015 Client ID: FRNP007

| 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 | 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 | BM1 | 07/23/25 | 0940 | 2834437 |

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" | 5.99 ug/L | 6.87 | 87 | (56%-149%) |
| Bromofluorobenzene | 8260D, Volatiles- full suite "As Received" | 46.2 ug/L | 50.0 | 92 | (85%-114%) |
| 1,2-Dichloroethane-d4 | 8260D, Volatiles- full suite "As Received" | 48.2 ug/L | 50.0 | 96 | (81%-118%) |
| Toluene-d8 | 8260D, Volatiles- full suite "As Received" | 49.0 ug/L | 50.0 | 98 | (89%-112%) |

**Notes:**

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# *Certificate of Analysis*

Report Date: October 1, 2025

| | |
|---|---|
| Company : | Four Rivers Nuclear Partnership, LLC |
| Address : | 5600 Hobbs Road |
| | Kevil, Kentucky 42053 |
| Contact: | Ms. Jaime Morrow |
| Project: | C-746-U Landfill Quarterly(UG25-04) |

| | | | |
|---|---|---|---|
| Client Sample ID: | TB3UG4-25 | Project: | FRNP00714 |
| Sample ID: | 734228015 | Client ID: | FRNP007 |

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

*Column headers are defined as follows:*

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

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# APPENDIX D

# STATISTICAL ANALYSES AND QUALIFICATION STATEMENT

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RESIDENTIAL/CONTAINED—QUARTERLY, 3rd CY 2025 Finds/Unit: KY8-980-008-982/1
Facility: U.S. DOE—Paducah Gaseous Diffusion Plant LAB ID: None
Permit Number: SW07300014, SW07300015, SW07300045

# GROUNDWATER STATISTICAL COMMENTS

**Introduction**

The statistical analyses conducted on the third 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 third quarter 2025 data used to conduct the statistical analyses were collected in July 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, third 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 |
|---|
| 2-Butanone |
| 2-Hexanone |
| Acetone |
| 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] |
| pH[b] |
| Potassium |
| Radium-226 |
| 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** | **1** | **6** | **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 |
| **Chemical Oxygen Demand (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** | **6** | **1** | **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** | **1** | **6** | **Yes** |
| **Magnesium** | **7** | **0** | **7** | **Yes** |
| **Manganese** | **7** | **0** | **7** | **Yes** |
| **Methylene chloride** | **7** | **5** | **2** | **Yes** |
| **Molybdenum** | **7** | **4** | **3** | **Yes** |
| **Nickel** | **7** | **1** | **6** | **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 | 7 | 0 | No |
| PCB-1016 | 7 | 7 | 0 | No |
| PCB-1221 | 7 | 7 | 0 | No |
| PCB-1232 | 7 | 7 | 0 | No |
| PCB-1242 | 7 | 7 | 0 | No |
| 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** | **6** | **1** | **Yes** |
| 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 |
| **Total Organic Carbon (TOC)** | **7** | **0** | **7** | **Yes** |
| **Total Organic Halides (TOX)** | **7** | **0** | **7** | **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** | **2** | **5** | **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** | **5** | **1** | **Yes** |
| **2-Hexanone** | **6** | **5** | **1** | **Yes** |
| 4-Methyl-2-pentanone | 6 | 6 | 0 | No |
| **Acetone** | **6** | **5** | **1** | **Yes** |
| Acrolein | 6 | 6 | 0 | No |
| Acrylonitrile | 6 | 6 | 0 | No |
| **Aluminum** | **6** | **3** | **3** | **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 |
| Chemical Oxygen Demand (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** | **3** | **3** | **Yes** |
| **Conductivity** | **6** | **0** | **6** | **Yes** |
| **Copper** | **6** | **0** | **6** | **Yes** |
| Cyanide | 6 | 6 | 0 | No |
| 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** | **5** | **1** | **Yes** |
| 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 |
| **Total Organic Carbon (TOC)** | **6** | **0** | **6** | **Yes** |
| **Total Organic Halides (TOX)** | **6** | **0** | **6** | **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** | **0** | **6** | **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** | **5** | **1** | **Yes** |
| Acrolein | 6 | 6 | 0 | No |
| Acrylonitrile | 6 | 6 | 0 | No |
| **Aluminum** | **6** | **5** | **1** | **Yes** |
| 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 |
| Chemical Oxygen Demand (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** | **3** | **3** | **Yes** |
| **Conductivity** | **6** | **0** | **6** | **Yes** |
| **Copper** | **6** | **0** | **6** | **Yes** |
| **Cyanide** | **6** | **5** | **1** | **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** | **1** | **5** | **Yes** |
| **Methylene chloride** | **6** | **4** | **2** | **Yes** |
| **Molybdenum** | **6** | **5** | **1** | **Yes** |
| **Nickel** | **6** | **2** | **4** | **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 | 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 |
| **Total Organic Carbon (TOC)** | **6** | **0** | **6** | **Yes** |
| **Total Organic Halides (TOX)** | **6** | **0** | **6** | **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 28, 29, and 27 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 calcium, 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, sulfate, and technetium-99.

**LRGA**

This quarter's results identified historical background exceedances for calcium, conductivity, dissolved oxygen, dissolved solids, magnesium, oxidation-reduction potential, pH, 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<br><br>**MW362:** Dissolved oxygen, oxidation-reduction potential,* and sulfate<br><br>**MW365:** Dissolved oxygen, oxidation-reduction potential,* and sulfate<br><br>**MW368:** Dissolved oxygen, oxidation-reduction potential* and sulfate<br><br>**MW371:** Calcium, dissolved oxygen, oxidation-reduction potential,* and sulfate<br><br>**MW374:** Oxidation-reduction potential* and sulfate<br><br>**MW375:** Dissolved oxygen, oxidation-reduction potential,* and sulfate | **MW357:** Oxidation-reduction potential*<br><br>**MW360:** Oxidation-reduction potential*<br><br>**MW363:** Oxidation-reduction potential*<br><br>**MW366:** Oxidation-reduction potential* and technetium-99<br><br>**MW369:** Dissolved oxygen and oxidation-reduction potential*<br><br>**MW372:** Calcium, conductivity, dissolved solids, magnesium, oxidation-reduction potential,* and sulfate | **MW358:** Oxidation-reduction potential*<br><br>**MW361:** Dissolved oxygen, oxidation-reduction potential,* and pH<br><br>**MW364:** Oxidation-reduction potential,* pH, and technetium-99<br><br>**MW367:** Oxidation-reduction potential* and pH<br><br>**MW370:** Dissolved oxygen and oxidation-reduction potential*<br><br>**MW373:** Calcium, conductivity, dissolved solids, magnesium, 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 | Current results exceed statistically derived historical background concentration in MW371. |
| 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, MW368, MW371, 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. |
| 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. |
| Radium-226 | Tolerance Interval | 3.79 | No exceedance of statistically derived historical background concentration. |
| Sodium | Tolerance Interval | 0.40 | No exceedance of statistically derived historical background concentration. |
| Sulfate | Tolerance Interval | 0.49 | Current results exceed statistically derived historical background concentration in MW359, MW362, MW365, MW368, MW371, MW374, and MW375. |

**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 |
|---|---|---|---|
| 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 |
|---|---|---|---|
| 2-Butanone | Tolerance Interval | 0.89 | No exceedance of statistically derived historical background concentration. |
| 2-Hexanone | Tolerance Interval | 0.00 | No exceedance of statistically derived historical background concentration. |
| Acetone | Tolerance Interval | 3.88 | No exceedance of statistically derived historical background concentration. |
| 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. |
| Dissolved Oxygen | Tolerance Interval | 0.76 | Current results exceed statistically derived historical background concentration in MW369. |
| 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. |
| Radium-226 | Tolerance Interval | 2.61 | 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 | Current results exceed statistically derived historical background concentration in MW366. |
| 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 |
|---|---|---|---|
| Acetone | Tolerance Interval | 2.67 | No exceedance of statistically derived historical background concentration. |
| Aluminum | Tolerance Interval | 2.78 | No exceedance of statistically derived historical background concentration. |
| 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 | No exceedance of statistically derived historical background concentration. |
| Dissolved Oxygen | Tolerance Interval | 0.83 | Current results exceed statistically derived historical background concentration in MW361 and 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 | Current results exceed statistically derived historical background concentration in MW373. |
| 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. |
| Molybdenum | Tolerance Interval | 1.20 | 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. |
| pH | Tolerance Interval | 0.03 | Current results outside of the statistically derived historical background range (below LTL) in MW361, MW364, and MW367. |
| 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 MW364. |
| 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. |

**Exhibit D.9. Test Summaries for Qualified Parameters for Historical Background—LRGA (Continued)**

| Parameter | Performed Test | CV Normality Test[a] | Results of Tolerance Interval Test Conducted |
|---|---|---|---|
| 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 4, 8, and 8 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 a current background UTL exceedance in downgradient wells for sulfate.

**URGA**

This quarter's results did not identify current background UTL exceedances in any downgradient URGA well.

**LRGA**

This quarter's results identified current background UTL exceedances in downgradient wells for pH and 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 |
|---|---|---|---|
| Calcium | 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. |
| Dissolved Oxygen | Tolerance Interval | 0.54 | 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 | 0.33 | MW359, MW362, MW365, MW368, and MW371 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 | 0.62 | 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 | 0.31 | MW369 exceeded the UTL, which is evidence of elevated concentration with respect to current background data. |
| Dissolved Solids | Tolerance Interval | 0.41 | 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 | 0.56 | 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 | 0.91 | 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 | 0.59 | 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 | 0.50 | 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 | 0.47 | 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 | 0.44 | 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 | 0.43 | 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. |
| pH | Tolerance Interval | 0.02 | MW361, MW364, and MW367 were below the LTL, which is evidence of statistically different pH levels with respect to current background data. |
| Technetium-99 | Tolerance Interval | 1.09 | MW364 exceeded the UTL, which is evidence of elevated concentration with respect to current background data. |

*Oxidation-reduction potential calibrated as Eh.

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# 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 Third 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 |

**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 |

**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 | 4.58E-02 | N/A | -3.08E+00 | NO |
| MW362 | Downgradient | Yes | 1.51E-01 | N/A | -1.89E+00 | NO |
| MW365 | Downgradient | Yes | 2.17E-02 | N/A | -3.83E+00 | NO |
| MW368 | Downgradient | No | 5.00E-02 | N/A | -3.00E+00 | N/A |
| MW371 | Upgradient | Yes | 2.09E-02 | N/A | -3.87E+00 | NO |
| MW374 | Upgradient | Yes | 2.88E-02 | N/A | -3.55E+00 | NO |
| MW375 | Sidegradient | Yes | 2.21E-02 | N/A | -3.81E+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 Third 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 | Yes | 6.26E-03 | N/A | -5.07E+00 | NO |
| MW362 | Downgradient | Yes | 2.43E-02 | N/A | -3.72E+00 | NO |
| MW365 | Downgradient | Yes | 6.36E-03 | N/A | -5.06E+00 | NO |
| MW368 | Downgradient | No | 1.50E-02 | N/A | -4.20E+00 | N/A |
| MW371 | Upgradient | Yes | 8.09E-03 | N/A | -4.82E+00 | NO |
| MW374 | Upgradient | Yes | 1.14E-02 | N/A | -4.47E+00 | NO |
| MW375 | Sidegradient | Yes | 8.58E-03 | N/A | -4.76E+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 Third 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 | 5.29E-01 | NO | -6.37E-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 Third 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 | 4.88E+00 | NO | 1.59E+00 | N/A |
| MW362 | Downgradient | Yes | 1.70E+01 | NO | 2.83E+00 | N/A |
| MW365 | Downgradient | Yes | 2.08E+01 | NO | 3.03E+00 | N/A |
| MW368 | Downgradient | Yes | 5.11E+01 | NO | 3.93E+00 | N/A |
| MW371 | Upgradient | Yes | 7.08E+01 | YES | 4.26E+00 | N/A |
| MW374 | Upgradient | Yes | 2.21E+01 | NO | 3.10E+00 | N/A |
| MW375 | Sidegradient | Yes | 1.29E+01 | NO | 2.56E+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**

MW371

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 Third 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 | No | 2.00E+01 | N/A | 3.00E+00 | N/A |
| MW371 | Upgradient | No | 2.00E+01 | N/A | 3.00E+00 | N/A |
| MW374 | Upgradient | Yes | 1.44E+01 | NO | 2.67E+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 Third 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 | 7.13E-01 | NO | -3.38E-01 | N/A |
| MW362 | Downgradient | Yes | 1.47E+00 | NO | 3.85E-01 | N/A |
| MW365 | Downgradient | Yes | 1.78E+00 | NO | 5.77E-01 | N/A |
| MW368 | Downgradient | Yes | 2.22E+00 | NO | 7.98E-01 | N/A |
| MW371 | Upgradient | Yes | 1.68E+00 | NO | 5.19E-01 | N/A |
| MW374 | Upgradient | Yes | 4.20E+01 | NO | 3.74E+00 | N/A |
| MW375 | Sidegradient | Yes | 3.31E+00 | NO | 1.20E+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**

**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 Third 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 | 1.53E-03 | N/A | -6.48E+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 | No | 1.00E-03 | N/A | -6.91E+00 | N/A |
| 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 Third 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 | 1.95E+02 | NO | 5.27E+00 | N/A |
| MW362 | Downgradient | Yes | 6.28E+02 | NO | 6.44E+00 | N/A |
| MW365 | Downgradient | Yes | 4.17E+02 | NO | 6.03E+00 | N/A |
| MW368 | Downgradient | Yes | 5.89E+02 | NO | 6.38E+00 | N/A |
| MW371 | Upgradient | Yes | 5.04E+02 | NO | 6.22E+00 | N/A |
| MW374 | Upgradient | Yes | 6.95E+02 | NO | 6.54E+00 | N/A |
| MW375 | Sidegradient | Yes | 3.31E+02 | NO | 5.80E+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 Third 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

**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 |

**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 | 1.42E-03 | N/A | -6.56E+00 | NO |
| MW362 | Downgradient | Yes | 1.74E-03 | N/A | -6.35E+00 | NO |
| MW365 | Downgradient | Yes | 3.07E-03 | N/A | -5.79E+00 | NO |
| MW368 | Downgradient | Yes | 5.08E-04 | N/A | -7.59E+00 | NO |
| MW371 | Upgradient | Yes | 1.31E-03 | N/A | -6.64E+00 | NO |
| MW374 | Upgradient | Yes | 5.15E-04 | N/A | -7.57E+00 | NO |
| MW375 | Sidegradient | Yes | 1.22E-03 | N/A | -6.71E+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 Third 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 | 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 | Yes | 3.73E-03 | NO | -5.59E+00 | N/A |
| MW368 | Downgradient | Yes | 2.62E-03 | NO | -5.94E+00 | N/A |
| MW371 | Upgradient | No | 2.00E-01 | N/A | -1.61E+00 | N/A |
| MW374 | Upgradient | No | 2.00E-01 | N/A | -1.61E+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 Third 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 | 3.99E+00 | YES | 1.38E+00 | N/A |
| MW362 | Downgradient | Yes | 4.94E+00 | YES | 1.60E+00 | N/A |
| MW365 | Downgradient | Yes | 4.54E+00 | YES | 1.51E+00 | N/A |
| MW368 | Downgradient | Yes | 3.33E+00 | YES | 1.20E+00 | N/A |
| MW371 | Upgradient | Yes | 5.67E+00 | YES | 1.74E+00 | N/A |
| MW374 | Upgradient | Yes | 1.92E+00 | NO | 6.52E-01 | N/A |
| MW375 | Sidegradient | Yes | 3.06E+00 | YES | 1.12E+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
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 Third 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 | 1.46E+02 | NO | 4.98E+00 | N/A |
| MW362 | Downgradient | Yes | 3.85E+02 | NO | 5.95E+00 | N/A |
| MW365 | Downgradient | Yes | 2.72E+02 | NO | 5.61E+00 | N/A |
| MW368 | Downgradient | Yes | 3.85E+02 | NO | 5.95E+00 | N/A |
| MW371 | Upgradient | Yes | 3.15E+02 | NO | 5.75E+00 | N/A |
| MW374 | Upgradient | Yes | 3.81E+02 | NO | 5.94E+00 | N/A |
| MW375 | Sidegradient | Yes | 2.00E+02 | NO | 5.30E+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 Third 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 | 5.80E-02 | NO | -2.85E+00 | N/A |
| MW362 | Downgradient | Yes | 1.20E-01 | NO | -2.12E+00 | N/A |
| MW365 | Downgradient | Yes | 3.73E-02 | NO | -3.29E+00 | N/A |
| MW368 | Downgradient | No | 1.00E-01 | N/A | -2.30E+00 | N/A |
| MW371 | Upgradient | Yes | 4.43E-02 | NO | -3.12E+00 | N/A |
| MW374 | Upgradient | Yes | 3.50E-01 | NO | -1.05E+00 | N/A |
| MW375 | Sidegradient | Yes | 3.76E-02 | NO | -3.28E+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 Third 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 | 2.79E+00 | NO | 1.03E+00 | N/A |
| MW362 | Downgradient | Yes | 7.17E+00 | NO | 1.97E+00 | N/A |
| MW365 | Downgradient | Yes | 9.54E+00 | NO | 2.26E+00 | N/A |
| MW368 | Downgradient | Yes | 1.30E+01 | NO | 2.56E+00 | N/A |
| MW371 | Upgradient | Yes | 1.19E+01 | NO | 2.48E+00 | N/A |
| MW374 | Upgradient | Yes | 6.07E+00 | NO | 1.80E+00 | N/A |
| MW375 | Sidegradient | Yes | 5.25E+00 | NO | 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**

**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 Third 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 | Yes | 1.02E-03 | NO | -6.89E+00 | N/A |
| MW362 | Downgradient | Yes | 2.75E-03 | NO | -5.90E+00 | N/A |
| MW365 | Downgradient | Yes | 1.03E-02 | NO | -4.58E+00 | N/A |
| MW368 | Downgradient | Yes | 7.70E-03 | NO | -4.87E+00 | N/A |
| MW371 | Upgradient | Yes | 1.18E-03 | NO | -6.74E+00 | N/A |
| MW374 | Upgradient | Yes | 6.89E-02 | NO | -2.68E+00 | N/A |
| MW375 | Sidegradient | Yes | 1.60E-03 | NO | -6.44E+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 Third 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 | Yes | 7.50E-01 | NO | -2.88E-01 | N/A |
| MW362 | Downgradient | Yes | 7.00E-01 | NO | -3.57E-01 | N/A |
| MW365 | Downgradient | No | 1.29E+00 | N/A | 2.55E-01 | N/A |
| MW368 | Downgradient | No | 7.20E-01 | N/A | -3.29E-01 | N/A |
| MW371 | Upgradient | No | 5.00E+00 | N/A | 1.61E+00 | N/A |
| MW374 | Upgradient | No | 5.00E+00 | N/A | 1.61E+00 | N/A |
| MW375 | Sidegradient | No | 5.00E+00 | 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 Third 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 | No | 1.00E-03 | N/A | -6.91E+00 | N/A |
| MW362 | Downgradient | Yes | 1.02E-03 | N/A | -6.89E+00 | NO |
| MW365 | Downgradient | No | 2.31E-04 | N/A | -8.37E+00 | N/A |
| MW368 | Downgradient | No | 4.29E-04 | N/A | -7.75E+00 | N/A |
| MW371 | Upgradient | Yes | 5.09E-04 | N/A | -7.58E+00 | NO |
| MW374 | Upgradient | Yes | 2.33E-04 | N/A | -8.36E+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 Third 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 | 8.50E-04 | NO | -7.07E+00 | N/A |
| MW362 | Downgradient | Yes | 8.86E-04 | NO | -7.03E+00 | N/A |
| MW365 | Downgradient | Yes | 5.10E-03 | NO | -5.28E+00 | N/A |
| MW368 | Downgradient | Yes | 7.96E-04 | NO | -7.14E+00 | N/A |
| MW371 | Upgradient | Yes | 1.21E-03 | NO | -6.72E+00 | N/A |
| MW374 | Upgradient | No | 2.00E-03 | N/A | -6.21E+00 | N/A |
| MW375 | Sidegradient | Yes | 9.14E-04 | NO | -7.00E+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 Third 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 | 4.37E+02 | N/A | 6.08E+00 | YES |
| MW362 | Downgradient | Yes | 4.70E+02 | N/A | 6.15E+00 | YES |
| MW365 | Downgradient | Yes | 4.57E+02 | N/A | 6.12E+00 | YES |
| MW368 | Downgradient | Yes | 3.33E+02 | N/A | 5.81E+00 | YES |
| MW371 | Upgradient | Yes | 3.56E+02 | N/A | 5.87E+00 | YES |
| MW374 | Upgradient | Yes | 4.31E+02 | N/A | 6.07E+00 | YES |
| MW375 | Sidegradient | Yes | 4.53E+02 | N/A | 6.12E+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 Third 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 | 5.96E+00 | NO | 1.79E+00 | N/A |
| MW362 | Downgradient | Yes | 6.99E+00 | NO | 1.94E+00 | N/A |
| MW365 | Downgradient | Yes | 6.08E+00 | NO | 1.81E+00 | N/A |
| MW368 | Downgradient | Yes | 6.10E+00 | NO | 1.81E+00 | N/A |
| MW371 | Upgradient | Yes | 6.47E+00 | NO | 1.87E+00 | N/A |
| MW374 | Upgradient | Yes | 6.78E+00 | NO | 1.91E+00 | N/A |
| MW375 | Sidegradient | Yes | 6.70E+00 | NO | 1.90E+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 Third 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 | 1.08E-01 | NO | -2.23E+00 | N/A |
| MW362 | Downgradient | Yes | 3.01E-01 | NO | -1.20E+00 | N/A |
| MW365 | Downgradient | Yes | 2.64E-01 | NO | -1.33E+00 | N/A |
| MW368 | Downgradient | Yes | 3.73E-01 | NO | -9.86E-01 | N/A |
| MW371 | Upgradient | Yes | 3.23E-01 | NO | -1.13E+00 | N/A |
| MW374 | Upgradient | Yes | 2.86E-01 | NO | -1.25E+00 | N/A |
| MW375 | Sidegradient | Yes | 2.55E-01 | NO | -1.37E+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 Third Quarter 2025 Statistical Analysis Historical Background Comparison

## Radium-226 UNITS: pCi/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=** 3.560 **S=** 13.483 **CV(1)=** 3.787 **K factor**=** 2.523 **TL(1)=** 3.76E+01 **LL(1)=** N/A

**Statistics-Transformed Background Data** **X=** -1.189 **S=** 1.742 **CV(2)=** -1.465 **K factor**=** 2.523 **TL(2)=** 3.99E+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 | 5.41E+01 | 3.99E+00 |
| 10/8/2002 | 9.37E-02 | -2.37E+00 |
| 1/8/2003 | 3.78E-01 | -9.73E-01 |
| 10/6/2003 | 1.79E-01 | -1.72E+00 |
| 1/7/2004 | 8.98E-01 | -1.08E-01 |
| 4/6/2004 | 1.08E-01 | -2.23E+00 |
| 7/13/2004 | -1.49E-01 | #Func! |
| 10/7/2004 | 1.54E-01 | -1.87E+00 |

| Well Number: | MW374 | |
|---|---|---|
| Date Collected | Result | LN(Result) |
| 10/8/2002 | 2.98E-01 | -1.21E+00 |
| 1/7/2003 | -8.44E-01 | #Func! |
| 10/7/2003 | 8.06E-01 | -2.16E-01 |
| 1/6/2004 | 3.06E-02 | -3.49E+00 |
| 4/7/2004 | 3.50E-01 | -1.05E+00 |
| 7/14/2004 | 2.73E-01 | -1.30E+00 |
| 10/7/2004 | 2.05E-01 | -1.58E+00 |
| 1/11/2005 | 7.99E-02 | -2.53E+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 | No | 3.60E-01 | N/A | -1.02E+00 | N/A |
| MW362 | Downgradient | Yes | 4.98E-01 | N/A | -6.97E-01 | NO |
| MW365 | Downgradient | No | 1.85E-01 | N/A | -1.69E+00 | N/A |
| MW368 | Downgradient | No | 4.98E-01 | N/A | -6.97E-01 | N/A |
| MW371 | Upgradient | No | 6.26E-01 | N/A | -4.68E-01 | N/A |
| MW374 | Upgradient | No | 5.53E-01 | N/A | -5.92E-01 | N/A |
| MW375 | Sidegradient | No | -1.08E-01 | N/A | #Error | 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 Third 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 | 2.95E+01 | NO | 3.38E+00 | N/A |
| MW362 | Downgradient | Yes | 1.07E+02 | NO | 4.67E+00 | N/A |
| MW365 | Downgradient | Yes | 5.14E+01 | NO | 3.94E+00 | N/A |
| MW368 | Downgradient | Yes | 5.08E+01 | NO | 3.93E+00 | N/A |
| MW371 | Upgradient | Yes | 2.72E+01 | NO | 3.30E+00 | N/A |
| MW374 | Upgradient | Yes | 1.19E+02 | NO | 4.78E+00 | N/A |
| MW375 | Sidegradient | Yes | 5.30E+01 | NO | 3.97E+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 Third 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 | 3.62E+01 | YES | 3.59E+00 | N/A |
| MW362 | Downgradient | Yes | 3.16E+01 | YES | 3.45E+00 | N/A |
| MW365 | Downgradient | Yes | 4.98E+01 | YES | 3.91E+00 | N/A |
| MW368 | Downgradient | Yes | 1.11E+02 | YES | 4.71E+00 | N/A |
| MW371 | Upgradient | Yes | 4.28E+01 | YES | 3.76E+00 | N/A |
| MW374 | Upgradient | Yes | 1.91E+01 | YES | 2.95E+00 | N/A |
| MW375 | Sidegradient | Yes | 2.17E+01 | YES | 3.08E+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**

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 Third 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

**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 |

**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 | 7.67E-01 | N/A | -2.65E-01 | NO |
| MW362 | Downgradient | Yes | 1.70E+00 | N/A | 5.31E-01 | NO |
| MW365 | Downgradient | Yes | 1.20E+00 | N/A | 1.82E-01 | NO |
| MW368 | Downgradient | Yes | 8.25E-01 | N/A | -1.92E-01 | NO |
| MW371 | Upgradient | Yes | 1.32E+00 | N/A | 2.78E-01 | NO |
| MW374 | Upgradient | Yes | 1.89E+00 | N/A | 6.37E-01 | NO |
| MW375 | Sidegradient | Yes | 5.90E-01 | N/A | -5.28E-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 Third 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

**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 |

**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 | 8.52E+00 | N/A | 2.14E+00 | NO |
| MW362 | Downgradient | Yes | 2.34E+01 | N/A | 3.15E+00 | NO |
| MW365 | Downgradient | Yes | 1.99E+01 | N/A | 2.99E+00 | NO |
| MW368 | Downgradient | Yes | 4.30E+00 | N/A | 1.46E+00 | NO |
| MW371 | Upgradient | Yes | 5.67E+00 | N/A | 1.74E+00 | NO |
| MW374 | Upgradient | Yes | 1.29E+01 | N/A | 2.56E+00 | NO |
| MW375 | Sidegradient | Yes | 1.02E+01 | N/A | 2.32E+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 Third 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

**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 |

**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 | 4.09E-03 | N/A | -5.50E+00 | NO |
| 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 | No | 2.00E-02 | N/A | -3.91E+00 | N/A |
| MW371 | Upgradient | Yes | 6.13E-03 | N/A | -5.09E+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 Third 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 | Yes | 5.66E-03 | N/A | -5.17E+00 | NO |
| MW362 | Downgradient | No | 2.00E-02 | N/A | -3.91E+00 | N/A |
| MW365 | Downgradient | Yes | 5.55E-03 | N/A | -5.19E+00 | NO |
| MW368 | Downgradient | Yes | 5.26E-03 | N/A | -5.25E+00 | NO |
| MW371 | Upgradient | Yes | 5.39E-03 | N/A | -5.22E+00 | NO |
| MW374 | Upgradient | No | 2.00E-02 | N/A | -3.91E+00 | N/A |
| MW375 | Sidegradient | Yes | 1.46E-02 | N/A | -4.23E+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 Third Quarter 2025 Statistical Analysis Historical Background Comparison

## 2-Butanone 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=** 20.000 **S=** 17.889 **CV(1)=** 0.894 **K factor**=** 2.523 **TL(1)=** 6.51E+01 **LL(1)=**N/A

**Statistics-Transformed Background Data** **X=** 2.705 **S=** 0.720 **CV(2)=** 0.266 **K factor**=** 2.523 **TL(2)=** 4.52E+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 | 1.00E+01 | 2.30E+00 |
| 10/8/2002 | 1.00E+01 | 2.30E+00 |
| 1/8/2003 | 1.00E+01 | 2.30E+00 |
| 4/3/2003 | 1.00E+01 | 2.30E+00 |
| 7/8/2003 | 1.00E+01 | 2.30E+00 |
| 10/6/2003 | 1.00E+01 | 2.30E+00 |

Well Number: MW372

| Date Collected | Result | LN(Result) |
|---|---|---|
| 3/19/2002 | 5.00E+01 | 3.91E+00 |
| 4/23/2002 | 5.00E+01 | 3.91E+00 |
| 7/16/2002 | 1.00E+01 | 2.30E+00 |
| 10/8/2002 | 1.00E+01 | 2.30E+00 |
| 1/7/2003 | 1.00E+01 | 2.30E+00 |
| 4/2/2003 | 1.00E+01 | 2.30E+00 |
| 7/9/2003 | 1.00E+01 | 2.30E+00 |
| 10/7/2003 | 1.00E+01 | 2.30E+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 | 6.00E+00 | NO | 1.79E+00 | N/A |
| MW372 | Upgradient | No | 5.00E+00 | 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 Third Quarter 2025 Statistical Analysis Historical Background Comparison

## 2-Hexanone 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=** 10.000 **S=** 0.000 **CV(1)=** 0.000 **K factor**=** 2.523 **TL(1)=** 1.00E+01 **LL(1)=**N/A

**Statistics-Transformed Background Data** **X=** 2.303 **S=** 0.000 **CV(2)=** 0.000 **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: 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 | 1.00E+01 | 2.30E+00 |
| 1/8/2003 | 1.00E+01 | 2.30E+00 |
| 4/3/2003 | 1.00E+01 | 2.30E+00 |
| 7/8/2003 | 1.00E+01 | 2.30E+00 |
| 10/6/2003 | 1.00E+01 | 2.30E+00 |

Well Number: MW372

| Date Collected | Result | LN(Result) |
|---|---|---|
| 3/19/2002 | 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 | 1.00E+01 | 2.30E+00 |
| 1/7/2003 | 1.00E+01 | 2.30E+00 |
| 4/2/2003 | 1.00E+01 | 2.30E+00 |
| 7/9/2003 | 1.00E+01 | 2.30E+00 |
| 10/7/2003 | 1.00E+01 | 2.30E+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 | 1.70E+00 | NO | 5.31E-01 | N/A |
| MW372 | Upgradient | No | 5.00E+00 | 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 Third Quarter 2025 Statistical Analysis Historical Background Comparison

## Acetone 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=** 372.563 **S=** 1447.319 **CV(1)=** 3.885 **K factor**=** 2.523 **TL(1)=** 4.02E+03 **LL(1)=**N/A

**Statistics-Transformed Background Data** **X=** 2.736 **S=** 1.603 **CV(2)=** 0.586 **K factor**=** 2.523 **TL(2)=** 6.78E+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 | 5.00E+00 | 1.61E+00 |
| 4/22/2002 | 1.00E+01 | 2.30E+00 |
| 7/15/2002 | 1.40E+01 | 2.64E+00 |
| 10/8/2002 | 1.00E+01 | 2.30E+00 |
| 1/8/2003 | 1.00E+01 | 2.30E+00 |
| 4/3/2003 | 1.00E+01 | 2.30E+00 |
| 7/8/2003 | 1.00E+01 | 2.30E+00 |
| 10/6/2003 | 5.80E+03 | 8.67E+00 |

| Well Number: | MW372 | |
|---|---|---|
| Date Collected | Result | LN(Result) |
| 3/19/2002 | 1.40E+01 | 2.64E+00 |
| 4/23/2002 | 1.00E+01 | 2.30E+00 |
| 7/16/2002 | 1.00E+01 | 2.30E+00 |
| 10/8/2002 | 1.00E+01 | 2.30E+00 |
| 1/7/2003 | 1.00E+01 | 2.30E+00 |
| 4/2/2003 | 1.00E+01 | 2.30E+00 |
| 7/9/2003 | 1.80E+01 | 2.89E+00 |
| 10/7/2003 | 1.00E+01 | 2.30E+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 | 1.95E+01 | N/A | 2.97E+00 | NO |
| MW372 | Upgradient | No | 5.00E+00 | 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 Third 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 |

**Historical Background Data from Upgradient Wells with Transformed Result**

**Because CV(1) is greater than 1, the natural logarithm of background and test well results were calculated utilizing TL(2) for comparison.**

| 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 | 2.23E-02 | N/A | -3.80E+00 | NO |
| MW360 | Downgradient | Yes | 5.71E-02 | N/A | -2.86E+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 | Yes | 2.89E-02 | N/A | -3.54E+00 | NO |
| 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 Third 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 |

**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 |

**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) |
|---|---|---|---|---|---|---|
| MW357 | Downgradient | Yes | 2.69E-01 | NO | -1.31E+00 | N/A |
| MW360 | Downgradient | Yes | 2.18E-02 | NO | -3.83E+00 | N/A |
| MW363 | Downgradient | Yes | 2.16E-02 | NO | -3.84E+00 | N/A |
| MW366 | Downgradient | Yes | 1.19E-01 | NO | -2.13E+00 | N/A |
| MW369 | Upgradient | Yes | 1.80E-02 | NO | -4.02E+00 | N/A |
| MW372 | Upgradient | Yes | 1.14E+00 | NO | 1.31E-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 Third 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 | 3.16E-01 | NO | -1.15E+00 | N/A |
| MW360 | Downgradient | Yes | 1.39E-01 | NO | -1.97E+00 | N/A |
| MW363 | Downgradient | No | 2.00E-01 | N/A | -1.61E+00 | N/A |
| MW366 | Downgradient | Yes | 4.95E-01 | NO | -7.03E-01 | N/A |
| MW369 | Upgradient | Yes | 3.70E-01 | NO | -9.94E-01 | N/A |
| MW372 | Upgradient | Yes | 5.29E-01 | NO | -6.37E-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 Third 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 |

**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 |

**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) |
|---|---|---|---|---|---|---|
| MW357 | Downgradient | Yes | 2.24E+01 | NO | 3.11E+00 | N/A |
| MW360 | Downgradient | Yes | 1.78E+01 | NO | 2.88E+00 | N/A |
| MW363 | Downgradient | Yes | 2.10E+01 | NO | 3.04E+00 | N/A |
| MW366 | Downgradient | Yes | 3.35E+01 | NO | 3.51E+00 | N/A |
| MW369 | Upgradient | Yes | 1.58E+01 | NO | 2.76E+00 | N/A |
| MW372 | Upgradient | Yes | 6.74E+01 | YES | 4.21E+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 Third 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 |

**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 |

**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) |
|---|---|---|---|---|---|---|
| MW357 | Downgradient | Yes | 2.68E+01 | NO | 3.29E+00 | N/A |
| MW360 | Downgradient | Yes | 5.53E+00 | NO | 1.71E+00 | N/A |
| MW363 | Downgradient | Yes | 1.07E+01 | NO | 2.37E+00 | N/A |
| MW366 | Downgradient | Yes | 4.04E+01 | NO | 3.70E+00 | N/A |
| MW369 | Upgradient | Yes | 2.89E+01 | NO | 3.36E+00 | N/A |
| MW372 | Upgradient | Yes | 3.60E+01 | NO | 3.58E+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 Third 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 | No | 1.00E-03 | N/A | -6.91E+00 | N/A |
| MW360 | Downgradient | Yes | 5.49E-04 | NO | -7.51E+00 | N/A |
| MW363 | Downgradient | Yes | 8.92E-04 | NO | -7.02E+00 | N/A |
| MW366 | Downgradient | No | 1.00E-03 | N/A | -6.91E+00 | N/A |
| MW369 | Upgradient | Yes | 4.35E-03 | NO | -5.44E+00 | N/A |
| MW372 | 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 Third 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 |

**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 |

**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) |
|---|---|---|---|---|---|---|
| MW357 | Downgradient | Yes | 3.85E+02 | NO | 5.95E+00 | N/A |
| MW360 | Downgradient | Yes | 3.85E+02 | NO | 5.95E+00 | N/A |
| MW363 | Downgradient | Yes | 3.40E+02 | NO | 5.83E+00 | N/A |
| MW366 | Downgradient | Yes | 4.95E+02 | NO | 6.20E+00 | N/A |
| MW369 | Upgradient | Yes | 3.53E+02 | NO | 5.87E+00 | N/A |
| MW372 | Upgradient | Yes | 7.20E+02 | YES | 6.58E+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 Third 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

**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: | 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 | 8.46E-04 | NO | -7.07E+00 | N/A |
| MW360 | Downgradient | Yes | 1.82E-03 | NO | -6.31E+00 | N/A |
| MW363 | Downgradient | Yes | 1.29E-03 | NO | -6.65E+00 | N/A |
| MW366 | Downgradient | Yes | 8.02E-04 | NO | -7.13E+00 | N/A |
| MW369 | Upgradient | Yes | 2.22E-03 | NO | -6.11E+00 | N/A |
| MW372 | Upgradient | Yes | 8.39E-04 | NO | -7.08E+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 Third 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 | 4.33E+00 | NO | 1.47E+00 | N/A |
| MW360 | Downgradient | Yes | 1.84E+00 | NO | 6.10E-01 | N/A |
| MW363 | Downgradient | Yes | 1.03E+00 | NO | 2.96E-02 | N/A |
| MW366 | Downgradient | Yes | 3.78E+00 | NO | 1.33E+00 | N/A |
| MW369 | Upgradient | Yes | 5.60E+00 | YES | 1.72E+00 | N/A |
| MW372 | Upgradient | Yes | 3.51E+00 | NO | 1.26E+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**

MW369

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 Third 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 | 1.96E+02 | NO | 5.28E+00 | N/A |
| MW360 | Downgradient | Yes | 2.17E+02 | NO | 5.38E+00 | N/A |
| MW363 | Downgradient | Yes | 2.18E+02 | NO | 5.38E+00 | N/A |
| MW366 | Downgradient | Yes | 2.82E+02 | NO | 5.64E+00 | N/A |
| MW369 | Upgradient | Yes | 2.02E+02 | NO | 5.31E+00 | N/A |
| MW372 | Upgradient | Yes | 4.92E+02 | YES | 6.20E+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 Third 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 |

**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: | 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 | 8.08E-02 | NO | -2.52E+00 | N/A |
| MW360 | Downgradient | Yes | 1.20E-01 | NO | -2.12E+00 | N/A |
| MW363 | Downgradient | Yes | 4.40E-02 | NO | -3.12E+00 | N/A |
| MW366 | Downgradient | No | 1.00E-01 | N/A | -2.30E+00 | N/A |
| MW369 | Upgradient | Yes | 1.54E-01 | NO | -1.87E+00 | N/A |
| MW372 | Upgradient | Yes | 4.70E-02 | NO | -3.06E+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**

**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 Third 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 |

**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 |

**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) |
|---|---|---|---|---|---|---|
| MW357 | Downgradient | Yes | 9.58E+00 | NO | 2.26E+00 | N/A |
| MW360 | Downgradient | Yes | 7.32E+00 | NO | 1.99E+00 | N/A |
| MW363 | Downgradient | Yes | 8.24E+00 | NO | 2.11E+00 | N/A |
| MW366 | Downgradient | Yes | 1.43E+01 | NO | 2.66E+00 | N/A |
| MW369 | Upgradient | Yes | 6.67E+00 | NO | 1.90E+00 | N/A |
| MW372 | Upgradient | Yes | 2.34E+01 | YES | 3.15E+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 Third 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

**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 |

**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) |
|---|---|---|---|---|---|---|
| MW357 | Downgradient | Yes | 2.29E-03 | NO | -6.08E+00 | N/A |
| MW360 | Downgradient | Yes | 5.24E-03 | NO | -5.25E+00 | N/A |
| MW363 | Downgradient | Yes | 1.40E-01 | NO | -1.97E+00 | N/A |
| MW366 | Downgradient | Yes | 1.30E-03 | NO | -6.65E+00 | N/A |
| MW369 | Upgradient | Yes | 4.79E-03 | NO | -5.34E+00 | N/A |
| MW372 | Upgradient | Yes | 1.34E-03 | NO | -6.62E+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 Third 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 | Yes | 8.10E-01 | NO | -2.11E-01 | N/A |
| MW360 | Downgradient | Yes | 5.80E-01 | NO | -5.45E-01 | N/A |
| MW363 | Downgradient | No | 1.22E+00 | N/A | 1.99E-01 | N/A |
| MW366 | Downgradient | No | 1.34E+00 | N/A | 2.93E-01 | N/A |
| MW369 | Upgradient | No | 5.00E+00 | N/A | 1.61E+00 | N/A |
| MW372 | Upgradient | No | 5.00E+00 | 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 Third 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 |

**Historical Background Data from Upgradient Wells with Transformed Result**

**Because CV(1) is greater than 1, the natural logarithm of background and test well results were calculated utilizing TL(2) for comparison.**

| 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 | No | 1.00E-03 | N/A | -6.91E+00 | N/A |
| 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 | Yes | 4.45E-04 | N/A | -7.72E+00 | NO |
| MW372 | Upgradient | Yes | 2.45E-04 | N/A | -8.31E+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 Third 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 | 1.59E-03 | NO | -6.44E+00 | N/A |
| MW363 | Downgradient | Yes | 9.06E-03 | NO | -4.70E+00 | N/A |
| MW366 | Downgradient | Yes | 7.59E-04 | NO | -7.18E+00 | N/A |
| MW369 | Upgradient | Yes | 4.13E-03 | NO | -5.49E+00 | N/A |
| MW372 | Upgradient | Yes | 7.07E-04 | NO | -7.25E+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 Third Quarter 2025 Statistical Analysis Historical 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 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 |

**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 |

**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) |
|---|---|---|---|---|---|---|
| MW357 | Downgradient | Yes | 4.88E+02 | N/A | 6.19E+00 | YES |
| MW360 | Downgradient | Yes | 4.95E+02 | N/A | 6.20E+00 | YES |
| MW363 | Downgradient | Yes | 4.86E+02 | N/A | 6.19E+00 | YES |
| MW366 | Downgradient | Yes | 4.67E+02 | N/A | 6.15E+00 | YES |
| MW369 | Upgradient | Yes | 4.21E+02 | N/A | 6.04E+00 | YES |
| MW372 | Upgradient | Yes | 4.21E+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.*

# C-746-U Third Quarter 2025 Statistical Analysis Historical Background Comparison

## 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 | 5.84E+00 | NO | 1.76E+00 | N/A |
| MW360 | Downgradient | Yes | 6.47E+00 | NO | 1.87E+00 | N/A |
| MW363 | Downgradient | Yes | 5.93E+00 | NO | 1.78E+00 | N/A |
| MW366 | Downgradient | Yes | 5.87E+00 | NO | 1.77E+00 | N/A |
| MW369 | Upgradient | Yes | 6.35E+00 | NO | 1.85E+00 | N/A |
| MW372 | Upgradient | Yes | 6.12E+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 Third 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 |

**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 |

**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) |
|---|---|---|---|---|---|---|
| MW357 | Downgradient | Yes | 1.54E+00 | NO | 4.32E-01 | N/A |
| MW360 | Downgradient | Yes | 6.63E-01 | NO | -4.11E-01 | N/A |
| MW363 | Downgradient | Yes | 1.83E+00 | NO | 6.04E-01 | N/A |
| MW366 | Downgradient | Yes | 1.98E+00 | NO | 6.83E-01 | N/A |
| MW369 | Upgradient | Yes | 5.75E-01 | NO | -5.53E-01 | N/A |
| MW372 | Upgradient | Yes | 2.17E+00 | NO | 7.75E-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 Third Quarter 2025 Statistical Analysis Historical Background Comparison

## Radium-226 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=** 3.398 | **S=** 8.854 | **CV(1)=** 2.605 | **K factor**=** 2.523 | **TL(1)=** 2.57E+01 | **LL(1)=**N/A |
| **Statistics-Transformed Background Data** | **X=** -0.836 | **S=** 1.704 | **CV(2)=** -2.039 | **K factor**=** 2.523 | **TL(2)=** 3.35E+00 | **LL(2)=**N/A |

**Historical Background Data from Upgradient Wells with Transformed Result**

| Well Number: | MW369 | |
|---|---|---|
| Date Collected | Result | LN(Result) |
| 7/15/2002 | 2.84E+01 | 3.35E+00 |
| 10/8/2002 | 1.67E-01 | -1.79E+00 |
| 1/8/2003 | 1.73E-01 | -1.75E+00 |
| 10/6/2003 | 1.68E-01 | -1.78E+00 |
| 1/7/2004 | 7.02E-01 | -3.54E-01 |
| 4/7/2004 | 1.95E-01 | -1.63E+00 |
| 7/13/2004 | 2.56E-01 | -1.36E+00 |
| 10/7/2004 | 2.28E-01 | -1.48E+00 |

| Well Number: | MW372 | |
|---|---|---|
| Date Collected | Result | LN(Result) |
| 7/16/2002 | 2.35E+01 | 3.16E+00 |
| 10/8/2002 | 1.95E-01 | -1.63E+00 |
| 1/7/2003 | -8.44E-01 | #Func! |
| 10/7/2003 | 3.49E-01 | -1.05E+00 |
| 1/5/2004 | 2.39E-01 | -1.43E+00 |
| 4/5/2004 | 3.08E-01 | -1.18E+00 |
| 7/14/2004 | 1.47E-01 | -1.92E+00 |
| 10/7/2004 | 1.88E-01 | -1.67E+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) |
|---|---|---|---|---|---|---|
| MW357 | Downgradient | Yes | 4.88E-01 | N/A | -7.17E-01 | NO |
| MW360 | Downgradient | No | 3.33E-01 | N/A | -1.10E+00 | N/A |
| MW363 | Downgradient | No | -5.14E-02 | N/A | #Error | N/A |
| MW366 | Downgradient | No | 2.42E-01 | N/A | -1.42E+00 | N/A |
| MW369 | Upgradient | No | 5.45E-01 | N/A | -6.07E-01 | N/A |
| MW372 | Upgradient | No | 3.16E-01 | N/A | -1.15E+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 Third 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 |

**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 |

**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) |
|---|---|---|---|---|---|---|
| MW357 | Downgradient | Yes | 3.75E+01 | NO | 3.62E+00 | N/A |
| MW360 | Downgradient | Yes | 5.46E+01 | NO | 4.00E+00 | N/A |
| MW363 | Downgradient | Yes | 3.92E+01 | NO | 3.67E+00 | N/A |
| MW366 | Downgradient | Yes | 4.79E+01 | NO | 3.87E+00 | N/A |
| MW369 | Upgradient | Yes | 4.93E+01 | NO | 3.90E+00 | N/A |
| MW372 | Upgradient | Yes | 6.30E+01 | NO | 4.14E+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 Third 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 |

**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 |

**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) |
|---|---|---|---|---|---|---|
| MW357 | Downgradient | Yes | 3.33E+01 | NO | 3.51E+00 | N/A |
| MW360 | Downgradient | Yes | 9.94E+00 | NO | 2.30E+00 | N/A |
| MW363 | Downgradient | Yes | 3.49E+01 | NO | 3.55E+00 | N/A |
| MW366 | Downgradient | Yes | 5.34E+01 | NO | 3.98E+00 | N/A |
| MW369 | Upgradient | Yes | 8.76E+00 | NO | 2.17E+00 | N/A |
| MW372 | Upgradient | Yes | 1.56E+02 | YES | 5.05E+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 Third 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

**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 |

**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 Quarter Data**

| Well No. | Gradient | Detected? | Result | Result >TL(1)? | LN(Result) | LN(Result) >TL(2) |
|---|---|---|---|---|---|---|
| MW357 | Downgradient | Yes | 3.85E+01 | NO | 3.65E+00 | N/A |
| MW360 | Downgradient | No | 5.08E+00 | N/A | 1.63E+00 | N/A |
| MW363 | Downgradient | No | 6.05E+00 | N/A | 1.80E+00 | N/A |
| MW366 | Downgradient | Yes | 7.19E+01 | YES | 4.28E+00 | N/A |
| MW369 | Upgradient | Yes | 5.22E+01 | NO | 3.96E+00 | N/A |
| MW372 | Upgradient | Yes | 5.15E+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**

**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 Third 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 |

**Historical Background Data from Upgradient Wells with Transformed Result**

**Because CV(1) is greater than 1, the natural logarithm of background and test well results were calculated utilizing TL(2) for comparison.**

| 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 | 3.74E-01 | N/A | -9.83E-01 | NO |
| MW360 | Downgradient | Yes | 9.27E-01 | N/A | -7.58E-02 | NO |
| MW363 | Downgradient | Yes | 7.42E-01 | N/A | -2.98E-01 | NO |
| MW366 | Downgradient | Yes | 4.83E-01 | N/A | -7.28E-01 | NO |
| MW369 | Upgradient | Yes | 6.53E-01 | N/A | -4.26E-01 | NO |
| MW372 | Upgradient | Yes | 7.64E-01 | N/A | -2.69E-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 Third 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 | 1.33E+01 | NO | 2.59E+00 | N/A |
| MW360 | Downgradient | Yes | 8.20E+00 | NO | 2.10E+00 | N/A |
| MW363 | Downgradient | Yes | 7.20E+00 | NO | 1.97E+00 | N/A |
| MW366 | Downgradient | Yes | 4.70E+00 | NO | 1.55E+00 | N/A |
| MW369 | Upgradient | Yes | 8.23E+00 | NO | 2.11E+00 | N/A |
| MW372 | Upgradient | Yes | 5.93E+00 | NO | 1.78E+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 Third 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 |

**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 |

**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) |
|---|---|---|---|---|---|---|
| MW357 | Downgradient | Yes | 5.02E-03 | N/A | -5.29E+00 | NO |
| MW360 | Downgradient | Yes | 7.54E-03 | N/A | -4.89E+00 | NO |
| MW363 | Downgradient | Yes | 1.51E-02 | N/A | -4.19E+00 | NO |
| MW366 | Downgradient | Yes | 4.95E-03 | N/A | -5.31E+00 | NO |
| MW369 | Upgradient | Yes | 1.16E-02 | N/A | -4.46E+00 | NO |
| MW372 | Upgradient | Yes | 4.86E-03 | N/A | -5.33E+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 Third Quarter 2025 Statistical Analysis Historical Background Comparison

## Acetone 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=** 51.625 | **S=** 137.818 | **CV(1)=** 2.670 | **K factor**=** 2.523 | **TL(1)=** 3.99E+02 | **LL(1)=**N/A |
| **Statistics-Transformed Background Data** | **X=** 2.777 | **S=** 1.127 | **CV(2)=** 0.406 | **K factor**=** 2.523 | **TL(2)=** 5.62E+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 | 1.80E+01 | 2.89E+00 |
| 4/23/2002 | 1.10E+02 | 4.70E+00 |
| 7/15/2002 | 1.00E+01 | 2.30E+00 |
| 10/8/2002 | 1.80E+01 | 2.89E+00 |
| 1/8/2003 | 1.00E+01 | 2.30E+00 |
| 4/3/2003 | 1.00E+01 | 2.30E+00 |
| 7/9/2003 | 1.00E+01 | 2.30E+00 |
| 10/6/2003 | 1.00E+01 | 2.30E+00 |

| Well Number: | MW373 | |
|---|---|---|
| Date Collected | Result | LN(Result) |
| 3/18/2002 | 9.00E+00 | 2.20E+00 |
| 4/23/2002 | 5.60E+02 | 6.33E+00 |
| 7/16/2002 | 1.00E+01 | 2.30E+00 |
| 10/8/2002 | 1.00E+01 | 2.30E+00 |
| 1/7/2003 | 1.00E+01 | 2.30E+00 |
| 4/2/2003 | 1.00E+01 | 2.30E+00 |
| 7/9/2003 | 1.00E+01 | 2.30E+00 |
| 10/7/2003 | 1.10E+01 | 2.40E+00 |

**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) |
|---|---|---|---|---|---|---|
| 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 | 6.19E+00 | N/A | 1.82E+00 | NO |
| MW373 | Upgradient | No | 5.00E+00 | 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 Third Quarter 2025 Statistical Analysis Historical Background Comparison

## Aluminum 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=** 2.026 | **S=** 5.626 | **CV(1)=** 2.777 | **K factor**=** 2.523 | **TL(1)=** 1.62E+01 | **LL(1)=** N/A |
| **Statistics-Transformed Background Data** | **X=** -0.803 | **S=** 1.380 | **CV(2)=** -1.718 | **K factor**=** 2.523 | **TL(2)=** 2.68E+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 | 4.66E+00 | 1.54E+00 |
| 4/23/2002 | 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: MW373

| Date Collected | Result | LN(Result) |
|---|---|---|
| 3/18/2002 | 2.27E+01 | 3.12E+00 |
| 4/23/2002 | 1.46E+00 | 3.78E-01 |
| 7/16/2002 | 2.53E-01 | -1.37E+00 |
| 10/8/2002 | 4.82E-01 | -7.30E-01 |
| 1/7/2003 | 6.08E-01 | -4.98E-01 |
| 4/2/2003 | 4.46E-01 | -8.07E-01 |
| 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) |
|---|---|---|---|---|---|---|
| MW358 | Downgradient | No | 5.00E-02 | N/A | -3.00E+00 | N/A |
| MW361 | Downgradient | No | 5.00E-02 | N/A | -3.00E+00 | N/A |
| MW364 | Downgradient | Yes | 3.13E-02 | N/A | -3.46E+00 | NO |
| MW367 | Downgradient | No | 5.00E-02 | N/A | -3.00E+00 | N/A |
| MW370 | Upgradient | No | 5.00E-02 | N/A | -3.00E+00 | N/A |
| MW373 | 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 Third 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 |

**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 |

**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) |
|---|---|---|---|---|---|---|
| MW358 | Downgradient | Yes | 3.96E-01 | NO | -9.26E-01 | N/A |
| MW361 | Downgradient | Yes | 2.32E-01 | NO | -1.46E+00 | N/A |
| MW364 | Downgradient | Yes | 1.96E-01 | NO | -1.63E+00 | N/A |
| MW367 | Downgradient | Yes | 2.67E-02 | NO | -3.62E+00 | N/A |
| MW370 | Upgradient | Yes | 7.26E-02 | NO | -2.62E+00 | N/A |
| MW373 | Upgradient | Yes | 2.76E+00 | NO | 1.02E+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 Third 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 | 4.22E-01 | NO | -8.63E-01 | N/A |
| MW361 | Downgradient | Yes | 4.47E-01 | NO | -8.05E-01 | N/A |
| MW364 | Downgradient | Yes | 4.71E-01 | NO | -7.53E-01 | N/A |
| MW367 | Downgradient | Yes | 2.59E-01 | NO | -1.35E+00 | N/A |
| MW370 | Upgradient | Yes | 5.17E-01 | NO | -6.60E-01 | N/A |
| MW373 | Upgradient | Yes | 4.63E-01 | NO | -7.70E-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 Third 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 |

**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 |

**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) |
|---|---|---|---|---|---|---|
| MW358 | Downgradient | Yes | 2.85E+01 | NO | 3.35E+00 | N/A |
| MW361 | Downgradient | Yes | 3.02E+01 | NO | 3.41E+00 | N/A |
| MW364 | Downgradient | Yes | 3.24E+01 | NO | 3.48E+00 | N/A |
| MW367 | Downgradient | Yes | 1.87E+01 | NO | 2.93E+00 | N/A |
| MW370 | Upgradient | Yes | 2.86E+01 | NO | 3.35E+00 | N/A |
| MW373 | Upgradient | Yes | 8.77E+01 | YES | 4.47E+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 Third 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 |

**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 |

**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) |
|---|---|---|---|---|---|---|
| MW358 | Downgradient | Yes | 3.62E+01 | NO | 3.59E+00 | N/A |
| MW361 | Downgradient | Yes | 3.67E+01 | NO | 3.60E+00 | N/A |
| MW364 | Downgradient | Yes | 3.62E+01 | NO | 3.59E+00 | N/A |
| MW367 | Downgradient | Yes | 1.91E+01 | NO | 2.95E+00 | N/A |
| MW370 | Upgradient | Yes | 4.17E+01 | NO | 3.73E+00 | N/A |
| MW373 | Upgradient | Yes | 2.99E+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 Third 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 | 5.73E-04 | N/A | -7.46E+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 | 5.40E-03 | N/A | -5.22E+00 | NO |
| MW370 | Upgradient | No | 1.00E-03 | N/A | -6.91E+00 | N/A |
| MW373 | Upgradient | Yes | 3.81E-04 | N/A | -7.87E+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 Third 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

**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 | 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 | 4.46E+02 | NO | 6.10E+00 | N/A |
| MW361 | Downgradient | Yes | 4.75E+02 | NO | 6.16E+00 | N/A |
| MW364 | Downgradient | Yes | 4.71E+02 | NO | 6.15E+00 | N/A |
| MW367 | Downgradient | Yes | 3.06E+02 | NO | 5.72E+00 | N/A |
| MW370 | Upgradient | Yes | 4.29E+02 | NO | 6.06E+00 | N/A |
| MW373 | Upgradient | Yes | 1.01E+03 | YES | 6.92E+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 Third 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 |

**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 | 2.50E-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 | 7.21E-04 | NO | -7.23E+00 | N/A |
| MW361 | Downgradient | Yes | 5.77E-04 | NO | -7.46E+00 | N/A |
| MW364 | Downgradient | Yes | 1.30E-03 | NO | -6.65E+00 | N/A |
| MW367 | Downgradient | Yes | 8.33E-04 | NO | -7.09E+00 | N/A |
| MW370 | Upgradient | Yes | 1.09E-03 | NO | -6.82E+00 | N/A |
| MW373 | Upgradient | Yes | 1.27E-03 | NO | -6.67E+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 Third 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

**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-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 | No | 2.00E-01 | N/A | -1.61E+00 | N/A |
| MW361 | Downgradient | No | 2.00E-01 | N/A | -1.61E+00 | N/A |
| MW364 | Downgradient | No | 2.00E-01 | N/A | -1.61E+00 | N/A |
| MW367 | Downgradient | Yes | 3.17E-03 | NO | -5.75E+00 | N/A |
| MW370 | Upgradient | No | 2.00E-01 | N/A | -1.61E+00 | N/A |
| MW373 | Upgradient | 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 Third 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 | 1.35E+00 | NO | 3.00E-01 | N/A |
| MW361 | Downgradient | Yes | 4.58E+00 | YES | 1.52E+00 | N/A |
| MW364 | Downgradient | Yes | 3.48E+00 | NO | 1.25E+00 | N/A |
| MW367 | Downgradient | Yes | 1.02E+00 | NO | 1.98E-02 | N/A |
| MW370 | Upgradient | Yes | 4.84E+00 | YES | 1.58E+00 | N/A |
| MW373 | Upgradient | Yes | 1.24E+00 | NO | 2.15E-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**

MW361
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 Third 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 | 2.65E+02 | NO | 5.58E+00 | N/A |
| MW361 | Downgradient | Yes | 2.82E+02 | NO | 5.64E+00 | N/A |
| MW364 | Downgradient | Yes | 2.62E+02 | NO | 5.57E+00 | N/A |
| MW367 | Downgradient | Yes | 1.66E+02 | NO | 5.11E+00 | N/A |
| MW370 | Upgradient | Yes | 2.25E+02 | NO | 5.42E+00 | N/A |
| MW373 | Upgradient | Yes | 6.66E+02 | YES | 6.50E+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 Third 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 |

**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 |

**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) |
|---|---|---|---|---|---|---|
| MW358 | Downgradient | Yes | 2.39E-01 | NO | -1.43E+00 | N/A |
| MW361 | Downgradient | No | 1.00E-01 | N/A | -2.30E+00 | N/A |
| MW364 | Downgradient | Yes | 7.36E-02 | NO | -2.61E+00 | N/A |
| MW367 | Downgradient | Yes | 6.28E-01 | NO | -4.65E-01 | N/A |
| MW370 | Upgradient | No | 1.00E-01 | N/A | -2.30E+00 | N/A |
| MW373 | Upgradient | Yes | 4.08E-02 | NO | -3.20E+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**

**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 Third 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 |

**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 |

**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) |
|---|---|---|---|---|---|---|
| MW358 | Downgradient | Yes | 1.24E+01 | NO | 2.52E+00 | N/A |
| MW361 | Downgradient | Yes | 1.32E+01 | NO | 2.58E+00 | N/A |
| MW364 | Downgradient | Yes | 1.39E+01 | NO | 2.63E+00 | N/A |
| MW367 | Downgradient | Yes | 9.41E+00 | NO | 2.24E+00 | N/A |
| MW370 | Upgradient | Yes | 1.25E+01 | NO | 2.53E+00 | N/A |
| MW373 | Upgradient | Yes | 3.30E+01 | YES | 3.50E+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 Third 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 |

**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 |

**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) |
|---|---|---|---|---|---|---|
| MW358 | Downgradient | Yes | 3.14E-02 | NO | -3.46E+00 | N/A |
| MW361 | Downgradient | Yes | 2.13E-03 | NO | -6.15E+00 | N/A |
| MW364 | Downgradient | Yes | 1.24E-02 | NO | -4.39E+00 | N/A |
| MW367 | Downgradient | Yes | 1.05E+00 | NO | 4.88E-02 | N/A |
| MW370 | Upgradient | No | 5.00E-03 | N/A | -5.30E+00 | N/A |
| MW373 | Upgradient | Yes | 4.72E-02 | NO | -3.05E+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 Third 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 |

**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 |

**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) |
|---|---|---|---|---|---|---|
| MW358 | Downgradient | Yes | 7.50E-01 | NO | -2.88E-01 | N/A |
| MW361 | Downgradient | Yes | 6.50E-01 | NO | -4.31E-01 | N/A |
| MW364 | Downgradient | No | 6.90E-01 | N/A | -3.71E-01 | N/A |
| MW367 | Downgradient | No | 7.70E-01 | N/A | -2.61E-01 | N/A |
| MW370 | Upgradient | No | 5.00E+00 | N/A | 1.61E+00 | N/A |
| MW373 | Upgradient | No | 5.00E+00 | 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 Third Quarter 2025 Statistical Analysis Historical Background Comparison

## Molybdenum 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=** 0.010 | **S=** 0.012 | **CV(1)=** 1.198 | **K factor**=** 2.523 | **TL(1)=** 4.03E-02 | **LL(1)=**N/A |
| **Statistics-Transformed Background Data** | **X=** -5.693 | **S=** 1.604 | **CV(2)=** -0.282 | **K factor**=** 2.523 | **TL(2)=** -1.65E+00 | **LL(2)=**N/A |

**Historical Background Data from Upgradient Wells with Transformed Result**

**Because CV(1) is greater than 1, the natural logarithm of background and test well results were calculated utilizing TL(2) for comparison.**

| 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 | 1.13E-03 | -6.79E+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: | MW373 | |
|---|---|---|
| Date Collected | Result | LN(Result) |
| 3/18/2002 | 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 | 1.00E-03 | -6.91E+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) |
|---|---|---|---|---|---|---|
| MW358 | Downgradient | No | 1.00E-03 | N/A | -6.91E+00 | N/A |
| 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 | No | 1.00E-03 | N/A | -6.91E+00 | N/A |
| MW370 | Upgradient | No | 1.00E-03 | N/A | -6.91E+00 | N/A |
| MW373 | Upgradient | Yes | 2.26E-04 | N/A | -8.39E+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 Third 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 |

**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 |

**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) |
|---|---|---|---|---|---|---|
| MW358 | Downgradient | Yes | 3.92E-03 | NO | -5.54E+00 | N/A |
| MW361 | Downgradient | No | 2.00E-03 | N/A | -6.21E+00 | N/A |
| MW364 | Downgradient | Yes | 6.36E-04 | NO | -7.36E+00 | N/A |
| MW367 | Downgradient | Yes | 2.88E-03 | NO | -5.85E+00 | N/A |
| MW370 | Upgradient | No | 2.00E-03 | N/A | -6.21E+00 | N/A |
| MW373 | Upgradient | Yes | 1.51E-03 | NO | -6.50E+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 Third 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 | 1.86E+02 | N/A | 5.23E+00 | YES |
| MW361 | Downgradient | Yes | 5.13E+02 | N/A | 6.24E+00 | YES |
| MW364 | Downgradient | Yes | 3.95E+02 | N/A | 5.98E+00 | YES |
| MW367 | Downgradient | Yes | 3.22E+02 | N/A | 5.77E+00 | YES |
| MW370 | Upgradient | Yes | 4.20E+02 | N/A | 6.04E+00 | YES |
| MW373 | Upgradient | Yes | 4.45E+02 | N/A | 6.10E+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 Third 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 |

**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 |

**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)? |
|---|---|---|---|---|---|---|
| MW358 | Downgradient | Yes | 5.94E+00 | NO | 1.78E+00 | N/A |
| MW361 | Downgradient | Yes | 5.75E+00 | YES | 1.75E+00 | N/A |
| MW364 | Downgradient | Yes | 5.69E+00 | YES | 1.74E+00 | N/A |
| MW367 | Downgradient | Yes | 5.66E+00 | YES | 1.73E+00 | N/A |
| MW370 | Upgradient | Yes | 6.02E+00 | NO | 1.80E+00 | N/A |
| MW373 | Upgradient | Yes | 6.69E+00 | NO | 1.90E+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 were below the Lower Tolerance Limit, which is evidence of statistically different pH levels 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.*

## C-746-U Third 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 |

**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 |

**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) |
|---|---|---|---|---|---|---|
| MW358 | Downgradient | Yes | 2.03E+00 | NO | 7.08E-01 | N/A |
| MW361 | Downgradient | Yes | 2.08E+00 | NO | 7.32E-01 | N/A |
| MW364 | Downgradient | Yes | 1.99E+00 | NO | 6.88E-01 | N/A |
| MW367 | Downgradient | Yes | 2.97E+00 | NO | 1.09E+00 | N/A |
| MW370 | Upgradient | Yes | 2.53E+00 | NO | 9.28E-01 | N/A |
| MW373 | Upgradient | Yes | 2.93E+00 | NO | 1.08E+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 Third 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 |

**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 |

**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) |
|---|---|---|---|---|---|---|
| MW358 | Downgradient | Yes | 3.64E+01 | NO | 3.59E+00 | N/A |
| MW361 | Downgradient | Yes | 4.03E+01 | NO | 3.70E+00 | N/A |
| MW364 | Downgradient | Yes | 4.17E+01 | NO | 3.73E+00 | N/A |
| MW367 | Downgradient | Yes | 2.41E+01 | NO | 3.18E+00 | N/A |
| MW370 | Upgradient | Yes | 4.44E+01 | NO | 3.79E+00 | N/A |
| MW373 | Upgradient | Yes | 7.28E+01 | NO | 4.29E+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 Third 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 |

**Historical Background Data from Upgradient Wells with Transformed Result**

**Because CV(1) is greater than 1, the natural logarithm of background and test well results were calculated utilizing TL(2) for comparison.**

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 | 5.37E+01 | N/A | 3.98E+00 | NO |
| MW361 | Downgradient | Yes | 6.75E+01 | N/A | 4.21E+00 | NO |
| MW364 | Downgradient | Yes | 6.72E+01 | N/A | 4.21E+00 | NO |
| MW367 | Downgradient | Yes | 3.06E+01 | N/A | 3.42E+00 | NO |
| MW370 | Upgradient | Yes | 1.94E+01 | N/A | 2.97E+00 | NO |
| MW373 | Upgradient | Yes | 2.46E+02 | N/A | 5.51E+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 Third 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 |

**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 |

**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 | 3.56E+01 | N/A | 3.57E+00 | NO |
| MW361 | Downgradient | Yes | 3.21E+01 | N/A | 3.47E+00 | NO |
| MW364 | Downgradient | Yes | 4.63E+01 | N/A | 3.84E+00 | YES |
| MW367 | Downgradient | No | 1.07E+01 | N/A | 2.37E+00 | N/A |
| MW370 | Upgradient | No | 8.12E+00 | N/A | 2.09E+00 | N/A |
| MW373 | Upgradient | No | 7.58E+00 | N/A | 2.03E+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**

**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**

MW364

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 Third Quarter 2025 Statistical Analysis Historical Background Comparison

## 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 | 8.07E-01 | N/A | -2.14E-01 | NO |
| MW361 | Downgradient | Yes | 4.19E-01 | N/A | -8.70E-01 | NO |
| MW364 | Downgradient | Yes | 4.50E-01 | N/A | -7.99E-01 | NO |
| MW367 | Downgradient | Yes | 3.46E-01 | N/A | -1.06E+00 | NO |
| MW370 | Upgradient | Yes | 6.10E-01 | N/A | -4.94E-01 | NO |
| MW373 | Upgradient | Yes | 1.06E+00 | N/A | 5.83E-02 | 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 Third 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 | Yes | 1.41E+01 | NO | 2.65E+00 | N/A |
| MW361 | Downgradient | Yes | 9.48E+00 | NO | 2.25E+00 | N/A |
| MW364 | Downgradient | Yes | 5.66E+00 | NO | 1.73E+00 | N/A |
| MW367 | Downgradient | Yes | 6.28E+00 | NO | 1.84E+00 | N/A |
| MW370 | Upgradient | Yes | 7.06E+00 | NO | 1.95E+00 | N/A |
| MW373 | Upgradient | Yes | 1.45E+01 | NO | 2.67E+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 Third 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 | 3.33E-03 | NO | -5.70E+00 | N/A |
| MW361 | Downgradient | No | 2.00E-02 | N/A | -3.91E+00 | N/A |
| MW364 | Downgradient | Yes | 1.57E-02 | NO | -4.15E+00 | N/A |
| MW367 | Downgradient | Yes | 1.12E-02 | NO | -4.49E+00 | N/A |
| MW370 | Upgradient | Yes | 6.08E-03 | NO | -5.10E+00 | N/A |
| MW373 | Upgradient | Yes | 6.34E-03 | NO | -5.06E+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**

**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.*

# 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 Third Quarter 2025 Statistical Analysis — Current 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 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=** 39.881 | **S=** 16.769 | **CV(1)=** 0.420 | **K factor**=** 2.523 | **TL(1)=** 8.22E+01 | **LL(1)=** N/A |
| **Statistics-Transformed Background Data** | **X=** 3.596 | **S=** 0.444 | **CV(2)=** 0.123 | **K factor**=** 2.523 | **TL(2)=** 4.72E+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) |
| 7/25/2023 | 6.09E+01 | 4.11E+00 |
| 10/11/2023 | 5.39E+01 | 3.99E+00 |
| 1/24/2024 | 5.68E+01 | 4.04E+00 |
| 4/10/2024 | 5.62E+01 | 4.03E+00 |
| 7/17/2024 | 5.68E+01 | 4.04E+00 |
| 10/10/2024 | 5.64E+01 | 4.03E+00 |
| 1/28/2025 | 4.89E+01 | 3.89E+00 |
| 4/10/2025 | 5.76E+01 | 4.05E+00 |

| Well Number: | MW374 | |
|---|---|---|
| Date Collected | Result | LN(Result) |
| 7/25/2023 | 2.38E+01 | 3.17E+00 |
| 10/11/2023 | 2.45E+01 | 3.20E+00 |
| 1/25/2024 | 2.47E+01 | 3.21E+00 |
| 4/10/2024 | 2.37E+01 | 3.17E+00 |
| 7/17/2024 | 2.19E+01 | 3.09E+00 |
| 10/10/2024 | 2.24E+01 | 3.11E+00 |
| 1/28/2025 | 2.56E+01 | 3.24E+00 |
| 4/10/2025 | 2.40E+01 | 3.18E+00 |

**Current Quarter Data**

| Well No. | Gradient | Detected? | Result | Result >TL(1)? | LN(Result) | LN(Result) >TL(2) |
|---|---|---|---|---|---|---|
| MW371 | Upgradient | Yes | 7.08E+01 | NO | 4.26E+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 Third 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=** 2.664 | **S=** 1.448 | **CV(1)=** 0.544 | **K factor**=** 2.523 | **TL(1)=** 6.32E+00 | **LL(1)=** N/A |
| **Statistics-Transformed Background Data** | **X=** 0.845 | **S=** 0.539 | **CV(2)=** 0.638 | **K factor**=** 2.523 | **TL(2)=** 2.20E+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).**

**Current Background Data from Upgradient Wells with Transformed Result**

| Well Number: | MW371 | |
|---|---|---|
| Date Collected | Result | LN(Result) |
| 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 |
| 4/10/2025 | 5.89E+00 | 1.77E+00 |

| Well Number: | MW374 | |
|---|---|---|
| Date Collected | Result | LN(Result) |
| 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 |
| 4/10/2025 | 2.82E+00 | 1.04E+00 |

**Current Quarter Data**

| Well No. | Gradient | Detected? | Result | Result >TL(1)? | LN(Result) | LN(Result) >TL(2) |
|---|---|---|---|---|---|---|
| MW359 | Downgradient | Yes | 3.99E+00 | NO | 1.38E+00 | N/A |
| MW362 | Downgradient | Yes | 4.94E+00 | NO | 1.60E+00 | N/A |
| MW365 | Downgradient | Yes | 4.54E+00 | NO | 1.51E+00 | N/A |
| MW368 | Downgradient | Yes | 3.33E+00 | NO | 1.20E+00 | N/A |
| MW371 | Upgradient | Yes | 5.67E+00 | NO | 1.74E+00 | N/A |
| MW375 | Sidegradient | Yes | 3.06E+00 | NO | 1.12E+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 Third 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=** 407.875 | **S=** 45.089 | **CV(1)=** 0.111 | **K factor**=** 2.523 | **TL(1)=** 5.22E+02 | **LL(1)=** N/A |
| **Statistics-Transformed Background Data** | **X=** 6.005 | **S=** 0.107 | **CV(2)=** 0.018 | **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) |
| 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 |
| 4/10/2025 | 3.97E+02 | 5.98E+00 |

| Well Number: | MW374 | |
|---|---|---|
| Date Collected | Result | LN(Result) |
| 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 |
| 4/10/2025 | 3.77E+02 | 5.93E+00 |

**Current Quarter Data**

| Well No. | Gradient | Detected? | Result | Result >TL(1)? | LN(Result) | LN(Result) >TL(2) |
|---|---|---|---|---|---|---|
| MW359 | Downgradient | Yes | 4.37E+02 | NO | 6.08E+00 | N/A |
| MW362 | Downgradient | Yes | 4.70E+02 | NO | 6.15E+00 | N/A |
| MW365 | Downgradient | Yes | 4.57E+02 | NO | 6.12E+00 | N/A |
| MW368 | Downgradient | Yes | 3.33E+02 | NO | 5.81E+00 | N/A |
| MW371 | Upgradient | Yes | 3.56E+02 | NO | 5.87E+00 | N/A |
| MW374 | Upgradient | Yes | 4.31E+02 | NO | 6.07E+00 | N/A |
| MW375 | Sidegradient | Yes | 4.53E+02 | NO | 6.12E+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 Third 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=** 15.328 | **S=** 5.014 | **CV(1)=**0.327 | **K factor**=** 2.523 | **TL(1)=** 2.80E+01 | **LL(1)=**N/A |
| **Statistics-Transformed Background Data** | **X=** 2.681 | **S=** 0.323 | **CV(2)=**0.120 | **K factor**=** 2.523 | **TL(2)=** 3.50E+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).**

**Current Background Data from Upgradient Wells with Transformed Result**

Well Number: MW371

| Date Collected | Result | LN(Result) |
|---|---|---|
| 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 |
| 4/10/2025 | 1.99E+01 | 2.99E+00 |

Well Number: MW374

| Date Collected | Result | LN(Result) |
|---|---|---|
| 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 |
| 4/10/2025 | 1.79E+01 | 2.88E+00 |

**Current Quarter Data**

| Well No. | Gradient | Detected? | Result | Result >TL(1)? | LN(Result) | LN(Result) >TL(2) |
|---|---|---|---|---|---|---|
| MW359 | Downgradient | Yes | 3.62E+01 | YES | 3.59E+00 | N/A |
| MW362 | Downgradient | Yes | 3.16E+01 | YES | 3.45E+00 | N/A |
| MW365 | Downgradient | Yes | 4.98E+01 | YES | 3.91E+00 | N/A |
| MW368 | Downgradient | Yes | 1.11E+02 | YES | 4.71E+00 | N/A |
| MW371 | Upgradient | Yes | 4.28E+01 | YES | 3.76E+00 | N/A |
| MW374 | Upgradient | Yes | 1.91E+01 | NO | 2.95E+00 | N/A |
| MW375 | Sidegradient | Yes | 2.17E+01 | NO | 3.08E+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**

MW359
MW362
MW365
MW368
MW371

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 Third 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=** 41.319 | **S=** 25.419 | **CV(1)=** 0.615 | **K factor**=** 2.523 | **TL(1)=** 1.05E+02 | **LL(1)=** N/A |
| **Statistics-Transformed Background Data** | **X=** 3.499 | **S=** 0.719 | **CV(2)=** 0.206 | **K factor**=** 2.523 | **TL(2)=** 5.31E+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) |
| 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 |
| 4/10/2025 | 2.53E+01 | 3.23E+00 |

| Well Number: | MW372 | |
|---|---|---|
| Date Collected | Result | LN(Result) |
| 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 |
| 4/10/2025 | 6.64E+01 | 4.20E+00 |

**Current Quarter Data**

| Well No. | Gradient | Detected? | Result | Result >TL(1)? | LN(Result) | LN(Result) >TL(2) |
|---|---|---|---|---|---|---|
| MW372 | Upgradient | Yes | 6.74E+01 | NO | 4.21E+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 Third 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=** 555.625 **S=** 206.147 **CV(1)=** 0.371 **K factor**=** 2.523 **TL(1)=** 1.08E+03 **LL(1)=** N/A

**Statistics-Transformed Background Data** **X=** 6.251 **S=** 0.390 **CV(2)=** 0.062 **K factor**=** 2.523 **TL(2)=** 7.24E+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) |
| 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 |
| 4/10/2025 | 3.87E+02 | 5.96E+00 |

| Well Number: | MW372 | |
|---|---|---|
| Date Collected | Result | LN(Result) |
| 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 |
| 4/10/2025 | 7.44E+02 | 6.61E+00 |

**Current Quarter Data**

| Well No. | Gradient | Detected? | Result | Result >TL(1)? | LN(Result) | LN(Result) >TL(2) |
|---|---|---|---|---|---|---|
| MW372 | Upgradient | Yes | 7.20E+02 | NO | 6.58E+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 Third 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=** 2.704 | **S=** 0.848 | **CV(1)=**0.314 | **K factor**=** 2.523 | **TL(1)=** 4.84E+00 | **LL(1)=**N/A |
| **Statistics-Transformed Background Data** | **X=** 0.951 | **S=** 0.304 | **CV(2)=**0.320 | **K factor**=** 2.523 | **TL(2)=** 1.72E+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) |
| 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 |
| 4/10/2025 | 2.40E+00 | 8.75E-01 |

| Well Number: | MW372 | |
|---|---|---|
| Date Collected | Result | LN(Result) |
| 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 |
| 4/10/2025 | 2.10E+00 | 7.42E-01 |

**Current Quarter Data**

| Well No. | Gradient | Detected? | Result | Result >TL(1)? | LN(Result) | LN(Result) >TL(2) |
|---|---|---|---|---|---|---|
| MW369 | Upgradient | 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**

MW369

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 Third 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=** 324.875 **S=** 134.076 **CV(1)=** 0.413 **K factor**=** 2.523 **TL(1)=** 6.63E+02 **LL(1)=** N/A

**Statistics-Transformed Background Data** **X=** 5.696 **S=** 0.439 **CV(2)=** 0.077 **K factor**=** 2.523 **TL(2)=** 6.80E+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) |
|---|---|---|
| 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 |
| 4/10/2025 | 2.35E+02 | 5.46E+00 |

Well Number: MW372

| Date Collected | Result | LN(Result) |
|---|---|---|
| 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 |
| 4/10/2025 | 4.74E+02 | 6.16E+00 |

**Current Quarter Data**

| Well No. | Gradient | Detected? | Result | Result >TL(1)? | LN(Result) | LN(Result) >TL(2) |
|---|---|---|---|---|---|---|
| MW372 | Upgradient | Yes | 4.92E+02 | NO | 6.20E+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 Third 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=** 15.013 | **S=** 8.347 | **CV(1)=**0.556 | **K factor**=** 2.523 | **TL(1)=** 3.61E+01 | **LL(1)=**N/A |
| **Statistics-Transformed Background Data** | **X=** 2.534 | **S=** 0.632 | **CV(2)=**0.249 | **K factor**=** 2.523 | **TL(2)=** 4.13E+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) |
| 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 |
| 4/10/2025 | 1.08E+01 | 2.38E+00 |

| Well Number: | MW372 | |
|---|---|---|
| Date Collected | Result | LN(Result) |
| 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 |
| 4/10/2025 | 2.42E+01 | 3.19E+00 |

**Current Quarter Data**

| Well No. | Gradient | Detected? | Result | Result >TL(1)? | LN(Result) | LN(Result) >TL(2) |
|---|---|---|---|---|---|---|
| MW372 | Upgradient | Yes | 2.34E+01 | NO | 3.15E+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 Third 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=** 417.125 | **S=** 47.889 | **CV(1)=** 0.115 | **K factor**=** 2.523 | **TL(1)=** 5.38E+02 | **LL(1)=** N/A |
| **Statistics-Transformed Background Data** | **X=** 6.027 | **S=** 0.121 | **CV(2)=** 0.020 | **K factor**=** 2.523 | **TL(2)=** 6.33E+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) |
| 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 |
| 4/10/2025 | 4.25E+02 | 6.05E+00 |

| Well Number: | MW372 | |
|---|---|---|
| Date Collected | Result | LN(Result) |
| 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 |
| 4/10/2025 | 4.20E+02 | 6.04E+00 |

**Current Quarter Data**

| Well No. | Gradient | Detected? | Result | Result >TL(1)? | LN(Result) | LN(Result) >TL(2) |
|---|---|---|---|---|---|---|
| MW357 | Downgradient | Yes | 4.88E+02 | NO | 6.19E+00 | N/A |
| MW360 | Downgradient | Yes | 4.95E+02 | NO | 6.20E+00 | N/A |
| MW363 | Downgradient | Yes | 4.86E+02 | NO | 6.19E+00 | N/A |
| MW366 | Downgradient | Yes | 4.67E+02 | NO | 6.15E+00 | N/A |
| MW369 | Upgradient | Yes | 4.21E+02 | NO | 6.04E+00 | N/A |
| MW372 | Upgradient | Yes | 4.21E+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 Third 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=** 79.515 | **S=** 72.553 | **CV(1)=** 0.912 | **K factor**=** 2.523 | **TL(1)=** 2.63E+02 | **LL(1)=** N/A |
| **Statistics-Transformed Background Data** | **X=** 3.610 | **S=** 1.455 | **CV(2)=** 0.403 | **K factor**=** 2.523 | **TL(2)=** 7.28E+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: | MW369 | |
|---|---|---|
| Date Collected | Result | LN(Result) |
| 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 |
| 4/10/2025 | 1.80E+01 | 2.89E+00 |

| Well Number: | MW372 | |
|---|---|---|
| Date Collected | Result | LN(Result) |
| 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 |
| 4/10/2025 | 1.61E+02 | 5.08E+00 |

**Current Quarter Data**

| Well No. | Gradient | Detected? | Result | Result >TL(1)? | LN(Result) | LN(Result) >TL(2) |
|---|---|---|---|---|---|---|
| MW372 | Upgradient | Yes | 1.56E+02 | NO | 5.05E+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 Third Quarter 2025 Statistical Analysis — Current 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 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=** 46.366 | **S=** 27.283 | **CV(1)=** 0.588 | **K factor**=** 2.523 | **TL(1)=** 1.15E+02 | **LL(1)=** N/A |
| **Statistics-Transformed Background Data** | **X=** 3.593 | **S=** 0.817 | **CV(2)=** 0.227 | **K factor**=** 2.523 | **TL(2)=** 5.66E+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) |
|---|---|---|
| 7/25/2023 | 5.61E+01 | 4.03E+00 |
| 10/11/2023 | 7.67E+01 | 4.34E+00 |
| 1/24/2024 | 6.27E+01 | 4.14E+00 |
| 4/10/2024 | 7.09E+01 | 4.26E+00 |
| 7/17/2024 | 4.27E+01 | 3.75E+00 |
| 10/10/2024 | 8.38E+01 | 4.43E+00 |
| 1/28/2025 | 5.27E+01 | 3.96E+00 |
| 4/10/2025 | 2.96E+01 | 3.39E+00 |

Well Number: MW372

| Date Collected | Result | LN(Result) |
|---|---|---|
| 7/25/2023 | 2.00E+01 | 3.00E+00 |
| 10/11/2023 | 2.25E+01 | 3.11E+00 |
| 1/25/2024 | 3.89E+01 | 3.66E+00 |
| 4/11/2024 | 6.15E+01 | 4.12E+00 |
| 7/17/2024 | 1.75E+01 | 2.86E+00 |
| 10/10/2024 | 9.20E+01 | 4.52E+00 |
| 1/28/2025 | 7.82E+00 | 2.06E+00 |
| 4/10/2025 | 6.43E+00 | 1.86E+00 |

**Current Quarter Data**

| Well No. | Gradient | Detected? | Result | Result >TL(1)? | LN(Result) | LN(Result) >TL(2) |
|---|---|---|---|---|---|---|
| MW366 | Downgradient | Yes | 7.19E+01 | NO | 4.28E+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 Third 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=** 56.450 | **S=** 28.379 | **CV(1)=** 0.503 | **K factor**=** 2.523 | **TL(1)=** 1.28E+02 | **LL(1)=** N/A |
| **Statistics-Transformed Background Data** | **X=** 3.899 | **S=** 0.547 | **CV(2)=** 0.140 | **K factor**=** 2.523 | **TL(2)=** 5.28E+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: | MW370 | |
|---|---|---|
| Date Collected | Result | LN(Result) |
| 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 |
| 4/10/2025 | 2.95E+01 | 3.38E+00 |

| Well Number: | MW373 | |
|---|---|---|
| Date Collected | Result | LN(Result) |
| 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 |
| 4/10/2025 | 8.69E+01 | 4.46E+00 |

**Current Quarter Data**

| Well No. | Gradient | Detected? | Result | Result >TL(1)? | LN(Result) | LN(Result) >TL(2) |
|---|---|---|---|---|---|---|
| MW373 | Upgradient | Yes | 8.77E+01 | NO | 4.47E+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 Third 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=** 690.688 | **S=** 254.591 | **CV(1)=** 0.369 | **K factor**=** 2.523 | **TL(1)=** 1.33E+03 | **LL(1)=** N/A |
| **Statistics-Transformed Background Data** | **X=** 6.469 | **S=** 0.386 | **CV(2)=** 0.060 | **K factor**=** 2.523 | **TL(2)=** 7.44E+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) |
| 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 |
| 4/10/2025 | 4.49E+02 | 6.11E+00 |

| Well Number: | MW373 | |
|---|---|---|
| Date Collected | Result | LN(Result) |
| 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 |
| 4/10/2025 | 1.00E+03 | 6.91E+00 |

**Current Quarter Data**

| Well No. | Gradient | Detected? | Result | Result >TL(1)? | LN(Result) | LN(Result) >TL(2) |
|---|---|---|---|---|---|---|
| MW373 | Upgradient | Yes | 1.01E+03 | NO | 6.92E+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 Third 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=** 3.183 | **S=** 1.509 | **CV(1)=**0.474 | **K factor**=** 2.523 | **TL(1)=** 6.99E+00 | **LL(1)=**N/A |
| **Statistics-Transformed Background Data** | **X=** 1.038 | **S=** 0.523 | **CV(2)=**0.504 | **K factor**=** 2.523 | **TL(2)=** 2.36E+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) |
| 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 |
| 4/10/2025 | 4.54E+00 | 1.51E+00 |

| Well Number: | MW373 | |
|---|---|---|
| Date Collected | Result | LN(Result) |
| 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 |
| 4/10/2025 | 2.90E+00 | 1.06E+00 |

**Current Quarter Data**

| Well No. | Gradient | Detected? | Result | Result >TL(1)? | LN(Result) | LN(Result) >TL(2) |
|---|---|---|---|---|---|---|
| MW361 | Downgradient | Yes | 4.58E+00 | NO | 1.52E+00 | N/A |
| MW370 | Upgradient | Yes | 4.84E+00 | NO | 1.58E+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 Third 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=** 392.313 **S=** 173.133 **CV(1)=** 0.441 **K factor**=** 2.523 **TL(1)=** 8.29E+02 **LL(1)=** N/A

**Statistics-Transformed Background Data** **X=** 5.872 **S=** 0.468 **CV(2)=** 0.080 **K factor**=** 2.523 **TL(2)=** 7.05E+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) |
|---|---|---|
| 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 |
| 4/10/2025 | 2.26E+02 | 5.42E+00 |

Well Number: MW373

| Date Collected | Result | LN(Result) |
|---|---|---|
| 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 |
| 4/10/2025 | 6.35E+02 | 6.45E+00 |

**Current Quarter Data**

| Well No. | Gradient | Detected? | Result | Result >TL(1)? | LN(Result) | LN(Result) >TL(2) |
|---|---|---|---|---|---|---|
| MW373 | Upgradient | Yes | 6.66E+02 | NO | 6.50E+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 Third Quarter 2025 Statistical Analysis — Current 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 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=** 21.050 | **S=** 9.033 | **CV(1)=**0.429 | **K factor**=** 2.523 | **TL(1)=** 4.38E+01 | **LL(1)=**N/A |
| **Statistics-Transformed Background Data** | **X=** 2.954 | **S=** 0.452 | **CV(2)=**0.153 | **K factor**=** 2.523 | **TL(2)=** 4.09E+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) |
| 7/25/2023 | 1.21E+01 | 2.49E+00 |
| 10/11/2023 | 1.21E+01 | 2.49E+00 |
| 1/24/2024 | 1.35E+01 | 2.60E+00 |
| 4/10/2024 | 1.23E+01 | 2.51E+00 |
| 7/17/2024 | 1.21E+01 | 2.49E+00 |
| 10/10/2024 | 1.21E+01 | 2.49E+00 |
| 1/28/2025 | 1.29E+01 | 2.56E+00 |
| 4/10/2025 | 1.24E+01 | 2.52E+00 |

| Well Number: | MW373 | |
|---|---|---|
| Date Collected | Result | LN(Result) |
| 7/25/2023 | 2.66E+01 | 3.28E+00 |
| 10/11/2023 | 2.78E+01 | 3.33E+00 |
| 1/25/2024 | 2.99E+01 | 3.40E+00 |
| 4/10/2024 | 2.93E+01 | 3.38E+00 |
| 7/17/2024 | 2.91E+01 | 3.37E+00 |
| 10/10/2024 | 2.91E+01 | 3.37E+00 |
| 1/28/2025 | 3.39E+01 | 3.52E+00 |
| 4/10/2025 | 3.16E+01 | 3.45E+00 |

**Current Quarter Data**

| Well No. | Gradient | Detected? | Result | Result >TL(1)? | LN(Result) | LN(Result) >TL(2) |
|---|---|---|---|---|---|---|
| MW373 | Upgradient | Yes | 3.30E+01 | NO | 3.50E+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 Third 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=** 433.125 **S=** 73.688 **CV(1)=** 0.170 **K factor**=** 2.523 **TL(1)=** 6.19E+02 **LL(1)=** N/A

**Statistics-Transformed Background Data** **X=** 6.058 **S=** 0.166 **CV(2)=** 0.027 **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).**

**Current Background Data from Upgradient Wells with Transformed Result**

| Well Number: | MW370 | |
|---|---|---|
| Date Collected | Result | LN(Result) |
| 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 |
| 4/10/2025 | 4.04E+02 | 6.00E+00 |

| Well Number: | MW373 | |
|---|---|---|
| Date Collected | Result | LN(Result) |
| 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 |
| 4/10/2025 | 4.14E+02 | 6.03E+00 |

**Current Quarter Data**

| Well No. | Gradient | Detected? | Result | Result >TL(1)? | LN(Result) | LN(Result) >TL(2) |
|---|---|---|---|---|---|---|
| MW358 | Downgradient | Yes | 1.86E+02 | NO | 5.23E+00 | N/A |
| MW361 | Downgradient | Yes | 5.13E+02 | NO | 6.24E+00 | N/A |
| MW364 | Downgradient | Yes | 3.95E+02 | NO | 5.98E+00 | N/A |
| MW367 | Downgradient | Yes | 3.22E+02 | NO | 5.77E+00 | N/A |
| MW370 | Upgradient | Yes | 4.20E+02 | NO | 6.04E+00 | N/A |
| MW373 | Upgradient | Yes | 4.45E+02 | NO | 6.10E+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 Third Quarter 2025 Statistical Analysis — Current 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 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=** 6.069 | **S=** 0.092 | **CV(1)=**0.015 | **K factor**=** 2.904 | **TL(1)=** 6.34E+00 | **LL(1)=**5.80E+00 |
| **Statistics-Transformed Background Data** | **X=** 1.803 | **S=** 0.015 | **CV(2)=**0.008 | **K factor**=** 2.904 | **TL(2)=** 1.85E+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).**

**Current Background Data from Upgradient Wells with Transformed Result**

| Well Number: | MW370 | |
|---|---|---|
| Date Collected | Result | LN(Result) |
| 7/25/2023 | 6.12E+00 | 1.81E+00 |
| 10/11/2023 | 6.10E+00 | 1.81E+00 |
| 1/24/2024 | 6.20E+00 | 1.82E+00 |
| 4/10/2024 | 5.93E+00 | 1.78E+00 |
| 7/30/2024 | 6.06E+00 | 1.80E+00 |
| 10/10/2024 | 5.98E+00 | 1.79E+00 |
| 1/28/2025 | 6.28E+00 | 1.84E+00 |
| 4/10/2025 | 6.01E+00 | 1.79E+00 |

| Well Number: | MW373 | |
|---|---|---|
| Date Collected | Result | LN(Result) |
| 7/25/2023 | 6.08E+00 | 1.81E+00 |
| 10/11/2023 | 6.14E+00 | 1.81E+00 |
| 1/25/2024 | 6.03E+00 | 1.80E+00 |
| 4/10/2024 | 6.02E+00 | 1.80E+00 |
| 7/30/2024 | 6.04E+00 | 1.80E+00 |
| 10/10/2024 | 5.96E+00 | 1.79E+00 |
| 1/28/2025 | 6.14E+00 | 1.81E+00 |
| 4/10/2025 | 6.01E+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)? |
|---|---|---|---|---|---|---|
| MW361 | Downgradient | Yes | 5.75E+00 | YES | 1.75E+00 | N/A |
| MW364 | Downgradient | Yes | 5.69E+00 | YES | 1.74E+00 | N/A |
| MW367 | Downgradient | Yes | 5.66E+00 | YES | 1.73E+00 | N/A |

**Conclusion of Statistical Analysis on Current Data**

**The test well(s) listed were below the Lower Tolerance Limit, which is evidence of statistically different pH levels 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.*

# C-746-U Third 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=** 8.965 | **S=** 9.766 | **CV(1)=** 1.089 | **K factor**=** 2.523 | **TL(1)=** 3.36E+01 | **LL(1)=**N/A |
| **Statistics-Transformed Background Data** | **X=** 2.334 | **S=** 0.719 | **CV(2)=** 0.308 | **K factor**=** 2.523 | **TL(2)=** 3.13E+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.**

**Current Background Data from Upgradient Wells with Transformed Result**

Well Number: MW370

| Date Collected | Result | LN(Result) |
|---|---|---|
| 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 |
| 4/10/2025 | 3.98E+00 | 1.38E+00 |

Well Number: MW373

| Date Collected | Result | LN(Result) |
|---|---|---|
| 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! |
| 4/10/2025 | 5.28E+00 | 1.66E+00 |

**Current Quarter Data**

| Well No. | Gradient | Detected? | Result | Result >TL(1)? | LN(Result) | LN(Result) >TL(2) |
|---|---|---|---|---|---|---|
| MW364 | Downgradient | Yes | 4.63E+01 | N/A | 3.84E+00 | YES |

**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**

MW364

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.*

# 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

November 3, 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 third quarter 2025 monitoring well data collected from the C-746-S Residential Landfill, C-746-T Inert Landfill, and C-746-U Contained Landfill were performed in accordance with guidance provided in the U.S. Environmental Protection Agency guidance document, *Statistical Analysis of Ground-Water 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 third quarter 2025 and determine groundwater flow rate and direction.

Water levels during this reporting period were measured on July 22-23, 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 $7.94 \times 10^{-4}$ ft/ft for both the URGA and LRGA. 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 $5.24 \times 10^{-4}$ 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. SW073-00045 NWC1 and range from $4.25 \times 10^{2}$ to $7.25 \times 10^{2}$ ft/day ($1.50 \times 10^{-1}$ to $2.56 \times 10^{-1}$ 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.

Groundwater flow beneath the C-746-U Landfill typically trends northeastward toward the Ohio River. As demonstrated on the potentiometric maps for July 2025, the groundwater flow direction in the immediate area of the landfill was to the north.

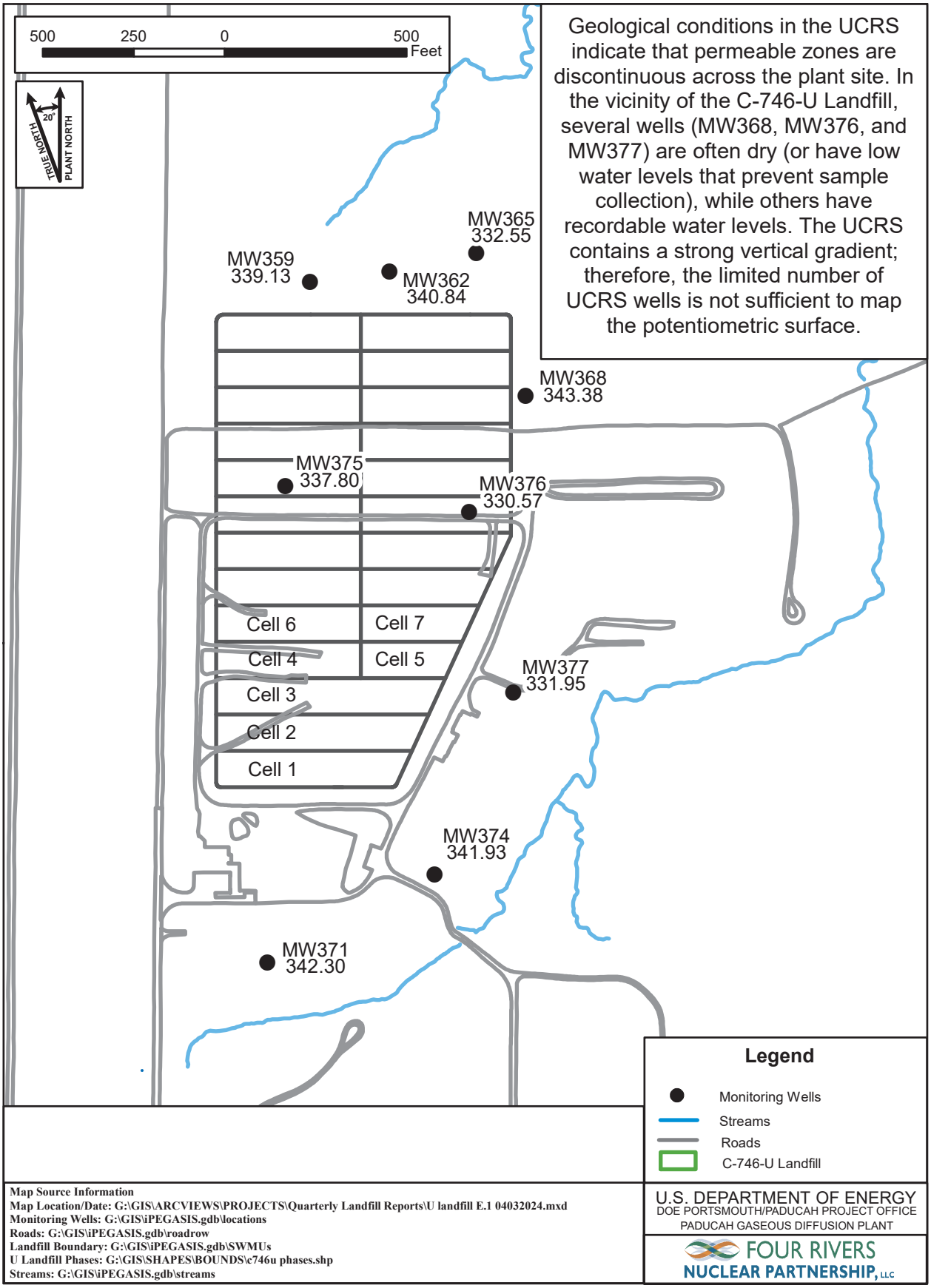


**Figure E.1. Potentiometric Measurements of the Upper Continental Recharge System at the C-746-U Landfill, July 22–23, 2025**

## Table E.1. C-746-U Landfill Third Quarter 2025 (July) Water Levels

| C-746-U Landfill (July 2025) Water Levels | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Raw Data | | *Corrected Data | |
| Date | Time | Well | Formation | Datum Elev (ft amsl) | BP (in Hg) | Delta BP (ft H20) | DTW (ft) | Elev (ft amsl) | DTW (ft) | Elev (ft amsl) |
| 7/22/2025 | 13:03 | MW357 | URGA | 368.77 | 30.02 | -0.01 | 41.60 | 327.17 | 41.59 | 327.18 |
| 7/22/2025 | 13:04 | MW358 | LRGA | 368.92 | 30.02 | -0.01 | 41.75 | 327.17 | 41.74 | 327.18 |
| 7/22/2025 | 13:05 | MW359 | UCRS | 368.91 | 30.02 | -0.01 | 29.79 | 339.12 | 29.78 | 339.13 |
| 7/22/2025 | 13:00 | MW360 | URGA | 362.07 | 30.02 | -0.01 | 34.91 | 327.16 | 34.90 | 327.17 |
| 7/22/2025 | 13:01 | MW361 | LRGA | 361.32 | 30.02 | -0.01 | 34.18 | 327.14 | 34.17 | 327.15 |
| 7/22/2025 | 13:02 | MW362 | UCRS | 361.85 | 30.02 | -0.01 | 21.02 | 340.83 | 21.01 | 340.84 |
| 7/23/2025 | 7:45 | MW363 | URGA | 368.56 | 30.05 | -0.05 | 41.54 | 327.02 | 41.49 | 327.07 |
| 7/22/2025 | 10:16 | MW364 | LRGA | 368.17 | 30.01 | 0.00 | 41.22 | 326.95 | 41.22 | 326.95 |
| 7/22/2025 | 10:15 | MW365 | UCRS | 368.14 | 30.01 | 0.00 | 35.59 | 332.55 | 35.59 | 332.55 |
| 7/22/2025 | 10:17 | MW366 | URGA | 368.95 | 30.01 | 0.00 | 41.72 | 327.23 | 41.72 | 327.23 |
| 7/22/2025 | 10:18 | MW367 | LRGA | 369.37 | 30.01 | 0.00 | 42.15 | 327.22 | 42.15 | 327.22 |
| 7/22/2025 | 10:19 | MW368 | UCRS | 368.98 | 30.01 | 0.00 | 25.60 | 343.38 | 25.60 | 343.38 |
| 7/22/2025 | 9:20 | MW369 | URGA | 364.23 | 30.01 | 0.00 | 35.68 | 328.55 | 35.68 | 328.55 |
| 7/22/2025 | 9:18 | MW370 | LRGA | 365.12 | 30.01 | 0.00 | 36.58 | 328.54 | 36.58 | 328.54 |
| 7/22/2025 | 9:19 | MW371 | UCRS | 364.64 | 30.01 | 0.00 | 22.34 | 342.30 | 22.34 | 342.30 |
| 7/22/2025 | 9:17 | MW372 | URGA | 359.42 | 30.01 | 0.00 | 30.85 | 328.57 | 30.85 | 328.57 |
| 7/22/2025 | 9:15 | MW373 | LRGA | 359.73 | 30.01 | 0.00 | 31.16 | 328.57 | 31.16 | 328.57 |
| 7/22/2025 | 9:16 | MW374 | UCRS | 359.44 | 30.01 | 0.00 | 17.51 | 341.93 | 17.51 | 341.93 |
| 7/22/2025 | 9:12 | MW375 | UCRS | 370.36 | 30.01 | 0.00 | 32.56 | 337.80 | 32.56 | 337.80 |
| 7/22/2025 | 9:13 | MW376 | UCRS | 370.39 | 30.01 | 0.00 | 39.82 | 330.57 | 39.82 | 330.57 |
| 7/22/2025 | 9:14 | MW377 | UCRS | 365.74 | 30.01 | 0.00 | 33.79 | 331.95 | 33.79 | 331.95 |

Reference Barometric Pressure **30.01**

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

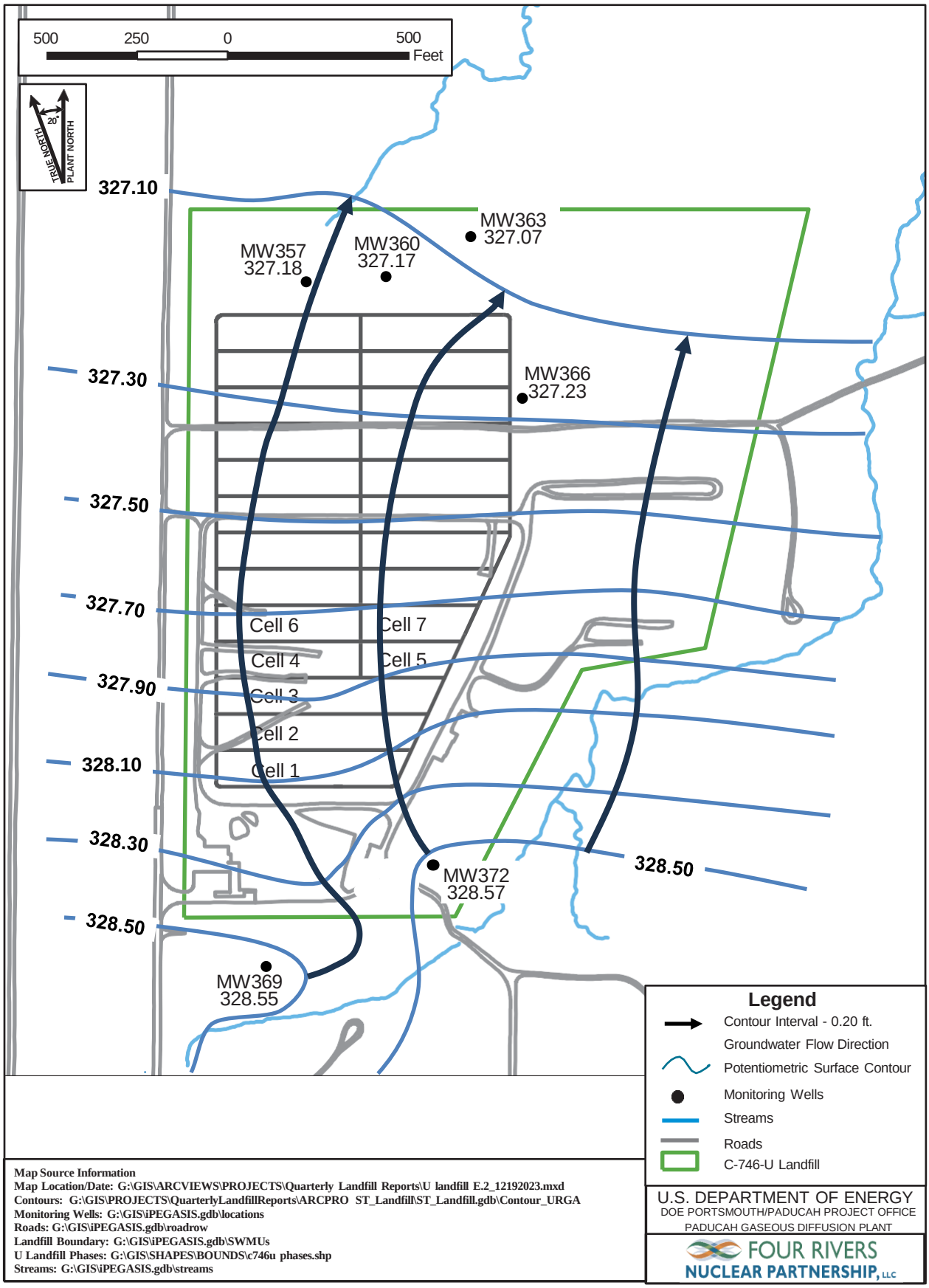


**Figure E.2. Potentiometric Surface of the Upper Regional Gravel Aquifer at the C-746-U Landfill, July 22–23, 2025**

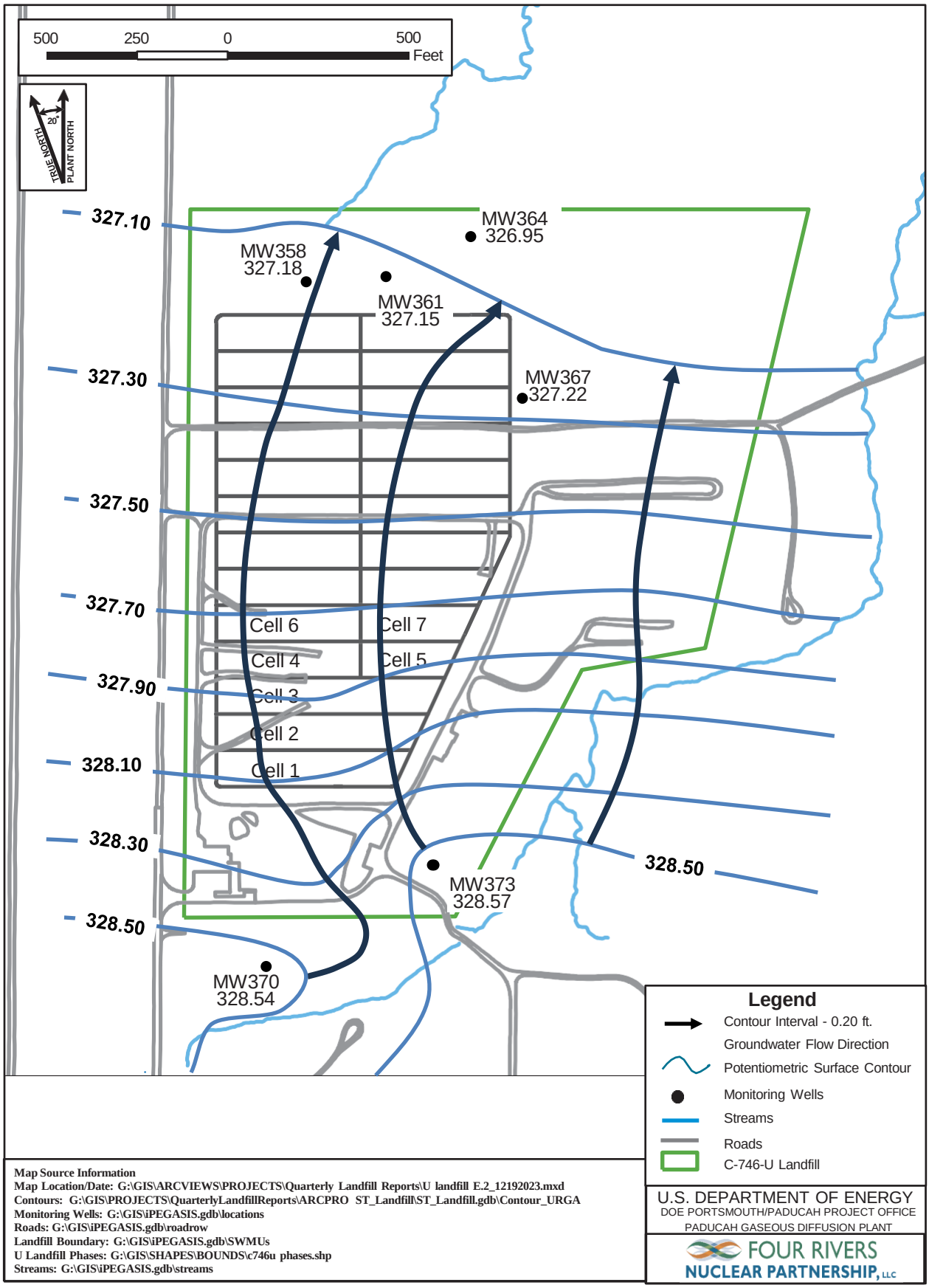


**Figure E.3. Potentiometric Surface of the Lower Regional Gravel Aquifer at the C-746-U Landfill, July 22-23, 2025**

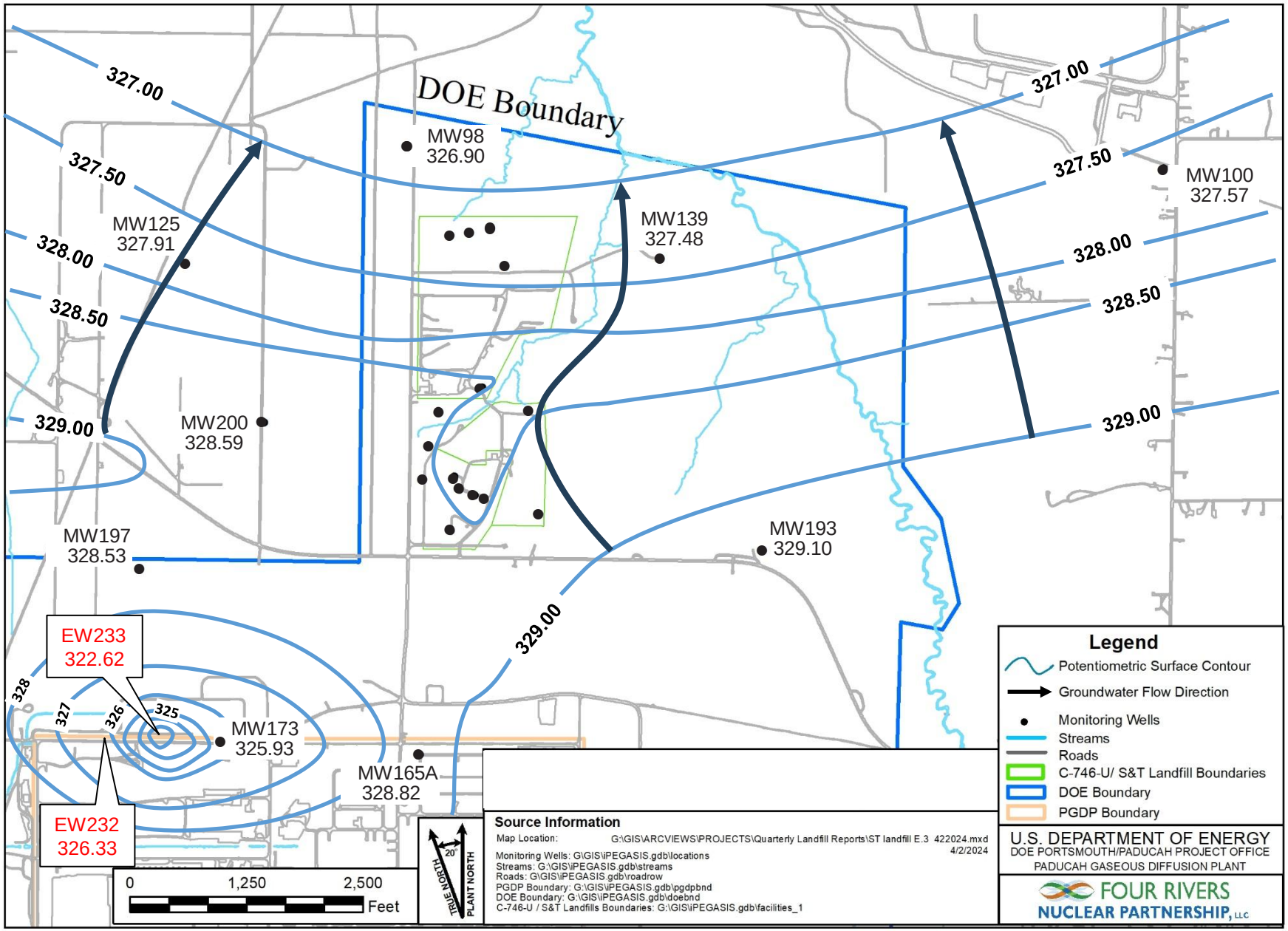


**Figure E.4. Vicinity Potentiometric Surface of the Regional Gravel Aquifer, July 22–23, 2025**

**Table E.2. C-746-U Landfill Hydraulic Gradients**

| | ft/ft |
|---|---|
| Beneath Landfill—Upper RGA | $7.94 \times 10^{-4}$ |
| Beneath Landfill—Lower RGA | $7.94 \times 10^{-4}$ |
| Vicinity | $5.24 \times 10^{-4}$ |

**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 | | | | | |
| $7.25 \times 10^{2}$ | $2.56 \times 10^{-1}$ | $5.76 \times 10^{-1}$ | $2.03 \times 10^{-4}$ | 2.30 | $8.13 \times 10^{-4}$ |
| $4.25 \times 10^{2}$ | $1.50 \times 10^{-1}$ | $3.38 \times 10^{-1}$ | $1.19 \times 10^{-4}$ | 1.35 | $4.77 \times 10^{-4}$ |
| Lower RGA | | | | | |
| $7.25 \times 10^{2}$ | $2.56 \times 10^{-1}$ | $5.76 \times 10^{-1}$ | $2.03 \times 10^{-4}$ | 2.30 | $8.13 \times 10^{-4}$ |
| $4.25 \times 10^{2}$ | $1.50 \times 10^{-1}$ | $3.38 \times 10^{-1}$ | $1.19 \times 10^{-4}$ | 1.35 | $4.77 \times 10^{-4}$ |
| Vicinity | | | | | |
| $7.25 \times 10^{2}$ | $2.56 \times 10^{-1}$ | $3.80 \times 10^{-1}$ | $1.34 \times 10^{-4}$ | 1.52 | $5.36 \times 10^{-4}$ |
| $4.25 \times 10^{2}$ | $1.50 \times 10^{-1}$ | $2.23 \times 10^{-1}$ | $7.85 \times 10^{-5}$ | $8.90 \times 10^{-1}$ | $3.14 \times 10^{-4}$ |

## Table E.4. Regional Third Quarter 2025 (July) Water Levels

| Regional (July 2025) Water Levels | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Raw Data | | *Corrected Data | |
| Date | Time | Well | Aquifer | Datum Elev (ft amsl) | BP (in Hg) | Delta BP (ft H20) | DTW (ft) | Elev (ft amsl) | DTW (ft) | Elev (ft amsl) |
| 7/23/2025 | 7:39 | MW98 | RGA | 370.55 | 30.05 | -0.05 | 43.70 | 326.85 | 43.65 | 326.90 |
| 7/22/2025 | 14:05 | MW100 | RGA | 373.39 | 30.02 | -0.01 | 45.83 | 327.56 | 45.82 | 327.57 |
| 7/22/2025 | 13:26 | MW125 | RGA | 375.57 | 30.01 | 0.00 | 47.66 | 327.91 | 47.66 | 327.91 |
| 7/22/2025 | 10:21 | MW139 | RGA | 363.75 | 30.01 | 0.00 | 36.27 | 327.48 | 36.27 | 327.48 |
| 7/22/2025 | 14:20 | MW165A | RGA | 380.94 | 30.02 | -0.01 | 52.13 | 328.81 | 52.12 | 328.82 |
| 7/22/2025 | 14:25 | MW173 | RGA | 373.63 | 30.02 | -0.01 | 47.71 | 325.92 | 47.70 | 325.93 |
| 7/22/2025 | 13:51 | MW193 | RGA | 368.30 | 30.02 | -0.01 | 39.21 | 329.09 | 39.20 | 329.10 |
| 7/22/2025 | 13:38 | MW197 | RGA | 368.39 | 30.02 | -0.01 | 39.87 | 328.52 | 39.86 | 328.53 |
| 7/22/2025 | 13:06 | MW200 | RGA | 378.70 | 30.02 | -0.01 | 50.12 | 328.58 | 50.11 | 328.59 |
| Reference Barometric Pressure | | | **30.01** | | | | | | | |

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 third 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** | Technetium-99 | MW366 |
| **Lower Regional Gravel Aquifer** | Technetium-99 | MW364 |

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.

9/3/2025

**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** | | | | | | | | | | | | | | | | | | | | | |
| Quarter 1, 2004 | | | | | | | | | | | | | | | ■ | | | | | | |
| Quarter 2, 2004 | | | | | | | | | | | | | | | ■ | | | | | | ■ |
| Quarter 3, 2004 | | | | | | | | | | | | | | | ■ | | | | | | |
| Quarter 4, 2004 | | | | | | | | | | | | | | | ■ | | | | | | |
| 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 4, 2011 | | | | | | | | | | | | | | | ■ | | | | | | |
| Quarter 1, 2012 | | | | | | | | | | ■ | | | | | | | | | | | |
| Quarter 2, 2012 | | | | | | | | | | ■ | | | | | | | | ■ | | | |
| Quarter 3, 2012 | | | | | | | | | | ■ | | | | | ■ | | | | | | |
| Quarter 4, 2012 | | | | | | | | | | | | | | | ■ | | | | | | ■ |
| Quarter 1, 2013 | | | | | | | | | | | | | | | ■ | | | | | | ■ |
| Quarter 3, 2013 | | | | | | | | | | | | | | | ■ | | | | | | ■ |
| Quarter 4, 2013 | | | | | | | | | | | | | | | ■ | | | | | | |
| Quarter 1, 2014 | | | | | | | | | | | | | | | ■ | | | | | | |
| Quarter 4, 2014 | | | | | | | | | | | | | | | ■ | | | | | | |
| Quarter 1, 2015 | | | | | | | | | | | | | | | ■ | | | | | | |
| Quarter 2, 2015 | | | | | | | | | | | | | | | | ■ | | | | | |
| Quarter 4, 2015 | | | | | | | | | | | | | | | ■ | | | | ■ | | |
| Quarter 3, 2016 | | | | | | | | | | | | | | | | | | | | ■ | |
| Quarter 4, 2016 | | | | | | | | | | | | | | ■ | | | | | | | |
| Quarter 2, 2017 | | | | | | | | | | | | | | | | | | | | ■ | |
| Quarter 3, 2017 | | | | | | | | | | | | | | | | | | | | ■ | |
| Quarter 4, 2017 | | | | | | | | | | | | | | | ■ | | | | | ■ | |
| Quarter 1, 2018 | | | | | | | | | | | | | | | | | | | ■ | ■ | |
| Quarter 2, 2018 | | | | | | | | | | | | | | ■ | | | | | | | |
| Quarter 3, 2018 | | | | | | | | | | | | | | | | | | | | ■ | |
| Quarter 4, 2018 | | | | | | | | | | | | | | | ■ | | | | | ■ | |

**Chart of MCL and Historical UTL Exceedances**
**for the C-746-U Contained Landfill (Continued)**

| | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Quarter 1, 2019 | | | | | | | | | | | | | | | | | | | ■ | |
| Quarter 2, 2019 | | | | | | | | | | | | | ■ | | | | | | ■ | |
| Quarter 3, 2019 | | | | | | | | | | | | | ■ | ■ | | | | | ■ | |
| Quarter 4, 2019 | | | | | | | | | ■ | | | | | ■ | | | | | ■ | |
| Quarter 1, 2020 | | | | | | | | ■ | | | | | | ■ | | | | | ■ | |
| Quarter 2, 2020 | | | | | | | | | | | | | | | | | | | ■ | |
| 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 | | | | | | | | | | | | | | | | | | | | | ✱ |
| Quarter 3, 2006 | | | | | | | | | | | | | | | ✱ | | | | | | |
| Quarter 2, 2008 | | | | | | | | | | | | | | | ✱ | | | | | | |
| 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 3, 2014 | | | | | | | | | | | | | | | ✱ | | | | | | ✱ |
| Quarter 4, 2014 | | | | | | | | | | | | | | | ✱ | | | | | | |
| Quarter 2, 2015 | | | | | | | | | | | | | | | ✱ | | | | | | |
| Quarter 3, 2015 | | | | | | | | | | | | | | | ✱ | | | | | | |
| Quarter 4, 2015 | | | | | | | | | | | | | | | ✱ | | | | | | |
| Quarter 1, 2016 | | | | | | | | | | | | | | | ✱ | | | | | | |
| Quarter 2, 2016 | | | | | | | | | | | | | | | ✱ | | | | | | |
| Quarter 2, 2017 | ✱ | | | | | | | | | | | | | | | | | | | | |
| Quarter 1, 2018 | ✱ | | | | | | | | | | | | | | | | | | | | |
| Quarter 3, 2018 | ✱ | | | | | | | | | | | | | | | | | | | | |
| 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 | | | | | | | | | | | | | | | ✱ | | | | | | ✱ |
| Quarter 3, 2025 | | | | | | | | ✱ | | | | | | | ✱ | | | | | | ✱ |
| **CARBON DISULFIDE** | | | | | | | | | | | | | | | | | | | | | |
| Quarter 3, 2003 | | | | | | | | | | ✱ | | | | | | | | | | | |
| Quarter 2, 2005 | | | | | | | ✱ | | | | | | | | | | | | | | |
| Quarter 3, 2005 | | | | | | ✱ | | | | | | | | | | | | | | | |
| Quarter 4, 2005 | | | | | | ✱ | | | | | | | | | | | | | | | |
| Quarter 1, 2006 | | | | | | ✱ | | | | | | | | | | | | | | | |
| Quarter 2, 2006 | | | | | | ✱ | | | | | | | | | | | | | | | |

**Chart of MCL and Historical UTL Exceedances**
**for the C-746-U Contained Landfill (Continued)**

| | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Quarter 3, 2010 | | * | | | | | | | | | * | | | | | | | | | |
| Quarter 4, 2010 | | | | | | | | | | | | | | * | | | | | | |
| Quarter 1, 2011 | | | | | | | | | | | | | | | * | | | | | |
| **CHEMICAL OXYGEN DEMAND** | | | | | | | | | | | | | | | | | | | | |
| 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 | | | | | | * | | | | | | | | | | | | * | * | |
| Quarter 1, 2006 | | | | | | | | | | | | | | | | | | | * | |
| Quarter 4, 2016 | | | | | | | | | | | | | | | | | | * | | |
| Quarter 1, 2017 | | | | | | | | | | | * | | | | | | | | | |
| Quarter 2, 2019 | | | | | | | | | | | | * | | | * | | | | | |
| Quarter 3, 2019 | | | | | | | | | | | | | | | * | | | | | * |
| Quarter 4, 2019 | | | | | | | | | | | | | | | * | | | | | |
| Quarter 4, 2024 | | | | | | | | | | | | * | | | | | | | | |
| **CHLORIDE** | | | | | | | | | | | | | | | | | | | | |
| Quarter 1, 2006 | | | | | | | | | | | | | | | | | | | * | |
| Quarter 2, 2014 | | | | | | | | | | | | | | | * | | | | | |
| **COBALT** | | | | | | | | | | | | | | | | | | | | |
| Quarter 3, 2003 | * | | | | | | * | | | * | * | | * | * | * | * | * | * | * | |
| Quarter 1, 2004 | | | | | | | | | | | | | | * | | | | | | |
| 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 | | | | | | | | | | * | | | | | | | | | | | |
| Quarter 1, 2003 | | | | | | | | | | * | | | | | | | | | | | |
| Quarter 2, 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 | | | | | | | | | | | | | | | * | | | | | | |
| Quarter 2, 2015 | | | | | | | | | | | | | | | * | | | | | | |
| Quarter 3, 2015 | | | | | | | | | | | | | | | * | | | | | | |
| Quarter 4, 2015 | | | | | | | | | | | | | | | * | | | | | | |
| Quarter 1, 2016 | | | | | | | | | | | | | | | * | | | | | | |
| Quarter 2, 2016 | | | | | | | | | | | | | | | * | | | | | | |
| Quarter 3, 2016 | | | | | | | | | | | | | | | * | | | | | | |
| 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 1, 2022 | | | | | | | | | | | | | | | * | | | | | | |
| Quarter 2, 2022 | | | | | | | | | | | | | | | * | | | | | | |
| Quarter 3, 2022 | | | | | | | | | | | | | | | * | | | | | | |

**Chart of MCL and Historical UTL Exceedances**
**for the C-746-U Contained Landfill (Continued)**

| | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 | | | | | | | | | | | | | | * | | | | | * |
| Quarter 3, 2025 | | | | | | | | | | | | | | * | | | | | * |
| **CYANIDE** | | | | | | | | | | | | | | | | | | | |
| Quarter 2, 2025 | | | | | | | | | | | | | | | | | * | | |
| **DISSOLVED OXYGEN** | | | | | | | | | | | | | | | | | | | |
| Quarter 1, 2003 | | | | | * | * | | | | * | | | | | | | | | |
| Quarter 3, 2003 | | | | | * | | | | | * | | | | | | | | | |
| Quarter 4, 2003 | | | | | * | | | | | | | | | | | | | | |
| Quarter 1, 2004 | | | | | * | | | | | | | | | | | | | | |
| Quarter 2, 2004 | | | | | | | | * | | | | | | | * | | | | |
| Quarter 1, 2005 | | | | | * | | | | | | | | | | | | | | |
| Quarter 2, 2005 | | | | | | | | * | | | | | | | | | | | |
| Quarter 1, 2006 | | | | | * | | | | | | | | | | | | | | |
| Quarter 2, 2006 | | | | | * | | | * | | | | | | | | | | | |
| Quarter 3, 2006 | | | | | * | | | * | | | | | | | | | | | |
| Quarter 4, 2006 | | | | | * | | | | * | | | | | | | | | | |
| 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 | | | | | ✱ | ✱ | | ✱ | ✱ | | | | | | | | | | | ✱ | ✱ |
| Quarter 3, 2010 | | | | | ✱ | ✱ | | | | | | | | | | | | | | | |
| 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 | | | | | ✱ | ✱ | ✱ | ✱ | | | | | | | | | | | | | |
| 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 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 | | ✱ | | | ✱ | ✱ | ✱ | ✱ | ✱ | ✱ | | | | | | | | | | ✱ | |
| Quarter 3, 2025 | ✱ | ✱ | | | ✱ | ✱ | ✱ | ✱ | | | | | | ✱ | | | ✱ | | | ✱ | |
| **DISSOLVED SOLIDS** | | | | | | | | | | | | | | | | | | | | | |
| Quarter 4, 2002 | | | | | | | | | | ✱ | | | | | | | | | | | |

**Chart of MCL and Historical UTL Exceedances**
**for the C-746-U Contained Landfill (Continued)**

| | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Quarter 1, 2003 | | | | | | | | | | * | | | | | | | | | | |
| Quarter 2, 2003 | | | | | | | | | | * | | | | | | | | | | |
| Quarter 3, 2003 | | | | | | | * | | | * | * | | | | | | | | | |
| Quarter 4, 2003 | | | | | | | | | | * | | | | | | | | | | |
| Quarter 3, 2005 | | | | | | * | | | | | | | | | | | | | | |
| Quarter 4, 2006 | | | | | | | | | | | | | | | * | | | | | |
| 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 | | | | | | | | | | | | | | | ✱ | | | | | | ✱ |
| Quarter 3, 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 | | | | | | | | | | | | | | | ✱ | | | | | | |

**Chart of MCL and Historical UTL Exceedances**
**for the C-746-U Contained Landfill (Continued)**

| | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 | | | | | | | | | | | | | | | * | | | | | | |
| Quarter 3, 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 | | ✱ | | | | ✱ | ✱ | ✱ | ✱ | ✱ | | ✱ | ✱ | | | | ✱ | ✱ | ✱ | ✱ | ✱ |

**Chart of MCL and Historical UTL Exceedances**
**for the C-746-U Contained Landfill (Continued)**

| | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 | * | * | | | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| Quarter 3, 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 | | | | | | | * | | | | | | | | | | | | | | |

**Chart of MCL and Historical UTL Exceedances**
**for the C-746-U Contained Landfill (Continued)**

| | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 | | | | | | | | | | | | | | | | ✱ | | | | | |
| Quarter 3, 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 | | ✱ | | | ✱ | ✱ | | | | | | | | | ✱ | | | | | | |

**Chart of MCL and Historical UTL Exceedances**
**for the C-746-U Contained Landfill (Continued)**

| | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 | * | * | | | * | * | * | * | * | | | | | | * | | | | | | |
| Quarter 3, 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 | | | | | | | | | | | | | | | | | | * | | | |

**Chart of MCL and Historical UTL Exceedances**
**for the C-746-U Contained Landfill (Continued)**

| | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 | | | | | | | | | | | | | | | | ✱ | ✱ | ✱ | | | |
| Quarter 3, 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 | | | | | | | | | | | | | | | ■ | | | | | ■ | ■ |

**Chart of MCL and Historical UTL Exceedances**
**for the C-746-U Contained Landfill (Continued)**

| | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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: | July 21, 2025 | Time: | 0855 | Monitor: | Michael Hideg |
|---|---|---|---|---|---|

**Weather Conditions: Partly Cloudy, Approximately 84ºF, humidity: 79%**

**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: 2025.07.28 16:14:31 -05'00'

**Signature** **Date**

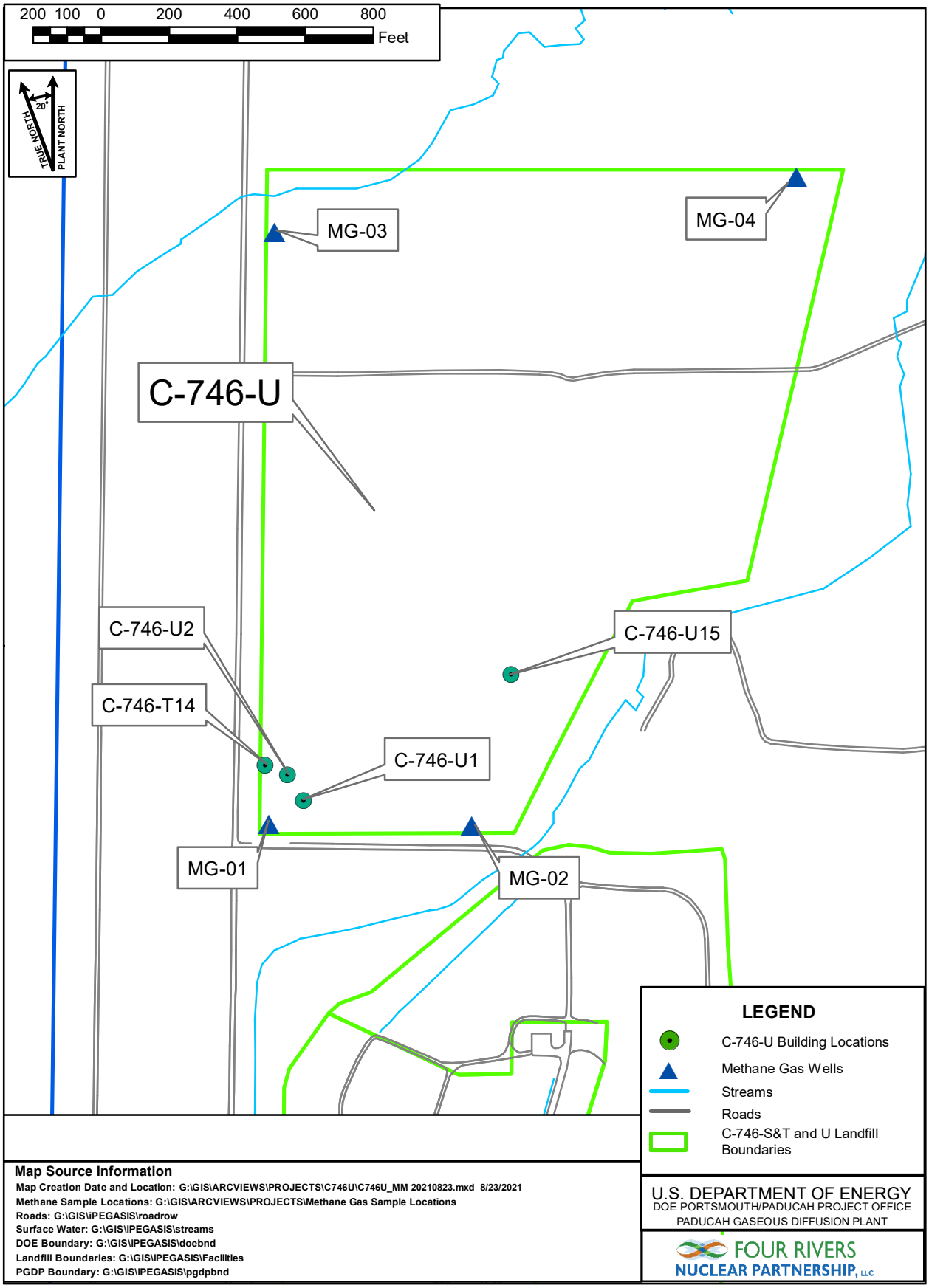


**Figure H.1. C-746-U Landfill Methane Monitoring Locations**

# 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:** 3rd Quarter 2025

**SAMPLE ID:** L150US4-25 Sample Type: REG

| Parameter | Qualifier | Result | Units | Reporting Limit | Date Collected | Rad Error (+/-) | TPU | Method | Validation Code |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | | 8.55 | mg/L | 2 | 7/8/2025 | | | EPA-300.0 | X |
| Sulfate | | 15.4 | mg/L | 4 | 7/8/2025 | | | EPA-300.0 | X |
| Conductivity | | 183 | µmhos/cm | | 7/8/2025 | | | FS | X |
| pH | | 8.26 | Std Unit | | 7/8/2025 | | | FS | X |
| Iron | | 0.81 | mg/L | 0.1 | 7/8/2025 | | | EPA-200.8 | X |
| Sodium | | 5.98 | mg/L | 0.25 | 7/8/2025 | | | EPA-200.8 | X |
| Uranium | | 0.000547 | mg/L | 0.0002 | 7/8/2025 | | | EPA-200.8 | X |
| Alpha activity | U | 2.67 | pCi/L | 4.99 | 7/8/2025 | 3.18 | 3.21 | SW846-9310 | X |
| Beta activity | U | 3.76 | pCi/L | 9.44 | 7/8/2025 | 5.48 | 5.51 | SW846-9310 | X |
| Dissolved Solids | | 136 | mg/L | 10 | 7/8/2025 | | | EPA-160.1 | X |
| Suspended Solids | | 36.3 | mg/L | 6.1 | 7/8/2025 | | | EPA-160.2 | X |
| Chemical Oxygen Demand (COD) | | 22.3 | mg/L | 20 | 7/8/2025 | | | EPA-410.4 | X |
| Total Solids | | 162 | mg/L | 10 | 7/8/2025 | | | SM-2540B | X |
| Total Organic Carbon (TOC) | | 7.66 | mg/L | 1 | 7/8/2025 | | | 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:** 3rd Quarter 2025

**SAMPLE ID:** L154US4-25 Sample Type: REG

| Parameter | Qualifier | Result | Units | Reporting Limit | Date Collected | Rad Error (+/-) | TPU | Method | Validation Code |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | | 1.52 | mg/L | 0.2 | 7/1/2025 | | | EPA-300.0 | X |
| Sulfate | | 1.61 | mg/L | 0.4 | 7/1/2025 | | | EPA-300.0 | X |
| Conductivity | | 145 | µmhos/cm | | 7/1/2025 | | | FS | X |
| pH | | 7.22 | Std Unit | | 7/1/2025 | | | FS | X |
| Iron | | 2.16 | mg/L | 0.1 | 7/1/2025 | | | EPA-200.8 | X |
| Sodium | | 2.13 | mg/L | 0.25 | 7/1/2025 | | | EPA-200.8 | X |
| Uranium | | 0.000863 | mg/L | 0.0002 | 7/1/2025 | | | EPA-200.8 | X |
| Alpha activity | U | 6.5 | pCi/L | 7.39 | 7/1/2025 | 5.19 | 5.29 | SW846-9310 | X |
| Beta activity | U | 8.92 | pCi/L | 10.3 | 7/1/2025 | 6.58 | 6.74 | SW846-9310 | X |
| Dissolved Solids | | 94 | mg/L | 10 | 7/1/2025 | | | EPA-160.1 | X |
| Suspended Solids | * | 3.4 | mg/L | 2.5 | 7/1/2025 | | | EPA-160.2 | X |
| Chemical Oxygen Demand (COD) | B | 48.4 | mg/L | 20 | 7/1/2025 | | | EPA-410.4 | X |
| Total Solids | * | 10.8 | mg/L | 1.54 | 7/1/2025 | | | SM-2540B | X |
| Total Organic Carbon (TOC) | | 10.7 | mg/L | 1 | 7/1/2025 | | | 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:** 3rd Quarter 2025

**SAMPLE ID:** L351US4-25 Sample Type: REG

| Parameter | Qualifier | Result | Units | Reporting Limit | Date Collected | Rad Error (+/-) | TPU | Method | Validation Code |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | | 3.33 | mg/L | 0.2 | 7/1/2025 | | | EPA-300.0 | X |
| Sulfate | | 4.2 | mg/L | 0.4 | 7/1/2025 | | | EPA-300.0 | X |
| Conductivity | | 205 | µmhos/cm | | 7/1/2025 | | | FS | X |
| pH | | 7.02 | Std Unit | | 7/1/2025 | | | FS | X |
| Iron | | 1.45 | mg/L | 0.1 | 7/1/2025 | | | EPA-200.8 | X |
| Sodium | | 6 | mg/L | 0.25 | 7/1/2025 | | | EPA-200.8 | X |
| Uranium | | 0.00624 | mg/L | 0.0002 | 7/1/2025 | | | EPA-200.8 | X |
| Alpha activity | | 15.3 | pCi/L | 7.19 | 7/1/2025 | 7.06 | 7.49 | SW846-9310 | X |
| Beta activity | | 39.7 | pCi/L | 10.4 | 7/1/2025 | 9.6 | 11.6 | SW846-9310 | X |
| Dissolved Solids | | 131 | mg/L | 10 | 7/1/2025 | | | EPA-160.1 | X |
| Suspended Solids | * | 31.5 | mg/L | 3.79 | 7/1/2025 | | | EPA-160.2 | X |
| Chemical Oxygen Demand (COD) | B | 31 | mg/L | 20 | 7/1/2025 | | | EPA-410.4 | X |
| Total Solids | * | 167 | mg/L | 10 | 7/1/2025 | | | SM-2540B | X |
| Total Organic Carbon (TOC) | | 9.1 | mg/L | 1 | 7/1/2025 | | | 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 value. |
| L | LCS and/or LCSD recovery outside of control limits. |
| L1 | LCS/LCSD RPD outside acceptance criteria. |
| N | MS and/or MSD recovery outside of control limits. |
| N1 | MS/MSD RPD outside of 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.) |
| W | Post-digestion spike recovery outside of control limits. |
| W1 | Post-digestion spike and post-digestion spike duplicate RPD outside of control limits. |
| X | Other specific flags and footnotes may be required to properly define the results. |
| Y1 | MS and/or MSD recovery outside of control limits. |
| 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 CERTIFICATES 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,
Address : LLC
5600 Hobbs Road

Kevil, Kentucky 42053 Report Date: October 1, 2025

Contact: Ms. Jaime Morrow

Project: C-746-U Landfill Surface Water Quarterly(US25-04)

Client Sample ID: L154US4-25
Sample ID: 731228001
Matrix: WS
Collect Date: 01-JUL-25
Receive Date: 02-JUL-25
Collector: Client

Project: FRNP00707
Client ID: FRNP007

| 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 | 6.50 | +/-5.19 | 7.39 | +/-5.29 | 15.0 | pCi/L | | | JE1 | 07/08/25 | 1609 | 2823704 | 1 |
| Beta | U | 8.92 | +/-6.58 | 10.3 | +/-6.74 | 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,
Address : LLC
5600 Hobbs Road

Kevil, Kentucky 42053

Report Date: October 1, 2025

Contact: Ms. Jaime Morrow

Project: C-746-U Landfill Surface Water Quarterly(US25-04)

Client Sample ID: L351US4-25
Sample ID: 731228002
Matrix: WS
Collect Date: 01-JUL-25
Receive Date: 02-JUL-25
Collector: Client

Project: FRNP00707
Client ID: FRNP007

| 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 | | 15.3 | +/-7.06 | 7.19 | +/-7.49 | 15.0 | pCi/L | | | JE1 | 07/08/25 | 1609 | 2823704 | 1 |
| Beta | | 39.7 | +/-9.60 | 10.4 | +/-11.6 | 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*

Report Date: October 1, 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(US25-04)

Client Sample ID: L154US4-25
Sample ID: 731228001
Matrix: WS
Collect Date: 01-JUL-25 08:06
Receive Date: 02-JUL-25
Collector: Client

Project: FRNP00707
Client ID: FRNP007

| 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 | | 10.7 | 0.330 | 1.00 | mg/L | | 1 | KB3 | 07/04/25 | 0709 | 2823818 | 1 |
| **Ion Chromatography** | | | | | | | | | | | | |
| **EPA 300.0 Anions (Chloride and Sulfate) "As Received"** | | | | | | | | | | | | |
| Chloride | | 1.52 | 0.0670 | 0.200 | mg/L | | 1 | TXT1 | 07/02/25 | 2208 | 2823507 | 2 |
| Sulfate | | 1.61 | 0.133 | 0.400 | mg/L | | 1 | | | | | |
| **Metals Analysis-ICP-MS** | | | | | | | | | | | | |
| **200.8/200.2 MIMICP Metals- Fe Na U "As Received"** | | | | | | | | | | | | |
| Iron | | 2.16 | 0.0330 | 0.100 | mg/L | 1.00 | 1 | BAJ | 07/08/25 | 1628 | 2823440 | 3 |
| Sodium | | 2.13 | 0.0800 | 0.250 | mg/L | 1.00 | 1 | | | | | |
| Uranium | | 0.000863 | 0.0000670 | 0.000200 | mg/L | 1.00 | 1 | | | | | |
| **Solids Analysis** | | | | | | | | | | | | |
| **EPA 160.1 Solids, Dissolved "As Received"** | | | | | | | | | | | | |
| Total Dissolved Solids | | 94.0 | 2.38 | 10.0 | mg/L | | | CH6 | 07/03/25 | 1232 | 2823594 | 4 |
| **EPA 160.2 Total Suspended Liq "As Received"** | | | | | | | | | | | | |
| Total Suspended Solids | * | 3.40 | 0.570 | 2.50 | mg/L | | | SC1 | 07/08/25 | 0950 | 2825184 | 5 |
| **SM 2540 B Solids, Total "As Received"** | | | | | | | | | | | | |
| Total Solids | * | 10.8 | 0.968 | 1.54 | mg/L | | | SC1 | 07/08/25 | 1325 | 2825185 | 6 |
| **Spectrometric Analysis** | | | | | | | | | | | | |
| **EPA 410.4 Chem. Oxygen Demand "As Received"** | | | | | | | | | | | | |
| COD | B | 48.4 | 8.95 | 20.0 | mg/L | | 1 | BR2 | 07/09/25 | 1432 | 2826203 | 7 |

The following Prep Methods were performed:

| Method | Description | Analyst | Date | Time | Prep Batch |
|---|---|---|---|---|---|
| EPA 200.2 | ICP-MS 200.2 PREP | MM12 | 07/07/25 | 1020 | 2823439 |

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# *Certificate of Analysis*

Report Date: October 1, 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(US25-04) |

| | | | |
|---|---|---|---|
| Client Sample ID: | L154US4-25 | Project: | FRNP00707 |
| Sample ID: | 731228001 | Client ID: | FRNP007 |

| 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 160.1 | |
| 5 | EPA 160.2 | |
| 6 | SM 2540B | |
| 7 | 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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# *Certificate of Analysis*

Report Date: October 1, 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(US25-04) |

| | | | |
|---|---|---|---|
| Client Sample ID: | L351US4-25 | Project: | FRNP00707 |
| Sample ID: | 731228002 | Client ID: | FRNP007 |
| Matrix: | WS | | |
| Collect Date: | 01-JUL-25 07:42 | | |
| Receive Date: | 02-JUL-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 | | 9.10 | 0.330 | 1.00 | mg/L | | 1 | KB3 | 07/04/25 | 0740 | 2823818 | 1 |
| Ion Chromatography | | | | | | | | | | | | |
| EPA 300.0 Anions (Chloride and Sulfate) "As Received" | | | | | | | | | | | | |
| Chloride | | 3.33 | 0.0670 | 0.200 | mg/L | | 1 | TXT1 | 07/02/25 | 2239 | 2823507 | 2 |
| Sulfate | | 4.20 | 0.133 | 0.400 | mg/L | | 1 | | | | | |
| Metals Analysis-ICP-MS | | | | | | | | | | | | |
| 200.8/200.2 MIMICP Metals- Fe Na U "As Received" | | | | | | | | | | | | |
| Iron | | 1.45 | 0.0330 | 0.100 | mg/L | 1.00 | 1 | BAJ | 07/08/25 | 1639 | 2823440 | 3 |
| Sodium | | 6.00 | 0.0800 | 0.250 | mg/L | 1.00 | 1 | | | | | |
| Uranium | | 0.00624 | 0.0000670 | 0.000200 | mg/L | 1.00 | 1 | | | | | |
| Solids Analysis | | | | | | | | | | | | |
| EPA 160.1 Solids, Dissolved "As Received" | | | | | | | | | | | | |
| Total Dissolved Solids | | 131 | 2.38 | 10.0 | mg/L | | | CH6 | 07/03/25 | 1232 | 2823594 | 4 |
| EPA 160.2 Total Suspended Liq "As Received" | | | | | | | | | | | | |
| Total Suspended Solids | * | 31.5 | 0.864 | 3.79 | mg/L | | | SC1 | 07/08/25 | 0950 | 2825184 | 5 |
| SM 2540 B Solids, Total "As Received" | | | | | | | | | | | | |
| Total Solids | * | 167 | 6.29 | 10.0 | mg/L | | | SC1 | 07/08/25 | 1325 | 2825185 | 6 |
| Spectrometric Analysis | | | | | | | | | | | | |
| EPA 410.4 Chem. Oxygen Demand "As Received" | | | | | | | | | | | | |
| COD | B | 31.0 | 8.95 | 20.0 | mg/L | | 1 | BR2 | 07/09/25 | 1432 | 2826203 | 7 |

The following Prep Methods were performed:

| Method | Description | Analyst | Date | Time | Prep Batch |
|---|---|---|---|---|---|
| EPA 200.2 | ICP-MS 200.2 PREP | MM12 | 07/07/25 | 1020 | 2823439 |

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# *Certificate of Analysis*

Report Date: October 1, 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(US25-04) |

| | | | |
|---|---|---|---|
| Client Sample ID: | L351US4-25 | Project: | FRNP00707 |
| Sample ID: | 731228002 | Client ID: | FRNP007 |

| 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 160.1 | |
| 5 | EPA 160.2 | |
| 6 | SM 2540B | |
| 7 | 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 |

# ATTACHMENT I2

# GEL LABORATORIES CERTIFICATES OF ANALYSIS

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## *Certificate of Analysis*

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

Kevil, Kentucky 42053 Report Date: October 1, 2025

Contact: Ms. Jaime Morrow

Project: C-746-U Landfill Surface Water Quarterly(US25-04)

Client Sample ID: L150US4-25
Sample ID: 732109001
Matrix: WS
Collect Date: 08-JUL-25
Receive Date: 09-JUL-25
Collector: Client

Project: FRNP00707
Client ID: FRNP007

| 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 | 2.67 | +/-3.18 | 4.99 | +/-3.21 | 15.0 | pCi/L | | | CT3 | 07/14/25 | 1627 | 2826408 | 1 |
| Beta | U | 3.76 | +/-5.48 | 9.44 | +/-5.51 | 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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# *Certificate of Analysis*

Report Date: October 1, 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(US25-04) |

| | | | |
|---|---|---|---|
| Client Sample ID: | L150US4-25 | Project: | FRNP00707 |
| Sample ID: | 732109001 | Client ID: | FRNP007 |
| Matrix: | WS | | |
| Collect Date: | 08-JUL-25 12:32 | | |
| Receive Date: | 09-JUL-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 | | 7.66 | 0.330 | 1.00 | mg/L | | 1 | KB3 | 07/10/25 | 2217 | 2826240 | 1 |
| Ion Chromatography | | | | | | | | | | | | |
| EPA 300.0 Anions (Chloride and Sulfate) "As Received" | | | | | | | | | | | | |
| Chloride | | 8.55 | 0.670 | 2.00 | mg/L | | 10 | TXT1 | 07/09/25 | 1915 | 2826511 | 2 |
| Sulfate | | 15.4 | 1.33 | 4.00 | mg/L | | 10 | | | | | |
| Metals Analysis-ICP-MS | | | | | | | | | | | | |
| 200.8/200.2 MIMICP Metals- Fe Na U "As Received" | | | | | | | | | | | | |
| Iron | | 0.810 | 0.0330 | 0.100 | mg/L | 1.00 | 1 | RM4 | 08/02/25 | 0513 | 2826464 | 3 |
| Sodium | | 5.98 | 0.0800 | 0.250 | mg/L | 1.00 | 1 | | | | | |
| Uranium | | 0.000547 | 0.0000670 | 0.000200 | mg/L | 1.00 | 1 | | | | | |
| Solids Analysis | | | | | | | | | | | | |
| EPA 160.1 Solids, Dissolved "As Received" | | | | | | | | | | | | |
| Total Dissolved Solids | | 136 | 2.38 | 10.0 | mg/L | | | SC1 | 07/11/25 | 1608 | 2826867 | 4 |
| EPA 160.2 Total Suspended Liq "As Received" | | | | | | | | | | | | |
| Total Suspended Solids | | 36.3 | 1.39 | 6.10 | mg/L | | | SC1 | 07/10/25 | 1009 | 2826866 | 5 |
| SM 2540 B Solids, Total "As Received" | | | | | | | | | | | | |
| Total Solids | | 162 | 6.29 | 10.0 | mg/L | | | SC1 | 07/10/25 | 0949 | 2826865 | 6 |
| Spectrometric Analysis | | | | | | | | | | | | |
| EPA 410.4 Chem. Oxygen Demand "As Received" | | | | | | | | | | | | |
| COD | | 22.3 | 8.95 | 20.0 | mg/L | | 1 | JW2 | 07/11/25 | 1534 | 2827819 | 7 |

The following Prep Methods were performed:

| Method | Description | Analyst | Date | Time | Prep Batch |
|---|---|---|---|---|---|
| EPA 200.2 | ICP-MS 200.2 PREP | BB2 | 07/10/25 | 0915 | 2826463 |

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# *Certificate of Analysis*

Report Date: October 1, 2025

| | |
|---|---|
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| Address : | 5600 Hobbs Road |
| | Kevil, Kentucky 42053 |
| Contact: | Ms. Jaime Morrow |
| Project: | C-746-U Landfill Surface Water Quarterly(US25-04) |

| | | | |
|---|---|---|---|
| Client Sample ID: | L150US4-25 | Project: | FRNP00707 |
| Sample ID: | 732109001 | Client ID: | FRNP007 |

| 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 160.1 | |
| 5 | EPA 160.2 | |
| 6 | SM 2540B | |
| 7 | 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 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.*

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# 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:7/16/25** | | | | | |
| 1017 | 66.4 | 393 | 6.07 | 5.01 | 4.71 |
| 1022 | 68.7 | 386 | 5.88 | 4.35 | 3.18 |
| 1027 | 69.1 | 385 | 5.84 | 4.33 | 3.03 |
| **MW359** | | | | | |
| **Date Collected: 7/16/25** | | | | | |
| 1331 | 74.0 | 202 | 6.50 | 4.01 | 3.50 |
| 1336 | 70.2 | 196 | 6.01 | 3.91 | 3.36 |
| 1341 | 71.0 | 195 | 5.96 | 3.99 | 3.27 |
| **MW361** | | | | | |
| **Date Collected: 7/16/25** | | | | | |
| 0824 | 64.1 | 473 | 5.83 | 4.84 | 3.33 |
| 0829 | 63.9 | 475 | 5.77 | 4.55 | 3.15 |
| 0834 | 64.2 | 475 | 5.75 | 4.58 | 3.00 |
| **MW363** | | | | | |
| **Date Collected: 07/17/25** | | | | | |
| 0731 | 64.5 | 340 | 6.08 | 2.68 | 5.68 |
| 0736 | 64.0 | 342 | 5.99 | 1.11 | 4.41 |
| 0741 | 64.7 | 340 | 5.93 | 1.03 | 4.20 |
| **MW365** | | | | | |
| **Date Collected:7/17/25** | | | | | |
| 0926 | 63.7 | 416 | 6.19 | 4.97 | 4.51 |
| 0931 | 65.3 | 416 | 6.10 | 4.59 | 4.33 |
| 0936 | 66.1 | 417 | 6.08 | 4.54 | 4.25 |
| **MW367** | | | | | |
| **Date Collected:7/17/25** | | | | | |
| 1122 | 67.5 | 325 | 5.73 | 2.89 | 8.61 |
| 1127 | 69.1 | 310 | 5.67 | 1.10 | 5.06 |
| 1132 | 69.7 | 306 | 5.66 | 1.02 | 5.13 |
| **MW369** | | | | | |
| **Date Collected: 7/21/25** | | | | | |
| 0811 | 65.6 | 351 | 6.31 | 6.14 | 5.01 |
| 0816 | 65.6 | 352 | 6.33 | 5.68 | 4.51 |
| 0821 | 65.7 | 353 | 6.35 | 5.60 | 4.39 |
| **MW371** | | | | | |
| **Date Collected:7/21/25** | | | | | |
| 1006 | 65.7 | 499 | 6.20 | 4.90 | 5.48 |
| 1011 | 64.7 | 504 | 6.40 | 5.56 | 4.90 |
| 1016 | 64.9 | 504 | 6.47 | 5.67 | 4.81 |
| **MW373** | | | | | |
| **Date Collected: 7/21/25** | | | | | |
| 1215 | 69.1 | 1003 | 6.86 | 1.85 | 3.90 |
| 1220 | 68.7 | 1007 | 6.76 | 1.34 | 4.04 |
| 1225 | 68.6 | 1008 | 6.69 | 1.24 | 4.00 |
| **MW375** | | | | | |
| **Date Collected:7/21/25** | | | | | |
| 0719 | 65.0 | 333 | 6.85 | 3.96 | 6.47 |
| 0724 | 65.0 | 330 | 6.80 | 3.15 | 4.89 |
| 0729 | 64.7 | 331 | 6.70 | 3.06 | 4.83 |

| | Temperature (°F) | Conductivity (µmhos/cm) | pH (Std Unit) | Dissolved oxygen (mg/L) | Turbidity (NTU) |
|---|---|---|---|---|---|
| **MW358** | | | | | |
| **Date Collected:7/16/25** | | | | | |
| 1221 | 65.6 | 435 | 5.98 | 3.04 | 3.69 |
| 1226 | 65.2 | 441 | 5.96 | 1.45 | 4.63 |
| 1231 | 65.6 | 446 | 5.94 | 1.35 | 4.55 |
| **MW360** | | | | | |
| **Date Collected:7/16/25** | | | | | |
| 0733 | 63.6 | 385 | 6.61 | 3.11 | 4.22 |
| 0738 | 62.3 | 388 | 6.50 | 1.93 | 4.13 |
| 0743 | 63.0 | 385 | 6.47 | 1.84 | 4.06 |
| **MW362** | | | | | |
| **Date Collected:7/16/25** | | | | | |
| 0926 | 66.1 | 608 | 6.81 | 6.56 | 6.71 |
| 0931 | 65.2 | 626 | 7.03 | 5.00 | 6.06 |
| 0936 | 65.3 | 628 | 6.99 | 4.94 | 6.13 |
| **MW364** | | | | | |
| **Date Collected:7/17/25** | | | | | |
| 0824 | 63.2 | 465 | 5.80 | 5.06 | 5.35 |
| 0829 | 63.0 | 467 | 5.73 | 3.58 | 5.11 |
| 0834 | 63.8 | 471 | 5.69 | 3.48 | 4.96 |
| **MW366** | | | | | |
| **Date Collected: 7/17/25** | | | | | |
| 1017 | 65.4 | 489 | 5.84 | 4.44 | 3.72 |
| 1022 | 65.2 | 493 | 5.90 | 3.88 | 3.74 |
| 1027 | 66.1 | 495 | 5.87 | 3.78 | 3.65 |
| **MW368** | | | | | |
| **Date Collected: 7/17/25** | | | | | |
| 1254 | 64.8 | 583 | 6.17 | 3.77 | 4.46 |
| 1259 | 64.9 | 588 | 6.10 | 3.41 | 4.20 |
| 1304 | 65.3 | 589 | 6.10 | 3.33 | 4.44 |
| **MW370** | | | | | |
| **Date Collected: 7/21/25** | | | | | |
| 0902 | 67.0 | 429 | 5.93 | 5.30 | 3.89 |
| 0907 | 67.1 | 427 | 6.00 | 4.93 | 3.96 |
| 0912 | 67.3 | 429 | 6.02 | 4.84 | 3.90 |
| **MW372** | | | | | |
| **Date Collected:7/21/25** | | | | | |
| 1057 | 65.2 | 700 | 6.29 | 4.20 | 4.16 |
| 1102 | 64.9 | 712 | 6.21 | 3.61 | 4.36 |
| 1107 | 64.7 | 720 | 6.12 | 3.51 | 3.88 |
| **MW374** | | | | | |
| **Date Collected:7/21/25** | | | | | |
| 1302 | 69.3 | 704 | 6.64 | 2.66 | 7.44 |
| 1307 | 66.7 | 689 | 6.70 | 2.00 | 6.43 |
| 1312 | 66.6 | 695 | 6.78 | 1.92 | 6.47 |
| | | | | | |
| | | | | | |
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