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August 21, 2025

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Dear Mr. Anderson and Mr. Hendricks:

**C-746-S&T LANDFILLS SECOND QUARTER CALENDAR YEAR 2025 (APRIL–JUNE)
COMPLIANCE MONITORING REPORT, PADUCAH GASEOUS DIFFUSION PLANT,
PADUCAH, KENTUCKY, FRNP-RPT-0386/V2, PERMIT NUMBER SW07300014,
SW07300015, SW07300045, AGENCY INTEREST ID NO. 3059**

The subject report for the second 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 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 of the second quarter CY 2025 monitoring well (MW) data collected from the C-746-S&T Landfills were performed in accordance with Monitoring Condition GSTR0003, 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 exceedance was indicated for calcium, conductivity, dissolved solids, and sulfate in MW373. These statistical exceedances are Type 2 Exceedances—Source Unknown. Continued evaluation of calcium, conductivity, dissolved solids, and sulfate levels through future quarterly monitoring events is recommended. This report also serves as the statistical exceedance notification for the second quarter CY 2025, in accordance with Monitoring Condition GSTR0003, 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

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April Ladd
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Enclosure:

*C-746-S&T Landfills Second Quarter Calendar Year 2025 (April–June) Compliance
Monitoring Report, Paducah Gaseous Diffusion Plant, Paducah, Kentucky,
FRNP-RPT-0386/V2*

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**C-746-S&T Landfills
Second Quarter Calendar Year 2025
(April–June)
Compliance Monitoring Report,
Paducah Gaseous Diffusion Plant,
Paducah, Kentucky**



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**C-746-S&T Landfills
Second Quarter Calendar Year 2025
(April–June)
Compliance Monitoring Report,
Paducah Gaseous Diffusion Plant,
Paducah, Kentucky**

Date Issued—August 2025

U.S. DEPARTMENT OF ENERGY
Office of Environmental Management

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

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ACRONYMS

<i>CFR</i>	<i>Code of Federal Regulations</i>
<i>KAR</i>	<i>Kentucky Administrative Regulations</i>
<i>KRS</i>	<i>Kentucky Revised Statutes</i>
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-S&T Landfills Second Quarter Calendar Year 2025 (April–June) Compliance Monitoring Report, Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, is being submitted in accordance with Solid Waste Landfill 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 that 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 and for all permit required parameters listed in 40 *CFR* § 302.4, Appendix A, 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 exceedances of the MCL and historical UTL that have occurred since the fourth quarter calendar year 2002. Methane monitoring results are documented on the approved C-746-S&T Landfills Methane Monitoring Report form provided in Appendix H. The form includes pertinent remarks/observations as required by 401 *KAR* 48:090 § 5. Surface water results 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-S&T Landfills are closed, solid waste landfills located north of the Paducah Site and south of the C-746-U Landfill. Construction and operation of the C-746-S Residential Landfill were permitted in April 1981 under Solid Waste Landfill Permit No. 073-00014. The permitted C-746-S Landfill area covers about 16 acres and contains a clay liner with a final cover of compacted soil. The C-746-S Landfill was a sanitary landfill for the Paducah Gaseous Diffusion Plant operations. The C-746-S Landfill is closed and has been inactive since July 1995.

Construction and operation of the C-746-T Inert Landfill were permitted in February 1985 under Solid Waste Landfill Permit No. 073-00015. The permitted C-746-T Landfill area covers about 20 acres and contains a clay liner with a final cover of compacted soil. The C-746-T Landfill was used to dispose of construction debris (e.g., concrete, wood, rock) and steam plant fly ash from the Paducah Gaseous Diffusion Plant operations. The C-746-T Landfill is closed and has been inactive since June 1992.

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 23 monitoring wells (MWs) under permit for the C-746-S&T Landfills: 5 UCRS wells, 11 URGA wells, and 7 LRGA wells. A map of the MW locations is presented in Figure 1. All MWs listed on the permit were sampled this quarter, except MW389 (screened in the UCRS), which had insufficient amounts of water to obtain samples.

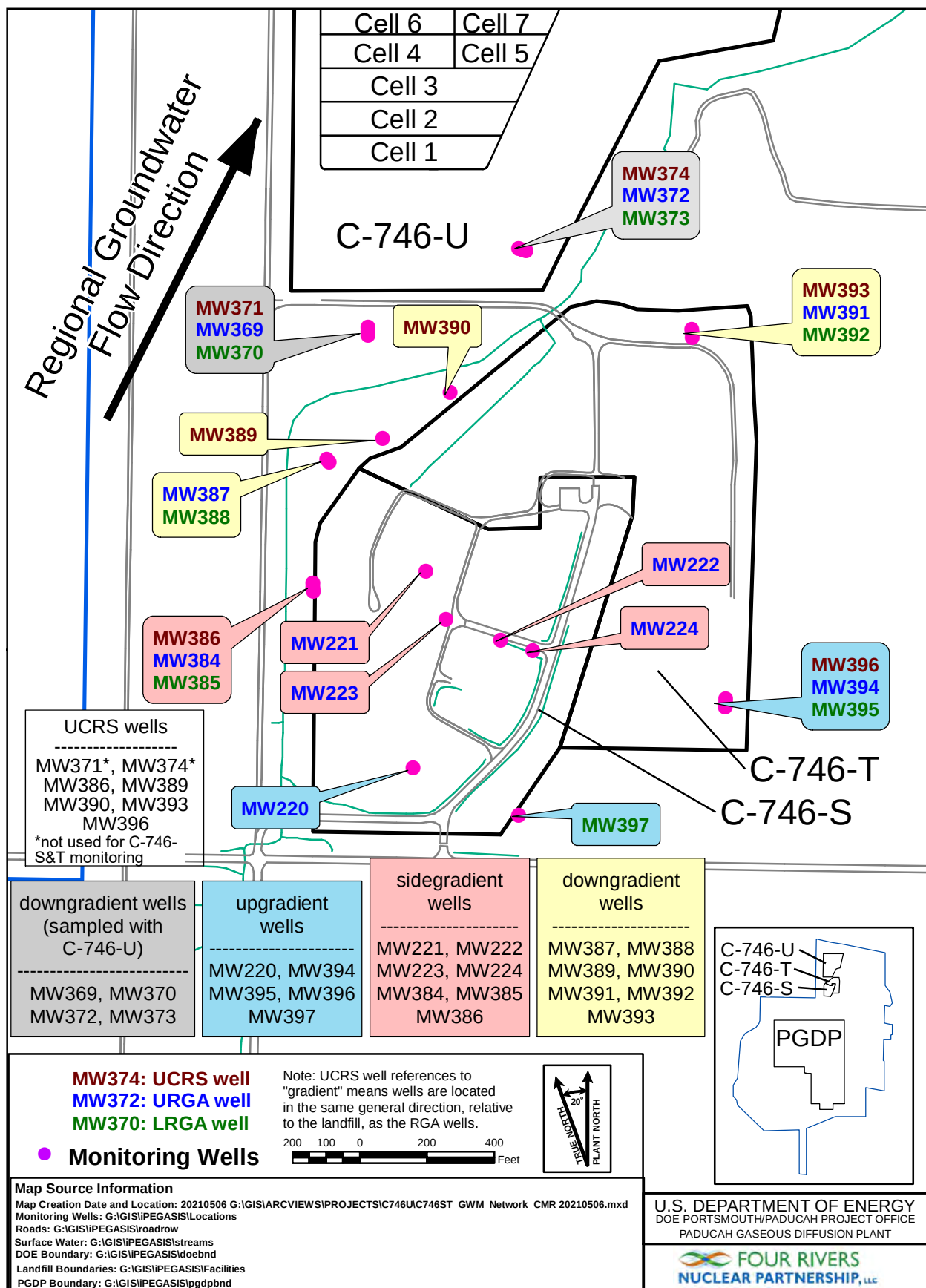


Figure 1. C-746-S&T Landfills Groundwater Monitoring Well Network

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*, PAD-PROJ-0139 (Groundwater Monitoring Plan), UCRS wells are included in the monitoring program (LATA Kentucky 2014). Groundwater flow gradients are downward through the UCRS, but the underlying Regional Gravel Aquifer (RGA) flows laterally. Groundwater flow in the RGA is typically in a north-northeasterly direction in the vicinity of the C-746-S&T Landfills. The Ohio River and lower reaches of Little Bayou Creek are the discharge areas for the RGA flow system from the vicinity of the landfills. Consistent with the conceptual site model, the constituent concentrations in UCRS wells are considered to be representative only of the conditions local to the well or sourced from overlying soils; thus, no discussion of potential “upgradient” sources is relevant to the discussion for the UCRS. Nevertheless, a UTL for background also has been calculated for UCRS wells using concentrations from UCRS wells located in the same direction (relative to the landfill) as those RGA wells identified as upgradient. The results from these wells are considered to represent historical “background” for UCRS water quality. Similarly, other gradient references for UCRS wells are identified using the same gradient references (relative to the landfill) that are attributed to nearby RGA wells. Results from UCRS wells are compared to this UTL (for background), and exceedances of these values are reported in the quarterly report.

Groundwater sampling was conducted within the second quarter 2025 in accordance with the Groundwater Monitoring Plan (LATA Kentucky 2014) using the Deactivation and Remediation Contractor, procedure CP4-ES-2101, *Groundwater Sampling*. Groundwater sampling for the second quarter 2025 was conducted on April 10–16, 2025. The analytical laboratory used U.S. Environmental Protection Agency-approved methods, as applicable. The parameters specified in Permit Condition GSTR0003, Special Condition 3, were analyzed for all locations sampled.

The groundwater flow rate and direction determination are provided in Appendix E. Depth-to-water was measured on April 21, 2025, in MWs of the C-746-S&T Landfills (see Appendix E, Table E.1); in MWs of the C-746-U Landfill; and in MWs of the surrounding region (shown on Appendix E, Figure E.3). Water level measurements in 39 vicinity wells define the potentiometric surface for the RGA. Typical regional flow in the RGA is northeastward, toward the Ohio River. During April 2025, RGA groundwater flow was directed inward and then south away from the Ohio River. The Paducah Site and the Jackson Purchase region experienced a significant flood event on the Ohio River, beginning on April 1, 2025, and peaking on April 7–17, 2025. High river stage was 333.61 ft on April 15, 2025, at Paducah, Kentucky. (The previous river stage had been 301.04 ft on March 31, 2025.) This sustained high river stage exceeded the potentiometric surface of the RGA from the Ohio River all the way back to the Paducah Site. Groundwater was unable to discharge to the Ohio River (because of the high river stage), and the RGA gradient (and groundwater flow direction) reversed for a period of approximately two weeks, which included the period of the groundwater level measurements on April 21, 2025. The hydraulic gradient for the RGA in the vicinity of the C-746-S&T Landfills in April 2025 was -2.70×10^{-4} ft/ft, while the gradient beneath the C-746-S&T Landfills was approximately -5.76×10^{-4} ft/ft (see Appendix E, Table E.2). Calculated groundwater flow rates (average linear velocities) for the RGA at the C-746-S&T Landfills ranged from 9.78×10^{-1} to 1.67 ft/day (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 Solid Waste Landfill Permit. Industrial Hygiene staff monitored for the occurrence of methane in one on-site building location, four locations along the landfill boundary, and 27 passive gas vents located in Cells 1, 2, and 3 of the C-746-S Landfill on May 21, 2025. Appendix H provides a map of the monitoring locations (Appendix H, Figure H.1). Monitoring results identified that all locations were compliant with the regulatory requirement of < 100% lower explosive limit (LEL) at boundary locations and < 25% LEL at all other locations. The results are documented on the C-746-S&T Landfills Methane Monitoring Report provided in Appendix H.

1.2.3 Surface Water Monitoring

Surface water sampling was performed on April 3, 2025, at the three locations monitored for the C-746-S&T Landfills: (1) upstream location L135, (2) instream location L154, and (3) instream location L136 (Figure 2). Surface water was monitored, as specified in 401 KAR 48:300 § 2, 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 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 but have concentrations that exceeded the statistically derived historical background UTL during the second quarter 2025.¹ Those constituents (present in downgradient wells) that exceed their historical background UTL were evaluated against their current UTL-derived background using the most recent eight quarters of data from wells designated as background wells (Table 3).

Table 1. Summary of MCL Exceedances

UCRS	URGA	LRGA
None	None	None

The notification of parameters that exceeded the MCL would typically have been submitted electronically to the Kentucky Division of Waste Management, in accordance with 401 KAR 48:300 § 7, prior to the submittal of this report.

Table 2. Exceedances of Statistically Derived Historical Background Concentrations

UCRS ^a	URGA	LRGA
MW386: Oxidation-reduction potential ^b	MW220: Oxidation-reduction potential ^b and sulfate	MW370: Oxidation-reduction potential ^b and sulfate
MW390: Oxidation-reduction potential ^b and technetium-99	MW221: Oxidation-reduction potential ^b	MW373: Calcium, conductivity, dissolved solids, magnesium, oxidation-reduction potential, ^b sodium, and sulfate
MW393: Oxidation-reduction potential ^b	MW222: Oxidation-reduction potential ^b	MW385: Oxidation-reduction potential, ^b sulfate, and technetium-99
MW396: Oxidation-reduction potential ^b	MW223: Oxidation-reduction potential ^b	MW388: Oxidation-reduction potential ^b and sulfate
	MW224: Oxidation-reduction potential ^b and sulfate	MW392: Oxidation-reduction potential ^b
	MW369: Oxidation-reduction potential ^b and sulfate	MW395: Oxidation-reduction potential ^b

¹ The UTL comparison for pH uses a two-sided test, both UTL and LTL.

**Table 2. Exceedances of Statistically Derived Historical Background Concentrations
(Continued)**

UCRS ^a	URGA	LRGA
	MW372: Calcium, conductivity, dissolved solids, magnesium, oxidation-reduction potential, ^b sodium, and sulfate	MW397: Oxidation-reduction potential ^b
	MW384: Oxidation-reduction potential, ^b sulfate, and technetium-99	
	MW387: Magnesium, oxidation-reduction potential, ^b sulfate, and technetium-99	
	MW391: Oxidation-reduction potential ^b	
	MW394: Oxidation-reduction potential ^b	

^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: MW221, MW222, MW223, MW224, MW384, MW385, and MW386.

Downgradient wells: MW369, MW370, MW372, MW373, MW387, MW388, MW389, MW390, MW391, MW392, and MW393.

Background wells: MW220, MW394, MW395, MW396, and MW397.

Table 3. Exceedances of Current Background UTL in Downgradient Wells

URGA	LRGA
MW372: Calcium, conductivity, dissolved solids, magnesium, sodium, and sulfate	MW370: Sulfate
MW387: Magnesium, sulfate, and technetium-99	MW373: Calcium, conductivity, dissolved solids, magnesium, and sulfate
	MW388: Sulfate

This report serves as the notification of parameters that had statistically significant increased concentrations relative to historical background concentrations, as required by Permit No. SW07300014, SW07300015, SW07300045, Condition GSTR0003, Standard Requirement 5, and 401 KAR 48:300 § 7.

The constituents listed in Table 2 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 to identify if the current downgradient well concentrations are consistent with current background values. The current background UTL was developed using the most recent eight quarters of data from wells identified as background wells. Table 3 summarizes the evaluation against current background UTL for those constituents present in downgradient wells with historical UTL exceedances. In accordance with the approved Groundwater Monitoring Plan (LATA Kentucky 2014), constituents in downgradient wells that exceed the historical UTL, but do not exceed the current UTL, are considered not to have a C-746-S&T Landfills source; therefore, they are Type 1 exceedances—not attributable to the C-746-S&T Landfills.

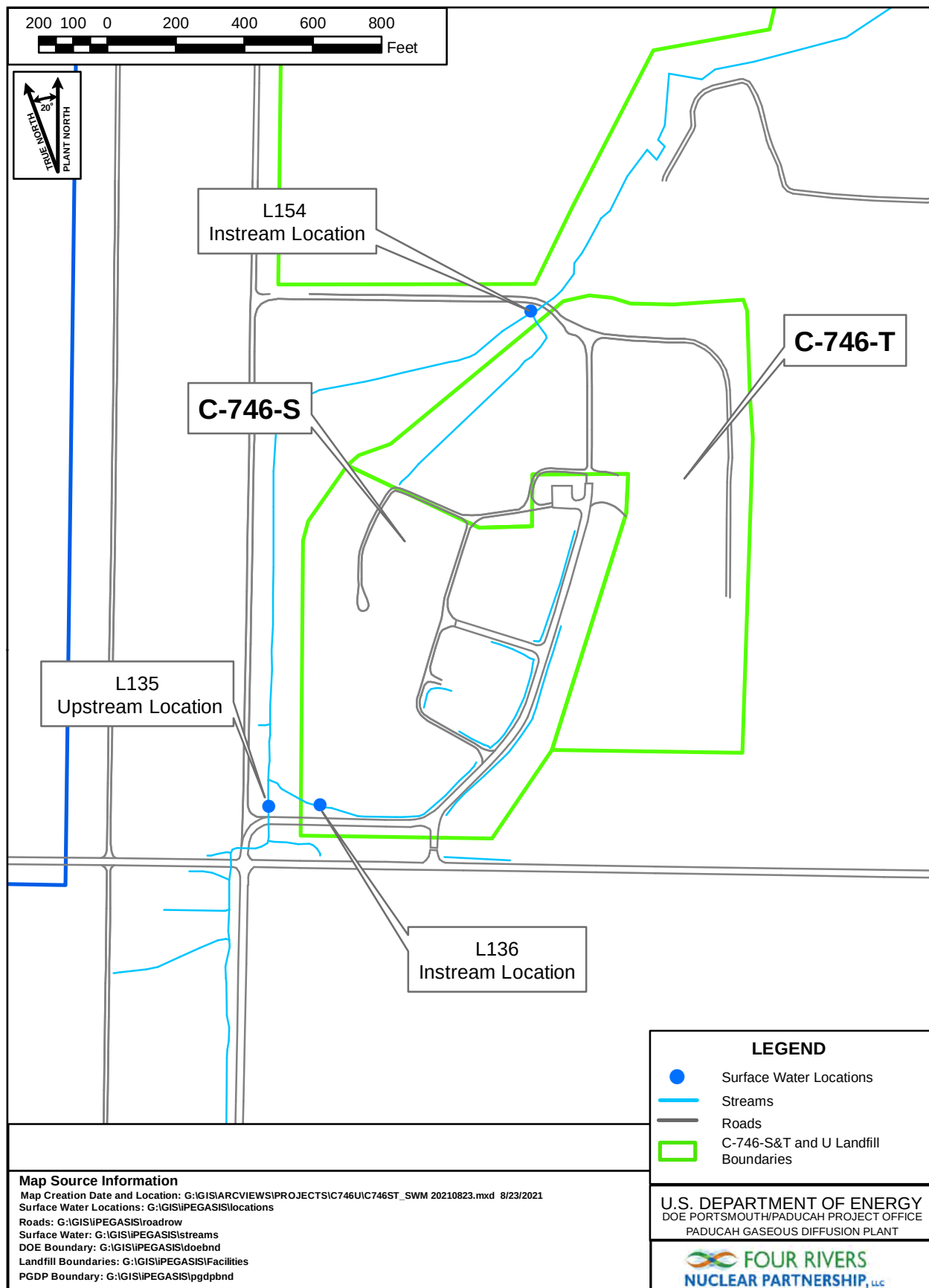


Figure 2. C-746-S&T Landfill Surface Water Monitoring Locations

The constituents listed in Table 3 that exceed both the historical UTL and the current UTL and do not have an identified source are considered preliminarily to be Type 2 exceedances, per the approved Groundwater Monitoring Plan (LATA Kentucky 2014). To evaluate these preliminary Type 2 exceedances further, the parameters were subjected to the Mann-Kendall statistical test for trend using the most recent eight quarters of data. The results are summarized in Table 4. Twelve of the 16 preliminary Type 2 exceedances in downgradient wells do not have increasing trends and are considered to be Type 1 exceedances—not attributable to the C-746-S&T Landfills.

**Table 4. C-746-S&T Landfills Downgradient Wells Trend Summary
Utilizing the Previous Eight Quarters**

Location	Well ID	Parameter	Sample Size	Alpha ^a	p-Value ^b	S ^c	Decision
C-746-S&T Landfills	MW370	Sulfate	8	0.05	0.274	7	No Trend
	MW372	Calcium	8	0.05	0.138	10	No Trend
		Conductivity	8	0.05	0.548	1	No Trend
		Dissolved Solids	8	0.05	0.089	12	No Trend
		Magnesium	8	0.05	0.089	12	No Trend
		Sodium	8	0.05	0.274	7	No Trend
		Sulfate	8	0.05	0.089	12	No Trend
	MW373	Calcium	8	0.05	0.016	18	Increasing
		Conductivity	8	0.05	0.002	22	Increasing
		Dissolved Solids	8	0.05	0.001	24	Increasing
		Magnesium	8	0.05	0.054	15	No Trend
		Sulfate	8	0.05	0.007	20	Increasing
	MW387	Magnesium	8	0.05	0.119	8	No Trend
		Sulfate	8	0.05	0.138	-10	No Trend
		Technetium-99	8	0.05	0.452	2	No Trend
	MW388	Sulfate	8	0.05	0.119	8	No Trend

^a An alpha of 0.05 represents a 95% confidence interval.

^b The p-value represents the risk of acceptance of 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 (i.e., 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.

NOTE: Statistics were generated using ProUCL.

Four of the 16 preliminary Type 2 exceedances in downgradient wells had an increasing trend. Specifically, the Mann-Kendall statistical test indicates increasing trends for calcium, conductivity, dissolved solids, and sulfate in LRGA well MW373. It should be noted that over the past eight quarters, concentrations of calcium, conductivity, dissolved solids, and sulfate in URGA well MW372 are consistently lower than those shown in collocated LRGA well MW373. Because calcium, conductivity, dissolved solids, and sulfate concentrations are lower in the shallower screened well at this location, the C-746-S&T Landfills are likely not the source of the concentrations observed in the deeper screened well. Therefore, the observed trends in MW373 should be considered Type 2 exceedances—sources undetermined. Evaluation of calcium, conductivity, dissolved solids, and sulfate trends through future quarterly monitoring events is recommended.

In accordance with Permit Condition GSTR0003, Special Condition 2, of the Solid Waste Landfill Permit, the groundwater assessment and corrective action requirements of 401 *KAR* 48:300 § 8 shall not apply to the C-746-S Residential Landfill and the C-746-T Inert Landfill. This variance in the permit provides that groundwater assessment and corrective actions for these landfills will be conducted in accordance with the corrective action requirements of 401 *KAR* 39:090.

The statistical evaluation of UCRS concentrations against the current UCRS background UTL identified one downgradient UCRS well exceeding both the historical and current backgrounds (Table 5).

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

UCRS
MW390: Technetium-99

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

All MCL and UTL exceedances reported for this quarter, except for calcium, conductivity, dissolved solids, and sulfate in MW373, were evaluated and considered to be Type 1 exceedances—not attributable to the C-746-S&T Landfills.

2. DATA EVALUATION/STATISTICAL SYNOPSIS

The statistical analyses conducted on the second quarter 2025 groundwater data collected from the C-746-S&T Landfill MWs were performed in accordance with the Groundwater Monitoring Plan (LATA Kentucky 2014). The statistical analyses for this report utilize data from the first eight quarters that were sampled for each parameter, beginning with the first two 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).

For those parameters that exceed the MCL for Kentucky solid waste facilities found in 401 *KAR* 47:030 § 6, exceedances are documented and evaluated further as follows. Exceedances are reviewed against historical background results (UTL). If the MCL exceedance is found not to exceed the historical UTL, the exceedance is noted as a Type 1 exceedance—an exceedance not attributable to the landfills. If there is an exceedance of the MCL in a downgradient well and this constituent also exceeds the historical background, the quarterly result is compared to the current background UTL (developed using the most recent eight quarters of data from wells identified as downgradient wells) to identify if this exceedance is attributable to upgradient/non-landfill sources. If the downgradient well concentration is less than the current background, the exceedance is noted as a Type 1 exceedance. If a constituent exceeds its Kentucky solid waste facility MCL, historical background UTL, and current background UTL, it is reported as a Type 2 exceedance—source undetermined. Type 2 exceedances (undetermined source) are further evaluated using the Mann-Kendall test for trend. If there is not a statistically significant increasing trend for a constituent in a downgradient well, the exceedance is reclassified as a Type 1 exceedance—not attributable to the landfills.

For those parameters that do not have a Kentucky solid waste facility MCL, the same process is used. If a constituent without an MCL exceeds its historical background UTL and its current background UTL, it is evaluated further to identify the source of the exceedance, if possible. If the source of the exceedance cannot be identified, it is reported as a Type 2 exceedance—source undetermined. Type 2 exceedances (undetermined source) are further evaluated using the Mann-Kendall test for trend. If there is not a statistically significant increasing trend for a constituent in a downgradient well, the exceedance is reclassified as a Type 1 exceedance—not attributable to the landfills.

To calculate the UTL, the data are divided into censored (nondetects) and uncensored (detected) observations. The one-sided tolerance interval statistical test is conducted only on parameters that have at least one uncensored observation. Results of the one-sided tolerance interval statistical test are used to determine whether the data show 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 is conducted. The test well results are compared to both the UTL and LTL to determine if statistically significant deviations in concentrations exist 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
MW386	MW220 (background)	MW370
MW389 ^b	MW221	MW373
MW390	MW222	MW385
MW393	MW223	MW388
MW396 ^c	MW224	MW392
	MW369	MW395 (background)
	MW372	MW397 (background)
	MW384	
	MW387	
	MW391	
	MW394 (background)	

^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 background.

2.1 STATISTICAL ANALYSIS OF GROUNDWATER DATA

Parameters requiring statistical analysis are summarized in Appendix D for each hydrological 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 exceedances 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 background in order to determine if the current downgradient well concentrations are consistent with current background values. Table 3 summarizes the constituents present in downgradient wells with historical UTL exceedances that are above the current UTL. Those constituents that have exceeded both the historical and current background UTLs in downgradient wells were further evaluated for increasing trends and are listed in Table 4.

2.1.1 Upper Continental Recharge System

In this quarter, 26 parameters, including those with MCLs, required statistical analysis in the UCRS. During the second quarter, oxidation-reduction potential and technetium-99 concentrations exceeded the respective historical UTL and are listed in Table 2. Technetium-99 exceeded the current background UTL in downgradient UCRS well MW390 and is shown in Table 5.

2.1.2 Upper Regional Gravel Aquifer

In this quarter, 28 parameters, including those with MCLs, required statistical analysis in the URGA. During the second quarter, calcium, conductivity, dissolved solids, magnesium, oxidation-reduction potential, sodium, sulfate, and technetium-99 displayed concentrations that exceeded their respective historical UTLs and are listed in Table 2. Calcium, conductivity, dissolved solids, magnesium, sodium, sulfate, and technetium-99 exceeded the current background UTL in downgradient URGA wells and are included in Table 3.

2.1.3 Lower Regional Gravel Aquifer

In this quarter, 29 parameters, including those with MCLs, required statistical analysis in the LRGA. During the second quarter, calcium, conductivity, dissolved solids, magnesium, oxidation-reduction potential, sodium, sulfate, and technetium-99 displayed concentrations that exceeded their respective historical UTL and are listed in Table 2. Calcium, conductivity, dissolved solids, magnesium, and sulfate exceeded the current background UTL in downgradient wells and are included in Table 3.

2.2 DATA VERIFICATION AND VALIDATION

Data verification is the process of comparing a data set against set standard or contractual requirements. In accordance with the approved Groundwater Monitoring Plan, (LATA Kentucky 2014), data verification is performed for 100% of the data. 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 for 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 tables 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-S&T Landfills Second Quarter Calendar Year 2025
(April-June) Compliance Monitoring Report, Paducah Gaseous
Diffusion Plant, Paducah, Kentucky (FRNP-RPT-0386/V2)*

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



PG 113927
KD 8-18-2025

Kenneth R. Davis
Kenneth R. Davis

PG113927

August 18, 2025
Date

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4. REFERENCES

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

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

Please check the following as applicable:

_____ Characterization X Quarterly _____ Semiannual _____ Annual _____ Assessment

Please check applicable submittal(s): X Groundwater X Surface Water
_____ Leachate X Methane Monitoring

This form is to be utilized by those sites required by regulation (Kentucky Waste Management Regulations-401 KAR 48:300 and 45:160) or by statute (Kentucky Revised Statutes 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

Groundwater: April 2025
Methane: May 2025
Sampling Date: Surface Water: April 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 Kevil, Kentucky 42053
Street City/State Zip

Phone No: (270) 441-6800 Latitude: N 37° 07' 37.70" Longitude: W 88° 47' 55.41"

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
Program Manager/Chief Executive Officer

Contact Person Title: Four Rivers Nuclear Partnership, LLC

Mailing Address: 5600 Hobbs Road Kevil, Kentucky 42053
Street City/State 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 Kevil, Kentucky 42053
Street City/State 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 Charleston, South Carolina 29407
Street City/State 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-S&T Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045
Sampling Point: MW220 UP **RGA Type:** URGA **Period:** 2nd Quarter 2025
AKGWA Well Tag #: 8000-5201 **SAMPLE ID:** MW220SG3-25 **Sample Type:** REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
Iodide	U	0.5	mg/L	0.5	4/14/2025			EPA-300.0	=
Bromide		0.212	mg/L	0.2	4/14/2025			SW846-9056A	=
Chloride	JW	18	mg/L	250	4/14/2025			SW846-9056A	=
Fluoride	J	0.229	mg/L	4	4/14/2025			SW846-9056A	=
Nitrate as Nitrogen	J	1.04	mg/L	10	4/14/2025			SW846-9056A	=
Sulfate		22.2	mg/L	0.8	4/14/2025			SW846-9056A	=
Barometric Pressure Reading		29.89	Inches/Hg		4/14/2025			FS	X
Conductivity		434	µmhos/cm		4/14/2025			FS	X
Depth to Water		54.48	ft		4/14/2025			FS	X
Dissolved Oxygen		4.64	mg/L		4/14/2025			FS	X
Eh (approx)		428	mV		4/14/2025			FS	X
pH		6.06	Std Unit		4/14/2025			FS	X
Temperature		66.4	deg F		4/14/2025			FS	X
Turbidity		4.11	NTU		4/14/2025			FS	X
Aluminum	UN	0.05	mg/L	0.05	4/14/2025			SW846-6020B	=
Antimony	U	0.003	mg/L	0.003	4/14/2025			SW846-6020B	=
Arsenic	U	0.005	mg/L	0.005	4/14/2025			SW846-6020B	=
Barium	N	0.221	mg/L	0.004	4/14/2025			SW846-6020B	=
Beryllium	U	0.0005	mg/L	0.0005	4/14/2025			SW846-6020B	=
Boron	J	0.0095	mg/L	0.015	4/14/2025			SW846-6020B	=
Cadmium	U	0.001	mg/L	0.001	4/14/2025			SW846-6020B	=
Calcium		26.2	mg/L	0.2	4/14/2025			SW846-6020B	=
Chromium	J	0.0051	mg/L	0.01	4/14/2025			SW846-6020B	=
Cobalt	U	0.001	mg/L	0.001	4/14/2025			SW846-6020B	=
Copper	BJ	0.00136	mg/L	0.002	4/14/2025			SW846-6020B	U
Iron	UN	0.1	mg/L	0.1	4/14/2025			SW846-6020B	=
Lead	U	0.002	mg/L	0.002	4/14/2025			SW846-6020B	=
Magnesium		11.1	mg/L	0.03	4/14/2025			SW846-6020B	=
Manganese	U	0.005	mg/L	0.005	4/14/2025			SW846-6020B	=
Molybdenum	J	0.00097	mg/L	0.001	4/14/2025			SW846-6020B	=
Nickel		0.00858	mg/L	0.002	4/14/2025			SW846-6020B	=
Potassium		1.33	mg/L	0.3	4/14/2025			SW846-6020B	=
Rhodium	U	0.005	mg/L	0.005	4/14/2025			SW846-6020B	=
Selenium	U	0.005	mg/L	0.005	4/14/2025			SW846-6020B	=
Silver	U	0.001	mg/L	0.001	4/14/2025			SW846-6020B	=
Sodium		46	mg/L	0.25	4/14/2025			SW846-6020B	=
Tantalum	UN	0.005	mg/L	0.005	4/14/2025			SW846-6020B	=
Thallium	U	0.002	mg/L	0.002	4/14/2025			SW846-6020B	=
Uranium	U	0.0002	mg/L	0.0002	4/14/2025			SW846-6020B	=
Vanadium	U	0.02	mg/L	0.02	4/14/2025			SW846-6020B	=
Zinc	J	0.00348	mg/L	0.02	4/14/2025			SW846-6020B	=
Mercury	U	0.0002	mg/L	0.0002	4/14/2025			SW846-7470A	=
Barium, Dissolved	N	0.234	mg/L	0.004	4/14/2025			SW846-6020B	J
Chromium, Dissolved	J	0.0044	mg/L	0.01	4/14/2025			SW846-6020B	J
Uranium, Dissolved	U	0.0002	mg/L	0.0002	4/14/2025			SW846-6020B	UJ
Radium-226	U	0.518	pCi/L	1.26	4/14/2025	0.968	0.97	AN-1418	=
Strontium-90	U	-0.444	pCi/L	1.88	4/14/2025	0.884	0.884	EPA-905.0-M	=

**Paducah OREIS
GROUNDWATER MONITORING REPORT**

Facility: C-746-S&T Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045
Sampling Point: MW220 UP **RGA Type:** URGA **Period:** 2nd Quarter 2025
AKGWA Well Tag #: 8000-5201 **SAMPLE ID:** MW220SG3-25 **Sample Type:** REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
Tritium	U	-12.5	pCi/L	228	4/14/2025	126	126	EPA-906.0-M	=
Technetium-99	U	10.5	pCi/L	19.5	4/14/2025	11.6	11.7	HASL 300, Tc-02-RC M	=
Thorium-230	U	1.78	pCi/L	3.45	4/14/2025	2.33	2.35	HASL 300, Th-01-RC M	=
Alpha activity	U	1.28	pCi/L	7.55	4/14/2025	3.79	3.79	SW846-9310	=
Beta activity		9.59	pCi/L	9.55	4/14/2025	6.22	6.43	SW846-9310	=
1,2-Dibromo-3-chloropropane	U	0.019	ug/L	0.019	4/14/2025			SW846-8011	=
1,1,1,2-Tetrachloroethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
1,1,1-Trichloroethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
1,1,2,2-Tetrachloroethane	UY1	1	ug/L	1	4/14/2025			SW846-8260D	=
1,1,2-Trichloroethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
1,1-Dichloroethane	UY1	1	ug/L	1	4/14/2025			SW846-8260D	=
1,1-Dichloroethene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
1,2,3-Trichloropropane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
1,2-Dibromoethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
1,2-Dichlorobenzene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
1,2-Dichloroethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
1,2-Dichloropropane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
1,4-Dichlorobenzene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
2-Butanone	U	5	ug/L	5	4/14/2025			SW846-8260D	=
2-Hexanone	U	5	ug/L	5	4/14/2025			SW846-8260D	=
4-Methyl-2-pentanone	U	5	ug/L	5	4/14/2025			SW846-8260D	=
Acetone	U	5	ug/L	5	4/14/2025			SW846-8260D	=
Acrolein	U	5	ug/L	5	4/14/2025			SW846-8260D	=
Acrylonitrile	U	5	ug/L	5	4/14/2025			SW846-8260D	=
Benzene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Bromochloromethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Bromodichloromethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Bromoform	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Bromomethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Carbon disulfide	U	5	ug/L	5	4/14/2025			SW846-8260D	=
Carbon tetrachloride	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Chlorobenzene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Chloroethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Chloroform	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Chloromethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
cis-1,2-Dichloroethene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
cis-1,3-Dichloropropene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Dibromochloromethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Dibromomethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Ethylbenzene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Iodomethane	U	5	ug/L	5	4/14/2025			SW846-8260D	=
Methylene chloride	U	5	ug/L	5	4/14/2025			SW846-8260D	=
Styrene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Tetrachloroethene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Toluene	U	1	ug/L	1	4/14/2025			SW846-8260D	=

**Paducah OREIS
GROUNDWATER MONITORING REPORT**

Facility: C-746-S&T Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045
Sampling Point: MW220 UP **RGA Type:** URGA **Period:** 2nd Quarter 2025
AKGWA Well Tag #: 8000-5201 **SAMPLE ID:** MW220SG3-25 **Sample Type:** REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
Total Xylene	U	3	ug/L	3	4/14/2025			SW846-8260D	=
trans-1,2-Dichloroethene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
trans-1,3-Dichloropropene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
trans-1,4-Dichloro-2-butene	U	5	ug/L	5	4/14/2025			SW846-8260D	UJ
Trichloroethene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Trichlorofluoromethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Vinyl acetate	U	5	ug/L	5	4/14/2025			SW846-8260D	=
Vinyl chloride	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Dissolved Solids		236	mg/L	10	4/14/2025			EPA-160.1	J
Chemical Oxygen Demand (COD)	U	20	mg/L	20	4/14/2025			EPA-410.4	=
Cyanide	UN1	0.2	mg/L	0.2	4/14/2025			SW846-9012B	=
Total Organic Halides (TOX)	BJ	6.94	ug/L	10	4/14/2025			SW846-9020B	U
Total Organic Carbon (TOC)	J	0.787	mg/L	2	4/14/2025			SW846-9060A	=

**Paducah OREIS
GROUNDWATER MONITORING REPORT**

Facility: C-746-S&T Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045

Sampling Point: MW221 SIDE **RGA Type:** URGA **Period:** 2nd Quarter 2025

AKGWA Well Tag #: 8000-5202 **SAMPLE ID:** MW221DSG3-25 **Sample Type:** FR

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
Iodide	U	0.5	mg/L	0.5	4/14/2025			EPA-300.0	=
Bromide		0.427	mg/L	0.2	4/14/2025			SW846-9056A	=
Chloride	JW	35.3	mg/L	250	4/14/2025			SW846-9056A	=
Fluoride	J	0.178	mg/L	4	4/14/2025			SW846-9056A	=
Nitrate as Nitrogen	J	0.954	mg/L	10	4/14/2025			SW846-9056A	=
Sulfate		16	mg/L	0.4	4/14/2025			SW846-9056A	=
Aluminum	UN	0.05	mg/L	0.05	4/14/2025			SW846-6020B	=
Antimony	U	0.003	mg/L	0.003	4/14/2025			SW846-6020B	=
Arsenic	U	0.005	mg/L	0.005	4/14/2025			SW846-6020B	=
Barium	N	0.206	mg/L	0.004	4/14/2025			SW846-6020B	=
Beryllium	U	0.0005	mg/L	0.0005	4/14/2025			SW846-6020B	=
Boron		0.0225	mg/L	0.015	4/14/2025			SW846-6020B	=
Cadmium	U	0.001	mg/L	0.001	4/14/2025			SW846-6020B	=
Calcium		21.5	mg/L	0.2	4/14/2025			SW846-6020B	=
Chromium	J	0.00311	mg/L	0.01	4/14/2025			SW846-6020B	=
Cobalt		0.00113	mg/L	0.001	4/14/2025			SW846-6020B	=
Copper	BJ	0.00171	mg/L	0.002	4/14/2025			SW846-6020B	U
Iron	UN	0.1	mg/L	0.1	4/14/2025			SW846-6020B	=
Lead	U	0.002	mg/L	0.002	4/14/2025			SW846-6020B	=
Magnesium		9.45	mg/L	0.03	4/14/2025			SW846-6020B	=
Manganese		0.00773	mg/L	0.005	4/14/2025			SW846-6020B	=
Molybdenum		0.00295	mg/L	0.001	4/14/2025			SW846-6020B	=
Nickel		0.0676	mg/L	0.002	4/14/2025			SW846-6020B	=
Potassium		1.8	mg/L	0.3	4/14/2025			SW846-6020B	=
Rhodium	U	0.005	mg/L	0.005	4/14/2025			SW846-6020B	=
Selenium	U	0.005	mg/L	0.005	4/14/2025			SW846-6020B	=
Silver	U	0.001	mg/L	0.001	4/14/2025			SW846-6020B	=
Sodium		45.4	mg/L	0.25	4/14/2025			SW846-6020B	=
Tantalum	UN	0.005	mg/L	0.005	4/14/2025			SW846-6020B	=
Thallium	U	0.002	mg/L	0.002	4/14/2025			SW846-6020B	=
Uranium	U	0.0002	mg/L	0.0002	4/14/2025			SW846-6020B	=
Vanadium	U	0.02	mg/L	0.02	4/14/2025			SW846-6020B	=
Zinc	J	0.00589	mg/L	0.02	4/14/2025			SW846-6020B	=
Mercury	U	0.0002	mg/L	0.0002	4/14/2025			SW846-7470A	=
Barium, Dissolved	N	0.217	mg/L	0.004	4/14/2025			SW846-6020B	J
Chromium, Dissolved	U	0.01	mg/L	0.01	4/14/2025			SW846-6020B	UJ
Uranium, Dissolved	U	0.0002	mg/L	0.0002	4/14/2025			SW846-6020B	UJ
Radium-226	U	0.911	pCi/L	1.93	4/14/2025	1.42	1.43	AN-1418	=
Strontium-90	U	-0.423	pCi/L	2.18	4/14/2025	1.03	1.03	EPA-905.0-M	=
Tritium		266	pCi/L	230	4/14/2025	147	155	EPA-906.0-M	=
Technetium-99	U	10.4	pCi/L	19.7	4/14/2025	11.7	11.8	HASL 300, Tc-02-RC M	=
Thorium-230	U	-0.152	pCi/L	3.99	4/14/2025	1.8	1.8	HASL 300, Th-01-RC M	=
Alpha activity	U	-0.394	pCi/L	6.97	4/14/2025	3.2	3.21	SW846-9310	=
Beta activity	U	8.33	pCi/L	9.61	4/14/2025	6.03	6.18	SW846-9310	=
1,2-Dibromo-3-chloropropane	U	0.0189	ug/L	0.0189	4/14/2025			SW846-8011	=

Paducah OREIS
GROUNDWATER MONITORING REPORT

Facility: C-746-S&T Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045

Sampling Point: MW221 SIDE **RGA Type:** URGA **Period:** 2nd Quarter 2025

AKGWA Well Tag #: 8000-5202 **SAMPLE ID:** MW221DSG3-25 **Sample Type:** FR

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
1,1,1,2-Tetrachloroethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
1,1,1-Trichloroethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
1,1,2,2-Tetrachloroethane	UY1	1	ug/L	1	4/14/2025			SW846-8260D	=
1,1,2-Trichloroethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
1,1-Dichloroethane	UY1	1	ug/L	1	4/14/2025			SW846-8260D	=
1,1-Dichloroethene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
1,2,3-Trichloropropane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
1,2-Dibromoethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
1,2-Dichlorobenzene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
1,2-Dichloroethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
1,2-Dichloropropane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
1,4-Dichlorobenzene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
2-Butanone	U	5	ug/L	5	4/14/2025			SW846-8260D	=
2-Hexanone	U	5	ug/L	5	4/14/2025			SW846-8260D	=
4-Methyl-2-pentanone	U	5	ug/L	5	4/14/2025			SW846-8260D	=
Acetone	U	5	ug/L	5	4/14/2025			SW846-8260D	=
Acrolein	U	5	ug/L	5	4/14/2025			SW846-8260D	=
Acrylonitrile	U	5	ug/L	5	4/14/2025			SW846-8260D	=
Benzene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Bromochloromethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Bromodichloromethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Bromoform	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Bromomethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Carbon disulfide	U	5	ug/L	5	4/14/2025			SW846-8260D	=
Carbon tetrachloride	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Chlorobenzene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Chloroethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Chloroform	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Chloromethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
cis-1,2-Dichloroethene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
cis-1,3-Dichloropropene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Dibromochloromethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Dibromomethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Ethylbenzene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Iodomethane	U	5	ug/L	5	4/14/2025			SW846-8260D	=
Methylene chloride	U	5	ug/L	5	4/14/2025			SW846-8260D	=
Styrene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Tetrachloroethene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Toluene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Total Xylene	U	3	ug/L	3	4/14/2025			SW846-8260D	=
trans-1,2-Dichloroethene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
trans-1,3-Dichloropropene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
trans-1,4-Dichloro-2-butene	U	5	ug/L	5	4/14/2025			SW846-8260D	UJ
Trichloroethene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Trichlorofluoromethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Vinyl acetate	U	5	ug/L	5	4/14/2025			SW846-8260D	=
Vinyl chloride	U	1	ug/L	1	4/14/2025			SW846-8260D	=

**Paducah OREIS
GROUNDWATER MONITORING REPORT**

Facility: C-746-S&T Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045
Sampling Point: MW221 SIDE **RGA Type:** URGA **Period:** 2nd Quarter 2025
AKGWA Well Tag #: 8000-5202 **SAMPLE ID:** MW221DSG3-25 **Sample Type:** FR

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
Dissolved Solids		195	mg/L	10	4/14/2025			EPA-160.1	=
Chemical Oxygen Demand (COD)	U	20	mg/L	20	4/14/2025			EPA-410.4	=
Cyanide	UN1	0.2	mg/L	0.2	4/14/2025			SW846-9012B	=
Total Organic Halides (TOX)	BJ	5.62	ug/L	10	4/14/2025			SW846-9020B	U
Total Organic Carbon (TOC)	J	1.05	mg/L	2	4/14/2025			SW846-9060A	=

**Paducah OREIS
GROUNDWATER MONITORING REPORT**

Facility: C-746-S&T Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045

Sampling Point: MW221 **SIDE** **RGA Type:** URGA **Period:** 2nd Quarter 2025

AKGWA Well Tag #: 8000-5202 **SAMPLE ID:** MW221SG3-25 **Sample Type:** REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
Iodide	U	0.5	mg/L	0.5	4/14/2025			EPA-300.0	=
Bromide		0.42	mg/L	0.2	4/14/2025			SW846-9056A	=
Chloride	JW	34.8	mg/L	250	4/14/2025			SW846-9056A	=
Fluoride	J	0.179	mg/L	4	4/14/2025			SW846-9056A	=
Nitrate as Nitrogen	J	0.955	mg/L	10	4/14/2025			SW846-9056A	=
Sulfate		16.1	mg/L	0.4	4/14/2025			SW846-9056A	=
Barometric Pressure Reading		29.85	Inches/Hg		4/14/2025			FS	X
Conductivity		402	µmhos/cm		4/14/2025			FS	X
Depth to Water		63.75	ft		4/14/2025			FS	X
Dissolved Oxygen		6.02	mg/L		4/14/2025			FS	X
Eh (approx)		439	mV		4/14/2025			FS	X
pH		6.03	Std Unit		4/14/2025			FS	X
Temperature		64.3	deg F		4/14/2025			FS	X
Turbidity		4.77	NTU		4/14/2025			FS	X
Aluminum	UN	0.05	mg/L	0.05	4/14/2025			SW846-6020B	=
Antimony	U	0.003	mg/L	0.003	4/14/2025			SW846-6020B	=
Arsenic	U	0.005	mg/L	0.005	4/14/2025			SW846-6020B	=
Barium	N	0.21	mg/L	0.004	4/14/2025			SW846-6020B	=
Beryllium	U	0.0005	mg/L	0.0005	4/14/2025			SW846-6020B	=
Boron		0.0248	mg/L	0.015	4/14/2025			SW846-6020B	=
Cadmium	U	0.001	mg/L	0.001	4/14/2025			SW846-6020B	=
Calcium		22.1	mg/L	0.2	4/14/2025			SW846-6020B	=
Chromium	J	0.00315	mg/L	0.01	4/14/2025			SW846-6020B	=
Cobalt		0.00109	mg/L	0.001	4/14/2025			SW846-6020B	=
Copper	B	0.0021	mg/L	0.002	4/14/2025			SW846-6020B	J
Iron	UN	0.1	mg/L	0.1	4/14/2025			SW846-6020B	=
Lead	U	0.002	mg/L	0.002	4/14/2025			SW846-6020B	=
Magnesium		9.62	mg/L	0.03	4/14/2025			SW846-6020B	=
Manganese		0.00772	mg/L	0.005	4/14/2025			SW846-6020B	=
Molybdenum		0.00302	mg/L	0.001	4/14/2025			SW846-6020B	=
Nickel		0.0677	mg/L	0.002	4/14/2025			SW846-6020B	=
Potassium		1.85	mg/L	0.3	4/14/2025			SW846-6020B	=
Rhodium	U	0.005	mg/L	0.005	4/14/2025			SW846-6020B	=
Selenium	U	0.005	mg/L	0.005	4/14/2025			SW846-6020B	=
Silver	U	0.001	mg/L	0.001	4/14/2025			SW846-6020B	=
Sodium		46.6	mg/L	0.25	4/14/2025			SW846-6020B	=
Tantalum	UN	0.005	mg/L	0.005	4/14/2025			SW846-6020B	=
Thallium	U	0.002	mg/L	0.002	4/14/2025			SW846-6020B	=
Uranium	J	0.000144	mg/L	0.0002	4/14/2025			SW846-6020B	=
Vanadium	U	0.02	mg/L	0.02	4/14/2025			SW846-6020B	=
Zinc	J	0.00548	mg/L	0.02	4/14/2025			SW846-6020B	=
Mercury	U	0.0002	mg/L	0.0002	4/14/2025			SW846-7470A	=
Barium, Dissolved	N	0.226	mg/L	0.004	4/14/2025			SW846-6020B	J
Chromium, Dissolved	U	0.01	mg/L	0.01	4/14/2025			SW846-6020B	UJ
Uranium, Dissolved	U	0.0002	mg/L	0.0002	4/14/2025			SW846-6020B	UJ
Radium-226	U	0.662	pCi/L	1.63	4/14/2025	1.11	1.12	AN-1418	=
Strontium-90	U	-0.822	pCi/L	1.83	4/14/2025	0.745	0.745	EPA-905.0-M	UJ

**Paducah OREIS
GROUNDWATER MONITORING REPORT**

Facility: C-746-S&T Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045

Sampling Point: MW221 SIDE **RGA Type:** URGA **Period:** 2nd Quarter 2025

AKGWA Well Tag #: 8000-5202 **SAMPLE ID:** MW221SG3-25 **Sample Type:** REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
Tritium	U	130	pCi/L	217	4/14/2025	130	133	EPA-906.0-M	=
Technetium-99	U	12.3	pCi/L	19.2	4/14/2025	11.6	11.6	HASL 300, Tc-02-RC M	=
Thorium-230	U	1.16	pCi/L	2.96	4/14/2025	1.83	1.84	HASL 300, Th-01-RC M	=
Alpha activity	U	0.0631	pCi/L	7.37	4/14/2025	3.34	3.35	SW846-9310	=
Beta activity	U	10.2	pCi/L	12	4/14/2025	7.51	7.69	SW846-9310	=
1,2-Dibromo-3-chloropropane	U	0.0188	ug/L	0.0188	4/14/2025			SW846-8011	=
1,1,1,2-Tetrachloroethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
1,1,1-Trichloroethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
1,1,2,2-Tetrachloroethane	UY1	1	ug/L	1	4/14/2025			SW846-8260D	=
1,1,2-Trichloroethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
1,1-Dichloroethane	UY1	1	ug/L	1	4/14/2025			SW846-8260D	=
1,1-Dichloroethene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
1,2,3-Trichloropropane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
1,2-Dibromoethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
1,2-Dichlorobenzene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
1,2-Dichloroethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
1,2-Dichloropropane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
1,4-Dichlorobenzene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
2-Butanone	U	5	ug/L	5	4/14/2025			SW846-8260D	=
2-Hexanone	U	5	ug/L	5	4/14/2025			SW846-8260D	=
4-Methyl-2-pentanone	U	5	ug/L	5	4/14/2025			SW846-8260D	=
Acetone	U	5	ug/L	5	4/14/2025			SW846-8260D	=
Acrolein	U	5	ug/L	5	4/14/2025			SW846-8260D	=
Acrylonitrile	U	5	ug/L	5	4/14/2025			SW846-8260D	=
Benzene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Bromochloromethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Bromodichloromethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Bromoform	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Bromomethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Carbon disulfide	U	5	ug/L	5	4/14/2025			SW846-8260D	=
Carbon tetrachloride	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Chlorobenzene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Chloroethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Chloroform	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Chloromethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
cis-1,2-Dichloroethene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
cis-1,3-Dichloropropene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Dibromochloromethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Dibromomethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Ethylbenzene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Iodomethane	U	5	ug/L	5	4/14/2025			SW846-8260D	=
Methylene chloride	U	5	ug/L	5	4/14/2025			SW846-8260D	=
Styrene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Tetrachloroethene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Toluene	U	1	ug/L	1	4/14/2025			SW846-8260D	=

**Paducah OREIS
GROUNDWATER MONITORING REPORT**

Facility: C-746-S&T Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045
Sampling Point: MW221 SIDE **RGA Type:** URGA **Period:** 2nd Quarter 2025
AKGWA Well Tag #: 8000-5202 **SAMPLE ID:** MW221SG3-25 **Sample Type:** REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
Total Xylene	U	3	ug/L	3	4/14/2025			SW846-8260D	=
trans-1,2-Dichloroethene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
trans-1,3-Dichloropropene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
trans-1,4-Dichloro-2-butene	U	5	ug/L	5	4/14/2025			SW846-8260D	UJ
Trichloroethene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Trichlorofluoromethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Vinyl acetate	U	5	ug/L	5	4/14/2025			SW846-8260D	=
Vinyl chloride	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Dissolved Solids		217	mg/L	10	4/14/2025			EPA-160.1	=
Chemical Oxygen Demand (COD)	U	20	mg/L	20	4/14/2025			EPA-410.4	=
Cyanide	UN1	0.2	mg/L	0.2	4/14/2025			SW846-9012B	=
Total Organic Halides (TOX)	BJ	7	ug/L	10	4/14/2025			SW846-9020B	U
Total Organic Carbon (TOC)	J	0.681	mg/L	2	4/14/2025			SW846-9060A	=

Paducah OREIS
GROUNDWATER MONITORING REPORT

Facility: C-746-S&T Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045

Sampling Point: MW222 SIDE **RGA Type:** URGA **Period:** 2nd Quarter 2025

AKGWA Well Tag #: 8000-5242 **SAMPLE ID:** MW222SG3-25 **Sample Type:** REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
Iodide	U	0.5	mg/L	0.5	4/14/2025			EPA-300.0	=
Bromide		0.402	mg/L	0.2	4/14/2025			SW846-9056A	=
Chloride	JW	32.2	mg/L	250	4/14/2025			SW846-9056A	=
Fluoride	J	0.236	mg/L	4	4/14/2025			SW846-9056A	=
Nitrate as Nitrogen	J	0.883	mg/L	10	4/14/2025			SW846-9056A	=
Sulfate		13	mg/L	0.4	4/14/2025			SW846-9056A	=
Barometric Pressure Reading		29.86	Inches/Hg		4/14/2025			FS	X
Conductivity		387	µmhos/cm		4/14/2025			FS	X
Depth to Water		67.76	ft		4/14/2025			FS	X
Dissolved Oxygen		4.88	mg/L		4/14/2025			FS	X
Eh (approx)		405	mV		4/14/2025			FS	X
pH		6.03	Std Unit		4/14/2025			FS	X
Temperature		64	deg F		4/14/2025			FS	X
Turbidity		4.2	NTU		4/14/2025			FS	X
Aluminum	UN	0.05	mg/L	0.05	4/14/2025			SW846-6020B	=
Antimony	U	0.003	mg/L	0.003	4/14/2025			SW846-6020B	=
Arsenic	U	0.005	mg/L	0.005	4/14/2025			SW846-6020B	=
Barium	N	0.279	mg/L	0.004	4/14/2025			SW846-6020B	=
Beryllium	U	0.0005	mg/L	0.0005	4/14/2025			SW846-6020B	=
Boron	J	0.0104	mg/L	0.015	4/14/2025			SW846-6020B	=
Cadmium	U	0.001	mg/L	0.001	4/14/2025			SW846-6020B	=
Calcium		20.5	mg/L	0.2	4/14/2025			SW846-6020B	=
Chromium	J	0.00553	mg/L	0.01	4/14/2025			SW846-6020B	=
Cobalt	U	0.001	mg/L	0.001	4/14/2025			SW846-6020B	=
Copper	BJ	0.00111	mg/L	0.002	4/14/2025			SW846-6020B	U
Iron	JN	0.0491	mg/L	0.1	4/14/2025			SW846-6020B	=
Lead	U	0.002	mg/L	0.002	4/14/2025			SW846-6020B	=
Magnesium		9.13	mg/L	0.03	4/14/2025			SW846-6020B	=
Manganese	J	0.00278	mg/L	0.005	4/14/2025			SW846-6020B	=
Molybdenum		0.00246	mg/L	0.001	4/14/2025			SW846-6020B	=
Nickel		0.0244	mg/L	0.002	4/14/2025			SW846-6020B	=
Potassium		0.599	mg/L	0.3	4/14/2025			SW846-6020B	=
Rhodium	U	0.005	mg/L	0.005	4/14/2025			SW846-6020B	=
Selenium	U	0.005	mg/L	0.005	4/14/2025			SW846-6020B	=
Silver	U	0.001	mg/L	0.001	4/14/2025			SW846-6020B	=
Sodium		46.6	mg/L	0.25	4/14/2025			SW846-6020B	=
Tantalum	UN	0.005	mg/L	0.005	4/14/2025			SW846-6020B	=
Thallium	U	0.002	mg/L	0.002	4/14/2025			SW846-6020B	=
Uranium	U	0.0002	mg/L	0.0002	4/14/2025			SW846-6020B	=
Vanadium	U	0.02	mg/L	0.02	4/14/2025			SW846-6020B	=
Zinc	J	0.00365	mg/L	0.02	4/14/2025			SW846-6020B	=
Mercury	U	0.0002	mg/L	0.0002	4/14/2025			SW846-7470A	=
Barium, Dissolved	N	0.282	mg/L	0.004	4/14/2025			SW846-6020B	J
Chromium, Dissolved	U	0.01	mg/L	0.01	4/14/2025			SW846-6020B	UJ
Uranium, Dissolved	U	0.0002	mg/L	0.0002	4/14/2025			SW846-6020B	UJ
Radium-226	U	0.57	pCi/L	0.684	4/14/2025	0.489	0.495	AN-1418	=
Strontium-90	U	1.41	pCi/L	2.59	4/14/2025	1.55	1.56	EPA-905.0-M	=

**Paducah OREIS
GROUNDWATER MONITORING REPORT**

Facility: C-746-S&T Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045
Sampling Point: MW222 SIDE **RGA Type:** URGA **Period:** 2nd Quarter 2025
AKGWA Well Tag #: 8000-5242 **SAMPLE ID:** MW222SG3-25 **Sample Type:** REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
Tritium	U	25.1	pCi/L	219	4/14/2025	124	124	EPA-906.0-M	=
Technetium-99	U	4.88	pCi/L	19.8	4/14/2025	11.5	11.5	HASL 300, Tc-02-RC M	=
Thorium-230	U	1	pCi/L	2.83	4/14/2025	1.69	1.7	HASL 300, Th-01-RC M	=
Alpha activity	U	2.97	pCi/L	8.85	4/14/2025	4.93	4.96	SW846-9310	=
Beta activity	U	6.2	pCi/L	14.7	4/14/2025	8.64	8.7	SW846-9310	=
1,2-Dibromo-3-chloropropane	US	0.019	ug/L	0.019	4/14/2025			SW846-8011	=
1,1,1,2-Tetrachloroethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
1,1,1-Trichloroethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
1,1,2,2-Tetrachloroethane	UY1	1	ug/L	1	4/14/2025			SW846-8260D	=
1,1,2-Trichloroethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
1,1-Dichloroethane	UY1	1	ug/L	1	4/14/2025			SW846-8260D	=
1,1-Dichloroethene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
1,2,3-Trichloropropane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
1,2-Dibromoethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
1,2-Dichlorobenzene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
1,2-Dichloroethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
1,2-Dichloropropane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
1,4-Dichlorobenzene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
2-Butanone	U	5	ug/L	5	4/14/2025			SW846-8260D	=
2-Hexanone	U	5	ug/L	5	4/14/2025			SW846-8260D	=
4-Methyl-2-pentanone	U	5	ug/L	5	4/14/2025			SW846-8260D	=
Acetone	U	5	ug/L	5	4/14/2025			SW846-8260D	=
Acrolein	U	5	ug/L	5	4/14/2025			SW846-8260D	=
Acrylonitrile	U	5	ug/L	5	4/14/2025			SW846-8260D	=
Benzene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Bromochloromethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Bromodichloromethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Bromoform	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Bromomethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Carbon disulfide	U	5	ug/L	5	4/14/2025			SW846-8260D	=
Carbon tetrachloride	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Chlorobenzene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Chloroethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Chloroform	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Chloromethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
cis-1,2-Dichloroethene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
cis-1,3-Dichloropropene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Dibromochloromethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Dibromomethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Ethylbenzene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Iodomethane	U	5	ug/L	5	4/14/2025			SW846-8260D	=
Methylene chloride	U	5	ug/L	5	4/14/2025			SW846-8260D	=
Styrene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Tetrachloroethene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Toluene	U	1	ug/L	1	4/14/2025			SW846-8260D	=

**Paducah OREIS
GROUNDWATER MONITORING REPORT**

Facility: C-746-S&T Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045
Sampling Point: MW222 SIDE **RGA Type:** URGA **Period:** 2nd Quarter 2025
AKGWA Well Tag #: 8000-5242 **SAMPLE ID:** MW222SG3-25 **Sample Type:** REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
Total Xylene	U	3	ug/L	3	4/14/2025			SW846-8260D	=
trans-1,2-Dichloroethene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
trans-1,3-Dichloropropene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
trans-1,4-Dichloro-2-butene	U	5	ug/L	5	4/14/2025			SW846-8260D	UJ
Trichloroethene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Trichlorofluoromethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Vinyl acetate	U	5	ug/L	5	4/14/2025			SW846-8260D	=
Vinyl chloride	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Dissolved Solids		223	mg/L	10	4/14/2025			EPA-160.1	=
Chemical Oxygen Demand (COD)	U	20	mg/L	20	4/14/2025			EPA-410.4	=
Cyanide	UN1	0.2	mg/L	0.2	4/14/2025			SW846-9012B	=
Total Organic Halides (TOX)	BJ	7.58	ug/L	10	4/14/2025			SW846-9020B	U
Total Organic Carbon (TOC)	J	0.448	mg/L	2	4/14/2025			SW846-9060A	=

Paducah OREIS
GROUNDWATER MONITORING REPORT

Facility: C-746-S&T Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045

Sampling Point: MW223 **SIDE** **RGA Type:** URGA **Period:** 2nd Quarter 2025

AKGWA Well Tag #: 8000-5243 **SAMPLE ID:** MW223SG3-25 **Sample Type:** REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
Iodide	U	0.5	mg/L	0.5	4/14/2025			EPA-300.0	=
Bromide		0.404	mg/L	0.2	4/14/2025			SW846-9056A	=
Chloride	JW	36.3	mg/L	250	4/14/2025			SW846-9056A	=
Fluoride	J	0.19	mg/L	4	4/14/2025			SW846-9056A	=
Nitrate as Nitrogen	J	0.859	mg/L	10	4/14/2025			SW846-9056A	=
Sulfate		15.9	mg/L	0.4	4/14/2025			SW846-9056A	=
Barometric Pressure Reading		29.86	Inches/Hg		4/14/2025			FS	X
Conductivity		391	µmhos/cm		4/14/2025			FS	X
Depth to Water		66.9	ft		4/14/2025			FS	X
Dissolved Oxygen		4.8	mg/L		4/14/2025			FS	X
Eh (approx)		431	mV		4/14/2025			FS	X
pH		6	Std Unit		4/14/2025			FS	X
Temperature		63.2	deg F		4/14/2025			FS	X
Turbidity		4.44	NTU		4/14/2025			FS	X
Aluminum	UN	0.05	mg/L	0.05	4/14/2025			SW846-6020B	=
Antimony	U	0.003	mg/L	0.003	4/14/2025			SW846-6020B	=
Arsenic	U	0.005	mg/L	0.005	4/14/2025			SW846-6020B	=
Barium	N	0.227	mg/L	0.004	4/14/2025			SW846-6020B	=
Beryllium	U	0.0005	mg/L	0.0005	4/14/2025			SW846-6020B	=
Boron	J	0.0112	mg/L	0.015	4/14/2025			SW846-6020B	=
Cadmium	U	0.001	mg/L	0.001	4/14/2025			SW846-6020B	=
Calcium		22.7	mg/L	0.2	4/14/2025			SW846-6020B	=
Chromium		0.0196	mg/L	0.01	4/14/2025			SW846-6020B	=
Cobalt		0.00236	mg/L	0.001	4/14/2025			SW846-6020B	=
Copper	BJ	0.00187	mg/L	0.002	4/14/2025			SW846-6020B	U
Iron	N	0.112	mg/L	0.1	4/14/2025			SW846-6020B	=
Lead	U	0.002	mg/L	0.002	4/14/2025			SW846-6020B	=
Magnesium		9.98	mg/L	0.03	4/14/2025			SW846-6020B	=
Manganese		0.0201	mg/L	0.005	4/14/2025			SW846-6020B	=
Molybdenum		0.00183	mg/L	0.001	4/14/2025			SW846-6020B	=
Nickel		0.322	mg/L	0.002	4/14/2025			SW846-6020B	=
Potassium		1.2	mg/L	0.3	4/14/2025			SW846-6020B	=
Rhodium	U	0.005	mg/L	0.005	4/14/2025			SW846-6020B	=
Selenium	U	0.005	mg/L	0.005	4/14/2025			SW846-6020B	=
Silver	U	0.001	mg/L	0.001	4/14/2025			SW846-6020B	=
Sodium		46.3	mg/L	0.25	4/14/2025			SW846-6020B	=
Tantalum	UN	0.005	mg/L	0.005	4/14/2025			SW846-6020B	=
Thallium	U	0.002	mg/L	0.002	4/14/2025			SW846-6020B	=
Uranium	U	0.0002	mg/L	0.0002	4/14/2025			SW846-6020B	=
Vanadium	U	0.02	mg/L	0.02	4/14/2025			SW846-6020B	=
Zinc	J	0.00429	mg/L	0.02	4/14/2025			SW846-6020B	=
Mercury	U	0.0002	mg/L	0.0002	4/14/2025			SW846-7470A	=
Barium, Dissolved	N	0.225	mg/L	0.004	4/14/2025			SW846-6020B	J
Chromium, Dissolved	J	0.0077	mg/L	0.01	4/14/2025			SW846-6020B	J
Uranium, Dissolved	U	0.0002	mg/L	0.0002	4/14/2025			SW846-6020B	UJ
Radium-226	U	0.277	pCi/L	0.676	4/14/2025	0.409	0.41	AN-1418	=
Strontium-90	U	-0.672	pCi/L	1.87	4/14/2025	0.853	0.853	EPA-905.0-M	=

Paducah OREIS
GROUNDWATER MONITORING REPORT

Facility: C-746-S&T Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045

Sampling Point: MW223 SIDE **RGA Type:** URGA **Period:** 2nd Quarter 2025

AKGWA Well Tag #: 8000-5243 **SAMPLE ID:** MW223SG3-25 **Sample Type:** REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
Tritium	U	103	pCi/L	230	4/14/2025	135	137	EPA-906.0-M	=
Technetium-99	U	10.9	pCi/L	19.5	4/14/2025	11.6	11.7	HASL 300, Tc-02-RC M	=
Thorium-230	U	1.24	pCi/L	2.81	4/14/2025	1.8	1.82	HASL 300, Th-01-RC M	=
Alpha activity	U	-2.09	pCi/L	8.35	4/14/2025	2.89	2.9	SW846-9310	=
Beta activity	U	11.9	pCi/L	13	4/14/2025	8.2	8.42	SW846-9310	=
1,2-Dibromo-3-chloropropane	U	0.0188	ug/L	0.0188	4/14/2025			SW846-8011	=
1,1,1,2-Tetrachloroethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
1,1,1-Trichloroethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
1,1,2,2-Tetrachloroethane	UY1	1	ug/L	1	4/14/2025			SW846-8260D	=
1,1,2-Trichloroethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
1,1-Dichloroethane	UY1	1	ug/L	1	4/14/2025			SW846-8260D	=
1,1-Dichloroethene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
1,2,3-Trichloropropane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
1,2-Dibromoethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
1,2-Dichlorobenzene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
1,2-Dichloroethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
1,2-Dichloropropane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
1,4-Dichlorobenzene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
2-Butanone	U	5	ug/L	5	4/14/2025			SW846-8260D	=
2-Hexanone	U	5	ug/L	5	4/14/2025			SW846-8260D	=
4-Methyl-2-pentanone	U	5	ug/L	5	4/14/2025			SW846-8260D	=
Acetone	U	5	ug/L	5	4/14/2025			SW846-8260D	=
Acrolein	U	5	ug/L	5	4/14/2025			SW846-8260D	=
Acrylonitrile	U	5	ug/L	5	4/14/2025			SW846-8260D	=
Benzene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Bromochloromethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Bromodichloromethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Bromoform	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Bromomethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Carbon disulfide	U	5	ug/L	5	4/14/2025			SW846-8260D	=
Carbon tetrachloride	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Chlorobenzene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Chloroethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Chloroform	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Chloromethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
cis-1,2-Dichloroethene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
cis-1,3-Dichloropropene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Dibromochloromethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Dibromomethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Ethylbenzene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Iodomethane	U	5	ug/L	5	4/14/2025			SW846-8260D	=
Methylene chloride	U	5	ug/L	5	4/14/2025			SW846-8260D	=
Styrene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Tetrachloroethene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Toluene	U	1	ug/L	1	4/14/2025			SW846-8260D	=

**Paducah OREIS
GROUNDWATER MONITORING REPORT**

Facility: C-746-S&T Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045
Sampling Point: MW223 SIDE **RGA Type:** URGA **Period:** 2nd Quarter 2025
AKGWA Well Tag #: 8000-5243 **SAMPLE ID:** MW223SG3-25 **Sample Type:** REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
Total Xylene	U	3	ug/L	3	4/14/2025			SW846-8260D	=
trans-1,2-Dichloroethene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
trans-1,3-Dichloropropene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
trans-1,4-Dichloro-2-butene	U	5	ug/L	5	4/14/2025			SW846-8260D	UJ
Trichloroethene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Trichlorofluoromethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Vinyl acetate	U	5	ug/L	5	4/14/2025			SW846-8260D	=
Vinyl chloride	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Dissolved Solids		204	mg/L	10	4/14/2025			EPA-160.1	=
Chemical Oxygen Demand (COD)	J	15	mg/L	20	4/14/2025			EPA-410.4	=
Cyanide	UN1	0.2	mg/L	0.2	4/14/2025			SW846-9012B	=
Total Organic Halides (TOX)	U	10	ug/L	10	4/14/2025			SW846-9020B	=
Total Organic Carbon (TOC)	J	0.496	mg/L	2	4/14/2025			SW846-9060A	=

Paducah OREIS
GROUNDWATER MONITORING REPORT

Facility: C-746-S&T Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045

Sampling Point: MW224 **SIDE** **RGA Type:** URGA **Period:** 2nd Quarter 2025

AKGWA Well Tag #: 8000-5244 **SAMPLE ID:** MW224SG3-25 **Sample Type:** REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
Iodide	U	0.5	mg/L	0.5	4/14/2025			EPA-300.0	=
Bromide		0.387	mg/L	0.2	4/14/2025			SW846-9056A	=
Chloride	JW	30.9	mg/L	250	4/14/2025			SW846-9056A	=
Fluoride	J	0.245	mg/L	4	4/14/2025			SW846-9056A	=
Nitrate as Nitrogen	J	0.938	mg/L	10	4/14/2025			SW846-9056A	=
Sulfate		21	mg/L	0.4	4/14/2025			SW846-9056A	=
Barometric Pressure Reading		29.86	Inches/Hg		4/14/2025			FS	X
Conductivity		454	µmhos/cm		4/14/2025			FS	X
Depth to Water		68.14	ft		4/14/2025			FS	X
Dissolved Oxygen		4.49	mg/L		4/14/2025			FS	X
Eh (approx)		449	mV		4/14/2025			FS	X
pH		6.06	Std Unit		4/14/2025			FS	X
Temperature		67.1	deg F		4/14/2025			FS	X
Turbidity		4.17	NTU		4/14/2025			FS	X
Aluminum	UN	0.05	mg/L	0.05	4/14/2025			SW846-6020B	=
Antimony	U	0.003	mg/L	0.003	4/14/2025			SW846-6020B	=
Arsenic	U	0.005	mg/L	0.005	4/14/2025			SW846-6020B	=
Barium	N	0.237	mg/L	0.004	4/14/2025			SW846-6020B	=
Beryllium	U	0.0005	mg/L	0.0005	4/14/2025			SW846-6020B	=
Boron		0.0423	mg/L	0.015	4/14/2025			SW846-6020B	=
Cadmium	U	0.001	mg/L	0.001	4/14/2025			SW846-6020B	=
Calcium		25.5	mg/L	0.2	4/14/2025			SW846-6020B	=
Chromium	U	0.01	mg/L	0.01	4/14/2025			SW846-6020B	=
Cobalt	U	0.001	mg/L	0.001	4/14/2025			SW846-6020B	=
Copper	BJ	0.00136	mg/L	0.002	4/14/2025			SW846-6020B	U
Iron	JN	0.0364	mg/L	0.1	4/14/2025			SW846-6020B	=
Lead	U	0.002	mg/L	0.002	4/14/2025			SW846-6020B	=
Magnesium		11.2	mg/L	0.03	4/14/2025			SW846-6020B	=
Manganese		0.00568	mg/L	0.005	4/14/2025			SW846-6020B	=
Molybdenum	J	0.000616	mg/L	0.001	4/14/2025			SW846-6020B	=
Nickel		0.016	mg/L	0.002	4/14/2025			SW846-6020B	=
Potassium		1.07	mg/L	0.3	4/14/2025			SW846-6020B	=
Rhodium	U	0.005	mg/L	0.005	4/14/2025			SW846-6020B	=
Selenium	U	0.005	mg/L	0.005	4/14/2025			SW846-6020B	=
Silver	U	0.001	mg/L	0.001	4/14/2025			SW846-6020B	=
Sodium		51.8	mg/L	2.5	4/14/2025			SW846-6020B	=
Tantalum	UN	0.005	mg/L	0.005	4/14/2025			SW846-6020B	=
Thallium	U	0.002	mg/L	0.002	4/14/2025			SW846-6020B	=
Uranium	U	0.0002	mg/L	0.0002	4/14/2025			SW846-6020B	=
Vanadium	U	0.02	mg/L	0.02	4/14/2025			SW846-6020B	=
Zinc	J	0.0043	mg/L	0.02	4/14/2025			SW846-6020B	=
Mercury	U	0.0002	mg/L	0.0002	4/14/2025			SW846-7470A	=
Barium, Dissolved	N	0.238	mg/L	0.004	4/14/2025			SW846-6020B	J
Chromium, Dissolved	U	0.01	mg/L	0.01	4/14/2025			SW846-6020B	UJ
Uranium, Dissolved	U	0.0002	mg/L	0.0002	4/14/2025			SW846-6020B	UJ
Radium-226	U	0.463	pCi/L	0.521	4/14/2025	0.391	0.395	AN-1418	=
Strontium-90	U	-0.778	pCi/L	2.32	4/14/2025	1.13	1.13	EPA-905.0-M	=

**Paducah OREIS
GROUNDWATER MONITORING REPORT**

Facility: C-746-S&T Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045

Sampling Point: MW224 SIDE **RGA Type:** URGA **Period:** 2nd Quarter 2025

AKGWA Well Tag #: 8000-5244 **SAMPLE ID:** MW224SG3-25 **Sample Type:** REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
Tritium	U	-70	pCi/L	226	4/14/2025	121	121	EPA-906.0-M	=
Technetium-99	U	7.9	pCi/L	19.9	4/14/2025	11.7	11.7	HASL 300, Tc-02-RC M	=
Thorium-230	U	1.48	pCi/L	3.02	4/14/2025	1.9	1.91	HASL 300, Th-01-RC M	=
Alpha activity	U	-0.361	pCi/L	5.53	4/14/2025	2.28	2.28	SW846-9310	=
Beta activity	U	2	pCi/L	8.22	4/14/2025	4.64	4.65	SW846-9310	=
1,2-Dibromo-3-chloropropane	U	0.019	ug/L	0.019	4/14/2025			SW846-8011	=
1,1,1,2-Tetrachloroethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
1,1,1-Trichloroethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
1,1,2,2-Tetrachloroethane	UY1	1	ug/L	1	4/14/2025			SW846-8260D	=
1,1,2-Trichloroethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
1,1-Dichloroethane	UY1	1	ug/L	1	4/14/2025			SW846-8260D	=
1,1-Dichloroethene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
1,2,3-Trichloropropane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
1,2-Dibromoethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
1,2-Dichlorobenzene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
1,2-Dichloroethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
1,2-Dichloropropane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
1,4-Dichlorobenzene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
2-Butanone	U	5	ug/L	5	4/14/2025			SW846-8260D	=
2-Hexanone	U	5	ug/L	5	4/14/2025			SW846-8260D	=
4-Methyl-2-pentanone	U	5	ug/L	5	4/14/2025			SW846-8260D	=
Acetone	U	5	ug/L	5	4/14/2025			SW846-8260D	=
Acrolein	U	5	ug/L	5	4/14/2025			SW846-8260D	=
Acrylonitrile	U	5	ug/L	5	4/14/2025			SW846-8260D	=
Benzene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Bromochloromethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Bromodichloromethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Bromoform	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Bromomethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Carbon disulfide	U	5	ug/L	5	4/14/2025			SW846-8260D	=
Carbon tetrachloride	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Chlorobenzene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Chloroethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Chloroform	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Chloromethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
cis-1,2-Dichloroethene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
cis-1,3-Dichloropropene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Dibromochloromethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Dibromomethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Ethylbenzene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Iodomethane	U	5	ug/L	5	4/14/2025			SW846-8260D	=
Methylene chloride	U	5	ug/L	5	4/14/2025			SW846-8260D	=
Styrene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Tetrachloroethene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Toluene	U	1	ug/L	1	4/14/2025			SW846-8260D	=

**Paducah OREIS
GROUNDWATER MONITORING REPORT**

Facility: C-746-S&T Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045
Sampling Point: MW224 SIDE **RGA Type:** URGA **Period:** 2nd Quarter 2025
AKGWA Well Tag #: 8000-5244 **SAMPLE ID:** MW224SG3-25 **Sample Type:** REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
Total Xylene	U	3	ug/L	3	4/14/2025			SW846-8260D	=
trans-1,2-Dichloroethene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
trans-1,3-Dichloropropene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
trans-1,4-Dichloro-2-butene	U	5	ug/L	5	4/14/2025			SW846-8260D	UJ
Trichloroethene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Trichlorofluoromethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Vinyl acetate	U	5	ug/L	5	4/14/2025			SW846-8260D	=
Vinyl chloride	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Dissolved Solids		245	mg/L	10	4/14/2025			EPA-160.1	=
Chemical Oxygen Demand (COD)	U	20	mg/L	20	4/14/2025			EPA-410.4	=
Cyanide	JN1	0.00295	mg/L	0.2	4/14/2025			SW846-9012B	=
Total Organic Halides (TOX)	BJ	7.96	ug/L	10	4/14/2025			SW846-9020B	U
Total Organic Carbon (TOC)	J	0.731	mg/L	2	4/14/2025			SW846-9060A	=

**Paducah OREIS
GROUNDWATER MONITORING REPORT**

Facility: C-746-S&T Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045
Sampling Point: MW369 DOWN **RGA Type:** URGA **Period:** 2nd Quarter 2025
AKGWA Well Tag #: 8004-4820 **SAMPLE ID:** MW369UG3-25 **Sample Type:** REG

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

**Paducah OREIS
GROUNDWATER MONITORING REPORT**

Facility: C-746-S&T Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045
Sampling Point: MW369 DOWN **RGA Type:** URGA **Period:** 2nd Quarter 2025
AKGWA Well Tag #: 8004-4820 **SAMPLE ID:** MW369UG3-25 **Sample Type:** REG

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

**Paducah OREIS
GROUNDWATER MONITORING REPORT**

Facility: C-746-S&T Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045
Sampling Point: MW369 DOWN **RGA Type:** URGA **Period:** 2nd Quarter 2025
AKGWA Well Tag #: 8004-4820 **SAMPLE ID:** MW369UG3-25 Sample Type: REG

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

**Paducah OREIS
GROUNDWATER MONITORING REPORT**

Facility: C-746-S&T Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045
Sampling Point: MW370 DOWN **RGA Type:** LRGA **Period:** 2nd Quarter 2025
AKGWA Well Tag #: 8004-4818 **SAMPLE ID:** MW370UG3-25 **Sample Type:** REG

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

**Paducah OREIS
GROUNDWATER MONITORING REPORT**

Facility: C-746-S&T Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045
Sampling Point: MW370 DOWN **RGA Type:** LRGA **Period:** 2nd Quarter 2025
AKGWA Well Tag #: 8004-4818 **SAMPLE ID:** MW370UG3-25 **Sample Type:** REG

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

**Paducah OREIS
GROUNDWATER MONITORING REPORT**

Facility: C-746-S&T Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045
Sampling Point: MW370 DOWN **RGA Type:** LRGA **Period:** 2nd Quarter 2025
AKGWA Well Tag #: 8004-4818 **SAMPLE ID:** MW370UG3-25 Sample Type: REG

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

**Paducah OREIS
GROUNDWATER MONITORING REPORT**

Facility: C-746-S&T Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045
Sampling Point: MW372 DOWN **RGA Type:** URGA **Period:** 2nd Quarter 2025
AKGWA Well Tag #: 8004-4808 **SAMPLE ID:** MW372UG3-25 **Sample Type:** REG

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

**Paducah OREIS
GROUNDWATER MONITORING REPORT**

Facility: C-746-S&T Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045
Sampling Point: MW372 DOWN **RGA Type:** URGA **Period:** 2nd Quarter 2025
AKGWA Well Tag #: 8004-4808 **SAMPLE ID:** MW372UG3-25 **Sample Type:** REG

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

**Paducah OREIS
GROUNDWATER MONITORING REPORT**

Facility: C-746-S&T Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045
Sampling Point: MW372 DOWN **RGA Type:** URGA **Period:** 2nd Quarter 2025
AKGWA Well Tag #: 8004-4808 **SAMPLE ID:** MW372UG3-25 Sample Type: REG

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

**Paducah OREIS
GROUNDWATER MONITORING REPORT**

Facility: C-746-S&T Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045

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

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

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

**Paducah OREIS
GROUNDWATER MONITORING REPORT**

Facility: C-746-S&T Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045
Sampling Point: MW373 DOWN **RGA Type:** LRGA **Period:** 2nd Quarter 2025
AKGWA Well Tag #: 8004-4792 **SAMPLE ID:** MW373UG3-25 **Sample Type:** REG

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

Paducah OREIS
GROUNDWATER MONITORING REPORT

Facility: C-746-S&T Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045
Sampling Point: MW373 DOWN **RGA Type:** LRGA **Period:** 2nd Quarter 2025
AKGWA Well Tag #: 8004-4792 **SAMPLE ID:** MW373UG3-25 **Sample Type:** REG

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

Paducah OREIS
GROUNDWATER MONITORING REPORT

Facility: C-746-S&T Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045

Sampling Point: MW384 **SIDE** **RGA Type:** URGA **Period:** 2nd Quarter 2025

AKGWA Well Tag #: 8004-4809 **SAMPLE ID:** MW384SG3-25 **Sample Type:** REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
Iodide	U	0.5	mg/L	0.5	4/15/2025			EPA-300.0	=
Bromide		0.281	mg/L	0.2	4/15/2025			SW846-9056A	=
Chloride	JW	23.5	mg/L	250	4/15/2025			SW846-9056A	=
Fluoride	J	0.163	mg/L	4	4/15/2025			SW846-9056A	=
Nitrate as Nitrogen	J	0.783	mg/L	10	4/15/2025			SW846-9056A	=
Sulfate	W	19.4	mg/L	1.6	4/15/2025			SW846-9056A	=
Barometric Pressure Reading		30.17	Inches/Hg		4/15/2025			FS	X
Conductivity		428	µmhos/cm		4/15/2025			FS	X
Depth to Water		37.72	ft		4/15/2025			FS	X
Dissolved Oxygen		5.2	mg/L		4/15/2025			FS	X
Eh (approx)		506	mV		4/15/2025			FS	X
pH		6	Std Unit		4/15/2025			FS	X
Temperature		61.8	deg F		4/15/2025			FS	X
Turbidity		9.34	NTU		4/15/2025			FS	X
Aluminum	U	0.05	mg/L	0.05	4/15/2025			SW846-6020B	=
Antimony	U	0.003	mg/L	0.003	4/15/2025			SW846-6020B	=
Arsenic	U	0.005	mg/L	0.005	4/15/2025			SW846-6020B	=
Barium	N	0.197	mg/L	0.004	4/15/2025			SW846-6020B	=
Beryllium	U	0.0005	mg/L	0.0005	4/15/2025			SW846-6020B	=
Boron		0.0938	mg/L	0.015	4/15/2025			SW846-6020B	=
Cadmium	U	0.001	mg/L	0.001	4/15/2025			SW846-6020B	=
Calcium		23.2	mg/L	0.2	4/15/2025			SW846-6020B	=
Chromium	U	0.01	mg/L	0.01	4/15/2025			SW846-6020B	=
Cobalt	U	0.001	mg/L	0.001	4/15/2025			SW846-6020B	=
Copper	J	0.00106	mg/L	0.002	4/15/2025			SW846-6020B	=
Iron		0.28	mg/L	0.1	4/15/2025			SW846-6020B	=
Lead	U	0.002	mg/L	0.002	4/15/2025			SW846-6020B	=
Magnesium		9.87	mg/L	0.03	4/15/2025			SW846-6020B	=
Manganese		0.00667	mg/L	0.005	4/15/2025			SW846-6020B	=
Molybdenum	J	0.000372	mg/L	0.001	4/15/2025			SW846-6020B	=
Nickel	U	0.002	mg/L	0.002	4/15/2025			SW846-6020B	=
Potassium		1.37	mg/L	0.3	4/15/2025			SW846-6020B	=
Rhodium	U	0.005	mg/L	0.005	4/15/2025			SW846-6020B	=
Selenium	U	0.005	mg/L	0.005	4/15/2025			SW846-6020B	=
Silver	U	0.001	mg/L	0.001	4/15/2025			SW846-6020B	=
Sodium		44.8	mg/L	0.25	4/15/2025			SW846-6020B	=
Tantalum	U	0.005	mg/L	0.005	4/15/2025			SW846-6020B	=
Thallium	U	0.002	mg/L	0.002	4/15/2025			SW846-6020B	=
Uranium	J	0.000194	mg/L	0.0002	4/15/2025			SW846-6020B	U
Vanadium	U	0.02	mg/L	0.02	4/15/2025			SW846-6020B	=
Zinc	U	0.02	mg/L	0.02	4/15/2025			SW846-6020B	=
Mercury	U	0.0002	mg/L	0.0002	4/15/2025			SW846-7470A	=
Barium, Dissolved	N	0.197	mg/L	0.004	4/15/2025			SW846-6020B	J
Chromium, Dissolved	U	0.01	mg/L	0.01	4/15/2025			SW846-6020B	UJ
Uranium, Dissolved	U	0.0002	mg/L	0.0002	4/15/2025			SW846-6020B	UJ
Radium-226	U	0.414	pCi/L	0.874	4/15/2025	0.569	0.572	AN-1418	=
Strontium-90	U	0.202	pCi/L	3.69	4/15/2025	2.02	2.02	EPA-905.0-M	=

**Paducah OREIS
GROUNDWATER MONITORING REPORT**

Facility: C-746-S&T Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045
Sampling Point: MW384 SIDE **RGA Type:** URGA **Period:** 2nd Quarter 2025
AKGWA Well Tag #: 8004-4809 **SAMPLE ID:** MW384SG3-25 **Sample Type:** REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
Tritium	U	-20.1	pCi/L	219	4/15/2025	121	121	EPA-906.0-M	=
Technetium-99		41.3	pCi/L	20.2	4/15/2025	13.5	14.3	HASL 300, Tc-02-RC M	=
Thorium-230	U	0.391	pCi/L	1.38	4/15/2025	0.791	0.795	HASL 300, Th-01-RC M	=
Alpha activity	U	-0.103	pCi/L	7.59	4/15/2025	3.34	3.35	SW846-9310	=
Beta activity		33.1	pCi/L	10.8	4/15/2025	8.96	10.5	SW846-9310	=
1,2-Dibromo-3-chloropropane	U	0.0189	ug/L	0.0189	4/15/2025			SW846-8011	=
1,1,1,2-Tetrachloroethane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
1,1,1-Trichloroethane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
1,1,2,2-Tetrachloroethane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
1,1,2-Trichloroethane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
1,1-Dichloroethane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
1,1-Dichloroethene	U	1	ug/L	1	4/15/2025			SW846-8260D	=
1,2,3-Trichloropropane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
1,2-Dibromoethane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
1,2-Dichlorobenzene	U	1	ug/L	1	4/15/2025			SW846-8260D	=
1,2-Dichloroethane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
1,2-Dichloropropane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
1,4-Dichlorobenzene	U	1	ug/L	1	4/15/2025			SW846-8260D	=
2-Butanone	U	5	ug/L	5	4/15/2025			SW846-8260D	=
2-Hexanone	U	5	ug/L	5	4/15/2025			SW846-8260D	=
4-Methyl-2-pentanone	U	5	ug/L	5	4/15/2025			SW846-8260D	=
Acetone	U	5	ug/L	5	4/15/2025			SW846-8260D	=
Acrolein	U	5	ug/L	5	4/15/2025			SW846-8260D	=
Acrylonitrile	U	5	ug/L	5	4/15/2025			SW846-8260D	=
Benzene	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Bromochloromethane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Bromodichloromethane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Bromoform	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Bromomethane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Carbon disulfide	U	5	ug/L	5	4/15/2025			SW846-8260D	=
Carbon tetrachloride	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Chlorobenzene	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Chloroethane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Chloroform	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Chloromethane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
cis-1,2-Dichloroethene	U	1	ug/L	1	4/15/2025			SW846-8260D	=
cis-1,3-Dichloropropene	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Dibromochloromethane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Dibromomethane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Ethylbenzene	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Iodomethane	U	5	ug/L	5	4/15/2025			SW846-8260D	=
Methylene chloride	U	5	ug/L	5	4/15/2025			SW846-8260D	=
Styrene	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Tetrachloroethene	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Toluene	U	1	ug/L	1	4/15/2025			SW846-8260D	=

**Paducah OREIS
GROUNDWATER MONITORING REPORT**

Facility: C-746-S&T Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045
Sampling Point: MW384 SIDE **RGA Type:** URGA **Period:** 2nd Quarter 2025
AKGWA Well Tag #: 8004-4809 **SAMPLE ID:** MW384SG3-25 **Sample Type:** REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
Total Xylene	U	3	ug/L	3	4/15/2025			SW846-8260D	=
trans-1,2-Dichloroethene	U	1	ug/L	1	4/15/2025			SW846-8260D	=
trans-1,3-Dichloropropene	U	1	ug/L	1	4/15/2025			SW846-8260D	=
trans-1,4-Dichloro-2-butene	U	5	ug/L	5	4/15/2025			SW846-8260D	=
Trichloroethene	J	0.39	ug/L	1	4/15/2025			SW846-8260D	=
Trichlorofluoromethane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Vinyl acetate	U	5	ug/L	5	4/15/2025			SW846-8260D	=
Vinyl chloride	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Dissolved Solids		210	mg/L	10	4/15/2025			EPA-160.1	=
Chemical Oxygen Demand (COD)		28.9	mg/L	20	4/15/2025			EPA-410.4	=
Cyanide	UNN1	0.2	mg/L	0.2	4/15/2025			SW846-9012B	=
Total Organic Halides (TOX)	J	6.88	ug/L	10	4/15/2025			SW846-9020B	=
Total Organic Carbon (TOC)	J	0.784	mg/L	2	4/15/2025			SW846-9060A	=

**Paducah OREIS
GROUNDWATER MONITORING REPORT**

Facility: C-746-S&T Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045
Sampling Point: MW385 SIDE **RGA Type:** LRGA **Period:** 2nd Quarter 2025
AKGWA Well Tag #: 8004-4810 **SAMPLE ID:** MW385SG3-25 **Sample Type:** REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
Iodide	U	0.5	mg/L	0.5	4/15/2025			EPA-300.0	=
Bromide		0.261	mg/L	0.2	4/15/2025			SW846-9056A	=
Chloride	JW	22.8	mg/L	250	4/15/2025			SW846-9056A	J
Fluoride	J	0.147	mg/L	4	4/15/2025			SW846-9056A	=
Nitrate as Nitrogen	J	0.832	mg/L	10	4/15/2025			SW846-9056A	=
Sulfate	W	19.9	mg/L	0.4	4/15/2025			SW846-9056A	J
Barometric Pressure Reading		30.17	Inches/Hg		4/15/2025			FS	X
Conductivity		398	µmhos/cm		4/15/2025			FS	X
Depth to Water		38.09	ft		4/15/2025			FS	X
Dissolved Oxygen		5.11	mg/L		4/15/2025			FS	X
Eh (approx)		514	mV		4/15/2025			FS	X
pH		6.04	Std Unit		4/15/2025			FS	X
Temperature		62.2	deg F		4/15/2025			FS	X
Turbidity		5.73	NTU		4/15/2025			FS	X
Aluminum	U	0.05	mg/L	0.05	4/15/2025			SW846-6020B	=
Antimony	U	0.003	mg/L	0.003	4/15/2025			SW846-6020B	=
Arsenic	U	0.005	mg/L	0.005	4/15/2025			SW846-6020B	=
Barium	N	0.201	mg/L	0.004	4/15/2025			SW846-6020B	=
Beryllium	U	0.0005	mg/L	0.0005	4/15/2025			SW846-6020B	=
Boron		0.0859	mg/L	0.015	4/15/2025			SW846-6020B	=
Cadmium	U	0.001	mg/L	0.001	4/15/2025			SW846-6020B	=
Calcium		23.3	mg/L	0.2	4/15/2025			SW846-6020B	=
Chromium	U	0.01	mg/L	0.01	4/15/2025			SW846-6020B	=
Cobalt	J	0.000669	mg/L	0.001	4/15/2025			SW846-6020B	=
Copper	J	0.00137	mg/L	0.002	4/15/2025			SW846-6020B	=
Iron	U	0.1	mg/L	0.1	4/15/2025			SW846-6020B	=
Lead	U	0.002	mg/L	0.002	4/15/2025			SW846-6020B	=
Magnesium		9.15	mg/L	0.03	4/15/2025			SW846-6020B	=
Manganese	J	0.00186	mg/L	0.005	4/15/2025			SW846-6020B	=
Molybdenum	J	0.000278	mg/L	0.001	4/15/2025			SW846-6020B	=
Nickel	J	0.0014	mg/L	0.002	4/15/2025			SW846-6020B	=
Potassium		1.52	mg/L	0.3	4/15/2025			SW846-6020B	=
Rhodium	U	0.005	mg/L	0.005	4/15/2025			SW846-6020B	=
Selenium	U	0.005	mg/L	0.005	4/15/2025			SW846-6020B	=
Silver	U	0.001	mg/L	0.001	4/15/2025			SW846-6020B	=
Sodium		44.2	mg/L	0.25	4/15/2025			SW846-6020B	=
Tantalum	U	0.005	mg/L	0.005	4/15/2025			SW846-6020B	=
Thallium	U	0.002	mg/L	0.002	4/15/2025			SW846-6020B	=
Uranium	U	0.0002	mg/L	0.0002	4/15/2025			SW846-6020B	=
Vanadium	U	0.02	mg/L	0.02	4/15/2025			SW846-6020B	=
Zinc	U	0.02	mg/L	0.02	4/15/2025			SW846-6020B	=
Mercury	U	0.0002	mg/L	0.0002	4/15/2025			SW846-7470A	=
Barium, Dissolved	N	0.197	mg/L	0.004	4/15/2025			SW846-6020B	J
Chromium, Dissolved	U	0.01	mg/L	0.01	4/15/2025			SW846-6020B	UJ
Uranium, Dissolved	U	0.0002	mg/L	0.0002	4/15/2025			SW846-6020B	UJ
Radium-226	U	0.444	pCi/L	0.852	4/15/2025	0.574	0.577	AN-1418	=
Strontium-90	U	-0.761	pCi/L	2.32	4/15/2025	1.06	1.06	EPA-905.0-M	=

**Paducah OREIS
GROUNDWATER MONITORING REPORT**

Facility: C-746-S&T Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045
Sampling Point: MW385 SIDE **RGA Type:** LRGA **Period:** 2nd Quarter 2025
AKGWA Well Tag #: 8004-4810 **SAMPLE ID:** MW385SG3-25 **Sample Type:** REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
Tritium	U	211	pCi/L	262	4/15/2025	160	165	EPA-906.0-M	=
Technetium-99		44.2	pCi/L	20.2	4/15/2025	13.7	14.6	HASL 300, Tc-02-RC M	=
Thorium-230	U	0.697	pCi/L	1.23	4/15/2025	0.828	0.837	HASL 300, Th-01-RC M	=
Alpha activity	U	-0.121	pCi/L	9.75	4/15/2025	4.65	4.65	SW846-9310	=
Beta activity		20.6	pCi/L	11.3	4/15/2025	8.12	8.83	SW846-9310	=
1,2-Dibromo-3-chloropropane	U	0.0189	ug/L	0.0189	4/15/2025			SW846-8011	=
1,1,1,2-Tetrachloroethane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
1,1,1-Trichloroethane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
1,1,2,2-Tetrachloroethane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
1,1,2-Trichloroethane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
1,1-Dichloroethane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
1,1-Dichloroethene	U	1	ug/L	1	4/15/2025			SW846-8260D	=
1,2,3-Trichloropropane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
1,2-Dibromoethane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
1,2-Dichlorobenzene	U	1	ug/L	1	4/15/2025			SW846-8260D	=
1,2-Dichloroethane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
1,2-Dichloropropane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
1,4-Dichlorobenzene	U	1	ug/L	1	4/15/2025			SW846-8260D	=
2-Butanone	U	5	ug/L	5	4/15/2025			SW846-8260D	=
2-Hexanone	U	5	ug/L	5	4/15/2025			SW846-8260D	=
4-Methyl-2-pentanone	U	5	ug/L	5	4/15/2025			SW846-8260D	=
Acetone	U	5	ug/L	5	4/15/2025			SW846-8260D	=
Acrolein	U	5	ug/L	5	4/15/2025			SW846-8260D	=
Acrylonitrile	U	5	ug/L	5	4/15/2025			SW846-8260D	=
Benzene	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Bromochloromethane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Bromodichloromethane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Bromoform	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Bromomethane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Carbon disulfide	U	5	ug/L	5	4/15/2025			SW846-8260D	=
Carbon tetrachloride	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Chlorobenzene	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Chloroethane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Chloroform	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Chloromethane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
cis-1,2-Dichloroethene	U	1	ug/L	1	4/15/2025			SW846-8260D	=
cis-1,3-Dichloropropene	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Dibromochloromethane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Dibromomethane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Ethylbenzene	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Iodomethane	U	5	ug/L	5	4/15/2025			SW846-8260D	=
Methylene chloride	U	5	ug/L	5	4/15/2025			SW846-8260D	=
Styrene	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Tetrachloroethene	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Toluene	U	1	ug/L	1	4/15/2025			SW846-8260D	=

**Paducah OREIS
GROUNDWATER MONITORING REPORT**

Facility: C-746-S&T Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045
Sampling Point: MW385 SIDE **RGA Type:** LRGA **Period:** 2nd Quarter 2025
AKGWA Well Tag #: 8004-4810 **SAMPLE ID:** MW385SG3-25 **Sample Type:** REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
Total Xylene	U	3	ug/L	3	4/15/2025			SW846-8260D	=
trans-1,2-Dichloroethene	U	1	ug/L	1	4/15/2025			SW846-8260D	=
trans-1,3-Dichloropropene	U	1	ug/L	1	4/15/2025			SW846-8260D	=
trans-1,4-Dichloro-2-butene	U	5	ug/L	5	4/15/2025			SW846-8260D	=
Trichloroethene	J	0.37	ug/L	1	4/15/2025			SW846-8260D	=
Trichlorofluoromethane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Vinyl acetate	U	5	ug/L	5	4/15/2025			SW846-8260D	=
Vinyl chloride	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Dissolved Solids		214	mg/L	10	4/15/2025			EPA-160.1	=
Chemical Oxygen Demand (COD)	U	20	mg/L	20	4/15/2025			EPA-410.4	=
Cyanide	UNN1	0.2	mg/L	0.2	4/15/2025			SW846-9012B	UJ
Total Organic Halides (TOX)	J	6.88	ug/L	10	4/15/2025			SW846-9020B	=
Total Organic Carbon (TOC)	J	0.7	mg/L	2	4/15/2025			SW846-9060A	=

**Paducah OREIS
GROUNDWATER MONITORING REPORT**

Facility: C-746-S&T Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045
Sampling Point: MW386 SIDE **RGA Type:** UCRS **Period:** 2nd Quarter 2025
AKGWA Well Tag #: 8004-4804 **SAMPLE ID:** MW386SG3-25 **Sample Type:** REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
Iodide	U	0.5	mg/L	0.5	4/15/2025			EPA-300.0	=
Bromide	U	0.2	mg/L	0.2	4/15/2025			SW846-9056A	=
Chloride	JW	9.62	mg/L	250	4/15/2025			SW846-9056A	=
Fluoride	J	0.871	mg/L	4	4/15/2025			SW846-9056A	=
Nitrate as Nitrogen	J	0.214	mg/L	10	4/15/2025			SW846-9056A	=
Sulfate	W	35.1	mg/L	0.8	4/15/2025			SW846-9056A	=
Barometric Pressure Reading		30.18	Inches/Hg		4/15/2025			FS	X
Conductivity		579	µmhos/cm		4/15/2025			FS	X
Depth to Water		18.68	ft		4/15/2025			FS	X
Dissolved Oxygen		3.95	mg/L		4/15/2025			FS	X
Eh (approx)		473	mV		4/15/2025			FS	X
pH		6.83	Std Unit		4/15/2025			FS	X
Temperature		61.9	deg F		4/15/2025			FS	X
Turbidity		3.75	NTU		4/15/2025			FS	X
Aluminum	U	0.05	mg/L	0.05	4/15/2025			SW846-6020B	=
Antimony	U	0.003	mg/L	0.003	4/15/2025			SW846-6020B	=
Arsenic	U	0.005	mg/L	0.005	4/15/2025			SW846-6020B	=
Barium	N	0.0947	mg/L	0.004	4/15/2025			SW846-6020B	=
Beryllium	U	0.0005	mg/L	0.0005	4/15/2025			SW846-6020B	=
Boron		0.0203	mg/L	0.015	4/15/2025			SW846-6020B	=
Cadmium	U	0.001	mg/L	0.001	4/15/2025			SW846-6020B	=
Calcium		19	mg/L	0.2	4/15/2025			SW846-6020B	=
Chromium	U	0.01	mg/L	0.01	4/15/2025			SW846-6020B	=
Cobalt	U	0.001	mg/L	0.001	4/15/2025			SW846-6020B	=
Copper		0.00369	mg/L	0.002	4/15/2025			SW846-6020B	=
Iron		0.105	mg/L	0.1	4/15/2025			SW846-6020B	=
Lead	U	0.002	mg/L	0.002	4/15/2025			SW846-6020B	=
Magnesium		8.23	mg/L	0.03	4/15/2025			SW846-6020B	=
Manganese		0.0308	mg/L	0.005	4/15/2025			SW846-6020B	=
Molybdenum	J	0.000895	mg/L	0.001	4/15/2025			SW846-6020B	=
Nickel	J	0.000653	mg/L	0.002	4/15/2025			SW846-6020B	=
Potassium	J	0.273	mg/L	0.3	4/15/2025			SW846-6020B	=
Rhodium	U	0.005	mg/L	0.005	4/15/2025			SW846-6020B	=
Selenium	U	0.005	mg/L	0.005	4/15/2025			SW846-6020B	=
Silver	U	0.001	mg/L	0.001	4/15/2025			SW846-6020B	=
Sodium		104	mg/L	2.5	4/15/2025			SW846-6020B	=
Tantalum	U	0.005	mg/L	0.005	4/15/2025			SW846-6020B	=
Thallium	U	0.002	mg/L	0.002	4/15/2025			SW846-6020B	=
Uranium	J	0.000078	mg/L	0.0002	4/15/2025			SW846-6020B	U
Vanadium	U	0.02	mg/L	0.02	4/15/2025			SW846-6020B	=
Zinc	U	0.02	mg/L	0.02	4/15/2025			SW846-6020B	=
Mercury	U	0.0002	mg/L	0.0002	4/15/2025			SW846-7470A	=
Barium, Dissolved	N	0.0912	mg/L	0.004	4/15/2025			SW846-6020B	J
Chromium, Dissolved	U	0.01	mg/L	0.01	4/15/2025			SW846-6020B	UJ
Uranium, Dissolved	J	0.000115	mg/L	0.0002	4/15/2025			SW846-6020B	UJ
Radium-226	U	0.501	pCi/L	0.872	4/15/2025	0.611	0.614	AN-1418	=
Strontium-90	U	-4.43	pCi/L	3.02	4/15/2025	1.1	1.1	EPA-905.0-M	UJ

**Paducah OREIS
GROUNDWATER MONITORING REPORT**

Facility: C-746-S&T Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045

Sampling Point: MW386 SIDE **RGA Type:** UCRS **Period:** 2nd Quarter 2025

AKGWA Well Tag #: 8004-4804 **SAMPLE ID:** MW386SG3-25 **Sample Type:** REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
Tritium	U	-13.3	pCi/L	214	4/15/2025	118	118	EPA-906.0-M	=
Technetium-99	U	2.94	pCi/L	19.9	4/15/2025	11.4	11.4	HASL 300, Tc-02-RC M	=
Thorium-230	U	0.712	pCi/L	1.47	4/15/2025	0.941	0.949	HASL 300, Th-01-RC M	=
Alpha activity	U	0.832	pCi/L	11.8	4/15/2025	5.93	5.94	SW846-9310	=
Beta activity	U	2.57	pCi/L	11.5	4/15/2025	6.45	6.47	SW846-9310	=
1,2-Dibromo-3-chloropropane	U	0.0188	ug/L	0.0188	4/15/2025			SW846-8011	=
1,1,1,2-Tetrachloroethane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
1,1,1-Trichloroethane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
1,1,2,2-Tetrachloroethane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
1,1,2-Trichloroethane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
1,1-Dichloroethane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
1,1-Dichloroethene	U	1	ug/L	1	4/15/2025			SW846-8260D	=
1,2,3-Trichloropropane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
1,2-Dibromoethane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
1,2-Dichlorobenzene	U	1	ug/L	1	4/15/2025			SW846-8260D	=
1,2-Dichloroethane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
1,2-Dichloropropane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
1,4-Dichlorobenzene	U	1	ug/L	1	4/15/2025			SW846-8260D	=
2-Butanone	U	5	ug/L	5	4/15/2025			SW846-8260D	=
2-Hexanone	U	5	ug/L	5	4/15/2025			SW846-8260D	=
4-Methyl-2-pentanone	U	5	ug/L	5	4/15/2025			SW846-8260D	=
Acetone	U	5	ug/L	5	4/15/2025			SW846-8260D	=
Acrolein	U	5	ug/L	5	4/15/2025			SW846-8260D	=
Acrylonitrile	U	5	ug/L	5	4/15/2025			SW846-8260D	=
Benzene	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Bromochloromethane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Bromodichloromethane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Bromoform	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Bromomethane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Carbon disulfide	U	5	ug/L	5	4/15/2025			SW846-8260D	=
Carbon tetrachloride	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Chlorobenzene	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Chloroethane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Chloroform	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Chloromethane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
cis-1,2-Dichloroethene	U	1	ug/L	1	4/15/2025			SW846-8260D	=
cis-1,3-Dichloropropene	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Dibromochloromethane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Dibromomethane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Ethylbenzene	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Iodomethane	U	5	ug/L	5	4/15/2025			SW846-8260D	=
Methylene chloride	U	5	ug/L	5	4/15/2025			SW846-8260D	=
Styrene	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Tetrachloroethene	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Toluene	U	1	ug/L	1	4/15/2025			SW846-8260D	=

**Paducah OREIS
GROUNDWATER MONITORING REPORT**

Facility: C-746-S&T Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045
Sampling Point: MW386 SIDE **RGA Type:** UCRS **Period:** 2nd Quarter 2025
AKGWA Well Tag #: 8004-4804 **SAMPLE ID:** MW386SG3-25 **Sample Type:** REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
Total Xylene	U	3	ug/L	3	4/15/2025			SW846-8260D	=
trans-1,2-Dichloroethene	U	1	ug/L	1	4/15/2025			SW846-8260D	=
trans-1,3-Dichloropropene	U	1	ug/L	1	4/15/2025			SW846-8260D	=
trans-1,4-Dichloro-2-butene	U	5	ug/L	5	4/15/2025			SW846-8260D	=
Trichloroethene	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Trichlorofluoromethane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Vinyl acetate	U	5	ug/L	5	4/15/2025			SW846-8260D	=
Vinyl chloride	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Dissolved Solids		350	mg/L	10	4/15/2025			EPA-160.1	=
Chemical Oxygen Demand (COD)	J	10.3	mg/L	20	4/15/2025			EPA-410.4	=
Cyanide	UNN1	0.2	mg/L	0.2	4/15/2025			SW846-9012B	=
Total Organic Halides (TOX)		103	ug/L	10	4/15/2025			SW846-9020B	=
Total Organic Carbon (TOC)		3.67	mg/L	2	4/15/2025			SW846-9060A	=

Paducah OREIS
GROUNDWATER MONITORING REPORT

Facility: C-746-S&T Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045

Sampling Point: MW387 DOWN **RGA Type:** URGA **Period:** 2nd Quarter 2025

AKGWA Well Tag #: 8004-4815 **SAMPLE ID:** MW387SG3-25 **Sample Type:** REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
Iodide	U	0.5	mg/L	0.5	4/15/2025			EPA-300.0	=
Bromide		0.452	mg/L	0.2	4/15/2025			SW846-9056A	=
Chloride	JW	33.3	mg/L	250	4/15/2025			SW846-9056A	=
Fluoride	J	0.88	mg/L	4	4/15/2025			SW846-9056A	=
Nitrate as Nitrogen	J	0.881	mg/L	10	4/15/2025			SW846-9056A	=
Sulfate	W	26	mg/L	2	4/15/2025			SW846-9056A	=
Barometric Pressure Reading		30.16	Inches/Hg		4/15/2025			FS	X
Conductivity		551	µmhos/cm		4/15/2025			FS	X
Depth to Water		35.98	ft		4/15/2025			FS	X
Dissolved Oxygen		4.3	mg/L		4/15/2025			FS	X
Eh (approx)		501	mV		4/15/2025			FS	X
pH		6.02	Std Unit		4/15/2025			FS	X
Temperature		61.5	deg F		4/15/2025			FS	X
Turbidity		5.3	NTU		4/15/2025			FS	X
Aluminum	J	0.0293	mg/L	0.05	4/15/2025			SW846-6020B	=
Antimony	U	0.003	mg/L	0.003	4/15/2025			SW846-6020B	=
Arsenic	U	0.005	mg/L	0.005	4/15/2025			SW846-6020B	=
Barium	N	0.105	mg/L	0.004	4/15/2025			SW846-6020B	=
Beryllium	U	0.0005	mg/L	0.0005	4/15/2025			SW846-6020B	=
Boron		0.0466	mg/L	0.015	4/15/2025			SW846-6020B	=
Cadmium	U	0.001	mg/L	0.001	4/15/2025			SW846-6020B	=
Calcium		35.9	mg/L	0.2	4/15/2025			SW846-6020B	=
Chromium	J	0.00312	mg/L	0.01	4/15/2025			SW846-6020B	=
Cobalt	U	0.001	mg/L	0.001	4/15/2025			SW846-6020B	=
Copper	J	0.00103	mg/L	0.002	4/15/2025			SW846-6020B	=
Iron	J	0.0955	mg/L	0.1	4/15/2025			SW846-6020B	=
Lead	U	0.002	mg/L	0.002	4/15/2025			SW846-6020B	=
Magnesium		16.3	mg/L	0.03	4/15/2025			SW846-6020B	=
Manganese		0.0155	mg/L	0.005	4/15/2025			SW846-6020B	=
Molybdenum	U	0.001	mg/L	0.001	4/15/2025			SW846-6020B	=
Nickel	U	0.002	mg/L	0.002	4/15/2025			SW846-6020B	=
Potassium		1.77	mg/L	0.3	4/15/2025			SW846-6020B	=
Rhodium	U	0.005	mg/L	0.005	4/15/2025			SW846-6020B	=
Selenium	U	0.005	mg/L	0.005	4/15/2025			SW846-6020B	=
Silver	U	0.001	mg/L	0.001	4/15/2025			SW846-6020B	=
Sodium		50.8	mg/L	2.5	4/15/2025			SW846-6020B	=
Tantalum	U	0.005	mg/L	0.005	4/15/2025			SW846-6020B	=
Thallium	U	0.002	mg/L	0.002	4/15/2025			SW846-6020B	=
Uranium	U	0.0002	mg/L	0.0002	4/15/2025			SW846-6020B	=
Vanadium	U	0.02	mg/L	0.02	4/15/2025			SW846-6020B	=
Zinc	U	0.02	mg/L	0.02	4/15/2025			SW846-6020B	=
Mercury	U	0.0002	mg/L	0.0002	4/15/2025			SW846-7470A	=
Barium, Dissolved	N	0.104	mg/L	0.004	4/15/2025			SW846-6020B	J
Chromium, Dissolved	U	0.01	mg/L	0.01	4/15/2025			SW846-6020B	UJ
Uranium, Dissolved	U	0.0002	mg/L	0.0002	4/15/2025			SW846-6020B	UJ
Radium-226	U	0.115	pCi/L	1.25	4/15/2025	0.624	0.624	AN-1418	=
Strontium-90	U	1.64	pCi/L	3.04	4/15/2025	1.81	1.83	EPA-905.0-M	=

Paducah OREIS
GROUNDWATER MONITORING REPORT

Facility: C-746-S&T Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045

Sampling Point: MW387 DOWN **RGA Type:** URGA **Period:** 2nd Quarter 2025

AKGWA Well Tag #: 8004-4815 **SAMPLE ID:** MW387SG3-25 **Sample Type:** REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
Tritium	U	16.2	pCi/L	210	4/15/2025	118	118	EPA-906.0-M	=
Technetium-99		42.9	pCi/L	20	4/15/2025	13.5	14.3	HASL 300, Tc-02-RC M	=
Thorium-230	U	0.0491	pCi/L	1.88	4/15/2025	0.87	0.872	HASL 300, Th-01-RC M	=
Alpha activity	U	-2.87	pCi/L	9.05	4/15/2025	3.38	3.38	SW846-9310	=
Beta activity		37.9	pCi/L	11.7	4/15/2025	9.57	11.4	SW846-9310	=
1,2-Dibromo-3-chloropropane	U	0.0188	ug/L	0.0188	4/15/2025			SW846-8011	=
1,1,1,2-Tetrachloroethane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
1,1,1-Trichloroethane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
1,1,2,2-Tetrachloroethane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
1,1,2-Trichloroethane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
1,1-Dichloroethane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
1,1-Dichloroethene	U	1	ug/L	1	4/15/2025			SW846-8260D	=
1,2,3-Trichloropropane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
1,2-Dibromoethane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
1,2-Dichlorobenzene	U	1	ug/L	1	4/15/2025			SW846-8260D	=
1,2-Dichloroethane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
1,2-Dichloropropane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
1,4-Dichlorobenzene	U	1	ug/L	1	4/15/2025			SW846-8260D	=
2-Butanone	U	5	ug/L	5	4/15/2025			SW846-8260D	=
2-Hexanone	U	5	ug/L	5	4/15/2025			SW846-8260D	=
4-Methyl-2-pentanone	U	5	ug/L	5	4/15/2025			SW846-8260D	=
Acetone	U	5	ug/L	5	4/15/2025			SW846-8260D	=
Acrolein	U	5	ug/L	5	4/15/2025			SW846-8260D	=
Acrylonitrile	U	5	ug/L	5	4/15/2025			SW846-8260D	=
Benzene	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Bromochloromethane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Bromodichloromethane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Bromoform	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Bromomethane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Carbon disulfide	U	5	ug/L	5	4/15/2025			SW846-8260D	=
Carbon tetrachloride	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Chlorobenzene	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Chloroethane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Chloroform	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Chloromethane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
cis-1,2-Dichloroethene	U	1	ug/L	1	4/15/2025			SW846-8260D	=
cis-1,3-Dichloropropene	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Dibromochloromethane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Dibromomethane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Ethylbenzene	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Iodomethane	U	5	ug/L	5	4/15/2025			SW846-8260D	=
Methylene chloride	U	5	ug/L	5	4/15/2025			SW846-8260D	=
Styrene	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Tetrachloroethene	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Toluene	U	1	ug/L	1	4/15/2025			SW846-8260D	=

**Paducah OREIS
GROUNDWATER MONITORING REPORT**

Facility: C-746-S&T Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045
Sampling Point: MW387 DOWN **RGA Type:** URGA **Period:** 2nd Quarter 2025
AKGWA Well Tag #: 8004-4815 **SAMPLE ID:** MW387SG3-25 **Sample Type:** REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
Total Xylene	U	3	ug/L	3	4/15/2025			SW846-8260D	=
trans-1,2-Dichloroethene	U	1	ug/L	1	4/15/2025			SW846-8260D	=
trans-1,3-Dichloropropene	U	1	ug/L	1	4/15/2025			SW846-8260D	=
trans-1,4-Dichloro-2-butene	U	5	ug/L	5	4/15/2025			SW846-8260D	=
Trichloroethene	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Trichlorofluoromethane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Vinyl acetate	U	5	ug/L	5	4/15/2025			SW846-8260D	=
Vinyl chloride	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Dissolved Solids		294	mg/L	10	4/15/2025			EPA-160.1	=
Chemical Oxygen Demand (COD)		26.6	mg/L	20	4/15/2025			EPA-410.4	=
Cyanide	UNN1	0.2	mg/L	0.2	4/15/2025			SW846-9012B	=
Total Organic Halides (TOX)		14.1	ug/L	10	4/15/2025			SW846-9020B	=
Total Organic Carbon (TOC)	J	0.746	mg/L	2	4/15/2025			SW846-9060A	=

Paducah OREIS
GROUNDWATER MONITORING REPORT

Facility: C-746-S&T Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045

Sampling Point: MW388 DOWN **RGA Type:** LRGA **Period:** 2nd Quarter 2025

AKGWA Well Tag #: 8004-4816 **SAMPLE ID:** MW388SG3-25 **Sample Type:** REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
Iodide	U	0.5	mg/L	0.5	4/15/2025			EPA-300.0	=
Bromide		0.383	mg/L	0.2	4/15/2025			SW846-9056A	=
Chloride	JW	29.9	mg/L	250	4/15/2025			SW846-9056A	=
Fluoride	J	0.285	mg/L	4	4/15/2025			SW846-9056A	=
Nitrate as Nitrogen	J	0.889	mg/L	10	4/15/2025			SW846-9056A	=
Sulfate	W	20.9	mg/L	2	4/15/2025			SW846-9056A	=
Barometric Pressure Reading		30.17	Inches/Hg		4/15/2025			FS	X
Conductivity		472	µmhos/cm		4/15/2025			FS	X
Depth to Water		35.89	ft		4/15/2025			FS	X
Dissolved Oxygen		4.92	mg/L		4/15/2025			FS	X
Eh (approx)		503	mV		4/15/2025			FS	X
pH		6.03	Std Unit		4/15/2025			FS	X
Temperature		62.1	deg F		4/15/2025			FS	X
Turbidity		5.89	NTU		4/15/2025			FS	X
Aluminum	U	0.05	mg/L	0.05	4/15/2025			SW846-6020B	=
Antimony	U	0.003	mg/L	0.003	4/15/2025			SW846-6020B	=
Arsenic	U	0.005	mg/L	0.005	4/15/2025			SW846-6020B	=
Barium	N	0.173	mg/L	0.004	4/15/2025			SW846-6020B	=
Beryllium	U	0.0005	mg/L	0.0005	4/15/2025			SW846-6020B	=
Boron		0.0344	mg/L	0.015	4/15/2025			SW846-6020B	=
Cadmium	U	0.001	mg/L	0.001	4/15/2025			SW846-6020B	=
Calcium		28.2	mg/L	0.2	4/15/2025			SW846-6020B	=
Chromium	U	0.01	mg/L	0.01	4/15/2025			SW846-6020B	=
Cobalt	U	0.001	mg/L	0.001	4/15/2025			SW846-6020B	=
Copper	J	0.00106	mg/L	0.002	4/15/2025			SW846-6020B	=
Iron	J	0.0398	mg/L	0.1	4/15/2025			SW846-6020B	=
Lead	U	0.002	mg/L	0.002	4/15/2025			SW846-6020B	=
Magnesium		13.4	mg/L	0.03	4/15/2025			SW846-6020B	=
Manganese	U	0.005	mg/L	0.005	4/15/2025			SW846-6020B	=
Molybdenum	U	0.001	mg/L	0.001	4/15/2025			SW846-6020B	=
Nickel		0.00555	mg/L	0.002	4/15/2025			SW846-6020B	=
Potassium		1.75	mg/L	0.3	4/15/2025			SW846-6020B	=
Rhodium	U	0.005	mg/L	0.005	4/15/2025			SW846-6020B	=
Selenium	U	0.005	mg/L	0.005	4/15/2025			SW846-6020B	=
Silver	U	0.001	mg/L	0.001	4/15/2025			SW846-6020B	=
Sodium		47.5	mg/L	0.25	4/15/2025			SW846-6020B	=
Tantalum	U	0.005	mg/L	0.005	4/15/2025			SW846-6020B	=
Thallium	U	0.002	mg/L	0.002	4/15/2025			SW846-6020B	=
Uranium	U	0.0002	mg/L	0.0002	4/15/2025			SW846-6020B	=
Vanadium	U	0.02	mg/L	0.02	4/15/2025			SW846-6020B	=
Zinc	U	0.02	mg/L	0.02	4/15/2025			SW846-6020B	=
Mercury	U	0.0002	mg/L	0.0002	4/15/2025			SW846-7470A	=
Barium, Dissolved	N	0.172	mg/L	0.004	4/15/2025			SW846-6020B	J
Chromium, Dissolved	U	0.01	mg/L	0.01	4/15/2025			SW846-6020B	UJ
Uranium, Dissolved	U	0.0002	mg/L	0.0002	4/15/2025			SW846-6020B	UJ
Radium-226	U	0.235	pCi/L	0.921	4/15/2025	0.518	0.519	AN-1418	=
Strontium-90	U	1.45	pCi/L	7.72	4/15/2025	4.32	4.33	EPA-905.0-M	=

**Paducah OREIS
GROUNDWATER MONITORING REPORT**

Facility: C-746-S&T Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045
Sampling Point: MW388 DOWN **RGA Type:** LRGA **Period:** 2nd Quarter 2025
AKGWA Well Tag #: 8004-4816 **SAMPLE ID:** MW388SG3-25 **Sample Type:** REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
Tritium	U	95.8	pCi/L	217	4/15/2025	128	129	EPA-906.0-M	=
Technetium-99	U	16.9	pCi/L	19.7	4/15/2025	12.1	12.2	HASL 300, Tc-02-RC M	=
Thorium-230	U	0.656	pCi/L	1.75	4/15/2025	1.05	1.06	HASL 300, Th-01-RC M	=
Alpha activity	U	-0.772	pCi/L	8.69	4/15/2025	3.77	3.77	SW846-9310	=
Beta activity		14.8	pCi/L	12.9	4/15/2025	8.42	8.77	SW846-9310	=
1,2-Dibromo-3-chloropropane	U	0.0191	ug/L	0.0191	4/15/2025			SW846-8011	=
1,1,1,2-Tetrachloroethane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
1,1,1-Trichloroethane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
1,1,2,2-Tetrachloroethane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
1,1,2-Trichloroethane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
1,1-Dichloroethane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
1,1-Dichloroethene	U	1	ug/L	1	4/15/2025			SW846-8260D	=
1,2,3-Trichloropropane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
1,2-Dibromoethane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
1,2-Dichlorobenzene	U	1	ug/L	1	4/15/2025			SW846-8260D	=
1,2-Dichloroethane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
1,2-Dichloropropane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
1,4-Dichlorobenzene	U	1	ug/L	1	4/15/2025			SW846-8260D	=
2-Butanone	U	5	ug/L	5	4/15/2025			SW846-8260D	=
2-Hexanone	U	5	ug/L	5	4/15/2025			SW846-8260D	=
4-Methyl-2-pentanone	U	5	ug/L	5	4/15/2025			SW846-8260D	=
Acetone	U	5	ug/L	5	4/15/2025			SW846-8260D	=
Acrolein	U	5	ug/L	5	4/15/2025			SW846-8260D	=
Acrylonitrile	U	5	ug/L	5	4/15/2025			SW846-8260D	=
Benzene	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Bromochloromethane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Bromodichloromethane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Bromoform	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Bromomethane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Carbon disulfide	U	5	ug/L	5	4/15/2025			SW846-8260D	=
Carbon tetrachloride	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Chlorobenzene	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Chloroethane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Chloroform	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Chloromethane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
cis-1,2-Dichloroethene	U	1	ug/L	1	4/15/2025			SW846-8260D	=
cis-1,3-Dichloropropene	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Dibromochloromethane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Dibromomethane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Ethylbenzene	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Iodomethane	U	5	ug/L	5	4/15/2025			SW846-8260D	=
Methylene chloride	U	5	ug/L	5	4/15/2025			SW846-8260D	=
Styrene	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Tetrachloroethene	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Toluene	U	1	ug/L	1	4/15/2025			SW846-8260D	=

**Paducah OREIS
GROUNDWATER MONITORING REPORT**

Facility: C-746-S&T Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045
Sampling Point: MW388 DOWN **RGA Type:** LRGA **Period:** 2nd Quarter 2025
AKGWA Well Tag #: 8004-4816 **SAMPLE ID:** MW388SG3-25 **Sample Type:** REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
Total Xylene	U	3	ug/L	3	4/15/2025			SW846-8260D	=
trans-1,2-Dichloroethene	U	1	ug/L	1	4/15/2025			SW846-8260D	=
trans-1,3-Dichloropropene	U	1	ug/L	1	4/15/2025			SW846-8260D	=
trans-1,4-Dichloro-2-butene	U	5	ug/L	5	4/15/2025			SW846-8260D	=
Trichloroethene	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Trichlorofluoromethane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Vinyl acetate	U	5	ug/L	5	4/15/2025			SW846-8260D	=
Vinyl chloride	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Dissolved Solids		252	mg/L	10	4/15/2025			EPA-160.1	=
Chemical Oxygen Demand (COD)	U	20	mg/L	20	4/15/2025			EPA-410.4	=
Cyanide	UNN1	0.2	mg/L	0.2	4/15/2025			SW846-9012B	=
Total Organic Halides (TOX)		10.9	ug/L	10	4/15/2025			SW846-9020B	=
Total Organic Carbon (TOC)	J	0.62	mg/L	2	4/15/2025			SW846-9060A	=

**Paducah OREIS
GROUNDWATER MONITORING REPORT**

Facility: C-746-S&T Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045

Sampling Point: MW390 DOWN **RGA Type:** UCRS **Period:** 2nd Quarter 2025

AKGWA Well Tag #: 8004-4811 **SAMPLE ID:** MW390SG3-25 **Sample Type:** REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
Iodide	U	0.5	mg/L	0.5	4/15/2025			EPA-300.0	=
Bromide		0.243	mg/L	0.2	4/15/2025			SW846-9056A	=
Chloride	JW	17.6	mg/L	250	4/15/2025			SW846-9056A	=
Fluoride	J	0.296	mg/L	4	4/15/2025			SW846-9056A	=
Nitrate as Nitrogen	J	1.03	mg/L	10	4/15/2025			SW846-9056A	=
Sulfate	W	34.3	mg/L	2	4/15/2025			SW846-9056A	=
Barometric Pressure Reading		30.13	Inches/Hg		4/15/2025			FS	X
Conductivity		606	µmhos/cm		4/15/2025			FS	X
Depth to Water		32.96	ft		4/15/2025			FS	X
Dissolved Oxygen		5.06	mg/L		4/15/2025			FS	X
Eh (approx)		500	mV		4/15/2025			FS	X
pH		6.09	Std Unit		4/15/2025			FS	X
Temperature		58.9	deg F		4/15/2025			FS	X
Turbidity		6.26	NTU		4/15/2025			FS	X
Aluminum	J	0.0449	mg/L	0.05	4/15/2025			SW846-6020B	=
Antimony	U	0.003	mg/L	0.003	4/15/2025			SW846-6020B	=
Arsenic	U	0.005	mg/L	0.005	4/15/2025			SW846-6020B	=
Barium	N	0.221	mg/L	0.004	4/15/2025			SW846-6020B	=
Beryllium	U	0.0005	mg/L	0.0005	4/15/2025			SW846-6020B	=
Boron		0.0271	mg/L	0.015	4/15/2025			SW846-6020B	=
Cadmium	U	0.001	mg/L	0.001	4/15/2025			SW846-6020B	=
Calcium		26.3	mg/L	0.2	4/15/2025			SW846-6020B	=
Chromium	U	0.01	mg/L	0.01	4/15/2025			SW846-6020B	=
Cobalt	U	0.001	mg/L	0.001	4/15/2025			SW846-6020B	=
Copper	J	0.00147	mg/L	0.002	4/15/2025			SW846-6020B	=
Iron	U	0.1	mg/L	0.1	4/15/2025			SW846-6020B	=
Lead	U	0.002	mg/L	0.002	4/15/2025			SW846-6020B	=
Magnesium		11.9	mg/L	0.03	4/15/2025			SW846-6020B	=
Manganese	U	0.005	mg/L	0.005	4/15/2025			SW846-6020B	=
Molybdenum	U	0.001	mg/L	0.001	4/15/2025			SW846-6020B	=
Nickel	J	0.000713	mg/L	0.002	4/15/2025			SW846-6020B	=
Potassium		0.331	mg/L	0.3	4/15/2025			SW846-6020B	=
Rhodium	U	0.005	mg/L	0.005	4/15/2025			SW846-6020B	=
Selenium	U	0.005	mg/L	0.005	4/15/2025			SW846-6020B	=
Silver	U	0.001	mg/L	0.001	4/15/2025			SW846-6020B	=
Sodium		95.3	mg/L	2.5	4/15/2025			SW846-6020B	=
Tantalum	U	0.005	mg/L	0.005	4/15/2025			SW846-6020B	=
Thallium	U	0.002	mg/L	0.002	4/15/2025			SW846-6020B	=
Uranium	J	0.000197	mg/L	0.0002	4/15/2025			SW846-6020B	U
Vanadium	U	0.02	mg/L	0.02	4/15/2025			SW846-6020B	=
Zinc	J	0.00445	mg/L	0.02	4/15/2025			SW846-6020B	=
Mercury	U	0.0002	mg/L	0.0002	4/15/2025			SW846-7470A	=
Barium, Dissolved	N	0.214	mg/L	0.004	4/15/2025			SW846-6020B	J
Chromium, Dissolved	U	0.01	mg/L	0.01	4/15/2025			SW846-6020B	UJ
Uranium, Dissolved	J	0.000188	mg/L	0.0002	4/15/2025			SW846-6020B	UJ
Radium-226	U	0.717	pCi/L	0.965	4/15/2025	0.764	0.769	AN-1418	=
Strontium-90	U	-1.52	pCi/L	3.14	4/15/2025	1.49	1.49	EPA-905.0-M	UJ

**Paducah OREIS
GROUNDWATER MONITORING REPORT**

Facility: C-746-S&T Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045
Sampling Point: MW390 DOWN **RGA Type:** UCRS **Period:** 2nd Quarter 2025
AKGWA Well Tag #: 8004-4811 **SAMPLE ID:** MW390SG3-25 **Sample Type:** REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
Tritium	U	25.1	pCi/L	209	4/15/2025	119	119	EPA-906.0-M	=
Technetium-99		73.7	pCi/L	19.5	4/15/2025	14.6	16.8	HASL 300, Tc-02-RC M	=
Thorium-230	U	-0.191	pCi/L	1.44	4/15/2025	0.531	0.532	HASL 300, Th-01-RC M	=
Alpha activity	U	2.81	pCi/L	9.55	4/15/2025	5.34	5.37	SW846-9310	=
Beta activity		46.2	pCi/L	10.8	4/15/2025	9.86	12.4	SW846-9310	=
1,2-Dibromo-3-chloropropane	U	0.0189	ug/L	0.0189	4/15/2025			SW846-8011	=
1,1,1,2-Tetrachloroethane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
1,1,1-Trichloroethane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
1,1,2,2-Tetrachloroethane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
1,1,2-Trichloroethane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
1,1-Dichloroethane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
1,1-Dichloroethene	U	1	ug/L	1	4/15/2025			SW846-8260D	=
1,2,3-Trichloropropane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
1,2-Dibromoethane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
1,2-Dichlorobenzene	U	1	ug/L	1	4/15/2025			SW846-8260D	=
1,2-Dichloroethane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
1,2-Dichloropropane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
1,4-Dichlorobenzene	U	1	ug/L	1	4/15/2025			SW846-8260D	=
2-Butanone	U	5	ug/L	5	4/15/2025			SW846-8260D	=
2-Hexanone	U	5	ug/L	5	4/15/2025			SW846-8260D	=
4-Methyl-2-pentanone	U	5	ug/L	5	4/15/2025			SW846-8260D	=
Acetone	U	5	ug/L	5	4/15/2025			SW846-8260D	=
Acrolein	U	5	ug/L	5	4/15/2025			SW846-8260D	=
Acrylonitrile	U	5	ug/L	5	4/15/2025			SW846-8260D	=
Benzene	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Bromochloromethane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Bromodichloromethane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Bromoform	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Bromomethane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Carbon disulfide	U	5	ug/L	5	4/15/2025			SW846-8260D	=
Carbon tetrachloride	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Chlorobenzene	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Chloroethane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Chloroform	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Chloromethane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
cis-1,2-Dichloroethene	U	1	ug/L	1	4/15/2025			SW846-8260D	=
cis-1,3-Dichloropropene	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Dibromochloromethane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Dibromomethane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Ethylbenzene	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Iodomethane	U	5	ug/L	5	4/15/2025			SW846-8260D	=
Methylene chloride	U	5	ug/L	5	4/15/2025			SW846-8260D	=
Styrene	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Tetrachloroethene	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Toluene	U	1	ug/L	1	4/15/2025			SW846-8260D	=

**Paducah OREIS
GROUNDWATER MONITORING REPORT**

Facility: C-746-S&T Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045
Sampling Point: MW390 DOWN **RGA Type:** UCRS **Period:** 2nd Quarter 2025
AKGWA Well Tag #: 8004-4811 **SAMPLE ID:** MW390SG3-25 **Sample Type:** REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
Total Xylene	U	3	ug/L	3	4/15/2025			SW846-8260D	=
trans-1,2-Dichloroethene	U	1	ug/L	1	4/15/2025			SW846-8260D	=
trans-1,3-Dichloropropene	U	1	ug/L	1	4/15/2025			SW846-8260D	=
trans-1,4-Dichloro-2-butene	U	5	ug/L	5	4/15/2025			SW846-8260D	=
Trichloroethene	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Trichlorofluoromethane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Vinyl acetate	U	5	ug/L	5	4/15/2025			SW846-8260D	=
Vinyl chloride	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Dissolved Solids		361	mg/L	10	4/15/2025			EPA-160.1	=
Chemical Oxygen Demand (COD)	U	20	mg/L	20	4/15/2025			EPA-410.4	=
Cyanide	UNN1	0.2	mg/L	0.2	4/15/2025			SW846-9012B	=
Total Organic Halides (TOX)		13.4	ug/L	10	4/15/2025			SW846-9020B	=
Total Organic Carbon (TOC)	J	1.98	mg/L	2	4/15/2025			SW846-9060A	=

Paducah OREIS
GROUNDWATER MONITORING REPORT

Facility: C-746-S&T Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045

Sampling Point: MW391 DOWN **RGA Type:** URGA **Period:** 2nd Quarter 2025

AKGWA Well Tag #: 8004-4805 **SAMPLE ID:** MW391SG3-25 **Sample Type:** REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
Iodide	U	0.5	mg/L	0.5	4/16/2025			EPA-300.0	=
Bromide		0.436	mg/L	0.2	4/16/2025			SW846-9056A	=
Chloride	J	32.7	mg/L	250	4/16/2025			SW846-9056A	=
Fluoride	J	0.177	mg/L	4	4/16/2025			SW846-9056A	=
Nitrate as Nitrogen	J	0.962	mg/L	10	4/16/2025			SW846-9056A	=
Sulfate		17.1	mg/L	0.4	4/16/2025			SW846-9056A	=
Barometric Pressure Reading		30.18	Inches/Hg		4/16/2025			FS	X
Conductivity		408	µmhos/cm		4/16/2025			FS	X
Depth to Water		39.1	ft		4/16/2025			FS	X
Dissolved Oxygen		3.84	mg/L		4/16/2025			FS	X
Eh (approx)		455	mV		4/16/2025			FS	X
pH		6.15	Std Unit		4/16/2025			FS	X
Temperature		62	deg F		4/16/2025			FS	X
Turbidity		7.35	NTU		4/16/2025			FS	X
Aluminum	N	0.129	mg/L	0.05	4/16/2025			SW846-6020B	=
Antimony	U	0.003	mg/L	0.003	4/16/2025			SW846-6020B	=
Arsenic	U	0.005	mg/L	0.005	4/16/2025			SW846-6020B	=
Barium		0.191	mg/L	0.004	4/16/2025			SW846-6020B	=
Beryllium	U	0.0005	mg/L	0.0005	4/16/2025			SW846-6020B	=
Boron		0.0295	mg/L	0.015	4/16/2025			SW846-6020B	=
Cadmium	U	0.001	mg/L	0.001	4/16/2025			SW846-6020B	=
Calcium	B	22.7	mg/L	0.2	4/16/2025			SW846-6020B	=
Chromium	U	0.01	mg/L	0.01	4/16/2025			SW846-6020B	=
Cobalt	U	0.001	mg/L	0.001	4/16/2025			SW846-6020B	=
Copper	J	0.00197	mg/L	0.002	4/16/2025			SW846-6020B	=
Iron		0.744	mg/L	0.1	4/16/2025			SW846-6020B	=
Lead	U	0.002	mg/L	0.002	4/16/2025			SW846-6020B	=
Magnesium		9.9	mg/L	0.03	4/16/2025			SW846-6020B	=
Manganese		0.00916	mg/L	0.005	4/16/2025			SW846-6020B	=
Molybdenum	U	0.001	mg/L	0.001	4/16/2025			SW846-6020B	=
Nickel	J	0.000828	mg/L	0.002	4/16/2025			SW846-6020B	=
Potassium		1.57	mg/L	0.3	4/16/2025			SW846-6020B	=
Rhodium	U	0.005	mg/L	0.005	4/16/2025			SW846-6020B	=
Selenium	U	0.005	mg/L	0.005	4/16/2025			SW846-6020B	=
Silver	U	0.001	mg/L	0.001	4/16/2025			SW846-6020B	=
Sodium		42.6	mg/L	0.25	4/16/2025			SW846-6020B	=
Tantalum	U	0.005	mg/L	0.005	4/16/2025			SW846-6020B	=
Thallium	U	0.002	mg/L	0.002	4/16/2025			SW846-6020B	=
Uranium	U	0.0002	mg/L	0.0002	4/16/2025			SW846-6020B	=
Vanadium	BJ	0.00646	mg/L	0.02	4/16/2025			SW846-6020B	U
Zinc	U	0.02	mg/L	0.02	4/16/2025			SW846-6020B	=
Mercury	U	0.0002	mg/L	0.0002	4/16/2025			SW846-7470A	=
Barium, Dissolved		0.178	mg/L	0.004	4/16/2025			SW846-6020B	J
Chromium, Dissolved	U	0.01	mg/L	0.01	4/16/2025			SW846-6020B	UJ
Uranium, Dissolved	U	0.0002	mg/L	0.0002	4/16/2025			SW846-6020B	UJ
Radium-226	U	0.657	pCi/L	0.978	4/16/2025	0.766	0.77	AN-1418	=
Strontium-90	U	-0.13	pCi/L	2.94	4/16/2025	1.53	1.53	EPA-905.0-M	=

**Paducah OREIS
GROUNDWATER MONITORING REPORT**

Facility: C-746-S&T Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045

Sampling Point: MW391 DOWN **RGA Type:** URGA **Period:** 2nd Quarter 2025

AKGWA Well Tag #: 8004-4805 **SAMPLE ID:** MW391SG3-25 **Sample Type:** REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
Tritium	U	12.9	pCi/L	229	4/16/2025	128	128	EPA-906.0-M	=
Technetium-99	U	5.56	pCi/L	20.4	4/16/2025	11.8	11.9	HASL 300, Tc-02-RC M	=
Thorium-230	U	-0.195	pCi/L	2.01	4/16/2025	0.819	0.819	HASL 300, Th-01-RC M	=
Alpha activity	U	-1.01	pCi/L	6.19	4/16/2025	2.47	2.47	SW846-9310	=
Beta activity	U	-2.54	pCi/L	9.07	4/16/2025	4.63	4.63	SW846-9310	=
1,2-Dibromo-3-chloropropane	U	0.0188	ug/L	0.0188	4/16/2025			SW846-8011	=
1,1,1,2-Tetrachloroethane	U	1	ug/L	1	4/16/2025			SW846-8260D	=
1,1,1-Trichloroethane	UY1	1	ug/L	1	4/16/2025			SW846-8260D	=
1,1,2,2-Tetrachloroethane	U	1	ug/L	1	4/16/2025			SW846-8260D	=
1,1,2-Trichloroethane	U	1	ug/L	1	4/16/2025			SW846-8260D	=
1,1-Dichloroethane	U	1	ug/L	1	4/16/2025			SW846-8260D	=
1,1-Dichloroethene	U	1	ug/L	1	4/16/2025			SW846-8260D	=
1,2,3-Trichloropropane	U	1	ug/L	1	4/16/2025			SW846-8260D	=
1,2-Dibromoethane	U	1	ug/L	1	4/16/2025			SW846-8260D	=
1,2-Dichlorobenzene	U	1	ug/L	1	4/16/2025			SW846-8260D	=
1,2-Dichloroethane	U	1	ug/L	1	4/16/2025			SW846-8260D	=
1,2-Dichloropropane	U	1	ug/L	1	4/16/2025			SW846-8260D	=
1,4-Dichlorobenzene	U	1	ug/L	1	4/16/2025			SW846-8260D	=
2-Butanone	U	5	ug/L	5	4/16/2025			SW846-8260D	=
2-Hexanone	U	5	ug/L	5	4/16/2025			SW846-8260D	=
4-Methyl-2-pentanone	U	5	ug/L	5	4/16/2025			SW846-8260D	=
Acetone		7.03	ug/L	5	4/16/2025			SW846-8260D	=
Acrolein	U	5	ug/L	5	4/16/2025			SW846-8260D	UJ
Acrylonitrile	U	5	ug/L	5	4/16/2025			SW846-8260D	=
Benzene	UY1	1	ug/L	1	4/16/2025			SW846-8260D	=
Bromochloromethane	U	1	ug/L	1	4/16/2025			SW846-8260D	=
Bromodichloromethane	UY1	1	ug/L	1	4/16/2025			SW846-8260D	=
Bromoform	U	1	ug/L	1	4/16/2025			SW846-8260D	=
Bromomethane	U	1	ug/L	1	4/16/2025			SW846-8260D	=
Carbon disulfide	U	5	ug/L	5	4/16/2025			SW846-8260D	=
Carbon tetrachloride	U	1	ug/L	1	4/16/2025			SW846-8260D	=
Chlorobenzene	U	1	ug/L	1	4/16/2025			SW846-8260D	=
Chloroethane	U	1	ug/L	1	4/16/2025			SW846-8260D	=
Chloroform	UY1	1	ug/L	1	4/16/2025			SW846-8260D	=
Chloromethane	U	1	ug/L	1	4/16/2025			SW846-8260D	=
cis-1,2-Dichloroethene	U	1	ug/L	1	4/16/2025			SW846-8260D	=
cis-1,3-Dichloropropene	UY1	1	ug/L	1	4/16/2025			SW846-8260D	=
Dibromochloromethane	U	1	ug/L	1	4/16/2025			SW846-8260D	=
Dibromomethane	U	1	ug/L	1	4/16/2025			SW846-8260D	=
Ethylbenzene	U	1	ug/L	1	4/16/2025			SW846-8260D	=
Iodomethane	UY1	5	ug/L	5	4/16/2025			SW846-8260D	=
Methylene chloride	J	3.8	ug/L	5	4/16/2025			SW846-8260D	=
Styrene	U	1	ug/L	1	4/16/2025			SW846-8260D	=
Tetrachloroethene	U	1	ug/L	1	4/16/2025			SW846-8260D	=
Toluene	UY1	1	ug/L	1	4/16/2025			SW846-8260D	=

**Paducah OREIS
GROUNDWATER MONITORING REPORT**

Facility: C-746-S&T Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045
Sampling Point: MW391 DOWN **RGA Type:** URGA **Period:** 2nd Quarter 2025
AKGWA Well Tag #: 8004-4805 **SAMPLE ID:** MW391SG3-25 **Sample Type:** REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
Total Xylene	UY1	3	ug/L	3	4/16/2025			SW846-8260D	=
trans-1,2-Dichloroethene	U	1	ug/L	1	4/16/2025			SW846-8260D	=
trans-1,3-Dichloropropene	UY1	1	ug/L	1	4/16/2025			SW846-8260D	=
trans-1,4-Dichloro-2-butene	U	5	ug/L	5	4/16/2025			SW846-8260D	=
Trichloroethene	JY1	0.37	ug/L	1	4/16/2025			SW846-8260D	=
Trichlorofluoromethane	U	1	ug/L	1	4/16/2025			SW846-8260D	=
Vinyl acetate	U	5	ug/L	5	4/16/2025			SW846-8260D	=
Vinyl chloride	U	1	ug/L	1	4/16/2025			SW846-8260D	=
Dissolved Solids	*	205	mg/L	10	4/16/2025			EPA-160.1	=
Chemical Oxygen Demand (COD)	U	20	mg/L	20	4/16/2025			EPA-410.4	=
Cyanide	UNN1	0.2	mg/L	0.2	4/16/2025			SW846-9012B	=
Total Organic Halides (TOX)	J	9.52	ug/L	10	4/16/2025			SW846-9020B	=
Total Organic Carbon (TOC)	J	0.728	mg/L	2	4/16/2025			SW846-9060A	=

**Paducah OREIS
GROUNDWATER MONITORING REPORT**

Facility: C-746-S&T Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045
Sampling Point: MW392 DOWN **RGA Type:** LRGA **Period:** 2nd Quarter 2025
AKGWA Well Tag #: 8004-4806 **SAMPLE ID:** MW392SG3-25 **Sample Type:** REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
Iodide	U	0.5	mg/L	0.5	4/16/2025			EPA-300.0	=
Bromide		0.613	mg/L	0.2	4/16/2025			SW846-9056A	=
Chloride	J	47.2	mg/L	250	4/16/2025			SW846-9056A	=
Fluoride	J	0.184	mg/L	4	4/16/2025			SW846-9056A	=
Nitrate as Nitrogen	J	0.938	mg/L	10	4/16/2025			SW846-9056A	=
Sulfate		8.17	mg/L	0.4	4/16/2025			SW846-9056A	=
Barometric Pressure Reading		30.17	Inches/Hg		4/16/2025			FS	X
Conductivity		386	µmhos/cm		4/16/2025			FS	X
Depth to Water		38.24	ft		4/16/2025			FS	X
Dissolved Oxygen		2.62	mg/L		4/16/2025			FS	X
Eh (approx)		503	mV		4/16/2025			FS	X
pH		6.06	Std Unit		4/16/2025			FS	X
Temperature		63.6	deg F		4/16/2025			FS	X
Turbidity		6.9	NTU		4/16/2025			FS	X
Aluminum	JN	0.0336	mg/L	0.05	4/16/2025			SW846-6020B	=
Antimony	U	0.003	mg/L	0.003	4/16/2025			SW846-6020B	=
Arsenic	U	0.005	mg/L	0.005	4/16/2025			SW846-6020B	=
Barium		0.245	mg/L	0.004	4/16/2025			SW846-6020B	=
Beryllium	U	0.0005	mg/L	0.0005	4/16/2025			SW846-6020B	=
Boron		0.0382	mg/L	0.015	4/16/2025			SW846-6020B	=
Cadmium	U	0.001	mg/L	0.001	4/16/2025			SW846-6020B	=
Calcium	B	28.3	mg/L	0.2	4/16/2025			SW846-6020B	=
Chromium	U	0.01	mg/L	0.01	4/16/2025			SW846-6020B	=
Cobalt	U	0.001	mg/L	0.001	4/16/2025			SW846-6020B	=
Copper	J	0.00111	mg/L	0.002	4/16/2025			SW846-6020B	=
Iron		0.296	mg/L	0.1	4/16/2025			SW846-6020B	=
Lead	U	0.002	mg/L	0.002	4/16/2025			SW846-6020B	=
Magnesium		11.7	mg/L	0.03	4/16/2025			SW846-6020B	=
Manganese		0.159	mg/L	0.005	4/16/2025			SW846-6020B	=
Molybdenum	J	0.00027	mg/L	0.001	4/16/2025			SW846-6020B	=
Nickel	J	0.000948	mg/L	0.002	4/16/2025			SW846-6020B	=
Potassium		1.95	mg/L	0.3	4/16/2025			SW846-6020B	=
Rhodium	U	0.005	mg/L	0.005	4/16/2025			SW846-6020B	=
Selenium	U	0.005	mg/L	0.005	4/16/2025			SW846-6020B	=
Silver	U	0.001	mg/L	0.001	4/16/2025			SW846-6020B	=
Sodium		32	mg/L	0.25	4/16/2025			SW846-6020B	=
Tantalum	U	0.005	mg/L	0.005	4/16/2025			SW846-6020B	=
Thallium	U	0.002	mg/L	0.002	4/16/2025			SW846-6020B	=
Uranium	U	0.0002	mg/L	0.0002	4/16/2025			SW846-6020B	=
Vanadium	BJ	0.00625	mg/L	0.02	4/16/2025			SW846-6020B	U
Zinc	BJ	0.00341	mg/L	0.02	4/16/2025			SW846-6020B	U
Mercury	U	0.0002	mg/L	0.0002	4/16/2025			SW846-7470A	=
Barium, Dissolved		0.228	mg/L	0.004	4/16/2025			SW846-6020B	J
Chromium, Dissolved	U	0.01	mg/L	0.01	4/16/2025			SW846-6020B	UJ
Uranium, Dissolved	U	0.0002	mg/L	0.0002	4/16/2025			SW846-6020B	UJ
Radium-226	U	0.19	pCi/L	0.677	4/16/2025	0.43	0.431	AN-1418	=
Strontium-90	U	0.402	pCi/L	4.1	4/16/2025	2.28	2.28	EPA-905.0-M	=

**Paducah OREIS
GROUNDWATER MONITORING REPORT**

Facility: C-746-S&T Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045
Sampling Point: MW392 DOWN **RGA Type:** LRGA **Period:** 2nd Quarter 2025
AKGWA Well Tag #: 8004-4806 **SAMPLE ID:** MW392SG3-25 **Sample Type:** REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
Tritium	U	83.4	pCi/L	227	4/16/2025	132	133	EPA-906.0-M	=
Technetium-99	U	-5.52	pCi/L	20.4	4/16/2025	11.2	11.2	HASL 300, Tc-02-RC M	=
Thorium-230	U	0.9	pCi/L	1.71	4/16/2025	1.16	1.18	HASL 300, Th-01-RC M	=
Alpha activity	U	-1.15	pCi/L	8.05	4/16/2025	3.64	3.64	SW846-9310	=
Beta activity	U	-0.846	pCi/L	9.98	4/16/2025	5.37	5.37	SW846-9310	=
1,2-Dibromo-3-chloropropane	U	0.019	ug/L	0.019	4/16/2025			SW846-8011	=
1,1,1,2-Tetrachloroethane	U	1	ug/L	1	4/16/2025			SW846-8260D	=
1,1,1-Trichloroethane	UY1	1	ug/L	1	4/16/2025			SW846-8260D	=
1,1,2,2-Tetrachloroethane	U	1	ug/L	1	4/16/2025			SW846-8260D	=
1,1,2-Trichloroethane	U	1	ug/L	1	4/16/2025			SW846-8260D	=
1,1-Dichloroethane	U	1	ug/L	1	4/16/2025			SW846-8260D	=
1,1-Dichloroethene	U	1	ug/L	1	4/16/2025			SW846-8260D	=
1,2,3-Trichloropropane	U	1	ug/L	1	4/16/2025			SW846-8260D	=
1,2-Dibromoethane	U	1	ug/L	1	4/16/2025			SW846-8260D	=
1,2-Dichlorobenzene	U	1	ug/L	1	4/16/2025			SW846-8260D	=
1,2-Dichloroethane	U	1	ug/L	1	4/16/2025			SW846-8260D	=
1,2-Dichloropropane	U	1	ug/L	1	4/16/2025			SW846-8260D	=
1,4-Dichlorobenzene	U	1	ug/L	1	4/16/2025			SW846-8260D	=
2-Butanone	U	5	ug/L	5	4/16/2025			SW846-8260D	=
2-Hexanone	U	5	ug/L	5	4/16/2025			SW846-8260D	=
4-Methyl-2-pentanone	U	5	ug/L	5	4/16/2025			SW846-8260D	=
Acetone		6.7	ug/L	5	4/16/2025			SW846-8260D	=
Acrolein	U	5	ug/L	5	4/16/2025			SW846-8260D	UJ
Acrylonitrile	U	5	ug/L	5	4/16/2025			SW846-8260D	=
Benzene	UY1	1	ug/L	1	4/16/2025			SW846-8260D	=
Bromochloromethane	U	1	ug/L	1	4/16/2025			SW846-8260D	=
Bromodichloromethane	UY1	1	ug/L	1	4/16/2025			SW846-8260D	=
Bromoform	U	1	ug/L	1	4/16/2025			SW846-8260D	=
Bromomethane	U	1	ug/L	1	4/16/2025			SW846-8260D	=
Carbon disulfide	U	5	ug/L	5	4/16/2025			SW846-8260D	=
Carbon tetrachloride	U	1	ug/L	1	4/16/2025			SW846-8260D	=
Chlorobenzene	U	1	ug/L	1	4/16/2025			SW846-8260D	=
Chloroethane	U	1	ug/L	1	4/16/2025			SW846-8260D	=
Chloroform	UY1	1	ug/L	1	4/16/2025			SW846-8260D	=
Chloromethane	U	1	ug/L	1	4/16/2025			SW846-8260D	=
cis-1,2-Dichloroethene	J	0.54	ug/L	1	4/16/2025			SW846-8260D	=
cis-1,3-Dichloropropene	UY1	1	ug/L	1	4/16/2025			SW846-8260D	=
Dibromochloromethane	U	1	ug/L	1	4/16/2025			SW846-8260D	=
Dibromomethane	U	1	ug/L	1	4/16/2025			SW846-8260D	=
Ethylbenzene	U	1	ug/L	1	4/16/2025			SW846-8260D	=
Iodomethane	UY1	5	ug/L	5	4/16/2025			SW846-8260D	=
Methylene chloride		6.19	ug/L	5	4/16/2025			SW846-8260D	=
Styrene	U	1	ug/L	1	4/16/2025			SW846-8260D	=
Tetrachloroethene	U	1	ug/L	1	4/16/2025			SW846-8260D	=
Toluene	UY1	1	ug/L	1	4/16/2025			SW846-8260D	=

Paducah OREIS
GROUNDWATER MONITORING REPORT

Facility: C-746-S&T Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045
Sampling Point: MW392 DOWN **RGA Type:** LRGA **Period:** 2nd Quarter 2025
AKGWA Well Tag #: 8004-4806 **SAMPLE ID:** MW392SG3-25 **Sample Type:** REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
Total Xylene	UY1	3	ug/L	3	4/16/2025			SW846-8260D	=
trans-1,2-Dichloroethene	U	1	ug/L	1	4/16/2025			SW846-8260D	=
trans-1,3-Dichloropropene	UY1	1	ug/L	1	4/16/2025			SW846-8260D	=
trans-1,4-Dichloro-2-butene	U	5	ug/L	5	4/16/2025			SW846-8260D	=
Trichloroethene	Y1	1.18	ug/L	1	4/16/2025			SW846-8260D	=
Trichlorofluoromethane	U	1	ug/L	1	4/16/2025			SW846-8260D	=
Vinyl acetate	U	5	ug/L	5	4/16/2025			SW846-8260D	=
Vinyl chloride	U	1	ug/L	1	4/16/2025			SW846-8260D	=
Dissolved Solids	*	195	mg/L	10	4/16/2025			EPA-160.1	=
Chemical Oxygen Demand (COD)	U	20	mg/L	20	4/16/2025			EPA-410.4	=
Cyanide	UNN1	0.2	mg/L	0.2	4/16/2025			SW846-9012B	=
Total Organic Halides (TOX)		13.7	ug/L	10	4/16/2025			SW846-9020B	=
Total Organic Carbon (TOC)	J	0.716	mg/L	2	4/16/2025			SW846-9060A	=

Paducah OREIS
GROUNDWATER MONITORING REPORT

Facility: C-746-S&T Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045

Sampling Point: MW393 DOWN **RGA Type:** UCRS **Period:** 2nd Quarter 2025

AKGWA Well Tag #: 8004-4807 **SAMPLE ID:** MW393SG3-25 **Sample Type:** REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
Iodide	U	0.5	mg/L	0.5	4/16/2025			EPA-300.0	=
Bromide	J	0.123	mg/L	0.2	4/16/2025			SW846-9056A	=
Chloride	J	8.47	mg/L	250	4/16/2025			SW846-9056A	=
Fluoride	J	0.177	mg/L	4	4/16/2025			SW846-9056A	=
Nitrate as Nitrogen	J	0.263	mg/L	10	4/16/2025			SW846-9056A	=
Sulfate		25.5	mg/L	1.6	4/16/2025			SW846-9056A	=
Barometric Pressure Reading		30.15	Inches/Hg		4/16/2025			FS	X
Conductivity		436	µmhos/cm		4/16/2025			FS	X
Depth to Water		27.57	ft		4/16/2025			FS	X
Dissolved Oxygen		1.54	mg/L		4/16/2025			FS	X
Eh (approx)		410	mV		4/16/2025			FS	X
pH		6.22	Std Unit		4/16/2025			FS	X
Temperature		62.9	deg F		4/16/2025			FS	X
Turbidity		25.49	NTU		4/16/2025			FS	X
Aluminum	N	0.0695	mg/L	0.05	4/16/2025			SW846-6020B	=
Antimony	U	0.003	mg/L	0.003	4/16/2025			SW846-6020B	=
Arsenic	J	0.0031	mg/L	0.005	4/16/2025			SW846-6020B	=
Barium		0.127	mg/L	0.004	4/16/2025			SW846-6020B	=
Beryllium	U	0.0005	mg/L	0.0005	4/16/2025			SW846-6020B	=
Boron		0.0189	mg/L	0.015	4/16/2025			SW846-6020B	=
Cadmium	U	0.001	mg/L	0.001	4/16/2025			SW846-6020B	=
Calcium	B	15.8	mg/L	0.2	4/16/2025			SW846-6020B	=
Chromium	U	0.01	mg/L	0.01	4/16/2025			SW846-6020B	=
Cobalt	U	0.001	mg/L	0.001	4/16/2025			SW846-6020B	=
Copper	J	0.000632	mg/L	0.002	4/16/2025			SW846-6020B	=
Iron		1.21	mg/L	0.1	4/16/2025			SW846-6020B	=
Lead	U	0.002	mg/L	0.002	4/16/2025			SW846-6020B	=
Magnesium		4.56	mg/L	0.03	4/16/2025			SW846-6020B	=
Manganese		0.0125	mg/L	0.005	4/16/2025			SW846-6020B	=
Molybdenum	J	0.000391	mg/L	0.001	4/16/2025			SW846-6020B	=
Nickel	U	0.002	mg/L	0.002	4/16/2025			SW846-6020B	=
Potassium		0.48	mg/L	0.3	4/16/2025			SW846-6020B	=
Rhodium	U	0.005	mg/L	0.005	4/16/2025			SW846-6020B	=
Selenium	J	0.00306	mg/L	0.005	4/16/2025			SW846-6020B	=
Silver	U	0.001	mg/L	0.001	4/16/2025			SW846-6020B	=
Sodium		80.7	mg/L	2.5	4/16/2025			SW846-6020B	=
Tantalum	U	0.005	mg/L	0.005	4/16/2025			SW846-6020B	=
Thallium	U	0.002	mg/L	0.002	4/16/2025			SW846-6020B	=
Uranium	J	0.000118	mg/L	0.0002	4/16/2025			SW846-6020B	=
Vanadium	BJ	0.0048	mg/L	0.02	4/16/2025			SW846-6020B	U
Zinc	U	0.02	mg/L	0.02	4/16/2025			SW846-6020B	=
Mercury	U	0.0002	mg/L	0.0002	4/16/2025			SW846-7470A	=
Barium, Dissolved		0.0757	mg/L	0.004	4/16/2025			SW846-6020B	J
Chromium, Dissolved	U	0.01	mg/L	0.01	4/16/2025			SW846-6020B	UJ
Uranium, Dissolved	J	0.000077	mg/L	0.0002	4/16/2025			SW846-6020B	UJ
Radium-226	U	0.635	pCi/L	0.883	4/16/2025	0.718	0.722	AN-1418	=
Strontium-90	U	-1.6	pCi/L	3.8	4/16/2025	1.88	1.88	EPA-905.0-M	=

**Paducah OREIS
GROUNDWATER MONITORING REPORT**

Facility: C-746-S&T Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045
Sampling Point: MW393 DOWN **RGA Type:** UCRS **Period:** 2nd Quarter 2025
AKGWA Well Tag #: 8004-4807 **SAMPLE ID:** MW393SG3-25 **Sample Type:** REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
Tritium	U	85.2	pCi/L	227	4/16/2025	132	133	EPA-906.0-M	=
Technetium-99	U	-2.54	pCi/L	20.3	4/16/2025	11.4	11.4	HASL 300, Tc-02-RC M	=
Thorium-230	U	-0.101	pCi/L	2.34	4/16/2025	1	1.01	HASL 300, Th-01-RC M	=
Alpha activity	U	3.31	pCi/L	8.21	4/16/2025	4.73	4.77	SW846-9310	=
Beta activity	U	3.09	pCi/L	8.99	4/16/2025	5.2	5.23	SW846-9310	=
1,2-Dibromo-3-chloropropane	U	0.0189	ug/L	0.0189	4/16/2025			SW846-8011	=
1,1,1,2-Tetrachloroethane	U	1	ug/L	1	4/16/2025			SW846-8260D	=
1,1,1-Trichloroethane	UY1	1	ug/L	1	4/16/2025			SW846-8260D	=
1,1,2,2-Tetrachloroethane	U	1	ug/L	1	4/16/2025			SW846-8260D	=
1,1,2-Trichloroethane	U	1	ug/L	1	4/16/2025			SW846-8260D	=
1,1-Dichloroethane	U	1	ug/L	1	4/16/2025			SW846-8260D	=
1,1-Dichloroethene	U	1	ug/L	1	4/16/2025			SW846-8260D	=
1,2,3-Trichloropropane	U	1	ug/L	1	4/16/2025			SW846-8260D	=
1,2-Dibromoethane	U	1	ug/L	1	4/16/2025			SW846-8260D	=
1,2-Dichlorobenzene	U	1	ug/L	1	4/16/2025			SW846-8260D	=
1,2-Dichloroethane	U	1	ug/L	1	4/16/2025			SW846-8260D	=
1,2-Dichloropropane	U	1	ug/L	1	4/16/2025			SW846-8260D	=
1,4-Dichlorobenzene	U	1	ug/L	1	4/16/2025			SW846-8260D	=
2-Butanone	U	5	ug/L	5	4/16/2025			SW846-8260D	=
2-Hexanone	U	5	ug/L	5	4/16/2025			SW846-8260D	=
4-Methyl-2-pentanone	U	5	ug/L	5	4/16/2025			SW846-8260D	=
Acetone	U	5	ug/L	5	4/16/2025			SW846-8260D	=
Acrolein	U	5	ug/L	5	4/16/2025			SW846-8260D	UJ
Acrylonitrile	U	5	ug/L	5	4/16/2025			SW846-8260D	=
Benzene	UY1	1	ug/L	1	4/16/2025			SW846-8260D	=
Bromochloromethane	U	1	ug/L	1	4/16/2025			SW846-8260D	=
Bromodichloromethane	UY1	1	ug/L	1	4/16/2025			SW846-8260D	=
Bromoform	U	1	ug/L	1	4/16/2025			SW846-8260D	=
Bromomethane	U	1	ug/L	1	4/16/2025			SW846-8260D	=
Carbon disulfide	U	5	ug/L	5	4/16/2025			SW846-8260D	=
Carbon tetrachloride	U	1	ug/L	1	4/16/2025			SW846-8260D	=
Chlorobenzene	U	1	ug/L	1	4/16/2025			SW846-8260D	=
Chloroethane	U	1	ug/L	1	4/16/2025			SW846-8260D	=
Chloroform	UY1	1	ug/L	1	4/16/2025			SW846-8260D	=
Chloromethane	U	1	ug/L	1	4/16/2025			SW846-8260D	=
cis-1,2-Dichloroethene	U	1	ug/L	1	4/16/2025			SW846-8260D	=
cis-1,3-Dichloropropene	UY1	1	ug/L	1	4/16/2025			SW846-8260D	=
Dibromochloromethane	U	1	ug/L	1	4/16/2025			SW846-8260D	=
Dibromomethane	U	1	ug/L	1	4/16/2025			SW846-8260D	=
Ethylbenzene	U	1	ug/L	1	4/16/2025			SW846-8260D	=
Iodomethane	UY1	5	ug/L	5	4/16/2025			SW846-8260D	=
Methylene chloride		6.16	ug/L	5	4/16/2025			SW846-8260D	=
Styrene	U	1	ug/L	1	4/16/2025			SW846-8260D	=
Tetrachloroethene	U	1	ug/L	1	4/16/2025			SW846-8260D	=
Toluene	UY1	1	ug/L	1	4/16/2025			SW846-8260D	=

**Paducah OREIS
GROUNDWATER MONITORING REPORT**

Facility: C-746-S&T Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045
Sampling Point: MW393 DOWN **RGA Type:** UCRS **Period:** 2nd Quarter 2025
AKGWA Well Tag #: 8004-4807 **SAMPLE ID:** MW393SG3-25 **Sample Type:** REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
Total Xylene	UY1	3	ug/L	3	4/16/2025			SW846-8260D	=
trans-1,2-Dichloroethene	U	1	ug/L	1	4/16/2025			SW846-8260D	=
trans-1,3-Dichloropropene	UY1	1	ug/L	1	4/16/2025			SW846-8260D	=
trans-1,4-Dichloro-2-butene	U	5	ug/L	5	4/16/2025			SW846-8260D	=
Trichloroethene	UY1	1	ug/L	1	4/16/2025			SW846-8260D	=
Trichlorofluoromethane	U	1	ug/L	1	4/16/2025			SW846-8260D	=
Vinyl acetate	U	5	ug/L	5	4/16/2025			SW846-8260D	=
Vinyl chloride	U	1	ug/L	1	4/16/2025			SW846-8260D	=
Dissolved Solids	*	274	mg/L	10	4/16/2025			EPA-160.1	=
Chemical Oxygen Demand (COD)	U	20	mg/L	20	4/16/2025			EPA-410.4	=
Cyanide	UNN1	0.2	mg/L	0.2	4/16/2025			SW846-9012B	=
Total Organic Halides (TOX)	J	9.11	ug/L	10	4/16/2025			SW846-9020B	=
Total Organic Carbon (TOC)		2.06	mg/L	2	4/16/2025			SW846-9060A	=

**Paducah OREIS
GROUNDWATER MONITORING REPORT**

Facility: C-746-S&T Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045
Sampling Point: MW394 UP **RGA Type:** URGA **Period:** 2nd Quarter 2025
AKGWA Well Tag #: 8004-4802 **SAMPLE ID:** MW394SG3-25 **Sample Type:** REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
Iodide	U	0.5	mg/L	0.5	4/16/2025			EPA-300.0	=
Bromide		0.583	mg/L	0.2	4/16/2025			SW846-9056A	=
Chloride	J	48.3	mg/L	250	4/16/2025			SW846-9056A	=
Fluoride	J	0.118	mg/L	4	4/16/2025			SW846-9056A	=
Nitrate as Nitrogen	J	1.52	mg/L	10	4/16/2025			SW846-9056A	=
Sulfate		11.8	mg/L	0.4	4/16/2025			SW846-9056A	=
Barometric Pressure Reading		30.16	Inches/Hg		4/16/2025			FS	X
Conductivity		429	µmhos/cm		4/16/2025			FS	X
Depth to Water		51.07	ft		4/16/2025			FS	X
Dissolved Oxygen		5.7	mg/L		4/16/2025			FS	X
Eh (approx)		498	mV		4/16/2025			FS	X
pH		5.82	Std Unit		4/16/2025			FS	X
Temperature		59.1	deg F		4/16/2025			FS	X
Turbidity		4.9	NTU		4/16/2025			FS	X
Aluminum	N	0.0544	mg/L	0.05	4/16/2025			SW846-6020B	=
Antimony	U	0.003	mg/L	0.003	4/16/2025			SW846-6020B	=
Arsenic	U	0.005	mg/L	0.005	4/16/2025			SW846-6020B	=
Barium		0.269	mg/L	0.004	4/16/2025			SW846-6020B	=
Beryllium	U	0.0005	mg/L	0.0005	4/16/2025			SW846-6020B	=
Boron		0.0221	mg/L	0.015	4/16/2025			SW846-6020B	=
Cadmium	U	0.001	mg/L	0.001	4/16/2025			SW846-6020B	=
Calcium	B	28	mg/L	0.2	4/16/2025			SW846-6020B	=
Chromium	U	0.01	mg/L	0.01	4/16/2025			SW846-6020B	=
Cobalt	U	0.001	mg/L	0.001	4/16/2025			SW846-6020B	=
Copper	J	0.00141	mg/L	0.002	4/16/2025			SW846-6020B	=
Iron		0.285	mg/L	0.1	4/16/2025			SW846-6020B	=
Lead	U	0.002	mg/L	0.002	4/16/2025			SW846-6020B	=
Magnesium		11.8	mg/L	0.03	4/16/2025			SW846-6020B	=
Manganese	J	0.00403	mg/L	0.005	4/16/2025			SW846-6020B	=
Molybdenum	U	0.001	mg/L	0.001	4/16/2025			SW846-6020B	=
Nickel		0.00634	mg/L	0.002	4/16/2025			SW846-6020B	=
Potassium		1.51	mg/L	0.3	4/16/2025			SW846-6020B	=
Rhodium	U	0.005	mg/L	0.005	4/16/2025			SW846-6020B	=
Selenium	U	0.005	mg/L	0.005	4/16/2025			SW846-6020B	=
Silver	U	0.001	mg/L	0.001	4/16/2025			SW846-6020B	=
Sodium		35.2	mg/L	0.25	4/16/2025			SW846-6020B	=
Tantalum	U	0.005	mg/L	0.005	4/16/2025			SW846-6020B	=
Thallium	U	0.002	mg/L	0.002	4/16/2025			SW846-6020B	=
Uranium	U	0.0002	mg/L	0.0002	4/16/2025			SW846-6020B	=
Vanadium	U	0.02	mg/L	0.02	4/16/2025			SW846-6020B	=
Zinc	BJ	0.00592	mg/L	0.02	4/16/2025			SW846-6020B	U
Mercury	U	0.0002	mg/L	0.0002	4/16/2025			SW846-7470A	=
Barium, Dissolved		0.262	mg/L	0.004	4/16/2025			SW846-6020B	J
Chromium, Dissolved	U	0.01	mg/L	0.01	4/16/2025			SW846-6020B	UJ
Uranium, Dissolved	U	0.0002	mg/L	0.0002	4/16/2025			SW846-6020B	UJ
Radium-226	U	0.129	pCi/L	0.793	4/16/2025	0.429	0.429	AN-1418	=
Strontium-90	U	-0.657	pCi/L	2.28	4/16/2025	1.06	1.06	EPA-905.0-M	=

**Paducah OREIS
GROUNDWATER MONITORING REPORT**

Facility: C-746-S&T Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045
Sampling Point: MW394 UP **RGA Type:** URGA **Period:** 2nd Quarter 2025
AKGWA Well Tag #: 8004-4802 **SAMPLE ID:** MW394SG3-25 **Sample Type:** REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
Tritium	U	16.9	pCi/L	227	4/16/2025	127	127	EPA-906.0-M	=
Technetium-99	U	1.25	pCi/L	19.6	4/16/2025	11.1	11.1	HASL 300, Tc-02-RC M	=
Thorium-230	U	0.686	pCi/L	1.88	4/16/2025	1.16	1.17	HASL 300, Th-01-RC M	=
Alpha activity	U	-0.308	pCi/L	8.99	4/16/2025	4.07	4.07	SW846-9310	=
Beta activity	U	6.84	pCi/L	12.1	4/16/2025	7.28	7.36	SW846-9310	=
1,2-Dibromo-3-chloropropane	U	0.0191	ug/L	0.0191	4/16/2025			SW846-8011	=
1,1,1,2-Tetrachloroethane	U	1	ug/L	1	4/16/2025			SW846-8260D	=
1,1,1-Trichloroethane	UY1	1	ug/L	1	4/16/2025			SW846-8260D	=
1,1,2,2-Tetrachloroethane	U	1	ug/L	1	4/16/2025			SW846-8260D	=
1,1,2-Trichloroethane	U	1	ug/L	1	4/16/2025			SW846-8260D	=
1,1-Dichloroethane	U	1	ug/L	1	4/16/2025			SW846-8260D	=
1,1-Dichloroethene	U	1	ug/L	1	4/16/2025			SW846-8260D	=
1,2,3-Trichloropropane	U	1	ug/L	1	4/16/2025			SW846-8260D	=
1,2-Dibromoethane	U	1	ug/L	1	4/16/2025			SW846-8260D	=
1,2-Dichlorobenzene	U	1	ug/L	1	4/16/2025			SW846-8260D	=
1,2-Dichloroethane	U	1	ug/L	1	4/16/2025			SW846-8260D	=
1,2-Dichloropropane	U	1	ug/L	1	4/16/2025			SW846-8260D	=
1,4-Dichlorobenzene	U	1	ug/L	1	4/16/2025			SW846-8260D	=
2-Butanone	U	5	ug/L	5	4/16/2025			SW846-8260D	=
2-Hexanone	U	5	ug/L	5	4/16/2025			SW846-8260D	=
4-Methyl-2-pentanone	U	5	ug/L	5	4/16/2025			SW846-8260D	=
Acetone	U	5	ug/L	5	4/16/2025			SW846-8260D	=
Acrolein	U	5	ug/L	5	4/16/2025			SW846-8260D	UJ
Acrylonitrile	U	5	ug/L	5	4/16/2025			SW846-8260D	=
Benzene	UY1	1	ug/L	1	4/16/2025			SW846-8260D	=
Bromochloromethane	U	1	ug/L	1	4/16/2025			SW846-8260D	=
Bromodichloromethane	UY1	1	ug/L	1	4/16/2025			SW846-8260D	=
Bromoform	U	1	ug/L	1	4/16/2025			SW846-8260D	=
Bromomethane	U	1	ug/L	1	4/16/2025			SW846-8260D	=
Carbon disulfide	U	5	ug/L	5	4/16/2025			SW846-8260D	=
Carbon tetrachloride	U	1	ug/L	1	4/16/2025			SW846-8260D	=
Chlorobenzene	U	1	ug/L	1	4/16/2025			SW846-8260D	=
Chloroethane	U	1	ug/L	1	4/16/2025			SW846-8260D	=
Chloroform	UY1	1	ug/L	1	4/16/2025			SW846-8260D	=
Chloromethane	U	1	ug/L	1	4/16/2025			SW846-8260D	=
cis-1,2-Dichloroethene	U	1	ug/L	1	4/16/2025			SW846-8260D	=
cis-1,3-Dichloropropene	UY1	1	ug/L	1	4/16/2025			SW846-8260D	=
Dibromochloromethane	U	1	ug/L	1	4/16/2025			SW846-8260D	=
Dibromomethane	U	1	ug/L	1	4/16/2025			SW846-8260D	=
Ethylbenzene	U	1	ug/L	1	4/16/2025			SW846-8260D	=
Iodomethane	UY1	5	ug/L	5	4/16/2025			SW846-8260D	=
Methylene chloride		6.07	ug/L	5	4/16/2025			SW846-8260D	=
Styrene	U	1	ug/L	1	4/16/2025			SW846-8260D	=
Tetrachloroethene	U	1	ug/L	1	4/16/2025			SW846-8260D	=
Toluene	UY1	1	ug/L	1	4/16/2025			SW846-8260D	=

**Paducah OREIS
GROUNDWATER MONITORING REPORT**

Facility: C-746-S&T Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045
Sampling Point: MW394 UP **RGA Type:** URGA **Period:** 2nd Quarter 2025
AKGWA Well Tag #: 8004-4802 **SAMPLE ID:** MW394SG3-25 **Sample Type:** REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
Total Xylene	UY1	3	ug/L	3	4/16/2025			SW846-8260D	=
trans-1,2-Dichloroethene	U	1	ug/L	1	4/16/2025			SW846-8260D	=
trans-1,3-Dichloropropene	UY1	1	ug/L	1	4/16/2025			SW846-8260D	=
trans-1,4-Dichloro-2-butene	U	5	ug/L	5	4/16/2025			SW846-8260D	=
Trichloroethene	Y1	2.77	ug/L	1	4/16/2025			SW846-8260D	=
Trichlorofluoromethane	U	1	ug/L	1	4/16/2025			SW846-8260D	=
Vinyl acetate	U	5	ug/L	5	4/16/2025			SW846-8260D	=
Vinyl chloride	U	1	ug/L	1	4/16/2025			SW846-8260D	=
Dissolved Solids	*	222	mg/L	10	4/16/2025			EPA-160.1	=
Chemical Oxygen Demand (COD)	U	20	mg/L	20	4/16/2025			EPA-410.4	=
Cyanide	UNN1	0.2	mg/L	0.2	4/16/2025			SW846-9012B	=
Total Organic Halides (TOX)	J	7.42	ug/L	10	4/16/2025			SW846-9020B	=
Total Organic Carbon (TOC)	J	0.511	mg/L	2	4/16/2025			SW846-9060A	=

**Paducah OREIS
GROUNDWATER MONITORING REPORT**

Facility: C-746-S&T Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045
Sampling Point: MW395 UP **RGA Type:** LRGA **Period:** 2nd Quarter 2025
AKGWA Well Tag #: 8004-4801 **SAMPLE ID:** MW395SG3-25 **Sample Type:** REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
Iodide	U	0.5	mg/L	0.5	4/16/2025			EPA-300.0	=
Bromide		0.561	mg/L	0.2	4/16/2025			SW846-9056A	=
Chloride	J	47.2	mg/L	250	4/16/2025			SW846-9056A	=
Fluoride	J	0.115	mg/L	4	4/16/2025			SW846-9056A	=
Nitrate as Nitrogen	J	1.36	mg/L	10	4/16/2025			SW846-9056A	=
Sulfate		11.5	mg/L	0.4	4/16/2025			SW846-9056A	=
Barometric Pressure Reading		30.17	Inches/Hg		4/16/2025			FS	X
Conductivity		401	µmhos/cm		4/16/2025			FS	X
Depth to Water		51.77	ft		4/16/2025			FS	X
Dissolved Oxygen		4.99	mg/L		4/16/2025			FS	X
Eh (approx)		480	mV		4/16/2025			FS	X
pH		5.87	Std Unit		4/16/2025			FS	X
Temperature		60.9	deg F		4/16/2025			FS	X
Turbidity		4.31	NTU		4/16/2025			FS	X
Aluminum	UN	0.05	mg/L	0.05	4/16/2025			SW846-6020B	=
Antimony	U	0.003	mg/L	0.003	4/16/2025			SW846-6020B	=
Arsenic	U	0.005	mg/L	0.005	4/16/2025			SW846-6020B	=
Barium		0.262	mg/L	0.004	4/16/2025			SW846-6020B	=
Beryllium	U	0.0005	mg/L	0.0005	4/16/2025			SW846-6020B	=
Boron		0.0218	mg/L	0.015	4/16/2025			SW846-6020B	=
Cadmium	U	0.001	mg/L	0.001	4/16/2025			SW846-6020B	=
Calcium	B	28.1	mg/L	0.2	4/16/2025			SW846-6020B	=
Chromium	U	0.01	mg/L	0.01	4/16/2025			SW846-6020B	=
Cobalt	U	0.001	mg/L	0.001	4/16/2025			SW846-6020B	=
Copper	J	0.000918	mg/L	0.002	4/16/2025			SW846-6020B	=
Iron	J	0.0552	mg/L	0.1	4/16/2025			SW846-6020B	=
Lead	U	0.002	mg/L	0.002	4/16/2025			SW846-6020B	=
Magnesium		12.4	mg/L	0.03	4/16/2025			SW846-6020B	=
Manganese	J	0.00205	mg/L	0.005	4/16/2025			SW846-6020B	=
Molybdenum	J	0.000248	mg/L	0.001	4/16/2025			SW846-6020B	=
Nickel	J	0.00183	mg/L	0.002	4/16/2025			SW846-6020B	=
Potassium		1.66	mg/L	0.3	4/16/2025			SW846-6020B	=
Rhodium	U	0.005	mg/L	0.005	4/16/2025			SW846-6020B	=
Selenium	U	0.005	mg/L	0.005	4/16/2025			SW846-6020B	=
Silver	U	0.001	mg/L	0.001	4/16/2025			SW846-6020B	=
Sodium		34	mg/L	0.25	4/16/2025			SW846-6020B	=
Tantalum	U	0.005	mg/L	0.005	4/16/2025			SW846-6020B	=
Thallium	U	0.002	mg/L	0.002	4/16/2025			SW846-6020B	=
Uranium	U	0.0002	mg/L	0.0002	4/16/2025			SW846-6020B	=
Vanadium	U	0.02	mg/L	0.02	4/16/2025			SW846-6020B	=
Zinc	U	0.02	mg/L	0.02	4/16/2025			SW846-6020B	=
Mercury	U	0.0002	mg/L	0.0002	4/16/2025			SW846-7470A	=
Barium, Dissolved		0.278	mg/L	0.004	4/16/2025			SW846-6020B	J
Chromium, Dissolved	U	0.01	mg/L	0.01	4/16/2025			SW846-6020B	UJ
Uranium, Dissolved	U	0.0002	mg/L	0.0002	4/16/2025			SW846-6020B	UJ
Radium-226	U	0.497	pCi/L	1	4/16/2025	0.68	0.683	AN-1418	=
Strontium-90	U	-0.766	pCi/L	4.81	4/16/2025	2.57	2.57	EPA-905.0-M	=

**Paducah OREIS
GROUNDWATER MONITORING REPORT**

Facility: C-746-S&T Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045

Sampling Point: MW395 UP **RGA Type:** LRGA **Period:** 2nd Quarter 2025

AKGWA Well Tag #: 8004-4801 **SAMPLE ID:** MW395SG3-25 **Sample Type:** REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
Tritium	U	-2.47	pCi/L	217	4/16/2025	120	120	EPA-906.0-M	=
Technetium-99	U	2.75	pCi/L	20.3	4/16/2025	11.7	11.7	HASL 300, Tc-02-RC M	=
Thorium-230	U	1.21	pCi/L	1.68	4/16/2025	1.27	1.29	HASL 300, Th-01-RC M	=
Alpha activity	U	-1.33	pCi/L	6.49	4/16/2025	2.47	2.47	SW846-9310	=
Beta activity	U	-1.2	pCi/L	11.9	4/16/2025	6.45	6.45	SW846-9310	=
1,2-Dibromo-3-chloropropane	U	0.0189	ug/L	0.0189	4/16/2025			SW846-8011	=
1,1,1,2-Tetrachloroethane	U	1	ug/L	1	4/16/2025			SW846-8260D	=
1,1,1-Trichloroethane	UY1	1	ug/L	1	4/16/2025			SW846-8260D	UJ
1,1,2,2-Tetrachloroethane	U	1	ug/L	1	4/16/2025			SW846-8260D	=
1,1,2-Trichloroethane	U	1	ug/L	1	4/16/2025			SW846-8260D	=
1,1-Dichloroethane	U	1	ug/L	1	4/16/2025			SW846-8260D	=
1,1-Dichloroethene	U	1	ug/L	1	4/16/2025			SW846-8260D	=
1,2,3-Trichloropropane	U	1	ug/L	1	4/16/2025			SW846-8260D	=
1,2-Dibromoethane	U	1	ug/L	1	4/16/2025			SW846-8260D	=
1,2-Dichlorobenzene	U	1	ug/L	1	4/16/2025			SW846-8260D	=
1,2-Dichloroethane	U	1	ug/L	1	4/16/2025			SW846-8260D	=
1,2-Dichloropropane	U	1	ug/L	1	4/16/2025			SW846-8260D	=
1,4-Dichlorobenzene	U	1	ug/L	1	4/16/2025			SW846-8260D	=
2-Butanone	U	5	ug/L	5	4/16/2025			SW846-8260D	=
2-Hexanone	U	5	ug/L	5	4/16/2025			SW846-8260D	=
4-Methyl-2-pentanone	U	5	ug/L	5	4/16/2025			SW846-8260D	=
Acetone	U	5	ug/L	5	4/16/2025			SW846-8260D	=
Acrolein	U	5	ug/L	5	4/16/2025			SW846-8260D	UJ
Acrylonitrile	U	5	ug/L	5	4/16/2025			SW846-8260D	=
Benzene	UY1	1	ug/L	1	4/16/2025			SW846-8260D	UJ
Bromochloromethane	U	1	ug/L	1	4/16/2025			SW846-8260D	=
Bromodichloromethane	UY1	1	ug/L	1	4/16/2025			SW846-8260D	UJ
Bromoform	U	1	ug/L	1	4/16/2025			SW846-8260D	=
Bromomethane	U	1	ug/L	1	4/16/2025			SW846-8260D	=
Carbon disulfide	U	5	ug/L	5	4/16/2025			SW846-8260D	=
Carbon tetrachloride	U	1	ug/L	1	4/16/2025			SW846-8260D	=
Chlorobenzene	U	1	ug/L	1	4/16/2025			SW846-8260D	=
Chloroethane	U	1	ug/L	1	4/16/2025			SW846-8260D	=
Chloroform	UY1	1	ug/L	1	4/16/2025			SW846-8260D	UJ
Chloromethane	U	1	ug/L	1	4/16/2025			SW846-8260D	=
cis-1,2-Dichloroethene	U	1	ug/L	1	4/16/2025			SW846-8260D	=
cis-1,3-Dichloropropene	UY1	1	ug/L	1	4/16/2025			SW846-8260D	UJ
Dibromochloromethane	U	1	ug/L	1	4/16/2025			SW846-8260D	=
Dibromomethane	U	1	ug/L	1	4/16/2025			SW846-8260D	=
Ethylbenzene	U	1	ug/L	1	4/16/2025			SW846-8260D	=
Iodomethane	UY1	5	ug/L	5	4/16/2025			SW846-8260D	UJ
Methylene chloride		6.18	ug/L	5	4/16/2025			SW846-8260D	=
Styrene	U	1	ug/L	1	4/16/2025			SW846-8260D	=
Tetrachloroethene	U	1	ug/L	1	4/16/2025			SW846-8260D	=
Toluene	UY1	1	ug/L	1	4/16/2025			SW846-8260D	UJ

**Paducah OREIS
GROUNDWATER MONITORING REPORT**

Facility: C-746-S&T Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045
Sampling Point: MW395 UP **RGA Type:** LRGA **Period:** 2nd Quarter 2025
AKGWA Well Tag #: 8004-4801 **SAMPLE ID:** MW395SG3-25 **Sample Type:** REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
Total Xylene	UY1	3	ug/L	3	4/16/2025			SW846-8260D	UJ
trans-1,2-Dichloroethene	U	1	ug/L	1	4/16/2025			SW846-8260D	=
trans-1,3-Dichloropropene	UY1	1	ug/L	1	4/16/2025			SW846-8260D	UJ
trans-1,4-Dichloro-2-butene	U	5	ug/L	5	4/16/2025			SW846-8260D	=
Trichloroethene	Y1	4.2	ug/L	1	4/16/2025			SW846-8260D	J
Trichlorofluoromethane	U	1	ug/L	1	4/16/2025			SW846-8260D	=
Vinyl acetate	U	5	ug/L	5	4/16/2025			SW846-8260D	=
Vinyl chloride	U	1	ug/L	1	4/16/2025			SW846-8260D	=
Dissolved Solids	*	213	mg/L	10	4/16/2025			EPA-160.1	J
Chemical Oxygen Demand (COD)	U	20	mg/L	20	4/16/2025			EPA-410.4	=
Cyanide	UNN1	0.2	mg/L	0.2	4/16/2025			SW846-9012B	UJ
Total Organic Halides (TOX)	J	7.17	ug/L	10	4/16/2025			SW846-9020B	=
Total Organic Carbon (TOC)	J	0.519	mg/L	2	4/16/2025			SW846-9060A	=

Paducah OREIS
GROUNDWATER MONITORING REPORT

Facility: C-746-S&T Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045
Sampling Point: MW396 UP **RGA Type:** UCRS **Period:** 2nd Quarter 2025
AKGWA Well Tag #: 8004-4803 **SAMPLE ID:** MW396SG3-25 **Sample Type:** REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
Iodide	U	0.5	mg/L	0.5	4/16/2025			EPA-300.0	=
Bromide		0.848	mg/L	0.2	4/16/2025			SW846-9056A	=
Chloride	J	55.6	mg/L	250	4/16/2025			SW846-9056A	=
Fluoride	J	0.605	mg/L	4	4/16/2025			SW846-9056A	=
Nitrate as Nitrogen	J	0.254	mg/L	10	4/16/2025			SW846-9056A	=
Sulfate		29.8	mg/L	1.6	4/16/2025			SW846-9056A	=
Barometric Pressure Reading		30.17	Inches/Hg		4/16/2025			FS	X
Conductivity		667	µmhos/cm		4/16/2025			FS	X
Depth to Water		6.42	ft		4/16/2025			FS	X
Dissolved Oxygen		2.73	mg/L		4/16/2025			FS	X
Eh (approx)		467	mV		4/16/2025			FS	X
pH		6.3	Std Unit		4/16/2025			FS	X
Temperature		62.2	deg F		4/16/2025			FS	X
Turbidity		5.1	NTU		4/16/2025			FS	X
Aluminum	JN	0.0274	mg/L	0.05	4/16/2025			SW846-6020B	=
Antimony	U	0.003	mg/L	0.003	4/16/2025			SW846-6020B	=
Arsenic	U	0.005	mg/L	0.005	4/16/2025			SW846-6020B	=
Barium		0.368	mg/L	0.004	4/16/2025			SW846-6020B	=
Beryllium	U	0.0005	mg/L	0.0005	4/16/2025			SW846-6020B	=
Boron	J	0.00739	mg/L	0.015	4/16/2025			SW846-6020B	=
Cadmium	U	0.001	mg/L	0.001	4/16/2025			SW846-6020B	=
Calcium	B	30.2	mg/L	0.2	4/16/2025			SW846-6020B	=
Chromium	U	0.01	mg/L	0.01	4/16/2025			SW846-6020B	=
Cobalt	J	0.000665	mg/L	0.001	4/16/2025			SW846-6020B	=
Copper	J	0.00108	mg/L	0.002	4/16/2025			SW846-6020B	=
Iron		0.245	mg/L	0.1	4/16/2025			SW846-6020B	=
Lead	U	0.002	mg/L	0.002	4/16/2025			SW846-6020B	=
Magnesium		14.5	mg/L	0.03	4/16/2025			SW846-6020B	=
Manganese		0.0744	mg/L	0.005	4/16/2025			SW846-6020B	=
Molybdenum	J	0.000489	mg/L	0.001	4/16/2025			SW846-6020B	=
Nickel	J	0.000669	mg/L	0.002	4/16/2025			SW846-6020B	=
Potassium		0.838	mg/L	0.3	4/16/2025			SW846-6020B	=
Rhodium	U	0.005	mg/L	0.005	4/16/2025			SW846-6020B	=
Selenium	U	0.005	mg/L	0.005	4/16/2025			SW846-6020B	=
Silver	U	0.001	mg/L	0.001	4/16/2025			SW846-6020B	=
Sodium		97.4	mg/L	2.5	4/16/2025			SW846-6020B	=
Tantalum	U	0.005	mg/L	0.005	4/16/2025			SW846-6020B	=
Thallium	U	0.002	mg/L	0.002	4/16/2025			SW846-6020B	=
Uranium	U	0.0002	mg/L	0.0002	4/16/2025			SW846-6020B	=
Vanadium	U	0.02	mg/L	0.02	4/16/2025			SW846-6020B	=
Zinc	U	0.02	mg/L	0.02	4/16/2025			SW846-6020B	=
Mercury	U	0.0002	mg/L	0.0002	4/16/2025			SW846-7470A	=
Barium, Dissolved		0.363	mg/L	0.004	4/16/2025			SW846-6020B	J
Chromium, Dissolved	U	0.01	mg/L	0.01	4/16/2025			SW846-6020B	UJ
Uranium, Dissolved	U	0.0002	mg/L	0.0002	4/16/2025			SW846-6020B	UJ
Radium-226	U	0.432	pCi/L	1.13	4/16/2025	0.719	0.721	AN-1418	=
Strontium-90	U	-0.261	pCi/L	3.46	4/16/2025	1.83	1.83	EPA-905.0-M	=

**Paducah OREIS
GROUNDWATER MONITORING REPORT**

Facility: C-746-S&T Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045
Sampling Point: MW396 UP **RGA Type:** UCRS **Period:** 2nd Quarter 2025
AKGWA Well Tag #: 8004-4803 **SAMPLE ID:** MW396SG3-25 **Sample Type:** REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
Tritium	U	14.8	pCi/L	228	4/16/2025	128	128	EPA-906.0-M	=
Technetium-99	U	2.06	pCi/L	21.2	4/16/2025	12.1	12.1	HASL 300, Tc-02-RC M	=
Thorium-230	U	0.83	pCi/L	1.53	4/16/2025	1.03	1.04	HASL 300, Th-01-RC M	=
Alpha activity	U	1.29	pCi/L	7.75	4/16/2025	4.03	4.03	SW846-9310	=
Beta activity	U	-1.54	pCi/L	10.1	4/16/2025	5.36	5.36	SW846-9310	=
1,2-Dibromo-3-chloropropane	U	0.0188	ug/L	0.0188	4/16/2025			SW846-8011	=
1,1,1,2-Tetrachloroethane	U	1	ug/L	1	4/16/2025			SW846-8260D	=
1,1,1-Trichloroethane	UY1	1	ug/L	1	4/16/2025			SW846-8260D	=
1,1,2,2-Tetrachloroethane	U	1	ug/L	1	4/16/2025			SW846-8260D	=
1,1,2-Trichloroethane	U	1	ug/L	1	4/16/2025			SW846-8260D	=
1,1-Dichloroethane	U	1	ug/L	1	4/16/2025			SW846-8260D	=
1,1-Dichloroethene	U	1	ug/L	1	4/16/2025			SW846-8260D	=
1,2,3-Trichloropropane	U	1	ug/L	1	4/16/2025			SW846-8260D	=
1,2-Dibromoethane	U	1	ug/L	1	4/16/2025			SW846-8260D	=
1,2-Dichlorobenzene	U	1	ug/L	1	4/16/2025			SW846-8260D	=
1,2-Dichloroethane	U	1	ug/L	1	4/16/2025			SW846-8260D	=
1,2-Dichloropropane	U	1	ug/L	1	4/16/2025			SW846-8260D	=
1,4-Dichlorobenzene	U	1	ug/L	1	4/16/2025			SW846-8260D	=
2-Butanone	U	5	ug/L	5	4/16/2025			SW846-8260D	=
2-Hexanone	U	5	ug/L	5	4/16/2025			SW846-8260D	=
4-Methyl-2-pentanone	U	5	ug/L	5	4/16/2025			SW846-8260D	=
Acetone	U	5	ug/L	5	4/16/2025			SW846-8260D	=
Acrolein	U	5	ug/L	5	4/16/2025			SW846-8260D	UJ
Acrylonitrile	U	5	ug/L	5	4/16/2025			SW846-8260D	=
Benzene	UY1	1	ug/L	1	4/16/2025			SW846-8260D	=
Bromochloromethane	U	1	ug/L	1	4/16/2025			SW846-8260D	=
Bromodichloromethane	UY1	1	ug/L	1	4/16/2025			SW846-8260D	=
Bromoform	U	1	ug/L	1	4/16/2025			SW846-8260D	=
Bromomethane	U	1	ug/L	1	4/16/2025			SW846-8260D	=
Carbon disulfide	U	5	ug/L	5	4/16/2025			SW846-8260D	=
Carbon tetrachloride	U	1	ug/L	1	4/16/2025			SW846-8260D	=
Chlorobenzene	U	1	ug/L	1	4/16/2025			SW846-8260D	=
Chloroethane	U	1	ug/L	1	4/16/2025			SW846-8260D	=
Chloroform	UY1	1	ug/L	1	4/16/2025			SW846-8260D	=
Chloromethane	U	1	ug/L	1	4/16/2025			SW846-8260D	=
cis-1,2-Dichloroethene	U	1	ug/L	1	4/16/2025			SW846-8260D	=
cis-1,3-Dichloropropene	UY1	1	ug/L	1	4/16/2025			SW846-8260D	=
Dibromochloromethane	U	1	ug/L	1	4/16/2025			SW846-8260D	=
Dibromomethane	U	1	ug/L	1	4/16/2025			SW846-8260D	=
Ethylbenzene	U	1	ug/L	1	4/16/2025			SW846-8260D	=
Iodomethane	UY1	5	ug/L	5	4/16/2025			SW846-8260D	=
Methylene chloride		6.03	ug/L	5	4/16/2025			SW846-8260D	=
Styrene	U	1	ug/L	1	4/16/2025			SW846-8260D	=
Tetrachloroethene	U	1	ug/L	1	4/16/2025			SW846-8260D	=
Toluene	UY1	1	ug/L	1	4/16/2025			SW846-8260D	=

**Paducah OREIS
GROUNDWATER MONITORING REPORT**

Facility: C-746-S&T Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045
Sampling Point: MW396 UP **RGA Type:** UCRS **Period:** 2nd Quarter 2025
AKGWA Well Tag #: 8004-4803 **SAMPLE ID:** MW396SG3-25 **Sample Type:** REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
Total Xylene	UY1	3	ug/L	3	4/16/2025			SW846-8260D	=
trans-1,2-Dichloroethene	U	1	ug/L	1	4/16/2025			SW846-8260D	=
trans-1,3-Dichloropropene	UY1	1	ug/L	1	4/16/2025			SW846-8260D	=
trans-1,4-Dichloro-2-butene	U	5	ug/L	5	4/16/2025			SW846-8260D	=
Trichloroethene	UY1	1	ug/L	1	4/16/2025			SW846-8260D	=
Trichlorofluoromethane	U	1	ug/L	1	4/16/2025			SW846-8260D	=
Vinyl acetate	U	5	ug/L	5	4/16/2025			SW846-8260D	=
Vinyl chloride	U	1	ug/L	1	4/16/2025			SW846-8260D	=
Dissolved Solids	*	410	mg/L	10	4/16/2025			EPA-160.1	=
Chemical Oxygen Demand (COD)	J	13.5	mg/L	20	4/16/2025			EPA-410.4	=
Cyanide	UNN1	0.2	mg/L	0.2	4/16/2025			SW846-9012B	=
Total Organic Halides (TOX)		47.8	ug/L	10	4/16/2025			SW846-9020B	=
Total Organic Carbon (TOC)		3.36	mg/L	2	4/16/2025			SW846-9060A	=

Paducah OREIS
GROUNDWATER MONITORING REPORT

Facility: C-746-S&T Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045
Sampling Point: MW397 UP **RGA Type:** LRGA **Period:** 2nd Quarter 2025
AKGWA Well Tag #: 8004-4817 **SAMPLE ID:** MW397SG3-25 **Sample Type:** REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
Iodide	U	0.5	mg/L	0.5	4/14/2025			EPA-300.0	=
Bromide		0.375	mg/L	0.2	4/14/2025			SW846-9056A	=
Chloride	JW	34.2	mg/L	250	4/14/2025			SW846-9056A	J
Fluoride	J	0.141	mg/L	4	4/14/2025			SW846-9056A	=
Nitrate as Nitrogen	J	0.913	mg/L	10	4/14/2025			SW846-9056A	=
Sulfate		12.1	mg/L	0.4	4/14/2025			SW846-9056A	=
Barometric Pressure Reading		29.89	Inches/Hg		4/14/2025			FS	X
Conductivity		324	µmhos/cm		4/14/2025			FS	X
Depth to Water		59.64	ft		4/14/2025			FS	X
Dissolved Oxygen		6.4	mg/L		4/14/2025			FS	X
Eh (approx)		423	mV		4/14/2025			FS	X
pH		5.96	Std Unit		4/14/2025			FS	X
Temperature		64.1	deg F		4/14/2025			FS	X
Turbidity		71.27	NTU		4/14/2025			FS	X
Aluminum	BN	0.786	mg/L	0.05	4/14/2025			SW846-6020B	J
Antimony	U	0.003	mg/L	0.003	4/14/2025			SW846-6020B	=
Arsenic	U	0.005	mg/L	0.005	4/14/2025			SW846-6020B	=
Barium	N	0.146	mg/L	0.004	4/14/2025			SW846-6020B	J
Beryllium	U	0.0005	mg/L	0.0005	4/14/2025			SW846-6020B	=
Boron	J	0.0101	mg/L	0.015	4/14/2025			SW846-6020B	=
Cadmium	U	0.001	mg/L	0.001	4/14/2025			SW846-6020B	=
Calcium		19.1	mg/L	0.2	4/14/2025			SW846-6020B	=
Chromium	U	0.01	mg/L	0.01	4/14/2025			SW846-6020B	=
Cobalt	J	0.000697	mg/L	0.001	4/14/2025			SW846-6020B	=
Copper	BJ	0.00159	mg/L	0.002	4/14/2025			SW846-6020B	U
Iron	N	1.56	mg/L	0.1	4/14/2025			SW846-6020B	J
Lead	J	0.000595	mg/L	0.002	4/14/2025			SW846-6020B	=
Magnesium		8.23	mg/L	0.03	4/14/2025			SW846-6020B	=
Manganese		0.0321	mg/L	0.005	4/14/2025			SW846-6020B	=
Molybdenum	U	0.001	mg/L	0.001	4/14/2025			SW846-6020B	=
Nickel	J	0.00158	mg/L	0.002	4/14/2025			SW846-6020B	=
Potassium		1.94	mg/L	0.3	4/14/2025			SW846-6020B	=
Rhodium	U	0.005	mg/L	0.005	4/14/2025			SW846-6020B	=
Selenium	U	0.005	mg/L	0.005	4/14/2025			SW846-6020B	=
Silver	U	0.001	mg/L	0.001	4/14/2025			SW846-6020B	=
Sodium		35.4	mg/L	0.25	4/14/2025			SW846-6020B	=
Tantalum	UN	0.005	mg/L	0.005	4/14/2025			SW846-6020B	UJ
Thallium	U	0.002	mg/L	0.002	4/14/2025			SW846-6020B	=
Uranium	J	0.000072	mg/L	0.0002	4/14/2025			SW846-6020B	=
Vanadium	J	0.00446	mg/L	0.02	4/14/2025			SW846-6020B	=
Zinc	J	0.00655	mg/L	0.02	4/14/2025			SW846-6020B	=
Mercury	U	0.0002	mg/L	0.0002	4/14/2025			SW846-7470A	=
Barium, Dissolved	N	0.132	mg/L	0.004	4/14/2025			SW846-6020B	J
Chromium, Dissolved	U	0.01	mg/L	0.01	4/14/2025			SW846-6020B	UJ
Uranium, Dissolved	U	0.0002	mg/L	0.0002	4/14/2025			SW846-6020B	UJ
Radium-226	U	0.851	pCi/L	1.44	4/14/2025	1.21	1.22	AN-1418	=
Strontium-90	U	0.171	pCi/L	1.31	4/14/2025	0.677	0.677	EPA-905.0-M	=

**Paducah OREIS
GROUNDWATER MONITORING REPORT**

Facility: C-746-S&T Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045
Sampling Point: MW397 UP **RGA Type:** LRGA **Period:** 2nd Quarter 2025
AKGWA Well Tag #: 8004-4817 **SAMPLE ID:** MW397SG3-25 **Sample Type:** REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
Tritium	U	52.6	pCi/L	199	4/14/2025	115	116	EPA-906.0-M	=
Technetium-99	U	16.8	pCi/L	21.2	4/14/2025	12.9	13.1	HASL 300, Tc-02-RC M	=
Thorium-230	U	-0.474	pCi/L	3.21	4/14/2025	1.24	1.24	HASL 300, Th-01-RC M	=
Alpha activity	U	1.1	pCi/L	10.4	4/14/2025	5.22	5.22	SW846-9310	=
Beta activity	U	7.88	pCi/L	9.84	4/14/2025	6.2	6.34	SW846-9310	=
1,2-Dibromo-3-chloropropane	U	0.0189	ug/L	0.0189	4/14/2025			SW846-8011	=
1,1,1,2-Tetrachloroethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
1,1,1-Trichloroethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
1,1,2,2-Tetrachloroethane	UY1	1	ug/L	1	4/14/2025			SW846-8260D	=
1,1,2-Trichloroethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
1,1-Dichloroethane	UY1	1	ug/L	1	4/14/2025			SW846-8260D	=
1,1-Dichloroethene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
1,2,3-Trichloropropane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
1,2-Dibromoethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
1,2-Dichlorobenzene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
1,2-Dichloroethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
1,2-Dichloropropane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
1,4-Dichlorobenzene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
2-Butanone	U	5	ug/L	5	4/14/2025			SW846-8260D	=
2-Hexanone	U	5	ug/L	5	4/14/2025			SW846-8260D	=
4-Methyl-2-pentanone	U	5	ug/L	5	4/14/2025			SW846-8260D	=
Acetone	U	5	ug/L	5	4/14/2025			SW846-8260D	=
Acrolein	U	5	ug/L	5	4/14/2025			SW846-8260D	=
Acrylonitrile	U	5	ug/L	5	4/14/2025			SW846-8260D	=
Benzene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Bromochloromethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Bromodichloromethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Bromoform	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Bromomethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Carbon disulfide	U	5	ug/L	5	4/14/2025			SW846-8260D	=
Carbon tetrachloride	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Chlorobenzene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Chloroethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Chloroform	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Chloromethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
cis-1,2-Dichloroethene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
cis-1,3-Dichloropropene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Dibromochloromethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Dibromomethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Ethylbenzene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Iodomethane	U	5	ug/L	5	4/14/2025			SW846-8260D	=
Methylene chloride	U	5	ug/L	5	4/14/2025			SW846-8260D	=
Styrene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Tetrachloroethene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Toluene	U	1	ug/L	1	4/14/2025			SW846-8260D	=

**Paducah OREIS
GROUNDWATER MONITORING REPORT**

Facility: C-746-S&T Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045
Sampling Point: MW397 UP **RGA Type:** LRGA **Period:** 2nd Quarter 2025
AKGWA Well Tag #: 8004-4817 **SAMPLE ID:** MW397SG3-25 **Sample Type:** REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
Total Xylene	U	3	ug/L	3	4/14/2025			SW846-8260D	=
trans-1,2-Dichloroethene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
trans-1,3-Dichloropropene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
trans-1,4-Dichloro-2-butene	U	5	ug/L	5	4/14/2025			SW846-8260D	UJ
Trichloroethene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Trichlorofluoromethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Vinyl acetate	U	5	ug/L	5	4/14/2025			SW846-8260D	=
Vinyl chloride	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Dissolved Solids		200	mg/L	10	4/14/2025			EPA-160.1	=
Chemical Oxygen Demand (COD)	U	20	mg/L	20	4/14/2025			EPA-410.4	=
Cyanide	UN1	0.2	mg/L	0.2	4/14/2025			SW846-9012B	=
Total Organic Halides (TOX)	B	10.2	ug/L	10	4/14/2025			SW846-9020B	J
Total Organic Carbon (TOC)	J	0.64	mg/L	2	4/14/2025			SW846-9060A	=

**Paducah OREIS
GROUNDWATER MONITORING REPORT**

Facility: C-746-S&T Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045
Sampling Point: QC **Period:** 2nd Quarter 2025
AKGWA Well Tag #: N/A **SAMPLE ID:** FB1SG3-25 **Sample Type:** FB

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
Iodide	U	0.5	mg/L	0.5	4/14/2025			EPA-300.0	=
Aluminum	UN	0.05	mg/L	0.05	4/14/2025			SW846-6020B	=
Antimony	U	0.003	mg/L	0.003	4/14/2025			SW846-6020B	=
Arsenic	U	0.005	mg/L	0.005	4/14/2025			SW846-6020B	=
Barium	UN	0.004	mg/L	0.004	4/14/2025			SW846-6020B	=
Beryllium	U	0.0005	mg/L	0.0005	4/14/2025			SW846-6020B	=
Boron	U	0.015	mg/L	0.015	4/14/2025			SW846-6020B	=
Cadmium	U	0.001	mg/L	0.001	4/14/2025			SW846-6020B	=
Calcium	U	0.2	mg/L	0.2	4/14/2025			SW846-6020B	=
Chromium	U	0.01	mg/L	0.01	4/14/2025			SW846-6020B	=
Cobalt	U	0.001	mg/L	0.001	4/14/2025			SW846-6020B	=
Copper	BJ	0.000354	mg/L	0.002	4/14/2025			SW846-6020B	U
Iron	UN	0.1	mg/L	0.1	4/14/2025			SW846-6020B	=
Lead	U	0.002	mg/L	0.002	4/14/2025			SW846-6020B	=
Magnesium	U	0.03	mg/L	0.03	4/14/2025			SW846-6020B	=
Manganese	U	0.005	mg/L	0.005	4/14/2025			SW846-6020B	=
Molybdenum	U	0.001	mg/L	0.001	4/14/2025			SW846-6020B	=
Nickel	U	0.002	mg/L	0.002	4/14/2025			SW846-6020B	=
Potassium	U	0.3	mg/L	0.3	4/14/2025			SW846-6020B	=
Rhodium	U	0.005	mg/L	0.005	4/14/2025			SW846-6020B	=
Selenium	U	0.005	mg/L	0.005	4/14/2025			SW846-6020B	=
Silver	U	0.001	mg/L	0.001	4/14/2025			SW846-6020B	=
Sodium	U	0.25	mg/L	0.25	4/14/2025			SW846-6020B	=
Tantalum	UN	0.005	mg/L	0.005	4/14/2025			SW846-6020B	=
Thallium	U	0.002	mg/L	0.002	4/14/2025			SW846-6020B	=
Uranium	U	0.0002	mg/L	0.0002	4/14/2025			SW846-6020B	=
Vanadium	U	0.02	mg/L	0.02	4/14/2025			SW846-6020B	=
Zinc	J	0.00414	mg/L	0.02	4/14/2025			SW846-6020B	=
Mercury	U	0.0002	mg/L	0.0002	4/14/2025			SW846-7470A	=
Radium-226	U	0.335	pCi/L	0.518	4/14/2025	0.364	0.366	AN-1418	=
Strontium-90	U	1.01	pCi/L	1.82	4/14/2025	1.1	1.11	EPA-905.0-M	=
Tritium	U	42	pCi/L	202	4/14/2025	116	117	EPA-906.0-M	=
Technetium-99	U	-7.06	pCi/L	19.9	4/14/2025	10.9	10.9	HASL 300, Tc-02-RC M	=
Thorium-230	U	0.474	pCi/L	2.74	4/14/2025	1.48	1.48	HASL 300, Th-01-RC M	=
Alpha activity	U	0.222	pCi/L	8.57	4/14/2025	4.07	4.07	SW846-9310	=
Beta activity	U	-4.49	pCi/L	11.5	4/14/2025	5.68	5.68	SW846-9310	=
1,2-Dibromo-3-chloropropane	U	0.019	ug/L	0.019	4/14/2025			SW846-8011	=
1,1,1,2-Tetrachloroethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
1,1,1-Trichloroethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
1,1,2,2-Tetrachloroethane	UY1	1	ug/L	1	4/14/2025			SW846-8260D	=
1,1,2-Trichloroethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
1,1-Dichloroethane	UY1	1	ug/L	1	4/14/2025			SW846-8260D	=
1,1-Dichloroethene	U	1	ug/L	1	4/14/2025			SW846-8260D	=

**Paducah OREIS
GROUNDWATER MONITORING REPORT**

Facility: C-746-S&T Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045
Sampling Point: QC **Period:** 2nd Quarter 2025
AKGWA Well Tag #: N/A **SAMPLE ID:** FB1SG3-25 **Sample Type:** FB

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
1,2,3-Trichloropropane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
1,2-Dibromoethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
1,2-Dichlorobenzene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
1,2-Dichloroethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
1,2-Dichloropropane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
1,4-Dichlorobenzene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
2-Butanone	U	5	ug/L	5	4/14/2025			SW846-8260D	=
2-Hexanone	U	5	ug/L	5	4/14/2025			SW846-8260D	=
4-Methyl-2-pentanone	U	5	ug/L	5	4/14/2025			SW846-8260D	=
Acetone	U	5	ug/L	5	4/14/2025			SW846-8260D	=
Acrolein	U	5	ug/L	5	4/14/2025			SW846-8260D	=
Acrylonitrile	U	5	ug/L	5	4/14/2025			SW846-8260D	=
Benzene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Bromochloromethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Bromodichloromethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Bromoform	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Bromomethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Carbon disulfide	U	5	ug/L	5	4/14/2025			SW846-8260D	=
Carbon tetrachloride	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Chlorobenzene		1.18	ug/L	1	4/14/2025			SW846-8260D	=
Chloroethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Chloroform	J	0.41	ug/L	1	4/14/2025			SW846-8260D	=
Chloromethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
cis-1,2-Dichloroethene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
cis-1,3-Dichloropropene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Dibromochloromethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Dibromomethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Ethylbenzene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Iodomethane	U	5	ug/L	5	4/14/2025			SW846-8260D	=
Methylene chloride	U	5	ug/L	5	4/14/2025			SW846-8260D	=
Styrene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Tetrachloroethene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Toluene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Total Xylene	U	3	ug/L	3	4/14/2025			SW846-8260D	=
trans-1,2-Dichloroethene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
trans-1,3-Dichloropropene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
trans-1,4-Dichloro-2-butene	U	5	ug/L	5	4/14/2025			SW846-8260D	UJ
Trichloroethene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Trichlorofluoromethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Vinyl acetate	U	5	ug/L	5	4/14/2025			SW846-8260D	=
Vinyl chloride	U	1	ug/L	1	4/14/2025			SW846-8260D	=

**Paducah OREIS
GROUNDWATER MONITORING REPORT**

Facility: C-746-S&T Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045

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

AKGWA Well Tag #: N/A **SAMPLE ID:** RI1SG3-25 **Sample Type:** RI

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
Iodide	U	0.5	mg/L	0.5	4/14/2025			EPA-300.0	=
Aluminum	UN	0.05	mg/L	0.05	4/14/2025			SW846-6020B	=
Antimony	U	0.003	mg/L	0.003	4/14/2025			SW846-6020B	=
Arsenic	U	0.005	mg/L	0.005	4/14/2025			SW846-6020B	=
Barium	UN	0.004	mg/L	0.004	4/14/2025			SW846-6020B	=
Beryllium	U	0.0005	mg/L	0.0005	4/14/2025			SW846-6020B	=
Boron	U	0.015	mg/L	0.015	4/14/2025			SW846-6020B	=
Cadmium	U	0.001	mg/L	0.001	4/14/2025			SW846-6020B	=
Calcium	U	0.2	mg/L	0.2	4/14/2025			SW846-6020B	=
Chromium	U	0.01	mg/L	0.01	4/14/2025			SW846-6020B	=
Cobalt	U	0.001	mg/L	0.001	4/14/2025			SW846-6020B	=
Copper	BJ	0.000452	mg/L	0.002	4/14/2025			SW846-6020B	U
Iron	UN	0.1	mg/L	0.1	4/14/2025			SW846-6020B	=
Lead	U	0.002	mg/L	0.002	4/14/2025			SW846-6020B	=
Magnesium	U	0.03	mg/L	0.03	4/14/2025			SW846-6020B	=
Manganese	U	0.005	mg/L	0.005	4/14/2025			SW846-6020B	=
Molybdenum	U	0.001	mg/L	0.001	4/14/2025			SW846-6020B	=
Nickel	U	0.002	mg/L	0.002	4/14/2025			SW846-6020B	=
Potassium	U	0.3	mg/L	0.3	4/14/2025			SW846-6020B	=
Rhodium	U	0.005	mg/L	0.005	4/14/2025			SW846-6020B	=
Selenium	U	0.005	mg/L	0.005	4/14/2025			SW846-6020B	=
Silver	U	0.001	mg/L	0.001	4/14/2025			SW846-6020B	=
Sodium	U	0.25	mg/L	0.25	4/14/2025			SW846-6020B	=
Tantalum	UN	0.005	mg/L	0.005	4/14/2025			SW846-6020B	=
Thallium	U	0.002	mg/L	0.002	4/14/2025			SW846-6020B	=
Uranium	U	0.0002	mg/L	0.0002	4/14/2025			SW846-6020B	=
Vanadium	U	0.02	mg/L	0.02	4/14/2025			SW846-6020B	=
Zinc	U	0.02	mg/L	0.02	4/14/2025			SW846-6020B	=
Mercury	U	0.0002	mg/L	0.0002	4/14/2025			SW846-7470A	=
Radium-226	U	0.314	pCi/L	0.552	4/14/2025	0.361	0.363	AN-1418	=
Strontium-90	U	2.84	pCi/L	3.13	4/14/2025	2	2.05	EPA-905.0-M	=
Tritium	U	16.2	pCi/L	198	4/14/2025	113	113	EPA-906.0-M	=
Technetium-99	U	0.178	pCi/L	19.8	4/14/2025	11.2	11.2	HASL 300, Tc-02-RC M	=
Thorium-230	U	0.51	pCi/L	2.8	4/14/2025	1.5	1.51	HASL 300, Th-01-RC M	=
Alpha activity	U	0.949	pCi/L	6.67	4/14/2025	3.26	3.26	SW846-9310	=
Beta activity	U	2.23	pCi/L	9.56	4/14/2025	5.36	5.37	SW846-9310	=
1,2-Dibromo-3-chloropropane	U	0.019	ug/L	0.019	4/14/2025			SW846-8011	=
1,1,1,2-Tetrachloroethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
1,1,1-Trichloroethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
1,1,2,2-Tetrachloroethane	UY1	1	ug/L	1	4/14/2025			SW846-8260D	=
1,1,2-Trichloroethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
1,1-Dichloroethane	UY1	1	ug/L	1	4/14/2025			SW846-8260D	=
1,1-Dichloroethene	U	1	ug/L	1	4/14/2025			SW846-8260D	=

**Paducah OREIS
GROUNDWATER MONITORING REPORT**

Facility: C-746-S&T Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045
Sampling Point: QC **Period:** 2nd Quarter 2025
AKGWA Well Tag #: N/A **SAMPLE ID:** RI1SG3-25 **Sample Type:** RI

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
1,2,3-Trichloropropane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
1,2-Dibromoethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
1,2-Dichlorobenzene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
1,2-Dichloroethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
1,2-Dichloropropane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
1,4-Dichlorobenzene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
2-Butanone	U	5	ug/L	5	4/14/2025			SW846-8260D	=
2-Hexanone	U	5	ug/L	5	4/14/2025			SW846-8260D	=
4-Methyl-2-pentanone	U	5	ug/L	5	4/14/2025			SW846-8260D	=
Acetone	U	5	ug/L	5	4/14/2025			SW846-8260D	=
Acrolein	U	5	ug/L	5	4/14/2025			SW846-8260D	=
Acrylonitrile	U	5	ug/L	5	4/14/2025			SW846-8260D	=
Benzene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Bromochloromethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Bromodichloromethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Bromoform	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Bromomethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Carbon disulfide	U	5	ug/L	5	4/14/2025			SW846-8260D	=
Carbon tetrachloride	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Chlorobenzene		2.15	ug/L	1	4/14/2025			SW846-8260D	=
Chloroethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Chloroform	J	0.69	ug/L	1	4/14/2025			SW846-8260D	=
Chloromethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
cis-1,2-Dichloroethene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
cis-1,3-Dichloropropene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Dibromochloromethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Dibromomethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Ethylbenzene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Iodomethane	U	5	ug/L	5	4/14/2025			SW846-8260D	=
Methylene chloride	U	5	ug/L	5	4/14/2025			SW846-8260D	=
Styrene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Tetrachloroethene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Toluene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Total Xylene	U	3	ug/L	3	4/14/2025			SW846-8260D	=
trans-1,2-Dichloroethene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
trans-1,3-Dichloropropene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
trans-1,4-Dichloro-2-butene	U	5	ug/L	5	4/14/2025			SW846-8260D	UJ
Trichloroethene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Trichlorofluoromethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Vinyl acetate	U	5	ug/L	5	4/14/2025			SW846-8260D	=
Vinyl chloride	U	1	ug/L	1	4/14/2025			SW846-8260D	=

Paducah OREIS
GROUNDWATER MONITORING REPORT

Facility: C-746-S&T Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045
Sampling Point: QC **Period:** 2nd Quarter 2025
AKGWA Well Tag #: N/A **SAMPLE ID:** TB1SG3-25 **Sample Type:** TB

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
1,2-Dibromo-3-chloropropane	U	0.0191	ug/L	0.0191	4/14/2025			SW846-8011	=
1,1,1,2-Tetrachloroethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
1,1,1-Trichloroethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
1,1,2,2-Tetrachloroethane	UY1	1	ug/L	1	4/14/2025			SW846-8260D	=
1,1,2-Trichloroethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
1,1-Dichloroethane	UY1	1	ug/L	1	4/14/2025			SW846-8260D	=
1,1-Dichloroethene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
1,2,3-Trichloropropane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
1,2-Dibromoethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
1,2-Dichlorobenzene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
1,2-Dichloroethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
1,2-Dichloropropane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
1,4-Dichlorobenzene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
2-Butanone	U	5	ug/L	5	4/14/2025			SW846-8260D	=
2-Hexanone	U	5	ug/L	5	4/14/2025			SW846-8260D	=
4-Methyl-2-pentanone	U	5	ug/L	5	4/14/2025			SW846-8260D	=
Acetone	U	5	ug/L	5	4/14/2025			SW846-8260D	=
Acrolein	U	5	ug/L	5	4/14/2025			SW846-8260D	=
Acrylonitrile	U	5	ug/L	5	4/14/2025			SW846-8260D	=
Benzene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Bromochloromethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Bromodichloromethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Bromoform	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Bromomethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Carbon disulfide	U	5	ug/L	5	4/14/2025			SW846-8260D	=
Carbon tetrachloride	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Chlorobenzene		2.19	ug/L	1	4/14/2025			SW846-8260D	=
Chloroethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Chloroform	J	0.69	ug/L	1	4/14/2025			SW846-8260D	=
Chloromethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
cis-1,2-Dichloroethene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
cis-1,3-Dichloropropene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Dibromochloromethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Dibromomethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Ethylbenzene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Iodomethane	U	5	ug/L	5	4/14/2025			SW846-8260D	=
Methylene chloride	U	5	ug/L	5	4/14/2025			SW846-8260D	=
Styrene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Tetrachloroethene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Toluene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Total Xylene	U	3	ug/L	3	4/14/2025			SW846-8260D	=
trans-1,2-Dichloroethene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
trans-1,3-Dichloropropene	U	1	ug/L	1	4/14/2025			SW846-8260D	=

**Paducah OREIS
GROUNDWATER MONITORING REPORT**

Facility: C-746-S&T Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045
Sampling Point: QC **Period:** 2nd Quarter 2025
AKGWA Well Tag #: N/A **SAMPLE ID:** TB1SG3-25 **Sample Type:** TB

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
trans-1,4-Dichloro-2-butene	U	5	ug/L	5	4/14/2025			SW846-8260D	UJ
Trichloroethene	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Trichlorofluoromethane	U	1	ug/L	1	4/14/2025			SW846-8260D	=
Vinyl acetate	U	5	ug/L	5	4/14/2025			SW846-8260D	=
Vinyl chloride	U	1	ug/L	1	4/14/2025			SW846-8260D	=

**Paducah OREIS
GROUNDWATER MONITORING REPORT**

Facility: C-746-S&T Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045
Sampling Point: QC **Period:** 2nd Quarter 2025
AKGWA Well Tag #: N/A **SAMPLE ID:** TB2SG3-25 **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	4/15/2025			SW846-8011	=
1,1,1,2-Tetrachloroethane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
1,1,1-Trichloroethane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
1,1,2,2-Tetrachloroethane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
1,1,2-Trichloroethane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
1,1-Dichloroethane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
1,1-Dichloroethene	U	1	ug/L	1	4/15/2025			SW846-8260D	=
1,2,3-Trichloropropane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
1,2-Dibromoethane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
1,2-Dichlorobenzene	U	1	ug/L	1	4/15/2025			SW846-8260D	=
1,2-Dichloroethane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
1,2-Dichloropropane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
1,4-Dichlorobenzene	U	1	ug/L	1	4/15/2025			SW846-8260D	=
2-Butanone	U	5	ug/L	5	4/15/2025			SW846-8260D	=
2-Hexanone	U	5	ug/L	5	4/15/2025			SW846-8260D	=
4-Methyl-2-pentanone	U	5	ug/L	5	4/15/2025			SW846-8260D	=
Acetone	U	5	ug/L	5	4/15/2025			SW846-8260D	=
Acrolein	U	5	ug/L	5	4/15/2025			SW846-8260D	=
Acrylonitrile	U	5	ug/L	5	4/15/2025			SW846-8260D	=
Benzene	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Bromochloromethane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Bromodichloromethane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Bromoform	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Bromomethane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Carbon disulfide	U	5	ug/L	5	4/15/2025			SW846-8260D	=
Carbon tetrachloride	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Chlorobenzene		1.83	ug/L	1	4/15/2025			SW846-8260D	=
Chloroethane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Chloroform	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Chloromethane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
cis-1,2-Dichloroethene	U	1	ug/L	1	4/15/2025			SW846-8260D	=
cis-1,3-Dichloropropene	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Dibromochloromethane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Dibromomethane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Ethylbenzene	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Iodomethane	U	5	ug/L	5	4/15/2025			SW846-8260D	=
Methylene chloride	U	5	ug/L	5	4/15/2025			SW846-8260D	=
Styrene	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Tetrachloroethene	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Toluene	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Total Xylene	U	3	ug/L	3	4/15/2025			SW846-8260D	=
trans-1,2-Dichloroethene	U	1	ug/L	1	4/15/2025			SW846-8260D	=
trans-1,3-Dichloropropene	U	1	ug/L	1	4/15/2025			SW846-8260D	=

**Paducah OREIS
GROUNDWATER MONITORING REPORT**

Facility: C-746-S&T Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045
Sampling Point: QC **Period:** 2nd Quarter 2025
AKGWA Well Tag #: N/A **SAMPLE ID:** TB2SG3-25 **Sample Type:** TB

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
trans-1,4-Dichloro-2-butene	U	5	ug/L	5	4/15/2025			SW846-8260D	=
Trichloroethene	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Trichlorofluoromethane	U	1	ug/L	1	4/15/2025			SW846-8260D	=
Vinyl acetate	U	5	ug/L	5	4/15/2025			SW846-8260D	=
Vinyl chloride	U	1	ug/L	1	4/15/2025			SW846-8260D	=

**Paducah OREIS
GROUNDWATER MONITORING REPORT**

Facility: C-746-S&T Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045
Sampling Point: QC **Period:** 2nd Quarter 2025
AKGWA Well Tag #: N/A **SAMPLE ID:** TB3SG3-25 **Sample Type:** TB

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
1,2-Dibromo-3-chloropropane	U	0.0188	ug/L	0.0188	4/16/2025			SW846-8011	=
1,1,1,2-Tetrachloroethane	U	1	ug/L	1	4/16/2025			SW846-8260D	=
1,1,1-Trichloroethane	UY1	1	ug/L	1	4/16/2025			SW846-8260D	=
1,1,2,2-Tetrachloroethane	U	1	ug/L	1	4/16/2025			SW846-8260D	=
1,1,2-Trichloroethane	U	1	ug/L	1	4/16/2025			SW846-8260D	=
1,1-Dichloroethane	U	1	ug/L	1	4/16/2025			SW846-8260D	=
1,1-Dichloroethene	U	1	ug/L	1	4/16/2025			SW846-8260D	=
1,2,3-Trichloropropane	U	1	ug/L	1	4/16/2025			SW846-8260D	=
1,2-Dibromoethane	U	1	ug/L	1	4/16/2025			SW846-8260D	=
1,2-Dichlorobenzene	U	1	ug/L	1	4/16/2025			SW846-8260D	=
1,2-Dichloroethane	U	1	ug/L	1	4/16/2025			SW846-8260D	=
1,2-Dichloropropane	U	1	ug/L	1	4/16/2025			SW846-8260D	=
1,4-Dichlorobenzene	U	1	ug/L	1	4/16/2025			SW846-8260D	=
2-Butanone	U	5	ug/L	5	4/16/2025			SW846-8260D	=
2-Hexanone	U	5	ug/L	5	4/16/2025			SW846-8260D	=
4-Methyl-2-pentanone	U	5	ug/L	5	4/16/2025			SW846-8260D	=
Acetone	U	5	ug/L	5	4/16/2025			SW846-8260D	=
Acrolein	U	5	ug/L	5	4/16/2025			SW846-8260D	UJ
Acrylonitrile	U	5	ug/L	5	4/16/2025			SW846-8260D	=
Benzene	UY1	1	ug/L	1	4/16/2025			SW846-8260D	=
Bromochloromethane	U	1	ug/L	1	4/16/2025			SW846-8260D	=
Bromodichloromethane	UY1	1	ug/L	1	4/16/2025			SW846-8260D	=
Bromoform	U	1	ug/L	1	4/16/2025			SW846-8260D	=
Bromomethane	U	1	ug/L	1	4/16/2025			SW846-8260D	=
Carbon disulfide	U	5	ug/L	5	4/16/2025			SW846-8260D	=
Carbon tetrachloride	U	1	ug/L	1	4/16/2025			SW846-8260D	=
Chlorobenzene		1.72	ug/L	1	4/16/2025			SW846-8260D	=
Chloroethane	U	1	ug/L	1	4/16/2025			SW846-8260D	=
Chloroform	UY1	1	ug/L	1	4/16/2025			SW846-8260D	=
Chloromethane	U	1	ug/L	1	4/16/2025			SW846-8260D	=
cis-1,2-Dichloroethene	U	1	ug/L	1	4/16/2025			SW846-8260D	=
cis-1,3-Dichloropropene	UY1	1	ug/L	1	4/16/2025			SW846-8260D	=
Dibromochloromethane	U	1	ug/L	1	4/16/2025			SW846-8260D	=
Dibromomethane	U	1	ug/L	1	4/16/2025			SW846-8260D	=
Ethylbenzene	U	1	ug/L	1	4/16/2025			SW846-8260D	=
Iodomethane	UY1	5	ug/L	5	4/16/2025			SW846-8260D	=
Methylene chloride		6.39	ug/L	5	4/16/2025			SW846-8260D	=
Styrene	U	1	ug/L	1	4/16/2025			SW846-8260D	=
Tetrachloroethene	U	1	ug/L	1	4/16/2025			SW846-8260D	=
Toluene	UY1	1	ug/L	1	4/16/2025			SW846-8260D	=
Total Xylene	UY1	3	ug/L	3	4/16/2025			SW846-8260D	=
trans-1,2-Dichloroethene	U	1	ug/L	1	4/16/2025			SW846-8260D	=
trans-1,3-Dichloropropene	UY1	1	ug/L	1	4/16/2025			SW846-8260D	=

**Paducah OREIS
GROUNDWATER MONITORING REPORT**

Facility: C-746-S&T Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045
Sampling Point: QC **Period:** 2nd Quarter 2025
AKGWA Well Tag #: N/A **SAMPLE ID:** TB3SG3-25 **Sample Type:** TB

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
trans-1,4-Dichloro-2-butene	U	5	ug/L	5	4/16/2025			SW846-8260D	=
Trichloroethene	UY1	1	ug/L	1	4/16/2025			SW846-8260D	=
Trichlorofluoromethane	U	1	ug/L	1	4/16/2025			SW846-8260D	=
Vinyl acetate	U	5	ug/L	5	4/16/2025			SW846-8260D	=
Vinyl chloride	U	1	ug/L	1	4/16/2025			SW846-8260D	=

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

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

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

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

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,
Address : LLC
5600 Hobbs Road

Kevil, Kentucky 42053

Report Date: July 8, 2025

Contact: Ms. Jaime Morrow

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

Client Sample ID: MW369UG3-25
Sample ID: 718665001
Matrix: WG
Collect Date: 10-APR-25
Receive Date: 11-APR-25
Collector: Client

Project: FRNP00607
Client ID: FRNP006

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis														
<i>AN-1418 AlphaSpec Ra226, Liquid "As Received"</i>														
Radium-226	U	0.209	+/-0.832	1.45	+/-0.833	5.00	pCi/L			CM4	04/29/25	1603	2784556	1
<i>Th-01-RC M, Th Isotopes, Liquid "As Received"</i>														
Thorium-230	U	0.576	+/-1.79	3.32	+/-1.80	50.0	pCi/L			RM3	04/26/25	1214	2784557	2
Thorium-232	U	-0.152	+/-0.929	2.28	+/-0.931		pCi/L							
Rad Gas Flow Proportional Counting														
<i>904.0Mod, Ra228, Liquid "As Received"</i>														
Radium-228	U	0.382	+/-2.50	4.68	+/-2.50	4.99	pCi/L			JE1	04/23/25	1121	2780419	3
<i>905.0Mod, Sr90, liquid "As Received"</i>														
Strontium-90	U	0.924	+/-1.52	2.65	+/-1.53	8.00	pCi/L			CH7	04/27/25	1715	2780411	4
<i>9310, Alpha/Beta Activity, liquid "As Received"</i>														
Alpha	U	-1.35	+/-2.70	7.30	+/-2.70	15.0	pCi/L			HH3	04/30/25	1508	2780428	5
Beta		24.9	+/-8.16	10.6	+/-9.15	50.0	pCi/L							
Rad Liquid Scintillation Analysis														
<i>906.0M, Tritium Dist, Liquid "As Received"</i>														
Tritium	U	-25.7	+/-130	234	+/-130	300	pCi/L			MJ3	05/07/25	1755	2790936	6
<i>Tc-02-RC-MOD, Tc99, Liquid "As Received"</i>														
Technetium-99		29.6	+/-13.0	20.3	+/-13.4	25.0	pCi/L			GS3	05/04/25	1728	2786732	7

The following Analytical Methods were performed

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

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	AN-1418 AlphaSpec Ra226, Liquid "As Received"	2784556	96.5	(30%-110%)
Thorium-229 Tracer	Th-01-RC M, Th Isotopes, Liquid "As Received"	2784557	80.5	(30%-110%)
Barium-133 Tracer	904.0Mod, Ra228, Liquid "As Received"	2780419	79.6	(30%-110%)
Strontium Carrier	905.0Mod, Sr90, liquid "As Received"	2780411	81.8	(30%-110%)
Technetium-99m Tracer	Tc-02-RC-MOD, Tc99, Liquid "As Received"	2786732	100	(30%-110%)

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Report Date: July 8, 2025

Contact: Ms. Jaime Morrow

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

Client Sample ID: MW369UG3-25

Project: FRNP00607

Sample ID: 718665001

Client ID: FRNP006

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

Notes:

The MDC is a sample specific MDC.

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

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

Lc/LC: Critical Level

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Mtd.: Method

PF: Prep Factor

RL: Reporting Limit

TPU: Total Propagated Uncertainty

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Kevil, Kentucky 42053

Report Date: July 8, 2025

Contact: Ms. Jaime Morrow

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

Client Sample ID: MW370UG3-25

Project: FRNP00607

Sample ID: 718665003

Client ID: FRNP006

Matrix: WG

Collect Date: 10-APR-25

Receive Date: 11-APR-25

Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis														
<i>AN-1418 AlphaSpec Ra226, Liquid "As Received"</i>														
Radium-226	U	0.858	+/-1.17	1.24	+/-1.17	5.00	pCi/L			CM4	04/29/25	1603	2784556	1
<i>Th-01-RC M, Th Isotopes, Liquid "As Received"</i>														
Thorium-230	U	0.837	+/-1.78	3.07	+/-1.80	50.0	pCi/L			RM3	04/26/25	1214	2784557	2
Thorium-232	U	-0.141	+/-0.831	2.05	+/-0.833		pCi/L							
Rad Gas Flow Proportional Counting														
<i>904.0Mod, Ra228, Liquid "As Received"</i>														
Radium-228	U	0.0600	+/-2.75	4.99	+/-2.75	4.99	pCi/L			JE1	04/23/25	1123	2780419	3
<i>905.0Mod, Sr90, liquid "As Received"</i>														
Strontium-90	U	-1.16	+/-1.31	2.72	+/-1.31	8.00	pCi/L			CH7	04/27/25	1715	2780411	4
<i>9310, Alpha/Beta Activity, liquid "As Received"</i>														
Alpha	U	4.35	+/-5.62	9.55	+/-5.67	15.0	pCi/L			HH3	04/30/25	1508	2780428	5
Beta	U	9.18	+/-7.05	11.2	+/-7.22	50.0	pCi/L							
Rad Liquid Scintillation Analysis														
<i>906.0M, Tritium Dist, Liquid "As Received"</i>														
Tritium	U	-77.9	+/-125	231	+/-125	300	pCi/L			MJ3	05/07/25	1837	2790936	6
<i>Tc-02-RC-MOD, Tc99, Liquid "As Received"</i>														
Technetium-99	U	3.98	+/-12.1	20.9	+/-12.1	25.0	pCi/L			GS3	05/04/25	1745	2786732	7

The following Analytical Methods were performed

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

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	AN-1418 AlphaSpec Ra226, Liquid "As Received"	2784556	96.3	(30%-110%)
Thorium-229 Tracer	Th-01-RC M, Th Isotopes, Liquid "As Received"	2784557	91.8	(30%-110%)
Barium-133 Tracer	904.0Mod, Ra228, Liquid "As Received"	2780419	86.6	(30%-110%)
Strontium Carrier	905.0Mod, Sr90, liquid "As Received"	2780411	90.9	(30%-110%)
Technetium-99m Tracer	Tc-02-RC-MOD, Tc99, Liquid "As Received"	2786732	97.1	(30%-110%)

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Certificate of Analysis

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5600 Hobbs Road

Kevil, Kentucky 42053

Report Date: July 8, 2025

Contact: Ms. Jaime Morrow

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

Client Sample ID: MW370UG3-25

Project: FRNP00607

Sample ID: 718665003

Client ID: FRNP006

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

Notes:

The MDC is a sample specific MDC.

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

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

Lc/LC: Critical Level

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Mtd.: Method

PF: Prep Factor

RL: Reporting Limit

TPU: Total Propagated Uncertainty

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Certificate of Analysis

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

Kevil, Kentucky 42053

Report Date: July 8, 2025

Contact: Ms. Jaime Morrow

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

Client Sample ID: MW372UG3-25

Project: FRNP00607

Sample ID: 718665007

Client ID: FRNP006

Matrix: WG

Collect Date: 10-APR-25

Receive Date: 11-APR-25

Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis														
<i>AN-1418 AlphaSpec Ra226, Liquid "As Received"</i>														
Radium-226	U	-0.0354	+/-0.582	1.23	+/-0.583	5.00	pCi/L			CM4	04/29/25	1603	2784556	1
<i>Th-01-RC M, Th Isotopes, Liquid "As Received"</i>														
Thorium-230	U	0.574	+/-1.67	3.11	+/-1.68	50.0	pCi/L			RM3	04/26/25	1224	2784557	2
Thorium-232	U	0.0608	+/-1.09	2.35	+/-1.09		pCi/L							
Rad Gas Flow Proportional Counting														
<i>904.0Mod, Ra228, Liquid "As Received"</i>														
Radium-228	U	2.87	+/-2.87	4.76	+/-2.97	4.99	pCi/L			JE1	04/23/25	1123	2780419	3
<i>905.0Mod, Sr90, liquid "As Received"</i>														
Strontium-90	U	-0.317	+/-1.69	3.22	+/-1.69	8.00	pCi/L			CH7	04/27/25	1715	2780411	4
<i>9310, Alpha/Beta Activity, liquid "As Received"</i>														
Alpha	U	-0.950	+/-4.30	9.69	+/-4.30	15.0	pCi/L			HH3	04/30/25	1508	2780428	5
Beta		16.4	+/-8.18	12.2	+/-8.61	50.0	pCi/L							
Rad Liquid Scintillation Analysis														
<i>906.0M, Tritium Dist, Liquid "As Received"</i>														
Tritium	U	99.4	+/-139	237	+/-141	300	pCi/L			MJ3	05/07/25	2001	2790936	6
<i>Tc-02-RC-MOD, Tc99, Liquid "As Received"</i>														
Technetium-99	U	6.43	+/-12.6	21.5	+/-12.6	25.0	pCi/L			GS3	05/04/25	1818	2786732	7

The following Analytical Methods were performed

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

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	AN-1418 AlphaSpec Ra226, Liquid "As Received"	2784556	94.2	(30%-110%)
Thorium-229 Tracer	Th-01-RC M, Th Isotopes, Liquid "As Received"	2784557	92.8	(30%-110%)
Barium-133 Tracer	904.0Mod, Ra228, Liquid "As Received"	2780419	86.5	(30%-110%)
Strontium Carrier	905.0Mod, Sr90, liquid "As Received"	2780411	81.8	(30%-110%)
Technetium-99m Tracer	Tc-02-RC-MOD, Tc99, Liquid "As Received"	2786732	94.5	(30%-110%)

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: July 8, 2025

Contact: Ms. Jaime Morrow

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

Client Sample ID: MW372UG3-25

Project: FRNP00607

Sample ID: 718665007

Client ID: FRNP006

Parameter	Qualifier	Result	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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Address : LLC
5600 Hobbs Road

Kevil, Kentucky 42053

Report Date: July 8, 2025

Contact: Ms. Jaime Morrow

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

Client Sample ID: MW373UG3-25

Project: FRNP00607

Sample ID: 718665009

Client ID: FRNP006

Matrix: WG

Collect Date: 10-APR-25

Receive Date: 11-APR-25

Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis														
<i>AN-1418 AlphaSpec Ra226, Liquid "As Received"</i>														
Radium-226	U	0.509	+/-0.985	1.35	+/-0.987	5.00	pCi/L			CM4	04/29/25	1603	2784556	1
<i>Th-01-RC M, Th Isotopes, Liquid "As Received"</i>														
Thorium-230	U	3.43	+/-3.03	4.34	+/-3.07	50.0	pCi/L			RM3	04/26/25	1339	2784557	2
Thorium-232	U	0.613	+/-1.29	1.91	+/-1.29		pCi/L							
Rad Gas Flow Proportional Counting														
<i>904.0Mod, Ra228, Liquid "As Received"</i>														
Radium-228	U	-0.250	+/-2.63	4.98	+/-2.63	4.99	pCi/L			JE1	04/23/25	1123	2780419	3
<i>905.0Mod, Sr90, liquid "As Received"</i>														
Strontium-90	U	-0.457	+/-1.31	2.66	+/-1.31	8.00	pCi/L			CH7	04/27/25	1715	2780411	4
<i>9310, Alpha/Beta Activity, liquid "As Received"</i>														
Alpha	U	-2.42	+/-3.76	10.0	+/-3.77	15.0	pCi/L			HH3	04/30/25	1508	2780428	5
Beta	U	7.50	+/-7.93	13.2	+/-8.03	50.0	pCi/L							
Rad Liquid Scintillation Analysis														
<i>906.0M, Tritium Dist, Liquid "As Received"</i>														
Tritium	U	32.9	+/-139	243	+/-139	300	pCi/L			MJ3	05/07/25	2043	2790936	6
<i>Tc-02-RC-MOD, Tc99, Liquid "As Received"</i>														
Technetium-99	U	5.28	+/-11.5	19.9	+/-11.6	25.0	pCi/L			GS3	05/07/25	0744	2792486	7

The following Analytical Methods were performed

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

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	AN-1418 AlphaSpec Ra226, Liquid "As Received"	2784556	100	(30%-110%)
Thorium-229 Tracer	Th-01-RC M, Th Isotopes, Liquid "As Received"	2784557	96.5	(30%-110%)
Barium-133 Tracer	904.0Mod, Ra228, Liquid "As Received"	2780419	85.5	(30%-110%)
Strontium Carrier	905.0Mod, Sr90, liquid "As Received"	2780411	79.5	(30%-110%)
Technetium-99m Tracer	Tc-02-RC-MOD, Tc99, Liquid "As Received"	2792486	94.6	(30%-110%)

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Report Date: July 8, 2025

Contact: Ms. Jaime Morrow

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

Client Sample ID: MW373UG3-25

Project: FRNP00607

Sample ID: 718665009

Client ID: FRNP006

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

Notes:

The MDC is a sample specific MDC.

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

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

Lc/LC: Critical Level

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Mtd.: Method

PF: Prep Factor

RL: Reporting Limit

TPU: Total Propagated Uncertainty

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Report Date: July 8, 2025

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

Client Sample ID:	MW369UG3-25	Project:	FRNP00607
Sample ID:	718665001	Client ID:	FRNP006
Matrix:	WG		
Collect Date:	10-APR-25 07:21		
Receive Date:	11-APR-25		
Collector:	Client		

C1-11

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: July 8, 2025

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

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

Client Sample ID: MW369UG3-25

Sample ID: 718665001

Project: FRNP00607

Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP-MS												
6020, Metals (15+ elements) "As Received"												
Iron	J	0.0379	0.0330	0.100	mg/L	1.00	1					
Lead	U	0.00200	0.000500	0.00200	mg/L	1.00	1					
Magnesium		10.8	0.0100	0.0300	mg/L	1.00	1					
Molybdenum	U	0.00100	0.000200	0.00100	mg/L	1.00	1					
Nickel	J	0.00153	0.000600	0.00200	mg/L	1.00	1					
Potassium		0.994	0.0800	0.300	mg/L	1.00	1					
Selenium	J	0.00183	0.00150	0.00500	mg/L	1.00	1					
Silver	U	0.00100	0.000300	0.00100	mg/L	1.00	1					
Thallium	U	0.00200	0.000600	0.00200	mg/L	1.00	1					
Vanadium	U	0.0200	0.00330	0.0200	mg/L	1.00	1					
Rhodium	U	0.00500	0.00160	0.00500	mg/L	1.00	1	PRB	05/07/25	1811	2790406	11
Tantalum	U	0.00500	0.00100	0.00500	mg/L	1.00	1					
Calcium		25.3	0.0800	0.200	mg/L	1.00	1	PRB	05/07/25	2058	2790406	12
Manganese		0.0102	0.00100	0.00500	mg/L	1.00	1					
Sodium		48.6	0.0800	0.250	mg/L	1.00	1					
Uranium	U	0.000200	0.0000670	0.000200	mg/L	1.00	1					
Zinc	J	0.00570	0.00330	0.0200	mg/L	1.00	1					
Boron		0.0355	0.00520	0.0150	mg/L	1.00	1	PRB	05/08/25	1008	2790406	13
Semi-Volatiles-PCB												
8082A, PCB Liquids "As Received"												
Aroclor-1016	UY2	0.100	0.0334	0.100	ug/L	0.00100	1	YS1	05/05/25	2103	2791589	14
Aroclor-1221	U	0.100	0.0334	0.100	ug/L	0.00100	1					
Aroclor-1232	U	0.100	0.0334	0.100	ug/L	0.00100	1					
Aroclor-1242	U	0.100	0.0334	0.100	ug/L	0.00100	1					
Aroclor-1248	U	0.100	0.0334	0.100	ug/L	0.00100	1					
Aroclor-1254	U	0.100	0.0334	0.100	ug/L	0.00100	1					
Aroclor-1260	UY1Y2	0.100	0.0334	0.100	ug/L	0.00100	1					
Aroclor-1268	U	0.100	0.0334	0.100	ug/L	0.00100	1					
Aroclor-Total	UY1Y2	0.100	0.0334	0.100	ug/L	0.00100	1					
Solids Analysis												
160.1, Dissolved Solids "As Received"												
Total Dissolved Solids		235	2.38	10.0	mg/L			CH6	04/16/25	1431	2782539	15
Spectrometric Analysis												
410.4, Chem. Oxygen Demand "As Received"												

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

Report Date: July 8, 2025

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

Project: FRNP00607

Client ID: FRNP006

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Report Date: July 8, 2025

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

Project: FRNP00607

Client ID: FRNP006

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010C Distillation	SW846 9010C Prep	KLP1	04/16/25	1306	2781930
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	JM13	05/02/25	0830	2790988
SW846 8011 PREP	8011 Prep	LOF	04/14/25	1716	2780752
SW846 3535A	SW3535A PCB SPE Extraction	DXF4	05/05/25	0545	2791588
SW846 3005A	ICP-MS 3005A PREP	HS2	05/02/25	1420	2790405

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Certificate of Analysis

Report Date: July 8, 2025

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

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

Client Sample ID: MW369UG3-25

Project: FRNP00607

Sample ID: 718665001

Client ID: FRNP006

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

The following Analytical Methods were performed:

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

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
1-Chloro-2-fluorobenzene	8011 VOA- 1,2-Dibromo-3-chloropropane "As Received"	6.67 ug/L	6.74	99	(56%-149%)
Decachlorobiphenyl	8082A, PCB Liquids "As Received"	0.172 ug/L	0.201	86	(30%-135%)
4cmx	8082A, PCB Liquids "As Received"	0.176 ug/L	0.201	88	(26%-108%)
1,2-Dichloroethane-d4	8260D, Volatiles- full suite "As Received"	55.7 ug/L	50.0	111	(81%-118%)
Bromofluorobenzene	8260D, Volatiles- full suite "As Received"	53.3 ug/L	50.0	107	(85%-114%)
Toluene-d8	8260D, Volatiles- full suite "As Received"	49.7 ug/L	50.0	99	(89%-112%)

Notes:

Column headers are defined as follows:

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

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Report Date: July 8, 2025

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

Client Sample ID:	MW369UG3-25	Project:	FRNP00607
Sample ID:	718665002	Client ID:	FRNP006
Matrix:	WG		
Collect Date:	10-APR-25 07:21		
Receive Date:	11-APR-25		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP-MS												
6020, Dissolved Metals (3 Elements) "As Received"												
Barium		0.525	0.000670	0.00400	mg/L	1.00	1	PRB	05/09/25	0115	2781464	1
Chromium	U	0.0100	0.00300	0.0100	mg/L	1.00	1					
Uranium	J	0.000160	0.0000670	0.000200	mg/L	1.00	1	PRB	05/09/25	1048	2781464	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	HS2	05/07/25	1600	2781463
EPA 160	Laboratory Filtration	MM7	04/14/25	1500	2780882

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 3005A/6020B	
2	SW846 3005A/6020B	

Notes:

Column headers are defined as follows:

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

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Report Date: July 8, 2025

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

Client Sample ID:	MW370UG3-25	Project:	FRNP00607
Sample ID:	718665003	Client ID:	FRNP006
Matrix:	WG		
Collect Date:	10-APR-25 08:06		
Receive Date:	11-APR-25		
Collector:	Client		

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Certificate of Analysis

Report Date: July 8, 2025

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

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

Client Sample ID: MW370UG3-25

Sample ID: 718665003

Project: FRNP00607

Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP-MS												
6020, Metals (15+ elements) "As Received"												
Iron	U	0.100	0.0330	0.100	mg/L	1.00	1					
Lead	U	0.00200	0.000500	0.00200	mg/L	1.00	1					
Magnesium		12.4	0.0100	0.0300	mg/L	1.00	1					
Molybdenum	U	0.00100	0.000200	0.00100	mg/L	1.00	1					
Nickel	U	0.00200	0.000600	0.00200	mg/L	1.00	1					
Potassium		2.44	0.0800	0.300	mg/L	1.00	1					
Selenium	U	0.00500	0.00150	0.00500	mg/L	1.00	1					
Silver	U	0.00100	0.000300	0.00100	mg/L	1.00	1					
Thallium	U	0.00200	0.000600	0.00200	mg/L	1.00	1					
Vanadium	U	0.0200	0.00330	0.0200	mg/L	1.00	1					
Rhodium	U	0.00500	0.00160	0.00500	mg/L	1.00	1	PRB	05/07/25	1812	2790406	11
Tantalum	U	0.00500	0.00100	0.00500	mg/L	1.00	1					
Calcium		29.5	0.0800	0.200	mg/L	1.00	1	PRB	05/07/25	2100	2790406	12
Manganese	J	0.00373	0.00100	0.00500	mg/L	1.00	1					
Sodium		45.0	0.0800	0.250	mg/L	1.00	1					
Uranium	U	0.000200	0.0000670	0.000200	mg/L	1.00	1					
Zinc	J	0.00530	0.00330	0.0200	mg/L	1.00	1					
Boron		0.0859	0.00520	0.0150	mg/L	1.00	1	PRB	05/08/25	1009	2790406	13
Semi-Volatiles-PCB												
8082A, PCB Liquids "As Received"												
Aroclor-1016	UY2	0.0971	0.0323	0.0971	ug/L	0.000971	1	YS1	05/05/25	2115	2791589	14
Aroclor-1221	U	0.0971	0.0323	0.0971	ug/L	0.000971	1					
Aroclor-1232	U	0.0971	0.0323	0.0971	ug/L	0.000971	1					
Aroclor-1242	U	0.0971	0.0323	0.0971	ug/L	0.000971	1					
Aroclor-1248	U	0.0971	0.0323	0.0971	ug/L	0.000971	1					
Aroclor-1254	U	0.0971	0.0323	0.0971	ug/L	0.000971	1					
Aroclor-1260	UY1Y2	0.0971	0.0323	0.0971	ug/L	0.000971	1					
Aroclor-1268	U	0.0971	0.0323	0.0971	ug/L	0.000971	1					
Aroclor-Total	UY1Y2	0.0971	0.0323	0.0971	ug/L	0.000971	1					
Solids Analysis												
160.1, Dissolved Solids "As Received"												
Total Dissolved Solids		226	2.38	10.0	mg/L			CH6	04/16/25	1431	2782539	15
Spectrometric Analysis												
410.4, Chem. Oxygen Demand "As Received"												

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Report Date: July 8, 2025

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

Project: FRNP00607

Client ID: FRNP006

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Report Date: July 8, 2025

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

Project: FRNP00607

Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
8260D, Volatiles- full suite "As Received"												
Methylene chloride	J	0.660	0.500	5.00	ug/L		1					
Styrene	U	1.00	0.333	1.00	ug/L		1					
Tetrachloroethylene	U	1.00	0.333	1.00	ug/L		1					
Toluene	U	1.00	0.333	1.00	ug/L		1					
Trichloroethylene		2.00	0.333	1.00	ug/L		1					
Trichlorofluoromethane	U	1.00	0.333	1.00	ug/L		1					
Vinyl acetate	U	5.00	1.67	5.00	ug/L		1					
Vinyl chloride	U	1.00	0.333	1.00	ug/L		1					
Xylenes (total)	U	3.00	1.00	3.00	ug/L		1					
cis-1,2-Dichloroethylene	U	1.00	0.333	1.00	ug/L		1					
cis-1,3-Dichloropropylene	U	1.00	0.333	1.00	ug/L		1					
trans-1,2-Dichloroethylene	U	1.00	0.333	1.00	ug/L		1					
trans-1,3-Dichloropropylene	U	1.00	0.333	1.00	ug/L		1					
trans-1,4-Dichloro-2-butene	UY1	5.00	1.67	5.00	ug/L		1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3535A	SW3535A PCB SPE Extraction	DXF4	05/05/25	0545	2791588
SW846 8011 PREP	8011 Prep	LOF	04/14/25	1716	2780752
SW846 3005A	ICP-MS 3005A PREP	HS2	05/02/25	1420	2790405
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	JM13	05/02/25	0830	2790988
SW846 9010C Distillation	SW846 9010C Prep	KLP1	04/16/25	1306	2781930

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Certificate of Analysis

Report Date: July 8, 2025

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

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

Client Sample ID: MW370UG3-25

Project: FRNP00607

Sample ID: 718665003

Client ID: FRNP006

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

The following Analytical Methods were performed:

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

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
1-Chloro-2-fluorobenzene	8011 VOA- 1,2-Dibromo-3-chloropropane "As Received"	6.28 ug/L	6.79	92	(56%-149%)
Decachlorobiphenyl	8082A, PCB Liquids "As Received"	0.194 ug/L	0.194	100	(30%-135%)
4cmx	8082A, PCB Liquids "As Received"	0.193 ug/L	0.194	99	(26%-108%)
Bromofluorobenzene	8260D, Volatiles- full suite "As Received"	54.2 ug/L	50.0	108	(85%-114%)
1,2-Dichloroethane-d4	8260D, Volatiles- full suite "As Received"	56.7 ug/L	50.0	113	(81%-118%)
Toluene-d8	8260D, Volatiles- full suite "As Received"	50.5 ug/L	50.0	101	(89%-112%)

Notes:

Column headers are defined as follows:

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

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Report Date: July 8, 2025

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

Client Sample ID:	MW370UG3-25	Project:	FRNP00607
Sample ID:	718665004	Client ID:	FRNP006
Matrix:	WG		
Collect Date:	10-APR-25 08:06		
Receive Date:	11-APR-25		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP-MS												
6020, Dissolved Metals (3 Elements) "As Received"												
Barium		0.207	0.000670	0.00400	mg/L	1.00	1	PRB	05/09/25	0118	2781464	1
Chromium	U	0.0100	0.00300	0.0100	mg/L	1.00	1					
Uranium	U	0.000200	0.0000670	0.000200	mg/L	1.00	1	PRB	05/09/25	1049	2781464	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 160	Laboratory Filtration	MM7	04/14/25	1500	2780882
SW846 3005A	ICP-MS 3005A PREP	HS2	05/07/25	1600	2781463

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 3005A/6020B	
2	SW846 3005A/6020B	

Notes:

Column headers are defined as follows:

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

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Report Date: July 8, 2025

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

Client Sample ID:	MW372UG3-25	Project:	FRNP00607
Sample ID:	718665007	Client ID:	FRNP006
Matrix:	WG		
Collect Date:	10-APR-25 09:23		
Receive Date:	11-APR-25		
Collector:	Client		

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Certificate of Analysis

Report Date: July 8, 2025

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

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

Client Sample ID: MW372UG3-25 Project: FRNP00607
Sample ID: 718665007 Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP-MS												
6020, Metals (15+ elements) "As Received"												
Iron	J	0.0907	0.0330	0.100	mg/L	1.00	1					
Lead	U	0.00200	0.000500	0.00200	mg/L	1.00	1					
Magnesium		24.2	0.0100	0.0300	mg/L	1.00	1					
Molybdenum	J	0.000241	0.000200	0.00100	mg/L	1.00	1					
Nickel	J	0.000831	0.000600	0.00200	mg/L	1.00	1					
Potassium		2.47	0.0800	0.300	mg/L	1.00	1					
Selenium	U	0.00500	0.00150	0.00500	mg/L	1.00	1					
Silver	U	0.00100	0.000300	0.00100	mg/L	1.00	1					
Thallium	U	0.00200	0.000600	0.00200	mg/L	1.00	1					
Vanadium	U	0.0200	0.00330	0.0200	mg/L	1.00	1					
Rhodium	U	0.00500	0.00160	0.00500	mg/L	1.00	1	PRB	05/07/25	1814	2790406	12
Tantalum	U	0.00500	0.00100	0.00500	mg/L	1.00	1					
Manganese	J	0.00479	0.00100	0.00500	mg/L	1.00	1	PRB	05/07/25	2115	2790406	13
Uranium	U	0.000200	0.0000670	0.000200	mg/L	1.00	1					
Zinc	J	0.00365	0.00330	0.0200	mg/L	1.00	1					
Calcium		66.4	1.60	4.00	mg/L	1.00	20	PRB	05/07/25	2149	2790406	14
Sodium		59.1	1.60	5.00	mg/L	1.00	20					
Boron		1.43	0.104	0.300	mg/L	1.00	20	PRB	05/08/25	1017	2790406	15
Semi-Volatiles-PCB												
8082A, PCB Liquids "As Received"												
Aroclor-1016	UY2	0.101	0.0336	0.101	ug/L	0.00101	1	YS1	05/05/25	2139	2791589	16
Aroclor-1221	U	0.101	0.0336	0.101	ug/L	0.00101	1					
Aroclor-1232	U	0.101	0.0336	0.101	ug/L	0.00101	1					
Aroclor-1242	U	0.101	0.0336	0.101	ug/L	0.00101	1					
Aroclor-1248	U	0.101	0.0336	0.101	ug/L	0.00101	1					
Aroclor-1254	U	0.101	0.0336	0.101	ug/L	0.00101	1					
Aroclor-1260	UY1Y2	0.101	0.0336	0.101	ug/L	0.00101	1					
Aroclor-1268	U	0.101	0.0336	0.101	ug/L	0.00101	1					
Aroclor-Total	UY1Y2	0.101	0.0336	0.101	ug/L	0.00101	1					
Solids Analysis												
160.1, Dissolved Solids "As Received"												
Total Dissolved Solids		474	2.38	10.0	mg/L			CH6	04/16/25	1431	2782539	17
Spectrometric Analysis												
410.4, Chem. Oxygen Demand "As Received"												

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

Client Sample ID: MW372UG3-25

Project: FRNP00607

Sample ID: 718665007

Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Spectrometric Analysis												
410.4, Chem. Oxygen Demand "As Received"												
COD	U	20.0	8.95	20.0	mg/L		1	HH2	04/22/25	1648	2781684	18
Volatile Organics												
8260D, Volatiles- full suite "As Received"												
1,1,1,2-Tetrachloroethane	U	1.00	0.333	1.00	ug/L		1	PXY1	04/17/25	1436	2783250	19
1,1,1-Trichloroethane	U	1.00	0.333	1.00	ug/L		1					
1,1,2,2-Tetrachloroethane	U	1.00	0.333	1.00	ug/L		1					
1,1,2-Trichloroethane	U	1.00	0.333	1.00	ug/L		1					
1,1-Dichloroethane	U	1.00	0.333	1.00	ug/L		1					
1,1-Dichloroethylene	U	1.00	0.333	1.00	ug/L		1					
1,2,3-Trichloropropane	U	1.00	0.333	1.00	ug/L		1					
1,2-Dibromoethane	U	1.00	0.333	1.00	ug/L		1					
1,2-Dichlorobenzene	U	1.00	0.333	1.00	ug/L		1					
1,2-Dichloroethane	U	1.00	0.333	1.00	ug/L		1					
1,2-Dichloropropane	U	1.00	0.333	1.00	ug/L		1					
1,4-Dichlorobenzene	U	1.00	0.333	1.00	ug/L		1					
2-Butanone	U	5.00	1.67	5.00	ug/L		1					
2-Hexanone	U	5.00	1.67	5.00	ug/L		1					
4-Methyl-2-pentanone	U	5.00	1.67	5.00	ug/L		1					
Acetone	U	5.00	1.74	5.00	ug/L		1					
Acrolein	U	5.00	1.67	5.00	ug/L		1					
Acrylonitrile	U	5.00	1.67	5.00	ug/L		1					
Benzene	U	1.00	0.333	1.00	ug/L		1					
Bromochloromethane	U	1.00	0.333	1.00	ug/L		1					
Bromodichloromethane	U	1.00	0.333	1.00	ug/L		1					
Bromoform	U	1.00	0.333	1.00	ug/L		1					
Bromomethane	U	1.00	0.337	1.00	ug/L		1					
Carbon disulfide	U	5.00	1.67	5.00	ug/L		1					
Carbon tetrachloride	U	1.00	0.333	1.00	ug/L		1					
Chlorobenzene	U	1.00	0.333	1.00	ug/L		1					
Chloroethane	U	1.00	0.333	1.00	ug/L		1					
Chloroform	U	1.00	0.333	1.00	ug/L		1					
Chloromethane	U	1.00	0.333	1.00	ug/L		1					
Dibromochloromethane	U	1.00	0.333	1.00	ug/L		1					
Dibromomethane	U	1.00	0.333	1.00	ug/L		1					
Ethylbenzene	U	1.00	0.333	1.00	ug/L		1					
Iodomethane	U	5.00	1.67	5.00	ug/L		1					

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

Report Date: July 8, 2025

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

Project: FRNP00607

Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
8260D, Volatiles- full suite "As Received"												
Methylene chloride	J	0.920	0.500	5.00	ug/L		1					
Styrene	U	1.00	0.333	1.00	ug/L		1					
Tetrachloroethylene	U	1.00	0.333	1.00	ug/L		1					
Toluene	U	1.00	0.333	1.00	ug/L		1					
Trichloroethylene		2.73	0.333	1.00	ug/L		1					
Trichlorofluoromethane	U	1.00	0.333	1.00	ug/L		1					
Vinyl acetate	U	5.00	1.67	5.00	ug/L		1					
Vinyl chloride	U	1.00	0.333	1.00	ug/L		1					
Xylenes (total)	U	3.00	1.00	3.00	ug/L		1					
cis-1,2-Dichloroethylene	U	1.00	0.333	1.00	ug/L		1					
cis-1,3-Dichloropropylene	U	1.00	0.333	1.00	ug/L		1					
trans-1,2-Dichloroethylene	U	1.00	0.333	1.00	ug/L		1					
trans-1,3-Dichloropropylene	U	1.00	0.333	1.00	ug/L		1					
trans-1,4-Dichloro-2-butene	UY1	5.00	1.67	5.00	ug/L		1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	HS2	05/02/25	1420	2790405
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	JM13	05/02/25	0830	2790988
SW846 9010C Distillation	SW846 9010C Prep	KLP1	04/16/25	1306	2781930
SW846 8011 PREP	8011 Prep	LOF	04/14/25	1716	2780752
SW846 3535A	SW3535A PCB SPE Extraction	DXF4	05/05/25	0545	2791588

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Report Date: July 8, 2025

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

Project: FRNP00607

Client ID: FRNP006

Notes:

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Certificate of Analysis

Report Date: July 8, 2025

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

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

Client Sample ID: MW372UG3-25

Sample ID: 718665007

Project: FRNP00607

Client ID: FRNP006

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

Column headers are defined as follows:

DF: Dilution Factor

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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Report Date: July 8, 2025

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

Client Sample ID:	MW372UG3-25	Project:	FRNP00607
Sample ID:	718665008	Client ID:	FRNP006
Matrix:	WG		
Collect Date:	10-APR-25 09:23		
Receive Date:	11-APR-25		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP-MS												
6020, Dissolved Metals (3 Elements) "As Received"												
Barium		0.0605	0.000670	0.00400	mg/L	1.00	1	PRB	05/09/25	0124	2781464	1
Chromium	U	0.0100	0.00300	0.0100	mg/L	1.00	1					
Uranium	U	0.000200	0.0000670	0.000200	mg/L	1.00	1	PRB	05/09/25	1051	2781464	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 160	Laboratory Filtration	MM7	04/14/25	1500	2780882
SW846 3005A	ICP-MS 3005A PREP	HS2	05/07/25	1600	2781463

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 3005A/6020B	
2	SW846 3005A/6020B	

Notes:

Column headers are defined as follows:

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

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Report Date: July 8, 2025

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

Client Sample ID:	MW373UG3-25	Project:	FRNP00607
Sample ID:	718665009	Client ID:	FRNP006
Matrix:	WG		
Collect Date:	10-APR-25 10:08		
Receive Date:	11-APR-25		
Collector:	Client		

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Certificate of Analysis

Report Date: July 8, 2025

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

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

Client Sample ID: MW373UG3-25

Sample ID: 718665009

Project: FRNP00607

Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP-MS												
6020, Metals (15+ elements) "As Received"												
Iron	J	0.0482	0.0330	0.100	mg/L	1.00	1					
Lead	U	0.00200	0.000500	0.00200	mg/L	1.00	1					
Magnesium		31.6	0.0100	0.0300	mg/L	1.00	1					
Molybdenum	U	0.00100	0.000200	0.00100	mg/L	1.00	1					
Nickel	J	0.000819	0.000600	0.00200	mg/L	1.00	1					
Potassium		2.97	0.0800	0.300	mg/L	1.00	1					
Selenium	U	0.00500	0.00150	0.00500	mg/L	1.00	1					
Silver	U	0.00100	0.000300	0.00100	mg/L	1.00	1					
Thallium	U	0.00200	0.000600	0.00200	mg/L	1.00	1					
Vanadium	U	0.0200	0.00330	0.0200	mg/L	1.00	1					
Rhodium	U	0.00500	0.00160	0.00500	mg/L	1.00	1	PRB	05/07/25	1818	2790406	12
Tantalum	U	0.00500	0.00100	0.00500	mg/L	1.00	1					
Manganese		0.0211	0.00100	0.00500	mg/L	1.00	1	PRB	05/07/25	2117	2790406	13
Uranium	J	0.0000910	0.0000670	0.000200	mg/L	1.00	1					
Zinc	U	0.0200	0.00330	0.0200	mg/L	1.00	1					
Calcium		86.9	1.60	4.00	mg/L	1.00	20	PRB	05/07/25	2131	2790406	14
Sodium		75.3	1.60	5.00	mg/L	1.00	20					
Boron		2.47	0.104	0.300	mg/L	1.00	20	PRB	05/08/25	1011	2790406	15
Semi-Volatiles-PCB												
8082A, PCB Liquids "As Received"												
Aroclor-1016	UY2	0.100	0.0333	0.100	ug/L	0.00100	1	YS1	05/05/25	2215	2791589	16
Aroclor-1221	U	0.100	0.0333	0.100	ug/L	0.00100	1					
Aroclor-1232	U	0.100	0.0333	0.100	ug/L	0.00100	1					
Aroclor-1242	U	0.100	0.0333	0.100	ug/L	0.00100	1					
Aroclor-1248	U	0.100	0.0333	0.100	ug/L	0.00100	1					
Aroclor-1254	U	0.100	0.0333	0.100	ug/L	0.00100	1					
Aroclor-1260	UY1Y2	0.100	0.0333	0.100	ug/L	0.00100	1					
Aroclor-1268	U	0.100	0.0333	0.100	ug/L	0.00100	1					
Aroclor-Total	UY1Y2	0.100	0.0333	0.100	ug/L	0.00100	1					
Solids Analysis												
160.1, Dissolved Solids "As Received"												
Total Dissolved Solids		635	2.38	10.0	mg/L			CH6	04/16/25	1431	2782539	17
Spectrometric Analysis												
410.4, Chem. Oxygen Demand "As Received"												

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Report Date: July 8, 2025

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

Project: FRNP00607

Client ID: FRNP006

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Report Date: July 8, 2025

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

Project: FRNP00607

Client ID: FRNP006

The following Prep Methods were performed:

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Report Date: July 8, 2025

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

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

Client Sample ID: MW373UG3-25

Project: FRNP00607

Sample ID: 718665009

Client ID: FRNP006

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

The following Analytical Methods were performed:

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

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
1-Chloro-2-fluorobenzene	8011 VOA- 1,2-Dibromo-3-chloropropane "As Received"	6.37 ug/L	6.77	94	(56%-149%)
Decachlorobiphenyl	8082A, PCB Liquids "As Received"	0.190 ug/L	0.200	95	(30%-135%)
4cmx	8082A, PCB Liquids "As Received"	0.186 ug/L	0.200	93	(26%-108%)
Bromofluorobenzene	8260D, Volatiles- full suite "As Received"	51.3 ug/L	50.0	103	(85%-114%)
1,2-Dichloroethane-d4	8260D, Volatiles- full suite "As Received"	55.1 ug/L	50.0	110	(81%-118%)
Toluene-d8	8260D, Volatiles- full suite "As Received"	49.6 ug/L	50.0	99	(89%-112%)

Notes:

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Certificate of Analysis

Report Date: July 8, 2025

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

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

Client Sample ID: MW373UG3-25

Sample ID: 718665009

Project: FRNP00607

Client ID: FRNP006

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

Column headers are defined as follows:

DF: Dilution Factor

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

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

Report Date: July 8, 2025

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

Client Sample ID:	MW373UG3-25	Project:	FRNP00607
Sample ID:	718665010	Client ID:	FRNP006
Matrix:	WG		
Collect Date:	10-APR-25 10:08		
Receive Date:	11-APR-25		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP-MS												
6020, Dissolved Metals (3 Elements) "As Received"												
Barium		0.0318	0.000670	0.00400	mg/L	1.00	1	PRB	05/09/25	0042	2781464	1
Chromium	U	0.0100	0.00300	0.0100	mg/L	1.00	1					
Uranium	J	0.0000710	0.0000670	0.000200	mg/L	1.00	1	PRB	05/09/25	1114	2781464	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 160	Laboratory Filtration	MM7	04/14/25	1500	2780882
SW846 3005A	ICP-MS 3005A PREP	HS2	05/07/25	1600	2781463

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 3005A/6020B	
2	SW846 3005A/6020B	

Notes:

Column headers are defined as follows:

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

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Certificate of Analysis

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

Kevil, Kentucky 42053

Report Date: July 8, 2025

Contact: Ms. Jaime Morrow

Project: C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW220SG3-25
Sample ID: 719425001
Matrix: WG
Collect Date: 14-APR-25
Receive Date: 15-APR-25
Collector: Client

Project: FRNP00609
Client ID: FRNP006

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis														
<i>AlphaSpec Ra226, Liquid "As Received"</i>														
Radium-226	U	0.518	+/-0.968	1.26	+/-0.970	5.00	pCi/L			CM4	04/29/25	1603	2784556	1
<i>Th-01-RC M, Th Isotopes, Liquid "As Received"</i>														
Thorium-230	U	1.78	+/-2.33	3.45	+/-2.35	50.0	pCi/L			RM3	04/26/25	1343	2784557	2
Rad Gas Flow Proportional Counting														
<i>905.0 Mod, Sr90, liquid "As Received"</i>														
Strontium-90	U	-0.444	+/-0.884	1.88	+/-0.884	8.00	pCi/L			CH7	05/01/25	1444	2782605	3
<i>9310, Alpha/Beta Activity, liquid "As Received"</i>														
Alpha	U	1.28	+/-3.79	7.55	+/-3.79	15.0	pCi/L			HH3	05/02/25	1426	2783382	4
Beta		9.59	+/-6.22	9.55	+/-6.43	50.0	pCi/L							
Rad Liquid Scintillation Analysis														
<i>906.0 Mod, Tritium Dist, Liquid "As Received"</i>														
Tritium	U	-12.5	+/-126	228	+/-126	300	pCi/L			IT1	05/09/25	1643	2792213	5
<i>Tc-02-RC-MOD, Tc99, Liquid "As Received"</i>														
Technetium-99	U	10.5	+/-11.6	19.5	+/-11.7	25.0	pCi/L			GS3	05/11/25	1938	2788030	6

The following Analytical Methods were performed

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

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	AlphaSpec Ra226, Liquid "As Received"	2784556	97.6	(30%-110%)
Thorium-229 Tracer	Th-01-RC M, Th Isotopes, Liquid "As Received"	2784557	64	(30%-110%)
Strontium Carrier	905.0 Mod, Sr90, liquid "As Received"	2782605	90.9	(30%-110%)
Technetium-99m Tracer	Tc-02-RC-MOD, Tc99, Liquid "As Received"	2788030	95.7	(30%-110%)

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Certificate of Analysis

Company : Four Rivers Nuclear Partnership,
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5600 Hobbs Road

Kevil, Kentucky 42053

Report Date: July 8, 2025

Contact: Ms. Jaime Morrow

Project: C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW220SG3-25

Project: FRNP00609

Sample ID: 719425001

Client ID: FRNP006

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

Notes:

The MDC is a sample specific MDC.

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

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

Lc/LC: Critical Level

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Mtd.: Method

PF: Prep Factor

RL: Reporting Limit

TPU: Total Propagated Uncertainty

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Certificate of Analysis

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

Kevil, Kentucky 42053

Report Date: July 8, 2025

Contact: Ms. Jaime Morrow

Project: C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW221DSG3-25

Project: FRNP00609

Sample ID: 719425003

Client ID: FRNP006

Matrix: WG

Collect Date: 14-APR-25

Receive Date: 15-APR-25

Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis														
<i>AlphaSpec Ra226, Liquid "As Received"</i>														
Radium-226	U	0.911	+/-1.42	1.93	+/-1.43	5.00	pCi/L			CM4	04/29/25	1603	2784556	1
<i>Th-01-RC M, Th Isotopes, Liquid "As Received"</i>														
Thorium-230	U	-0.152	+/-1.80	3.99	+/-1.80	50.0	pCi/L			RM3	04/26/25	1343	2784557	2
Rad Gas Flow Proportional Counting														
<i>905.0 Mod, Sr90, liquid "As Received"</i>														
Strontium-90	U	-0.423	+/-1.03	2.18	+/-1.03	8.00	pCi/L			CH7	05/01/25	1444	2782605	3
<i>9310, Alpha/Beta Activity, liquid "As Received"</i>														
Alpha	U	-0.394	+/-3.20	6.97	+/-3.21	15.0	pCi/L			HH3	05/05/25	0908	2783382	4
Beta	U	8.33	+/-6.03	9.61	+/-6.18	50.0	pCi/L							
Rad Liquid Scintillation Analysis														
<i>906.0 Mod, Tritium Dist, Liquid "As Received"</i>														
Tritium		266	+/-147	230	+/-155	300	pCi/L			IT1	05/09/25	1720	2792213	5
<i>Tc-02-RC-MOD, Tc99, Liquid "As Received"</i>														
Technetium-99	U	10.4	+/-11.7	19.7	+/-11.8	25.0	pCi/L			GS3	05/11/25	1954	2788030	6

The following Analytical Methods were performed

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

Surrogate/Tracer	Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer		AlphaSpec Ra226, Liquid "As Received"	2784556	93.1	(30%-110%)
Thorium-229 Tracer		Th-01-RC M, Th Isotopes, Liquid "As Received"	2784557	75	(30%-110%)
Strontium Carrier		905.0 Mod, Sr90, liquid "As Received"	2782605	81.8	(30%-110%)
Technetium-99m Tracer		Tc-02-RC-MOD, Tc99, Liquid "As Received"	2788030	96.7	(30%-110%)

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5600 Hobbs Road

Kevil, Kentucky 42053

Report Date: July 8, 2025

Contact: Ms. Jaime Morrow

Project: C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW221DSG3-25

Project: FRNP00609

Sample ID: 719425003

Client ID: FRNP006

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

Notes:

The MDC is a sample specific MDC.

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

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

Lc/LC: Critical Level

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Mtd.: Method

PF: Prep Factor

RL: Reporting Limit

TPU: Total Propagated Uncertainty

GEL LABORATORIES LLC

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

Certificate of Analysis

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

Kevil, Kentucky 42053

Report Date: July 8, 2025

Contact: Ms. Jaime Morrow

Project: C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW221SG3-25

Project: FRNP00609

Sample ID: 719425005

Client ID: FRNP006

Matrix: WG

Collect Date: 14-APR-25

Receive Date: 15-APR-25

Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis														
<i>AlphaSpec Ra226, Liquid "As Received"</i>														
Radium-226	U	0.662	+/-1.11	1.63	+/-1.12	5.00	pCi/L			CM4	04/29/25	1603	2784556	1
<i>Th-01-RC M, Th Isotopes, Liquid "As Received"</i>														
Thorium-230	U	1.16	+/-1.83	2.96	+/-1.84	50.0	pCi/L			RM3	04/26/25	1343	2784557	2
Rad Gas Flow Proportional Counting														
<i>905.0 Mod, Sr90, liquid "As Received"</i>														
Strontium-90	U	-0.822	+/-0.745	1.83	+/-0.745	8.00	pCi/L			CH7	05/01/25	1444	2782605	3
<i>9310, Alpha/Beta Activity, liquid "As Received"</i>														
Alpha	U	0.0631	+/-3.34	7.37	+/-3.35	15.0	pCi/L			HH3	05/12/25	1233	2795379	4
Beta	U	10.2	+/-7.51	12.0	+/-7.69	50.0	pCi/L							
Rad Liquid Scintillation Analysis														
<i>906.0 Mod, Tritium Dist, Liquid "As Received"</i>														
Tritium	U	130	+/-130	217	+/-133	300	pCi/L			IT1	05/09/25	1757	2792213	5
<i>Tc-02-RC-MOD, Tc99, Liquid "As Received"</i>														
Technetium-99	U	12.3	+/-11.6	19.2	+/-11.6	25.0	pCi/L			GS3	05/11/25	2011	2788030	6

The following Analytical Methods were performed

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

Surrogate/Tracer	Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer		AlphaSpec Ra226, Liquid "As Received"	2784556	103	(30%-110%)
Thorium-229 Tracer		Th-01-RC M, Th Isotopes, Liquid "As Received"	2784557	82.5	(30%-110%)
Strontium Carrier		905.0 Mod, Sr90, liquid "As Received"	2782605	90.9	(30%-110%)
Technetium-99m Tracer		Tc-02-RC-MOD, Tc99, Liquid "As Received"	2788030	98.3	(30%-110%)

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Certificate of Analysis

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

Kevil, Kentucky 42053

Report Date: July 8, 2025

Contact: Ms. Jaime Morrow

Project: C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW221SG3-25

Project: FRNP00609

Sample ID: 719425005

Client ID: FRNP006

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

Notes:

The MDC is a sample specific MDC.

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

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

Lc/LC: Critical Level

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Mtd.: Method

PF: Prep Factor

RL: Reporting Limit

TPU: Total Propagated Uncertainty

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Certificate of Analysis

Company : Four Rivers Nuclear Partnership,
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Kevil, Kentucky 42053

Report Date: July 8, 2025

Contact: Ms. Jaime Morrow

Project: C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW222SG3-25

Project: FRNP00609

Sample ID: 719425007

Client ID: FRNP006

Matrix: WG

Collect Date: 14-APR-25

Receive Date: 15-APR-25

Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis														
<i>AlphaSpec Ra226, Liquid "As Received"</i>														
Radium-226	U	0.570	+/-0.489	0.684	+/-0.495	5.00	pCi/L			CM4	04/29/25	0818	2784556	1
<i>Th-01-RC M, Th Isotopes, Liquid "As Received"</i>														
Thorium-230	U	1.00	+/-1.69	2.83	+/-1.70	50.0	pCi/L			RM3	04/26/25	1343	2784557	2
Rad Gas Flow Proportional Counting														
<i>905.0 Mod, Sr90, liquid "As Received"</i>														
Strontium-90	U	1.41	+/-1.55	2.59	+/-1.56	8.00	pCi/L			CH7	05/01/25	0819	2782605	3
<i>9310, Alpha/Beta Activity, liquid "As Received"</i>														
Alpha	U	2.97	+/-4.93	8.85	+/-4.96	15.0	pCi/L			HH3	05/10/25	1621	2795379	4
Beta	U	6.20	+/-8.64	14.7	+/-8.70	50.0	pCi/L							
Rad Liquid Scintillation Analysis														
<i>906.0 Mod, Tritium Dist, Liquid "As Received"</i>														
Tritium	U	25.1	+/-124	219	+/-124	300	pCi/L			IT1	05/09/25	1833	2792213	5
<i>Tc-02-RC-MOD, Tc99, Liquid "As Received"</i>														
Technetium-99	U	4.88	+/-11.5	19.8	+/-11.5	25.0	pCi/L			GS3	05/11/25	2028	2788030	6

The following Analytical Methods were performed

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

Surrogate/Tracer	Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer		AlphaSpec Ra226, Liquid "As Received"	2784556	97.6	(30%-110%)
Thorium-229 Tracer		Th-01-RC M, Th Isotopes, Liquid "As Received"	2784557	99.5	(30%-110%)
Strontium Carrier		905.0 Mod, Sr90, liquid "As Received"	2782605	88.6	(30%-110%)
Technetium-99m Tracer		Tc-02-RC-MOD, Tc99, Liquid "As Received"	2788030	95.4	(30%-110%)

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5600 Hobbs Road

Kevil, Kentucky 42053

Report Date: July 8, 2025

Contact: Ms. Jaime Morrow

Project: C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW222SG3-25

Project: FRNP00609

Sample ID: 719425007

Client ID: FRNP006

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

Notes:

The MDC is a sample specific MDC.

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

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

Lc/LC: Critical Level

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Mtd.: Method

PF: Prep Factor

RL: Reporting Limit

TPU: Total Propagated Uncertainty

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Kevil, Kentucky 42053

Report Date: July 8, 2025

Contact: Ms. Jaime Morrow

Project: C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW223SG3-25

Project: FRNP00609

Sample ID: 719425009

Client ID: FRNP006

Matrix: WG

Collect Date: 14-APR-25

Receive Date: 15-APR-25

Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis														
<i>AlphaSpec Ra226, Liquid "As Received"</i>														
Radium-226	U	0.277	+/-0.409	0.676	+/-0.410	5.00	pCi/L			CM4	04/29/25	0818	2784556	1
<i>Th-01-RC M, Th Isotopes, Liquid "As Received"</i>														
Thorium-230	U	1.24	+/-1.80	2.81	+/-1.82	50.0	pCi/L			RM3	04/26/25	1343	2784557	2
Rad Gas Flow Proportional Counting														
<i>905.0 Mod, Sr90, liquid "As Received"</i>														
Strontium-90	U	-0.672	+/-0.853	1.87	+/-0.853	8.00	pCi/L			CH7	05/01/25	0819	2782605	3
<i>9310, Alpha/Beta Activity, liquid "As Received"</i>														
Alpha	U	-2.09	+/-2.89	8.35	+/-2.90	15.0	pCi/L			HH3	05/10/25	1621	2795379	4
Beta	U	11.9	+/-8.20	13.0	+/-8.42	50.0	pCi/L							
Rad Liquid Scintillation Analysis														
<i>906.0 Mod, Tritium Dist, Liquid "As Received"</i>														
Tritium	U	103	+/-135	230	+/-137	300	pCi/L			IT1	05/09/25	1910	2792213	5
<i>Tc-02-RC-MOD, Tc99, Liquid "As Received"</i>														
Technetium-99	U	10.9	+/-11.6	19.5	+/-11.7	25.0	pCi/L			GS3	05/11/25	2044	2788030	6

The following Analytical Methods were performed

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

Surrogate/Tracer	Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer		AlphaSpec Ra226, Liquid "As Received"	2784556	95.7	(30%-110%)
Thorium-229 Tracer		Th-01-RC M, Th Isotopes, Liquid "As Received"	2784557	79.4	(30%-110%)
Strontium Carrier		905.0 Mod, Sr90, liquid "As Received"	2782605	95.5	(30%-110%)
Technetium-99m Tracer		Tc-02-RC-MOD, Tc99, Liquid "As Received"	2788030	96	(30%-110%)

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Kevil, Kentucky 42053

Report Date: July 8, 2025

Contact: Ms. Jaime Morrow

Project: C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW223SG3-25

Project: FRNP00609

Sample ID: 719425009

Client ID: FRNP006

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

Notes:

The MDC is a sample specific MDC.

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

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

Lc/LC: Critical Level

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Mtd.: Method

PF: Prep Factor

RL: Reporting Limit

TPU: Total Propagated Uncertainty

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Report Date: July 8, 2025

Contact: Ms. Jaime Morrow

Project: C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW224SG3-25

Project: FRNP00609

Sample ID: 719425011

Client ID: FRNP006

Matrix: WG

Collect Date: 14-APR-25

Receive Date: 15-APR-25

Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis														
<i>AlphaSpec Ra226, Liquid "As Received"</i>														
Radium-226	U	0.463	+/-0.391	0.521	+/-0.395	5.00	pCi/L			CM4	04/29/25	0818	2784556	1
<i>Th-01-RC M, Th Isotopes, Liquid "As Received"</i>														
Thorium-230	U	1.48	+/-1.90	3.02	+/-1.91	50.0	pCi/L			RM3	04/26/25	1343	2784557	2
Rad Gas Flow Proportional Counting														
<i>905.0 Mod, Sr90, liquid "As Received"</i>														
Strontium-90	U	-0.778	+/-1.13	2.32	+/-1.13	8.00	pCi/L			CH7	05/01/25	1444	2782605	3
<i>9310, Alpha/Beta Activity, liquid "As Received"</i>														
Alpha	U	-0.361	+/-2.28	5.53	+/-2.28	15.0	pCi/L			HH3	05/05/25	0908	2783382	4
Beta	U	2.00	+/-4.64	8.22	+/-4.65	50.0	pCi/L							
Rad Liquid Scintillation Analysis														
<i>906.0 Mod, Tritium Dist, Liquid "As Received"</i>														
Tritium	U	-70.0	+/-121	226	+/-121	300	pCi/L			IT1	05/09/25	1947	2792213	5
<i>Tc-02-RC-MOD, Tc99, Liquid "As Received"</i>														
Technetium-99	U	7.90	+/-11.7	19.9	+/-11.7	25.0	pCi/L			GS3	05/11/25	2101	2788030	6

The following Analytical Methods were performed

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

Surrogate/Tracer	Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer		AlphaSpec Ra226, Liquid "As Received"	2784556	96.7	(30%-110%)
Thorium-229 Tracer		Th-01-RC M, Th Isotopes, Liquid "As Received"	2784557	99.5	(30%-110%)
Strontium Carrier		905.0 Mod, Sr90, liquid "As Received"	2782605	100	(30%-110%)
Technetium-99m Tracer		Tc-02-RC-MOD, Tc99, Liquid "As Received"	2788030	95.2	(30%-110%)

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Kevil, Kentucky 42053

Report Date: July 8, 2025

Contact: Ms. Jaime Morrow

Project: C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW224SG3-25

Project: FRNP00609

Sample ID: 719425011

Client ID: FRNP006

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

Notes:

The MDC is a sample specific MDC.

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

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

Lc/LC: Critical Level

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Mtd.: Method

PF: Prep Factor

RL: Reporting Limit

TPU: Total Propagated Uncertainty

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Kevil, Kentucky 42053

Report Date: July 8, 2025

Contact: Ms. Jaime Morrow

Project: C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW397SG3-25

Project: FRNP00609

Sample ID: 719425013

Client ID: FRNP006

Matrix: WG

Collect Date: 14-APR-25

Receive Date: 15-APR-25

Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis														
<i>AlphaSpec Ra226, Liquid "As Received"</i>														
Radium-226	U	0.851	+/-1.21	1.44	+/-1.22	5.00	pCi/L			CM4	04/29/25	1603	2784556	1
<i>Th-01-RC M, Th Isotopes, Liquid "As Received"</i>														
Thorium-230	U	-0.474	+/-1.24	3.21	+/-1.24	50.0	pCi/L			RM3	04/26/25	1343	2784557	2
Rad Gas Flow Proportional Counting														
<i>905.0 Mod, Sr90, liquid "As Received"</i>														
Strontium-90	U	0.171	+/-0.677	1.31	+/-0.677	8.00	pCi/L			CH7	05/01/25	0819	2782605	3
<i>9310, Alpha/Beta Activity, liquid "As Received"</i>														
Alpha	U	1.10	+/-5.22	10.4	+/-5.22	15.0	pCi/L			HH3	05/02/25	1426	2783382	4
Beta	U	7.88	+/-6.20	9.84	+/-6.34	50.0	pCi/L							
Rad Liquid Scintillation Analysis														
<i>906.0 Mod, Tritium Dist, Liquid "As Received"</i>														
Tritium	U	52.6	+/-115	199	+/-116	300	pCi/L			IT1	05/12/25	2104	2792213	5
<i>Tc-02-RC-MOD, Tc99, Liquid "As Received"</i>														
Technetium-99	U	16.8	+/-12.9	21.2	+/-13.1	25.0	pCi/L			GS3	05/11/25	2118	2788030	6

The following Analytical Methods were performed

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

Surrogate/Tracer	Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer		AlphaSpec Ra226, Liquid "As Received"	2784556	91.8	(30%-110%)
Thorium-229 Tracer		Th-01-RC M, Th Isotopes, Liquid "As Received"	2784557	84.6	(30%-110%)
Strontium Carrier		905.0 Mod, Sr90, liquid "As Received"	2782605	102	(30%-110%)
Technetium-99m Tracer		Tc-02-RC-MOD, Tc99, Liquid "As Received"	2788030	90	(30%-110%)

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Report Date: July 8, 2025

Contact: Ms. Jaime Morrow

Project: C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW397SG3-25

Project: FRNP00609

Sample ID: 719425013

Client ID: FRNP006

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

Notes:

The MDC is a sample specific MDC.

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

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

Lc/LC: Critical Level

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Mtd.: Method

PF: Prep Factor

RL: Reporting Limit

TPU: Total Propagated Uncertainty

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Kevil, Kentucky 42053

Report Date: July 8, 2025

Contact: Ms. Jaime Morrow

Project: C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: FB1SG3-25

Project: FRNP00609

Sample ID: 719425015

Client ID: FRNP006

Matrix: WATER

Collect Date: 14-APR-25

Receive Date: 15-APR-25

Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis														
<i>AlphaSpec Ra226, Liquid "As Received"</i>														
Radium-226	U	0.335	+/-0.364	0.518	+/-0.366	5.00	pCi/L			CM4	04/29/25	0818	2784556	1
<i>Th-01-RC M, Th Isotopes, Liquid "As Received"</i>														
Thorium-230	U	0.474	+/-1.48	2.74	+/-1.48	50.0	pCi/L			RM3	04/26/25	1343	2784557	2
Rad Gas Flow Proportional Counting														
<i>905.0 Mod, Sr90, liquid "As Received"</i>														
Strontium-90	U	1.01	+/-1.10	1.82	+/-1.11	8.00	pCi/L			CH7	05/01/25	0819	2782605	3
<i>9310, Alpha/Beta Activity, liquid "As Received"</i>														
Alpha	U	0.222	+/-4.07	8.57	+/-4.07	15.0	pCi/L			HH3	05/02/25	1426	2783382	4
Beta	U	-4.49	+/-5.68	11.5	+/-5.68	50.0	pCi/L							
Rad Liquid Scintillation Analysis														
<i>906.0 Mod, Tritium Dist, Liquid "As Received"</i>														
Tritium	U	42.0	+/-116	202	+/-117	300	pCi/L			IT1	05/12/25	2151	2792213	5
<i>Tc-02-RC-MOD, Tc99, Liquid "As Received"</i>														
Technetium-99	U	-7.06	+/-10.9	19.9	+/-10.9	25.0	pCi/L			GS3	05/11/25	2134	2788030	6

The following Analytical Methods were performed

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

Surrogate/Tracer	Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer		AlphaSpec Ra226, Liquid "As Received"	2784556	94.4	(30%-110%)
Thorium-229 Tracer		Th-01-RC M, Th Isotopes, Liquid "As Received"	2784557	79.3	(30%-110%)
Strontium Carrier		905.0 Mod, Sr90, liquid "As Received"	2782605	97.7	(30%-110%)
Technetium-99m Tracer		Tc-02-RC-MOD, Tc99, Liquid "As Received"	2788030	95.2	(30%-110%)

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Report Date: July 8, 2025

Contact: Ms. Jaime Morrow

Project: C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: FB1SG3-25

Project: FRNP00609

Sample ID: 719425015

Client ID: FRNP006

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

Notes:

The MDC is a sample specific MDC.

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

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

Lc/LC: Critical Level

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Mtd.: Method

PF: Prep Factor

RL: Reporting Limit

TPU: Total Propagated Uncertainty

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Report Date: July 8, 2025

Contact: Ms. Jaime Morrow

Project: C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: RI1SG3-25

Project: FRNP00609

Sample ID: 719425016

Client ID: FRNP006

Matrix: WATER

Collect Date: 14-APR-25

Receive Date: 15-APR-25

Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis														
<i>AlphaSpec Ra226, Liquid "As Received"</i>														
Radium-226	U	0.314	+/-0.361	0.552	+/-0.363	5.00	pCi/L			CM4	04/29/25	0818	2784556	1
<i>Th-01-RC M, Th Isotopes, Liquid "As Received"</i>														
Thorium-230	U	0.510	+/-1.50	2.80	+/-1.51	50.0	pCi/L			RM3	04/26/25	1343	2784557	2
Rad Gas Flow Proportional Counting														
<i>905.0 Mod, Sr90, liquid "As Received"</i>														
Strontium-90	U	2.84	+/-2.00	3.13	+/-2.05	8.00	pCi/L			CH7	05/01/25	0819	2782605	3
<i>9310, Alpha/Beta Activity, liquid "As Received"</i>														
Alpha	U	0.949	+/-3.26	6.67	+/-3.26	15.0	pCi/L			HH3	05/02/25	1426	2783382	4
Beta	U	2.23	+/-5.36	9.56	+/-5.37	50.0	pCi/L							
Rad Liquid Scintillation Analysis														
<i>906.0 Mod, Tritium Dist, Liquid "As Received"</i>														
Tritium	U	16.2	+/-113	198	+/-113	300	pCi/L			IT1	05/12/25	2237	2792213	5
<i>Tc-02-RC-MOD, Tc99, Liquid "As Received"</i>														
Technetium-99	U	0.178	+/-11.2	19.8	+/-11.2	25.0	pCi/L			GS3	05/11/25	2151	2788030	6

The following Analytical Methods were performed

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

Surrogate/Tracer	Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer		AlphaSpec Ra226, Liquid "As Received"	2784556	101	(30%-110%)
Thorium-229 Tracer		Th-01-RC M, Th Isotopes, Liquid "As Received"	2784557	91	(30%-110%)
Strontium Carrier		905.0 Mod, Sr90, liquid "As Received"	2782605	68.2	(30%-110%)
Technetium-99m Tracer		Tc-02-RC-MOD, Tc99, Liquid "As Received"	2788030	95.8	(30%-110%)

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Certificate of Analysis

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

Kevil, Kentucky 42053

Report Date: July 8, 2025

Contact: Ms. Jaime Morrow

Project: C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: RI1SG3-25

Project: FRNP00609

Sample ID: 719425016

Client ID: FRNP006

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

Notes:

The MDC is a sample specific MDC.

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

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

Lc/LC: Critical Level

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Mtd.: Method

PF: Prep Factor

RL: Reporting Limit

TPU: Total Propagated Uncertainty

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Certificate of Analysis

Report Date: July 8, 2025

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

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW220SG3-25 Project: FRNP00609
Sample ID: 719425001 Client ID: FRNP006
Matrix: WG
Collect Date: 14-APR-25 12:09
Receive Date: 15-APR-25
Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
504.1/8011 Analysis of EDB/DBCP												
8011, VOA Compounds Liquid "As Received"												
1,2-Dibromo-3-chloropropane	U	0.0190	0.00854	0.0190	ug/L	0.949	1	LL2	04/17/25	0321	2782287	1
Carbon Analysis												
9060A, Total Organic Carbon "As Received"												
Total Organic Carbon Average	J	0.787	0.330	2.00	mg/L		1	KB3	04/24/25	1729	2786227	3
Flow Injection Analysis												
9012B, Total Cyanide "As Received"												
Cyanide, Total	UN1	0.200	0.00167	0.200	mg/L	1.00	1	KLP1	04/21/25	1158	2781931	4
Halogen Analysis												
9020B, TOX (Organic Halogen) "As Received"												
Total Organic Halogens	BJ	6.94	3.33	10.0	ug/L		1	RMJ	05/09/25	0551	2795005	5
Ion Chromatography												
300.0, Iodide in Liquid "As Received"												
Iodide	U	0.500	0.167	0.500	mg/L		1	CH6	04/24/25	2155	2786990	6
SW846 9056A Anions (5) "As Received"												
Bromide		0.212	0.0670	0.200	mg/L		1	RXB5	04/15/25	1524	2781883	7
Fluoride	J	0.229	0.0330	4.00	mg/L		1					
Chloride	JW	18.0	0.134	250	mg/L		2	RXB5	04/15/25	2307	2781883	8
Nitrate-N	J	1.04	0.0660	10.0	mg/L		2					
Sulfate		22.2	0.266	0.800	mg/L		2					
Mercury Analysis-CVAA												
7470, Mercury Liquid "As Received"												
Mercury	U	0.000200	0.0000670	0.000200	mg/L	1.00	1	JP2	05/06/25	0918	2791818	9
Metals Analysis-ICP-MS												
6020, Metals (15+) "As Received"												
Antimony	U	0.00300	0.00100	0.00300	mg/L	1.00	1	PRB	05/10/25	2139	2792675	10
Arsenic	U	0.00500	0.00200	0.00500	mg/L	1.00	1					
Barium	N	0.221	0.000670	0.00400	mg/L	1.00	1					
Beryllium	U	0.000500	0.000200	0.000500	mg/L	1.00	1					
Boron	J	0.00950	0.00520	0.0150	mg/L	1.00	1					
Cadmium	U	0.00100	0.000300	0.00100	mg/L	1.00	1					
Calcium		26.2	0.0800	0.200	mg/L	1.00	1					
Chromium	J	0.00510	0.00300	0.0100	mg/L	1.00	1					
Cobalt	U	0.00100	0.000300	0.00100	mg/L	1.00	1					

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

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW220SG3-25 Project: FRNP00609
Sample ID: 719425001 Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP-MS												
6020, Metals (15+) "As Received"												
Copper	BJ	0.00136	0.000300	0.00200	mg/L	1.00	1					
Iron	UN	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		11.1	0.0100	0.0300	mg/L	1.00	1					
Manganese	U	0.00500	0.00100	0.00500	mg/L	1.00	1					
Molybdenum	J	0.000970	0.000200	0.00100	mg/L	1.00	1					
Nickel		0.00858	0.000600	0.00200	mg/L	1.00	1					
Potassium		1.33	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		46.0	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	0.00348	0.00330	0.0200	mg/L	1.00	1					
Rhodium	U	0.00500	0.00160	0.00500	mg/L	1.00	1	PRB	05/11/25	0218	2792675	11
Tantalum	UN	0.00500	0.00100	0.00500	mg/L	1.00	1					
Aluminum	UN	0.0500	0.0193	0.0500	mg/L	1.00	1	PRB	05/11/25	1352	2792675	12
Solids Analysis												
160.1, Dissolved Solids "As Received"												
Total Dissolved Solids		236	2.38	10.0	mg/L			SC1	04/21/25	1425	2784292	13
Spectrometric Analysis												
410.4, Chem. Oxygen Demand "As Received"												
COD	U	20.0	8.95	20.0	mg/L		1	HH2	04/28/25	1456	2783865	14
Volatile Organics												
8260D, Volatiles- full suite "As Received"												
1,1,1,2-Tetrachloroethane	U	1.00	0.333	1.00	ug/L		1	PXY1	04/18/25	1349	2783937	15
1,1,1-Trichloroethane	U	1.00	0.333	1.00	ug/L		1					
1,1,2,2-Tetrachloroethane	UY1	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	UY1	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					

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

Contact: Kevil, Kentucky 42053
Project: Ms. Jaime Morrow
C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW220SG3-25

Sample ID: 719425001

Project: FRNP00609

Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time Batch	Method
Volatile Organics											
8260D, Volatiles- full suite "As Received"											
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				
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				

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

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW220SG3-25 Project: FRNP00609
Sample ID: 719425001 Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
8260D, Volatiles- full suite "As Received"												
trans-1,2-Dichloroethylene	U	1.00	0.333	1.00	ug/L		1					
trans-1,3-Dichloropropylene	U	1.00	0.333	1.00	ug/L		1					
trans-1,4-Dichloro-2-butene	U	5.00	1.67	5.00	ug/L		1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	JM13	05/05/25	1145	2791816
SW846 9010C Distillation	SW846 9010C Prep	KLP1	04/16/25	1306	2781930
SW846 3005A	ICP-MS 3005A PREP	HS2	05/06/25	1545	2792674
SW846 8011 PREP	8011 Prep	LL2	04/16/25	1542	2782286

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	EPA 160.1	
14	EPA 410.4	
15	SW846 8260D	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
1-Chloro-2-fluorobenzene	8011, VOA Compounds Liquid "As Received"	6.23 ug/L	6.78	92	(56%-149%)
Bromofluorobenzene	8260D, Volatiles- full suite "As Received"	55.1 ug/L	50.0	110	(85%-114%)
1,2-Dichloroethane-d4	8260D, Volatiles- full suite "As Received"	52.8 ug/L	50.0	106	(81%-118%)
Toluene-d8	8260D, Volatiles- full suite "As Received"	53.6 ug/L	50.0	107	(89%-112%)

Notes:

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

Contact: Kevil, Kentucky 42053
Project: Ms. Jaime Morrow
C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW220SG3-25

Sample ID: 719425001

Project: FRNP00609

Client ID: FRNP006

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

Column headers are defined as follows:

DF: Dilution Factor

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: July 8, 2025

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

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID:	MW220SG3-25	Project:	FRNP00609
Sample ID:	719425002	Client ID:	FRNP006
Matrix:	WG		
Collect Date:	14-APR-25 12:09		
Receive Date:	15-APR-25		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP-MS												
6020, Dissolved Metals (3 Elements) "As Received"												
Barium		0.234	0.000670	0.00400	mg/L	1.00	1	PRB	05/10/25	2246	2783203	1
Chromium	J	0.00440	0.00300	0.0100	mg/L	1.00	1					
Uranium	U	0.000200	0.0000670	0.000200	mg/L	1.00	1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	HS2	05/07/25	1545	2783202
EPA 160	Laboratory Filtration	EXF1	04/17/25	0815	2782002

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 3005A/6020B	

Notes:

Column headers are defined as follows:

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

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Report Date: July 8, 2025

Contact: Kevil, Kentucky 42053
Ms. Jaime Morrow
Project: C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID:	MW221DSG3-25	Project:	FRNP00609
Sample ID:	719425003	Client ID:	FRNP006
Matrix:	WG		
Collect Date:	14-APR-25 07:39		
Receive Date:	15-APR-25		
Collector:	Client		

C1-61

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Report Date: July 8, 2025

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

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW221DSG3-25 Project: FRNP00609
Sample ID: 719425003 Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP-MS												
6020, Metals (15+) "As Received"												
Copper	BJ	0.00171	0.000300	0.00200	mg/L	1.00	1					
Iron	UN	0.100	0.0330	0.100	mg/L	1.00	1					
Lead	U	0.00200	0.000500	0.00200	mg/L	1.00	1					
Magnesium		9.45	0.0100	0.0300	mg/L	1.00	1					
Manganese		0.00773	0.00100	0.00500	mg/L	1.00	1					
Molybdenum		0.00295	0.000200	0.00100	mg/L	1.00	1					
Nickel		0.0676	0.000600	0.00200	mg/L	1.00	1					
Potassium		1.80	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		45.4	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	0.00589	0.00330	0.0200	mg/L	1.00	1					
Rhodium	U	0.00500	0.00160	0.00500	mg/L	1.00	1	PRB	05/11/25	0219	2792675	11
Tantalum	UN	0.00500	0.00100	0.00500	mg/L	1.00	1					
Aluminum	UN	0.0500	0.0193	0.0500	mg/L	1.00	1	PRB	05/11/25	1353	2792675	12
Solids Analysis												
160.1, Dissolved Solids "As Received"												
Total Dissolved Solids		195	2.38	10.0	mg/L			SC1	04/21/25	1425	2784292	13
Spectrometric Analysis												
410.4, Chem. Oxygen Demand "As Received"												
COD	U	20.0	8.95	20.0	mg/L		1	HH2	04/28/25	1456	2783865	14
Volatile Organics												
8260D, Volatiles- full suite "As Received"												
1,1,1,2-Tetrachloroethane	U	1.00	0.333	1.00	ug/L		1	PXY1	04/18/25	1414	2783937	15
1,1,1-Trichloroethane	U	1.00	0.333	1.00	ug/L		1					
1,1,2,2-Tetrachloroethane	UY1	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	UY1	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					

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

Contact: Kevil, Kentucky 42053
Project: Ms. Jaime Morrow
C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW221DSG3-25

Sample ID: 719425003

Project: FRNP00609

Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time Batch	Method
Volatile Organics											
8260D, Volatiles- full suite "As Received"											
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				
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				

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Report Date: July 8, 2025

Contact: Kevil, Kentucky 42053
Ms. Jaime Morrow
Project: C-746-S&T Landfill Quarterly(SG25-03)

Project: FRNP00609

Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
8260D, Volatiles- full suite "As Received"												
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	04/16/25	1306	2781930
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	JM13	05/05/25	1145	2791816
SW846 8011 PREP	8011 Prep	LL2	04/16/25	1542	2782286
SW846 3005A	ICP-MS 3005A PREP	HS2	05/06/25	1545	2792674

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	EPA 160.1	
14	EPA 410.4	
15	SW846 8260D	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
1-Chloro-2-fluorobenzene	8011, VOA Compounds Liquid "As Received"	6.32 ug/L	6.75	94	(56%-149%)
Bromofluorobenzene	8260D, Volatiles- full suite "As Received"	54.9 ug/L	50.0	110	(85%-114%)
1,2-Dichloroethane-d4	8260D, Volatiles- full suite "As Received"	52.6 ug/L	50.0	105	(81%-118%)
Toluene-d8	8260D, Volatiles- full suite "As Received"	52.3 ug/L	50.0	105	(89%-112%)

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Certificate of Analysis

Report Date: July 8, 2025

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

Contact: Kevil, Kentucky 42053
Project: Ms. Jaime Morrow
C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW221DSG3-25

Sample ID: 719425003

Project: FRNP00609

Client ID: FRNP006

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

Column headers are defined as follows:

DF: Dilution Factor

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: July 8, 2025

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

Contact: Kevil, Kentucky 42053
Project: Ms. Jaime Morrow
C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID:	MW221DSG3-25	Project:	FRNP00609
Sample ID:	719425004	Client ID:	FRNP006
Matrix:	WG		
Collect Date:	14-APR-25 07:39		
Receive Date:	15-APR-25		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP-MS												
6020, Dissolved Metals (3 Elements) "As Received"												
Barium		0.217	0.000670	0.00400	mg/L	1.00	1	PRB	05/10/25	2249	2783203	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	EXF1	04/17/25	0815	2782002
SW846 3005A	ICP-MS 3005A PREP	HS2	05/07/25	1545	2783202

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 3005A/6020B	

Notes:

Column headers are defined as follows:

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

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Certificate of Analysis

Report Date: July 8, 2025

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

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW221SG3-25 Project: FRNP00609
Sample ID: 719425005 Client ID: FRNP006
Matrix: WG
Collect Date: 14-APR-25 07:39
Receive Date: 15-APR-25
Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
504.1/8011 Analysis of EDB/DBCP												
8011, VOA Compounds Liquid "As Received"												
1,2-Dibromo-3-chloropropane	U	0.0188	0.00845	0.0188	ug/L	0.939	1	LL2	04/17/25	0428	2782287	1
Carbon Analysis												
9060A, Total Organic Carbon "As Received"												
Total Organic Carbon Average	J	0.681	0.330	2.00	mg/L		1	KB3	04/24/25	2008	2787007	3
Flow Injection Analysis												
9012B, Total Cyanide "As Received"												
Cyanide, Total	UN1	0.200	0.00167	0.200	mg/L	1.00	1	KLP1	04/21/25	1200	2781931	4
Halogen Analysis												
9020B, TOX (Organic Halogen) "As Received"												
Total Organic Halogens	BJ	7.00	3.33	10.0	ug/L		1	RMJ	05/10/25	0423	2795005	5
Ion Chromatography												
300.0, Iodide in Liquid "As Received"												
Iodide	U	0.500	0.167	0.500	mg/L		1	CH6	04/24/25	2220	2786990	6
SW846 9056A Anions (5) "As Received"												
Bromide		0.420	0.0670	0.200	mg/L		1	RXB5	04/15/25	1626	2781883	7
Fluoride	J	0.179	0.0330	4.00	mg/L		1					
Sulfate		16.1	0.133	0.400	mg/L		1					
Chloride	JW	34.8	0.335	250	mg/L		5	RXB5	04/16/25	0111	2781883	8
Nitrate-N	J	0.955	0.165	10.0	mg/L		5					
Mercury Analysis-CVAA												
7470, Mercury Liquid "As Received"												
Mercury	U	0.000200	0.0000670	0.000200	mg/L	1.00	1	JP2	05/06/25	0921	2791818	9
Metals Analysis-ICP-MS												
6020, Metals (15+) "As Received"												
Antimony	U	0.00300	0.00100	0.00300	mg/L	1.00	1	PRB	05/10/25	2145	2792675	10
Arsenic	U	0.00500	0.00200	0.00500	mg/L	1.00	1					
Barium	N	0.210	0.000670	0.00400	mg/L	1.00	1					
Beryllium	U	0.000500	0.000200	0.000500	mg/L	1.00	1					
Boron		0.0248	0.00520	0.0150	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	J	0.00315	0.00300	0.0100	mg/L	1.00	1					
Cobalt		0.00109	0.000300	0.00100	mg/L	1.00	1					

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Report Date: July 8, 2025

Contact: Kevil, Kentucky 42053
 Project: Ms. Jaime Morrow
 C-746-S&T Landfill Quarterly(SG25-03)

Project: FRNP00609

Client ID: FRNP006

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Certificate of Analysis

Report Date: July 8, 2025

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

Contact: Kevil, Kentucky 42053
Project: Ms. Jaime Morrow
C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW221SG3-25

Sample ID: 719425005

Project: FRNP00609

Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time Batch	Method
Volatile Organics											
8260D, Volatiles- full suite "As Received"											
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				
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				

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Certificate of Analysis

Report Date: July 8, 2025

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

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW221SG3-25 Project: FRNP00609
Sample ID: 719425005 Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
8260D, Volatiles- full suite "As Received"												
trans-1,2-Dichloroethylene	U	1.00	0.333	1.00	ug/L		1					
trans-1,3-Dichloropropylene	U	1.00	0.333	1.00	ug/L		1					
trans-1,4-Dichloro-2-butene	U	5.00	1.67	5.00	ug/L		1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	JM13	05/05/25	1145	2791816
SW846 3005A	ICP-MS 3005A PREP	HS2	05/06/25	1545	2792674
SW846 8011 PREP	8011 Prep	LL2	04/16/25	1542	2782286
SW846 9010C Distillation	SW846 9010C Prep	KLP1	04/16/25	1306	2781930

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	EPA 160.1	
14	EPA 410.4	
15	SW846 8260D	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
1-Chloro-2-fluorobenzene	8011, VOA Compounds Liquid "As Received"	5.61 ug/L	6.71	84	(56%-149%)
Bromofluorobenzene	8260D, Volatiles- full suite "As Received"	54.3 ug/L	50.0	109	(85%-114%)
1,2-Dichloroethane-d4	8260D, Volatiles- full suite "As Received"	52.6 ug/L	50.0	105	(81%-118%)
Toluene-d8	8260D, Volatiles- full suite "As Received"	51.6 ug/L	50.0	103	(89%-112%)

Notes:

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Certificate of Analysis

Report Date: July 8, 2025

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

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW221SG3-25

Sample ID: 719425005

Project: FRNP00609

Client ID: FRNP006

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

Column headers are defined as follows:

DF: Dilution Factor

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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Report Date: July 8, 2025

Contact: Kevil, Kentucky 42053
 Project: Ms. Jaime Morrow
 C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID:	MW221SG3-25	Project:	FRNP00609
Sample ID:	719425006	Client ID:	FRNP006
Matrix:	WG		
Collect Date:	14-APR-25 07:39		
Receive Date:	15-APR-25		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP-MS												
6020, Dissolved Metals (3 Elements) "As Received"												
Barium		0.226	0.000670	0.00400	mg/L	1.00	1	PRB	05/10/25	2257	2783203	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	EXF1	04/17/25	0815	2782002
SW846 3005A	ICP-MS 3005A PREP	HS2	05/07/25	1545	2783202

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 3005A/6020B	

Notes:

Column headers are defined as follows:

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

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Certificate of Analysis

Report Date: July 8, 2025

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

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW222SG3-25 Project: FRNP00609
Sample ID: 719425007 Client ID: FRNP006
Matrix: WG
Collect Date: 14-APR-25 09:27
Receive Date: 15-APR-25
Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
504.1/8011 Analysis of EDB/DBCP												
8011, VOA Compounds Liquid "As Received"												
1,2-Dibromo-3-chloropropane	US	0.0190	0.00854	0.0190	ug/L	0.949	1	LL2	04/17/25	0502	2782287	1
Carbon Analysis												
9060A, Total Organic Carbon "As Received"												
Total Organic Carbon Average	J	0.448	0.330	2.00	mg/L		1	KB3	04/24/25	2142	2787007	3
Flow Injection Analysis												
9012B, Total Cyanide "As Received"												
Cyanide, Total	UN1	0.200	0.00167	0.200	mg/L	1.00	1	KLP1	04/21/25	1201	2781931	4
Halogen Analysis												
9020B, TOX (Organic Halogen) "As Received"												
Total Organic Halogens	BJ	7.58	3.33	10.0	ug/L		1	RMJ	05/09/25	1937	2795005	5
Ion Chromatography												
300.0, Iodide in Liquid "As Received"												
Iodide	U	0.500	0.167	0.500	mg/L		1	CH6	04/24/25	2233	2786990	6
SW846 9056A Anions (5) "As Received"												
Bromide		0.402	0.0670	0.200	mg/L		1	RXB5	04/15/25	1657	2781883	7
Fluoride	J	0.236	0.0330	4.00	mg/L		1					
Sulfate		13.0	0.133	0.400	mg/L		1					
Chloride	JW	32.2	0.335	250	mg/L		5	RXB5	04/16/25	0142	2781883	8
Nitrate-N	J	0.883	0.165	10.0	mg/L		5					
Mercury Analysis-CVAA												
7470, Mercury Liquid "As Received"												
Mercury	U	0.000200	0.0000670	0.000200	mg/L	1.00	1	JP2	05/06/25	0923	2791818	9
Metals Analysis-ICP-MS												
6020, Metals (15+) "As Received"												
Antimony	U	0.00300	0.00100	0.00300	mg/L	1.00	1	PRB	05/10/25	2147	2792675	10
Arsenic	U	0.00500	0.00200	0.00500	mg/L	1.00	1					
Barium	N	0.279	0.000670	0.00400	mg/L	1.00	1					
Beryllium	U	0.000500	0.000200	0.000500	mg/L	1.00	1					
Boron	J	0.0104	0.00520	0.0150	mg/L	1.00	1					
Cadmium	U	0.00100	0.000300	0.00100	mg/L	1.00	1					
Calcium		20.5	0.0800	0.200	mg/L	1.00	1					
Chromium	J	0.00553	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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Report Date: July 8, 2025

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

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW222SG3-25 Project: FRNP00609
Sample ID: 719425007 Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP-MS												
6020, Metals (15+) "As Received"												
Copper	BJ	0.00111	0.000300	0.00200	mg/L	1.00	1					
Iron	JN	0.0491	0.0330	0.100	mg/L	1.00	1					
Lead	U	0.00200	0.000500	0.00200	mg/L	1.00	1					
Magnesium		9.13	0.0100	0.0300	mg/L	1.00	1					
Manganese	J	0.00278	0.00100	0.00500	mg/L	1.00	1					
Molybdenum		0.00246	0.000200	0.00100	mg/L	1.00	1					
Nickel		0.0244	0.000600	0.00200	mg/L	1.00	1					
Potassium		0.599	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		46.6	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	0.00365	0.00330	0.0200	mg/L	1.00	1					
Rhodium	U	0.00500	0.00160	0.00500	mg/L	1.00	1	PRB	05/11/25	0222	2792675	11
Tantalum	UN	0.00500	0.00100	0.00500	mg/L	1.00	1					
Aluminum	UN	0.0500	0.0193	0.0500	mg/L	1.00	1	PRB	05/11/25	1355	2792675	12
Solids Analysis												
160.1, Dissolved Solids "As Received"												
Total Dissolved Solids		223	2.38	10.0	mg/L			SC1	04/21/25	1425	2784292	13
Spectrometric Analysis												
410.4, Chem. Oxygen Demand "As Received"												
COD	U	20.0	8.95	20.0	mg/L		1	HH2	04/28/25	1456	2783865	14
Volatile Organics												
8260D, Volatiles- full suite "As Received"												
1,1,1,2-Tetrachloroethane	U	1.00	0.333	1.00	ug/L		1	PXY1	04/18/25	1506	2783937	15
1,1,1-Trichloroethane	U	1.00	0.333	1.00	ug/L		1					
1,1,2,2-Tetrachloroethane	UY1	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	UY1	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					

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

Certificate of Analysis

Report Date: July 8, 2025

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

Contact: Kevil, Kentucky 42053
Project: Ms. Jaime Morrow
C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW222SG3-25

Project: FRNP00609

Sample ID: 719425007

Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time Batch	Method
Volatile Organics											
8260D, Volatiles- full suite "As Received"											
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				
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				

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

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW222SG3-25 Project: FRNP00609
Sample ID: 719425007 Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
8260D, Volatiles- full suite "As Received"												
trans-1,2-Dichloroethylene	U	1.00	0.333	1.00	ug/L		1					
trans-1,3-Dichloropropylene	U	1.00	0.333	1.00	ug/L		1					
trans-1,4-Dichloro-2-butene	U	5.00	1.67	5.00	ug/L		1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	JM13	05/05/25	1145	2791816
SW846 8011 PREP	8011 Prep	LL2	04/16/25	1542	2782286
SW846 3005A	ICP-MS 3005A PREP	HS2	05/06/25	1545	2792674
SW846 9010C Distillation	SW846 9010C Prep	KLP1	04/16/25	1306	2781930

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	EPA 160.1		
14	EPA 410.4		
15	SW846 8260D		

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
1-Chloro-2-fluorobenzene	8011, VOA Compounds Liquid "As Received"	13.0 ug/L	6.78	192*	(56%-149%)
Bromofluorobenzene	8260D, Volatiles- full suite "As Received"	54.6 ug/L	50.0	109	(85%-114%)
1,2-Dichloroethane-d4	8260D, Volatiles- full suite "As Received"	52.5 ug/L	50.0	105	(81%-118%)
Toluene-d8	8260D, Volatiles- full suite "As Received"	53.0 ug/L	50.0	106	(89%-112%)

Notes:

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

Contact: Kevil, Kentucky 42053
Project: Ms. Jaime Morrow
C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW222SG3-25

Sample ID: 719425007

Project: FRNP00609

Client ID: FRNP006

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

Column headers are defined as follows:

DF: Dilution Factor

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

Contact: Kevil, Kentucky 42053
Project: Ms. Jaime Morrow
C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW222SG3-25 Project: FRNP00609
Sample ID: 719425008 Client ID: FRNP006
Matrix: WG
Collect Date: 14-APR-25 09:27
Receive Date: 15-APR-25
Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP-MS												
6020, Dissolved Metals (3 Elements) "As Received"												
Barium		0.282	0.000670	0.00400	mg/L	1.00	1	PRB	05/10/25	2300	2783203	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	EXF1	04/17/25	0815	2782002
SW846 3005A	ICP-MS 3005A PREP	HS2	05/07/25	1545	2783202

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	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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Report Date: July 8, 2025

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

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW223SG3-25 Project: FRNP00609
Sample ID: 719425009 Client ID: FRNP006
Matrix: WG
Collect Date: 14-APR-25 08:43
Receive Date: 15-APR-25
Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
504.1/8011 Analysis of EDB/DBCP												
8011, VOA Compounds Liquid "As Received"												
1,2-Dibromo-3-chloropropane	U	0.0188	0.00847	0.0188	ug/L	0.941	1	LL2	04/17/25	0536	2782287	1
Carbon Analysis												
9060A, Total Organic Carbon "As Received"												
Total Organic Carbon Average	J	0.496	0.330	2.00	mg/L		1	KB3	04/25/25	0803	2787022	3
Flow Injection Analysis												
9012B, Total Cyanide "As Received"												
Cyanide, Total	UN1	0.200	0.00167	0.200	mg/L	1.00	1	KLP1	04/21/25	1202	2781931	4
Halogen Analysis												
9020B, TOX (Organic Halogen) "As Received"												
Total Organic Halogens	U	10.0	3.33	10.0	ug/L		1	RMJ	05/10/25	0507	2795005	5
Ion Chromatography												
300.0, Iodide in Liquid "As Received"												
Iodide	U	0.500	0.167	0.500	mg/L		1	CH6	04/24/25	2246	2786990	6
SW846 9056A Anions (5) "As Received"												
Bromide		0.404	0.0670	0.200	mg/L		1	RXB5	04/15/25	1830	2781883	7
Fluoride	J	0.190	0.0330	4.00	mg/L		1					
Sulfate		15.9	0.133	0.400	mg/L		1					
Chloride	JW	36.3	0.335	250	mg/L		5	RXB5	04/16/25	0213	2781883	8
Nitrate-N	J	0.859	0.165	10.0	mg/L		5					
Mercury Analysis-CVAA												
7470, Mercury Liquid "As Received"												
Mercury	U	0.000200	0.0000670	0.000200	mg/L	1.00	1	JP2	05/06/25	0924	2791818	9
Metals Analysis-ICP-MS												
6020, Metals (15+) "As Received"												
Antimony	U	0.00300	0.00100	0.00300	mg/L	1.00	1	PRB	05/10/25	2150	2792675	10
Arsenic	U	0.00500	0.00200	0.00500	mg/L	1.00	1					
Barium	N	0.227	0.000670	0.00400	mg/L	1.00	1					
Beryllium	U	0.000500	0.000200	0.000500	mg/L	1.00	1					
Boron	J	0.0112	0.00520	0.0150	mg/L	1.00	1					
Cadmium	U	0.00100	0.000300	0.00100	mg/L	1.00	1					
Calcium		22.7	0.0800	0.200	mg/L	1.00	1					
Chromium		0.0196	0.00300	0.0100	mg/L	1.00	1					
Cobalt		0.00236	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-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW223SG3-25 Project: FRNP00609
Sample ID: 719425009 Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP-MS												
6020, Metals (15+) "As Received"												
Copper	BJ	0.00187	0.000300	0.00200	mg/L	1.00	1					
Iron	N	0.112	0.0330	0.100	mg/L	1.00	1					
Lead	U	0.00200	0.000500	0.00200	mg/L	1.00	1					
Magnesium		9.98	0.0100	0.0300	mg/L	1.00	1					
Manganese		0.0201	0.00100	0.00500	mg/L	1.00	1					
Molybdenum		0.00183	0.000200	0.00100	mg/L	1.00	1					
Nickel		0.322	0.000600	0.00200	mg/L	1.00	1					
Potassium		1.20	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		46.3	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	0.00429	0.00330	0.0200	mg/L	1.00	1					
Rhodium	U	0.00500	0.00160	0.00500	mg/L	1.00	1	PRB	05/11/25	0223	2792675	11
Tantalum	UN	0.00500	0.00100	0.00500	mg/L	1.00	1					
Aluminum	UN	0.0500	0.0193	0.0500	mg/L	1.00	1	PRB	05/11/25	1356	2792675	12
Solids Analysis												
160.1, Dissolved Solids "As Received"												
Total Dissolved Solids		204	2.38	10.0	mg/L			SC1	04/21/25	1425	2784292	13
Spectrometric Analysis												
410.4, Chem. Oxygen Demand "As Received"												
COD	J	15.0	8.95	20.0	mg/L		1	HH2	04/28/25	1456	2783865	14
Volatile Organics												
8260D, Volatiles- full suite "As Received"												
1,1,1,2-Tetrachloroethane	U	1.00	0.333	1.00	ug/L		1	PXY1	04/18/25	1532	2783937	15
1,1,1-Trichloroethane	U	1.00	0.333	1.00	ug/L		1					
1,1,2,2-Tetrachloroethane	UY1	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	UY1	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					

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Contact: Kevil, Kentucky 42053
Project: Ms. Jaime Morrow
C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW223SG3-25

Project: FRNP00609

Sample ID: 719425009

Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time Batch	Method
Volatile Organics											
8260D, Volatiles- full suite "As Received"											
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				
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				

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Report Date: July 8, 2025

Contact: Kevil, Kentucky 42053
Project: Ms. Jaime Morrow
C-746-S&T Landfill Quarterly(SG25-03)

Project: FRNP00609

Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
8260D, Volatiles- full suite "As Received"												
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	04/16/25	1306	2781930
SW846 8011 PREP	8011 Prep	LL2	04/16/25	1542	2782286
SW846 3005A	ICP-MS 3005A PREP	HS2	05/06/25	1545	2792674
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	JM13	05/05/25	1145	2791816

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	EPA 160.1	
14	EPA 410.4	
15	SW846 8260D	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
1-Chloro-2-fluorobenzene	8011, VOA Compounds Liquid "As Received"	6.25 ug/L	6.72	93	(56%-149%)
Bromofluorobenzene	8260D, Volatiles- full suite "As Received"	54.8 ug/L	50.0	110	(85%-114%)
1,2-Dichloroethane-d4	8260D, Volatiles- full suite "As Received"	52.7 ug/L	50.0	105	(81%-118%)
Toluene-d8	8260D, Volatiles- full suite "As Received"	53.8 ug/L	50.0	108	(89%-112%)

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Certificate of Analysis

Report Date: July 8, 2025

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

Contact: Kevil, Kentucky 42053
Project: Ms. Jaime Morrow
C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW223SG3-25

Sample ID: 719425009

Project: FRNP00609

Client ID: FRNP006

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

Column headers are defined as follows:

DF: Dilution Factor

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

GEL LABORATORIES LLC

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Certificate of Analysis

Report Date: July 8, 2025

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

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW223SG3-25 Project: FRNP00609
Sample ID: 719425010 Client ID: FRNP006
Matrix: WG
Collect Date: 14-APR-25 08:43
Receive Date: 15-APR-25
Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP-MS												
6020, Dissolved Metals (3 Elements) "As Received"												
Barium		0.225	0.000670	0.00400	mg/L	1.00	1	PRB	05/10/25	2302	2783203	1
Chromium	J	0.00770	0.00300	0.0100	mg/L	1.00	1					
Uranium	U	0.000200	0.0000670	0.000200	mg/L	1.00	1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	HS2	05/07/25	1545	2783202
EPA 160	Laboratory Filtration	EXF1	04/17/25	0815	2782002

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	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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Report Date: July 8, 2025

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

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW224SG3-25
Sample ID: 719425011
Matrix: WG
Collect Date: 14-APR-25 10:11
Receive Date: 15-APR-25
Collector: Client

Project: FRNP00609
Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
504.1/8011 Analysis of EDB/DBCP												
8011, VOA Compounds Liquid "As Received"												
1,2-Dibromo-3-chloropropane	U	0.0190	0.00854	0.0190	ug/L	0.949	1	LL2	04/17/25	0609	2782287	1
Carbon Analysis												
9060A, Total Organic Carbon "As Received"												
Total Organic Carbon Average	J	0.731	0.330	2.00	mg/L		1	KB3	04/25/25	0907	2787022	3
Flow Injection Analysis												
9012B, Total Cyanide "As Received"												
Cyanide, Total	JN1	0.00295	0.00167	0.200	mg/L	1.00	1	KLP1	04/21/25	1203	2781931	4
Halogen Analysis												
9020B, TOX (Organic Halogen) "As Received"												
Total Organic Halogens	BJ	7.96	3.33	10.0	ug/L		1	RMJ	05/09/25	2228	2795005	5
Ion Chromatography												
300.0, Iodide in Liquid "As Received"												
Iodide	U	0.500	0.167	0.500	mg/L		1	CH6	04/24/25	2259	2786990	6
SW846 9056A Anions (5) "As Received"												
Bromide		0.387	0.0670	0.200	mg/L		1	RXB5	04/15/25	1900	2781883	7
Fluoride	J	0.245	0.0330	4.00	mg/L		1					
Sulfate		21.0	0.133	0.400	mg/L		1					
Chloride	JW	30.9	0.335	250	mg/L		5	RXB5	04/16/25	0244	2781883	8
Nitrate-N	J	0.938	0.165	10.0	mg/L		5					
Mercury Analysis-CVAA												
7470, Mercury Liquid "As Received"												
Mercury	U	0.000200	0.0000670	0.000200	mg/L	1.00	1	JP2	05/06/25	0926	2791818	9
Metals Analysis-ICP-MS												
6020, Metals (15+) "As Received"												
Antimony	U	0.00300	0.00100	0.00300	mg/L	1.00	1	PRB	05/10/25	2153	2792675	10
Arsenic	U	0.00500	0.00200	0.00500	mg/L	1.00	1					
Barium	N	0.237	0.000670	0.00400	mg/L	1.00	1					
Beryllium	U	0.000500	0.000200	0.000500	mg/L	1.00	1					
Boron		0.0423	0.00520	0.0150	mg/L	1.00	1					
Cadmium	U	0.00100	0.000300	0.00100	mg/L	1.00	1					
Calcium		25.5	0.0800	0.200	mg/L	1.00	1					
Chromium	U	0.0100	0.00300	0.0100	mg/L	1.00	1					
Cobalt	U	0.00100	0.000300	0.00100	mg/L	1.00	1					

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Report Date: July 8, 2025

Client Sample ID:	MW224SG3-25	Project:	FRNP00609
Sample ID:	719425011	Client ID:	FRNP006

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Certificate of Analysis

Report Date: July 8, 2025

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

Contact: Kevil, Kentucky 42053
Project: Ms. Jaime Morrow
C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW224SG3-25

Sample ID: 719425011

Project: FRNP00609

Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time Batch	Method
Volatile Organics											
8260D, Volatiles- full suite "As Received"											
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				
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				

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Report Date: July 8, 2025

Contact: Kevil, Kentucky 42053
 Project: Ms. Jaime Morrow
 C-746-S&T Landfill Quarterly(SG25-03)

Project: FRNP00609

Client ID: FRNP006

The following Prep Methods were performed:

The following Analytical Methods were performed:

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
1-Chloro-2-fluorobenzene	8011, VOA Compounds Liquid "As Received"	6.42 ug/L	6.78	95	(56%-149%)
Bromofluorobenzene	8260D, Volatiles- full suite "As Received"	55.3 ug/L	50.0	111	(85%-114%)
1,2-Dichloroethane-d4	8260D, Volatiles- full suite "As Received"	52.8 ug/L	50.0	106	(81%-118%)
Toluene-d8	8260D, Volatiles- full suite "As Received"	54.2 ug/L	50.0	108	(89%-112%)

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Contact: Kevil, Kentucky 42053
Project: Ms. Jaime Morrow
C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW224SG3-25

Sample ID: 719425011

Project: FRNP00609

Client ID: FRNP006

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

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: July 8, 2025

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

Contact: Kevil, Kentucky 42053
Project: Ms. Jaime Morrow
C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID:	MW224SG3-25	Project:	FRNP00609
Sample ID:	719425012	Client ID:	FRNP006
Matrix:	WG		
Collect Date:	14-APR-25 10:11		
Receive Date:	15-APR-25		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP-MS												
6020, Dissolved Metals (3 Elements) "As Received"												
Barium		0.238	0.000670	0.00400	mg/L	1.00	1	PRB	05/10/25	2305	2783203	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	EXF1	04/17/25	0815	2782002
SW846 3005A	ICP-MS 3005A PREP	HS2	05/07/25	1545	2783202

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 3005A/6020B	

Notes:

Column headers are defined as follows:

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

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Certificate of Analysis

Report Date: July 8, 2025

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

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW397SG3-25 Project: FRNP00609
Sample ID: 719425013 Client ID: FRNP006
Matrix: WG
Collect Date: 14-APR-25 12:55
Receive Date: 15-APR-25
Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
504.1/8011 Analysis of EDB/DBCP												
8011, VOA Compounds Liquid "As Received"												
1,2-Dibromo-3-chloropropane	U	0.0189	0.00850	0.0189	ug/L	0.944	1	LL2	04/17/25	0643	2782287	1
Carbon Analysis												
9060A, Total Organic Carbon "As Received"												
Total Organic Carbon Average	J	0.640	0.330	2.00	mg/L		1	KB3	04/25/25	0938	2787022	3
Flow Injection Analysis												
9012B, Total Cyanide "As Received"												
Cyanide, Total	UN1	0.200	0.00167	0.200	mg/L	1.00	1	KLP1	04/21/25	1204	2781931	4
Halogen Analysis												
9020B, TOX (Organic Halogen) "As Received"												
Total Organic Halogens	B	10.2	3.33	10.0	ug/L		1	RMJ	05/09/25	2033	2795005	5
Ion Chromatography												
300.0, Iodide in Liquid "As Received"												
Iodide	U	0.500	0.167	0.500	mg/L		1	CH6	04/24/25	2312	2786990	6
SW846 9056A Anions (5) "As Received"												
Bromide		0.375	0.0670	0.200	mg/L		1	RXB5	04/15/25	1931	2781883	7
Fluoride	J	0.141	0.0330	4.00	mg/L		1					
Sulfate		12.1	0.133	0.400	mg/L		1					
Chloride	JW	34.2	0.335	250	mg/L		5	RXB5	04/16/25	0314	2781883	8
Nitrate-N	J	0.913	0.165	10.0	mg/L		5					
Mercury Analysis-CVAA												
7470, Mercury Liquid "As Received"												
Mercury	U	0.000200	0.0000670	0.000200	mg/L	1.00	1	JP2	05/06/25	0928	2791818	9
Metals Analysis-ICP-MS												
6020, Metals (15+) "As Received"												
Antimony	U	0.00300	0.00100	0.00300	mg/L	1.00	1	PRB	05/10/25	2201	2792675	10
Arsenic	U	0.00500	0.00200	0.00500	mg/L	1.00	1					
Barium	N	0.146	0.000670	0.00400	mg/L	1.00	1					
Beryllium	U	0.000500	0.000200	0.000500	mg/L	1.00	1					
Boron	J	0.0101	0.00520	0.0150	mg/L	1.00	1					
Cadmium	U	0.00100	0.000300	0.00100	mg/L	1.00	1					
Calcium		19.1	0.0800	0.200	mg/L	1.00	1					
Chromium	U	0.0100	0.00300	0.0100	mg/L	1.00	1					
Cobalt	J	0.000697	0.000300	0.00100	mg/L	1.00	1					

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Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW397SG3-25 Project: FRNP00609
Sample ID: 719425013 Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP-MS												
6020, Metals (15+) "As Received"												
Copper	BJ	0.00159	0.000300	0.00200	mg/L	1.00	1					
Iron	N	1.56	0.0330	0.100	mg/L	1.00	1					
Lead	J	0.000595	0.000500	0.00200	mg/L	1.00	1					
Magnesium		8.23	0.0100	0.0300	mg/L	1.00	1					
Manganese		0.0321	0.00100	0.00500	mg/L	1.00	1					
Molybdenum	U	0.00100	0.000200	0.00100	mg/L	1.00	1					
Nickel	J	0.00158	0.000600	0.00200	mg/L	1.00	1					
Potassium		1.94	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		35.4	0.0800	0.250	mg/L	1.00	1					
Thallium	U	0.00200	0.000600	0.00200	mg/L	1.00	1					
Uranium	J	0.0000720	0.0000670	0.000200	mg/L	1.00	1					
Vanadium	J	0.00446	0.00330	0.0200	mg/L	1.00	1					
Zinc	J	0.00655	0.00330	0.0200	mg/L	1.00	1					
Rhodium	U	0.00500	0.00160	0.00500	mg/L	1.00	1	PRB	05/11/25	0227	2792675	11
Tantalum	UN	0.00500	0.00100	0.00500	mg/L	1.00	1					
Aluminum	BN	0.786	0.0193	0.0500	mg/L	1.00	1	PRB	05/11/25	1400	2792675	12
Solids Analysis												
160.1, Dissolved Solids "As Received"												
Total Dissolved Solids		200	2.38	10.0	mg/L			SC1	04/21/25	1425	2784292	13
Spectrometric Analysis												
410.4, Chem. Oxygen Demand "As Received"												
COD	U	20.0	8.95	20.0	mg/L		1	HH2	04/28/25	1456	2783865	14
Volatile Organics												
8260D, Volatiles- full suite "As Received"												
1,1,1,2-Tetrachloroethane	U	1.00	0.333	1.00	ug/L		1	PXY1	04/18/25	1624	2783937	15
1,1,1-Trichloroethane	U	1.00	0.333	1.00	ug/L		1					
1,1,2,2-Tetrachloroethane	UY1	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	UY1	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					

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Contact: Kevil, Kentucky 42053
Project: Ms. Jaime Morrow
C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW397SG3-25

Sample ID: 719425013

Project: FRNP00609

Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time Batch	Method
Volatile Organics											
8260D, Volatiles- full suite "As Received"											
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				
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				

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Address : 5600 Hobbs Road

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW397SG3-25 Project: FRNP00609
Sample ID: 719425013 Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
8260D, Volatiles- full suite "As Received"												
trans-1,2-Dichloroethylene	U	1.00	0.333	1.00	ug/L		1					
trans-1,3-Dichloropropylene	U	1.00	0.333	1.00	ug/L		1					
trans-1,4-Dichloro-2-butene	U	5.00	1.67	5.00	ug/L		1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	JM13	05/05/25	1145	2791816
SW846 8011 PREP	8011 Prep	LL2	04/16/25	1542	2782286
SW846 3005A	ICP-MS 3005A PREP	HS2	05/06/25	1545	2792674
SW846 9010C Distillation	SW846 9010C Prep	KLP1	04/16/25	1306	2781930

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	EPA 160.1	
14	EPA 410.4	
15	SW846 8260D	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
1-Chloro-2-fluorobenzene	8011, VOA Compounds Liquid "As Received"	6.05 ug/L	6.74	90	(56%-149%)
Bromofluorobenzene	8260D, Volatiles- full suite "As Received"	55.2 ug/L	50.0	110	(85%-114%)
1,2-Dichloroethane-d4	8260D, Volatiles- full suite "As Received"	53.3 ug/L	50.0	107	(81%-118%)
Toluene-d8	8260D, Volatiles- full suite "As Received"	52.9 ug/L	50.0	106	(89%-112%)

Notes:

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Report Date: July 8, 2025

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

Contact: Kevil, Kentucky 42053
Project: Ms. Jaime Morrow
C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW397SG3-25

Sample ID: 719425013

Project: FRNP00609

Client ID: FRNP006

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

Column headers are defined as follows:

DF: Dilution Factor

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: July 8, 2025

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

Contact: Kevil, Kentucky 42053
Project: Ms. Jaime Morrow
C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID:	MW397SG3-25	Project:	FRNP00609
Sample ID:	719425014	Client ID:	FRNP006
Matrix:	WG		
Collect Date:	14-APR-25 12:55		
Receive Date:	15-APR-25		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP-MS												
6020, Dissolved Metals (3 Elements) "As Received"												
Barium		0.132	0.000670	0.00400	mg/L	1.00	1	PRB	05/10/25	2308	2783203	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	EXF1	04/17/25	0815	2782002
SW846 3005A	ICP-MS 3005A PREP	HS2	05/07/25	1545	2783202

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-S&T Landfill Quarterly(SG25-03)

Client Sample ID: FB1SG3-25 Project: FRNP00609
Sample ID: 719425015 Client ID: FRNP006
Matrix: WATER
Collect Date: 14-APR-25 07:42
Receive Date: 15-APR-25
Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
504.1/8011 Analysis of EDB/DBCP												
8011, VOA Compounds Liquid "As Received"												
1,2-Dibromo-3-chloropropane	U	0.0190	0.00853	0.0190	ug/L	0.948	1	LL2	04/17/25	0912	2782287	1
Ion Chromatography												
300.0, Iodide in Liquid "As Received"												
Iodide	U	0.500	0.167	0.500	mg/L		1	CH6	04/25/25	0016	2786990	3
Mercury Analysis-CVAA												
7470, Mercury Liquid "As Received"												
Mercury	U	0.000200	0.0000670	0.000200	mg/L	1.00	1	JP2	05/06/25	0939	2791818	4
Metals Analysis-ICP-MS												
6020, Metals (15+) "As Received"												
Antimony	U	0.00300	0.00100	0.00300	mg/L	1.00	1	PRB	05/10/25	2215	2792675	5
Arsenic	U	0.00500	0.00200	0.00500	mg/L	1.00	1					
Barium	UN	0.00400	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					
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	BJ	0.000354	0.000300	0.00200	mg/L	1.00	1					
Iron	UN	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	J	0.00414	0.00330	0.0200	mg/L	1.00	1					
Rhodium	U	0.00500	0.00160	0.00500	mg/L	1.00	1	PRB	05/11/25	0233	2792675	6

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

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: FB1SG3-25 Project: FRNP00609
Sample ID: 719425015 Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP-MS												
6020, Metals (15+) "As Received"												
Tantalum	UN	0.00500	0.00100	0.00500	mg/L	1.00	1					
Aluminum	UN	0.0500	0.0193	0.0500	mg/L	1.00	1	PRB	05/11/25	1405	2792675	7
Volatile Organics												
8260D, Volatiles- full suite "As Received"												
1,1,1,2-Tetrachloroethane	U	1.00	0.333	1.00	ug/L		1	PXY1	04/18/25	1650	2783937	8
1,1,1-Trichloroethane	U	1.00	0.333	1.00	ug/L		1					
1,1,2,2-Tetrachloroethane	UY1	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	UY1	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		1.18	0.333	1.00	ug/L		1					
Chloroethane	U	1.00	0.333	1.00	ug/L		1					
Chloroform	J	0.410	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					

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

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: FB1SG3-25 Project: FRNP00609
Sample ID: 719425015 Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
8260D, Volatiles- full suite "As Received"												
Iodomethane	U	5.00	1.67	5.00	ug/L		1					
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	LL2	04/16/25	1542	2782286
SW846 3005A	ICP-MS 3005A PREP	HS2	05/06/25	1545	2792674
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	JM13	05/05/25	1145	2791816

The following Analytical Methods were performed:

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

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
1-Chloro-2-fluorobenzene	8011, VOA Compounds Liquid "As Received"	7.18 ug/L	6.77	106	(56%-149%)
Bromofluorobenzene	8260D, Volatiles- full suite "As Received"	54.9 ug/L	50.0	110	(85%-114%)

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

Contact: Kevil, Kentucky 42053
Project: Ms. Jaime Morrow
C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: FB1SG3-25

Sample ID: 719425015

Project: FRNP00609

Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time Batch	Method
1,2-Dichloroethane-d4	8260D, Volatiles-	full suite "As Received"			52.5 ug/L	50.0		105		(81%-118%)	
Toluene-d8	8260D, Volatiles-	full suite "As Received"			53.3 ug/L	50.0		107		(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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Company : Four Rivers Nuclear Partnership, LLC
Address : 5600 Hobbs Road

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: RI1SG3-25 Project: FRNP00609
Sample ID: 719425016 Client ID: FRNP006
Matrix: WATER
Collect Date: 14-APR-25 06:15
Receive Date: 15-APR-25
Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
504.1/8011 Analysis of EDB/DBCP												
8011, VOA Compounds Liquid "As Received"												
1,2-Dibromo-3-chloropropane	U	0.0190	0.00854	0.0190	ug/L	0.949	1	LL2	04/17/25	1143	2782287	1
Ion Chromatography												
300.0, Iodide in Liquid "As Received"												
Iodide	U	0.500	0.167	0.500	mg/L		1	CH6	04/25/25	0029	2786990	3
Mercury Analysis-CVAA												
7470, Mercury Liquid "As Received"												
Mercury	U	0.000200	0.0000670	0.000200	mg/L	1.00	1	JP2	05/06/25	0941	2791818	4
Metals Analysis-ICP-MS												
6020, Metals (15+) "As Received"												
Antimony	U	0.00300	0.00100	0.00300	mg/L	1.00	1	PRB	05/10/25	2218	2792675	5
Arsenic	U	0.00500	0.00200	0.00500	mg/L	1.00	1					
Barium	UN	0.00400	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					
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	BJ	0.000452	0.000300	0.00200	mg/L	1.00	1					
Iron	UN	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					
Rhodium	U	0.00500	0.00160	0.00500	mg/L	1.00	1	PRB	05/11/25	0234	2792675	6

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Address : 5600 Hobbs Road

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: RI1SG3-25 Project: FRNP00609
Sample ID: 719425016 Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP-MS												
6020, Metals (15+) "As Received"												
Tantalum	UN	0.00500	0.00100	0.00500	mg/L	1.00	1					
Aluminum	UN	0.0500	0.0193	0.0500	mg/L	1.00	1	PRB	05/11/25	1406	2792675	7
Volatile Organics												
8260D, Volatiles- full suite "As Received"												
1,1,1,2-Tetrachloroethane	U	1.00	0.333	1.00	ug/L		1	PXY1	04/18/25	1716	2783937	8
1,1,1-Trichloroethane	U	1.00	0.333	1.00	ug/L		1					
1,1,2,2-Tetrachloroethane	UY1	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	UY1	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		2.15	0.333	1.00	ug/L		1					
Chloroethane	U	1.00	0.333	1.00	ug/L		1					
Chloroform	J	0.690	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					

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Certificate of Analysis

Report Date: July 8, 2025

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

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: RI1SG3-25 Project: FRNP00609
Sample ID: 719425016 Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
8260D, Volatiles- full suite "As Received"												
Iodomethane	U	5.00	1.67	5.00	ug/L		1					
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 3005A	ICP-MS 3005A PREP	HS2	05/06/25	1545	2792674
SW846 8011 PREP	8011 Prep	LL2	04/16/25	1542	2782286
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	JM13	05/05/25	1145	2791816

The following Analytical Methods were performed:

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

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
1-Chloro-2-fluorobenzene	8011, VOA Compounds Liquid "As Received"	6.79 ug/L	6.78	100	(56%-149%)
Bromofluorobenzene	8260D, Volatiles- full suite "As Received"	54.3 ug/L	50.0	109	(85%-114%)

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Report Date: July 8, 2025

Client Sample ID: RI1SG3-25
Sample ID: 719425016

Project:	FRNP00609
Client ID:	FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
1,2-Dichloroethane-d4	8260D,	Volatiles- full suite "As Received"		51.7	ug/L	50.0			103		(81%-118%)	
Toluene-d8	8260D,	Volatiles- full suite "As Received"		52.9	ug/L	50.0			106		(89%-112%)	

Notes:

Column headers are defined as follows:

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

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Report Date: July 8, 2025

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

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: TB1SG3-25 Project: FRNP00609
Sample ID: 719425017 Client ID: FRNP006
Matrix: WATER
Collect Date: 14-APR-25 06:10
Receive Date: 15-APR-25
Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
504.1/8011 Analysis of EDB/DBCP												
8011, VOA Compounds Liquid "As Received"												
1,2-Dibromo-3-chloropropane	U	0.0191	0.00860	0.0191	ug/L	0.956	1	LL2	04/17/25	1020	2782287	1
Volatile Organics												
8260D, Volatiles- full suite "As Received"												
1,1,1,2-Tetrachloroethane	U	1.00	0.333	1.00	ug/L		1	PXY1	04/18/25	1742	2783937	3
1,1,1-Trichloroethane	U	1.00	0.333	1.00	ug/L		1					
1,1,2,2-Tetrachloroethane	UY1	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	UY1	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		2.19	0.333	1.00	ug/L		1					
Chloroethane	U	1.00	0.333	1.00	ug/L		1					
Chloroform	J	0.690	0.333	1.00	ug/L		1					
Chloromethane	U	1.00	0.333	1.00	ug/L		1					
Dibromochloromethane	U	1.00	0.333	1.00	ug/L		1					
Dibromomethane	U	1.00	0.333	1.00	ug/L		1					
Ethylbenzene	U	1.00	0.333	1.00	ug/L		1					
Iodomethane	U	5.00	1.67	5.00	ug/L		1					

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Report Date: July 8, 2025

Contact: Kevil, Kentucky 42053
Ms. Jaime Morrow
Project: C-746-S&T Landfill Quarterly(SG25-03)

Project: FRNP00609

Client ID: FRNP006

The following Prep Methods were performed:

The following Analytical Methods were performed:

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
1-Chloro-2-fluorobenzene	8011, VOA Compounds Liquid "As Received"	7.58 ug/L	6.83	111	(56%-149%)
Bromofluorobenzene	8260D, Volatiles- full suite "As Received"	54.1 ug/L	50.0	108	(85%-114%)
1,2-Dichloroethane-d4	8260D, Volatiles- full suite "As Received"	52.8 ug/L	50.0	106	(81%-118%)
Toluene-d8	8260D, Volatiles- full suite "As Received"	53.2 ug/L	50.0	106	(89%-112%)

Notes:

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Certificate of Analysis

Report Date: July 8, 2025

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

Contact: Kevil, Kentucky 42053
Project: Ms. Jaime Morrow
C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: TB1SG3-25

Sample ID: 719425017

Project: FRNP00609

Client ID: FRNP006

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

Column headers are defined as follows:

DF: Dilution Factor

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

Company : Four Rivers Nuclear Partnership,
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5600 Hobbs Road

Kevil, Kentucky 42053

Report Date: July 8, 2025

Contact: Ms. Jaime Morrow

Project: C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW384SG3-25
Sample ID: 719632001
Matrix: WG
Collect Date: 15-APR-25
Receive Date: 16-APR-25
Collector: Client

Project: FRNP00609
Client ID: FRNP006

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis														
<i>AlphaSpec Ra226, Liquid "As Received"</i>														
Radium-226	U	0.414	+/-0.569	0.874	+/-0.572	5.00	pCi/L			CM4	05/04/25	1226	2790618	1
<i>Th-01-RC M, Th Isotopes, Liquid "As Received"</i>														
Thorium-230	U	0.391	+/-0.791	1.38	+/-0.795	50.0	pCi/L			CM4	04/27/25	1146	2784559	2
Rad Gas Flow Proportional Counting														
<i>905.0 Mod, Sr90, liquid "As Received"</i>														
Strontium-90	U	0.202	+/-2.02	3.69	+/-2.02	8.00	pCi/L			CH7	05/01/25	1506	2783394	3
<i>9310, Alpha/Beta Activity, liquid "As Received"</i>														
Alpha	U	-0.103	+/-3.34	7.59	+/-3.35	15.0	pCi/L			HH3	05/02/25	1538	2783554	4
Beta		33.1	+/-8.96	10.8	+/-10.5	50.0	pCi/L							
Rad Liquid Scintillation Analysis														
<i>906.0 Mod, Tritium Dist, Liquid "As Received"</i>														
Tritium	U	-20.1	+/-121	219	+/-121	300	pCi/L			MJ3	05/11/25	1309	2792302	5
<i>Tc-02-RC-MOD, Tc99, Liquid "As Received"</i>														
Technetium-99		41.3	+/-13.5	20.2	+/-14.3	25.0	pCi/L			MJ3	05/11/25	2331	2788031	6

The following Analytical Methods were performed

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

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	AlphaSpec Ra226, Liquid "As Received"	2790618	94.7	(30%-110%)
Thorium-229 Tracer	Th-01-RC M, Th Isotopes, Liquid "As Received"	2784559	90.2	(30%-110%)
Strontium Carrier	905.0 Mod, Sr90, liquid "As Received"	2783394	70.5	(30%-110%)
Technetium-99m Tracer	Tc-02-RC-MOD, Tc99, Liquid "As Received"	2788031	98	(30%-110%)

GEL LABORATORIES LLC

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5600 Hobbs Road

Kevil, Kentucky 42053

Report Date: July 8, 2025

Contact: Ms. Jaime Morrow

Project: C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW384SG3-25

Project: FRNP00609

Sample ID: 719632001

Client ID: FRNP006

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

Notes:

The MDC is a sample specific MDC.

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

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

Lc/LC: Critical Level

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Mtd.: Method

PF: Prep Factor

RL: Reporting Limit

TPU: Total Propagated Uncertainty

GEL LABORATORIES LLC

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Certificate of Analysis

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5600 Hobbs Road

Kevil, Kentucky 42053

Report Date: July 8, 2025

Contact: Ms. Jaime Morrow

Project: C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW385SG3-25

Project: FRNP00609

Sample ID: 719632003

Client ID: FRNP006

Matrix: WG

Collect Date: 15-APR-25

Receive Date: 16-APR-25

Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis														
<i>AlphaSpec Ra226, Liquid "As Received"</i>														
Radium-226	U	0.444	+/-0.574	0.852	+/-0.577	5.00	pCi/L			CM4	05/04/25	1226	2790618	1
<i>Th-01-RC M, Th Isotopes, Liquid "As Received"</i>														
Thorium-230	U	0.697	+/-0.828	1.23	+/-0.837	50.0	pCi/L			CM4	04/27/25	1146	2784559	2
Rad Gas Flow Proportional Counting														
<i>905.0 Mod, Sr90, liquid "As Received"</i>														
Strontium-90	U	-0.761	+/-1.06	2.32	+/-1.06	8.00	pCi/L			CH7	05/01/25	1506	2783394	3
<i>9310, Alpha/Beta Activity, liquid "As Received"</i>														
Alpha	U	-0.121	+/-4.65	9.75	+/-4.65	15.0	pCi/L			HH3	05/02/25	1538	2783554	4
Beta		20.6	+/-8.12	11.3	+/-8.83	50.0	pCi/L							
Rad Liquid Scintillation Analysis														
<i>906.0 Mod, Tritium Dist, Liquid "As Received"</i>														
Tritium	U	211	+/-160	262	+/-165	300	pCi/L			MJ3	05/13/25	2127	2792302	5
<i>Tc-02-RC-MOD, Tc99, Liquid "As Received"</i>														
Technetium-99		44.2	+/-13.7	20.2	+/-14.6	25.0	pCi/L			MJ3	05/11/25	2348	2788031	6

The following Analytical Methods were performed

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

Surrogate/Tracer	Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer		AlphaSpec Ra226, Liquid "As Received"	2790618	98.1	(30%-110%)
Thorium-229 Tracer		Th-01-RC M, Th Isotopes, Liquid "As Received"	2784559	94.3	(30%-110%)
Strontium Carrier		905.0 Mod, Sr90, liquid "As Received"	2783394	79.5	(30%-110%)
Technetium-99m Tracer		Tc-02-RC-MOD, Tc99, Liquid "As Received"	2788031	96.5	(30%-110%)

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Report Date: July 8, 2025

Contact: Ms. Jaime Morrow

Project: C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW385SG3-25

Project: FRNP00609

Sample ID: 719632003

Client ID: FRNP006

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

Notes:

The MDC is a sample specific MDC.

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

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

Lc/LC: Critical Level

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Mtd.: Method

PF: Prep Factor

RL: Reporting Limit

TPU: Total Propagated Uncertainty

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Kevil, Kentucky 42053

Report Date: July 8, 2025

Contact: Ms. Jaime Morrow

Project: C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW386SG3-25

Project: FRNP00609

Sample ID: 719632005

Client ID: FRNP006

Matrix: WG

Collect Date: 15-APR-25

Receive Date: 16-APR-25

Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis														
<i>AlphaSpec Ra226, Liquid "As Received"</i>														
Radium-226	U	0.501	+/-0.611	0.872	+/-0.614	5.00	pCi/L			CM4	05/04/25	1226	2790618	1
<i>Th-01-RC M, Th Isotopes, Liquid "As Received"</i>														
Thorium-230	U	0.712	+/-0.941	1.47	+/-0.949	50.0	pCi/L			CM4	04/27/25	1146	2784559	2
Rad Gas Flow Proportional Counting														
<i>905.0 Mod, Sr90, liquid "As Received"</i>														
Strontium-90	U	-4.43	+/-1.10	3.02	+/-1.10	8.00	pCi/L			CH7	05/02/25	1656	2783394	3
<i>9310, Alpha/Beta Activity, liquid "As Received"</i>														
Alpha	U	0.832	+/-5.93	11.8	+/-5.94	15.0	pCi/L			HH3	05/02/25	1538	2783554	4
Beta	U	2.57	+/-6.45	11.5	+/-6.47	50.0	pCi/L							
Rad Liquid Scintillation Analysis														
<i>906.0 Mod, Tritium Dist, Liquid "As Received"</i>														
Tritium	U	-13.3	+/-118	214	+/-118	300	pCi/L			MJ3	05/11/25	1432	2792302	5
<i>Tc-02-RC-MOD, Tc99, Liquid "As Received"</i>														
Technetium-99	U	2.94	+/-11.4	19.9	+/-11.4	25.0	pCi/L			MJ3	05/12/25	0005	2788031	6

The following Analytical Methods were performed

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

Surrogate/Tracer	Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer		AlphaSpec Ra226, Liquid "As Received"	2790618	92.4	(30%-110%)
Thorium-229 Tracer		Th-01-RC M, Th Isotopes, Liquid "As Received"	2784559	90.2	(30%-110%)
Strontium Carrier		905.0 Mod, Sr90, liquid "As Received"	2783394	84.1	(30%-110%)
Technetium-99m Tracer		Tc-02-RC-MOD, Tc99, Liquid "As Received"	2788031	98.4	(30%-110%)

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Report Date: July 8, 2025

Contact: Ms. Jaime Morrow

Project: C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW386SG3-25

Project: FRNP00609

Sample ID: 719632005

Client ID: FRNP006

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

Notes:

The MDC is a sample specific MDC.

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

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

Lc/LC: Critical Level

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Mtd.: Method

PF: Prep Factor

RL: Reporting Limit

TPU: Total Propagated Uncertainty

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

Kevil, Kentucky 42053

Report Date: July 8, 2025

Contact: Ms. Jaime Morrow

Project: C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW387SG3-25

Project: FRNP00609

Sample ID: 719632007

Client ID: FRNP006

Matrix: WG

Collect Date: 15-APR-25

Receive Date: 16-APR-25

Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis														
<i>AlphaSpec Ra226, Liquid "As Received"</i>														
Radium-226	U	0.115	+/-0.624	1.25	+/-0.624	5.00	pCi/L			CM4	05/04/25	1226	2790618	1
<i>Th-01-RC M, Th Isotopes, Liquid "As Received"</i>														
Thorium-230	U	0.0491	+/-0.870	1.88	+/-0.872	50.0	pCi/L			CM4	05/06/25	1708	2784559	2
Rad Gas Flow Proportional Counting														
<i>905.0 Mod, Sr90, liquid "As Received"</i>														
Strontium-90	U	1.64	+/-1.81	3.04	+/-1.83	8.00	pCi/L			CH7	05/01/25	1505	2783394	3
<i>9310, Alpha/Beta Activity, liquid "As Received"</i>														
Alpha	U	-2.87	+/-3.38	9.05	+/-3.38	15.0	pCi/L			HH3	05/02/25	1538	2783554	4
Beta		37.9	+/-9.57	11.7	+/-11.4	50.0	pCi/L							
Rad Liquid Scintillation Analysis														
<i>906.0 Mod, Tritium Dist, Liquid "As Received"</i>														
Tritium	U	16.2	+/-118	210	+/-118	300	pCi/L			MJ3	05/11/25	1514	2792302	5
<i>Tc-02-RC-MOD, Tc99, Liquid "As Received"</i>														
Technetium-99		42.9	+/-13.5	20.0	+/-14.3	25.0	pCi/L			MJ3	05/12/25	0021	2788031	6

The following Analytical Methods were performed

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

Surrogate/Tracer	Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer		AlphaSpec Ra226, Liquid "As Received"	2790618	93.4	(30%-110%)
Thorium-229 Tracer		Th-01-RC M, Th Isotopes, Liquid "As Received"	2784559	74.8	(30%-110%)
Strontium Carrier		905.0 Mod, Sr90, liquid "As Received"	2783394	79.5	(30%-110%)
Technetium-99m Tracer		Tc-02-RC-MOD, Tc99, Liquid "As Received"	2788031	98.9	(30%-110%)

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Certificate of Analysis

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

Kevil, Kentucky 42053

Report Date: July 8, 2025

Contact: Ms. Jaime Morrow

Project: C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW387SG3-25

Project: FRNP00609

Sample ID: 719632007

Client ID: FRNP006

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

Notes:

The MDC is a sample specific MDC.

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

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

Lc/LC: Critical Level

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Mtd.: Method

PF: Prep Factor

RL: Reporting Limit

TPU: Total Propagated Uncertainty

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Kevil, Kentucky 42053

Report Date: July 8, 2025

Contact: Ms. Jaime Morrow

Project: C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW388SG3-25

Project: FRNP00609

Sample ID: 719632009

Client ID: FRNP006

Matrix: WG

Collect Date: 15-APR-25

Receive Date: 16-APR-25

Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis														
<i>AlphaSpec Ra226, Liquid "As Received"</i>														
Radium-226	U	0.235	+/-0.518	0.921	+/-0.519	5.00	pCi/L			CM4	05/04/25	1226	2790618	1
<i>Th-01-RC M, Th Isotopes, Liquid "As Received"</i>														
Thorium-230	U	0.656	+/-1.05	1.75	+/-1.06	50.0	pCi/L			CM4	05/06/25	0834	2784559	2
Rad Gas Flow Proportional Counting														
<i>905.0 Mod, Sr90, liquid "As Received"</i>														
Strontium-90	U	1.45	+/-4.32	7.72	+/-4.33	8.00	pCi/L			HH3	05/07/25	1627	2793036	3
<i>9310, Alpha/Beta Activity, liquid "As Received"</i>														
Alpha	U	-0.772	+/-3.77	8.69	+/-3.77	15.0	pCi/L			HH3	05/02/25	1538	2783554	4
Beta		14.8	+/-8.42	12.9	+/-8.77	50.0	pCi/L							
Rad Liquid Scintillation Analysis														
<i>906.0 Mod, Tritium Dist, Liquid "As Received"</i>														
Tritium	U	95.8	+/-128	217	+/-129	300	pCi/L			MJ3	05/11/25	1556	2792302	5
<i>Tc-02-RC-MOD, Tc99, Liquid "As Received"</i>														
Technetium-99	U	16.9	+/-12.1	19.7	+/-12.2	25.0	pCi/L			MJ3	05/12/25	0038	2788031	6

The following Analytical Methods were performed

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

Surrogate/Tracer	Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer		AlphaSpec Ra226, Liquid "As Received"	2790618	103	(30%-110%)
Thorium-229 Tracer		Th-01-RC M, Th Isotopes, Liquid "As Received"	2784559	98.5	(30%-110%)
Strontium Carrier		905.0 Mod, Sr90, liquid "As Received"	2793036	68.2	(30%-110%)
Technetium-99m Tracer		Tc-02-RC-MOD, Tc99, Liquid "As Received"	2788031	99.4	(30%-110%)

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Report Date: July 8, 2025

Contact: Ms. Jaime Morrow

Project: C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW388SG3-25

Project: FRNP00609

Sample ID: 719632009

Client ID: FRNP006

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

Notes:

The MDC is a sample specific MDC.

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

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

Lc/LC: Critical Level

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Mtd.: Method

PF: Prep Factor

RL: Reporting Limit

TPU: Total Propagated Uncertainty

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Kevil, Kentucky 42053

Report Date: July 8, 2025

Contact: Ms. Jaime Morrow

Project: C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW390SG3-25

Project: FRNP00609

Sample ID: 719632011

Client ID: FRNP006

Matrix: WG

Collect Date: 15-APR-25

Receive Date: 16-APR-25

Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis														
<i>AlphaSpec Ra226, Liquid "As Received"</i>														
Radium-226	U	0.717	+/-0.764	0.965	+/-0.769	5.00	pCi/L			CM4	05/04/25	1235	2790618	1
<i>Th-01-RC M, Th Isotopes, Liquid "As Received"</i>														
Thorium-230	U	-0.191	+/-0.531	1.44	+/-0.532	50.0	pCi/L			CM4	04/27/25	1218	2784559	2
Rad Gas Flow Proportional Counting														
<i>905.0 Mod, Sr90, liquid "As Received"</i>														
Strontium-90	U	-1.52	+/-1.49	3.14	+/-1.49	8.00	pCi/L			CH7	05/01/25	1505	2783394	3
<i>9310, Alpha/Beta Activity, liquid "As Received"</i>														
Alpha	U	2.81	+/-5.34	9.55	+/-5.37	15.0	pCi/L			HH3	05/02/25	1538	2783554	4
Beta		46.2	+/-9.86	10.8	+/-12.4	50.0	pCi/L							
Rad Liquid Scintillation Analysis														
<i>906.0 Mod, Tritium Dist, Liquid "As Received"</i>														
Tritium	U	25.1	+/-119	209	+/-119	300	pCi/L			MJ3	05/11/25	1637	2792302	5
<i>Tc-02-RC-MOD, Tc99, Liquid "As Received"</i>														
Technetium-99		73.7	+/-14.6	19.5	+/-16.8	25.0	pCi/L			MJ3	05/12/25	0213	2788031	6

The following Analytical Methods were performed

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

Surrogate/Tracer	Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer		AlphaSpec Ra226, Liquid "As Received"	2790618	98.1	(30%-110%)
Thorium-229 Tracer		Th-01-RC M, Th Isotopes, Liquid "As Received"	2784559	99.3	(30%-110%)
Strontium Carrier		905.0 Mod, Sr90, liquid "As Received"	2783394	75	(30%-110%)
Technetium-99m Tracer		Tc-02-RC-MOD, Tc99, Liquid "As Received"	2788031	98.2	(30%-110%)

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Report Date: July 8, 2025

Contact: Ms. Jaime Morrow

Project: C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW390SG3-25

Project: FRNP00609

Sample ID: 719632011

Client ID: FRNP006

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

Notes:

The MDC is a sample specific MDC.

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

Column headers are defined as follows:

DF: Dilution Factor

Mtd.: Method

DL: Detection Limit

PF: Prep Factor

Lc/LC: Critical Level

RL: Reporting Limit

MDA: Minimum Detectable Activity

TPU: Total Propagated Uncertainty

MDC: Minimum Detectable Concentration

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Report Date: July 8, 2025

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

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW384SG3-25
Sample ID: 719632001
Matrix: WG
Collect Date: 15-APR-25 09:38
Receive Date: 16-APR-25
Collector: Client

Project: FRNP00609
Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
504.1/8011 Analysis of EDB/DBCP												
8011, VOA Compounds Liquid "As Received"												
1,2-Dibromo-3-chloropropane	U	0.0189	0.00852	0.0189	ug/L	0.946	1	LOF	04/20/25	0008	2782801	1
Carbon Analysis												
9060A, Total Organic Carbon "As Received"												
Total Organic Carbon Average	J	0.784	0.330	2.00	mg/L		1	KB3	04/25/25	1144	2787022	3
Flow Injection Analysis												
9012B, Total Cyanide "As Received"												
Cyanide, Total	UNN1	0.200	0.00167	0.200	mg/L	1.00	1	KLP1	04/23/25	1359	2786023	4
Halogen Analysis												
9020B, TOX (Organic Halogen) "As Received"												
Total Organic Halogens	J	6.88	3.33	10.0	ug/L		1	RMJ	05/13/25	2308	2796411	5
Ion Chromatography												
300.0, Iodide in Liquid "As Received"												
Iodide	U	0.500	0.167	0.500	mg/L		1	CH6	04/25/25	0042	2786990	6
SW846 9056A Anions (5) "As Received"												
Chloride	JW	23.5	0.268	250	mg/L		4	RXB5	04/16/25	1212	2782607	7
Nitrate-N	J	0.783	0.132	10.0	mg/L		4					
Sulfate	W	19.4	0.532	1.60	mg/L		4					
Bromide		0.281	0.0670	0.200	mg/L		1	RXB5	04/16/25	1853	2782607	8
Fluoride	J	0.163	0.0330	4.00	mg/L		1					
Mercury Analysis-CVAA												
7470, Mercury Liquid "As Received"												
Mercury	U	0.000200	0.0000670	0.000200	mg/L	1.00	1	JP2	05/06/25	0942	2791818	9
Metals Analysis-ICP-MS												
6020, Metals (15+) "As Received"												
Antimony	U	0.00300	0.00100	0.00300	mg/L	1.00	1	PRB	05/11/25	1822	2783206	10
Arsenic	U	0.00500	0.00200	0.00500	mg/L	1.00	1					
Barium	N	0.197	0.000670	0.00400	mg/L	1.00	1					
Cadmium	U	0.00100	0.000300	0.00100	mg/L	1.00	1					
Calcium		23.2	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	0.00106	0.000300	0.00200	mg/L	1.00	1					
Iron		0.280	0.0330	0.100	mg/L	1.00	1					

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Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW384SG3-25 Project: FRNP00609
Sample ID: 719632001 Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP-MS												
6020, Metals (15+) "As Received"												
Manganese		0.00667	0.00100	0.00500	mg/L	1.00	1					
Nickel	U	0.00200	0.000600	0.00200	mg/L	1.00	1					
Potassium		1.37	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		44.8	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					
Zinc	U	0.0200	0.00330	0.0200	mg/L	1.00	1					
Rhodium	U	0.00500	0.00160	0.00500	mg/L	1.00	1	PRB	05/11/25	2119	2783206	11
Tantalum	U	0.00500	0.00100	0.00500	mg/L	1.00	1					
Boron		0.0938	0.00520	0.0150	mg/L	1.00	1	PRB	05/13/25	1629	2783206	12
Molybdenum	J	0.000372	0.000200	0.00100	mg/L	1.00	1					
Uranium	J	0.000194	0.0000670	0.000200	mg/L	1.00	1					
Aluminum	U	0.0500	0.0193	0.0500	mg/L	1.00	1	PRB	05/14/25	1525	2783206	13
Beryllium	U	0.000500	0.000200	0.000500	mg/L	1.00	1					
Lead	U	0.00200	0.000500	0.00200	mg/L	1.00	1					
Magnesium		9.87	0.0100	0.0300	mg/L	1.00	1					
Solids Analysis												
160.1, Dissolved Solids "As Received"												
Total Dissolved Solids		210	2.38	10.0	mg/L			SC1	04/21/25	1426	2784293	14
Spectrometric Analysis												
410.4, Chem. Oxygen Demand "As Received"												
COD		28.9	8.95	20.0	mg/L		1	HH2	04/28/25	1457	2783865	15
Volatile Organics												
8260D, Volatiles- full suite "As Received"												
1,1,1,2-Tetrachloroethane	U	1.00	0.333	1.00	ug/L		1	JM6	04/22/25	1202	2785340	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					

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Contact: Kevil, Kentucky 42053
Project: Ms. Jaime Morrow
C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW384SG3-25

Sample ID: 719632001

Project: FRNP00609

Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time Batch	Method
Volatile Organics											
8260D, Volatiles- full suite "As Received"											
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				
Methylene chloride	U	5.00	0.500	5.00	ug/L		1				
Styrene	U	1.00	0.333	1.00	ug/L		1				
Tetrachloroethylene	U	1.00	0.333	1.00	ug/L		1				
Toluene	U	1.00	0.333	1.00	ug/L		1				
Trichloroethylene	J	0.390	0.333	1.00	ug/L		1				
Trichlorofluoromethane	U	1.00	0.333	1.00	ug/L		1				
Vinyl acetate	U	5.00	1.67	5.00	ug/L		1				
Vinyl chloride	U	1.00	0.333	1.00	ug/L		1				
Xylenes (total)	U	3.00	1.00	3.00	ug/L		1				
cis-1,2-Dichloroethylene	U	1.00	0.333	1.00	ug/L		1				
cis-1,3-Dichloropropylene	U	1.00	0.333	1.00	ug/L		1				

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Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW384SG3-25 Project: FRNP00609
Sample ID: 719632001 Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
8260D, Volatiles- full suite "As Received"												
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	BB2	05/08/25	0820	2783205
SW846 8011 PREP	8011 Prep	LL2	04/18/25	1356	2782800
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	JM13	05/05/25	1145	2791816
SW846 9010C Distillation	SW846 9010C Prep	KLP1	04/23/25	1257	2786022

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	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 Compounds Liquid "As Received"	5.68 ug/L	6.76	84	(56%-149%)
Bromofluorobenzene	8260D, Volatiles- full suite "As Received"	54.4 ug/L	50.0	109	(85%-114%)
1,2-Dichloroethane-d4	8260D, Volatiles- full suite "As Received"	52.4 ug/L	50.0	105	(81%-118%)
Toluene-d8	8260D, Volatiles- full suite "As Received"	53.9 ug/L	50.0	108	(89%-112%)

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Contact: Kevil, Kentucky 42053
Project: Ms. Jaime Morrow
C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW384SG3-25

Sample ID: 719632001

Project: FRNP00609

Client ID: FRNP006

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

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

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

Report Date: July 8, 2025

Contact: Kevil, Kentucky 42053
 Project: Ms. Jaime Morrow
 C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID:	MW384SG3-25	Project:	FRNP00609
Sample ID:	719632002	Client ID:	FRNP006
Matrix:	WG		
Collect Date:	15-APR-25 09:38		
Receive Date:	16-APR-25		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP-MS												
6020, Dissolved Metals (3 Elements) "As Received"												
Barium	N	0.197	0.000670	0.00400	mg/L	1.00	1	PRB	05/11/25	1825	2783206	1
Chromium	U	0.0100	0.00300	0.0100	mg/L	1.00	1					
Uranium	U	0.000200	0.0000670	0.000200	mg/L	1.00	1	PRB	05/13/25	1631	2783206	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 160	Laboratory Filtration	EXF1	04/17/25	0905	2782832
SW846 3005A	ICP-MS 3005A PREP	BB2	05/08/25	0820	2783205

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 3005A/6020B	
2	SW846 3005A/6020B	

Notes:

Column headers are defined as follows:

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

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Certificate of Analysis

Report Date: July 8, 2025

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

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW385SG3-25
Sample ID: 719632003
Matrix: WG
Collect Date: 15-APR-25 11:51
Receive Date: 16-APR-25
Collector: Client

Project: FRNP00609
Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
504.1/8011 Analysis of EDB/DBCP												
8011, VOA Compounds Liquid "As Received"												
1,2-Dibromo-3-chloropropane	U	0.0189	0.00849	0.0189	ug/L	0.944	1	LOF	04/20/25	0130	2782801	1
Carbon Analysis												
9060A, Total Organic Carbon "As Received"												
Total Organic Carbon Average	J	0.700	0.330	2.00	mg/L		1	KB3	04/25/25	1409	2787022	3
Flow Injection Analysis												
9012B, Total Cyanide "As Received"												
Cyanide, Total	UNN1	0.200	0.00167	0.200	mg/L	1.00	1	KLP1	04/23/25	1400	2786023	4
Halogen Analysis												
9020B, TOX (Organic Halogen) "As Received"												
Total Organic Halogens	J	6.88	3.33	10.0	ug/L		1	RMJ	05/13/25	0232	2796411	5
Ion Chromatography												
300.0, Iodide in Liquid "As Received"												
Iodide	U	0.500	0.167	0.500	mg/L		1	CH6	04/25/25	0055	2786990	6
SW846 9056A Anions (5) "As Received"												
Chloride	JW	22.8	0.268	250	mg/L		4	RXB5	04/16/25	1243	2782607	7
Nitrate-N	J	0.832	0.132	10.0	mg/L		4					
Bromide		0.261	0.0670	0.200	mg/L		1	RXB5	04/16/25	1924	2782607	8
Fluoride	J	0.147	0.0330	4.00	mg/L		1					
Sulfate	W	19.9	0.133	0.400	mg/L		1					
Mercury Analysis-CVAA												
7470, Mercury Liquid "As Received"												
Mercury	U	0.000200	0.0000670	0.000200	mg/L	1.00	1	JP2	05/06/25	0944	2791818	9
Metals Analysis-ICP-MS												
6020, Metals (15+) "As Received"												
Antimony	U	0.00300	0.00100	0.00300	mg/L	1.00	1	PRB	05/11/25	1827	2783206	10
Arsenic	U	0.00500	0.00200	0.00500	mg/L	1.00	1					
Barium	N	0.201	0.000670	0.00400	mg/L	1.00	1					
Cadmium	U	0.00100	0.000300	0.00100	mg/L	1.00	1					
Calcium		23.3	0.0800	0.200	mg/L	1.00	1					
Chromium	U	0.0100	0.00300	0.0100	mg/L	1.00	1					
Cobalt	J	0.000669	0.000300	0.00100	mg/L	1.00	1					
Copper	J	0.00137	0.000300	0.00200	mg/L	1.00	1					
Iron	U	0.100	0.0330	0.100	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-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW385SG3-25 Project: FRNP00609
Sample ID: 719632003 Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP-MS												
6020, Metals (15+) "As Received"												
Manganese	J	0.00186	0.00100	0.00500	mg/L	1.00	1					
Nickel	J	0.00140	0.000600	0.00200	mg/L	1.00	1					
Potassium		1.52	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		44.2	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					
Zinc	U	0.0200	0.00330	0.0200	mg/L	1.00	1					
Rhodium	U	0.00500	0.00160	0.00500	mg/L	1.00	1	PRB	05/11/25	2120	2783206	11
Tantalum	U	0.00500	0.00100	0.00500	mg/L	1.00	1					
Boron		0.0859	0.00520	0.0150	mg/L	1.00	1	PRB	05/13/25	1633	2783206	12
Molybdenum	J	0.000278	0.000200	0.00100	mg/L	1.00	1					
Uranium	U	0.000200	0.0000670	0.000200	mg/L	1.00	1					
Aluminum	U	0.0500	0.0193	0.0500	mg/L	1.00	1	PRB	05/14/25	1528	2783206	13
Beryllium	U	0.000500	0.000200	0.000500	mg/L	1.00	1					
Lead	U	0.00200	0.000500	0.00200	mg/L	1.00	1					
Magnesium		9.15	0.0100	0.0300	mg/L	1.00	1					
Solids Analysis												
160.1, Dissolved Solids "As Received"												
Total Dissolved Solids		214	2.38	10.0	mg/L			SC1	04/21/25	1426	2784293	14
Spectrometric Analysis												
410.4, Chem. Oxygen Demand "As Received"												
COD	U	20.0	8.95	20.0	mg/L		1	HH2	04/28/25	1457	2783865	15
Volatile Organics												
8260D, Volatiles- full suite "As Received"												
1,1,1,2-Tetrachloroethane	U	1.00	0.333	1.00	ug/L		1	JM6	04/22/25	1229	2785340	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					

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

Contact: Kevil, Kentucky 42053
Project: Ms. Jaime Morrow
C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW385SG3-25

Sample ID: 719632003

Project: FRNP00609

Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
8260D, Volatiles- full suite "As Received"												
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					
Methylene chloride	U	5.00	0.500	5.00	ug/L		1					
Styrene	U	1.00	0.333	1.00	ug/L		1					
Tetrachloroethylene	U	1.00	0.333	1.00	ug/L		1					
Toluene	U	1.00	0.333	1.00	ug/L		1					
Trichloroethylene	J	0.370	0.333	1.00	ug/L		1					
Trichlorofluoromethane	U	1.00	0.333	1.00	ug/L		1					
Vinyl acetate	U	5.00	1.67	5.00	ug/L		1					
Vinyl chloride	U	1.00	0.333	1.00	ug/L		1					
Xylenes (total)	U	3.00	1.00	3.00	ug/L		1					
cis-1,2-Dichloroethylene	U	1.00	0.333	1.00	ug/L		1					
cis-1,3-Dichloropropylene	U	1.00	0.333	1.00	ug/L		1					

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

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW385SG3-25 Project: FRNP00609
Sample ID: 719632003 Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
8260D, Volatiles- full suite "As Received"												
trans-1,2-Dichloroethylene	U	1.00	0.333	1.00	ug/L		1					
trans-1,3-Dichloropropylene	U	1.00	0.333	1.00	ug/L		1					
trans-1,4-Dichloro-2-butene	U	5.00	1.67	5.00	ug/L		1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	JM13	05/05/25	1145	2791816
SW846 3005A	ICP-MS 3005A PREP	BB2	05/08/25	0820	2783205
SW846 9010C Distillation	SW846 9010C Prep	KLP1	04/23/25	1257	2786022
SW846 8011 PREP	8011 Prep	LL2	04/18/25	1356	2782800

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	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 Compounds Liquid "As Received"	4.23 ug/L	6.74	63	(56%-149%)
Bromofluorobenzene	8260D, Volatiles- full suite "As Received"	54.0 ug/L	50.0	108	(85%-114%)
1,2-Dichloroethane-d4	8260D, Volatiles- full suite "As Received"	52.7 ug/L	50.0	105	(81%-118%)
Toluene-d8	8260D, Volatiles- full suite "As Received"	53.3 ug/L	50.0	107	(89%-112%)

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

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW385SG3-25

Sample ID: 719632003

Project: FRNP00609

Client ID: FRNP006

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

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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Report Date: July 8, 2025

Contact: Kevil, Kentucky 42053
 Project: Ms. Jaime Morrow
 C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID:	MW385SG3-25	Project:	FRNP00609
Sample ID:	719632004	Client ID:	FRNP006
Matrix:	WG		
Collect Date:	15-APR-25 11:51		
Receive Date:	16-APR-25		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP-MS												
6020, Dissolved Metals (3 Elements) "As Received"												
Barium	N	0.197	0.000670	0.00400	mg/L	1.00	1	PRB	05/11/25	1847	2783206	1
Chromium	U	0.0100	0.00300	0.0100	mg/L	1.00	1					
Uranium	U	0.000200	0.0000670	0.000200	mg/L	1.00	1	PRB	05/13/25	1642	2783206	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	BB2	05/08/25	0820	2783205
EPA 160	Laboratory Filtration	EXF1	04/17/25	0905	2782832

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 3005A/6020B	
2	SW846 3005A/6020B	

Notes:

Column headers are defined as follows:

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

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Report Date: July 8, 2025

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

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW386SG3-25 Project: FRNP00609
Sample ID: 719632005 Client ID: FRNP006
Matrix: WG
Collect Date: 15-APR-25 12:47
Receive Date: 16-APR-25
Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
504.1/8011 Analysis of EDB/DBCP												
8011, VOA Compounds Liquid "As Received"												
1,2-Dibromo-3-chloropropane	U	0.0188	0.00848	0.0188	ug/L	0.942	1	LOF	04/20/25	0311	2782801	1
Carbon Analysis												
9060A, Total Organic Carbon "As Received"												
Total Organic Carbon Average		3.67	0.330	2.00	mg/L		1	KB3	04/25/25	1544	2787022	3
Flow Injection Analysis												
9012B, Total Cyanide "As Received"												
Cyanide, Total	UNN1	0.200	0.00167	0.200	mg/L	1.00	1	KLP1	04/23/25	1409	2786023	4
Halogen Analysis												
9020B, TOX (Organic Halogen) "As Received"												
Total Organic Halogens		103	3.33	10.0	ug/L		1	RMJ	05/13/25	0708	2796411	5
Ion Chromatography												
300.0, Iodide in Liquid "As Received"												
Iodide	U	0.500	0.167	0.500	mg/L		1	CH6	04/25/25	0133	2786990	6
SW846 9056A Anions (5) "As Received"												
Sulfate	W	35.1	0.266	0.800	mg/L		2	RXB5	04/16/25	1313	2782607	7
Nitrate-N	J	0.214	0.165	10.0	mg/L		5	RXB5	04/16/25	1822	2782607	8
Bromide	U	0.200	0.0670	0.200	mg/L		1	RXB5	04/16/25	2056	2782607	9
Chloride	JW	9.62	0.0670	250	mg/L		1					
Fluoride	J	0.871	0.0330	4.00	mg/L		1					
Mercury Analysis-CVAA												
7470, Mercury Liquid "As Received"												
Mercury	U	0.000200	0.0000670	0.000200	mg/L	1.00	1	JP2	05/06/25	0956	2791818	10
Metals Analysis-ICP-MS												
6020, Metals (15+) "As Received"												
Antimony	U	0.00300	0.00100	0.00300	mg/L	1.00	1	PRB	05/11/25	1907	2783206	11
Arsenic	U	0.00500	0.00200	0.00500	mg/L	1.00	1					
Barium	N	0.0947	0.000670	0.00400	mg/L	1.00	1					
Cadmium	U	0.00100	0.000300	0.00100	mg/L	1.00	1					
Calcium		19.0	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					
Copper		0.00369	0.000300	0.00200	mg/L	1.00	1					
Iron		0.105	0.0330	0.100	mg/L	1.00	1					

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Report Date: July 8, 2025

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

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW386SG3-25 Project: FRNP00609
Sample ID: 719632005 Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP-MS												
6020, Metals (15+) "As Received"												
Manganese		0.0308	0.00100	0.00500	mg/L	1.00	1					
Nickel	J	0.000653	0.000600	0.00200	mg/L	1.00	1					
Potassium	J	0.273	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					
Zinc	U	0.0200	0.00330	0.0200	mg/L	1.00	1					
Rhodium	U	0.00500	0.00160	0.00500	mg/L	1.00	1	PRB	05/11/25	2128	2783206	12
Tantalum	U	0.00500	0.00100	0.00500	mg/L	1.00	1					
Boron		0.0203	0.00520	0.0150	mg/L	1.00	1	PRB	05/13/25	1649	2783206	13
Molybdenum	J	0.000895	0.000200	0.00100	mg/L	1.00	1					
Uranium	J	0.0000780	0.0000670	0.000200	mg/L	1.00	1					
Sodium		104	0.800	2.50	mg/L	1.00	10	PRB	05/13/25	1650	2783206	14
Aluminum	U	0.0500	0.0193	0.0500	mg/L	1.00	1	PRB	05/14/25	1536	2783206	15
Beryllium	U	0.000500	0.000200	0.000500	mg/L	1.00	1					
Lead	U	0.00200	0.000500	0.00200	mg/L	1.00	1					
Magnesium		8.23	0.0100	0.0300	mg/L	1.00	1					
Solids Analysis												
160.1, Dissolved Solids "As Received"												
Total Dissolved Solids		350	2.38	10.0	mg/L			SC1	04/21/25	1426	2784293	16
Spectrometric Analysis												
410.4, Chem. Oxygen Demand "As Received"												
COD	J	10.3	8.95	20.0	mg/L		1	HH2	04/28/25	1457	2783865	17
Volatile Organics												
8260D, Volatiles- full suite "As Received"												
1,1,1,2-Tetrachloroethane	U	1.00	0.333	1.00	ug/L		1	JM6	04/22/25	1255	2785340	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					

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Certificate of Analysis

Report Date: July 8, 2025

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

Contact: Kevil, Kentucky 42053
Project: Ms. Jaime Morrow
C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW386SG3-25

Project: FRNP00609

Sample ID: 719632005

Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
8260D, Volatiles- full suite "As Received"												
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					
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					

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Address : 5600 Hobbs Road

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW386SG3-25 Project: FRNP00609
Sample ID: 719632005 Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
8260D, Volatiles- full suite "As Received"												
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	BB2	05/08/25	0820	2783205
SW846 9010C Distillation	SW846 9010C Prep	KLP1	04/23/25	1257	2786022
SW846 8011 PREP	8011 Prep	LL2	04/18/25	1356	2782800
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	JM13	05/05/25	1145	2791816

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	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 Compounds Liquid "As Received"	7.24 ug/L	6.73	108	(56%-149%)
Bromofluorobenzene	8260D, Volatiles- full suite "As Received"	53.2 ug/L	50.0	106	(85%-114%)

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Company : Four Rivers Nuclear Partnership, LLC
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Contact: Kevil, Kentucky 42053
Project: Ms. Jaime Morrow
C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW386SG3-25

Sample ID: 719632005

Project: FRNP00609

Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time Batch	Method
1,2-Dichloroethane-d4	8260D, Volatiles-	full suite "As Received"			52.8 ug/L	50.0		106		(81%-118%)	
Toluene-d8	8260D, Volatiles-	full suite "As Received"			53.7 ug/L	50.0		107		(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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Company : Four Rivers Nuclear Partnership, LLC
Address : 5600 Hobbs Road

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID:	MW386SG3-25	Project:	FRNP00609
Sample ID:	719632006	Client ID:	FRNP006
Matrix:	WG		
Collect Date:	15-APR-25 12:47		
Receive Date:	16-APR-25		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP-MS												
6020, Dissolved Metals (3 Elements) "As Received"												
Barium	N	0.0912	0.000670	0.00400	mg/L	1.00	1	PRB	05/11/25	1909	2783206	1
Chromium	U	0.0100	0.00300	0.0100	mg/L	1.00	1					
Uranium	J	0.000115	0.0000670	0.000200	mg/L	1.00	1	PRB	05/13/25	1654	2783206	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	BB2	05/08/25	0820	2783205
EPA 160	Laboratory Filtration	EXF1	04/17/25	0905	2782832

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 3005A/6020B	
2	SW846 3005A/6020B	

Notes:

Column headers are defined as follows:

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

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Certificate of Analysis

Report Date: July 8, 2025

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

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW387SG3-25
Sample ID: 719632007
Matrix: WG
Collect Date: 15-APR-25 08:09
Receive Date: 16-APR-25
Collector: Client

Project: FRNP00609
Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
504.1/8011 Analysis of EDB/DBCP												
8011, VOA Compounds Liquid "As Received"												
1,2-Dibromo-3-chloropropane	U	0.0188	0.00845	0.0188	ug/L	0.939	1	LOF	04/20/25	0345	2782801	1
Carbon Analysis												
9060A, Total Organic Carbon "As Received"												
Total Organic Carbon Average	J	0.746	0.330	2.00	mg/L		1	KB3	04/25/25	1615	2787022	3
Flow Injection Analysis												
9012B, Total Cyanide "As Received"												
Cyanide, Total	UNN1	0.200	0.00167	0.200	mg/L	1.00	1	KLP1	04/23/25	1410	2786023	4
Halogen Analysis												
9020B, TOX (Organic Halogen) "As Received"												
Total Organic Halogens		14.1	3.33	10.0	ug/L		1	RMJ	05/13/25	0748	2796411	5
Ion Chromatography												
300.0, Iodide in Liquid "As Received"												
Iodide	U	0.500	0.167	0.500	mg/L		1	CH6	04/25/25	0146	2786990	6
SW846 9056A Anions (5) "As Received"												
Chloride	JW	33.3	0.335	250	mg/L		5	RXB5	04/16/25	1344	2782607	7
Nitrate-N	J	0.881	0.165	10.0	mg/L		5					
Sulfate	W	26.0	0.665	2.00	mg/L		5					
Bromide		0.452	0.0670	0.200	mg/L		1	RXB5	04/16/25	2127	2782607	8
Fluoride	J	0.880	0.0330	4.00	mg/L		1					
Mercury Analysis-CVAA												
7470, Mercury Liquid "As Received"												
Mercury	U	0.000200	0.0000670	0.000200	mg/L	1.00	1	JP2	05/06/25	0957	2791818	9
Metals Analysis-ICP-MS												
6020, Metals (15+) "As Received"												
Antimony	U	0.00300	0.00100	0.00300	mg/L	1.00	1	PRB	05/11/25	1912	2783206	10
Arsenic	U	0.00500	0.00200	0.00500	mg/L	1.00	1					
Barium	N	0.105	0.000670	0.00400	mg/L	1.00	1					
Cadmium	U	0.00100	0.000300	0.00100	mg/L	1.00	1					
Calcium		35.9	0.0800	0.200	mg/L	1.00	1					
Chromium	J	0.00312	0.00300	0.0100	mg/L	1.00	1					
Cobalt	U	0.00100	0.000300	0.00100	mg/L	1.00	1					
Copper	J	0.00103	0.000300	0.00200	mg/L	1.00	1					
Iron	J	0.0955	0.0330	0.100	mg/L	1.00	1					

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Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW387SG3-25 Project: FRNP00609
Sample ID: 719632007 Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP-MS												
6020, Metals (15+) "As Received"												
Manganese		0.0155	0.00100	0.00500	mg/L	1.00	1					
Nickel	U	0.00200	0.000600	0.00200	mg/L	1.00	1					
Potassium		1.77	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					
Zinc	U	0.0200	0.00330	0.0200	mg/L	1.00	1					
Rhodium	U	0.00500	0.00160	0.00500	mg/L	1.00	1	PRB	05/11/25	2129	2783206	11
Tantalum	U	0.00500	0.00100	0.00500	mg/L	1.00	1					
Boron		0.0466	0.00520	0.0150	mg/L	1.00	1	PRB	05/13/25	1656	2783206	12
Molybdenum	U	0.00100	0.000200	0.00100	mg/L	1.00	1					
Uranium	U	0.000200	0.0000670	0.000200	mg/L	1.00	1					
Sodium		50.8	0.800	2.50	mg/L	1.00	10	PRB	05/13/25	1657	2783206	13
Aluminum	J	0.0293	0.0193	0.0500	mg/L	1.00	1	PRB	05/14/25	1537	2783206	14
Beryllium	U	0.000500	0.000200	0.000500	mg/L	1.00	1					
Lead	U	0.00200	0.000500	0.00200	mg/L	1.00	1					
Magnesium		16.3	0.0100	0.0300	mg/L	1.00	1					
Solids Analysis												
160.1, Dissolved Solids "As Received"												
Total Dissolved Solids		294	2.38	10.0	mg/L			SC1	04/21/25	1426	2784293	15
Spectrometric Analysis												
410.4, Chem. Oxygen Demand "As Received"												
COD		26.6	8.95	20.0	mg/L		1	HH2	04/28/25	1457	2783865	16
Volatile Organics												
8260D, Volatiles- full suite "As Received"												
1,1,1,2-Tetrachloroethane	U	1.00	0.333	1.00	ug/L		1	JM6	04/22/25	1322	2785340	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					

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Contact: Kevil, Kentucky 42053
Project: Ms. Jaime Morrow
C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW387SG3-25

Sample ID: 719632007

Project: FRNP00609

Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time Batch	Method
Volatile Organics											
8260D, Volatiles- full suite "As Received"											
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				
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				

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Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW387SG3-25 Project: FRNP00609
Sample ID: 719632007 Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
8260D, Volatiles- full suite "As Received"												
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	04/18/25	1356	2782800
SW846 3005A	ICP-MS 3005A PREP	BB2	05/08/25	0820	2783205
SW846 9010C Distillation	SW846 9010C Prep	KLP1	04/23/25	1257	2786022
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	JM13	05/05/25	1145	2791816

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	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 Compounds Liquid "As Received"	5.17 ug/L	6.70	77	(56%-149%)
Bromofluorobenzene	8260D, Volatiles- full suite "As Received"	54.7 ug/L	50.0	109	(85%-114%)
1,2-Dichloroethane-d4	8260D, Volatiles- full suite "As Received"	53.1 ug/L	50.0	106	(81%-118%)

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Contact: Kevil, Kentucky 42053
Project: Ms. Jaime Morrow
C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW387SG3-25

Sample ID: 719632007

Project: FRNP00609

Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time Batch	Method
Toluene-d8	8260D, Volatiles-	full suite "As Received"			53.5 ug/L		50.0		107	(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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Contact: Kevil, Kentucky 42053
 Project: Ms. Jaime Morrow
 C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID:	MW387SG3-25	Project:	FRNP00609
Sample ID:	719632008	Client ID:	FRNP006
Matrix:	WG		
Collect Date:	15-APR-25 08:09		
Receive Date:	16-APR-25		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP-MS												
6020, Dissolved Metals (3 Elements) "As Received"												
Barium	N	0.104	0.000670	0.00400	mg/L	1.00	1	PRB	05/11/25	1915	2783206	1
Chromium	U	0.0100	0.00300	0.0100	mg/L	1.00	1					
Uranium	U	0.000200	0.0000670	0.000200	mg/L	1.00	1	PRB	05/13/25	1659	2783206	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	BB2	05/08/25	0820	2783205
EPA 160	Laboratory Filtration	EXF1	04/17/25	0905	2782832

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 3005A/6020B	
2	SW846 3005A/6020B	

Notes:

Column headers are defined as follows:

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

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Certificate of Analysis

Report Date: July 8, 2025

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

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW388SG3-25
Sample ID: 719632009
Matrix: WG
Collect Date: 15-APR-25 08:54
Receive Date: 16-APR-25
Collector: Client

Project: FRNP00609
Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
504.1/8011 Analysis of EDB/DBCP												
8011, VOA Compounds Liquid "As Received"												
1,2-Dibromo-3-chloropropane	U	0.0191	0.00858	0.0191	ug/L	0.954	1	LOF	04/20/25	0419	2782801	1
Carbon Analysis												
9060A, Total Organic Carbon "As Received"												
Total Organic Carbon Average	J	0.620	0.330	2.00	mg/L		1	KB3	04/25/25	1646	2787022	3
Flow Injection Analysis												
9012B, Total Cyanide "As Received"												
Cyanide, Total	UNN1	0.200	0.00167	0.200	mg/L	1.00	1	KLP1	04/23/25	1411	2786023	4
Halogen Analysis												
9020B, TOX (Organic Halogen) "As Received"												
Total Organic Halogens		10.9	3.33	10.0	ug/L		1	RMJ	05/13/25	2017	2796411	5
Ion Chromatography												
300.0, Iodide in Liquid "As Received"												
Iodide	U	0.500	0.167	0.500	mg/L		1	CH6	04/25/25	0159	2786990	6
SW846 9056A Anions (5) "As Received"												
Chloride	JW	29.9	0.335	250	mg/L		5	RXB5	04/16/25	1415	2782607	7
Nitrate-N	J	0.889	0.165	10.0	mg/L		5					
Sulfate	W	20.9	0.665	2.00	mg/L		5					
Bromide		0.383	0.0670	0.200	mg/L		1	RXB5	04/16/25	2158	2782607	8
Fluoride	J	0.285	0.0330	4.00	mg/L		1					
Mercury Analysis-CVAA												
7470, Mercury Liquid "As Received"												
Mercury	U	0.000200	0.0000670	0.000200	mg/L	1.00	1	JP2	05/06/25	0959	2791818	9
Metals Analysis-ICP-MS												
6020, Metals (15+) "As Received"												
Antimony	U	0.00300	0.00100	0.00300	mg/L	1.00	1	PRB	05/11/25	1918	2783206	10
Arsenic	U	0.00500	0.00200	0.00500	mg/L	1.00	1					
Barium	N	0.173	0.000670	0.00400	mg/L	1.00	1					
Cadmium	U	0.00100	0.000300	0.00100	mg/L	1.00	1					
Calcium		28.2	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	0.00106	0.000300	0.00200	mg/L	1.00	1					
Iron	J	0.0398	0.0330	0.100	mg/L	1.00	1					

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Company : Four Rivers Nuclear Partnership, LLC
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Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW388SG3-25 Project: FRNP00609
Sample ID: 719632009 Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP-MS												
6020, Metals (15+) "As Received"												
Manganese	U	0.00500	0.00100	0.00500	mg/L	1.00	1					
Nickel		0.00555	0.000600	0.00200	mg/L	1.00	1					
Potassium		1.75	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		47.5	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					
Zinc	U	0.0200	0.00330	0.0200	mg/L	1.00	1					
Rhodium	U	0.00500	0.00160	0.00500	mg/L	1.00	1	PRB	05/13/25	1700	2783206	11
Tantalum	U	0.00500	0.00100	0.00500	mg/L	1.00	1					
Boron		0.0344	0.00520	0.0150	mg/L	1.00	1	PRB	05/13/25	1700	2783206	12
Molybdenum	U	0.00100	0.000200	0.00100	mg/L	1.00	1					
Uranium	U	0.000200	0.0000670	0.000200	mg/L	1.00	1					
Aluminum	U	0.0500	0.0193	0.0500	mg/L	1.00	1	PRB	05/14/25	1539	2783206	13
Beryllium	U	0.000500	0.000200	0.000500	mg/L	1.00	1					
Lead	U	0.00200	0.000500	0.00200	mg/L	1.00	1					
Magnesium		13.4	0.0100	0.0300	mg/L	1.00	1					
Solids Analysis												
160.1, Dissolved Solids "As Received"												
Total Dissolved Solids		252	2.38	10.0	mg/L			SC1	04/21/25	1426	2784293	14
Spectrometric Analysis												
410.4, Chem. Oxygen Demand "As Received"												
COD	U	20.0	8.95	20.0	mg/L		1	HH2	04/28/25	1457	2783865	15
Volatile Organics												
8260D, Volatiles- full suite "As Received"												
1,1,1,2-Tetrachloroethane	U	1.00	0.333	1.00	ug/L		1	JM6	04/22/25	1348	2785340	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					

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Report Date: July 8, 2025

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

Contact: Kevil, Kentucky 42053
Project: Ms. Jaime Morrow
C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW388SG3-25

Sample ID: 719632009

Project: FRNP00609

Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time Batch	Method
Volatile Organics											
8260D, Volatiles- full suite "As Received"											
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				
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				

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

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW388SG3-25 Project: FRNP00609
Sample ID: 719632009 Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
8260D, Volatiles- full suite "As Received"												
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	04/23/25	1257	2786022
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	JM13	05/05/25	1145	2791816
SW846 8011 PREP	8011 Prep	LL2	04/18/25	1356	2782800
SW846 3005A	ICP-MS 3005A PREP	BB2	05/08/25	0820	2783205

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	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 Compounds Liquid "As Received"	6.26 ug/L	6.81	92	(56%-149%)
Bromofluorobenzene	8260D, Volatiles- full suite "As Received"	55.4 ug/L	50.0	111	(85%-114%)
1,2-Dichloroethane-d4	8260D, Volatiles- full suite "As Received"	52.8 ug/L	50.0	106	(81%-118%)
Toluene-d8	8260D, Volatiles- full suite "As Received"	54.2 ug/L	50.0	108	(89%-112%)

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Address : 5600 Hobbs Road

Contact: Kevil, Kentucky 42053
Project: Ms. Jaime Morrow
C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW388SG3-25

Sample ID: 719632009

Project: FRNP00609

Client ID: FRNP006

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

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

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

Report Date: July 8, 2025

Contact: Kevil, Kentucky 42053
Project: Ms. Jaime Morrow
C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID:	MW388SG3-25	Project:	FRNP00609
Sample ID:	719632010	Client ID:	FRNP006
Matrix:	WG		
Collect Date:	15-APR-25 08:54		
Receive Date:	16-APR-25		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP-MS												
6020, Dissolved Metals (3 Elements) "As Received"												
Barium	N	0.172	0.000670	0.00400	mg/L	1.00	1	PRB	05/11/25	1920	2783206	1
Chromium	U	0.0100	0.00300	0.0100	mg/L	1.00	1					
Uranium	U	0.000200	0.0000670	0.000200	mg/L	1.00	1	PRB	05/13/25	1701	2783206	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	BB2	05/08/25	0820	2783205
EPA 160	Laboratory Filtration	EXF1	04/17/25	0905	2782832

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 3005A/6020B	
2	SW846 3005A/6020B	

Notes:

Column headers are defined as follows:

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

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Report Date: July 8, 2025

Contact: Kevil, Kentucky 42053
Ms. Jaime Morrow
Project: C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID:	MW390SG3-25	Project:	FRNP00609
Sample ID:	719632011	Client ID:	FRNP006
Matrix:	WG		
Collect Date:	15-APR-25 07:24		
Receive Date:	16-APR-25		
Collector:	Client		

C1-150

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Company : Four Rivers Nuclear Partnership, LLC
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Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW390SG3-25 Project: FRNP00609
Sample ID: 719632011 Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP-MS												
6020, Metals (15+) "As Received"												
Manganese	U	0.00500	0.00100	0.00500	mg/L	1.00	1					
Nickel	J	0.000713	0.000600	0.00200	mg/L	1.00	1					
Potassium		0.331	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					
Zinc	J	0.00445	0.00330	0.0200	mg/L	1.00	1					
Rhodium	U	0.00500	0.00160	0.00500	mg/L	1.00	1	PRB	05/11/25	2132	2783206	11
Tantalum	U	0.00500	0.00100	0.00500	mg/L	1.00	1					
Boron		0.0271	0.00520	0.0150	mg/L	1.00	1	PRB	05/13/25	1703	2783206	12
Molybdenum	U	0.00100	0.000200	0.00100	mg/L	1.00	1					
Uranium	J	0.000197	0.0000670	0.000200	mg/L	1.00	1					
Sodium		95.3	0.800	2.50	mg/L	1.00	10	PRB	05/13/25	1704	2783206	13
Aluminum	J	0.0449	0.0193	0.0500	mg/L	1.00	1	PRB	05/14/25	1540	2783206	14
Beryllium	U	0.000500	0.000200	0.000500	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					
Solids Analysis												
160.1, Dissolved Solids "As Received"												
Total Dissolved Solids		361	2.38	10.0	mg/L			SC1	04/21/25	1426	2784293	15
Spectrometric Analysis												
410.4, Chem. Oxygen Demand "As Received"												
COD	U	20.0	8.95	20.0	mg/L		1	HH2	04/28/25	1457	2783865	16
Volatile Organics												
8260D, Volatiles- full suite "As Received"												
1,1,1,2-Tetrachloroethane	U	1.00	0.333	1.00	ug/L		1	JM6	04/22/25	1415	2785340	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					

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Certificate of Analysis

Report Date: July 8, 2025

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

Contact: Kevil, Kentucky 42053
Project: Ms. Jaime Morrow
C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW390SG3-25

Sample ID: 719632011

Project: FRNP00609

Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time Batch	Method
Volatile Organics											
8260D, Volatiles- full suite "As Received"											
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				
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				

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Certificate of Analysis

Report Date: July 8, 2025

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

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW390SG3-25 Project: FRNP00609
Sample ID: 719632011 Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
8260D, Volatiles- full suite "As Received"												
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	BB2	05/08/25	0820	2783205
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	JM13	05/05/25	1145	2791816
SW846 8011 PREP	8011 Prep	LL2	04/18/25	1356	2782800
SW846 9010C Distillation	SW846 9010C Prep	KLP1	04/23/25	1257	2786022

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	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 Compounds Liquid "As Received"	5.86 ug/L	6.75	87	(56%-149%)
Bromofluorobenzene	8260D, Volatiles- full suite "As Received"	54.6 ug/L	50.0	109	(85%-114%)
1,2-Dichloroethane-d4	8260D, Volatiles- full suite "As Received"	53.5 ug/L	50.0	107	(81%-118%)

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Company : Four Rivers Nuclear Partnership, LLC
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Contact: Kevil, Kentucky 42053
Project: Ms. Jaime Morrow
C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW390SG3-25

Sample ID: 719632011

Project: FRNP00609

Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time Batch	Method
Toluene-d8	8260D, Volatiles-	full suite "As Received"			53.8 ug/L		50.0		108	(89%-112%)	

Notes:

Column headers are defined as follows:

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

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Report Date: July 8, 2025

Contact: Kevil, Kentucky 42053
 Project: Ms. Jaime Morrow
 C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID:	MW390SG3-25	Project:	FRNP00609
Sample ID:	719632012	Client ID:	FRNP006
Matrix:	WG		
Collect Date:	15-APR-25 07:24		
Receive Date:	16-APR-25		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP-MS												
6020, Dissolved Metals (3 Elements) "As Received"												
Barium	N	0.214	0.000670	0.00400	mg/L	1.00	1	PRB	05/11/25	1926	2783206	1
Chromium	U	0.0100	0.00300	0.0100	mg/L	1.00	1					
Uranium	J	0.000188	0.0000670	0.000200	mg/L	1.00	1	PRB	05/13/25	1706	2783206	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 160	Laboratory Filtration	EXF1	04/17/25	0905	2782832
SW846 3005A	ICP-MS 3005A PREP	BB2	05/08/25	0820	2783205

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 3005A/6020B	
2	SW846 3005A/6020B	

Notes:

Column headers are defined as follows:

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

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Report Date: July 8, 2025

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

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: TB2SG3-25 Project: FRNP00609
Sample ID: 719632013 Client ID: FRNP006
Matrix: WATER
Collect Date: 15-APR-25 06:20
Receive Date: 16-APR-25
Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
504.1/8011 Analysis of EDB/DBCP												
8011, VOA Compounds Liquid "As Received"												
1,2-Dibromo-3-chloropropane	U	0.0192	0.00862	0.0192	ug/L	0.958	1	LOF	04/20/25	0527	2782801	1
Volatile Organics												
8260D, Volatiles- full suite "As Received"												
1,1,1,2-Tetrachloroethane	U	1.00	0.333	1.00	ug/L		1	JM6	04/22/25	1441	2785340	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		1.83	0.333	1.00	ug/L		1					
Chloroethane	U	1.00	0.333	1.00	ug/L		1					
Chloroform	U	1.00	0.333	1.00	ug/L		1					
Chloromethane	U	1.00	0.333	1.00	ug/L		1					
Dibromochloromethane	U	1.00	0.333	1.00	ug/L		1					
Dibromomethane	U	1.00	0.333	1.00	ug/L		1					
Ethylbenzene	U	1.00	0.333	1.00	ug/L		1					
Iodomethane	U	5.00	1.67	5.00	ug/L		1					

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Certificate of Analysis

Report Date: July 8, 2025

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

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: TB2SG3-25 Project: FRNP00609
Sample ID: 719632013 Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
8260D, Volatiles- full suite "As Received"												
Methylene chloride	U	5.00	0.500	5.00	ug/L		1					
Styrene	U	1.00	0.333	1.00	ug/L		1					
Tetrachloroethylene	U	1.00	0.333	1.00	ug/L		1					
Toluene	U	1.00	0.333	1.00	ug/L		1					
Trichloroethylene	U	1.00	0.333	1.00	ug/L		1					
Trichlorofluoromethane	U	1.00	0.333	1.00	ug/L		1					
Vinyl acetate	U	5.00	1.67	5.00	ug/L		1					
Vinyl chloride	U	1.00	0.333	1.00	ug/L		1					
Xylenes (total)	U	3.00	1.00	3.00	ug/L		1					
cis-1,2-Dichloroethylene	U	1.00	0.333	1.00	ug/L		1					
cis-1,3-Dichloropropylene	U	1.00	0.333	1.00	ug/L		1					
trans-1,2-Dichloroethylene	U	1.00	0.333	1.00	ug/L		1					
trans-1,3-Dichloropropylene	U	1.00	0.333	1.00	ug/L		1					
trans-1,4-Dichloro-2-butene	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	04/18/25	1356	2782800

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 Compounds Liquid "As Received"	5.96 ug/L	6.84	87	(56%-149%)
Bromofluorobenzene	8260D, Volatiles- full suite "As Received"	54.5 ug/L	50.0	109	(85%-114%)
1,2-Dichloroethane-d4	8260D, Volatiles- full suite "As Received"	54.0 ug/L	50.0	108	(81%-118%)
Toluene-d8	8260D, Volatiles- full suite "As Received"	54.3 ug/L	50.0	109	(89%-112%)

Notes:

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Report Date: July 8, 2025

Company : Four Rivers Nuclear Partnership, LLC
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Contact: Kevil, Kentucky 42053
Project: Ms. Jaime Morrow
C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: TB2SG3-25

Sample ID: 719632013

Project: FRNP00609

Client ID: FRNP006

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

Column headers are defined as follows:

DF: Dilution Factor

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

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

Kevil, Kentucky 42053

Report Date: July 8, 2025

Contact: Ms. Jaime Morrow

Project: C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW391SG3-25
Sample ID: 719930001
Matrix: WG
Collect Date: 16-APR-25
Receive Date: 17-APR-25
Collector: Client

Project: FRNP00609
Client ID: FRNP006

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis														
<i>AlphaSpec Ra226, Liquid "As Received"</i>														
Radium-226	U	0.657	+/-0.766	0.978	+/-0.770	5.00	pCi/L			CM4	05/04/25	1235	2790618	1
<i>Th-01-RC M, Th Isotopes, Liquid "As Received"</i>														
Thorium-230	U	-0.195	+/-0.819	2.01	+/-0.819	50.0	pCi/L			CM4	04/27/25	1218	2784559	2
Rad Gas Flow Proportional Counting														
<i>905.0 Mod, Sr90, liquid "As Received"</i>														
Strontium-90	U	-0.130	+/-1.53	2.94	+/-1.53	8.00	pCi/L			CH7	05/01/25	1611	2784108	3
<i>9310, Alpha/Beta Activity, liquid "As Received"</i>														
Alpha	U	-1.01	+/-2.47	6.19	+/-2.47	15.0	pCi/L			HH3	05/05/25	1648	2783572	4
Beta	U	-2.54	+/-4.63	9.07	+/-4.63	50.0	pCi/L							
Rad Liquid Scintillation Analysis														
<i>906.0 Mod, Tritium Dist, Liquid "As Received"</i>														
Tritium	U	12.9	+/-128	229	+/-128	300	pCi/L			IT1	05/20/25	0509	2799492	5
<i>Tc-02-RC-MOD, Tc99, Liquid "As Received"</i>														
Technetium-99	U	5.56	+/-11.8	20.4	+/-11.9	25.0	pCi/L			MJ3	05/12/25	0229	2788031	6

The following Analytical Methods were performed

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

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	AlphaSpec Ra226, Liquid "As Received"	2790618	91.9	(30%-110%)
Thorium-229 Tracer	Th-01-RC M, Th Isotopes, Liquid "As Received"	2784559	79.5	(30%-110%)
Strontium Carrier	905.0 Mod, Sr90, liquid "As Received"	2784108	86.4	(30%-110%)
Technetium-99m Tracer	Tc-02-RC-MOD, Tc99, Liquid "As Received"	2788031	96.7	(30%-110%)

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Report Date: July 8, 2025

Contact: Ms. Jaime Morrow

Project: C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW391SG3-25

Project: FRNP00609

Sample ID: 719930001

Client ID: FRNP006

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

Notes:

The MDC is a sample specific MDC.

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

Column headers are defined as follows:

DF: Dilution Factor

Mtd.: Method

DL: Detection Limit

PF: Prep Factor

Lc/LC: Critical Level

RL: Reporting Limit

MDA: Minimum Detectable Activity

TPU: Total Propagated Uncertainty

MDC: Minimum Detectable Concentration

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Report Date: July 8, 2025

Contact: Ms. Jaime Morrow

Project: C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW392SG3-25

Project: FRNP00609

Sample ID: 719930003

Client ID: FRNP006

Matrix: WG

Collect Date: 16-APR-25

Receive Date: 17-APR-25

Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis														
<i>AlphaSpec Ra226, Liquid "As Received"</i>														
Radium-226	U	0.190	+/-0.430	0.677	+/-0.431	5.00	pCi/L			CM4	05/04/25	1235	2790618	1
<i>Th-01-RC M, Th Isotopes, Liquid "As Received"</i>														
Thorium-230	U	0.900	+/-1.16	1.71	+/-1.18	50.0	pCi/L			CM4	04/27/25	1218	2784559	2
Rad Gas Flow Proportional Counting														
<i>905.0 Mod, Sr90, liquid "As Received"</i>														
Strontium-90	U	0.402	+/-2.28	4.10	+/-2.28	8.00	pCi/L			CH7	05/01/25	1611	2784108	3
<i>9310, Alpha/Beta Activity, liquid "As Received"</i>														
Alpha	U	-1.15	+/-3.64	8.05	+/-3.64	15.0	pCi/L			HH3	05/05/25	1648	2783572	4
Beta	U	-0.846	+/-5.37	9.98	+/-5.37	50.0	pCi/L							
Rad Liquid Scintillation Analysis														
<i>906.0 Mod, Tritium Dist, Liquid "As Received"</i>														
Tritium	U	83.4	+/-132	227	+/-133	300	pCi/L			IT1	05/20/25	0546	2799492	5
<i>Tc-02-RC-MOD, Tc99, Liquid "As Received"</i>														
Technetium-99	U	-5.52	+/-11.2	20.4	+/-11.2	25.0	pCi/L			MJ3	05/12/25	0246	2788031	6

The following Analytical Methods were performed

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

Surrogate/Tracer	Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer		AlphaSpec Ra226, Liquid "As Received"	2790618	101	(30%-110%)
Thorium-229 Tracer		Th-01-RC M, Th Isotopes, Liquid "As Received"	2784559	78	(30%-110%)
Strontium Carrier		905.0 Mod, Sr90, liquid "As Received"	2784108	90.9	(30%-110%)
Technetium-99m Tracer		Tc-02-RC-MOD, Tc99, Liquid "As Received"	2788031	96.6	(30%-110%)

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Report Date: July 8, 2025

Contact: Ms. Jaime Morrow

Project: C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW392SG3-25

Project: FRNP00609

Sample ID: 719930003

Client ID: FRNP006

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

Notes:

The MDC is a sample specific MDC.

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

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

Lc/LC: Critical Level

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Mtd.: Method

PF: Prep Factor

RL: Reporting Limit

TPU: Total Propagated Uncertainty

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Kevil, Kentucky 42053

Report Date: July 8, 2025

Contact: Ms. Jaime Morrow

Project: C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW393SG3-25

Project: FRNP00609

Sample ID: 719930005

Client ID: FRNP006

Matrix: WG

Collect Date: 16-APR-25

Receive Date: 17-APR-25

Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis														
<i>AlphaSpec Ra226, Liquid "As Received"</i>														
Radium-226	U	0.635	+/-0.718	0.883	+/-0.722	5.00	pCi/L			CM4	05/04/25	1235	2790618	1
<i>Th-01-RC M, Th Isotopes, Liquid "As Received"</i>														
Thorium-230	U	-0.101	+/-1.00	2.34	+/-1.01	50.0	pCi/L			CM4	04/27/25	1218	2784559	2
Rad Gas Flow Proportional Counting														
<i>905.0 Mod, Sr90, liquid "As Received"</i>														
Strontium-90	U	-1.60	+/-1.88	3.80	+/-1.88	8.00	pCi/L			CH7	05/01/25	1611	2784108	3
<i>9310, Alpha/Beta Activity, liquid "As Received"</i>														
Alpha	U	3.31	+/-4.73	8.21	+/-4.77	15.0	pCi/L			HH3	05/05/25	1648	2783572	4
Beta	U	3.09	+/-5.20	8.99	+/-5.23	50.0	pCi/L							
Rad Liquid Scintillation Analysis														
<i>906.0 Mod, Tritium Dist, Liquid "As Received"</i>														
Tritium	U	85.2	+/-132	227	+/-133	300	pCi/L			IT1	05/20/25	0623	2799492	5
<i>Tc-02-RC-MOD, Tc99, Liquid "As Received"</i>														
Technetium-99	U	-2.54	+/-11.4	20.3	+/-11.4	25.0	pCi/L			MJ3	05/12/25	0303	2788031	6

The following Analytical Methods were performed

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

Surrogate/Tracer	Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer		AlphaSpec Ra226, Liquid "As Received"	2790618	101	(30%-110%)
Thorium-229 Tracer		Th-01-RC M, Th Isotopes, Liquid "As Received"	2784559	62.6	(30%-110%)
Strontium Carrier		905.0 Mod, Sr90, liquid "As Received"	2784108	86.4	(30%-110%)
Technetium-99m Tracer		Tc-02-RC-MOD, Tc99, Liquid "As Received"	2788031	96.8	(30%-110%)

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Certificate of Analysis

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

Kevil, Kentucky 42053

Report Date: July 8, 2025

Contact: Ms. Jaime Morrow

Project: C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW393SG3-25

Project: FRNP00609

Sample ID: 719930005

Client ID: FRNP006

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

Notes:

The MDC is a sample specific MDC.

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

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

Lc/LC: Critical Level

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Mtd.: Method

PF: Prep Factor

RL: Reporting Limit

TPU: Total Propagated Uncertainty

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Kevil, Kentucky 42053

Report Date: July 8, 2025

Contact: Ms. Jaime Morrow

Project: C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW394SG3-25

Project: FRNP00609

Sample ID: 719930007

Client ID: FRNP006

Matrix: WG

Collect Date: 16-APR-25

Receive Date: 17-APR-25

Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis														
<i>AlphaSpec Ra226, Liquid "As Received"</i>														
Radium-226	U	0.129	+/-0.429	0.793	+/-0.429	5.00	pCi/L			CM4	05/04/25	1235	2790618	1
<i>Th-01-RC M, Th Isotopes, Liquid "As Received"</i>														
Thorium-230	U	0.686	+/-1.16	1.88	+/-1.17	50.0	pCi/L			CM4	04/27/25	1218	2784559	2
Rad Gas Flow Proportional Counting														
<i>905.0 Mod, Sr90, liquid "As Received"</i>														
Strontium-90	U	-0.657	+/-1.06	2.28	+/-1.06	8.00	pCi/L			CH7	05/01/25	1611	2784108	3
<i>9310, Alpha/Beta Activity, liquid "As Received"</i>														
Alpha	U	-0.308	+/-4.07	8.99	+/-4.07	15.0	pCi/L			HH3	05/06/25	1641	2783572	4
Beta	U	6.84	+/-7.28	12.1	+/-7.36	50.0	pCi/L							
Rad Liquid Scintillation Analysis														
<i>906.0 Mod, Tritium Dist, Liquid "As Received"</i>														
Tritium	U	16.9	+/-127	227	+/-127	300	pCi/L			IT1	05/20/25	0700	2799492	5
<i>Tc-02-RC-MOD, Tc99, Liquid "As Received"</i>														
Technetium-99	U	1.25	+/-11.1	19.6	+/-11.1	25.0	pCi/L			MJ3	05/12/25	0319	2788031	6

The following Analytical Methods were performed

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

Surrogate/Tracer	Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer		AlphaSpec Ra226, Liquid "As Received"	2790618	101	(30%-110%)
Thorium-229 Tracer		Th-01-RC M, Th Isotopes, Liquid "As Received"	2784559	75.7	(30%-110%)
Strontium Carrier		905.0 Mod, Sr90, liquid "As Received"	2784108	90.9	(30%-110%)
Technetium-99m Tracer		Tc-02-RC-MOD, Tc99, Liquid "As Received"	2788031	99.6	(30%-110%)

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Report Date: July 8, 2025

Contact: Ms. Jaime Morrow

Project: C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW394SG3-25

Project: FRNP00609

Sample ID: 719930007

Client ID: FRNP006

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

Notes:

The MDC is a sample specific MDC.

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

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

Lc/LC: Critical Level

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Mtd.: Method

PF: Prep Factor

RL: Reporting Limit

TPU: Total Propagated Uncertainty

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Certificate of Analysis

Company : Four Rivers Nuclear Partnership,
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Kevil, Kentucky 42053

Report Date: July 8, 2025

Contact: Ms. Jaime Morrow

Project: C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW395SG3-25

Project: FRNP00609

Sample ID: 719930009

Client ID: FRNP006

Matrix: WG

Collect Date: 16-APR-25

Receive Date: 17-APR-25

Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis														
<i>AlphaSpec Ra226, Liquid "As Received"</i>														
Radium-226	U	0.497	+/-0.680	1.00	+/-0.683	5.00	pCi/L			CM4	05/04/25	1235	2790618	1
<i>Th-01-RC M, Th Isotopes, Liquid "As Received"</i>														
Thorium-230	U	1.21	+/-1.27	1.68	+/-1.29	50.0	pCi/L			CM4	04/27/25	1218	2784559	2
Rad Gas Flow Proportional Counting														
<i>905.0 Mod, Sr90, liquid "As Received"</i>														
Strontium-90	U	-0.766	+/-2.57	4.81	+/-2.57	8.00	pCi/L			CH7	05/02/25	1309	2784108	3
<i>9310, Alpha/Beta Activity, liquid "As Received"</i>														
Alpha	U	-1.33	+/-2.47	6.49	+/-2.47	15.0	pCi/L			HH3	05/05/25	1648	2783572	4
Beta	U	-1.20	+/-6.45	11.9	+/-6.45	50.0	pCi/L							
Rad Liquid Scintillation Analysis														
<i>906.0 Mod, Tritium Dist, Liquid "As Received"</i>														
Tritium	U	-2.47	+/-120	217	+/-120	300	pCi/L			IT1	05/20/25	0736	2799492	5
<i>Tc-02-RC-MOD, Tc99, Liquid "As Received"</i>														
Technetium-99	U	2.75	+/-11.7	20.3	+/-11.7	25.0	pCi/L			MJ3	05/12/25	0336	2788031	6

The following Analytical Methods were performed

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

Surrogate/Tracer	Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer		AlphaSpec Ra226, Liquid "As Received"	2790618	102	(30%-110%)
Thorium-229 Tracer		Th-01-RC M, Th Isotopes, Liquid "As Received"	2784559	82.2	(30%-110%)
Strontium Carrier		905.0 Mod, Sr90, liquid "As Received"	2784108	77.3	(30%-110%)
Technetium-99m Tracer		Tc-02-RC-MOD, Tc99, Liquid "As Received"	2788031	97.3	(30%-110%)

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Report Date: July 8, 2025

Contact: Ms. Jaime Morrow

Project: C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW395SG3-25

Project: FRNP00609

Sample ID: 719930009

Client ID: FRNP006

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

Notes:

The MDC is a sample specific MDC.

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

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

Lc/LC: Critical Level

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Mtd.: Method

PF: Prep Factor

RL: Reporting Limit

TPU: Total Propagated Uncertainty

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Kevil, Kentucky 42053

Report Date: July 8, 2025

Contact: Ms. Jaime Morrow

Project: C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW396SG3-25

Project: FRNP00609

Sample ID: 719930011

Client ID: FRNP006

Matrix: WG

Collect Date: 16-APR-25

Receive Date: 17-APR-25

Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis														
<i>AlphaSpec Ra226, Liquid "As Received"</i>														
Radium-226	U	0.432	+/-0.719	1.13	+/-0.721	5.00	pCi/L			CM4	05/04/25	1235	2790618	1
<i>Th-01-RC M, Th Isotopes, Liquid "As Received"</i>														
Thorium-230	U	0.830	+/-1.03	1.53	+/-1.04	50.0	pCi/L			CM4	04/27/25	1218	2784559	2
Rad Gas Flow Proportional Counting														
<i>905.0 Mod, Sr90, liquid "As Received"</i>														
Strontium-90	U	-0.261	+/-1.83	3.46	+/-1.83	8.00	pCi/L			CH7	05/01/25	1610	2784108	3
<i>9310, Alpha/Beta Activity, liquid "As Received"</i>														
Alpha	U	1.29	+/-4.03	7.75	+/-4.03	15.0	pCi/L			HH3	05/05/25	1648	2783572	4
Beta	U	-1.54	+/-5.36	10.1	+/-5.36	50.0	pCi/L							
Rad Liquid Scintillation Analysis														
<i>906.0 Mod, Tritium Dist, Liquid "As Received"</i>														
Tritium	U	14.8	+/-128	228	+/-128	300	pCi/L			IT1	05/20/25	0813	2799492	5
<i>Tc-02-RC-MOD, Tc99, Liquid "As Received"</i>														
Technetium-99	U	2.06	+/-12.1	21.2	+/-12.1	25.0	pCi/L			MJ3	05/12/25	0352	2788031	6

The following Analytical Methods were performed

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

Surrogate/Tracer	Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer		AlphaSpec Ra226, Liquid "As Received"	2790618	90.2	(30%-110%)
Thorium-229 Tracer		Th-01-RC M, Th Isotopes, Liquid "As Received"	2784559	93.2	(30%-110%)
Strontium Carrier		905.0 Mod, Sr90, liquid "As Received"	2784108	81.8	(30%-110%)
Technetium-99m Tracer		Tc-02-RC-MOD, Tc99, Liquid "As Received"	2788031	93	(30%-110%)

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Report Date: July 8, 2025

Contact: Ms. Jaime Morrow

Project: C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW396SG3-25

Project: FRNP00609

Sample ID: 719930011

Client ID: FRNP006

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

Notes:

The MDC is a sample specific MDC.

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

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

Lc/LC: Critical Level

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Mtd.: Method

PF: Prep Factor

RL: Reporting Limit

TPU: Total Propagated Uncertainty

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Certificate of Analysis

Report Date: July 8, 2025

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

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID:	MW391SG3-25	Project:	FRNP00609
Sample ID:	719930001	Client ID:	FRNP006
Matrix:	WG		
Collect Date:	16-APR-25 10:04		
Receive Date:	17-APR-25		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
504.1/8011 Analysis of EDB/DBCP												
8011, VOA Compounds Liquid "As Received"												
1,2-Dibromo-3-chloropropane	U	0.0188	0.00846	0.0188	ug/L	0.940	1	LOF	04/24/25	1526	2783445	1
Carbon Analysis												
9060A, Total Organic Carbon "As Received"												
Total Organic Carbon Average	J	0.728	0.330	2.00	mg/L		1	KB3	04/25/25	2221	2787022	3
Flow Injection Analysis												
9012B, Total Cyanide "As Received"												
Cyanide, Total	UNN1	0.200	0.00167	0.200	mg/L	1.00	1	KLP1	04/23/25	1428	2786023	4
Halogen Analysis												
9020B, TOX (Organic Halogen) "As Received"												
Total Organic Halogens	J	9.52	3.33	10.0	ug/L		1	JW2	05/13/25	1608	2796635	5
Ion Chromatography												
300.0, Iodide in Liquid "As Received"												
Iodide	U	0.500	0.167	0.500	mg/L		1	CH6	04/25/25	0250	2786990	6
SW846 9056A Anions (5) "As Received"												
Chloride	J	32.7	0.335	250	mg/L		5	RXB5	04/17/25	1331	2783249	7
Nitrate-N	J	0.962	0.165	10.0	mg/L		5					
Bromide		0.436	0.0670	0.200	mg/L		1	RXB5	04/18/25	0122	2783249	8
Fluoride	J	0.177	0.0330	4.00	mg/L		1					
Sulfate		17.1	0.133	0.400	mg/L		1					
Mercury Analysis-CVAA												
7470, Mercury Liquid "As Received"												
Mercury	U	0.000200	0.0000670	0.000200	mg/L	1.00	1	JP2	05/08/25	0958	2793439	9
Metals Analysis-ICP-MS												
6020, Metals (15+) "As Received"												
Aluminum	N	0.129	0.0193	0.0500	mg/L	1.00	1	PRB	05/11/25	1943	2785177	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		0.191	0.000670	0.00400	mg/L	1.00	1					
Cadmium	U	0.00100	0.000300	0.00100	mg/L	1.00	1					
Calcium	B	22.7	0.0800	0.200	mg/L	1.00	1					
Chromium	U	0.0100	0.00300	0.0100	mg/L	1.00	1					
Cobalt	U	0.00100	0.000300	0.00100	mg/L	1.00	1					
Copper	J	0.00197	0.000300	0.00200	mg/L	1.00	1					

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Address : 5600 Hobbs Road

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW391SG3-25 Project: FRNP00609
Sample ID: 719930001 Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP-MS												
6020, Metals (15+) "As Received"												
Iron		0.744	0.0330	0.100	mg/L	1.00	1					
Lead	U	0.00200	0.000500	0.00200	mg/L	1.00	1					
Magnesium		9.90	0.0100	0.0300	mg/L	1.00	1					
Manganese		0.00916	0.00100	0.00500	mg/L	1.00	1					
Molybdenum	U	0.00100	0.000200	0.00100	mg/L	1.00	1					
Nickel	J	0.000828	0.000600	0.00200	mg/L	1.00	1					
Potassium		1.57	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		42.6	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	BJ	0.00646	0.00330	0.0200	mg/L	1.00	1					
Zinc	U	0.0200	0.00330	0.0200	mg/L	1.00	1					
Rhodium	U	0.00500	0.00160	0.00500	mg/L	1.00	1	PRB	05/11/25	2138	2785177	11
Tantalum	U	0.00500	0.00100	0.00500	mg/L	1.00	1					
Boron		0.0295	0.00520	0.0150	mg/L	1.00	1	PRB	05/13/25	1603	2785177	12
Beryllium	U	0.000500	0.000200	0.000500	mg/L	1.00	1	PRB	05/15/25	1133	2785177	13
Solids Analysis												
160.1, Dissolved Solids "As Received"												
Total Dissolved Solids	*	205	2.38	10.0	mg/L			SC1	04/23/25	1247	2785877	14
Spectrometric Analysis												
410.4, Chem. Oxygen Demand "As Received"												
COD	U	20.0	8.95	20.0	mg/L		1	HH2	04/22/25	1700	2785194	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	04/23/25	1301	2786438	16
1,1,1-Trichloroethane	UY1	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					

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Report Date: July 8, 2025

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

Contact: Kevil, Kentucky 42053
Project: Ms. Jaime Morrow
C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW391SG3-25

Project: FRNP00609

Sample ID: 719930001

Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time Batch	Method
Volatile Organics											
8260D, Volatiles- full suite "As Received"											
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		7.03	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	UY1	1.00	0.333	1.00	ug/L		1				
Bromochloromethane	U	1.00	0.333	1.00	ug/L		1				
Bromodichloromethane	UY1	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	UY1	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	UY1	5.00	1.67	5.00	ug/L		1				
Methylene chloride	J	3.80	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	UY1	1.00	0.333	1.00	ug/L		1				
Trichloroethylene	JY1	0.370	0.333	1.00	ug/L		1				
Trichlorofluoromethane	U	1.00	0.333	1.00	ug/L		1				
Vinyl acetate	U	5.00	1.67	5.00	ug/L		1				
Vinyl chloride	U	1.00	0.333	1.00	ug/L		1				
Xylenes (total)	UY1	3.00	1.00	3.00	ug/L		1				
cis-1,2-Dichloroethylene	U	1.00	0.333	1.00	ug/L		1				
cis-1,3-Dichloropropylene	UY1	1.00	0.333	1.00	ug/L		1				

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Certificate of Analysis

Report Date: July 8, 2025

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

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW391SG3-25 Project: FRNP00609
Sample ID: 719930001 Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
8260D, Volatiles- full suite "As Received"												
trans-1,2-Dichloroethylene	U	1.00	0.333	1.00	ug/L		1					
trans-1,3-Dichloropropylene	UY1	1.00	0.333	1.00	ug/L		1					
trans-1,4-Dichloro-2-butene	U	5.00	1.67	5.00	ug/L		1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	HS2	05/07/25	1545	2785176
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	JM13	05/07/25	1140	2793427
SW846 8011 PREP	8011 Prep	LOF	04/24/25	1207	2783444
SW846 9010C Distillation	SW846 9010C Prep	KLP1	04/23/25	1257	2786022

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	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 Compounds Liquid "As Received"	5.30 ug/L	6.71	79	(56%-149%)
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"	48.5 ug/L	50.0	97	(81%-118%)
Toluene-d8	8260D, Volatiles- full suite "As Received"	49.7 ug/L	50.0	99	(89%-112%)

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Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW391SG3-25

Sample ID: 719930001

Project: FRNP00609

Client ID: FRNP006

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

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

Contact: Kevil, Kentucky 42053
Project: Ms. Jaime Morrow
C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID:	MW391SG3-25	Project:	FRNP00609
Sample ID:	719930002	Client ID:	FRNP006
Matrix:	WG		
Collect Date:	16-APR-25 10:04		
Receive Date:	17-APR-25		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP-MS												
6020, Dissolved Metals (3 Elements) "As Received"												
Barium		0.178	0.000670	0.00400	mg/L	1.00	1	PRB	05/11/25	1946	2785177	1
Chromium	U	0.0100	0.00300	0.0100	mg/L	1.00	1					
Uranium	U	0.000200	0.0000670	0.000200	mg/L	1.00	1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 160	Laboratory Filtration	MM7	04/21/25	1715	2783543
SW846 3005A	ICP-MS 3005A PREP	HS2	05/07/25	1545	2785176

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-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW392SG3-25 Project: FRNP00609
Sample ID: 719930003 Client ID: FRNP006
Matrix: WG
Collect Date: 16-APR-25 11:52
Receive Date: 17-APR-25
Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
504.1/8011 Analysis of EDB/DBCP												
8011, VOA Compounds Liquid "As Received"												
1,2-Dibromo-3-chloropropane	U	0.0190	0.00853	0.0190	ug/L	0.948	1	LOF	04/24/25	1600	2783445	1
Carbon Analysis												
9060A, Total Organic Carbon "As Received"												
Total Organic Carbon Average	J	0.716	0.330	2.00	mg/L		1	KB3	04/25/25	2252	2787022	3
Flow Injection Analysis												
9012B, Total Cyanide "As Received"												
Cyanide, Total	UNN1	0.200	0.00167	0.200	mg/L	1.00	1	KLP1	04/23/25	1429	2786023	4
Halogen Analysis												
9020B, TOX (Organic Halogen) "As Received"												
Total Organic Halogens		13.7	3.33	10.0	ug/L		1	JW2	05/13/25	1723	2796635	5
Ion Chromatography												
300.0, Iodide in Liquid "As Received"												
Iodide	U	0.500	0.167	0.500	mg/L		1	CH6	04/25/25	0303	2786990	6
SW846 9056A Anions (5) "As Received"												
Nitrate-N	J	0.938	0.165	10.0	mg/L		5	RXB5	04/17/25	1402	2783249	7
Bromide		0.613	0.0670	0.200	mg/L		1	RXB5	04/18/25	0152	2783249	8
Fluoride	J	0.184	0.0330	4.00	mg/L		1					
Sulfate		8.17	0.133	0.400	mg/L		1					
Chloride	J	47.2	0.670	250	mg/L		10	RXB5	04/18/25	0223	2783249	9
Mercury Analysis-CVAA												
7470, Mercury Liquid "As Received"												
Mercury	U	0.000200	0.0000670	0.000200	mg/L	1.00	1	JP2	05/08/25	1000	2793439	10
Metals Analysis-ICP-MS												
6020, Metals (15+) "As Received"												
Aluminum	JN	0.0336	0.0193	0.0500	mg/L	1.00	1	PRB	05/11/25	1948	2785177	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		0.245	0.000670	0.00400	mg/L	1.00	1					
Cadmium	U	0.00100	0.000300	0.00100	mg/L	1.00	1					
Calcium	B	28.3	0.0800	0.200	mg/L	1.00	1					
Chromium	U	0.0100	0.00300	0.0100	mg/L	1.00	1					
Cobalt	U	0.00100	0.000300	0.00100	mg/L	1.00	1					
Copper	J	0.00111	0.000300	0.00200	mg/L	1.00	1					

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

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW392SG3-25 Project: FRNP00609
Sample ID: 719930003 Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP-MS												
6020, Metals (15+) "As Received"												
Iron		0.296	0.0330	0.100	mg/L	1.00	1					
Lead	U	0.00200	0.000500	0.00200	mg/L	1.00	1					
Magnesium		11.7	0.0100	0.0300	mg/L	1.00	1					
Manganese		0.159	0.00100	0.00500	mg/L	1.00	1					
Molybdenum	J	0.000270	0.000200	0.00100	mg/L	1.00	1					
Nickel	J	0.000948	0.000600	0.00200	mg/L	1.00	1					
Potassium		1.95	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		32.0	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	BJ	0.00625	0.00330	0.0200	mg/L	1.00	1					
Zinc	BJ	0.00341	0.00330	0.0200	mg/L	1.00	1					
Rhodium	U	0.00500	0.00160	0.00500	mg/L	1.00	1	PRB	05/11/25	2139	2785177	12
Tantalum	U	0.00500	0.00100	0.00500	mg/L	1.00	1					
Boron		0.0382	0.00520	0.0150	mg/L	1.00	1	PRB	05/13/25	1605	2785177	13
Beryllium	U	0.000500	0.000200	0.000500	mg/L	1.00	1	PRB	05/15/25	1135	2785177	14
Solids Analysis												
160.1, Dissolved Solids "As Received"												
Total Dissolved Solids	*	195	2.38	10.0	mg/L			SC1	04/23/25	1247	2785877	15
Spectrometric Analysis												
410.4, Chem. Oxygen Demand "As Received"												
COD	U	20.0	8.95	20.0	mg/L		1	HH2	04/22/25	1700	2785194	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	04/23/25	1326	2786438	17
1,1,1-Trichloroethane	UY1	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					

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Address : 5600 Hobbs Road

Contact: Kevil, Kentucky 42053
Project: Ms. Jaime Morrow
C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW392SG3-25

Project: FRNP00609

Sample ID: 719930003

Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time Batch	Method
Volatile Organics											
8260D, Volatiles- full suite "As Received"											
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		6.70	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	UY1	1.00	0.333	1.00	ug/L		1				
Bromochloromethane	U	1.00	0.333	1.00	ug/L		1				
Bromodichloromethane	UY1	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	UY1	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	UY1	5.00	1.67	5.00	ug/L		1				
Methylene chloride		6.19	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	UY1	1.00	0.333	1.00	ug/L		1				
Trichloroethylene	Y1	1.18	0.333	1.00	ug/L		1				
Trichlorofluoromethane	U	1.00	0.333	1.00	ug/L		1				
Vinyl acetate	U	5.00	1.67	5.00	ug/L		1				
Vinyl chloride	U	1.00	0.333	1.00	ug/L		1				
Xylenes (total)	UY1	3.00	1.00	3.00	ug/L		1				
cis-1,2-Dichloroethylene	J	0.540	0.333	1.00	ug/L		1				
cis-1,3-Dichloropropylene	UY1	1.00	0.333	1.00	ug/L		1				

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Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW392SG3-25 Project: FRNP00609
Sample ID: 719930003 Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
8260D, Volatiles- full suite "As Received"												
trans-1,2-Dichloroethylene	U	1.00	0.333	1.00	ug/L		1					
trans-1,3-Dichloropropylene	UY1	1.00	0.333	1.00	ug/L		1					
trans-1,4-Dichloro-2-butene	U	5.00	1.67	5.00	ug/L		1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 8011 PREP	8011 Prep	LOF	04/24/25	1207	2783444
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	JM13	05/07/25	1140	2793427
SW846 9010C Distillation	SW846 9010C Prep	KLP1	04/23/25	1257	2786022
SW846 3005A	ICP-MS 3005A PREP	HS2	05/07/25	1545	2785176

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	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 Compounds Liquid "As Received"	5.60 ug/L	6.77	83	(56%-149%)
Bromofluorobenzene	8260D, Volatiles- full suite "As Received"	43.8 ug/L	50.0	88	(85%-114%)
1,2-Dichloroethane-d4	8260D, Volatiles- full suite "As Received"	48.9 ug/L	50.0	98	(81%-118%)

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Company : Four Rivers Nuclear Partnership, LLC
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Contact: Kevil, Kentucky 42053
Project: Ms. Jaime Morrow
C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW392SG3-25

Sample ID: 719930003

Project: FRNP00609

Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time Batch	Method
Toluene-d8	8260D, Volatiles-	full suite "As Received"			49.7 ug/L		50.0		99	(89%-112%)	

Notes:

Column headers are defined as follows:

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

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

Contact: Kevil, Kentucky 42053
Project: Ms. Jaime Morrow
C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID:	MW392SG3-25	Project:	FRNP00609
Sample ID:	719930004	Client ID:	FRNP006
Matrix:	WG		
Collect Date:	16-APR-25 11:52		
Receive Date:	17-APR-25		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP-MS												
6020, Dissolved Metals (3 Elements) "As Received"												
Barium		0.228	0.000670	0.00400	mg/L	1.00	1	PRB	05/11/25	1951	2785177	1
Chromium	U	0.0100	0.00300	0.0100	mg/L	1.00	1					
Uranium	U	0.000200	0.0000670	0.000200	mg/L	1.00	1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	HS2	05/07/25	1545	2785176
EPA 160	Laboratory Filtration	MM7	04/21/25	1715	2783543

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-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW393SG3-25 Project: FRNP00609
Sample ID: 719930005 Client ID: FRNP006
Matrix: WG
Collect Date: 16-APR-25 12:33
Receive Date: 17-APR-25
Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
504.1/8011 Analysis of EDB/DBCP												
8011, VOA Compounds Liquid "As Received"												
1,2-Dibromo-3-chloropropane	U	0.0189	0.00849	0.0189	ug/L	0.944	1	LOF	04/24/25	1635	2783445	1
Carbon Analysis												
9060A, Total Organic Carbon "As Received"												
Total Organic Carbon Average		2.06	0.330	2.00	mg/L		1	KB3	04/25/25	2343	2787022	3
Flow Injection Analysis												
9012B, Total Cyanide "As Received"												
Cyanide, Total	UNN1	0.200	0.00167	0.200	mg/L	1.00	1	KLP1	04/23/25	1430	2786023	4
Halogen Analysis												
9020B, TOX (Organic Halogen) "As Received"												
Total Organic Halogens	J	9.11	3.33	10.0	ug/L		1	JW2	05/13/25	1753	2796635	5
Ion Chromatography												
300.0, Iodide in Liquid "As Received"												
Iodide	U	0.500	0.167	0.500	mg/L		1	CH6	04/25/25	0316	2786990	6
SW846 9056A Anions (5) "As Received"												
Bromide	J	0.123	0.0670	0.200	mg/L		1	RXB5	04/17/25	1433	2783249	7
Chloride	J	8.47	0.0670	250	mg/L		1					
Fluoride	J	0.177	0.0330	4.00	mg/L		1					
Nitrate-N	J	0.263	0.132	10.0	mg/L		4	RXB5	04/17/25	2044	2783249	8
Sulfate		25.5	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	05/08/25	1001	2793439	9
Metals Analysis-ICP-MS												
6020, Metals (15+) "As Received"												
Aluminum	N	0.0695	0.0193	0.0500	mg/L	1.00	1	PRB	05/11/25	1954	2785177	10
Antimony	U	0.00300	0.00100	0.00300	mg/L	1.00	1					
Arsenic	J	0.00310	0.00200	0.00500	mg/L	1.00	1					
Barium		0.127	0.000670	0.00400	mg/L	1.00	1					
Cadmium	U	0.00100	0.000300	0.00100	mg/L	1.00	1					
Calcium	B	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	U	0.00100	0.000300	0.00100	mg/L	1.00	1					
Copper	J	0.000632	0.000300	0.00200	mg/L	1.00	1					

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Certificate of Analysis

Report Date: July 8, 2025

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

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW393SG3-25 Project: FRNP00609
Sample ID: 719930005 Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP-MS												
6020, Metals (15+) "As Received"												
Iron		1.21	0.0330	0.100	mg/L	1.00	1					
Lead	U	0.00200	0.000500	0.00200	mg/L	1.00	1					
Magnesium		4.56	0.0100	0.0300	mg/L	1.00	1					
Manganese		0.0125	0.00100	0.00500	mg/L	1.00	1					
Molybdenum	J	0.000391	0.000200	0.00100	mg/L	1.00	1					
Nickel	U	0.00200	0.000600	0.00200	mg/L	1.00	1					
Potassium		0.480	0.0800	0.300	mg/L	1.00	1					
Selenium	J	0.00306	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	0.000118	0.0000670	0.000200	mg/L	1.00	1					
Vanadium	BJ	0.00480	0.00330	0.0200	mg/L	1.00	1					
Zinc	U	0.0200	0.00330	0.0200	mg/L	1.00	1					
Rhodium	U	0.00500	0.00160	0.00500	mg/L	1.00	1	PRB	05/11/25	2141	2785177	11
Tantalum	U	0.00500	0.00100	0.00500	mg/L	1.00	1					
Boron		0.0189	0.00520	0.0150	mg/L	1.00	1	PRB	05/13/25	1606	2785177	12
Sodium		80.7	0.800	2.50	mg/L	1.00	10	PRB	05/13/25	1607	2785177	13
Beryllium	U	0.000500	0.000200	0.000500	mg/L	1.00	1	PRB	05/15/25	1137	2785177	14
Solids Analysis												
160.1, Dissolved Solids "As Received"												
Total Dissolved Solids	*	274	2.38	10.0	mg/L			SC1	04/23/25	1247	2785877	15
Spectrometric Analysis												
410.4, Chem. Oxygen Demand "As Received"												
COD	U	20.0	8.95	20.0	mg/L		1	HH2	04/22/25	1700	2785194	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	04/23/25	1352	2786438	17
1,1,1-Trichloroethane	UY1	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					

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Address : 5600 Hobbs Road

Contact: Kevil, Kentucky 42053
Project: Ms. Jaime Morrow
C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW393SG3-25

Project: FRNP00609

Sample ID: 719930005

Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time Batch	Method
Volatile Organics											
8260D, Volatiles- full suite "As Received"											
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	UY1	1.00	0.333	1.00	ug/L		1				
Bromochloromethane	U	1.00	0.333	1.00	ug/L		1				
Bromodichloromethane	UY1	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	UY1	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	UY1	5.00	1.67	5.00	ug/L		1				
Methylene chloride		6.16	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	UY1	1.00	0.333	1.00	ug/L		1				
Trichloroethylene	UY1	1.00	0.333	1.00	ug/L		1				
Trichlorofluoromethane	U	1.00	0.333	1.00	ug/L		1				
Vinyl acetate	U	5.00	1.67	5.00	ug/L		1				
Vinyl chloride	U	1.00	0.333	1.00	ug/L		1				
Xylenes (total)	UY1	3.00	1.00	3.00	ug/L		1				
cis-1,2-Dichloroethylene	U	1.00	0.333	1.00	ug/L		1				
cis-1,3-Dichloropropylene	UY1	1.00	0.333	1.00	ug/L		1				

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Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW393SG3-25 Project: FRNP00609
Sample ID: 719930005 Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
8260D, Volatiles- full suite "As Received"												
trans-1,2-Dichloroethylene	U	1.00	0.333	1.00	ug/L		1					
trans-1,3-Dichloropropylene	UY1	1.00	0.333	1.00	ug/L		1					
trans-1,4-Dichloro-2-butene	U	5.00	1.67	5.00	ug/L		1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 8011 PREP	8011 Prep	LOF	04/24/25	1207	2783444
SW846 3005A	ICP-MS 3005A PREP	HS2	05/07/25	1545	2785176
SW846 9010C Distillation	SW846 9010C Prep	KLP1	04/23/25	1257	2786022
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	JM13	05/07/25	1140	2793427

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	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 Compounds Liquid "As Received"	4.64 ug/L	6.74	69	(56%-149%)
Bromofluorobenzene	8260D, Volatiles- full suite "As Received"	44.3 ug/L	50.0	89	(85%-114%)
1,2-Dichloroethane-d4	8260D, Volatiles- full suite "As Received"	48.8 ug/L	50.0	98	(81%-118%)

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Contact: Kevil, Kentucky 42053
Project: Ms. Jaime Morrow
C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW393SG3-25

Sample ID: 719930005

Project: FRNP00609

Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time Batch	Method
Toluene-d8	8260D, Volatiles-	full suite "As Received"			49.3 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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Company : Four Rivers Nuclear Partnership, LLC
Address : 5600 Hobbs Road

Contact: Kevil, Kentucky 42053
Project: Ms. Jaime Morrow
C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID:	MW393SG3-25	Project:	FRNP00609
Sample ID:	719930006	Client ID:	FRNP006
Matrix:	WG		
Collect Date:	16-APR-25 12:33		
Receive Date:	17-APR-25		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP-MS												
6020, Dissolved Metals (3 Elements) "As Received"												
Barium		0.0757	0.000670	0.00400	mg/L	1.00	1	PRB	05/11/25	1957	2785177	1
Chromium	U	0.0100	0.00300	0.0100	mg/L	1.00	1					
Uranium	J	0.0000770	0.0000670	0.000200	mg/L	1.00	1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 160	Laboratory Filtration	MM7	04/21/25	1715	2783543
SW846 3005A	ICP-MS 3005A PREP	HS2	05/07/25	1545	2785176

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 3005A/6020B	

Notes:

Column headers are defined as follows:

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

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Certificate of Analysis

Report Date: July 8, 2025

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

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW394SG3-25 Project: FRNP00609
Sample ID: 719930007 Client ID: FRNP006
Matrix: WG
Collect Date: 16-APR-25 07:41
Receive Date: 17-APR-25
Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
504.1/8011 Analysis of EDB/DBCP												
8011, VOA Compounds Liquid "As Received"												
1,2-Dibromo-3-chloropropane	U	0.0191	0.00859	0.0191	ug/L	0.955	1	LOF	04/24/25	1709	2783445	1
Carbon Analysis												
9060A, Total Organic Carbon "As Received"												
Total Organic Carbon Average	J	0.511	0.330	2.00	mg/L		1	KB3	04/30/25	1259	2789363	3
Flow Injection Analysis												
9012B, Total Cyanide "As Received"												
Cyanide, Total	UNN1	0.200	0.00167	0.200	mg/L	1.00	1	KLP1	04/23/25	1431	2786023	4
Halogen Analysis												
9020B, TOX (Organic Halogen) "As Received"												
Total Organic Halogens	J	7.42	3.33	10.0	ug/L		1	JW2	05/13/25	1844	2796635	5
Ion Chromatography												
300.0, Iodide in Liquid "As Received"												
Iodide	U	0.500	0.167	0.500	mg/L		1	CH6	04/25/25	0355	2786991	6
SW846 9056A Anions (5) "As Received"												
Chloride	J	48.3	0.670	250	mg/L		10	RXB5	04/17/25	1504	2783249	7
Nitrate-N	J	1.52	0.330	10.0	mg/L		10					
Bromide		0.583	0.0670	0.200	mg/L		1	RXB5	04/18/25	0254	2783249	8
Fluoride	J	0.118	0.0330	4.00	mg/L		1					
Sulfate		11.8	0.133	0.400	mg/L		1					
Mercury Analysis-CVAA												
7470, Mercury Liquid "As Received"												
Mercury	U	0.000200	0.0000670	0.000200	mg/L	1.00	1	JP2	05/08/25	1003	2793439	9
Metals Analysis-ICP-MS												
6020, Metals (15+) "As Received"												
Aluminum	N	0.0544	0.0193	0.0500	mg/L	1.00	1	PRB	05/11/25	1959	2785177	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		0.269	0.000670	0.00400	mg/L	1.00	1					
Cadmium	U	0.00100	0.000300	0.00100	mg/L	1.00	1					
Calcium	B	28.0	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					
Copper	J	0.00141	0.000300	0.00200	mg/L	1.00	1					

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Contact: Kevil, Kentucky 42053
Project: Ms. Jaime Morrow
C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW394SG3-25

Sample ID: 719930007

Project: FRNP00609

Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP-MS												
6020, Metals (15+) "As Received"												
Iron		0.285	0.0330	0.100	mg/L	1.00	1					
Lead	U	0.00200	0.000500	0.00200	mg/L	1.00	1					
Magnesium		11.8	0.0100	0.0300	mg/L	1.00	1					
Manganese	J	0.00403	0.00100	0.00500	mg/L	1.00	1					
Molybdenum	U	0.00100	0.000200	0.00100	mg/L	1.00	1					
Nickel		0.00634	0.000600	0.00200	mg/L	1.00	1					
Potassium		1.51	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		35.2	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					
Zinc	BJ	0.00592	0.00330	0.0200	mg/L	1.00	1					
Rhodium	U	0.00500	0.00160	0.00500	mg/L	1.00	1	PRB	05/11/25	2142	2785177	11
Tantalum	U	0.00500	0.00100	0.00500	mg/L	1.00	1					
Boron		0.0221	0.00520	0.0150	mg/L	1.00	1	PRB	05/13/25	1612	2785177	12
Beryllium	U	0.000500	0.000200	0.000500	mg/L	1.00	1	PRB	05/15/25	1139	2785177	13
Solids Analysis												
160.1, Dissolved Solids "As Received"												
Total Dissolved Solids	*	222	2.38	10.0	mg/L			SC1	04/23/25	1247	2785877	14
Spectrometric Analysis												
410.4, Chem. Oxygen Demand "As Received"												
COD	U	20.0	8.95	20.0	mg/L		1	HH2	04/22/25	1700	2785194	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	04/23/25	1417	2786438	16
1,1,1-Trichloroethane	UY1	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					

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Project: Ms. Jaime Morrow
C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW394SG3-25

Sample ID: 719930007

Project: FRNP00609

Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time Batch	Method
Volatile Organics											
8260D, Volatiles- full suite "As Received"											
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	UY1	1.00	0.333	1.00	ug/L		1				
Bromochloromethane	U	1.00	0.333	1.00	ug/L		1				
Bromodichloromethane	UY1	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	UY1	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	UY1	5.00	1.67	5.00	ug/L		1				
Methylene chloride		6.07	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	UY1	1.00	0.333	1.00	ug/L		1				
Trichloroethylene	Y1	2.77	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)	UY1	3.00	1.00	3.00	ug/L		1				
cis-1,2-Dichloroethylene	U	1.00	0.333	1.00	ug/L		1				
cis-1,3-Dichloropropylene	UY1	1.00	0.333	1.00	ug/L		1				

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Certificate of Analysis

Report Date: July 8, 2025

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

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW394SG3-25 Project: FRNP00609
Sample ID: 719930007 Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
8260D, Volatiles- full suite "As Received"												
trans-1,2-Dichloroethylene	U	1.00	0.333	1.00	ug/L		1					
trans-1,3-Dichloropropylene	UY1	1.00	0.333	1.00	ug/L		1					
trans-1,4-Dichloro-2-butene	U	5.00	1.67	5.00	ug/L		1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	JM13	05/07/25	1140	2793427
SW846 3005A	ICP-MS 3005A PREP	HS2	05/07/25	1545	2785176
SW846 9010C Distillation	SW846 9010C Prep	KLP1	04/23/25	1257	2786022
SW846 8011 PREP	8011 Prep	LOF	04/24/25	1207	2783444

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	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 Compounds Liquid "As Received"	4.56 ug/L	6.82	67	(56%-149%)
Bromofluorobenzene	8260D, Volatiles- full suite "As Received"	43.3 ug/L	50.0	87	(85%-114%)
1,2-Dichloroethane-d4	8260D, Volatiles- full suite "As Received"	47.9 ug/L	50.0	96	(81%-118%)
Toluene-d8	8260D, Volatiles- full suite "As Received"	48.8 ug/L	50.0	98	(89%-112%)

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

Contact: Kevil, Kentucky 42053
Project: Ms. Jaime Morrow
C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW394SG3-25

Sample ID: 719930007

Project: FRNP00609

Client ID: FRNP006

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

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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Report Date: July 8, 2025

Contact: Kevil, Kentucky 42053
 Project: Ms. Jaime Morrow
 C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID:	MW394SG3-25	Project:	FRNP00609
Sample ID:	719930008	Client ID:	FRNP006
Matrix:	WG		
Collect Date:	16-APR-25 07:41		
Receive Date:	17-APR-25		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP-MS												
6020, Dissolved Metals (3 Elements) "As Received"												
Barium		0.262	0.000670	0.00400	mg/L	1.00	1	PRB	05/11/25	2008	2785177	1
Chromium	U	0.0100	0.00300	0.0100	mg/L	1.00	1					
Uranium	U	0.000200	0.0000670	0.000200	mg/L	1.00	1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 160	Laboratory Filtration	MM7	04/21/25	1715	2783543
SW846 3005A	ICP-MS 3005A PREP	HS2	05/07/25	1545	2785176

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 3005A/6020B	

Notes:

Column headers are defined as follows:

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

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Report Date: July 8, 2025

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

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW395SG3-25 Project: FRNP00609
Sample ID: 719930009 Client ID: FRNP006
Matrix: WG
Collect Date: 16-APR-25 08:28
Receive Date: 17-APR-25
Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
504.1/8011 Analysis of EDB/DBCP												
8011, VOA Compounds Liquid "As Received"												
1,2-Dibromo-3-chloropropane	U	0.0189	0.00850	0.0189	ug/L	0.945	1	LOF	04/24/25	1743	2783445	1
Carbon Analysis												
9060A, Total Organic Carbon "As Received"												
Total Organic Carbon Average	J	0.519	0.330	2.00	mg/L		1	KB3	04/30/25	1330	2789363	3
Flow Injection Analysis												
9012B, Total Cyanide "As Received"												
Cyanide, Total	UNN1	0.200	0.00167	0.200	mg/L	1.00	1	KLP1	04/23/25	1432	2786023	4
Halogen Analysis												
9020B, TOX (Organic Halogen) "As Received"												
Total Organic Halogens	J	7.17	3.33	10.0	ug/L		1	JW2	05/13/25	1448	2796635	5
Ion Chromatography												
300.0, Iodide in Liquid "As Received"												
Iodide	U	0.500	0.167	0.500	mg/L		1	CH6	04/25/25	0407	2786991	6
SW846 9056A Anions (5) "As Received"												
Nitrate-N	J	1.36	0.165	10.0	mg/L		5	RXB5	04/17/25	1535	2783249	7
Bromide		0.561	0.0670	0.200	mg/L		1	RXB5	04/18/25	0325	2783249	8
Fluoride	J	0.115	0.0330	4.00	mg/L		1					
Sulfate		11.5	0.133	0.400	mg/L		1					
Chloride	J	47.2	0.670	250	mg/L		10	RXB5	04/18/25	0458	2783249	9
Mercury Analysis-CVAA												
7470, Mercury Liquid "As Received"												
Mercury	U	0.000200	0.0000670	0.000200	mg/L	1.00	1	JP2	05/08/25	1005	2793439	10
Metals Analysis-ICP-MS												
6020, Metals (15+) "As Received"												
Aluminum	UN	0.0500	0.0193	0.0500	mg/L	1.00	1	PRB	05/11/25	2011	2785177	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		0.262	0.000670	0.00400	mg/L	1.00	1					
Cadmium	U	0.00100	0.000300	0.00100	mg/L	1.00	1					
Calcium	B	28.1	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					
Copper	J	0.000918	0.000300	0.00200	mg/L	1.00	1					

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

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW395SG3-25 Project: FRNP00609
Sample ID: 719930009 Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP-MS												
6020, Metals (15+) "As Received"												
Iron	J	0.0552	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	J	0.00205	0.00100	0.00500	mg/L	1.00	1					
Molybdenum	J	0.000248	0.000200	0.00100	mg/L	1.00	1					
Nickel	J	0.00183	0.000600	0.00200	mg/L	1.00	1					
Potassium		1.66	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		34.0	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					
Rhodium	U	0.00500	0.00160	0.00500	mg/L	1.00	1	PRB	05/11/25	2145	2785177	12
Tantalum	U	0.00500	0.00100	0.00500	mg/L	1.00	1					
Boron		0.0218	0.00520	0.0150	mg/L	1.00	1	PRB	05/13/25	1613	2785177	13
Beryllium	U	0.000500	0.000200	0.000500	mg/L	1.00	1	PRB	05/15/25	1143	2785177	14
Solids Analysis												
160.1, Dissolved Solids "As Received"												
Total Dissolved Solids	*	213	2.38	10.0	mg/L			SC1	04/23/25	1247	2785877	15
Spectrometric Analysis												
410.4, Chem. Oxygen Demand "As Received"												
COD	U	20.0	8.95	20.0	mg/L		1	HH2	04/22/25	1700	2785194	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	04/23/25	1443	2786438	17
1,1,1-Trichloroethane	UY1	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					

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

Contact: Kevil, Kentucky 42053
Project: Ms. Jaime Morrow
C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW395SG3-25

Project: FRNP00609

Sample ID: 719930009

Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time Batch	Method
Volatile Organics											
8260D, Volatiles- full suite "As Received"											
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	UY1	1.00	0.333	1.00	ug/L		1				
Bromochloromethane	U	1.00	0.333	1.00	ug/L		1				
Bromodichloromethane	UY1	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	UY1	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	UY1	5.00	1.67	5.00	ug/L		1				
Methylene chloride		6.18	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	UY1	1.00	0.333	1.00	ug/L		1				
Trichloroethylene	Y1	4.20	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)	UY1	3.00	1.00	3.00	ug/L		1				
cis-1,2-Dichloroethylene	U	1.00	0.333	1.00	ug/L		1				
cis-1,3-Dichloropropylene	UY1	1.00	0.333	1.00	ug/L		1				

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Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW395SG3-25 Project: FRNP00609
Sample ID: 719930009 Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
8260D, Volatiles- full suite "As Received"												
trans-1,2-Dichloroethylene	U	1.00	0.333	1.00	ug/L		1					
trans-1,3-Dichloropropylene	UY1	1.00	0.333	1.00	ug/L		1					
trans-1,4-Dichloro-2-butene	U	5.00	1.67	5.00	ug/L		1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	JM13	05/07/25	1140	2793427
SW846 3005A	ICP-MS 3005A PREP	HS2	05/07/25	1545	2785176
SW846 8011 PREP	8011 Prep	LOF	04/24/25	1207	2783444
SW846 9010C Distillation	SW846 9010C Prep	KLP1	04/23/25	1257	2786022

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	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 Compounds Liquid "As Received"	5.32 ug/L	6.75	79	(56%-149%)
Bromofluorobenzene	8260D, Volatiles- full suite "As Received"	43.5 ug/L	50.0	87	(85%-114%)
1,2-Dichloroethane-d4	8260D, Volatiles- full suite "As Received"	48.7 ug/L	50.0	97	(81%-118%)

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

Contact: Kevil, Kentucky 42053
Project: Ms. Jaime Morrow
C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW395SG3-25

Sample ID: 719930009

Project: FRNP00609

Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time Batch	Method
Toluene-d8	8260D, Volatiles-	full suite "As Received"			49.5 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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Company : Four Rivers Nuclear Partnership, LLC
Address : 5600 Hobbs Road

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID:	MW395SG3-25	Project:	FRNP00609
Sample ID:	719930010	Client ID:	FRNP006
Matrix:	WG		
Collect Date:	16-APR-25 08:28		
Receive Date:	17-APR-25		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP-MS												
6020, Dissolved Metals (3 Elements) "As Received"												
Barium		0.278	0.000670	0.00400	mg/L	1.00	1	PRB	05/14/25	1957	2785177	1
Chromium	U	0.0100	0.00300	0.0100	mg/L	1.00	1					
Uranium	U	0.000200	0.0000670	0.000200	mg/L	1.00	1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	HS2	05/07/25	1545	2785176
EPA 160	Laboratory Filtration	MM7	04/21/25	1715	2783543

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-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW396SG3-25 Project: FRNP00609
Sample ID: 719930011 Client ID: FRNP006
Matrix: WG
Collect Date: 16-APR-25 09:18
Receive Date: 17-APR-25
Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
504.1/8011 Analysis of EDB/DBCP												
8011, VOA Compounds Liquid "As Received"												
1,2-Dibromo-3-chloropropane	U	0.0188	0.00845	0.0188	ug/L	0.939	1	LOF	04/24/25	1926	2783445	1
Carbon Analysis												
9060A, Total Organic Carbon "As Received"												
Total Organic Carbon Average		3.36	0.330	2.00	mg/L		1	KB3	04/30/25	1505	2789363	3
Flow Injection Analysis												
9012B, Total Cyanide "As Received"												
Cyanide, Total	UNN1	0.200	0.00167	0.200	mg/L	1.00	1	KLP1	04/23/25	1441	2786023	4
Halogen Analysis												
9020B, TOX (Organic Halogen) "As Received"												
Total Organic Halogens		47.8	3.33	10.0	ug/L		1	JW2	05/13/25	2344	2796635	5
Ion Chromatography												
300.0, Iodide in Liquid "As Received"												
Iodide	U	0.500	0.167	0.500	mg/L		1	CH6	04/25/25	0512	2786991	6
SW846 9056A Anions (5) "As Received"												
Bromide		0.848	0.0670	0.200	mg/L		1	RXB5	04/17/25	1606	2783249	7
Fluoride	J	0.605	0.0330	4.00	mg/L		1					
Nitrate-N	J	0.254	0.132	10.0	mg/L		4	RXB5	04/17/25	2115	2783249	8
Sulfate		29.8	0.532	1.60	mg/L		4					
Chloride	J	55.6	0.670	250	mg/L		10	RXB5	04/18/25	0732	2783249	9
Mercury Analysis-CVAA												
7470, Mercury Liquid "As Received"												
Mercury	U	0.000200	0.0000670	0.000200	mg/L	1.00	1	JP2	05/08/25	1016	2793439	10
Metals Analysis-ICP-MS												
6020, Metals (15+) "As Received"												
Aluminum	JN	0.0274	0.0193	0.0500	mg/L	1.00	1	PRB	05/11/25	2044	2785177	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		0.368	0.000670	0.00400	mg/L	1.00	1					
Cadmium	U	0.00100	0.000300	0.00100	mg/L	1.00	1					
Calcium	B	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	J	0.000665	0.000300	0.00100	mg/L	1.00	1					
Copper	J	0.00108	0.000300	0.00200	mg/L	1.00	1					

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Certificate of Analysis

Report Date: July 8, 2025

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

Contact: Kevil, Kentucky 42053
Project: Ms. Jaime Morrow
C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW396SG3-25

Project: FRNP00609

Sample ID: 719930011

Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP-MS												
6020, Metals (15+) "As Received"												
Iron		0.245	0.0330	0.100	mg/L	1.00	1					
Lead	U	0.00200	0.000500	0.00200	mg/L	1.00	1					
Magnesium		14.5	0.0100	0.0300	mg/L	1.00	1					
Manganese		0.0744	0.00100	0.00500	mg/L	1.00	1					
Molybdenum	J	0.000489	0.000200	0.00100	mg/L	1.00	1					
Nickel	J	0.000669	0.000600	0.00200	mg/L	1.00	1					
Potassium		0.838	0.0800	0.300	mg/L	1.00	1					
Selenium	U	0.00500	0.00150	0.00500	mg/L	1.00	1					
Silver	U	0.00100	0.000300	0.00100	mg/L	1.00	1					
Thallium	U	0.00200	0.000600	0.00200	mg/L	1.00	1					
Uranium	U	0.000200	0.0000670	0.000200	mg/L	1.00	1					
Vanadium	U	0.0200	0.00330	0.0200	mg/L	1.00	1					
Zinc	U	0.0200	0.00330	0.0200	mg/L	1.00	1					
Rhodium	U	0.00500	0.00160	0.00500	mg/L	1.00	1	PRB	05/11/25	2151	2785177	12
Tantalum	U	0.00500	0.00100	0.00500	mg/L	1.00	1					
Boron	J	0.00739	0.00520	0.0150	mg/L	1.00	1	PRB	05/13/25	1620	2785177	13
Sodium		97.4	0.800	2.50	mg/L	1.00	10	PRB	05/13/25	1621	2785177	14
Beryllium	U	0.000500	0.000200	0.000500	mg/L	1.00	1	PRB	05/15/25	1156	2785177	15
Solids Analysis												
160.1, Dissolved Solids "As Received"												
Total Dissolved Solids	*	410	2.38	10.0	mg/L			SC1	04/23/25	1247	2785877	16
Spectrometric Analysis												
410.4, Chem. Oxygen Demand "As Received"												
COD	J	13.5	8.95	20.0	mg/L		1	HH2	04/22/25	1700	2785194	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	04/23/25	1509	2786438	18
1,1,1-Trichloroethane	UY1	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					

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Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW396SG3-25

Project: FRNP00609

Sample ID: 719930011

Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time Batch	Method
Volatile Organics											
8260D, Volatiles- full suite "As Received"											
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	UY1	1.00	0.333	1.00	ug/L		1				
Bromochloromethane	U	1.00	0.333	1.00	ug/L		1				
Bromodichloromethane	UY1	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	UY1	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	UY1	5.00	1.67	5.00	ug/L		1				
Methylene chloride		6.03	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	UY1	1.00	0.333	1.00	ug/L		1				
Trichloroethylene	UY1	1.00	0.333	1.00	ug/L		1				
Trichlorofluoromethane	U	1.00	0.333	1.00	ug/L		1				
Vinyl acetate	U	5.00	1.67	5.00	ug/L		1				
Vinyl chloride	U	1.00	0.333	1.00	ug/L		1				
Xylenes (total)	UY1	3.00	1.00	3.00	ug/L		1				
cis-1,2-Dichloroethylene	U	1.00	0.333	1.00	ug/L		1				
cis-1,3-Dichloropropylene	UY1	1.00	0.333	1.00	ug/L		1				

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Contact: Kevil, Kentucky 42053
Project: Ms. Jaime Morrow
C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID:	MW396SG3-25	Project:	FRNP00609
Sample ID:	719930011	Client ID:	FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
8260D, Volatiles- full suite "As Received"												
trans-1,2-Dichloroethylene	U	1.00	0.333	1.00	ug/L		1					
trans-1,3-Dichloropropylene	UY1	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	04/23/25	1257	2786022
SW846 3005A	ICP-MS 3005A PREP	HS2	05/07/25	1545	2785176
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	JM13	05/07/25	1140	2793427
SW846 8011 PREP	8011 Prep	LOF	04/24/25	1207	2783444

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	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 Compounds Liquid "As Received"	5.85 ug/L	6.71	87	(56%-149%)
Bromofluorobenzene	8260D, Volatiles- full suite "As Received"	43.8 ug/L	50.0	88	(85%-114%)

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Contact: Kevil, Kentucky 42053
Project: Ms. Jaime Morrow
C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW396SG3-25

Sample ID: 719930011

Project: FRNP00609

Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time Batch	Method
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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Company : Four Rivers Nuclear Partnership, LLC
Address : 5600 Hobbs Road

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: MW396SG3-25 Project: FRNP00609
Sample ID: 719930012 Client ID: FRNP006
Matrix: WG
Collect Date: 16-APR-25 09:18
Receive Date: 17-APR-25
Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP-MS												
6020, Dissolved Metals (3 Elements) "As Received"												
Barium		0.363	0.000670	0.00400	mg/L	1.00	1	PRB	05/11/25	2047	2785177	1
Chromium	U	0.0100	0.00300	0.0100	mg/L	1.00	1					
Uranium	U	0.000200	0.0000670	0.000200	mg/L	1.00	1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3005A	ICP-MS 3005A PREP	HS2	05/07/25	1545	2785176
EPA 160	Laboratory Filtration	MM7	04/21/25	1715	2783543

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	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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Report Date: July 8, 2025

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

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: TB3SG3-25 Project: FRNP00609
Sample ID: 719930013 Client ID: FRNP006
Matrix: WATER
Collect Date: 16-APR-25 06:15
Receive Date: 17-APR-25
Collector: Client

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
504.1/8011 Analysis of EDB/DBCP												
8011, VOA Compounds Liquid "As Received"												
1,2-Dibromo-3-chloropropane	U	0.0188	0.00847	0.0188	ug/L	0.941	1	LOF	04/24/25	2001	2783445	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	04/23/25	1535	2786438	3
1,1,1-Trichloroethane	UY1	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	UY1	1.00	0.333	1.00	ug/L		1					
Bromochloromethane	U	1.00	0.333	1.00	ug/L		1					
Bromodichloromethane	UY1	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		1.72	0.333	1.00	ug/L		1					
Chloroethane	U	1.00	0.333	1.00	ug/L		1					
Chloroform	UY1	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	UY1	5.00	1.67	5.00	ug/L		1					

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Report Date: July 8, 2025

Contact: Kevil, Kentucky 42053
Project: Ms. Jaime Morrow
C-746-S&T Landfill Quarterly(SG25-03)

Project: FRNP00609

Client ID: FRNP006

The following Prep Methods were performed:

The following Analytical Methods were performed:

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
1-Chloro-2-fluorobenzene	8011, VOA Compounds Liquid "As Received"	6.64 ug/L	6.72	99	(56%-149%)
Bromofluorobenzene	8260D, Volatiles- full suite "As Received"	43.3 ug/L	50.0	87	(85%-114%)
1,2-Dichloroethane-d4	8260D, Volatiles- full suite "As Received"	47.8 ug/L	50.0	96	(81%-118%)
Toluene-d8	8260D, Volatiles- full suite "As Received"	49.4 ug/L	50.0	99	(89%-112%)

Notes:

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Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-S&T Landfill Quarterly(SG25-03)

Client Sample ID: TB3SG3-25

Sample ID: 719930013

Project: FRNP00609

Client ID: FRNP006

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

Column headers are defined as follows:

DF: Dilution Factor

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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GROUNDWATER STATISTICAL COMMENTS

Introduction

The statistical analyses conducted on the second quarter 2025 groundwater data collected from the C-746-S&T Landfills monitoring wells (MWs) were performed in accordance with Permit GSTR0003, Standard Requirement 3, using the U.S. Environmental Protection Agency (EPA) guidance document, *EPA Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities, Interim Final Guidance* (1989).

The statistical evaluation was conducted separately for the three groundwater systems: the Upper Continental Recharge System (UCRS), the Upper Regional Gravel Aquifer (URGA), and the Lower Regional Gravel Aquifer (LRGA). For each groundwater system, data from wells considered to represent background conditions were compared with test wells (downgradient or sidegradient wells) (Exhibit D.1). The second quarter 2025 data used to conduct the statistical analyses were collected in April 2025. The statistical analyses for this report first used data from the initial 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 compliance well that 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. For parameters with no established MCL and for 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 for pH. 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	Groundwater Unit
MW220	BG	URGA
MW221	SG	URGA
MW222	SG	URGA
MW223	SG	URGA
MW224	SG	URGA
MW369	TW	URGA
MW370	TW	LRGA
MW372	TW	URGA
MW373	TW	LRGA
MW384	SG	URGA
MW385	SG	LRGA
MW386 ^a	SG	UCRS
MW387	TW	URGA
MW388	TW	LRGA
MW389 ^{a,b}	TW	UCRS
MW390 ^a	TW	UCRS
MW391	TW	URGA
MW392	TW	LRGA
MW393 ^a	TW	UCRS
MW394	BG	URGA
MW395	BG	LRGA
MW396 ^a	BG	UCRS
MW397	BG	LRGA

^a The gradients in UCRS wells are downward. The UCRS wells identified as up-, side-, or downgradient are those wells located in the same general direction as the Regional Gravel Aquifer wells considered to be up-, side-, or downgradient.

^b Well was dry this quarter and a groundwater sample could not be collected.

BG: upgradient or background wells

TW: compliance or test wells

SG: sidegradient wells

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. 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, 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. Statistical analyses are performed on the last eight quarters of 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 (or is below the LTL for pH), the well has a statistically significant difference in concentration compared to the 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).
 - 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 $CV \leq 1.0$, 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 (or is below the LTL for pH), then there is statistically significant evidence that the well concentration exceeds the historical background.

Type of Data Used

Exhibit D.1 presents the background wells (identified as “BG”), the compliance or test wells (identified as “TW”), and the sidegradient wells (identified as “SG”) for the C-746-S&T Residential and Inert Landfills. 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 URGAs, and the LRGA, respectively. Those parameters displayed with bold-face type indicate the one-sided tolerance interval statistical test was performed. The data presented in Exhibits D.3, D.4, and D.5 were collected during the current quarter, second quarter 2025. The observations are representative of the current quarter data. Historical background data are presented in Attachment D1. The sampling dates associated with background data are listed next to the result in Attachment D1. 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. A result has been considered a nondetect if it has a “U” validation code.

¹ For pH, two-sided tolerance limits (upper and lower) were calculated with an adjusted K factor using the following equations.

$$UTL = X + (K \times S)$$

$$LTL = X - (K \times S)$$

**Exhibit D.2. List of Parameters Tested Using the One-Sided Upper Tolerance Level Test
with Historical Background**

Parameters
Acetone
Aluminum
Boron
Bromide
Calcium
Chemical Oxygen Demand (COD)
Chloride
<i>cis</i> -1,2-Dichloroethene
Cobalt
Conductivity
Copper
Cyanide
Dissolved Oxygen
Dissolved Solids
Iron
Magnesium
Manganese
Methylene Chloride
Molybdenum
Nickel
Oxidation-Reduction Potential ^a
pH ^b
Potassium
Sodium
Sulfate
Technetium-99
Total Organic Carbon (TOC)
Total Organic Halides (TOX)
Vanadium
Zinc

^a Oxidation-reduction potential calibrated as Eh.

^b For pH, the test well results were compared to both UTL and LTL to determine if the current result differs to a statistically significant degree from the historical background values.

Exhibit D.3. Summary of Censored and Uncensored Data—UCRS

Parameters	Observations	Censored Observation	Uncensored Observation	Statistical Analysis?
1,1,1,2-Tetrachloroethane	4	4	0	No
1,1,2,2-Tetrachloroethane	4	4	0	No
1,1,2-Trichloroethane	4	4	0	No
1,1-Dichloroethane	4	4	0	No
1,2,3-Trichloropropane	4	4	0	No
1,2-Dibromo-3-chloropropane	4	4	0	No
1,2-Dibromoethane	4	4	0	No
1,2-Dichlorobenzene	4	4	0	No
1,2-Dichloropropane	4	4	0	No
2-Butanone	4	4	0	No
2-Hexanone	4	4	0	No
4-Methyl-2-pentanone	4	4	0	No
Acetone	4	4	0	No
Acrolein	4	4	0	No
Acrylonitrile	4	4	0	No
Aluminum	4	1	3	Yes
Antimony	4	4	0	No
Beryllium	4	4	0	No
Boron	4	0	4	Yes
Bromide	4	1	3	Yes
Bromochloromethane	4	4	0	No
Bromodichloromethane	4	4	0	No
Bromoform	4	4	0	No
Bromomethane	4	4	0	No
Calcium	4	0	4	Yes
Carbon disulfide	4	4	0	No
COD	4	2	2	Yes
Chloride	4	0	4	Yes
Chlorobenzene	4	4	0	No
Chloroethane	4	4	0	No
Chloroform	4	4	0	No
Chloromethane	4	4	0	No
<i>cis</i> -1,2-Dichloroethene	4	4	0	No
<i>cis</i> -1,3-Dichloropropene	4	4	0	No
Cobalt	4	3	1	Yes
Conductivity	4	0	4	Yes
Copper	4	0	4	Yes
Cyanide	4	4	0	No
Dibromochloromethane	4	4	0	No
Dibromomethane	4	4	0	No
Dimethylbenzene, Total	4	4	0	No
Dissolved Oxygen	4	0	4	Yes
Dissolved Solids	4	0	4	Yes
Ethylbenzene	4	4	0	No
Iodide	4	4	0	No

Exhibit D.3. Summary of Censored and Uncensored Data—UCRS (Continued)

Parameters	Observations	Censored Observation	Uncensored Observation	Statistical Analysis?
Iodomethane	4	4	0	No
Iron	4	1	3	Yes
Magnesium	4	0	4	Yes
Manganese	4	1	3	Yes
Methylene chloride	4	2	2	Yes
Molybdenum	4	1	3	Yes
Nickel	4	1	3	Yes
Oxidation-Reduction Potential	4	0	4	Yes
pH	4	0	4	Yes
Potassium	4	0	4	Yes
Radium-226	4	4	0	No
Rhodium	4	4	0	No
Sodium	4	0	4	Yes
Styrene	4	4	0	No
Sulfate	4	0	4	Yes
Tantalum	4	4	0	No
Technetium-99	4	3	1	Yes
Tetrachloroethene	4	4	0	No
Thallium	4	4	0	No
Thorium-230	4	4	0	No
Toluene	4	4	0	No
TOC	4	0	4	Yes
TOX	4	0	4	Yes
<i>trans</i> -1,2-Dichloroethene	4	4	0	No
<i>trans</i> -1,3-Dichloropropene	4	4	0	No
<i>trans</i> -1,4-Dichloro-2-Butene	4	4	0	No
Trichlorofluoromethane	4	4	0	No
Vanadium	4	4	0	No
Vinyl Acetate	4	4	0	No
Zinc	4	3	1	Yes

Bold 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	11	11	0	No
1,1,2,2-Tetrachloroethane	11	11	0	No
1,1,2-Trichloroethane	11	11	0	No
1,1-Dichloroethane	11	11	0	No
1,2,3-Trichloropropane	11	11	0	No
1,2-Dibromo-3-chloropropane	11	11	0	No
1,2-Dibromoethane	11	11	0	No
1,2-Dichlorobenzene	11	11	0	No
1,2-Dichloropropane	11	11	0	No
2-Butanone	11	11	0	No
2-Hexanone	11	11	0	No
4-Methyl-2-pentanone	11	11	0	No
Acetone	11	10	1	Yes
Acrolein	11	11	0	No
Acrylonitrile	11	11	0	No
Aluminum	11	8	3	Yes
Antimony	11	11	0	No
Beryllium	11	11	0	No
Boron	11	0	11	Yes
Bromide	11	0	11	Yes
Bromochloromethane	11	11	0	No
Bromodichloromethane	11	11	0	No
Bromoform	11	11	0	No
Bromomethane	11	11	0	No
Calcium	11	0	11	Yes
Carbon disulfide	11	11	0	No
COD	11	8	3	Yes
Chloride	11	0	11	Yes
Chlorobenzene	11	11	0	No
Chloroethane	11	11	0	No
Chloroform	11	11	0	No
Chloromethane	11	11	0	No
<i>cis</i> -1,2-Dichloroethene	11	11	0	No
<i>cis</i> -1,3-Dichloropropene	11	11	0	No
Cobalt	11	7	4	Yes
Conductivity	11	0	11	Yes
Copper	11	4	7	Yes
Cyanide	11	9	2	Yes
Dibromochloromethane	11	11	0	No
Dibromomethane	11	11	0	No
Dimethylbenzene, Total	11	11	0	No
Dissolved Oxygen	11	0	11	Yes
Dissolved Solids	11	0	11	Yes
Ethylbenzene	11	11	0	No
Iodide	11	11	0	No

Exhibit D.4. Summary of Censored and Uncensored Data—URGA (Continued)

Parameters	Observations	Censored Observation	Uncensored Observation	Statistical Analysis?
Iodomethane	11	11	0	No
Iron	11	2	9	Yes
Magnesium	11	0	11	Yes
Manganese	11	1	10	Yes
Methylene chloride	11	7	4	Yes
Molybdenum	11	4	7	Yes
Nickel	11	2	9	Yes
Oxidation-Reduction Potential	11	0	11	Yes
pH	11	0	11	Yes
Potassium	11	0	11	Yes
Radium-226	11	11	0	No
Rhodium	11	11	0	No
Sodium	11	0	11	Yes
Styrene	11	11	0	No
Sulfate	11	0	11	Yes
Tantalum	11	11	0	No
Technetium-99	11	8	3	Yes
Tetrachloroethene	11	11	0	No
Thallium	11	11	0	No
Thorium-230	11	11	0	No
Toluene	11	11	0	No
TOC	11	0	11	Yes
TOX	11	7	4	Yes
<i>trans</i> -1,2-Dichloroethene	11	11	0	No
<i>trans</i> -1,3-Dichloropropene	11	11	0	No
<i>trans</i> -1,4-Dichloro-2-Butene	11	11	0	No
Trichlorofluoromethane	11	11	0	No
Vanadium	11	11	0	No
Vinyl Acetate	11	11	0	No
Zinc	11	4	7	Yes

Bold 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	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	6	1	Yes
Acrolein	7	7	0	No
Acrylonitrile	7	7	0	No
Aluminum	7	5	2	Yes
Antimony	7	7	0	No
Beryllium	7	7	0	No
Boron	7	0	7	Yes
Bromide	7	0	7	Yes
Bromochloromethane	7	7	0	No
Bromodichloromethane	7	7	0	No
Bromoform	7	7	0	No
Bromomethane	7	7	0	No
Calcium	7	0	7	Yes
Carbon disulfide	7	7	0	No
COD	7	7	0	No
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	6	1	Yes
cis-1,3-Dichloropropene	7	7	0	No
Cobalt	7	5	2	Yes
Conductivity	7	0	7	Yes
Copper	7	1	6	Yes
Cyanide	7	6	1	Yes
Dibromochloromethane	7	7	0	No
Dibromomethane	7	7	0	No
Dimethylbenzene, Total	7	7	0	No
Dissolved Oxygen	7	0	7	Yes
Dissolved Solids	7	0	7	Yes
Ethylbenzene	7	7	0	No
Iodide	7	7	0	No
Iodomethane	7	7	0	No
Iron	7	2	5	Yes
Magnesium	7	0	7	Yes

Exhibit D.5. Summary of Censored and Uncensored Data—LRGA (Continued)

Parameters	Observations	Censored Observation	Uncensored Observation	Statistical Analysis?
Manganese	7	1	6	Yes
Methylene chloride	7	3	4	Yes
Molybdenum	7	4	3	Yes
Nickel	7	1	6	Yes
Oxidation-Reduction Potential	7	0	7	Yes
pH	7	0	7	Yes
Potassium	7	0	7	Yes
Radium-226	7	7	0	No
Rhodium	7	7	0	No
Sodium	7	0	7	Yes
Styrene	7	7	0	No
Sulfate	7	0	7	Yes
Tantalum	7	7	0	No
Technetium-99	7	6	1	Yes
Tetrachloroethene	7	7	0	No
Thallium	7	7	0	No
Thorium-230	7	7	0	No
Toluene	7	7	0	No
TOC	7	0	7	Yes
TOX	7	0	7	Yes
<i>trans</i> -1,2-Dichloroethene	7	7	0	No
<i>trans</i> -1,3-Dichloropropene	7	7	0	No
<i>trans</i> -1,4-Dichloro-2-Butene	7	7	0	No
Trichlorofluoromethane	7	7	0	No
Vanadium	7	6	1	Yes
Vinyl Acetate	7	7	0	No
Zinc	7	5	2	Yes

Bold denotes parameters with at least one uncensored observation.

Discussion of Results from Historical Background Comparison

For the UCRS, URGAs, and LRGA, the concentrations of this quarter were compared to the results of the one-sided tolerance interval tests that were calculated using historical background and presented in Attachment D1. For the UCRS, URGAs, and LRGA, the test was applied to 26, 28, and 29 parameters, respectively, including those listed in bold print in Exhibits D.3, D.4, and D.5. A summary of exceedances when compared to statistically derived historical background by well number is shown in Exhibit D.6.

UCRS

This quarter's results identified exceedances of historical background UTL for oxidation-reduction potential and technetium-99.

URGA

This quarter's results identified exceedances of historical background UTL for calcium, conductivity, dissolved solids, magnesium, oxidation-reduction potential, sodium, sulfate, and technetium-99.

LRGA

This quarter's results identified exceedances of historical background UTL for calcium, conductivity, dissolved solids, magnesium, oxidation-reduction potential, sodium, sulfate, and technetium-99.

Statistical Summary

Summaries of the results of the statistical tests conducted on data obtained from wells in the UCRS, the URGAs, and in the LRGA 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
MW386: Oxidation-reduction potential*	MW220: Oxidation-reduction potential* and sulfate	MW370: Oxidation-reduction potential* and sulfate
MW390: Oxidation-reduction potential* and technetium-99	MW221: Oxidation-reduction potential*	MW373: Calcium, conductivity, dissolved solids, magnesium, oxidation-reduction potential,* sodium, and sulfate
MW393: Oxidation-reduction potential*	MW222: Oxidation-reduction potential*	MW385: Oxidation-reduction potential,* sulfate, and technetium-99
MW396: Oxidation-reduction potential*	MW223: Oxidation-reduction potential*	MW388: Oxidation-reduction potential* and sulfate
	MW224: Oxidation-reduction potential* and sulfate	MW392: Oxidation-reduction potential*
	MW369: Oxidation-reduction potential* and sulfate	MW395: Oxidation-reduction potential*
	MW372: Calcium, conductivity, dissolved solids, magnesium, oxidation-reduction potential,* sodium, and sulfate	
	MW384: Oxidation-reduction potential,* sulfate, and technetium-99	MW397: Oxidation-reduction potential*
	MW387: Magnesium, oxidation-reduction potential,* sulfate, and technetium-99	
	MW391: Oxidation-reduction potential*	
	MW394: 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	0.57	No exceedance of statistically derived historical background concentration.
Boron	Tolerance Interval	1.28	No exceedance of statistically derived historical background concentration.
Bromide	Tolerance Interval	0.24	No exceedance of statistically derived historical background concentration.
Calcium	Tolerance Interval	0.20	No exceedance of statistically derived historical background concentration.
COD	Tolerance Interval	0.02	No exceedance of statistically derived historical background concentration.
Chloride	Tolerance Interval	0.05	No exceedance of statistically derived historical background concentration.
Cobalt	Tolerance Interval	1.34	No exceedance of statistically derived historical background concentration.
Conductivity	Tolerance Interval	0.12	No exceedance of statistically derived historical background concentration.
Copper	Tolerance Interval	0.48	No exceedance of statistically derived historical background concentration.
Dissolved Oxygen	Tolerance Interval	1.20	No exceedance of statistically derived historical background concentration.
Dissolved Solids	Tolerance Interval	0.19	No exceedance of statistically derived historical background concentration.
Iron	Tolerance Interval	0.48	No exceedance of statistically derived historical background concentration.
Magnesium	Tolerance Interval	0.20	No exceedance of statistically derived historical background concentration.
Manganese	Tolerance Interval	0.46	No exceedance of statistically derived historical background concentration.
Methylene Chloride	Tolerance Interval	0.56	No exceedance of statistically derived historical background concentration.
Molybdenum	Tolerance Interval	1.51	No exceedance of statistically derived historical background concentration.
Nickel	Tolerance Interval	1.27	No exceedance of statistically derived historical background concentration.
Oxidation-Reduction Potential ^b	Tolerance Interval	4.77	Current results exceed statistically derived historical background concentration in MW386, MW390, MW393, and MW396.
pH	Tolerance Interval	0.05	No exceedance of statistically derived historical background concentration.
Potassium	Tolerance Interval	0.28	No exceedance of statistically derived historical background concentration.
Sodium	Tolerance Interval	0.30	No exceedance of statistically derived historical background concentration.

Exhibit D.7. Test Summaries for Qualified Parameters for Historical Background—UCRS (Continued)

Parameter	Performed Test	CV Normality Test^a	Results of Tolerance Interval Test Conducted
Sulfate	Tolerance Interval	0.40	No exceedance of statistically derived historical background concentration.
Technetium-99	Tolerance Interval	0.86	Current results exceed statistically derived historical background concentration in MW390.
TOC	Tolerance Interval	0.47	No exceedance of statistically derived historical background concentration.
TOX	Tolerance Interval	0.38	No exceedance of statistically derived historical background concentration.
Zinc	Tolerance Interval	0.79	No exceedance of statistically derived historical background concentration.

CV: coefficient of variation

^aIf CV > 1.0, used log-transformed data.

^bOxidation-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
Acetone	Tolerance Interval	0.10	No exceedance of statistically derived historical background concentration.
Aluminum	Tolerance Interval	0.28	No exceedance of statistically derived historical background concentration.
Boron	Tolerance Interval	1.45	No exceedance of statistically derived historical background concentration.
Bromide	Tolerance Interval	0.00	No exceedance of statistically derived historical background concentration.
Calcium	Tolerance Interval	0.17	Current results exceed statistically derived historical background concentrations in MW372.
COD	Tolerance Interval	0.00	No exceedance of statistically derived historical background concentration.
Chloride	Tolerance Interval	0.23	No exceedance of statistically derived historical background concentration.
Cobalt	Tolerance Interval	2.44	No exceedance of statistically derived historical background concentration.
Conductivity	Tolerance Interval	0.28	Current results exceed statistically derived historical background concentration in MW372.
Copper	Tolerance Interval	0.43	No exceedance of statistically derived historical background concentration.
Cyanide	Tolerance Interval	0.43	No exceedance of statistically derived historical background concentration.
Dissolved Oxygen	Tolerance Interval	0.50	No exceedance of statistically derived historical background concentration.
Dissolved Solids	Tolerance Interval	0.12	Current results exceed statistically derived historical background concentration in MW372.
Iron	Tolerance Interval	1.17	No exceedance of statistically derived historical background concentration.
Magnesium	Tolerance Interval	0.16	Current results exceed statistically derived historical background concentration in MW372 and MW387.
Manganese	Tolerance Interval	2.16	No exceedance of statistically derived historical background concentration.
Methylene Chloride	Tolerance Interval	0.16	No exceedance of statistically derived historical background concentration.
Molybdenum	Tolerance Interval	1.26	No exceedance of statistically derived historical background concentration.
Nickel	Tolerance Interval	1.79	No exceedance of statistically derived historical background concentration.
Oxidation-Reduction Potential ^b	Tolerance Interval	0.48	Current results exceed statistically derived historical background concentration in MW220, MW221, MW222, MW223, MW224, MW369, MW372, MW384, MW387, MW391, and MW394.
pH	Tolerance Interval	0.05	No exceedance of statistically derived historical background concentration.
Potassium	Tolerance Interval	1.40	No exceedance of statistically derived historical background concentration.
Sodium	Tolerance Interval	0.24	Current results exceed statistically derived historical background concentration in MW372.

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	0.25	Current results exceed statistically derived historical background concentration in MW220, MW224, MW369, MW372, MW384, and MW387.
Technetium-99	Tolerance Interval	0.99	Current results exceed statistically derived historical background concentration in MW384 and MW387.
TOC	Tolerance Interval	0.49	No exceedance of statistically derived historical background concentration.
TOX	Tolerance Interval	2.57	No exceedance of statistically derived historical background concentration.
Zinc	Tolerance Interval	0.72	No exceedance of statistically derived historical background concentration.

CV: coefficient of variation

^a If CV > 1.0, used log-transformed data.

^b Oxidation-reduction potential calibrated as Eh.

^c Tolerance interval was calculated based on an MCL exceedance.

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	0.02	No exceedance of statistically derived historical background concentration.
Aluminum	Tolerance Interval	0.86	No exceedance of statistically derived historical background concentration.
Boron	Tolerance Interval	1.24	No exceedance of statistically derived historical background concentration.
Bromide	Tolerance Interval	0.00	No exceedance of statistically derived historical background concentration.
Calcium	Tolerance Interval	0.50	Current results exceed statistically derived historical background concentration in MW373.
Chloride	Tolerance Interval	0.22	No exceedance of statistically derived historical background concentration.
<i>cis</i> -1,2-Dichloroethene	Tolerance Interval	0.00	No exceedance of statistically derived historical background concentration.
Cobalt	Tolerance Interval	1.51	No exceedance of statistically derived historical background concentration.
Conductivity	Tolerance Interval	0.14	Current results exceed statistically derived historical background concentration in MW373.
Copper	Tolerance Interval	0.47	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	0.52	No exceedance of statistically derived historical background concentration.
Dissolved Solids	Tolerance Interval	0.16	Current results exceed statistically derived historical background concentration in MW373.
Iron	Tolerance Interval	1.29	No exceedance of statistically derived historical background concentration.
Magnesium	Tolerance Interval	0.51	Current results exceed statistically derived historical background concentration in MW373.
Manganese	Tolerance Interval	1.49	No exceedance of statistically derived historical background concentration.
Methylene Chloride	Tolerance Interval	0.55	No exceedance of statistically derived historical background concentration.
Molybdenum	Tolerance Interval	1.45	No exceedance of statistically derived historical background concentration.
Nickel	Tolerance Interval	1.09	No exceedance of statistically derived historical background concentration.
Oxidation-Reduction Potential ^b	Tolerance Interval	0.33	Current results exceed statistically derived historical background concentration in MW370, MW373, MW385, MW388, MW392, MW395, and MW397.
pH	Tolerance Interval	0.04	No exceedance of statistically derived historical background concentration.
Potassium	Tolerance Interval	0.40	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
Sodium	Tolerance Interval	0.47	Current results exceed statistically derived historical background concentration in MW373.
Sulfate	Tolerance Interval	0.20	Current results exceed statistically derived historical background concentration in MW370, MW373, MW385, and MW388.
Technetium-99	Tolerance Interval	0.80	Current results exceed statistically derived historical background concentration in MW385.
TOC	Tolerance Interval	0.55	No exceedance of statistically derived historical background concentration.
TOX	Tolerance Interval	0.59	No exceedance of statistically derived historical background concentration.
Vanadium	Tolerance Interval	0.11	No exceedance of statistically derived historical background concentration.
Zinc	Tolerance Interval	0.76	No exceedance of statistically derived historical background concentration.

CV: coefficient of variation

^a If CV > 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, URGAs, and LRGA that exceeded the tolerance limit test using historical background, the concentrations were compared to the one-sided tolerance limit calculated using the most recent eight quarters of data and are presented in Attachment D2. For the UCRS, URGAs, and LRGA, the test was applied to 2, 8, and 8 parameters, respectively, because these parameter concentrations exceeded the historical background tolerance limit.

For downgradient wells only, a summary of instances where concentrations exceeded the tolerance limit calculated using current background data is shown in Exhibit D.10.

UCRS

Because gradients in the UCRS are downward (vertical), there are no hydrogeologically downgradient UCRS wells. It should be noted, however, that this quarter's results identified current background exceedances in downgradient UCRS well MW390 for technetium-99.

URGA

This quarter's results identified current background exceedances in downgradient wells for calcium, conductivity, dissolved solids, magnesium, sodium, sulfate, and technetium-99.

LRGA

This quarter's results identified current background exceedances in downgradient wells for calcium, conductivity, dissolved solids, magnesium, and sulfate.

Statistical Summary

Summaries of the statistical tests conducted on data obtained from wells in the UCRS, the URGAs, and the LRGA are presented in Exhibit D.11, Exhibit D.12, and Exhibit D.13, respectively.

Exhibit D.10. Summary of Exceedances (Downgradient Wells) of the Tolerance Limit Calculated Using Current Background Concentrations

URGA	LRGA
MW372: Calcium, conductivity, dissolved solids, magnesium, sodium, and sulfate	MW370: Sulfate
MW387: Magnesium, sulfate, and technetium-99	MW373: Calcium, conductivity, dissolved solids, magnesium, and sulfate
	MW388: Sulfate

Exhibit D.11. Test Summaries for Qualified Parameters for Current Background—UCRS

Parameter	Performed Test	CV Normality Test^a	Results of Tolerance Interval Test Conducted
Oxidation-Reduction Potential ^b	Tolerance Interval	0.19	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	-18.5	MW390 exceeded the UTL, which is evidence of elevated concentration with respect to current background data.

^a If CV > 1.0, used log-transformed data.

^b Oxidation-reduction potential calibrated as Eh.

Exhibit D.12. Test Summaries for Qualified Parameters for Current Background—URGA

Parameter	Performed Test	CV Normality Test^a	Results of Tolerance Interval Test Conducted
Calcium	Tolerance Interval	0.11	MW372 exceeded the UTL, which is evidence of elevated concentration with respect to current background data.
Conductivity	Tolerance Interval	0.10	MW372 exceeded the UTL, which is evidence of elevated concentration with respect to current background data.
Dissolved Solids	Tolerance Interval	0.27	MW372 exceeded the UTL, which is evidence of elevated concentration with respect to current background data.
Magnesium	Tolerance Interval	0.12	MW372 and MW387 exceeded the UTL, which is evidence of elevated concentration with respect to current background data.
Oxidation-Reduction Potential ^b	Tolerance Interval	0.12	None of the test wells exceeded the UTL, which is evidence that concentrations in these wells are not different from current background concentrations to a statistically significant level.
Sodium	Tolerance Interval	0.16	MW372 exceeded the UTL, which is evidence of elevated concentration with respect to current background data.
Sulfate	Tolerance Interval	0.24	MW372 and MW387 exceeded the UTL, which is evidence of elevated concentration with respect to current background data.
Technetium-99	Tolerance Interval	0.63	MW384 and MW387 exceeded the UTL, which is evidence of elevated concentration with respect to current background data.

CV: coefficient of variation

^a If CV > 1.0, used log-transformed data.

^b Oxidation-reduction potential calibrated as Eh.

Exhibit D.13. Test Summaries for Qualified Parameters for Current Background—LRGA

Parameter	Performed Test	CV Normality Test^a	Results of Tolerance Interval Test Conducted
Calcium	Tolerance Interval	0.21	MW373 exceeded the UTL, which is evidence of elevated concentration with respect to current background data.
Conductivity	Tolerance Interval	0.11	MW373 exceeded the UTL, which is evidence of elevated concentration with respect to current background data.
Dissolved Solids	Tolerance Interval	0.14	MW373 exceeded the UTL, which is evidence of elevated concentration with respect to current background data.
Magnesium	Tolerance Interval	0.22	MW373 exceeded the UTL, which is evidence of elevated concentration with respect to current background data.
Oxidation-Reduction Potential ^b	Tolerance Interval	0.21	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.
Sodium	Tolerance Interval	0.48	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	0.03	MW370, MW373, MW385, and MW388 exceeded the UTL, which is evidence of elevated concentration with respect to current background data.
Technetium-99	Tolerance Interval	0.74	MW385 exceeded the UTL, which is evidence of elevated concentration with respect to current background data.

^a If CV > 1.0, used log-transformed data.

^b Oxidation-reduction potential calibrated as Eh.

ATTACHMENT D1

**COMPARISON OF CURRENT DATA TO
ONE-SIDED UPPER TOLERANCE INTERVAL TEST
CALCULATED USING
HISTORICAL BACKGROUND DATA**

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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.

Historical Background Data from Upgradient Wells with Transformed Result

Dry/Partially Dry Wells

Because $CV(1)$ is less than or equal to 1, assume normal distribution and continue with statistical analysis utilizing $TL(1)$.

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW386	Sidegradient	No	5.00E-02	N/A	-3.00E+00	N/A
MW390	Downgradient	Yes	4.49E-02	NO	-3.10E+00	N/A
MW393	Downgradient	Yes	6.95E-02	NO	-2.67E+00	N/A
MW396	Upgradient	Yes	2.74E-02	NO	-3.60E+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.

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.

CV Coefficient-of-Variation, $CV = S/X$ If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, $S = [\text{Sum} ((\text{background result}-X)^2)/[\text{count of background results} - 1]]^{0.5}$
TL Upper Tolerance Limit, $TL = X + (K * S)$, LL Lower Tolerance Limit, $LL = X - (K * S)$
X Mean, $X = (\text{sum of background results})/(\text{count of background results})$

D1-3

C-746-S/T Second Quarter 2025 Statistical Analysis Historical Background Comparison**Boron****UNITS: mg/L****UCRS**

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data X= 0.650 S= 0.833 CV(1)=1.282 K factor**= 3.188 TL(1)= 3.31E+00 LL(1)=N/A**Statistics-Transformed Background Data** X= -1.034 S= 1.066 CV(2)=-1.031 K factor**= 3.188 TL(2)= 2.36E+00 LL(2)=N/A**Historical Background Data from Upgradient Wells with Transformed Result**

Well Number: MW396

Date Collected	Result	LN(Result)
8/13/2002	2.00E+00	6.93E-01
9/16/2002	2.00E+00	6.93E-01
10/16/2002	2.00E-01	-1.61E+00
1/13/2003	2.00E-01	-1.61E+00
4/8/2003	2.00E-01	-1.61E+00
7/16/2003	2.00E-01	-1.61E+00
10/14/2003	2.00E-01	-1.61E+00
1/14/2004	2.00E-01	-1.61E+00

Dry/Partially Dry Wells

Well No. Gradient

MW389 Downgradient

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)
MW386	Sidegradient	Yes	2.03E-02	N/A	-3.90E+00	NO
MW390	Downgradient	Yes	2.71E-02	N/A	-3.61E+00	NO
MW393	Downgradient	Yes	1.89E-02	N/A	-3.97E+00	NO
MW396	Upgradient	Yes	7.39E-03	N/A	-4.91E+00	NO

N/A - Results identified as Non-Detects during laboratory analysis or data validation and were not included in the statistical evaluation. Additionally for parameters that have MCLs, where the result for a well did not exceed the MCL value, that well was not included in the statistical evaluation.

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, $CV = S/X$ If CV is less than or equal to 1 assume normal distribution.

S Standard Deviation, $S = [\text{Sum}([(background\ result - X)^2]/[\text{count of background results} - 1])]^{0.5}$

TL Upper Tolerance Limit, $TL = X + (K * S)$, LL Lower Tolerance Limit, $LL = X - (K * S)$

X Mean, $X = (\text{sum of background results})/(\text{count of background results})$

** 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.

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.

Historical Background Data from Upgradient Wells with Transformed Result

Dry/Partially Dry Wells

Because $CV(1)$ is less than or equal to 1, assume normal distribution and continue with statistical analysis utilizing $TL(1)$.

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW386	Sidegradient	No	2.00E-01	N/A	-1.61E+00	N/A
MW390	Downgradient	Yes	2.43E-01	NO	-1.41E+00	N/A
MW393	Downgradient	Yes	1.23E-01	NO	-2.10E+00	N/A
MW396	Upgradient	Yes	8.48E-01	NO	-1.65E-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.

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.

CV Coefficient-of-Variation, $CV = S/X$ If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, $S = [\text{Sum} ((\text{background result}-X)^2)/[\text{count of background results} - 1]]^{0.5}$
TL Upper Tolerance Limit, $TL = X + (K * S)$, LL Lower Tolerance Limit, $LL = X - (K * S)$
X Mean, $X = (\text{sum of background results})/(\text{count of background results})$

D1-5

C-746-S/T Second Quarter 2025 Statistical Analysis Historical Background Comparison

Calcium

UNITS: mg/L

UCRS

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data X= 41.825 S= 8.445 CV(1)=0.202 K factor**= 3.188 TL(1)= 6.87E+01 LL(1)=N/A

Statistics-Transformed Background Data X= 3.711 S= 0.241 CV(2)=0.065 K factor**= 3.188 TL(2)= 4.48E+00 LL(2)=N/A

Historical Background Data from Upgradient Wells with Transformed Result

Well Number:	MW396	
Date Collected	Result	LN(Result)
8/13/2002	3.84E+01	3.65E+00
9/16/2002	4.29E+01	3.76E+00
10/16/2002	4.02E+01	3.69E+00
1/13/2003	4.67E+01	3.84E+00
4/8/2003	4.98E+01	3.91E+00
7/16/2003	4.33E+01	3.77E+00
10/14/2003	4.97E+01	3.91E+00
1/14/2004	2.36E+01	3.16E+00

Dry/Partially Dry Wells

Well No.	Gradient
MW389	Downgradient

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)
MW386	Sidegradient	Yes	1.90E+01	NO	2.94E+00	N/A
MW390	Downgradient	Yes	2.63E+01	NO	3.27E+00	N/A
MW393	Downgradient	Yes	1.58E+01	NO	2.76E+00	N/A
MW396	Upgradient	Yes	3.02E+01	NO	3.41E+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, $S = [\text{Sum}([(background\ result - X)^2]/[\text{count of background results} - 1])]^{0.5}$

TL Upper Tolerance Limit, $TL = X + (K * S)$, LL Lower Tolerance Limit, $LL = X - (K * S)$

X Mean, $X = (\text{sum of background results})/(\text{count of background results})$

** 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-S/T Second Quarter 2025 Statistical Analysis Historical Background Comparison

Chemical Oxygen Demand (COD) UNITS: mg/L UCRS

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data X= 35.375 S= 0.744 CV(1)=0.021 K factor**= 3.188 TL(1)= 3.77E+01 LL(1)=N/A

Statistics-Transformed Background Data X= 3.566 S= 0.021 CV(2)=0.006 K factor**= 3.188 TL(2)= 3.63E+00 LL(2)=N/A

Historical Background Data from Upgradient Wells with Transformed Result

Well Number:	MW396
Date Collected	Result LN(Result)
8/13/2002	3.60E+01 3.58E+00
9/16/2002	3.50E+01 3.56E+00
10/16/2002	3.70E+01 3.61E+00
1/13/2003	3.50E+01 3.56E+00
4/8/2003	3.50E+01 3.56E+00
7/16/2003	3.50E+01 3.56E+00
10/14/2003	3.50E+01 3.56E+00
1/14/2004	3.50E+01 3.56E+00

Dry/Partially Dry Wells

Well No.	Gradient
MW389	Downgradient

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)
MW386	Sidegradient	Yes	1.03E+01	NO	2.33E+00	N/A
MW390	Downgradient	No	2.00E+01	N/A	3.00E+00	N/A
MW393	Downgradient	No	2.00E+01	N/A	3.00E+00	N/A
MW396	Upgradient	Yes	1.35E+01	NO	2.60E+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, $S = [\text{Sum}([(background\ result - X)^2]/[\text{count of background results} - 1])]^{0.5}$

TL Upper Tolerance Limit, $TL = X + (K * S)$, LL Lower Tolerance Limit, $LL = X - (K * S)$

X Mean, $X = (\text{sum of background results})/(\text{count of background results})$

** 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.

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.

Historical Background Data from Upgradient Wells with Transformed Result

Dry/Partially Dry Wells

Because $CV(1)$ is less than or equal to 1, assume normal distribution and continue with statistical analysis utilizing $TL(1)$.

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW386	Sidegradient	Yes	9.62E+00	NO	2.26E+00	N/A
MW390	Downgradient	Yes	1.76E+01	NO	2.87E+00	N/A
MW393	Downgradient	Yes	8.47E+00	NO	2.14E+00	N/A
MW396	Upgradient	Yes	5.56E+01	NO	4.02E+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.

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.

*** 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.*

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.

Historical Background Data from Upgradient Wells with Transformed Result

Dry/Partially Dry Wells

Because CV(1) is greater than 1, the natural logarithm of background and test well results were calculated utilizing TL(2) for comparison.

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW386	Sidegradient	No	1.00E-03	N/A	-6.91E+00	N/A
MW390	Downgradient	No	1.00E-03	N/A	-6.91E+00	N/A
MW393	Downgradient	No	1.00E-03	N/A	-6.91E+00	N/A
MW396	Upgradient	Yes	6.65E-04	N/A	-7.32E+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.

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.

CV Coefficient-of-Variation, $CV = S/X$ If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, $S = [\text{Sum} ((\text{background result}-X)^2)/[\text{count of background results} - 1]]^{0.5}$
TL Upper Tolerance Limit, $TL = X + (K * S)$, LL Lower Tolerance Limit, $LL = X - (K * S)$
X Mean, $X = (\text{sum of background results})/(\text{count of background results})$

D1-9

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-Transformed Background Data **X**= 6.822 **S**= 0.111 **CV(2)**=0.016 **K factor****= 3.188 **TL(2)**= 7.17E+00 **LL(2)**=N/A

Because $CV(1)$ is less than or equal to 1, assume normal distribution and continue with statistical analysis utilizing $TL(1)$.

Well No.	Gradient
MW389	Downgradient

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW386	Sidegradient	Yes	5.79E+02	NO	6.36E+00	N/A
MW390	Downgradient	Yes	6.06E+02	NO	6.41E+00	N/A
MW393	Downgradient	Yes	4.36E+02	NO	6.08E+00	N/A
MW396	Upgradient	Yes	6.67E+02	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.

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.

*** 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-S/T Second Quarter 2025 Statistical Analysis Historical Background Comparison

Copper

UNITS: mg/L

UCRS

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data X= 0.028 S= 0.014 CV(1)=0.481 K factor**= 3.188 TL(1)= 7.16E-02 LL(1)=N/A

Statistics-Transformed Background Data X= -3.650 S= 0.414 CV(2)=-0.113 K factor**= 3.188 TL(2)= -2.33E+00 LL(2)=N/A

Historical Background Data from Upgradient Wells with Transformed Result

Well Number:	MW396	
Date Collected	Result	LN(Result)
8/13/2002	5.00E-02	-3.00E+00
9/16/2002	5.00E-02	-3.00E+00
10/16/2002	2.60E-02	-3.65E+00
1/13/2003	2.00E-02	-3.91E+00
4/8/2003	2.00E-02	-3.91E+00
7/16/2003	2.00E-02	-3.91E+00
10/14/2003	2.00E-02	-3.91E+00
1/14/2004	2.00E-02	-3.91E+00

Dry/Partially Dry Wells

Well No.	Gradient
MW389	Downgradient

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)
MW386	Sidegradient	Yes	3.69E-03	NO	-5.60E+00	N/A
MW390	Downgradient	Yes	1.47E-03	NO	-6.52E+00	N/A
MW393	Downgradient	Yes	6.32E-04	NO	-7.37E+00	N/A
MW396	Upgradient	Yes	1.08E-03	NO	-6.83E+00	N/A

N/A - Results identified as Non-Detects during laboratory analysis or data validation and were not included in the statistical evaluation. Additionally for parameters that have MCLs, where the result for a well did not exceed the MCL value, that well was not included in the statistical evaluation.

Conclusion of Statistical Analysis on Historical Data

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, $S = [\text{Sum}([(background\ result - X)^2]/[\text{count of background results} - 1])]^{0.5}$

TL Upper Tolerance Limit, $TL = X + (K * S)$, LL Lower Tolerance Limit, $LL = X - (K * S)$

X Mean, $X = (\text{sum of background results})/(\text{count of background results})$

** 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-S/T Second Quarter 2025 Statistical Analysis Historical Background Comparison

Dissolved Oxygen UNITS: mg/L UCRS

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data X= 1.395 S= 1.677 CV(1)=1.202 K factor**= 3.188 TL(1)= 6.74E+00 LL(1)=N/A

Statistics-Transformed Background Data X= -0.043 S= 0.814 CV(2)=-18.867 K factor**= 3.188 TL(2)= 2.55E+00 LL(2)=N/A

Historical Background Data from Upgradient Wells with Transformed Result

Well Number:	MW396
Date Collected	Result LN(Result)
8/13/2002	5.45E+00 1.70E+00
9/16/2002	4.00E-01 -9.16E-01
10/16/2002	5.40E-01 -6.16E-01
1/13/2003	7.20E-01 -3.29E-01
4/8/2003	6.90E-01 -3.71E-01
7/16/2003	1.10E+00 9.53E-02
10/14/2003	7.10E-01 -3.42E-01
1/14/2004	1.55E+00 4.38E-01

Dry/Partially Dry Wells

Well No.	Gradient
MW389	Downgradient

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)
MW386	Sidegradient	Yes	3.95E+00	N/A	1.37E+00	NO
MW390	Downgradient	Yes	5.06E+00	N/A	1.62E+00	NO
MW393	Downgradient	Yes	1.54E+00	N/A	4.32E-01	NO
MW396	Upgradient	Yes	2.73E+00	N/A	1.00E+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, $S = [\text{Sum}([(background\ result-X)^2]/[\text{count of background results} - 1])]^{0.5}$

TL Upper Tolerance Limit, $TL = X + (K * S)$, LL Lower Tolerance Limit, $LL = X - (K * S)$

X Mean, $X = (\text{sum of background results})/(\text{count of background results})$

** 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-S/T Second Quarter 2025 Statistical Analysis Historical Background Comparison**Dissolved Solids****UNITS: mg/L****UCRS**

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data X= 550.375 S= 104.330 CV(1)=0.190 K factor**= 3.188 TL(1)= 8.83E+02 LL(1)=N/A

Statistics-Transformed Background Data X= 6.298 S= 0.162 CV(2)=0.026 K factor**= 3.188 TL(2)= 6.82E+00 LL(2)=N/A

Historical Background Data from Upgradient Wells with Transformed Result

Well Number:	MW396	
Date Collected	Result	LN(Result)
8/13/2002	5.02E+02	6.22E+00
9/16/2002	5.06E+02	6.23E+00
10/16/2002	5.43E+02	6.30E+00
1/13/2003	5.21E+02	6.26E+00
4/8/2003	5.04E+02	6.22E+00
7/16/2003	5.32E+02	6.28E+00
10/14/2003	4.90E+02	6.19E+00
1/14/2004	8.05E+02	6.69E+00

Dry/Partially Dry Wells

Well No.	Gradient
MW389	Downgradient

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)
MW386	Sidegradient	Yes	3.50E+02	NO	5.86E+00	N/A
MW390	Downgradient	Yes	3.61E+02	NO	5.89E+00	N/A
MW393	Downgradient	Yes	2.74E+02	NO	5.61E+00	N/A
MW396	Upgradient	Yes	4.10E+02	NO	6.02E+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, $S = [\text{Sum}([(background\ result - X)^2]/[\text{count of background results} - 1])]^{0.5}$

TL Upper Tolerance Limit, $TL = X + (K * S)$, LL Lower Tolerance Limit, $LL = X - (K * S)$

X Mean, $X = (\text{sum of background results})/(\text{count of background results})$

** 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.

UCRS

Statistics-Transformed Background Data X= 1.880 S= 0.723 CV(2)=0.384 K factor**= 3.188 TL(2)= 4.18E+00 LL(2)=N/A

Because $CV(1)$ is less than or equal to 1, assume normal distribution and continue with statistical analysis utilizing $TL(1)$.

MW389 Downgradient

Date Collected	Result	LN(Result)
8/13/2002	1.80E+00	5.88E-01
9/16/2002	9.53E+00	2.25E+00
10/16/2002	7.43E+00	2.01E+00
1/13/2003	9.93E+00	2.30E+00
4/8/2003	1.02E+01	2.32E+00
7/16/2003	9.16E+00	2.21E+00
10/14/2003	1.19E+01	2.48E+00
1/14/2004	2.42E+00	8.84E-01

Well No.	Gradient	Detected?	Result	Result > TL(1)?	LN(Result)	LN(Result) > TL(2)

MW386	Sidegradient	Yes	1.05E-01	NO	-2.25E+00	N/A
MW390	Downgradient	No	1.00E-01	N/A	-2.30E+00	N/A
MW393	Downgradient	Yes	1.21E+00	NO	1.91E-01	N/A
MW396	Upgradient	Yes	2.45E-01	NO	-1.41E+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.

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.

*** 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.*

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.

Historical Background Data from Upgradient Wells with Transformed Result

Dry/Partially Dry Wells

Because $CV(1)$ is less than or equal to 1, assume normal distribution and continue with statistical analysis utilizing $TL(1)$.

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW386	Sidegradient	Yes	8.23E+00	NO	2.11E+00	N/A
MW390	Downgradient	Yes	1.19E+01	NO	2.48E+00	N/A
MW393	Downgradient	Yes	4.56E+00	NO	1.52E+00	N/A
MW396	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.

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.

*** 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.*

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.

Historical Background Data from Upgradient Wells with Transformed Result

Dry/Partially Dry Wells

Because $CV(1)$ is less than or equal to 1, assume normal distribution and continue with statistical analysis utilizing $TL(1)$.

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW386	Sidegradient	Yes	3.08E-02	NO	-3.48E+00	N/A
MW390	Downgradient	No	5.00E-03	N/A	-5.30E+00	N/A
MW393	Downgradient	Yes	1.25E-02	NO	-4.38E+00	N/A
MW396	Upgradient	Yes	7.44E-02	NO	-2.60E+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.

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.

*** 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-S/T Second Quarter 2025 Statistical Analysis	Historical Background Comparison
Methylene chloride	UNITS: ug/L
	UCRS

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	X= 5.625	S= 3.159	CV(1)=0.562	K factor**= 3.188	TL(1)= 1.57E+01	LL(1)=N/A
Statistics-Transformed Background Data	X= 1.614	S= 0.500	CV(2)=0.310	K factor**= 3.188	TL(2)= 3.21E+00	LL(2)=N/A

Historical Background Data from Upgradient Wells with Transformed Result

Well Number:	MW396	
Date Collected	Result	LN(Result)
8/13/2002	1.30E+01	2.56E+00
9/30/2002	2.00E+00	6.93E-01
10/16/2002	5.00E+00	1.61E+00
1/13/2003	5.00E+00	1.61E+00
4/8/2003	5.00E+00	1.61E+00
7/16/2003	5.00E+00	1.61E+00
10/14/2003	5.00E+00	1.61E+00
1/14/2004	5.00E+00	1.61E+00

Dry/Partially Dry Wells

Well No.	Gradient
MW389	Downgradient

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)
MW386	Sidegradient	No	5.00E+00	N/A	1.61E+00	N/A
MW390	Downgradient	No	5.00E+00	N/A	1.61E+00	N/A
MW393	Downgradient	Yes	6.16E+00	NO	1.82E+00	N/A
MW396	Upgradient	Yes	6.03E+00	NO	1.80E+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, $S = [\text{Sum}([(background\ result - X)^2]/[\text{count of background results} - 1])]^{0.5}$

TL Upper Tolerance Limit, $TL = X + (K * S)$, LL Lower Tolerance Limit, $LL = X - (K * S)$

X Mean, $X = (\text{sum of background results})/(\text{count of background results})$

** 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.

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.

Historical Background Data from Upgradient Wells with Transformed Result

Dry/Partially Dry Wells

Because CV(1) is greater than 1, the natural logarithm of background and test well results were calculated utilizing TL(2) for comparison.

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.

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.

*** 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-S/T Second Quarter 2025 Statistical Analysis Historical Background Comparison**Nickel****UNITS: mg/L****UCRS**

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data X= 0.016 S= 0.021 CV(1)=1.272 K factor**= 3.188 TL(1)= 8.26E-02 LL(1)=N/A

Statistics-Transformed Background Data X= -4.706 S= 1.057 CV(2)=-0.225 K factor**= 3.188 TL(2)= -1.34E+00 LL(2)=N/A

Historical Background Data from Upgradient Wells with Transformed Result

Well Number:	MW396	
Date Collected	Result	LN(Result)
8/13/2002	5.00E-02	-3.00E+00
9/16/2002	5.00E-02	-3.00E+00
10/16/2002	5.00E-03	-5.30E+00
1/13/2003	5.00E-03	-5.30E+00
4/8/2003	5.71E-03	-5.17E+00
7/16/2003	5.00E-03	-5.30E+00
10/14/2003	5.00E-03	-5.30E+00
1/14/2004	5.00E-03	-5.30E+00

Dry/Partially Dry Wells

Well No.	Gradient
MW389	Downgradient

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)
MW386	Sidegradient	Yes	6.53E-04	N/A	-7.33E+00	NO
MW390	Downgradient	Yes	7.13E-04	N/A	-7.25E+00	NO
MW393	Downgradient	No	2.00E-03	N/A	-6.21E+00	N/A
MW396	Upgradient	Yes	6.69E-04	N/A	-7.31E+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, $S = [\text{Sum}([(background\ result - X)^2]/[\text{count of background results} - 1])]^{0.5}$

TL Upper Tolerance Limit, $TL = X + (K * S)$, LL Lower Tolerance Limit, $LL = X - (K * S)$

X Mean, $X = (\text{sum of background results})/(\text{count of background results})$

** 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.

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.

Historical Background Data from Upgradient Wells with Transformed Result

#Because the natural log was not possible for all background values, the TL was considered equal to the maximum background value.

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.

MW386
MW390
MW393
MW396

*** 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.*

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.

Historical Background Data from Upgradient Wells with Transformed Result

Dry/Partially Dry Wells

Because $CV(1)$ is less than or equal to 1, assume normal distribution and continue with statistical analysis utilizing $TL(1)$.

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW386	Sidegradient	Yes	2.73E-01	NO	-1.30E+00	N/A
MW390	Downgradient	Yes	3.31E-01	NO	-1.11E+00	N/A
MW393	Downgradient	Yes	4.80E-01	NO	-7.34E-01	N/A
MW396	Upgradient	Yes	8.38E-01	NO	-1.77E-01	N/A

Conclusion of Statistical Analysis on Historical Data

D1-22

C-746-S/T Second Quarter 2025 Statistical Analysis Historical Background Comparison**Sodium****UNITS: mg/L****UCRS**

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data X= 106.825 S= 32.041 CV(1)=0.300 K factor**= 3.188 TL(1)= 2.09E+02 LL(1)=N/A

Statistics-Transformed Background Data X= 4.595 S= 0.492 CV(2)=0.107 K factor**= 3.188 TL(2)= 6.16E+00 LL(2)=N/A

Historical Background Data from Upgradient Wells with Transformed Result

Well Number: MW396

Date Collected	Result	LN(Result)
8/13/2002	1.15E+02	4.74E+00
9/16/2002	1.16E+02	4.75E+00
10/16/2002	1.17E+02	4.76E+00
1/13/2003	1.22E+02	4.80E+00
4/8/2003	1.06E+02	4.66E+00
7/16/2003	1.17E+02	4.76E+00
10/14/2003	1.32E+02	4.88E+00
1/14/2004	2.96E+01	3.39E+00

Dry/Partially Dry Wells

Well No. Gradient

MW389 Downgradient

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)
MW386	Sidegradient	Yes	1.04E+02	NO	4.64E+00	N/A
MW390	Downgradient	Yes	9.53E+01	NO	4.56E+00	N/A
MW393	Downgradient	Yes	8.07E+01	NO	4.39E+00	N/A
MW396	Upgradient	Yes	9.74E+01	NO	4.58E+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, $S = [\text{Sum}([(background\ result - X)^2]/[\text{count of background results} - 1])]^{0.5}$

TL Upper Tolerance Limit, $TL = X + (K * S)$, LL Lower Tolerance Limit, $LL = X - (K * S)$

X Mean, $X = (\text{sum of background results})/(\text{count of background results})$

** 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.

UCRS

Statistics-Transformed Background Data **X=** 3.054 **S=** 0.351 **CV(2)=**0.115 **K factor**=** 3.188 **TL(2)=** 4.17E+00 **LL(2)=**N/A

Because $CV(1)$ is less than or equal to 1, assume normal distribution and continue with statistical analysis utilizing $TL(1)$.

MW389 Downgradient

Date Collected	Result	LN(Result)
8/13/2002	4.19E+01	3.74E+00
9/16/2002	2.63E+01	3.27E+00
10/16/2002	2.06E+01	3.03E+00
1/13/2003	1.66E+01	2.81E+00
4/8/2003	2.39E+01	3.17E+00
7/16/2003	1.88E+01	2.93E+00
10/14/2003	1.29E+01	2.56E+00
1/14/2004	1.87E+01	2.93E+00

Well No.	Gradient	Detected?	Result	Result>TL(1)?	LN(Result)	LN(Result)>TL(2)

MW386	Sidegradient	Yes	3.51E+01	NO	3.56E+00	N/A
MW390	Downgradient	Yes	3.43E+01	NO	3.54E+00	N/A
MW393	Downgradient	Yes	2.55E+01	NO	3.24E+00	N/A
MW396	Upgradient	Yes	2.98E+01	NO	3.39E+00	N/A

N/A - Results identified as Non-Detects during laboratory analysis or data validation and were not included in the statistical evaluation. Additionally for parameters that have MCLs, where the result for a well did not exceed the MCL value, that well was not included in the statistical evaluation.

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.

*** 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-S/T Second Quarter 2025 Statistical Analysis	Historical Background Comparison
Technetium-99	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= 7.624	S= 6.558	CV(1)=0.860	K factor**= 3.188	TL(1)= 2.85E+01	LL(1)=N/A
Statistics-Transformed Background Data	X= 1.498	S= 1.321	CV(2)=0.882	K factor**= 3.188	TL(2)= 5.71E+00	LL(2)=N/A

Historical Background Data from Upgradient Wells with Transformed Result

Well Number:	MW396	
Date Collected	Result	LN(Result)
8/13/2002	1.67E+01	2.82E+00
9/16/2002	6.39E+00	1.85E+00
10/16/2002	4.55E+00	1.52E+00
1/13/2003	1.65E+01	2.80E+00
4/8/2003	3.04E+00	1.11E+00
7/16/2003	3.54E-01	-1.04E+00
10/14/2003	1.19E+01	2.48E+00
1/14/2004	1.56E+00	4.45E-01

Dry/Partially Dry Wells

Well No.	Gradient
MW389	Downgradient

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)
MW386	Sidegradient	No	2.94E+00	N/A	1.08E+00	N/A
MW390	Downgradient	Yes	7.37E+01	YES	4.30E+00	N/A
MW393	Downgradient	No	-2.54E+00	N/A	#Error	N/A
MW396	Upgradient	No	2.06E+00	N/A	7.23E-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

MW390

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, $S = [\text{Sum}([(background\ result - X)^2]/[\text{count of background results} - 1])]^{0.5}$

TL Upper Tolerance Limit, $TL = X + (K * S)$, LL Lower Tolerance Limit, $LL = X - (K * S)$

X Mean, $X = (\text{sum of background results})/(\text{count of background results})$

** 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.

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.

Historical Background Data from Upgradient Wells with Transformed Result

Dry/Partially Dry Wells

Because $CV(1)$ is less than or equal to 1, assume normal distribution and continue with statistical analysis utilizing $TL(1)$.

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW386	Sidegradient	Yes	3.67E+00	NO	1.30E+00	N/A
MW390	Downgradient	Yes	1.98E+00	NO	6.83E-01	N/A
MW393	Downgradient	Yes	2.06E+00	NO	7.23E-01	N/A
MW396	Upgradient	Yes	3.36E+00	NO	1.21E+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.

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.

CV Coefficient-of-Variation, $CV = S/X$ If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, $S = [\text{Sum} ((\text{background result}-X)^2)/[\text{count of background results} - 1]]^{0.5}$
TL Upper Tolerance Limit, $TL = X + (K * S)$, LL Lower Tolerance Limit, $LL = X - (K * S)$
X Mean, $X = (\text{sum of background results})/(\text{count of background results})$

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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= 142.650 S= 53.533 CV(1)=0.375 K factor**= 3.188 TL(1)= 3.13E+02 LL(1)=N/A

Statistics-Transformed Background Data X= 4.896 S= 0.390 CV(2)=0.080 K factor**= 3.188 TL(2)= 6.14E+00 LL(2)=N/A

Historical Background Data from Upgradient Wells with Transformed Result

Well Number:	MW396	
Date Collected	Result	LN(Result)
8/13/2002	1.93E+02	5.26E+00
9/16/2002	1.90E+02	5.25E+00
10/16/2002	2.21E+02	5.40E+00
1/13/2003	1.06E+02	4.66E+00
4/8/2003	7.78E+01	4.35E+00
7/16/2003	1.22E+02	4.80E+00
10/14/2003	8.64E+01	4.46E+00
1/14/2004	1.45E+02	4.98E+00

Dry/Partially Dry Wells

Well No.	Gradient
MW389	Downgradient

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)
MW386	Sidegradient	Yes	1.03E+02	NO	4.63E+00	N/A
MW390	Downgradient	Yes	1.34E+01	NO	2.60E+00	N/A
MW393	Downgradient	Yes	9.11E+00	NO	2.21E+00	N/A
MW396	Upgradient	Yes	4.78E+01	NO	3.87E+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, $S = [\text{Sum}([(background\ result-X)^2]/[\text{count of background results} - 1])]^{0.5}$

TL Upper Tolerance Limit, $TL = X + (K * S)$, LL Lower Tolerance Limit, $LL = X - (K * S)$

X Mean, $X = (\text{sum of background results})/(\text{count of background results})$

** 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.

UCRS

D1-28

C-746-S/T Second 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= 10.250 S= 1.000 CV(1)=0.098 **K factor**= 2.523** TL(1)= 1.28E+01 LL(1)=N/A

Statistics-Transformed Background Data X= 2.324 S= 0.084 CV(2)=0.036 **K factor**= 2.523** TL(2)= 2.54E+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: MW220

Date Collected	Result	LN(Result)
10/14/2002	1.00E+01	2.30E+00
1/15/2003	1.00E+01	2.30E+00
4/10/2003	1.00E+01	2.30E+00
7/14/2003	1.00E+01	2.30E+00
10/13/2003	1.00E+01	2.30E+00
4/13/2004	1.00E+01	2.30E+00
7/21/2004	1.00E+01	2.30E+00
10/11/2004	1.00E+01	2.30E+00

Well Number: MW394

Date Collected	Result	LN(Result)
8/13/2002	1.00E+01	2.30E+00
9/30/2002	1.00E+01	2.30E+00
10/16/2002	1.00E+01	2.30E+00
1/13/2003	1.00E+01	2.30E+00
4/10/2003	1.00E+01	2.30E+00
7/16/2003	1.00E+01	2.30E+00
10/14/2003	1.40E+01	2.64E+00
4/12/2004	1.00E+01	2.30E+00

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW220	Upgradient	No	5.00E+00	N/A	1.61E+00	N/A
MW221	Sidegradient	No	5.00E+00	N/A	1.61E+00	N/A
MW222	Sidegradient	No	5.00E+00	N/A	1.61E+00	N/A
MW223	Sidegradient	No	5.00E+00	N/A	1.61E+00	N/A
MW224	Sidegradient	No	5.00E+00	N/A	1.61E+00	N/A
MW369	Downgradient	No	5.00E+00	N/A	1.61E+00	N/A
MW372	Downgradient	No	5.00E+00	N/A	1.61E+00	N/A
MW384	Sidegradient	No	5.00E+00	N/A	1.61E+00	N/A
MW387	Downgradient	No	5.00E+00	N/A	1.61E+00	N/A
MW391	Downgradient	Yes	7.03E+00	NO	1.95E+00	N/A
MW394	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, $S = [\text{Sum}([(background\ result-X)^2]/[\text{count of background results} - 1])]^{0.5}$

TL Upper Tolerance Limit, $TL = X + (K * S)$, LL Lower Tolerance Limit, $LL = X - (K * S)$

X Mean, $X = (\text{sum of background results})/(\text{count of background results})$

** 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-S/T Second Quarter 2025 Statistical Analysis Historical Background Comparison**Aluminum****UNITS: mg/L****URGA**

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	X= 0.221	S= 0.061	CV(1)=0.277	K factor**= 2.523	TL(1)= 3.76E-01	LL(1)=N/A
Statistics-Transformed Background Data	X= -1.534	S= 0.212	CV(2)=-0.138	K factor**= 2.523	TL(2)= -9.99E-01	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: MW220

Date Collected	Result	LN(Result)
10/14/2002	2.00E-01	-1.61E+00
1/15/2003	2.00E-01	-1.61E+00
4/10/2003	2.00E-01	-1.61E+00
7/14/2003	2.00E-01	-1.61E+00
10/13/2003	4.27E-01	-8.51E-01
1/13/2004	3.09E-01	-1.17E+00
4/13/2004	2.00E-01	-1.61E+00
7/21/2004	2.02E-01	-1.60E+00

Well Number: MW394

Date Collected	Result	LN(Result)
8/13/2002	2.00E-01	-1.61E+00
9/16/2002	2.00E-01	-1.61E+00
10/16/2002	2.00E-01	-1.61E+00
1/13/2003	2.00E-01	-1.61E+00
4/10/2003	2.00E-01	-1.61E+00
7/16/2003	2.00E-01	-1.61E+00
10/14/2003	2.00E-01	-1.61E+00
1/13/2004	2.00E-01	-1.61E+00

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW220	Upgradient	No	5.00E-02	N/A	-3.00E+00	N/A
MW221	Sidegradient	No	5.00E-02	N/A	-3.00E+00	N/A
MW222	Sidegradient	No	5.00E-02	N/A	-3.00E+00	N/A
MW223	Sidegradient	No	5.00E-02	N/A	-3.00E+00	N/A
MW224	Sidegradient	No	5.00E-02	N/A	-3.00E+00	N/A
MW369	Downgradient	No	5.00E-02	N/A	-3.00E+00	N/A
MW372	Downgradient	No	5.00E-02	N/A	-3.00E+00	N/A
MW384	Sidegradient	No	5.00E-02	N/A	-3.00E+00	N/A
MW387	Downgradient	Yes	2.93E-02	NO	-3.53E+00	N/A
MW391	Downgradient	Yes	1.29E-01	NO	-2.05E+00	N/A
MW394	Upgradient	Yes	5.44E-02	NO	-2.91E+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, $S = [\text{Sum}([(background\ result-X)^2]/[\text{count of background results} - 1])]^{0.5}$

TL Upper Tolerance Limit, $TL = X + (K * S)$, LL Lower Tolerance Limit, $LL = X - (K * S)$

X Mean, $X = (\text{sum of background results})/(\text{count of background results})$

** 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-S/T Second Quarter 2025 Statistical Analysis Historical Background Comparison**Boron****UNITS: mg/L****URGA**

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data X= 0.425 S= 0.615 CV(1)=1.447 K factor**= 2.523 TL(1)= 1.98E+00 LL(1)=N/A

Statistics-Transformed Background Data X= -1.322 S= 0.786 CV(2)=-0.595 K factor**= 2.523 TL(2)= 6.63E-01 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: MW220

Date Collected	Result	LN(Result)
10/14/2002	2.00E-01	-1.61E+00
1/15/2003	2.00E-01	-1.61E+00
4/10/2003	2.00E-01	-1.61E+00
7/14/2003	2.00E-01	-1.61E+00
10/13/2003	2.00E-01	-1.61E+00
1/13/2004	2.00E-01	-1.61E+00
4/13/2004	2.00E-01	-1.61E+00
7/21/2004	2.00E-01	-1.61E+00

Well Number: MW394

Date Collected	Result	LN(Result)
8/13/2002	2.00E+00	6.93E-01
9/16/2002	2.00E+00	6.93E-01
10/16/2002	2.00E-01	-1.61E+00
1/13/2003	2.00E-01	-1.61E+00
4/10/2003	2.00E-01	-1.61E+00
7/16/2003	2.00E-01	-1.61E+00
10/14/2003	2.00E-01	-1.61E+00
1/13/2004	2.00E-01	-1.61E+00

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result > TL(1)?	LN(Result)	LN(Result) > TL(2)
MW220	Upgradient	Yes	9.50E-03	N/A	-4.66E+00	NO
MW221	Sidegradient	Yes	2.48E-02	N/A	-3.70E+00	NO
MW222	Sidegradient	Yes	1.04E-02	N/A	-4.57E+00	NO
MW223	Sidegradient	Yes	1.12E-02	N/A	-4.49E+00	NO
MW224	Sidegradient	Yes	4.23E-02	N/A	-3.16E+00	NO
MW369	Downgradient	Yes	3.55E-02	N/A	-3.34E+00	NO
MW372	Downgradient	Yes	1.43E+00	N/A	3.58E-01	NO
MW384	Sidegradient	Yes	9.38E-02	N/A	-2.37E+00	NO
MW387	Downgradient	Yes	4.66E-02	N/A	-3.07E+00	NO
MW391	Downgradient	Yes	2.95E-02	N/A	-3.52E+00	NO
MW394	Upgradient	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, $S = [\text{Sum}([(background\ result-X)^2]/[\text{count of background results} - 1])]^{0.5}$

TL Upper Tolerance Limit, $TL = X + (K * S)$, LL Lower Tolerance Limit, $LL = X - (K * S)$

X Mean, $X = (\text{sum of background results})/(\text{count of background results})$

** 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-S/T Second Quarter 2025 Statistical Analysis Historical Background Comparison**Bromide****UNITS: mg/L****URGA**

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	X= 1.000	S= 0.000	CV(1)=0.000	K factor**= 2.523	TL(1)= 1.00E+00	LL(1)=N/A
Statistics-Transformed Background Data	X= 0.000	S= 0.000	CV(2)=#Num!	K factor**= 2.523	TL(2)= 0.00E+00	LL(2)=N/A

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: MW220

Date Collected	Result	LN(Result)
10/14/2002	1.00E+00	0.00E+00
1/15/2003	1.00E+00	0.00E+00
4/10/2003	1.00E+00	0.00E+00
7/14/2003	1.00E+00	0.00E+00
10/13/2003	1.00E+00	0.00E+00
1/13/2004	1.00E+00	0.00E+00
4/13/2004	1.00E+00	0.00E+00
7/21/2004	1.00E+00	0.00E+00

Well Number: MW394

Date Collected	Result	LN(Result)
8/13/2002	1.00E+00	0.00E+00
9/16/2002	1.00E+00	0.00E+00
10/16/2002	1.00E+00	0.00E+00
1/13/2003	1.00E+00	0.00E+00
4/10/2003	1.00E+00	0.00E+00
7/16/2003	1.00E+00	0.00E+00
10/14/2003	1.00E+00	0.00E+00
1/13/2004	1.00E+00	0.00E+00

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW220	Upgradient	Yes	2.12E-01	NO	-1.55E+00	N/A
MW221	Sidegradient	Yes	4.27E-01	NO	-8.51E-01	N/A
MW222	Sidegradient	Yes	4.02E-01	NO	-9.11E-01	N/A
MW223	Sidegradient	Yes	4.04E-01	NO	-9.06E-01	N/A
MW224	Sidegradient	Yes	3.87E-01	NO	-9.49E-01	N/A
MW369	Downgradient	Yes	4.71E-01	NO	-7.53E-01	N/A
MW372	Downgradient	Yes	4.88E-01	NO	-7.17E-01	N/A
MW384	Sidegradient	Yes	2.81E-01	NO	-1.27E+00	N/A
MW387	Downgradient	Yes	4.52E-01	NO	-7.94E-01	N/A
MW391	Downgradient	Yes	4.36E-01	NO	-8.30E-01	N/A
MW394	Upgradient	Yes	5.83E-01	NO	-5.40E-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, $S = [\text{Sum}([(background\ result-X)^2]/[\text{count of background results} - 1])]^{0.5}$

TL Upper Tolerance Limit, $TL = X + (K * S)$, LL Lower Tolerance Limit, $LL = X - (K * S)$

X Mean, $X = (\text{sum of background results})/(\text{count of background results})$

** 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-S/T Second Quarter 2025 Statistical Analysis Historical Background Comparison**Calcium****UNITS: mg/L****URGA**

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	X= 27.638	S= 4.743	CV(1)=0.172	K factor**= 2.523	TL(1)= 3.96E+01	LL(1)=N/A
Statistics-Transformed Background Data	X= 3.304	S= 0.183	CV(2)=0.055	K factor**= 2.523	TL(2)= 3.76E+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: MW220

Date Collected	Result	LN(Result)
10/14/2002	2.36E+01	3.16E+00
1/15/2003	2.59E+01	3.25E+00
4/10/2003	3.04E+01	3.41E+00
7/14/2003	3.39E+01	3.52E+00
10/13/2003	2.13E+01	3.06E+00
1/13/2004	2.03E+01	3.01E+00
4/13/2004	2.38E+01	3.17E+00
7/21/2004	1.90E+01	2.94E+00

Well Number: MW394

Date Collected	Result	LN(Result)
8/13/2002	2.95E+01	3.38E+00
9/16/2002	2.99E+01	3.40E+00
10/16/2002	3.12E+01	3.44E+00
1/13/2003	3.07E+01	3.42E+00
4/10/2003	3.44E+01	3.54E+00
7/16/2003	2.96E+01	3.39E+00
10/14/2003	3.03E+01	3.41E+00
1/13/2004	2.84E+01	3.35E+00

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW220	Upgradient	Yes	2.62E+01	NO	3.27E+00	N/A
MW221	Sidegradient	Yes	2.15E+01	NO	3.07E+00	N/A
MW222	Sidegradient	Yes	2.05E+01	NO	3.02E+00	N/A
MW223	Sidegradient	Yes	2.27E+01	NO	3.12E+00	N/A
MW224	Sidegradient	Yes	2.55E+01	NO	3.24E+00	N/A
MW369	Downgradient	Yes	2.53E+01	NO	3.23E+00	N/A
MW372	Downgradient	Yes	6.64E+01	YES	4.20E+00	N/A
MW384	Sidegradient	Yes	2.32E+01	NO	3.14E+00	N/A
MW387	Downgradient	Yes	3.59E+01	NO	3.58E+00	N/A
MW391	Downgradient	Yes	2.27E+01	NO	3.12E+00	N/A
MW394	Upgradient	Yes	2.80E+01	NO	3.33E+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, $S = [\text{Sum}([(background\ result - X)^2]/[\text{count of background results} - 1])]^{0.5}$

TL Upper Tolerance Limit, $TL = X + (K * S)$, LL Lower Tolerance Limit, $LL = X - (K * S)$

X Mean, $X = (\text{sum of background results})/(\text{count of background results})$

** 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-S/T Second Quarter 2025 Statistical Analysis Historical Background Comparison

Chemical Oxygen Demand (COD) UNITS: mg/L URG

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= 35.000	S= 0.000	CV(1)=0.000	K factor**= 2.523	TL(1)= 3.50E+01	LL(1)=N/A
Statistics-Transformed Background Data	X= 3.555	S= 0.000	CV(2)=0.000	K factor**= 2.523	TL(2)= 3.56E+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: MW220

Date Collected	Result	LN(Result)
10/14/2002	3.50E+01	3.56E+00
1/15/2003	3.50E+01	3.56E+00
4/10/2003	3.50E+01	3.56E+00
7/14/2003	3.50E+01	3.56E+00
10/13/2003	3.50E+01	3.56E+00
1/13/2004	3.50E+01	3.56E+00
4/13/2004	3.50E+01	3.56E+00
7/21/2004	3.50E+01	3.56E+00

Well Number: MW394

Date Collected	Result	LN(Result)
8/13/2002	3.50E+01	3.56E+00
9/16/2002	3.50E+01	3.56E+00
10/16/2002	3.50E+01	3.56E+00
1/13/2003	3.50E+01	3.56E+00
4/10/2003	3.50E+01	3.56E+00
7/16/2003	3.50E+01	3.56E+00
10/14/2003	3.50E+01	3.56E+00
1/13/2004	3.50E+01	3.56E+00

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW220	Upgradient	No	2.00E+01	N/A	3.00E+00	N/A
MW221	Sidegradient	No	2.00E+01	N/A	3.00E+00	N/A
MW222	Sidegradient	No	2.00E+01	N/A	3.00E+00	N/A
MW223	Sidegradient	Yes	1.50E+01	NO	2.71E+00	N/A
MW224	Sidegradient	No	2.00E+01	N/A	3.00E+00	N/A
MW369	Downgradient	No	2.00E+01	N/A	3.00E+00	N/A
MW372	Downgradient	No	2.00E+01	N/A	3.00E+00	N/A
MW384	Sidegradient	Yes	2.89E+01	NO	3.36E+00	N/A
MW387	Downgradient	Yes	2.66E+01	NO	3.28E+00	N/A
MW391	Downgradient	No	2.00E+01	N/A	3.00E+00	N/A
MW394	Upgradient	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, $S = [\text{Sum}([(background\ result-X)^2]/[\text{count of background results} - 1])]^{0.5}$

TL Upper Tolerance Limit, $TL = X + (K * S)$, LL Lower Tolerance Limit, $LL = X - (K * S)$

X Mean, $X = (\text{sum of background results})/(\text{count of background results})$

** 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.

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.

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 $TL(1)$.

Current Quarter Data						
Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW220	Upgradient	Yes	1.80E+01	NO	2.89E+00	N/A
MW221	Sidegradient	Yes	3.53E+01	NO	3.56E+00	N/A
MW222	Sidegradient	Yes	3.22E+01	NO	3.47E+00	N/A
MW223	Sidegradient	Yes	3.63E+01	NO	3.59E+00	N/A
MW224	Sidegradient	Yes	3.09E+01	NO	3.43E+00	N/A
MW369	Downgradient	Yes	3.64E+01	NO	3.59E+00	N/A
MW372	Downgradient	Yes	3.44E+01	NO	3.54E+00	N/A
MW384	Sidegradient	Yes	2.35E+01	NO	3.16E+00	N/A
MW387	Downgradient	Yes	3.33E+01	NO	3.51E+00	N/A
MW391	Downgradient	Yes	3.27E+01	NO	3.49E+00	N/A
MW394	Upgradient	Yes	4.83E+01	NO	3.88E+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.

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.

CV Coefficient-of-Variation, $CV = S/X$ If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, $S = [\text{Sum} ((\text{background result}-X)^2)/[\text{count of background results} - 1]]^{0.5}$
TL Upper Tolerance Limit, $TL = X + (K * S)$, LL Lower Tolerance Limit, $LL = X - (K * S)$
X Mean, $X = (\text{sum of background results})/(\text{count of background results})$

*** 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.*

URGA

D1-36

C-746-S/T Second Quarter 2025 Statistical Analysis Historical Background Comparison

Copper

UNITS: mg/L

URGA

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	X= 0.024	S= 0.010	CV(1)=0.429	K factor**= 2.523	TL(1)= 4.96E-02	LL(1)=N/A
Statistics-Transformed Background Data	X= -3.794	S= 0.312	CV(2)=-0.082	K factor**= 2.523	TL(2)= -3.01E+00	LL(2)=N/A

Historical Background Data from Upgradient Wells with Transformed Result

Well Number: MW220

Date Collected	Result	LN(Result)
10/14/2002	2.11E-02	-3.86E+00
1/15/2003	2.00E-02	-3.91E+00
4/10/2003	2.00E-02	-3.91E+00
7/14/2003	2.00E-02	-3.91E+00
10/13/2003	2.00E-02	-3.91E+00
1/13/2004	2.00E-02	-3.91E+00
4/13/2004	2.00E-02	-3.91E+00
7/21/2004	2.00E-02	-3.91E+00

Well Number: MW394

Date Collected	Result	LN(Result)
8/13/2002	5.00E-02	-3.00E+00
9/16/2002	5.00E-02	-3.00E+00
10/16/2002	2.00E-02	-3.91E+00
1/13/2003	2.00E-02	-3.91E+00
4/10/2003	2.00E-02	-3.91E+00
7/16/2003	2.00E-02	-3.91E+00
10/14/2003	2.00E-02	-3.91E+00
1/13/2004	2.00E-02	-3.91E+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)
MW220	Upgradient	No	1.36E-03	N/A	-6.60E+00	N/A
MW221	Sidegradient	Yes	2.10E-03	NO	-6.17E+00	N/A
MW222	Sidegradient	No	1.11E-03	N/A	-6.80E+00	N/A
MW223	Sidegradient	No	1.87E-03	N/A	-6.28E+00	N/A
MW224	Sidegradient	No	1.36E-03	N/A	-6.60E+00	N/A
MW369	Downgradient	Yes	1.38E-03	NO	-6.59E+00	N/A
MW372	Downgradient	Yes	8.96E-04	NO	-7.02E+00	N/A
MW384	Sidegradient	Yes	1.06E-03	NO	-6.85E+00	N/A
MW387	Downgradient	Yes	1.03E-03	NO	-6.88E+00	N/A
MW391	Downgradient	Yes	1.97E-03	NO	-6.23E+00	N/A
MW394	Upgradient	Yes	1.41E-03	NO	-6.56E+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

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, $S = [\text{Sum}([(background\ result-X)^2]/[\text{count of background results} - 1])]^{0.5}$

TL Upper Tolerance Limit, $TL = X + (K * S)$, LL Lower Tolerance Limit, $LL = X - (K * S)$

X Mean, $X = (\text{sum of background results})/(\text{count of background results})$

** 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.

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.

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 $TL(1)$.

Current Quarter Data						
Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW220	Upgradient	No	2.00E-01	N/A	-1.61E+00	N/A
MW221	Sidegradient	No	2.00E-01	N/A	-1.61E+00	N/A
MW222	Sidegradient	No	2.00E-01	N/A	-1.61E+00	N/A
MW223	Sidegradient	No	2.00E-01	N/A	-1.61E+00	N/A
MW224	Sidegradient	Yes	2.95E-03	NO	-5.83E+00	N/A
MW369	Downgradient	No	2.00E-01	N/A	-1.61E+00	N/A
MW372	Downgradient	Yes	2.23E-03	NO	-6.11E+00	N/A
MW384	Sidegradient	No	2.00E-01	N/A	-1.61E+00	N/A
MW387	Downgradient	No	2.00E-01	N/A	-1.61E+00	N/A
MW391	Downgradient	No	2.00E-01	N/A	-1.61E+00	N/A
MW394	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.

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.

CV Coefficient-of-Variation, $CV = S/X$ If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, $S = [\text{Sum} ((\text{background result}-X)^2)/[\text{count of background results} - 1]]^{0.5}$
TL Upper Tolerance Limit, $TL = X + (K * S)$, LL Lower Tolerance Limit, $LL = X - (K * S)$
X Mean, $X = (\text{sum of background results})/(\text{count of background results})$

*** 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-S/T Second Quarter 2025 Statistical Analysis Historical Background Comparison

Dissolved Oxygen UNITS: mg/L URG

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= 3.784	S= 1.887	CV(1)=0.499	K factor**= 2.523	TL(1)= 8.54E+00	LL(1)=N/A
Statistics-Transformed Background Data	X= 1.182	S= 0.612	CV(2)=0.518	K factor**= 2.523	TL(2)= 2.73E+00	LL(2)=N/A

Historical Background Data from Upgradient Wells with Transformed Result

Well Number: MW220

Date Collected	Result	LN(Result)
10/14/2002	6.79E+00	1.92E+00
1/15/2003	7.25E+00	1.98E+00
4/10/2003	3.60E+00	1.28E+00
7/14/2003	9.40E-01	-6.19E-02
10/13/2003	1.65E+00	5.01E-01
1/13/2004	3.48E+00	1.25E+00
4/13/2004	1.05E+00	4.88E-02
7/21/2004	4.46E+00	1.50E+00

Well Number: MW394

Date Collected	Result	LN(Result)
8/13/2002	6.09E+00	1.81E+00
9/16/2002	3.85E+00	1.35E+00
10/16/2002	5.11E+00	1.63E+00
1/13/2003	3.83E+00	1.34E+00
4/10/2003	4.15E+00	1.42E+00
7/16/2003	1.83E+00	6.04E-01
10/14/2003	3.33E+00	1.20E+00
1/13/2004	3.14E+00	1.14E+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)
MW220	Upgradient	Yes	4.64E+00	NO	1.53E+00	N/A
MW221	Sidegradient	Yes	6.02E+00	NO	1.80E+00	N/A
MW222	Sidegradient	Yes	4.88E+00	NO	1.59E+00	N/A
MW223	Sidegradient	Yes	4.80E+00	NO	1.57E+00	N/A
MW224	Sidegradient	Yes	4.49E+00	NO	1.50E+00	N/A
MW369	Downgradient	Yes	2.40E+00	NO	8.75E-01	N/A
MW372	Downgradient	Yes	2.10E+00	NO	7.42E-01	N/A
MW384	Sidegradient	Yes	5.20E+00	NO	1.65E+00	N/A
MW387	Downgradient	Yes	4.30E+00	NO	1.46E+00	N/A
MW391	Downgradient	Yes	3.84E+00	NO	1.35E+00	N/A
MW394	Upgradient	Yes	5.70E+00	NO	1.74E+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, $S = [\text{Sum}([(background\ result-X)^2]/[\text{count of background results} - 1])]^{0.5}$

TL Upper Tolerance Limit, $TL = X + (K * S)$, LL Lower Tolerance Limit, $LL = X - (K * S)$

X Mean, $X = (\text{sum of background results})/(\text{count of background results})$

** 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.

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.

Historical Background Data from Upgradient Wells with Transformed Result

Well Number: MW220

Well Number: MW394

Current Quarter Data

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.

Wells with Exceedances

MW372

CV Coefficient-of-Variation, $CV = S/X$ If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, $S = [\text{Sum} ((\text{background result}-X)^2)/[\text{count of background results} - 1]]^{0.5}$
TL Upper Tolerance Limit, $TL = X + (K * S)$, LL Lower Tolerance Limit, $LL = X - (K * S)$
X Mean, $X = (\text{sum of background results})/(\text{count of background results})$

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C-746-S/T Second Quarter 2025 Statistical Analysis Historical Background Comparison**Iron****UNITS: mg/L****URGA**

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data X= 0.897 S= 1.050 CV(1)=1.170 **K factor**= 2.523** TL(1)= 3.55E+00 LL(1)=N/A

Statistics-Transformed Background Data X= -0.565 S= 0.951 CV(2)=-1.683 **K factor**= 2.523** TL(2)= 1.83E+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: MW220

Date Collected	Result	LN(Result)
10/14/2002	2.00E-01	-1.61E+00
1/15/2003	2.00E-01	-1.61E+00
4/10/2003	4.29E-01	-8.46E-01
7/14/2003	4.33E+00	1.47E+00
10/13/2003	1.81E+00	5.93E-01
1/13/2004	7.93E-01	-2.32E-01
4/13/2004	1.30E-01	-2.04E+00
7/21/2004	3.82E-01	-9.62E-01

Well Number: MW394

Date Collected	Result	LN(Result)
8/13/2002	1.34E+00	2.93E-01
9/16/2002	3.28E-01	-1.11E+00
10/16/2002	1.38E+00	3.22E-01
1/13/2003	1.30E+00	2.62E-01
4/10/2003	4.94E-01	-7.05E-01
7/16/2003	6.20E-01	-4.78E-01
10/14/2003	3.70E-01	-9.94E-01
1/13/2004	2.51E-01	-1.38E+00

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result > TL(1)?	LN(Result)	LN(Result) > TL(2)
MW220	Upgradient	No	1.00E-01	N/A	-2.30E+00	N/A
MW221	Sidegradient	No	1.00E-01	N/A	-2.30E+00	N/A
MW222	Sidegradient	Yes	4.91E-02	N/A	-3.01E+00	NO
MW223	Sidegradient	Yes	1.12E-01	N/A	-2.19E+00	NO
MW224	Sidegradient	Yes	3.64E-02	N/A	-3.31E+00	NO
MW369	Downgradient	Yes	3.79E-02	N/A	-3.27E+00	NO
MW372	Downgradient	Yes	9.07E-02	N/A	-2.40E+00	NO
MW384	Sidegradient	Yes	2.80E-01	N/A	-1.27E+00	NO
MW387	Downgradient	Yes	9.55E-02	N/A	-2.35E+00	NO
MW391	Downgradient	Yes	7.44E-01	N/A	-2.96E-01	NO
MW394	Upgradient	Yes	2.85E-01	N/A	-1.26E+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, $S = [\text{Sum}([(background\ result - X)^2]/[\text{count of background results} - 1])]^{0.5}$

TL Upper Tolerance Limit, $TL = X + (K * S)$, LL Lower Tolerance Limit, $LL = X - (K * S)$

X Mean, $X = (\text{sum of background results})/(\text{count of background results})$

** 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.

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.

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 $TL(1)$.

Current Quarter Data						
Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW220	Upgradient	Yes	1.11E+01	NO	2.41E+00	N/A
MW221	Sidegradient	Yes	9.62E+00	NO	2.26E+00	N/A
MW222	Sidegradient	Yes	9.13E+00	NO	2.21E+00	N/A
MW223	Sidegradient	Yes	9.98E+00	NO	2.30E+00	N/A
MW224	Sidegradient	Yes	1.12E+01	NO	2.42E+00	N/A
MW369	Downgradient	Yes	1.08E+01	NO	2.38E+00	N/A
MW372	Downgradient	Yes	2.42E+01	YES	3.19E+00	N/A
MW384	Sidegradient	Yes	9.87E+00	NO	2.29E+00	N/A
MW387	Downgradient	Yes	1.63E+01	YES	2.79E+00	N/A
MW391	Downgradient	Yes	9.90E+00	NO	2.29E+00	N/A
MW394	Upgradient	Yes	1.18E+01	NO	2.47E+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.

The test well(s) listed exceeded the Upper Tolerance Limit, which is evidence of elevated concentration with respect to historical background data.

MW372
MW387

CV Coefficient-of-Variation, $CV = S/X$ If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, $S = [\text{Sum} ((\text{background result}-X)^2)/[\text{count of background results} - 1]]^{0.5}$
TL Upper Tolerance Limit, $TL = X + (K * S)$, LL Lower Tolerance Limit, $LL = X - (K * S)$
X Mean, $X = (\text{sum of background results})/(\text{count of background results})$

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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.

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.

Current Quarter Data						
Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW220	Upgradient	No	5.00E-03	N/A	-5.30E+00	N/A
MW221	Sidegradient	Yes	7.73E-03	N/A	-4.86E+00	NO
MW222	Sidegradient	Yes	2.78E-03	N/A	-5.89E+00	NO
MW223	Sidegradient	Yes	2.01E-02	N/A	-3.91E+00	NO
MW224	Sidegradient	Yes	5.68E-03	N/A	-5.17E+00	NO
MW369	Downgradient	Yes	1.02E-02	N/A	-4.59E+00	NO
MW372	Downgradient	Yes	4.79E-03	N/A	-5.34E+00	NO
MW384	Sidegradient	Yes	6.67E-03	N/A	-5.01E+00	NO
MW387	Downgradient	Yes	1.55E-02	N/A	-4.17E+00	NO
MW391	Downgradient	Yes	9.16E-03	N/A	-4.69E+00	NO
MW394	Upgradient	Yes	4.03E-03	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.

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.

CV Coefficient-of-Variation, $CV = S/X$ If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, $S = [\text{Sum} ((\text{background result}-X)^2)/[\text{count of background results} - 1]]^{0.5}$
TL Upper Tolerance Limit, $TL = X + (K * S)$, LL Lower Tolerance Limit, $LL = X - (K * S)$
X Mean, $X = (\text{sum of background results})/(\text{count of background results})$

*** 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-S/T Second Quarter 2025 Statistical Analysis	Historical Background Comparison
Methylene chloride	UNITS: ug/L URGA

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	X= 4.813	S= 0.750	CV(1)=0.156	K factor**= 2.523	TL(1)= 6.70E+00	LL(1)=N/A
Statistics-Transformed Background Data	X= 1.552	S= 0.229	CV(2)=0.148	K factor**= 2.523	TL(2)= 2.13E+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: MW220

Date Collected	Result	LN(Result)
10/14/2002	5.00E+00	1.61E+00
1/15/2003	5.00E+00	1.61E+00
4/10/2003	5.00E+00	1.61E+00
7/14/2003	5.00E+00	1.61E+00
10/13/2003	5.00E+00	1.61E+00
1/13/2004	5.00E+00	1.61E+00
4/13/2004	5.00E+00	1.61E+00
7/21/2004	5.00E+00	1.61E+00

Well Number: MW394

Date Collected	Result	LN(Result)
8/13/2002	5.00E+00	1.61E+00
9/30/2002	2.00E+00	6.93E-01
10/16/2002	5.00E+00	1.61E+00
1/13/2003	5.00E+00	1.61E+00
4/10/2003	5.00E+00	1.61E+00
7/16/2003	5.00E+00	1.61E+00
10/14/2003	5.00E+00	1.61E+00
1/13/2004	5.00E+00	1.61E+00

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW220	Upgradient	No	5.00E+00	N/A	1.61E+00	N/A
MW221	Sidegradient	No	5.00E+00	N/A	1.61E+00	N/A
MW222	Sidegradient	No	5.00E+00	N/A	1.61E+00	N/A
MW223	Sidegradient	No	5.00E+00	N/A	1.61E+00	N/A
MW224	Sidegradient	No	5.00E+00	N/A	1.61E+00	N/A
MW369	Downgradient	Yes	6.60E-01	NO	-4.16E-01	N/A
MW372	Downgradient	Yes	9.20E-01	NO	-8.34E-02	N/A
MW384	Sidegradient	No	5.00E+00	N/A	1.61E+00	N/A
MW387	Downgradient	No	5.00E+00	N/A	1.61E+00	N/A
MW391	Downgradient	Yes	3.80E+00	NO	1.34E+00	N/A
MW394	Upgradient	Yes	6.07E+00	NO	1.80E+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, $S = \left[\frac{\text{Sum}([(background\ result - X)^2])}{\text{count of background results} - 1} \right]^{0.5}$

TL Upper Tolerance Limit, $TL = X + (K * S)$, LL Lower Tolerance Limit, $LL = X - (K * S)$

X Mean, $X = (\text{sum of background results}) / (\text{count of background results})$

** 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.

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.

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.

Current Quarter Data						
Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW220	Upgradient	Yes	9.70E-04	N/A	-6.94E+00	NO
MW221	Sidegradient	Yes	3.02E-03	N/A	-5.80E+00	NO
MW222	Sidegradient	Yes	2.46E-03	N/A	-6.01E+00	NO
MW223	Sidegradient	Yes	1.83E-03	N/A	-6.30E+00	NO
MW224	Sidegradient	Yes	6.16E-04	N/A	-7.39E+00	NO
MW369	Downgradient	No	1.00E-03	N/A	-6.91E+00	N/A
MW372	Downgradient	Yes	2.41E-04	N/A	-8.33E+00	NO
MW384	Sidegradient	Yes	3.72E-04	N/A	-7.90E+00	NO
MW387	Downgradient	No	1.00E-03	N/A	-6.91E+00	N/A
MW391	Downgradient	No	1.00E-03	N/A	-6.91E+00	N/A
MW394	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.

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.

CV Coefficient-of-Variation, $CV = S/X$ If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, $S = [\text{Sum} ((\text{background result}-X)^2)/[\text{count of background results} - 1]]^{0.5}$
TL Upper Tolerance Limit, $TL = X + (K * S)$, LL Lower Tolerance Limit, $LL = X - (K * S)$
X Mean, $X = (\text{sum of background results})/(\text{count of background results})$

*** 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-S/T Second Quarter 2025 Statistical Analysis Historical Background Comparison**Nickel****UNITS: mg/L****URGA**

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data X= 0.127 S= 0.228 CV(1)=1.790 **K factor**= 2.523** TL(1)= 7.01E-01 LL(1)=N/A

Statistics-Transformed Background Data X= -3.617 S= 1.837 CV(2)=-0.508 **K factor**= 2.523** TL(2)= 1.02E+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: MW220

Date Collected	Result	LN(Result)
10/14/2002	4.18E-01	-8.72E-01
1/15/2003	7.38E-01	-3.04E-01
4/10/2003	5.44E-01	-6.09E-01
7/14/2003	1.06E-01	-2.24E+00
10/13/2003	5.29E-02	-2.94E+00
1/13/2004	2.09E-02	-3.87E+00
4/13/2004	5.00E-03	-5.30E+00
7/21/2004	1.92E-02	-3.95E+00

Well Number: MW394

Date Collected	Result	LN(Result)
8/13/2002	5.00E-02	-3.00E+00
9/16/2002	5.00E-02	-3.00E+00
10/16/2002	5.00E-03	-5.30E+00
1/13/2003	5.00E-03	-5.30E+00
4/10/2003	5.00E-03	-5.30E+00
7/16/2003	5.00E-03	-5.30E+00
10/14/2003	5.00E-03	-5.30E+00
1/13/2004	5.00E-03	-5.30E+00

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result > TL(1)?	LN(Result)	LN(Result) > TL(2)
MW220	Upgradient	Yes	8.58E-03	N/A	-4.76E+00	NO
MW221	Sidegradient	Yes	6.77E-02	N/A	-2.69E+00	NO
MW222	Sidegradient	Yes	2.44E-02	N/A	-3.71E+00	NO
MW223	Sidegradient	Yes	3.22E-01	N/A	-1.13E+00	NO
MW224	Sidegradient	Yes	1.60E-02	N/A	-4.14E+00	NO
MW369	Downgradient	Yes	1.53E-03	N/A	-6.48E+00	NO
MW372	Downgradient	Yes	8.31E-04	N/A	-7.09E+00	NO
MW384	Sidegradient	No	2.00E-03	N/A	-6.21E+00	N/A
MW387	Downgradient	No	2.00E-03	N/A	-6.21E+00	N/A
MW391	Downgradient	Yes	8.28E-04	N/A	-7.10E+00	NO
MW394	Upgradient	Yes	6.34E-03	N/A	-5.06E+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, $S = [\text{Sum}([(background\ result - X)^2]/[\text{count of background results} - 1])]^{0.5}$

TL Upper Tolerance Limit, $TL = X + (K * S)$, LL Lower Tolerance Limit, $LL = X - (K * S)$

X Mean, $X = (\text{sum of background results})/(\text{count of background results})$

** 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-S/T Second 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= 179.872	S= 86.318	CV(1)=0.480	K factor**= 2.523	TL(1)= 3.98E+02	LL(1)=N/A
Statistics-Transformed Background Data	X= 4.861	S= 1.252	CV(2)=0.258	K factor**= 2.523	TL(2)= 8.02E+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: MW220

Date Collected	Result	LN(Result)
10/14/2002	2.05E+02	5.32E+00
1/15/2003	1.95E+00	6.68E-01
4/10/2003	2.03E+02	5.31E+00
7/14/2003	3.00E+01	3.40E+00
10/13/2003	1.07E+02	4.67E+00
1/13/2004	2.95E+02	5.69E+00
4/13/2004	1.90E+02	5.25E+00
7/21/2004	3.19E+02	5.77E+00

Well Number: MW394

Date Collected	Result	LN(Result)
8/13/2002	9.00E+01	4.50E+00
9/16/2002	2.40E+02	5.48E+00
10/16/2002	1.85E+02	5.22E+00
1/13/2003	2.20E+02	5.39E+00
4/10/2003	1.96E+02	5.28E+00
7/16/2003	1.72E+02	5.15E+00
10/14/2003	1.75E+02	5.16E+00
1/13/2004	2.49E+02	5.52E+00

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result > TL(1)?	LN(Result)	LN(Result) > TL(2)
MW220	Upgradient	Yes	4.28E+02	YES	6.06E+00	N/A
MW221	Sidegradient	Yes	4.39E+02	YES	6.08E+00	N/A
MW222	Sidegradient	Yes	4.05E+02	YES	6.00E+00	N/A
MW223	Sidegradient	Yes	4.31E+02	YES	6.07E+00	N/A
MW224	Sidegradient	Yes	4.49E+02	YES	6.11E+00	N/A
MW369	Downgradient	Yes	4.25E+02	YES	6.05E+00	N/A
MW372	Downgradient	Yes	4.20E+02	YES	6.04E+00	N/A
MW384	Sidegradient	Yes	5.06E+02	YES	6.23E+00	N/A
MW387	Downgradient	Yes	5.01E+02	YES	6.22E+00	N/A
MW391	Downgradient	Yes	4.55E+02	YES	6.12E+00	N/A
MW394	Upgradient	Yes	4.98E+02	YES	6.21E+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.

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, $S = [\text{Sum}([(background\ result - X)^2]/[\text{count of background results} - 1])]^{0.5}$

TL Upper Tolerance Limit, $TL = X + (K * S)$, LL Lower Tolerance Limit, $LL = X - (K * S)$

X Mean, $X = (\text{sum of background results})/(\text{count of background results})$

** 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.

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

MW220
MW221
MW222
MW223
MW224
MW369
MW372
MW384
MW387
MW391
MW394

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, $S = [\text{Sum } ((\text{background result} - X)^2 / [\text{count of background results} - 1])]^{0.5}$

TL Upper Tolerance Limit, $TL = X + (K * S)$, LL Lower Tolerance Limit, $LL = X - (K * S)$

X Mean, $X = (\text{sum of background results}) / (\text{count of background results})$

** 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-S/T Second 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= 6.138	S= 0.282	CV(1)=0.046	K factor**= 2.904	TL(1)= 6.96E+00	LL(1)=5.32E+00
Statistics-Transformed Background Data	X= 1.813	S= 0.047	CV(2)=0.026	K factor**= 2.904	TL(2)= 1.95E+00	LL(2)=1.68E+00

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: MW220

Date Collected	Result	LN(Result)
10/14/2002	6.04E+00	1.80E+00
1/15/2003	6.31E+00	1.84E+00
4/10/2003	6.50E+00	1.87E+00
7/14/2003	6.30E+00	1.84E+00
10/13/2003	6.34E+00	1.85E+00
1/13/2004	6.33E+00	1.85E+00
4/13/2004	6.30E+00	1.84E+00
7/21/2004	5.90E+00	1.77E+00

Well Number: MW394

Date Collected	Result	LN(Result)
8/13/2002	5.80E+00	1.76E+00
9/30/2002	5.93E+00	1.78E+00
10/16/2002	5.42E+00	1.69E+00
1/13/2003	6.00E+00	1.79E+00
4/10/2003	6.04E+00	1.80E+00
7/16/2003	6.20E+00	1.82E+00
10/14/2003	6.40E+00	1.86E+00
1/13/2004	6.39E+00	1.85E+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)?
MW220	Upgradient	Yes	6.06E+00	NO	1.80E+00	N/A
MW221	Sidegradient	Yes	6.03E+00	NO	1.80E+00	N/A
MW222	Sidegradient	Yes	6.03E+00	NO	1.80E+00	N/A
MW223	Sidegradient	Yes	6.00E+00	NO	1.79E+00	N/A
MW224	Sidegradient	Yes	6.06E+00	NO	1.80E+00	N/A
MW369	Downgradient	Yes	6.08E+00	NO	1.81E+00	N/A
MW372	Downgradient	Yes	6.10E+00	NO	1.81E+00	N/A
MW384	Sidegradient	Yes	6.00E+00	NO	1.79E+00	N/A
MW387	Downgradient	Yes	6.02E+00	NO	1.80E+00	N/A
MW391	Downgradient	Yes	6.15E+00	NO	1.82E+00	N/A
MW394	Upgradient	Yes	5.82E+00	NO	1.76E+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, $S = [\text{Sum}([(background\ result-X)^2]/[\text{count of background results} - 1])]^{0.5}$

TL Upper Tolerance Limit, $TL = X + (K * S)$, LL Lower Tolerance Limit, $LL = X - (K * S)$

X Mean, $X = (\text{sum of background results})/(\text{count of background results})$

** 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-S/T Second Quarter 2025 Statistical Analysis Historical Background Comparison

Potassium

UNITS: mg/L

URGA

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	X= 6.654	S= 9.310	CV(1)=1.399	K factor**= 2.523	TL(1)= 3.01E+01	LL(1)=N/A
Statistics-Transformed Background Data	X= 1.130	S= 1.208	CV(2)=1.069	K factor**= 2.523	TL(2)= 4.18E+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: MW220

Date Collected	Result	LN(Result)
10/14/2002	6.70E+00	1.90E+00
1/15/2003	2.97E+01	3.39E+00
4/10/2003	2.49E+01	3.21E+00
7/14/2003	1.13E+00	1.22E-01
10/13/2003	3.43E+00	1.23E+00
1/13/2004	6.71E+00	1.90E+00
4/13/2004	1.93E+01	2.96E+00
7/21/2004	3.97E+00	1.38E+00

Well Number: MW394

Date Collected	Result	LN(Result)
8/13/2002	2.00E+00	6.93E-01
9/16/2002	2.00E+00	6.93E-01
10/16/2002	1.03E+00	2.96E-02
1/13/2003	1.10E+00	9.53E-02
4/10/2003	1.24E+00	2.15E-01
7/16/2003	1.14E+00	1.31E-01
10/14/2003	1.05E+00	4.88E-02
1/13/2004	1.07E+00	6.77E-02

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW220	Upgradient	Yes	1.33E+00	N/A	2.85E-01	NO
MW221	Sidegradient	Yes	1.85E+00	N/A	6.15E-01	NO
MW222	Sidegradient	Yes	5.99E-01	N/A	-5.12E-01	NO
MW223	Sidegradient	Yes	1.20E+00	N/A	1.82E-01	NO
MW224	Sidegradient	Yes	1.07E+00	N/A	6.77E-02	NO
MW369	Downgradient	Yes	9.94E-01	N/A	-6.02E-03	NO
MW372	Downgradient	Yes	2.47E+00	N/A	9.04E-01	NO
MW384	Sidegradient	Yes	1.37E+00	N/A	3.15E-01	NO
MW387	Downgradient	Yes	1.77E+00	N/A	5.71E-01	NO
MW391	Downgradient	Yes	1.57E+00	N/A	4.51E-01	NO
MW394	Upgradient	Yes	1.51E+00	N/A	4.12E-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, $S = [\text{Sum}([(background\ result-X)^2]/[\text{count of background results} - 1])]^{0.5}$

TL Upper Tolerance Limit, $TL = X + (K * S)$, LL Lower Tolerance Limit, $LL = X - (K * S)$

X Mean, $X = (\text{sum of background results})/(\text{count of background results})$

** 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-S/T Second Quarter 2025 Statistical Analysis Historical Background Comparison**Sodium****UNITS: mg/L****URGA**

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data X= 36.363 S= 8.666 CV(1)=0.238 K factor**= 2.523 TL(1)= 5.82E+01 LL(1)=N/A

Statistics-Transformed Background Data X= 3.570 S= 0.222 CV(2)=0.062 K factor**= 2.523 TL(2)= 4.13E+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: MW220

Date Collected	Result	LN(Result)
10/14/2002	3.54E+01	3.57E+00
1/15/2003	4.06E+01	3.70E+00
4/10/2003	5.10E+01	3.93E+00
7/14/2003	5.82E+01	4.06E+00
10/13/2003	3.81E+01	3.64E+00
1/13/2004	3.70E+01	3.61E+00
4/13/2004	4.32E+01	3.77E+00
7/21/2004	3.38E+01	3.52E+00

Well Number: MW394

Date Collected	Result	LN(Result)
8/13/2002	3.29E+01	3.49E+00
9/16/2002	2.99E+01	3.40E+00
10/16/2002	2.90E+01	3.37E+00
1/13/2003	2.71E+01	3.30E+00
4/10/2003	2.48E+01	3.21E+00
7/16/2003	3.56E+01	3.57E+00
10/14/2003	3.39E+01	3.52E+00
1/13/2004	3.13E+01	3.44E+00

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW220	Upgradient	Yes	4.60E+01	NO	3.83E+00	N/A
MW221	Sidegradient	Yes	4.66E+01	NO	3.84E+00	N/A
MW222	Sidegradient	Yes	4.66E+01	NO	3.84E+00	N/A
MW223	Sidegradient	Yes	4.63E+01	NO	3.84E+00	N/A
MW224	Sidegradient	Yes	5.18E+01	NO	3.95E+00	N/A
MW369	Downgradient	Yes	4.86E+01	NO	3.88E+00	N/A
MW372	Downgradient	Yes	5.91E+01	YES	4.08E+00	N/A
MW384	Sidegradient	Yes	4.48E+01	NO	3.80E+00	N/A
MW387	Downgradient	Yes	5.08E+01	NO	3.93E+00	N/A
MW391	Downgradient	Yes	4.26E+01	NO	3.75E+00	N/A
MW394	Upgradient	Yes	3.52E+01	NO	3.56E+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

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, $S = [\text{Sum}([(background\ result-X)^2]/[\text{count of background results} - 1])]^{0.5}$

TL Upper Tolerance Limit, $TL = X + (K * S)$, LL Lower Tolerance Limit, $LL = X - (K * S)$

X Mean, $X = (\text{sum of background results})/(\text{count of background results})$

** 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.

URGA

D1-53

C-746-S/T Second Quarter 2025 Statistical Analysis	Historical Background Comparison
Technetium-99	UNITS: pCi/L
	URGA

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	X= 9.354	S= 9.280	CV(1)=0.992	K factor**= 2.523	TL(1)= 3.28E+01	LL(1)=N/A
Statistics-Transformed Background Data	X= 2.270	S= 0.849	CV(2)=0.374	K factor**= 2.523	TL(2)= 3.26E+00	LL(2)=N/A

Historical Background Data from Upgradient Wells with Transformed Result

Well Number: MW220		
Date Collected	Result	LN(Result)
10/14/2002	1.97E+01	2.98E+00
1/15/2003	2.61E+01	3.26E+00
4/10/2003	3.56E+00	1.27E+00
7/14/2003	0.00E+00	#Func!
10/13/2003	2.10E+01	3.04E+00
1/13/2004	6.32E+00	1.84E+00
4/13/2004	3.00E+00	1.10E+00
7/21/2004	1.46E+01	2.68E+00

Well Number: MW394		
Date Collected	Result	LN(Result)
8/13/2002	1.40E+01	2.64E+00
9/16/2002	5.45E+00	1.70E+00
10/16/2002	2.49E+00	9.12E-01
1/13/2003	1.83E+01	2.91E+00
4/10/2003	-1.45E+00	#Func!
7/16/2003	-1.71E+00	#Func!
10/14/2003	1.83E+01	2.91E+00
1/13/2004	0.00E+00	#Func!

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)
MW220	Upgradient	No	1.05E+01	N/A	2.35E+00	N/A
MW221	Sidegradient	No	1.23E+01	N/A	2.51E+00	N/A
MW222	Sidegradient	No	4.88E+00	N/A	1.59E+00	N/A
MW223	Sidegradient	No	1.09E+01	N/A	2.39E+00	N/A
MW224	Sidegradient	No	7.90E+00	N/A	2.07E+00	N/A
MW369	Downgradient	Yes	2.96E+01	NO	3.39E+00	N/A
MW372	Downgradient	No	6.43E+00	N/A	1.86E+00	N/A
MW384	Sidegradient	Yes	4.13E+01	YES	3.72E+00	N/A
MW387	Downgradient	Yes	4.29E+01	YES	3.76E+00	N/A
MW391	Downgradient	No	5.56E+00	N/A	1.72E+00	N/A
MW394	Upgradient	No	1.25E+00	N/A	2.23E-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

MW384
MW387

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, $S = \sqrt{[\text{Sum}([(background\ result - X)^2]/[\text{count of background results} - 1])]/0.5}$

TL Upper Tolerance Limit, $TL = X + (K * S)$, LL Lower Tolerance Limit, $LL = X - (K * S)$

X Mean, $X = (\text{sum of background results})/(\text{count of background results})$

** 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.

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.

Historical Background Data from Upgradient Wells with Transformed Result

Well Number: MW220

Well Number: MW394

Current Quarter Data

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.

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.

** 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.

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.

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.

Current Quarter Data						
Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW220	Upgradient	No	6.94E+00	N/A	1.94E+00	N/A
MW221	Sidegradient	No	7.00E+00	N/A	1.95E+00	N/A
MW222	Sidegradient	No	7.58E+00	N/A	2.03E+00	N/A
MW223	Sidegradient	No	1.00E+01	N/A	2.30E+00	N/A
MW224	Sidegradient	No	7.96E+00	N/A	2.07E+00	N/A
MW369	Downgradient	No	3.60E+00	N/A	1.28E+00	N/A
MW372	Downgradient	No	7.12E+00	N/A	1.96E+00	N/A
MW384	Sidegradient	Yes	6.88E+00	N/A	1.93E+00	NO
MW387	Downgradient	Yes	1.41E+01	N/A	2.65E+00	NO
MW391	Downgradient	Yes	9.52E+00	N/A	2.25E+00	NO
MW394	Upgradient	Yes	7.42E+00	N/A	2.00E+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.

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.

CV Coefficient-of-Variation, $CV = S/X$ If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, $S = [\text{Sum} ((\text{background result}-X)^2)/[\text{count of background results} - 1]]^{0.5}$
TL Upper Tolerance Limit, $TL = X + (K * S)$, LL Lower Tolerance Limit, $LL = X - (K * S)$
X Mean, $X = (\text{sum of background results})/(\text{count of background results})$

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C-746-S/T Second Quarter 2025 Statistical Analysis Historical Background Comparison**Zinc****UNITS: mg/L****URGA**

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	X= 0.036	S= 0.026	CV(1)=0.722	K factor**= 2.523	TL(1)= 1.01E-01	LL(1)=N/A
Statistics-Transformed Background Data	X= -3.485	S= 0.525	CV(2)=-0.151	K factor**= 2.523	TL(2)= -2.16E+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: MW220

Date Collected	Result	LN(Result)
10/14/2002	2.50E-02	-3.69E+00
1/15/2003	3.50E-02	-3.35E+00
4/10/2003	3.50E-02	-3.35E+00
7/14/2003	3.89E-02	-3.25E+00
10/13/2003	2.60E-02	-3.65E+00
1/13/2004	2.00E-02	-3.91E+00
4/13/2004	2.00E-02	-3.91E+00
7/21/2004	2.00E-02	-3.91E+00

Well Number: MW394

Date Collected	Result	LN(Result)
8/13/2002	1.00E-01	-2.30E+00
9/16/2002	1.00E-01	-2.30E+00
10/16/2002	2.50E-02	-3.69E+00
1/13/2003	3.50E-02	-3.35E+00
4/10/2003	3.50E-02	-3.35E+00
7/16/2003	2.00E-02	-3.91E+00
10/14/2003	2.00E-02	-3.91E+00
1/13/2004	2.00E-02	-3.91E+00

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result > TL(1)?	LN(Result)	LN(Result) > TL(2)
MW220	Upgradient	Yes	3.48E-03	NO	-5.66E+00	N/A
MW221	Sidegradient	Yes	5.89E-03	NO	-5.13E+00	N/A
MW222	Sidegradient	Yes	3.65E-03	NO	-5.61E+00	N/A
MW223	Sidegradient	Yes	4.29E-03	NO	-5.45E+00	N/A
MW224	Sidegradient	Yes	4.30E-03	NO	-5.45E+00	N/A
MW369	Downgradient	Yes	5.70E-03	NO	-5.17E+00	N/A
MW372	Downgradient	Yes	3.65E-03	NO	-5.61E+00	N/A
MW384	Sidegradient	No	2.00E-02	N/A	-3.91E+00	N/A
MW387	Downgradient	No	2.00E-02	N/A	-3.91E+00	N/A
MW391	Downgradient	No	2.00E-02	N/A	-3.91E+00	N/A
MW394	Upgradient	No	5.92E-03	N/A	-5.13E+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, $S = [\text{Sum}([(background\ result - X)^2]/[\text{count of background results} - 1])]^{0.5}$

TL Upper Tolerance Limit, $TL = X + (K * S)$, LL Lower Tolerance Limit, $LL = X - (K * S)$

X Mean, $X = (\text{sum of background results})/(\text{count of background results})$

** 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-S/T Second 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= 10.063	S= 0.250	CV(1)=0.025	K factor**= 2.523	TL(1)= 1.07E+01	LL(1)=N/A
Statistics-Transformed Background Data	X= 2.309	S= 0.024	CV(2)=0.010	K factor**= 2.523	TL(2)= 2.37E+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: MW395

Date Collected	Result	LN(Result)
8/13/2002	1.10E+01	2.40E+00
9/30/2002	1.00E+01	2.30E+00
10/16/2002	1.00E+01	2.30E+00
1/13/2003	1.00E+01	2.30E+00
4/10/2003	1.00E+01	2.30E+00
7/16/2003	1.00E+01	2.30E+00
10/14/2003	1.00E+01	2.30E+00
4/12/2004	1.00E+01	2.30E+00

Well Number: MW397

Date Collected	Result	LN(Result)
8/13/2002	1.00E+01	2.30E+00
9/30/2002	1.00E+01	2.30E+00
10/17/2002	1.00E+01	2.30E+00
1/13/2003	1.00E+01	2.30E+00
4/8/2003	1.00E+01	2.30E+00
7/16/2003	1.00E+01	2.30E+00
10/14/2003	1.00E+01	2.30E+00
4/12/2004	1.00E+01	2.30E+00

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result > TL(1)?	LN(Result)	LN(Result) > TL(2)
MW370	Downgradient	No	5.00E+00	N/A	1.61E+00	N/A
MW373	Downgradient	No	5.00E+00	N/A	1.61E+00	N/A
MW385	Sidegradient	No	5.00E+00	N/A	1.61E+00	N/A
MW388	Downgradient	No	5.00E+00	N/A	1.61E+00	N/A
MW392	Downgradient	Yes	6.70E+00	NO	1.90E+00	N/A
MW395	Upgradient	No	5.00E+00	N/A	1.61E+00	N/A
MW397	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, $S = [\text{Sum}([(background\ result-X)^2]/[\text{count of background results} - 1])]^{0.5}$

TL Upper Tolerance Limit, $TL = X + (K * S)$, LL Lower Tolerance Limit, $LL = X - (K * S)$

X Mean, $X = (\text{sum of background results})/(\text{count of background results})$

** 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-S/T Second 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= 0.258	S= 0.221	CV(1)=0.856	K factor**= 2.523	TL(1)= 8.15E-01	LL(1)=N/A
Statistics-Transformed Background Data	X= -2.266	S= 2.485	CV(2)=-1.097	K factor**= 2.523	TL(2)= 4.00E+00	LL(2)=N/A

Historical Background Data from Upgradient Wells with Transformed Result

Well Number: MW395

Date Collected	Result	LN(Result)
8/13/2002	2.00E-01	-1.61E+00
9/16/2002	2.00E-01	-1.61E+00
10/16/2002	2.00E-04	-8.52E+00
1/13/2003	7.37E-01	-3.05E-01
4/10/2003	2.00E-01	-1.61E+00
7/16/2003	2.00E-01	-1.61E+00
10/14/2003	2.00E-01	-1.61E+00
1/13/2004	2.00E-01	-1.61E+00

Well Number: MW397

Date Collected	Result	LN(Result)
8/13/2002	8.24E-01	-1.94E-01
9/16/2002	2.00E-01	-1.61E+00
10/17/2002	2.00E-04	-8.52E+00
1/13/2003	3.63E-01	-1.01E+00
4/8/2003	2.00E-01	-1.61E+00
7/16/2003	2.00E-01	-1.61E+00
10/14/2003	2.00E-01	-1.61E+00
1/13/2004	2.00E-01	-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)
MW370	Downgradient	No	5.00E-02	N/A	-3.00E+00	N/A
MW373	Downgradient	No	5.00E-02	N/A	-3.00E+00	N/A
MW385	Sidegradient	No	5.00E-02	N/A	-3.00E+00	N/A
MW388	Downgradient	No	5.00E-02	N/A	-3.00E+00	N/A
MW392	Downgradient	Yes	3.36E-02	NO	-3.39E+00	N/A
MW395	Upgradient	No	5.00E-02	N/A	-3.00E+00	N/A
MW397	Upgradient	Yes	7.86E-01	NO	-2.41E-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, $S = \left[\frac{\sum ((\text{background result} - X)^2)}{(\text{count of background results} - 1)} \right]^{0.5}$

TL Upper Tolerance Limit, $TL = X + (K * S)$, LL Lower Tolerance Limit, $LL = X - (K * S)$

X Mean, $X = (\text{sum of background results}) / (\text{count of background results})$

** 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-S/T Second Quarter 2025 Statistical Analysis Historical Background Comparison**Boron****UNITS: mg/L****LRGA**

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	X= 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

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: MW395

Date Collected	Result	LN(Result)
8/13/2002	2.00E+00	6.93E-01
9/16/2002	2.00E+00	6.93E-01
10/16/2002	2.00E-01	-1.61E+00
1/13/2003	2.00E-01	-1.61E+00
4/10/2003	2.00E-01	-1.61E+00
7/16/2003	2.00E-01	-1.61E+00
10/14/2003	2.00E-01	-1.61E+00
1/13/2004	2.00E-01	-1.61E+00

Well Number: MW397

Date Collected	Result	LN(Result)
8/13/2002	2.00E+00	6.93E-01
9/16/2002	2.00E+00	6.93E-01
10/17/2002	2.00E-01	-1.61E+00
1/13/2003	2.00E-01	-1.61E+00
4/8/2003	2.00E-01	-1.61E+00
7/16/2003	2.00E-01	-1.61E+00
10/14/2003	2.00E-01	-1.61E+00
1/13/2004	2.00E-01	-1.61E+00

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result > TL(1)?	LN(Result)	LN(Result) > TL(2)
MW370	Downgradient	Yes	8.59E-02	N/A	-2.45E+00	NO
MW373	Downgradient	Yes	2.47E+00	N/A	9.04E-01	NO
MW385	Sidegradient	Yes	8.59E-02	N/A	-2.45E+00	NO
MW388	Downgradient	Yes	3.44E-02	N/A	-3.37E+00	NO
MW392	Downgradient	Yes	3.82E-02	N/A	-3.26E+00	NO
MW395	Upgradient	Yes	2.18E-02	N/A	-3.83E+00	NO
MW397	Upgradient	Yes	1.01E-02	N/A	-4.60E+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, $S = [\text{Sum}([(background\ result-X)^2]/[\text{count of background results} - 1])]^{0.5}$

TL Upper Tolerance Limit, $TL = X + (K * S)$, LL Lower Tolerance Limit, $LL = X - (K * S)$

X Mean, $X = (\text{sum of background results})/(\text{count of background results})$

** 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-S/T Second Quarter 2025 Statistical Analysis Historical Background Comparison**Bromide****UNITS: mg/L****LRGA**

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	X= 1.000	S= 0.000	CV(1)=0.000	K factor**= 2.523	TL(1)= 1.00E+00	LL(1)=N/A
Statistics-Transformed Background Data	X= 0.000	S= 0.000	CV(2)=#Num!	K factor**= 2.523	TL(2)= 0.00E+00	LL(2)=N/A

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: MW395

Date Collected	Result	LN(Result)
8/13/2002	1.00E+00	0.00E+00
9/16/2002	1.00E+00	0.00E+00
10/16/2002	1.00E+00	0.00E+00
1/13/2003	1.00E+00	0.00E+00
4/10/2003	1.00E+00	0.00E+00
7/16/2003	1.00E+00	0.00E+00
10/14/2003	1.00E+00	0.00E+00
1/13/2004	1.00E+00	0.00E+00

Well Number: MW397

Date Collected	Result	LN(Result)
8/13/2002	1.00E+00	0.00E+00
9/16/2002	1.00E+00	0.00E+00
10/17/2002	1.00E+00	0.00E+00
1/13/2003	1.00E+00	0.00E+00
4/8/2003	1.00E+00	0.00E+00
7/16/2003	1.00E+00	0.00E+00
10/14/2003	1.00E+00	0.00E+00
1/13/2004	1.00E+00	0.00E+00

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result > TL(1)?	LN(Result)	LN(Result) > TL(2)
MW370	Downgradient	Yes	5.24E-01	NO	-6.46E-01	N/A
MW373	Downgradient	Yes	4.62E-01	NO	-7.72E-01	N/A
MW385	Sidegradient	Yes	2.61E-01	NO	-1.34E+00	N/A
MW388	Downgradient	Yes	3.83E-01	NO	-9.60E-01	N/A
MW392	Downgradient	Yes	6.13E-01	NO	-4.89E-01	N/A
MW395	Upgradient	Yes	5.61E-01	NO	-5.78E-01	N/A
MW397	Upgradient	Yes	3.75E-01	NO	-9.81E-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, $S = [\text{Sum}([(background\ result-X)^2]/[\text{count of background results} - 1])]^{0.5}$

TL Upper Tolerance Limit, $TL = X + (K * S)$, LL Lower Tolerance Limit, $LL = X - (K * S)$

X Mean, $X = (\text{sum of background results})/(\text{count of background results})$

** 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-S/T Second Quarter 2025 Statistical Analysis Historical Background Comparison**Calcium****UNITS: mg/L****LRGA**

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data X= 23.103 S= 11.538 CV(1)=0.499 K factor**= 2.523 TL(1)= 5.22E+01 LL(1)=N/A**Statistics-Transformed Background Data** X= 2.357 S= 2.411 CV(2)=1.023 K factor**= 2.523 TL(2)= 8.44E+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: MW395

Date Collected	Result	LN(Result)
8/13/2002	3.22E+01	3.47E+00
9/16/2002	3.30E+01	3.50E+00
10/16/2002	2.95E-02	-3.52E+00
1/13/2003	3.21E+01	3.47E+00
4/10/2003	4.02E+01	3.69E+00
7/16/2003	3.24E+01	3.48E+00
10/14/2003	3.39E+01	3.52E+00
1/13/2004	3.12E+01	3.44E+00

Well Number: MW397

Date Collected	Result	LN(Result)
8/13/2002	1.94E+01	2.97E+00
9/16/2002	1.90E+01	2.94E+00
10/17/2002	1.79E-02	-4.02E+00
1/13/2003	1.78E+01	2.88E+00
4/8/2003	2.03E+01	3.01E+00
7/16/2003	1.94E+01	2.97E+00
10/14/2003	1.99E+01	2.99E+00
1/13/2004	1.88E+01	2.93E+00

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result > TL(1)?	LN(Result)	LN(Result) > TL(2)
MW370	Downgradient	Yes	2.95E+01	NO	3.38E+00	N/A
MW373	Downgradient	Yes	8.69E+01	YES	4.46E+00	N/A
MW385	Sidegradient	Yes	2.33E+01	NO	3.15E+00	N/A
MW388	Downgradient	Yes	2.82E+01	NO	3.34E+00	N/A
MW392	Downgradient	Yes	2.83E+01	NO	3.34E+00	N/A
MW395	Upgradient	Yes	2.81E+01	NO	3.34E+00	N/A
MW397	Upgradient	Yes	1.91E+01	NO	2.95E+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, $S = [\text{Sum}([(background\ result - X)^2]/[\text{count of background results} - 1])]^{0.5}$

TL Upper Tolerance Limit, $TL = X + (K * S)$, LL Lower Tolerance Limit, $LL = X - (K * S)$

X Mean, $X = (\text{sum of background results})/(\text{count of background results})$

** 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-S/T Second Quarter 2025 Statistical Analysis Historical Background Comparison**Chloride****UNITS: mg/L****LRGA**

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data X= 51.844 S= 11.652 CV(1)=0.225 K factor**= 2.523 TL(1)= 8.12E+01 LL(1)=N/A

Statistics-Transformed Background Data X= 3.924 S= 0.229 CV(2)=0.058 K factor**= 2.523 TL(2)= 4.50E+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: MW395

Date Collected	Result	LN(Result)
8/13/2002	6.22E+01	4.13E+00
9/16/2002	6.47E+01	4.17E+00
10/16/2002	6.22E+01	4.13E+00
1/13/2003	6.35E+01	4.15E+00
4/10/2003	6.41E+01	4.16E+00
7/16/2003	6.40E+01	4.16E+00
10/14/2003	6.32E+01	4.15E+00
1/13/2004	6.06E+01	4.10E+00

Well Number: MW397

Date Collected	Result	LN(Result)
8/13/2002	3.89E+01	3.66E+00
9/16/2002	3.98E+01	3.68E+00
10/17/2002	3.93E+01	3.67E+00
1/13/2003	4.05E+01	3.70E+00
4/8/2003	4.21E+01	3.74E+00
7/16/2003	4.20E+01	3.74E+00
10/14/2003	4.08E+01	3.71E+00
1/13/2004	4.16E+01	3.73E+00

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result > TL(1)?	LN(Result)	LN(Result) > TL(2)
MW370	Downgradient	Yes	4.15E+01	NO	3.73E+00	N/A
MW373	Downgradient	Yes	3.01E+01	NO	3.40E+00	N/A
MW385	Sidegradient	Yes	2.28E+01	NO	3.13E+00	N/A
MW388	Downgradient	Yes	2.99E+01	NO	3.40E+00	N/A
MW392	Downgradient	Yes	4.72E+01	NO	3.85E+00	N/A
MW395	Upgradient	Yes	4.72E+01	NO	3.85E+00	N/A
MW397	Upgradient	Yes	3.42E+01	NO	3.53E+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, $S = [\text{Sum}([(background\ result-X)^2]/[\text{count of background results} - 1])]^{0.5}$

TL Upper Tolerance Limit, $TL = X + (K * S)$, LL Lower Tolerance Limit, $LL = X - (K * S)$

X Mean, $X = (\text{sum of background results})/(\text{count of background results})$

** 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.

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.

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 $TL(1)$.

Current Quarter Data						
Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW370	Downgradient	No	1.00E+00	N/A	0.00E+00	N/A
MW373	Downgradient	No	1.00E+00	N/A	0.00E+00	N/A
MW385	Sidegradient	No	1.00E+00	N/A	0.00E+00	N/A
MW388	Downgradient	No	1.00E+00	N/A	0.00E+00	N/A
MW392	Downgradient	Yes	5.40E-01	NO	-6.16E-01	N/A
MW395	Upgradient	No	1.00E+00	N/A	0.00E+00	N/A
MW397	Upgradient	No	1.00E+00	N/A	0.00E+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.

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.

CV Coefficient-of-Variation, $CV = S/X$ If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, $S = [\text{Sum} ((\text{background result}-X)^2)/[\text{count of background results} - 1]]^{0.5}$
TL Upper Tolerance Limit, $TL = X + (K * S)$, LL Lower Tolerance Limit, $LL = X - (K * S)$
X Mean, $X = (\text{sum of background results})/(\text{count of background results})$

*** 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.*

LRGA

D1-65

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.

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 $TL(1)$.

Current Quarter Data						
Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW370	Downgradient	Yes	4.49E+02	NO	6.11E+00	N/A
MW373	Downgradient	Yes	1.00E+03	YES	6.91E+00	N/A
MW385	Sidegradient	Yes	3.98E+02	NO	5.99E+00	N/A
MW388	Downgradient	Yes	4.72E+02	NO	6.16E+00	N/A
MW392	Downgradient	Yes	3.86E+02	NO	5.96E+00	N/A
MW395	Upgradient	Yes	4.01E+02	NO	5.99E+00	N/A
MW397	Upgradient	Yes	3.24E+02	NO	5.78E+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.

Wells with Exceedances

The test well(s) listed exceeded the Upper Tolerance Limit, which is evidence of elevated concentration with respect to historical background data.

MW373

CV Coefficient-of-Variation, $CV = S/X$ If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, $S = [\text{Sum} ((\text{background result}-X)^2)/[\text{count of background results} - 1]]^{0.5}$
TL Upper Tolerance Limit, $TL = X + (K * S)$, LL Lower Tolerance Limit, $LL = X - (K * S)$
X Mean, $X = (\text{sum of background results})/(\text{count of background results})$

*** 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-S/T Second Quarter 2025 Statistical Analysis Historical Background Comparison

Copper

UNITS: mg/L

LRGA

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data X= 0.028 S= 0.013 CV(1)=0.474 K factor**= 2.523 TL(1)= 6.15E-02 LL(1)=N/A

Statistics-Transformed Background Data X= -3.662 S= 0.406 CV(2)=-0.111 K factor**= 2.523 TL(2)= -2.64E+00 LL(2)=N/A

Historical Background Data from Upgradient Wells with Transformed Result

Well Number: MW395

Date Collected	Result	LN(Result)
8/13/2002	5.00E-02	-3.00E+00
9/16/2002	5.00E-02	-3.00E+00
10/16/2002	2.81E-02	-3.57E+00
1/13/2003	2.00E-02	-3.91E+00
4/10/2003	2.00E-02	-3.91E+00
7/16/2003	2.00E-02	-3.91E+00
10/14/2003	2.00E-02	-3.91E+00
1/13/2004	2.00E-02	-3.91E+00

Well Number: MW397

Date Collected	Result	LN(Result)
8/13/2002	5.00E-02	-3.00E+00
9/16/2002	5.00E-02	-3.00E+00
10/17/2002	2.00E-02	-3.91E+00
1/13/2003	2.00E-02	-3.91E+00
4/8/2003	2.00E-02	-3.91E+00
7/16/2003	2.00E-02	-3.91E+00
10/14/2003	2.00E-02	-3.91E+00
1/13/2004	2.00E-02	-3.91E+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)
MW370	Downgradient	Yes	8.50E-04	NO	-7.07E+00	N/A
MW373	Downgradient	Yes	7.67E-04	NO	-7.17E+00	N/A
MW385	Sidegradient	Yes	1.37E-03	NO	-6.59E+00	N/A
MW388	Downgradient	Yes	1.06E-03	NO	-6.85E+00	N/A
MW392	Downgradient	Yes	1.11E-03	NO	-6.80E+00	N/A
MW395	Upgradient	Yes	9.18E-04	NO	-6.99E+00	N/A
MW397	Upgradient	No	1.59E-03	N/A	-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, $S = \sqrt{[\text{Sum}([(background\ result - X)^2]/[\text{count of background results} - 1])]/0.5}$

TL Upper Tolerance Limit, $TL = X + (K * S)$, LL Lower Tolerance Limit, $LL = X - (K * S)$

X Mean, $X = (\text{sum of background results})/(\text{count of background results})$

** 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-S/T Second Quarter 2025 Statistical Analysis	Historical Background Comparison
Cyanide	UNITS: mg/L
	LRGA

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	X= 0.020	S= 0.000	CV(1)=0.000	K factor**= 2.523	TL(1)= 2.00E-02	LL(1)=N/A
Statistics-Transformed Background Data	X= -3.912	S= 0.000	CV(2)=0.000	K factor**= 2.523	TL(2)= -3.91E+00	LL(2)=N/A

Historical Background Data from Upgradient Wells with Transformed Result

Because CV(1) is less than or equal to 1, assume normal distribution and continue with statistical analysis utilizing TL(1).

Well Number: MW395

Date Collected	Result	LN(Result)
8/13/2002	2.00E-02	-3.91E+00
9/16/2002	2.00E-02	-3.91E+00
10/16/2002	2.00E-02	-3.91E+00
1/13/2003	2.00E-02	-3.91E+00
4/10/2003	2.00E-02	-3.91E+00
7/16/2003	2.00E-02	-3.91E+00
10/14/2003	2.00E-02	-3.91E+00
1/13/2004	2.00E-02	-3.91E+00

Well Number: MW397

Date Collected	Result	LN(Result)
8/13/2002	2.00E-02	-3.91E+00
9/16/2002	2.00E-02	-3.91E+00
10/17/2002	2.00E-02	-3.91E+00
1/13/2003	2.00E-02	-3.91E+00
4/8/2003	2.00E-02	-3.91E+00
7/16/2003	2.00E-02	-3.91E+00
10/14/2003	2.00E-02	-3.91E+00
1/13/2004	2.00E-02	-3.91E+00

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result > TL(1)?	LN(Result)	LN(Result) > TL(2)
MW370	Downgradient	No	2.00E-01	N/A	-1.61E+00	N/A
MW373	Downgradient	Yes	7.96E-03	NO	-4.83E+00	N/A
MW385	Sidegradient	No	2.00E-01	N/A	-1.61E+00	N/A
MW388	Downgradient	No	2.00E-01	N/A	-1.61E+00	N/A
MW392	Downgradient	No	2.00E-01	N/A	-1.61E+00	N/A
MW395	Upgradient	No	2.00E-01	N/A	-1.61E+00	N/A
MW397	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, $S = \sqrt{(\text{Sum}([(background\ result-X)^2]/(\text{count of background results} - 1)))^{0.5}}$

TL Upper Tolerance Limit, $TL = X + (K * S)$, LL Lower Tolerance Limit, $LL = X - (K * S)$

X Mean, $X = (\text{sum of background results})/(\text{count of background results})$

** 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.

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.

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 $TL(1)$.

Current Quarter Data						
Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW370	Downgradient	Yes	4.54E+00	NO	1.51E+00	N/A
MW373	Downgradient	Yes	2.90E+00	NO	1.06E+00	N/A
MW385	Sidegradient	Yes	5.11E+00	NO	1.63E+00	N/A
MW388	Downgradient	Yes	4.92E+00	NO	1.59E+00	N/A
MW392	Downgradient	Yes	2.62E+00	NO	9.63E-01	N/A
MW395	Upgradient	Yes	4.99E+00	NO	1.61E+00	N/A
MW397	Upgradient	Yes	6.40E+00	NO	1.86E+00	N/A

N/A - Results identified as Non-Detects during laboratory analysis or data validation and were not included in the statistical evaluation. Additionally for parameters that have MCLs, where the result for a well did not exceed the MCL value, that well was not included in the statistical evaluation.

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.

CV Coefficient-of-Variation, $CV = S/X$ If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, $S = [\text{Sum} ((\text{background result}-X)^2)/[\text{count of background results} - 1]]^{0.5}$
TL Upper Tolerance Limit, $TL = X + (K * S)$, LL Lower Tolerance Limit, $LL = X - (K * S)$
X Mean, $X = (\text{sum of background results})/(\text{count of background results})$

*** 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-S/T Second Quarter 2025 Statistical Analysis Historical Background Comparison**Dissolved Solids****UNITS: mg/L****LRGA**

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data X= 219.250 S= 34.107 CV(1)=0.156 K factor**= 2.523 TL(1)= 3.05E+02 LL(1)=N/A**Statistics-Transformed Background Data** X= 5.379 S= 0.152 CV(2)=0.028 K factor**= 2.523 TL(2)= 5.76E+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: MW395

Date Collected	Result	LN(Result)
8/13/2002	2.49E+02	5.52E+00
9/16/2002	2.72E+02	5.61E+00
10/16/2002	2.55E+02	5.54E+00
1/13/2003	2.11E+02	5.35E+00
4/10/2003	2.89E+02	5.67E+00
7/16/2003	2.36E+02	5.46E+00
10/14/2003	2.24E+02	5.41E+00
1/13/2004	2.35E+02	5.46E+00

Well Number: MW397

Date Collected	Result	LN(Result)
8/13/2002	1.87E+02	5.23E+00
9/16/2002	1.97E+02	5.28E+00
10/17/2002	1.83E+02	5.21E+00
1/13/2003	1.82E+02	5.20E+00
4/8/2003	2.17E+02	5.38E+00
7/16/2003	1.96E+02	5.28E+00
10/14/2003	1.98E+02	5.29E+00
1/13/2004	1.77E+02	5.18E+00

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result > TL(1)?	LN(Result)	LN(Result) > TL(2)
MW370	Downgradient	Yes	2.26E+02	NO	5.42E+00	N/A
MW373	Downgradient	Yes	6.35E+02	YES	6.45E+00	N/A
MW385	Sidegradient	Yes	2.14E+02	NO	5.37E+00	N/A
MW388	Downgradient	Yes	2.52E+02	NO	5.53E+00	N/A
MW392	Downgradient	Yes	1.95E+02	NO	5.27E+00	N/A
MW395	Upgradient	Yes	2.13E+02	NO	5.36E+00	N/A
MW397	Upgradient	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

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, $S = [\text{Sum}([(background\ result - X)^2]/[\text{count of background results} - 1])]^{0.5}$

TL Upper Tolerance Limit, $TL = X + (K * S)$, LL Lower Tolerance Limit, $LL = X - (K * S)$

X Mean, $X = (\text{sum of background results})/(\text{count of background results})$

** 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-S/T Second Quarter 2025 Statistical Analysis Historical Background Comparison

Iron

UNITS: mg/L

LRGA

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	X= 0.400	S= 0.514	CV(1)=1.286	K factor**= 2.523	TL(1)= 1.70E+00	LL(1)=N/A
Statistics-Transformed Background Data	X= -2.197	S= 2.634	CV(2)=-1.199	K factor**= 2.523	TL(2)= 4.45E+00	LL(2)=N/A

Historical Background Data from Upgradient Wells with Transformed Result

Well Number: MW395

Date Collected	Result	LN(Result)
8/13/2002	2.94E-01	-1.22E+00
9/16/2002	2.00E-01	-1.61E+00
10/16/2002	2.00E-04	-8.52E+00
1/13/2003	1.33E+00	2.85E-01
4/10/2003	1.31E+00	2.70E-01
7/16/2003	2.00E-01	-1.61E+00
10/14/2003	1.00E-01	-2.30E+00
1/13/2004	1.00E-01	-2.30E+00

Well Number: MW397

Date Collected	Result	LN(Result)
8/13/2002	1.58E+00	4.57E-01
9/16/2002	2.32E-01	-1.46E+00
10/17/2002	2.00E-04	-8.52E+00
1/13/2003	4.53E-01	-7.92E-01
4/8/2003	2.00E-01	-1.61E+00
7/16/2003	2.00E-01	-1.61E+00
10/14/2003	1.00E-01	-2.30E+00
1/13/2004	1.00E-01	-2.30E+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)
MW370	Downgradient	No	1.00E-01	N/A	-2.30E+00	N/A
MW373	Downgradient	Yes	4.82E-02	N/A	-3.03E+00	NO
MW385	Sidegradient	No	1.00E-01	N/A	-2.30E+00	N/A
MW388	Downgradient	Yes	3.98E-02	N/A	-3.22E+00	NO
MW392	Downgradient	Yes	2.96E-01	N/A	-1.22E+00	NO
MW395	Upgradient	Yes	5.52E-02	N/A	-2.90E+00	NO
MW397	Upgradient	Yes	1.56E+00	N/A	4.45E-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, $S = \left[\frac{\sum ((\text{background result} - X)^2)}{(\text{count of background results} - 1)} \right]^{0.5}$

TL Upper Tolerance Limit, $TL = X + (K * S)$, LL Lower Tolerance Limit, $LL = X - (K * S)$

X Mean, $X = (\text{sum of background results})/(\text{count of background results})$

** 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.*

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.

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 $TL(1)$.

Current Quarter Data						
Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW370	Downgradient	Yes	1.24E+01	NO	2.52E+00	N/A
MW373	Downgradient	Yes	3.16E+01	YES	3.45E+00	N/A
MW385	Sidegradient	Yes	9.15E+00	NO	2.21E+00	N/A
MW388	Downgradient	Yes	1.34E+01	NO	2.60E+00	N/A
MW392	Downgradient	Yes	1.17E+01	NO	2.46E+00	N/A
MW395	Upgradient	Yes	1.24E+01	NO	2.52E+00	N/A
MW397	Upgradient	Yes	8.23E+00	NO	2.11E+00	N/A

N/A - Results identified as Non-Detects during laboratory analysis or data validation and were not included in the statistical evaluation. Additionally for parameters that have MCLs, where the result for a well did not exceed the MCL value, that well was not included in the statistical evaluation.

Wells with Exceedances

MW373

CV Coefficient-of-Variation, $CV = S/X$ If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, $S = [\text{Sum} ((\text{background result}-X)^2)/[\text{count of background results} - 1]]^{0.5}$
TL Upper Tolerance Limit, $TL = X + (K * S)$, LL Lower Tolerance Limit, $LL = X - (K * S)$
X Mean, $X = (\text{sum of background results})/(\text{count of background results})$

*** 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.*

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.

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.

Current Quarter Data						
Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW370	Downgradient	Yes	3.73E-03	N/A	-5.59E+00	NO
MW373	Downgradient	Yes	2.11E-02	N/A	-3.86E+00	NO
MW385	Sidegradient	Yes	1.86E-03	N/A	-6.29E+00	NO
MW388	Downgradient	No	5.00E-03	N/A	-5.30E+00	N/A
MW392	Downgradient	Yes	1.59E-01	N/A	-1.84E+00	NO
MW395	Upgradient	Yes	2.05E-03	N/A	-6.19E+00	NO
MW397	Upgradient	Yes	3.21E-02	N/A	-3.44E+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.

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.

CV Coefficient-of-Variation, $CV = S/X$ If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, $S = [\text{Sum}([(background\ result - X)^2]/[\text{count of background results} - 1])]^{0.5}$
TL Upper Tolerance Limit, $TL = X + (K * S)$, LL Lower Tolerance Limit, $LL = X - (K * S)$
X Mean, $X = (\text{sum of background results})/(\text{count of background results})$

*** 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.*

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.

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 $TL(1)$.

Current Quarter Data						
Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW370	Downgradient	Yes	6.60E-01	NO	-4.16E-01	N/A
MW373	Downgradient	Yes	7.60E-01	NO	-2.74E-01	N/A
MW385	Sidegradient	No	5.00E+00	N/A	1.61E+00	N/A
MW388	Downgradient	No	5.00E+00	N/A	1.61E+00	N/A
MW392	Downgradient	Yes	6.19E+00	NO	1.82E+00	N/A
MW395	Upgradient	Yes	6.18E+00	NO	1.82E+00	N/A
MW397	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.

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.

CV Coefficient-of-Variation, $CV = S/X$ If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, $S = [\text{Sum}([(background\ result - X)^2]/[\text{count of background results} - 1])]^{0.5}$
TL Upper Tolerance Limit, $TL = X + (K * S)$, LL Lower Tolerance Limit, $LL = X - (K * S)$
X Mean, $X = (\text{sum of background results})/(\text{count of background results})$

*** 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.*

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.

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.

Current Quarter Data						
Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW370	Downgradient	No	1.00E-03	N/A	-6.91E+00	N/A
MW373	Downgradient	No	1.00E-03	N/A	-6.91E+00	N/A
MW385	Sidegradient	Yes	2.78E-04	N/A	-8.19E+00	NO
MW388	Downgradient	No	1.00E-03	N/A	-6.91E+00	N/A
MW392	Downgradient	Yes	2.70E-04	N/A	-8.22E+00	NO
MW395	Upgradient	Yes	2.48E-04	N/A	-8.30E+00	NO
MW397	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.

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.

CV Coefficient-of-Variation, $CV = S/X$ If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, $S = [\text{Sum} ((\text{background result}-X)^2)/[\text{count of background results} - 1]]^{0.5}$
TL Upper Tolerance Limit, $TL = X + (K * S)$, LL Lower Tolerance Limit, $LL = X - (K * S)$
X Mean, $X = (\text{sum of background results})/(\text{count of background results})$

*** 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-S/T Second Quarter 2025 Statistical Analysis Historical Background Comparison**Nickel****UNITS: mg/L****LRGA**

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	X= 0.018	S= 0.020	CV(1)=1.089	K factor**= 2.523	TL(1)= 6.83E-02	LL(1)=N/A
Statistics-Transformed Background Data	X= -4.540	S= 1.020	CV(2)=-0.225	K factor**= 2.523	TL(2)= -1.97E+00	LL(2)=N/A

Historical Background Data from Upgradient Wells with Transformed Result

Well Number: MW395

Date Collected	Result	LN(Result)
8/13/2002	5.00E-02	-3.00E+00
9/16/2002	5.00E-02	-3.00E+00
10/16/2002	7.02E-03	-4.96E+00
1/13/2003	2.90E-02	-3.54E+00
4/10/2003	9.10E-03	-4.70E+00
7/16/2003	6.27E-03	-5.07E+00
10/14/2003	5.00E-03	-5.30E+00
1/13/2004	5.00E-03	-5.30E+00

Well Number: MW397

Date Collected	Result	LN(Result)
8/13/2002	5.00E-02	-3.00E+00
9/16/2002	5.00E-02	-3.00E+00
10/17/2002	5.00E-03	-5.30E+00
1/13/2003	5.02E-03	-5.29E+00
4/8/2003	5.00E-03	-5.30E+00
7/16/2003	5.00E-03	-5.30E+00
10/14/2003	5.00E-03	-5.30E+00
1/13/2004	5.00E-03	-5.30E+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)
MW370	Downgradient	No	2.00E-03	N/A	-6.21E+00	N/A
MW373	Downgradient	Yes	8.19E-04	N/A	-7.11E+00	NO
MW385	Sidegradient	Yes	1.40E-03	N/A	-6.57E+00	NO
MW388	Downgradient	Yes	5.55E-03	N/A	-5.19E+00	NO
MW392	Downgradient	Yes	9.48E-04	N/A	-6.96E+00	NO
MW395	Upgradient	Yes	1.83E-03	N/A	-6.30E+00	NO
MW397	Upgradient	Yes	1.58E-03	N/A	-6.45E+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, $S = \left[\frac{\text{Sum}([(background\ result - X)^2])}{\text{count of background results} - 1} \right]^{0.5}$

TL Upper Tolerance Limit, $TL = X + (K * S)$, LL Lower Tolerance Limit, $LL = X - (K * S)$

X Mean, $X = (\text{sum of background results}) / (\text{count of background results})$

** 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.*

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.

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 $TL(1)$.

Current Quarter Data						
Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW370	Downgradient	Yes	4.04E+02	YES	6.00E+00	N/A
MW373	Downgradient	Yes	4.14E+02	YES	6.03E+00	N/A
MW385	Sidegradient	Yes	5.14E+02	YES	6.24E+00	N/A
MW388	Downgradient	Yes	5.03E+02	YES	6.22E+00	N/A
MW392	Downgradient	Yes	5.03E+02	YES	6.22E+00	N/A
MW395	Upgradient	Yes	4.80E+02	YES	6.17E+00	N/A
MW397	Upgradient	Yes	4.23E+02	YES	6.05E+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.

The test well(s) listed exceeded the Upper Tolerance Limit, which is evidence of elevated concentration with respect to historical background data.

MW370
MW373
MW385
MW388
MW392
MW395
MW397

CV Coefficient-of-Variation, $CV = S/X$ If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, $S = [\text{Sum} ((\text{background result}-X)^2)/[\text{count of background results} - 1]]^{0.5}$
TL Upper Tolerance Limit, $TL = X + (K * S)$, LL Lower Tolerance Limit, $LL = X - (K * S)$
X Mean, $X = (\text{sum of background results})/(\text{count of background results})$

*** 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-S/T Second Quarter 2025 Statistical Analysis Historical Background Comparison

pH

UNITS: Std Unit

LRGA

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	X= 6.048	S= 0.248	CV(1)=0.041	K factor**= 2.904	TL(1)= 6.77E+00	LL(1)=5.33E+00
Statistics-Transformed Background Data	X= 1.799	S= 0.042	CV(2)=0.023	K factor**= 2.904	TL(2)= 1.92E+00	LL(2)=1.68E+00

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: MW395

Date Collected	Result	LN(Result)
8/13/2002	5.80E+00	1.76E+00
9/16/2002	6.00E+00	1.79E+00
10/16/2002	5.47E+00	1.70E+00
1/13/2003	6.00E+00	1.79E+00
4/10/2003	6.18E+00	1.82E+00
7/16/2003	6.00E+00	1.79E+00
10/14/2003	6.31E+00	1.84E+00
1/13/2004	6.24E+00	1.83E+00

Well Number: MW397

Date Collected	Result	LN(Result)
8/13/2002	5.84E+00	1.76E+00
9/30/2002	6.00E+00	1.79E+00
10/17/2002	5.75E+00	1.75E+00
1/13/2003	6.00E+00	1.79E+00
4/8/2003	6.30E+00	1.84E+00
7/16/2003	6.20E+00	1.82E+00
10/14/2003	6.36E+00	1.85E+00
1/13/2004	6.32E+00	1.84E+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)?
MW370	Downgradient	Yes	6.01E+00	NO	1.79E+00	N/A
MW373	Downgradient	Yes	6.01E+00	NO	1.79E+00	N/A
MW385	Sidegradient	Yes	6.04E+00	NO	1.80E+00	N/A
MW388	Downgradient	Yes	6.03E+00	NO	1.80E+00	N/A
MW392	Downgradient	Yes	6.06E+00	NO	1.80E+00	N/A
MW395	Upgradient	Yes	5.87E+00	NO	1.77E+00	N/A
MW397	Upgradient	Yes	5.96E+00	NO	1.79E+00	N/A

N/A - Results identified as Non-Detects during laboratory analysis or data validation and were not included in the statistical evaluation. Additionally for parameters that have MCLs, where the result for a well did not exceed the MCL value, that well was not included in the statistical evaluation.

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, $CV = S/X$ If CV is less than or equal to 1 assume normal distribution.

S Standard Deviation, $S = \sqrt{[\text{Sum}([(background\ result-X)^2]/[\text{count of background results} - 1]])^{0.5}}$

TL Upper Tolerance Limit, $TL = X + (K * S)$, LL Lower Tolerance Limit, $LL = X - (K * S)$

X Mean, $X = (\text{sum of background results})/(\text{count of background results})$

** 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-S/T Second Quarter 2025 Statistical Analysis Historical Background Comparison**Potassium****UNITS: mg/L****LRGA**

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	X= 1.590	S= 0.642	CV(1)=0.404	K factor**= 2.523	TL(1)= 3.21E+00	LL(1)=N/A
Statistics-Transformed Background Data	X= -0.306	S= 2.457	CV(2)=-8.028	K factor**= 2.523	TL(2)= 5.89E+00	LL(2)=N/A

Historical Background Data from Upgradient Wells with Transformed Result

Well Number: MW395

Date Collected	Result	LN(Result)
8/13/2002	2.00E+00	6.93E-01
9/16/2002	2.00E+00	6.93E-01
10/16/2002	1.29E-03	-6.65E+00
1/13/2003	1.51E+00	4.12E-01
4/10/2003	1.67E+00	5.13E-01
7/16/2003	1.73E+00	5.48E-01
10/14/2003	1.70E+00	5.31E-01
1/13/2004	1.58E+00	4.57E-01

Well Number: MW397

Date Collected	Result	LN(Result)
8/13/2002	2.03E+00	7.08E-01
9/16/2002	2.00E+00	6.93E-01
10/17/2002	1.45E-03	-6.54E+00
1/13/2003	1.69E+00	5.25E-01
4/8/2003	1.73E+00	5.48E-01
7/16/2003	2.00E+00	6.93E-01
10/14/2003	1.92E+00	6.52E-01
1/13/2004	1.87E+00	6.26E-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)
MW370	Downgradient	Yes	2.44E+00	NO	8.92E-01	N/A
MW373	Downgradient	Yes	2.97E+00	NO	1.09E+00	N/A
MW385	Sidegradient	Yes	1.52E+00	NO	4.19E-01	N/A
MW388	Downgradient	Yes	1.75E+00	NO	5.60E-01	N/A
MW392	Downgradient	Yes	1.95E+00	NO	6.68E-01	N/A
MW395	Upgradient	Yes	1.66E+00	NO	5.07E-01	N/A
MW397	Upgradient	Yes	1.94E+00	NO	6.63E-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, $S = \sqrt{[\text{Sum}([(background\ result - X)^2]/[\text{count of background results} - 1])]/0.5}$

TL Upper Tolerance Limit, $TL = X + (K * S)$, LL Lower Tolerance Limit, $LL = X - (K * S)$

X Mean, $X = (\text{sum of background results})/(\text{count of background results})$

** 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-S/T Second Quarter 2025 Statistical Analysis Historical Background Comparison**Sodium****UNITS: mg/L****LRGA**

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data X= 29.560 S= 13.894 CV(1)=0.470 **K factor**= 2.523** TL(1)= 6.46E+01 LL(1)=N/A

Statistics-Transformed Background Data X= 2.615 S= 2.411 CV(2)=0.922 **K factor**= 2.523** TL(2)= 8.70E+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: MW395

Date Collected	Result	LN(Result)
8/13/2002	2.70E+01	3.30E+00
9/16/2002	2.72E+01	3.30E+00
10/16/2002	2.53E-02	-3.68E+00
1/13/2003	2.26E+01	3.12E+00
4/10/2003	5.39E+01	3.99E+00
7/16/2003	3.00E+01	3.40E+00
10/14/2003	2.91E+01	3.37E+00
1/13/2004	2.64E+01	3.27E+00

Well Number: MW397

Date Collected	Result	LN(Result)
8/13/2002	3.52E+01	3.56E+00
9/16/2002	3.43E+01	3.54E+00
10/17/2002	3.36E-02	-3.39E+00
1/13/2003	3.13E+01	3.44E+00
4/8/2003	4.61E+01	3.83E+00
7/16/2003	3.84E+01	3.65E+00
10/14/2003	3.71E+01	3.61E+00
1/13/2004	3.43E+01	3.54E+00

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result > TL(1)?	LN(Result)	LN(Result) > TL(2)
MW370	Downgradient	Yes	4.50E+01	NO	3.81E+00	N/A
MW373	Downgradient	Yes	7.53E+01	YES	4.32E+00	N/A
MW385	Sidegradient	Yes	4.42E+01	NO	3.79E+00	N/A
MW388	Downgradient	Yes	4.75E+01	NO	3.86E+00	N/A
MW392	Downgradient	Yes	3.20E+01	NO	3.47E+00	N/A
MW395	Upgradient	Yes	3.40E+01	NO	3.53E+00	N/A
MW397	Upgradient	Yes	3.54E+01	NO	3.57E+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, $S = [\text{Sum}([(background\ result - X)^2]/[\text{count of background results} - 1])]^{0.5}$

TL Upper Tolerance Limit, $TL = X + (K * S)$, LL Lower Tolerance Limit, $LL = X - (K * S)$

X Mean, $X = (\text{sum of background results})/(\text{count of background results})$

** 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.*

LRGA

D1-81

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.

Historical Background Data from Upgradient Wells with Transformed Result

#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)
MW370	Downgradient	No	3.98E+00	N/A	1.38E+00	N/A
MW373	Downgradient	No	5.28E+00	N/A	1.66E+00	N/A
MW385	Sidegradient	Yes	4.42E+01	YES	3.79E+00	N/A
MW388	Downgradient	No	1.69E+01	N/A	2.83E+00	N/A
MW392	Downgradient	No	-5.52E+00	N/A	#Error	N/A
MW395	Upgradient	No	2.75E+00	N/A	1.01E+00	N/A
MW397	Upgradient	No	1.68E+01	N/A	2.82E+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.

Wells with Exceedances

MW385

CV Coefficient-of-Variation, $CV = S/X$ If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, $S = [\text{Sum} ((\text{background result}-X)^2)/[\text{count of background results} - 1]]^{0.5}$
TL Upper Tolerance Limit, $TL = X + (K * S)$, LL Lower Tolerance Limit, $LL = X - (K * S)$
X Mean, $X = (\text{sum of background results})/(\text{count of background results})$

D1-82

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.

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 $TL(1)$.

Current Quarter Data						
Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW370	Downgradient	Yes	1.11E+00	NO	1.04E-01	N/A
MW373	Downgradient	Yes	1.60E+00	NO	4.70E-01	N/A
MW385	Sidegradient	Yes	7.00E-01	NO	-3.57E-01	N/A
MW388	Downgradient	Yes	6.20E-01	NO	-4.78E-01	N/A
MW392	Downgradient	Yes	7.16E-01	NO	-3.34E-01	N/A
MW395	Upgradient	Yes	5.19E-01	NO	-6.56E-01	N/A
MW397	Upgradient	Yes	6.40E-01	NO	-4.46E-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.

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.

CV Coefficient-of-Variation, $CV = S/X$ If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, $S = [\text{Sum} ((\text{background result}-X)^2)/[\text{count of background results} - 1]]^{0.5}$
TL Upper Tolerance Limit, $TL = X + (K * S)$, LL Lower Tolerance Limit, $LL = X - (K * S)$
X Mean, $X = (\text{sum of background results})/(\text{count of background results})$

*** 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.*

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.

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 $TL(1)$.

Current Quarter Data						
Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW370	Downgradient	Yes	1.26E+01	NO	2.53E+00	N/A
MW373	Downgradient	Yes	1.10E+01	NO	2.40E+00	N/A
MW385	Sidegradient	Yes	6.88E+00	NO	1.93E+00	N/A
MW388	Downgradient	Yes	1.09E+01	NO	2.39E+00	N/A
MW392	Downgradient	Yes	1.37E+01	NO	2.62E+00	N/A
MW395	Upgradient	Yes	7.17E+00	NO	1.97E+00	N/A
MW397	Upgradient	Yes	1.02E+01	NO	2.32E+00	N/A

N/A - Results identified as Non-Detects during laboratory analysis or data validation and were not included in the statistical evaluation. Additionally for parameters that have MCLs, where the result for a well did not exceed the MCL value, that well was not included in the statistical evaluation.

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.

CV Coefficient-of-Variation, $CV = S/X$ If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, $S = [\text{Sum} ((\text{background result}-X)^2)/[\text{count of background results} - 1]]^{0.5}$
TL Upper Tolerance Limit, $TL = X + (K * S)$, LL Lower Tolerance Limit, $LL = X - (K * S)$
X Mean, $X = (\text{sum of background results})/(\text{count of background results})$

*** 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-S/T Second Quarter 2025 Statistical Analysis Historical Background Comparison**Vanadium****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= 0.021	S= 0.002	CV(1)=0.105	K factor**= 2.523	TL(1)= 2.69E-02	LL(1)=N/A
Statistics-Transformed Background Data	X= -3.856	S= 0.100	CV(2)=-0.026	K factor**= 2.523	TL(2)= -3.60E+00	LL(2)=N/A

Historical Background Data from Upgradient Wells with Transformed Result

Well Number: MW395

Date Collected	Result	LN(Result)
8/13/2002	2.50E-02	-3.69E+00
9/16/2002	2.50E-02	-3.69E+00
10/16/2002	2.00E-02	-3.91E+00
1/13/2003	2.00E-02	-3.91E+00
7/16/2003	2.00E-02	-3.91E+00
10/14/2003	2.00E-02	-3.91E+00
1/13/2004	2.00E-02	-3.91E+00
4/12/2004	2.00E-02	-3.91E+00

Well Number: MW397

Date Collected	Result	LN(Result)
8/13/2002	2.50E-02	-3.69E+00
9/16/2002	2.50E-02	-3.69E+00
10/17/2002	2.00E-02	-3.91E+00
1/13/2003	2.00E-02	-3.91E+00
4/8/2003	2.00E-02	-3.91E+00
7/16/2003	2.00E-02	-3.91E+00
10/14/2003	2.00E-02	-3.91E+00
1/13/2004	2.00E-02	-3.91E+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)
MW370	Downgradient	No	2.00E-02	N/A	-3.91E+00	N/A
MW373	Downgradient	No	2.00E-02	N/A	-3.91E+00	N/A
MW385	Sidegradient	No	2.00E-02	N/A	-3.91E+00	N/A
MW388	Downgradient	No	2.00E-02	N/A	-3.91E+00	N/A
MW392	Downgradient	No	6.25E-03	N/A	-5.08E+00	N/A
MW395	Upgradient	No	2.00E-02	N/A	-3.91E+00	N/A
MW397	Upgradient	Yes	4.46E-03	NO	-5.41E+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, $S = [\text{Sum}([(background\ result - X)^2]/[\text{count of background results} - 1])]^{0.5}$

TL Upper Tolerance Limit, $TL = X + (K * S)$, LL Lower Tolerance Limit, $LL = X - (K * S)$

X Mean, $X = (\text{sum of background results})/(\text{count of background results})$

** 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-S/T Second Quarter 2025 Statistical Analysis Historical Background Comparison

Zinc

UNITS: mg/L

LRGA

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is evidence of an exceedance of the statistically-derived historical background concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	X= 0.044	S= 0.034	CV(1)=0.760	K factor**= 2.523	TL(1)= 1.29E-01	LL(1)=N/A
Statistics-Transformed Background Data	X= -3.342	S= 0.659	CV(2)=-0.197	K factor**= 2.523	TL(2)= -1.68E+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: MW395

Date Collected	Result	LN(Result)
8/13/2002	1.00E-01	-2.30E+00
9/16/2002	1.00E-01	-2.30E+00
10/16/2002	2.50E-02	-3.69E+00
1/13/2003	3.50E-02	-3.35E+00
4/10/2003	3.50E-02	-3.35E+00
7/16/2003	2.00E-02	-3.91E+00
10/14/2003	2.00E-02	-3.91E+00
1/13/2004	2.00E-02	-3.91E+00

Well Number: MW397

Date Collected	Result	LN(Result)
8/13/2002	1.00E-01	-2.30E+00
9/16/2002	1.00E-01	-2.30E+00
10/17/2002	2.50E-02	-3.69E+00
1/13/2003	3.50E-02	-3.35E+00
4/8/2003	3.50E-02	-3.35E+00
7/16/2003	2.00E-02	-3.91E+00
10/14/2003	2.00E-02	-3.91E+00
1/13/2004	2.00E-02	-3.91E+00

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result > TL(1)?	LN(Result)	LN(Result) > TL(2)
MW370	Downgradient	Yes	5.30E-03	NO	-5.24E+00	N/A
MW373	Downgradient	No	2.00E-02	N/A	-3.91E+00	N/A
MW385	Sidegradient	No	2.00E-02	N/A	-3.91E+00	N/A
MW388	Downgradient	No	2.00E-02	N/A	-3.91E+00	N/A
MW392	Downgradient	No	3.41E-03	N/A	-5.68E+00	N/A
MW395	Upgradient	No	2.00E-02	N/A	-3.91E+00	N/A
MW397	Upgradient	Yes	6.55E-03	NO	-5.03E+00	N/A

N/A - Results identified as Non-Detects during laboratory analysis or data validation and were not included in the statistical evaluation. Additionally for parameters that have MCLs, where the result for a well did not exceed the MCL value, that well was not included in the statistical evaluation.

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, $CV = S/X$ If CV is less than or equal to 1 assume normal distribution.

S Standard Deviation, $S = \sqrt{\text{Sum}([(background\ result - X)^2] / [\text{count of background results} - 1])}$

TL Upper Tolerance Limit, $TL = X + (K * S)$, LL Lower Tolerance Limit, $LL = X - (K * S)$

X Mean, $X = (\text{sum of background results}) / (\text{count of background results})$

** 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-S/T Second Quarter 2025 Statistical Analysis	Current Background Comparison
Oxidation-Reduction Potential	UNITS: mV
	UCRS

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is statistically significant evidence of elevated concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data **X**= 333.750 **S**= 62.814 **CV(1)**=0.188 **K factor****= 3.188 **TL(1)**= 5.34E+02 **LL(1)**=N/A

Statistics-Transformed Background Data **X**= 5.795 **S**= 0.190 **CV(2)**=0.033 **K factor****= 3.188 **TL(2)**= 6.40E+00 **LL(2)**=N/A

Current 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: MW396

Date Collected	Result	LN(Result)
4/27/2023	2.50E+02	5.52E+00
7/27/2023	3.15E+02	5.75E+00
10/18/2023	2.62E+02	5.57E+00
1/30/2024	3.08E+02	5.73E+00
4/16/2024	3.53E+02	5.87E+00
7/24/2024	3.73E+02	5.92E+00
10/15/2024	4.40E+02	6.09E+00
1/29/2025	3.69E+02	5.91E+00

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW386	Sidegradient	Yes	4.73E+02	NO	6.16E+00	N/A
MW390	Downgradient	Yes	5.00E+02	NO	6.21E+00	N/A
MW393	Downgradient	Yes	4.10E+02	NO	6.02E+00	N/A
MW396	Upgradient	Yes	4.67E+02	NO	6.15E+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, $S = [\text{Sum}([(background\ result - X)^2]/[\text{count of background results} - 1])]^{0.5}$

TL Upper Tolerance Limit, $TL = X + (K * S)$, LL Lower Tolerance Limit, $LL = X - (K * S)$

X Mean, $X = (\text{sum of background results})/(\text{count of background results})$

** 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-S/T Second Quarter 2025 Statistical Analysis	Current Background Comparison
Technetium-99	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 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= -0.334	S= 6.173	CV(1)=-18.497	K factor**= 3.188	TL(1)= 1.93E+01	LL(1)=N/A

Statistics-Transformed Background Data	X= 1.480	S= 0.571	CV(2)=0.386	K factor**= 3.188	TL(2)= 2.22E+00	LL(2)=N/A

Current Background Data from Upgradient Wells with Transformed Result

Well Number: MW396

Date Collected	Result	LN(Result)
4/27/2023	9.19E+00	2.22E+00
7/27/2023	3.97E+00	1.38E+00
10/18/2023	4.46E+00	1.50E+00
1/30/2024	-5.21E+00	#Func!
4/16/2024	-3.78E+00	#Func!
7/24/2024	-8.86E+00	#Func!
10/15/2024	2.29E+00	8.29E-01
1/29/2025	-4.73E+00	#Func!

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)
MW390	Downgradient	Yes	7.37E+01	YES	4.30E+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

MW390

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, $S = [\text{Sum}([(background\ result-X)^2]/[\text{count of background results}-1])]^{0.5}$

TL Upper Tolerance Limit, $TL = X + (K * S)$, LL Lower Tolerance Limit, $LL = X - (K * S)$

X Mean, $X = (\text{sum of background results})/(\text{count of background results})$

** 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-S/T Second Quarter 2025 Statistical Analysis	Current Background Comparison
Calcium	UNITS: mg/L
	URGA

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is statistically significant evidence of elevated concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	X= 25.213	S= 2.829	CV(1)=0.112	K factor**= 2.523	TL(1)= 3.24E+01	LL(1)=N/A
Statistics-Transformed Background Data	X= 3.221	S= 0.117	CV(2)=0.036	K factor**= 2.523	TL(2)= 3.52E+00	LL(2)=N/A

Current 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: MW220

Date Collected	Result	LN(Result)
5/1/2023	2.82E+01	3.34E+00
7/28/2023	2.21E+01	3.10E+00
10/16/2023	2.16E+01	3.07E+00
1/29/2024	2.02E+01	3.01E+00
4/11/2024	2.33E+01	3.15E+00
7/24/2024	2.55E+01	3.24E+00
10/14/2024	2.05E+01	3.02E+00
1/29/2025	2.40E+01	3.18E+00

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW372	Downgradient	Yes	6.64E+01	YES	4.20E+00	N/A

Well Number: MW394

Date Collected	Result	LN(Result)
4/27/2023	2.69E+01	3.29E+00
7/27/2023	2.65E+01	3.28E+00
10/17/2023	2.79E+01	3.33E+00
1/30/2024	2.68E+01	3.29E+00
4/16/2024	2.79E+01	3.33E+00
7/24/2024	2.75E+01	3.31E+00
10/15/2024	2.66E+01	3.28E+00
1/29/2025	2.79E+01	3.33E+00

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

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, $S = [\text{Sum}([(background\ result - X)^2]/[\text{count of background results} - 1])]^{0.5}$

TL Upper Tolerance Limit, $TL = X + (K * S)$, LL Lower Tolerance Limit, $LL = X - (K * S)$

X Mean, $X = (\text{sum of background results})/(\text{count of background results})$

** 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-S/T Second Quarter 2025 Statistical Analysis	Current Background Comparison
Conductivity	UNITS: umho/cm
	URGA

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is statistically significant evidence of elevated concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	X= 394.563	S= 38.898	CV(1)=0.099	K factor**= 2.523	TL(1)= 4.93E+02	LL(1)=N/A

Statistics-Transformed Background Data	X= 5.973	S= 0.102	CV(2)=0.017	K factor**= 2.523	TL(2)= 6.23E+00	LL(2)=N/A

Current 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: MW220

Date Collected	Result	LN(Result)
5/1/2023	4.20E+02	6.04E+00
7/31/2023	3.54E+02	5.87E+00
10/16/2023	3.23E+02	5.78E+00
1/29/2024	3.31E+02	5.80E+00
4/11/2024	3.78E+02	5.93E+00
7/24/2024	4.17E+02	6.03E+00
10/14/2024	3.42E+02	5.83E+00
1/29/2025	4.63E+02	6.14E+00

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW372	Downgradient	Yes	7.44E+02	YES	6.61E+00	N/A

Well Number: MW394

Date Collected	Result	LN(Result)
4/27/2023	4.09E+02	6.01E+00
7/27/2023	4.15E+02	6.03E+00
10/17/2023	4.03E+02	6.00E+00
1/30/2024	4.07E+02	6.01E+00
4/16/2024	4.14E+02	6.03E+00
7/24/2024	4.00E+02	5.99E+00
10/15/2024	4.01E+02	5.99E+00
1/29/2025	4.36E+02	6.08E+00

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

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, $S = [\text{Sum}([(background\ result - X)^2]/[\text{count of background results} - 1])]^{0.5}$

TL Upper Tolerance Limit, $TL = X + (K * S)$, LL Lower Tolerance Limit, $LL = X - (K * S)$

X Mean, $X = (\text{sum of background results})/(\text{count of background results})$

** 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-S/T Second Quarter 2025 Statistical Analysis	Current Background Comparison
Dissolved Solids	UNITS: mg/L
	URGA

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is statistically significant evidence of elevated concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	X= 184.563	S= 50.746	CV(1)=0.275	K factor**= 2.523	TL(1)= 3.13E+02	LL(1)=N/A

Statistics-Transformed Background Data	X= 5.088	S= 0.750	CV(2)=0.147	K factor**= 2.523	TL(2)= 6.98E+00	LL(2)=N/A

Current 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: MW220

Date Collected	Result	LN(Result)
5/1/2023	2.02E+02	5.31E+00
7/31/2023	1.76E+02	5.17E+00
10/16/2023	1.58E+02	5.06E+00
1/29/2024	1.90E+02	5.25E+00
4/11/2024	1.98E+02	5.29E+00
7/24/2024	2.46E+02	5.51E+00
10/14/2024	1.81E+02	5.20E+00
1/29/2025	2.05E+02	5.32E+00

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW372	Downgradient	Yes	4.74E+02	YES	6.16E+00	N/A

Well Number: MW394

Date Collected	Result	LN(Result)
4/27/2023	1.96E+02	5.28E+00
7/27/2023	2.01E+02	5.30E+00
10/17/2023	1.70E+02	5.14E+00
1/30/2024	2.00E+02	5.30E+00
4/16/2024	1.92E+02	5.26E+00
7/24/2024	2.17E+02	5.38E+00
10/15/2024	2.11E+02	5.35E+00
1/29/2025	1.00E+01	2.30E+00

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

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, $S = [\text{Sum}([(background\ result - X)^2]/[\text{count of background results} - 1])]^{0.5}$

TL Upper Tolerance Limit, $TL = X + (K * S)$, LL Lower Tolerance Limit, $LL = X - (K * S)$

X Mean, $X = (\text{sum of background results})/(\text{count of background results})$

** 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-S/T Second Quarter 2025 Statistical Analysis	Current Background Comparison
Magnesium	UNITS: mg/L
	URGA

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is statistically significant evidence of elevated concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	X= 10.468	S= 1.247	CV(1)=0.119	K factor**= 2.523	TL(1)= 1.36E+01	LL(1)=N/A

Statistics-Transformed Background Data	X= 2.341	S= 0.124	CV(2)=0.053	K factor**= 2.523	TL(2)= 2.65E+00	LL(2)=N/A

Current 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: MW220

Date Collected	Result	LN(Result)
5/1/2023	1.19E+01	2.48E+00
7/28/2023	8.97E+00	2.19E+00
10/16/2023	8.85E+00	2.18E+00
1/29/2024	8.23E+00	2.11E+00
4/11/2024	9.96E+00	2.30E+00
7/24/2024	1.04E+01	2.34E+00
10/14/2024	8.55E+00	2.15E+00
1/29/2025	9.82E+00	2.28E+00

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW372	Downgradient	Yes	2.42E+01	YES	3.19E+00	N/A
MW387	Downgradient	Yes	1.63E+01	YES	2.79E+00	N/A

Well Number: MW394

Date Collected	Result	LN(Result)
4/27/2023	1.13E+01	2.42E+00
7/27/2023	1.07E+01	2.37E+00
10/17/2023	1.16E+01	2.45E+00
1/30/2024	1.10E+01	2.40E+00
4/16/2024	1.16E+01	2.45E+00
7/24/2024	1.15E+01	2.44E+00
10/15/2024	1.14E+01	2.43E+00
1/29/2025	1.17E+01	2.46E+00

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

MW372
MW387

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, $S = [\text{Sum}([(background\ result - X)^2]/[\text{count of background results} - 1])]^{0.5}$

TL Upper Tolerance Limit, $TL = X + (K * S)$, LL Lower Tolerance Limit, $LL = X - (K * S)$

X Mean, $X = (\text{sum of background results})/(\text{count of background results})$

** 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-S/T Second Quarter 2025 Statistical Analysis	Current Background Comparison
Oxidation-Reduction Potential	UNITS: mV
	URGA

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is statistically significant evidence of elevated concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data X= 442.025 S= 53.329 CV(1)=0.121 **K factor**= 2.523** TL(1)= 5.77E+02 LL(1)=N/A

Statistics-Transformed Background Data X= 6.085 S= 0.121 CV(2)=0.020 **K factor**= 2.523** TL(2)= 6.39E+00 LL(2)=N/A

Current 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: MW220

Date Collected	Result	LN(Result)
5/1/2023	4.77E+02	6.17E+00
7/31/2023	3.77E+02	5.93E+00
10/16/2023	4.06E+02	6.01E+00
1/29/2024	4.63E+02	6.14E+00
4/11/2024	3.66E+02	5.90E+00
7/24/2024	3.92E+02	5.97E+00
10/14/2024	5.00E+02	6.21E+00
1/29/2025	4.39E+02	6.09E+00

Well Number: MW394

Date Collected	Result	LN(Result)
4/27/2023	4.51E+02	6.11E+00
7/27/2023	4.94E+02	6.20E+00
10/17/2023	4.61E+02	6.13E+00
1/30/2024	5.18E+02	6.25E+00
4/16/2024	4.12E+02	6.02E+00
7/24/2024	4.04E+02	6.00E+00
10/15/2024	5.34E+02	6.28E+00
1/29/2025	3.78E+02	5.93E+00

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW220	Upgradient	Yes	4.28E+02	NO	6.06E+00	N/A
MW221	Sidegradient	Yes	4.39E+02	NO	6.08E+00	N/A
MW222	Sidegradient	Yes	4.05E+02	NO	6.00E+00	N/A
MW223	Sidegradient	Yes	4.31E+02	NO	6.07E+00	N/A
MW224	Sidegradient	Yes	4.49E+02	NO	6.11E+00	N/A
MW369	Downgradient	Yes	4.25E+02	NO	6.05E+00	N/A
MW372	Downgradient	Yes	4.20E+02	NO	6.04E+00	N/A
MW384	Sidegradient	Yes	5.06E+02	NO	6.23E+00	N/A
MW387	Downgradient	Yes	5.01E+02	NO	6.22E+00	N/A
MW391	Downgradient	Yes	4.55E+02	NO	6.12E+00	N/A
MW394	Upgradient	Yes	4.98E+02	NO	6.21E+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, $S = [\text{Sum}([(background\ result - X)^2]/[\text{count of background results} - 1])]^{0.5}$

TL Upper Tolerance Limit, $TL = X + (K * S)$, LL Lower Tolerance Limit, $LL = X - (K * S)$

X Mean, $X = (\text{sum of background results})/(\text{count of background results})$

** 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-S/T Second Quarter 2025 Statistical Analysis	Current 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 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= 37.306	S= 5.921	CV(1)=0.159	K factor**= 2.523	TL(1)= 5.22E+01	LL(1)=N/A

Statistics-Transformed Background Data	X= 3.609	S= 0.147	CV(2)=0.041	K factor**= 2.523	TL(2)= 3.98E+00	LL(2)=N/A

Current 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: MW220

Date Collected	Result	LN(Result)
5/1/2023	5.30E+01	3.97E+00
7/28/2023	3.85E+01	3.65E+00
10/16/2023	3.72E+01	3.62E+00
1/29/2024	3.58E+01	3.58E+00
4/11/2024	4.34E+01	3.77E+00
7/24/2024	4.60E+01	3.83E+00
10/14/2024	3.69E+01	3.61E+00
1/29/2025	4.12E+01	3.72E+00

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW372	Downgradient	Yes	5.91E+01	YES	4.08E+00	N/A

Well Number: MW394

Date Collected	Result	LN(Result)
4/27/2023	3.32E+01	3.50E+00
7/27/2023	3.18E+01	3.46E+00
10/17/2023	3.45E+01	3.54E+00
1/30/2024	3.16E+01	3.45E+00
4/16/2024	3.41E+01	3.53E+00
7/24/2024	3.32E+01	3.50E+00
10/15/2024	3.29E+01	3.49E+00
1/29/2025	3.36E+01	3.51E+00

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

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, $S = [\text{Sum}([(background\ result - X)^2]/[\text{count of background results} - 1])]^{0.5}$

TL Upper Tolerance Limit, $TL = X + (K * S)$, LL Lower Tolerance Limit, $LL = X - (K * S)$

X Mean, $X = (\text{sum of background results})/(\text{count of background results})$

** 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-S/T Second Quarter 2025 Statistical Analysis	Current Background Comparison
Sulfate	UNITS: mg/L
	URGA

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is statistically significant evidence of elevated concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	X= 14.881	S= 3.581	CV(1)=0.241	K factor**= 2.523	TL(1)= 2.39E+01	LL(1)=N/A
Statistics-Transformed Background Data	X= 2.674	S= 0.233	CV(2)=0.087	K factor**= 2.523	TL(2)= 3.26E+00	LL(2)=N/A

Current 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: MW220

Date Collected	Result	LN(Result)
5/1/2023	2.00E+01	3.00E+00
7/31/2023	1.78E+01	2.88E+00
10/16/2023	1.55E+01	2.74E+00
1/29/2024	1.47E+01	2.69E+00
4/11/2024	1.86E+01	2.92E+00
7/24/2024	2.16E+01	3.07E+00
10/14/2024	1.66E+01	2.81E+00
1/29/2025	1.91E+01	2.95E+00

Well Number: MW394

Date Collected	Result	LN(Result)
4/27/2023	1.17E+01	2.46E+00
7/27/2023	1.22E+01	2.50E+00
10/17/2023	1.17E+01	2.46E+00
1/30/2024	1.16E+01	2.45E+00
4/16/2024	1.20E+01	2.48E+00
7/24/2024	1.17E+01	2.46E+00
10/15/2024	1.17E+01	2.46E+00
1/29/2025	1.16E+01	2.45E+00

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW220	Upgradient	Yes	2.22E+01	NO	3.10E+00	N/A
MW224	Sidegradient	Yes	2.10E+01	NO	3.04E+00	N/A
MW369	Downgradient	Yes	1.80E+01	NO	2.89E+00	N/A
MW372	Downgradient	Yes	1.61E+02	YES	5.08E+00	N/A
MW384	Sidegradient	Yes	1.94E+01	NO	2.97E+00	N/A
MW387	Downgradient	Yes	2.60E+01	YES	3.26E+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

MW372
MW387

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, $S = [\text{Sum}([(background\ result - X)^2]/[\text{count of background results} - 1])]^{0.5}$

TL Upper Tolerance Limit, $TL = X + (K * S)$, LL Lower Tolerance Limit, $LL = X - (K * S)$

X Mean, $X = (\text{sum of background results})/(\text{count of background results})$

** 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-S/T Second 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= 10.004	S= 6.345	CV(1)=0.634	K factor**= 2.523	TL(1)= 2.60E+01	LL(1)=N/A

Statistics-Transformed Background Data	X= 1.922	S= 1.220	CV(2)=0.635	K factor**= 2.523	TL(2)= 5.00E+00	LL(2)=N/A

Current 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: MW220

Date Collected	Result	LN(Result)
5/1/2023	1.13E+01	2.42E+00
7/28/2023	1.91E+01	2.95E+00
10/16/2023	1.58E+01	2.76E+00
1/29/2024	2.00E+01	3.00E+00
4/11/2024	1.64E+01	2.80E+00
7/24/2024	2.79E+00	1.03E+00
10/14/2024	1.48E+01	2.69E+00
1/29/2025	8.02E+00	2.08E+00

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW384	Sidegradient	Yes	4.13E+01	YES	3.72E+00	N/A
MW387	Downgradient	Yes	4.29E+01	YES	3.76E+00	N/A

Well Number: MW394

Date Collected	Result	LN(Result)
4/27/2023	6.79E+00	1.92E+00
7/27/2023	4.32E+00	1.46E+00
10/17/2023	1.63E+01	2.79E+00
1/30/2024	2.34E+00	8.50E-01
4/16/2024	5.85E+00	1.77E+00
7/24/2024	6.82E+00	1.92E+00
10/15/2024	1.47E-01	-1.92E+00
1/29/2025	9.28E+00	2.23E+00

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

MW384
MW387

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, $S = [\text{Sum}([(background\ result - X)^2]/[\text{count of background results} - 1])]^{0.5}$

TL Upper Tolerance Limit, $TL = X + (K * S)$, LL Lower Tolerance Limit, $LL = X - (K * S)$

X Mean, $X = (\text{sum of background results})/(\text{count of background results})$

** 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-S/T Second Quarter 2025 Statistical Analysis	Current Background Comparison
Calcium	UNITS: mg/L
	LRGA

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is statistically significant evidence of elevated concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	X= 23.563	S= 5.030	CV(1)=0.213	K factor**= 2.523	TL(1)= 3.63E+01	LL(1)=N/A

Statistics-Transformed Background Data	X= 3.137	S= 0.220	CV(2)=0.070	K factor**= 2.523	TL(2)= 3.69E+00	LL(2)=N/A

Current 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: MW395

Date Collected	Result	LN(Result)
4/27/2023	2.71E+01	3.30E+00
7/27/2023	2.62E+01	3.27E+00
10/18/2023	2.78E+01	3.33E+00
1/30/2024	2.66E+01	3.28E+00
4/16/2024	2.78E+01	3.33E+00
7/24/2024	2.69E+01	3.29E+00
10/15/2024	2.74E+01	3.31E+00
1/29/2025	2.79E+01	3.33E+00

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW373	Downgradient	Yes	8.69E+01	YES	4.46E+00	N/A

Well Number: MW397

Date Collected	Result	LN(Result)
5/1/2023	1.87E+01	2.93E+00
7/27/2023	1.76E+01	2.87E+00
10/16/2023	1.86E+01	2.92E+00
1/30/2024	1.73E+01	2.85E+00
4/15/2024	1.89E+01	2.94E+00
7/22/2024	1.84E+01	2.91E+00
10/16/2024	1.80E+01	2.89E+00
1/29/2025	3.18E+01	3.46E+00

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

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, $S = [\text{Sum}([(background\ result - X)^2]/[\text{count of background results} - 1])]^{0.5}$

TL Upper Tolerance Limit, $TL = X + (K * S)$, LL Lower Tolerance Limit, $LL = X - (K * S)$

X Mean, $X = (\text{sum of background results})/(\text{count of background results})$

** 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-S/T Second Quarter 2025 Statistical Analysis	Current Background Comparison
Conductivity	UNITS: umho/cm
	LRGA

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is statistically significant evidence of elevated concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	X= 359.813 S= 40.871	CV(1)=0.114	K factor**= 2.523	TL(1)= 4.63E+02	LL(1)=N/A

Statistics-Transformed Background Data	X= 5.879 S= 0.115	CV(2)=0.020	K factor**= 2.523	TL(2)= 6.17E+00	LL(2)=N/A

Current 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: MW395

Date Collected	Result	LN(Result)
4/27/2023	4.05E+02	6.00E+00
7/27/2023	3.85E+02	5.95E+00
10/18/2023	3.83E+02	5.95E+00
1/30/2024	3.88E+02	5.96E+00
4/16/2024	4.01E+02	5.99E+00
7/24/2024	3.91E+02	5.97E+00
10/15/2024	3.84E+02	5.95E+00
1/29/2025	3.87E+02	5.96E+00

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW373	Downgradient	Yes	1.00E+03	YES	6.91E+00	N/A

Well Number: MW397

Date Collected	Result	LN(Result)
5/1/2023	3.20E+02	5.77E+00
7/27/2023	3.19E+02	5.77E+00
10/16/2023	3.09E+02	5.73E+00
1/30/2024	3.17E+02	5.76E+00
4/15/2024	3.14E+02	5.75E+00
7/22/2024	3.18E+02	5.76E+00
10/16/2024	4.20E+02	6.04E+00
1/29/2025	3.16E+02	5.76E+00

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

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, $S = [\text{Sum}([(background\ result - X)^2]/[\text{count of background results} - 1])]^{0.5}$

TL Upper Tolerance Limit, $TL = X + (K * S)$, LL Lower Tolerance Limit, $LL = X - (K * S)$

X Mean, $X = (\text{sum of background results})/(\text{count of background results})$

** 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-S/T Second Quarter 2025 Statistical Analysis	Current Background Comparison
Dissolved Solids	UNITS: mg/L
	LRGA

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is statistically significant evidence of elevated concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	X= 176.000	S= 24.419	CV(1)=0.139	K factor**= 2.523	TL(1)= 2.38E+02	LL(1)=N/A

Statistics-Transformed Background Data	X= 5.161	S= 0.141	CV(2)=0.027	K factor**= 2.523	TL(2)= 5.52E+00	LL(2)=N/A

Current 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: MW395

Date Collected	Result	LN(Result)
4/27/2023	1.94E+02	5.27E+00
7/27/2023	1.88E+02	5.24E+00
10/18/2023	1.76E+02	5.17E+00
1/30/2024	2.07E+02	5.33E+00
4/16/2024	2.02E+02	5.31E+00
7/24/2024	2.14E+02	5.37E+00
10/15/2024	2.09E+02	5.34E+00
1/29/2025	1.78E+02	5.18E+00

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW373	Downgradient	Yes	6.35E+02	YES	6.45E+00	N/A

Well Number: MW397

Date Collected	Result	LN(Result)
5/1/2023	1.28E+02	4.85E+00
7/27/2023	1.52E+02	5.02E+00
10/16/2023	1.65E+02	5.11E+00
1/30/2024	1.61E+02	5.08E+00
4/15/2024	1.66E+02	5.11E+00
7/22/2024	1.60E+02	5.08E+00
10/16/2024	1.64E+02	5.10E+00
1/29/2025	1.52E+02	5.02E+00

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

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, $S = [\text{Sum}([(background\ result - X)^2]/[\text{count of background results} - 1])]^{0.5}$

TL Upper Tolerance Limit, $TL = X + (K * S)$, LL Lower Tolerance Limit, $LL = X - (K * S)$

X Mean, $X = (\text{sum of background results})/(\text{count of background results})$

** 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-S/T Second 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= 9.860	S= 2.209	CV(1)=0.224	K factor**= 2.523	TL(1)= 1.54E+01	LL(1)=N/A
Statistics-Transformed Background Data	X= 2.265	S= 0.227	CV(2)=0.100	K factor**= 2.523	TL(2)= 2.84E+00	LL(2)=N/A

Current 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: MW395

Date Collected	Result	LN(Result)
4/27/2023	1.14E+01	2.43E+00
7/27/2023	1.05E+01	2.35E+00
10/18/2023	1.15E+01	2.44E+00
1/30/2024	1.08E+01	2.38E+00
4/16/2024	1.16E+01	2.45E+00
7/24/2024	1.13E+01	2.42E+00
10/15/2024	1.15E+01	2.44E+00
1/29/2025	1.18E+01	2.47E+00

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW373	Downgradient	Yes	3.16E+01	YES	3.45E+00	N/A

Well Number: MW397

Date Collected	Result	LN(Result)
5/1/2023	7.95E+00	2.07E+00
7/27/2023	7.07E+00	1.96E+00
10/16/2023	7.83E+00	2.06E+00
1/30/2024	7.49E+00	2.01E+00
4/15/2024	7.73E+00	2.05E+00
7/22/2024	7.52E+00	2.02E+00
10/16/2024	7.57E+00	2.02E+00
1/29/2025	1.42E+01	2.65E+00

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

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, $S = [\text{Sum}([(background\ result - X)^2]/[\text{count of background results} - 1])]^{0.5}$

TL Upper Tolerance Limit, $TL = X + (K * S)$, LL Lower Tolerance Limit, $LL = X - (K * S)$

X Mean, $X = (\text{sum of background results})/(\text{count of background results})$

** 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-S/T Second Quarter 2025 Statistical Analysis	Current Background Comparison
Oxidation-Reduction Potential	UNITS: mV
	LRGA

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is statistically significant evidence of elevated concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	X= 401.688 S= 85.973	CV(1)=0.214	K factor***= 2.523	TL(1)= 6.19E+02	LL(1)=N/A

Statistics-Transformed Background Data	X= 5.970 S= 0.249	CV(2)=0.042	K factor***= 2.523	TL(2)= 6.60E+00	LL(2)=N/A

Current 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: MW395

Date Collected	Result	LN(Result)
4/27/2023	1.90E+02	5.25E+00
7/27/2023	3.02E+02	5.71E+00
10/18/2023	4.09E+02	6.01E+00
1/30/2024	5.09E+02	6.23E+00
4/16/2024	3.99E+02	5.99E+00
7/24/2024	3.93E+02	5.97E+00
10/15/2024	4.60E+02	6.13E+00
1/29/2025	3.84E+02	5.95E+00

Well Number: MW397

Date Collected	Result	LN(Result)
5/1/2023	4.76E+02	6.17E+00
7/27/2023	4.05E+02	6.00E+00
10/16/2023	4.87E+02	6.19E+00
1/30/2024	5.40E+02	6.29E+00
4/15/2024	3.74E+02	5.92E+00
7/22/2024	3.97E+02	5.98E+00
10/16/2024	3.13E+02	5.75E+00
1/29/2025	3.89E+02	5.96E+00

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW370	Downgradient	Yes	4.04E+02	NO	6.00E+00	N/A
MW373	Downgradient	Yes	4.14E+02	NO	6.03E+00	N/A
MW385	Sidegradient	Yes	5.14E+02	NO	6.24E+00	N/A
MW388	Downgradient	Yes	5.03E+02	NO	6.22E+00	N/A
MW392	Downgradient	Yes	5.03E+02	NO	6.22E+00	N/A
MW395	Upgradient	Yes	4.80E+02	NO	6.17E+00	N/A
MW397	Upgradient	Yes	4.23E+02	NO	6.05E+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, $S = [\text{Sum}([(background\ result - X)^2]/[\text{count of background results} - 1])]^{0.5}$

TL Upper Tolerance Limit, $TL = X + (K * S)$, LL Lower Tolerance Limit, $LL = X - (K * S)$

X Mean, $X = (\text{sum of background results})/(\text{count of background results})$

** 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-S/T Second Quarter 2025 Statistical Analysis	Current 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 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= 35.344	S= 17.101	CV(1)=0.484	K factor**= 2.523	TL(1)= 7.85E+01	LL(1)=N/A
Statistics-Transformed Background Data	X= 3.508	S= 0.295	CV(2)=0.084	K factor**= 2.523	TL(2)= 4.25E+00	LL(2)=N/A

Current 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: MW395

Date Collected	Result	LN(Result)
4/27/2023	3.10E+01	3.43E+00
7/27/2023	2.85E+01	3.35E+00
10/18/2023	3.06E+01	3.42E+00
1/30/2024	2.92E+01	3.37E+00
4/16/2024	3.14E+01	3.45E+00
7/24/2024	3.08E+01	3.43E+00
10/15/2024	3.06E+01	3.42E+00
1/29/2025	3.11E+01	3.44E+00

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW373	Downgradient	Yes	7.53E+01	NO	4.32E+00	N/A

Well Number: MW397

Date Collected	Result	LN(Result)
5/1/2023	3.57E+01	3.58E+00
7/27/2023	3.00E+01	3.40E+00
10/16/2023	3.15E+01	3.45E+00
1/30/2024	3.00E+01	3.40E+00
4/15/2024	3.19E+01	3.46E+00
7/22/2024	3.23E+01	3.48E+00
10/16/2024	3.17E+01	3.46E+00
1/29/2025	9.92E+01	4.60E+00

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, $S = [\text{Sum}([(background\ result - X)^2]/[\text{count of background results} - 1])]^{0.5}$

TL Upper Tolerance Limit, $TL = X + (K * S)$, LL Lower Tolerance Limit, $LL = X - (K * S)$

X Mean, $X = (\text{sum of background results})/(\text{count of background results})$

** 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-S/T Second Quarter 2025 Statistical Analysis	Current Background Comparison
Sulfate	LRGA
UNITS: mg/L	

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is statistically significant evidence of elevated concentration in that well. For pH only, the current test well results are compared to the TL and LL. If the test well result for pH exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Statistics-Background Data	X= 11.425	S= 0.364	CV(1)=0.032	K factor***= 2.523	TL(1)= 1.23E+01	LL(1)=N/A
Statistics-Transformed Background Data	X= 2.435	S= 0.032	CV(2)=0.013	K factor***= 2.523	TL(2)= 2.52E+00	LL(2)=N/A

Current 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: MW395

Date Collected	Result	LN(Result)
4/27/2023	1.10E+01	2.40E+00
7/27/2023	1.15E+01	2.44E+00
10/18/2023	1.10E+01	2.40E+00
1/30/2024	1.12E+01	2.42E+00
4/16/2024	1.13E+01	2.42E+00
7/24/2024	1.11E+01	2.41E+00
10/15/2024	1.10E+01	2.40E+00
1/29/2025	1.11E+01	2.41E+00

Well Number: MW397

Date Collected	Result	LN(Result)
5/1/2023	1.21E+01	2.49E+00
7/27/2023	1.21E+01	2.49E+00
10/16/2023	1.15E+01	2.44E+00
1/30/2024	1.16E+01	2.45E+00
4/15/2024	1.17E+01	2.46E+00
7/22/2024	1.18E+01	2.47E+00
10/16/2024	1.14E+01	2.43E+00
1/29/2025	1.14E+01	2.43E+00

Current Quarter Data

Well No.	Gradient	Detected?	Result	Result >TL(1)?	LN(Result)	LN(Result) >TL(2)
MW370	Downgradient	Yes	2.02E+01	YES	3.01E+00	N/A
MW373	Downgradient	Yes	2.25E+02	YES	5.42E+00	N/A
MW385	Sidegradient	Yes	1.99E+01	YES	2.99E+00	N/A
MW388	Downgradient	Yes	2.09E+01	YES	3.04E+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

MW370
MW373
MW385
MW388

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, $S = [\text{Sum}([(background\ result - X)^2]/[\text{count of background results} - 1])]^{0.5}$

TL Upper Tolerance Limit, $TL = X + (K * S)$, LL Lower Tolerance Limit, $LL = X - (K * S)$

X Mean, $X = (\text{sum of background results})/(\text{count of background results})$

** 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-S/T Second Quarter 2025 Statistical Analysis	Current Background Comparison
Technetium-99	LRGA
UNITS: pCi/L	

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= 10.716	S= 7.917	CV(1)=0.739	K factor**= 2.523	TL(1)= 3.07E+01	LL(1)=N/A

Statistics-Transformed Background Data	X= 2.069	S= 0.849	CV(2)=0.410	K factor**= 2.523	TL(2)= 4.21E+00	LL(2)=N/A

Current Background Data from Upgradient Wells with Transformed Result

Well Number: MW395

Date Collected	Result	LN(Result)
4/27/2023	2.51E+00	9.20E-01
7/27/2023	3.76E+00	1.32E+00
10/18/2023	1.64E+01	2.80E+00
1/30/2024	5.75E+00	1.75E+00
4/16/2024	2.17E+00	7.75E-01
7/24/2024	3.05E+00	1.12E+00
10/15/2024	1.07E+01	2.37E+00
1/29/2025	2.80E+00	1.03E+00

Well Number: MW397

Date Collected	Result	LN(Result)
5/1/2023	1.41E+01	2.65E+00
7/27/2023	2.77E+01	3.32E+00
10/16/2023	2.29E+01	3.13E+00
1/30/2024	1.08E+01	2.38E+00
4/15/2024	5.18E+00	1.64E+00
7/22/2024	9.13E+00	2.21E+00
10/16/2024	1.55E+01	2.74E+00
1/29/2025	1.90E+01	2.94E+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)
MW385	Sidegradient	Yes	4.42E+01	YES	3.79E+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

MW385

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, $S = [\text{Sum}([(background\ result - X)^2]/[\text{count of background results} - 1])]^{0.5}$

TL Upper Tolerance Limit, $TL = X + (K * S)$, LL Lower Tolerance Limit, $LL = X - (K * S)$

X Mean, $X = (\text{sum of background results})/(\text{count of background results})$

** 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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July 17, 2025

Mr. Dennis Greene
Four Rivers Nuclear Partnership, LLC
5511 Hobbs Road
Kevil, KY 42053

Dear Mr. Greene:

As an Environmental Scientist, with a bachelor's degree in Earth Sciences/Geology, I have over 30 years of experience in reviewing and assessing laboratory analytical results associated with environmental sampling and investigation activities. For the generation of these statistical analyses, my work was reviewed by a qualified independent technical reviewer with Four Rivers Nuclear Partnership, LLC.

For this project, the statistical analyses conducted on the second quarter 2025 monitoring well data collected from the C-746-S&T and C-746-U Landfills were performed in accordance with guidance provided in the U.S. Environmental Protection Agency guidance document, *EPA Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities, Interim Final Guidance* (1989).

Sincerely,


Bryan Smith

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APPENDIX E

GROUNDWATER FLOW RATE AND DIRECTION

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GROUNDWATER FLOW RATE AND DIRECTION

Whenever monitoring wells (MWs) are sampled, 401 KAR 48:300, Section 11, requires determination of groundwater flow rate and direction of flow in the uppermost aquifer. The uppermost aquifer below the C-746-S&T Landfills is the Regional Gravel Aquifer (RGA). Water level measurements currently are recorded in several wells at the landfill on a quarterly basis. These measurements were used to plot the potentiometric surface of the RGA for the second quarter 2025 and to determine the groundwater flow rate and direction.

Water levels during this reporting period were measured on April 21, 2025. As shown on Figure E.1, MW389, screened in the Upper Continental Recharge System (UCRS), is usually dry, while other UCRS wells have recordable water levels. During this reporting period, all UCRS wells (including MW389) contained sufficient water for measurement of the water level.

The UCRS has a strong vertical hydraulic gradient; therefore, the limited number of available UCRS wells, screened over different elevations, is not sufficient for mapping the potentiometric surface. Figure E.1 shows the location of UCRS MWs. The Upper Regional Gravel Aquifer (URGA) and Lower Regional Gravel Aquifer (LRGA) data were corrected for barometric pressure, if necessary, and converted to elevations to plot the potentiometric surface of the RGA, as a whole, as shown on Table E.1. Figure E.2 is a composite or average map of the URGA and LRGA elevations where well clusters exist. The contour lines are placed based on the average water level elevations of the clusters.¹ During April, RGA groundwater flow was directed inward and then south. Based on the site potentiometric map (Figure E.2), the hydraulic gradient beneath the landfill, as measured along the defined groundwater flow directions, is 5.76×10^{-4} ft/ft. Additional water level measurements in April (Figure E.3) document the vicinity groundwater hydraulic gradient for the RGA to be 2.70×10^{-4} ft/ft, southeastward. 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. 073-00045NWC1 and range from 4.25×10^2 to 7.25×10^2 ft/day (1.50×10^{-1} to 2.56×10^{-1} cm/s). RGA effective porosity is assumed to be 25%. Vicinity and site flow velocities were calculated using the low and high values for hydraulic conductivity, as shown in Table E.3.

Regional groundwater flow near the C-746-S&T Landfills typically trends northeastward toward the Ohio River. As demonstrated on the potentiometric map for April 2025, RGA groundwater flow from the landfill area was directed to the south. This inconsistency appears to be related to flooding on the Ohio River due to historic rainfall events. The Paducah Site and the Jackson Purchase region experienced a significant flood event on the Ohio River, beginning on April 1, 2025, and peaking on April 7–17, 2025. The high river stage was 333.61 ft on April 15, 2025, at Paducah, Kentucky. (The previous river stage had been 301.04 ft on March 31, 2025.) This sustained high river stage exceeded the potentiometric surface of the RGA from the Ohio River all the way back to the Paducah Site. Groundwater was unable to discharge to the Ohio River (because of the high river stage), and the RGA gradient (and groundwater flow direction) reversed for a period of approximately two weeks, which included the period of the groundwater level measurements on April 21, 2025.

¹ Additional 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), were used to contour the RGA potentiometric surface.

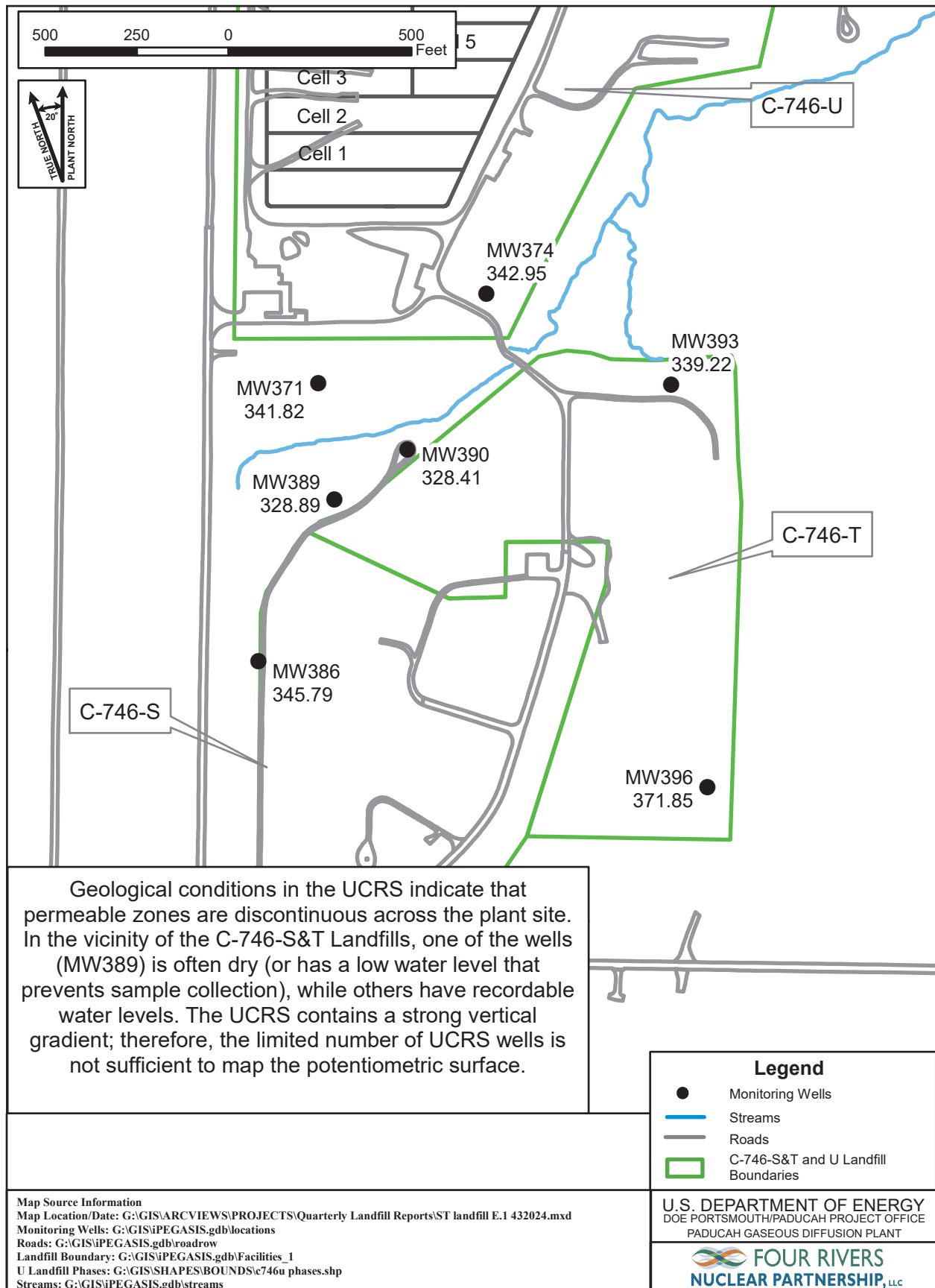


Figure E.1. Potentiometric Measurements of the Upper Continental Recharge System at the C-746-S&T Landfills, April 21, 2025

Table E.1. C-746-S&T Landfills Second Quarter 2025 (April) Water Levels

C-746-S&T Landfills (April 2025) Water Levels										
Date	Time	Well	Formation	Datum Elev (ft amsl)	BP (in Hg)	Delta BP (ft H2O)	Raw Data		*Corrected Data	
							DTW (ft)	Elev (ft amsl)	DTW (ft)	Elev (ft amsl)
4/21/2025	10:13	MW220	URGA	382.01	30.03	0.00	53.94	328.07	53.94	328.07
4/21/2025	10:06	MW221	URGA	391.38	30.03	0.00	63.00	328.38	63.00	328.38
4/21/2025	10:09	MW222	URGA	395.27	30.03	0.00	66.90	328.37	66.90	328.37
4/21/2025	10:08	MW223	URGA	394.38	30.03	0.00	66.05	328.33	66.05	328.33
4/21/2025	10:10	MW224	URGA	395.69	30.03	0.00	65.42	330.27	65.42	330.27
4/21/2025	10:15	MW225	URGA	385.73	30.03	0.00	57.70	328.03	57.70	328.03
4/21/2025	9:10	MW353	LRGA	375.05	30.01	0.02	47.60	327.45	47.62	327.43
4/21/2025	9:36	MW369	URGA	364.23	30.01	0.02	35.65	328.58	35.67	328.56
4/21/2025	9:38	MW370	LRGA	365.12	30.01	0.02	36.54	328.58	36.56	328.56
4/21/2025	9:37	MW371	UCRS	364.64	30.01	0.02	22.80	341.84	22.82	341.82
4/21/2025	9:32	MW372	URGA	359.42	30.01	0.02	30.90	328.52	30.92	328.50
4/21/2025	9:34	MW373	LRGA	359.73	30.01	0.02	31.20	328.53	31.22	328.51
4/21/2025	9:33	MW374	UCRS	359.44	30.01	0.02	16.47	342.97	16.49	342.95
4/21/2025	9:49	MW384	URGA	365.29	30.01	0.02	36.76	328.53	36.78	328.51
4/21/2025	9:51	MW385	LRGA	365.74	30.01	0.02	37.18	328.56	37.20	328.54
4/21/2025	9:50	MW386	UCRS	365.32	30.01	0.02	19.51	345.81	19.53	345.79
4/21/2025	9:47	MW387	URGA	363.48	30.01	0.02	34.98	328.50	35.00	328.48
4/21/2025	9:48	MW388	LRGA	363.45	30.01	0.02	34.94	328.51	34.96	328.49
4/21/2025	9:45	MW389	UCRS	364.11	30.01	0.02	35.20	328.91	35.22	328.89
4/21/2025	9:43	MW390	UCRS	360.39	30.01	0.02	31.96	328.43	31.98	328.41
4/21/2025	10:04	MW391	URGA	366.67	30.03	0.00	38.33	328.34	38.33	328.34
4/21/2025	10:02	MW392	LRGA	365.85	30.03	0.00	37.51	328.34	37.51	328.34
4/21/2025	10:03	MW393	UCRS	366.62	30.03	0.00	27.40	339.22	27.40	339.22
4/21/2025	9:55	MW394	URGA	378.46	30.03	0.00	50.95	327.51	50.95	327.51
4/21/2025	9:57	MW395	LRGA	379.12	30.03	0.00	51.00	328.12	51.00	328.12
4/21/2025	9:56	MW396	UCRS	378.75	30.03	0.00	6.90	371.85	6.90	371.85
4/21/2025	9:52	MW397	LRGA	387.00	30.01	0.02	58.96	328.04	58.98	328.02
4/21/2025	10:00	MW418	URGA	367.21	30.03	0.00	38.82	328.39	38.82	328.39
4/21/2025	10:01	MW419	LRGA	367.05	30.03	0.00	38.66	328.39	38.66	328.39
Reference Barometric Pressure			30.03							

Elev = elevation

amsl = above mean sea level

BP = barometric pressure

DTW = depth to water in feet below datum

URGA = Upper Regional Gravel Aquifer

LRGA = Lower Regional Gravel Aquifer

UCRS = Upper Continental Recharge System

*Assumes a barometric efficiency of 1.0

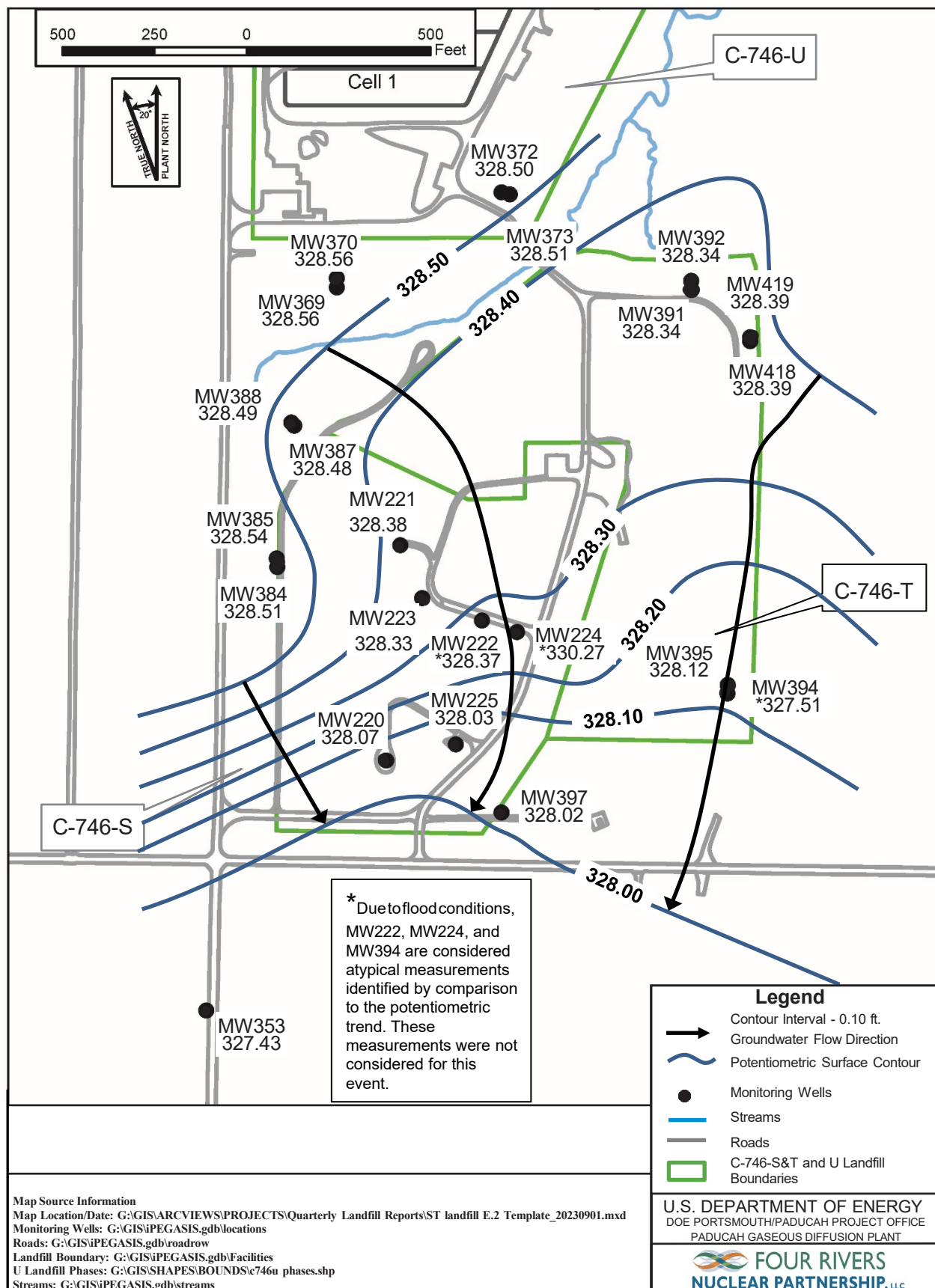


Figure E.2. Composite Potentiometric Surface of the Regional Gravel Aquifer at the C-746-S&T Landfills, April 21, 2025

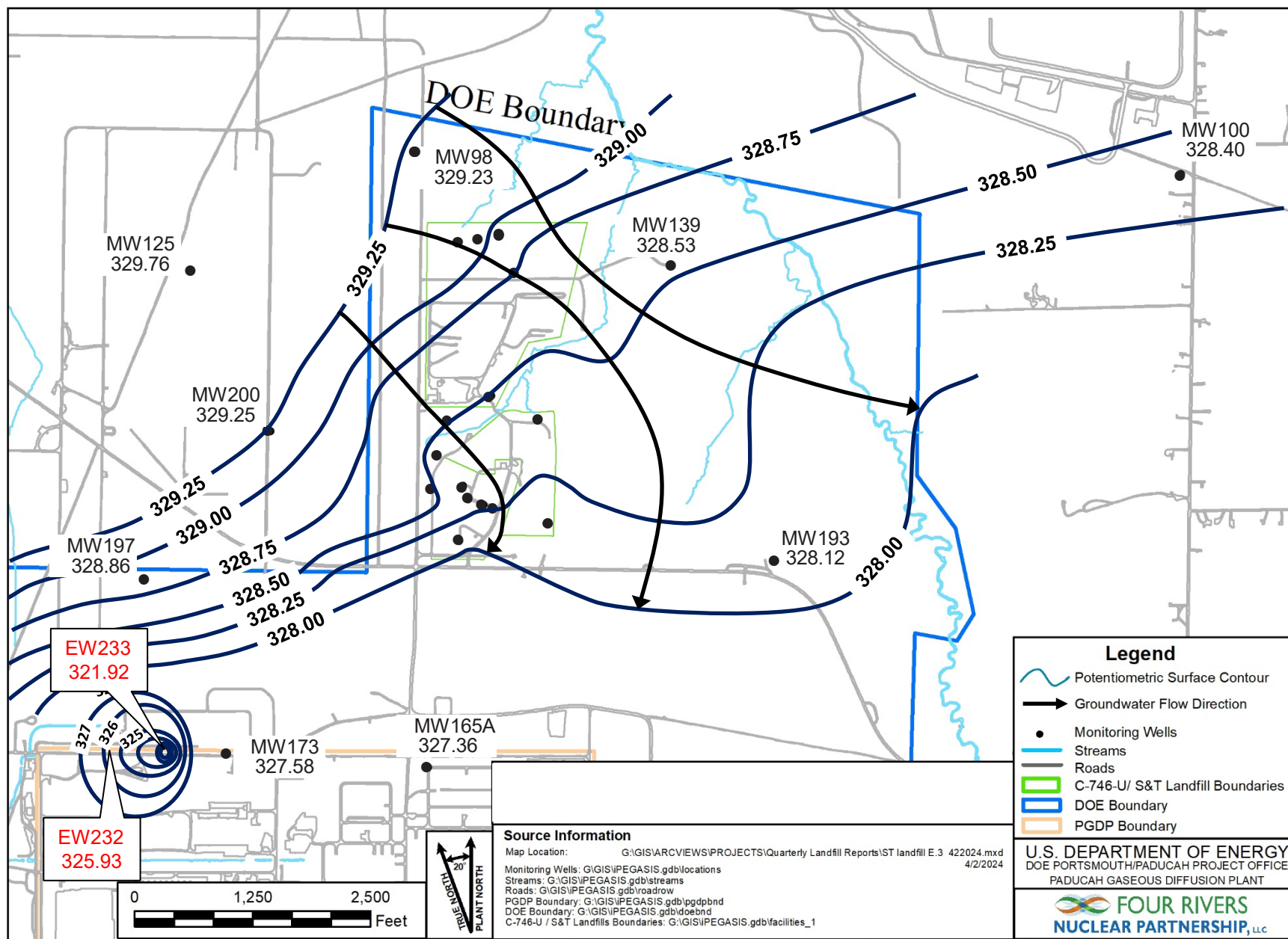


Figure E.3. Vicinity Potentiometric Surface of the Regional Gravel Aquifer, April 21, 2025

Table E.2. C-746-S&T Landfills Hydraulic Gradients

	ft/ft
Beneath Landfill Mound	-5.76×10^{-4}
Vicinity	-2.70×10^{-4}

Table E.3. C-746-S&T Landfills 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
<u>Beneath Landfill Mound</u>					
7.25×10^2	2.56×10^{-1}	4.17×10^{-1}	1.47×10^{-4}	1.67	5.89×10^{-4}
4.25×10^2	1.50×10^{-1}	2.45×10^{-1}	8.63×10^{-5}	9.78×10^{-1}	3.45×10^{-4}
<u>Vicinity</u>					
7.25×10^2	2.56×10^{-1}	1.96×10^{-1}	6.91×10^{-5}	7.83×10^{-1}	2.76×10^{-4}
4.25×10^2	1.50×10^{-1}	1.15×10^{-1}	4.05×10^{-5}	4.59×10^{-1}	1.62×10^{-4}

Table E.4. Regional Second Quarter 2025 (April) Water Levels

Regional (April 2025) Water Levels										
Date	Time	Well	Aquifer	Datum Elev (ft amsl)	BP (in Hg)	Delta BP (ft H2O)	Raw Data		*Corrected Data	
							DTW (ft)	Elev (ft amsl)	DTW (ft)	Elev (ft amsl)
4/21/2025	12:55	MW98	RGA	370.55	30.05	-0.02	41.34	329.21	41.32	329.23
4/21/2025	13:36	MW100	RGA	373.39	30.05	-0.02	45.01	328.38	44.99	328.40
4/21/2025	13:15	MW125	RGA	375.57	30.05	-0.02	45.83	329.74	45.81	329.76
4/21/2025	12:31	MW139	RGA	363.75	30.06	-0.03	35.25	328.50	35.22	328.53
4/21/2025	13:03	MW165A	RGA	380.94	30.05	-0.02	53.60	327.34	53.58	327.36
4/21/2025	14:05	MW173	RGA	373.63	30.05	-0.02	46.07	327.56	46.05	327.58
4/21/2025	13:30	MW193	RGA	368.30	30.05	-0.02	40.20	328.10	40.18	328.12
4/21/2025	13:22	MW197	RGA	368.39	30.05	-0.02	39.55	328.84	39.53	328.86
4/21/2025	13:10	MW200	RGA	378.70	30.05	-0.02	49.47	329.23	49.45	329.25
Reference Barometric Pressure			30.03							
Elev = elevation										
amsl = above mean sea level										
BP = barometric pressure										
DTW = depth to water in feet below datum										
URGA = Upper Regional Gravel Aquifer										
LRGA = Lower Regional Gravel Aquifer										
UCRS = Upper Continental Recharge System										
*Assumes a barometric efficiency of 1.0										

APPENDIX F
NOTIFICATIONS

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NOTIFICATIONS

In accordance with 401 *KAR* 48:300 § 7, the notification for parameters that exceed (or do not exceed) the maximum contaminant level (MCL) has been submitted to the Kentucky Division of Waste Management. The parameters are listed on page F-4. The notification for parameters that do not have MCLs but had statistically significant increased concentrations relative to historical background concentrations is provided below.

STATISTICAL ANALYSIS OF PARAMETERS NOTIFICATION

The statistical analyses conducted on the second quarter 2025 groundwater data collected from the C-746-S&T Landfills 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.

	<u>Parameter</u>	<u>Monitoring Well</u>
Upper Continental Recharge System	Technetium-99	MW390
Upper Regional Gravel Aquifer	Sodium	MW372
	Technetium-99	MW384, MW387
Lower Regional Gravel Aquifer	Sodium	MW373
	Technetium-99	MW385

NOTE: Although technetium-99 is not cited in 40 *CFR* § 302.4, Appendix A, this radionuclide is being reported along with the parameters of this regulation.

6/2/2025

**Four Rivers Nuclear Partnership, LLC
PROJECT ENVIRONMENTAL MEASUREMENTS SYSTEM
C-746-S&T LANDFILLS
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-S&T Landfills

Groundwater Flow System	UCRS					URGA										LRGA									
Gradient	S	D	D	D	U	S	S	S	S	S	D	D	D	D	U	U	S	D	D	D	U	U			
Monitoring Well	386	389	390	393	396	221	222	223	224	384	369	372	387	391	220	394	385	370	373	388	392	395	397		
ACETONE																									
Quarter 3, 2003							*					*													
Quarter 4, 2003											*								*						
Quarter 1, 2005								*																	
Quarter 4, 2019																*									
ALPHA ACTIVITY																									
Quarter 4, 2002				■	■								■												
Quarter 4, 2008											■														
Quarter 4, 2010											■														
ALUMINUM																									
Quarter 1, 2003			*				*					*	*	*											
Quarter 2, 2003			*				*					*	*	*											
Quarter 3, 2003			*				*	*				*	*	*											
Quarter 4, 2003							*	*			*		*	*											
Quarter 1, 2004			*				*	*			*														
Quarter 2, 2004							*							*											
Quarter 3, 2004							*							*											
Quarter 4, 2004			*																						
Quarter 1, 2005			*																						
Quarter 2, 2005			*				*																		
Quarter 3, 2005			*				*			*											*				
Quarter 4, 2005			*				*			*															
Quarter 1, 2006							*						*												
Quarter 2, 2006			*				*																		
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Quarter 4, 2006			*				*																		
Quarter 1, 2007							*										*								
Quarter 2, 2007							*										*								
Quarter 3, 2007							*																		
Quarter 4, 2007							*																		
Quarter 1, 2008							*						*												
Quarter 2, 2008											*			*											
Quarter 4, 2008							*																		
Quarter 1, 2009			*				*				*														
Quarter 1, 2010			*				*				*														
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Quarter 1, 2011							*				*														
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Quarter 4, 2014			*																						
Quarter 1, 2016							*																		
Quarter 2, 2016														*											
Quarter 1, 2017							*																		
Quarter 4, 2017																								*	
Quarter 1, 2018							*																		
Quarter 1, 2020													*												
BARIUM																									
Quarter 3, 2003							■	■																	
Quarter 4, 2003							■	■																	
BETA ACTIVITY																									
Quarter 4, 2002													■												
Quarter 1, 2003													■				■								

**Chart of MCL and Historical UTL Exceedances for the C-746-S&T Landfills
(Continued)**

Groundwater Flow System	UCRS					URGA										LRGA							
	S	D	D	D	U	S	S	S	S	S	D	D	D	D	U	U	S	D	D	D	D	U	U
Monitoring Well	386	389	390	393	396	221	222	223	224	384	369	372	387	391	220	394	385	370	373	388	392	395	397
BETA ACTIVITY																							
Quarter 2, 2003			■	■													■			■			
Quarter 3, 2003			■										■				■						
Quarter 4, 2003			■							■			■										
Quarter 1, 2004			■										■				■						
Quarter 2, 2004			■									■	■				■		■	■			
Quarter 3, 2004			■									■	■				■						
Quarter 4, 2004			■									■	■				■						
Quarter 1, 2005			■							■			■				■						
Quarter 2, 2005			■										■				■			■			
Quarter 3, 2005										■			■										
Quarter 4, 2005										■		■	■				■						
Quarter 1, 2006										■		■	■				■		■	■			
Quarter 2, 2006			■							■		■	■				■		■	■			
Quarter 3, 2006										■		■	■				■		■	■			
Quarter 4, 2006	■		■							■		■	■				■		■	■			
Quarter 1, 2007			■							■		■	■				■		■	■			
Quarter 2, 2007			■							■		■	■				■		■	■			
Quarter 3, 2007										■		■	■				■			■			
Quarter 4, 2007			■							■		■	■				■		■	■			
Quarter 1, 2008			■							■		■	■				■		■	■			
Quarter 2, 2008			■							■	■	■	■				■			■			
Quarter 3, 2008										■		■	■				■			■			
Quarter 4, 2008										■		■	■				■						
Quarter 1, 2009			■							■		■	■				■						
Quarter 2, 2009										■		■	■				■						
Quarter 3, 2009										■		■	■				■			■			
Quarter 4, 2009										■		■	■				■						
Quarter 1, 2010										■		■	■				■						
Quarter 2, 2010			■							■		■	■				■						
Quarter 3, 2010										■		■	■				■						
Quarter 4, 2010										■		■	■				■						
Quarter 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 4, 2016										■	■	■	■				■			■			
Quarter 1, 2017										■		■	■				■			■			
Quarter 2, 2017										■		■	■				■	■		■			
Quarter 3, 2017										■		■	■				■	■		■			
Quarter 4, 2017										■		■	■				■	■		■			
Quarter 1, 2018			■							■		■	■				■	■		■			
Quarter 2, 2018			■							■	■	■	■				■			■			
Quarter 3, 2018			■							■		■	■				■	■		■			

(Continued)

**Chart of MCL and Historical UTL Exceedances for the C-746-S&T Landfills
(Continued)**

Groundwater Flow System	UCRS					URGA										LRGA							
Gradient	S	D	D	D	U	S	S	S	S	S	D	D	D	D	U	U	S	D	D	D	D	U	U
Monitoring Well	386	389	390	393	396	221	222	223	224	384	369	372	387	391	220	394	385	370	373	388	392	395	397
CALCIUM																							
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												*		*					*				
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Quarter 4, 2019												*	*						*				
Quarter 1, 2020												*	*						*				
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Quarter 3, 2020												*	*						*				
Quarter 4, 2020												*	*						*				
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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												*							*				
CARBON DISULFIDE																							
Quarter 4, 2010											*												
Quarter 1, 2011												*									*		
Quarter 2, 2017												*	*						*				
CHEMICAL OXYGEN DEMAND																							
Quarter 1, 2003				*																			
Quarter 2, 2003				*																			
Quarter 3, 2003				*			*			*													
Quarter 4, 2003				*																			
Quarter 1, 2004	*			*																			
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Quarter 2, 2005	*																						
Quarter 3, 2005	*									*		*									*		
Quarter 4, 2005	*									*													
Quarter 1, 2006	*																						
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Quarter 3, 2006	*																						
Quarter 4, 2006																	*						
Quarter 1, 2007	*									*													
Quarter 2, 2007	*																						
Quarter 3, 2007	*																						
Quarter 4, 2007	*																						
Quarter 1, 2008	*																						
Quarter 2, 2008	*																						

**Chart of MCL and Historical UTL Exceedances for the C-746-S&T Landfills
(Continued)**

Groundwater Flow System	UCRS					URGA													LRGA									
Gradient	S	D	D	D	U	S	S	S	S	S	D	D	D	D	U	U	S	D	D	D	D	U	U					
Monitoring Well	386	389	390	393	396	221	222	223	224	384	369	372	387	391	220	394	385	370	373	388	392	395	397					
CHEMICAL OXYGEN DEMAND																												
Quarter 3, 2008	*																											
Quarter 4, 2008	*																											
Quarter 1, 2009	*																											
Quarter 2, 2009	*																			*								
Quarter 3, 2009	*																											
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Quarter 4, 2018																							*					
Quarter 2, 2019				*							*	*	*					*										
Quarter 3, 2019											*	*	*					*			*	*						
Quarter 4, 2019	*		*				*			*	*					*												
Quarter 1, 2020			*					*											*									
Quarter 2, 2020															*													
Quarter 4, 2020																*												
Quarter 1, 2021											*																	
Quarter 2, 2021				*											*													
Quarter 4, 2021	*																											
Quarter 1, 2022				*		*	*						*	*					*	*								
Quarter 2, 2022				*									*															
Quarter 4, 2022	*																											
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Quarter 2, 2024															*													
Quarter 3, 2024												*																
CHLORIDE																												
Quarter 1, 2003			*																									
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Quarter 1, 2008			*																									
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Quarter 4, 2008			*																									

**Chart of MCL and Historical UTL Exceedances for the C-746-S&T Landfills
(Continued)**

Groundwater Flow System	UCRS					URGA										LRGA									
Gradient	S	D	D	D	U	S	S	S	S	S	D	D	D	U	U	S	D	D	D	D	U	U			
Monitoring Well	386	389	390	393	396	221	222	223	224	384	369	372	387	391	220	394	385	370	373	388	392	395	397		
CHLORIDE																									
Quarter 1, 2009			*																						
Quarter 2, 2009			*																						
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Quarter 2, 2019																					*				
CHROMIUM																									
Quarter 4, 2002									■																
Quarter 1, 2003									■														■		
Quarter 2, 2003								■	■																
Quarter 3, 2009						■																			
Quarter 1, 2019						■																			
COBALT																									
Quarter 3, 2003								*																	
CONDUCTIVITY																									
Quarter 4, 2002										*									*						
Quarter 1, 2003			*							*									*						
Quarter 2, 2003			*							*									*						
Quarter 3, 2003			*					*		*									*						
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Quarter 4, 2011											*							*	*						
Quarter 1, 2012											*	*						*	*						
Quarter 2, 2012											*	*						*	*						
Quarter 3, 2012											*	*						*	*						

**Chart of MCL and Historical UTL Exceedances for the C-746-S&T Landfills
(Continued)**

Groundwater Flow System	UCRS					URGA										LRGA							
Gradient	S	D	D	D	U	S	S	S	S	S	D	D	D	D	U	U	S	D	D	D	D	U	U
Monitoring Well	386	389	390	393	396	221	222	223	224	384	369	372	387	391	220	394	385	370	373	388	392	395	397
CONDUCTIVITY																							
Quarter 4, 2012												*							*				
Quarter 1, 2013												*							*				
Quarter 2, 2013												*							*				
Quarter 3, 2013												*							*				
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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												*							*				
DISSOLVED OXYGEN																							
Quarter 3, 2006			*					*															
DISSOLVED SOLIDS																							
Quarter 4, 2002										*									*				
Quarter 1, 2003			*							*									*				
Quarter 2, 2003			*							*									*				
Quarter 3, 2003			*				*	*		*		*							*				
Quarter 4, 2003			*				*		*	*		*							*				
Quarter 1, 2004			*									*							*				
Quarter 2, 2004										*		*							*				
Quarter 3, 2004										*		*							*				
Quarter 4, 2004										*		*							*				
Quarter 1, 2005												*							*				
Quarter 2, 2005																			*				
Quarter 3, 2005																	*	*	*	*	*	*	
Quarter 4, 2005																	*	*	*	*	*	*	
Quarter 1, 2006																	*	*	*	*	*	*	
Quarter 2, 2006																	*	*	*	*	*	*	
Quarter 3, 2006																	*	*	*	*	*	*	
Quarter 4, 2006										*		*					*		*				
Quarter 1, 2007												*							*				
Quarter 2, 2007										*		*							*				
Quarter 3, 2007										*		*							*				
Quarter 4, 2007												*							*				

**Chart of MCL and Historical UTL Exceedances for the C-746-S&T Landfills
(Continued)**

Groundwater Flow System	UCRS					URGA										LRGA									
Gradient	S	D	D	D	U	S	S	S	S	S	D	D	D	U	U	S	D	D	D	U	U				
Monitoring Well	386	389	390	393	396	221	222	223	224	384	369	372	387	391	220	394	385	370	373	388	392	395	397		
DISSOLVED SOLIDS																									
Quarter 1, 2008												*							*						
Quarter 2, 2008												*							*						
Quarter 3, 2008												*							*						
Quarter 4, 2008										*		*							*						
Quarter 1, 2009												*							*						
Quarter 2, 2009												*	*						*						
Quarter 3, 2009												*	*						*						U
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 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 2, 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												*							*						
IODIDE																									
Quarter 4, 2002																						*			
Quarter 2, 2003							*																		
Quarter 3, 2003													*												
Quarter 1, 2004				*																					
Quarter 3, 2010																					*				
Quarter 2, 2013											*														

**Chart of MCL and Historical UTL Exceedances for the C-746-S&T Landfills
(Continued)**

Groundwater Flow System	UCRS					URGA										LRGA									
Gradient	S	D	D	D	U	S	S	S	S	S	D	D	D	D	U	U	S	D	D	D	D	U	U		
Monitoring Well	386	389	390	393	396	221	222	223	224	384	369	372	387	391	220	394	385	370	373	388	392	395	397		
IRON																									
Quarter 1, 2003							*				*	*		*											
Quarter 2, 2003											*	*	*	*											
Quarter 3, 2003							*	*	*	*	*	*													
Quarter 4, 2003											*														
Quarter 1, 2004											*														
Quarter 2, 2004											*	*													
Quarter 3, 2004											*														
Quarter 4, 2004											*														
Quarter 1, 2005												*													
Quarter 2, 2005											*	*													
Quarter 1, 2006							*																		
Quarter 2, 2006												*													
Quarter 3, 2006											*														
Quarter 1, 2007											*	*													
Quarter 2, 2007											*														
Quarter 2, 2008												*													
Quarter 3, 2008												*													
MAGNESIUM																									
Quarter 1, 2003			*																						
Quarter 2, 2003			*								*								*						
Quarter 3, 2003			*				*				*														
Quarter 4, 2003			*								*								*						
Quarter 1, 2004			*								*		*						*						
Quarter 2, 2004			*								*								*						
Quarter 3, 2004			*								*								*						
Quarter 4, 2004			*								*								*						
Quarter 1, 2005											*								*						
Quarter 2, 2005											*								*						
Quarter 3, 2005											*								*						
Quarter 4, 2005											*								*						
Quarter 1, 2006											*								*						
Quarter 2, 2006											*								*						
Quarter 3, 2006											*								*						
Quarter 4, 2006											*								*						
Quarter 1, 2007											*								*						
Quarter 2, 2007											*								*						
Quarter 3, 2007											*								*						
Quarter 4, 2007											*								*						
Quarter 1, 2008											*								*						
Quarter 2, 2008											*								*						
Quarter 3, 2008											*								*						
Quarter 4, 2008											*								*						
Quarter 1, 2009											*								*						
Quarter 2, 2009											*								*						
Quarter 3, 2009											*	*							*						
Quarter 4, 2009											*								*						
Quarter 1, 2010											*								*						
Quarter 2, 2010											*	*							*						
Quarter 3, 2010											*								*						
Quarter 4, 2010											*								*						
Quarter 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																		*	*						

**Chart of MCL and Historical UTL Exceedances for the C-746-S&T Landfills
(Continued)**

Groundwater Flow System	UCRS					URGA										LRGA							
Gradient	S	D	D	D	U	S	S	S	S	S	D	D	D	D	U	U	S	D	D	D	D	U	U
Monitoring Well	386	389	390	393	396	221	222	223	224	384	369	372	387	391	220	394	385	370	373	388	392	395	397
MAGNESIUM																							
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 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												*	*						*				
MANGANESE																							
Quarter 4, 2002																					*		
Quarter 3, 2003							*	*															
Quarter 4, 2003							*	*															
Quarter 1, 2004							*																
Quarter 2, 2004							*																
Quarter 4, 2004							*	*															
Quarter 1, 2005							*																
Quarter 3, 2005																					*		
Quarter 3, 2009	*																						
Quarter 1, 2022	*																						
OXIDATION-REDUCTION POTENTIAL																							
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 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			*	*		*	*	*	*			*						*	*	*	*		

**Chart of MCL and Historical UTL Exceedances for the C-746-S&T Landfills
(Continued)**

Groundwater Flow System	UCRS					URGA										LRGA							
Gradient	S	D	D	D	U	S	S	S	S	S	D	D	D	D	U	U	S	D	D	D	D	U	U
Monitoring Well	386	389	390	393	396	221	222	223	224	384	369	372	387	391	220	394	385	370	373	388	392	395	397
OXIDATION-REDUCTION POTENTIAL																							
Quarter 1, 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 4, 2016	*		*	*	*	*	*	*	*	*		*	*	*	*	*	*	*	*	*	*	*	*
Quarter 1, 2017	*		*	*	*	*	*	*	*	*		*	*	*	*	*	*	*	*	*	*	*	*
Quarter 2, 2017	*		*	*	*	*											*	*	*	*	*	*	*
Quarter 3, 2017	*		*	*	*	*											*	*	*	*	*	*	*
Quarter 4, 2017	*		*	*	*	*	*	*	*	*		*	*	*	*	*	*	*	*	*	*	*	*
Quarter 1, 2018	*		*	*	*	*											*	*	*	*	*	*	*
Quarter 2, 2018	*		*	*	*	*											*	*	*	*	*	*	*
Quarter 3, 2018	*		*	*	*	*	*	*	*	*							*	*	*	*	*	*	*
Quarter 4, 2018	*		*	*	*	*				*		*		*		*	*	*	*	*	*	*	*
Quarter 1, 2019	*		*	*	*	*	*	*	*	*		*		*	*	*	*	*	*	*	*	*	*
Quarter 2, 2019	*		*	*	*	*	*	*	*	*		*	*	*	*	*	*	*	*	*	*	*	*
Quarter 3, 2019	*		*	*	*	*	*	*	*	*		*	*	*	*	*	*	*	*	*	*	*	*
Quarter 4, 2019	*		*	*	*	*	*	*	*	*		*	*	*	*	*	*	*	*	*	*	*	*
Quarter 1, 2020	*		*	*	*	*	*	*	*	*		*	*	*	*	*	*	*	*	*	*	*	*
Quarter 2, 2020	*		*	*	*	*	*	*	*	*		*	*	*	*	*	*	*	*	*	*	*	*
Quarter 3, 2020	*		*	*	*	*	*	*	*	*		*	*	*	*	*	*	*	*	*	*	*	*
Quarter 4, 2020	*		*	*	*	*	*	*	*	*		*	*	*	*	*	*	*	*	*	*	*	*
Quarter 1, 2021	*		*	*	*	*	*	*	*	*		*	*	*	*	*	*	*	*	*	*	*	*
Quarter 2, 2021	*		*	*	*	*	*	*	*	*		*	*	*	*	*	*	*	*	*	*	*	*
Quarter 3, 2021	*		*	*	*	*	*	*	*	*		*	*	*	*	*	*	*	*	*	*	*	*
Quarter 4, 2021	*		*	*	*	*	*	*	*	*		*	*	*	*	*	*	*	*	*	*	*	*
Quarter 1, 2022	*		*	*	*	*	*	*	*	*		*	*	*	*	*	*	*	*	*	*	*	*
Quarter 2, 2022	*		*	*	*	*	*	*	*	*		*	*	*	*	*	*	*	*	*	*	*	*
Quarter 3, 2022	*		*	*	*	*	*	*	*	*		*	*	*	*	*	*	*	*	*	*	*	*
Quarter 4, 2022	*		*	*	*	*	*	*	*	*		*	*	*	*	*	*	*	*	*	*	*	*
Quarter 1, 2023	*		*	*	*	*	*	*	*	*		*	*	*	*	*	*	*	*	*	*	*	*
Quarter 2, 2023	*		*	*	*	*	*	*	*	*		*	*	*	*	*	*	*	*	*	*	*	*
Quarter 3, 2023	*		*	*	*	*	*	*	*	*		*	*	*	*	*	*	*	*	*	*	*	*
Quarter 4, 2023	*		*	*	*	*	*	*	*	*		*	*	*	*	*	*	*	*	*	*	*	*
Quarter 1, 2024	*		*	*	*	*	*	*	*	*		*	*	*	*	*	*	*	*	*	*	*	*
Quarter 2, 2024	*		*	*	*	*											*	*	*	*	*	*	*
Quarter 3, 2024	*		*	*	*	*	*	*	*	*		*	*	*	*	*	*	*	*	*	*	*	*
Quarter 4, 2024	*		*	*	*	*	*	*	*	*		*	*	*	*	*	*	*	*	*	*	*	*
Quarter 1, 2025	*		*	*	*	*	*	*	*	*		*	*	*	*	*	*	*	*	*	*	*	*
Quarter 2, 2025	*		*	*	*	*	*	*	*	*		*	*	*	*	*	*	*	*	*	*	*	*
PCB-1016							*	*	*	*		*					*						
Quarter 4, 2003							*	*	*	*		*					*						
Quarter 3, 2004										*		*											
Quarter 3, 2005							*			*		*											
Quarter 1, 2006										*		*											
Quarter 2, 2006										*		*											
Quarter 4, 2006										*		*											
Quarter 1, 2007										*	*												
Quarter 2, 2007										*		*											
Quarter 3, 2007										*		*											
Quarter 2, 2008										*	*												
Quarter 3, 2008										*		*											
Quarter 4, 2008										*		*											

**Chart of MCL and Historical UTL Exceedances for the C-746-S&T Landfills
(Continued)**

Groundwater Flow System	UCRS					URGA										LRGA									
Gradient	S	D	D	D	U	S	S	S	S	S	D	D	D	D	U	U	S	D	D	D	D	U	U		
Monitoring Well	386	389	390	393	396	221	222	223	224	384	369	372	387	391	220	394	385	370	373	388	392	395	397		
PCB-1016																									
Quarter 1, 2009											*														
Quarter 2, 2009											*														
Quarter 3, 2009											*														
Quarter 4, 2009											*														
Quarter 1, 2010											*														
Quarter 2, 2010											*														
Quarter 3, 2010											*														
Quarter 4, 2010											*														
PCB-1232																									
Quarter 1, 2011											*														
PCB-1248																									
Quarter 2, 2008												*													
PCB-1260																									
Quarter 2, 2006																		*							
pH																									
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 4, 2005										*								*							
Quarter 1, 2006																		*							
Quarter 2, 2006																		*							
Quarter 3, 2006																		*							
Quarter 3, 2007																		*							
Quarter 4, 2007																		*							
Quarter 4, 2008																		*							
Quarter 1, 2009																		*							
Quarter 1, 2011																		*							
Quarter 2, 2011											*														
Quarter 3, 2011											*														
Quarter 1, 2012														*											
Quarter 1, 2013										*			*					*							
Quarter 4, 2014																					*				
Quarter 2, 2016																		*	*						
POTASSIUM																									
Quarter 4, 2002																		*	*						
Quarter 3, 2004																			*						
Quarter 2, 2005																			*						
Quarter 3, 2005																			*						
Quarter 4, 2005																			*						
Quarter 2, 2006																			*						
Quarter 3, 2006																			*						
Quarter 4, 2006																			*						
Quarter 4, 2008																			*						
Quarter 3, 2012																			*						
Quarter 1, 2013																			*						
Quarter 2, 2013																			*						
Quarter 3, 2013																			*						
RADIUM-226																									
Quarter 4, 2002			*										*	*							*				
Quarter 2, 2004																			*						
Quarter 2, 2005									*																
Quarter 1, 2009											*														
Quarter 3, 2014									*			*													
Quarter 4, 2014			*							*								*							
Quarter 1, 2015			*				*			*		*						*							
Quarter 2, 2015			*				*			*		*						*							
Quarter 3, 2015			*																						

**Chart of MCL and Historical UTL Exceedances for the C-746-S&T Landfills
(Continued)**

Groundwater Flow System	UCRS					URGA										LRGA									
	S	D	D	D	U	S	S	S	S	S	D	D	D	D	U	U	S	D	D	D	D	U	U		
Monitoring Well	386	389	390	393	396	221	222	223	224	384	369	372	387	391	220	394	385	370	373	388	392	395	397		
RADIUM-226																									
Quarter 4, 2015					*	*									*		*					*	*		
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 4, 2018													*				*								
Quarter 1, 2020																	*								
Quarter 2, 2020															*										
Quarter 2, 2024																	*			*	*				
Quarter 3, 2024		*		*	*				*											*			*		
RADIUM-228																									
Quarter 2, 2005																									
Quarter 3, 2005																									
Quarter 4, 2005																									
Quarter 1, 2006																									
SELENIUM																									
Quarter 4, 2002																									
Quarter 1, 2003																									
Quarter 2, 2003																									
Quarter 3, 2003																									
Quarter 4, 2003																									
SODIUM																									
Quarter 4, 2002																			*		*				
Quarter 1, 2003				*					*	*	*														
Quarter 2, 2003			*						*	*	*		*												
Quarter 3, 2003						*	*		*	*	*														
Quarter 4, 2003						*			*	*	*														
Quarter 1, 2004									*	*	*			*											
Quarter 2, 2004									*	*	*														
Quarter 3, 2004									*	*	*														
Quarter 4, 2004									*	*	*														
Quarter 1, 2005									*	*	*								*		*				
Quarter 2, 2005									*	*	*								*		*				
Quarter 3, 2005									*	*	*								*		*				
Quarter 4, 2005									*	*	*														
Quarter 1, 2006									*	*	*														
Quarter 2, 2006									*	*	*														
Quarter 3, 2006									*	*	*	*							*		*				
Quarter 4, 2006									*	*	*						*								
Quarter 1, 2007									*	*	*	*													
Quarter 2, 2007									*	*	*														
Quarter 3, 2007									*	*	*														
Quarter 4, 2007									*	*	*														
Quarter 1, 2008									*	*	*														
Quarter 3, 2008									*	*	*	*													
Quarter 4, 2008									*	*	*														
Quarter 1, 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 4, 2011									*	*	*	*							*		*				
Quarter 1, 2012									*	*	*	*							*		*				
Quarter 3, 2012									*	*	*	*							*		*				
Quarter 4, 2012									*	*	*	*							*		*				

**Chart of MCL and Historical UTL Exceedances for the C-746-S&T Landfills
(Continued)**

Groundwater Flow System	UCRS					URGA										LRGA							
Gradient	S	D	D	D	U	S	S	S	S	S	D	D	D	D	U	U	S	D	D	D	D	U	U
Monitoring Well	386	389	390	393	396	221	222	223	224	384	369	372	387	391	220	394	385	370	373	388	392	395	397
SODIUM																							
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 2, 2016											*												
Quarter 3, 2016											*												*
Quarter 1, 2017										*	*		*					*					
Quarter 2, 2017									*	*	*								*				
Quarter 2, 2018													*										
Quarter 3, 2018														*									
Quarter 1, 2019													*										
Quarter 2, 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 4, 2023										*		*											
Quarter 1, 2024												*											
Quarter 2, 2024									*			*							*				
Quarter 3, 2024									*										*				
Quarter 4, 2024												*							*				
Quarter 1, 2025									*			*							*				*
Quarter 2, 2025												*							*				
STRONTIUM-90																							
Quarter 2, 2003										■													
Quarter 1, 2004										■													
SULFATE																							
Quarter 4, 2002																			*				
Quarter 1, 2003												*	*				*		*				
Quarter 2, 2003										*	*	*	*					*	*				
Quarter 3, 2003										*	*	*	*					*					
Quarter 4, 2003										*	*	*	*					*					
Quarter 1, 2004										*	*	*	*					*	*				
Quarter 2, 2004										*	*	*	*				*	*	*	*			
Quarter 3, 2004								*	*	*	*	*	*				*	*	*	*			
Quarter 4, 2004										*	*	*	*					*	*				
Quarter 1, 2005										*	*	*	*				*	*	*	*			
Quarter 2, 2005										*	*	*	*					*	*				
Quarter 3, 2005										*	*	*	*				*	*	*	*			
Quarter 4, 2005										*	*	*	*				*	*	*	*			
Quarter 1, 2006										*	*	*	*				*	*	*	*			
Quarter 2, 2006									*	*	*	*	*				*	*	*	*			
Quarter 3, 2006									*	*	*	*	*				*	*	*	*			
Quarter 4, 2006									*	*	*	*	*				*	*	*	*			
Quarter 1, 2007									*	*	*	*	*				*	*	*	*			
Quarter 2, 2007									*	*	*	*	*				*	*	*	*			
Quarter 3, 2007									*	*	*	*	*				*	*	*	*			
Quarter 4, 2007									*	*	*	*	*				*	*	*	*			
Quarter 1, 2008										*	*	*	*				*	*	*	*			
Quarter 2, 2008							*		*	*	*	*	*	*			*	*	*	*			
Quarter 3, 2008									*	*	*	*	*				*	*	*	*			
Quarter 4, 2008									*	*	*	*	*				*	*	*	*			
Quarter 1, 2009									*	*	*	*	*				*	*	*	*			
Quarter 2, 2009									*	*	*	*	*				*	*	*	*			
Quarter 3, 2009									*	*	*	*	*				*	*	*	*			
Quarter 4, 2009		*							*	*	*	*	*				*	*	*	*			
Quarter 1, 2010		*							*	*	*	*	*				*	*	*	*			

**Chart of MCL and Historical UTL Exceedances for the C-746-S&T Landfills
(Continued)**

Groundwater Flow System	UCRS					URGA										LRGA							
Gradient	S	D	D	D	U	S	S	S	S	S	D	D	D	D	U	U	S	D	D	D	D	U	U
Monitoring Well	386	389	390	393	396	221	222	223	224	384	369	372	387	391	220	394	385	370	373	388	392	395	397
SULFATE																							
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 4, 2016										*		*	*	*	*		*	*	*	*	*		
Quarter 1, 2017										*		*	*	*	*		*	*	*	*	*		
Quarter 2, 2017								*		*	*	*	*	*	*		*	*	*	*	*		
Quarter 3, 2017								*		*	*	*	*	*	*		*	*	*	*	*		
Quarter 4, 2017										*		*	*	*	*		*	*	*	*	*		
Quarter 1, 2018										*		*	*	*	*		*	*	*	*	*		
Quarter 2, 2018								*		*	*	*	*	*	*		*	*	*	*	*		
Quarter 3, 2018								*		*	*	*	*	*	*		*	*	*	*	*		
Quarter 4, 2018										*		*	*	*	*		*	*	*	*	*		
Quarter 1, 2019								*		*	*	*	*	*	*		*	*	*	*	*		
Quarter 2, 2019								*		*	*	*	*	*	*		*	*	*	*	*		
Quarter 3, 2019			*					*		*	*	*	*	*	*		*	*	*	*	*	*	
Quarter 4, 2019			*							*	*	*	*	*	*		*	*	*	*	*	*	
Quarter 1, 2020								*		*	*	*	*	*	*		*	*	*	*	*	*	
Quarter 2, 2020								*		*	*	*	*	*	*		*	*	*	*	*	*	
Quarter 3, 2020			*							*	*	*	*	*	*		*	*	*	*	*	*	
Quarter 4, 2020										*	*	*	*	*	*		*	*	*	*	*	*	
Quarter 1, 2021										*	*	*	*	*	*		*	*	*	*	*	*	
Quarter 2, 2021								*		*	*	*	*	*	*		*	*	*	*	*	*	
Quarter 3, 2021										*	*	*	*	*	*		*	*	*	*	*	*	
Quarter 4, 2021										*	*	*	*	*	*		*	*	*	*	*	*	
Quarter 1, 2022										*	*	*	*	*	*		*	*	*	*	*	*	
Quarter 2, 2022										*	*	*	*	*	*		*	*	*	*	*	*	
Quarter 3, 2022			*							*	*	*	*	*	*		*	*	*	*	*	*	
Quarter 4, 2022										*	*	*	*	*	*		*	*	*	*	*	*	
Quarter 1, 2023										*	*	*	*	*	*		*	*	*	*	*	*	
Quarter 2, 2023										*	*	*	*	*	*	*		*	*	*	*	*	
Quarter 3, 2023										*	*	*	*	*	*	*		*	*	*	*	*	
Quarter 4, 2023										*	*	*	*	*	*		*	*	*	*	*	*	
Quarter 1, 2024										*	*	*	*	*	*		*	*	*	*	*	*	
Quarter 2, 2024										*	*	*	*	*	*	*		*	*	*	*	*	
Quarter 3, 2024										*	*	*	*	*	*	*		*	*	*	*	*	
Quarter 4, 2024										*	*	*	*	*	*	*		*	*	*	*	*	
Quarter 1, 2025										*	*	*	*	*	*	*		*	*	*	*	*	
Quarter 2, 2025										*	*	*	*	*	*	*		*	*	*	*	*	
TECHNETIUM-99																							
Quarter 4, 2002																			*				
Quarter 1, 2003														*			*		*				
Quarter 2, 2003	*		*							*			*				*		*				
Quarter 3, 2003			*									*					*		*	*			
Quarter 4, 2003			*							*		*	*				*		*	*	*		
Quarter 1, 2004			*									*	*				*		*	*	*		
Quarter 2, 2004			*									*	*				*		*	*	*		
Quarter 3, 2004			*									*	*				*		*	*	*		
Quarter 4, 2004			*							*		*	*				*	*	*	*	*		
Quarter 1, 2005			*							*		*	*				*		*	*	*		
Quarter 2, 2005			*							*		*	*				*	*	*	*	*		
Quarter 3, 2005			*							*		*	*				*	*	*	*	*		
Quarter 4, 2005			*							*		*	*				*	*	*	*	*		

**Chart of MCL and Historical UTL Exceedances for the C-746-S&T Landfills
(Continued)**

Groundwater Flow System	UCRS					URGA												LRGA							
Gradient	S	D	D	D	U	S	S	S	S	S	D	D	D	D	U	U	S	D	D	D	D	U	U		
Monitoring Well	386	389	390	393	396	221	222	223	224	384	369	372	387	391	220	394	385	370	373	388	392	395	397		
TECHNETIUM-99																									
Quarter 1, 2006										*		*	*						*	*					
Quarter 2, 2006			*							*		*	*				*	*	*	*					
Quarter 3, 2006			*							*		*	*				*	*	*	*					
Quarter 4, 2006	*									*		*	*						*	*					
Quarter 1, 2007			*							*		*	*				*		*	*					
Quarter 2, 2007			*							*		*	*				*	*	*	*					
Quarter 3, 2007			*							*	*	*	*				*		*	*					
Quarter 4, 2007			*							*		*	*				*		*	*					
Quarter 1, 2008			*							*		*	*				*	*	*	*					
Quarter 2, 2008			*							*	*		*				*		*	*					
Quarter 3, 2008										*		*	*				*			*					
Quarter 4, 2008			*							*		*	*				*	*	*	*					
Quarter 1, 2009			*							*		*	*				*								
Quarter 2, 2009			*							*		*	*				*	*		*					
Quarter 3, 2009			*							*	*	*	*				*			*					
Quarter 4, 2009			*							*		*	*				*								
Quarter 1, 2010			*							*		*	*				*								
Quarter 2, 2010			*							*		*	*				*	*		*					
Quarter 3, 2010			*							*	*	*	*				*								
Quarter 4, 2010			*							*		*	*				*								
Quarter 1, 2011										*		*	*				*								
Quarter 2, 2011			*							*		*	*				*			*					
Quarter 3, 2011			*							*		*	*				*			*					
Quarter 4, 2011			*							*	*	*	*				*								
Quarter 1, 2012			*							*		*	*				*			*					
Quarter 2, 2012			*							*		*	*				*		*	*					
Quarter 3, 2012			*							*		*	*				*								
Quarter 4, 2012										*		*	*				*		*	*					
Quarter 1, 2013										*		*	*				*		*	*					
Quarter 2, 2013										*		*	*				*		*	*					
Quarter 3, 2013			*							*		*	*				*		*	*					
Quarter 4, 2013			*							*		*	*				*		*	*					
Quarter 1, 2014			*							*	*	*	*				*		*	*					
Quarter 2, 2014			*							*	*	*	*	*			*		*	*					
Quarter 3, 2014			*							*		*	*				*		*	*					
Quarter 4, 2014			*							*	*	*	*				*		*	*					
Quarter 1, 2015			*							*	*	*	*				*		*	*					
Quarter 2, 2015			*							*	*	*	*				*		*	*					
Quarter 3, 2015			*							*	*	*	*				*	*	*	*					
Quarter 4, 2015			*							*	*	*	*				*	*	*	*					
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			*							*	*	*	*				*	*	*	*					

**Chart of MCL and Historical UTL Exceedances for the C-746-S&T Landfills
(Continued)**

Groundwater Flow System	UCRS						URGA												LRGA							
Gradient	S	D	D	D	U		S	S	S	S	S	D	D	D	U	U			S	D	D	D	U	U		
Monitoring Well	386	389	390	393	396	221	222	223	224	384	369	372	387	391	220	394			385	370	373	388	392	395	397	
TECHNETIUM-99																										
Quarter 1, 2022			*								*	*	*	*					*							
Quarter 2, 2022			*								*	*	*	*					*			*				
Quarter 3, 2022			*								*	*	*	*												
Quarter 4, 2022			*								*	*	*	*					*			*				
Quarter 1, 2023											*	*	*	*												
Quarter 2, 2023			*								*	*	*	*					*							
Quarter 3, 2023			*								*	*	*	*					*							
Quarter 4, 2023											*	*	*	*					*							
Quarter 1, 2024											*	*	*	*												
Quarter 2, 2024											*	*	*	*												
Quarter 3, 2024			*								*	*	*	*					*							
Quarter 4, 2024			*								*	*	*	*					*							
Quarter 1, 2025			*								*	*	*	*					*			*				
Quarter 2, 2025			*								*		*	*					*							
THORIUM-230																										
Quarter 1, 2012	*									*				*												
Quarter 4, 2014	*		*																							
Quarter 3, 2015	*									*	*		*	*	*											
Quarter 1, 2017			*							*									*							
Quarter 4, 2024	*												*									*				
THORIUM-234																										
Quarter 2, 2003						*				*				*												
Quarter 4, 2007										*																
TOLUENE																										
Quarter 2, 2014										*	*		*													
TOTAL ORGANIC CARBON																										
Quarter 4, 2002																								*		
Quarter 1, 2003				*						*	*								*	*		*		*		
Quarter 2, 2003										*	*	*	*	*									*			
Quarter 3, 2003							*	*	*	*	*	*	*	*												
Quarter 4, 2003							*		*	*	*	*	*	*												
Quarter 1, 2004										*																
Quarter 2, 2004										*	*															
Quarter 3, 2004										*																
Quarter 4, 2004										*																
Quarter 1, 2005										*																
Quarter 2, 2005										*													*			
Quarter 3, 2005										*		*											*			
Quarter 4, 2005										*													*			
Quarter 1, 2006										*																
Quarter 2, 2006										*		*														
Quarter 4, 2006																			*							
Quarter 1, 2007	*									*																
Quarter 3, 2007	*					*	*	*	*	*			*	*					*							
Quarter 2, 2011										*																
Quarter 3, 2012	*																									
Quarter 3, 2016																					*					
TOTAL ORGANIC HALIDES																										
Quarter 4, 2002																			*	*		*				
Quarter 1, 2003				*															*			*		*		
Quarter 3, 2003				*																		*		*		
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 4, 2006																			*							
Quarter 1, 2007	*																									
Quarter 2, 2007	*																									
Quarter 3, 2007	*																									
Quarter 4, 2007	*																						*			
Quarter 1, 2008	*																									
Quarter 4, 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	*																									

**Chart of MCL and Historical UTL Exceedances for the C-746-S&T Landfills
(Continued)**

[illegible]

**Chart of MCL and Historical UTL Exceedances for the C-746-S&T Landfills
(Continued)**

Groundwater Flow System	UCRS					URGA										LRGA									
Gradient	S	D	D	D	U	S	S	S	S	S	D	D	D	D	U	U	S	D	D	D	D	U	U		
Monitoring Well	386	389	390	393	396	221	222	223	224	384	369	372	387	391	220	394	385	370	373	388	392	395	397		
TRICHLOROETHENE																									
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 3, 2024																							■		
TURBIDITY																									
Quarter 4, 2002																						*			
Quarter 1, 2003							*					*		*											
URANIUM																									
Quarter 4, 2002																		*	*						
Quarter 1, 2003																			*						
Quarter 4, 2003							*													*					
Quarter 1, 2004							*	*	*					*				*							
Quarter 4, 2004																		*							
Quarter 4, 2006																			*		*				
ZINC																									
Quarter 3, 2003												*													
Quarter 4, 2003							*		*		*														
Quarter 4, 2004							*																		
Quarter 4, 2007							*	*	*																
* Statistical test results indicate an elevated concentration (i.e., a statistically significant increase).																									
■ 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																									
S = Sidegradient; D = Downgradient; U = Upgradient																									

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APPENDIX H
METHANE MONITORING DATA

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CP3-WM-0017-F03 - C-746-S & T LANDFILL METHANE MONITORING REPORT

Date:	May 21, 2025	Time:	1336	Monitor:	Michael Hideg														
Weather Conditions: Sunny, Approximately 76° F, humidity: 40%																			
Monitoring Equipment: Multi RAE – Serial # 11881																			
Monitoring Location					Reading (% LEL)														
Ogden Landing Road Entrance	Checked at ground level				0														
North Landfill Gate	Checked at ground level				0														
West Side of Landfill: North 37° 07.652' West 88° 48.029'	Checked at ground level				0														
East Side of Landfill: North 37° 07.628' West 88° 47.798'	Checked at ground level				0														
Cell 1 Gas Vent (17)	1 0	2 0	3 0	4 0	5 0	6 0	7 0	8 0	9 0	10 0	11 0	12 0	13 0	14 0	15 0	16 0	17 0	0	
Cell 2 Gas Vent (3)	1 0	2 0	3 0															0	
Cell 3 Gas Vent (7)	1 0	2 0	3 0	4 0	5 0	6 0	7 0												0
Landfill Office	Checked at ground level																	0	
Suspect or Problem Areas	None noted																	N/A	
Remarks: All gas vents checked 1" from opening.																			
Performed by: MICHAEL HIDEG (Affiliate) Digitally signed by MICHAEL HIDEG (Affiliate) Date: 2025.05.29 08:06:26 -05'00'																			
Signature																			
Date																			

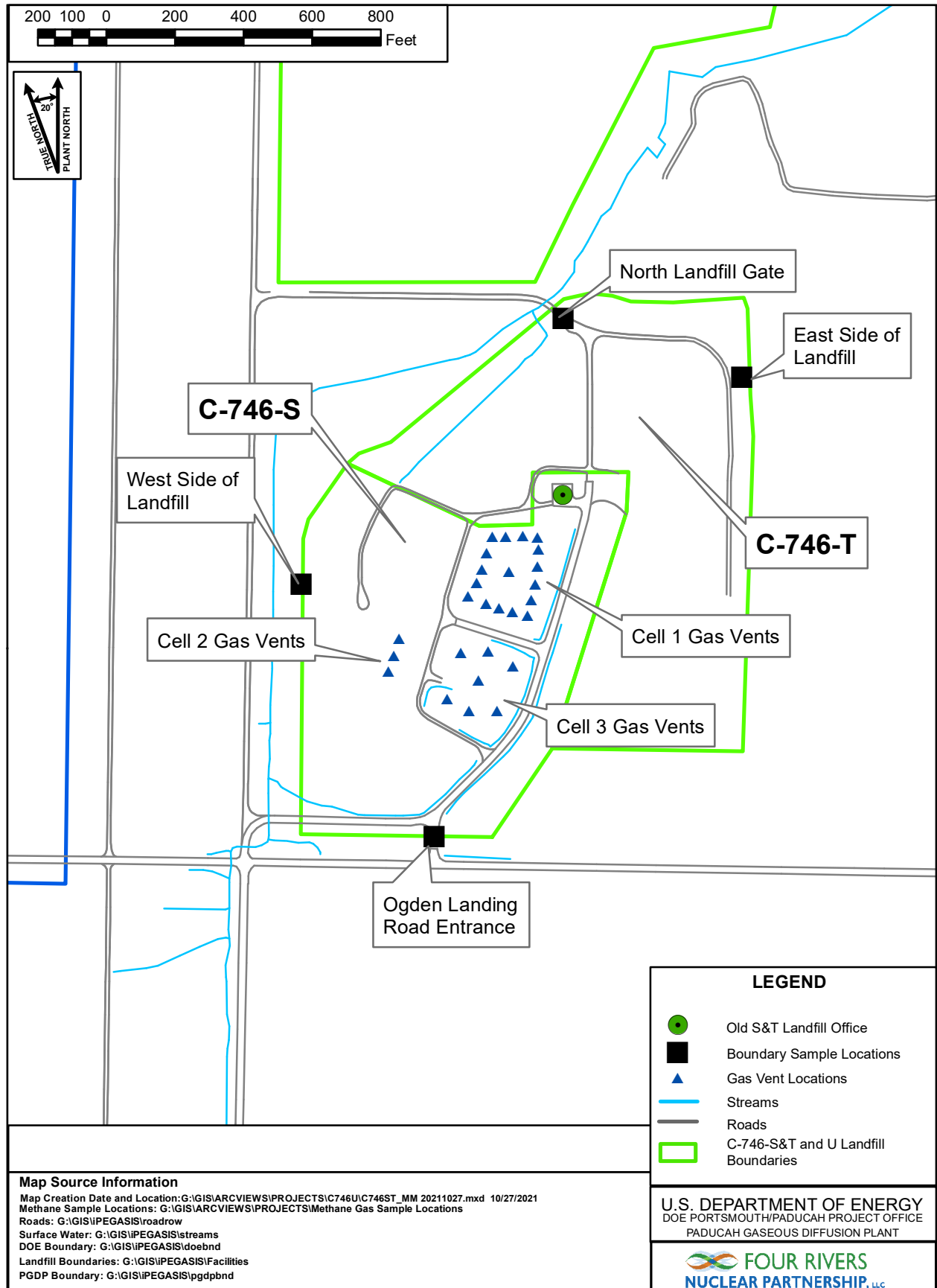


Figure H.1. C-746-S&T Landfill Methane Monitoring Locations

APPENDIX I

SURFACE WATER ANALYSES AND LABORATORY REPORTS

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Paducah OREIS
SURFACE WATER MONITORING REPORT

Facility: C-746-S&T Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045
Sampling Point: L135 UPSTREAM **Period:** 2nd Quarter 2025
SAMPLE ID: L135SS3-25 **Sample Type:** REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
Chloride	W	6.36	mg/L	0.2	4/3/2025			EPA-300.0	X
Sulfate	W	1.86	mg/L	0.4	4/3/2025			EPA-300.0	X
Conductivity		275	µmhos/cm		4/3/2025			FS	X
pH		7.27	Std Unit		4/3/2025			FS	X
Iron		0.749	mg/L	0.1	4/3/2025			EPA-200.8	X
Sodium		5.3	mg/L	0.25	4/3/2025			EPA-200.8	X
Uranium		0.00118	mg/L	0.0002	4/3/2025			EPA-200.8	X
Alpha activity	U	-0.476	pCi/L	9.08	4/3/2025	3.88	3.88	SW846-9310	X
Beta activity	U	7.9	pCi/L	14.3	4/3/2025	8.56	8.67	SW846-9310	X
Dissolved Solids		173	mg/L	10	4/3/2025			EPA-160.1	X
Suspended Solids	*	27.5	mg/L	6.25	4/3/2025			EPA-160.2	X
Chemical Oxygen Demand (COD)		62.6	mg/L	20	4/3/2025			EPA-410.4	X
Total Solids		191	mg/L	10	4/3/2025			SM-2540B	X
Total Organic Carbon (TOC)		17.2	mg/L	2	4/3/2025			SW846-9060A	X

Paducah OREIS
SURFACE WATER MONITORING REPORT

Facility: C-746-S&T Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045
Sampling Point: L136 INSTREAM **Period:** 2nd Quarter 2025
SAMPLE ID: L136SS3-25 **Sample Type:** REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
Chloride	W	0.267	mg/L	0.2	4/3/2025			EPA-300.0	X
Sulfate	W	10.1	mg/L	0.4	4/3/2025			EPA-300.0	X
Conductivity		457	µmhos/cm		4/3/2025			FS	X
pH		7.36	Std Unit		4/3/2025			FS	X
Iron		0.258	mg/L	0.1	4/3/2025			EPA-200.8	X
Sodium		1.94	mg/L	0.25	4/3/2025			EPA-200.8	X
Uranium		0.00237	mg/L	0.0002	4/3/2025			EPA-200.8	X
Alpha activity	U	3.15	pCi/L	8.01	4/3/2025	4.57	4.6	SW846-9310	X
Beta activity	U	0.665	pCi/L	12.6	4/3/2025	6.91	6.91	SW846-9310	X
Dissolved Solids		207	mg/L	10	4/3/2025			EPA-160.1	X
Suspended Solids	*	2.8	mg/L	2.5	4/3/2025			EPA-160.2	X
Chemical Oxygen Demand (COD)		51	mg/L	20	4/3/2025			EPA-410.4	X
Total Solids		203	mg/L	10	4/3/2025			SM-2540B	X
Total Organic Carbon (TOC)		14.9	mg/L	2	4/3/2025			SW846-9060A	X

**Paducah OREIS
SURFACE WATER MONITORING REPORT**

Facility: C-746-S&T Landfill **County:** McCracken **Permit #:** SW07300014,SW07300015,SW07300045
Sampling Point: L154 INSTREAM **Period:** 2nd Quarter 2025
SAMPLE ID: L154US3-25 **Sample Type:** REG

Parameter	Qualifier	Result	Units	Reporting Limit	Date Collected	Rad Error (+/-)	TPU	Method	Validation Code
Chloride	W	5.09	mg/L	0.2	4/3/2025			EPA-300.0	X
Sulfate	W	1.56	mg/L	0.4	4/3/2025			EPA-300.0	X
Conductivity		248	µmhos/cm		4/3/2025			FS	X
pH		7.14	Std Unit		4/3/2025			FS	X
Iron		0.784	mg/L	0.1	4/3/2025			EPA-200.8	X
Sodium		4.32	mg/L	0.25	4/3/2025			EPA-200.8	X
Uranium		0.000828	mg/L	0.0002	4/3/2025			EPA-200.8	X
Alpha activity	U	1.86	pCi/L	6.39	4/3/2025	3.51	3.52	SW846-9310	X
Beta activity		14.1	pCi/L	13.1	4/3/2025	8.33	8.66	SW846-9310	X
Dissolved Solids		130	mg/L	10	4/3/2025			EPA-160.1	X
Suspended Solids	*	36	mg/L	3.85	4/3/2025			EPA-160.2	X
Chemical Oxygen Demand (COD)		41.7	mg/L	20	4/3/2025			EPA-410.4	X
Total Solids		165	mg/L	10	4/3/2025			SM-2540B	X
Total Organic Carbon (TOC)		16.1	mg/L	1	4/3/2025			SW846-9060A	X

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

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

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

ATTACHMENT II

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,
Address : LLC
5600 Hobbs Road

Kevil, Kentucky 42053

Report Date: July 8, 2025

Contact: Ms. Jaime Morrow

Project: C-746-S&T Landfill Surface Water Quarterly(SS25-03)

Client Sample ID: L135SS3-25
Sample ID: 717326001
Matrix: WS
Collect Date: 03-APR-25
Receive Date: 04-APR-25
Collector: Client

Project: FRNP00617
Client ID: FRNP006

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
<i>GFPC, Gross A/B, liquid "As Received"</i>														
Alpha	U	-0.476	+/-3.88	9.08	+/-3.88	15.0	pCi/L			HH3	04/27/25	1345	2776606	1
Beta	U	7.90	+/-8.56	14.3	+/-8.67	50.0	pCi/L							

The following Analytical Methods were performed

Method	Description
1	EPA 900.0/SW846 9310

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits

Notes:

The MDC is a sample specific MDC.

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

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

Lc/LC: Critical Level

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Mtd.: Method

PF: Prep Factor

RL: Reporting Limit

TPU: Total Propagated Uncertainty

GEL LABORATORIES LLC

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Certificate of Analysis

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

Kevil, Kentucky 42053

Report Date: July 8, 2025

Contact: Ms. Jaime Morrow

Project: C-746-S&T Landfill Surface Water Quarterly(SS25-03)

Client Sample ID: L136SS3-25

Project: FRNP00617

Sample ID: 717326002

Client ID: FRNP006

Matrix: WS

Collect Date: 03-APR-25

Receive Date: 04-APR-25

Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
<i>GFPC, Gross A/B, liquid "As Received"</i>														
Alpha	U	3.15	+/-4.57	8.01	+/-4.60	15.0	pCi/L			HH3	04/27/25	1345	2776606	1
Beta	U	0.665	+/-6.91	12.6	+/-6.91	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: July 8, 2025

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

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-S&T Landfill Surface Water Quarterly(SS25-03)

Client Sample ID: L135SS3-25	Project: FRNP00617
Sample ID: 717326001	Client ID: FRNP006
Matrix: WS	
Collect Date: 03-APR-25 09:47	
Receive Date: 04-APR-25	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Carbon Analysis												
9060A, Total Organic Carbon "As Received"												
Total Organic Carbon Average		17.2	0.330	2.00	mg/L		1	KB3	04/18/25	1010	2783146	1
Ion Chromatography												
EPA 300.0 Anions (Chloride and Sulfate) "As Received"												
Chloride	W	6.36	0.0670	0.200	mg/L		1	CWW	04/05/25	0536	2776597	2
Sulfate	W	1.86	0.133	0.400	mg/L		1					
Metals Analysis-ICP-MS												
200.8/200.2 MIMICP Metals- Fe Na U "As Received"												
Sodium		5.30	0.0800	0.250	mg/L	1.00	1	BAJ	05/01/25	0606	2786829	3
Iron		0.749	0.0330	0.100	mg/L	1.00	1	BAJ	05/02/25	1242	2786829	4
Uranium		0.00118	0.0000670	0.000200	mg/L	1.00	1					
Solids Analysis												
EPA 160.1 Solids, Dissolved "As Received"												
Total Dissolved Solids		173	2.38	10.0	mg/L			CH6	04/09/25	1544	2778514	5
EPA 160.2 Total Suspended Liq "As Received"												
Total Suspended Solids	*	27.5	1.43	6.25	mg/L			CH6	04/10/25	1056	2779499	6
SM 2540 B Solids, Total "As Received"												
Total Solids		191	6.29	10.0	mg/L			CH6	04/10/25	1205	2779507	7
Spectrometric Analysis												
EPA 410.4 Chem. Oxygen Demand "As Received"												
COD		62.6	8.95	20.0	mg/L		1	HH2	04/10/25	1456	2777208	8

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 200.2	ICP-MS 200.2 PREP	BB2	04/26/25	1445	2786828

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: July 8, 2025

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

Contact: Kevil, Kentucky 42053
Ms. Jaime Morrow
Project: C-746-S&T Landfill Surface Water Quarterly(SS25-03)

Client Sample ID: L135SS3-25

Project: FRNP00617

Sample ID: 717326001

Client ID: FRNP006

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

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9060A	
2	EPA 300.0	
3	EPA 200.8	
4	EPA 200.8	
5	EPA 160.1	
6	EPA 160.2	
7	SM 2540B	
8	EPA 410.4	

Notes:

Column headers are defined as follows:

DF: Dilution Factor

Lc/LC: Critical Level

DL: Detection Limit

PF: Prep Factor

MDA: Minimum Detectable Activity

RL: Reporting Limit

MDC: Minimum Detectable Concentration

SQL: Sample Quantitation Limit

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

Certificate of Analysis

Report Date: July 8, 2025

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

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-S&T Landfill Surface Water Quarterly(SS25-03)

Client Sample ID: L136SS3-25	Project: FRNP00617
Sample ID: 717326002	Client ID: FRNP006
Matrix: WS	
Collect Date: 03-APR-25 09:33	
Receive Date: 04-APR-25	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Carbon Analysis												
9060A, Total Organic Carbon "As Received"												
Total Organic Carbon Average		14.9	0.330	2.00	mg/L		1	KB3	04/18/25	1042	2783146	1
Ion Chromatography												
EPA 300.0 Anions (Chloride and Sulfate) "As Received"												
Chloride	W	0.267	0.0670	0.200	mg/L		1	CWW	04/05/25	1258	2776597	2
Sulfate	W	10.1	0.133	0.400	mg/L		1					
Metals Analysis-ICP-MS												
200.8/200.2 MIMICP Metals- Fe Na U "As Received"												
Sodium		1.94	0.0800	0.250	mg/L	1.00	1	BAJ	05/01/25	0607	2786829	3
Iron		0.258	0.0330	0.100	mg/L	1.00	1	BAJ	05/02/25	1244	2786829	4
Uranium		0.00237	0.0000670	0.000200	mg/L	1.00	1					
Solids Analysis												
EPA 160.1 Solids, Dissolved "As Received"												
Total Dissolved Solids		207	2.38	10.0	mg/L			CH6	04/09/25	1544	2778514	5
EPA 160.2 Total Suspended Liq "As Received"												
Total Suspended Solids	*	2.80	0.570	2.50	mg/L			CH6	04/10/25	1056	2779499	6
SM 2540 B Solids, Total "As Received"												
Total Solids		203	6.29	10.0	mg/L			CH6	04/10/25	1205	2779507	7
Spectrometric Analysis												
EPA 410.4 Chem. Oxygen Demand "As Received"												
COD		51.0	8.95	20.0	mg/L		1	HH2	04/10/25	1456	2777208	8

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 200.2	ICP-MS 200.2 PREP	BB2	04/26/25	1445	2786828

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

Certificate of Analysis

Report Date: July 8, 2025

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

Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-S&T Landfill Surface Water Quarterly(SS25-03)

Client Sample ID: L136SS3-25	Project: FRNP00617
Sample ID: 717326002	Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time Batch	Method
The following Analytical Methods were performed:											
Method	Description		Analyst Comments								
1	SW846 9060A										
2	EPA 300.0										
3	EPA 200.8										
4	EPA 200.8										
5	EPA 160.1										
6	EPA 160.2										
7	SM 2540B										
8	EPA 410.4										

Notes:

Column headers are defined as follows:

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

GEL LABORATORIES LLC

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: July 8, 2025

Contact: Ms. Jaime Morrow

Project: C-746-U Landfill Surface Water Quarterly (US25-03)

Client Sample ID: L154US3-25

Project: FRNP00612

Sample ID: 717328002

Client ID: FRNP006

Matrix: WS

Collect Date: 03-APR-25

Receive Date: 04-APR-25

Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
<i>GFPC, Gross A/B, liquid "As Received"</i>														
Alpha	U	1.86	+/-3.51	6.39	+/-3.52	15.0	pCi/L			HH3	04/28/25	1713	2776606	1
Beta		14.1	+/-8.33	13.1	+/-8.66	50.0	pCi/L							

The following Analytical Methods were performed

Method	Description
1	EPA 900.0/SW846 9310

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits

Notes:

The MDC is a sample specific MDC.

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

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

Lc/LC: Critical Level

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Mtd.: Method

PF: Prep Factor

RL: Reporting Limit

TPU: Total Propagated Uncertainty

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Certificate of Analysis

Report Date: July 8, 2025

Company : Four Rivers Nuclear Partnership, LLC
Address : 5600 Hobbs Road
Kevil, Kentucky 42053
Contact: Ms. Jaime Morrow
Project: C-746-U Landfill Surface Water Quarterly (US25-03)

Client Sample ID: L154US3-25
Sample ID: 717328002
Matrix: WS
Collect Date: 03-APR-25 09:20
Receive Date: 04-APR-25
Collector: Client

Project: FRNP00612
Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Carbon Analysis												
9060A, Total Organic Carbon "As Received"												
Total Organic Carbon Average		16.1	0.330	1.00	mg/L		1	KB3	04/18/25	1310	2783146	1
Ion Chromatography												
EPA 300.0 Anions (Chloride and Sulfate) "As Received"												
Chloride	W	5.09	0.0670	0.200	mg/L		1	CWW	04/05/25	0815	2776597	2
Sulfate	W	1.56	0.133	0.400	mg/L		1					
Metals Analysis-ICP-MS												
200.8/200.2 MIMICP Metals- Fe Na U "As Received"												
Sodium		4.32	0.0800	0.250	mg/L	1.00	1	BAJ	05/01/25	0609	2786829	3
Iron		0.784	0.0330	0.100	mg/L	1.00	1	BAJ	05/02/25	1247	2786829	4
Uranium		0.000828	0.0000670	0.000200	mg/L	1.00	1					
Solids Analysis												
EPA 160.1 Solids, Dissolved "As Received"												
Total Dissolved Solids		130	2.38	10.0	mg/L			CH6	04/09/25	1544	2778514	5
EPA 160.2 Total Suspended Liq "As Received"												
Total Suspended Solids	*	36.0	0.877	3.85	mg/L			CH6	04/10/25	1056	2779499	6
SM 2540 B Solids, Total "As Received"												
Total Solids		165	6.29	10.0	mg/L			CH6	04/10/25	1205	2779507	7
Spectrometric Analysis												
EPA 410.4 Chem. Oxygen Demand "As Received"												
COD		41.7	8.95	20.0	mg/L		1	HH2	04/10/25	1456	2777208	8

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 200.2	ICP-MS 200.2 PREP	BB2	04/26/25	1445	2786828

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Certificate of Analysis

Report Date: July 8, 2025

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

Contact: Kevil, Kentucky 42053
Ms. Jaime Morrow
Project: C-746-U Landfill Surface Water Quarterly (US25-03)

Client Sample ID: L154US3-25
Sample ID: 717328002

Project: FRNP00612
Client ID: FRNP006

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
The following Analytical Methods were performed:												
Method	Description		Analyst Comments									
1	SW846 9060A											
2	EPA 300.0											
3	EPA 200.8											
4	EPA 200.8											
5	EPA 160.1											
6	EPA 160.2											
7	SM 2540B											
8	EPA 410.4											

Notes:

Column headers are defined as follows:

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

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APPENDIX J

ANALYTICAL LABORATORY CERTIFICATION

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Accredited Laboratory

A2LA has accredited

GEL LABORATORIES, LLC

Charleston, SC

for technical competence in the field of

Environmental Testing

In recognition of the successful completion of the A2LA evaluation process that includes an assessment of the laboratory's compliance with ISO/IEC 17025:2017, the 2009 and 2016 TNI Environmental Testing Laboratory Standard, the requirements of the Department of Defense Environmental Laboratory Accreditation Program (DoD ELAP), and the requirements of the Department of Energy Consolidated Audit Program (DOECAP) as detailed in Version 5.4 of the DoD/DOE Quality System Manual for Environmental Laboratories (QSM), accreditation is granted to this laboratory to perform recognized EPA methods as defined on the associated A2LA Environmental Scope of Accreditation. This accreditation demonstrates technical competence for this defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communiqué dated April 2017).



Presented this 26th day of June 2023.

A blue ink signature of Mr. Trace McInturff, written over a horizontal line.

Mr. Trace McInturff, Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 2567.01
Valid to June 30, 2025

For the tests to which this accreditation applies, please refer to the laboratory's Environmental Scope of Accreditation.



Accredited Laboratory

A2LA has accredited

GEL LABORATORIES, LLC

Charleston, SC

for technical competence in the field of

Environmental Testing

In recognition of the successful completion of the A2LA evaluation process that includes an assessment of the laboratory's compliance with ISO/IEC 17025:2017, the 2016 TNI Environmental Testing Laboratory Standard, and the requirements of the Department of Defense Environmental Laboratory Accreditation Program (DoD ELAP) and Department of Energy Consolidated Audit Program (DOECAP) as detailed in version 6.0 of the DoD Quality System Manual for Environmental Laboratories (QSM), the A2LA R206 – *Specific Requirements – Environmental Testing Laboratory Accreditation Program*, the A2LA R220 – *Specific Requirements – A2LA DoD Environmental Laboratory Accreditation Program*, and the A2LA R252 – *Specific Requirements – A2LA DOECAP Environmental Laboratory Accreditation Program*, accreditation is granted to this laboratory to perform recognized EPA methods as defined on the associated A2LA Environmental Scope of Accreditation. This accreditation demonstrates technical competence for this defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communiqué dated April 2017).



Presented this 9th day of May 2025.

A blue ink signature of Mr. Trace McInturff, written in a cursive style.

Mr. Trace McInturff, Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 2567.01
Valid to June 30, 2027

For the tests to which this accreditation applies, please refer to the laboratory's Environmental Scope of Accreditation.

APPENDIX K

LABORATORY ANALYTICAL METHODS

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LABORATORY ANALYTICAL METHODS

Analytical Method	Preparation Method	Product
SM 2540B		Solids, Total
SW846 8260D		Volatile Organic Compounds (VOC) by Gas Chromatograph/Mass Spectrometer
SW846 8011	SW846 8011 PREP	Analysis of 1,2-Dibromoethane (EDB), 1,2-Dibromo-3-Chloropropane (DBCP) and 1,2,3-Trichloropropane in Water by GC/ECD Using Methods 504.1 or 8011
SW846 8082A	SW846 3535A	Analysis of Polychlorinated Biphenyls by GC/ECD by ECD
SW846 6020B	SW846 3005A	Determination of Metals by ICP-MS
SW846 7470A	SW846 7470A Prep	Mercury Analysis Using the Perkin Elmer Automated Mercury Analyzer
SW846 9060A		Carbon, Total Organic
SW846 9012B	SW846 9010C Distillation	Cyanide, Total
EPA 300.0		Ion Chromatography Iodide
SW846 9056A		Ion Chromatography
EPA 160.1		Solids, Total Dissolved
EPA 160.2		Solids, Total Suspended
EPA 200.8	EPA 200.2	Determination of Metals by ICP-MS
EPA 410.4		COD
Eichrom Industries, AN-1418		AlphaSpec Ra226, Liquid
DOE EML HASL-300, Th-01-RC Modified		Th-01-RC M, Th Isotopes, Liquid
EPA 904.0 Modified		904.0Mod, Ra228, Liquid
SW846 9310		9310, Alpha/Beta Activity, liquid
EPA 905.0 Modified		905.0Mod, Sr90, liquid
DOE EML HASL-300, Tc-02-RC Modified		Tc-02-RC-MOD, Tc99, Liquid
EPA 906.0 Modified		906.0M, Tritium Dist, Liquid
SW846 9020B		Total Organic Halogens (TOX)

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APPENDIX L

MICRO-PURGING STABILITY PARAMETERS

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**Micro-Purge Stability Parameters
for the C-746-S&T Landfills**

	Temperature (°F) Conductivity (µmhos/cm) pH (Std Unit) Dissolved oxygen (mg/L) Turbidity (NTU)						Temperature (°F) Conductivity (µmhos/cm) pH (Std Unit) Dissolved oxygen (mg/L) Turbidity (NTU)					
MW220							MW221					
Date Collected: 4/14/2025							Date Collected: 4/14/2025					
1202	66.1	434	6.14	4.96	4.24		0732	65.1	382	6.15	6.74	4.76
1205	66.3	435	6.08	4.73	4.20		0735	64.6	400	6.07	6.11	4.70
1208	66.4	434	6.06	4.64	4.11		0738	64.3	402	6.03	6.02	4.77
MW222							MW223					
Date Collected: 4/14/2025							Date Collected: 4/14/2025					
0920	64.3	386	6.13	6.11	4.14		0836	63.1	391	6.06	5.26	4.65
0923	64.0	388	6.04	4.96	4.38		0839	63.2	392	6.02	4.84	4.51
0926	64.0	387	6.03	4.88	4.20		0842	63.2	391	6.00	4.80	4.44
MW224							MW369					
Date Collected: 4/14/2025							Date Collected: 4/10/2025					
1004	66.0	450	6.10	5.13	4.17		0714	59.6	384	6.44	3.15	5.70
1007	67.0	453	6.09	4.59	4.04		0717	59.6	386	6.12	2.49	5.47
1010	67.1	454	6.06	4.49	4.17		0720	59.7	387	6.08	2.40	5.27
MW370							MW372					
Date Collected: 4/10/2025							Date Collected: 4/10/2025					
0759	61.1	443	6.07	5.40	4.24		0916	62.9	732	6.16	3.90	9.69
0802	60.9	448	6.02	4.60	4.20		0919	62.5	740	6.17	2.16	4.56
0805	60.9	449	6.01	4.54	4.33		0922	62.4	744	6.10	2.10	4.63
MW373							MW384					
Date Collected: 4/10/2025							Date Collected: 4/15/2025					
1001	64.2	951	6.10	3.70	6.34		0931	62.0	424	6.06	6.06	8.49
1004	64.0	1001	6.04	3.00	6.19		0934	61.8	426	6.02	5.25	9.16
1007	63.3	1003	6.01	2.90	6.10		0937	61.8	428	6.00	5.20	9.34
MW385							MW386					
Date Collected: 4/15/2025							Date Collected: 4/15/2025					
1144	62.1	393	6.08	5.99	5.47		1240	62.3	571	6.77	5.00	3.70
1147	62.3	397	6.05	5.19	5.74		1243	61.8	578	6.80	4.00	3.93
1150	62.2	398	6.04	5.11	5.73		1246	61.9	579	6.83	3.95	3.75
MW387							MW388					
Date Collected: 4/15/2025							Date Collected: 4/15/2025					
0802	61.4	551	6.12	4.88	5.74		0847	62.2	470	6.05	5.17	5.70
0805	61.4	552	6.04	4.40	5.66		0850	62.1	471	6.04	5.00	5.92
0808	61.5	551	6.02	4.30	5.30		0853	62.1	472	6.03	4.92	5.89
MW390							MW391					
Date Collected: 4/15/2025							Date Collected: 4/16/2025					
0717	58.8	597	6.13	5.38	6.54		0957	62.1	404	6.19	4.64	7.13
0720	58.9	603	6.10	5.11	6.34		1000	62.0	407	6.16	3.92	7.29
0723	58.9	606	6.09	5.06	6.26		1003	62.0	408	6.15	3.84	7.35
MW392							MW393					
Date Collected: 4/16/2025							Date Collected: 4/16/2025					
1145	65.2	383	6.13	3.30	7.12		1226	63.7	423	6.23	3.02	26.29
1148	64.0	387	6.07	2.67	7.00		1229	62.9	430	6.23	1.63	25.77
1151	63.6	386	6.06	2.62	6.90		1232	62.9	436	6.22	1.54	25.49
MW394							MW395					
Date Collected: 4/16/2025							Date Collected: 4/16/2025					
0734	58.8	426	5.88	5.86	4.89		0821	60.8	400	5.91	5.66	4.45
0737	59.0	430	5.84	5.76	4.99		0824	60.8	401	5.88	5.06	4.24
0740	59.1	429	5.82	5.70	4.90		0827	60.9	401	5.87	4.99	4.31
MW396							MW397					
Date Collected: 4/16/2025							Date Collected: 4/14/2025					
0911	63.2	650	6.36	4.38	7.96		1248	63.9	322	6.00	6.61	70.96
0914	62.7	664	6.31	2.83	5.56		1251	64.0	323	5.96	6.44	72.16
0917	62.2	667	6.30	2.73	5.10		1254	64.1	324	5.96	6.40	71.27

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