PAD-ENM-0089/V4

C-746-U Contained Landfill
Fourth Quarter Calendar Year 2014
(October–December)
Compliance Monitoring Report
Paducah Gaseous Diffusion Plant,
Paducah, Kentucky

CLEARED FOR PUBLIC RELEASE

PAD-ENM-0089/V4

C-746-U Contained Landfill
Fourth Quarter Calendar Year 2014
(October–December)
Compliance Monitoring Report
Paducah Gaseous Diffusion Plant,
Paducah, Kentucky

Date Issued—February 2015

Prepared for the
U.S. DEPARTMENT OF ENERGY
Office of Environmental Management

Prepared by
LATA ENVIRONMENTAL SERVICES OF KENTUCKY, LLC
managing the
Environmental Remediation Activities at the
Paducah Gaseous Diffusion Plant
under contract DE-AC30-10CC40020

CLEARED FOR PUBLIC RELEASE

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CONTENTS

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FIGURE

TABLES

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ACRONYMS

CFR	*Code of Federal Regulations*
CY	calendar year
EPA	U.S. Environmental Protection Agency
KAR	*Kentucky Administrative Regulations*
KDWM	Kentucky Division of Waste Management
KRS	*Kentucky Revised Statutes*
LEL	lower explosive limit
LRGA	Lower Regional Gravel Aquifer
MCL	maximum contaminant level
MW	monitoring well
RGA	Regional Gravel Aquifer
UCRS	Upper Continental Recharge System
URGA	Upper Regional Gravel Aquifer
UTL	upper tolerance limit

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1. INTRODUCTION

This report, *C-746-U Contained Landfill Fourth Quarter Calendar Year 2014 (October-December) Compliance Monitoring Report, Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, is being submitted in accordance with Solid Waste Landfill Permit Number 073-00014, 073-00015, 073-00045. This report was written utilizing 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* (LATA Kentucky 2014).

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 recorded on the Kentucky Division of Waste Management (KDWM) groundwater reporting forms, which are presented in Appendix C. The statistical analyses and qualification statement are provided in Appendix D. The groundwater flow rate and direction determination are provided in Appendix E. Appendix F contains the notifications for all permit required parameters whose concentrations exceed the maximum contaminant level (MCL) listed in 401 *KAR* 47:030 § 6 for Kentucky solid waste facilities 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), as established at a 95% confidence].

Appendix G provides a chart of MCL exceedances and exceedances of the historical background UTL that have occurred, beginning in the fourth quarter calendar year (CY) 2002. Methane monitoring results are documented on the approved C-746-U Landfill Methane Monitoring Report form provided in Appendix H. The form includes pertinent remarks/observations as required by 401 *KAR* 48:090 § 4.

1.1 BACKGROUND

The C-746-U Landfill is an operating solid waste landfill located north of the Paducah Gaseous Diffusion Plant and north of the C-746-S&T Landfills. Construction and operation of the C-746-U Landfill was permitted in November 1996 under Solid Waste Landfill Permit Number 073-00045. The permitted C-746-U Landfill area covers about 60 acres and includes a liner and leachate collection system. C-746-U Landfill currently is operating in Phases 3, 4, and 5. Phases 1, 2, and most of Phase 3 have long-term cover. Phases 6 through 23 have not been constructed.

1.2 MONITORING PERIOD ACTIVITIES

1.2.1 Groundwater Monitoring

Three zones are monitored at the site: the Upper Continental Recharge System (UCRS), Upper Regional Gravel Aquifer (URGA), and the Lower Regional Gravel Aquifer (LRGA). There are 21 monitoring wells (MWs) under permit for the C-746-U Landfill: 9 UCRS wells, 6 URGA wells, and 6 LRGA wells. A map of the MW locations is presented in Figure 1. All MWs were sampled this quarter except MW359, MW365, MW368, MW376, and MW377 (all screened in the UCRS), which had an insufficient amount of water to obtain samples; therefore, there are no analytical results for these locations.

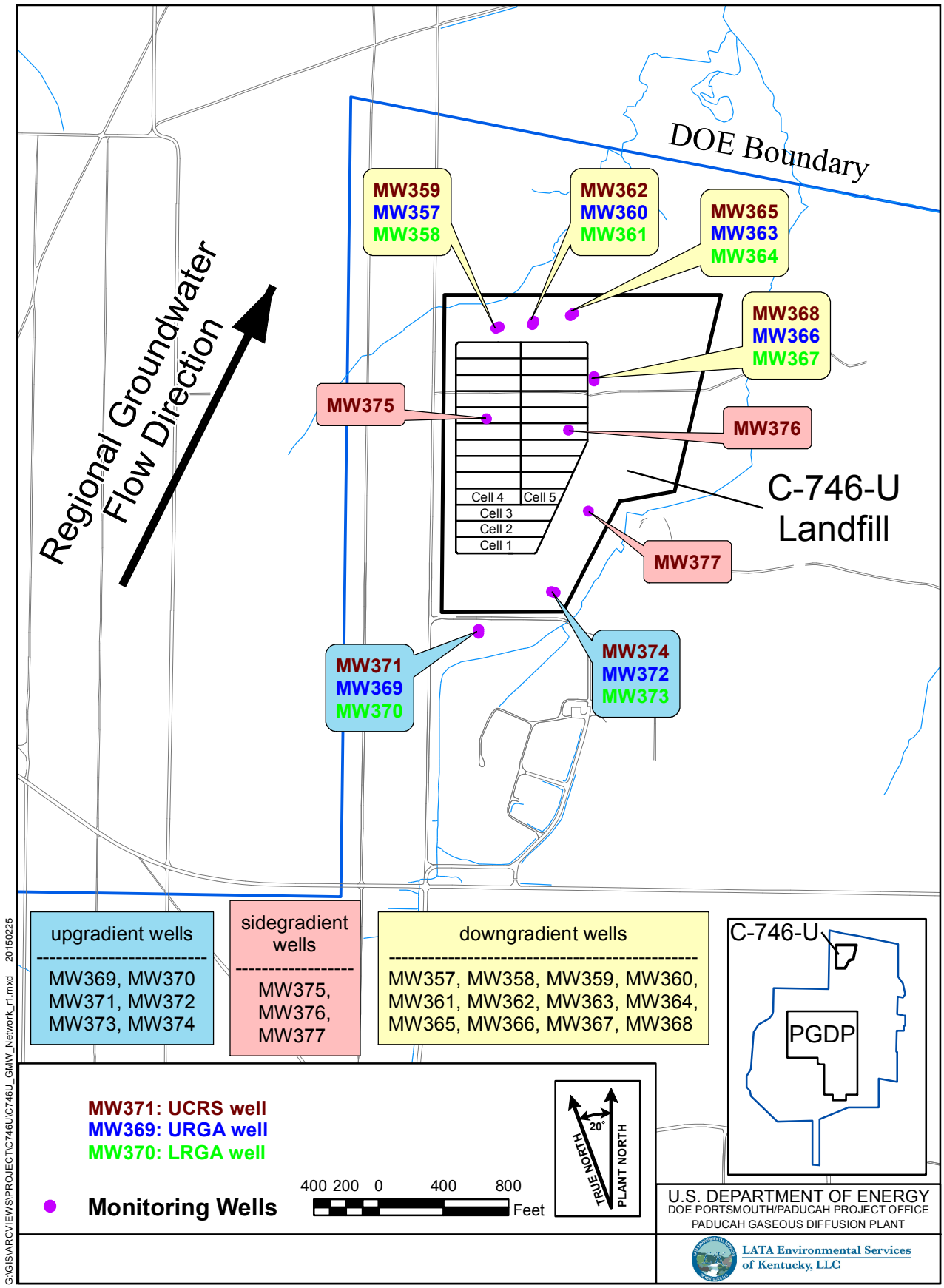

Figure 1. C-746-U Landfill Groundwater Monitoring Well Network

Consistent with the approved Groundwater Monitoring Plan (LATA Kentucky 2014) UCRS wells are included in the monitoring program. Groundwater flow is downward through the UCRS, but flow in the underlying RGA is lateral. Groundwater flow in the RGA is in a north-northeasterly direction in the vicinity of the C-746-U Landfill. The Ohio River and lower reaches of Little Bayou Creek are the discharge areas for the RGA flow system from the vicinity of the landfills. Consistent with the conceptual site model, the constituent concentrations in UCRS wells are considered to be representative only of the conditions local to the well or sourced from overlying soils; thus, no discussion of potential "upgradient" sources is relevant to the discussion for the UCRS. Nevertheless, a UTL for background also has been calculated for UCRS wells using concentrations from UCRS wells located in the same direction (relative to the landfill) as those RGA wells identified as upgradient. The results from these wells are considered to represent historical "background" for the UCRS water quality. Results from UCRS wells are compared to this UTL and exceedances of these values are reported in the quarterly report.

Groundwater sampling was conducted in accordance with the Groundwater Monitoring Plan (LATA Kentucky 2014) within the fourth quarter 2014 using LATA Environmental Services of Kentucky, LLC, procedure PAD-ENM-2101, *Groundwater Sampling*. Appropriate sample containers and preservatives were used. The parameters specified in Permit Condition GSTR0001, Special Condition 1, were analyzed for all locations sampled.

The groundwater flow rate and direction determination are provided in Appendix E. Depth-to-water was measured on October 28, 2014, in MWs of the C-746-U Landfill (see Table E.1), in MWs of the C-746-S&T Landfills, and in MWs of the surrounding region (shown on Figure E.4). Water level measurements in 38 vicinity wells define the potentiometric surface for the RGA.[1] Normal regional flow in the RGA is northeastward, toward the Ohio River. The hydraulic gradient in the vicinity of the C-746-U Landfill in October was 4.06×10^{-4} ft/ft. The hydraulic gradient for the URGA at the C-746-U Landfill was 8.13×10^{-4} ft/ft, and the hydraulic gradient for the LRGA was 8.11×10^{-4} ft/ft. Calculated groundwater flow rates (average linear velocity) at the C-746-U Landfill range from 1.38 to 2.36 ft/day for the URGA and LRGA (see Table E.3).

1.2.2 Methane Monitoring

The fourth quarter CY 2014 methane inspection was not completed during December 2014 because of inclement weather.

Landfill operations staff monitored for the occurrence of methane on January 16, 2015, in four on-site building locations and four locations along the landfill boundary. See Appendix H for a map of the monitoring locations. Monitoring identified 0% of the lower explosive limit (LEL) of methane at all locations, which is compliant with the regulatory requirement of < 100% LEL at boundary locations and < 25% LEL at all other locations. The results are documented on the C-746-U Landfill Methane Log provided in Appendix H.

[1] Although depth-to-water is measured in the UCRS wells, the UCRS has a strong vertical hydraulic gradient that varies locally. The UCRS wells are screened over different elevations; therefore, the UCRS well measurements are not sufficient for mapping the potentiometric surface.

1.2.3 Surface Water Monitoring

There was no surface water sampling conducted during the fourth quarter 2014 due to insufficient rainfall during normal landfill operating hours.

1.3 KEY RESULTS

The following parameters had concentrations that either exceeded the respective MCL (Table 1) or were shown to exceed the statistically derived historical background UTL (Table 2) concentrations[2] during the fourth quarter 2014. Those constituents (present in downgradient wells) that exceed their historical UTL were further evaluated against their current UTL-derived background using the most recent eight quarters of data from wells considered to be upgradient (Table 3).

Table 1. Summary of MCL Exceedances

UCRS	URGA	LRGA
None	MW357: Trichloroethene	MW358: Trichloroethene
	MW372: Beta activity, trichloroethene	MW373: Trichloroethene

Table 2. Exceedances of Statistically Derived Historical Background Concentrations

UCRS	URGA	LRGA
MW362: Dissolved oxygen, oxidation-reduction potential, sulfate	MW357: Oxidation-reduction potential	MW358: Oxidation-reduction potential
MW371: Oxidation-reduction potential	MW360: Sodium	MW361: Oxidation-reduction potential
MW374: Oxidation-reduction potential, sulfate	MW363: Oxidation-reduction potential	MW364: Oxidation-reduction potential
MW375: Oxidation-reduction potential, sulfate	MW366: Oxidation-reduction potential,	MW367: Oxidation-reduction potential
	MW369: Oxidation-reduction potential	MW370: Oxidation-reduction potential
	MW372: Beta activity, calcium, conductivity, dissolved solids, magnesium, technetium-99	MW373: Oxidation-reduction potential

Sidegradient wells: MW375, MW376, MW377
Downgradient wells: MW357, MW358, MW359, MW360, MW361, MW362, MW363, MW364, MW365, MW366, MW367, MW368
Upgradient wells: MW369, MW370, MW371, MW372, MW373, MW374

Table 3. Exceedances of Current Background UTL in Downgradient Wells

None

[2] The term "concentration" may refer to a field measurement result such as pH, oxidation-reduction potential, or an analytical parameter such as trichloroethene or polychlorinated biphenyls.

The notification of parameters that exceeded the MCL has been submitted electronically to the KDWM, in accordance with 401 *KAR* 48:300 § 7, prior to the submittal of this report.

There were no new MCL exceedances for this quarter. The constituents that exceeded their MCL were subjected to a comparison against the UTL concentrations calculated using historical concentrations from wells identified as background. None of the MCL exceedances in downgradient wells also exceeded the statistically derived historical background concentration. In accordance with the approved groundwater monitoring plan, the MCL exceedances in downgradient wells (trichloroethene in MW357and MW358) do not exceed the historical background concentration and are considered to be Type I exceedances that are not attributable to the C-746-U Landfill.

The constituents that had exceedances of the statistically derived historical background UTL underwent additional statistical evaluation. The current-quarter concentrations were compared to the current background UTL developed using the most recent eight quarters of data from wells identified as upgradient in order to determine if the current downgradient concentrations are consistent with current background values. Table 3 summarizes that the constituents present in downgradient wells with historical UTL exceedances that are below the current UTL. In accordance with the approved groundwater monitoring plan, these are considered to be Type 1 exceedances and are considered to be not attributable to the C-746-U Landfill. NOTE: The gradients in UCRS wells are downward. Thus, none of the UCRS wells are properly considered to be downgradient of the landfill and are not included in Table 3. However, the statistical evaluation of current UCRS wells against the current UCRS background UTL identified UCRS wells with sulfate values that exceed both the historical and current background. These exceedances are not attributable to C-746-U sources and are considered Type 1 exceedances (Table 4).

Table 4. Exceedances of Current Background UTL in UCRS Wells

UCRS
MW362: Sulfate
MW375: Sulfate

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

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2. DATA EVALUATION/STATISTICAL SYNOPSIS

The statistical analyses conducted on the fourth quarter 2014 groundwater data collected from the C-746-U Contained Landfill MWs were performed in accordance with the *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 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, D2, and D3).

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

For those parameters that do not have a Kentucky solid waste facility MCL, the same process was used. If a constituent without an MCL exceeded its historical background UTL and its current background UTL, it was evaluated further to identify the source of the exceedance, if possible. If the source of the exceedance could not be identified, it was reported as a Type 2 exceedance.

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 was conducted. The test well results were compared to both upper and lower tolerance limit to determine if statistically significant deviations in concentrations exist with respect to upgradient (background) well data. A stepwise list of the one-side 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 historically in the statistical analyses are listed in Table 5.

Table 5. Monitoring Wells Included in Statistical Analysis*

UCRS	URGA	LRGA
MW359***	MW357	MW358
MW362	MW360	MW361
MW365***	MW363	MW364
MW368***	MW366	MW367
MW371**	MW369 (upgradient)	MW370 (upgradient)
MW374**	MW372 (upgradient)	MW373 (upgradient)
MW375		
MW376 (dry)***		
MW377 (dry)***		

*A map showing the monitoring well locations is shown on Figure 1.
**In the same direction (relative to the landfill) as RGA wells considered to be upgradient.
***MW359, MW365, MW368, MW376, and MW377 had sufficient water to permit a water level measurement, but insufficient water to provide water samples for laboratory analysis.

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.

2.1.1 Upper Continental Recharge System

In this quarter, 28 parameters, including those with MCLs, required statistical analysis in the UCRS. During the fourth quarter, dissolved oxygen, oxidation-reduction potential, and sulfate displayed concentrations that exceeded their respective historical UTL and are listed in Table 2.

2.1.2 Upper Regional Gravel Aquifer

In this quarter, 32 parameters, including those with MCLs, required statistical analysis in the URGA. During the fourth quarter, beta activity, calcium, conductivity, dissolved solids, magnesium, oxidation-reduction potential, sodium, and technetium-99 displayed concentrations that exceeded their respective historical UTL and are listed in Table 2.

2.1.3 Lower Regional Gravel Aquifer

In this quarter, 28 parameters, including those with MCLs, required statistical analysis in the LRGA. During the fourth quarter, oxidation-reduction potential displayed concentrations that exceeded their respective historical UTL and are listed in Table 2.

2.2 DATA VALIDATION

Data verification is the process of comparing a data set against a set standard or contractual requirements. In accordance with the approved groundwater monitoring plan, data verification is performed for 100 percent of the data. Data are flagged as necessary.

Data validation was performed on 100 percent of the organic, inorganic, and radiochemical analytical data 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 qualifiers are added by the independent validator and not the laboratory. Validation qualifiers are not requested on the groundwater reporting forms.

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

Data validation results for this data set indicated that all data were considered acceptable.

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3. PROFESSIONAL GEOLOGIST AUTHORIZATION

DOCUMENT IDENTIFICATION: *C-746-U Contained Landfill*
Fourth Quarter Calendar Year 2014 (October–December)
Compliance Monitoring Report,
Paducah Gaseous Diffusion Plant,
Paducah, Kentucky (PAD-ENM-0089/V4)

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

Kenneth R. Davis
Kenneth R. Davis

PG1194

February 26, 2015
Date

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4. REFERENCES

EPA (U.S. Environmental Protection Agency) 1989. *EPA Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities*, Interim Final Guidance, Office of Resource Conservation and Recovery, U.S. Environmental Protection Agency, Washington, DC.

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, LATA Environmental Services of Kentucky, LLC, Kevil, KY, June.

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APPENDIX A

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

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

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

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

Permit No: 073-00045 Finds/Unit No: _____ Quarter & Year 4th Qtr. CY 2014

Please check the following as applicable:

_____ Characterization X Quarterly _____ Semiannual ____ Annual _____ Assessment

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

_____ Leachate X Methane Monitoring

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

I certify under penalty of law that the 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 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.

Mark J. Duff, Paducah Project Manager
LATA Environmental Services of Kentucky, LLC

2-27-15
Date

Jennifer Woodard, Paducah Site Lead
U.S. Department of Energy

2/27/15
Date

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APPENDIX B

FACILITY INFORMATION SHEET

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FACILITY INFORMATION SHEET

Sampling Date: Groundwater: October 2014
Methane: January 2015 County: McCracken Permit Nos. 073-00045

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

Site Address: 5501 Hobbs Road (Street) Kevil, Kentucky (City/State) 42053 (Zip)

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

OWNER INFORMATION

Facility Owner: U.S. DOE – W. E. Murphie, Manager Phone No: (859) 219-4001

Contact Person: Mark J. Duff Phone No: (270) 441-5030

Contact Person Title: Project Manager, LATA Environmental Services of Kentucky, LLC

Mailing Address: 761 Veterans Avenue (Street) Kevil, Kentucky (City/State) 42053 (Zip)

SAMPLING PERSONNEL
(IF OTHER THAN LANDFILL OR LABORATORY)

Company: LATA Environmental Services of Kentucky, LLC

Contact Person: Jeff Boulton Phone No: (270) 441-5444

Mailing Address: 761 Veterans Avenue (Street) Kevil, Kentucky (City/State) 42053 (Zip)

LABORATORY RECORD #1

Laboratory GEL Laboratories, LLC Lab ID No: KY90129

Contact Person: Joanne Harley Phone No: (843) 769-7387

Mailing Address: 2040 Savage Road (Street) Charleston, South Carolina (City/State) 29047 (Zip)

LABORATORY RECORD #2

Laboratory: . Lab ID No:

Contact Person: Phone No:

Mailing Address: Street City/State Zip

LABORATORY RECORD #3

Laboratory: Lab ID No:

Contact Person: Phone No:

Mailing Address: Street City/State Zip

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APPENDIX C

GROUNDWATER SAMPLE ANALYSES AND WRITTEN COMMENTS

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Division of Waste Management
Solid Waste Branch
14 Reilly Road
Frankfort, KY 40601 (502)564-6716

RESIDENTIAL/CONTAINED-QUARTERLY
Facility: US DOE - Paducah Gaseous Diffusion Plant
Permit Number: 073-00045

FINDS/UNIT: KY8-890-008-982 / 1
LAB ID: None
For Official Use Only

GROUNDWATER SAMPLE ANALYSIS(S)

AKGWA NUMBER[1], Facility Well/Spring Number						8004-4798		8004-4799		8004-0981		8004-4800	
Facility's Local Well or Spring Number (e.g., MW-1, MW-2, etc.)						357		358		359		360	
Sample Sequence #						1		1		1		1	
If sample is a Blank, specify Type: (F)ield, (T)rip, (M)ethod, or (E)quipment						NA		NA		NA		NA	
Sample Date and Time (Month/Day/Year hour: minutes)						10/14/2014 08:51		10/14/2014 10:10		NA		10/14/2014 14:24	
Duplicate ("Y" or "N")[2]						N		N		N		N	
Split ("Y" or "N")[3]						N		N		N		N	
Facility Sample ID Number (if applicable)						MW357UG1-15		MW358UG1-15		NA		MW360UG1-15	
Laboratory Sample ID Number (if applicable)						359085001		359085002		NA		359089005	
Date of Analysis (Month/Day/Year) For Volatile Organics Analysis						10/18/2014		10/18/2014		NA		10/18/2014	
Gradient with respect to Monitored Unit (UP, DOWN, SIDE, UNKNOWN)						DOWN		DOWN		DOWN		DOWN	
CAS RN[4]		**CONSTITUENT**	**TD[5]**	**Unit OF MEASURE**	**METHOD**	**DETECTED VALUE OR PQL[6]**	**FLAGS[7]**	**DETECTED VALUE OR PQL[6]**	**FLAGS**	**DETECTED VALUE OR PQL[6]**	**FLAGS**	**DETECTED VALUE OR PQL[6]**	**FLAGS**
24959-67-9		**Bromide**	**T**	**mg/L**	**9056**	0.41		0.473			*	0.166	J
16887-00-6		**Chloride(s)**	**T**	**mg/L**	**9056**	32.3		34.5			*	10.3	
16984-48-8		**Fluoride**	**T**	**mg/L**	**9056**	0.152		0.154			*	0.27	
S0595- -		**Nitrate & Nitrite**	**T**	**mg/L**	**9056**	1.21		0.597			*	0.154	
14808-79-8		**Sulfate**	**T**	**mg/L**	**9056**	54.9		83.2			*	30.9	
NS1894		**Barometric Pressure Reading**	**T**	**Inches/Hg**	**Field**	29.6		29.6			*	29.61	
S0145- -		**Specific Conductance**	**T**	**μMH0/cm**	**Field**	440		520			*	542	

[1]AKGWA # is 0000-0000 for any type of blank.
[2]Respond "Y" if the sample was a duplicate of another sample in this report.
[3]Respond "Y" if the sample was split and analyzed by separate laboratories.
[4]Chemical Abstracts Service Registry Number or unique identifier number assigned by agency.
[5]"T" = Total; "D" = Dissolved
[6]"<" indicates a non-detect; do not use "ND" or "BDL". Value shown is Practical Quantification Limit.
[7]Flags are as designated, do not use any other type. Use "*," then describe on "Written Comments Page."

STANDARD FLAGS:
* = See Comments
J = Estimated Value
B = Analyte found in blank
A = Average value
N = Presumptive ID
D = Concentration from analysis of a secondary dilution

RESIDENTIAL/CONTAINED-QUARTERLY
Facility: US DOE - Paducah Gaseous Diffusion Plant
Permit Number: 073-00045

FINDS/UNIT: KY8-890-008-982 / 1
LAB ID: None
For Official Use Only

GROUNDWATER SAMPLE ANALYSIS - (Cont.)

AKGWA NUMBER[1], Facility Well/Spring Number						8004-4798		8004-4799		8004-0981		8004-4800	
Facility's Local Well or Spring Number (e.g., MW-1, MW-2, BLANK-F, etc.)						357		358		359		360	
CAS RN[4]		CONSTITUENT	TD[5]	Unit OF MEASURE	METHOD	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS
S0906 - -		Static Water Level Elevation	T	Ft. MSL	Field	322.62		322.58			*	322.6	
N238		Dissolved Oxygen	T	mg/L	Field	3.83		0.94			*	1.31	
S0266- -		Total Dissolved Solids	T	mg/L	160.1	234		261			*	324	
S0296- -		pH	T	Units	Field	6.17		6.22			*	6.36	
NS215		Eh	T	mV	Field	427		169			*	180	
S0907 - -		Temperature	T	°C	Field	15.22		15.5			*	15.33	
7429-90-5		Aluminum	T	mg/L	6020	<0.05		<0.05			*	0.0302	J
7440-36-0		Antimony	T	mg/L	6020	<0.003		<0.003			*	<0.003	
7440-38-2		Arsenic	T	mg/L	6020	<0.005		<0.005			*	<0.005	
7440-39-3		Barium	T	mg/L	6020	0.0592		0.0515			*	0.137	
7440-41-7		Beryllium	T	mg/L	6020	<0.0005		<0.0005			*	<0.0005	
7440-42-8		Boron	T	mg/L	6020	0.435		0.437			*	0.0364	
7440-43-9		Cadmium	T	mg/L	6020	<0.001		<0.001			*	<0.001	
7440-70-2		Calcium	T	mg/L	6020	28.5		35.7			*	25.9	
7440-47-3		Chromium	T	mg/L	6020	<0.01		<0.01			*	<0.01	
7440-48-4		Cobalt	T	mg/L	6020	0.00011	J	0.00361			*	0.0231	
7440-50-8		Copper	T	mg/L	6020	0.00081	J	0.0005	J		*	0.0005	J
7439-89-6		Iron	T	mg/L	6020	<0.1		1.38			*	4.78	
7439-92-1		Lead	T	mg/L	6020	<0.002		<0.002			*	<0.002	
7439-95-4		Magnesium	T	mg/L	6020	11.3	J	15.1	J		*	9.16	J
7439-96-5		Manganese	T	mg/L	6020	0.00214	J	0.287			*	0.255	
7439-97-6		Mercury	T	mg/L	7470	<0.0002		<0.0002			*	<0.0002	

RESIDENTIAL/CONTAINED-QUARTERLY
Facility: US DOE - Paducah Gaseous Diffusion Plant
Permit Number: 073-00045

FINDS/UNIT: KY8-890-008-982 / 1
LAB ID: None
For Official Use Only

GROUNDWATER SAMPLE ANALYSIS - (Cont.)

AKGWA NUMBER[1], Facility Well/Spring Number						8004-4798		8004-4799		8004-0981		8004-4800	
Facility's Local Well or Spring Number (e.g., MW-1, MW-2, etc.)						357		358		359		360	
CAS RN[4]		CONSTITUENT	TD[5]	Unit OF MEASURE	METHOD	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS
7439-98-7		Molybdenum	T	mg/L	6020	<0.0005		0.00018	J		*	0.00035	J
7440-02-0		Nickel	T	mg/L	6020	0.00066	J	0.00294			*	0.00184	J
7440-09-7		Potassium	T	mg/L	6010	1.73		2.44			*	0.719	
7440-16-6		Rhodium	T	mg/L	6020	<0.005		<0.005			*	<0.005	
7782-49-2		Selenium	T	mg/L	6020	<0.005		<0.005			*	<0.005	
7440-22-4		Silver	T	mg/L	6020	<0.001		<0.001			*	<0.001	
7440-23-5		Sodium	T	mg/L	6010	40.8		40.1			*	85.2	
7440-25-7		Tantalum	T	mg/L	6020	<0.005		<0.005			*	<0.005	
7440-28-0		Thallium	T	mg/L	6020	<0.002		<0.002			*	<0.002	
7440-61-1		Uranium	T	mg/L	6020	<0.0002		<0.0002			*	0.00025	J
7440-62-2		Vanadium	T	mg/L	6020	<0.005		<0.005			*	<0.005	
7440-66-6		Zinc	T	mg/L	6020	0.00401	J	0.00542	J		*	<0.01	
108-05-4		Vinyl acetate	T	mg/L	8260	<0.005		<0.005			*	<0.005	
67-64-1		Acetone	T	mg/L	8260	<0.005		<0.005			*	<0.005	
107-02-8		Acrolein	T	mg/L	8260	<0.005		<0.005			*	<0.005	
107-13-1		Acrylonitrile	T	mg/L	8260	<0.005		<0.005			*	<0.005	
71-43-2		Benzene	T	mg/L	8260	<0.001		<0.001			*	<0.001	
108-90-7		Chlorobenzene	T	mg/L	8260	<0.001		<0.001			*	<0.001	
1330-20-7		Xylenes	T	mg/L	8260	<0.003		<0.003			*	<0.003	
100-42-5		Styrene	T	mg/L	8260	<0.001		<0.001			*	<0.001	
108-88-3		Toluene	T	mg/L	8260	<0.001		<0.001			*	<0.001	
74-97-5		Chlorobromomethane	T	mg/L	8260	<0.001		<0.001			*	<0.001	

RESIDENTIAL/CONTAINED-QUARTERLY
Facility: US DOE - Paducah Gaseous Diffusion Plant
Permit Number: 073-00045

FINDS/UNIT: KY8-890-008-982 / 1
LAB ID: None
For Official Use Only

GROUNDWATER SAMPLE ANALYSIS - (Cont.)

AKGWA NUMBER[1], Facility Well/Spring Number						8004-4798		8004-4799		8004-0981		8004-4800	
Facility's Local Well or Spring Number (e.g., MW-1, MW-2, etc.)						357		358		359		360	
CAS RN[4]		CONSTITUENT	TD[5]	Unit OF MEASURE	METHOD	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS
75-27-4		Bromodichloromethane	T	mg/L	8260	<0.001		<0.001			*	<0.001	
75-25-2		Tribromomethane	T	mg/L	8260	<0.001		<0.001			*	<0.001	
74-83-9		Methyl bromide	T	mg/L	8260	<0.001		<0.001			*	<0.001	
78-93-3		Methyl ethyl ketone	T	mg/L	8260	<0.005		<0.005			*	<0.005	
110-57-6		trans-1,4-Dichloro-2-butene	T	mg/L	8260	<0.005		<0.005			*	<0.005	
75-15-0		Carbon disulfide	T	mg/L	8260	<0.005		<0.005			*	<0.005	
75-00-3		Chloroethane	T	mg/L	8260	<0.001		<0.001			*	<0.001	
67-66-3		Chloroform	T	mg/L	8260	<0.001		<0.001			*	<0.001	
74-87-3		Methyl chloride	T	mg/L	8260	<0.001		<0.001			*	<0.001	
156-59-2		cis-1,2-Dichloroethene	T	mg/L	8260	<0.001		<0.001			*	<0.001	
74-95-3		Methylene bromide	T	mg/L	8260	<0.001		<0.001			*	<0.001	
75-34-3		1,1-Dichloroethane	T	mg/L	8260	<0.001		<0.001			*	<0.001	
107-06-2		1,2-Dichloroethane	T	mg/L	8260	<0.001		<0.001			*	<0.001	
75-35-4		1,1-Dichloroethylene	T	mg/L	8260	<0.001		<0.001			*	<0.001	
106-93-4		Ethane, 1,2-dibromo	T	mg/L	8260	<0.001		<0.001			*	<0.001	
79-34-5		Ethane, 1,1,2,2-Tetrachloro	T	mg/L	8260	<0.001		<0.001			*	<0.001	
71-55-6		Ethane, 1,1,1-Trichloro-	T	mg/L	8260	<0.001		<0.001			*	<0.001	
79-00-5		Ethane, 1,1,2-Trichloro	T	mg/L	8260	<0.001		<0.001			*	<0.001	
630-20-6		Ethane, 1,1,1,2-Tetrachloro	T	mg/L	8260	<0.001		<0.001			*	<0.001	
75-01-4		Vinyl chloride	T	mg/L	8260	<0.001		<0.001			*	<0.001	
127-18-4		Ethene, Tetrachloro-	T	mg/L	8260	<0.001		<0.001			*	<0.001	
79-01-6		Ethene, Trichloro-	T	mg/L	8260	0.00571		0.00524			*	<0.001	

RESIDENTIAL/CONTAINED-QUARTERLY
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FINDS/UNIT: KY8-890-008-982 / 1
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GROUNDWATER SAMPLE ANALYSIS - (Cont.)

AKGWA NUMBER[1], Facility Well/Spring Number						8004-4798		8004-4799		8004-0981		8004-4800	
Facility's Local Well or Spring Number (e.g., MW-1, MW-2, etc.)						357		358		359		360	
CAS RN[4]		CONSTITUENT	TD[5]	Unit OF MEASURE	METHOD	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS
100-41-4		Ethylbenzene	T	mg/L	8260	<0.001		<0.001			*	<0.001	
591-78-6		2-Hexanone	T	mg/L	8260	<0.005		<0.005			*	<0.005	
74-88-4		Iodomethane	T	mg/L	8260	<0.005		<0.005			*	<0.005	
124-48-1		Methane, Dibromochloro-	T	mg/L	8260	<0.001		<0.001			*	<0.001	
56-23-5		Carbon Tetrachloride	T	mg/L	8260	<0.001		<0.001			*	<0.001	
75-09-2		Dichloromethane	T	mg/L	8260	<0.005		<0.005			*	<0.005	
108-10-1		Methyl isobutyl ketone	T	mg/L	8260	<0.005		<0.005			*	<0.005	
96-12-8		Propane, 1,2-Dibromo-3-chloro	T	mg/L	8011	<0.0000206		<0.0000205			*	<0.0000205	
78-87-5		Propane, 1,2-Dichloro-	T	mg/L	8260	<0.001		<0.001			*	<0.001	
10061-02-6		trans-1,3-Dichloro-1-propene	T	mg/L	8260	<0.001		<0.001			*	<0.001	
10061-01-5		cis-1,3-Dichloro-1-propene	T	mg/L	8260	<0.001		<0.001			*	<0.001	
156-60-5		trans-1,2-Dichloroethene	T	mg/L	8260	<0.001		<0.001			*	<0.001	
75-69-4		Trichlorofluoromethane	T	mg/L	8260	<0.001		<0.001			*	<0.001	
96-18-4		1,2,3-Trichloropropane	T	mg/L	8260	<0.001		<0.001			*	<0.001	
95-50-1		Benzene, 1,2-Dichloro-	T	mg/L	8260	<0.001		<0.001			*	<0.001	
106-46-7		Benzene, 1,4-Dichloro-	T	mg/L	8260	<0.001		<0.001			*	<0.001	
1336-36-3		PCB,Total	T	ug/L	8082	<0.0943		<0.0935			*	<0.0935	
12674-11-2		PCB-1016	T	ug/L	8082	<0.0943		<0.0935			*	<0.0935	
11104-28-2		PCB-1221	T	ug/L	8082	<0.0943		<0.0935			*	<0.0935	
11141-16-5		PCB-1232	T	ug/L	8082	<0.0943		<0.0935			*	<0.0935	
53469-21-9		PCB-1242	T	ug/L	8082	<0.0943		<0.0935			*	<0.0935	
12672-29-6		PCB-1248	T	ug/L	8082	<0.0943		<0.0935			*	<0.0935	

RESIDENTIAL/CONTAINED-QUARTERLY
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FINDS/UNIT: KY8-890-008-982 / 1
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GROUNDWATER SAMPLE ANALYSIS - (Cont.)

AKGWA NUMBER[1], Facility Well/Spring Number						8004-4798		8004-4799		8004-0981		8004-4800	
Facility's Local Well or Spring Number (e.g., MW-1, MW-2, etc.)						357		358		359		360	
CAS RN[4]		CONSTITUENT	TD[5]	Unit OF MEASURE	METHOD	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS
11097-69-1		PCB-1254	T	ug/L	8082	<0.0943		<0.0935			*	<0.0935	
11096-82-5		PCB-1260	T	ug/L	8082	<0.0943		<0.0935			*	<0.0935	
11100-14-4		PCB-1268	T	ug/L	8082	<0.0943		<0.0935			*	<0.0935	
12587-46-1		Gross Alpha	T	pCi/L	9310	-3.48	*	-1.48	*		*	-0.947	*
12587-47-2		Gross Beta	T	pCi/L	9310	21.5	*	26	*		*	-2.38	*
10043-66-0		Iodine-131	T	pCi/L			*		*		*		*
13982-63-3		Radium-226	T	pCi/L	HASL 300	0.301	*	0.372	*		*	0.466	*
10098-97-2		Strontium-90	T	pCi/L	906.0	1.07	*	0.943	*		*	3.02	*
14133-76-7		Technetium-99	T	pCi/L	Tc-02-RC	38.9	*	41.9	*		*	-3.63	*
14269-63-7		Thorium-230	T	pCi/L	Th-01-RC	0.793	*	0.108	*		*	1.16	*
10028-17-8		Tritium	T	pCi/L	906.0	103	*	62.8	*		*	24.1	*
S0130- -		Chemical Oxygen Demand	T	mg/L	410.4	19.9	J	<20			*	17.4	J
57-12-5		Cyanide	T	mg/L	9012	<0.2		<0.2			*	<0.2	
20461-54-5		Iodide	T	mg/L	300.0	<0.5		<0.5			*	<0.5	
S0268- -		Total Organic Carbon	T	mg/L	9060	1.28	J	1.34	J		*	3.11	
S0586- -		Total Organic Halides	T	mg/L	9020	0.0087	J	0.0062	J		*	0.0167	

Division of Waste Management
Solid Waste Branch
14 Reilly Road
Frankfort, KY 40601 (502)564-6716

RESIDENTIAL/CONTAINED-QUARTERLY
Facility: US DOE - Paducah Gaseous Diffusion Plant
Permit Number: 073-00045

FINDS/UNIT: KY8-890-008-982 / 1
LAB ID: None
For Official Use Only

GROUNDWATER SAMPLE ANALYSIS(S)

AKGWA NUMBER[1], Facility Well/Spring Number						8004-4795		8004-0986		8004-4796		8004-4797	
Facility's Local Well or Spring Number (e.g., MW-1, MW-2, etc.)						361		362		363		364	
Sample Sequence #						1		1		1		1	
If sample is a Blank, specify Type: (F)ield, (T)rip, (M)ethod, or (E)quipment						NA		NA		NA		NA	
Sample Date and Time (Month/Day/Year hour: minutes)						10/14/2014 13:13		10/15/2014 08:40		10/15/2014 10:12		10/15/2014 12:55	
Duplicate ("Y" or "N")[2]						N		N		N		N	
Split ("Y" or "N")[3]						N		N		N		N	
Facility Sample ID Number (if applicable)						MW361UG1-15		MW362UG1-15		MW363UG1-15		MW364UG1-15	
Laboratory Sample ID Number (if applicable)						359085004		359134001		359134002		359134003	
Date of Analysis (Month/Day/Year) For Volatile Organics Analysis						10/18/2014		10/20/2014		10/20/2014		10/20/2014	
Gradient with respect to Monitored Unit (UP, DOWN, SIDE, UNKNOWN)						DOWN		DOWN		DOWN		DOWN	
CAS RN[4]		CONSTITUENT	TD[5]	Unit OF MEASURE	METHOD	DETECTED VALUE OR PQL[6]	FLAGS[7]	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS
24959-67-9		Bromide	T	mg/L	9056	0.409		0.189	J	0.154	J	0.422	
16887-00-6		Chloride(s)	T	mg/L	9056	29.7		9.97		33.2		32.6	
16984-48-8		Fluoride	T	mg/L	9056	0.156		0.295		0.158		0.143	
S0595- -		Nitrate & Nitrite	T	mg/L	9056	0.93		0.327	J	3.49		1.04	
14808-79-8		Sulfate	T	mg/L	9056	73.9		23.4		26.4		68.4	
NS1894		Barometric Pressure Reading	T	Inches/Hg	Field	29.61		29.8		29.81		29.84	
S0145- -		Specific Conductance	T	µMH0/cm	Field	476		706		388		454	

[1]AKGWA # is 0000-0000 for any type of blank.
[2]Respond "Y" if the sample was a duplicate of another sample in this report.
[3]Respond "Y" if the sample was split and analyzed by separate laboratories.
[4]Chemical Abstracts Service Registry Number or unique identifier number assigned by agency.
[5]"T" = Total; "D" = Dissolved
[6]"<" indicates a non-detect; do not use "ND" or "BDL". Value shown is Practical Quantification Limit.
[7]Flags are as designated, do not use any other type. Use "*," then describe on "Written Comments Page."

STANDARD FLAGS:
* = See Comments
J = Estimated Value
B = Analyte found in blank
A = Average value
N = Presumptive ID
D = Concentration from analysis of a secondary dilution

RESIDENTIAL/CONTAINED-QUARTERLY
Facility: US DOE - Paducah Gaseous Diffusion Plant
Permit Number: 073-00045

FINDS/UNIT: KY8-890-008-982 / 1
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GROUNDWATER SAMPLE ANALYSIS - (Cont.)

AKGWA NUMBER[1], Facility Well/Spring Number						8004-4795		8004-0986		8004-4796		8004-4797	
Facility's Local Well or Spring Number (e.g., MW-1, MW-2, BLANK-F, etc.)						361		362		363		364	
CAS RN[4]		CONSTITUENT	TD[5]	Unit OF MEASURE	METHOD	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS
S0906 - -		Static Water Level Elevation	T	Ft. MSL	Field	322.59		335.07		322.23		322.17	
N238		Dissolved Oxygen	T	mg/L	Field	3.62		2.73		1.13		2.58	
S0266- -		Total Dissolved Solids	T	mg/L	160.1	256		444		189		217	
S0296- -		pH	T	Units	Field	6.07		6.98		6.19		6.23	
NS215		Eh	T	mV	Field	345		179		344		241	
S0907 - -		Temperature	T	°C	Field	15.89		14.17		14		14.67	
7429-90-5		Aluminum	T	mg/L	6020	0.0289	J	11.6		<0.05		0.0351	J
7440-36-0		Antimony	T	mg/L	6020	<0.003		<0.003		<0.003		<0.003	
7440-38-2		Arsenic	T	mg/L	6020	<0.005		0.002	J	<0.005		<0.005	
7440-39-3		Barium	T	mg/L	6020	0.0551		0.134		0.161		0.0813	
7440-41-7		Beryllium	T	mg/L	6020	<0.0005		0.00039	J	<0.0005		<0.0005	
7440-42-8		Boron	T	mg/L	6020	0.145		0.0138	J	0.0217		0.0106	J
7440-43-9		Cadmium	T	mg/L	6020	<0.001		<0.001		<0.001		<0.001	
7440-70-2		Calcium	T	mg/L	6020	31.4		22.7		27.2		29.5	
7440-47-3		Chromium	T	mg/L	6020	<0.01		0.0111		<0.01		<0.01	
7440-48-4		Cobalt	T	mg/L	6020	0.00038	J	0.00414		0.00116		0.00132	
7440-50-8		Copper	T	mg/L	6020	0.00101		0.00744		0.00064	J	0.00103	
7439-89-6		Iron	T	mg/L	6020	0.239		7.92		0.0989	J	0.989	
7439-92-1		Lead	T	mg/L	6020	<0.002		0.00482		<0.002		<0.002	
7439-95-4		Magnesium	T	mg/L	6020	13	J	9.61	J	10.3	J	11.9	J
7439-96-5		Manganese	T	mg/L	6020	0.0596		0.0622		0.158		0.325	
7439-97-6		Mercury	T	mg/L	7470	<0.0002		<0.0002		<0.0002		<0.0002	

RESIDENTIAL/CONTAINED-QUARTERLY
Facility: US DOE - Paducah Gaseous Diffusion Plant
Permit Number: 073-00045

FINDS/UNIT: KY8-890-008-982 / 1
LAB ID: None
For Official Use Only

GROUNDWATER SAMPLE ANALYSIS - (Cont.)

AKGWA NUMBER[1], Facility Well/Spring Number						8004-4795		8004-0986		8004-4796		8004-4797	
Facility's Local Well or Spring Number (e.g., MW-1, MW-2, etc.)						361		362		363		364	
CAS RN[4]		CONSTITUENT	TD[5]	Unit OF MEASURE	METHOD	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS
7439-98-7		Molybdenum	T	mg/L	6020	<0.0005		0.00119		<0.0005		0.00017	J
7440-02-0		Nickel	T	mg/L	6020	0.00075	J	0.00703		0.00103	J	0.00159	J
7440-09-7		Potassium	T	mg/L	6020	2.22		0.95		1.37		1.99	
7440-16-6		Rhodium	T	mg/L	6020	<0.005		<0.005		<0.005		<0.005	
7782-49-2		Selenium	T	mg/L	6020	0.00175	J	<0.005		<0.005		0.00164	J
7440-22-4		Silver	T	mg/L	6020	<0.001		0.00035	J	<0.001		<0.001	
7440-23-5		Sodium	T	mg/L	6020	42.5		148		33.6		41.1	
7440-25-7		Tantalum	T	mg/L	6020	<0.005		<0.005		<0.005		<0.005	
7440-28-0		Thallium	T	mg/L	6020	<0.002		<0.002		<0.002		<0.002	
7440-61-1		Uranium	T	mg/L	6020	<0.0002		0.0059	J	<0.0002		<0.0002	
7440-62-2		Vanadium	T	mg/L	6010	<0.005		0.0149		<0.005		<0.005	
7440-66-6		Zinc	T	mg/L	6020	<0.01		0.0191		<0.01		0.0284	
108-05-4		Vinyl acetate	T	mg/L	8260	<0.005		<0.005		<0.005		<0.005	
67-64-1		Acetone	T	mg/L	8260	<0.005		<0.005		<0.005		<0.005	
107-02-8		Acrolein	T	mg/L	8260	<0.005		<0.005		<0.005		<0.005	
107-13-1		Acrylonitrile	T	mg/L	8260	<0.005		<0.005		<0.005		<0.005	
71-43-2		Benzene	T	mg/L	8260	<0.001		<0.001		<0.001		<0.001	
108-90-7		Chlorobenzene	T	mg/L	8260	<0.001		<0.001		<0.001		<0.001	
1330-20-7		Xylenes	T	mg/L	8260	<0.003		<0.003		<0.003		<0.003	
100-42-5		Styrene	T	mg/L	8260	<0.001		<0.001		<0.001		<0.001	
108-88-3		Toluene	T	mg/L	8260	<0.001		<0.001		<0.001		<0.001	
74-97-5		Chlorobromomethane	T	mg/L	8260	<0.001		<0.001		<0.001		<0.001	

RESIDENTIAL/CONTAINED-QUARTERLY
Facility: US DOE - Paducah Gaseous Diffusion Plant
Permit Number: 073-00045

FINDS/UNIT: KY8-890-008-982 / 1
LAB ID: None
For Official Use Only

GROUNDWATER SAMPLE ANALYSIS - (Cont.)

AKGWA NUMBER[1], Facility Well/Spring Number						8004-4795		8004-0986		8004-4796		8004-4797	
Facility's Local Well or Spring Number (e.g., MW-1, MW-2, etc.)						361		362		363		364	
CAS RN[4]		CONSTITUENT	TD[5]	Unit OF MEASURE	METHOD	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS
75-27-4		Bromodichloromethane	T	mg/L	8260	<0.001		<0.001		<0.001		<0.001	
75-25-2		Tribromomethane	T	mg/L	8260	<0.001		<0.001		<0.001		<0.001	
74-83-9		Methyl bromide	T	mg/L	8260	<0.001		<0.001		<0.001		<0.001	
78-93-3		Methyl ethyl ketone	T	mg/L	8260	<0.005		<0.005		<0.005		<0.005	
110-57-6		trans-1,4-Dichloro-2-butene	T	mg/L	8260	<0.005		<0.005		<0.005		<0.005	
75-15-0		Carbon disulfide	T	mg/L	8260	<0.005		<0.005		<0.005		<0.005	
75-00-3		Chloroethane	T	mg/L	8260	<0.001		<0.001		<0.001		<0.001	
67-66-3		Chloroform	T	mg/L	8260	<0.001		<0.001		<0.001		<0.001	
74-87-3		Methyl chloride	T	mg/L	8260	<0.001		<0.001		<0.001		<0.001	
156-59-2		cis-1,2-Dichloroethene	T	mg/L	8260	<0.001		<0.001		<0.001		<0.001	
74-95-3		Methylene bromide	T	mg/L	8260	<0.001		<0.001		<0.001		<0.001	
75-34-3		1,1-Dichloroethane	T	mg/L	8260	<0.001		<0.001		<0.001		<0.001	
107-06-2		1,2-Dichloroethane	T	mg/L	8260	<0.001		<0.001		<0.001		<0.001	
75-35-4		1,1-Dichloroethylene	T	mg/L	8260	<0.001		<0.001		<0.001		<0.001	
106-93-4		Ethane, 1,2-dibromo	T	mg/L	8260	<0.001		<0.001		<0.001		<0.001	
79-34-5		Ethane, 1,1,2,2-Tetrachloro	T	mg/L	8260	<0.001		<0.001		<0.001		<0.001	
71-55-6		Ethane, 1,1,1-Trichloro-	T	mg/L	8260	<0.001		<0.001		<0.001		<0.001	
79-00-5		Ethane, 1,1,2-Trichloro	T	mg/L	8260	<0.001		<0.001		<0.001		<0.001	
630-20-6		Ethane, 1,1,1,2-Tetrachloro	T	mg/L	8260	<0.001		<0.001		<0.001		<0.001	
75-01-4		Vinyl chloride	T	mg/L	8260	<0.001		<0.001		<0.001		<0.001	
127-18-4		Ethene, Tetrachloro-	T	mg/L	8260	<0.001		<0.001		<0.001		<0.001	
79-01-6		Ethene, Trichloro-	T	mg/L	8260	0.00354		<0.001		0.00427		0.00386	

RESIDENTIAL/CONTAINED-QUARTERLY
Facility: US DOE - Paducah Gaseous Diffusion Plant
Permit Number: 073-00045

FINDS/UNIT: KY8-890-008-982 / 1
LAB ID: None
For Official Use Only

GROUNDWATER SAMPLE ANALYSIS - (Cont.)

AKGWA NUMBER[1], Facility Well/Spring Number						8004-4795		8004-0986		8004-4796		8004-4797	
Facility's Local Well or Spring Number (e.g., MW-1, MW-2, etc.)						361		362		363		364	
CAS RN[4]		CONSTITUENT	TD[5]	Unit OF MEASURE	METHOD	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS
100-41-4		Ethylbenzene	T	mg/L	8260	<0.001		<0.001		<0.001		<0.001	
591-78-6		2-Hexanone	T	mg/L	8260	<0.005		<0.005		<0.005		<0.005	
74-88-4		Iodomethane	T	mg/L	8260	<0.005		<0.005		<0.005		<0.005	
124-48-1		Methane, Dibromochloro-	T	mg/L	8260	<0.001		<0.001		<0.001		<0.001	
56-23-5		Carbon Tetrachloride	T	mg/L	8260	<0.001		<0.001		<0.001		<0.001	
75-09-2		Dichloromethane	T	mg/L	8260	<0.005		<0.005		<0.005		<0.005	
108-10-1		Methyl isobutyl ketone	T	mg/L	8260	<0.005		<0.005		<0.005		<0.005	
96-12-8		Propane, 1,2-Dibromo-3-chloro	T	mg/L	8011	<0.0000201		<0.0000203		<0.0000203		<0.0000205	
78-87-5		Propane, 1,2-Dichloro-	T	mg/L	8260	<0.001		<0.001		<0.001		<0.001	
10061-02-6		trans-1,3-Dichloro-1-propene	T	mg/L	8260	<0.001		<0.001		<0.001		<0.001	
10061-01-5		cis-1,3-Dichloro-1-propene	T	mg/L	8260	<0.001		<0.001		<0.001		<0.001	
156-60-5		trans-1,2-Dichloroethene	T	mg/L	8260	<0.001		<0.001		<0.001		<0.001	
75-69-4		Trichlorofluoromethane	T	mg/L	8260	<0.001		<0.001		<0.001		<0.001	
96-18-4		1,2,3-Trichloropropane	T	mg/L	8260	<0.001		<0.001		<0.001		<0.001	
95-50-1		Benzene, 1,2-Dichloro-	T	mg/L	8260	<0.001		<0.001		<0.001		<0.001	
106-46-7		Benzene, 1,4-Dichloro-	T	mg/L	8260	<0.001		<0.001		<0.001		<0.001	
1336-36-3		PCB,Total	T	ug/L	8082	<0.0943		<0.0952		0.115		<0.0935	
12674-11-2		PCB-1016	T	ug/L	8082	<0.0943		<0.0952		<0.0943		<0.0935	
11104-28-2		PCB-1221	T	ug/L	8082	<0.0943		<0.0952		<0.0943		<0.0935	
11141-16-5		PCB-1232	T	ug/L	8082	<0.0943		<0.0952		<0.0943		<0.0935	
53469-21-9		PCB-1242	T	ug/L	8082	<0.0943		<0.0952		0.115		<0.0935	
12672-29-6		PCB-1248	T	ug/L	8082	<0.0943		<0.0952		<0.0943		<0.0935	

RESIDENTIAL/CONTAINED-QUARTERLY
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Permit Number: 073-00045

FINDS/UNIT: KY8-890-008-982 / 1
LAB ID: None
For Official Use Only

GROUNDWATER SAMPLE ANALYSIS - (Cont.)

AKGWA NUMBER[1], Facility Well/Spring Number						8004-4795		8004-0986		8004-4796		8004-4797	
Facility's Local Well or Spring Number (e.g., MW-1, MW-2, etc.)						361		362		363		364	
CAS RN[4]		CONSTITUENT	TD[5]	Unit OF MEASURE	METHOD	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS
11097-69-1		PCB-1254	T	ug/L	8082	<0.0943		<0.0952		<0.0943		<0.0935	
11096-82-5		PCB-1260	T	ug/L	8082	<0.0943		<0.0952		<0.0943		<0.0935	
11100-14-4		PCB-1268	T	ug/L	8082	<0.0943		<0.0952		<0.0943		<0.0935	
12587-46-1		Gross Alpha	T	pCi/L	9310	2.95	*	5.85	*	0.317	*	-3.53	*
12587-47-2		Gross Beta	T	pCi/L	9310	26.7	*	5.3	*	11.8	*	23.4	*
10043-66-0		Iodine-131	T	pCi/L			*		*		*		*
13982-63-3		Radium-226	T	pCi/L	HASL 300	0.198	*	0.303	*	0.523	*	0.497	*
10098-97-2		Strontium-90	T	pCi/L	905.0	0.789	*	-0.767	*	-2.65	*	2.2	*
14133-76-7		Technetium-99	T	pCi/L	Tc-02-RC	41.9	*	-6.89	*	5.23	*	39.6	*
14269-63-7		Thorium-230	T	pCi/L	Th-01-RC	0.653	*	1.2	*	1.22	*	0.688	*
10028-17-8		Tritium	T	pCi/L	906.0	158	*	48.4	*	-20.9	*	54.5	*
S0130- -		Chemical Oxygen Demand	T	mg/L	410.4	<20		17.6	J	8.1	J	8.1	J
57-12-5		Cyanide	T	mg/L	9012	<0.2		<0.2		<0.2		<0.2	
20461-54-5		Iodide	T	mg/L	300.0	<0.5		<0.5		<0.5		<0.5	
S0268- -		Total Organic Carbon	T	mg/L	9060	1.35	J	1.44	J	4.17		1.47	J
S0586- -		Total Organic Halides	T	mg/L	9020	0.00618	J	0.0157		0.0077	J	<0.01	

Division of Waste Management
Solid Waste Branch
14 Reilly Road
Frankfort, KY 40601 (502)564-6716

RESIDENTIAL/CONTAINED-QUARTERLY
Facility: US DOE - Paducah Gaseous Diffusion Plant
Permit Number: 073-00045

FINDS/UNIT: KY8-890-008-982 / 1
LAB ID: None
For Official Use Only

GROUNDWATER SAMPLE ANALYSIS(S)

AKGWA NUMBER[1], Facility Well/Spring Number						8004-0984		8004-0982		8004-4793		8004-0983	
Facility's Local Well or Spring Number (e.g., MW-1, MW-2, etc.)						365		366		367		368	
Sample Sequence #						1		1		1		1	
If sample is a Blank, specify Type: (F)ield, (T)rip, (M)ethod, or (E)quipment						NA		NA		NA		NA	
Sample Date and Time (Month/Day/Year hour: minutes)						NA		10/16/2014 08:53		10/15/2014 14:20		NA	
Duplicate ("Y" or "N")[2]						N		N		N		N	
Split ("Y" or "N")[3]						N		N		N		N	
Facility Sample ID Number (if applicable)						NA		MW366UG1-15		MW367UG1-15		NA	
Laboratory Sample ID Number (if applicable)						NA		359287002		359134004		NA	
Date of Analysis (Month/Day/Year) For Volatile Organics Analysis						NA		10/23/2014		10/20/2014		NA	
Gradient with respect to Monitored Unit (UP, DOWN, SIDE, UNKNOWN)						DOWN		SIDE		SIDE		SIDE	
CAS RN[4]		**CONSTITUENT**	**TD[5]**	**Unit OF MEASURE**	**METHOD**	**DETECTED VALUE OR PQL[6]**	**FLAGS[7]**	**DETECTED VALUE OR PQL[6]**	**FLAGS**	**DETECTED VALUE OR PQL[6]**	**FLAGS**	**DETECTED VALUE OR PQL[6]**	**FLAGS**
24959-67-9		**Bromide**	**T**	**mg/L**	**9056**		*	0.482		0.101	J		*
16887-00-6		**Chloride(s)**	**T**	**mg/L**	**9056**		*	37.6		8.23			*
16984-48-8		**Fluoride**	**T**	**mg/L**	**9056**		*	0.167		0.0933	J		*
S0595- -		**Nitrate & Nitrite**	**T**	**mg/L**	**9056**		*	0.803		<0.1			*
14808-79-8		**Sulfate**	**T**	**mg/L**	**9056**		*	46		21.4			*
NS1894		**Barometric Pressure Reading**	**T**	**Inches/Hg**	**Field**		*	29.93		29.83			*
S0145- -		**Specific Conductance**	**T**	**μMH0/cm**	**Field**		*	450		276			*

[1]AKGWA # is 0000-0000 for any type of blank.
[2]Respond "Y" if the sample was a duplicate of another sample in this report.
[3]Respond "Y" if the sample was split and analyzed by separate laboratories.
[4]Chemical Abstracts Service Registry Number or unique identifier number assigned by agency.
[5]"T" = Total; "D" = Dissolved
[6]"<" indicates a non-detect; do not use "ND" or "BDL". Value shown is Practical Quantification Limit.
[7]Flags are as designated, do not use any other type. Use "*," then describe on "Written Comments Page."

STANDARD FLAGS:
* = See Comments
J = Estimated Value
B = Analyte found in blank
A = Average value
N = Presumptive ID
D = Concentration from analysis of a secondary dilution

RESIDENTIAL/CONTAINED-QUARTERLY
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FINDS/UNIT: KY8-890-008-982 / 1
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GROUNDWATER SAMPLE ANALYSIS - (Cont.)

AKGWA NUMBER[1], Facility Well/Spring Number						8004-0984		8004-0982		8004-4793		8004-0983	
Facility's Local Well or Spring Number (e.g., MW-1, MW-2, BLANK-F, etc.)						365		366		367		368	
CAS RN[4]		CONSTITUENT	TD[5]	Unit OF MEASURE	METHOD	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS
S0906 - -		Static Water Level Elevation	T	Ft. MSL	Field		*	322.26		322.44			*
N238		Dissolved Oxygen	T	mg/L	Field		*	3.56		1.49			*
S0266- -		Total Dissolved Solids	T	mg/L	160.1		*	239		124			*
S0296- -		pH	T	Units	Field		*	6.12		6.11			*
NS215		Eh	T	mV	Field		*	343		195			*
S0907 - -		Temperature	T	°C	Field		*	14.72		15			*
7429-90-5		Aluminum	T	mg/L	6020		*	<0.05		0.0505			*
7440-36-0		Antimony	T	mg/L	6020		*	<0.003		<0.003			*
7440-38-2		Arsenic	T	mg/L	6020		*	<0.005		0.00602			*
7440-39-3		Barium	T	mg/L	6020		*	0.157		0.16			*
7440-41-7		Beryllium	T	mg/L	6020		*	<0.0005		<0.0005			*
7440-42-8		Boron	T	mg/L	6020		*	0.0882		0.0146	J		*
7440-43-9		Cadmium	T	mg/L	6020		*	<0.001		<0.001			*
7440-70-2		Calcium	T	mg/L	6020		*	28.9		14.6			*
7440-47-3		Chromium	T	mg/L	6020		*	<0.01		<0.01			*
7440-48-4		Cobalt	T	mg/L	6020		*	0.00065	J	0.00459			*
7440-50-8		Copper	T	mg/L	6020		*	0.00054	J	0.00081	J		*
7439-89-6		Iron	T	mg/L	6020		*	0.107		16.6			*
7439-92-1		Lead	T	mg/L	6020		*	<0.002		<0.002			*
7439-95-4		Magnesium	T	mg/L	6020		*	12.2		7.33	J		*
7439-96-5		Manganese	T	mg/L	6020		*	0.0329		1.95			*
7439-97-6		Mercury	T	mg/L	7470		*	<0.0002		<0.0002			*

RESIDENTIAL/CONTAINED-QUARTERLY
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FINDS/UNIT: KY8-890-008-982 / 1
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GROUNDWATER SAMPLE ANALYSIS - (Cont.)

AKGWA NUMBER[1], Facility Well/Spring Number						8004-0984		8004-0982		8004-4793		8004-0983	
Facility's Local Well or Spring Number (e.g., MW-1, MW-2, etc.)						365		366		367		368	
CAS RN[4]		CONSTITUENT	TD[5]	Unit OF MEASURE	METHOD	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS
7439-98-7		Molybdenum	T	mg/L	6020		*	<0.0005		<0.0005			*
7440-02-0		Nickel	T	mg/L	6020		*	0.00063	J	0.00311			*
7440-09-7		Potassium	T	mg/L	6020		*	1.88		2.62			*
7440-16-6		Rhodium	T	mg/L	6020		*	<0.005		<0.005			*
7782-49-2		Selenium	T	mg/L	6020		*	0.00227	J	<0.005			*
7440-22-4		Silver	T	mg/L	6020		*	<0.001		<0.001			*
7440-23-5		Sodium	T	mg/L	6020		*	45.9		15.6			*
7440-25-7		Tantalum	T	mg/L	6020		*	<0.005		<0.005			*
7440-28-0		Thallium	T	mg/L	6020		*	<0.002		<0.002			*
7440-61-1		Uranium	T	mg/L	6020		*	<0.0002		<0.0002			*
7440-62-2		Vanadium	T	mg/L	6010		*	<0.005		0.00185	J		*
7440-66-6		Zinc	T	mg/L	6020		*	0.00718	BJ	0.00611	J		*
108-05-4		Vinyl acetate	T	mg/L	8260		*	<0.005		<0.005			*
67-64-1		Acetone	T	mg/L	8260		*	<0.005		<0.005			*
107-02-8		Acrolein	T	mg/L	8260		*	<0.005		<0.005			*
107-13-1		Acrylonitrile	T	mg/L	8260		*	<0.005		<0.005			*
71-43-2		Benzene	T	mg/L	8260		*	<0.001		<0.001			*
108-90-7		Chlorobenzene	T	mg/L	8260		*	<0.001		<0.001			*
1330-20-7		Xylenes	T	mg/L	8260		*	<0.003		<0.003			*
100-42-5		Styrene	T	mg/L	8260		*	<0.001		<0.001			*
108-88-3		Toluene	T	mg/L	8260		*	<0.001		<0.001			*
74-97-5		Chlorobromomethane	T	mg/L	8260		*	<0.001		<0.001			*

RESIDENTIAL/CONTAINED-QUARTERLY
Facility: US DOE - Paducah Gaseous Diffusion Plant
Permit Number: 073-00045

FINDS/UNIT: KY8-890-008-982 / 1
LAB ID: None
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GROUNDWATER SAMPLE ANALYSIS - (Cont.)

AKGWA NUMBER[1], Facility Well/Spring Number						8004-0984		8004-0982		8004-4793		8004-0983	
Facility's Local Well or Spring Number (e.g., MW-1, MW-2, etc.)						365		366		367		368	
CAS RN[4]		CONSTITUENT	TD[5]	Unit OF MEASURE	METHOD	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS
75-27-4		Bromodichloromethane	T	mg/L	8260		*	<0.001		<0.001			*
75-25-2		Tribromomethane	T	mg/L	8260		*	<0.001		<0.001			*
74-83-9		Methyl bromide	T	mg/L	8260		*	<0.001		<0.001			*
78-93-3		Methyl ethyl ketone	T	mg/L	8260		*	<0.005		<0.005			*
110-57-6		trans-1,4-Dichloro-2-butene	T	mg/L	8260		*	<0.005		<0.005			*
75-15-0		Carbon disulfide	T	mg/L	8260		*	<0.005		<0.005			*
75-00-3		Chloroethane	T	mg/L	8260		*	<0.001		<0.001			*
67-66-3		Chloroform	T	mg/L	8260		*	<0.001		<0.001			*
74-87-3		Methyl chloride	T	mg/L	8260		*	<0.001		<0.001			*
156-59-2		cis-1,2-Dichloroethene	T	mg/L	8260		*	<0.001		<0.001			*
74-95-3		Methylene bromide	T	mg/L	8260		*	<0.001		<0.001			*
75-34-3		1,1-Dichloroethane	T	mg/L	8260		*	<0.001		<0.001			*
107-06-2		1,2-Dichloroethane	T	mg/L	8260		*	<0.001		<0.001			*
75-35-4		1,1-Dichloroethylene	T	mg/L	8260		*	<0.001		<0.001			*
106-93-4		Ethane, 1,2-dibromo	T	mg/L	8260		*	<0.001		<0.001			*
79-34-5		Ethane, 1,1,2,2-Tetrachloro	T	mg/L	8260		*	<0.001		<0.001			*
71-55-6		Ethane, 1,1,1-Trichloro-	T	mg/L	8260		*	<0.001		<0.001			*
79-00-5		Ethane, 1,1,2-Trichloro	T	mg/L	8260		*	<0.001		<0.001			*
630-20-6		Ethane, 1,1,1,2-Tetrachloro	T	mg/L	8260		*	<0.001		<0.001			*
75-01-4		Vinyl chloride	T	mg/L	8260		*	<0.001		<0.001			*
127-18-4		Ethene, Tetrachloro-	T	mg/L	8260		*	<0.001		<0.001			*
79-01-6		Ethene, Trichloro-	T	mg/L	8260		*	0.00332		<0.001			*

RESIDENTIAL/CONTAINED-QUARTERLY
Facility: US DOE - Paducah Gaseous Diffusion Plant
Permit Number: 073-00045

FINDS/UNIT: KY8-890-008-982 / 1
LAB ID: None
For Official Use Only

GROUNDWATER SAMPLE ANALYSIS - (Cont.)

AKGWA NUMBER[1], Facility Well/Spring Number						8004-0984		8004-0982		8004-4793		8004-0983	
Facility's Local Well or Spring Number (e.g., MW-1, MW-2, etc.)						365		366		367		368	
CAS RN[4]		CONSTITUENT	TD[5]	Unit OF MEASURE	METHOD	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS
100-41-4		Ethylbenzene	T	mg/L	8260		*	<0.001		<0.001			*
591-78-6		2-Hexanone	T	mg/L	8260		*	<0.005		<0.005			*
74-88-4		Iodomethane	T	mg/L	8260		*	<0.005		<0.005			*
124-48-1		Methane, Dibromochloro-	T	mg/L	8260		*	<0.001		<0.001			*
56-23-5		Carbon Tetrachloride	T	mg/L	8260		*	<0.001		<0.001			*
75-09-2		Dichloromethane	T	mg/L	8260		*	<0.005		<0.005			*
108-10-1		Methyl isobutyl ketone	T	mg/L	8260		*	<0.005		<0.005			*
96-12-8		Propane, 1,2-Dibromo-3-chloro	T	mg/L	8011		*	<0.0000203		<0.0000201			*
78-87-5		Propane, 1,2-Dichloro-	T	mg/L	8260		*	<0.001		<0.001			*
10061-02-6		trans-1,3-Dichloro-1-propene	T	mg/L	8260		*	<0.001		<0.001			*
10061-01-5		cis-1,3-Dichloro-1-propene	T	mg/L	8260		*	<0.001		<0.001			*
156-60-5		trans-1,2-Dichloroethene	T	mg/L	8260		*	<0.001		<0.001			*
75-69-4		Trichlorofluoromethane	T	mg/L	8260		*	<0.001		<0.001			*
96-18-4		1,2,3-Trichloropropane	T	mg/L	8260		*	<0.001		<0.001			*
95-50-1		Benzene, 1,2-Dichloro-	T	mg/L	8260		*	<0.001		<0.001			*
106-46-7		Benzene, 1,4-Dichloro-	T	mg/L	8260		*	<0.001		<0.001			*
1336-36-3		PCB,Total	T	ug/L	8082		*	<0.0962		<0.098			*
12674-11-2		PCB-1016	T	ug/L	8082		*	<0.0962		<0.098			*
11104-28-2		PCB-1221	T	ug/L	8082		*	<0.0962		<0.098			*
11141-16-5		PCB-1232	T	ug/L	8082		*	<0.0962		<0.098			*
53469-21-9		PCB-1242	T	ug/L	8082		*	<0.0962		<0.098			*
12672-29-6		PCB-1248	T	ug/L	8082		*	<0.0962		<0.098			*

RESIDENTIAL/CONTAINED-QUARTERLY
Facility: US DOE - Paducah Gaseous Diffusion Plant
Permit Number: 073-00045

FINDS/UNIT: KY8-890-008-982 / 1
LAB ID: None
For Official Use Only

GROUNDWATER SAMPLE ANALYSIS - (Cont.)

AKGWA NUMBER[1], Facility Well/Spring Number						8004-0984		8004-0982		8004-4793		8004-0983	
Facility's Local Well or Spring Number (e.g., MW-1, MW-2, etc.)						365		366		367		368	
CAS RN[4]		CONSTITUENT	TD[5]	Unit OF MEASURE	METHOD	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS
11097-69-1		PCB-1254	T	ug/L	8082		*	<0.0962		<0.098			*
11096-82-5		PCB-1260	T	ug/L	8082		*	<0.0962		<0.098			*
11100-14-4		PCB-1268	T	ug/L	8082		*	<0.0962		<0.098			*
12587-46-1		Gross Alpha	T	pCi/L	9310		*	-5.26	*	-3.85	*		*
12587-47-2		Gross Beta	T	pCi/L	9310		*	40.2	*	2.1	*		*
10043-66-0		Iodine-131	T	pCi/L			*		*		*		*
13982-63-3		Radium-226	T	pCi/L	HASL 300		*	0.283	*	0.772	*		*
10098-97-2		Strontium-90	T	pCi/L	905.0		*	2.69	*	-0.123	*		*
14133-76-7		Technetium-99	T	pCi/L	Tc-02-RC		*	37.5	*	-3.34	*		*
14269-63-7		Thorium-230	T	pCi/L	TH-01-RC		*	-1.05	*	0.372	*		*
10028-17-8		Tritium	T	pCi/L	906.0		*	16.2	*	19	*		*
S0130- -		Chemical Oxygen Demand	T	mg/L	410.4		*	24.8		<20			*
57-12-5		Cyanide	T	mg/L	9012		*	<0.2		<0.2			*
20461-54-5		Iodide	T	mg/L	300.0		*	<0.5		<0.5			*
S0268- -		Total Organic Carbon	T	mg/L	9060		*	1.61	J	1.84	J		*
S0586- -		Total Organic Halides	T	mg/L	9020		*	0.00604	J	<0.01			*

Division of Waste Management
Solid Waste Branch
14 Reilly Road
Frankfort, KY 40601 (502)564-6716

RESIDENTIAL/CONTAINED-QUARTERLY
Facility: US DOE - Paducah Gaseous Diffusion Plant
Permit Number: 073-00045

FINDS/UNIT: KY8-890-008-982 / 1
LAB ID: None
For Official Use Only

GROUNDWATER SAMPLE ANALYSIS(S)

AKGWA NUMBER[1], Facility Well/Spring Number						8004-4820		8004-4818		8004-4819		8004-4808		
Facility's Local Well or Spring Number (e.g., MW-1, MW-2, etc.)						369		370		371		372		
Sample Sequence #						1		1		1		1		
If sample is a Blank, specify Type: (F)ield, (T)rip, (M)ethod, or (E)quipment						NA		NA		NA		NA		
Sample Date and Time (Month/Day/Year hour: minutes)						10/20/2014 08:42		10/20/2014 13:47		10/20/2014 13:06		10/16/2014 13:05		
Duplicate ("Y" or "N")[2]						N		N		N		N		
Split ("Y" or "N")[3]						N		N		N		N		
Facility Sample ID Number (if applicable)						MW369UG1-15		MW370UG1-15		MW371UG1-15		MW372UG1-15		
Laboratory Sample ID Number (if applicable)						359506001		359506002		359506003		359287003		
Date of Analysis (Month/Day/Year) For Volatile Organics Analysis						10/23/2014		10/23/2014		10/23/2014		10/23/2014		
Gradient with respect to Monitored Unit (UP, DOWN, SIDE, UNKNOWN)						UP		UP		UP		UP		
CAS RN[4]		**CONSTITUENT**	**TD[5]**	**Unit OF MEASURE**	**METHOD**	**DETECTED VALUE OR PQL[6]**	**FLAGS[7]**	**DETECTED VALUE OR PQL[6]**	**FLAGS**	**DETECTED VALUE OR PQL[6]**	**FLAGS**	**DETECTED VALUE OR PQL[6]**	**FLAGS**	
24959-67-9		**Bromide**	**T**	**mg/L**	**9056**	0.402		0.55		0.103	J	0.629		
16887-00-6		**Chloride(s)**	**T**	**mg/L**	**9056**	31.8		40		6.81		47.3		
16984-48-8		**Fluoride**	**T**	**mg/L**	**9056**	0.19		0.158		0.28		0.176		
S0595- -		**Nitrate & Nitrite**	**T**	**mg/L**	**9056**	0.474		1.22		0.427		0.798		
14808-79-8		**Sulfate**	**T**	**mg/L**	**9056**	7.65		19.1		10.5		118		
NS1894		**Barometric Pressure Reading**	**T**	**Inches/Hg**	**Field**	30.03		29.98		30.01		29.93		
S0145- -		**Specific Conductance**	**T**	**μMH0/cm**	**Field**	371		437		782		766		

[1]AKGWA # is 0000-0000 for any type of blank.
[2]Respond "Y" if the sample was a duplicate of another sample in this report.
[3]Respond "Y" if the sample was split and analyzed by separate laboratories.
[4]Chemical Abstracts Service Registry Number or unique identifier number assigned by agency.
[5]"T" = Total; "D" = Dissolved
[6]"<" indicates a non-detect; do not use "ND" or "BDL". Value shown is Practical Quantification Limit.
[7]Flags are as designated, do not use any other type. Use "*," then describe on "Written Comments Page."

STANDARD FLAGS:
* = See Comments
J = Estimated Value
B = Analyte found in blank
A = Average value
N = Presumptive ID
D = Concentration from analysis of a secondary dilution

RESIDENTIAL/CONTAINED-QUARTERLY
Facility: US DOE - Paducah Gaseous Diffusion Plant
Permit Number: 073-00045

FINDS/UNIT: KY8-890-008-982 / 1
LAB ID: None
For Official Use Only

GROUNDWATER SAMPLE ANALYSIS - (Cont.)

AKGWA NUMBER[1], Facility Well/Spring Number						8004-4820		8004-4818		8004-4819		8004-4808	
Facility's Local Well or Spring Number (e.g., MW-1, MW-2, BLANK-F, etc.)						369		370		371		372	
CAS RN[4]		CONSTITUENT	TD[5]	Unit OF MEASURE	METHOD	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS
S0906 - -		Static Water Level Elevation	T	Ft. MSL	Field	323.43		323.51		340.85		323.61	
N238		Dissolved Oxygen	T	mg/L	Field	2.1		3.74		0.98		0.98	
S0266- -		Total Dissolved Solids	T	mg/L	160.1	193		190		394		476	
S0296- -		pH	T	Units	Field	6.09		6.03		6.52		6.16	
NS215		Eh	T	mV	Field	405		363		360		88	
S0907 - -		Temperature	T	°C	Field	14.5		19.5		17.89		17.39	
7429-90-5		Aluminum	T	mg/L	6020	0.184		<0.05		0.156		0.0506	
7440-36-0		Antimony	T	mg/L	6020	<0.003		<0.003		<0.003		<0.003	
7440-38-2		Arsenic	T	mg/L	6020	0.00171	J	<0.005		<0.005		0.00186	J
7440-39-3		Barium	T	mg/L	6020	0.368		0.2		0.182		0.0678	
7440-41-7		Beryllium	T	mg/L	6020	0.00022	J	<0.0005		<0.0005		<0.0005	
7440-42-8		Boron	T	mg/L	6020	0.0139	J	0.0323		<0.015		1.08	
7440-43-9		Cadmium	T	mg/L	6020	<0.001		<0.001		<0.001		<0.001	
7440-70-2		Calcium	T	mg/L	6020	16.8		28		32.6		59.3	
7440-47-3		Chromium	T	mg/L	6020	<0.01		<0.01		<0.01		<0.01	
7440-48-4		Cobalt	T	mg/L	6020	0.00805		0.00074	J	<0.001		0.00031	J
7440-50-8		Copper	T	mg/L	6020	0.00143		0.00075	J	0.00151		0.00041	J
7439-89-6		Iron	T	mg/L	6020	0.339		0.0369	J	0.104		0.476	
7439-92-1		Lead	T	mg/L	6020	<0.002		0.00065	J	<0.002		<0.002	
7439-95-4		Magnesium	T	mg/L	6020	7.03		12.2		13.3		22.4	
7439-96-5		Manganese	T	mg/L	6020	0.038		0.0099		0.00145	J	0.0208	
7439-97-6		Mercury	T	mg/L	7470	<0.0002		<0.0002		<0.0002		<0.0002	

RESIDENTIAL/CONTAINED-QUARTERLY
Facility: US DOE - Paducah Gaseous Diffusion Plant
Permit Number: 073-00045

FINDS/UNIT: KY8-890-008-982 / 1
LAB ID: None
For Official Use Only

GROUNDWATER SAMPLE ANALYSIS - (Cont.)

AKGWA NUMBER[1], Facility Well/Spring Number						8004-4820		8004-4818		8004-4819		8004-4808	
Facility's Local Well or Spring Number (e.g., MW-1, MW-2, etc.)						369		370		371		372	
CAS RN[4]		CONSTITUENT	TD[5]	Unit OF MEASURE	METHOD	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS
7439-98-7		Molybdenum	T	mg/L	6020	0.0002	J	0.00022	J	0.00023	J	0.00041	J
7440-02-0		Nickel	T	mg/L	6020	0.00827	J	0.00081	BJ	0.00079	BJ	0.00166	J
7440-09-7		Potassium	T	mg/L	6020	0.534		2.38		0.352		2.37	
7440-16-6		Rhodium	T	mg/L	6020	<0.005		<0.005		<0.005		<0.005	
7782-49-2		Selenium	T	mg/L	6020	0.00169	J	<0.005		<0.005		<0.005	
7440-22-4		Silver	T	mg/L	6020	<0.001		<0.001		<0.001		<0.001	
7440-23-5		Sodium	T	mg/L	6020	53.4		42.9		133		59.7	
7440-25-7		Tantalum	T	mg/L	6020	<0.005		<0.005		<0.005		<0.005	
7440-28-0		Thallium	T	mg/L	6020	<0.002		<0.002		<0.002		<0.002	
7440-61-1		Uranium	T	mg/L	6020	<0.0002		<0.0002		0.00201		<0.0002	
7440-62-2		Vanadium	T	mg/L	6010	0.00109	J	<0.005		0.00256	J	<0.005	
7440-66-6		Zinc	T	mg/L	6020	0.00607	J	0.00417	J	0.00586	J	0.00799	BJ
108-05-4		Vinyl acetate	T	mg/L	8260	<0.005		<0.005		<0.005		<0.005	
67-64-1		Acetone	T	mg/L	8260	<0.005		<0.005		<0.005		<0.005	
107-02-8		Acrolein	T	mg/L	8260	<0.005		<0.005		<0.005		<0.005	
107-13-1		Acrylonitrile	T	mg/L	8260	<0.005		<0.005		<0.005		<0.005	
71-43-2		Benzene	T	mg/L	8260	<0.001		<0.001		<0.001		<0.001	
108-90-7		Chlorobenzene	T	mg/L	8260	<0.001		<0.001		<0.001		<0.001	
1330-20-7		Xylenes	T	mg/L	8260	<0.003		<0.003		<0.003		<0.003	
100-42-5		Styrene	T	mg/L	8260	<0.001		<0.001		<0.001		<0.001	
108-88-3		Toluene	T	mg/L	8260	<0.001		<0.001		<0.001		<0.001	
74-97-5		Chlorobromomethane	T	mg/L	8260	<0.001		<0.001		<0.001		<0.001	

GROUNDWATER SAMPLE ANALYSIS - (Cont.)

AKGWA NUMBER[1], Facility Well/Spring Number						8004-4820		8004-4818		8004-4819		8004-4808	
Facility's Local Well or Spring Number (e.g., MW-1, MW-2, etc.)						369		370		371		372	
CAS RN[4]		CONSTITUENT	TD[5]	Unit OF MEASURE	METHOD	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS
75-27-4		Bromodichloromethane	T	mg/L	8260	<0.001		<0.001		<0.001		<0.001	
75-25-2		Tribromomethane	T	mg/L	8260	<0.001		<0.001		<0.001		<0.001	
74-83-9		Methyl bromide	T	mg/L	8260	<0.001		<0.001		<0.001		<0.001	
78-93-3		Methyl ethyl ketone	T	mg/L	8260	<0.005		<0.005		<0.005		<0.005	
110-57-6		trans-1,4-Dichloro-2-butene	T	mg/L	8260	<0.005		<0.005		<0.005		<0.005	
75-15-0		Carbon disulfide	T	mg/L	8260	<0.005		<0.005		<0.005		<0.005	
75-00-3		Chloroethane	T	mg/L	8260	<0.001		<0.001		<0.001		<0.001	
67-66-3		Chloroform	T	mg/L	8260	<0.001		<0.001		<0.001		<0.001	
74-87-3		Methyl chloride	T	mg/L	8260	<0.001		<0.001		<0.001		<0.001	
156-59-2		cis-1,2-Dichloroethene	T	mg/L	8260	<0.001		<0.001		<0.001		<0.001	
74-95-3		Methylene bromide	T	mg/L	8260	<0.001		<0.001		<0.001		<0.001	
75-34-3		1,1-Dichloroethane	T	mg/L	8260	<0.001		<0.001		<0.001		<0.001	
107-06-2		1,2-Dichloroethane	T	mg/L	8260	<0.001		<0.001		<0.001		<0.001	
75-35-4		1,1-Dichloroethylene	T	mg/L	8260	<0.001		<0.001		<0.001		<0.001	
106-93-4		Ethane, 1,2-dibromo	T	mg/L	8260	<0.001		<0.001		<0.001		<0.001	
79-34-5		Ethane, 1,1,2,2-Tetrachloro	T	mg/L	8260	<0.001		<0.001		<0.001		<0.001	
71-55-6		Ethane, 1,1,1-Trichloro-	T	mg/L	8260	<0.001		<0.001		<0.001		<0.001	
79-00-5		Ethane, 1,1,2-Trichloro	T	mg/L	8260	<0.001		<0.001		<0.001		<0.001	
630-20-6		Ethane, 1,1,1,2-Tetrachloro	T	mg/L	8260	<0.001		<0.001		<0.001		<0.001	
75-01-4		Vinyl chloride	T	mg/L	8260	<0.001		<0.001		<0.001		<0.001	
127-18-4		Ethene, Tetrachloro-	T	mg/L	8260	<0.001		<0.001		<0.001		<0.001	
79-01-6		Ethene, Trichloro-	T	mg/L	8260	0.00127		0.00111		<0.001		0.00779	

GROUNDWATER SAMPLE ANALYSIS - (Cont.)

AKGWA NUMBER[1], Facility Well/Spring Number						8004-4820		8004-4818		8004-4819		8004-4808	
Facility's Local Well or Spring Number (e.g., MW-1, MW-2, etc.)						369		370		371		372	
CAS RN[4]		CONSTITUENT	TD[5]	Unit OF MEASURE	METHOD	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS
100-41-4		Ethylbenzene	T	mg/L	8260	<0.001		<0.001		<0.001		<0.001	
591-78-6		2-Hexanone	T	mg/L	8260	<0.005		<0.005		<0.005		<0.005	
74-88-4		Iodomethane	T	mg/L	8260	<0.005		<0.005		<0.005		<0.005	
124-48-1		Methane, Dibromochloro-	T	mg/L	8260	<0.001		<0.001		<0.001		<0.001	
56-23-5		Carbon Tetrachloride	T	mg/L	8260	<0.001		<0.001		<0.001		<0.001	
75-09-2		Dichloromethane	T	mg/L	8260	<0.005		<0.005		<0.005		<0.005	
108-10-1		Methyl isobutyl ketone	T	mg/L	8260	<0.005		<0.005		<0.005		<0.005	
96-12-8		Propane, 1,2-Dibromo-3-chloro	T	mg/L	8011	<0.00002		<0.0000202		<0.00002		<0.0000204	
78-87-5		Propane, 1,2-Dichloro-	T	mg/L	8260	<0.001		<0.001		<0.001		<0.001	
10061-02-6		trans-1,3-Dichloro-1-propene	T	mg/L	8260	<0.001		<0.001		<0.001		<0.001	
10061-01-5		cis-1,3-Dichloro-1-propene	T	mg/L	8260	<0.001		<0.001		<0.001		<0.001	
156-60-5		trans-1,2-Dichloroethene	T	mg/L	8260	<0.001		<0.001		<0.001		<0.001	
75-69-4		Trichlorofluoromethane	T	mg/L	8260	<0.001		<0.001		<0.001		<0.001	
96-18-4		1,2,3-Trichloropropane	T	mg/L	8260	<0.001		<0.001		<0.001		<0.001	
95-50-1		Benzene, 1,2-Dichloro-	T	mg/L	8260	<0.001		<0.001		<0.001		<0.001	
106-46-7		Benzene, 1,4-Dichloro-	T	mg/L	8260	<0.001		<0.001		<0.001		<0.001	
1336-36-3		PCB,Total	T	ug/L	8082	0.0385	J	<0.0962		<0.0943		0.103	
12674-11-2		PCB-1016	T	ug/L	8082	<0.0943		<0.0962		<0.0943		<0.0962	
11104-28-2		PCB-1221	T	ug/L	8082	<0.0943		<0.0962		<0.0943		<0.0962	
11141-16-5		PCB-1232	T	ug/L	8082	<0.0943		<0.0962		<0.0943		<0.0962	
53469-21-9		PCB-1242	T	ug/L	8082	0.0385	J	<0.0962		<0.0943		0.103	
12672-29-6		PCB-1248	T	ug/L	8082	<0.0943		<0.0962		<0.0943		<0.0962	

RESIDENTIAL/CONTAINED-QUARTERLY
Facility: US DOE - Paducah Gaseous Diffusion Plant
Permit Number: 073-00045

FINDS/UNIT: KY8-890-008-982 / 1
LAB ID: None
For Official Use Only

GROUNDWATER SAMPLE ANALYSIS - (Cont.)

AKGWA NUMBER[1], Facility Well/Spring Number						8004-4820		8004-4818		8004-4819		8004-4808	
Facility's Local Well or Spring Number (e.g., MW-1, MW-2, etc.)						369		370		371		372	
CAS RN[4]		CONSTITUENT	TD[5]	Unit OF MEASURE	METHOD	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS
11097-69-1		PCB-1254	T	ug/L	8082	<0.0943		<0.0962		<0.0943		<0.0962	
11096-82-5		PCB-1260	T	ug/L	8082	<0.0943		<0.0962		<0.0943		<0.0962	
11100-14-4		PCB-1268	T	ug/L	8082	<0.0943		<0.0962		<0.0943		<0.0962	
12587-46-1		Gross Alpha	T	pCi/L	9310	-1.45	*	-3.22	*	-1.48	*	6.26	*
12587-47-2		Gross Beta	T	pCi/L	9310	32.1	*	14.5	*	9.51	*	74	*
10043-66-0		Iodine-131	T	pCi/L			*		*		*		*
13982-63-3		Radium-226	T	pCi/L	HASL 300	0.748	*	0.818	*	1.11	*	0.461	*
10098-97-2		Strontium-90	T	pCi/L	905.0	-0.216	*	-1.54	*	-2.29	*	-1.49	*
14133-76-7		Technetium-99	T	pCi/L	Tc-02-RC	43.3	*	22.5	*	-6.47	*	107	*
14269-63-7		Thorium-230	T	pCi/L	Th-01-RC	4.4	*	3.82	*	5.33	*	4.97	*
10028-17-8		Tritium	T	pCi/L	906.0	-66.2	*	26.1	*	1.42	*	-2.17	*
S0130- -		Chemical Oxygen Demand	T	mg/L	410.4	<20		31.2		<20		12.9	J
57-12-5		Cyanide	T	mg/L	9012	<0.2		<0.2		<0.2		<0.2	
20461-54-5		Iodide	T	mg/L	300.0	<0.5		<0.5		<0.5		<0.5	
S0268- -		Total Organic Carbon	T	mg/L	9060	1.59	J	0.853	J	2.55		2.74	
S0586- -		Total Organic Halides	T	mg/L	9020	0.0137		0.0038	J	0.00338	J	0.00642	J

Division of Waste Management
Solid Waste Branch
14 Reilly Road
Frankfort, KY 40601 (502)564-6716

RESIDENTIAL/CONTAINED-QUARTERLY
Facility: US DOE - Paducah Gaseous Diffusion Plant
Permit Number: 073-00045

FINDS/UNIT: KY8-890-008-982 / 1
LAB ID: None
For Official Use Only

GROUNDWATER SAMPLE ANALYSIS(S)

AKGWA NUMBER[1], Facility Well/Spring Number						8004-4792		8004-0990		8004-0985		8004-0988	
Facility's Local Well or Spring Number (e.g., MW-1, MW-2, etc.)						373		374		375		376	
Sample Sequence #						1		1		1		1	
If sample is a Blank, specify Type: (F)ield, (T)rip, (M)ethod, or (E)quipment						NA		NA		NA		NA	
Sample Date and Time (Month/Day/Year hour: minutes)						10/16/2014 12:26		10/16/2014 12:41		10/16/2014 13:39		NA	
Duplicate ("Y" or "N")[2]						N		N		N		N	
Split ("Y" or "N")[3]						N		N		N		N	
Facility Sample ID Number (if applicable)						MW373UG1-15		MW374UG1-15		MW375UG1-15		NA	
Laboratory Sample ID Number (if applicable)						359287004		359287005		359287006		NA	
Date of Analysis (Month/Day/Year) For Volatile Organics Analysis						10/23/2014		10/23/2014		10/23/2014		NA	
Gradient with respect to Monitored Unit (UP, DOWN, SIDE, UNKNOWN)						UP		UP		SIDE		SIDE	
CAS RN[4]		CONSTITUENT	TD[5]	Unit OF MEASURE	METHOD	DETECTED VALUE OR PQL[6]	FLAGS[7]	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS
24959-67-9		Bromide	T	mg/L	9056	0.609		1.01		<0.2			*
16887-00-6		Chloride(s)	T	mg/L	9056	43.5		83.3		6.19			*
16984-48-8		Fluoride	T	mg/L	9056	0.18		0.17		0.267			*
S0595- -		Nitrate & Nitrite	T	mg/L	9056	0.908		<0.1		1.62			*
14808-79-8		Sulfate	T	mg/L	9056	181		5.73		23.6			*
NS1894		Barometric Pressure Reading	T	Inches/Hg	Field	29.93		29.93		29.91			*
S0145- -		Specific Conductance	T	μMH0/cm	Field	901		710		352			*

[1]AKGWA # is 0000-0000 for any type of blank.
[2]Respond "Y" if the sample was a duplicate of another sample in this report.
[3]Respond "Y" if the sample was split and analyzed by separate laboratories.
[4]Chemical Abstracts Service Registry Number or unique identifier number assigned by agency.
[5]"T" = Total; "D" = Dissolved
[6]"<" indicates a non-detect; do not use "ND" or "BDL". Value shown is Practical Quantification Limit.
[7]Flags are as designated, do not use any other type. Use "*," then describe on "Written Comments Page."

STANDARD FLAGS:
* = See Comments
J = Estimated Value
B = Analyte found in blank
A = Average value
N = Presumptive ID
D = Concentration from analysis of a secondary dilution

RESIDENTIAL/CONTAINED-QUARTERLY
Facility: US DOE - Paducah Gaseous Diffusion Plant
Permit Number: 073-00045

FINDS/UNIT: KY8-890-008-982 / 1
LAB ID: None
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GROUNDWATER SAMPLE ANALYSIS - (Cont.)

AKGWA NUMBER[1], Facility Well/Spring Number						8004-4792		8004-0990		8004-0985		8004-0988	
Facility's Local Well or Spring Number (e.g., MW-1, MW-2, BLANK-F, etc.)						373		374		375		376	
CAS RN[4]		CONSTITUENT	TD[5]	Unit OF MEASURE	METHOD	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS
S0906 - -		Static Water Level Elevation	T	Ft. MSL	Field	323.58		334		330.52			*
N238		Dissolved Oxygen	T	mg/L	Field	1.37		0.86		1.42			*
S0266- -		Total Dissolved Solids	T	mg/L	160.1	536		416		237			*
S0296- -		pH	T	Units	Field	6.22		6.44		6.32			*
NS215		Eh	T	mV	Field	404		257		335			*
S0907 - -		Temperature	T	°C	Field	16.83		17.89		17.72			*
7429-90-5		Aluminum	T	mg/L	6020	<0.05		0.0629		0.0529			*
7440-36-0		Antimony	T	mg/L	6020	<0.003		<0.003		<0.003			*
7440-38-2		Arsenic	T	mg/L	6020	<0.005		<0.005		0.00178	J		*
7440-39-3		Barium	T	mg/L	6020	0.0264		0.164		0.173			*
7440-41-7		Beryllium	T	mg/L	6020	<0.0005		<0.0005		<0.0005			*
7440-42-8		Boron	T	mg/L	6020	1.65		0.0394		0.0213			*
7440-43-9		Cadmium	T	mg/L	6020	<0.001		<0.001		<0.001			*
7440-70-2		Calcium	T	mg/L	6020	72.4		22.1		14.3			*
7440-47-3		Chromium	T	mg/L	6020	<0.01		<0.01		<0.01			*
7440-48-4		Cobalt	T	mg/L	6020	0.00098	J	0.00367		<0.001			*
7440-50-8		Copper	T	mg/L	6020	<0.001		0.00046	J	0.00042	J		*
7439-89-6		Iron	T	mg/L	6020	0.2		0.284		0.0939	J		*
7439-92-1		Lead	T	mg/L	6020	<0.002		<0.002		<0.002			*
7439-95-4		Magnesium	T	mg/L	6020	27.4		6.27		5.9			*
7439-96-5		Manganese	T	mg/L	6020	0.0598		0.334		0.00298	J		*
7439-97-6		Mercury	T	mg/L	7470	<0.0002		<0.0002		<0.0002			*

RESIDENTIAL/CONTAINED-QUARTERLY
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FINDS/UNIT: KY8-890-008-982 / 1
LAB ID: None
For Official Use Only

GROUNDWATER SAMPLE ANALYSIS - (Cont.)

AKGWA NUMBER[1], Facility Well/Spring Number						8004-4792		8004-0990		8004-0985		8004-0988	
Facility's Local Well or Spring Number (e.g., MW-1, MW-2, etc.)						373		374		375		376	
CAS RN[4]		CONSTITUENT	TD[5]	Unit OF MEASURE	METHOD	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS
7439-98-7		Molybdenum	T	mg/L	6020	<0.0005		<0.0005		<0.0005			*
7440-02-0		Nickel	T	mg/L	6020	0.00255		0.00152	J	0.00142	J		*
7440-09-7		Potassium	T	mg/L	6020	2.92		0.467		0.291	J		*
7440-16-6		Rhodium	T	mg/L	6020	<0.005		<0.005		<0.005			*
7782-49-2		Selenium	T	mg/L	6020	<0.005		0.00586		0.00282	J		*
7440-22-4		Silver	T	mg/L	6020	<0.001		<0.001		<0.001			*
7440-23-5		Sodium	T	mg/L	6020	61		126		54.6			*
7440-25-7		Tantalum	T	mg/L	6020	<0.005		<0.005		<0.005			*
7440-28-0		Thallium	T	mg/L	6020	<0.002		<0.002		<0.002			*
7440-61-1		Uranium	T	mg/L	6020	<0.0002		0.00044		0.000077	J		*
7440-62-2		Vanadium	T	mg/L	6010	<0.005		<0.005		<0.005			*
7440-66-6		Zinc	T	mg/L	6020	0.00704	BJ	0.00811	BJ	0.00666	BJ		*
108-05-4		Vinyl acetate	T	mg/L	8260	<0.005		<0.005		<0.005			*
67-64-1		Acetone	T	mg/L	8260	<0.005		<0.005		<0.005			*
107-02-8		Acrolein	T	mg/L	8260	<0.005		<0.005		<0.005			*
107-13-1		Acrylonitrile	T	mg/L	8260	<0.005		<0.005		<0.005			*
71-43-2		Benzene	T	mg/L	8260	<0.001		<0.001		<0.001			*
108-90-7		Chlorobenzene	T	mg/L	8260	<0.001		<0.001		<0.001			*
1330-20-7		Xylenes	T	mg/L	8260	<0.003		<0.003		<0.003			*
100-42-5		Styrene	T	mg/L	8260	<0.001		<0.001		<0.001			*
108-88-3		Toluene	T	mg/L	8260	<0.001		<0.001		<0.001			*
74-97-5		Chlorobromomethane	T	mg/L	8260	<0.001		<0.001		<0.001			*

RESIDENTIAL/CONTAINED-QUARTERLY
Facility: US DOE - Paducah Gaseous Diffusion Plant
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FINDS/UNIT: KY8-890-008-982 / 1
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GROUNDWATER SAMPLE ANALYSIS - (Cont.)

AKGWA NUMBER[1], Facility Well/Spring Number						8004-4792		8004-0990		8004-0985		8004-0988	
Facility's Local Well or Spring Number (e.g., MW-1, MW-2, etc.)						373		374		375		376	
CAS RN[4]		CONSTITUENT	TD[5]	Unit OF MEASURE	METHOD	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS
75-27-4		Bromodichloromethane	T	mg/L	8260	<0.001		<0.001		<0.001			*
75-25-2		Tribromomethane	T	mg/L	8260	<0.001		<0.001		<0.001			*
74-83-9		Methyl bromide	T	mg/L	8260	<0.001		<0.001		<0.001			*
78-93-3		Methyl ethyl ketone	T	mg/L	8260	<0.005		<0.005		<0.005			*
110-57-6		trans-1,4-Dichloro-2-butene	T	mg/L	8260	<0.005		<0.005		<0.005			*
75-15-0		Carbon disulfide	T	mg/L	8260	<0.005		<0.005		<0.005			*
75-00-3		Chloroethane	T	mg/L	8260	<0.001		<0.001		<0.001			*
67-66-3		Chloroform	T	mg/L	8260	<0.001		<0.001		<0.001			*
74-87-3		Methyl chloride	T	mg/L	8260	<0.001		<0.001		<0.001			*
156-59-2		cis-1,2-Dichloroethene	T	mg/L	8260	<0.001		<0.001		<0.001			*
74-95-3		Methylene bromide	T	mg/L	8260	<0.001		<0.001		<0.001			*
75-34-3		1,1-Dichloroethane	T	mg/L	8260	<0.001		<0.001		<0.001			*
107-06-2		1,2-Dichloroethane	T	mg/L	8260	<0.001		<0.001		<0.001			*
75-35-4		1,1-Dichloroethylene	T	mg/L	8260	<0.001		<0.001		<0.001			*
106-93-4		Ethane, 1,2-dibromo	T	mg/L	8260	<0.001		<0.001		<0.001			*
79-34-5		Ethane, 1,1,2,2-Tetrachloro	T	mg/L	8260	<0.001		<0.001		<0.001			*
71-55-6		Ethane, 1,1,1-Trichloro-	T	mg/L	8260	<0.001		<0.001		<0.001			*
79-00-5		Ethane, 1,1,2-Trichloro	T	mg/L	8260	<0.001		<0.001		<0.001			*
630-20-6		Ethane, 1,1,1,2-Tetrachloro	T	mg/L	8260	<0.001		<0.001		<0.001			*
75-01-4		Vinyl chloride	T	mg/L	8260	<0.001		<0.001		<0.001			*
127-18-4		Ethene, Tetrachloro-	T	mg/L	8260	<0.001		<0.001		<0.001			*
79-01-6		Ethene, Trichloro-	T	mg/L	8260	0.00767		<0.001		<0.001			*

RESIDENTIAL/CONTAINED-QUARTERLY
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FINDS/UNIT: KY8-890-008-982 / 1
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GROUNDWATER SAMPLE ANALYSIS - (Cont.)

AKGWA NUMBER[1], Facility Well/Spring Number						8004-4792		8004-0990		8004-0985		8004-0988	
Facility's Local Well or Spring Number (e.g., MW-1, MW-2, etc.)						373		374		375		376	
CAS RN[4]		CONSTITUENT	TD[5]	Unit OF MEASURE	METHOD	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS
100-41-4		Ethylbenzene	T	mg/L	8260	<0.001		<0.001		<0.001			*
591-78-6		2-Hexanone	T	mg/L	8260	<0.005		<0.005		<0.005			*
74-88-4		Iodomethane	T	mg/L	8260	<0.005		<0.005		<0.005			*
124-48-1		Methane, Dibromochloro-	T	mg/L	8260	<0.001		<0.001		<0.001			*
56-23-5		Carbon Tetrachloride	T	mg/L	8260	<0.001		<0.001		<0.001			*
75-09-2		Dichloromethane	T	mg/L	8260	<0.005		<0.005		<0.005			*
108-10-1		Methyl isobutyl ketone	T	mg/L	8260	<0.005		<0.005		<0.005			*
96-12-8		Propane, 1,2-Dibromo-3-chloro	T	mg/L	8011	<0.0000203		<0.0000203		<0.00002			*
78-87-5		Propane, 1,2-Dichloro-	T	mg/L	8260	<0.001		<0.001		<0.001			*
10061-02-6		trans-1,3-Dichloro-1-propene	T	mg/L	8260	<0.001		<0.001		<0.001			*
10061-01-5		cis-1,3-Dichloro-1-propene	T	mg/L	8260	<0.001		<0.001		<0.001			*
156-60-5		trans-1,2-Dichloroethene	T	mg/L	8260	<0.001		<0.001		<0.001			*
75-69-4		Trichlorofluoromethane	T	mg/L	8260	<0.001		<0.001		<0.001			*
96-18-4		1,2,3-Trichloropropane	T	mg/L	8260	<0.001		<0.001		<0.001			*
95-50-1		Benzene, 1,2-Dichloro-	T	mg/L	8260	<0.001		<0.001		<0.001			*
106-46-7		Benzene, 1,4-Dichloro-	T	mg/L	8260	<0.001		<0.001		<0.001			*
1336-36-3		PCB,Total	T	ug/L	8082	<0.0943		<0.0943		<0.0952			*
12674-11-2		PCB-1016	T	ug/L	8082	<0.0943		<0.0943		<0.0952			*
11104-28-2		PCB-1221	T	ug/L	8082	<0.0943		<0.0943		<0.0952			*
11141-16-5		PCB-1232	T	ug/L	8082	<0.0943		<0.0943		<0.0952			*
53469-21-9		PCB-1242	T	ug/L	8082	<0.0943		<0.0943		<0.0952			*
12672-29-6		PCB-1248	T	ug/L	8082	<0.0943		<0.0943		<0.0952			*

RESIDENTIAL/CONTAINED-QUARTERLY
Facility: US DOE - Paducah Gaseous Diffusion Plant
Permit Number: 073-00045

FINDS/UNIT: KY8-890-008-982 / 1
LAB ID: None
For Official Use Only

GROUNDWATER SAMPLE ANALYSIS - (Cont.)

AKGWA NUMBER[1], Facility Well/Spring Number						8004-4792		8004-0990		8004-0985		8004-0988	
Facility's Local Well or Spring Number (e.g., MW-1, MW-2, etc.)						373		374		375		376	
CAS RN[4]		CONSTITUENT	TD[5]	Unit OF MEASURE	METHOD	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS
11097-69-1		PCB-1254	T	ug/L	8082	<0.0943		<0.0943		<0.0952			*
11096-82-5		PCB-1260	T	ug/L	8082	<0.0943		<0.0943		<0.0952			*
11100-14-4		PCB-1268	T	ug/L	8082	<0.0943		<0.0943		<0.0952			*
12587-46-1		Gross Alpha	T	pCi/L	9310	-1.21	*	3.6	*	-3.1	*		*
12587-47-2		Gross Beta	T	pCi/L	9310	24.9	*	3.55	*	-7.2	*		*
10043-66-0		Iodine-131	T	pCi/L			*		*		*		*
13982-63-3		Radium-226	T	pCi/L	HASL 300	0.42	*	0.859	*	0.392	*		*
10098-97-2		Strontium-90	T	pCi/L	905.0	-2	*	0.659	*	-1.7	*		*
14133-76-7		Technetium-99	T	pCi/L	Tc-02-RC	38	*	-5.81	*	-7.14	*		*
14269-63-7		Thorium-230	T	pCi/L	Th-01-RC	3.9	*	1.41	*	-1.94	*		*
10028-17-8		Tritium	T	pCi/L	906.0	18.7	*	19.1	*	66.1	*		*
S0130- -		Chemical Oxygen Demand	T	mg/L	410.4	12.9	J	10.5	J	15.2	J		*
57-12-5		Cyanide	T	mg/L	9012	<0.2		<0.2		<0.2			*
20461-54-5		Iodide	T	mg/L	300.0	<0.5		<0.5		<0.5			*
S0268- -		Total Organic Carbon	T	mg/L	9060	1.89	J	3.35		1.49	J		*
S0586- -		Total Organic Halides	T	mg/L	9020	0.028		0.0116		0.0102			*

Division of Waste Management
Solid Waste Branch
14 Reilly Road
Frankfort, KY 40601 (502)564-6716

RESIDENTIAL/CONTAINED-QUARTERLY
Facility: US DOE - Paducah Gaseous Diffusion Plant
Permit Number: 073-00045

FINDS/UNIT: KY8-890-008-982 / 1
LAB ID: None
For Official Use Only

GROUNDWATER SAMPLE ANALYSIS(S)

AKGWA NUMBER[1], Facility Well/Spring Number					8004-0989		0000-0000		0000-0000		0000-0000	
Facility's Local Well or Spring Number (e.g., MW-1, MW-2, etc.)					377		E. BLANK		F. BLANK		T. BLANK 1	
Sample Sequence #					1		1		1		1	
If sample is a Blank, specify Type: (F)ield, (T)rip, (M)ethod, or (E)quipment					NA		E		F		T	
Sample Date and Time (Month/Day/Year hour: minutes)					NA		10/14/2014 07:50		10/14/2014 08:53		10/14/2014 07:45	
Duplicate ("Y" or "N")[2]					N		N		N		N	
Split ("Y" or "N")[3]					N		N		N		N	
Facility Sample ID Number (if applicable)					NA		RI1UG1-15		FB1UG1-15		TB1UG1-15	
Laboratory Sample ID Number (if applicable)					NA		359089010		359085009		359085007	
Date of Analysis (Month/Day/Year) For Volatile Organics Analysis					NA		10/18/2014		10/18/2014		10/18/2014	
Gradient with respect to Monitored Unit (UP, DOWN, SIDE, UNKNOWN)					SIDE		NA		NA		NA	
CAS RN[4]		**CONSTITUENT**	**TD[5]**	**Unit OF MEASURE**	**METHOD**	**DETECTED VALUE OR PQL[6]**	**FLAGS[7]**	**DETECTED VALUE OR PQL[6]**	**FLAGS**	**DETECTED VALUE OR PQL[6]**	**FLAGS**	**DETECTED VALUE OR PQL[6]**	**FLAGS**
24959-67-9		**Bromide**	**T**	**mg/L**	**9056**		*		*		*		*
16887-00-6		**Chloride(s)**	**T**	**mg/L**	**9056**		*		*		*		*
16984-48-8		**Fluoride**	**T**	**mg/L**	**9056**		*		*		*		*
S0595- -		**Nitrate & Nitrite**	**T**	**mg/L**	**9056**		*		*		*		*
14808-79-8		**Sulfate**	**T**	**mg/L**	**9056**		*		*		*		*
NS1894		**Barometric Pressure Reading**	**T**	**Inches/Hg**	**Field**		*		*		*		*
S0145- -		**Specific Conductance**	**T**	**μMH0/cm**	**Field**		*		*		*		*

[1]AKGWA # is 0000-0000 for any type of blank.
[2]Respond "Y" if the sample was a duplicate of another sample in this report.
[3]Respond "Y" if the sample was split and analyzed by separate laboratories.
[4]Chemical Abstracts Service Registry Number or unique identifier number assigned by agency.
[5]"T" = Total; "D" = Dissolved
[6]"<" indicates a non-detect; do not use "ND" or "BDL". Value shown is Practical Quantification Limit.
[7]Flags are as designated, do not use any other type. Use "*," then describe on "Written Comments Page."

STANDARD FLAGS:
* = See Comments
J = Estimated Value
B = Analyte found in blank
A = Average value
N = Presumptive ID
D = Concentration from analysis of a secondary dilution

RESIDENTIAL/CONTAINED-QUARTERLY
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Permit Number: 073-00045

FINDS/UNIT: KY8-890-008-982 / 1
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GROUNDWATER SAMPLE ANALYSIS - (Cont.)

AKGWA NUMBER[1], Facility Well/Spring Number						8004-0989		0000-0000		0000-0000		0000-0000	
Facility's Local Well or Spring Number (e.g., MW-1, MW-2, BLANK-F, etc.)						377		E. BLANK		F. BLANK		T. BLANK 1	
CAS RN[4]		CONSTITUENT	TD[5]	Unit OF MEASURE	METHOD	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS
S0906 - -		Static Water Level Elevation	T	Ft. MSL	Field		*		*		*		*
N238		Dissolved Oxygen	T	mg/L	Field		*		*		*		*
S0266- -		Total Dissolved Solids	T	mg/L	160.1		*		*		*		*
S0296- -		pH	T	Units	Field		*		*		*		*
NS215		Eh	T	mV	Field		*		*		*		*
S0907 - -		Temperature	T	°C	Field		*		*		*		*
7429-90-5		Aluminum	T	mg/L	6020		*	<0.05		<0.05			*
7440-36-0		Antimony	T	mg/L	6020		*	<0.003		<0.003			*
7440-38-2		Arsenic	T	mg/L	6020		*	<0.005		<0.005			*
7440-39-3		Barium	T	mg/L	6020		*	<0.002		<0.002			*
7440-41-7		Beryllium	T	mg/L	6020		*	<0.0005		<0.0005			*
7440-42-8		Boron	T	mg/L	6020		*	<0.015		<0.015			*
7440-43-9		Cadmium	T	mg/L	6020		*	<0.001		<0.001			*
7440-70-2		Calcium	T	mg/L	6020		*	<0.2		<0.2			*
7440-47-3		Chromium	T	mg/L	6020		*	<0.01		<0.01			*
7440-48-4		Cobalt	T	mg/L	6020		*	<0.001		<0.001			*
7440-50-8		Copper	T	mg/L	6020		*	<0.001		<0.001			*
7439-89-6		Iron	T	mg/L	6020		*	<0.1		<0.1			*
7439-92-1		Lead	T	mg/L	6020		*	<0.002		<0.002			*
7439-95-4		Magnesium	T	mg/L	6020		*	<0.03		<0.03			*
7439-96-5		Manganese	T	mg/L	6020		*	<0.005		<0.005			*
7439-97-6		Mercury	T	mg/L	7470		*	<0.0002		<0.0002			*

RESIDENTIAL/CONTAINED-QUARTERLY
Facility: US DOE - Paducah Gaseous Diffusion Plant
Permit Number: 073-00045

FINDS/UNIT: KY8-890-008-982 / 1
LAB ID: None
For Official Use Only

GROUNDWATER SAMPLE ANALYSIS - (Cont.)

AKGWA NUMBER[1], Facility Well/Spring Number						8004-0989		0000-0000		0000-0000		0000-0000	
Facility's Local Well or Spring Number (e.g., MW-1, MW-2, etc.)						377		E. BLANK		F. BLANK		T. BLANK 1	
CAS RN[4]		CONSTITUENT	TD[5]	Unit OF MEASURE	METHOD	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS
7439-98-7		Molybdenum	T	mg/L	6020		*	<0.0005		<0.0005			*
7440-02-0		Nickel	T	mg/L	6020		*	<0.002		<0.002			*
7440-09-7		Potassium	T	mg/L	6020		*	<0.3		<0.3			*
7440-16-6		Rhodium	T	mg/L	6020		*	<0.005		<0.005			*
7782-49-2		Selenium	T	mg/L	6020		*	<0.005		<0.005			*
7440-22-4		Silver	T	mg/L	6020		*	<0.001		<0.001			*
7440-23-5		Sodium	T	mg/L	6020		*	<0.25		<0.25			*
7440-25-7		Tantalum	T	mg/L	6020		*	<0.005		<0.005			*
7440-28-0		Thallium	T	mg/L	6020		*	<0.002		<0.002			*
7440-61-1		Uranium	T	mg/L	6020		*	<0.0002		<0.0002			*
7440-62-2		Vanadium	T	mg/L	6010		*	<0.005		<0.005			*
7440-66-6		Zinc	T	mg/L	6020		*	<0.01		<0.01			*
108-05-4		Vinyl acetate	T	mg/L	8260		*	<0.005		<0.005		<0.005	
67-64-1		Acetone	T	mg/L	8260		*	<0.005		<0.005		<0.005	
107-02-8		Acrolein	T	mg/L	8260		*	<0.005		<0.005		<0.005	
107-13-1		Acrylonitrile	T	mg/L	8260		*	<0.005		<0.005		<0.005	
71-43-2		Benzene	T	mg/L	8260		*	<0.001		<0.001		<0.001	
108-90-7		Chlorobenzene	T	mg/L	8260		*	<0.001		<0.001		<0.001	
1330-20-7		Xylenes	T	mg/L	8260		*	<0.003		<0.003		<0.003	
100-42-5		Styrene	T	mg/L	8260		*	<0.001		<0.001		<0.001	
108-88-3		Toluene	T	mg/L	8260		*	<0.001		<0.001		<0.001	
74-97-5		Chlorobromomethane	T	mg/L	8260		*	<0.001		<0.001		<0.001	

RESIDENTIAL/CONTAINED-QUARTERLY
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FINDS/UNIT: KY8-890-008-982 / 1
LAB ID: None
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GROUNDWATER SAMPLE ANALYSIS - (Cont.)

AKGWA NUMBER[1], Facility Well/Spring Number						8004-0989		0000-0000		0000-0000		0000-0000	
Facility's Local Well or Spring Number (e.g., MW-1, MW-2, etc.)						377		E. BLANK		F. BLANK		T. BLANK 1	
CAS RN[4]		CONSTITUENT	TD[5]	Unit OF MEASURE	METHOD	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS
75-27-4		Bromodichloromethane	T	mg/L	8260		*	<0.001		<0.001		<0.001	
75-25-2		Tribromomethane	T	mg/L	8260		*	<0.001		<0.001		<0.001	
74-83-9		Methyl bromide	T	mg/L	8260		*	<0.001		<0.001		<0.001	
78-93-3		Methyl ethyl ketone	T	mg/L	8260		*	<0.005		<0.005		<0.005	
110-57-6		trans-1,4-Dichloro-2-butene	T	mg/L	8260		*	<0.005		<0.005		<0.005	
75-15-0		Carbon disulfide	T	mg/L	8260		*	<0.005		<0.005		<0.005	
75-00-3		Chloroethane	T	mg/L	8260		*	<0.001		<0.001		<0.001	
67-66-3		Chloroform	T	mg/L	8260		*	<0.001		<0.001		<0.001	
74-87-3		Methyl chloride	T	mg/L	8260		*	<0.001		<0.001		<0.001	
156-59-2		cis-1,2-Dichloroethene	T	mg/L	8260		*	<0.001		<0.001		<0.001	
74-95-3		Methylene bromide	T	mg/L	8260		*	<0.001		<0.001		<0.001	
75-34-3		1,1-Dichloroethane	T	mg/L	8260		*	<0.001		<0.001		<0.001	
107-06-2		1,2-Dichloroethane	T	mg/L	8260		*	<0.001		<0.001		<0.001	
75-35-4		1,1-Dichloroethylene	T	mg/L	8260		*	<0.001		<0.001		<0.001	
106-93-4		Ethane, 1,2-dibromo	T	mg/L	8260		*	<0.001		<0.001		<0.001	
79-34-5		Ethane, 1,1,2,2-Tetrachloro	T	mg/L	8260		*	<0.001		<0.001		<0.001	
71-55-6		Ethane, 1,1,1-Trichloro-	T	mg/L	8260		*	<0.001		<0.001		<0.001	
79-00-5		Ethane, 1,1,2-Trichloro	T	mg/L	8260		*	<0.001		<0.001		<0.001	
630-20-6		Ethane, 1,1,1,2-Tetrachloro	T	mg/L	8260		*	<0.001		<0.001		<0.001	
75-01-4		Vinyl chloride	T	mg/L	8260		*	<0.001		<0.001		<0.001	
127-18-4		Ethene, Tetrachloro-	T	mg/L	8260		*	<0.001		<0.001		<0.001	
79-01-6		Ethene, Trichloro-	T	mg/L	8260		*	<0.001		<0.001		<0.001	

RESIDENTIAL/CONTAINED-QUARTERLY
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FINDS/UNIT: KY8-890-008-982 / 1
LAB ID: None
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GROUNDWATER SAMPLE ANALYSIS - (Cont.)

AKGWA NUMBER[1], Facility Well/Spring Number						8004-0989		0000-0000		0000-0000		0000-0000	
Facility's Local Well or Spring Number (e.g., MW-1, MW-2, etc.)						377		E. BLANK		F. BLANK		T. BLANK 1	
CAS RN[4]		CONSTITUENT	TD[5]	Unit OF MEASURE	METHOD	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS
100-41-4		Ethylbenzene	T	mg/L	8260		*	<0.001		<0.001		<0.001	
591-78-6		2-Hexanone	T	mg/L	8260		*	<0.005		<0.005		<0.005	
74-88-4		Iodomethane	T	mg/L	8260		*	<0.005		<0.005		<0.005	
124-48-1		Methane, Dibromochloro-	T	mg/L	8260		*	<0.001		<0.001		<0.001	
56-23-5		Carbon Tetrachloride	T	mg/L	8260		*	<0.001		<0.001		<0.001	
75-09-2		Dichloromethane	T	mg/L	8260		*	<0.005		<0.005		<0.005	
108-10-1		Methyl isobutyl ketone	T	mg/L	8260		*	<0.005		<0.005		<0.005	
96-12-8		Propane, 1,2-Dibromo-3-chloro	T	mg/L	8011		*	<0.0000204		<0.0000203		<0.0000203	
78-87-5		Propane, 1,2-Dichloro-	T	mg/L	8260		*	<0.001		<0.001		<0.001	
10061-02-6		trans-1,3-Dichloro-1-propene	T	mg/L	8260		*	<0.001		<0.001		<0.001	
10061-01-5		cis-1,3-Dichloro-1-propene	T	mg/L	8260		*	<0.001		<0.001		<0.001	
156-60-5		trans-1,2-Dichloroethene	T	mg/L	8260		*	<0.001		<0.001		<0.001	
75-69-4		Trichlorofluoromethane	T	mg/L	8260		*	<0.001		<0.001		<0.001	
96-18-4		1,2,3-Trichloropropane	T	mg/L	8260		*	<0.001		<0.001		<0.001	
95-50-1		Benzene, 1,2-Dichloro-	T	mg/L	8260		*	<0.001		<0.001		<0.001	
106-46-7		Benzene, 1,4-Dichloro-	T	mg/L	8260		*	<0.001		<0.001		<0.001	
1336-36-3		PCB,Total	T	ug/L	8082		*	<0.0926		<0.0926			*
12674-11-2		PCB-1016	T	ug/L	8082		*	<0.0926		<0.0926			*
11104-28-2		PCB-1221	T	ug/L	8082		*	<0.0926		<0.0926			*
11141-16-5		PCB-1232	T	ug/L	8082		*	<0.0926		<0.0926			*
53469-21-9		PCB-1242	T	ug/L	8082		*	<0.0926		<0.0926			*
12672-29-6		PCB-1248	T	ug/L	8082		*	<0.0926		<0.0926			*

RESIDENTIAL/CONTAINED-QUARTERLY
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GROUNDWATER SAMPLE ANALYSIS - (Cont.)

AKGWA NUMBER[1], Facility Well/Spring Number						8004-0989		0000-0000		0000-0000		0000-0000	
Facility's Local Well or Spring Number (e.g., MW-1, MW-2, etc.)						377		E. BLANK		F. BLANK		T. BLANK 1	
CAS RN[4]		CONSTITUENT	TD[5]	Unit OF MEASURE	METHOD	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS
11097-69-1		PCB-1254	T	ug/L	8082		*	<0.0926		<0.0926			*
11096-82-5		PCB-1260	T	ug/L	8082		*	<0.0926		<0.0926			*
11100-14-4		PCB-1268	T	ug/L	8082		*	<0.0926		<0.0926			*
12587-46-1		Gross Alpha	T	pCi/L	9310		*	1.2	*	-2.66	*		*
12587-47-2		Gross Beta	T	pCi/L	9310		*	18.2	*	3.23	*		*
10043-66-0		Iodine-131	T	pCi/L			*		*		*		*
13982-63-3		Radium-226	T	pCi/L	HASL 300		*	0.423	*	0.08	*		*
10098-97-2		Strontium-90	T	pCi/L	905.0		*	-1.17	*	-1.17	*		*
14133-76-7		Technetium-99	T	pCi/L	Tc-02-RC		*	-2.07	*	-1.83	*		*
14269-63-7		Thorium-230	T	pCi/L	Th-01-RC		*	0.434	*	0.653	*		*
10028-17-8		Tritium	T	pCi/L	906.0		*	136	*	77.5	*		*
S0130- -		Chemical Oxygen Demand	T	mg/L	410.4		*		*		*		*
57-12-5		Cyanide	T	mg/L	9012		*		*		*		*
20461-54-5		Iodide	T	mg/L	300.0		*	<0.5		<0.5			*
S0268- -		Total Organic Carbon	T	mg/L	9060		*		*		*		*
S0586- -		Total Organic Halides	T	mg/L	9020		*		*		*		*

Division of Waste Management
Solid Waste Branch
14 Reilly Road
Frankfort, KY 40601 (502)564-6716

RESIDENTIAL/CONTAINED-QUARTERLY
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Permit Number: 073-00045

FINDS/UNIT: KY8-890-008-982 / 1
LAB ID: None
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GROUNDWATER SAMPLE ANALYSIS(S)

AKGWA NUMBER[1], Facility Well/Spring Number						0000-0000		0000-0000		0000-0000		0000-0000	
Facility's Local Well or Spring Number (e.g., MW-1, MW-2, etc.)						T. BLANK 2		T. BLANK 3		T. BLANK 4		T. BLANK 5	
Sample Sequence #						1		1		1		1	
If sample is a Blank, specify Type: (F)ield, (T)rip, (M)ethod, or (E)quipment						T		T		T		T	
Sample Date and Time (Month/Day/Year hour: minutes)						10/15/2014 07:25		10/16/2014 07:10		10/16/2014 11:40		10/20/2014 07:27	
Duplicate ("Y" or "N")[2]						N		N		N		N	
Split ("Y" or "N")[3]						N		N		N		N	
Facility Sample ID Number (if applicable)						TB2UG1-15		TB3UG1-15		TB4UG1-15		TB5UG1-15	
Laboratory Sample ID Number (if applicable)						359134005		359287007		359287008		359506004	
Date of Analysis (Month/Day/Year) For Volatile Organics Analysis						10/20/2014		10/22/2014		10/22/2014		10/23/2014	
Gradient with respect to Monitored Unit (UP, DOWN, SIDE, UNKNOWN)						NA		NA		NA		NA	
CAS RN[4]		CONSTITUENT	TD[5]	Unit OF MEASURE	METHOD	DETECTED VALUE OR PQL[6]	FLAGS[7]	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS
24959-67-9		Bromide	T	mg/L	9056		*		*		*		*
16887-00-6		Chloride(s)	T	mg/L	9056		*		*		*		*
16984-48-8		Fluoride	T	mg/L	9056		*		*		*		*
S0595- -		Nitrate & Nitrite	T	mg/L	9056		*		*		*		*
14808-79-8		Sulfate	T	mg/L	9056		*		*		*		*
NS1894		Barometric Pressure Reading	T	Inches/Hg	Field		*		*		*		*
S0145- -		Specific Conductance	T	μMH0/cm	Field		*		*		*		*

[1]AKGWA # is 0000-0000 for any type of blank.
[2]Respond "Y" if the sample was a duplicate of another sample in this report.
[3]Respond "Y" if the sample was split and analyzed by separate laboratories.
[4]Chemical Abstracts Service Registry Number or unique identifier number assigned by agency.
[5]"T" = Total; "D" = Dissolved
[6]"<" indicates a non-detect; do not use "ND" or "BDL". Value shown is Practical Quantification Limit.
[7]Flags are as designated, do not use any other type. Use "*," then describe on "Written Comments Page."

STANDARD FLAGS:
* = See Comments
J = Estimated Value
B = Analyte found in blank
A = Average value
N = Presumptive ID
D = Concentration from analysis of a secondary dilution

RESIDENTIAL/CONTAINED-QUARTERLY
Facility: US DOE - Paducah Gaseous Diffusion Plant
Permit Number: 073-00045

FINDS/UNIT: KY8-890-008-982 / 1
LAB ID: None
For Official Use Only

GROUNDWATER SAMPLE ANALYSIS - (Cont.)

AKGWA NUMBER[1], Facility Well/Spring Number						0000-0000		0000-0000		0000-0000		0000-0000	
Facility's Local Well or Spring Number (e.g., MW-1, MW-2, BLANK-F, etc.)						T. BLANK 2		T. BLANK 3		T. BLANK 4		T. BLANK 5	
CAS RN[4]		CONSTITUENT	TD[5]	Unit OF MEASURE	METHOD	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS
S0906 - -		Static Water Level Elevation	T	Ft. MSL	Field		*		*		*		*
N238		Dissolved Oxygen	T	mg/L	Field		*		*		*		*
S0266- -		Total Dissolved Solids	T	mg/L	160.1		*		*		*		*
S0296- -		pH	T	Units	Field		*		*		*		*
NS215		Eh	T	mV	Field		*		*		*		*
S0907 - -		Temperature	T	^{o}C	Field		*		*		*		*
7429-90-5		Aluminum	T	mg/L	6020		*		*		*		*
7440-36-0		Antimony	T	mg/L	6020		*		*		*		*
7440-38-2		Arsenic	T	mg/L	6020		*		*		*		*
7440-39-3		Barium	T	mg/L	6020		*		*		*		*
7440-41-7		Beryllium	T	mg/L	6020		*		*		*		*
7440-42-8		Boron	T	mg/L	6020		*		*		*		*
7440-43-9		Cadmium	T	mg/L	6020		*		*		*		*
7440-70-2		Calcium	T	mg/L	6020		*		*		*		*
7440-47-3		Chromium	T	mg/L	6020		*		*		*		*
7440-48-4		Cobalt	T	mg/L	6020		*		*		*		*
7440-50-8		Copper	T	mg/L	6020		*		*		*		*
7439-89-6		Iron	T	mg/L	6020		*		*		*		*
7439-92-1		Lead	T	mg/L	6020		*		*		*		*
7439-95-4		Magnesium	T	mg/L	6020		*		*		*		*
7439-96-5		Manganese	T	mg/L	6020		*		*		*		*
7439-97-6		Mercury	T	mg/L	7470		*		*		*		*

GROUNDWATER SAMPLE ANALYSIS - (Cont.)

AKGWA NUMBER[1], Facility Well/Spring Number						0000-0000		0000-0000		0000-0000		0000-0000	
Facility's Local Well or Spring Number (e.g., MW-1, MW-2, etc.)						T. BLANK 2		T. BLANK 3		T. BLANK 4		T. BLANK 5	
CAS RN[4]		CONSTITUENT	TD[5]	Unit OF MEASURE	METHOD	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS
7439-98-7		Molybdenum	T	mg/L	6020		*		*		*		*
7440-02-0		Nickel	T	mg/L	6020		*		*		*		*
7440-09-7		Potassium	T	mg/L	6020		*		*		*		*
7440-16-6		Rhodium	T	mg/L	6020		*		*		*		*
7782-49-2		Selenium	T	mg/L	6020		*		*		*		*
7440-22-4		Silver	T	mg/L	6020		*		*		*		*
7440-23-5		Sodium	T	mg/L	6020		*		*		*		*
7440-25-7		Tantalum	T	mg/L	6020		*		*		*		*
7440-28-0		Thallium	T	mg/L	6020		*		*		*		*
7440-61-1		Uranium	T	mg/L	6020		*		*		*		*
7440-62-2		Vanadium	T	mg/L	6010		*		*		*		*
7440-66-6		Zinc	T	mg/L	6020		*		*		*		*
108-05-4		Vinyl acetate	T	mg/L	8260	<0.005		<0.005		<0.005		<0.005	
67-64-1		Acetone	T	mg/L	8260	<0.005		<0.005		<0.005		<0.005	
107-02-8		Acrolein	T	mg/L	8260	<0.005		<0.005		<0.005		<0.005	
107-13-1		Acrylonitrile	T	mg/L	8260	<0.005		<0.005		<0.005		<0.005	
71-43-2		Benzene	T	mg/L	8260	<0.001		<0.001		<0.001		<0.001	
108-90-7		Chlorobenzene	T	mg/L	8260	<0.001		<0.001		<0.001		<0.001	
1330-20-7		Xylenes	T	mg/L	8260	<0.003		<0.003		<0.003		<0.003	
100-42-5		Styrene	T	mg/L	8260	<0.001		<0.001		<0.001		<0.001	
108-88-3		Toluene	T	mg/L	8260	<0.001		<0.001		<0.001		<0.001	
74-97-5		Chlorobromomethane	T	mg/L	8260	<0.001		<0.001		<0.001		<0.001	

RESIDENTIAL/CONTAINED-QUARTERLY
Facility: US DOE - Paducah Gaseous Diffusion Plant
Permit Number: 073-00045

FINDS/UNIT: KY8-890-008-982 / 1
LAB ID: None
For Official Use Only

GROUNDWATER SAMPLE ANALYSIS - (Cont.)

AKGWA NUMBER[1], Facility Well/Spring Number						0000-0000		0000-0000		0000-0000		0000-0000	
Facility's Local Well or Spring Number (e.g., MW-1, MW-2, etc.)						T. BLANK 2		T. BLANK 3		T. BLANK 4		T. BLANK 5	
CAS RN[4]		CONSTITUENT	TD[5]	Unit OF MEASURE	METHOD	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS
75-27-4		Bromodichloromethane	T	mg/L	8260	<0.001		<0.001		<0.001		<0.001	
75-25-2		Tribromomethane	T	mg/L	8260	<0.001		<0.001		<0.001		<0.001	
74-83-9		Methyl bromide	T	mg/L	8260	<0.001		<0.001		<0.001		<0.001	
78-93-3		Methyl ethyl ketone	T	mg/L	8260	<0.005		<0.005		<0.005		<0.005	
110-57-6		trans-1,4-Dichloro-2-butene	T	mg/L	8260	<0.005		<0.005		<0.005		<0.005	
75-15-0		Carbon disulfide	T	mg/L	8260	<0.005		<0.005		<0.005		<0.005	
75-00-3		Chloroethane	T	mg/L	8260	<0.001		<0.001		<0.001		<0.001	
67-66-3		Chloroform	T	mg/L	8260	<0.001		<0.001		<0.001		<0.001	
74-87-3		Methyl chloride	T	mg/L	8260	<0.001		<0.001		<0.001		<0.001	
156-59-2		cis-1,2-Dichloroethene	T	mg/L	8260	<0.001		<0.001		<0.001		<0.001	
74-95-3		Methylene bromide	T	mg/L	8260	<0.001		<0.001		<0.001		<0.001	
75-34-3		1,1-Dichloroethane	T	mg/L	8260	<0.001		<0.001		<0.001		<0.001	
107-06-2		1,2-Dichloroethane	T	mg/L	8260	<0.001		<0.001		<0.001		<0.001	
75-35-4		1,1-Dichloroethylene	T	mg/L	8260	<0.001		<0.001		<0.001		<0.001	
106-93-4		Ethane, 1,2-dibromo	T	mg/L	8260	<0.001		<0.001		<0.001		<0.001	
79-34-5		Ethane, 1,1,2,2-Tetrachloro	T	mg/L	8260	<0.001		<0.001		<0.001		<0.001	
71-55-6		Ethane, 1,1,1-Trichloro-	T	mg/L	8260	<0.001		<0.001		<0.001		<0.001	
79-00-5		Ethane, 1,1,2-Trichloro	T	mg/L	8260	<0.001		<0.001		<0.001		<0.001	
630-20-6		Ethane, 1,1,1,2-Tetrachloro	T	mg/L	8260	<0.001		<0.001		<0.001		<0.001	
75-01-4		Vinyl chloride	T	mg/L	8260	<0.001		<0.001		<0.001		<0.001	
127-18-4		Ethene, Tetrachloro-	T	mg/L	8260	<0.001		<0.001		<0.001		<0.001	
79-01-6		Ethene, Trichloro-	T	mg/L	8260	<0.001		<0.001		<0.001		<0.001	

RESIDENTIAL/CONTAINED-QUARTERLY
Facility: US DOE - Paducah Gaseous Diffusion Plant
Permit Number: 073-00045

FINDS/UNIT: KY8-890-008-982 / 1
LAB ID: None
For Official Use Only

GROUNDWATER SAMPLE ANALYSIS - (Cont.)

AKGWA NUMBER[1], Facility Well/Spring Number						0000-0000		0000-0000		0000-0000		0000-0000	
Facility's Local Well or Spring Number (e.g., MW-1, MW-2, etc.)						T. BLANK 2		T. BLANK 3		T. BLANK 4		T. BLANK 5	
CAS RN[4]		CONSTITUENT	TD[5]	Unit OF MEASURE	METHOD	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS
100-41-4		Ethylbenzene	T	mg/L	8260	<0.001		<0.001		<0.001		<0.001	
591-78-6		2-Hexanone	T	mg/L	8260	<0.005		<0.005		<0.005		<0.005	
74-88-4		Iodomethane	T	mg/L	8260	<0.005		<0.005		<0.005		<0.005	
124-48-1		Methane, Dibromochloro-	T	mg/L	8260	<0.001		<0.001		<0.001		<0.001	
56-23-5		Carbon Tetrachloride	T	mg/L	8260	<0.001		<0.001		<0.001		<0.001	
75-09-2		Dichloromethane	T	mg/L	8260	<0.005		<0.005		<0.005		<0.005	
108-10-1		Methyl isobutyl ketone	T	mg/L	8260	<0.005		<0.005		<0.005		<0.005	
96-12-8		Propane, 1,2-Dibromo-3-chloro	T	mg/L	8011	<0.0000203		<0.0000203		<0.0000201		<0.0000201	
78-87-5		Propane, 1,2-Dichloro-	T	mg/L	8260	<0.001		<0.001		<0.001		<0.001	
10061-02-6		trans-1,3-Dichloro-1-propene	T	mg/L	8260	<0.001		<0.001		<0.001		<0.001	
10061-01-5		cis-1,3-Dichloro-1-propene	T	mg/L	8260	<0.001		<0.001		<0.001		<0.001	
156-60-5		trans-1,2-Dichloroethene	T	mg/L	8260	<0.001		<0.001		<0.001		<0.001	
75-69-4		Trichlorofluoromethane	T	mg/L	8260	<0.001		<0.001		<0.001		<0.001	
96-18-4		1,2,3-Trichloropropane	T	mg/L	8260	<0.001		<0.001		<0.001		<0.001	
95-50-1		Benzene, 1,2-Dichloro-	T	mg/L	8260	<0.001		<0.001		<0.001		<0.001	
106-46-7		Benzene, 1,4-Dichloro-	T	mg/L	8260	<0.001		<0.001		<0.001		<0.001	
1336-36-3		PCB,Total	T	ug/L	8082		*		*		*		*
12674-11-2		PCB-1016	T	ug/L	8082		*		*		*		*
11104-28-2		PCB-1221	T	ug/L	8082		*		*		*		*
11141-16-5		PCB-1232	T	ug/L	8082		*		*		*		*
53469-21-9		PCB-1242	T	ug/L	8082		*		*		*		*
12672-29-6		PCB-1248	T	ug/L	8082		*		*		*		*

RESIDENTIAL/CONTAINED-QUARTERLY
Facility: US DOE - Paducah Gaseous Diffusion Plant
Permit Number: 073-00045

FINDS/UNIT: KY8-890-008-982 / 1
LAB ID: None
For Official Use Only

GROUNDWATER SAMPLE ANALYSIS - (Cont.)

AKGWA NUMBER[1], Facility Well/Spring Number						0000-0000		0000-0000		0000-0000		0000-0000	
Facility's Local Well or Spring Number (e.g., MW-1, MW-2, etc.)						T. BLANK 2		T. BLANK 3		T. BLANK 4		T. BLANK 5	
CAS RN[4]		CONSTITUENT	TD[5]	Unit OF MEASURE	METHOD	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS
11097-69-1		PCB-1254	T	ug/L	8082		*		*		*		*
11096-82-5		PCB-1260	T	ug/L	8082		*		*		*		*
11100-14-4		PCB-1268	T	ug/L	8082		*		*		*		*
12587-46-1		Gross Alpha	T	pCi/L	9310		*		*		*		*
12587-47-2		Gross Beta	T	pCi/L	9310		*		*		*		*
10043-66-0		Iodine-131	T	pCi/L			*		*		*		*
13982-63-3		Radium-226	T	pCi/L	HASL 300		*		*		*		*
10098-97-2		Strontium-90	T	pCi/L	905.0		*		*		*		*
14133-76-7		Technetium-99	T	pCi/L	Tc-02-RC		*		*		*		*
14269-63-7		Thorium-230	T	pCi/L	Th-01-RC		*		*		*		*
10028-17-8		Tritium	T	pCi/L	906.0		*		*		*		*
S0130- -		Chemical Oxygen Demand	T	mg/L	410.4		*		*		*		*
57-12-5		Cyanide	T	mg/L	9012		*		*		*		*
20461-54-5		Iodide	T	mg/L	300.0		*		*		*		*
S0268- -		Total Organic Carbon	T	mg/L	9060		*		*		*		*
S0586- -		Total Organic Halides	T	mg/L	9020		*		*		*		*

Division of Waste Management
Solid Waste Branch
14 Reilly Road
Frankfort, KY 40601 (502)564-6716

RESIDENTIAL/CONTAINED-QUARTERLY
Facility: US DOE - Paducah Gaseous Diffusion Plant
Permit Number: 073-00045

FINDS/UNIT: KY8-890-008-982 / 1
LAB ID: None
For Official Use Only

GROUNDWATER SAMPLE ANALYSIS(S)

AKGWA NUMBER[1], Facility Well/Spring Number	8004-0982			
Facility's Local Well or Spring Number (e.g., MW-1, MW-2, etc.)	366			
Sample Sequence #	2			
If sample is a Blank, specify Type: (F)ield, (T)rip, (M)ethod, or (E)quipment	NA			
Sample Date and Time (Month/Day/Year hour: minutes)	10/16/2014 08:53			
Duplicate ("Y" or "N")[2]	Y			
Split ("Y" or "N")[3]	N			
Facility Sample ID Number (if applicable)	MW366DUG1-15			
Laboratory Sample ID Number (if applicable)	359287001			
Date of Analysis (Month/Day/Year) For Volatile Organics Analysis	10/23/2014			
Gradient with respect to Monitored Unit (UP, DOWN, SIDE, UNKNOWN)	SIDE			

CAS RN[4]		CONSTITUENT	TD[5]	Unit OF MEASURE	METHOD	DETECTED VALUE OR PQL[6]	FLAGS[7]	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS
24959-67-9		Bromide	T	mg/L	9056	0.49							
16887-00-6		Chloride(s)	T	mg/L	9056	37.5							
16984-48-8		Fluoride	T	mg/L	9056	0.166							
S0595- -		Nitrate & Nitrite	T	mg/L	9056	0.802							
14808-79-8		Sulfate	T	mg/L	9056	45.9							
NS1894		Barometric Pressure Reading	T	Inches/Hg	Field	29.93							
S0145- -		Specific Conductance	T	µMH0/cm	Field	450							

[1]AKGWA # is 0000-0000 for any type of blank.
[2]Respond "Y" if the sample was a duplicate of another sample in this report.
[3]Respond "Y" if the sample was split and analyzed by separate laboratories.
[4]Chemical Abstracts Service Registry Number or unique identifier number assigned by agency.
[5]"T" = Total; "D" = Dissolved
[6]"<" indicates a non-detect; do not use "ND" or "BDL". Value shown is Practical Quantification Limit.
[7]Flags are as designated, do not use any other type. Use "*," then describe on "Written Comments Page."

STANDARD FLAGS:
* = See Comments
J = Estimated Value
B = Analyte found in blank
A = Average value
N = Presumptive ID
D = Concentration from analysis of a secondary dilution

RESIDENTIAL/CONTAINED-QUARTERLY
Facility: US DOE - Paducah Gaseous Diffusion Plant
Permit Number: 073-00045

FINDS/UNIT: KY8-890-008-982 / 1
LAB ID: None
For Official Use Only

GROUNDWATER SAMPLE ANALYSIS - (Cont.)

AKGWA NUMBER[1], Facility Well/Spring Number						8004-0982							
Facility's Local Well or Spring Number (e.g., MW-1, MW-2, BLANK-F, etc.)						366							
CAS RN[4]		CONSTITUENT	TD[5]	Unit OF MEASURE	METHOD	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS
S0906 - -		Static Water Level Elevation	T	Ft. MSL	Field	322.26							
N238		Dissolved Oxygen	T	mg/L	Field	3.56							
S0266- -		Total Dissolved Solids	T	mg/L	160.1	214							
S0296- -		pH	T	Units	Field	6.12							
NS215		Eh	T	mV	Field	343							
S0907 - -		Temperature	T	°C	Field	14.72							
7429-90-5		Aluminum	T	mg/L	6020	0.0171	J						
7440-36-0		Antimony	T	mg/L	6020	<0.003							
7440-38-2		Arsenic	T	mg/L	6020	<0.005							
7440-39-3		Barium	T	mg/L	6020	0.157							
7440-41-7		Beryllium	T	mg/L	6020	<0.0005							
7440-42-8		Boron	T	mg/L	6020	0.0876							
7440-43-9		Cadmium	T	mg/L	6020	<0.001							
7440-70-2		Calcium	T	mg/L	6020	28.2							
7440-47-3		Chromium	T	mg/L	6020	<0.01							
7440-48-4		Cobalt	T	mg/L	6020	0.00066	J						
7440-50-8		Copper	T	mg/L	6020	0.00057	J						
7439-89-6		Iron	T	mg/L	6020	0.121							
7439-92-1		Lead	T	mg/L	6020	<0.002							
7439-95-4		Magnesium	T	mg/L	6020	11.8							
7439-96-5		Manganese	T	mg/L	6020	0.0358							
7439-97-6		Mercury	T	mg/L	7470	<0.0002							

FINDS/UNIT: KY8-890-008-982 / 1
LAB ID: None
For Official Use Only

GROUNDWATER SAMPLE ANALYSIS - (Cont.)

AKGWA NUMBER[1], Facility Well/Spring Number						8004-0982							
Facility's Local Well or Spring Number (e.g., MW-1, MW-2, etc.)						366							
CAS RN[4]		CONSTITUENT	TD[5]	Unit OF MEASURE	METHOD	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS
7439-98-7		Molybdenum	T	mg/L	6020	<0.0005							
7440-02-0		Nickel	T	mg/L	6020	0.00054	J						
7440-09-7		Potassium	T	mg/L	6020	1.86							
7440-16-6		Rhodium	T	mg/L	6020	<0.005							
7782-49-2		Selenium	T	mg/L	6020	0.00165	J						
7440-22-4		Silver	T	mg/L	6020	<0.001							
7440-23-5		Sodium	T	mg/L	6020	44.6							
7440-25-7		Tantalum	T	mg/L	6020	<0.005							
7440-28-0		Thallium	T	mg/L	6020	<0.002							
7440-61-1		Uranium	T	mg/L	6020	<0.0002							
7440-62-2		Vanadium	T	mg/L	6010	<0.005							
7440-66-6		Zinc	T	mg/L	6020	0.00619	BJ						
108-05-4		Vinyl acetate	T	mg/L	8260	<0.005							
67-64-1		Acetone	T	mg/L	8260	<0.005							
107-02-8		Acrolein	T	mg/L	8260	<0.005							
107-13-1		Acrylonitrile	T	mg/L	8260	<0.005							
71-43-2		Benzene	T	mg/L	8260	<0.001							
108-90-7		Chlorobenzene	T	mg/L	8260	<0.001							
1330-20-7		Xylenes	T	mg/L	8260	<0.003							
100-42-5		Styrene	T	mg/L	8260	<0.001							
108-88-3		Toluene	T	mg/L	8260	<0.001							
74-97-5		Chlorobromomethane	T	mg/L	8260	<0.001							

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GROUNDWATER SAMPLE ANALYSIS - (Cont.)

AKGWA NUMBER[1], Facility Well/Spring Number						8004-0982							
Facility's Local Well or Spring Number (e.g., MW-1, MW-2, etc.)						366							
CAS RN[4]		CONSTITUENT	TD[5]	Unit OF MEASURE	METHOD	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS
75-27-4		Bromodichloromethane	T	mg/L	8260	<0.001							
75-25-2		Tribromomethane	T	mg/L	8260	<0.001							
74-83-9		Methyl bromide	T	mg/L	8260	<0.001							
78-93-3		Methyl ethyl ketone	T	mg/L	8260	<0.005							
110-57-6		trans-1,4-Dichloro-2-butene	T	mg/L	8260	<0.005							
75-15-0		Carbon disulfide	T	mg/L	8260	<0.005							
75-00-3		Chloroethane	T	mg/L	8260	<0.001							
67-66-3		Chloroform	T	mg/L	8260	<0.001							
74-87-3		Methyl chloride	T	mg/L	8260	<0.001							
156-59-2		cis-1,2-Dichloroethene	T	mg/L	8260	<0.001							
74-95-3		Methylene bromide	T	mg/L	8260	<0.001							
75-34-3		1,1-Dichloroethane	T	mg/L	8260	<0.001							
107-06-2		1,2-Dichloroethane	T	mg/L	8260	<0.001							
75-35-4		1,1-Dichloroethylene	T	mg/L	8260	<0.001							
106-93-4		Ethane, 1,2-dibromo	T	mg/L	8260	<0.001							
79-34-5		Ethane, 1,1,2,2-Tetrachloro	T	mg/L	8260	<0.001							
71-55-6		Ethane, 1,1,1-Trichloro-	T	mg/L	8260	<0.001							
79-00-5		Ethane, 1,1,2-Trichloro	T	mg/L	8260	<0.001							
630-20-6		Ethane, 1,1,1,2-Tetrachloro	T	mg/L	8260	<0.001							
75-01-4		Vinyl chloride	T	mg/L	8260	<0.001							
127-18-4		Ethene, Tetrachloro-	T	mg/L	8260	<0.001							
79-01-6		Ethene, Trichloro-	T	mg/L	8260	0.00359							

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GROUNDWATER SAMPLE ANALYSIS - (Cont.)

AKGWA NUMBER[1], Facility Well/Spring Number						8004-0982							
Facility's Local Well or Spring Number (e.g., MW-1, MW-2, etc.)						366							
CAS RN[4]		CONSTITUENT	TD[5]	Unit OF MEASURE	METHOD	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS
100-41-4		Ethylbenzene	T	mg/L	8260	<0.001							
591-78-6		2-Hexanone	T	mg/L	8260	<0.005							
74-88-4		Iodomethane	T	mg/L	8260	<0.005							
124-48-1		Methane, Dibromochloro-	T	mg/L	8260	<0.001							
56-23-5		Carbon Tetrachloride	T	mg/L	8260	<0.001							
75-09-2		Dichloromethane	T	mg/L	8260	<0.005							
108-10-1		Methyl isobutyl ketone	T	mg/L	8260	<0.005							
96-12-8		Propane, 1,2-Dibromo-3-chloro	T	mg/L	8011	<0.0000201							
78-87-5		Propane, 1,2-Dichloro-	T	mg/L	8260	<0.001							
10061-02-6		trans-1,3-Dichloro-1-propene	T	mg/L	8260	<0.001							
10061-01-5		cis-1,3-Dichloro-1-propene	T	mg/L	8260	<0.001							
156-60-5		trans-1,2-Dichloroethene	T	mg/L	8260	<0.001							
75-69-4		Trichlorofluoromethane	T	mg/L	8260	<0.001							
96-18-4		1,2,3-Trichloropropane	T	mg/L	8260	<0.001							
95-50-1		Benzene, 1,2-Dichloro-	T	mg/L	8260	<0.001							
106-46-7		Benzene, 1,4-Dichloro-	T	mg/L	8260	<0.001							
1336-36-3		PCB,Total	T	ug/L	8082	<0.0935							
12674-11-2		PCB-1016	T	ug/L	8082	<0.0935							
11104-28-2		PCB-1221	T	ug/L	8082	<0.0935							
11141-16-5		PCB-1232	T	ug/L	8082	<0.0935							
53469-21-9		PCB-1242	T	ug/L	8082	<0.0935							
12672-29-6		PCB-1248	T	ug/L	8082	<0.0935							

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GROUNDWATER SAMPLE ANALYSIS - (Cont.)

AKGWA NUMBER[1], Facility Well/Spring Number						8004-0982								
Facility's Local Well or Spring Number (e.g., MW-1, MW-2, etc.)						366								
CAS RN[4]		CONSTITUENT	TD[5]	Unit OF MEASURE	METHOD	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS
11097-69-1		PCB-1254	T	ug/L	8082	<0.0935							
11096-82-5		PCB-1260	T	ug/L	8082	<0.0935							
11100-14-4		PCB-1268	T	ug/L	8082	<0.0935							
12587-46-1		Gross Alpha	T	pCi/L	9310	-1.83	*						
12587-47-2		Gross Beta	T	pCi/L	9310	33	*						
10043-66-0		Iodine-131	T	pCi/L			*						
13982-63-3		Radium-226	T	pCi/L	HASL 300	0.707	*						
10098-97-2		Strontium-90	T	pCi/L	905.0	-1.39	*						
14133-76-7		Technetium-99	T	pCi/L	Tc-02-RC	64.4	*						
14269-63-7		Thorium-230	T	pCi/L	Th-01-RC	4.85	*						
10028-17-8		Tritium	T	pCi/L	906.0	185	*						
S0130- -		Chemical Oxygen Demand	T	mg/L	410.4	10.5	J						
57-12-5		Cyanide	T	mg/L	9012	<0.2							
20461-54-5		Iodide	T	mg/L	300.0	<0.5							
S0268- -		Total Organic Carbon	T	mg/L	9060	1.54	J						
S0586- -		Total Organic Halides	T	mg/L	9020	0.006	J						

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Monitoring Point	Facility Sample ID	Constituent	Flag	Description
8004-4798 MW357	MW357UG1-15	Gross alpha	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 5.82. Rad error is 5.82.
		Gross beta		TPU is 11.1. Rad error is 10.5.
		Iodine-131		Analysis of constituent not required and not performed.
		Radium-226	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.397. Rad error is 0.391.
		Strontium-90	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 3.12. Rad error is 3.12.
		Technetium-99		TPU is 14.9. Rad error is 14.3.
		Thorium-230	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 1.91. Rad error is 1.89.
		Tritium	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 157. Rad error is 156.
8004-4799 MW358	MW358UG1-15	Gross alpha	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 1.88. Rad error is 1.88.
		Gross beta		TPU is 10.6. Rad error is 9.69.
		Iodine-131		Analysis of constituent not required and not performed.
		Radium-226	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.378. Rad error is 0.371.
		Strontium-90	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 2.1. Rad error is 2.1.
		Technetium-99		TPU is 15.4. Rad error is 14.6.
		Thorium-230	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 1.45. Rad error is 1.44.
		Tritium	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 157. Rad error is 156.

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Monitoring Point	Facility Sample ID	Constituent	Flag	Description
8004-0981 MW359		Bromide		During sampling, the well went dry; therefore, no sample was collected.
		Chloride		During sampling, the well went dry; therefore, no sample was collected.
		Fluoride		During sampling, the well went dry; therefore, no sample was collected.
		Nitrate & Nitrite		During sampling, the well went dry; therefore, no sample was collected.
		Sulfate		During sampling, the well went dry; therefore, no sample was collected.
		Barometric Pressure Reading		During sampling, the well went dry; therefore, no sample was collected.
		Specific Conductance		During sampling, the well went dry; therefore, no sample was collected.
		Static Water Level Elevation		During sampling, the well went dry; therefore, no sample was collected.
		Dissolved Oxygen		During sampling, the well went dry; therefore, no sample was collected.
		Total Dissolved Solids		During sampling, the well went dry; therefore, no sample was collected.
		pH		During sampling, the well went dry; therefore, no sample was collected.
		Eh		During sampling, the well went dry; therefore, no sample was collected.
		Temperature		During sampling, the well went dry; therefore, no sample was collected.
		Aluminum		During sampling, the well went dry; therefore, no sample was collected.
		Antimony		During sampling, the well went dry; therefore, no sample was collected.
		Arsenic		During sampling, the well went dry; therefore, no sample was collected.
		Barium		During sampling, the well went dry; therefore, no sample was collected.
		Beryllium		During sampling, the well went dry; therefore, no sample was collected.
		Boron		During sampling, the well went dry; therefore, no sample was collected.
		Cadmium		During sampling, the well went dry; therefore, no sample was collected.
		Calcium		During sampling, the well went dry; therefore, no sample was collected.
		Chromium		During sampling, the well went dry; therefore, no sample was collected.
		Cobalt		During sampling, the well went dry; therefore, no sample was collected.
		Copper		During sampling, the well went dry; therefore, no sample was collected.
		Iron		During sampling, the well went dry; therefore, no sample was collected.
		Lead		During sampling, the well went dry; therefore, no sample was collected.

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Monitoring Point	Facility Sample ID	Constituent	Flag	Description
8004-0981 MW359		Magnesium		During sampling, the well went dry; therefore, no sample was collected.
		Manganese		During sampling, the well went dry; therefore, no sample was collected.
		Mercury		During sampling, the well went dry; therefore, no sample was collected.
		Molybdenum		During sampling, the well went dry; therefore, no sample was collected.
		Nickel		During sampling, the well went dry; therefore, no sample was collected.
		Potassium		During sampling, the well went dry; therefore, no sample was collected.
		Rhodium		During sampling, the well went dry; therefore, no sample was collected.
		Selenium		During sampling, the well went dry; therefore, no sample was collected.
		Silver		During sampling, the well went dry; therefore, no sample was collected.
		Sodium		During sampling, the well went dry; therefore, no sample was collected.
		Tantalum		During sampling, the well went dry; therefore, no sample was collected.
		Thallium		During sampling, the well went dry; therefore, no sample was collected.
		Uranium		During sampling, the well went dry; therefore, no sample was collected.
		Vanadium		During sampling, the well went dry; therefore, no sample was collected.
		Zinc		During sampling, the well went dry; therefore, no sample was collected.
		Vinyl acetate		During sampling, the well went dry; therefore, no sample was collected.
		Acetone		During sampling, the well went dry; therefore, no sample was collected.
		Acrolein		During sampling, the well went dry; therefore, no sample was collected.
		Acrylonitrile		During sampling, the well went dry; therefore, no sample was collected.
		Benzene		During sampling, the well went dry; therefore, no sample was collected.
		Chlorobenzene		During sampling, the well went dry; therefore, no sample was collected.
		Xylenes		During sampling, the well went dry; therefore, no sample was collected.
		Styrene		During sampling, the well went dry; therefore, no sample was collected.
		Toluene		During sampling, the well went dry; therefore, no sample was collected.
		Chlorobromomethane		During sampling, the well went dry; therefore, no sample was collected.
		Bromodichloromethane		During sampling, the well went dry; therefore, no sample was collected.

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Monitoring Point	Facility Sample ID	Constituent	Flag	Description
8004-0981 MW359		Tribromomethane		During sampling, the well went dry; therefore, no sample was collected.
		Methyl bromide		During sampling, the well went dry; therefore, no sample was collected.
		Methyl Ethyl Ketone		During sampling, the well went dry; therefore, no sample was collected.
		trans-1,4-Dichloro-2-butene		During sampling, the well went dry; therefore, no sample was collected.
		Carbon disulfide		During sampling, the well went dry; therefore, no sample was collected.
		Chloroethane		During sampling, the well went dry; therefore, no sample was collected.
		Chloroform		During sampling, the well went dry; therefore, no sample was collected.
		Methyl chloride		During sampling, the well went dry; therefore, no sample was collected.
		cis-1,2-Dichloroethene		During sampling, the well went dry; therefore, no sample was collected.
		Methylene bromide		During sampling, the well went dry; therefore, no sample was collected.
		1,1-Dichloroethane		During sampling, the well went dry; therefore, no sample was collected.
		1,2-Dichloroethane		During sampling, the well went dry; therefore, no sample was collected.
		1,1-Dichloroethylene		During sampling, the well went dry; therefore, no sample was collected.
		1,2-Dibromoethane		During sampling, the well went dry; therefore, no sample was collected.
		1,1,2,2-Tetrachloroethane		During sampling, the well went dry; therefore, no sample was collected.
		1,1,1-Trichloroethane		During sampling, the well went dry; therefore, no sample was collected.
		1,1,2-Trichloroethane		During sampling, the well went dry; therefore, no sample was collected.
		1,1,1,2-Tetrachloroethane		During sampling, the well went dry; therefore, no sample was collected.
		Vinyl chloride		During sampling, the well went dry; therefore, no sample was collected.
		Tetrachloroethene		During sampling, the well went dry; therefore, no sample was collected.
		Trichloroethene		During sampling, the well went dry; therefore, no sample was collected.
		Ethylbenzene		During sampling, the well went dry; therefore, no sample was collected.
		2-Hexanone		During sampling, the well went dry; therefore, no sample was collected.
		Iodomethane		During sampling, the well went dry; therefore, no sample was collected.
		Dibromochloromethane		During sampling, the well went dry; therefore, no sample was collected.
		Carbon tetrachloride		During sampling, the well went dry; therefore, no sample was collected.

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Monitoring Point	Facility Sample ID	Constituent	Flag	Description
8004-0981 MW359		Dichloromethane		During sampling, the well went dry; therefore, no sample was collected.
		Methyl Isobutyl Ketone		During sampling, the well went dry; therefore, no sample was collected.
		1,2-Dibromo-3-chloropropane		During sampling, the well went dry; therefore, no sample was collected.
		1,2-Dichloropropane		During sampling, the well went dry; therefore, no sample was collected.
		trans-1,3-Dichloropropene		During sampling, the well went dry; therefore, no sample was collected.
		cis-1,3-Dichloropropene		During sampling, the well went dry; therefore, no sample was collected.
		trans-1,2-Dichloroethene		During sampling, the well went dry; therefore, no sample was collected.
		Trichlorofluoromethane		During sampling, the well went dry; therefore, no sample was collected.
		1,2,3-Trichloropropane		During sampling, the well went dry; therefore, no sample was collected.
		1,2-Dichlorobenzene		During sampling, the well went dry; therefore, no sample was collected.
		1,4-Dichlorobenzene		During sampling, the well went dry; therefore, no sample was collected.
		PCB, Total		During sampling, the well went dry; therefore, no sample was collected.
		PCB-1016		During sampling, the well went dry; therefore, no sample was collected.
		PCB-1221		During sampling, the well went dry; therefore, no sample was collected.
		PCB-1232		During sampling, the well went dry; therefore, no sample was collected.
		PCB-1242		During sampling, the well went dry; therefore, no sample was collected.
		PCB-1248		During sampling, the well went dry; therefore, no sample was collected.
		PCB-1254		During sampling, the well went dry; therefore, no sample was collected.
		PCB-1260		During sampling, the well went dry; therefore, no sample was collected.
		PCB-1268		During sampling, the well went dry; therefore, no sample was collected.
		Gross alpha		During sampling, the well went dry; therefore, no sample was collected.
		Gross beta		During sampling, the well went dry; therefore, no sample was collected.
		Iodine-131		During sampling, the well went dry; therefore, no sample was collected.
		Radium-226		During sampling, the well went dry; therefore, no sample was collected.
		Strontium-90		During sampling, the well went dry; therefore, no sample was collected.
		Technetium-99		During sampling, the well went dry; therefore, no sample was collected.

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Monitoring Point	Facility Sample ID	Constituent	Flag	Description
8004-0981 MW359		Thorium-230		During sampling, the well went dry; therefore, no sample was collected.
		Tritium		During sampling, the well went dry; therefore, no sample was collected.
		Chemical Oxygen Demand		During sampling, the well went dry; therefore, no sample was collected.
		Cyanide		During sampling, the well went dry; therefore, no sample was collected.
		Iodide		During sampling, the well went dry; therefore, no sample was collected.
		Total Organic Carbon		During sampling, the well went dry; therefore, no sample was collected.
		Total Organic Halides		During sampling, the well went dry; therefore, no sample was collected.
8004-4800 MW360	MW360UG1-15	Gross alpha	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 4.31. Rad error is 4.31.
		Gross beta	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 4.34. Rad error is 4.34.
		Iodine-131		Analysis of constituent not required and not performed.
		Radium-226		TPU is 0.378. Rad error is 0.365.
		Strontium-90	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 3.09. Rad error is 3.05.
		Technetium-99	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 13.1. Rad error is 13.1.
		Thorium-230	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 2.16. Rad error is 2.13.
		Tritium	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 142. Rad error is 142.
8004-4795 MW361	MW361UG1-15	Gross alpha	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 6.95. Rad error is 6.93.
		Gross beta		TPU is 10.9. Rad error is 9.99.
		Iodine-131		Analysis of constituent not required and not performed.
		Radium-226	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.278. Rad error is 0.276.
		Strontium-90	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 2.41. Rad error is 2.41.
		Technetium-99		TPU is 14.8. Rad error is 14.
		Thorium-230	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 1.88. Rad error is 1.86.
		Tritium	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 158. Rad error is 155.

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8004-0986 MW362	MW362UG1-15	Gross alpha	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 7.3. Rad error is 7.24.
		Gross beta	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 5.71. Rad error is 5.62.
		Iodine-131		Analysis of constituent not required and not performed.
		Radium-226	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.427. Rad error is 0.422.
		Strontium-90	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 3.4. Rad error is 3.4.
		Technetium-99	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 13.6. Rad error is 13.6.
		Thorium-230	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 1.99. Rad error is 1.96.
		Tritium	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 145. Rad error is 145.
8004-4796 MW363	MW363UG1-15	Gross alpha	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 5.22. Rad error is 5.21.
		Gross beta	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 9.81. Rad error is 9.62.
		Iodine-131		Analysis of constituent not required and not performed.
		Radium-226		TPU is 0.423. Rad error is 0.411.
		Strontium-90	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 1.95. Rad error is 1.95.
		Technetium-99	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 13.2. Rad error is 13.2.
		Thorium-230	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 1.95. Rad error is 1.92.
		Tritium	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 147. Rad error is 147.
8004-4797 MW364	MW364UG1-15	Gross alpha	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 3.83. Rad error is 3.83.
		Gross beta		TPU is 9.72. Rad error is 8.95.
		Iodine-131		Analysis of constituent not required and not performed.
		Radium-226		TPU is 0.347. Rad error is 0.331.
		Strontium-90	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 4.48. Rad error is 4.47.
		Technetium-99		TPU is 15.2. Rad error is 14.6.
		Thorium-230	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 1.94. Rad error is 1.92.
		Tritium	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 148. Rad error is 147.

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Monitoring Point	Facility Sample ID	Constituent	Flag	Description
8004-0984 MW365		Bromide		During sampling, the well went dry; therefore, no sample was collected.
		Chloride		During sampling, the well went dry; therefore, no sample was collected.
		Fluoride		During sampling, the well went dry; therefore, no sample was collected.
		Nitrate & Nitrite		During sampling, the well went dry; therefore, no sample was collected.
		Sulfate		During sampling, the well went dry; therefore, no sample was collected.
		Barometric Pressure Reading		During sampling, the well went dry; therefore, no sample was collected.
		Specific Conductance		During sampling, the well went dry; therefore, no sample was collected.
		Static Water Level Elevation		During sampling, the well went dry; therefore, no sample was collected.
		Dissolved Oxygen		During sampling, the well went dry; therefore, no sample was collected.
		Total Dissolved Solids		During sampling, the well went dry; therefore, no sample was collected.
		pH		During sampling, the well went dry; therefore, no sample was collected.
		Eh		During sampling, the well went dry; therefore, no sample was collected.
		Temperature		During sampling, the well went dry; therefore, no sample was collected.
		Aluminum		During sampling, the well went dry; therefore, no sample was collected.
		Antimony		During sampling, the well went dry; therefore, no sample was collected.
		Arsenic		During sampling, the well went dry; therefore, no sample was collected.
		Barium		During sampling, the well went dry; therefore, no sample was collected.
		Beryllium		During sampling, the well went dry; therefore, no sample was collected.
		Boron		During sampling, the well went dry; therefore, no sample was collected.
		Cadmium		During sampling, the well went dry; therefore, no sample was collected.
		Calcium		During sampling, the well went dry; therefore, no sample was collected.
		Chromium		During sampling, the well went dry; therefore, no sample was collected.
		Cobalt		During sampling, the well went dry; therefore, no sample was collected.
		Copper		During sampling, the well went dry; therefore, no sample was collected.
		Iron		During sampling, the well went dry; therefore, no sample was collected.
		Lead		During sampling, the well went dry; therefore, no sample was collected.

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Monitoring Point	Facility Sample ID	Constituent	Flag	Description
8004-0984 MW365		Magnesium		During sampling, the well went dry; therefore, no sample was collected.
		Manganese		During sampling, the well went dry; therefore, no sample was collected.
		Mercury		During sampling, the well went dry; therefore, no sample was collected.
		Molybdenum		During sampling, the well went dry; therefore, no sample was collected.
		Nickel		During sampling, the well went dry; therefore, no sample was collected.
		Potassium		During sampling, the well went dry; therefore, no sample was collected.
		Rhodium		During sampling, the well went dry; therefore, no sample was collected.
		Selenium		During sampling, the well went dry; therefore, no sample was collected.
		Silver		During sampling, the well went dry; therefore, no sample was collected.
		Sodium		During sampling, the well went dry; therefore, no sample was collected.
		Tantalum		During sampling, the well went dry; therefore, no sample was collected.
		Thallium		During sampling, the well went dry; therefore, no sample was collected.
		Uranium		During sampling, the well went dry; therefore, no sample was collected.
		Vanadium		During sampling, the well went dry; therefore, no sample was collected.
		Zinc		During sampling, the well went dry; therefore, no sample was collected.
		Vinyl acetate		During sampling, the well went dry; therefore, no sample was collected.
		Acetone		During sampling, the well went dry; therefore, no sample was collected.
		Acrolein		During sampling, the well went dry; therefore, no sample was collected.
		Acrylonitrile		During sampling, the well went dry; therefore, no sample was collected.
		Benzene		During sampling, the well went dry; therefore, no sample was collected.
		Chlorobenzene		During sampling, the well went dry; therefore, no sample was collected.
		Xylenes		During sampling, the well went dry; therefore, no sample was collected.
		Styrene		During sampling, the well went dry; therefore, no sample was collected.
		Toluene		During sampling, the well went dry; therefore, no sample was collected.
		Chlorobromomethane		During sampling, the well went dry; therefore, no sample was collected.
		Bromodichloromethane		During sampling, the well went dry; therefore, no sample was collected.

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Monitoring Point	Facility Sample ID	Constituent	Flag	Description
8004-0984 MW365		Tribromomethane		During sampling, the well went dry; therefore, no sample was collected.
		Methyl bromide		During sampling, the well went dry; therefore, no sample was collected.
		Methyl Ethyl Ketone		During sampling, the well went dry; therefore, no sample was collected.
		trans-1,4-Dichloro-2-butene		During sampling, the well went dry; therefore, no sample was collected.
		Carbon disulfide		During sampling, the well went dry; therefore, no sample was collected.
		Chloroethane		During sampling, the well went dry; therefore, no sample was collected.
		Chloroform		During sampling, the well went dry; therefore, no sample was collected.
		Methyl chloride		During sampling, the well went dry; therefore, no sample was collected.
		cis-1,2-Dichloroethene		During sampling, the well went dry; therefore, no sample was collected.
		Methylene bromide		During sampling, the well went dry; therefore, no sample was collected.
		1,1-Dichloroethane		During sampling, the well went dry; therefore, no sample was collected.
		1,2-Dichloroethane		During sampling, the well went dry; therefore, no sample was collected.
		1,1-Dichloroethylene		During sampling, the well went dry; therefore, no sample was collected.
		1,2-Dibromoethane		During sampling, the well went dry; therefore, no sample was collected.
		1,1,2,2-Tetrachloroethane		During sampling, the well went dry; therefore, no sample was collected.
		1,1,1-Trichloroethane		During sampling, the well went dry; therefore, no sample was collected.
		1,1,2-Trichloroethane		During sampling, the well went dry; therefore, no sample was collected.
		1,1,1,2-Tetrachloroethane		During sampling, the well went dry; therefore, no sample was collected.
		Vinyl chloride		During sampling, the well went dry; therefore, no sample was collected.
		Tetrachloroethene		During sampling, the well went dry; therefore, no sample was collected.
		Trichloroethene		During sampling, the well went dry; therefore, no sample was collected.
		Ethylbenzene		During sampling, the well went dry; therefore, no sample was collected.
		2-Hexanone		During sampling, the well went dry; therefore, no sample was collected.
		Iodomethane		During sampling, the well went dry; therefore, no sample was collected.
		Dibromochloromethane		During sampling, the well went dry; therefore, no sample was collected.
		Carbon tetrachloride		During sampling, the well went dry; therefore, no sample was collected.

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Monitoring Point	Facility Sample ID	Constituent	Flag	Description
8004-0984 MW365		Dichloromethane		During sampling, the well went dry; therefore, no sample was collected.
		Methyl Isobutyl Ketone		During sampling, the well went dry; therefore, no sample was collected.
		1,2-Dibromo-3-chloropropane		During sampling, the well went dry; therefore, no sample was collected.
		1,2-Dichloropropane		During sampling, the well went dry; therefore, no sample was collected.
		trans-1,3-Dichloropropene		During sampling, the well went dry; therefore, no sample was collected.
		cis-1,3-Dichloropropene		During sampling, the well went dry; therefore, no sample was collected.
		trans-1,2-Dichloroethene		During sampling, the well went dry; therefore, no sample was collected.
		Trichlorofluoromethane		During sampling, the well went dry; therefore, no sample was collected.
		1,2,3-Trichloropropane		During sampling, the well went dry; therefore, no sample was collected.
		1,2-Dichlorobenzene		During sampling, the well went dry; therefore, no sample was collected.
		1,4-Dichlorobenzene		During sampling, the well went dry; therefore, no sample was collected.
		PCB, Total		During sampling, the well went dry; therefore, no sample was collected.
		PCB-1016		During sampling, the well went dry; therefore, no sample was collected.
		PCB-1221		During sampling, the well went dry; therefore, no sample was collected.
		PCB-1232		During sampling, the well went dry; therefore, no sample was collected.
		PCB-1242		During sampling, the well went dry; therefore, no sample was collected.
		PCB-1248		During sampling, the well went dry; therefore, no sample was collected.
		PCB-1254		During sampling, the well went dry; therefore, no sample was collected.
		PCB-1260		During sampling, the well went dry; therefore, no sample was collected.
		PCB-1268		During sampling, the well went dry; therefore, no sample was collected.
		Gross alpha		During sampling, the well went dry; therefore, no sample was collected.
		Gross beta		During sampling, the well went dry; therefore, no sample was collected.
		Iodine-131		During sampling, the well went dry; therefore, no sample was collected.
		Radium-226		During sampling, the well went dry; therefore, no sample was collected.
		Strontium-90		During sampling, the well went dry; therefore, no sample was collected.
		Technetium-99		During sampling, the well went dry; therefore, no sample was collected.

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Monitoring Point	Facility Sample ID	Constituent	Flag	Description
8004-0984 MW365		Thorium-230		During sampling, the well went dry; therefore, no sample was collected.
		Tritium		During sampling, the well went dry; therefore, no sample was collected.
		Chemical Oxygen Demand		During sampling, the well went dry; therefore, no sample was collected.
		Cyanide		During sampling, the well went dry; therefore, no sample was collected.
		Iodide		During sampling, the well went dry; therefore, no sample was collected.
		Total Organic Carbon		During sampling, the well went dry; therefore, no sample was collected.
		Total Organic Halides		During sampling, the well went dry; therefore, no sample was collected.
8004-0982 MW366	MW366UG1-15	Gross alpha	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 3.81. Rad error is 3.8.
		Gross beta		TPU is 12.7. Rad error is 10.8.
		Iodine-131		Analysis of constituent not required and not performed.
		Radium-226	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.359. Rad error is 0.355.
		Strontium-90	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 3.28. Rad error is 3.25.
		Technetium-99		TPU is 14.5. Rad error is 13.9.
		Thorium-230	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 4.64. Rad error is 4.63.
		Tritium	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 141. Rad error is 141.
8004-4793 MW367	MW367UG1-15	Gross alpha	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 4.88. Rad error is 4.87.
		Gross beta	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 5.77. Rad error is 5.76.
		Iodine-131		Analysis of constituent not required and not performed.
		Radium-226		TPU is 0.467. Rad error is 0.443.
		Strontium-90	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 2.47. Rad error is 2.47.
		Technetium-99	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 13.3. Rad error is 13.3.
		Thorium-230	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 1.59. Rad error is 1.58.
		Tritium	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 141. Rad error is 141.

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Monitoring Point	Facility Sample ID	Constituent	Flag	Description
8004-0983	MW368	Bromide		During sampling, the well went dry; therefore, no sample was collected.
		Chloride		During sampling, the well went dry; therefore, no sample was collected.
		Fluoride		During sampling, the well went dry; therefore, no sample was collected.
		Nitrate & Nitrite		During sampling, the well went dry; therefore, no sample was collected.
		Sulfate		During sampling, the well went dry; therefore, no sample was collected.
		Barometric Pressure Reading		During sampling, the well went dry; therefore, no sample was collected.
		Specific Conductance		During sampling, the well went dry; therefore, no sample was collected.
		Static Water Level Elevation		During sampling, the well went dry; therefore, no sample was collected.
		Dissolved Oxygen		During sampling, the well went dry; therefore, no sample was collected.
		Total Dissolved Solids		During sampling, the well went dry; therefore, no sample was collected.
		pH		During sampling, the well went dry; therefore, no sample was collected.
		Eh		During sampling, the well went dry; therefore, no sample was collected.
		Temperature		During sampling, the well went dry; therefore, no sample was collected.
		Aluminum		During sampling, the well went dry; therefore, no sample was collected.
		Antimony		During sampling, the well went dry; therefore, no sample was collected.
		Arsenic		During sampling, the well went dry; therefore, no sample was collected.
		Barium		During sampling, the well went dry; therefore, no sample was collected.
		Beryllium		During sampling, the well went dry; therefore, no sample was collected.
		Boron		During sampling, the well went dry; therefore, no sample was collected.
		Cadmium		During sampling, the well went dry; therefore, no sample was collected.
		Calcium		During sampling, the well went dry; therefore, no sample was collected.
		Chromium		During sampling, the well went dry; therefore, no sample was collected.
		Cobalt		During sampling, the well went dry; therefore, no sample was collected.
		Copper		During sampling, the well went dry; therefore, no sample was collected.
		Iron		During sampling, the well went dry; therefore, no sample was collected.
		Lead		During sampling, the well went dry; therefore, no sample was collected.

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Monitoring Point	Facility Sample ID	Constituent	Flag	Description
8004-0983	MW368	Magnesium		During sampling, the well went dry; therefore, no sample was collected.
		Manganese		During sampling, the well went dry; therefore, no sample was collected.
		Mercury		During sampling, the well went dry; therefore, no sample was collected.
		Molybdenum		During sampling, the well went dry; therefore, no sample was collected.
		Nickel		During sampling, the well went dry; therefore, no sample was collected.
		Potassium		During sampling, the well went dry; therefore, no sample was collected.
		Rhodium		During sampling, the well went dry; therefore, no sample was collected.
		Selenium		During sampling, the well went dry; therefore, no sample was collected.
		Silver		During sampling, the well went dry; therefore, no sample was collected.
		Sodium		During sampling, the well went dry; therefore, no sample was collected.
		Tantalum		During sampling, the well went dry; therefore, no sample was collected.
		Thallium		During sampling, the well went dry; therefore, no sample was collected.
		Uranium		During sampling, the well went dry; therefore, no sample was collected.
		Vanadium		During sampling, the well went dry; therefore, no sample was collected.
		Zinc		During sampling, the well went dry; therefore, no sample was collected.
		Vinyl acetate		During sampling, the well went dry; therefore, no sample was collected.
		Acetone		During sampling, the well went dry; therefore, no sample was collected.
		Acrolein		During sampling, the well went dry; therefore, no sample was collected.
		Acrylonitrile		During sampling, the well went dry; therefore, no sample was collected.
		Benzene		During sampling, the well went dry; therefore, no sample was collected.
		Chlorobenzene		During sampling, the well went dry; therefore, no sample was collected.
		Xylenes		During sampling, the well went dry; therefore, no sample was collected.
		Styrene		During sampling, the well went dry; therefore, no sample was collected.
		Toluene		During sampling, the well went dry; therefore, no sample was collected.
		Chlorobromomethane		During sampling, the well went dry; therefore, no sample was collected.
		Bromodichloromethane		During sampling, the well went dry; therefore, no sample was collected.

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Monitoring Point	Facility Sample ID	Constituent	Flag	Description
8004-0983	MW368	Tribromomethane		During sampling, the well went dry; therefore, no sample was collected.
		Methyl bromide		During sampling, the well went dry; therefore, no sample was collected.
		Methyl Ethyl Ketone		During sampling, the well went dry; therefore, no sample was collected.
		trans-1,4-Dichloro-2-butene		During sampling, the well went dry; therefore, no sample was collected.
		Carbon disulfide		During sampling, the well went dry; therefore, no sample was collected.
		Chloroethane		During sampling, the well went dry; therefore, no sample was collected.
		Chloroform		During sampling, the well went dry; therefore, no sample was collected.
		Methyl chloride		During sampling, the well went dry; therefore, no sample was collected.
		cis-1,2-Dichloroethene		During sampling, the well went dry; therefore, no sample was collected.
		Methylene bromide		During sampling, the well went dry; therefore, no sample was collected.
		1,1-Dichloroethane		During sampling, the well went dry; therefore, no sample was collected.
		1,2-Dichloroethane		During sampling, the well went dry; therefore, no sample was collected.
		1,1-Dichloroethylene		During sampling, the well went dry; therefore, no sample was collected.
		1,2-Dibromoethane		During sampling, the well went dry; therefore, no sample was collected.
		1,1,2,2-Tetrachloroethane		During sampling, the well went dry; therefore, no sample was collected.
		1,1,1-Trichloroethane		During sampling, the well went dry; therefore, no sample was collected.
		1,1,2-Trichloroethane		During sampling, the well went dry; therefore, no sample was collected.
		1,1,1,2-Tetrachloroethane		During sampling, the well went dry; therefore, no sample was collected.
		Vinyl chloride		During sampling, the well went dry; therefore, no sample was collected.
		Tetrachloroethene		During sampling, the well went dry; therefore, no sample was collected.
		Trichloroethene		During sampling, the well went dry; therefore, no sample was collected.
		Ethylbenzene		During sampling, the well went dry; therefore, no sample was collected.
		2-Hexanone		During sampling, the well went dry; therefore, no sample was collected.
		Iodomethane		During sampling, the well went dry; therefore, no sample was collected.
		Dibromochloromethane		During sampling, the well went dry; therefore, no sample was collected.
		Carbon tetrachloride		During sampling, the well went dry; therefore, no sample was collected.

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Monitoring Point	Facility Sample ID	Constituent	Flag	Description
8004-0983	MW368	Dichloromethane		During sampling, the well went dry; therefore, no sample was collected.
		Methyl Isobutyl Ketone		During sampling, the well went dry; therefore, no sample was collected.
		1,2-Dibromo-3-chloropropane		During sampling, the well went dry; therefore, no sample was collected.
		1,2-Dichloropropane		During sampling, the well went dry; therefore, no sample was collected.
		trans-1,3-Dichloropropene		During sampling, the well went dry; therefore, no sample was collected.
		cis-1,3-Dichloropropene		During sampling, the well went dry; therefore, no sample was collected.
		trans-1,2-Dichloroethene		During sampling, the well went dry; therefore, no sample was collected.
		Trichlorofluoromethane		During sampling, the well went dry; therefore, no sample was collected.
		1,2,3-Trichloropropane		During sampling, the well went dry; therefore, no sample was collected.
		1,2-Dichlorobenzene		During sampling, the well went dry; therefore, no sample was collected.
		1,4-Dichlorobenzene		During sampling, the well went dry; therefore, no sample was collected.
		PCB, Total		During sampling, the well went dry; therefore, no sample was collected.
		PCB-1016		During sampling, the well went dry; therefore, no sample was collected.
		PCB-1221		During sampling, the well went dry; therefore, no sample was collected.
		PCB-1232		During sampling, the well went dry; therefore, no sample was collected.
		PCB-1242		During sampling, the well went dry; therefore, no sample was collected.
		PCB-1248		During sampling, the well went dry; therefore, no sample was collected.
		PCB-1254		During sampling, the well went dry; therefore, no sample was collected.
		PCB-1260		During sampling, the well went dry; therefore, no sample was collected.
		PCB-1268		During sampling, the well went dry; therefore, no sample was collected.
		Gross alpha		During sampling, the well went dry; therefore, no sample was collected.
		Gross beta		During sampling, the well went dry; therefore, no sample was collected.
		Iodine-131		During sampling, the well went dry; therefore, no sample was collected.
		Radium-226		During sampling, the well went dry; therefore, no sample was collected.
		Strontium-90		During sampling, the well went dry; therefore, no sample was collected.
		Technetium-99		During sampling, the well went dry; therefore, no sample was collected.

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Monitoring Point	Facility Sample ID	Constituent	Flag	Description
8004-0983 MW368		Thorium-230		During sampling, the well went dry; therefore, no sample was collected.
		Tritium		During sampling, the well went dry; therefore, no sample was collected.
		Chemical Oxygen Demand		During sampling, the well went dry; therefore, no sample was collected.
		Cyanide		During sampling, the well went dry; therefore, no sample was collected.
		Iodide		During sampling, the well went dry; therefore, no sample was collected.
		Total Organic Carbon		During sampling, the well went dry; therefore, no sample was collected.
		Total Organic Halides		During sampling, the well went dry; therefore, no sample was collected.
8004-4820 MW369	MW369UG1-15	Gross alpha	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 4.58. Rad error is 4.57.
		Gross beta		TPU is 10.1. Rad error is 8.7.
		Iodine-131		Analysis of constituent not required and not performed.
		Radium-226		TPU is 0.543. Rad error is 0.515.
		Strontium-90	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 1.91. Rad error is 1.91.
		Technetium-99		TPU is 15.6. Rad error is 14.8.
		Thorium-230		TPU is 2.54. Rad error is 2.45.
		Tritium	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 146. Rad error is 146.
8004-4818 MW370	MW370UG1-15	Gross alpha	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 5.86. Rad error is 5.86.
		Gross beta		TPU is 8.53. Rad error is 8.13.
		Iodine-131		Analysis of constituent not required and not performed.
		Radium-226		TPU is 0.64. Rad error is 0.619.
		Strontium-90	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 1.92. Rad error is 1.92.
		Technetium-99		TPU is 13.8. Rad error is 13.6.
		Thorium-230		TPU is 2.24. Rad error is 2.15.
		Tritium	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 151. Rad error is 151.

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8004-4819 MW371	MW371UG1-15	Gross alpha	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 5.29. Rad error is 5.28.
		Gross beta	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 6.73. Rad error is 6.54.
		Iodine-131		Analysis of constituent not required and not performed.
		Radium-226		TPU is 0.726. Rad error is 0.685.
		Strontium-90	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 2.26. Rad error is 2.26.
		Technetium-99	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 13.7. Rad error is 13.7.
		Thorium-230		TPU is 2.71. Rad error is 2.59.
		Tritium	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 147. Rad error is 147.
8004-4808 MW372	MW372UG1-15	Gross alpha	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 7.87. Rad error is 7.72.
		Gross beta		TPU is 16.9. Rad error is 11.9.
		Iodine-131		Analysis of constituent not required and not performed.
		Radium-226		TPU is 0.404. Rad error is 0.391.
		Strontium-90	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 2.17. Rad error is 2.17.
		Technetium-99		TPU is 19.8. Rad error is 15.8.
		Thorium-230	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 7.32. Rad error is 7.2.
		Tritium	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 151. Rad error is 151.
8004-4792 MW373	MW373UG1-15	Gross alpha	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 4.59. Rad error is 4.59.
		Gross beta		TPU is 8.8. Rad error is 7.8.
		Iodine-131		Analysis of constituent not required and not performed.
		Radium-226	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.427. Rad error is 0.419.
		Strontium-90	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 2.51. Rad error is 2.51.
		Technetium-99		TPU is 14.6. Rad error is 13.9.
		Thorium-230	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 7.86. Rad error is 7.77.
		Tritium	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 147. Rad error is 147.

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Monitoring Point	Facility Sample ID	Constituent	Flag	Description
8004-0990 MW374	MW374UG1-15	Gross alpha	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 5.17. Rad error is 5.13.
		Gross beta	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 6.2. Rad error is 6.17.
		Iodine-131		Analysis of constituent not required and not performed.
		Radium-226		TPU is 0.605. Rad error is 0.573.
		Strontium-90	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 4.42. Rad error is 4.42.
		Technetium-99	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 13.5. Rad error is 13.5.
		Thorium-230	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 5.08. Rad error is 5.04.
		Tritium	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 147. Rad error is 147.
8004-0985 MW375	MW375UG1-15	Gross alpha	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 5.18. Rad error is 5.18.
		Gross beta	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 5.3. Rad error is 5.3.
		Iodine-131		Analysis of constituent not required and not performed.
		Radium-226	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.38. Rad error is 0.373.
		Strontium-90	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 1.95. Rad error is 1.95.
		Technetium-99	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 12.6. Rad error is 12.6.
		Thorium-230	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 6.52. Rad error is 6.51.
		Tritium	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 151. Rad error is 151.

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Monitoring Point	Facility Sample ID	Constituent	Flag	Description
8004-0988 MW376		Bromide		During sampling, the well went dry; therefore, no sample was collected.
		Chloride		During sampling, the well went dry; therefore, no sample was collected.
		Fluoride		During sampling, the well went dry; therefore, no sample was collected.
		Nitrate & Nitrite		During sampling, the well went dry; therefore, no sample was collected.
		Sulfate		During sampling, the well went dry; therefore, no sample was collected.
		Barometric Pressure Reading		During sampling, the well went dry; therefore, no sample was collected.
		Specific Conductance		During sampling, the well went dry; therefore, no sample was collected.
		Static Water Level Elevation		During sampling, the well went dry; therefore, no sample was collected.
		Dissolved Oxygen		During sampling, the well went dry; therefore, no sample was collected.
		Total Dissolved Solids		During sampling, the well went dry; therefore, no sample was collected.
		pH		During sampling, the well went dry; therefore, no sample was collected.
		Eh		During sampling, the well went dry; therefore, no sample was collected.
		Temperature		During sampling, the well went dry; therefore, no sample was collected.
		Aluminum		During sampling, the well went dry; therefore, no sample was collected.
		Antimony		During sampling, the well went dry; therefore, no sample was collected.
		Arsenic		During sampling, the well went dry; therefore, no sample was collected.
		Barium		During sampling, the well went dry; therefore, no sample was collected.
		Beryllium		During sampling, the well went dry; therefore, no sample was collected.
		Boron		During sampling, the well went dry; therefore, no sample was collected.
		Cadmium		During sampling, the well went dry; therefore, no sample was collected.
		Calcium		During sampling, the well went dry; therefore, no sample was collected.
		Chromium		During sampling, the well went dry; therefore, no sample was collected.
		Cobalt		During sampling, the well went dry; therefore, no sample was collected.
		Copper		During sampling, the well went dry; therefore, no sample was collected.
		Iron		During sampling, the well went dry; therefore, no sample was collected.
		Lead		During sampling, the well went dry; therefore, no sample was collected.

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Monitoring Point	Facility Sample ID	Constituent	Flag	Description
8004-0988	MW376	Magnesium		During sampling, the well went dry; therefore, no sample was collected.
		Manganese		During sampling, the well went dry; therefore, no sample was collected.
		Mercury		During sampling, the well went dry; therefore, no sample was collected.
		Molybdenum		During sampling, the well went dry; therefore, no sample was collected.
		Nickel		During sampling, the well went dry; therefore, no sample was collected.
		Potassium		During sampling, the well went dry; therefore, no sample was collected.
		Rhodium		During sampling, the well went dry; therefore, no sample was collected.
		Selenium		During sampling, the well went dry; therefore, no sample was collected.
		Silver		During sampling, the well went dry; therefore, no sample was collected.
		Sodium		During sampling, the well went dry; therefore, no sample was collected.
		Tantalum		During sampling, the well went dry; therefore, no sample was collected.
		Thallium		During sampling, the well went dry; therefore, no sample was collected.
		Uranium		During sampling, the well went dry; therefore, no sample was collected.
		Vanadium		During sampling, the well went dry; therefore, no sample was collected.
		Zinc		During sampling, the well went dry; therefore, no sample was collected.
		Vinyl acetate		During sampling, the well went dry; therefore, no sample was collected.
		Acetone		During sampling, the well went dry; therefore, no sample was collected.
		Acrolein		During sampling, the well went dry; therefore, no sample was collected.
		Acrylonitrile		During sampling, the well went dry; therefore, no sample was collected.
		Benzene		During sampling, the well went dry; therefore, no sample was collected.
		Chlorobenzene		During sampling, the well went dry; therefore, no sample was collected.
		Xylenes		During sampling, the well went dry; therefore, no sample was collected.
		Styrene		During sampling, the well went dry; therefore, no sample was collected.
		Toluene		During sampling, the well went dry; therefore, no sample was collected.
		Chlorobromomethane		During sampling, the well went dry; therefore, no sample was collected.
		Bromodichloromethane		During sampling, the well went dry; therefore, no sample was collected.

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Monitoring Point	Facility Sample ID	Constituent	Flag	Description
8004-0988	MW376	Tribromomethane		During sampling, the well went dry; therefore, no sample was collected.
		Methyl bromide		During sampling, the well went dry; therefore, no sample was collected.
		Methyl Ethyl Ketone		During sampling, the well went dry; therefore, no sample was collected.
		trans-1,4-Dichloro-2-butene		During sampling, the well went dry; therefore, no sample was collected.
		Carbon disulfide		During sampling, the well went dry; therefore, no sample was collected.
		Chloroethane		During sampling, the well went dry; therefore, no sample was collected.
		Chloroform		During sampling, the well went dry; therefore, no sample was collected.
		Methyl chloride		During sampling, the well went dry; therefore, no sample was collected.
		cis-1,2-Dichloroethene		During sampling, the well went dry; therefore, no sample was collected.
		Methylene bromide		During sampling, the well went dry; therefore, no sample was collected.
		1,1-Dichloroethane		During sampling, the well went dry; therefore, no sample was collected.
		1,2-Dichloroethane		During sampling, the well went dry; therefore, no sample was collected.
		1,1-Dichloroethylene		During sampling, the well went dry; therefore, no sample was collected.
		1,2-Dibromoethane		During sampling, the well went dry; therefore, no sample was collected.
		1,1,2,2-Tetrachloroethane		During sampling, the well went dry; therefore, no sample was collected.
		1,1,1-Trichloroethane		During sampling, the well went dry; therefore, no sample was collected.
		1,1,2-Trichloroethane		During sampling, the well went dry; therefore, no sample was collected.
		1,1,1,2-Tetrachloroethane		During sampling, the well went dry; therefore, no sample was collected.
		Vinyl chloride		During sampling, the well went dry; therefore, no sample was collected.
		Tetrachloroethene		During sampling, the well went dry; therefore, no sample was collected.
		Trichloroethene		During sampling, the well went dry; therefore, no sample was collected.
		Ethylbenzene		During sampling, the well went dry; therefore, no sample was collected.
		2-Hexanone		During sampling, the well went dry; therefore, no sample was collected.
		Iodomethane		During sampling, the well went dry; therefore, no sample was collected.
		Dibromochloromethane		During sampling, the well went dry; therefore, no sample was collected.
		Carbon tetrachloride		During sampling, the well went dry; therefore, no sample was collected.

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Monitoring Point	Facility Sample ID	Constituent	Flag	Description
8004-0988	MW376	Dichloromethane		During sampling, the well went dry; therefore, no sample was collected.
		Methyl Isobutyl Ketone		During sampling, the well went dry; therefore, no sample was collected.
		1,2-Dibromo-3-chloropropane		During sampling, the well went dry; therefore, no sample was collected.
		1,2-Dichloropropane		During sampling, the well went dry; therefore, no sample was collected.
		trans-1,3-Dichloropropene		During sampling, the well went dry; therefore, no sample was collected.
		cis-1,3-Dichloropropene		During sampling, the well went dry; therefore, no sample was collected.
		trans-1,2-Dichloroethene		During sampling, the well went dry; therefore, no sample was collected.
		Trichlorofluoromethane		During sampling, the well went dry; therefore, no sample was collected.
		1,2,3-Trichloropropane		During sampling, the well went dry; therefore, no sample was collected.
		1,2-Dichlorobenzene		During sampling, the well went dry; therefore, no sample was collected.
		1,4-Dichlorobenzene		During sampling, the well went dry; therefore, no sample was collected.
		PCB, Total		During sampling, the well went dry; therefore, no sample was collected.
		PCB-1016		During sampling, the well went dry; therefore, no sample was collected.
		PCB-1221		During sampling, the well went dry; therefore, no sample was collected.
		PCB-1232		During sampling, the well went dry; therefore, no sample was collected.
		PCB-1242		During sampling, the well went dry; therefore, no sample was collected.
		PCB-1248		During sampling, the well went dry; therefore, no sample was collected.
		PCB-1254		During sampling, the well went dry; therefore, no sample was collected.
		PCB-1260		During sampling, the well went dry; therefore, no sample was collected.
		PCB-1268		During sampling, the well went dry; therefore, no sample was collected.
		Gross alpha		During sampling, the well went dry; therefore, no sample was collected.
		Gross beta		During sampling, the well went dry; therefore, no sample was collected.
		Iodine-131		During sampling, the well went dry; therefore, no sample was collected.
		Radium-226		During sampling, the well went dry; therefore, no sample was collected.
		Strontium-90		During sampling, the well went dry; therefore, no sample was collected.
		Technetium-99		During sampling, the well went dry; therefore, no sample was collected.

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Monitoring Point	Facility Sample ID	Constituent	Flag	Description
8004-0988	MW376	Thorium-230		During sampling, the well went dry; therefore, no sample was collected.
		Tritium		During sampling, the well went dry; therefore, no sample was collected.
		Chemical Oxygen Demand		During sampling, the well went dry; therefore, no sample was collected.
		Cyanide		During sampling, the well went dry; therefore, no sample was collected.
		Iodide		During sampling, the well went dry; therefore, no sample was collected.
		Total Organic Carbon		During sampling, the well went dry; therefore, no sample was collected.
		Total Organic Halides		During sampling, the well went dry; therefore, no sample was collected.

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Monitoring Point	Facility Sample ID	Constituent	Flag	Description
8004-0989 MW377		Bromide		During sampling, the well went dry; therefore, no sample was collected.
		Chloride		During sampling, the well went dry; therefore, no sample was collected.
		Fluoride		During sampling, the well went dry; therefore, no sample was collected.
		Nitrate & Nitrite		During sampling, the well went dry; therefore, no sample was collected.
		Sulfate		During sampling, the well went dry; therefore, no sample was collected.
		Barometric Pressure Reading		During sampling, the well went dry; therefore, no sample was collected.
		Specific Conductance		During sampling, the well went dry; therefore, no sample was collected.
		Static Water Level Elevation		During sampling, the well went dry; therefore, no sample was collected.
		Dissolved Oxygen		During sampling, the well went dry; therefore, no sample was collected.
		Total Dissolved Solids		During sampling, the well went dry; therefore, no sample was collected.
		pH		During sampling, the well went dry; therefore, no sample was collected.
		Eh		During sampling, the well went dry; therefore, no sample was collected.
		Temperature		During sampling, the well went dry; therefore, no sample was collected.
		Aluminum		During sampling, the well went dry; therefore, no sample was collected.
		Antimony		During sampling, the well went dry; therefore, no sample was collected.
		Arsenic		During sampling, the well went dry; therefore, no sample was collected.
		Barium		During sampling, the well went dry; therefore, no sample was collected.
		Beryllium		During sampling, the well went dry; therefore, no sample was collected.
		Boron		During sampling, the well went dry; therefore, no sample was collected.
		Cadmium		During sampling, the well went dry; therefore, no sample was collected.
		Calcium		During sampling, the well went dry; therefore, no sample was collected.
		Chromium		During sampling, the well went dry; therefore, no sample was collected.
		Cobalt		During sampling, the well went dry; therefore, no sample was collected.
		Copper		During sampling, the well went dry; therefore, no sample was collected.
		Iron		During sampling, the well went dry; therefore, no sample was collected.
		Lead		During sampling, the well went dry; therefore, no sample was collected.

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Monitoring Point	Facility Sample ID	Constituent	Flag	Description
8004-0989 MW377		Magnesium		During sampling, the well went dry; therefore, no sample was collected.
		Manganese		During sampling, the well went dry; therefore, no sample was collected.
		Mercury		During sampling, the well went dry; therefore, no sample was collected.
		Molybdenum		During sampling, the well went dry; therefore, no sample was collected.
		Nickel		During sampling, the well went dry; therefore, no sample was collected.
		Potassium		During sampling, the well went dry; therefore, no sample was collected.
		Rhodium		During sampling, the well went dry; therefore, no sample was collected.
		Selenium		During sampling, the well went dry; therefore, no sample was collected.
		Silver		During sampling, the well went dry; therefore, no sample was collected.
		Sodium		During sampling, the well went dry; therefore, no sample was collected.
		Tantalum		During sampling, the well went dry; therefore, no sample was collected.
		Thallium		During sampling, the well went dry; therefore, no sample was collected.
		Uranium		During sampling, the well went dry; therefore, no sample was collected.
		Vanadium		During sampling, the well went dry; therefore, no sample was collected.
		Zinc		During sampling, the well went dry; therefore, no sample was collected.
		Vinyl acetate		During sampling, the well went dry; therefore, no sample was collected.
		Acetone		During sampling, the well went dry; therefore, no sample was collected.
		Acrolein		During sampling, the well went dry; therefore, no sample was collected.
		Acrylonitrile		During sampling, the well went dry; therefore, no sample was collected.
		Benzene		During sampling, the well went dry; therefore, no sample was collected.
		Chlorobenzene		During sampling, the well went dry; therefore, no sample was collected.
		Xylenes		During sampling, the well went dry; therefore, no sample was collected.
		Styrene		During sampling, the well went dry; therefore, no sample was collected.
		Toluene		During sampling, the well went dry; therefore, no sample was collected.
		Chlorobromomethane		During sampling, the well went dry; therefore, no sample was collected.
		Bromodichloromethane		During sampling, the well went dry; therefore, no sample was collected.

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Monitoring Point	Facility Sample ID	Constituent	Flag	Description
8004-0989	MW377	Tribromomethane		During sampling, the well went dry; therefore, no sample was collected.
		Methyl bromide		During sampling, the well went dry; therefore, no sample was collected.
		Methyl Ethyl Ketone		During sampling, the well went dry; therefore, no sample was collected.
		trans-1,4-Dichloro-2-butene		During sampling, the well went dry; therefore, no sample was collected.
		Carbon disulfide		During sampling, the well went dry; therefore, no sample was collected.
		Chloroethane		During sampling, the well went dry; therefore, no sample was collected.
		Chloroform		During sampling, the well went dry; therefore, no sample was collected.
		Methyl chloride		During sampling, the well went dry; therefore, no sample was collected.
		cis-1,2-Dichloroethene		During sampling, the well went dry; therefore, no sample was collected.
		Methylene bromide		During sampling, the well went dry; therefore, no sample was collected.
		1,1-Dichloroethane		During sampling, the well went dry; therefore, no sample was collected.
		1,2-Dichloroethane		During sampling, the well went dry; therefore, no sample was collected.
		1,1-Dichloroethylene		During sampling, the well went dry; therefore, no sample was collected.
		1,2-Dibromoethane		During sampling, the well went dry; therefore, no sample was collected.
		1,1,2,2-Tetrachloroethane		During sampling, the well went dry; therefore, no sample was collected.
		1,1,1-Trichloroethane		During sampling, the well went dry; therefore, no sample was collected.
		1,1,2-Trichloroethane		During sampling, the well went dry; therefore, no sample was collected.
		1,1,1,2-Tetrachloroethane		During sampling, the well went dry; therefore, no sample was collected.
		Vinyl chloride		During sampling, the well went dry; therefore, no sample was collected.
		Tetrachloroethene		During sampling, the well went dry; therefore, no sample was collected.
		Trichloroethene		During sampling, the well went dry; therefore, no sample was collected.
		Ethylbenzene		During sampling, the well went dry; therefore, no sample was collected.
		2-Hexanone		During sampling, the well went dry; therefore, no sample was collected.
		Iodomethane		During sampling, the well went dry; therefore, no sample was collected.
		Dibromochloromethane		During sampling, the well went dry; therefore, no sample was collected.
		Carbon tetrachloride		During sampling, the well went dry; therefore, no sample was collected.

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Monitoring Point	Facility Sample ID	Constituent	Flag	Description
8004-0989 MW377		Dichloromethane		During sampling, the well went dry; therefore, no sample was collected.
		Methyl Isobutyl Ketone		During sampling, the well went dry; therefore, no sample was collected.
		1,2-Dibromo-3-chloropropane		During sampling, the well went dry; therefore, no sample was collected.
		1,2-Dichloropropane		During sampling, the well went dry; therefore, no sample was collected.
		trans-1,3-Dichloropropene		During sampling, the well went dry; therefore, no sample was collected.
		cis-1,3-Dichloropropene		During sampling, the well went dry; therefore, no sample was collected.
		trans-1,2-Dichloroethene		During sampling, the well went dry; therefore, no sample was collected.
		Trichlorofluoromethane		During sampling, the well went dry; therefore, no sample was collected.
		1,2,3-Trichloropropane		During sampling, the well went dry; therefore, no sample was collected.
		1,2-Dichlorobenzene		During sampling, the well went dry; therefore, no sample was collected.
		1,4-Dichlorobenzene		During sampling, the well went dry; therefore, no sample was collected.
		PCB, Total		During sampling, the well went dry; therefore, no sample was collected.
		PCB-1016		During sampling, the well went dry; therefore, no sample was collected.
		PCB-1221		During sampling, the well went dry; therefore, no sample was collected.
		PCB-1232		During sampling, the well went dry; therefore, no sample was collected.
		PCB-1242		During sampling, the well went dry; therefore, no sample was collected.
		PCB-1248		During sampling, the well went dry; therefore, no sample was collected.
		PCB-1254		During sampling, the well went dry; therefore, no sample was collected.
		PCB-1260		During sampling, the well went dry; therefore, no sample was collected.
		PCB-1268		During sampling, the well went dry; therefore, no sample was collected.
		Gross alpha		During sampling, the well went dry; therefore, no sample was collected.
		Gross beta		During sampling, the well went dry; therefore, no sample was collected.
		Iodine-131		During sampling, the well went dry; therefore, no sample was collected.
		Radium-226		During sampling, the well went dry; therefore, no sample was collected.
		Strontium-90		During sampling, the well went dry; therefore, no sample was collected.
		Technetium-99		During sampling, the well went dry; therefore, no sample was collected.

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Monitoring Point	Facility Sample ID	Constituent	Flag	Description
8004-0989 MW377		Thorium-230		During sampling, the well went dry; therefore, no sample was collected.
		Tritium		During sampling, the well went dry; therefore, no sample was collected.
		Chemical Oxygen Demand		During sampling, the well went dry; therefore, no sample was collected.
		Cyanide		During sampling, the well went dry; therefore, no sample was collected.
		Iodide		During sampling, the well went dry; therefore, no sample was collected.
		Total Organic Carbon		During sampling, the well went dry; therefore, no sample was collected.
		Total Organic Halides		During sampling, the well went dry; therefore, no sample was collected.
0000-0000 QC	RI1UG1-15	Bromide		Analysis of constituent not required and not performed.
		Chloride		Analysis of constituent not required and not performed.
		Fluoride		Analysis of constituent not required and not performed.
		Nitrate & Nitrite		Analysis of constituent not required and not performed.
		Sulfate		Analysis of constituent not required and not performed.
		Barometric Pressure Reading		Analysis of constituent not required and not performed.
		Specific Conductance		Analysis of constituent not required and not performed.
		Static Water Level Elevation		Analysis of constituent not required and not performed.
		Dissolved Oxygen		Analysis of constituent not required and not performed.
		Total Dissolved Solids		Analysis of constituent not required and not performed.
		pH		Analysis of constituent not required and not performed.
		Eh		Analysis of constituent not required and not performed.
		Temperature		Analysis of constituent not required and not performed.
		Gross alpha	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 5.35. Rad error is 5.34.
		Gross beta		TPU is 8. Rad error is 7.42.
		Iodine-131		Analysis of constituent not required and not performed.
		Radium-226	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.381. Rad error is 0.373.
		Strontium-90	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 2.31. Rad error is 2.31.
		Technetium-99	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 13.1. Rad error is 13.1.
		Thorium-230	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 1.89. Rad error is 1.88.
		Tritium	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 160. Rad error is 158.
		Chemical Oxygen Demand		Analysis of constituent not required and not performed.
		Cyanide		Analysis of constituent not required and not performed.
		Total Organic Carbon		Analysis of constituent not required and not performed.
		Total Organic Halides		Analysis of constituent not required and not performed.

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Monitoring Point	Facility Sample ID	Constituent	Flag	Description
0000-0000 QC	FB1UG1-15	Bromide		Analysis of constituent not required and not performed.
		Chloride		Analysis of constituent not required and not performed.
		Fluoride		Analysis of constituent not required and not performed.
		Nitrate & Nitrite		Analysis of constituent not required and not performed.
		Sulfate		Analysis of constituent not required and not performed.
		Barometric Pressure Reading		Analysis of constituent not required and not performed.
		Specific Conductance		Analysis of constituent not required and not performed.
		Static Water Level Elevation		Analysis of constituent not required and not performed.
		Dissolved Oxygen		Analysis of constituent not required and not performed.
		Total Dissolved Solids		Analysis of constituent not required and not performed.
		pH		Analysis of constituent not required and not performed.
		Eh		Analysis of constituent not required and not performed.
		Temperature		Analysis of constituent not required and not performed.
		Gross alpha	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 4.91. Rad error is 4.9.
		Gross beta	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 8.48. Rad error is 8.47.
		Iodine-131		Analysis of constituent not required and not performed.
		Radium-226	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.276. Rad error is 0.275.
		Strontium-90	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 2.44. Rad error is 2.44.
		Technetium-99	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 13. Rad error is 13.
		Thorium-230	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 1.71. Rad error is 1.69.
		Tritium	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 156. Rad error is 156.
		Chemical Oxygen Demand		Analysis of constituent not required and not performed.
		Cyanide		Analysis of constituent not required and not performed.
		Total Organic Carbon		Analysis of constituent not required and not performed.
		Total Organic Halides		Analysis of constituent not required and not performed.

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Monitoring Point	Facility Sample ID	Constituent	Flag	Description
0000-0000 QC	TB1UG1-15	Bromide		Analysis of constituent not required and not performed.
		Chloride		Analysis of constituent not required and not performed.
		Fluoride		Analysis of constituent not required and not performed.
		Nitrate & Nitrite		Analysis of constituent not required and not performed.
		Sulfate		Analysis of constituent not required and not performed.
		Barometric Pressure Reading		Analysis of constituent not required and not performed.
		Specific Conductance		Analysis of constituent not required and not performed.
		Static Water Level Elevation		Analysis of constituent not required and not performed.
		Dissolved Oxygen		Analysis of constituent not required and not performed.
		Total Dissolved Solids		Analysis of constituent not required and not performed.
		pH		Analysis of constituent not required and not performed.
		Eh		Analysis of constituent not required and not performed.
		Temperature		Analysis of constituent not required and not performed.
		Aluminum		Analysis of constituent not required and not performed.
		Antimony		Analysis of constituent not required and not performed.
		Arsenic		Analysis of constituent not required and not performed.
		Barium		Analysis of constituent not required and not performed.
		Beryllium		Analysis of constituent not required and not performed.
		Boron		Analysis of constituent not required and not performed.
		Cadmium		Analysis of constituent not required and not performed.
		Calcium		Analysis of constituent not required and not performed.
		Chromium		Analysis of constituent not required and not performed.
		Cobalt		Analysis of constituent not required and not performed.
		Copper		Analysis of constituent not required and not performed.
		Iron		Analysis of constituent not required and not performed.
		Lead		Analysis of constituent not required and not performed.
		Magnesium		Analysis of constituent not required and not performed.
		Manganese		Analysis of constituent not required and not performed.
		Mercury		Analysis of constituent not required and not performed.
		Molybdenum		Analysis of constituent not required and not performed.
		Nickel		Analysis of constituent not required and not performed.
		Potassium		Analysis of constituent not required and not performed.
		Rhodium		Analysis of constituent not required and not performed.
		Selenium		Analysis of constituent not required and not performed.
		Silver		Analysis of constituent not required and not performed.
		Sodium		Analysis of constituent not required and not performed.
		Tantalum		Analysis of constituent not required and not performed.
		Thallium		Analysis of constituent not required and not performed.
		Uranium		Analysis of constituent not required and not performed.
		Vanadium		Analysis of constituent not required and not performed.

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Monitoring Point	Facility Sample ID	Constituent	Flag	Description
0000-0000 QC	TB1UG1-15	Zinc		Analysis of constituent not required and not performed.
		PCB, Total		Analysis of constituent not required and not performed.
		PCB-1016		Analysis of constituent not required and not performed.
		PCB-1221		Analysis of constituent not required and not performed.
		PCB-1232		Analysis of constituent not required and not performed.
		PCB-1242		Analysis of constituent not required and not performed.
		PCB-1248		Analysis of constituent not required and not performed.
		PCB-1254		Analysis of constituent not required and not performed.
		PCB-1260		Analysis of constituent not required and not performed.
		PCB-1268		Analysis of constituent not required and not performed.
		Gross alpha		Analysis of constituent not required and not performed.
		Gross beta		Analysis of constituent not required and not performed.
		Iodine-131		Analysis of constituent not required and not performed.
		Radium-226		Analysis of constituent not required and not performed.
		Strontium-90		Analysis of constituent not required and not performed.
		Technetium-99		Analysis of constituent not required and not performed.
		Thorium-230		Analysis of constituent not required and not performed.
		Tritium		Analysis of constituent not required and not performed.
		Chemical Oxygen Demand		Analysis of constituent not required and not performed.
		Cyanide		Analysis of constituent not required and not performed.
		Iodide		Analysis of constituent not required and not performed.
		Total Organic Carbon		Analysis of constituent not required and not performed.
		Total Organic Halides		Analysis of constituent not required and not performed.

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Monitoring Point	Facility Sample ID	Constituent	Flag	Description
0000-0000 QC	TB2UG1-15	Bromide		Analysis of constituent not required and not performed.
		Chloride		Analysis of constituent not required and not performed.
		Fluoride		Analysis of constituent not required and not performed.
		Nitrate & Nitrite		Analysis of constituent not required and not performed.
		Sulfate		Analysis of constituent not required and not performed.
		Barometric Pressure Reading		Analysis of constituent not required and not performed.
		Specific Conductance		Analysis of constituent not required and not performed.
		Static Water Level Elevation		Analysis of constituent not required and not performed.
		Dissolved Oxygen		Analysis of constituent not required and not performed.
		Total Dissolved Solids		Analysis of constituent not required and not performed.
		pH		Analysis of constituent not required and not performed.
		Eh		Analysis of constituent not required and not performed.
		Temperature		Analysis of constituent not required and not performed.
		Aluminum		Analysis of constituent not required and not performed.
		Antimony		Analysis of constituent not required and not performed.
		Arsenic		Analysis of constituent not required and not performed.
		Barium		Analysis of constituent not required and not performed.
		Beryllium		Analysis of constituent not required and not performed.
		Boron		Analysis of constituent not required and not performed.
		Cadmium		Analysis of constituent not required and not performed.
		Calcium		Analysis of constituent not required and not performed.
		Chromium		Analysis of constituent not required and not performed.
		Cobalt		Analysis of constituent not required and not performed.
		Copper		Analysis of constituent not required and not performed.
		Iron		Analysis of constituent not required and not performed.
		Lead		Analysis of constituent not required and not performed.
		Magnesium		Analysis of constituent not required and not performed.
		Manganese		Analysis of constituent not required and not performed.
		Mercury		Analysis of constituent not required and not performed.
		Molybdenum		Analysis of constituent not required and not performed.
		Nickel		Analysis of constituent not required and not performed.
		Potassium		Analysis of constituent not required and not performed.
		Rhodium		Analysis of constituent not required and not performed.
		Selenium		Analysis of constituent not required and not performed.
		Silver		Analysis of constituent not required and not performed.
		Sodium		Analysis of constituent not required and not performed.
		Tantalum		Analysis of constituent not required and not performed.
		Thallium		Analysis of constituent not required and not performed.
		Uranium		Analysis of constituent not required and not performed.
		Vanadium		Analysis of constituent not required and not performed.

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Monitoring Point	Facility Sample ID	Constituent	Flag	Description
0000-0000 QC	TB2UG1-15	Zinc		Analysis of constituent not required and not performed.
		PCB, Total		Analysis of constituent not required and not performed.
		PCB-1016		Analysis of constituent not required and not performed.
		PCB-1221		Analysis of constituent not required and not performed.
		PCB-1232		Analysis of constituent not required and not performed.
		PCB-1242		Analysis of constituent not required and not performed.
		PCB-1248		Analysis of constituent not required and not performed.
		PCB-1254		Analysis of constituent not required and not performed.
		PCB-1260		Analysis of constituent not required and not performed.
		PCB-1268		Analysis of constituent not required and not performed.
		Gross alpha		Analysis of constituent not required and not performed.
		Gross beta		Analysis of constituent not required and not performed.
		Iodine-131		Analysis of constituent not required and not performed.
		Radium-226		Analysis of constituent not required and not performed.
		Strontium-90		Analysis of constituent not required and not performed.
		Technetium-99		Analysis of constituent not required and not performed.
		Thorium-230		Analysis of constituent not required and not performed.
		Tritium		Analysis of constituent not required and not performed.
		Chemical Oxygen Demand		Analysis of constituent not required and not performed.
		Cyanide		Analysis of constituent not required and not performed.
		Iodide		Analysis of constituent not required and not performed.
		Total Organic Carbon		Analysis of constituent not required and not performed.
		Total Organic Halides		Analysis of constituent not required and not performed.

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Monitoring Point	Facility Sample ID	Constituent	Flag	Description
0000-0000 QC	TB3UG1-15	Bromide		Analysis of constituent not required and not performed.
		Chloride		Analysis of constituent not required and not performed.
		Fluoride		Analysis of constituent not required and not performed.
		Nitrate & Nitrite		Analysis of constituent not required and not performed.
		Sulfate		Analysis of constituent not required and not performed.
		Barometric Pressure Reading		Analysis of constituent not required and not performed.
		Specific Conductance		Analysis of constituent not required and not performed.
		Static Water Level Elevation		Analysis of constituent not required and not performed.
		Dissolved Oxygen		Analysis of constituent not required and not performed.
		Total Dissolved Solids		Analysis of constituent not required and not performed.
		pH		Analysis of constituent not required and not performed.
		Eh		Analysis of constituent not required and not performed.
		Temperature		Analysis of constituent not required and not performed.
		Aluminum		Analysis of constituent not required and not performed.
		Antimony		Analysis of constituent not required and not performed.
		Arsenic		Analysis of constituent not required and not performed.
		Barium		Analysis of constituent not required and not performed.
		Beryllium		Analysis of constituent not required and not performed.
		Boron		Analysis of constituent not required and not performed.
		Cadmium		Analysis of constituent not required and not performed.
		Calcium		Analysis of constituent not required and not performed.
		Chromium		Analysis of constituent not required and not performed.
		Cobalt		Analysis of constituent not required and not performed.
		Copper		Analysis of constituent not required and not performed.
		Iron		Analysis of constituent not required and not performed.
		Lead		Analysis of constituent not required and not performed.
		Magnesium		Analysis of constituent not required and not performed.
		Manganese		Analysis of constituent not required and not performed.
		Mercury		Analysis of constituent not required and not performed.
		Molybdenum		Analysis of constituent not required and not performed.
		Nickel		Analysis of constituent not required and not performed.
		Potassium		Analysis of constituent not required and not performed.
		Rhodium		Analysis of constituent not required and not performed.
		Selenium		Analysis of constituent not required and not performed.
		Silver		Analysis of constituent not required and not performed.
		Sodium		Analysis of constituent not required and not performed.
		Tantalum		Analysis of constituent not required and not performed.
		Thallium		Analysis of constituent not required and not performed.
		Uranium		Analysis of constituent not required and not performed.
		Vanadium		Analysis of constituent not required and not performed.

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Monitoring Point	Facility Sample ID	Constituent	Flag	Description
0000-0000 QC	TB3UG1-15	Zinc		Analysis of constituent not required and not performed.
		PCB, Total		Analysis of constituent not required and not performed.
		PCB-1016		Analysis of constituent not required and not performed.
		PCB-1221		Analysis of constituent not required and not performed.
		PCB-1232		Analysis of constituent not required and not performed.
		PCB-1242		Analysis of constituent not required and not performed.
		PCB-1248		Analysis of constituent not required and not performed.
		PCB-1254		Analysis of constituent not required and not performed.
		PCB-1260		Analysis of constituent not required and not performed.
		PCB-1268		Analysis of constituent not required and not performed.
		Gross alpha		Analysis of constituent not required and not performed.
		Gross beta		Analysis of constituent not required and not performed.
		Iodine-131		Analysis of constituent not required and not performed.
		Radium-226		Analysis of constituent not required and not performed.
		Strontium-90		Analysis of constituent not required and not performed.
		Technetium-99		Analysis of constituent not required and not performed.
		Thorium-230		Analysis of constituent not required and not performed.
		Tritium		Analysis of constituent not required and not performed.
		Chemical Oxygen Demand		Analysis of constituent not required and not performed.
		Cyanide		Analysis of constituent not required and not performed.
		Iodide		Analysis of constituent not required and not performed.
		Total Organic Carbon		Analysis of constituent not required and not performed.
		Total Organic Halides		Analysis of constituent not required and not performed.

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Monitoring Point	Facility Sample ID	Constituent	Flag	Description
0000-0000 QC	TB4UG1-15	Bromide		Analysis of constituent not required and not performed.
		Chloride		Analysis of constituent not required and not performed.
		Fluoride		Analysis of constituent not required and not performed.
		Nitrate & Nitrite		Analysis of constituent not required and not performed.
		Sulfate		Analysis of constituent not required and not performed.
		Barometric Pressure Reading		Analysis of constituent not required and not performed.
		Specific Conductance		Analysis of constituent not required and not performed.
		Static Water Level Elevation		Analysis of constituent not required and not performed.
		Dissolved Oxygen		Analysis of constituent not required and not performed.
		Total Dissolved Solids		Analysis of constituent not required and not performed.
		pH		Analysis of constituent not required and not performed.
		Eh		Analysis of constituent not required and not performed.
		Temperature		Analysis of constituent not required and not performed.
		Aluminum		Analysis of constituent not required and not performed.
		Antimony		Analysis of constituent not required and not performed.
		Arsenic		Analysis of constituent not required and not performed.
		Barium		Analysis of constituent not required and not performed.
		Beryllium		Analysis of constituent not required and not performed.
		Boron		Analysis of constituent not required and not performed.
		Cadmium		Analysis of constituent not required and not performed.
		Calcium		Analysis of constituent not required and not performed.
		Chromium		Analysis of constituent not required and not performed.
		Cobalt		Analysis of constituent not required and not performed.
		Copper		Analysis of constituent not required and not performed.
		Iron		Analysis of constituent not required and not performed.
		Lead		Analysis of constituent not required and not performed.
		Magnesium		Analysis of constituent not required and not performed.
		Manganese		Analysis of constituent not required and not performed.
		Mercury		Analysis of constituent not required and not performed.
		Molybdenum		Analysis of constituent not required and not performed.
		Nickel		Analysis of constituent not required and not performed.
		Potassium		Analysis of constituent not required and not performed.
		Rhodium		Analysis of constituent not required and not performed.
		Selenium		Analysis of constituent not required and not performed.
		Silver		Analysis of constituent not required and not performed.
		Sodium		Analysis of constituent not required and not performed.
		Tantalum		Analysis of constituent not required and not performed.
		Thallium		Analysis of constituent not required and not performed.
		Uranium		Analysis of constituent not required and not performed.
		Vanadium		Analysis of constituent not required and not performed.

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Monitoring Point	Facility Sample ID	Constituent	Flag	Description
0000-0000 QC	TB4UG1-15	Zinc		Analysis of constituent not required and not performed.
		PCB, Total		Analysis of constituent not required and not performed.
		PCB-1016		Analysis of constituent not required and not performed.
		PCB-1221		Analysis of constituent not required and not performed.
		PCB-1232		Analysis of constituent not required and not performed.
		PCB-1242		Analysis of constituent not required and not performed.
		PCB-1248		Analysis of constituent not required and not performed.
		PCB-1254		Analysis of constituent not required and not performed.
		PCB-1260		Analysis of constituent not required and not performed.
		PCB-1268		Analysis of constituent not required and not performed.
		Gross alpha		Analysis of constituent not required and not performed.
		Gross beta		Analysis of constituent not required and not performed.
		Iodine-131		Analysis of constituent not required and not performed.
		Radium-226		Analysis of constituent not required and not performed.
		Strontium-90		Analysis of constituent not required and not performed.
		Technetium-99		Analysis of constituent not required and not performed.
		Thorium-230		Analysis of constituent not required and not performed.
		Tritium		Analysis of constituent not required and not performed.
		Chemical Oxygen Demand		Analysis of constituent not required and not performed.
		Cyanide		Analysis of constituent not required and not performed.
		Iodide		Analysis of constituent not required and not performed.
		Total Organic Carbon		Analysis of constituent not required and not performed.
		Total Organic Halides		Analysis of constituent not required and not performed.

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Monitoring Point	Facility Sample ID	Constituent	Flag	Description
0000-0000 QC	TB5UG1-15	Bromide		Analysis of constituent not required and not performed.
		Chloride		Analysis of constituent not required and not performed.
		Fluoride		Analysis of constituent not required and not performed.
		Nitrate & Nitrite		Analysis of constituent not required and not performed.
		Sulfate		Analysis of constituent not required and not performed.
		Barometric Pressure Reading		Analysis of constituent not required and not performed.
		Specific Conductance		Analysis of constituent not required and not performed.
		Static Water Level Elevation		Analysis of constituent not required and not performed.
		Dissolved Oxygen		Analysis of constituent not required and not performed.
		Total Dissolved Solids		Analysis of constituent not required and not performed.
		pH		Analysis of constituent not required and not performed.
		Eh		Analysis of constituent not required and not performed.
		Temperature		Analysis of constituent not required and not performed.
		Aluminum		Analysis of constituent not required and not performed.
		Antimony		Analysis of constituent not required and not performed.
		Arsenic		Analysis of constituent not required and not performed.
		Barium		Analysis of constituent not required and not performed.
		Beryllium		Analysis of constituent not required and not performed.
		Boron		Analysis of constituent not required and not performed.
		Cadmium		Analysis of constituent not required and not performed.
		Calcium		Analysis of constituent not required and not performed.
		Chromium		Analysis of constituent not required and not performed.
		Cobalt		Analysis of constituent not required and not performed.
		Copper		Analysis of constituent not required and not performed.
		Iron		Analysis of constituent not required and not performed.
		Lead		Analysis of constituent not required and not performed.
		Magnesium		Analysis of constituent not required and not performed.
		Manganese		Analysis of constituent not required and not performed.
		Mercury		Analysis of constituent not required and not performed.
		Molybdenum		Analysis of constituent not required and not performed.
		Nickel		Analysis of constituent not required and not performed.
		Potassium		Analysis of constituent not required and not performed.
		Rhodium		Analysis of constituent not required and not performed.
		Selenium		Analysis of constituent not required and not performed.
		Silver		Analysis of constituent not required and not performed.
		Sodium		Analysis of constituent not required and not performed.
		Tantalum		Analysis of constituent not required and not performed.
		Thallium		Analysis of constituent not required and not performed.
		Uranium		Analysis of constituent not required and not performed.
		Vanadium		Analysis of constituent not required and not performed.

RESIDENTIAL/CONTAINED – QUARTERLY
Facility: US DOE - Paducah Gaseous Diffusion Plant
Permit Numbers: 073-00045

Finds/Unit: KY8-890-008-982 / 1
LAB ID: None
For Official Use Only

GROUNDWATER
WRITTEN COMMENTS

Monitoring Point	Facility Sample ID	Constituent	Flag	Description
0000-0000 QC	TB5UG1-15	Zinc		Analysis of constituent not required and not performed.
		PCB, Total		Analysis of constituent not required and not performed.
		PCB-1016		Analysis of constituent not required and not performed.
		PCB-1221		Analysis of constituent not required and not performed.
		PCB-1232		Analysis of constituent not required and not performed.
		PCB-1242		Analysis of constituent not required and not performed.
		PCB-1248		Analysis of constituent not required and not performed.
		PCB-1254		Analysis of constituent not required and not performed.
		PCB-1260		Analysis of constituent not required and not performed.
		PCB-1268		Analysis of constituent not required and not performed.
		Gross alpha		Analysis of constituent not required and not performed.
		Gross beta		Analysis of constituent not required and not performed.
		Iodine-131		Analysis of constituent not required and not performed.
		Radium-226		Analysis of constituent not required and not performed.
		Strontium-90		Analysis of constituent not required and not performed.
		Technetium-99		Analysis of constituent not required and not performed.
		Thorium-230		Analysis of constituent not required and not performed.
		Tritium		Analysis of constituent not required and not performed.
		Chemical Oxygen Demand		Analysis of constituent not required and not performed.
		Cyanide		Analysis of constituent not required and not performed.
		Iodide		Analysis of constituent not required and not performed.
		Total Organic Carbon		Analysis of constituent not required and not performed.
		Total Organic Halides		Analysis of constituent not required and not performed.
8004-0982 MW366	MW366DUG1-15	Gross alpha	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 3.45. Rad error is 3.45.
		Gross beta		TPU is 11.4. Rad error is 10.1.
		Iodine-131		Analysis of constituent not required and not performed.
		Radium-226		TPU is 0.444. Rad error is 0.417.
		Strontium-90	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 2.4. Rad error is 2.4.
		Technetium-99		TPU is 16.3. Rad error is 14.7.
		Thorium-230	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 7.91. Rad error is 7.8.
		Tritium	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 160. Rad error is 156.

APPENDIX D

STATISTICAL ANALYSES AND QUALIFICATION STATEMENT

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GROUNDWATER STATISTICAL COMMENTS

Introduction

The statistical analyses conducted on the fourth quarter 2014 groundwater data collected from the C-746-U Landfill monitoring wells (MWs) were performed in accordance with Permit GSTR0001, 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 at least three test wells or sidegradient wells (Exhibit 1). The fourth quarter 2014 data used to conduct the statistical analyses were collected in October 2014. The statistical analyses for this report first 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. Then a second set of statistical analyses is run, utilizing the last eight quarters, on analytes that had at least one downgradient 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

For chemicals of concern that have Kentucky maximum contaminant levels (MCLs) and the results that do not exceed their respective MCL, no exceedance is reported. Parameters that have MCLs can be found in 401 *KAR* 47:030 § 6. For parameters with no established MCL and those parameters that exceed their MCLs, the 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. For the statistical analysis of pH, a two-sided tolerance interval statistical test was conducted for pH. The test well results were compared to both an upper and lower tolerance limit to determine if statistically significant deviations in concentrations exist with respect to upgradient (background) well data from the first eight quarters. The tolerance interval statistical analysis was conducted separately for each parameter in each well (no pooling of downgradient data).

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.

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, was conducted. The second one-sided tolerance interval statistical test was conducted to determine whether the current concentration in downgradient wells exceeds the current background, as determined by a comparison against the statistically derived upper tolerance limit using the most recent eight quarters of data for the relevant background wells. For the statistical analysis of pH, a two-sided tolerance interval statistical test is conducted, if required. The test well pH results are compared to both an upper and lower tolerance limit to determine if the current pH is different from the current background level to a statistically significant level. The tolerance interval statistical analysis was conducted separately for each parameter in each well (no pooling of downgradient data).

Statistical analyses are performed on the last eight quarters of current background data, not on the data for the current quarter. Once a statistical result is obtained using the background data, the result for the current quarter is compared to that value. If the value is exceeded, the well has an exceedance of the statistically derived current background concentration.

A stepwise list of the one-sided tolerance interval statistical procedure applied to the data is summarized below:[1]

1. The tolerance limit (TL) was calculated for the background data (first using the first eight quarters, then using the last eight quarters, if required).

    - For each parameter, the background data were used to establish a baseline. On this data set, the mean (X) and the standard deviation (S) were computed.

    - The data set was 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 upper tolerance limit with 95% minimum coverage was 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 upper tolerance limit was calculated using the following equation:
      $TL = X + (K \times S)$

2. Each observation from downgradient wells was compared to the calculated one-sided upper tolerance limit in Step 1. If an observation value exceeds the tolerance limit, then there is statistically significant evidence that the well concentration exceeds the historical background.

Type of Data Used

Exhibit 1 presents the upgradient or background wells (identified as "BG"), the downgradient or test wells (identified as "TW"), and the sidegradient wells (identified as "SG") for the C-746-U Contained Landfill. Exhibit 2 presents the parameters by groundwater system from the available data set and the statistical test performed using the one-sided tolerance interval.

[1] For pH, two-sided TL (upper and lower) were calculated with an adjusted K factor using the following equations:
upper $TL = X + (K \times S)$
lower $TL = X - (K \times S)$

Exhibits 3, 4, and 5 list the number of analyses (observations), nondetects (censored observations), detects (uncensored observations), and missing observations (wells were dry this quarter and groundwater samples could not be collected) by parameter in the UCRS, the URGA, and the LRGA, respectively. Those parameters displayed with bold-face type indicate the one-sided tolerance interval statistical test was performed. The data presented in Exhibits 3, 4, and 5 were collected during the current quarter, fourth quarter 2014. The observations are representative of the current quarter data. Background data are presented in Attachments D1 and D2. The sampling dates associated with background data are listed next to the result in Attachments D1 and D2. When field duplicate data are available, the higher of the two readings is retained for further evaluation. When a well is sampled on two different dates, the most current available data are used.

Exhibit 1. Station Identification for Monitoring Wells Analyzed

Station	Type	Groundwater Unit
MW357	TW	URGA
MW358	TW	LRGA
MW359*	TW	UCRS
MW360	TW	URGA
MW361	TW	LRGA
MW362	TW	UCRS
MW363	TW	URGA
MW364	TW	LRGA
MW365*	TW	UCRS
MW366	TW	URGA
MW367	TW	LRGA
MW368*	TW	UCRS
MW369	BG	URGA
MW370	BG	LRGA
MW371	BG	UCRS
MW372	BG	URGA
MW373	BG	LRGA
MW374	BG	UCRS
MW375	SG	UCRS
MW376*	SG	UCRS
MW377*	SG	UCRS

NOTE: 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 RGA wells considered to be up-, side-, or downgradient.
BG: upgradient or background wells
TW: downgradient or test wells
SG: sidegradient wells
***Well was dry this quarter and a groundwater sample could not be collected.

Exhibit 2. List of Parameters Tested Using the One-Sided Upper Tolerance Level Test with Historical Background

Parameters
Aluminum
Beryllium
Beta Activity
Boron
Bromide
Calcium
Chemical Oxygen Demand (COD)
Chloride
Cobalt
Conductivity
Copper
Dissolved Oxygen
Dissolved Solids
Iron
Magnesium
Manganese
Molybdenum
Nickel
Oxidation-Reduction Potential
PCB, Total
PCB-1242
pH*
Potassium
Radium-226
Sodium
Sulfate
Technetium-99
Total Organic Carbon (TOC)
Total Organic Halides (TOX)
Trichloroethene
Uranium
Vanadium
Zinc

*****For pH, the test well results were compared to both an upper and lower TL to determine if the current result differs to a statistically significant degree from the historical background values.

Exhibit 3. Summary of Missing, Censored, and Uncensored Data—UCRS

Parameters	Observations	Missing Observation	Censored Observation	Uncensored Observation	Statistical Analysis?
1,1,1,2-Tetrachloroethane	4	0	4	0	No
1,1,2,2-Tetrachloroethane	4	0	4	0	No
1,1,2-Trichloroethane	4	0	4	0	No
1,1-Dichloroethane	4	0	4	0	No
1,2,3-Trichloropropane	4	0	4	0	No
1,2-Dibromo-3-chloropropane	4	0	4	0	No
1,2-Dibromoethane	4	0	4	0	No
1,2-Dichlorobenzene	4	0	4	0	No
1,2-Dichloropropane	4	0	4	0	No
2-Butanone	4	0	4	0	No
2-Hexanone	4	0	4	0	No
4-Methyl-2-pentanone	4	0	4	0	No
Acetone	4	0	4	0	No
Acrolein	4	0	4	0	No
Acrylonitrile	4	0	4	0	No
Aluminum	**4**	**0**	**0**	**4**	**YES**
Antimony	4	0	4	0	No
Beryllium	**4**	**0**	**3**	**1**	**YES**
Boron	**4**	**0**	**3**	**1**	**YES**
Bromide	**4**	**0**	**1**	**3**	**YES**
Bromochloromethane	4	0	4	0	No
Bromodichloromethane	4	0	4	0	No
Bromoform	4	0	4	0	No
Bromomethane	4	0	4	0	No
Calcium	**4**	**0**	**0**	**4**	**YES**
Carbon disulfide	4	0	4	0	No
Chemical Oxygen Demand (COD)	**4**	**0**	**1**	**3**	**YES**
Chloride	**4**	**0**	**0**	**4**	**YES**
Chlorobenzene	4	0	4	0	No
Chloroethane	4	0	4	0	No
Chloroform	4	0	4	0	No
Chloromethane	4	0	4	0	No
cis-1,2-Dichloroethene	4	0	4	0	No
cis-1,3-Dichloropropene	4	0	4	0	No
Cobalt	**4**	**0**	**2**	**2**	**YES**
Conductivity	**4**	**0**	**0**	**4**	**YES**
Copper	**4**	**0**	**0**	**4**	**YES**
Cyanide	4	0	4	0	No
Dibromochloromethane	4	0	4	0	No
Dibromomethane	4	0	4	0	No

Exhibit 3. Summary of Missing, Censored, and Uncensored Data—UCRS (Continued)

Parameters	Observations	Missing Observation	Censored Observation	Uncensored Observation	Statistical Analysis?
Dimethylbenzene, Total	4	0	4	0	No
Dissolved Oxygen	**4**	**0**	**0**	**4**	**YES**
Dissolved Solids	**4**	**0**	**0**	**4**	**YES**
Ethylbenzene	4	0	4	0	No
Iodide	4	0	4	0	No
Iodomethane	4	0	4	0	No
Iron	**4**	**0**	**0**	**4**	**YES**
Magnesium	**4**	**0**	**0**	**4**	**YES**
Manganese	**4**	**0**	**0**	**4**	**YES**
Methylene chloride	4	0	4	0	No
Molybdenum	**4**	**0**	**2**	**2**	**YES**
Nickel	**4**	**0**	**1**	**3**	**YES**
Oxidation-Reduction Potential	**4**	**0**	**0**	**4**	**YES**
PCB, Total	4	0	4	0	No
PCB-1016	4	0	4	0	No
PCB-1221	4	0	4	0	No
PCB-1232	4	0	4	0	No
PCB-1242	4	0	4	0	No
PCB-1248	4	0	4	0	No
PCB-1254	4	0	4	0	No
PCB-1260	4	0	4	0	No
PCB-1268	4	0	4	0	No
pH	**4**	**0**	**0**	**4**	**YES**
Potassium	**4**	**0**	**0**	**4**	**YES**
Radium-226	**4**	**0**	**2**	**2**	**YES**
Rhodium	4	0	4	0	No
Sodium	**4**	**0**	**0**	**4**	**YES**
Styrene	4	0	4	0	No
Sulfate	**4**	**0**	**0**	**4**	**YES**
Tantalum	4	0	4	0	No
Technetium-99	4	0	4	0	No
Tetrachloroethene	4	0	4	0	No
Thallium	4	0	4	0	No
Thorium-230	4	0	4	0	No
Toluene	4	0	4	0	No
Total Organic Carbon (TOC)	**4**	**0**	**0**	**4**	**YES**
Total Organic Halides (TOX)	**4**	**0**	**0**	**4**	**YES**
trans-1,2-Dichloroethene	4	0	4	0	No
trans-1,3-Dichloropropene	4	0	4	0	No
trans-1,4-Dichloro-2-butene	4	0	4	0	No

Exhibit 3. Summary of Missing, Censored, and Uncensored Data—UCRS (Continued)

Parameters	Observations	Missing Observation	Censored Observation	Uncensored Observation	Statistical Analysis?
Trichlorofluoromethane	4	0	4	0	No
Uranium	**4**	**0**	**0**	**4**	**YES**
Vanadium	**4**	**0**	**2**	**2**	**YES**
Vinyl acetate	4	0	4	0	No
Zinc	**4**	**0**	**2**	**2**	**YES**

Bold denotes parameters with at least one uncensored observation.

Exhibit 4. Summary of Missing, Censored, and Uncensored Data—URGA

Parameters	Observations	Missing Observation	Censored Observation	Uncensored Observation	Statistical Analysis?
1,1,1,2-Tetrachloroethane	6	0	6	0	No
1,1,2,2-Tetrachloroethane	6	0	6	0	No
1,1,2-Trichloroethane	6	0	6	0	No
1,1-Dichloroethane	6	0	6	0	No
1,2,3-Trichloropropane	6	0	6	0	No
1,2-Dibromo-3-chloropropane	6	0	6	0	No
1,2-Dibromoethane	6	0	6	0	No
1,2-Dichlorobenzene	6	0	6	0	No
1,2-Dichloropropane	6	0	6	0	No
2-Butanone	6	0	6	0	No
2-Hexanone	6	0	6	0	No
4-Methyl-2-pentanone	6	0	6	0	No
Acetone	6	0	6	0	No
Acrolein	6	0	6	0	No
Acrylonitrile	6	0	6	0	No
Aluminum	**6**	**0**	**2**	**4**	**YES**
Antimony	6	0	6	0	No
Beryllium	**6**	**0**	**5**	**1**	**YES**
Boron	**6**	**0**	**1**	**5**	**YES**
Bromide	**6**	**0**	**0**	**6**	**YES**
Bromochloromethane	6	0	6	0	No
Bromodichloromethane	6	0	6	0	No
Bromoform	6	0	6	0	No
Bromomethane	6	0	6	0	No
Calcium	**6**	**0**	**0**	**6**	**YES**
Carbon disulfide	6	0	6	0	No
Chemical Oxygen Demand (COD)	**6**	**0**	**1**	**5**	**YES**
Chloride	**6**	**0**	**0**	**6**	**YES**
Chlorobenzene	6	0	6	0	No
Chloroethane	6	0	6	0	No
Chloroform	6	0	6	0	No
Chloromethane	6	0	6	0	No
cis-1,2-Dichloroethene	6	0	6	0	No
cis-1,3-Dichloropropene	6	0	6	0	No
Cobalt	**6**	**0**	**0**	**6**	**YES**
Conductivity	**6**	**0**	**0**	**6**	**YES**
Copper	**6**	**0**	**0**	**6**	**YES**
Cyanide	6	0	6	0	No
Dibromochloromethane	6	0	6	0	No

Exhibit 4. Summary of Missing, Censored, and Uncensored Data—URGA (Continued)

Parameters	Observations	Missing Observation	Censored Observation	Uncensored Observation	Statistical Analysis?
Dibromomethane	6	0	6	0	No
Dimethylbenzene, Total	6	0	6	0	No
Dissolved Oxygen	**6**	**0**	**0**	**6**	**YES**
Dissolved Solids	**6**	**0**	**0**	**6**	**YES**
Ethylbenzene	6	0	6	0	No
Iodide	6	0	6	0	No
Iodomethane	6	0	6	0	No
Iron	**6**	**0**	**1**	**5**	**YES**
Magnesium	**6**	**0**	**0**	**6**	**YES**
Manganese	**6**	**0**	**0**	**6**	**YES**
Methylene chloride	6	0	6	0	No
Molybdenum	**6**	**0**	**3**	**3**	**YES**
Nickel	**6**	**0**	**0**	**6**	**YES**
Oxidation-Reduction Potential	**6**	**0**	**0**	**6**	**YES**
PCB, Total	**6**	**0**	**3**	**3**	**YES**
PCB-1016	6	0	6	0	No
PCB-1221	6	0	6	0	No
PCB-1232	6	0	6	0	No
PCB-1242	**6**	**0**	**3**	**3**	**YES**
PCB-1248	6	0	6	0	No
PCB-1254	6	0	6	0	No
PCB-1260	6	0	6	0	No
PCB-1268	6	0	6	0	No
pH	**6**	**0**	**0**	**6**	**YES**
Potassium	**6**	**0**	**0**	**6**	**YES**
Radium-226	**6**	**0**	**1**	**5**	**YES**
Rhodium	6	0	6	0	No
Sodium	**6**	**0**	**0**	**6**	**YES**
Styrene	6	0	6	0	No
Sulfate	**6**	**0**	**0**	**6**	**YES**
Tantalum	6	0	6	0	No
Technetium-99	**6**	**0**	**2**	**4**	**YES**
Tetrachloroethene	6	0	6	0	No
Thallium	6	0	6	0	No
Thorium-230	6	0	6	0	No
Toluene	6	0	6	0	No
Total Organic Carbon (TOC)	**6**	**0**	**0**	**6**	**YES**
Total Organic Halides (TOX)	**6**	**0**	**0**	**6**	**YES**
trans-1,2-Dichloroethene	6	0	6	0	No
trans-1,3-Dichloropropene	6	0	6	0	No

Exhibit 4. Summary of Missing, Censored, and Uncensored Data—URGA (Continued)

Parameters	Observations	Missing Observation	Censored Observation	Uncensored Observation	Statistical Analysis?
trans-1,4-Dichloro-2-butene	6	0	6	0	No
Trichlorofluoromethane	6	0	6	0	No
Uranium	6	0	6	0	No
Vanadium	**6**	**0**	**5**	**1**	**YES**
Vinyl acetate	6	0	6	0	No
Zinc	**6**	**0**	**4**	**2**	**YES**

Bold denotes parameters with at least one uncensored observation.

Exhibit 5. Summary of Missing, Censored, and Uncensored Data—LRGA

Parameters	Observations	Missing Observation	Censored Observation	Uncensored Observation	Statistical Analysis?
1,1,1,2-Tetrachloroethane	6	0	6	0	No
1,1,2,2-Tetrachloroethane	6	0	6	0	No
1,1,2-Trichloroethane	6	0	6	0	No
1,1-Dichloroethane	6	0	6	0	No
1,2,3-Trichloropropane	6	0	6	0	No
1,2-Dibromo-3-chloropropane	6	0	6	0	No
1,2-Dibromoethane	6	0	6	0	No
1,2-Dichlorobenzene	6	0	6	0	No
1,2-Dichloropropane	6	0	6	0	No
2-Butanone	6	0	6	0	No
2-Hexanone	6	0	6	0	No
4-Methyl-2-pentanone	6	0	6	0	No
Acetone	6	0	6	0	No
Acrolein	6	0	6	0	No
Acrylonitrile	6	0	6	0	No
Aluminum	**6**	**0**	**3**	**3**	**YES**
Antimony	6	0	6	0	No
Beryllium	6	0	6	0	No
Boron	**6**	**0**	**2**	**4**	**YES**
Bromide	**6**	**0**	**0**	**6**	**YES**
Bromochloromethane	6	0	6	0	No
Bromodichloromethane	6	0	6	0	No
Bromoform	6	0	6	0	No
Bromomethane	6	0	6	0	No
Calcium	**6**	**0**	**0**	**6**	**YES**
Carbon disulfide	6	0	6	0	No
Chemical Oxygen Demand (COD)	**6**	**0**	**3**	**3**	**YES**
Chloride	**6**	**0**	**0**	**6**	**YES**
Chlorobenzene	6	0	6	0	No
Chloroethane	6	0	6	0	No
Chloroform	6	0	6	0	No
Chloromethane	6	0	6	0	No
cis-1,2-Dichloroethene	6	0	6	0	No
cis-1,3-Dichloropropene	6	0	6	0	No
Cobalt	**6**	**0**	**0**	**6**	**YES**
Conductivity	**6**	**0**	**0**	**6**	**YES**
Copper	**6**	**0**	**1**	**5**	**YES**
Cyanide	6	0	6	0	No
Dibromochloromethane	6	0	6	0	No
Dibromomethane	6	0	6	0	No
Dimethylbenzene, Total	6	0	6	0	No
Dissolved Oxygen	**6**	**0**	**0**	**6**	**YES**

Exhibit 5. Summary of Missing, Censored, and Uncensored Data—LRGA (Continued)

Parameters	Observations	Missing Observation	Censored Observation	Uncensored Observation	Statistical Analysis?
Dissolved Solids	**6**	**0**	**0**	**6**	**YES**
Ethylbenzene	6	0	6	0	No
Iodide	6	0	6	0	No
Iodomethane	6	0	6	0	No
Iron	**6**	**0**	**0**	**6**	**YES**
Magnesium	**6**	**0**	**0**	**6**	**YES**
Manganese	**6**	**0**	**0**	**6**	**YES**
Methylene chloride	6	0	6	0	No
Molybdenum	**6**	**0**	**3**	**3**	**YES**
Nickel	**6**	**0**	**1**	**5**	**YES**
Oxidation-Reduction Potential	**6**	**0**	**0**	**6**	**YES**
PCB, Total	6	0	6	0	No
PCB-1016	6	0	6	0	No
PCB-1221	6	0	6	0	No
PCB-1232	6	0	6	0	No
PCB-1242	6	0	6	0	No
PCB-1248	6	0	6	0	No
PCB-1254	6	0	6	0	No
PCB-1260	6	0	6	0	No
PCB-1268	6	0	6	0	No
pH	**6**	**0**	**0**	**6**	**YES**
Potassium	**6**	**0**	**0**	**6**	**YES**
Radium-226	**6**	**0**	**3**	**3**	**YES**
Rhodium	6	0	6	0	No
Sodium	**6**	**0**	**0**	**6**	**YES**
Styrene	6	0	6	0	No
Sulfate	**6**	**0**	**0**	**6**	**YES**
Tantalum	6	0	6	0	No
Technetium-99	**6**	**0**	**1**	**5**	**YES**
Tetrachloroethene	6	0	6	0	No
Thallium	6	0	6	0	No
Thorium-230	6	0	6	0	No
Toluene	6	0	6	0	No
Total Organic Carbon (TOC)	**6**	**0**	**0**	**6**	**YES**
Total Organic Halides (TOX)	**6**	**0**	**2**	**4**	**YES**
trans-1,2-Dichloroethene	6	0	6	0	No
trans-1,3-Dichloropropene	6	0	6	0	No
trans-1,4-Dichloro-2-butene	6	0	6	0	No
Trichlorofluoromethane	6	0	6	0	No
Uranium	6	0	6	0	No
Vanadium	**6**	**0**	**5**	**1**	**YES**
Vinyl acetate	6	0	6	0	No

Exhibit 5. Summary of Missing, Censored, and Uncensored Data—LRGA (Continued)

Parameters	Observations	Missing Observation	Censored Observation	Uncensored Observation	Statistical Analysis?
Zinc	**6**	**0**	**2**	**4**	**YES**

Bold denotes parameters with at least one uncensored observation.

Discussion of Results from Historical Background Comparison

For the UCRS, URGA, and LRGA, the concentrations of this quarter were compared to the results of the one-sided upper tolerance interval test calculated using historical background and are presented in Attachment D1. The statistician qualification statement is presented in Attachment D3. For the UCRS, URGA, and LRGA, the test was applied to 28, 32, and 28 parameters, respectively, including those listed in bold print in Exhibits 3, 4, and 5 plus those constituents (Beta Activity and TCE) that exceeded their MCL. A summary of exceedances when compared to statistically derived historical upgradiant background by well number is shown in Exhibit 6.

UCRS

This quarter's results identified historical background exceedances for dissolved oxygen, oxidation-reduction potential, and sulfate.

URGA

This quarter's results identified historical background exceedances for beta activity, calcium, conductivity, dissolved solids, magnesium, oxidation-reduction potential, sodium, and technetium-99.

LRGA

This quarter's results identified historical background exceedances for oxidation-reduction potential.

Conclusion

Summaries of the results of the statistical tests conducted on data obtained from wells in the UCRS, the URGA, and in the LRGA in comparison to historical data are presented in Exhibit 7, Exhibit 8, and Exhibit 9, respectively.

Exhibit 6. Summary of Exceedances of Statistically Derived Historical Background Concentrations

UCRS	URGA	LRGA
MW362: Dissolved Oxygen, Oxidation-Reduction Potential, Sulfate	**MW357:** Oxidation-Reduction Potential	**MW358:** Oxidation-Reduction Potential
MW371: Oxidation-Reduction Potential	**MW360:** Sodium	**MW361:** Oxidation-Reduction Potential
MW374: Oxidation-Reduction Potential	**MW363:** Oxidation-Reduction Potential	**MW364:** Oxidation-Reduction Potential
MW375: Oxidation-Reduction Potential, Sulfate	**MW366:** Oxidation-Reduction Potential	**MW367:** Oxidation-Reduction Potential
	MW369: Oxidation-Reduction Potential	**MW370:** Oxidation-Reduction Potential
	MW372: Beta activity, Calcium, Conductivity, Dissolved Solids, Magnesium, Technetium-99	**MW373:** Oxidation-Reduction Potential

Exhibit 7. Test Summaries for Qualified Parameters—UCRS

Parameter	Performed Test	CV Normality Test*	Results of Tolerance Interval Test Conducted
Aluminum	Tolerance Interval	2.08	No exceedance of statistically derived historical background concentration
Beryllium	Tolerance Interval	1.12	No exceedance of statistically derived historical background concentration
Boron	Tolerance Interval	1.24	No exceedance of statistically derived historical background concentration
Bromide	Tolerance Interval	0.34	No exceedance of statistically derived historical background concentration
Calcium	Tolerance Interval	0.40	No exceedance of statistically derived historical background concentration
Chemical Oxygen Demand (COD)	Tolerance Interval	0.97	No exceedance of statistically derived historical background concentration
Chloride	Tolerance Interval	0.95	No exceedance of statistically derived historical background concentration
Cobalt	Tolerance Interval	1.31	No exceedance of statistically derived historical background concentration
Conductivity	Tolerance Interval	0.45	No exceedance of statistically derived historical background concentration
Copper	Tolerance Interval	1.27	No exceedance of statistically derived historical background concentration
Dissolved Oxygen	Tolerance Interval	0.55	Current results exceed statistically derived historical background concentration in MW362
Dissolved Solids	Tolerance Interval	0.42	No exceedance of statistically derived historical background concentration
Iron	Tolerance Interval	0.98	No exceedance of statistically derived historical background concentration
Magnesium	Tolerance Interval	0.27	No exceedance of statistically derived historical background concentration
Manganese	Tolerance Interval	0.89	No exceedance of statistically derived historical background concentration
Molybdenum	Tolerance Interval	1.65	No exceedance of statistically derived historical background concentration

Exhibit 7. Tests Summary for Qualified Parameters—UCRS (Continued)

Parameter	Performed Test	CV Normality Test*	Results of Tolerance Interval Test Conducted
Nickel	Tolerance Interval	0.98	No exceedance of statistically derived historical background concentration
Oxidation-Reduction Potential	Tolerance Interval	3.54	Current results exceed statistically derived historical background concentration in MW362, MW371, MW374, and MW375
pH	Tolerance Interval	0.05	No exceedance of statistically derived historical background concentration
Potassium	Tolerance Interval	0.72	No exceedance of statistically derived historical background concentration
Radium-226	Tolerance Interval	3.79	No exceedance of statistically derived historical background concentration
Sodium	Tolerance Interval	0.40	No exceedance of statistically derived historical background concentration
Sulfate	Tolerance Interval	0.49	Current results exceed statistically derived historical background concentration in MW362 and MW375
Total Organic Carbon	Tolerance Interval	1.38	No exceedance of statistically derived historical background concentration
Total Organic Halides	Tolerance Interval	1.08	No exceedance of statistically derived historical background concentration
Uranium	Tolerance Interval	1.68	No exceedance of statistically derived historical background concentration
Vanadium	Tolerance Interval	1.32	No exceedance of statistically derived historical background concentration
Zinc	Tolerance Interval	1.38	No exceedance of statistically derived historical background concentration

CV: coefficient of variation
*If CV > 1.0, used log-transformed data.

Exhibit 8. Test Summaries for Qualified Parameters—URGA

Parameter	Performed Test	CV Normality Test*	Results of Tolerance Interval Test Conducted
Aluminum	Tolerance Interval	1.24	No exceedance of statistically derived historical background concentration
Beryllium	Tolerance Interval	0.80	No exceedance of statistically derived historical background concentration
Beta activity[1]	Tolerance Interval	0.74	Current results exceed statistically derived historical background concentration in MW372
Boron	Tolerance Interval	0.84	No exceedance of statistically derived historical background concentration
Bromide	Tolerance Interval	0.00	No exceedance of statistically derived historical background concentration
Calcium	Tolerance Interval	0.29	Current results exceed statistically derived historical background concentration in MW372
Chemical Oxygen Demand (COD)	Tolerance Interval	0.10	No exceedance of statistically derived historical background concentration
Chloride	Tolerance Interval	0.10	No exceedance of statistically derived historical background concentration
Cobalt	Tolerance Interval	0.85	No exceedance of statistically derived historical background concentration
Conductivity	Tolerance Interval	0.12	Current results exceed statistically derived historical background concentration in MW372
Copper	Tolerance Interval	0.40	No exceedance of statistically derived historical background concentration
Dissolved Oxygen	Tolerance Interval	0.76	No exceedance of statistically derived historical background concentration
Dissolved Solids	Tolerance Interval	0.16	Current results exceed statistically derived historical background concentration in MW372
Iron	Tolerance Interval	0.95	No exceedance of statistically derived historical background concentration
Magnesium	Tolerance Interval	0.27	Current results exceed statistically derived historical background concentration in MW372
Manganese	Tolerance Interval	0.66	No exceedance of statistically derived historical background concentration
Molybdenum	Tolerance Interval	1.20	No exceedance of statistically derived historical background concentration

Exhibit 8. Tests Summary for Qualified Parameters—URGA (Continued)

Parameter	Performed Test	CV Normality Test*	Results of Tolerance Interval Test Conducted
Nickel	Tolerance Interval	0.91	No exceedance of statistically derived historical background concentration
Oxidation-Reduction Potential	Tolerance Interval	1.26	Current results exceed statistically derived historical background concentration in MW357, MW363, MW366, and MW369
PCB, Total	Tolerance Interval	0.90	No exceedance of statistically derived historical background concentration
PCB-1242	Tolerance Interval	1.36	No exceedance of statistically derived historical background concentration
pH	Tolerance Interval	0.03	No exceedance of statistically derived historical background concentration
Potassium	Tolerance Interval	0.29	No exceedance of statistically derived historical background concentration
Radium-226	Tolerance Interval	2.61	No exceedance of statistically derived historical background concentration
Sodium	Tolerance Interval	0.26	Current results exceed statistically derived historical background concentration in MW360
Sulfate	Tolerance Interval	0.75	No exceedance of statistically derived historical background concentration
Technetium-99	Tolerance Interval	0.87	Current results exceed statistically derived historical background concentration in MW372
Total Organic Carbon	Tolerance Interval	1.23	No exceedance of statistically derived historical background concentration
Total Organic Halides	Tolerance Interval	0.95	No exceedance of statistically derived historical background concentration
Trichloroethene[1]	Tolerance Interval	0.64	No exceedance of statistically derived historical background concentration
Vanadium	Tolerance Interval	0.26	No exceedance of statistically derived historical background concentration
Zinc	Tolerance Interval	1.49	No exceedance of statistically derived historical background concentration

CV: coefficient of variation
*If CV > 1.0, used log-transformed data.
[1] A tolerance interval was calculated based on an MCL exceedance.

Exhibit 9. Test Summaries for Qualified Parameters—LRGA

Parameter	Performed Test	CV Normality Test	Results of Tolerance Interval Test Conducted
Aluminum	Tolerance Interval	2.78	No exceedance of statistically derived historical background concentration
Boron	Tolerance Interval	0.68	No exceedance of statistically derived historical background concentration
Bromide	Tolerance Interval	0.00	No exceedance of statistically derived historical background concentration
Calcium	Tolerance Interval	0.31	No exceedance of statistically derived historical background concentration
Chemical Oxygen Demand (COD)	Tolerance Interval	0.59	No exceedance of statistically derived historical background concentration
Chloride	Tolerance Interval	0.16	No exceedance of statistically derived historical background concentration
Cobalt	Tolerance Interval	1.17	No exceedance of statistically derived historical background concentration
Conductivity	Tolerance Interval	0.26	No exceedance of statistically derived historical background concentration
Copper	Tolerance Interval	0.40	No exceedance of statistically derived historical background concentration
Dissolved Oxygen	Tolerance Interval	0.83	No exceedance of statistically derived historical background concentration
Dissolved Solids	Tolerance Interval	0.30	No exceedance of statistically derived historical background concentration
Iron	Tolerance Interval	0.96	No exceedance of statistically derived historical background concentration
Magnesium	Tolerance Interval	0.34	No exceedance of statistically derived historical background concentration
Manganese	Tolerance Interval	0.62	No exceedance of statistically derived historical background concentration
Molybdenum	Tolerance Interval	1.20	No exceedance of statistically derived historical background concentration
Nickel	Tolerance Interval	0.90	No exceedance of statistically derived historical background concentration

Exhibit 9. Tests Summary for Qualified Parameters—LRGA (Continued)

Parameter	Performed Test	CV Normality Test	Results of Tolerance Interval Test Conducted
Oxidation-Reduction Potential	Tolerance Interval	1.31	Current results exceed statistically derived historical background concentration in MW358, MW361, MW364, MW367, MW370, and MW373
pH	Tolerance Interval	0.03	No exceedance of statistically derived historical background concentration
Potassium	Tolerance Interval	0.19	No exceedance of statistically derived historical background concentration
Radium-226	Tolerance Interval	2.66	No exceedance of statistically derived historical background concentration
Sodium	Tolerance Interval	0.30	No exceedance of statistically derived historical background concentration
Sulfate	Tolerance Interval	1.59	No exceedance of statistically derived historical background concentration
Technetium-99	Tolerance Interval	1.73	No exceedance of statistically derived historical background concentration
Total Organic Carbon	Tolerance Interval	1.96	No exceedance of statistically derived historical background concentration
Total Organic Halides	Tolerance Interval	0.98	No exceedance of statistically derived historical background concentration
Trichloroethene[1]	Tolerance Interval	0.57	No exceedance of statistically derived historical background concentration
Vanadium	Tolerance Interval	0.32	No exceedance of statistically derived historical background concentration
Zinc	Tolerance Interval	0.67	No exceedance of statistically derived historical background concentration

CV: coefficient of variation
*If CV > 1.0, used log-transformed data.
[1] A tolerance interval was calculated based on an MCL exceedance.

Discussion of Results from Current Background Comparison

For the UCRS, URGA, and LRGA, the concentrations from downgradient wells were compared to the results of the one-sided upper tolerance interval test compared to current background, and are presented in Attachment D2 and the statistician qualification statement is presented in Attachment D3. For the UCRS, URGA, and LRGA, the test was applied to 3, 8, and 1 parameters, respectively, because these parameter concentrations exceeded the historical background TL. A summary of instances where downgradient well concentrations exceeded the TL calculated using current background data is shown in Exhibit 10, presented by well number.

UCRS

Because gradients in the UCRS are downward, there are no truly downgradient UCRS wells that exceed the current background TL derived using the most recent eight quarters of data. NOTE: Sulfate concentrations in some UCRS wells exceeded the current TL this quarter.

URGA

This quarter's results showed no exceedances of the current TL in wells located downgradient of the landfill.

LRGA

This quarter's results showed no exceedances of the current TL in wells located downgradient of the landfill.

Conclusion

Summaries of the statistical tests conducted on data obtained from wells in the UCRS, the URGA, and in the LRGA are presented in Exhibit 11, Exhibit 12, and Exhibit 13, respectively.

Exhibit 10. Summary of Exceedances (in downgradient wells) of the TL Calculated Using Current Background Concentrations

None

Exhibit 11. Test Summaries for Qualified Parameters—UCRS

Parameter	Performed Test	CV Normality Test	Results of Tolerance Interval Test Conducted
Dissolved Oxygen	Tolerance Interval	0.49	No exceedance of statistically derived current background concentration
Oxidation-Reduction Potential	Tolerance Interval	0.36	No exceedance of statistically derived current background concentration
Sulfate	Tolerance Interval	0.51	Because gradients in UCRS wells are downward, there are no UCRS wells that are actually downgradient of the landfill. However, sulfate concentrations exceeded the TL calculated using current background data in MW362 and MW375

CV: coefficient of variation

Exhibit 12. Test Summaries for Qualified Parameters—URGA

Parameter	Performed Test	CV Normality Test	Results of Tolerance Interval Test Conducted
Beta activity	Tolerance Interval	0.96	No exceedance of statistically derived current background concentration
Calcium	Tolerance Interval	0.61	No exceedance of statistically derived current background concentration
Conductivity	Tolerance Interval	0.38	No exceedance of statistically derived current background concentration
Dissolved Solids	Tolerance Interval	0.42	No exceedance of statistically derived current background concentration
Magnesium	Tolerance Interval	0.60	No exceedance of statistically derived current background concentration
Oxidation-Reduction Potential	Tolerance Interval	0.66	No exceedance of statistically derived current background concentration
Sodium	Tolerance Interval	0.31	No exceedance of statistically derived current background concentration
Technetium-99	Tolerance Interval	0.99	No exceedance of statistically derived current background concentration

CV: coefficient of variation

Exhibit 13. Test Summaries for Qualified Parameters—LRGA

Parameter	Performed Test	CV Normality Test	Results of Tolerance Interval Test Conducted
Oxidation-Reduction Potential	Tolerance Interval	0.34	No exceedance of statistically derived current background concentration

CV: coefficient of variation

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ATTACHMENT D1

COMPARISON OF CURRENT DATA TO ONE-SIDED UPPER TOLERANCE INTERVAL TEST CALCULATED USING HISTORICAL BACKGROUND DATA

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C-746-U Fourth Quarter 2014 Statistical Analysis — UCRS
Aluminum — 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 evidence of an exceedance of the statistically-derived historical background concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW371
Date Collected	Result
3/18/2002	2.240
4/22/2002	0.200
7/15/2002	0.200
10/8/2002	0.200
1/8/2003	0.200
4/3/2003	0.200
7/9/2003	0.200
10/6/2003	0.200
Well Number:	MW374
Date Collected	Result
10/8/2002	21.300
1/7/2003	20.000
4/2/2003	4.110
7/9/2003	1.410
10/7/2003	1.090
1/6/2004	0.854
4/7/2004	0.200
7/14/2004	0.200

Statistics on Background Data

X= 3.300
S= 6.859
CV= 2.078
K factor = 2.523**
TL= 20.604

Because CV is greater than 1, the natural logarithm of background and test well results were calculated.

Statistics on Transformed Background Data

X= -0.371
S= 1.678
CV= -4.521
K factor = 2.523**
TL= 3.863

Transformed Background Data from Upgradient Wells

Well Number:	MW371
Date Collected	LN(Result)
3/18/2002	0.806
4/22/2002	-1.609
7/15/2002	-1.609
10/8/2002	-1.609
1/8/2003	-1.609
4/3/2003	-1.609
7/9/2003	-1.609
10/6/2003	-1.609
Well Number:	MW374
Date Collected	LN(Result)
10/8/2002	3.059
1/7/2003	2.996
4/2/2003	1.413
7/9/2003	0.344
10/7/2003	0.086
1/6/2004	-0.158
4/7/2004	-1.609
7/14/2004	-1.609

Fourth Quarter 2014 Data Collected in October 2014

Well No.	Result	Gradient	Result >TL?
MW362	11.600	Downgradient	N/A
MW371	0.156	Upgradient	N/A
MW374	0.063	Upgradient	N/A
MW375	0.053	Sidegradient	N/A

Fourth Quarter 2014 Dry/Partially Dry Wells

Well No.	Gradient
MW359	Downgradient
MW365	Downgradient
MW368	Sidegradient
MW376	Sidegradient
MW377	Sidegradient

Transformed Fourth Quarter 2014 Data Collected in October 2014

Well Number	LN(Result)	Result >TL?
MW362	2.451	NO
MW371	-1.858	NO
MW374	-2.766	NO
MW375	-2.939	NO

Conclusion of Statistical Analysis on Transformed Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5
TL Upper Tolerance Limit, TL = X + (K * S)
X Mean, X = (sum of background results)/(count of background results)

** Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Interim Guidance, EPA, 1989, based on total number of background results

C-746-U Fourth Quarter 2014 Statistical Analysis — UCRS
Beryllium — 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 evidence of an exceedance of the statistically-derived historical background concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW371
Date Collected	Result
3/18/2002	0.005
4/22/2002	0.005
7/15/2002	0.005
10/8/2002	0.001
1/8/2003	0.001
4/3/2003	0.001
7/9/2003	0.001
10/6/2003	0.001
Well Number:	MW374
Date Collected	Result
10/8/2002	0.010
1/7/2003	0.001
4/2/2003	0.001
7/9/2003	0.001
10/7/2003	0.001
1/6/2004	0.001
4/7/2004	0.001
7/14/2004	0.001

Statistics on Background Data

X= 0.002
S= 0.003
CV= 1.125
K factor = 2.523**
TL= 0.009

Because CV is greater than 1, the natural logarithm of background and test well results were calculated.

Statistics on Transformed Background Data

X= -6.462
S= 0.812
CV= -0.126
K factor = 2.523**
TL= -4.413

Transformed Background Data from Upgradient Wells

Well Number:	MW371
Date Collected	LN(Result)
3/18/2002	-5.298
4/22/2002	-5.298
7/15/2002	-5.298
10/8/2002	-6.908
1/8/2003	-6.908
4/3/2003	-6.908
7/9/2003	-6.908
10/6/2003	-6.908
Well Number:	MW374
Date Collected	LN(Result)
10/8/2002	-4.605
1/7/2003	-6.908
4/2/2003	-6.908
7/9/2003	-6.908
10/7/2003	-6.908
1/6/2004	-6.908
4/7/2004	-6.908
7/14/2004	-6.908

Fourth Quarter 2014 Data Collected in October 2014

Well No.	Result	Gradient	Result >TL?
MW362	0.000	Downgradient	N/A
MW371	0.001	Upgradient	N/A
MW374	0.001	Upgradient	N/A
MW375	0.001	Sidegradient	N/A

Fourth Quarter 2014 Dry/Partially Dry Wells

Well No.	Gradient
MW359	Downgradient
MW365	Downgradient
MW368	Sidegradient
MW376	Sidegradient
MW377	Sidegradient

Transformed Fourth Quarter 2014 Data Collected in October 2014

Well Number	LN(Result)	Result >TL?
MW362	-7.849	NO
MW371	-7.601	NO
MW374	-7.601	NO
MW375	-7.601	NO

Conclusion of Statistical Analysis on Transformed Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5
TL Upper Tolerance Limit, TL = X + (K * S)
X Mean, X = (sum of background results)/(count of background results)

** Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Interim Guidance, EPA, 1989, based on total number of background results

C-746-U Fourth Quarter 2014 Statistical Analysis — UCRS
Boron — 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 evidence of an exceedance of the statistically-derived historical background concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW371
Date Collected	Result
3/18/2002	2.000
4/22/2002	2.000
7/15/2002	2.000
10/8/2002	0.200
1/8/2003	0.200
4/3/2003	0.200
7/9/2003	0.200
10/6/2003	0.200
Well Number:	MW374
Date Collected	Result
10/8/2002	2.000
1/7/2003	0.200
4/2/2003	0.200
7/9/2003	0.200
10/7/2003	0.200
1/6/2004	0.200
4/7/2004	0.200
7/14/2004	0.200

Statistics on Background Data

X= 0.650
S= 0.805
CV= 1.238
K factor = 2.523**
TL= 2.681

Because CV is greater than 1, the natural logarithm of background and test well results were calculated.

Statistics on Transformed Background Data

X= -1.034
S= 1.030
CV= -0.996
K factor = 2.523**
TL= 1.564

Transformed Background Data from Upgradient Wells

Well Number:	MW371
Date Collected	LN(Result)
3/18/2002	0.693
4/22/2002	0.693
7/15/2002	0.693
10/8/2002	-1.609
1/8/2003	-1.609
4/3/2003	-1.609
7/9/2003	-1.609
10/6/2003	-1.609
Well Number:	MW374
Date Collected	LN(Result)
10/8/2002	0.693
1/7/2003	-1.609
4/2/2003	-1.609
7/9/2003	-1.609
10/7/2003	-1.609
1/6/2004	-1.609
4/7/2004	-1.609
7/14/2004	-1.609

Fourth Quarter 2014 Data Collected in October 2014

Well No.	Result	Gradient	Result >TL?
MW362	0.014	Downgradient	N/A
MW371	0.015	Upgradient	N/A
MW374	0.039	Upgradient	N/A
MW375	0.021	Sidegradient	N/A

Fourth Quarter 2014 Dry/Partially Dry Wells

Well No.	Gradient
MW359	Downgradient
MW365	Downgradient
MW368	Sidegradient
MW376	Sidegradient
MW377	Sidegradient

Transformed Fourth Quarter 2014 Data Collected in October 2014

Well Number	LN(Result)	Result >TL?
MW362	-4.283	NO
MW371	-4.200	NO
MW374	-3.234	NO
MW375	-3.849	NO

Conclusion of Statistical Analysis on Transformed Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5
TL Upper Tolerance Limit, TL = X + (K * S)
X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Interim Guidance, EPA, 1989, based on total number of background results*

C-746-U Fourth Quarter 2014 Statistical Analysis — UCRS
Bromide — 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 evidence of an exceedance of the statistically-derived historical background concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW371
Date Collected	Result
3/18/2002	1.000
4/22/2002	1.000
7/15/2002	1.000
10/8/2002	1.000
1/8/2003	1.000
4/3/2003	1.000
7/9/2003	1.000
10/6/2003	1.000

Well Number:	MW374
Date Collected	Result
10/8/2002	2.100
1/7/2003	2.100
4/2/2003	1.900
7/9/2003	1.000
10/7/2003	1.900
1/6/2004	1.900
4/7/2004	1.800
7/14/2004	1.600

Statistics on Background Data

X= 1.394
S= 0.474
CV= 0.340
K factor = 2.523**
TL= 2.590

Because CV is less than or equal to 1, assume normal distribution and continue with statistical analysis.

Fourth Quarter 2014 Data Collected in October 2014

Well No.	Result	Gradient	Result >TL?
MW362	0.189	Downgradient	NO
MW371	0.103	Upgradient	NO
MW374	1.010	Upgradient	NO
MW375	0.200	Sidegradient	NO

Fourth Quarter 2014 Dry/Partially Dry Wells

Well No.	Gradient
MW359	Downgradient
MW365	Downgradient
MW368	Sidegradient
MW376	Sidegradient
MW377	Sidegradient

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5
TL Upper Tolerance Limit, TL = X + (K * S)
X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Interim Guidance, EPA, 1989, based on total number of background results*

C-746-U Fourth Quarter 2014 Statistical Analysis — UCRS
Calcium — 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 evidence of an exceedance of the statistically-derived historical background concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW371
Date Collected	Result
3/18/2002	17.200
4/22/2002	22.400
7/15/2002	25.500
10/8/2002	26.400
1/8/2003	27.200
4/3/2003	30.300
7/9/2003	25.900
10/6/2003	27.000

Well Number:	MW374
Date Collected	Result
10/8/2002	67.300
1/7/2003	60.600
4/2/2003	47.200
7/9/2003	34.700
10/7/2003	37.100
1/6/2004	37.700
4/7/2004	32.200
7/14/2004	26.900

Statistics on Background Data

X= 34.100
S= 13.637
CV= 0.400
K factor = 2.523**
TL= 68.505

Because CV is less than or equal to 1, assume normal distribution and continue with statistical analysis.

Fourth Quarter 2014 Data Collected in October 2014

Well No.	Result	Gradient	Result >TL?
MW362	22.700	Downgradient	NO
MW371	32.600	Upgradient	NO
MW374	22.100	Upgradient	NO
MW375	14.300	Sidegradient	NO

Fourth Quarter 2014 Dry/Partially Dry Wells

Well No.	Gradient
MW359	Downgradient
MW365	Downgradient
MW368	Sidegradient
MW376	Sidegradient
MW377	Sidegradient

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5
TL Upper Tolerance Limit, TL = X + (K * S)
X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Interim Guidance, EPA, 1989, based on total number of background results*

C-746-U Fourth Quarter 2014 Statistical Analysis — UCRS
Chemical Oxygen Demand (COD) — 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 evidence of an exceedance of the statistically-derived historical background concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW371
Date Collected	Result
3/18/2002	35.000
4/22/2002	35.000
7/15/2002	35.000
10/8/2002	35.000
1/8/2003	35.000
4/3/2003	35.000
7/9/2003	35.000
10/6/2003	35.000

Well Number:	MW374
Date Collected	Result
10/8/2002	260.000
1/7/2003	214.000
4/2/2003	147.000
7/9/2003	72.000
10/7/2003	56.000
1/6/2004	68.000
4/7/2004	35.000
7/14/2004	35.000

Statistics on Background Data

X= 72.938
S= 70.749
CV= 0.970
K factor = 2.523**
TL= 251.437

Because CV is less than or equal to 1, assume normal distribution and continue with statistical analysis.

Fourth Quarter 2014 Data Collected in October 2014

Well No.	Result	Gradient	Result >TL?
MW362	17.600	Downgradient	NO
MW371	20.000	Upgradient	NO
MW374	10.500	Upgradient	NO
MW375	15.200	Sidegradient	NO

Fourth Quarter 2014 Dry/Partially Dry Wells

Well No.	Gradient
MW359	Downgradient
MW365	Downgradient
MW368	Sidegradient
MW376	Sidegradient
MW377	Sidegradient

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5
TL Upper Tolerance Limit, TL = X + (K * S)
X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Interim Guidance, EPA, 1989, based on total number of background results*

C-746-U Fourth Quarter 2014 Statistical Analysis — UCRS
Chloride — 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 evidence of an exceedance of the statistically-derived historical background concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW371
Date Collected	Result
7/15/2002	8.300
10/8/2002	7.600
1/8/2003	7.700
4/3/2003	8.800
7/9/2003	8.100
10/6/2003	8.600
1/7/2004	7.600
4/6/2004	7.600

Well Number:	MW374
Date Collected	Result
10/8/2002	199.200
1/7/2003	199.700
4/2/2003	171.800
7/9/2003	178.700
10/7/2003	175.600
1/6/2004	170.400
4/7/2004	156.400
7/14/2004	144.700

Statistics on Background Data

X= 91.300
S= 86.959
CV= 0.952
K factor = 2.523**
TL= 310.697

Because CV is less than or equal to 1, assume normal distribution and continue with statistical analysis.

Fourth Quarter 2014 Data Collected in October 2014

Well No.	Result	Gradient	Result >TL?
MW362	9.970	Downgradient	NO
MW371	6.810	Upgradient	NO
MW374	83.300	Upgradient	NO
MW375	6.190	Sidegradient	NO

Fourth Quarter 2014 Dry/Partially Dry Wells

Well No.	Gradient
MW359	Downgradient
MW365	Downgradient
MW368	Sidegradient
MW376	Sidegradient
MW377	Sidegradient

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5
TL Upper Tolerance Limit, TL = X + (K * S)
X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Interim Guidance, EPA, 1989, based on total number of background results*

C-746-U Fourth Quarter 2014 Statistical Analysis — UCRS
Cobalt — 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 evidence of an exceedance of the statistically-derived historical background concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW371
Date Collected	Result
3/18/2002	0.025
4/22/2002	0.025
7/15/2002	0.025
10/8/2002	0.001
1/8/2003	0.001
4/3/2003	0.001
7/9/2003	0.001
10/6/2003	0.001
Well Number:	MW374
Date Collected	Result
10/8/2002	0.010
1/7/2003	0.010
4/2/2003	0.010
7/9/2003	0.002
10/7/2003	0.001
1/6/2004	0.001
4/7/2004	0.001
7/14/2004	0.001

Statistics on Background Data

X= 0.007
S= 0.009
CV= 1.314
K factor = 2.523**
TL= 0.031

Because CV is greater than 1, the natural logarithm of background and test well results were calculated.

Statistics on Transformed Background Data

X= -5.843
S= 1.392
CV= -0.238
K factor = 2.523**
TL= -2.331

Transformed Background Data from Upgradient Wells

Well Number:	MW371
Date Collected	LN(Result)
3/18/2002	-3.689
4/22/2002	-3.689
7/15/2002	-3.689
10/8/2002	-6.908
1/8/2003	-6.908
4/3/2003	-6.908
7/9/2003	-6.908
10/6/2003	-6.908
Well Number:	MW374
Date Collected	LN(Result)
10/8/2002	-4.605
1/7/2003	-4.605
4/2/2003	-4.605
7/9/2003	-6.432
10/7/2003	-6.908
1/6/2004	-6.908
4/7/2004	-6.908
7/14/2004	-6.908

Fourth Quarter 2014 Data Collected in October 2014

Well No.	Result	Gradient	Result >TL?
MW362	0.004	Downgradient	N/A
MW371	0.001	Upgradient	N/A
MW374	0.004	Upgradient	N/A
MW375	0.001	Sidegradient	N/A

Fourth Quarter 2014 Dry/Partially Dry Wells

Well No.	Gradient
MW359	Downgradient
MW365	Downgradient
MW368	Sidegradient
MW376	Sidegradient
MW377	Sidegradient

Transformed Fourth Quarter 2014 Data Collected in October 2014

Well Number	LN(Result)	Result >TL?
MW362	-5.487	NO
MW371	-6.908	NO
MW374	-5.608	NO
MW375	-6.908	NO

Conclusion of Statistical Analysis on Transformed Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5
TL Upper Tolerance Limit, TL = X + (K * S)
X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Interim Guidance, EPA, 1989, based on total number of background results*

C-746-U Fourth Quarter 2014 Statistical Analysis — UCRS
Conductivity — UNITS: umho/cm

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test 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.

Background Data from Upgradient Wells

Well Number:	MW371
Date Collected	Result
3/18/2002	541.000
4/22/2002	643.000
7/15/2002	632.000
10/8/2002	631.000
1/8/2003	680.000
4/3/2003	749.000
7/9/2003	734.000
10/6/2003	753.000

Well Number:	MW374
Date Collected	Result
3/18/2002	1007.00
10/8/2002	1680.00
1/7/2003	1715.90
4/2/2003	172.000
7/9/2003	1231.00
10/7/2003	1214.00
1/6/2004	1172.00
4/7/2004	1145.00

Statistics on Background Data

X= 918.744
S= 417.257
CV= 0.454
K factor = 2.523**
TL= 1971.483

Because CV is less than or equal to 1, assume normal distribution and continue with statistical analysis.

Fourth Quarter 2014 Data Collected in October 2014

Well No.	Result	Gradient	Result >TL?
MW362	706.00	Downgradient	NO
MW371	782.00	Upgradient	NO
MW374	710.00	Upgradient	NO
MW375	352.00	Sidegradient	NO

Fourth Quarter 2014 Dry/Partially Dry Wells

Well No.	Gradient
MW359	Downgradient
MW365	Downgradient
MW368	Sidegradient
MW376	Sidegradient
MW377	Sidegradient

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5
TL Upper Tolerance Limit, TL = X + (K * S)
X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Interim Guidance, EPA, 1989, based on total number of background results*

C-746-U Fourth Quarter 2014 Statistical Analysis — UCRS
Copper — 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 evidence of an exceedance of the statistically-derived historical background concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW371
Date Collected	Result
3/18/2002	0.025
4/22/2002	0.025
7/15/2002	0.050
10/8/2002	0.020
1/8/2003	0.020
4/3/2003	0.020
7/9/2003	0.020
10/6/2003	0.020
Well Number:	MW374
Date Collected	Result
10/8/2002	0.200
1/7/2003	0.200
4/2/2003	0.200
7/9/2003	0.020
10/7/2003	0.020
1/6/2004	0.020
4/7/2004	0.020
7/14/2004	0.020

Statistics on Background Data

X= 0.056
S= 0.072
CV= 1.275
K factor = 2.523**
TL= 0.237

Because CV is greater than 1, the natural logarithm of background and test well results were calculated.

Statistics on Transformed Background Data

X= -3.395
S= 0.915
CV= -0.270
K factor = 2.523**
TL= -1.086

Transformed Background Data from Upgradient Wells

Well Number:	MW371
Date Collected	LN(Result)
3/18/2002	-3.689
4/22/2002	-3.689
7/15/2002	-2.996
10/8/2002	-3.912
1/8/2003	-3.912
4/3/2003	-3.912
7/9/2003	-3.912
10/6/2003	-3.912
Well Number:	MW374
Date Collected	LN(Result)
10/8/2002	-1.609
1/7/2003	-1.609
4/2/2003	-1.609
7/9/2003	-3.912
10/7/2003	-3.912
1/6/2004	-3.912
4/7/2004	-3.912
7/14/2004	-3.912

Fourth Quarter 2014 Data Collected in October 2014

Well No.	Result	Gradient	Result >TL?
MW362	0.007	Downgradient	N/A
MW371	0.002	Upgradient	N/A
MW374	0.000	Upgradient	N/A
MW375	0.000	Sidegradient	N/A

Fourth Quarter 2014 Dry/Partially Dry Wells

Well No.	Gradient
MW359	Downgradient
MW365	Downgradient
MW368	Sidegradient
MW376	Sidegradient
MW377	Sidegradient

Transformed Fourth Quarter 2014 Data Collected in October 2014

Well Number	LN(Result)	Result >TL?
MW362	-4.901	NO
MW371	-6.496	NO
MW374	-7.684	NO
MW375	-7.775	NO

Conclusion of Statistical Analysis on Transformed Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5
TL Upper Tolerance Limit, TL = X + (K * S)
X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Interim Guidance, EPA, 1989, based on total number of background results*

C-746-U Fourth Quarter 2014 Statistical Analysis — UCRS
Dissolved Oxygen — 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 evidence of an exceedance of the statistically-derived historical background concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW371
Date Collected	Result
3/18/2002	2.260
4/22/2002	1.150
7/15/2002	0.940
10/8/2002	0.740
1/8/2003	2.620
4/3/2003	1.500
7/9/2003	1.660
10/6/2003	1.280

Well Number:	MW374
Date Collected	Result
3/18/2002	0.600
10/8/2002	0.670
1/7/2003	0.230
4/2/2003	0.650
7/9/2003	0.920
10/7/2003	0.990
1/6/2004	1.110
4/7/2004	0.880

Statistics on Background Data

X= 1.138
S= 0.621
CV= 0.546
K factor = 2.523**
TL= 2.704

Because CV is less than or equal to 1, assume normal distribution and continue with statistical analysis.

Fourth Quarter 2014 Data Collected in October 2014

Well No.	Result	Gradient	Result >TL?
MW362	2.730	Downgradient	**YES**
MW371	0.980	Upgradient	NO
MW374	0.860	Upgradient	NO
MW375	1.420	Sidegradient	NO

Fourth Quarter 2014 Dry/Partially Dry Wells

Well No.	Gradient
MW359	Downgradient
MW365	Downgradient
MW368	Sidegradient
MW376	Sidegradient
MW377	Sidegradient

Conclusion of Statistical Analysis on Historical Data

The following test well(s) exceeded the Upper Tolerance Limit, which is evidence of elevated concentration with respect to historical background data.

MW362

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5
TL Upper Tolerance Limit, TL = X + (K * S)
X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Interim Guidance, EPA, 1989, based on total number of background results*

C-746-U Fourth Quarter 2014 Statistical Analysis — UCRS
Dissolved Solids — 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 evidence of an exceedance of the statistically-derived historical background concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW371
Date Collected	Result
3/18/2002	274.000
4/22/2002	409.000
7/15/2002	418.000
10/8/2002	424.000
1/8/2003	431.000
4/3/2003	444.000
7/9/2003	445.000
10/6/2003	438.000

Well Number:	MW374
Date Collected	Result
10/8/2002	1136.00
1/7/2003	1101.00
4/2/2003	863.000
7/9/2003	682.000
10/7/2003	589.000
1/6/2004	603.000
4/7/2004	601.000
7/14/2004	582.000

Statistics on Background Data

X= 590.000
S= 248.068
CV= 0.420
K factor = 2.523**
TL= 1215.876

Because CV is less than or equal to 1, assume normal distribution and continue with statistical analysis.

Fourth Quarter 2014 Data Collected in October 2014

Well No.	Result	Gradient	Result >TL?
MW362	444.00	Downgradient	NO
MW371	394.00	Upgradient	NO
MW374	416.00	Upgradient	NO
MW375	237.00	Sidegradient	NO

Fourth Quarter 2014 Dry/Partially Dry Wells

Well No.	Gradient
MW359	Downgradient
MW365	Downgradient
MW368	Sidegradient
MW376	Sidegradient
MW377	Sidegradient

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5
TL Upper Tolerance Limit, TL = X + (K * S)
X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Interim Guidance, EPA, 1989, based on total number of background results*

C-746-U Fourth Quarter 2014 Statistical Analysis — UCRS
Iron — 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 evidence of an exceedance of the statistically-derived historical background concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW371
Date Collected	Result
3/18/2002	1.310
4/22/2002	0.913
7/15/2002	0.881
10/8/2002	3.860
1/8/2003	1.880
4/3/2003	3.180
7/9/2003	0.484
10/6/2003	2.720

Well Number:	MW374
Date Collected	Result
10/8/2002	23.000
1/7/2003	13.900
4/2/2003	14.000
7/9/2003	14.200
10/7/2003	7.920
1/6/2004	7.860
4/7/2004	4.820
7/14/2004	4.870

Statistics on Background Data

X= 6.612
S= 6.487
CV= 0.981
K factor = 2.523**
TL= 22.979

Because CV is less than or equal to 1, assume normal distribution and continue with statistical analysis.

Fourth Quarter 2014 Data Collected in October 2014

Well No.	Result	Gradient	Result >TL?
MW362	7.920	Downgradient	NO
MW371	0.104	Upgradient	NO
MW374	0.284	Upgradient	NO
MW375	0.094	Sidegradient	NO

Fourth Quarter 2014 Dry/Partially Dry Wells

Well No.	Gradient
MW359	Downgradient
MW365	Downgradient
MW368	Sidegradient
MW376	Sidegradient
MW377	Sidegradient

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5
TL Upper Tolerance Limit, TL = X + (K * S)
X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Interim Guidance, EPA, 1989, based on total number of background results*

C-746-U Fourth Quarter 2014 Statistical Analysis — UCRS
Magnesium — 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 evidence of an exceedance of the statistically-derived historical background concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW371
Date Collected	Result
3/18/2002	7.100
4/22/2002	9.770
7/15/2002	10.400
10/8/2002	10.200
1/8/2003	10.700
4/3/2003	11.900
7/9/2003	10.800
10/6/2003	10.900

Well Number:	MW374
Date Collected	Result
10/8/2002	20.000
1/7/2003	16.100
4/2/2003	13.100
7/9/2003	10.300
10/7/2003	11.100
1/6/2004	11.000
4/7/2004	9.690
7/14/2004	8.490

Statistics on Background Data

X= 11.347
S= 3.019
CV= 0.266
K factor = 2.523**
TL= 18.963

Because CV is less than or equal to 1, assume normal distribution and continue with statistical analysis.

Fourth Quarter 2014 Data Collected in October 2014

Well No.	Result	Gradient	Result >TL?
MW362	9.610	Downgradient	NO
MW371	13.300	Upgradient	NO
MW374	6.270	Upgradient	NO
MW375	5.900	Sidegradient	NO

Fourth Quarter 2014 Dry/Partially Dry Wells

Well No.	Gradient
MW359	Downgradient
MW365	Downgradient
MW368	Sidegradient
MW376	Sidegradient
MW377	Sidegradient

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5
TL Upper Tolerance Limit, TL = X + (K * S)
X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Interim Guidance, EPA, 1989, based on total number of background results*

C-746-U Fourth Quarter 2014 Statistical Analysis — UCRS
Manganese — 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 evidence of an exceedance of the statistically-derived historical background concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW371
Date Collected	Result
3/18/2002	0.063
4/22/2002	0.067
7/15/2002	0.074
10/8/2002	0.052
1/8/2003	0.039
4/3/2003	0.055
7/9/2003	0.055
10/6/2003	0.054

Well Number:	MW374
Date Collected	Result
10/8/2002	0.596
1/7/2003	0.565
4/2/2003	0.675
7/9/2003	0.397
10/7/2003	0.312
1/6/2004	0.299
4/7/2004	0.329
7/14/2004	0.342

Statistics on Background Data

X= 0.248
S= 0.222
CV= 0.894
K factor = 2.523**
TL= 0.809

Because CV is less than or equal to 1, assume normal distribution and continue with statistical analysis.

Fourth Quarter 2014 Data Collected in October 2014

Well No.	Result	Gradient	Result >TL?
MW362	0.062	Downgradient	NO
MW371	0.001	Upgradient	NO
MW374	0.334	Upgradient	NO
MW375	0.003	Sidegradient	NO

Fourth Quarter 2014 Dry/Partially Dry Wells

Well No.	Gradient
MW359	Downgradient
MW365	Downgradient
MW368	Sidegradient
MW376	Sidegradient
MW377	Sidegradient

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5
TL Upper Tolerance Limit, TL = X + (K * S)
X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Interim Guidance, EPA, 1989, based on total number of background results*

C-746-U Fourth Quarter 2014 Statistical Analysis — UCRS
Molybdenum — 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 evidence of an exceedance of the statistically-derived historical background concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW371
Date Collected	Result
3/18/2002	0.025
4/22/2002	0.025
7/15/2002	0.025
10/8/2002	0.001
1/8/2003	0.001
4/3/2003	0.001
7/9/2003	0.001
10/6/2003	0.001
Well Number:	MW374
Date Collected	Result
10/8/2002	0.002
1/7/2003	0.002
4/2/2003	0.002
7/9/2003	0.002
10/7/2003	0.001
1/6/2004	0.001
4/7/2004	0.001
7/14/2004	0.001

Statistics on Background Data

X= 0.006
S= 0.010
CV= 1.650
K factor = 2.523**
TL= 0.030

Because CV is greater than 1, the natural logarithm of background and test well results were calculated.

Statistics on Transformed Background Data

X= -6.108
S= 1.239
CV= -0.203
K factor = 2.523**
TL= -2.983

Transformed Background Data from Upgradient Wells

Well Number:	MW371
Date Collected	LN(Result)
3/18/2002	-3.689
4/22/2002	-3.689
7/15/2002	-3.689
10/8/2002	-6.908
1/8/2003	-6.717
4/3/2003	-6.908
7/9/2003	-6.803
10/6/2003	-6.908
Well Number:	MW374
Date Collected	LN(Result)
10/8/2002	-6.110
1/7/2003	-6.210
4/2/2003	-6.444
7/9/2003	-6.024
10/7/2003	-6.908
1/6/2004	-6.908
4/7/2004	-6.908
7/14/2004	-6.908

Fourth Quarter 2014 Data Collected in October 2014

Well No.	Result	Gradient	Result >TL?
MW362	0.001	Downgradient	N/A
MW371	0.000	Upgradient	N/A
MW374	0.001	Upgradient	N/A
MW375	0.001	Sidegradient	N/A

Fourth Quarter 2014 Dry/Partially Dry Wells

Well No.	Gradient
MW359	Downgradient
MW365	Downgradient
MW368	Sidegradient
MW376	Sidegradient
MW377	Sidegradient

Transformed Fourth Quarter 2014 Data Collected in October 2014

Well Number	LN(Result)	Result >TL?
MW362	-6.734	NO
MW371	-8.377	NO
MW374	-7.601	NO
MW375	-7.601	NO

Conclusion of Statistical Analysis on Transformed Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5
TL Upper Tolerance Limit, TL = X + (K * S)
X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Interim Guidance, EPA, 1989, based on total number of background results*

C-746-U Fourth Quarter 2014 Statistical Analysis — UCRS
Nickel — 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 evidence of an exceedance of the statistically-derived historical background concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW371
Date Collected	Result
3/18/2002	0.050
4/22/2002	0.050
7/15/2002	0.050
10/8/2002	0.012
1/8/2003	0.005
4/3/2003	0.005
7/9/2003	0.005
10/6/2003	0.005

Well Number:	MW374
Date Collected	Result
10/8/2002	0.050
1/7/2003	0.050
4/2/2003	0.050
7/9/2003	0.008
10/7/2003	0.005
1/6/2004	0.005
4/7/2004	0.005
7/14/2004	0.005

Statistics on Background Data

X= 0.023
S= 0.022
CV= 0.980
K factor = 2.523**
TL= 0.078

Because CV is less than or equal to 1, assume normal distribution and continue with statistical analysis.

Fourth Quarter 2014 Data Collected in October 2014

Well No.	Result	Gradient	Result >TL?
MW362	0.007	Downgradient	NO
MW371	0.001	Upgradient	NO
MW374	0.002	Upgradient	NO
MW375	0.001	Sidegradient	NO

Fourth Quarter 2014 Dry/Partially Dry Wells

Well No.	Gradient
MW359	Downgradient
MW365	Downgradient
MW368	Sidegradient
MW376	Sidegradient
MW377	Sidegradient

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5
TL Upper Tolerance Limit, TL = X + (K * S)
X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Interim Guidance, EPA, 1989, based on total number of background results*

C-746-U Fourth Quarter 2014 Statistical Analysis — UCRS
Oxidation-Reduction Potential — UNITS: mV

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test 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.

Background Data from Upgradient Wells

Well Number:	MW371
Date Collected	Result
3/18/2002	75.000
4/22/2002	165.000
7/15/2002	65.000
4/3/2003	-19.000
7/9/2003	114.000
10/6/2003	-22.000
1/7/2004	20.500
4/6/2004	113.000
Well Number:	MW374
Date Collected	Result
3/18/2002	135.000
4/2/2003	-56.000
7/9/2003	-68.000
10/7/2003	-50.000
1/6/2004	-85.000
4/7/2004	6.000
7/14/2004	-38.000
10/7/2004	1.000

Statistics on Background Data

X= 22.281
S= 78.889
CV= 3.541
K factor = 2.523**
TL= 221.319

Because CV is greater than 1, the natural logarithm of background and test well results were calculated.

Statistics on Transformed Background Data

X = error
S = error
CV = error
K factor = 2.523**
TL# = 5.106

Because the natural log was not possible for all background values, the TL was considered equal to the maximum background value.

Transformed Background Data from Upgradient Wells

Well Number:	MW371
Date Collected	LN(Result)
3/18/2002	4.317
4/22/2002	5.106
7/15/2002	4.174
4/3/2003	#Func!
7/9/2003	4.736
10/6/2003	#Func!
1/7/2004	3.020
4/6/2004	4.727
Well Number:	MW374
Date Collected	LN(Result)
3/18/2002	4.905
4/2/2003	#Func!
7/9/2003	#Func!
10/7/2003	#Func!
1/6/2004	#Func!
4/7/2004	1.792
7/14/2004	#Func!
10/7/2004	0.000

Fourth Quarter 2014 Data Collected in October 2014

Well No.	Result	Gradient	Result >TL?
MW362	179.000	Downgradient	N/A
MW371	360.000	Upgradient	N/A
MW374	257.000	Upgradient	N/A
MW375	335.000	Sidegradient	N/A

Fourth Quarter 2014 Dry/Partially Dry Wells

Well No.	Gradient
MW359	Downgradient
MW365	Downgradient
MW368	Sidegradient
MW376	Sidegradient
MW377	Sidegradient

Transformed Fourth Quarter 2014 Data Collected in October 2014

Well Number	LN(Result)	Result >TL?
MW362	5.187	**YES**
MW371	5.886	**YES**
MW374	5.549	**YES**
MW375	5.814	**YES**

Conclusion of Statistical Analysis on Transformed Historical Data

The following test well(s) exceeded the Upper Tolerance Limit, which is evidence of elevated concentration with respect to historical background data.

MW362

MW371

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5
TL Upper Tolerance Limit, TL = X + (K * S)
X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Interim Guidance, EPA, 1989, based on total number of background results*

C-746-U Fourth Quarter 2014 Statistical Analysis Oxidation-Reduction Potential (Continued)	UCRS UNITS: mV

MW374
MW375

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.

S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5

TL Upper Tolerance Limit, TL = X + (K * S)

X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Interim Guidance, EPA, 1989, based on total number of background results*

C-746-U Fourth Quarter 2014 Statistical Analysis — UCRS
pH — UNITS: Std Unit

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL and LL. If the test well result exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW371
Date Collected	Result
3/18/2002	6.300
4/22/2002	6.500
7/15/2002	6.500
10/8/2002	6.600
1/8/2003	6.600
4/3/2003	6.900
7/9/2003	6.700
10/6/2003	7.000

Well Number:	MW374
Date Collected	Result
3/18/2002	5.750
10/8/2002	6.600
1/7/2003	6.820
4/2/2003	6.860
7/9/2003	6.700
10/7/2003	6.600
1/6/2004	6.900
4/7/2004	6.580

Statistics on Background Data

X= 6.619
S= 0.295
CV= 0.045
K factor = 2.904**
TL= 7.475
LL= 5.764

Because CV is less than or equal to 1, assume normal distribution and continue with statistical analysis.

Fourth Quarter 2014 Data Collected in October 2014

Well No.	Result	Gradient	Result >TL?	Result <LL?
MW362	6.980	Downgradient	NO	NO
MW371	6.520	Upgradient	NO	NO
MW374	6.440	Upgradient	NO	NO
MW375	6.320	Sidegradient	NO	NO

Fourth Quarter 2014 Dry/Partially Dry Wells

Well No.	Gradient
MW359	Downgradient
MW365	Downgradient
MW368	Sidegradient
MW376	Sidegradient
MW377	Sidegradient

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.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5
TL Upper Tolerance Limit, TL = X + (K * S), LL Lower Tolerance Limit, LL = X - (K * S)
X Mean, X = (sum of background results)/(count of background results)
** The K-factor was adjusted for pH to account for a two-sided tolerance interval instead of a one-sided tolerance limit. The K- factor for pH was computed using a formula from NIST/SEMATECH e-Handbook of Statistical Methods, http://www.itl.nist.gov/div898/handbook/, 2009.

C-746-U Fourth Quarter 2014 Statistical Analysis — UCRS
Potassium — 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 evidence of an exceedance of the statistically-derived historical background concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW371
Date Collected	Result
3/18/2002	2.000
4/22/2002	2.000
7/15/2002	2.000
10/8/2002	0.408
1/8/2003	0.384
4/3/2003	0.368
7/9/2003	0.587
10/6/2003	0.382

Well Number:	MW374
Date Collected	Result
10/8/2002	3.040
1/7/2003	2.830
4/2/2003	2.000
7/9/2003	1.090
10/7/2003	0.802
1/6/2004	0.897
4/7/2004	0.689
7/14/2004	0.716

Statistics on Background Data

X= 1.262
S= 0.907
CV= 0.718
K factor = 2.523**
TL= 3.549

Because CV is less than or equal to 1, assume normal distribution and continue with statistical analysis.

Fourth Quarter 2014 Data Collected in October 2014

Well No.	Result	Gradient	Result >TL?
MW362	0.950	Downgradient	NO
MW371	0.352	Upgradient	NO
MW374	0.467	Upgradient	NO
MW375	0.291	Sidegradient	NO

Fourth Quarter 2014 Dry/Partially Dry Wells

Well No.	Gradient
MW359	Downgradient
MW365	Downgradient
MW368	Sidegradient
MW376	Sidegradient
MW377	Sidegradient

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5
TL Upper Tolerance Limit, TL = X + (K * S)
X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Interim Guidance, EPA, 1989, based on total number of background results*

C-746-U Fourth Quarter 2014 Statistical Analysis — UCRS
Radium-226 — 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 evidence of an exceedance of the statistically-derived historical background concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW371
Date Collected	Result
7/15/2002	54.100
10/8/2002	0.094
1/8/2003	0.378
10/6/2003	0.179
1/7/2004	0.898
4/6/2004	0.108
7/13/2004	-0.149
10/7/2004	0.154
Well Number:	MW374
Date Collected	Result
10/8/2002	0.298
1/7/2003	-0.844
10/7/2003	0.806
1/6/2004	0.031
4/7/2004	0.350
7/14/2004	0.273
10/7/2004	0.205
1/11/2005	0.080

Statistics on Background Data

X= 3.560
S= 13.483
CV= 3.787
K factor = 2.523**
TL= 37.577

Because CV is greater than 1, the natural logarithm of background and test well results were calculated.

Statistics on Transformed Background Data

X = error
S = error
CV = error
K factor = 2.523**
TL# = 3.991

Because the natural log was not possible for all background values, the TL was considered equal to the maximum background value.

Transformed Background Data from Upgradient Wells

Well Number:	MW371
Date Collected	LN(Result)
7/15/2002	3.991
10/8/2002	-2.368
1/8/2003	-0.973
10/6/2003	-1.720
1/7/2004	-0.108
4/6/2004	-2.226
7/13/2004	#Func!
10/7/2004	-1.871
Well Number:	MW374
Date Collected	LN(Result)
10/8/2002	-1.211
1/7/2003	#Func!
10/7/2003	-0.216
1/6/2004	-3.487
4/7/2004	-1.050
7/14/2004	-1.298
10/7/2004	-1.585
1/11/2005	-2.527

Fourth Quarter 2014 Data Collected in October 2014

Well No.	Result	Gradient	Result >TL?
MW362	0.303	Downgradient	N/A
MW371	1.110	Upgradient	N/A
MW374	0.859	Upgradient	N/A
MW375	0.392	Sidegradient	N/A

Fourth Quarter 2014 Dry/Partially Dry Wells

Well No.	Gradient
MW359	Downgradient
MW365	Downgradient
MW368	Sidegradient
MW376	Sidegradient
MW377	Sidegradient

Transformed Fourth Quarter 2014 Data Collected in October 2014

Well Number	LN(Result)	Result >TL?
MW362	-1.194	NO
MW371	0.104	NO
MW374	-0.152	NO
MW375	-0.936	NO

Conclusion of Statistical Analysis on Transformed Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.

S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5

TL Upper Tolerance Limit, TL = X + (K * S)

X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Interim Guidance, EPA, 1989, based on total number of background results*

C-746-U Fourth Quarter 2014 Statistical Analysis — UCRS
Sodium — 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 evidence of an exceedance of the statistically-derived historical background concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW371
Date Collected	Result
3/18/2002	129.000
4/22/2002	131.000
7/15/2002	127.000
10/8/2002	123.000
1/8/2003	128.000
4/3/2003	144.000
7/9/2003	126.000
10/6/2003	120.000

Well Number:	MW374
Date Collected	Result
10/8/2002	336.000
1/7/2003	329.000
4/2/2003	287.000
7/9/2003	181.000
10/7/2003	182.000
1/6/2004	206.000
4/7/2004	182.000
7/14/2004	198.000

Statistics on Background Data

X= 183.063
S= 73.222
CV= 0.400
K factor = 2.523**
TL= 367.800

Because CV is less than or equal to 1, assume normal distribution and continue with statistical analysis.

Fourth Quarter 2014 Data Collected in October 2014

Well No.	Result	Gradient	Result >TL?
MW362	148.00	Downgradient	NO
MW371	133.00	Upgradient	NO
MW374	126.00	Upgradient	NO
MW375	54.600	Sidegradient	NO

Fourth Quarter 2014 Dry/Partially Dry Wells

Well No.	Gradient
MW359	Downgradient
MW365	Downgradient
MW368	Sidegradient
MW376	Sidegradient
MW377	Sidegradient

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5
TL Upper Tolerance Limit, TL = X + (K * S)
X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Interim Guidance, EPA, 1989, based on total number of background results*

C-746-U Fourth Quarter 2014 Statistical Analysis — UCRS
Sulfate — 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 evidence of an exceedance of the statistically-derived historical background concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW371
Date Collected	Result
3/18/2002	16.300
4/22/2002	8.600
7/15/2002	6.700
10/8/2002	5.000
1/8/2003	5.000
4/3/2003	5.000
7/9/2003	5.000
10/6/2003	5.000

Well Number:	MW374
Date Collected	Result
10/8/2002	5.000
1/7/2003	5.000
4/2/2003	5.000
7/9/2003	5.600
10/7/2003	5.000
1/6/2004	5.000
4/7/2004	11.300
7/14/2004	5.000

Statistics on Background Data

X= 6.469
S= 3.153
CV= 0.487
K factor = 2.523**
TL= 14.423

Because CV is less than or equal to 1, assume normal distribution and continue with statistical analysis.

Fourth Quarter 2014 Data Collected in October 2014

Well No.	Result	Gradient	Result >TL?
MW362	23.400	Downgradient	**YES**
MW371	10.500	Upgradient	NO
MW374	5.730	Upgradient	NO
MW375	23.600	Sidegradient	**YES**

Fourth Quarter 2014 Dry/Partially Dry Wells

Well No.	Gradient
MW359	Downgradient
MW365	Downgradient
MW368	Sidegradient
MW376	Sidegradient
MW377	Sidegradient

Conclusion of Statistical Analysis on Historical Data

The following test well(s) exceeded the Upper Tolerance Limit, which is evidence of elevated concentration with respect to historical background data.

MW362

MW375

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5
TL Upper Tolerance Limit, TL = X + (K * S)
X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Interim Guidance, EPA, 1989, based on total number of background results*

C-746-U Fourth Quarter 2014 Statistical Analysis — UCRS
Total Organic Carbon (TOC) — 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 evidence of an exceedance of the statistically-derived historical background concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW371
Date Collected	Result
3/18/2002	11.100
4/22/2002	7.000
7/15/2002	4.100
10/8/2002	6.000
1/8/2003	5.300
4/3/2003	5.300
7/9/2003	2.900
10/6/2003	3.200
Well Number:	MW374
Date Collected	Result
10/8/2002	90.000
1/7/2003	64.000
4/2/2003	25.000
7/9/2003	16.000
10/7/2003	13.000
1/6/2004	10.000
4/7/2004	7.200
7/14/2004	12.000

Statistics on Background Data

X= 17.631
S= 24.314
CV= 1.379
K factor = 2.523**
TL= 78.977

Because CV is greater than 1, the natural logarithm of background and test well results were calculated.

Statistics on Transformed Background Data

X= 2.318
S= 0.979
CV= 0.422
K factor = 2.523**
TL= 4.788

Transformed Background Data from Upgradient Wells

Well Number:	MW371
Date Collected	LN(Result)
3/18/2002	2.407
4/22/2002	1.946
7/15/2002	1.411
10/8/2002	1.792
1/8/2003	1.668
4/3/2003	1.668
7/9/2003	1.065
10/6/2003	1.163
Well Number:	MW374
Date Collected	LN(Result)
10/8/2002	4.500
1/7/2003	4.159
4/2/2003	3.219
7/9/2003	2.773
10/7/2003	2.565
1/6/2004	2.303
4/7/2004	1.974
7/14/2004	2.485

Fourth Quarter 2014 Data Collected in October 2014

Well No.	Result	Gradient	Result >TL?
MW362	1.440	Downgradient	N/A
MW371	2.550	Upgradient	N/A
MW374	3.350	Upgradient	N/A
MW375	1.490	Sidegradient	N/A

Fourth Quarter 2014 Dry/Partially Dry Wells

Well No.	Gradient
MW359	Downgradient
MW365	Downgradient
MW368	Sidegradient
MW376	Sidegradient
MW377	Sidegradient

Transformed Fourth Quarter 2014 Data Collected in October 2014

Well Number	LN(Result)	Result >TL?
MW362	0.365	NO
MW371	0.936	NO
MW374	1.209	NO
MW375	0.399	NO

Conclusion of Statistical Analysis on Transformed Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5
TL Upper Tolerance Limit, TL = X + (K * S)
X Mean, X = (sum of background results)/(count of background results)

** Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Interim Guidance, EPA, 1989, based on total number of background results

C-746-U Fourth Quarter 2014 Statistical Analysis — UCRS
Total Organic Halides (TOX) — UNITS: ug/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 evidence of an exceedance of the statistically-derived historical background concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW371
Date Collected	Result
3/18/2002	50.000
4/22/2002	105.000
7/15/2002	70.000
10/8/2002	52.000
1/8/2003	20.200
4/3/2003	104.000
7/9/2003	34.200
10/6/2003	46.100
Well Number:	MW374
Date Collected	Result
10/8/2002	903.000
1/7/2003	539.000
4/2/2003	295.000
7/9/2003	272.000
10/7/2003	197.000
1/6/2004	330.000
4/7/2004	183.000
7/14/2004	225.000

Statistics on Background Data

X= 214.094
S= 231.089
CV= 1.079
K factor = 2.523**
TL= 797.131

Because CV is greater than 1, the natural logarithm of background and test well results were calculated.

Statistics on Transformed Background Data

X= 4.867
S= 1.065
CV= 0.219
K factor = 2.523**
TL= 7.554

Transformed Background Data from Upgradient Wells

Well Number:	MW371
Date Collected	LN(Result)
3/18/2002	3.912
4/22/2002	4.654
7/15/2002	4.248
10/8/2002	3.951
1/8/2003	3.006
4/3/2003	4.644
7/9/2003	3.532
10/6/2003	3.831
Well Number:	MW374
Date Collected	LN(Result)
10/8/2002	6.806
1/7/2003	6.290
4/2/2003	5.687
7/9/2003	5.606
10/7/2003	5.283
1/6/2004	5.799
4/7/2004	5.209
7/14/2004	5.416

Fourth Quarter 2014 Data Collected in October 2014

Well No.	Result	Gradient	Result >TL?
MW362	15.700	Downgradient	N/A
MW371	3.380	Upgradient	N/A
MW374	11.600	Upgradient	N/A
MW375	10.200	Sidegradient	N/A

Fourth Quarter 2014 Dry/Partially Dry Wells

Well No.	Gradient
MW359	Downgradient
MW365	Downgradient
MW368	Sidegradient
MW376	Sidegradient
MW377	Sidegradient

Transformed Fourth Quarter 2014 Data Collected in October 2014

Well Number	LN(Result)	Result >TL?
MW362	2.754	NO
MW371	1.218	NO
MW374	2.451	NO
MW375	2.322	NO

Conclusion of Statistical Analysis on Transformed Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5
TL Upper Tolerance Limit, TL = X + (K * S)
X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Interim Guidance, EPA, 1989, based on total number of background results*

C-746-U Fourth Quarter 2014 Statistical Analysis — UCRS
Uranium — 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 evidence of an exceedance of the statistically-derived historical background concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW371
Date Collected	Result
3/18/2002	0.001
4/22/2002	0.001
7/15/2002	0.001
10/8/2002	0.027
1/8/2003	0.001
4/3/2003	0.001
7/9/2003	0.001
10/6/2003	0.001
Well Number:	MW374
Date Collected	Result
10/8/2002	0.044
1/7/2003	0.011
4/2/2003	0.009
7/9/2003	0.007
10/7/2003	0.001
1/6/2004	0.003
4/7/2004	0.003
7/14/2004	0.002

Statistics on Background Data

X= 0.007
S= 0.012
CV= 1.678
K factor = 2.523**
TL= 0.037

Because CV is greater than 1, the natural logarithm of background and test well results were calculated.

Statistics on Transformed Background Data

X= -5.884
S= 1.299
CV= -0.221
K factor = 2.523**
TL= -2.607

Transformed Background Data from Upgradient Wells

Well Number:	MW371
Date Collected	LN(Result)
3/18/2002	-6.908
4/22/2002	-6.908
7/15/2002	-6.908
10/8/2002	-3.612
1/8/2003	-6.908
4/3/2003	-6.908
7/9/2003	-6.822
10/6/2003	-6.908
Well Number:	MW374
Date Collected	LN(Result)
10/8/2002	-3.128
1/7/2003	-4.510
4/2/2003	-4.705
7/9/2003	-4.970
10/7/2003	-6.908
1/6/2004	-5.760
4/7/2004	-5.960
7/14/2004	-6.320

Fourth Quarter 2014 Data Collected in October 2014

Well No.	Result	Gradient	Result >TL?
MW362	0.006	Downgradient	N/A
MW371	0.002	Upgradient	N/A
MW374	0.000	Upgradient	N/A
MW375	0.000	Sidegradient	N/A

Fourth Quarter 2014 Dry/Partially Dry Wells

Well No.	Gradient
MW359	Downgradient
MW365	Downgradient
MW368	Sidegradient
MW376	Sidegradient
MW377	Sidegradient

Transformed Fourth Quarter 2014 Data Collected in October 2014

Well Number	LN(Result)	Result >TL?
MW362	-5.133	NO
MW371	-6.210	NO
MW374	-7.729	NO
MW375	-9.472	NO

Conclusion of Statistical Analysis on Transformed Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5
TL Upper Tolerance Limit, TL = X + (K * S)
X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Interim Guidance, EPA, 1989, based on total number of background results*

C-746-U Fourth Quarter 2014 Statistical Analysis — UCRS
Vanadium — 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 evidence of an exceedance of the statistically-derived historical background concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW371
Date Collected	Result
3/18/2002	0.025
4/22/2002	0.025
7/15/2002	0.025
10/8/2002	0.020
1/8/2003	0.020
4/3/2003	0.020
7/9/2003	0.020
10/6/2003	0.020
Well Number:	MW374
Date Collected	Result
10/8/2002	0.200
1/7/2003	0.200
4/2/2003	0.200
7/9/2003	0.020
10/7/2003	0.020
1/6/2004	0.020
4/7/2004	0.020
7/14/2004	0.020

Statistics on Background Data

X= 0.055
S= 0.072
CV= 1.319
K factor = 2.523**
TL= 0.237

Because CV is greater than 1, the natural logarithm of background and test well results were calculated.

Statistics on Transformed Background Data

X= -3.438
S= 0.912
CV= -0.265
K factor = 2.523**
TL= -1.138

Transformed Background Data from Upgradient Wells

Well Number:	MW371
Date Collected	LN(Result)
3/18/2002	-3.689
4/22/2002	-3.689
7/15/2002	-3.689
10/8/2002	-3.912
1/8/2003	-3.912
4/3/2003	-3.912
7/9/2003	-3.912
10/6/2003	-3.912
Well Number:	MW374
Date Collected	LN(Result)
10/8/2002	-1.609
1/7/2003	-1.609
4/2/2003	-1.609
7/9/2003	-3.912
10/7/2003	-3.912
1/6/2004	-3.912
4/7/2004	-3.912
7/14/2004	-3.912

Fourth Quarter 2014 Data Collected in October 2014

Well No.	Result	Gradient	Result >TL?
MW362	0.015	Downgradient	N/A
MW371	0.003	Upgradient	N/A
MW374	0.005	Upgradient	N/A
MW375	0.005	Sidegradient	N/A

Fourth Quarter 2014 Dry/Partially Dry Wells

Well No.	Gradient
MW359	Downgradient
MW365	Downgradient
MW368	Sidegradient
MW376	Sidegradient
MW377	Sidegradient

Transformed Fourth Quarter 2014 Data Collected in October 2014

Well Number	LN(Result)	Result >TL?
MW362	-4.206	NO
MW371	-5.968	NO
MW374	-5.298	NO
MW375	-5.298	NO

Conclusion of Statistical Analysis on Transformed Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5
TL Upper Tolerance Limit, TL = X + (K * S)
X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Interim Guidance, EPA, 1989, based on total number of background results*

C-746-U Fourth Quarter 2014 Statistical Analysis — UCRS
Zinc — 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 evidence of an exceedance of the statistically-derived historical background concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW371
Date Collected	Result
3/18/2002	0.100
4/22/2002	0.100
7/15/2002	0.100
10/8/2002	0.025
1/8/2003	0.035
4/3/2003	0.035
7/9/2003	0.038
10/6/2003	0.020
Well Number:	MW374
Date Collected	Result
10/8/2002	0.025
1/7/2003	0.350
4/2/2003	0.035
7/9/2003	0.020
10/7/2003	0.020
1/6/2004	0.020
4/7/2004	0.020
7/14/2004	0.020

Statistics on Background Data

X= 0.060
S= 0.083
CV= 1.380
K factor = 2.523**
TL= 0.270

Because CV is greater than 1, the natural logarithm of background and test well results were calculated.

Statistics on Transformed Background Data

X= -3.259
S= 0.840
CV= -0.258
K factor = 2.523**
TL= -1.140

Transformed Background Data from Upgradient Wells

Well Number:	MW371
Date Collected	LN(Result)
3/18/2002	-2.303
4/22/2002	-2.303
7/15/2002	-2.303
10/8/2002	-3.689
1/8/2003	-3.352
4/3/2003	-3.352
7/9/2003	-3.281
10/6/2003	-3.912
Well Number:	MW374
Date Collected	LN(Result)
10/8/2002	-3.689
1/7/2003	-1.050
4/2/2003	-3.352
7/9/2003	-3.912
10/7/2003	-3.912
1/6/2004	-3.912
4/7/2004	-3.912
7/14/2004	-3.912

Fourth Quarter 2014 Data Collected in October 2014

Well No.	Result	Gradient	Result >TL?
MW362	0.019	Downgradient	N/A
MW371	0.006	Upgradient	N/A
MW374	0.008	Upgradient	N/A
MW375	0.007	Sidegradient	N/A

Fourth Quarter 2014 Dry/Partially Dry Wells

Well No.	Gradient
MW359	Downgradient
MW365	Downgradient
MW368	Sidegradient
MW376	Sidegradient
MW377	Sidegradient

Transformed Fourth Quarter 2014 Data Collected in October 2014

Well Number	LN(Result)	Result >TL?
MW362	-3.958	NO
MW371	-5.140	NO
MW374	-4.815	NO
MW375	-5.012	NO

Conclusion of Statistical Analysis on Transformed Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5
TL Upper Tolerance Limit, TL = X + (K * S)
X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Interim Guidance, EPA, 1989, based on total number of background results*

C-746-U Fourth Quarter 2014 Statistical Analysis — URGA
Aluminum — 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 evidence of an exceedance of the statistically-derived historical background concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW369
Date Collected	Result
3/18/2002	0.255
4/22/2002	0.200
7/15/2002	0.322
10/8/2002	0.200
1/8/2003	0.200
4/3/2003	0.200
7/8/2003	0.200
10/6/2003	0.689
Well Number:	MW372
Date Collected	Result
3/19/2002	2.610
4/23/2002	0.200
7/16/2002	1.140
10/8/2002	0.862
1/7/2003	2.320
4/2/2003	0.200
7/9/2003	0.200
10/7/2003	0.200

Statistics on Background Data

X= 0.625
S= 0.774
CV= 1.239
K factor = 2.523**
TL= 2.578

Because CV is greater than 1, the natural logarithm of background and test well results were calculated.

Statistics on Transformed Background Data

X= -0.973
S= 0.935
CV= -0.961
K factor = 2.523**
TL= 1.386

Transformed Background Data from Upgradient Wells

Well Number:	MW369
Date Collected	LN(Result)
3/18/2002	-1.366
4/22/2002	-1.609
7/15/2002	-1.133
10/8/2002	-1.609
1/8/2003	-1.609
4/3/2003	-1.609
7/8/2003	-1.609
10/6/2003	-0.373
Well Number:	MW372
Date Collected	LN(Result)
3/19/2002	0.959
4/23/2002	-1.609
7/16/2002	0.131
10/8/2002	-0.149
1/7/2003	0.842
4/2/2003	-1.609
7/9/2003	-1.609
10/7/2003	-1.609

Fourth Quarter 2014 Data Collected in October 2014

Well No.	Result	Gradient	Result >TL?
MW357	0.050	Downgradient	N/A
MW360	0.030	Downgradient	N/A
MW363	0.050	Downgradient	N/A
MW366	0.017	Sidegradient	N/A
MW369	0.184	Upgradient	N/A
MW372	0.051	Upgradient	N/A

Transformed Fourth Quarter 2014 Data Collected in October 2014

Well Number	LN(Result)	Result >TL?
MW357	-2.996	NO
MW360	-3.500	NO
MW363	-2.996	NO
MW366	-4.069	NO
MW369	-1.693	NO
MW372	-2.984	NO

Conclusion of Statistical Analysis on Transformed Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5
TL Upper Tolerance Limit, TL = X + (K * S)
X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Interim Guidance, EPA, 1989, based on total number of background results*

C-746-U Fourth Quarter 2014 Statistical Analysis — URGA
Beryllium — 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 evidence of an exceedance of the statistically-derived historical background concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW369
Date Collected	Result
3/18/2002	0.005
4/22/2002	0.005
7/15/2002	0.005
10/8/2002	0.001
1/8/2003	0.001
4/3/2003	0.001
7/8/2003	0.001
10/6/2003	0.001

Well Number:	MW372
Date Collected	Result
3/19/2002	0.005
4/23/2002	0.005
7/16/2002	0.005
10/8/2002	0.001
1/7/2003	0.001
4/2/2003	0.001
7/9/2003	0.001
10/7/2003	0.001

Statistics on Background Data

X= 0.003
S= 0.002
CV= 0.800
K factor = 2.523**
TL= 0.008

Because CV is less than or equal to 1, assume normal distribution and continue with statistical analysis.

Fourth Quarter 2014 Data Collected in October 2014

Well No.	Result	Gradient	Result >TL?
MW357	0.001	Downgradient	NO
MW360	0.001	Downgradient	NO
MW363	0.001	Downgradient	NO
MW366	0.001	Sidegradient	NO
MW369	0.000	Upgradient	NO
MW372	0.001	Upgradient	NO

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5
TL Upper Tolerance Limit, TL = X + (K * S)
X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Interim Guidance, EPA, 1989, based on total number of background results*

C-746-U Fourth Quarter 2014 Statistical Analysis — URGA
Beta activity — 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 evidence of an exceedance of the statistically-derived historical background concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW369
Date Collected	Result
3/18/2002	32.500
4/22/2002	35.400
7/15/2002	12.900
10/8/2002	7.590
1/8/2003	9.580
4/3/2003	6.690
7/8/2003	9.100
10/6/2003	7.310

Well Number:	MW372
Date Collected	Result
3/19/2002	28.500
4/23/2002	5.370
7/16/2002	19.900
10/8/2002	38.700
1/7/2003	13.000
4/2/2003	3.940
7/9/2003	3.560
10/7/2003	21.900

Statistics on Background Data

X= 15.996
S= 11.899
CV= 0.744
K factor = 2.523**
TL= 46.017

Because CV is less than or equal to 1, assume normal distribution and continue with statistical analysis.

Fourth Quarter 2014 Data Collected in October 2014

Well No.	Result	Gradient	Result >TL?
MW372	74.000	Upgradient	**YES**

Conclusion of Statistical Analysis on Historical Data

The following test well(s) exceeded the Upper Tolerance Limit, which is evidence of elevated concentration with respect to historical background data.

MW372

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5
TL Upper Tolerance Limit, TL = X + (K * S)
X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Interim Guidance, EPA, 1989, based on total number of background results*

C-746-U Fourth Quarter 2014 Statistical Analysis — URGA
Boron — 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 evidence of an exceedance of the statistically-derived historical background concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW369
Date Collected	Result
3/18/2002	2.000
4/22/2002	2.000
7/15/2002	2.000
10/8/2002	0.200
1/8/2003	0.200
4/3/2003	0.200
7/8/2003	0.200
10/6/2003	0.200

Well Number:	MW372
Date Collected	Result
3/19/2002	2.000
4/23/2002	2.000
7/16/2002	2.000
10/8/2002	0.492
1/7/2003	0.492
4/2/2003	0.600
7/9/2003	0.570
10/7/2003	0.604

Statistics on Background Data

X= 0.985
S= 0.825
CV= 0.838
K factor = 2.523**
TL= 3.067

Because CV is less than or equal to 1, assume normal distribution and continue with statistical analysis.

Fourth Quarter 2014 Data Collected in October 2014

Well No.	Result	Gradient	Result >TL?
MW357	0.435	Downgradient	NO
MW360	0.036	Downgradient	NO
MW363	0.022	Downgradient	NO
MW366	0.088	Sidegradient	NO
MW369	0.014	Upgradient	NO
MW372	1.080	Upgradient	NO

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5
TL Upper Tolerance Limit, TL = X + (K * S)
X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Interim Guidance, EPA, 1989, based on total number of background results*

C-746-U Fourth Quarter 2014 Statistical Analysis — URGA
Bromide — 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 evidence of an exceedance of the statistically-derived historical background concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW369
Date Collected	Result
3/18/2002	1.000
4/22/2002	1.000
7/15/2002	1.000
10/8/2002	1.000
1/8/2003	1.000
4/3/2003	1.000
7/8/2003	1.000
10/6/2003	1.000

Well Number:	MW372
Date Collected	Result
3/19/2002	1.000
4/23/2002	1.000
7/16/2002	1.000
10/8/2002	1.000
1/7/2003	1.000
4/2/2003	1.000
7/9/2003	1.000
10/7/2003	1.000

Statistics on Background Data

X= 1.000
S= 0.000
CV= 0.000
K factor = 2.523**
TL= 1.000

Because CV is less than or equal to 1, assume normal distribution and continue with statistical analysis.

Fourth Quarter 2014 Data Collected in October 2014

Well No.	Result	Gradient	Result >TL?
MW357	0.410	Downgradient	NO
MW360	0.166	Downgradient	NO
MW363	0.154	Downgradient	NO
MW366	0.490	Sidegradient	NO
MW369	0.402	Upgradient	NO
MW372	0.629	Upgradient	NO

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5
TL Upper Tolerance Limit, TL = X + (K * S)
X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Interim Guidance, EPA, 1989, based on total number of background results*

C-746-U Fourth Quarter 2014 Statistical Analysis — URGA
Calcium — 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 evidence of an exceedance of the statistically-derived historical background concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW369
Date Collected	Result
3/18/2002	29.500
4/22/2002	29.800
7/15/2002	25.300
10/8/2002	21.900
1/8/2003	20.900
4/3/2003	22.200
7/8/2003	22.900
10/6/2003	21.700

Well Number:	MW372
Date Collected	Result
3/19/2002	41.500
4/23/2002	43.600
7/16/2002	40.400
10/8/2002	38.800
1/7/2003	41.100
4/2/2003	42.900
7/9/2003	35.100
10/7/2003	46.600

Statistics on Background Data

X= 32.763
S= 9.391
CV= 0.287
K factor = 2.523**
TL= 56.456

Because CV is less than or equal to 1, assume normal distribution and continue with statistical analysis.

Fourth Quarter 2014 Data Collected in October 2014

Well No.	Result	Gradient	Result >TL?
MW357	28.500	Downgradient	NO
MW360	25.900	Downgradient	NO
MW363	27.200	Downgradient	NO
MW366	28.900	Sidegradient	NO
MW369	16.800	Upgradient	NO
MW372	59.300	Upgradient	**YES**

Conclusion of Statistical Analysis on Historical Data

The following test well(s) exceeded the Upper Tolerance Limit, which is evidence of elevated concentration with respect to historical background data.

MW372

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5
TL Upper Tolerance Limit, TL = X + (K * S)
X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Interim Guidance, EPA, 1989, based on total number of background results*

C-746-U Fourth Quarter 2014 Statistical Analysis — URGA
Chemical Oxygen Demand (COD) — 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 evidence of an exceedance of the statistically-derived historical background concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW369
Date Collected	Result
3/18/2002	35.000
4/22/2002	35.000
7/15/2002	35.000
10/8/2002	50.000
1/8/2003	35.000
4/3/2003	35.000
7/8/2003	35.000
10/6/2003	35.000

Well Number:	MW372
Date Collected	Result
3/19/2002	35.000
4/23/2002	35.000
7/16/2002	35.000
10/8/2002	35.000
1/7/2003	35.000
4/2/2003	35.000
7/9/2003	35.000
10/7/2003	35.000

Statistics on Background Data

X= 35.938
S= 3.750
CV= 0.104
K factor = 2.523**
TL= 45.399

Because CV is less than or equal to 1, assume normal distribution and continue with statistical analysis.

Fourth Quarter 2014 Data Collected in October 2014

Well No.	Result	Gradient	Result >TL?
MW357	19.900	Downgradient	NO
MW360	17.400	Downgradient	NO
MW363	8.100	Downgradient	NO
MW366	24.800	Sidegradient	NO
MW369	20.000	Upgradient	NO
MW372	12.900	Upgradient	NO

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5
TL Upper Tolerance Limit, TL = X + (K * S)
X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Interim Guidance, EPA, 1989, based on total number of background results*

C-746-U Fourth Quarter 2014 Statistical Analysis — URGA
Chloride — 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 evidence of an exceedance of the statistically-derived historical background concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW369
Date Collected	Result
7/15/2002	48.300
10/8/2002	47.700
1/8/2003	45.700
4/3/2003	47.400
7/8/2003	55.900
10/6/2003	47.400
1/7/2004	45.500
4/7/2004	43.400

Well Number:	MW372
Date Collected	Result
7/16/2002	39.800
10/8/2002	41.000
1/7/2003	39.400
4/2/2003	39.200
7/9/2003	39.800
10/7/2003	40.000
1/5/2004	43.400
4/5/2004	42.000

Statistics on Background Data

X= 44.119
S= 4.554
CV= 0.103
K factor = 2.523**
TL= 55.607

Because CV is less than or equal to 1, assume normal distribution and continue with statistical analysis.

Fourth Quarter 2014 Data Collected in October 2014

Well No.	Result	Gradient	Result >TL?
MW357	32.300	Downgradient	NO
MW360	10.300	Downgradient	NO
MW363	33.200	Downgradient	NO
MW366	37.600	Sidegradient	NO
MW369	31.800	Upgradient	NO
MW372	47.300	Upgradient	NO

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5
TL Upper Tolerance Limit, TL = X + (K * S)
X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Interim Guidance, EPA, 1989, based on total number of background results*

C-746-U Fourth Quarter 2014 Statistical Analysis — URGA
Cobalt — 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 evidence of an exceedance of the statistically-derived historical background concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW369
Date Collected	Result
3/18/2002	0.025
4/22/2002	0.025
7/15/2002	0.025
10/8/2002	0.009
1/8/2003	0.005
4/3/2003	0.006
7/8/2003	0.054
10/6/2003	0.069

Well Number:	MW372
Date Collected	Result
3/19/2002	0.025
4/23/2002	0.025
7/16/2002	0.025
10/8/2002	0.002
1/7/2003	0.015
4/2/2003	0.012
7/9/2003	0.065
10/7/2003	0.008

Statistics on Background Data

X= 0.025
S= 0.021
CV= 0.845
K factor = 2.523**
TL= 0.077

Because CV is less than or equal to 1, assume normal distribution and continue with statistical analysis.

Fourth Quarter 2014 Data Collected in October 2014

Well No.	Result	Gradient	Result >TL?
MW357	0.000	Downgradient	NO
MW360	0.023	Downgradient	NO
MW363	0.001	Downgradient	NO
MW366	0.001	Sidegradient	NO
MW369	0.008	Upgradient	NO
MW372	0.000	Upgradient	NO

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5
TL Upper Tolerance Limit, TL = X + (K * S)
X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Interim Guidance, EPA, 1989, based on total number of background results*

C-746-U Fourth Quarter 2014 Statistical Analysis — URGA
Conductivity — UNITS: umho/cm

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test 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.

Background Data from Upgradient Wells

Well Number:	MW369
Date Collected	Result
3/18/2002	388.000
4/22/2002	404.000
7/15/2002	394.000
10/8/2002	403.000
1/8/2003	520.000
4/3/2003	487.000
7/8/2003	478.000
10/6/2003	476.000

Well Number:	MW372
Date Collected	Result
3/19/2002	508.000
4/23/2002	501.000
7/16/2002	507.000
10/8/2002	495.000
1/7/2003	508.700
4/2/2003	515.000
7/9/2003	576.000
10/7/2003	565.000

Statistics on Background Data

X= 482.856
S= 57.603
CV= 0.119
K factor = 2.523**
TL= 628.189

Because CV is less than or equal to 1, assume normal distribution and continue with statistical analysis.

Fourth Quarter 2014 Data Collected in October 2014

Well No.	Result	Gradient	Result >TL?
MW357	440.00	Downgradient	NO
MW360	542.00	Downgradient	NO
MW363	388.00	Downgradient	NO
MW366	450.00	Sidegradient	NO
MW369	371.00	Upgradient	NO
MW372	766.00	Upgradient	**YES**

Conclusion of Statistical Analysis on Historical Data

The following test well(s) exceeded the Upper Tolerance Limit, which is evidence of elevated concentration with respect to historical background data.

MW372

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5
TL Upper Tolerance Limit, TL = X + (K * S)
X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Interim Guidance, EPA, 1989, based on total number of background results*

C-746-U Fourth Quarter 2014 Statistical Analysis — URGA
Copper — 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 evidence of an exceedance of the statistically-derived historical background concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW369
Date Collected	Result
3/18/2002	0.025
4/22/2002	0.025
7/15/2002	0.050
10/8/2002	0.020
1/8/2003	0.020
4/3/2003	0.020
7/8/2003	0.020
10/6/2003	0.020

Well Number:	MW372
Date Collected	Result
3/19/2002	0.025
4/23/2002	0.025
7/16/2002	0.050
10/8/2002	0.020
1/7/2003	0.020
4/2/2003	0.020
7/9/2003	0.020
10/7/2003	0.020

Statistics on Background Data

X= 0.025
S= 0.010
CV= 0.400
K factor = 2.523**
TL= 0.050

Because CV is less than or equal to 1, assume normal distribution and continue with statistical analysis.

Fourth Quarter 2014 Data Collected in October 2014

Well No.	Result	Gradient	Result >TL?
MW357	0.001	Downgradient	NO
MW360	0.001	Downgradient	NO
MW363	0.001	Downgradient	NO
MW366	0.001	Sidegradient	NO
MW369	0.001	Upgradient	NO
MW372	0.000	Upgradient	NO

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5
TL Upper Tolerance Limit, TL = X + (K * S)
X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Interim Guidance, EPA, 1989, based on total number of background results*

C-746-U Fourth Quarter 2014 Statistical Analysis — URGA
Dissolved Oxygen — 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 evidence of an exceedance of the statistically-derived historical background concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW369
Date Collected	Result
3/18/2002	5.410
4/22/2002	1.570
7/15/2002	0.800
10/8/2002	1.090
1/8/2003	2.690
4/3/2003	2.040
7/8/2003	1.190
10/6/2003	1.780

Well Number:	MW372
Date Collected	Result
3/19/2002	3.890
4/23/2002	0.050
7/16/2002	1.330
10/8/2002	2.660
1/7/2003	0.400
4/2/2003	0.910
7/9/2003	1.420
10/7/2003	1.260

Statistics on Background Data

X= 1.781
S= 1.351
CV= 0.759
K factor = 2.523**
TL= 5.190

Because CV is less than or equal to 1, assume normal distribution and continue with statistical analysis.

Fourth Quarter 2014 Data Collected in October 2014

Well No.	Result	Gradient	Result >TL?
MW357	3.830	Downgradient	NO
MW360	1.310	Downgradient	NO
MW363	1.130	Downgradient	NO
MW366	3.560	Sidegradient	NO
MW369	2.100	Upgradient	NO
MW372	0.980	Upgradient	NO

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5
TL Upper Tolerance Limit, TL = X + (K * S)
X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Interim Guidance, EPA, 1989, based on total number of background results*

C-746-U Fourth Quarter 2014 Statistical Analysis — URGA
Dissolved Solids — 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 evidence of an exceedance of the statistically-derived historical background concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW369
Date Collected	Result
3/18/2002	173.000
4/22/2002	246.000
7/15/2002	232.000
10/8/2002	275.000
1/8/2003	269.000
4/3/2003	250.000
7/8/2003	295.000
10/6/2003	276.000

Well Number:	MW372
Date Collected	Result
3/19/2002	295.000
4/23/2002	322.000
7/16/2002	329.000
10/8/2002	290.000
1/7/2003	316.000
4/2/2003	311.000
7/9/2003	347.000
10/7/2003	337.000

Statistics on Background Data

X= 285.188
S= 44.908
CV= 0.157
K factor = 2.523**
TL= 398.489

Because CV is less than or equal to 1, assume normal distribution and continue with statistical analysis.

Fourth Quarter 2014 Data Collected in October 2014

Well No.	Result	Gradient	Result >TL?
MW357	234.00	Downgradient	NO
MW360	324.00	Downgradient	NO
MW363	189.00	Downgradient	NO
MW366	239.00	Sidegradient	NO
MW369	193.00	Upgradient	NO
MW372	476.00	Upgradient	**YES**

Conclusion of Statistical Analysis on Historical Data

The following test well(s) exceeded the Upper Tolerance Limit, which is evidence of elevated concentration with respect to historical background data.

MW372

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5
TL Upper Tolerance Limit, TL = X + (K * S)
X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Interim Guidance, EPA, 1989, based on total number of background results*

C-746-U Fourth Quarter 2014 Statistical Analysis — URGA
Iron — 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 evidence of an exceedance of the statistically-derived historical background concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW369
Date Collected	Result
3/18/2002	0.656
4/22/2002	0.695
7/15/2002	7.100
10/8/2002	21.500
1/8/2003	18.500
4/3/2003	14.900
7/8/2003	11.300
10/6/2003	14.900

Well Number:	MW372
Date Collected	Result
3/19/2002	5.950
4/23/2002	0.792
7/16/2002	1.780
10/8/2002	0.776
1/7/2003	3.550
4/2/2003	5.020
7/9/2003	10.000
10/7/2003	0.733

Statistics on Background Data

X= 7.385
S= 6.991
CV= 0.947
K factor = 2.523**
TL= 25.024

Because CV is less than or equal to 1, assume normal distribution and continue with statistical analysis.

Fourth Quarter 2014 Data Collected in October 2014

Well No.	Result	Gradient	Result >TL?
MW357	0.100	Downgradient	NO
MW360	4.780	Downgradient	NO
MW363	0.099	Downgradient	NO
MW366	0.121	Sidegradient	NO
MW369	0.339	Upgradient	NO
MW372	0.476	Upgradient	NO

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5
TL Upper Tolerance Limit, TL = X + (K * S)
X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Interim Guidance, EPA, 1989, based on total number of background results*

C-746-U Fourth Quarter 2014 Statistical Analysis — URGA
Magnesium — 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 evidence of an exceedance of the statistically-derived historical background concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW369
Date Collected	Result
3/18/2002	11.400
4/22/2002	12.000
7/15/2002	10.000
10/8/2002	8.620
1/8/2003	7.890
4/3/2003	7.970
7/8/2003	10.300
10/6/2003	9.140

Well Number:	MW372
Date Collected	Result
3/19/2002	15.700
4/23/2002	16.600
7/16/2002	15.400
10/8/2002	15.800
1/7/2003	15.800
4/2/2003	16.400
7/9/2003	15.200
10/7/2003	17.600

Statistics on Background Data

X= 12.864
S= 3.505
CV= 0.272
K factor = 2.523**
TL= 21.707

Because CV is less than or equal to 1, assume normal distribution and continue with statistical analysis.

Fourth Quarter 2014 Data Collected in October 2014

Well No.	Result	Gradient	Result >TL?
MW357	11.300	Downgradient	NO
MW360	9.160	Downgradient	NO
MW363	10.300	Downgradient	NO
MW366	12.200	Sidegradient	NO
MW369	7.030	Upgradient	NO
MW372	22.400	Upgradient	**YES**

Conclusion of Statistical Analysis on Historical Data

The following test well(s) exceeded the Upper Tolerance Limit, which is evidence of elevated concentration with respect to historical background data.

MW372

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5
TL Upper Tolerance Limit, TL = X + (K * S)
X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Interim Guidance, EPA, 1989, based on total number of background results*

C-746-U Fourth Quarter 2014 Statistical Analysis — URGA
Manganese — 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 evidence of an exceedance of the statistically-derived historical background concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW369
Date Collected	Result
3/18/2002	0.034
4/22/2002	0.062
7/15/2002	0.436
10/8/2002	0.867
1/8/2003	0.828
4/3/2003	0.672
7/8/2003	0.321
10/6/2003	0.714

Well Number:	MW372
Date Collected	Result
3/19/2002	0.205
4/23/2002	0.345
7/16/2002	0.210
10/8/2002	0.054
1/7/2003	0.537
4/2/2003	0.415
7/9/2003	0.654
10/7/2003	0.254

Statistics on Background Data

X= 0.413
S= 0.274
CV= 0.664
K factor = 2.523**
TL= 1.105

Because CV is less than or equal to 1, assume normal distribution and continue with statistical analysis.

Fourth Quarter 2014 Data Collected in October 2014

Well No.	Result	Gradient	Result >TL?
MW357	0.002	Downgradient	NO
MW360	0.255	Downgradient	NO
MW363	0.158	Downgradient	NO
MW366	0.036	Sidegradient	NO
MW369	0.038	Upgradient	NO
MW372	0.021	Upgradient	NO

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5
TL Upper Tolerance Limit, TL = X + (K * S)
X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Interim Guidance, EPA, 1989, based on total number of background results*

C-746-U Fourth Quarter 2014 Statistical Analysis — URGA
Molybdenum — 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 evidence of an exceedance of the statistically-derived historical background concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW369
Date Collected	Result
3/18/2002	0.025
4/22/2002	0.025
7/15/2002	0.025
10/8/2002	0.001
1/8/2003	0.001
4/3/2003	0.001
7/8/2003	0.001
10/6/2003	0.001
Well Number:	MW372
Date Collected	Result
3/19/2002	0.025
4/23/2002	0.025
7/16/2002	0.025
10/8/2002	0.001
1/7/2003	0.001
4/2/2003	0.001
7/9/2003	0.001
10/7/2003	0.001

Statistics on Background Data

X= 0.010
S= 0.012
CV= 1.199
K factor = 2.523**
TL= 0.040

Because CV is greater than 1, the natural logarithm of background and test well results were calculated.

Statistics on Transformed Background Data

X= -5.698
S= 1.607
CV= -0.282
K factor = 2.523**
TL= -1.643

Transformed Background Data from Upgradient Wells

Well Number:	MW369
Date Collected	LN(Result)
3/18/2002	-3.689
4/22/2002	-3.689
7/15/2002	-3.689
10/8/2002	-6.908
1/8/2003	-6.908
4/3/2003	-6.908
7/8/2003	-6.908
10/6/2003	-6.908
Well Number:	MW372
Date Collected	LN(Result)
3/19/2002	-3.689
4/23/2002	-3.689
7/16/2002	-3.689
10/8/2002	-6.908
1/7/2003	-6.908
4/2/2003	-6.908
7/9/2003	-6.859
10/7/2003	-6.908

Fourth Quarter 2014 Data Collected in October 2014

Well No.	Result	Gradient	Result >TL?
MW357	0.001	Downgradient	N/A
MW360	0.000	Downgradient	N/A
MW363	0.001	Downgradient	N/A
MW366	0.001	Sidegradient	N/A
MW369	0.000	Upgradient	N/A
MW372	0.000	Upgradient	N/A

Transformed Fourth Quarter 2014 Data Collected in October 2014

Well Number	LN(Result)	Result >TL?
MW357	-7.601	NO
MW360	-7.958	NO
MW363	-7.601	NO
MW366	-7.601	NO
MW369	-8.517	NO
MW372	-7.799	NO

Conclusion of Statistical Analysis on Transformed Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5
TL Upper Tolerance Limit, TL = X + (K * S)
X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Interim Guidance, EPA, 1989, based on total number of background results*

C-746-U Fourth Quarter 2014 Statistical Analysis — URGA
Nickel — 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 evidence of an exceedance of the statistically-derived historical background concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW369
Date Collected	Result
3/18/2002	0.050
4/22/2002	0.050
7/15/2002	0.050
10/8/2002	0.005
1/8/2003	0.005
4/3/2003	0.005
7/8/2003	0.013
10/6/2003	0.010

Well Number:	MW372
Date Collected	Result
3/19/2002	0.050
4/23/2002	0.050
7/16/2002	0.050
10/8/2002	0.005
1/7/2003	0.005
4/2/2003	0.005
7/9/2003	0.019
10/7/2003	0.005

Statistics on Background Data

X= 0.024
S= 0.021
CV= 0.910
K factor = 2.523**
TL= 0.078

Because CV is less than or equal to 1, assume normal distribution and continue with statistical analysis.

Fourth Quarter 2014 Data Collected in October 2014

Well No.	Result	Gradient	Result >TL?
MW357	0.001	Downgradient	NO
MW360	0.002	Downgradient	NO
MW363	0.001	Downgradient	NO
MW366	0.001	Sidegradient	NO
MW369	0.008	Upgradient	NO
MW372	0.002	Upgradient	NO

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5
TL Upper Tolerance Limit, TL = X + (K * S)
X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Interim Guidance, EPA, 1989, based on total number of background results*

C-746-U Fourth Quarter 2014 Statistical Analysis — URGA
Oxidation-Reduction Potential — UNITS: mV

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test 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.

Background Data from Upgradient Wells

Well Number:	MW369
Date Collected	Result
3/18/2002	215.000
4/22/2002	110.000
7/15/2002	20.000
1/8/2003	-5.000
4/3/2003	-18.000
7/8/2003	-67.000
10/6/2003	-1.000
1/7/2004	55.000
Well Number:	MW372
Date Collected	Result
3/19/2002	210.000
4/23/2002	65.000
7/16/2002	215.000
10/8/2002	185.000
1/7/2003	45.000
4/2/2003	65.000
7/9/2003	-39.000
10/7/2003	138.000

Statistics on Background Data

X= 74.563
S= 94.243
CV= 1.264
K factor = 2.523**
TL= 312.337

Because CV is greater than 1, the natural logarithm of background and test well results were calculated.

Statistics on Transformed Background Data

X = error
S = error
CV = error
K factor = 2.523**
TL# = 5.371

Because the natural log was not possible for all background values, the TL was considered equal to the maximum background value.

Transformed Background Data from Upgradient Wells

Well Number:	MW369
Date Collected	LN(Result)
3/18/2002	5.371
4/22/2002	4.700
7/15/2002	2.996
1/8/2003	#Func!
4/3/2003	#Func!
7/8/2003	#Func!
10/6/2003	#Func!
1/7/2004	4.007
Well Number:	MW372
Date Collected	LN(Result)
3/19/2002	5.347
4/23/2002	4.174
7/16/2002	5.371
10/8/2002	5.220
1/7/2003	3.807
4/2/2003	4.174
7/9/2003	#Func!
10/7/2003	4.927

Fourth Quarter 2014 Data Collected in October 2014

Well No.	Result	Gradient	Result >TL?
MW357	427.000	Downgradient	N/A
MW360	180.000	Downgradient	N/A
MW363	344.000	Downgradient	N/A
MW366	343.000	Sidegradient	N/A
MW369	405.000	Upgradient	N/A
MW372	88.000	Upgradient	N/A

Transformed Fourth Quarter 2014 Data Collected in October 2014

Well Number	LN(Result)	Result >TL?
MW357	6.057	**YES**
MW360	5.193	NO
MW363	5.841	**YES**
MW366	5.838	**YES**
MW369	6.004	**YES**
MW372	4.477	NO

Conclusion of Statistical Analysis on Transformed Historical Data

The following test well(s) exceeded the Upper Tolerance Limit, which is evidence of elevated concentration with respect to historical background data.

MW357

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5
TL Upper Tolerance Limit, TL = X + (K * S)
X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Interim Guidance, EPA, 1989, based on total number of background results*

C-746-U Fourth Quarter 2014 Statistical Analysis Oxidation-Reduction Potential (Continued)	URGA UNITS: mV

MW363
MW366
MW369

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.

S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5

TL Upper Tolerance Limit, TL = X + (K * S)

X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Interim Guidance, EPA, 1989, based on total number of background results*

C-746-U Fourth Quarter 2014 Statistical Analysis — URGA
PCB, total — UNITS: ug/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 evidence of an exceedance of the statistically-derived historical background concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW369
Date Collected	Result
3/18/2002	1.000
4/22/2002	0.170
7/15/2002	0.170
7/8/2003	1.150
10/6/2003	0.605
7/13/2004	0.420
7/20/2005	0.280
4/4/2006	0.230

Well Number:	MW372
Date Collected	Result
3/19/2002	1.000
4/23/2002	0.170
7/16/2002	0.170
7/9/2003	0.170
10/7/2003	0.170
7/14/2004	0.180
7/21/2005	0.170
4/5/2006	0.180

Statistics on Background Data

X= 0.390
S= 0.350
CV= 0.897
K factor = 2.523**
TL= 1.272

Because CV is less than or equal to 1, assume normal distribution and continue with statistical analysis.

Fourth Quarter 2014 Data Collected in October 2014

Well No.	Result	Gradient	Result >TL?
MW357	0.094	Downgradient	NO
MW360	0.094	Downgradient	NO
MW363	0.115	Downgradient	NO
MW366	0.096	Sidegradient	NO
MW369	0.039	Upgradient	NO
MW372	0.103	Upgradient	NO

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5
TL Upper Tolerance Limit, TL = X + (K * S)
X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Interim Guidance, EPA, 1989, based on total number of background results*

C-746-U Fourth Quarter 2014 Statistical Analysis — URGA
PCB-1242 — UNITS: ug/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 evidence of an exceedance of the statistically-derived historical background concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW369
Date Collected	Result
3/18/2002	1.000
4/22/2002	0.110
7/15/2002	0.110
7/8/2003	1.150
10/6/2003	0.090
7/13/2004	0.100
7/20/2005	0.100
4/4/2006	0.100

Well Number:	MW372
Date Collected	Result
3/19/2002	1.000
4/23/2002	0.110
7/16/2002	0.110
7/9/2003	0.130
10/7/2003	0.090
7/14/2004	0.100
7/21/2005	0.100
4/5/2006	0.100

Statistics on Background Data

X= 0.281
S= 0.383
CV= 1.361
K factor = 2.523**
TL= 1.247

Because CV is greater than 1, the natural logarithm of background and test well results were calculated.

Statistics on Transformed Background Data

X= -1.835
S= 0.938
CV= -0.511
K factor = 2.523**
TL= 0.532

Transformed Background Data from Upgradient Wells

Well Number:	MW369
Date Collected	LN(Result)
3/18/2002	0.000
4/22/2002	-2.207
7/15/2002	-2.207
7/8/2003	0.140
10/6/2003	-2.408
7/13/2004	-2.303
7/20/2005	-2.303
4/4/2006	-2.303

Well Number:	MW372
Date Collected	LN(Result)
3/19/2002	0.000
4/23/2002	-2.207
7/16/2002	-2.207
7/9/2003	-2.040
10/7/2003	-2.408
7/14/2004	-2.303
7/21/2005	-2.303
4/5/2006	-2.303

Fourth Quarter 2014 Data Collected in October 2014

Well No.	Result	Gradient	Result >TL?
MW357	0.094	Downgradient	N/A
MW360	0.094	Downgradient	N/A
MW363	0.115	Downgradient	N/A
MW366	0.096	Sidegradient	N/A
MW369	0.039	Upgradient	N/A
MW372	0.103	Upgradient	N/A

Transformed Fourth Quarter 2014 Data Collected in October 2014

Well Number	LN(Result)	Result >TL?
MW357	-2.361	NO
MW360	-2.370	NO
MW363	-2.163	NO
MW366	-2.341	NO
MW369	-3.257	NO
MW372	-2.273	NO

Conclusion of Statistical Analysis on Transformed Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5
TL Upper Tolerance Limit, TL = X + (K * S)
X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Interim Guidance, EPA, 1989, based on total number of background results*

C-746-U Fourth Quarter 2014 Statistical Analysis URGA
pH UNITS: Std Unit

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL and LL. If the test well result exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW369
Date Collected	Result
3/18/2002	6.100
4/22/2002	6.100
7/15/2002	6.100
10/8/2002	6.500
1/8/2003	6.500
4/3/2003	6.600
7/8/2003	6.500
10/6/2003	6.500

Well Number:	MW372
Date Collected	Result
3/19/2002	6.100
4/23/2002	6.120
7/16/2002	6.100
10/8/2002	6.060
1/7/2003	6.260
4/2/2003	6.150
7/9/2003	6.300
10/7/2003	6.400

Statistics on Background Data

X= 6.274
S= 0.194
CV= 0.031
K factor = 2.904**
TL= 6.837
LL= 5.711

Because CV is less than or equal to 1, assume normal distribution and continue with statistical analysis.

Fourth Quarter 2014 Data Collected in October 2014

Well No.	Result	Gradient	Result >TL?	Result <LL?
MW357	6.170	Downgradient	NO	NO
MW360	6.360	Downgradient	NO	NO
MW363	6.190	Downgradient	NO	NO
MW366	6.120	Sidegradient	NO	NO
MW369	6.090	Upgradient	NO	NO
MW372	6.160	Upgradient	NO	NO

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.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5
TL Upper Tolerance Limit, TL = X + (K * S), LL Lower Tolerance Limit, LL = X - (K * S)
X Mean, X = (sum of background results)/(count of background results)
** The K-factor was adjusted for pH to account for a two-sided tolerance interval instead of a one-sided tolerance limit. The K- factor for pH was computed using a formula from NIST/SEMATECH e-Handbook of Statistical Methods, http://www.itl.nist.gov/div898/handbook/, 2009.

C-746-U Fourth Quarter 2014 Statistical Analysis — URGA
Potassium — 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 evidence of an exceedance of the statistically-derived historical background concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW369
Date Collected	Result
3/18/2002	2.000
4/22/2002	2.210
7/15/2002	2.000
10/8/2002	0.966
1/8/2003	0.727
4/3/2003	0.800
7/8/2003	1.620
10/6/2003	1.140

Well Number:	MW372
Date Collected	Result
3/19/2002	2.040
4/23/2002	2.030
7/16/2002	2.000
10/8/2002	1.540
1/7/2003	1.880
4/2/2003	2.090
7/9/2003	1.780
10/7/2003	1.790

Statistics on Background Data

X= 1.663
S= 0.488
CV= 0.293
K factor = 2.523**
TL= 2.895

Because CV is less than or equal to 1, assume normal distribution and continue with statistical analysis.

Fourth Quarter 2014 Data Collected in October 2014

Well No.	Result	Gradient	Result >TL?
MW357	1.730	Downgradient	NO
MW360	0.719	Downgradient	NO
MW363	1.370	Downgradient	NO
MW366	1.880	Sidegradient	NO
MW369	0.534	Upgradient	NO
MW372	2.370	Upgradient	NO

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5
TL Upper Tolerance Limit, TL = X + (K * S)
X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Interim Guidance, EPA, 1989, based on total number of background results*

C-746-U Fourth Quarter 2014 Statistical Analysis — URGA
Radium-226 — 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 evidence of an exceedance of the statistically-derived historical background concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW369
Date Collected	Result
7/15/2002	28.400
10/8/2002	0.167
1/8/2003	0.173
10/6/2003	0.168
1/7/2004	0.702
4/7/2004	0.195
7/13/2004	0.256
10/7/2004	0.228
Well Number:	MW372
Date Collected	Result
7/16/2002	23.500
10/8/2002	0.195
1/7/2003	-0.844
10/7/2003	0.349
1/5/2004	0.239
4/5/2004	0.308
7/14/2004	0.147
10/7/2004	0.188

Statistics on Background Data

X= 3.398
S= 8.854
CV= 2.605
K factor = 2.523**
TL= 25.736

Because CV is greater than 1, the natural logarithm of background and test well results were calculated.

Statistics on Transformed Background Data

X = error
S = error
CV = error
K factor = 2.523**
TL# = 3.346

Because the natural log was not possible for all background values, the TL was considered equal to the maximum background value.

Transformed Background Data from Upgradient Wells

Well Number:	MW369
Date Collected	LN(Result)
7/15/2002	3.346
10/8/2002	-1.790
1/8/2003	-1.754
10/6/2003	-1.784
1/7/2004	-0.354
4/7/2004	-1.635
7/13/2004	-1.363
10/7/2004	-1.478
Well Number:	MW372
Date Collected	LN(Result)
7/16/2002	3.157
10/8/2002	-1.635
1/7/2003	#Func!
10/7/2003	-1.053
1/5/2004	-1.431
4/5/2004	-1.178
7/14/2004	-1.917
10/7/2004	-1.671

Fourth Quarter 2014 Data Collected in October 2014

Well No.	Result	Gradient	Result >TL?
MW357	0.301	Downgradient	N/A
MW360	0.466	Downgradient	N/A
MW363	0.523	Downgradient	N/A
MW366	0.707	Sidegradient	N/A
MW369	0.748	Upgradient	N/A
MW372	0.461	Upgradient	N/A

Transformed Fourth Quarter 2014 Data Collected in October 2014

Well Number	LN(Result)	Result >TL?
MW357	-1.201	NO
MW360	-0.764	NO
MW363	-0.648	NO
MW366	-0.347	NO
MW369	-0.290	NO
MW372	-0.774	NO

Conclusion of Statistical Analysis on Transformed Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5
TL Upper Tolerance Limit, TL = X + (K * S)
X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Interim Guidance, EPA, 1989, based on total number of background results*

C-746-U Fourth Quarter 2014 Statistical Analysis — URGA
Sodium — 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 evidence of an exceedance of the statistically-derived historical background concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW369
Date Collected	Result
3/18/2002	35.700
4/22/2002	37.600
7/15/2002	42.400
10/8/2002	66.900
1/8/2003	67.900
4/3/2003	61.800
7/8/2003	45.600
10/6/2003	59.100

Well Number:	MW372
Date Collected	Result
3/19/2002	37.200
4/23/2002	38.600
7/16/2002	35.600
10/8/2002	37.500
1/7/2003	34.100
4/2/2003	34.400
7/9/2003	44.100
10/7/2003	43.100

Statistics on Background Data

X= 45.100
S= 11.875
CV= 0.263
K factor = 2.523**
TL= 75.061

Because CV is less than or equal to 1, assume normal distribution and continue with statistical analysis.

Fourth Quarter 2014 Data Collected in October 2014

Well No.	Result	Gradient	Result >TL?
MW357	40.800	Downgradient	NO
MW360	85.200	Downgradient	**YES**
MW363	33.600	Downgradient	NO
MW366	45.900	Sidegradient	NO
MW369	53.400	Upgradient	NO
MW372	59.700	Upgradient	NO

Conclusion of Statistical Analysis on Historical Data

The following test well(s) exceeded the Upper Tolerance Limit, which is evidence of elevated concentration with respect to historical background data.

MW360

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5
TL Upper Tolerance Limit, TL = X + (K * S)
X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Interim Guidance, EPA, 1989, based on total number of background results*

C-746-U Fourth Quarter 2014 Statistical Analysis — URGA
Sulfate — 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 evidence of an exceedance of the statistically-derived historical background concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW369
Date Collected	Result
3/18/2002	15.500
4/22/2002	15.800
7/15/2002	13.800
10/8/2002	6.900
1/8/2003	10.500
4/3/2003	10.500
7/8/2003	10.900
10/6/2003	16.300

Well Number:	MW372
Date Collected	Result
3/19/2002	71.700
4/23/2002	74.700
7/16/2002	74.100
10/8/2002	70.500
1/7/2003	75.800
4/2/2003	81.800
7/9/2003	83.600
10/7/2003	88.100

Statistics on Background Data

X= 45.031
S= 33.919
CV= 0.753
K factor = 2.523**
TL= 130.609

Because CV is less than or equal to 1, assume normal distribution and continue with statistical analysis.

Fourth Quarter 2014 Data Collected in October 2014

Well No.	Result	Gradient	Result >TL?
MW357	54.900	Downgradient	NO
MW360	30.900	Downgradient	NO
MW363	26.400	Downgradient	NO
MW366	46.000	Sidegradient	NO
MW369	7.650	Upgradient	NO
MW372	118.00	Upgradient	NO

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5
TL Upper Tolerance Limit, TL = X + (K * S)
X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Interim Guidance, EPA, 1989, based on total number of background results*

C-746-U Fourth Quarter 2014 Statistical Analysis — URGA
Technetium-99 — 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 evidence of an exceedance of the statistically-derived historical background concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW369
Date Collected	Result
3/18/2002	41.700
4/22/2002	53.100
7/15/2002	18.100
10/8/2002	16.400
1/8/2003	3.490
4/3/2003	9.340
7/8/2003	17.500
10/6/2003	17.000

Well Number:	MW372
Date Collected	Result
3/19/2002	44.800
4/23/2002	0.802
7/16/2002	19.800
10/8/2002	46.100
1/7/2003	-0.973
4/2/2003	9.070
7/9/2003	0.000
10/7/2003	36.900

Statistics on Background Data

X= 20.821
S= 18.044
CV= 0.867
K factor = 2.523**
TL= 66.344

Because CV is less than or equal to 1, assume normal distribution and continue with statistical analysis.

Fourth Quarter 2014 Data Collected in October 2014

Well No.	Result	Gradient	Result >TL?
MW357	38.900	Downgradient	NO
MW360	-3.630	Downgradient	NO
MW363	5.230	Downgradient	NO
MW366	64.400	Sidegradient	NO
MW369	43.300	Upgradient	NO
MW372	107.00	Upgradient	**YES**

Conclusion of Statistical Analysis on Historical Data

The following test well(s) exceeded the Upper Tolerance Limit, which is evidence of elevated concentration with respect to historical background data.

MW372

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5
TL Upper Tolerance Limit, TL = X + (K * S)
X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Interim Guidance, EPA, 1989, based on total number of background results*

C-746-U Fourth Quarter 2014 Statistical Analysis — URGA
Total Organic Carbon (TOC) — 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 evidence of an exceedance of the statistically-derived historical background concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW369
Date Collected	Result
3/18/2002	1.700
4/22/2002	1.600
7/15/2002	3.100
10/8/2002	17.700
1/8/2003	9.000
4/3/2003	4.000
7/8/2003	4.900
10/6/2003	2.400
Well Number:	MW372
Date Collected	Result
3/19/2002	1.000
4/23/2002	1.200
7/16/2002	1.000
10/8/2002	1.000
1/7/2003	1.600
4/2/2003	1.500
7/9/2003	3.000
10/7/2003	1.500

Statistics on Background Data

X= 3.513
S= 4.307
CV= 1.226
K factor = 2.523**
TL= 14.378

Because CV is greater than 1, the natural logarithm of background and test well results were calculated.

Statistics on Transformed Background Data

X= 0.851
S= 0.828
CV= 0.973
K factor = 2.523**
TL= 2.940

Transformed Background Data from Upgradient Wells

Well Number:	MW369
Date Collected	LN(Result)
3/18/2002	0.531
4/22/2002	0.470
7/15/2002	1.131
10/8/2002	2.874
1/8/2003	2.197
4/3/2003	1.386
7/8/2003	1.589
10/6/2003	0.875
Well Number:	MW372
Date Collected	LN(Result)
3/19/2002	0.000
4/23/2002	0.182
7/16/2002	0.000
10/8/2002	0.000
1/7/2003	0.470
4/2/2003	0.405
7/9/2003	1.099
10/7/2003	0.405

Fourth Quarter 2014 Data Collected in October 2014

Well No.	Result	Gradient	Result >TL?
MW357	1.280	Downgradient	N/A
MW360	3.110	Downgradient	N/A
MW363	4.170	Downgradient	N/A
MW366	1.610	Sidegradient	N/A
MW369	1.590	Upgradient	N/A
MW372	2.740	Upgradient	N/A

Transformed Fourth Quarter 2014 Data Collected in October 2014

Well Number	LN(Result)	Result >TL?
MW357	0.247	NO
MW360	1.135	NO
MW363	1.428	NO
MW366	0.476	NO
MW369	0.464	NO
MW372	1.008	NO

Conclusion of Statistical Analysis on Transformed Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5
TL Upper Tolerance Limit, TL = X + (K * S)
X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Interim Guidance, EPA, 1989, based on total number of background results*

C-746-U Fourth Quarter 2014 Statistical Analysis — URGA
Total Organic Halides (TOX) — UNITS: ug/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 evidence of an exceedance of the statistically-derived historical background concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW369
Date Collected	Result
3/18/2002	50.000
4/22/2002	50.000
7/15/2002	81.000
10/8/2002	202.000
1/8/2003	177.000
4/3/2003	93.100
7/8/2003	17.500
10/6/2003	37.500

Well Number:	MW372
Date Collected	Result
3/19/2002	184.000
4/23/2002	50.000
7/16/2002	50.000
10/8/2002	50.000
1/7/2003	10.000
4/2/2003	12.700
7/9/2003	10.000
10/7/2003	12.600

Statistics on Background Data

X= 67.963
S= 64.316
CV= 0.946
K factor = 2.523**
TL= 230.231

Because CV is less than or equal to 1, assume normal distribution and continue with statistical analysis.

Fourth Quarter 2014 Data Collected in October 2014

Well No.	Result	Gradient	Result >TL?
MW357	8.700	Downgradient	NO
MW360	16.700	Downgradient	NO
MW363	7.700	Downgradient	NO
MW366	6.040	Sidegradient	NO
MW369	13.700	Upgradient	NO
MW372	6.420	Upgradient	NO

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5
TL Upper Tolerance Limit, TL = X + (K * S)
X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Interim Guidance, EPA, 1989, based on total number of background results*

C-746-U Fourth Quarter 2014 Statistical Analysis — URGA
Trichloroethene — UNITS: ug/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 evidence of an exceedance of the statistically-derived historical background concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW369
Date Collected	Result
3/18/2002	11.000
4/22/2002	16.000
7/15/2002	8.000
10/8/2002	3.000
1/8/2003	2.000
4/3/2003	3.000
7/8/2003	3.000
10/6/2003	2.000

Well Number:	MW372
Date Collected	Result
3/19/2002	5.000
4/23/2002	5.000
7/16/2002	4.000
10/8/2002	6.000
1/7/2003	5.000
4/2/2003	6.000
7/9/2003	5.000
10/7/2003	6.000

Statistics on Background Data

X= 5.625
S= 3.594
CV= 0.639
K factor = 2.523**
TL= 14.693

Because CV is less than or equal to 1, assume normal distribution and continue with statistical analysis.

Fourth Quarter 2014 Data Collected in October 2014

Well No.	Result	Gradient	Result >TL?
MW357	5.710	Downgradient	NO
MW372	7.790	Upgradient	NO

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5
TL Upper Tolerance Limit, TL = X + (K * S)
X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Interim Guidance, EPA, 1989, based on total number of background results*

C-746-U Fourth Quarter 2014 Statistical Analysis — URGA
Vanadium — 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 evidence of an exceedance of the statistically-derived historical background concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW369
Date Collected	Result
3/18/2002	0.025
4/22/2002	0.027
7/15/2002	0.025
10/8/2002	0.020
1/8/2003	0.020
4/3/2003	0.020
7/8/2003	0.020
10/6/2003	0.020

Well Number:	MW372
Date Collected	Result
3/19/2002	0.039
4/23/2002	0.037
7/16/2002	0.025
10/8/2002	0.020
1/7/2003	0.020
4/2/2003	0.020
7/9/2003	0.020
10/7/2003	0.020

Statistics on Background Data

X= 0.024
S= 0.006
CV= 0.259
K factor = 2.523**
TL= 0.039

Because CV is less than or equal to 1, assume normal distribution and continue with statistical analysis.

Fourth Quarter 2014 Data Collected in October 2014

Well No.	Result	Gradient	Result >TL?
MW357	0.005	Downgradient	NO
MW360	0.005	Downgradient	NO
MW363	0.005	Downgradient	NO
MW366	0.005	Sidegradient	NO
MW369	0.001	Upgradient	NO
MW372	0.005	Upgradient	NO

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5
TL Upper Tolerance Limit, TL = X + (K * S)
X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Interim Guidance, EPA, 1989, based on total number of background results*

C-746-U Fourth Quarter 2014 Statistical Analysis — URGA
Zinc — 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 evidence of an exceedance of the statistically-derived historical background concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW369
Date Collected	Result
3/18/2002	0.100
4/22/2002	0.100
7/15/2002	0.100
10/8/2002	0.025
1/8/2003	0.035
4/3/2003	0.035
7/8/2003	0.020
10/6/2003	0.020
Well Number:	MW372
Date Collected	Result
3/19/2002	0.725
4/23/2002	0.100
7/16/2002	0.100
10/8/2002	0.025
1/7/2003	0.035
4/2/2003	0.035
7/9/2003	0.200
10/7/2003	0.200

Statistics on Background Data

X= 0.116
S= 0.173
CV= 1.490
K factor = 2.523**
TL= 0.552

Because CV is greater than 1, the natural logarithm of background and test well results were calculated.

Statistics on Transformed Background Data

X= -2.729
S= 1.014
CV= -0.371
K factor = 2.523**
TL= -0.172

Transformed Background Data from Upgradient Wells

Well Number:	MW369
Date Collected	LN(Result)
3/18/2002	-2.303
4/22/2002	-2.303
7/15/2002	-2.303
10/8/2002	-3.689
1/8/2003	-3.352
4/3/2003	-3.352
7/8/2003	-3.912
10/6/2003	-3.912
Well Number:	MW372
Date Collected	LN(Result)
3/19/2002	-0.322
4/23/2002	-2.303
7/16/2002	-2.303
10/8/2002	-3.689
1/7/2003	-3.352
4/2/2003	-3.352
7/9/2003	-1.609
10/7/2003	-1.609

Fourth Quarter 2014 Data Collected in October 2014

Well No.	Result	Gradient	Result >TL?
MW357	0.004	Downgradient	N/A
MW360	0.010	Downgradient	N/A
MW363	0.010	Downgradient	N/A
MW366	0.007	Sidegradient	N/A
MW369	0.006	Upgradient	N/A
MW372	0.008	Upgradient	N/A

Transformed Fourth Quarter 2014 Data Collected in October 2014

Well Number	LN(Result)	Result >TL?
MW357	-5.519	NO
MW360	-4.605	NO
MW363	-4.605	NO
MW366	-4.936	NO
MW369	-5.104	NO
MW372	-4.830	NO

Conclusion of Statistical Analysis on Transformed Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5
TL Upper Tolerance Limit, TL = X + (K * S)
X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Interim Guidance, EPA, 1989, based on total number of background results*

C-746-U Fourth Quarter 2014 Statistical Analysis — LRGA
Aluminum — 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 evidence of an exceedance of the statistically-derived historical background concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW370
Date Collected	Result
3/17/2002	4.660
4/23/2002	0.200
7/15/2002	0.200
10/8/2002	0.200
1/8/2003	0.200
4/3/2003	0.200
7/9/2003	0.200
10/6/2003	0.200
Well Number:	MW373
Date Collected	Result
3/18/2002	22.700
4/23/2002	1.460
7/16/2002	0.253
10/8/2002	0.482
1/7/2003	0.608
4/2/2003	0.446
7/9/2003	0.200
10/7/2003	0.200

Statistics on Background Data

X= 2.026
S= 5.626
CV= 2.777
K factor = 2.523**
TL= 16.219

Because CV is greater than 1, the natural logarithm of background and test well results were calculated.

Statistics on Transformed Background Data

X= -0.803
S= 1.380
CV= -1.718
K factor = 2.523**
TL= 2.678

Transformed Background Data from Upgradient Wells

Well Number:	MW370
Date Collected	LN(Result)
3/17/2002	1.539
4/23/2002	-1.609
7/15/2002	-1.609
10/8/2002	-1.609
1/8/2003	-1.609
4/3/2003	-1.609
7/9/2003	-1.609
10/6/2003	-1.609
Well Number:	MW373
Date Collected	LN(Result)
3/18/2002	3.122
4/23/2002	0.378
7/16/2002	-1.374
10/8/2002	-0.730
1/7/2003	-0.498
4/2/2003	-0.807
7/9/2003	-1.609
10/7/2003	-1.609

Fourth Quarter 2014 Data Collected in October 2014

Well No.	Result	Gradient	Result >TL?
MW358	0.050	Downgradient	N/A
MW361	0.029	Downgradient	N/A
MW364	0.035	Downgradient	N/A
MW367	0.051	Sidegradient	N/A
MW370	0.050	Upgradient	N/A
MW373	0.050	Upgradient	N/A

Transformed Fourth Quarter 2014 Data Collected in October 2014

Well Number	LN(Result)	Result >TL?
MW358	-2.996	NO
MW361	-3.544	NO
MW364	-3.350	NO
MW367	-2.986	NO
MW370	-2.996	NO
MW373	-2.996	NO

Conclusion of Statistical Analysis on Transformed Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5
TL Upper Tolerance Limit, TL = X + (K * S)
X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Interim Guidance, EPA, 1989, based on total number of background results*

C-746-U Fourth Quarter 2014 Statistical Analysis — LRGA
Boron — 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 evidence of an exceedance of the statistically-derived historical background concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW370
Date Collected	Result
3/17/2002	2.000
4/23/2002	2.000
7/15/2002	2.000
10/8/2002	0.200
1/8/2003	0.200
4/3/2003	0.200
7/9/2003	0.200
10/6/2003	0.200

Well Number:	MW373
Date Collected	Result
3/18/2002	2.000
4/23/2002	2.000
7/16/2002	2.000
10/8/2002	0.790
1/7/2003	0.807
4/2/2003	1.130
7/9/2003	1.280
10/7/2003	1.240

Statistics on Background Data

X= 1.140
S= 0.780
CV= 0.684
K factor = 2.523**
TL= 3.108

Because CV is less than or equal to 1, assume normal distribution and continue with statistical analysis.

Fourth Quarter 2014 Data Collected in October 2014

Well No.	Result	Gradient	Result >TL?
MW358	0.437	Downgradient	NO
MW361	0.145	Downgradient	NO
MW364	0.011	Downgradient	NO
MW367	0.015	Sidegradient	NO
MW370	0.032	Upgradient	NO
MW373	1.650	Upgradient	NO

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5
TL Upper Tolerance Limit, TL = X + (K * S)
X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Interim Guidance, EPA, 1989, based on total number of background results*

C-746-U Fourth Quarter 2014 Statistical Analysis — LRGA
Bromide — 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 evidence of an exceedance of the statistically-derived historical background concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW370
Date Collected	Result
3/17/2002	1.000
4/23/2002	1.000
7/15/2002	1.000
10/8/2002	1.000
1/8/2003	1.000
4/3/2003	1.000
7/9/2003	1.000
10/6/2003	1.000

Well Number:	MW373
Date Collected	Result
3/18/2002	1.000
4/23/2002	1.000
7/16/2002	1.000
10/8/2002	1.000
1/7/2003	1.000
4/2/2003	1.000
7/9/2003	1.000
10/7/2003	1.000

Statistics on Background Data

X= 1.000
S= 0.000
CV= 0.000
K factor = 2.523**
TL= 1.000

Because CV is less than or equal to 1, assume normal distribution and continue with statistical analysis.

Fourth Quarter 2014 Data Collected in October 2014

Well No.	Result	Gradient	Result >TL?
MW358	0.473	Downgradient	NO
MW361	0.409	Downgradient	NO
MW364	0.422	Downgradient	NO
MW367	0.101	Sidegradient	NO
MW370	0.550	Upgradient	NO
MW373	0.609	Upgradient	NO

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5
TL Upper Tolerance Limit, TL = X + (K * S)
X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Interim Guidance, EPA, 1989, based on total number of background results*

C-746-U Fourth Quarter 2014 Statistical Analysis — LRGA
Calcium — 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 evidence of an exceedance of the statistically-derived historical background concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW370
Date Collected	Result
3/17/2002	34.800
4/23/2002	43.400
7/15/2002	33.200
10/8/2002	29.200
1/8/2003	31.300
4/3/2003	32.400
7/9/2003	22.900
10/6/2003	28.000

Well Number:	MW373
Date Collected	Result
3/18/2002	61.900
4/23/2002	59.200
7/16/2002	47.600
10/8/2002	46.100
1/7/2003	49.200
4/2/2003	57.800
7/9/2003	52.700
10/7/2003	64.900

Statistics on Background Data

X= 43.413
S= 13.444
CV= 0.310
K factor = 2.523**
TL= 77.331

Because CV is less than or equal to 1, assume normal distribution and continue with statistical analysis.

Fourth Quarter 2014 Data Collected in October 2014

Well No.	Result	Gradient	Result >TL?
MW358	35.700	Downgradient	NO
MW361	31.400	Downgradient	NO
MW364	29.500	Downgradient	NO
MW367	14.600	Sidegradient	NO
MW370	28.000	Upgradient	NO
MW373	72.400	Upgradient	NO

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5
TL Upper Tolerance Limit, TL = X + (K * S)
X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Interim Guidance, EPA, 1989, based on total number of background results*

C-746-U Fourth Quarter 2014 Statistical Analysis — LRGA
Chemical Oxygen Demand (COD) — 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 evidence of an exceedance of the statistically-derived historical background concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW370
Date Collected	Result
3/17/2002	35.000
4/23/2002	134.000
7/15/2002	35.000
10/8/2002	35.000
1/8/2003	35.000
4/3/2003	35.000
7/9/2003	35.000
10/6/2003	35.000

Well Number:	MW373
Date Collected	Result
3/18/2002	35.000
4/23/2002	47.000
7/16/2002	35.000
10/8/2002	35.000
1/7/2003	35.000
4/2/2003	35.000
7/9/2003	35.000
10/7/2003	35.000

Statistics on Background Data

X= 41.938
S= 24.732
CV= 0.590
K factor = 2.523**
TL= 104.336

Because CV is less than or equal to 1, assume normal distribution and continue with statistical analysis.

Fourth Quarter 2014 Data Collected in October 2014

Well No.	Result	Gradient	Result >TL?
MW358	20.000	Downgradient	NO
MW361	20.000	Downgradient	NO
MW364	8.100	Downgradient	NO
MW367	20.000	Sidegradient	NO
MW370	31.200	Upgradient	NO
MW373	12.900	Upgradient	NO

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5
TL Upper Tolerance Limit, TL = X + (K * S)
X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Interim Guidance, EPA, 1989, based on total number of background results*

C-746-U Fourth Quarter 2014 Statistical Analysis — LRGA
Chloride — 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 evidence of an exceedance of the statistically-derived historical background concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW370
Date Collected	Result
7/15/2002	55.500
10/8/2002	53.600
1/8/2003	52.900
4/3/2003	53.600
7/9/2003	51.900
10/6/2003	53.000
1/7/2004	53.000
4/7/2004	51.600

Well Number:	MW373
Date Collected	Result
7/16/2002	40.600
10/8/2002	38.800
1/7/2003	39.000
4/2/2003	38.400
7/9/2003	38.100
10/7/2003	38.000
1/6/2004	37.900
4/7/2004	38.800

Statistics on Background Data

X= 45.919
S= 7.524
CV= 0.164
K factor = 2.523**
TL= 64.901

Because CV is less than or equal to 1, assume normal distribution and continue with statistical analysis.

Fourth Quarter 2014 Data Collected in October 2014

Well No.	Result	Gradient	Result >TL?
MW358	34.500	Downgradient	NO
MW361	29.700	Downgradient	NO
MW364	32.600	Downgradient	NO
MW367	8.230	Sidegradient	NO
MW370	40.000	Upgradient	NO
MW373	43.500	Upgradient	NO

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5
TL Upper Tolerance Limit, TL = X + (K * S)
X Mean, X = (sum of background results)/(count of background results)

** Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Interim Guidance, EPA, 1989, based on total number of background results

C-746-U Fourth Quarter 2014 Statistical Analysis — LRGA
Cobalt — 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 evidence of an exceedance of the statistically-derived historical background concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW370
Date Collected	Result
3/17/2002	0.025
4/23/2002	0.025
7/15/2002	0.025
10/8/2002	0.017
1/8/2003	0.011
4/3/2003	0.009
7/9/2003	0.137
10/6/2003	0.046
Well Number:	MW373
Date Collected	Result
3/18/2002	0.025
4/23/2002	0.034
7/16/2002	0.025
10/8/2002	0.004
1/7/2003	0.003
4/2/2003	0.004
7/9/2003	0.041
10/7/2003	0.008

Statistics on Background Data

X= 0.027
S= 0.032
CV= 1.165
K factor = 2.523**
TL= 0.108

Because CV is greater than 1, the natural logarithm of background and test well results were calculated.

Statistics on Transformed Background Data

X= -4.058
S= 1.011
CV= -0.249
K factor = 2.523**
TL= -1.507

Transformed Background Data from Upgradient Wells

Well Number:	MW370
Date Collected	LN(Result)
3/17/2002	-3.689
4/23/2002	-3.689
7/15/2002	-3.689
10/8/2002	-4.051
1/8/2003	-4.556
4/3/2003	-4.677
7/9/2003	-1.988
10/6/2003	-3.073
Well Number:	MW373
Date Collected	LN(Result)
3/18/2002	-3.689
4/23/2002	-3.381
7/16/2002	-3.689
10/8/2002	-5.494
1/7/2003	-5.672
4/2/2003	-5.605
7/9/2003	-3.206
10/7/2003	-4.776

Fourth Quarter 2014 Data Collected in October 2014

Well No.	Result	Gradient	Result >TL?
MW358	0.004	Downgradient	N/A
MW361	0.000	Downgradient	N/A
MW364	0.001	Downgradient	N/A
MW367	0.005	Sidegradient	N/A
MW370	0.001	Upgradient	N/A
MW373	0.001	Upgradient	N/A

Transformed Fourth Quarter 2014 Data Collected in October 2014

Well Number	LN(Result)	Result >TL?
MW358	-5.624	NO
MW361	-7.875	NO
MW364	-6.630	NO
MW367	-5.384	NO
MW370	-7.209	NO
MW373	-6.928	NO

Conclusion of Statistical Analysis on Transformed Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5
TL Upper Tolerance Limit, TL = X + (K * S)
X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Interim Guidance, EPA, 1989, based on total number of background results*

C-746-U Fourth Quarter 2014 Statistical Analysis — LRGA
Conductivity — UNITS: umho/cm

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test 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.

Background Data from Upgradient Wells

Well Number:	MW370
Date Collected	Result
3/17/2002	406.000
4/23/2002	543.000
7/15/2002	476.000
10/8/2002	441.000
1/8/2003	486.000
4/3/2003	466.000
7/9/2003	479.000
10/6/2003	435.000

Well Number:	MW373
Date Collected	Result
3/18/2002	661.000
4/23/2002	801.000
7/16/2002	774.000
10/8/2002	680.000
1/7/2003	686.500
4/2/2003	763.000
7/9/2003	828.000
10/7/2003	814.000

Statistics on Background Data

X= 608.719
S= 156.157
CV= 0.257
K factor = 2.523**
TL= 1002.702

Because CV is less than or equal to 1, assume normal distribution and continue with statistical analysis.

Fourth Quarter 2014 Data Collected in October 2014

Well No.	Result	Gradient	Result >TL?
MW358	520.00	Downgradient	NO
MW361	476.00	Downgradient	NO
MW364	454.00	Downgradient	NO
MW367	276.00	Sidegradient	NO
MW370	437.00	Upgradient	NO
MW373	901.00	Upgradient	NO

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5
TL Upper Tolerance Limit, TL = X + (K * S)
X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Interim Guidance, EPA, 1989, based on total number of background results*

C-746-U Fourth Quarter 2014 Statistical Analysis — LRGA
Copper — 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 evidence of an exceedance of the statistically-derived historical background concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW370
Date Collected	Result
3/17/2002	0.025
4/23/2002	0.025
7/15/2002	0.050
10/8/2002	0.020
1/8/2003	0.020
4/3/2003	0.020
7/9/2003	0.020
10/6/2003	0.020

Well Number:	MW373
Date Collected	Result
3/18/2002	0.026
4/23/2002	0.025
7/16/2002	0.050
10/8/2002	0.020
1/7/2003	0.020
4/2/2003	0.020
7/9/2003	0.020
10/7/2003	0.020

Statistics on Background Data

X= 0.025
S= 0.010
CV= 0.399
K factor = 2.523**
TL= 0.050

Because CV is less than or equal to 1, assume normal distribution and continue with statistical analysis.

Fourth Quarter 2014 Data Collected in October 2014

Well No.	Result	Gradient	Result >TL?
MW358	0.001	Downgradient	NO
MW361	0.001	Downgradient	NO
MW364	0.001	Downgradient	NO
MW367	0.001	Sidegradient	NO
MW370	0.001	Upgradient	NO
MW373	0.001	Upgradient	NO

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5
TL Upper Tolerance Limit, TL = X + (K * S)
X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Interim Guidance, EPA, 1989, based on total number of background results*

C-746-U Fourth Quarter 2014 Statistical Analysis — LRGA
Dissolved Oxygen — 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 evidence of an exceedance of the statistically-derived historical background concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW370
Date Collected	Result
3/17/2002	4.320
4/23/2002	1.240
7/15/2002	0.750
10/8/2002	0.940
1/8/2003	3.080
4/3/2003	1.450
7/9/2003	1.220
10/6/2003	1.070

Well Number:	MW373
Date Collected	Result
3/18/2002	3.040
4/23/2002	0.030
7/16/2002	0.230
10/8/2002	0.860
1/7/2003	0.210
4/2/2003	1.190
7/9/2003	1.100
10/7/2003	1.460

Statistics on Background Data

X= 1.387
S= 1.153
CV= 0.831
K factor = 2.523**
TL= 4.295

Because CV is less than or equal to 1, assume normal distribution and continue with statistical analysis.

Fourth Quarter 2014 Data Collected in October 2014

Well No.	Result	Gradient	Result >TL?
MW358	0.940	Downgradient	NO
MW361	3.620	Downgradient	NO
MW364	2.580	Downgradient	NO
MW367	1.490	Sidegradient	NO
MW370	3.740	Upgradient	NO
MW373	1.370	Upgradient	NO

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5
TL Upper Tolerance Limit, TL = X + (K * S)
X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Interim Guidance, EPA, 1989, based on total number of background results*

C-746-U Fourth Quarter 2014 Statistical Analysis — LRGA
Dissolved Solids — 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 evidence of an exceedance of the statistically-derived historical background concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW370
Date Collected	Result
3/17/2002	236.000
4/23/2002	337.000
7/15/2002	266.000
10/8/2002	240.000
1/8/2003	282.000
4/3/2003	238.000
7/9/2003	248.000
10/6/2003	224.000

Well Number:	MW373
Date Collected	Result
3/18/2002	427.000
4/23/2002	507.000
7/16/2002	464.000
10/8/2002	408.000
1/7/2003	404.000
4/2/2003	450.000
7/9/2003	487.000
10/7/2003	481.000

Statistics on Background Data

X= 356.188
S= 106.752
CV= 0.300
K factor = 2.523**
TL= 625.523

Because CV is less than or equal to 1, assume normal distribution and continue with statistical analysis.

Fourth Quarter 2014 Data Collected in October 2014

Well No.	Result	Gradient	Result >TL?
MW358	261.00	Downgradient	NO
MW361	256.00	Downgradient	NO
MW364	217.00	Downgradient	NO
MW367	124.00	Sidegradient	NO
MW370	190.00	Upgradient	NO
MW373	536.00	Upgradient	NO

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5
TL Upper Tolerance Limit, TL = X + (K * S)
X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Interim Guidance, EPA, 1989, based on total number of background results*

C-746-U Fourth Quarter 2014 Statistical Analysis — LRGA
Iron — 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 evidence of an exceedance of the statistically-derived historical background concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW370
Date Collected	Result
3/17/2002	9.340
4/23/2002	4.330
7/15/2002	3.520
10/8/2002	7.450
1/8/2003	7.040
4/3/2003	4.640
7/9/2003	15.800
10/6/2003	6.490

Well Number:	MW373
Date Collected	Result
3/18/2002	37.600
4/23/2002	19.000
7/16/2002	10.700
10/8/2002	3.750
1/7/2003	3.870
4/2/2003	3.500
7/9/2003	7.720
10/7/2003	2.930

Statistics on Background Data

X= 9.230
S= 8.841
CV= 0.958
K factor = 2.523**
TL= 31.535

Because CV is less than or equal to 1, assume normal distribution and continue with statistical analysis.

Fourth Quarter 2014 Data Collected in October 2014

Well No.	Result	Gradient	Result >TL?
MW358	1.380	Downgradient	NO
MW361	0.239	Downgradient	NO
MW364	0.989	Downgradient	NO
MW367	16.600	Sidegradient	NO
MW370	0.037	Upgradient	NO
MW373	0.200	Upgradient	NO

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5
TL Upper Tolerance Limit, TL = X + (K * S)
X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Interim Guidance, EPA, 1989, based on total number of background results*

C-746-U Fourth Quarter 2014 Statistical Analysis — LRGA
Magnesium — 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 evidence of an exceedance of the statistically-derived historical background concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW370
Date Collected	Result
3/17/2002	12.100
4/23/2002	15.100
7/15/2002	12.400
10/8/2002	12.200
1/8/2003	11.500
4/3/2003	12.300
7/9/2003	10.000
10/6/2003	12.100

Well Number:	MW373
Date Collected	Result
3/18/2002	24.800
4/23/2002	22.700
7/16/2002	18.800
10/8/2002	21.100
1/7/2003	19.900
4/2/2003	25.500
7/9/2003	23.300
10/7/2003	26.900

Statistics on Background Data

X= 17.544
S= 5.911
CV= 0.337
K factor = 2.523**
TL= 32.458

Because CV is less than or equal to 1, assume normal distribution and continue with statistical analysis.

Fourth Quarter 2014 Data Collected in October 2014

Well No.	Result	Gradient	Result >TL?
MW358	15.100	Downgradient	NO
MW361	13.000	Downgradient	NO
MW364	11.900	Downgradient	NO
MW367	7.330	Sidegradient	NO
MW370	12.200	Upgradient	NO
MW373	27.400	Upgradient	NO

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5
TL Upper Tolerance Limit, TL = X + (K * S)
X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Interim Guidance, EPA, 1989, based on total number of background results*

C-746-U Fourth Quarter 2014 Statistical Analysis — LRGA
Manganese — 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 evidence of an exceedance of the statistically-derived historical background concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW370
Date Collected	Result
3/17/2002	0.244
4/23/2002	1.820
7/15/2002	1.220
10/8/2002	0.988
1/8/2003	0.729
4/3/2003	0.637
7/9/2003	2.510
10/6/2003	1.050

Well Number:	MW373
Date Collected	Result
3/18/2002	0.355
4/23/2002	2.160
7/16/2002	1.390
10/8/2002	0.717
1/7/2003	0.587
4/2/2003	0.545
7/9/2003	1.760
10/7/2003	0.570

Statistics on Background Data

X= 1.080
S= 0.674
CV= 0.624
K factor = 2.523**
TL= 2.780

Because CV is less than or equal to 1, assume normal distribution and continue with statistical analysis.

Fourth Quarter 2014 Data Collected in October 2014

Well No.	Result	Gradient	Result >TL?
MW358	0.287	Downgradient	NO
MW361	0.060	Downgradient	NO
MW364	0.325	Downgradient	NO
MW367	1.950	Sidegradient	NO
MW370	0.010	Upgradient	NO
MW373	0.060	Upgradient	NO

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5
TL Upper Tolerance Limit, TL = X + (K * S)
X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Interim Guidance, EPA, 1989, based on total number of background results*

C-746-U Fourth Quarter 2014 Statistical Analysis — LRGA
Molybdenum — 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 evidence of an exceedance of the statistically-derived historical background concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW370
Date Collected	Result
3/17/2002	0.025
4/23/2002	0.025
7/15/2002	0.025
10/8/2002	0.001
1/8/2003	0.001
4/3/2003	0.001
7/9/2003	0.001
10/6/2003	0.001
Well Number:	MW373
Date Collected	Result
3/18/2002	0.025
4/23/2002	0.025
7/16/2002	0.025
10/8/2002	0.001
1/7/2003	0.001
4/2/2003	0.001
7/9/2003	0.001
10/7/2003	0.001

Statistics on Background Data

X= 0.010
S= 0.012
CV= 1.198
K factor = 2.523**
TL= 0.040

Because CV is greater than 1, the natural logarithm of background and test well results were calculated.

Statistics on Transformed Background Data

X= -5.693
S= 1.604
CV= -0.282
K factor = 2.523**
TL= -1.647

Transformed Background Data from Upgradient Wells

Well Number:	MW370
Date Collected	LN(Result)
3/17/2002	-3.689
4/23/2002	-3.689
7/15/2002	-3.689
10/8/2002	-6.786
1/8/2003	-6.908
4/3/2003	-6.908
7/9/2003	-6.908
10/6/2003	-6.908
Well Number:	MW373
Date Collected	LN(Result)
3/18/2002	-3.689
4/23/2002	-3.689
7/16/2002	-3.689
10/8/2002	-6.908
1/7/2003	-6.908
4/2/2003	-6.908
7/9/2003	-6.908
10/7/2003	-6.908

Fourth Quarter 2014 Data Collected in October 2014

Well No.	Result	Gradient	Result >TL?
MW358	0.000	Downgradient	N/A
MW361	0.001	Downgradient	N/A
MW364	0.000	Downgradient	N/A
MW367	0.001	Sidegradient	N/A
MW370	0.000	Upgradient	N/A
MW373	0.001	Upgradient	N/A

Transformed Fourth Quarter 2014 Data Collected in October 2014

Well Number	LN(Result)	Result >TL?
MW358	-8.623	NO
MW361	-7.601	NO
MW364	-8.680	NO
MW367	-7.601	NO
MW370	-8.422	NO
MW373	-7.601	NO

Conclusion of Statistical Analysis on Transformed Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5
TL Upper Tolerance Limit, TL = X + (K * S)
X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Interim Guidance, EPA, 1989, based on total number of background results*

C-746-U Fourth Quarter 2014 Statistical Analysis — LRGA
Nickel — 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 evidence of an exceedance of the statistically-derived historical background concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW370
Date Collected	Result
3/17/2002	0.050
4/23/2002	0.050
7/15/2002	0.050
10/8/2002	0.005
1/8/2003	0.005
4/3/2003	0.005
7/9/2003	0.026
10/6/2003	0.010

Well Number:	MW373
Date Collected	Result
3/18/2002	0.050
4/23/2002	0.050
7/16/2002	0.050
10/8/2002	0.005
1/7/2003	0.005
4/2/2003	0.005
7/9/2003	0.011
10/7/2003	0.005

Statistics on Background Data

X= 0.024
S= 0.022
CV= 0.901
K factor = 2.523**
TL= 0.078

Because CV is less than or equal to 1, assume normal distribution and continue with statistical analysis.

Fourth Quarter 2014 Data Collected in October 2014

Well No.	Result	Gradient	Result >TL?
MW358	0.003	Downgradient	NO
MW361	0.001	Downgradient	NO
MW364	0.002	Downgradient	NO
MW367	0.003	Sidegradient	NO
MW370	0.001	Upgradient	NO
MW373	0.003	Upgradient	NO

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5
TL Upper Tolerance Limit, TL = X + (K * S)
X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Interim Guidance, EPA, 1989, based on total number of background results*

C-746-U Fourth Quarter 2014 Statistical Analysis — LRGA
Oxidation-Reduction Potential — UNITS: mV

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test 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.

Background Data from Upgradient Wells

Well Number:	MW370
Date Collected	Result
3/17/2002	140.000
4/23/2002	-15.000
7/15/2002	5.000
4/3/2003	49.000
7/9/2003	-35.000
10/6/2003	40.000
1/7/2004	101.000
4/7/2004	105.000
Well Number:	MW373
Date Collected	Result
3/18/2002	140.000
4/23/2002	-20.000
10/8/2002	10.000
1/7/2003	10.000
4/2/2003	67.000
7/9/2003	-29.000
10/7/2003	127.000
1/6/2004	52.000

Statistics on Background Data

X= 46.688
S= 60.986
CV= 1.306
K factor = 2.523**
TL= 200.555

Because CV is greater than 1, the natural logarithm of background and test well results were calculated.

Statistics on Transformed Background Data

X = error
S = error
CV = error
K factor = 2.523**
TL# = 4.942

Because the natural log was not possible for all background values, the TL was considered equal to the maximum background value.

Transformed Background Data from Upgradient Wells

Well Number:	MW370
Date Collected	LN(Result)
3/17/2002	4.942
4/23/2002	#Func!
7/15/2002	1.609
4/3/2003	3.892
7/9/2003	#Func!
10/6/2003	3.689
1/7/2004	4.615
4/7/2004	4.654
Well Number:	MW373
Date Collected	LN(Result)
3/18/2002	4.942
4/23/2002	#Func!
10/8/2002	2.303
1/7/2003	2.303
4/2/2003	4.205
7/9/2003	#Func!
10/7/2003	4.844
1/6/2004	3.951

Fourth Quarter 2014 Data Collected in October 2014

Well No.	Result	Gradient	Result >TL?
MW358	169.000	Downgradient	N/A
MW361	345.000	Downgradient	N/A
MW364	241.000	Downgradient	N/A
MW367	195.000	Sidegradient	N/A
MW370	363.000	Upgradient	N/A
MW373	404.000	Upgradient	N/A

Transformed Fourth Quarter 2014 Data Collected in October 2014

Well Number	LN(Result)	Result >TL?
MW358	5.130	**YES**
MW361	5.844	**YES**
MW364	5.485	**YES**
MW367	5.273	**YES**
MW370	5.894	**YES**
MW373	6.001	**YES**

Conclusion of Statistical Analysis on Transformed Historical Data

The following test well(s) exceeded the Upper Tolerance Limit, which is evidence of elevated concentration with respect to historical background data.

MW358

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5
TL Upper Tolerance Limit, TL = X + (K * S)
X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Interim Guidance, EPA, 1989, based on total number of background results*

C-746-U Fourth Quarter 2014 Statistical Analysis Oxidation-Reduction Potential (Continued)	LRGA UNITS: mV

MW361
MW364
MW367
MW370
MW373

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.

S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5

TL Upper Tolerance Limit, TL = X + (K * S)

X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Interim Guidance, EPA, 1989, based on total number of background results*

C-746-U Fourth Quarter 2014 Statistical Analysis — LRGA
pH — UNITS: Std Unit

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL and LL. If the test well result exceeds the TL or is less than the LL, that is statistically significant evidence of elevated or lowered concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW370
Date Collected	Result
3/17/2002	6.300
4/23/2002	6.400
7/15/2002	6.300
10/8/2002	6.300
1/8/2003	6.400
4/3/2003	6.500
7/9/2003	6.300
10/6/2003	6.500

Well Number:	MW373
Date Collected	Result
3/18/2002	6.000
4/23/2002	6.300
7/16/2002	6.450
10/8/2002	6.180
1/7/2003	6.350
4/2/2003	6.140
7/9/2003	6.100
10/7/2003	6.000

Statistics on Background Data

X= 6.283
S= 0.159
CV= 0.025
K factor = 2.904**
TL= 6.745
LL= 5.820

Because CV is less than or equal to 1, assume normal distribution and continue with statistical analysis.

Fourth Quarter 2014 Data Collected in October 2014

Well No.	Result	Gradient	Result >TL?	Result <LL?
MW358	6.220	Downgradient	NO	NO
MW361	6.070	Downgradient	NO	NO
MW364	6.230	Downgradient	NO	NO
MW367	6.110	Sidegradient	NO	NO
MW370	6.030	Upgradient	NO	NO
MW373	6.220	Upgradient	NO	NO

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.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5
TL Upper Tolerance Limit, TL = X + (K * S), LL Lower Tolerance Limit, LL = X - (K * S)
X Mean, X = (sum of background results)/(count of background results)
** The K-factor was adjusted for pH to account for a two-sided tolerance interval instead of a one-sided tolerance limit. The K- factor for pH was computed using a formula from NIST/SEMATECH e-Handbook of Statistical Methods, http://www.itl.nist.gov/div898/handbook/, 2009.

C-746-U Fourth Quarter 2014 Statistical Analysis — LRGA
Potassium — 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 evidence of an exceedance of the statistically-derived historical background concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW370
Date Collected	Result
3/17/2002	3.220
4/23/2002	3.430
7/15/2002	2.980
10/8/2002	2.460
1/8/2003	2.410
4/3/2003	2.430
7/9/2003	2.440
10/6/2003	2.480

Well Number:	MW373
Date Collected	Result
3/18/2002	4.340
4/23/2002	3.040
7/16/2002	2.930
10/8/2002	2.300
1/7/2003	2.450
4/2/2003	2.700
7/9/2003	2.680
10/7/2003	2.880

Statistics on Background Data

X= 2.823
S= 0.522
CV= 0.185
K factor = 2.523**
TL= 4.139

Because CV is less than or equal to 1, assume normal distribution and continue with statistical analysis.

Fourth Quarter 2014 Data Collected in October 2014

Well No.	Result	Gradient	Result >TL?
MW358	2.440	Downgradient	NO
MW361	2.220	Downgradient	NO
MW364	1.990	Downgradient	NO
MW367	2.620	Sidegradient	NO
MW370	2.380	Upgradient	NO
MW373	2.920	Upgradient	NO

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5
TL Upper Tolerance Limit, TL = X + (K * S)
X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Interim Guidance, EPA, 1989, based on total number of background results*

C-746-U Fourth Quarter 2014 Statistical Analysis — LRGA
Radium-226 — 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 evidence of an exceedance of the statistically-derived historical background concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW370
Date Collected	Result
7/15/2002	10.100
10/8/2002	-0.825
1/8/2003	0.415
10/6/2003	0.520
1/7/2004	1.030
4/7/2004	0.434
7/13/2004	0.532
10/7/2004	0.299
Well Number:	MW373
Date Collected	Result
7/16/2002	21.500
10/8/2002	0.033
1/7/2003	-0.844
10/7/2003	0.000
1/6/2004	0.177
4/7/2004	0.792
7/14/2004	0.327
10/7/2004	0.033

Statistics on Background Data

X= 2.158
S= 5.739
CV= 2.660
K factor = 2.523**
TL= 16.637

Because CV is greater than 1, the natural logarithm of background and test well results were calculated.

Statistics on Transformed Background Data

X = error
S = error
CV = error
K factor = 2.523**
TL# = 3.068

Because the natural log was not possible for all background values, the TL was considered equal to the maximum background value.

Transformed Background Data from Upgradient Wells

Well Number:	MW370
Date Collected	LN(Result)
7/15/2002	2.313
10/8/2002	#Func!
1/8/2003	-0.879
10/6/2003	-0.654
1/7/2004	0.030
4/7/2004	-0.835
7/13/2004	-0.631
10/7/2004	-1.207
Well Number:	MW373
Date Collected	LN(Result)
7/16/2002	3.068
10/8/2002	-3.420
1/7/2003	#Func!
10/7/2003	#Func!
1/6/2004	-1.732
4/7/2004	-0.233
7/14/2004	-1.118
10/7/2004	-3.411

Fourth Quarter 2014 Data Collected in October 2014

Well No.	Result	Gradient	Result >TL?
MW358	0.372	Downgradient	N/A
MW361	0.198	Downgradient	N/A
MW364	0.497	Downgradient	N/A
MW367	0.772	Sidegradient	N/A
MW370	0.818	Upgradient	N/A
MW373	0.420	Upgradient	N/A

Transformed Fourth Quarter 2014 Data Collected in October 2014

Well Number	LN(Result)	Result >TL?
MW358	-0.989	NO
MW361	-1.619	NO
MW364	-0.699	NO
MW367	-0.259	NO
MW370	-0.201	NO
MW373	-0.868	NO

Conclusion of Statistical Analysis on Transformed Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5
TL Upper Tolerance Limit, TL = X + (K * S)
X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Interim Guidance, EPA, 1989, based on total number of background results*

C-746-U Fourth Quarter 2014 Statistical Analysis — LRGA
Sodium — 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 evidence of an exceedance of the statistically-derived historical background concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW370
Date Collected	Result
3/17/2002	31.800
4/23/2002	50.000
7/15/2002	44.700
10/8/2002	40.000
1/8/2003	44.600
4/3/2003	41.900
7/9/2003	40.000
10/6/2003	38.100

Well Number:	MW373
Date Collected	Result
3/18/2002	43.400
4/23/2002	79.800
7/16/2002	87.700
10/8/2002	61.600
1/7/2003	59.300
4/2/2003	62.100
7/9/2003	50.100
10/7/2003	49.600

Statistics on Background Data

X= 51.544
S= 15.227
CV= 0.295
K factor = 2.523**
TL= 89.962

Because CV is less than or equal to 1, assume normal distribution and continue with statistical analysis.

Fourth Quarter 2014 Data Collected in October 2014

Well No.	Result	Gradient	Result >TL?
MW358	40.100	Downgradient	NO
MW361	42.500	Downgradient	NO
MW364	41.100	Downgradient	NO
MW367	15.600	Sidegradient	NO
MW370	42.900	Upgradient	NO
MW373	61.000	Upgradient	NO

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5
TL Upper Tolerance Limit, TL = X + (K * S)
X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Interim Guidance, EPA, 1989, based on total number of background results*

C-746-U Fourth Quarter 2014 Statistical Analysis — LRGA
Sulfate — 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 evidence of an exceedance of the statistically-derived historical background concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW370
Date Collected	Result
3/17/2002	17.400
4/23/2002	37.900
7/15/2002	15.700
10/8/2002	13.400
1/8/2003	14.400
4/3/2003	18.100
7/9/2003	9.600
10/6/2003	16.500
Well Number:	MW373
Date Collected	Result
3/18/2002	163.300
4/23/2002	809.600
7/16/2002	109.400
10/8/2002	110.600
1/7/2003	113.700
4/2/2003	133.000
7/9/2003	182.100
10/7/2003	193.400

Statistics on Background Data

X= 122.381
S= 195.095
CV= 1.594
K factor = 2.523**
TL= 614.606

Because CV is greater than 1, the natural logarithm of background and test well results were calculated.

Statistics on Transformed Background Data

X= 3.985
S= 1.323
CV= 0.332
K factor = 2.523**
TL= 7.322

Transformed Background Data from Upgradient Wells

Well Number:	MW370
Date Collected	LN(Result)
3/17/2002	2.856
4/23/2002	3.635
7/15/2002	2.754
10/8/2002	2.595
1/8/2003	2.667
4/3/2003	2.896
7/9/2003	2.262
10/6/2003	2.803
Well Number:	MW373
Date Collected	LN(Result)
3/18/2002	5.096
4/23/2002	6.697
7/16/2002	4.695
10/8/2002	4.706
1/7/2003	4.734
4/2/2003	4.890
7/9/2003	5.205
10/7/2003	5.265

Fourth Quarter 2014 Data Collected in October 2014

Well No.	Result	Gradient	Result >TL?
MW358	83.200	Downgradient	N/A
MW361	73.900	Downgradient	N/A
MW364	68.400	Downgradient	N/A
MW367	21.400	Sidegradient	N/A
MW370	19.100	Upgradient	N/A
MW373	181.000	Upgradient	N/A

Transformed Fourth Quarter 2014 Data Collected in October 2014

Well Number	LN(Result)	Result >TL?
MW358	4.421	NO
MW361	4.303	NO
MW364	4.225	NO
MW367	3.063	NO
MW370	2.950	NO
MW373	5.198	NO

Conclusion of Statistical Analysis on Transformed Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5
TL Upper Tolerance Limit, TL = X + (K * S)
X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Interim Guidance, EPA, 1989, based on total number of background results*

C-746-U Fourth Quarter 2014 Statistical Analysis — LRGA
Technetium-99 — 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 evidence of an exceedance of the statistically-derived historical background concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW370
Date Collected	Result
3/17/2002	10.800
4/23/2002	8.530
7/15/2002	5.090
10/8/2002	4.780
1/8/2003	-5.120
4/3/2003	5.110
7/9/2003	4.250
10/6/2003	6.540
Well Number:	MW373
Date Collected	Result
3/18/2002	16.500
4/23/2002	3.490
7/16/2002	1.420
10/8/2002	-6.060
1/7/2003	-8.410
4/2/2003	26.300
7/9/2003	3.060
10/7/2003	46.200

Statistics on Background Data

X= 7.655
S= 13.274
CV= 1.734
K factor = 2.523**
TL= 41.146

Because CV is greater than 1, the natural logarithm of background and test well results were calculated.

Statistics on Transformed Background Data

X = error
S = error
CV = error
K factor = 2.523**
TL# = 3.833

Because the natural log was not possible for all background values, the TL was considered equal to the maximum background value.

Transformed Background Data from Upgradient Wells

Well Number:	MW370
Date Collected	LN(Result)
3/17/2002	2.380
4/23/2002	2.144
7/15/2002	1.627
10/8/2002	1.564
1/8/2003	#Func!
4/3/2003	1.631
7/9/2003	1.447
10/6/2003	1.878
Well Number:	MW373
Date Collected	LN(Result)
3/18/2002	2.803
4/23/2002	1.250
7/16/2002	0.351
10/8/2002	#Func!
1/7/2003	#Func!
4/2/2003	3.270
7/9/2003	1.118
10/7/2003	3.833

Fourth Quarter 2014 Data Collected in October 2014

Well No.	Result	Gradient	Result >TL?
MW358	41.900	Downgradient	N/A
MW361	41.900	Downgradient	N/A
MW364	39.600	Downgradient	N/A
MW367	-3.340	Sidegradient	N/A
MW370	22.500	Upgradient	N/A
MW373	38.000	Upgradient	N/A

Transformed Fourth Quarter 2014 Data Collected in October 2014

Well Number	LN(Result)	Result >TL?
MW358	3.735	NO
MW361	3.735	NO
MW364	3.679	NO
MW367	#Error	NO
MW370	3.114	NO
MW373	3.638	NO

Conclusion of Statistical Analysis on Transformed Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5
TL Upper Tolerance Limit, TL = X + (K * S)
X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Interim Guidance, EPA, 1989, based on total number of background results*

C-746-U Fourth Quarter 2014 Statistical Analysis — LRGA
Total Organic Carbon (TOC) — 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 evidence of an exceedance of the statistically-derived historical background concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW370
Date Collected	Result
3/17/2002	1.200
4/23/2002	4.300
7/15/2002	2.600
10/8/2002	2.300
1/8/2003	3.000
4/3/2003	1.200
7/9/2003	2.600
10/6/2003	1.700
Well Number:	MW373
Date Collected	Result
3/18/2002	1.100
4/23/2002	17.500
7/16/2002	49.000
10/8/2002	2.900
1/7/2003	3.900
4/2/2003	2.500
7/9/2003	1.700
10/7/2003	1.200

Statistics on Background Data

X= 6.169
S= 12.072
CV= 1.957
K factor = 2.523**
TL= 36.626

Because CV is greater than 1, the natural logarithm of background and test well results were calculated.

Statistics on Transformed Background Data

X= 1.069
S= 1.014
CV= 0.948
K factor = 2.523**
TL= 3.626

Transformed Background Data from Upgradient Wells

Well Number:	MW370
Date Collected	LN(Result)
3/17/2002	0.182
4/23/2002	1.459
7/15/2002	0.956
10/8/2002	0.833
1/8/2003	1.099
4/3/2003	0.182
7/9/2003	0.956
10/6/2003	0.531
Well Number:	MW373
Date Collected	LN(Result)
3/18/2002	0.095
4/23/2002	2.862
7/16/2002	3.892
10/8/2002	1.065
1/7/2003	1.361
4/2/2003	0.916
7/9/2003	0.531
10/7/2003	0.182

Fourth Quarter 2014 Data Collected in October 2014

Well No.	Result	Gradient	Result >TL?
MW358	1.340	Downgradient	N/A
MW361	1.350	Downgradient	N/A
MW364	1.470	Downgradient	N/A
MW367	1.840	Sidegradient	N/A
MW370	0.853	Upgradient	N/A
MW373	1.890	Upgradient	N/A

Transformed Fourth Quarter 2014 Data Collected in October 2014

Well Number	LN(Result)	Result >TL?
MW358	0.293	NO
MW361	0.300	NO
MW364	0.385	NO
MW367	0.610	NO
MW370	-0.159	NO
MW373	0.637	NO

Conclusion of Statistical Analysis on Transformed Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5
TL Upper Tolerance Limit, TL = X + (K * S)
X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Interim Guidance, EPA, 1989, based on total number of background results*

C-746-U Fourth Quarter 2014 Statistical Analysis — LRGA
Total Organic Halides (TOX) — UNITS: ug/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 evidence of an exceedance of the statistically-derived historical background concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW370
Date Collected	Result
3/17/2002	50.000
4/23/2002	228.000
7/15/2002	88.000
10/8/2002	58.000
1/8/2003	72.400
4/3/2003	26.600
7/9/2003	16.400
10/6/2003	31.100

Well Number:	MW373
Date Collected	Result
3/18/2002	50.000
4/23/2002	276.000
7/16/2002	177.000
10/8/2002	76.000
1/7/2003	45.900
4/2/2003	57.800
7/9/2003	10.000
10/7/2003	13.900

Statistics on Background Data

X= 79.819
S= 78.470
CV= 0.983
K factor = 2.523**
TL= 277.798

Because CV is less than or equal to 1, assume normal distribution and continue with statistical analysis.

Fourth Quarter 2014 Data Collected in October 2014

Well No.	Result	Gradient	Result >TL?
MW358	6.200	Downgradient	NO
MW361	6.180	Downgradient	NO
MW364	10.000	Downgradient	NO
MW367	10.000	Sidegradient	NO
MW370	3.800	Upgradient	NO
MW373	28.000	Upgradient	NO

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5
TL Upper Tolerance Limit, TL = X + (K * S)
X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Interim Guidance, EPA, 1989, based on total number of background results*

C-746-U Fourth Quarter 2014 Statistical Analysis — LRGA
Trichloroethene — UNITS: ug/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 evidence of an exceedance of the statistically-derived historical background concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW370
Date Collected	Result
3/17/2002	19.000
4/23/2002	17.000
7/15/2002	15.000
10/8/2002	18.000
1/8/2003	17.000
4/3/2003	18.000
7/9/2003	15.000
10/6/2003	16.000

Well Number:	MW373
Date Collected	Result
3/18/2002	5.000
4/23/2002	25.000
7/16/2002	3.000
10/8/2002	4.000
1/7/2003	6.000
4/2/2003	5.000
7/9/2003	6.000
10/7/2003	6.000

Statistics on Background Data

X= 12.188
S= 6.950
CV= 0.570
K factor = 2.523**
TL= 29.721

Because CV is less than or equal to 1, assume normal distribution and continue with statistical analysis.

Fourth Quarter 2014 Data Collected in October 2014

Well No.	Result	Gradient	Result >TL?
MW358	5.240	Downgradient	NO
MW373	7.670	Upgradient	NO

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5
TL Upper Tolerance Limit, TL = X + (K * S)
X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Interim Guidance, EPA, 1989, based on total number of background results*

C-746-U Fourth Quarter 2014 Statistical Analysis — LRGA
Vanadium — 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 evidence of an exceedance of the statistically-derived historical background concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW370
Date Collected	Result
3/17/2002	0.035
4/23/2002	0.033
7/15/2002	0.025
10/8/2002	0.020
1/8/2003	0.020
4/3/2003	0.020
7/9/2003	0.020
10/6/2003	0.020

Well Number:	MW373
Date Collected	Result
3/18/2002	0.048
4/23/2002	0.025
7/16/2002	0.025
10/8/2002	0.020
1/7/2003	0.020
4/2/2003	0.020
7/9/2003	0.020
10/7/2003	0.020

Statistics on Background Data

X= 0.024
S= 0.008
CV= 0.324
K factor = 2.523**
TL= 0.044

Because CV is less than or equal to 1, assume normal distribution and continue with statistical analysis.

Fourth Quarter 2014 Data Collected in October 2014

Well No.	Result	Gradient	Result >TL?
MW358	0.005	Downgradient	NO
MW361	0.005	Downgradient	NO
MW364	0.005	Downgradient	NO
MW367	0.002	Sidegradient	NO
MW370	0.005	Upgradient	NO
MW373	0.005	Upgradient	NO

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5
TL Upper Tolerance Limit, TL = X + (K * S)
X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Interim Guidance, EPA, 1989, based on total number of background results*

C-746-U Fourth Quarter 2014 Statistical Analysis — LRGA
Zinc — 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 evidence of an exceedance of the statistically-derived historical background concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW370
Date Collected	Result
3/17/2002	0.100
4/23/2002	0.100
7/15/2002	0.100
10/8/2002	0.025
1/8/2003	0.035
4/3/2003	0.035
7/9/2003	0.020
10/6/2003	0.020

Well Number:	MW373
Date Collected	Result
3/18/2002	0.100
4/23/2002	0.100
7/16/2002	0.100
10/8/2002	0.025
1/7/2003	0.035
4/2/2003	0.035
7/9/2003	0.023
10/7/2003	0.020

Statistics on Background Data

X= 0.055
S= 0.037
CV= 0.673
K factor = 2.523**
TL= 0.147

Because CV is less than or equal to 1, assume normal distribution and continue with statistical analysis.

Fourth Quarter 2014 Data Collected in October 2014

Well No.	Result	Gradient	Result >TL?
MW358	0.005	Downgradient	NO
MW361	0.010	Downgradient	NO
MW364	0.028	Downgradient	NO
MW367	0.006	Sidegradient	NO
MW370	0.004	Upgradient	NO
MW373	0.007	Upgradient	NO

Conclusion of Statistical Analysis on Historical Data

None of the test wells exceeded the Upper Tolerance Limit, which is evidence that concentrations in these wells are not different from historical background concentrations to a statistically-significant level.

NOTE: For UCRS wells, background ("upgradient") wells are those located in the same direction as RGA wells located upgradient from the landfill.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5
TL Upper Tolerance Limit, TL = X + (K * S)
X Mean, X = (sum of background results)/(count of background results)

** *Read from Table 5, Appendix B of Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Interim Guidance, EPA, 1989, based on total number of background results*

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ATTACHMENT D2

COMPARISON OF CURRENT DATA TO ONE-SIDED UPPER TOLERANCE INTERVAL TEST CALCULATED USING CURRENT BACKGROUND DATA

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C-746-U Fourth Quarter 2014 Statistical Analysis — UCRS
Dissolved Oxygen — 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.

Background Data from Upgradient Wells

Well Number:	MW371
Date Collected	Result
10/3/2012	1.650
1/10/2013	1.350
4/9/2013	1.610
7/16/2013	2.760
10/8/2013	1.380
1/14/2014	1.970
4/14/2014	3.870
7/8/2014	2.640

Well Number:	MW374
Date Collected	Result
10/2/2012	2.980
1/9/2013	3.890
4/8/2013	6.520
7/16/2013	3.410
10/9/2013	2.740
1/14/2014	1.670
4/15/2014	3.440
7/7/2014	1.760

Statistics on Background Data

X= 2.728
S= 1.338
CV= 0.490
K factor = 2.523**
TL= 6.102

Because CV is less than or equal to 1, assume normal distribution and continue with statistical analysis.

Fourth Quarter 2014 Data Collected in October 2014

Well No.	Result	Gradient	Result >TL?
MW362	2.730	Downgradient	NO
MW371	0.980	Upgradient	NO
MW374	0.860	Upgradient	NO
MW375	1.420	Sidegradient	NO

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.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5
TL Upper Tolerance Limit, TL = X + (K * S)
X Mean, X = (sum of background results)/(count of background results)
** Read from Table 5, Appendix B of *Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,* Interim Guidance, EPA, 1989, based on total number of background results

C-746-U Fourth Quarter 2014 Statistical Analysis — UCRS
Oxidation-Reduction Potential — UNITS: mV

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test 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.

Background Data from Upgradient Wells

Well Number:	MW371
Date Collected	Result
10/3/2012	524.000
1/10/2013	286.000
4/9/2013	690.000
7/16/2013	390.000
10/8/2013	544.000
1/14/2014	374.000
4/14/2014	476.000
7/8/2014	335.000

Well Number:	MW374
Date Collected	Result
10/2/2012	211.000
1/9/2013	534.000
4/8/2013	313.000
7/16/2013	344.000
10/9/2013	802.000
1/14/2014	515.000
4/15/2014	499.000
7/7/2014	259.000

Statistics on Background Data

X= 443.500
S= 159.708
CV= 0.360
K factor = 2.523**
TL= 846.445

Because CV is less than or equal to 1, assume normal distribution and continue with statistical analysis.

Fourth Quarter 2014 Data Collected in October 2014

Well No.	Result	Gradient	Result >TL?
MW362	179.000	Downgradient	NO
MW371	360.000	Upgradient	NO
MW374	257.000	Upgradient	NO
MW375	335.000	Sidegradient	NO

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.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5
TL Upper Tolerance Limit, TL = X + (K * S)
X Mean, X = (sum of background results)/(count of background results)
** Read from Table 5, Appendix B of *Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,* Interim Guidance, EPA, 1989, based on total number of background results

C-746-U Fourth Quarter 2014 Statistical Analysis — UCRS
Sulfate — 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.

Background Data from Upgradient Wells

Well Number:	MW371
Date Collected	Result
10/3/2012	11.000
1/10/2013	9.600
4/9/2013	14.000
7/16/2013	19.000
10/8/2013	13.000
1/14/2014	9.900
4/14/2014	16.400
7/8/2014	18.600

Well Number:	MW374
Date Collected	Result
10/2/2012	5.100
1/9/2013	5.300
4/8/2013	6.000
7/16/2013	5.600
10/9/2013	6.600
1/14/2014	5.100
4/15/2014	5.630
7/7/2014	5.640

Statistics on Background Data

X= 9.779
S= 5.010
CV= 0.512
K factor = 2.523**
TL= 22.419

Because CV is less than or equal to 1, assume normal distribution and continue with statistical analysis.

Fourth Quarter 2014 Data Collected in October 2014

Well No.	Result	Gradient	Result >TL?
MW362	23.400	Downgradient	**YES**
MW371	10.500	Upgradient	NO
MW374	5.730	Upgradient	NO
MW375	23.600	Sidegradient	**YES**

Conclusion of Statistical Analysis on Current Data

The following test well(s) exceeded the Upper Tolerance Limit, which is evidence of elevated concentration with respect to current background data.

MW362

MW375

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5
TL Upper Tolerance Limit, TL = X + (K * S)
X Mean, X = (sum of background results)/(count of background results)
** Read from Table 5, Appendix B of *Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,* Interim Guidance, EPA, 1989, based on total number of background results

C-746-U Fourth Quarter 2014 Statistical Analysis — URGA
Beta activity — 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.

Background Data from Upgradient Wells

Well Number:	MW369
Date Collected	Result
10/3/2012	15.000
1/10/2013	16.800
4/10/2013	22.000
7/16/2013	16.700
10/8/2013	17.300
1/14/2014	26.800
4/14/2014	15.700
7/8/2014	5.760

Well Number:	MW372
Date Collected	Result
10/2/2012	77.800
1/9/2013	95.600
4/8/2013	23.200
7/16/2013	115.000
10/9/2013	131.000
1/14/2014	102.000
4/16/2014	7.560
7/7/2014	30.300

Statistics on Background Data

X= 44.908
S= 43.047
CV= 0.959
K factor = 2.523**
TL= 153.516

Because CV is less than or equal to 1, assume normal distribution and continue with statistical analysis.

Fourth Quarter 2014 Data Collected in October 2014

Well No.	Result	Gradient	Result >TL?
MW372	74.000	Upgradient	NO

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.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5
TL Upper Tolerance Limit, TL = X + (K * S)
X Mean, X = (sum of background results)/(count of background results)
** Read from Table 5, Appendix B of *Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,* Interim Guidance, EPA, 1989, based on total number of background results

C-746-U Fourth Quarter 2014 Statistical Analysis — URGA
Calcium — 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.

Background Data from Upgradient Wells

Well Number:	MW369
Date Collected	Result
10/3/2012	16.400
1/10/2013	16.300
4/10/2013	16.400
7/16/2013	19.900
10/8/2013	16.200
1/14/2014	21.800
4/14/2014	16.400
7/8/2014	15.500

Well Number:	MW372
Date Collected	Result
10/2/2012	67.000
1/9/2013	66.900
4/8/2013	65.900
7/16/2013	63.500
10/9/2013	60.200
1/14/2014	31.300
4/16/2014	70.500
7/7/2014	59.100

Statistics on Background Data

X= 38.956
S= 23.905
CV= 0.614
K factor = 2.523**
TL= 99.268

Because CV is less than or equal to 1, assume normal distribution and continue with statistical analysis.

Fourth Quarter 2014 Data Collected in October 2014

Well No.	Result	Gradient	Result >TL?
MW357	28.500	Downgradient	NO
MW360	25.900	Downgradient	NO
MW363	27.200	Downgradient	NO
MW366	28.900	Sidegradient	NO
MW369	16.800	Upgradient	NO
MW372	59.300	Upgradient	NO

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.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5
TL Upper Tolerance Limit, TL = X + (K * S)
X Mean, X = (sum of background results)/(count of background results)
** Read from Table 5, Appendix B of *Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,* Interim Guidance, EPA, 1989, based on total number of background results

C-746-U Fourth Quarter 2014 Statistical Analysis — URGA
Conductivity — UNITS: umho/cm

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test 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.

Background Data from Upgradient Wells

Well Number:	MW369
Date Collected	Result
10/3/2012	392.000
1/10/2013	365.000
4/10/2013	392.000
7/16/2013	427.000
10/8/2013	376.000
1/14/2014	392.000
4/14/2014	380.000
7/8/2014	364.000

Well Number:	MW372
Date Collected	Result
10/2/2012	855.000
1/9/2013	860.000
4/8/2013	879.000
7/16/2013	822.000
10/9/2013	791.000
1/14/2014	759.000
4/16/2014	837.000
7/7/2014	839.000

Statistics on Background Data

X= 608.125
S= 231.367
CV= 0.380
K factor = 2.523**
TL= 1191.865

Because CV is less than or equal to 1, assume normal distribution and continue with statistical analysis.

Fourth Quarter 2014 Data Collected in October 2014

Well No.	Result	Gradient	Result >TL?
MW357	440.000	Downgradient	NO
MW360	542.000	Downgradient	NO
MW363	388.000	Downgradient	NO
MW366	450.000	Sidegradient	NO
MW369	371.000	Upgradient	NO
MW372	766.000	Upgradient	NO

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.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5
TL Upper Tolerance Limit, TL = X + (K * S)
X Mean, X = (sum of background results)/(count of background results)
** Read from Table 5, Appendix B of *Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,* Interim Guidance, EPA, 1989, based on total number of background results

C-746-U Fourth Quarter 2014 Statistical Analysis — URGA
Dissolved Solids — 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.

Background Data from Upgradient Wells

Well Number:	MW369
Date Collected	Result
10/3/2012	226.000
1/10/2013	213.000
4/10/2013	237.000
7/16/2013	232.000
10/8/2013	228.000
1/14/2014	216.000
4/14/2014	213.000
7/8/2014	150.000

Well Number:	MW372
Date Collected	Result
10/2/2012	513.000
1/9/2013	506.000
4/8/2013	526.000
7/16/2013	503.000
10/9/2013	481.000
1/14/2014	455.000
4/16/2014	546.000
7/7/2014	314.000

Statistics on Background Data

X= 347.438
S= 147.316
CV= 0.424
K factor = 2.523**
TL= 719.116

Because CV is less than or equal to 1, assume normal distribution and continue with statistical analysis.

Fourth Quarter 2014 Data Collected in October 2014

Well No.	Result	Gradient	Result >TL?
MW357	234.000	Downgradient	NO
MW360	324.000	Downgradient	NO
MW363	189.000	Downgradient	NO
MW366	239.000	Sidegradient	NO
MW369	193.000	Upgradient	NO
MW372	476.000	Upgradient	NO

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.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5
TL Upper Tolerance Limit, TL = X + (K * S)
X Mean, X = (sum of background results)/(count of background results)
** Read from Table 5, Appendix B of *Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,* Interim Guidance, EPA, 1989, based on total number of background results

C-746-U Fourth Quarter 2014 Statistical Analysis URGA
Magnesium 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.

Background Data from Upgradient Wells

Well Number:	MW369
Date Collected	Result
10/3/2012	6.310
1/10/2013	6.090
4/10/2013	6.380
7/16/2013	7.620
10/8/2013	6.500
1/14/2014	9.540
4/14/2014	6.700
7/8/2014	5.660

Well Number:	MW372
Date Collected	Result
10/2/2012	25.500
1/9/2013	26.000
4/8/2013	26.000
7/16/2013	23.800
10/9/2013	22.800
1/14/2014	12.800
4/16/2014	26.100
7/7/2014	21.600

Statistics on Background Data

X= 14.963
S= 8.959
CV= 0.599
K factor = 2.523**
TL= 37.566

Because CV is less than or equal to 1, assume normal distribution and continue with statistical analysis.

Fourth Quarter 2014 Data Collected in October 2014

Well No.	Result	Gradient	Result >TL?
MW357	11.300	Downgradient	NO
MW360	9.160	Downgradient	NO
MW363	10.300	Downgradient	NO
MW366	12.200	Sidegradient	NO
MW369	7.030	Upgradient	NO
MW372	22.400	Upgradient	NO

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.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5
TL Upper Tolerance Limit, TL = X + (K * S)
X Mean, X = (sum of background results)/(count of background results)
** Read from Table 5, Appendix B of *Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,* Interim Guidance, EPA, 1989, based on total number of background results

C-746-U Fourth Quarter 2014 Statistical Analysis — URGA
Oxidation-Reduction Potential — UNITS: mV

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test 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.

Background Data from Upgradient Wells

Well Number:	MW369
Date Collected	Result
10/3/2012	588.000
1/10/2013	675.000
4/10/2013	580.000
7/16/2013	284.000
10/8/2013	750.000
1/14/2014	438.000
4/14/2014	514.000
7/8/2014	409.000

Well Number:	MW372
Date Collected	Result
10/2/2012	-6.000
1/9/2013	43.000
4/8/2013	28.000
7/16/2013	273.000
10/9/2013	519.000
1/14/2014	740.000
4/16/2014	236.000
7/7/2014	126.000

Statistics on Background Data

X= 387.313
S= 254.270
CV= 0.656
K factor = 2.523**
TL= 1028.837

Because CV is less than or equal to 1, assume normal distribution and continue with statistical analysis.

Fourth Quarter 2014 Data Collected in October 2014

Well No.	Result	Gradient	Result >TL?
MW357	427.000	Downgradient	NO
MW360	180.000	Downgradient	NO
MW363	344.000	Downgradient	NO
MW366	343.000	Sidegradient	NO
MW369	405.000	Upgradient	NO
MW372	88.000	Upgradient	NO

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.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5
TL Upper Tolerance Limit, TL = X + (K * S)
X Mean, X = (sum of background results)/(count of background results)
** Read from Table 5, Appendix B of *Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,* Interim Guidance, EPA, 1989, based on total number of background results

C-746-U Fourth Quarter 2014 Statistical Analysis — URGA
Sodium — 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.

Background Data from Upgradient Wells

Well Number:	MW369
Date Collected	Result
10/3/2012	56.500
1/10/2013	54.000
4/10/2013	52.400
7/16/2013	54.700
10/8/2013	52.600
1/14/2014	30.600
4/14/2014	58.700
7/8/2014	48.800

Well Number:	MW372
Date Collected	Result
10/2/2012	64.300
1/9/2013	63.700
4/8/2013	59.700
7/16/2013	61.600
10/9/2013	61.500
1/14/2014	123.000
4/16/2014	65.500
7/7/2014	60.700

Statistics on Background Data

X= 60.519
S= 18.642
CV= 0.308
K factor = 2.523**
TL= 107.553

Because CV is less than or equal to 1, assume normal distribution and continue with statistical analysis.

Fourth Quarter 2014 Data Collected in October 2014

Well No.	Result	Gradient	Result >TL?
MW357	40.800	Downgradient	NO
MW360	85.200	Downgradient	NO
MW363	33.600	Downgradient	NO
MW366	45.900	Sidegradient	NO
MW369	53.400	Upgradient	NO
MW372	59.700	Upgradient	NO

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.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5
TL Upper Tolerance Limit, TL = X + (K * S)
X Mean, X = (sum of background results)/(count of background results)
** Read from Table 5, Appendix B of *Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,* Interim Guidance, EPA, 1989, based on total number of background results

C-746-U Fourth Quarter 2014 Statistical Analysis — URGA
Technetium-99 — 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.

Background Data from Upgradient Wells

Well Number:	MW369
Date Collected	Result
10/3/2012	26.900
1/10/2013	30.500
4/10/2013	25.500
7/16/2013	23.000
10/8/2013	29.700
1/14/2014	25.300
4/14/2014	35.400
7/8/2014	15.800

Well Number:	MW372
Date Collected	Result
10/2/2012	105.000
1/9/2013	30.600
4/8/2013	42.900
7/16/2013	176.000
10/9/2013	176.000
1/14/2014	131.000
4/16/2014	13.400
7/7/2014	26.600

Statistics on Background Data

X= 57.100
S= 56.269
CV= 0.985
K factor = 2.523**
TL= 199.067

Because CV is less than or equal to 1, assume normal distribution and continue with statistical analysis.

Fourth Quarter 2014 Data Collected in October 2014

Well No.	Result	Gradient	Result >TL?
MW357	38.900	Downgradient	NO
MW360	-3.630	Downgradient	NO
MW363	5.230	Downgradient	NO
MW366	64.400	Sidegradient	NO
MW369	43.300	Upgradient	NO
MW372	107.000	Upgradient	NO

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.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5
TL Upper Tolerance Limit, TL = X + (K * S)
X Mean, X = (sum of background results)/(count of background results)
** Read from Table 5, Appendix B of *Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,* Interim Guidance, EPA, 1989, based on total number of background results

C-746-U Fourth Quarter 2014 Statistical Analysis — LRGA
Oxidation-Reduction Potential — UNITS: mV

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test 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.

Background Data from Upgradient Wells

Well Number:	MW370
Date Collected	Result
10/3/2012	551.000
1/14/2013	725.000
4/10/2013	505.000
7/16/2013	387.000
10/8/2013	811.000
1/14/2014	443.000
4/15/2014	535.000
7/8/2014	363.000

Well Number:	MW373
Date Collected	Result
10/2/2012	664.000
1/9/2013	83.000
4/9/2013	498.000
7/16/2013	500.000
10/9/2013	627.000
1/14/2014	494.000
4/16/2014	398.000
7/7/2014	374.000

Statistics on Background Data

X= 497.375
S= 169.137
CV= 0.340
K factor = 2.523**
TL= 924.107

Because CV is less than or equal to 1, assume normal distribution and continue with statistical analysis.

Fourth Quarter 2014 Data Collected in October 2014

Well No.	Result	Gradient	Result >TL?
MW358	169.000	Downgradient	NO
MW361	345.000	Downgradient	NO
MW364	241.000	Downgradient	NO
MW367	195.000	Sidegradient	NO
MW370	363.000	Upgradient	NO
MW373	404.000	Upgradient	NO

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.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5
TL Upper Tolerance Limit, TL = X + (K * S)
X Mean, X = (sum of background results)/(count of background results)
** Read from Table 5, Appendix B of *Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,* Interim Guidance, EPA, 1989, based on total number of background results

ATTACHMENT D3

STATISTICIAN QUALIFICATION STATEMENT

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756 Park Meadow Road
Westerville, Ohio 43081

January 15th, 2015

Mr. Craig Jones
LATA Environmental Services of Kentucky, LLC
761 Veterans Avenue
Kevil, Kentucky 42053

Dear Mr. Jones:

This statement is submitted in response to your request that it be included with the completed statistical analysis that I have performed on the groundwater data for the C-746-S&T and C-746-U Landfills at the Paducah Gaseous Diffusion Plant.

As a Chemist, with a Bachelor of Science degree in chemistry and a minor in mathematics, I have over two 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 observed and reviewed by a senior chemist and geologist with LATA.

For this project, the statistical analyses conducted on the fourth quarter 2014 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). For pH, an additional lower tolerance interval was established. For pH only, the test well data was compared to both the upper and lower tolerance intervals to determine if statistically significant deviations in concentration with respect to upgradient well exist.

Sincerely,

Cory Tackett
LATA Project Chemist

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APPENDIX E

GROUNDWATER FLOW RATE AND DIRECTION

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GROUNDWATER FLOW RATE AND DIRECTION

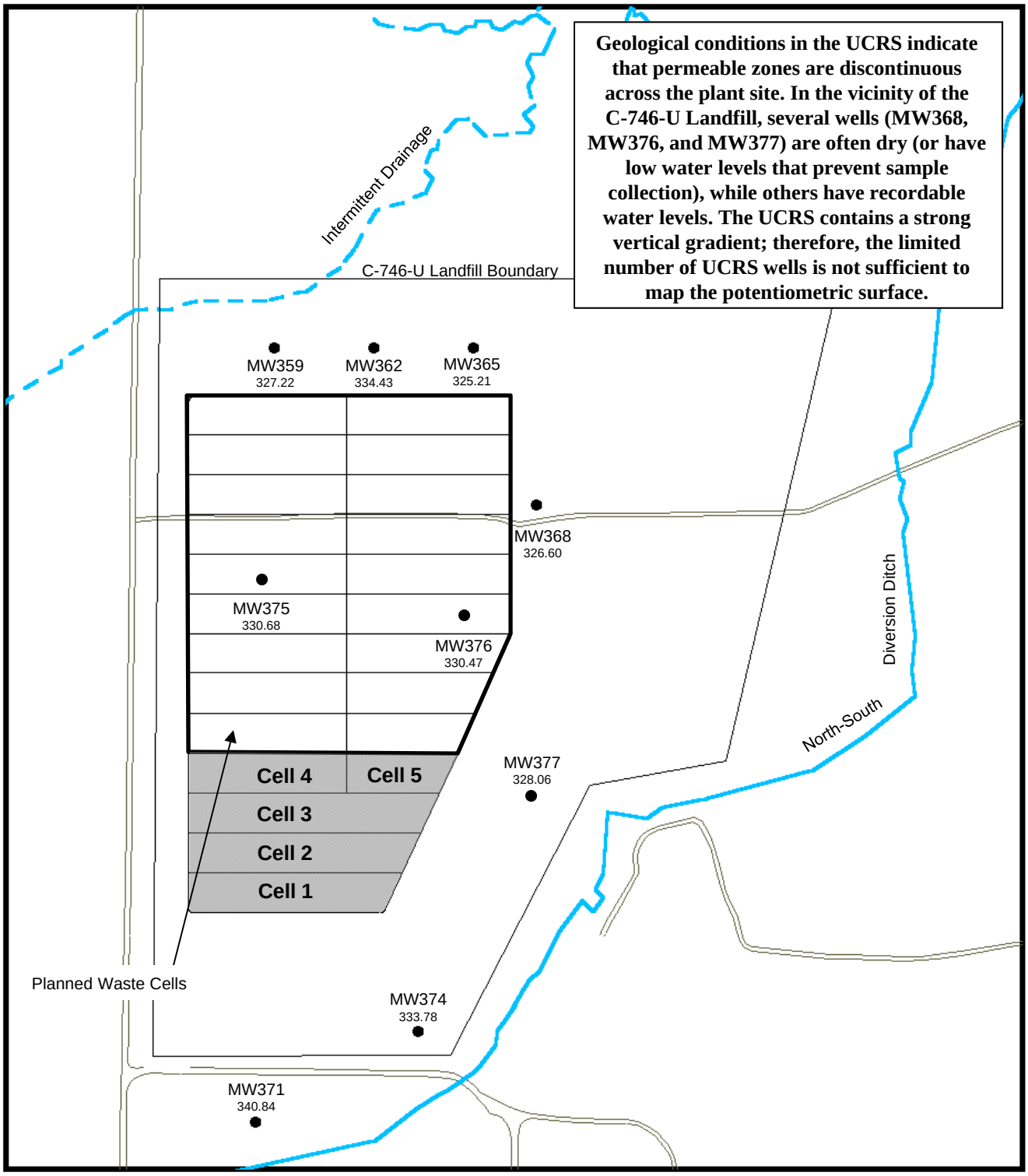
Determination of groundwater flow rate and direction of flow in the uppermost aquifer whenever the monitoring wells (MWs) are sampled is a requirement of 401 *KAR* 48.300, Section 11. The uppermost aquifer below the C-746-U Landfill is the Regional Gravel Aquifer (RGA). Water level measurements currently are recorded in several wells at the landfill on a quarterly basis. These measurements were used to plot the potentiometric surface of the RGA for the fourth quarter 2014 and determine groundwater flow rate and direction.

Water levels during this reporting period were measured on October 28, 2014. As shown on Figure E.1, all Upper Continental Recharge System (UCRS) wells had sufficient water to permit water level measurement during this reporting period. UCRS wells MW376 and MW377 had insufficient water to permit sampling.

The UCRS has a strong vertical hydraulic gradient; therefore, the available UCRS wells screened over different elevations are not sufficient for mapping the potentiometric surface. As shown in Table E.1, the RGA data were converted to elevations to plot the potentiometric surfaces within the Upper Regional Gravel Aquifer (URGA) and Lower Regional Gravel Aquifer (LRGA). (At the request of the Commonwealth of Kentucky, the RGA is differentiated into two zones, the URGA and LRGA.) Based on the potentiometric maps (Figures E.2 and E.3), the hydraulic gradient for both the URGA and LRGA at the C-746-U Landfill were similar (8.13×10^{-4} ft/ft and 8.11×10^{-4} ft/ft, respectively). Water level measurements in wells at the C-746-U Landfill and in wells of the surrounding region (MW98, MW100, MW125, MW139, MW165A, MW173, MW193, MW197, and MW200), along with the C-746-S&T Landfill wells, were used to contour the general RGA potentiometric surface (Figure E.4). The hydraulic gradient for the RGA, as a whole, in the vicinity of the C-746-U Landfill was 4.06×10^{-4} ft/ft. The hydraulic gradients are shown in Table E.2.

The average linear groundwater flow velocity (v) is determined by multiplying the hydraulic gradient (i) by the hydraulic conductivity (K) [resulting in the specific discharge (q)] and dividing by the effective porosity (n_e). The RGA hydraulic conductivity values used are reported in the Administrative Application for the New Solid Waste Landfill Permit No. 073-00045NWC1 and range from 425 to 725 ft/day (0.150 to 0.256 cm/s). RGA (both URGA and LRGA) effective porosity is assumed to be 25%. Flow velocities were calculated for the URGA and LRGA using the low and high values for hydraulic conductivity, as shown in the Table E.3.

Groundwater flow beneath the C-746-U Landfill typically trends northeastward toward the Ohio River. As demonstrated on the potentiometric map for October 2014, the groundwater flow direction in the immediate area of the landfill conforms to the typical regional flow direction.



LEGEND

400 0 400 Feet

Contour Interval = N/A

20° True North — Plant North

U.S. DEPARTMENT OF ENERGY
DOE PORTSMOUTH-PADUCAH PROJECT OFFICE
PADUCAH GASEOUS DIFFUSION PLANT

LATA Environmental Services of Kentucky, LLC

Figure E.1. Potentiometric Surface of the Upper Continental Recharge System at the C-746-U Landfill, October 28, 2014

Table E.1. C-746-U Landfill Fourth Quarter 2014 (October) Water Levels

C-746-U Landfill (October 2014) Water Levels										
							Raw Data		*Corrected Data	
Date	Time	Well	Aquifer	Datum Elev (ft amsl)	BP (in Hg)	Delta BP (ft H20)	DTW (ft)	Elev (ft amsl)	DTW (ft)	Elev (ft amsl)
10/28/2014	9:38	MW357	URGA	368.99	30.00	0.03	46.92	322.07	46.95	322.04
10/28/2014	9:40	MW358	LRGA	369.13	30.00	0.03	47.07	322.06	47.10	322.03
10/28/2014	9:39	MW359	UCRS	369.11	30.00	0.03	41.86	327.25	41.89	327.22
10/28/2014	9:37	MW360	URGA	362.30	30.00	0.03	40.22	322.08	40.25	322.05
10/28/2014	9:35	MW361	LRGA	361.54	30.00	0.03	39.49	322.05	39.52	322.02
10/28/2014	9:36	MW362	UCRS	362.04	30.00	0.03	27.58	334.46	27.61	334.43
10/28/2014	9:26	MW363	URGA	368.83	30.00	0.03	46.80	322.03	46.83	322.00
10/28/2014	9:28	MW364	LRGA	367.75	30.00	0.03	45.77	321.98	45.80	321.95
10/28/2014	9:27	MW365	UCRS	368.37	30.00	0.03	43.13	325.24	43.16	325.21
10/28/2014	9:32	MW366	URGA	369.27	30.00	0.03	47.01	322.26	47.04	322.23
10/28/2014	9:30	MW367	LRGA	369.66	30.00	0.03	47.43	322.23	47.46	322.20
10/28/2014	9:31	MW368	UCRS	369.27	30.00	0.03	42.64	326.63	42.67	326.60
10/28/2014	10:00	MW369	URGA	364.48	30.02	0.01	40.97	323.51	40.98	323.50
10/28/2014	10:03	MW370	LRGA	365.35	30.02	0.01	41.85	323.50	41.86	323.49
10/28/2014	10:02	MW371	UCRS	364.88	30.02	0.01	24.03	340.85	24.04	340.84
10/28/2014	10:06	MW372	URGA	359.66	30.02	0.01	36.17	323.49	36.18	323.48
10/28/2014	10:08	MW373	LRGA	359.95	30.02	0.01	36.48	323.47	36.49	323.46
10/28/2014	10:07	MW374	UCRS	359.71	30.02	0.01	25.92	333.79	25.93	333.78
10/28/2014	10:16	MW375	UCRS	370.53	30.03	0.00	39.85	330.68	39.85	330.68
10/28/2014	10:13	MW376	UCRS	370.61	30.03	0.00	40.14	330.47	40.14	330.47
10/28/2014	10:10	MW377	UCRS	365.92	30.03	0.00	37.86	328.06	37.86	328.06

Initial Barometric Pressure **30.03**

Elev = elevation

amsl = above mean sea level

BP = barometric pressure

DTW = depth to water in feet below datum

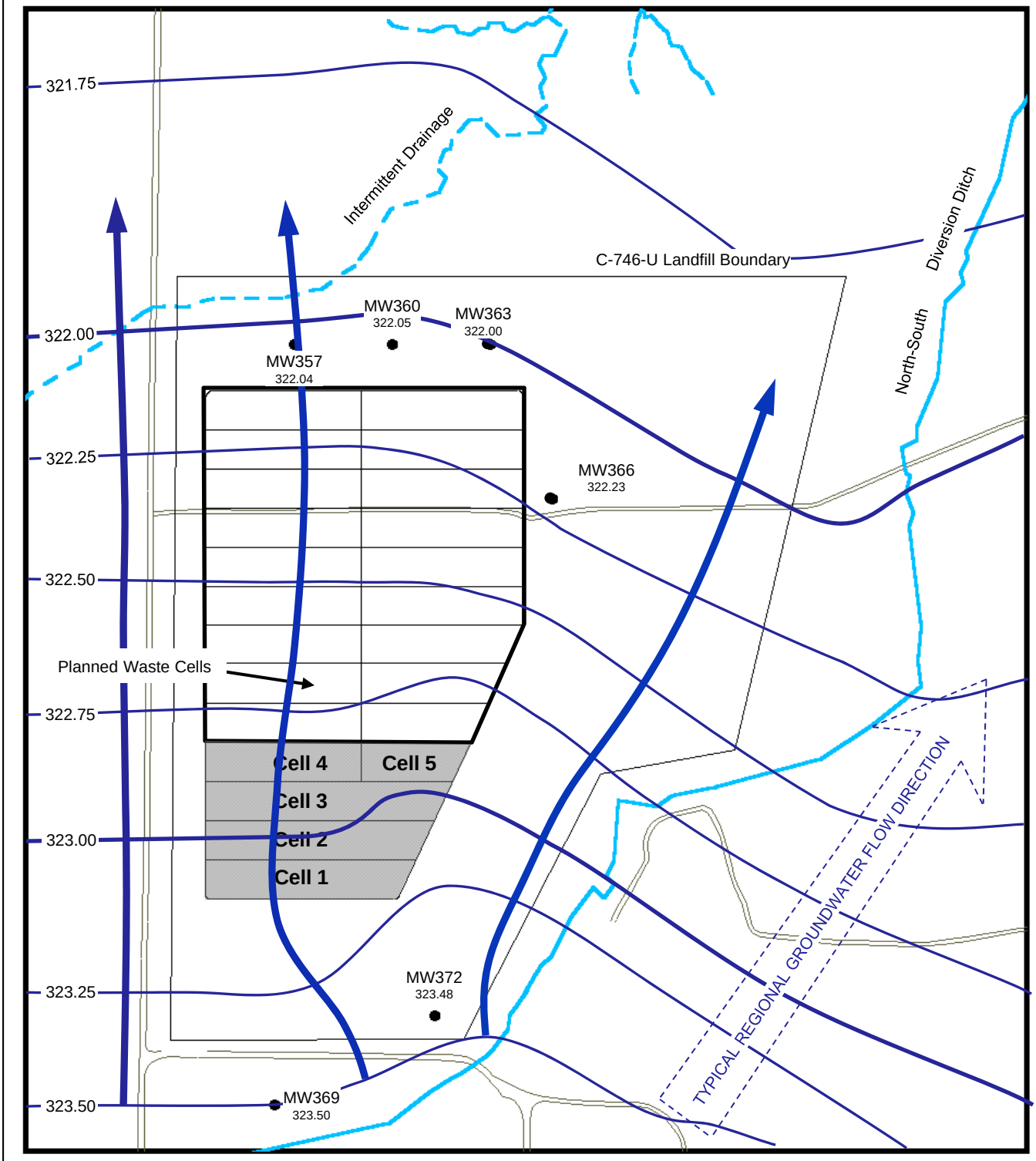
URGA = Upper Regional Gravel Aquifer

LRGA = Lower Regional Gravel Aquifer

UCRS = Upper Continental Recharge System

ND = No data acquired

*Assumes a barometric efficiency of 1.0



LEGEND

400 0 400 Feet

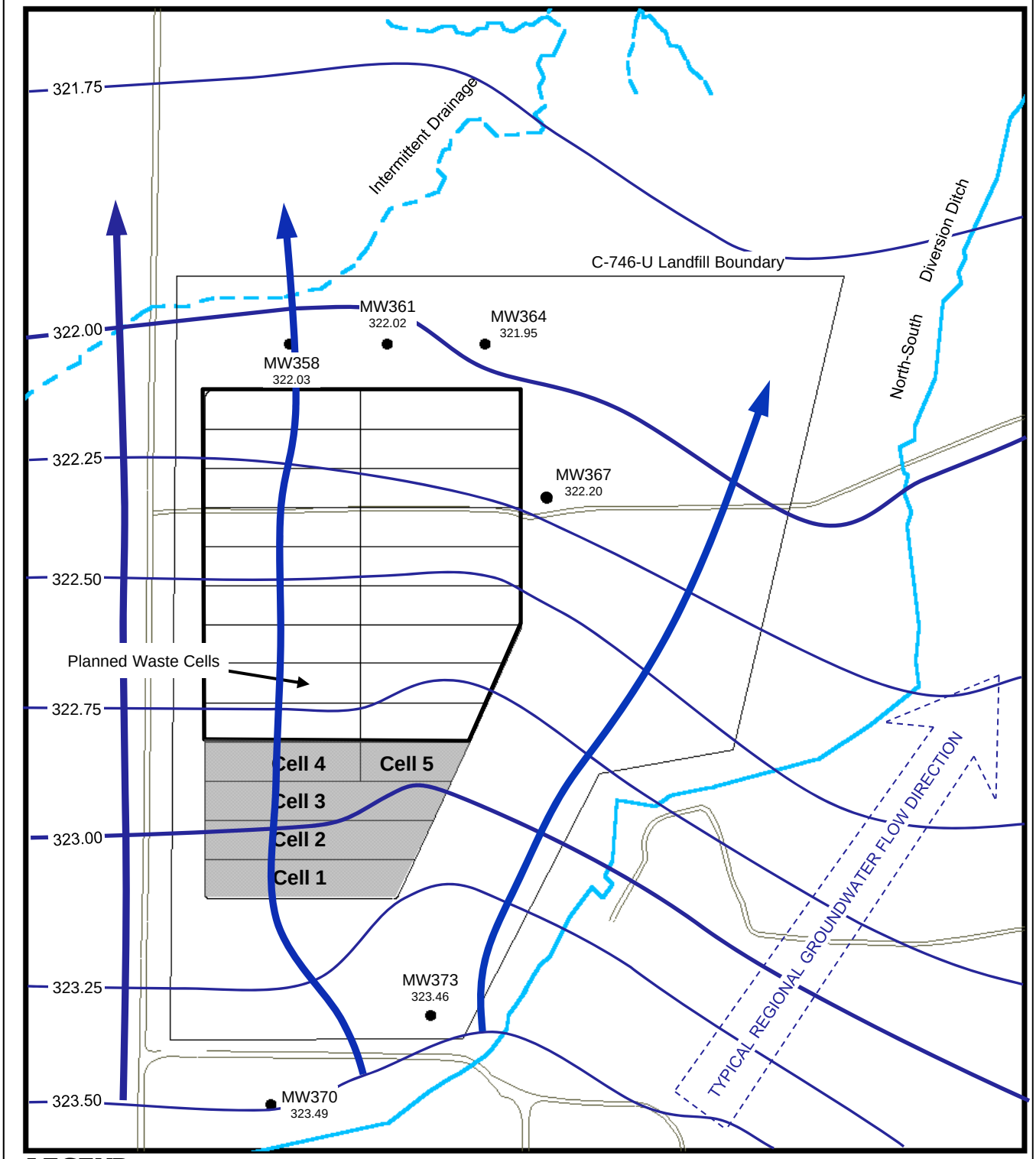
Contour Interval = 0.25 ft
Groundwater Flow Direction
327.00 Potentiometric Surface Contour

20° Plant North
True North

U.S. DEPARTMENT OF ENERGY
DOE PORTSMOUTH-PADUCAH PROJECT OFFICE
PADUCAH GASEOUS DIFFUSION PLANT

LATA Environmental Services of Kentucky, LLC

Figure E.2. Potentiometric Surface of the Upper Regional Gravel Aquifer at the C-746-U Landfill, October 28, 2014



LEGEND

400 0 400 Feet

Contour Interval = 0.25 ft

Groundwater Flow Direction

327.00 Potentiometric Surface Contour

20° Plant North / True North

U.S. DEPARTMENT OF ENERGY
DOE PORTSMOUTH-PADUCAH PROJECT OFFICE
PADUCAH GASEOUS DIFFUSION PLANT

LATA Environmental Services of Kentucky, LLC

Figure E.3. Potentiometric Surface of the Lower Regional Gravel Aquifer at the C-746-U Landfill, October 28, 2014

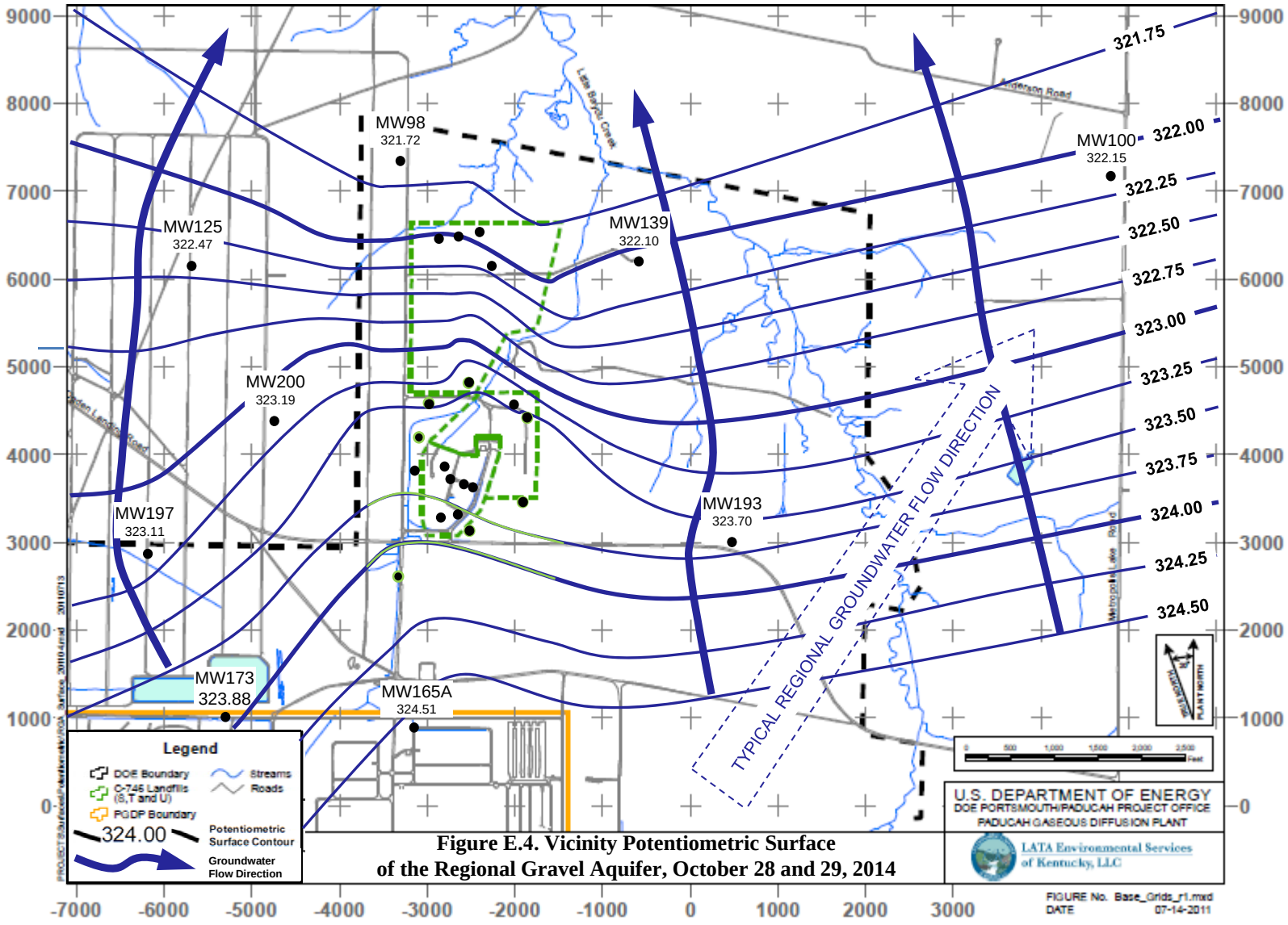


Figure E.4. Vicinity Potentiometric Surface of the Regional Gravel Aquifer, October 28 and 29, 2014

Table E.2. C-746-U Landfill Hydraulic Gradients

	ft/ft
Beneath Landfill – Upper RGA	8.13×10^{-4}
Beneath Landfill – Lower RGA	8.11×10^{-4}
Vicinity	4.06×10^{-4}

Table E.3. C-746-U Landfill Groundwater Flow Rate

Hydraulic Conductivity (K)		Specific Discharge (q)		Average Linear Velocity (v)	
ft/day	cm/s	ft/day	cm/s	ft/day	cm/s
Upper RGA					
725	0.256	0.59	2.08×10^{-4}	2.36	8.32×10^{-4}
425	0.150	0.35	1.22×10^{-4}	1.38	4.88×10^{-4}
Lower RGA					
725	0.256	0.59	2.08×10^{-4}	2.35	8.30×10^{-4}
425	0.150	0.34	1.22×10^{-4}	1.38	4.87×10^{-4}

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APPENDIX F

NOTIFICATIONS

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NOTIFICATIONS

In accordance with 401 *KAR* 48:300 § 7, the notification for parameters that exceed the maximum contaminant level has been submitted to the Kentucky Division of Waste Management. The parameters submitted are listed on page F-4. The notification for parameters that had statistically significant increased concentrations relative to background concentrations is provided below.

Statistical Analysis of Parameters Notification

The statistical analyses conducted on the fourth quarter 2014 groundwater data collected from the C-746-U Landfill monitoring wells were performed in accordance with *Groundwater Monitoring Plan for the Solid Waste Permitted Landfills (C-746-S Residential Landfill, C-746-T Inert Landfill, and C-746-U Contained Landfill) at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky* (LATA Kentucky 2014).

The following are the permit required parameters in 40 *CFR* § 302.4, Appendix A, which had statistically significant increased concentrations relative to historical background concentrations.

	Parameter	**Monitoring Well**
Upper Continental Recharge System	None	
Upper Regional Gravel Aquifer	Sodium	MW360
	Technetium-99	MW372
Lower Regional Gravel Aquifer	None	

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.

12/15/2014

LATA Environmental Services of Kentucky
PROJECT ENVIRONMENTAL MEASUREMENTS SYSTEM
C-746-U LANDFILL
PERMIT NUMBER 073-00045
MAXIMUM CONTAMINANT LIMIT (MCL) EXCEEDANCE REPORT
Quarterly Groundwater Sampling

AKGWA	Station	Analysis	Method	Results	Units	MCL
8004-4798	MW357	Trichloroethene	8260B	5.71	ug/L	5
8004-4799	MW358	Trichloroethene	8260B	5.24	ug/L	5
8004-4808	MW372	Beta activity	900.0	74	pCi/L	50
		Trichloroethene	8260B	7.79	ug/L	5
8004-4792	MW373	Trichloroethene	8260B	7.67	ug/L	5

NOTE 1: These limits are defined in 401 KAR 47:030.

NOTE 2: MW370, MW372, and MW373 are down-gradient wells for the C-746-S and C-746-T Landfills and upgradient for the the C-746-U Landfill. These wells are sampled with the C-746-U Landfill monitoring well network. These wells are reported on the exceedance reports for C-746-S, C-746-T, and C-746-U.

APPENDIX G

CHART OF MCL AND UTL EXCEEDANCES

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Chart of MCL and Historical UTL Exceedances for the C-746-U Contained Landfill

Groundwater Flow System	UCRS									URGA						LRGA					
Gradient	S	S	S	S	D	D	D	U	U	S	D	D	D	U	U	S	D	D	S	U	U
Monitoring Well	368	375	376	377	359	362	365	371	374	366	360	363	357	369	372	367	361	364	358	370	373
ACETONE																					
Quarter 3, 2002										✱	✱	✱									
Quarter 4, 2002										✱	✱	✱									
Quarter 1, 2003											✱	✱									
Quarter 2, 2003											✱	✱									
Quarter 3, 2003	✱						✱			✱	✱	✱			✱			✱			
Quarter 4, 2003						✱	✱				✱			✱							
Quarter 3, 2004						✱										✱					
Quarter 3, 2005						✱															
Quarter 4, 2005						✱															
ALPHA ACTIVITY																					
Quarter 1, 2004																					■
Quarter 2, 2004						■															
Quarter 3, 2009						■															
ALUMINUM																					
Quarter 3, 2003											✱										
BETA ACTIVITY																					
Quarter 1, 2004															■						
Quarter 2, 2004															■						■
Quarter 3, 2004															■						
Quarter 4, 2004															■						
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Quarter 4, 2007										■					■						■
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Quarter 2, 2008														■		■					
Quarter 3, 2008										■					■				■		
Quarter 4, 2008										■					■				■		
Quarter 1, 2009										■					■						
Quarter 2, 2009															■	■	■				
Quarter 3, 2009										■					■						
Quarter 4, 2009										■					■						
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Quarter 3, 2010										■											
Quarter 4, 2010															■						
Quarter 2, 2011										■						■					
Quarter 4, 2011															■						
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Quarter 4, 2012															■						■
Quarter 1, 2013															■						■
Quarter 3, 2013															■						■
Quarter 4, 2013															■						
Quarter 1, 2014															■						
Quarter 4, 2014															■						
BROMIDE																					
Quarter 2, 2004													✱								

Chart of MCL and Historical UTL Exceedances for the C-746-U Contained Landfill

Groundwater Flow System	UCRS									URGA						LRGA					
Gradient	S	S	S	S	D	D	D	U	U	S	D	D	D	U	U	S	D	D	S	U	U
Monitoring Well	368	375	376	377	359	362	365	371	374	366	360	363	357	369	372	367	361	364	358	370	373
CALCIUM																					
Quarter 3, 2003										*											
Quarter 2, 2005																					*
Quarter 3, 2006															*						
Quarter 2, 2008															*						
Quarter 3, 2009															*						
Quarter 4, 2009															*						
Quarter 1, 2010															*						
Quarter 2, 2010															*						
Quarter 3, 2010															*						
Quarter 1, 2011															*						
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Quarter 4, 2011															*						*
Quarter 1, 2012															*						*
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Quarter 4, 2012															*						
Quarter 1, 2013															*						*
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Quarter 3, 2013															*						*
Quarter 4, 2013															*						
Quarter 2, 2014															*						*
Quarter 3, 2014															*						*
Quarter 4, 2014															*						
CARBON DISULFIDE																					
Quarter 3, 2003										*											
Quarter 2, 2005							*														
Quarter 3, 2005						*															
Quarter 4, 2005						*															
Quarter 1, 2006						*															
Quarter 2, 2006						*															
Quarter 3, 2010		*									*										
Quarter 4, 2010														*							
Quarter 1, 2011															*						
CHEMICAL OXYGEN DEMAND																					
Quarter 3, 2002										*	*	*	*	*	*						
Quarter 4, 2002										*	*										
Quarter 1, 2003										*	*										
Quarter 2, 2003										*	*	*									
Quarter 3, 2003	*									*	*					*					
Quarter 4, 2003						*				*	*										
Quarter 3, 2004										*											
Quarter 3, 2005						*				*					*	*			*		
Quarter 4, 2005						*												*	*		
Quarter 1, 2006																			*		
CHLORIDE																					
Quarter 1, 2006																				*	
Quarter 2, 2014															*						
COBALT																					
Quarter 3, 2003	*						*			*	*		*	*	*	*	*	*		*	
Quarter 1, 2004														*							
CONDUCTIVITY																					
Quarter 4, 2002										*											
Quarter 1, 2003										*											
Quarter 2, 2003										*	*										
Quarter 4, 2003										*											
Quarter 1, 2004										*											

Chart of MCL and Historical UTL Exceedances for the C-746-U Contained Landfill

Groundwater Flow System	UCRS									URGA						LRGA					
Gradient	S	S	S	S	D	D	D	U	U	S	D	D	D	U	U	S	D	D	S	U	U
Monitoring Well	368	375	376	377	359	362	365	371	374	366	360	363	357	369	372	367	361	364	358	370	373
CONDUCTIVITY																					
Quarter 2, 2004										*											
Quarter 3, 2004										*											
Quarter 1, 2005															*						
Quarter 2, 2005															*						
Quarter 3, 2005						*													*		
Quarter 4, 2005															*			*			
Quarter 1, 2006															*						
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Quarter 3, 2006															*						
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Quarter 1, 2009															*						
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Quarter 3, 2013															*						
Quarter 4, 2013															*						
Quarter 1, 2014															*						
Quarter 2, 2014															*						
Quarter 3, 2014															*						
Quarter 4, 2014															*						
DISSOLVED OXYGEN																					
Quarter 1, 2003					*	*				*											
Quarter 3, 2003					*					*											
Quarter 4, 2003					*																
Quarter 1, 2004					*																
Quarter 2, 2004								*								*					
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Quarter 2, 2006					*			*													
Quarter 3, 2006					*			*													
Quarter 4, 2006					*				*												
Quarter 2, 2007					*			*													
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Quarter 3, 2008								*													
Quarter 1, 2009							*														
Quarter 2, 2009					*			*	*												
Quarter 3, 2009						*		*	*												

Chart of MCL and Historical UTL Exceedances for the C-746-U Contained Landfill

Groundwater Flow System	UCRS									URGA						LRGA					
Gradient	S	S	S	S	D	D	D	U	U	S	D	D	D	U	U	S	D	D	S	U	U
Monitoring Well	368	375	376	377	359	362	365	371	374	366	360	363	357	369	372	367	361	364	358	370	373
DISSOLVED OXYGEN																					
Quarter 1, 2010					✱		✱														
Quarter 2, 2010					✱	✱		✱	✱											✱	✱
Quarter 3, 2010					✱	✱															
Quarter 4, 2010							✱					✱								✱	
Quarter 1, 2011						✱															
Quarter 2, 2011					✱	✱	✱	✱	✱					✱							
Quarter 3, 2011						✱			✱												
Quarter 1, 2012							✱		✱												
Quarter 2, 2012	✱			✱	✱	✱		✱	✱												
Quarter 3, 2012						✱															
Quarter 4, 2012									✱												
Quarter 1, 2013						✱			✱												
Quarter 2, 2013							✱		✱												
Quarter 3, 2013	✱				✱		✱	✱	✱												
Quarter 4, 2013									✱											✱	
Quarter 2, 2014	✱				✱	✱	✱	✱	✱									✱			
Quarter 3, 2014	✱				✱	✱	✱														
Quarter 4, 2014						✱															
DISSOLVED SOLIDS																					
Quarter 4, 2002										✱											
Quarter 1, 2003										✱											
Quarter 2, 2003										✱											
Quarter 3, 2003							✱			✱	✱										
Quarter 4, 2003										✱											
Quarter 3, 2005						✱															
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Quarter 4, 2014															✱						
IODIDE																					
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Quarter 3, 2003	✱									✱											
Quarter 4, 2003							✱														
Quarter 3, 2010						✱		✱					✱				✱				
IODINE-131																					
Quarter 3, 2010																		■			

Chart of MCL and Historical UTL Exceedances for the C-746-U Contained Landfill

Groundwater Flow System	UCRS									URGA						LRGA					
Gradient	S	S	S	S	D	D	D	U	U	S	D	D	D	U	U	S	D	D	S	U	U
Monitoring Well	368	375	376	377	359	362	365	371	374	366	360	363	357	369	372	367	361	364	358	370	373
IODOMETHANE																					
Quarter 4, 2003						*															
IRON																					
Quarter 4, 2002						*															
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Quarter 3, 2005																*					
MAGNESIUM																					
Quarter 2, 2005															*						*
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Quarter 4, 2013															*						
Quarter 2, 2014															*						
Quarter 4, 2014															*						
MANGANESE																					
Quarter 3, 2002										*		*									
Quarter 4, 2002		*				*	*			*		*		*							
Quarter 2, 2003										*		*									
Quarter 3, 2003										*		*	*			*	*	*	*		
Quarter 4, 2003										*	*	*	*				*	*			
Quarter 1, 2004										*	*	*				*	*	*			
Quarter 2, 2004							*			*	*	*						*			
Quarter 3, 2004							*			*	*	*				*					
Quarter 4, 2004										*		*				*					
Quarter 1, 2005										*		*									
Quarter 2, 2005										*		*									
Quarter 3, 2005										*		*				*					
Quarter 4, 2005										*						*					
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Quarter 4, 2008							*														
Quarter 3, 2009							*														
Quarter 3, 2011							*														

Chart of MCL and Historical UTL Exceedances for the C-746-U Contained Landfill

Groundwater Flow System	UCRS									URGA						LRGA					
Gradient	S	S	S	S	D	D	D	U	U	S	D	D	D	U	U	S	D	D	S	U	U
Monitoring Well	368	375	376	377	359	362	365	371	374	366	360	363	357	369	372	367	361	364	358	370	373
NICKEL																					
Quarter 3, 2003										✱											
OXIDATION-REDUCTION POTENTIAL																					
Quarter 4, 2002																	✱		✱		
Quarter 1, 2003																	✱		✱		
Quarter 2, 2003																			✱		
Quarter 3, 2003	✱																				
Quarter 4, 2003					✱																
Quarter 2, 2004													✱				✱				✱
Quarter 3, 2004					✱			✱					✱	✱	✱		✱			✱	✱
Quarter 4, 2004												✱									✱
Quarter 1, 2005																	✱			✱	✱
Quarter 2, 2005								✱					✱				✱			✱	
Quarter 3, 2005					✱	✱		✱			✱	✱	✱				✱		✱	✱	✱
Quarter 4, 2005		✱						✱					✱				✱			✱	
Quarter 1, 2006					✱			✱	✱								✱				✱
Quarter 2, 2006					✱		✱	✱					✱				✱			✱	
Quarter 3, 2006					✱			✱					✱				✱			✱	
Quarter 4, 2006					✱		✱			✱		✱	✱				✱			✱	✱
Quarter 1, 2007		✱			✱			✱					✱				✱			✱	✱
Quarter 2, 2007					✱								✱				✱			✱	✱
Quarter 3, 2007					✱			✱									✱			✱	
Quarter 4, 2007																	✱			✱	✱
Quarter 1, 2008					✱			✱				✱	✱						✱	✱	
Quarter 2, 2008					✱			✱		✱			✱	✱				✱		✱	✱
Quarter 3, 2008					✱		✱	✱	✱	✱		✱	✱	✱			✱	✱	✱	✱	✱
Quarter 4, 2008								✱		✱		✱	✱				✱	✱		✱	✱
Quarter 1, 2009							✱	✱		✱		✱	✱					✱		✱	
Quarter 2, 2009					✱		✱	✱		✱		✱	✱				✱	✱		✱	✱
Quarter 3, 2009		✱			✱	✱	✱	✱	✱	✱		✱	✱	✱			✱	✱	✱	✱	✱
Quarter 4, 2009		✱				✱	✱	✱	✱	✱		✱	✱				✱	✱	✱	✱	✱
Quarter 1, 2010		✱			✱		✱	✱		✱			✱			✱	✱	✱		✱	
Quarter 2, 2010					✱	✱		✱		✱	✱	✱	✱			✱	✱	✱	✱	✱	✱
Quarter 3, 2010		✱			✱	✱	✱	✱	✱	✱	✱		✱	✱	✱		✱	✱	✱	✱	✱
Quarter 4, 2010		✱				✱	✱	✱	✱	✱	✱	✱	✱	✱		✱	✱	✱	✱	✱	✱
Quarter 1, 2011						✱		✱		✱	✱	✱	✱	✱		✱	✱	✱	✱	✱	
Quarter 2, 2011		✱			✱	✱	✱	✱	✱	✱	✱	✱	✱	✱		✱	✱	✱	✱	✱	✱
Quarter 3, 2011		✱				✱		✱	✱	✱		✱	✱	✱		✱	✱	✱	✱	✱	✱
Quarter 4, 2011		✱				✱		✱	✱	✱	✱	✱	✱	✱		✱	✱	✱		✱	✱
Quarter 1, 2012		✱				✱	✱	✱	✱	✱	✱	✱	✱	✱		✱	✱	✱	✱	✱	✱
Quarter 2, 2012	✱	✱		✱	✱	✱	✱	✱	✱	✱	✱	✱	✱	✱		✱	✱	✱	✱	✱	✱
Quarter 3, 2012		✱				✱		✱		✱		✱	✱	✱		✱	✱	✱	✱	✱	✱
Quarter 4, 2012		✱				✱		✱	✱	✱	✱	✱	✱	✱		✱	✱	✱	✱	✱	✱
Quarter 1, 2013		✱				✱		✱	✱	✱	✱	✱	✱	✱		✱	✱	✱		✱	
Quarter 2, 2013		✱						✱	✱	✱	✱	✱	✱	✱	✱	✱	✱	✱	✱	✱	✱
Quarter 3, 2013	✱	✱			✱	✱	✱	✱	✱	✱	✱	✱	✱	✱	✱	✱	✱	✱	✱	✱	✱
Quarter 4, 2013		✱				✱		✱	✱	✱	✱	✱	✱	✱	✱	✱	✱	✱	✱	✱	✱
Quarter 1, 2014		✱						✱	✱	✱	✱	✱	✱	✱	✱	✱	✱	✱	✱	✱	✱
Quarter 2, 2014	✱	✱			✱	✱	✱	✱	✱	✱	✱	✱	✱	✱	✱	✱	✱	✱	✱	✱	✱
Quarter 3, 2014	✱	✱			✱	✱	✱	✱	✱	✱		✱	✱	✱		✱	✱	✱	✱	✱	✱
Quarter 4, 2014		✱				✱		✱	✱	✱		✱	✱	✱		✱	✱	✱	✱	✱	✱
PCB, TOTAL																					
Quarter 4, 2003																	✱				
Quarter 3, 2004												✱									
Quarter 3, 2005							✱														
Quarter 2, 2006							✱														
Quarter 3, 2006							✱														
Quarter 1, 2007							✱														
Quarter 2, 2007							✱														
Quarter 3, 2007							✱														
Quarter 1, 2008							✱														
Quarter 2, 2008							✱														

Chart of MCL and Historical UTL Exceedances for the C-746-U Contained Landfill

Groundwater Flow System	UCRS									URGA						LRGA					
Gradient	S	S	S	S	D	D	D	U	U	S	D	D	D	U	U	S	D	D	S	U	U
Monitoring Well	368	375	376	377	359	362	365	371	374	366	360	363	357	369	372	367	361	364	358	370	373
PCB, TOTAL																					
Quarter 4, 2008							✱														
Quarter 3, 2009							✱														
Quarter 1, 2010							✱														
Quarter 2, 2010							✱														
Quarter 4, 2010							✱														
PCB-1016																					
Quarter 3, 2004												✱									
Quarter 2, 2006							✱					✱									
Quarter 1, 2007							✱														
Quarter 2, 2007							✱														
Quarter 3, 2007							✱														
Quarter 2, 2008							✱														
Quarter 4, 2008							✱														
Quarter 3, 2009							✱														
Quarter 1, 2010							✱														
Quarter 2, 2010							✱														
Quarter 4, 2010							✱														
PCB-1242																					
Quarter 3, 2006							✱					✱									
Quarter 4, 2006										✱											
Quarter 1, 2008							✱														
Quarter 2, 2012							✱														
PCB-1248																					
Quarter 2, 2008							✱														
PCB-1260																					
Quarter 2, 2006							✱														
pH																					
Quarter 3, 2002										✱											
Quarter 4, 2002										✱											
Quarter 1, 2003										✱											
Quarter 2, 2003										✱											
Quarter 3, 2003	✱						✱			✱											
Quarter 4, 2003							✱									✱					
Quarter 1, 2004							✱									✱					
Quarter 3, 2005						✱												✱	✱		
Quarter 4, 2005						✱													✱		
Quarter 3, 2006																✱					
Quarter 2, 2011														✱							
Quarter 3, 2011														✱							
Quarter 4, 2011														✱							
Quarter 1, 2012																✱	✱				
Quarter 2, 2012												✱									
Quarter 1, 2013										✱		✱				✱					
POTASSIUM																					
Quarter 1, 2014																✱					
RADIUM-228																					
Quarter 2, 2005														■							
Quarter 4, 2005						■						■						■			
SELENIUM																					
Quarter 4, 2003									■												
SODIUM																					
Quarter 3, 2002										✱	✱		✱								
Quarter 4, 2002										✱	✱			✱							
Quarter 1, 2003										✱											
Quarter 2, 2003										✱	✱										
Quarter 3, 2003											✱										
Quarter 1, 2007											✱										
Quarter 1, 2012														✱							
Quarter 1, 2014															✱						
Quarter 3, 2014											✱										
Quarter 4, 2014											✱										

Chart of MCL and Historical UTL Exceedances for the C-746-U Contained Landfill

Groundwater Flow System	UCRS									URGA						LRGA					
Gradient	S	S	S	S	D	D	D	U	U	S	D	D	D	U	U	S	D	D	S	U	U
Monitoring Well	368	375	376	377	359	362	365	371	374	366	360	363	357	369	372	367	361	364	358	370	373
STRONTIUM-90																					
Quarter 4, 2008							■														
SULFATE																					
Quarter 1, 2003							✱														
Quarter 2, 2003						✱	✱														
Quarter 3, 2003	✱					✱															
Quarter 4, 2003					✱		✱														
Quarter 1, 2004					✱	✱	✱														
Quarter 2, 2004					✱	✱	✱														
Quarter 3, 2004					✱	✱	✱														
Quarter 1, 2005					✱	✱			✱												
Quarter 2, 2005					✱		✱		✱						✱						
Quarter 3, 2005					✱	✱	✱														
Quarter 4, 2005															✱						
Quarter 1, 2006					✱				✱												
Quarter 2, 2006						✱	✱		✱						✱						
Quarter 3, 2006							✱														
Quarter 1, 2007							✱														
Quarter 2, 2007							✱														
Quarter 3, 2007							✱														
Quarter 4, 2007		✱																			
Quarter 1, 2008		✱			✱		✱		✱												
Quarter 2, 2008		✱			✱	✱	✱														
Quarter 3, 2008		✱			✱	✱	✱														
Quarter 4, 2008		✱				✱	✱														
Quarter 1, 2009		✱					✱														
Quarter 2, 2009		✱			✱	✱	✱														
Quarter 3, 2009		✱			✱	✱	✱								✱						
Quarter 4, 2009		✱			✱	✱									✱						
Quarter 1, 2010		✱			✱	✱	✱								✱						
Quarter 2, 2010		✱			✱	✱	✱								✱						
Quarter 3, 2010		✱			✱	✱	✱								✱						
Quarter 4, 2010		✱				✱	✱								✱						
Quarter 1, 2011		✱																			
Quarter 2, 2011		✱			✱	✱	✱								✱						
Quarter 3, 2011		✱				✱	✱	✱							✱						
Quarter 4, 2011		✱				✱									✱						
Quarter 1, 2012		✱					✱	✱							✱						
Quarter 2, 2012	✱	✱		✱	✱	✱	✱	✱	✱						✱						
Quarter 3, 2012		✱				✱									✱						
Quarter 4, 2012		✱													✱						
Quarter 1, 2013		✱				✱									✱						
Quarter 2, 2013		✱													✱						
Quarter 3, 2013	✱	✱		✱	✱	✱	✱								✱						
Quarter 4, 2013		✱													✱						
Quarter 1, 2014		✱													✱						
Quarter 2, 2014	✱	✱			✱		✱	✱							✱						
Quarter 3, 2014	✱	✱			✱	✱	✱	✱							✱						
Quarter 4, 2014		✱				✱															
TECHNETIUM-99																					
Quarter 4, 2002																	✱	✱	✱		
Quarter 2, 2003							✱						✱			✱	✱	✱	✱		✱
Quarter 3, 2003																	✱				
Quarter 4, 2003																	✱				✱
Quarter 1, 2004															✱		✱				✱
Quarter 2, 2004															✱						✱
Quarter 3, 2004															✱						✱
Quarter 4, 2004															✱		✱				✱
Quarter 3, 2005																	✱				
Quarter 1, 2006															✱						✱
Quarter 2, 2006		✱							✱												✱
Quarter 3, 2006																					✱

Chart of MCL and Historical UTL Exceedances for the C-746-U Contained Landfill

Groundwater Flow System	UCRS									URGA						LRGA					
Gradient	S	S	S	S	D	D	D	U	U	S	D	D	D	U	U	S	D	D	S	U	U
Monitoring Well	368	375	376	377	359	362	365	371	374	366	360	363	357	369	372	367	361	364	358	370	373
TECHNETIUM-99																					
Quarter 4, 2006															*						*
Quarter 1, 2007																					*
Quarter 2, 2007													*		*					*	
Quarter 3, 2007															*		*	*			
Quarter 4, 2007										*					*				*		*
Quarter 1, 2008															*					*	*
Quarter 2, 2008							*	*						*		*			*		
Quarter 3, 2008															*						
Quarter 4, 2008										*							*		*		
Quarter 1, 2009										*											
Quarter 2, 2009																		*			
Quarter 3, 2009								*		*					*						
Quarter 4, 2009										*					*			*	*		
Quarter 2, 2010										*						*	*	*	*		
Quarter 3, 2010										*					*						
Quarter 4, 2010																		*			
Quarter 1, 2011		*								*							*				
Quarter 2, 2011																*	*	*	*		
Quarter 1, 2012																	*	*			
Quarter 2, 2012								*										*			
Quarter 3, 2012																	*	*			
Quarter 4, 2012															*			*			*
Quarter 1, 2013																		*			*
Quarter 2, 2013																					*
Quarter 3, 2013										*											*
Quarter 4, 2013															*		*	*			*
Quarter 1, 2014															*		*	*			
Quarter 2, 2014																		*			
Quarter 3, 2014																	*	*	*		
Quarter 4, 2014															*						
TOLUENE																					
Quarter 2, 2014										*				*							
TOTAL ORGANIC CARBON																					
Quarter 3, 2002										*	*	*		*							*
Quarter 4, 2002										*	*			*							
Quarter 1, 2003											*										
Quarter 3, 2003	*									*	*					*					
Quarter 4, 2003										*	*										
Quarter 1, 2004											*										
Quarter 3, 2005						*				*					*	*			*		
Quarter 4, 2005						*												*	*		
Quarter 1, 2006																			*		
TOTAL ORGANIC HALIDES																					
Quarter 4, 2002										*											
Quarter 1, 2003										*											
Quarter 2, 2003										*											
Quarter 1, 2004																*					
TRICHLOROETHENE																					
Quarter 3, 2002														■						■	
Quarter 4, 2002															■					■	
Quarter 1, 2003																				■	■
Quarter 2, 2003															■					■	
Quarter 3, 2003							■													■	■
Quarter 4, 2003															■					■	■
Quarter 1, 2004															■					■	■
Quarter 2, 2004															■					■	■
Quarter 3, 2004															■					■	■
Quarter 4, 2004															■					■	■
Quarter 1, 2005															■					■	■
Quarter 2, 2005															■					■	■
Quarter 3, 2005															■					■	■

Chart of MCL and Historical UTL Exceedances for the C-746-U Contained Landfill

Groundwater Flow System	UCRS									URGA						LRGA					
Gradient	S	S	S	S	D	D	D	U	U	S	D	D	D	U	U	S	D	D	S	U	U
Monitoring Well	368	375	376	377	359	362	365	371	374	366	360	363	357	369	372	367	361	364	358	370	373
TRICHLOROETHENE																					
Quarter 4, 2005															■					■	■
Quarter 1, 2006															■					■	■
Quarter 2, 2006															■					■	■
Quarter 3, 2006															■					■	■
Quarter 4, 2006															■						■
Quarter 1, 2007															■					■	■
Quarter 2, 2007															■						■
Quarter 3, 2007															■						■
Quarter 4, 2007															■						■
Quarter 1, 2008															■						■
Quarter 2, 2008															■				■		■
Quarter 3, 2008															■						■
Quarter 4, 2008															■						■
Quarter 1, 2009															■						■
Quarter 2, 2009															■						■
Quarter 3, 2009															■						■
Quarter 4, 2009						■	■				■		■	■	■		■				■
Quarter 1, 2010													■		■						■
Quarter 2, 2010													■		■						■
Quarter 3, 2010													■		■						■
Quarter 4, 2010													■		■						■
Quarter 2, 2011															■				■		■
Quarter 3, 2011													■		■				■		■
Quarter 4, 2011													■		■						■
Quarter 1, 2012													■		■		■		■		■
Quarter 2, 2012															■						■
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													■		■				■		■
TURBIDITY																					
Quarter 1, 2003										✱											
URANIUM																					
Quarter 4, 2002		✱			✱	✱	✱			✱	✱	✱	✱	✱	✱	✱		✱	✱	✱	✱
Quarter 4, 2006																					✱
ZINC																					
Quarter 3, 2005																			✱		

✱ Statistical test results indicate an elevated concentration (i.e., a statistical exceedance).

■ MCL Exceedance

UCRS Upper Continental Recharge System

URGA Upper Regional Gravel Aquifer

LRGA Lower Regional Gravel Aquifer

APPENDIX H

METHANE MONITORING DATA

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C-746-U LANDFILL METHANE LOG

PADUCAH GASEOUS DIFFUSION PLANT
Permit #: 073-00045
McCracken County, Kentucky

Date: January 16, 2015

Time	Location	% LEL of Methane Reading	Remarks	Weather Conditions
11:00	C-746-U1	0	checked at floor level	Inside office
11:05	C-746-U2	0	checked at floor level	Inside office
11:10	C-746-U-T-14	0	checked at floor level	Inside office
11:17	C-746-U15	0	checked at floor level	Inside office
11:13	MG1	0	wet casing	Sunny at 58° Calm winds out of the northwest
11:22	MG2	0	wet casing	
12:40	MG3	0	dry casing	
12:30	MG4	0	dry casing	
N/A	Suspect or Problem Areas	N/A	No problems noted	N/A

JS 1-16-15

Tammy Smith
Signature

WD-F-0053 (8/19/13)
PAD-WD-0017

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Complete All Forms In Accordance With PAD-WC-0044

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