PAD-ENM-0086/V2

C-746-U Contained Landfill
Second Quarter Calendar Year 2013
(April–June)
Compliance Monitoring Report
Paducah Gaseous Diffusion Plant,
Paducah, Kentucky

This document is approved for public release per review by:

T. H. Dan

LATA Kentucky Classification Support

8-30-13
Date

PAD-ENM-0086/V2

C-746-U Contained Landfill
Second Quarter Calendar Year 2013
(April–June)
Compliance Monitoring Report
Paducah Gaseous Diffusion Plant,
Paducah, Kentucky

Date Issued—August 2013

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

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ACRONYMS

CFR	*Code of Federal Regulations*
EPA	U.S. Environmental Protection Agency
KAR	*Kentucky Administrative Regulations*
KDWM	Kentucky Division of Waste Management
KPDES	Kentucky Pollutant Discharge Elimination System
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

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1. INTRODUCTION

This report, *C-746-U Contained Landfill Second Quarter Calendar Year 2013 (April–June) Compliance Monitoring Report, Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, is being submitted in accordance with Solid Waste Landfill Permit Number 073-00045.

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 total metals results reported in Appendix C are measured in an unfiltered sample, as required by Permit Condition GSTR0001, Standard Requirement 4. 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 parameters that exceed the maximum contaminant level (MCL) and for all parameters that had statistically significant increased concentrations relative to background concentrations, including those parameters listed in 40 *CFR* § 302.4, Appendix A. Appendix G provides a chart of MCL exceedances and statistically significant increases that have occurred, beginning in the fourth quarter calendar year 2002. Methane monitoring results are documented on the approved C-746-U Landfill Methane Monitoring Report form provided in Appendix H. The form includes pertinent remarks/observations as required by 401 *KAR* 48:090, Section 4. Appendix J contains the annual leachate data, as required by landfill permit condition ACTV0006, Special Condition 1.

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

Groundwater sampling was conducted within the second quarter 2013, during April, using LATA Environmental Services of Kentucky, LLC, procedure PAD-ENM-2101, *Groundwater Sampling*. Appropriate sample containers and preservatives were utilized. The laboratories that performed analysis used U.S. Environmental Protection Agency (EPA)-approved methods, as applicable.

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 for MW359, MW362, MW368, MW376, and MW377. These wells, screened in the UCRS, had an insufficient amount of water to obtain samples this quarter; therefore, there are no analytical results for these locations.

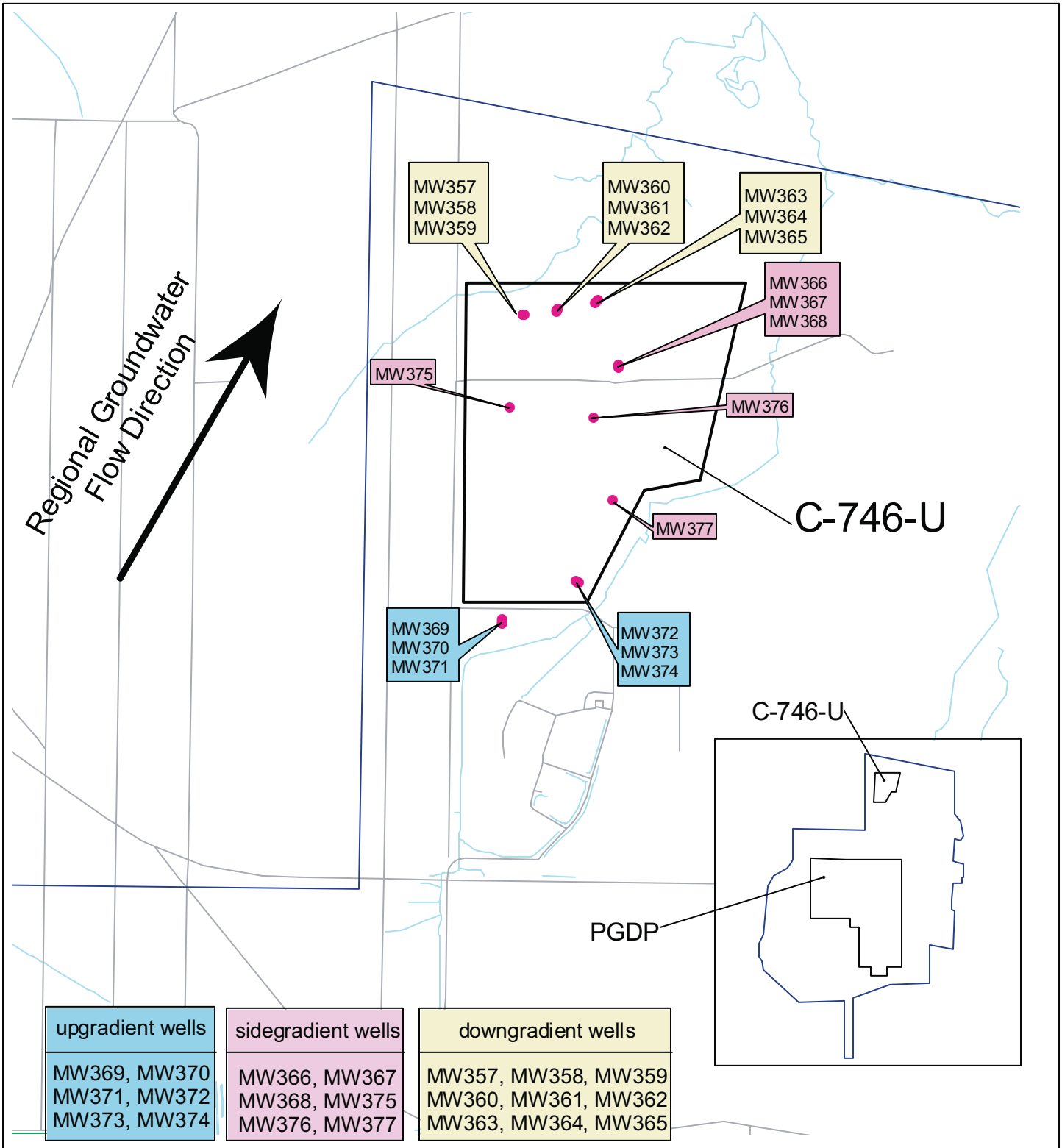

Figure 1. C-746-U Landfill Groundwater Monitoring Well Network

U.S. DEPARTMENT OF ENERGY
DOE PORTSMOUTH/PADUCAH PROJECT OFFICE
PADUCAH GASEOUS DIFFUSION PLANT

LATA Environmental Services of Kentucky, LLC

FIGURE No. c5ac90002SK115.apr
DATE 04-27-11

The parameters specified in Permit Condition GSTR0001, Special Condition 1, were analyzed for all locations sampled.

The groundwater flow rate and direction determination are provided in Appendix E. Depth-to-water was measured on April 16, 2013, 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 35 vicinity wells define the potentiometric surface for the Regional Gravel Aquifer (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 April was 2.62×10^{-4} ft/ft, while the hydraulic gradient for the upper RGA at the C-746-U Landfill was 1.22×10^{-4} ft/ft and for the lower RGA was 1.25×10^{-4} ft/ft. Calculated groundwater flow rates (average linear velocity) at the C-746-U Landfill range from 0.21 to 0.35 ft/day for the URGA and 0.21 to 0.36 ft/day for the LRGA (see Table E.3).

1.2.2 Methane Monitoring

Landfill operations staff monitored for the occurrence of methane on June 11, 2013, in four on-site building locations and four locations along the landfill boundary. See Appendix H for a map of the monitoring locations. No potential gas problem areas (i.e., suspect or problem areas) were identified. 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 approved C-746-U Landfill Methane Log provided in Appendix H.

1.2.3 Surface Water Monitoring

Surface water sampling was conducted on April 11, 2013, using LATA Environmental Services of Kentucky, LLC, procedure PAD-ENM-2203, *Surface Water Sampling*. Appropriate sample containers and preservatives were utilized. The laboratories that performed analysis used EPA-approved methods, as applicable. Samples were collected at the three permitted monitoring locations. The landfill has an upgradient location, L154; a downgradient location, L351; and a location near the working area of the landfill, L150. A map of the surface water monitoring locations is presented in Figure 2. Surface water was monitored, as specified in 401 *KAR* 48:300 § 2, and the approved surface water monitoring plan. The parameters identified in the Solid Waste Landfill Permit were analyzed for all three locations for reporting only, pursuant to Permit Condition GMNP0001, Standard Requirement 1.

The surface water sample collected at L150 indicated a concentration of uranium above those levels generally observed. There are no permit limits that apply to surface water. Sampling location L150 is inside the fence at the landfill, located upstream and flowing into the sedimentation pond. Water from the sedimentation pond is discharged under the Kentucky Pollutant Discharge Elimination System (KPDES) permit at Outfall K019; however, radiological parameters are designated as report only. The effluent of the sedimentation pond is included in DOE's environmental monitoring program and is in compliance with DOE Order 458.1.

[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.

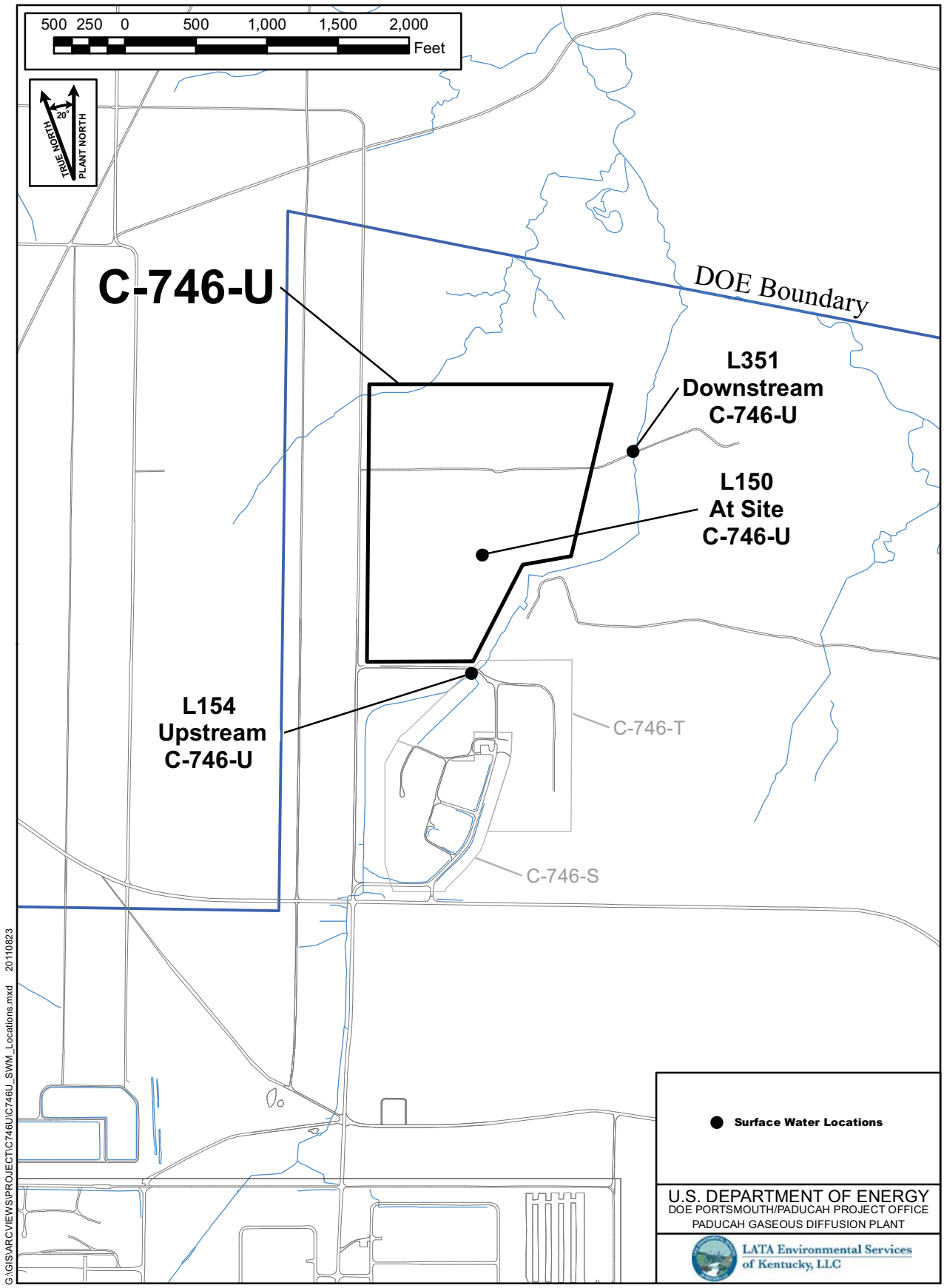

Figure 2. C-746-U Landfill Surface Water Monitoring Locations

1.2.4 Annual Leachate Monitoring

Annual leachate sampling was performed on April 17, 2013, pursuant to Permit ACTV0006, Special Condition 1. The results of the annual leachate sampling for calendar year 2013 are presented in Appendix J. The results indicated an elevated concentration of uranium compared to the previous annual sampling event. These concentrations do not represent an exceedance because there are no standards applicable to untreated leachate. The leachate is treated, and the effluent is regulated at Outfall K020 under the KPDES permit; however, radiological parameters are designated as report only. This effluent is included in DOE's environmental monitoring program and is in compliance with DOE Order 458.1. DOE will continue to coordinate with the Commonwealth of Kentucky on this matter.

1.3 KEY RESULTS

The following parameters had concentrations that either exceeded the MCL (Table 1) or were shown to have statistically significant increases (Table 2) in concentrations[2] relative to background concentrations during the first quarter 2013.

Table 1. Summary of MCL Exceedances

UCRS	URGA	LRGA
(none)	MW357: trichloroethene MW372: trichloroethene	MW358: trichloroethene MW361: trichloroethene MW373: trichloroethene

Table 2. Summary of Statistically Significant Increases

UCRS	URGA	LRGA
MW365: dissolved oxygen, sulfate MW371: (upgradient): oxidation-reduction potential MW374: (upgradient): dissolved oxygen, oxidation-reduction potential MW375: oxidation-reduction potential, sulfate	MW357: oxidation-reduction potential MW360: oxidation-reduction potential MW363: oxidation-reduction potential MW366: oxidation-reduction potential MW369: (upgradient): oxidation-reduction potential MW372: (upgradient): calcium, conductivity, dissolved solids, magnesium, sulfate	MW358: oxidation-reduction potential MW361: oxidation-reduction potential MW364: oxidation-reduction potential MW367: oxidation-reduction potential MW370: (upgradient): oxidation-reduction potential MW373: (upgradient): oxidation-reduction potential, technetium-99

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

[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 (PCBs).

MCL exceedances and parameters shown to have statistically significant increases relative to background concentrations are being assessed in accordance with the *Groundwater Assessment Plan for the C-746-U Landfill* (PRS 2007).

2. DATA EVALUATION/STATISTICAL SYNOPSIS

The statistical analyses conducted on the second quarter 2013 groundwater data collected from the C-746-U Contained Landfill MWs were performed in accordance with Permit Condition GSTR0001, Standard Requirement 3, using the EPA guidance document, *EPA Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Interim Final Guidance* (1989), with the exception of pH. The method for conducting the statistical analysis of pH was selected by the project statistician. 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 (D17–D77).

For chemicals with an established MCL, no statistical analysis was performed. Parameters that have an MCL can be found in 401 *KAR* 47:030, Section 6. For parameters with no established MCL, 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 statistically significant increase in concentrations with respect to upgradient (background) well data. 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 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 3.

Table 3. Monitoring Wells Included Historically in Statistical Analysis*

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

*A map showing the monitoring well locations is shown on Figure 1.

**MW359, MW362, MW368, MW376, and MW377 had sufficient water to permit a water level measurement but insufficient water to provide water samples for laboratory analysis.

STATISTICAL ANALYSIS OF GROUNDWATER DATA

Parameters requiring statistical analysis are summarized in Appendix D for each hydrological unit. A stepwise list for determining statistically significant increases is provided in Appendix D under Statistical Analysis Process. Appendix G summarizes the occurrences (by well and by quarter) of statistically significant increases and MCL exceedances.

Upper Continental Recharge System

In this quarter, 19 parameters required statistical analysis in the UCRS. During the second quarter, dissolved oxygen, oxidation-reduction potential, and sulfate displayed elevated concentrations that were determined to qualify as statistically significant increases and are listed in Table 2.

Upper Regional Gravel Aquifer

In this quarter, 22 parameters required statistical analysis in the URGA. During the second quarter, calcium, conductivity, dissolved solids, magnesium, oxidation-reduction potential, and sulfate displayed elevated concentrations that were determined to qualify as statistically significant increases and are listed in Table 2.

Lower Regional Gravel Aquifer

In this quarter, 19 parameters required statistical analysis in the LRGA. During the second quarter, oxidation reduction potential, and technetium-99 displayed elevated concentrations that were determined to qualify as statistically significant increases and are listed in Table 2.

3. DATA VALIDATION

Data validation was performed on the organic, inorganic, and radiochemical analytical data by an independent third-party validator. Validation qualifiers are not requested on the groundwater reporting forms.

Field quality control samples are collected quarterly during each sampling event. Equipment blanks, field blanks, and trip blanks are obtained to ensure quality control and 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 validation process.

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

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4. PROFESSIONAL GEOLOGIST AUTHORIZATION

DOCUMENT IDENTIFICATION: *C-746-U Contained Landfill*
Second Quarter Calendar Year 2013 (April-June)
Compliance Monitoring Report,
Paducah Gaseous Diffusion Plant,
Paducah, Kentucky (PAD-ENM-0086/V2)

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 August 30, 2013
Date

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5. 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.

PRS (Paducah Remediation Services, LLC) 2007. *Groundwater Assessment Plan for the C-746-U Landfill at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, PRS-PROJ-0006, Paducah Remediation Services, LLC,* Kevil, KY, February.

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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 2nd Qtr. CY 2013

Please check the following as applicable:

_____ Characterization X Quarterly _____ Semiannual X Annual _____ Assessment

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

X 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

8-30-13
Date

Rachel H. Blumenfeld, Acting Paducah Site Lead
U.S. Department of Energy

Date

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APPENDIX B

FACILITY INFORMATION SHEET

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FACILITY INFORMATION SHEET

Sampling Date: Groundwater: April 2013
Surface Water: April 2013
Leachate: April 2013 County: McCracken Permit Nos. 073-00045

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

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

Phone No: (270) 441-6800 Latitude: N 37° 07' 38.87" Longitude: W 88° 48' 13.42"

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: USEC Analytical Laboratories – Paducah Lab ID No: KY00906 (EPA ID Number)

Contact Person: John Price Phone No: (270) 441-5867

Mailing Address: P.O. Box 1410 (Street) Paducah, Kentucky (City/State) 42002-1410 (Zip)

LABORATORY RECORD #2

Laboratory: TestAmerica Laboratories, Inc. Lab ID No: MO00054 (EPA ID Number)

Contact Person: Elaine Wild Phone No: (314) 298-8566

Mailing Address: 13715 Rider Trail North (Street) Earth City, MO (City/State) 63045 (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)						4/2/2013 08:10		4/2/2013 09:35		NA		4/2/2013 13:06	
Duplicate ("Y" or "N")[2]						N		N		N		N	
Split ("Y" or "N")[3]						N		N		N		N	
Facility Sample ID Number (if applicable)						MW357UG3-13		MW358UG3-13		NA		MW360UG3-13	
Laboratory Sample ID Number (if applicable)						C13092029001		C13092029002		NA		C13092037001	
Date of Analysis (Month/Day/Year) For Volatile Organics Analysis						4/5/2013		4/5/2013		NA		4/5/2013	
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	<2		<2			*	<2	
16887-00-6		Chloride(s)	T	mg/L	9056	32		32			*	11	
16984-48-8		Fluoride	T	mg/L	9214	0.15		0.19			*	0.21	
S0595- -		Nitrate & Nitrite	T	mg/L	9056	1.2		<1			*	<1	
14808-79-8		Sulfate	T	mg/L	9056	62		87			*	89	
NS1894		Barometric Pressure Reading	T	Inches/Hg	Field	30.26		30.26			*	30.26	
S0145- -		Specific Conductance	T	µMH0/cm	Field	437		525			*	526	

[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

NOTE: The following parameters have updated method numbers: aluminum, 6010; arsenic, 6020; and tritium, EPA-906. The methods will be updated in an upcoming permit modification.

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	321.72		321.69			*	321.69	
N238		Dissolved Oxygen	T	mg/L	Field	3.97		0.64			*	1.23	
S0266- -		Total Dissolved Solids	T	mg/L	160.1	251		307			*	305	
S0296- -		pH	T	Units	Field	6.37		6.33			*	6.23	
NS215		Eh	T	mV	Field	746		329			*	362	
S0907 - -		Temperature	T	°C	Field	13.17		14.5			*	15.22	
7429-90-5		Aluminum	T	mg/L	6020	<0.2		<0.2			*	<0.2	
7440-36-0		Antimony	T	mg/L	6020	<0.005		<0.005			*	<0.005	
7440-38-2		Arsenic	T	mg/L	7060	<0.001		0.00132			*	<0.001	
7440-39-3		Barium	T	mg/L	6020	0.054	*	0.0586	*		*	0.211	*
7440-41-7		Beryllium	T	mg/L	6020	<0.001		<0.001			*	<0.001	
7440-42-8		Boron	T	mg/L	6010	0.369		0.368			*	<0.2	B
7440-43-9		Cadmium	T	mg/L	6020	<0.001		<0.001			*	<0.001	
7440-70-2		Calcium	T	mg/L	6010	27.8		36.5			*	25.9	
7440-47-3		Chromium	T	mg/L	6020	<0.01		<0.01			*	<0.01	
7440-48-4		Cobalt	T	mg/L	6020	<0.001		0.00316			*	0.0404	
7440-50-8		Copper	T	mg/L	6020	<0.02		<0.02			*	<0.02	
7439-89-6		Iron	T	mg/L	6010	<0.1		1.56			*	5.3	
7439-92-1		Lead	T	mg/L	6020	<0.0013		<0.0013			*	<0.0013	
7439-95-4		Magnesium	T	mg/L	6010	11.4		15.6			*	9.81	
7439-96-5		Manganese	T	mg/L	6020	0.0283	*	0.447	*		*	0.22	*
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	<0.001	B	<0.001	B		*	<0.001	B
7440-02-0		Nickel	T	mg/L	6020	<0.005		<0.005			*	<0.005	
7440-09-7		Potassium	T	mg/L	6010	1.81	B	2.64	B		*	0.899	B
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	*B	<0.001	*B		*	<0.001	*B
7440-23-5		Sodium	T	mg/L	6010	39.1		40.4			*	58.3	
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	<0.001		<0.001			*	<0.001	
7440-62-2		Vanadium	T	mg/L	6020	<0.02		<0.02			*	<0.02	
7440-66-6		Zinc	T	mg/L	6020	<0.02		<0.02			*	<0.02	
108-05-4		Vinyl acetate	T	mg/L	8260	<0.01		<0.01			*	<0.01	
67-64-1		Acetone	T	mg/L	8260	<0.01	J	<0.01	J		*	<0.01	J
107-02-8		Acrolein	T	mg/L	8260	<0.01		<0.01			*	<0.01	
107-13-1		Acrylonitrile	T	mg/L	8260	<0.01		<0.01			*	<0.01	
71-43-2		Benzene	T	mg/L	8260	<0.005		<0.005			*	<0.005	
108-90-7		Chlorobenzene	T	mg/L	8260	<0.005		<0.005			*	<0.005	
1330-20-7		Xylenes	T	mg/L	8260	<0.015		<0.015			*	<0.015	
100-42-5		Styrene	T	mg/L	8260	<0.005		<0.005			*	<0.005	
108-88-3		Toluene	T	mg/L	8260	<0.005		<0.005			*	<0.005	
74-97-5		Chlorobromomethane	T	mg/L	8260	<0.005		<0.005			*	<0.005	

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	<0.005		<0.005			*	<0.005	
75-25-2		Tribromomethane	T	mg/L	8260	<0.005		<0.005			*	<0.005	
74-83-9		Methyl bromide	T	mg/L	8260	<0.005		<0.005			*	<0.005	
78-93-3		Methyl ethyl ketone	T	mg/L	8260	<0.01		<0.01			*	<0.01	
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	<0.005		<0.005			*	<0.005	
67-66-3		Chloroform	T	mg/L	8260	<0.001		<0.001			*	<0.001	
74-87-3		Methyl chloride	T	mg/L	8260	<0.005		<0.005			*	<0.005	
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	<0.005		<0.005			*	<0.005	
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	<0.005		<0.005			*	<0.005	
79-34-5		Ethane, 1,1,2,2-Tetrachloro	T	mg/L	8260	<0.005	J	<0.005	J		*	<0.005	J
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	J	<0.001	J		*	<0.001	J
630-20-6		Ethane, 1,1,1,2-Tetrachloro	T	mg/L	8260	<0.005		<0.005			*	<0.005	
75-01-4		Vinyl chloride	T	mg/L	8260	<0.002		<0.002			*	<0.002	
127-18-4		Ethene, Tetrachloro-	T	mg/L	8260	<0.001		<0.001			*	<0.001	
79-01-6		Ethene, Trichloro-	T	mg/L	8260	0.0059		0.0056			*	<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
100-41-4		Ethylbenzene	T	mg/L	8260	<0.005		<0.005			*	<0.005	
591-78-6		2-Hexanone	T	mg/L	8260	<0.01		<0.01			*	<0.01	
74-88-4		Iodomethane	T	mg/L	8260	<0.01		<0.01			*	<0.01	
124-48-1		Methane, Dibromochloro-	T	mg/L	8260	<0.005		<0.005			*	<0.005	
56-23-5		Carbon Tetrachloride	T	mg/L	8260	<0.005		<0.005			*	<0.005	
75-09-2		Dichloromethane	T	mg/L	8260	<0.005		<0.005			*	<0.005	
108-10-1		Methyl isobutyl ketone	T	mg/L	8260	<0.01		<0.01			*	<0.01	
96-12-8		Propane, 1,2-Dibromo-3-chloro	T	mg/L	8011	<0.0002		<0.0002			*	<0.0002	
78-87-5		Propane, 1,2-Dichloro-	T	mg/L	8260	<0.005		<0.005			*	<0.005	
10061-02-6		trans-1,3-Dichloro-1-propene	T	mg/L	8260	<0.005		<0.005			*	<0.005	
10061-01-5		cis-1,3-Dichloro-1-propene	T	mg/L	8260	<0.005		<0.005			*	<0.005	
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	<0.005		<0.005			*	<0.005	
96-18-4		1,2,3-Trichloropropane	T	mg/L	8260	<0.005		<0.005			*	<0.005	
95-50-1		Benzene, 1,2-Dichloro-	T	mg/L	8260	<0.005		<0.005			*	<0.005	
106-46-7		Benzene, 1,4-Dichloro-	T	mg/L	8260	<0.005		<0.005			*	<0.005	
1336-36-3		PCB,Total	T	ug/L	8082	<0.17		<0.17			*	<0.17	
12674-11-2		PCB-1016	T	ug/L	8082	<0.16		<0.16			*	<0.16	
11104-28-2		PCB-1221	T	ug/L	8082	<0.17		<0.17			*	<0.17	
11141-16-5		PCB-1232	T	ug/L	8082	<0.13		<0.13			*	<0.14	
53469-21-9		PCB-1242	T	ug/L	8082	<0.1		<0.1			*	<0.1	
12672-29-6		PCB-1248	T	ug/L	8082	<0.11		<0.11			*	<0.12	

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	<0.07		<0.07			*	<0.07	
11096-82-5		PCB-1260	T	ug/L	8082	<0.05		<0.05			*	<0.05	
11100-14-4		PCB-1268	T	ug/L	8082	<0.09		<0.09			*	<0.09	
12587-46-1		Gross Alpha	T	pCi/L	9310	2.7	*	2.94	*		*	0.0315	*
12587-47-2		Gross Beta	T	pCi/L	9310	23.7	*	24.6	*		*	6.57	*
10043-66-0		Iodine-131	T	pCi/L	RL-7124		*		*		*		*
13982-63-3		Radium-226	T	pCi/L	RL-7129	-0.109	*	0.298	*		*	0.0849	*
10098-97-2		Strontium-90	T	pCi/L	RL-7140	-0.0452	*	0.133	*		*	-0.0119	*
14133-76-7		Technetium-99	T	pCi/L	RL-7100	35.1	*	38.3	*		*	2.71	*
14269-63-7		Thorium-230	T	pCi/L	RL-7128	0.0579	*	0.0477	*		*	0.0856	*
10028-17-8		Tritium	T	pCi/L	704R6	-439	*	-390	*		*	-519	*
S0130- -		Chemical Oxygen Demand	T	mg/L	410.4	<25		<25			*	<25	
57-12-5		Cyanide	T	mg/L	9010	<0.04	BJ	<0.04	BJ		*	<0.04	BJ
20461-54-5		Iodide	T	mg/L	345.1	<2		<2			*	<2	
S0268- -		Total Organic Carbon	T	mg/L	9060	<1		1	*		*	1.7	
S0586- -		Total Organic Halides	T	mg/L	9020	0.034		0.034			*	0.04	

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)	4/3/2013 09:26	NA	4/3/2013 12:38	4/4/2013 09:22
Duplicate ("Y" or "N")[2]	N	N	N	N
Split ("Y" or "N")[3]	N	N	N	N
Facility Sample ID Number (if applicable)	MW361UG3-13	NA	MW363UG3-13	MW364UG3-13
Laboratory Sample ID Number (if applicable)	C13093034001	NA	C13093050001	C13094116001
Date of Analysis (Month/Day/Year) For Volatile Organics Analysis	4/5/2013	NA	4/5/2013	4/6/2013
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	<2			*	<2		<2	
16887-00-6		Chloride(s)	T	mg/L	9056	33			*	30		32	
16984-48-8		Fluoride	T	mg/L	9214	0.16			*	0.19		0.16	
S0595- -		Nitrate & Nitrite	T	mg/L	9056	<1			*	2.2		<1	*
14808-79-8		Sulfate	T	mg/L	9056	76			*	23		64	
NS1894		Barometric Pressure Reading	T	Inches/Hg	Field	30.28			*	30.28		30.06	
S0145- -		Specific Conductance	T	µMH0/cm	Field	466			*	369		443	

[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

NOTE: The following parameters have updated method numbers: aluminum, 6010; arsenic, 6020; and tritium, EPA-906. The methods will be updated in an upcoming permit modification.

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, 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	321.74			*	321.65		321.82	
N238		Dissolved Oxygen	T	mg/L	Field	3.17			*	1.03		2.18	
S0266- -		Total Dissolved Solids	T	mg/L	160.1	274			*	208		257	
S0296- -		pH	T	Units	Field	6.59			*	6.27		6.26	
NS215		Eh	T	mV	Field	487			*	451		385	
S0907 - -		Temperature	T	°C	Field	14.33			*	15.11		14.67	
7429-90-5		Aluminum	T	mg/L	6020	<0.2			*	<0.2		<0.2	
7440-36-0		Antimony	T	mg/L	6020	<0.005			*	<0.005		<0.005	
7440-38-2		Arsenic	T	mg/L	7060	<0.001			*	<0.001		0.00101	
7440-39-3		Barium	T	mg/L	6020	0.058	*		*	0.168	*	0.0815	*
7440-41-7		Beryllium	T	mg/L	6020	<0.001			*	<0.001		<0.001	
7440-42-8		Boron	T	mg/L	6010	0.293			*	<0.2	B	<0.2	B
7440-43-9		Cadmium	T	mg/L	6020	<0.001			*	<0.001		<0.001	
7440-70-2		Calcium	T	mg/L	6010	31			*	23.8		27	
7440-47-3		Chromium	T	mg/L	6020	<0.01			*	<0.01		<0.01	
7440-48-4		Cobalt	T	mg/L	6020	<0.001			*	<0.001		<0.001	
7440-50-8		Copper	T	mg/L	6020	<0.02			*	<0.02		<0.02	
7439-89-6		Iron	T	mg/L	6010	<0.1			*	0.575		0.116	
7439-92-1		Lead	T	mg/L	6020	<0.0013			*	<0.0013		<0.0013	
7439-95-4		Magnesium	T	mg/L	6010	12.7			*	9.41		11.1	
7439-96-5		Manganese	T	mg/L	6020	<0.005	*		*	0.174	*	0.0188	*
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
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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, 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**	<0.001	B		*	<0.001	B	<0.001	B
7440-02-0		**Nickel**	**T**	**mg/L**	**6020**	<0.005			*	<0.005		0.0343	
7440-09-7		**Potassium**	**T**	**mg/L**	**6010**	2.09	B		*	1.13	B	2.04	B
7440-16-6		**Rhodium**	**T**	**mg/L**	**6020**	<0.005			*	<0.005		<0.005	
7782-49-2		**Selenium**	**T**	**mg/L**	**6020**	0.00522			*	<0.005		0.00526	
7440-22-4		**Silver**	**T**	**mg/L**	**6020**	<0.001	*B		*	<0.001	*B	<0.001	*B
7440-23-5		**Sodium**	**T**	**mg/L**	**6010**	39.9			*	31.7		38.7	
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**	<0.001			*	<0.001		<0.001	
7440-62-2		**Vanadium**	**T**	**mg/L**	**6020**	<0.02			*	<0.02		<0.02	
7440-66-6		**Zinc**	**T**	**mg/L**	**6020**	<0.02			*	<0.02		<0.02	
108-05-4		**Vinyl acetate**	**T**	**mg/L**	**8260**	<0.01			*	<0.01		<0.01	
67-64-1		**Acetone**	**T**	**mg/L**	**8260**	<0.01	J		*	<0.01	J	<0.01	J
107-02-8		**Acrolein**	**T**	**mg/L**	**8260**	<0.01			*	<0.01		<0.01	
107-13-1		**Acrylonitrile**	**T**	**mg/L**	**8260**	<0.01			*	<0.01		<0.01	
71-43-2		**Benzene**	**T**	**mg/L**	**8260**	<0.005			*	<0.005		<0.005	
108-90-7		**Chlorobenzene**	**T**	**mg/L**	**8260**	<0.005			*	<0.005		<0.005	
1330-20-7		**Xylenes**	**T**	**mg/L**	**8260**	<0.015			*	<0.015		<0.015	
100-42-5		**Styrene**	**T**	**mg/L**	**8260**	<0.005			*	<0.005		<0.005	
108-88-3		**Toluene**	**T**	**mg/L**	**8260**	<0.005			*	<0.005		<0.005	
74-97-5		**Chlorobromomethane**	**T**	**mg/L**	**8260**	<0.005			*	<0.005		<0.005	

RESIDENTIAL/CONTAINED-QUARTERLY
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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, 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	<0.005			*	<0.005		<0.005	
75-25-2		Tribromomethane	T	mg/L	8260	<0.005			*	<0.005		<0.005	
74-83-9		Methyl bromide	T	mg/L	8260	<0.005			*	<0.005		<0.005	
78-93-3		Methyl ethyl ketone	T	mg/L	8260	<0.01			*	<0.01		<0.01	
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	<0.005			*	<0.005		<0.005	
67-66-3		Chloroform	T	mg/L	8260	<0.001			*	<0.001		<0.001	
74-87-3		Methyl chloride	T	mg/L	8260	<0.005			*	<0.005		<0.005	
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	<0.005			*	<0.005		<0.005	
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	<0.005			*	<0.005		<0.005	
79-34-5		Ethane, 1,1,2,2-Tetrachloro	T	mg/L	8260	<0.005	J		*	<0.005	J	<0.005	J
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	J		*	<0.001	J	<0.001	J
630-20-6		Ethane, 1,1,1,2-Tetrachloro	T	mg/L	8260	<0.005			*	<0.005		<0.005	
75-01-4		Vinyl chloride	T	mg/L	8260	<0.002			*	<0.002		<0.002	
127-18-4		Ethene, Tetrachloro-	T	mg/L	8260	<0.001			*	<0.001		<0.001	
79-01-6		Ethene, Trichloro-	T	mg/L	8260	0.006			*	<0.001		0.0034	

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	<0.005			*	<0.005		<0.005	
591-78-6		2-Hexanone	T	mg/L	8260	<0.01			*	<0.01		<0.01	
74-88-4		Iodomethane	T	mg/L	8260	<0.01			*	<0.01		<0.01	
124-48-1		Methane, Dibromochloro-	T	mg/L	8260	<0.005			*	<0.005		<0.005	
56-23-5		Carbon Tetrachloride	T	mg/L	8260	<0.005			*	<0.005		<0.005	
75-09-2		Dichloromethane	T	mg/L	8260	<0.005			*	<0.005		<0.005	
108-10-1		Methyl isobutyl ketone	T	mg/L	8260	<0.01			*	<0.01		<0.01	
96-12-8		Propane, 1,2-Dibromo-3-chloro	T	mg/L	8011	<0.0002			*	<0.0002	*	<0.0002	
78-87-5		Propane, 1,2-Dichloro-	T	mg/L	8260	<0.005			*	<0.005		<0.005	
10061-02-6		trans-1,3-Dichloro-1-propene	T	mg/L	8260	<0.005			*	<0.005		<0.005	
10061-01-5		cis-1,3-Dichloro-1-propene	T	mg/L	8260	<0.005			*	<0.005		<0.005	
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	<0.005			*	<0.005		<0.005	
96-18-4		1,2,3-Trichloropropane	T	mg/L	8260	<0.005			*	<0.005		<0.005	
95-50-1		Benzene, 1,2-Dichloro-	T	mg/L	8260	<0.005			*	<0.005		<0.005	
106-46-7		Benzene, 1,4-Dichloro-	T	mg/L	8260	<0.005			*	<0.005		<0.005	
1336-36-3		PCB,Total	T	ug/L	8082	<0.17			*	0.18		<0.17	
12674-11-2		PCB-1016	T	ug/L	8082	<0.16			*	<0.16		<0.16	
11104-28-2		PCB-1221	T	ug/L	8082	<0.17			*	<0.17		<0.17	
11141-16-5		PCB-1232	T	ug/L	8082	<0.14			*	<0.13		<0.14	
53469-21-9		PCB-1242	T	ug/L	8082	<0.1			*	0.18		<0.1	
12672-29-6		PCB-1248	T	ug/L	8082	<0.12			*	<0.11		<0.12	

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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, 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	<0.07			*	<0.07		<0.07	
11096-82-5		PCB-1260	T	ug/L	8082	<0.05			*	<0.05		<0.05	
11100-14-4		PCB-1268	T	ug/L	8082	<0.09			*	<0.09		<0.09	
12587-46-1		Gross Alpha	T	pCi/L	9310	4.92	*		*	0.48	*	0.994	*
12587-47-2		Gross Beta	T	pCi/L	9310	30.2	*		*	8.55	*	43.7	*
10043-66-0		Iodine-131	T	pCi/L	RL-7124		*		*		*		*
13982-63-3		Radium-226	T	pCi/L	RL-7129	0.221	*		*	-0.187	*	0.228	*
10098-97-2		Strontium-90	T	pCi/L	RL-7140	0.402	*		*	0.0813	*	-0.502	*
14133-76-7		Technetium-99	T	pCi/L	RL-7100	39.5	*		*	1.4	*	45.5	*
14269-63-7		Thorium-230	T	pCi/L	RL-7128	0.0887	*		*	0.0199	*	0.0718	*
10028-17-8		Tritium	T	pCi/L	704R6	-260	*		*	-710	*	-493	*
S0130- -		Chemical Oxygen Demand	T	mg/L	410.4	<25			*	<25		<25	
57-12-5		Cyanide	T	mg/L	9010	<0.04	BJ		*	<0.04		<0.04	
20461-54-5		Iodide	T	mg/L	345.1	<2			*	<2		<2	
S0268- -		Total Organic Carbon	T	mg/L	9060	<1			*	1.5		<1	
S0586- -		Total Organic Halides	T	mg/L	9020	0.018			*	0.014		0.025	

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)						4/15/2013 09:17		4/4/2013 12:41		4/8/2013 13:15		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)						MW365UG3-13		MW366UG3-13		MW367UG3-13		NA	
Laboratory Sample ID Number (if applicable)						C13105020001		C13094116002		C13098031001		NA	
Date of Analysis (Month/Day/Year) For Volatile Organics Analysis						4/16/2013		4/6/2013		4/12/2013		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	<2		<2		<2			*
16887-00-6		Chloride(s)	T	mg/L	9056	5.5		39		33			*
16984-48-8		Fluoride	T	mg/L	9214	0.28		0.18		0.14			*
S0595- -		Nitrate & Nitrite	T	mg/L	9056	<1		<1	*	<1			*
14808-79-8		Sulfate	T	mg/L	9056	62		42		36			*
NS1894		Barometric Pressure Reading	T	Inches/Hg	Field	29.88		30.06		29.86			*
S0145- -		Specific Conductance	T	µMH0/cm	Field	391		443		397			*

[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

NOTE: The following parameters have updated method numbers: aluminum, 6010; arsenic, 6020; and tritium, EPA-906. The methods will be updated in an upcoming permit modification.

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	327.24		321.95		322.22			*
N238		Dissolved Oxygen	T	mg/L	Field	5.54		0.86		0.79			*
S0266- -		Total Dissolved Solids	T	mg/L	160.1	244		251		230			*
S0296- -		pH	T	Units	Field	6.4		6.11		6.2			*
NS215		Eh	T	mV	Field	99		365		250			*
S0907 - -		Temperature	T	°C	Field	16.28		15.44		17.06			*
7429-90-5		Aluminum	T	mg/L	6020	<0.2		<0.2		<0.2			*
7440-36-0		Antimony	T	mg/L	6020	<0.005		<0.005		<0.005			*
7440-38-2		Arsenic	T	mg/L	7060	<0.001		0.00131		0.00148			*
7440-39-3		Barium	T	mg/L	6020	0.113	*	0.178	*	0.202	*		*
7440-41-7		Beryllium	T	mg/L	6020	<0.001		<0.001		<0.001			*
7440-42-8		Boron	T	mg/L	6010	<0.2	B	<0.2	B	<0.2	B		*
7440-43-9		Cadmium	T	mg/L	6020	<0.001		<0.001		<0.001			*
7440-70-2		Calcium	T	mg/L	6010	18.8		27.1		25.7			*
7440-47-3		Chromium	T	mg/L	6020	<0.01		<0.01		<0.01			*
7440-48-4		Cobalt	T	mg/L	6020	0.00155		<0.001		0.00147			*
7440-50-8		Copper	T	mg/L	6020	<0.02		<0.02		<0.02			*
7439-89-6		Iron	T	mg/L	6010	0.126		<0.1		1.22			*
7439-92-1		Lead	T	mg/L	6020	<0.0013		<0.0013		<0.0013			*
7439-95-4		Magnesium	T	mg/L	6010	8.52		11		10.4			*
7439-96-5		Manganese	T	mg/L	6020	0.0544	*	0.0223	*	0.731	*		*
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
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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	<0.001	B	<0.001	B	<0.001	B		*
7440-02-0		Nickel	T	mg/L	6020	0.00598		<0.005		<0.005			*
7440-09-7		Potassium	T	mg/L	6010	0.312	B	1.93	B	2.72			*
7440-16-6		Rhodium	T	mg/L	6020	<0.005		<0.005		<0.005			*
7782-49-2		Selenium	T	mg/L	6020	<0.005		0.00677		0.00524			*
7440-22-4		Silver	T	mg/L	6020	<0.001	*B	<0.001	*B	<0.001	*B		*
7440-23-5		Sodium	T	mg/L	6010	41.2		40.6		33.3			*
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	<0.001		<0.001		<0.001			*
7440-62-2		Vanadium	T	mg/L	6020	<0.02		<0.02		<0.02			*
7440-66-6		Zinc	T	mg/L	6020	<0.02		<0.02		<0.02			*
108-05-4		Vinyl acetate	T	mg/L	8260	<0.01		<0.01		<0.01			*
67-64-1		Acetone	T	mg/L	8260	<0.01	J	<0.01	J	<0.01			*
107-02-8		Acrolein	T	mg/L	8260	<0.01		<0.01		<0.01	J		*
107-13-1		Acrylonitrile	T	mg/L	8260	<0.01		<0.005		<0.01			*
71-43-2		Benzene	T	mg/L	8260	<0.005		<0.005		<0.005			*
108-90-7		Chlorobenzene	T	mg/L	8260	<0.005		<0.005		<0.005			*
1330-20-7		Xylenes	T	mg/L	8260	<0.015		<0.015		<0.015			*
100-42-5		Styrene	T	mg/L	8260	<0.005		<0.005		<0.005			*
108-88-3		Toluene	T	mg/L	8260	<0.005		<0.005		<0.005			*
74-97-5		Chlorobromomethane	T	mg/L	8260	<0.005		<0.005		<0.005			*

RESIDENTIAL/CONTAINED-QUARTERLY
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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	<0.005		<0.005		<0.005			*
75-25-2		Tribromomethane	T	mg/L	8260	<0.005		<0.005		<0.005	*		*
74-83-9		Methyl bromide	T	mg/L	8260	<0.005	J	<0.005		<0.005	J		*
78-93-3		Methyl ethyl ketone	T	mg/L	8260	<0.01	J	<0.01		<0.01			*
110-57-6		trans-1,4-Dichloro-2-butene	T	mg/L	8260	<0.005	J	<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	<0.005	J	<0.005		<0.005	*J		*
67-66-3		Chloroform	T	mg/L	8260	<0.001		<0.001		<0.001			*
74-87-3		Methyl chloride	T	mg/L	8260	<0.005		<0.005		<0.005	J		*
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	<0.005		<0.005		<0.005			*
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	<0.005		<0.005		<0.005			*
79-34-5		Ethane, 1,1,2,2-Tetrachloro	T	mg/L	8260	<0.005	J	<0.005	J	<0.005	J		*
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	J	<0.001			*
630-20-6		Ethane, 1,1,1,2-Tetrachloro	T	mg/L	8260	<0.005		<0.005		<0.005			*
75-01-4		Vinyl chloride	T	mg/L	8260	<0.002	J	<0.002		<0.002	*		*
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		0.0031		0.0022			*

RESIDENTIAL/CONTAINED-QUARTERLY
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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	<0.005		<0.005		<0.005			*
591-78-6		2-Hexanone	T	mg/L	8260	<0.01	J	<0.01		<0.01			*
74-88-4		Iodomethane	T	mg/L	8260	<0.01		<0.01		<0.01			*
124-48-1		Methane, Dibromochloro-	T	mg/L	8260	<0.005		<0.005		<0.005	*		*
56-23-5		Carbon Tetrachloride	T	mg/L	8260	<0.005		<0.001		<0.005			*
75-09-2		Dichloromethane	T	mg/L	8260	<0.005		<0.005		<0.005	*		*
108-10-1		Methyl isobutyl ketone	T	mg/L	8260	<0.01		<0.01		<0.01			*
96-12-8		Propane, 1,2-Dibromo-3-chloro	T	mg/L	8011	<0.0002	*	<0.0002		<0.0002			*
78-87-5		Propane, 1,2-Dichloro-	T	mg/L	8260	<0.005		<0.005		<0.005			*
10061-02-6		trans-1,3-Dichloro-1-propene	T	mg/L	8260	<0.005		<0.005		<0.005			*
10061-01-5		cis-1,3-Dichloro-1-propene	T	mg/L	8260	<0.005		<0.005		<0.005	*		*
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	<0.005		<0.005		<0.005			*
96-18-4		1,2,3-Trichloropropane	T	mg/L	8260	<0.005		<0.005		<0.005			*
95-50-1		Benzene, 1,2-Dichloro-	T	mg/L	8260	<0.005		<0.005		<0.005			*
106-46-7		Benzene, 1,4-Dichloro-	T	mg/L	8260	<0.005		<0.005		<0.005			*
1336-36-3		PCB,Total	T	ug/L	8082	<0.18		<0.18		<0.17			*
12674-11-2		PCB-1016	T	ug/L	8082	<0.17		<0.17		<0.16			*
11104-28-2		PCB-1221	T	ug/L	8082	<0.18		<0.18		<0.17			*
11141-16-5		PCB-1232	T	ug/L	8082	<0.14		<0.14		<0.14			*
53469-21-9		PCB-1242	T	ug/L	8082	<0.1		<0.1		<0.1			*
12672-29-6		PCB-1248	T	ug/L	8082	<0.12		<0.12		<0.12			*

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	<0.07		<0.07		<0.07			*
11096-82-5		PCB-1260	T	ug/L	8082	<0.05		<0.05		<0.05			*
11100-14-4		PCB-1268	T	ug/L	8082	<0.09		<0.09		<0.09			*
12587-46-1		Gross Alpha	T	pCi/L	9310	1.44	*	0.47	*	3.81	*		*
12587-47-2		Gross Beta	T	pCi/L	9310	0.216	*	37.5	*	35	*		*
10043-66-0		Iodine-131	T	pCi/L	RL-7124		*		*		*		*
13982-63-3		Radium-226	T	pCi/L	RL-7129	-0.0301	*	0.276	*	0.592	*		*
10098-97-2		Strontium-90	T	pCi/L	RL-7140	-0.681	*	-0.168	*	0.368	*		*
14133-76-7		Technetium-99	T	pCi/L	RL-7100	-1.41	*	48	*	29.6	*		*
14269-63-7		Thorium-230	T	pCi/L	RL-7128	0.0476	*	0.0231	*	0.0745	*		*
10028-17-8		Tritium	T	pCi/L	704R6	-261	*	-587	*	-276	*		*
S0130- -		Chemical Oxygen Demand	T	mg/L	410.4	<25		<25		<25			*
57-12-5		Cyanide	T	mg/L	9010	<0.04		<0.04		<0.04			*
20461-54-5		Iodide	T	mg/L	345.1	<2		<2		<2			*
S0268- -		Total Organic Carbon	T	mg/L	9060	1.9		<1		<1			*
S0586- -		Total Organic Halides	T	mg/L	9020	0.016	B	0.023		0.025			*

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)	4/10/2013 08:22	4/10/2013 09:32	4/9/2013 08:11	4/8/2013 08:12
Duplicate ("Y" or "N")[2]	N	N	N	N
Split ("Y" or "N")[3]	N	N	N	N
Facility Sample ID Number (if applicable)	MW369UG3-13	MW370UG3-13	MW371UG3-13	MW372UG3-13
Laboratory Sample ID Number (if applicable)	C13100018001	C13100018002	C13099017001	C13098018001
Date of Analysis (Month/Day/Year) For Volatile Organics Analysis	4/15/2013	4/12/2013	4/12/2013	4/12/2013
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	<2		<2		<2		<2	
16887-00-6		Chloride(s)	T	mg/L	9056	36		43		8.4		47	
16984-48-8		Fluoride	T	mg/L	9214	0.2		0.16		0.3		0.18	
S0595- -		Nitrate & Nitrite	T	mg/L	9056	<1		1.2		<1		<1	
14808-79-8		Sulfate	T	mg/L	9056	7.5		18		11		170	
NS1894		Barometric Pressure Reading	T	Inches/Hg	Field	29.88		29.88		29.96		29.86	
S0145- -		Specific Conductance	T	µMH0/cm	Field	392		432		766		879	

[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

NOTE: The following parameters have updated method numbers: aluminum, 6010; arsenic, 6020; and tritium, EPA-906. The methods will be updated in an upcoming permit modification.

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	322.52		322.47		339.69		322.48	
N238		Dissolved Oxygen	T	mg/L	Field	1.19		3.25		1.61		0.76	
S0266- -		Total Dissolved Solids	T	mg/L	160.1	237		239		475		526	
S0296- -		pH	T	Units	Field	6.32		6.25		6.79		6.24	
NS215		Eh	T	mV	Field	580		505		690		28	
S0907 - -		Temperature	T	°C	Field	18.72		17.83		16.5		16.67	
7429-90-5		Aluminum	T	mg/L	6020	0.201		<0.2		1.31		<0.2	
7440-36-0		Antimony	T	mg/L	6020	<0.005	B	<0.005		<0.005	B	<0.005	
7440-38-2		Arsenic	T	mg/L	7060	0.00158		0.00151		0.00106		0.00296	
7440-39-3		Barium	T	mg/L	6020	0.388		0.199	*	0.171		0.0768	*
7440-41-7		Beryllium	T	mg/L	6020	<0.001		<0.001		<0.001		<0.001	
7440-42-8		Boron	T	mg/L	6010	<0.2	B	<0.2	B	<0.2	B	1.43	
7440-43-9		Cadmium	T	mg/L	6020	<0.001		<0.001		<0.001		<0.001	
7440-70-2		Calcium	T	mg/L	6010	16.4		28.2		29.3		65.9	
7440-47-3		Chromium	T	mg/L	6020	<0.01		<0.01		<0.01		<0.01	
7440-48-4		Cobalt	T	mg/L	6020	0.0234	*B	<0.001		<0.001	B*	<0.001	
7440-50-8		Copper	T	mg/L	6020	<0.02		<0.02		<0.02		<0.02	
7439-89-6		Iron	T	mg/L	6010	0.725		<0.1		0.852		1.88	
7439-92-1		Lead	T	mg/L	6020	<0.0013	B	<0.0013		<0.0013	B	<0.0013	
7439-95-4		Magnesium	T	mg/L	6010	6.38		11.5		12.6		26	
7439-96-5		Manganese	T	mg/L	6020	0.218	*	<0.005	*	0.0108	*	0.0612	*
7439-97-6		Mercury	T	mg/L	7470	<0.0002		<0.0002		<0.0002		<0.0002	

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						8004-4820		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	<0.001	B	<0.001	B	<0.001	B	<0.001	B
7440-02-0		Nickel	T	mg/L	6020	0.00706	*	<0.005		<0.005	*	<0.005	
7440-09-7		Potassium	T	mg/L	6010	0.568		2.48		0.477		2.72	B
7440-16-6		Rhodium	T	mg/L	6020	<0.005		<0.005		<0.005		<0.005	
7782-49-2		Selenium	T	mg/L	6020	<0.005		0.00623		<0.005		0.00603	
7440-22-4		Silver	T	mg/L	6020	<0.001		<0.001	*B	<0.001		<0.001	*B
7440-23-5		Sodium	T	mg/L	6010	52.4		37.2		121		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	<0.001		<0.001		0.00199		<0.001	
7440-62-2		Vanadium	T	mg/L	6020	<0.02		<0.02		<0.02		<0.02	
7440-66-6		Zinc	T	mg/L	6020	<0.02	B	<0.02		<0.02	B	<0.02	
108-05-4		Vinyl acetate	T	mg/L	8260	<0.01		<0.01		<0.01		<0.01	
67-64-1		Acetone	T	mg/L	8260	<0.01	J	<0.01		<0.01		<0.01	
107-02-8		Acrolein	T	mg/L	8260	<0.01		<0.01	J	<0.01	J	<0.01	J
107-13-1		Acrylonitrile	T	mg/L	8260	<0.01		<0.01		<0.005		<0.01	
71-43-2		Benzene	T	mg/L	8260	<0.005		<0.005		<0.005		<0.005	
108-90-7		Chlorobenzene	T	mg/L	8260	<0.005		<0.005		<0.005		<0.005	
1330-20-7		Xylenes	T	mg/L	8260	<0.015		<0.015		<0.015		<0.015	
100-42-5		Styrene	T	mg/L	8260	<0.005		<0.005		<0.005		<0.005	
108-88-3		Toluene	T	mg/L	8260	<0.005		<0.005		<0.005		<0.005	
74-97-5		Chlorobromomethane	T	mg/L	8260	<0.005		<0.005		<0.005		<0.005	

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	<0.005		<0.005		<0.005		<0.005	
75-25-2		Tribromomethane	T	mg/L	8260	<0.005		<0.005	*	<0.005	*	<0.005	*
74-83-9		Methyl bromide	T	mg/L	8260	<0.005	J	<0.005	J	<0.005	J	<0.005	J
78-93-3		Methyl ethyl ketone	T	mg/L	8260	<0.01	J	<0.01		<0.01		<0.01	
110-57-6		trans-1,4-Dichloro-2-butene	T	mg/L	8260	<0.005	J	<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	<0.005	J	<0.005	*J	<0.005	*J	<0.005	*J
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	<0.005		<0.005	J	<0.005	J	<0.005	J
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	<0.005		<0.005		<0.005		<0.005	
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	<0.005		<0.005		<0.005		<0.005	
79-34-5		Ethane, 1,1,2,2-Tetrachloro	T	mg/L	8260	<0.005	J	<0.005	J	<0.005	J	<0.005	J
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	<0.005		<0.005		<0.005		<0.005	
75-01-4		Vinyl chloride	T	mg/L	8260	<0.002	J	<0.002	*	<0.002	*	<0.002	*
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		0.0013		<0.001		0.0062	

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
100-41-4		Ethylbenzene	T	mg/L	8260	<0.005		<0.005		<0.005		<0.005	
591-78-6		2-Hexanone	T	mg/L	8260	<0.01	J	<0.01		<0.01		<0.01	
74-88-4		Iodomethane	T	mg/L	8260	<0.01		<0.01		<0.01		<0.01	
124-48-1		Methane, Dibromochloro-	T	mg/L	8260	<0.005		<0.005	*	<0.005	*	<0.005	*
56-23-5		Carbon Tetrachloride	T	mg/L	8260	<0.005		<0.005		<0.001		<0.005	
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	<0.01		<0.01		<0.01		<0.01	
96-12-8		Propane, 1,2-Dibromo-3-chloro	T	mg/L	8011	<0.0002		<0.0002		<0.0002		<0.0002	
78-87-5		Propane, 1,2-Dichloro-	T	mg/L	8260	<0.005		<0.005		<0.005		<0.005	
10061-02-6		trans-1,3-Dichloro-1-propene	T	mg/L	8260	<0.005		<0.005		<0.005		<0.005	
10061-01-5		cis-1,3-Dichloro-1-propene	T	mg/L	8260	<0.005		<0.005	*	<0.005	*	<0.005	*
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	<0.005		<0.005		<0.005		<0.005	
96-18-4		1,2,3-Trichloropropane	T	mg/L	8260	<0.005		<0.005		<0.005		<0.005	
95-50-1		Benzene, 1,2-Dichloro-	T	mg/L	8260	<0.005		<0.005		<0.005		<0.005	
106-46-7		Benzene, 1,4-Dichloro-	T	mg/L	8260	<0.005		<0.005		<0.005		<0.005	
1336-36-3		PCB,Total	T	ug/L	8082	<0.17		<0.17		<0.17		<0.18	
12674-11-2		PCB-1016	T	ug/L	8082	<0.16		<0.16		<0.16		<0.17	
11104-28-2		PCB-1221	T	ug/L	8082	<0.17		<0.17		<0.17		<0.18	
11141-16-5		PCB-1232	T	ug/L	8082	<0.14		<0.14		<0.14		<0.14	
53469-21-9		PCB-1242	T	ug/L	8082	<0.1		<0.1		<0.1		<0.1	
12672-29-6		PCB-1248	T	ug/L	8082	<0.12		<0.12		<0.12		<0.12	

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	<0.07		<0.07		<0.07		<0.07	
11096-82-5		PCB-1260	T	ug/L	8082	<0.05		<0.05		<0.05		<0.05	
11100-14-4		PCB-1268	T	ug/L	8082	<0.09		<0.09		<0.09		<0.09	
12587-46-1		Gross Alpha	T	pCi/L	9310	3.19	*	2.82	*	3.13	*	-0.195	*
12587-47-2		Gross Beta	T	pCi/L	9310	22	*	17.2	*	1.66	*	23.2	*
10043-66-0		Iodine-131	T	pCi/L	RL-7124		*		*		*		*
13982-63-3		Radium-226	T	pCi/L	RL-7129	0.214	*	0.162	*	0.437	*	0.152	*
10098-97-2		Strontium-90	T	pCi/L	RL-7140	0.0601	*	1.09	*	0.595	*	0.502	*
14133-76-7		Technetium-99	T	pCi/L	RL-7100	25.5	*	12	*	-3.76	*	42.9	*
14269-63-7		Thorium-230	T	pCi/L	RL-7128	0.0249	*	0.0331	*	0.0747	*	0.0953	*
10028-17-8		Tritium	T	pCi/L	704R6	-404	*	-633	*	-481	*	-645	*
S0130- -		Chemical Oxygen Demand	T	mg/L	410.4	<25		<25		<25		<25	
57-12-5		Cyanide	T	mg/L	9010	<0.04	J	<0.04	J	<0.04		<0.04	
20461-54-5		Iodide	T	mg/L	345.1	<2		<2		<2		<2	
S0268- -		Total Organic Carbon	T	mg/L	9060	1.7		<1		1.8		2.5	
S0586- -		Total Organic Halides	T	mg/L	9020	0.048		0.015		0.023		0.025	

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)						4/9/2013 12:46		4/8/2013 09:21		4/10/2013 12:25		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)						MW373UG3-13		MW374UG3-13		MW375UG3-13		NA	
Laboratory Sample ID Number (if applicable)						C13099030001		C13098018002		C13100031001		NA	
Date of Analysis (Month/Day/Year) For Volatile Organics Analysis						4/12/2013		4/12/2013		4/15/2013		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	<2		<2		<2			*
16887-00-6		Chloride(s)	T	mg/L	9056	47		88		5.9			*
16984-48-8		Fluoride	T	mg/L	9214	0.18		0.19		0.32			*
S0595- -		Nitrate & Nitrite	T	mg/L	9056	<1		<1		<1			*
14808-79-8		Sulfate	T	mg/L	9056	200		6		35			*
NS1894		Barometric Pressure Reading	T	Inches/Hg	Field	29.96		29.86		29.88			*
S0145- -		Specific Conductance	T	µMH0/cm	Field	921		750		449			*

[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

NOTE: The following parameters have updated method numbers: aluminum, 6010; arsenic, 6020; and tritium, EPA-906. The methods will be updated in an upcoming permit modification.

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						8004-4792		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	322.39		332.26		338.94			*
N238		Dissolved Oxygen	T	mg/L	Field	1.46		6.52		0.74			*
S0266- -		Total Dissolved Solids	T	mg/L	160.1	585		421		286			*
S0296- -		pH	T	Units	Field	6.21		6.86		6.59			*
NS215		Eh	T	mV	Field	498		313		403			*
S0907 - -		Temperature	T	°C	Field	18.33		17.5		19			*
7429-90-5		Aluminum	T	mg/L	6020	<0.2		<0.2		<0.2			*
7440-36-0		Antimony	T	mg/L	6020	<0.005		<0.005		<0.005			*
7440-38-2		Arsenic	T	mg/L	7060	0.00168		0.0021		<0.001			*
7440-39-3		Barium	T	mg/L	6020	0.03	*	0.156	*	0.169	*		*
7440-41-7		Beryllium	T	mg/L	6020	<0.001		<0.001		<0.001			*
7440-42-8		Boron	T	mg/L	6010	1.8		<0.2	B	<0.2	B		*
7440-43-9		Cadmium	T	mg/L	6020	<0.001		<0.001		<0.001			*
7440-70-2		Calcium	T	mg/L	6010	76.1		20.8		15.3			*
7440-47-3		Chromium	T	mg/L	6020	<0.01		<0.01		<0.01			*
7440-48-4		Cobalt	T	mg/L	6020	<0.001		<0.001		<0.001			*
7440-50-8		Copper	T	mg/L	6020	<0.02		<0.02		<0.02			*
7439-89-6		Iron	T	mg/L	6010	<0.1		0.14		0.244			*
7439-92-1		Lead	T	mg/L	6020	<0.0013		<0.0013		<0.0013			*
7439-95-4		Magnesium	T	mg/L	6010	29.4		5.9		6.04			*
7439-96-5		Manganese	T	mg/L	6020	0.0558	*	0.00699	*	0.0161	*		*
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	<0.001	B	<0.001	B	<0.001	B		*
7440-02-0		Nickel	T	mg/L	6020	<0.005		<0.005		<0.005			*
7440-09-7		Potassium	T	mg/L	6010	3.29		0.536	B	0.338	B		*
7440-16-6		Rhodium	T	mg/L	6020	<0.005		<0.005		<0.005			*
7782-49-2		Selenium	T	mg/L	6020	0.00747		0.023		<0.005			*
7440-22-4		Silver	T	mg/L	6020	<0.001	*B	<0.001	*B	<0.001	*B		*
7440-23-5		Sodium	T	mg/L	6010	64.1		120		75.6			*
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	<0.001		<0.001		<0.001			*
7440-62-2		Vanadium	T	mg/L	6020	<0.02		<0.02		<0.02			*
7440-66-6		Zinc	T	mg/L	6020	<0.02		<0.02		<0.02			*
108-05-4		Vinyl acetate	T	mg/L	8260	<0.01		<0.01		<0.01			*
67-64-1		Acetone	T	mg/L	8260	<0.01		<0.01		<0.01	J		*
107-02-8		Acrolein	T	mg/L	8260	<0.01	J	<0.01	J	<0.01			*
107-13-1		Acrylonitrile	T	mg/L	8260	<0.01		<0.01		<0.01			*
71-43-2		Benzene	T	mg/L	8260	<0.005		<0.005		<0.005			*
108-90-7		Chlorobenzene	T	mg/L	8260	<0.005		<0.005		<0.005			*
1330-20-7		Xylenes	T	mg/L	8260	<0.015		<0.015		<0.015			*
100-42-5		Styrene	T	mg/L	8260	<0.005		<0.005		<0.005			*
108-88-3		Toluene	T	mg/L	8260	<0.005		<0.005		<0.005			*
74-97-5		Chlorobromomethane	T	mg/L	8260	<0.005		<0.005		<0.005			*

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	<0.005		<0.005		<0.005			*
75-25-2		Tribromomethane	T	mg/L	8260	<0.005	*	<0.005	*	<0.005			*
74-83-9		Methyl bromide	T	mg/L	8260	<0.005	J	<0.005	J	<0.005	J		*
78-93-3		Methyl ethyl ketone	T	mg/L	8260	<0.01		<0.01		<0.01	J		*
110-57-6		trans-1,4-Dichloro-2-butene	T	mg/L	8260	<0.005		<0.005		<0.005	J		*
75-15-0		Carbon disulfide	T	mg/L	8260	<0.005		<0.005		<0.005			*
75-00-3		Chloroethane	T	mg/L	8260	<0.005	*J	<0.005	*J	<0.005	J		*
67-66-3		Chloroform	T	mg/L	8260	<0.001		<0.001		<0.001			*
74-87-3		Methyl chloride	T	mg/L	8260	<0.005	J	<0.005	J	<0.005			*
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	<0.005		<0.005		<0.005			*
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	<0.005		<0.005		<0.005			*
79-34-5		Ethane, 1,1,2,2-Tetrachloro	T	mg/L	8260	<0.005	J	<0.005	J	<0.005	J		*
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	<0.005		<0.005		<0.005			*
75-01-4		Vinyl chloride	T	mg/L	8260	<0.002	*	<0.002	*	<0.002	J		*
127-18-4		Ethene, Tetrachloro-	T	mg/L	8260	<0.001		<0.001		<0.001			*
79-01-6		Ethene, Trichloro-	T	mg/L	8260	0.0064		<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						8004-4792		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	<0.005		<0.005		<0.005			*
591-78-6		2-Hexanone	T	mg/L	8260	<0.01		<0.01		<0.01	J		*
74-88-4		Iodomethane	T	mg/L	8260	<0.01		<0.01		<0.01			*
124-48-1		Methane, Dibromochloro-	T	mg/L	8260	<0.005	*	<0.005	*	<0.005			*
56-23-5		Carbon Tetrachloride	T	mg/L	8260	<0.005		<0.005		<0.005			*
75-09-2		Dichloromethane	T	mg/L	8260	<0.005	*	<0.005	*	<0.005			*
108-10-1		Methyl isobutyl ketone	T	mg/L	8260	<0.01		<0.01		<0.01			*
96-12-8		Propane, 1,2-Dibromo-3-chloro	T	mg/L	8011	<0.0002		<0.0002	*	<0.0002			*
78-87-5		Propane, 1,2-Dichloro-	T	mg/L	8260	<0.005		<0.005		<0.005			*
10061-02-6		trans-1,3-Dichloro-1-propene	T	mg/L	8260	<0.005		<0.005		<0.005			*
10061-01-5		cis-1,3-Dichloro-1-propene	T	mg/L	8260	<0.005	*	<0.005	*	<0.005			*
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	<0.005		<0.005		<0.005			*
96-18-4		1,2,3-Trichloropropane	T	mg/L	8260	<0.005		<0.005		<0.005			*
95-50-1		Benzene, 1,2-Dichloro-	T	mg/L	8260	<0.005		<0.005		<0.005			*
106-46-7		Benzene, 1,4-Dichloro-	T	mg/L	8260	<0.005		<0.005		<0.005			*
1336-36-3		PCB,Total	T	ug/L	8082	<0.18		<0.17		<0.17			*
12674-11-2		PCB-1016	T	ug/L	8082	<0.17		<0.16		<0.16			*
11104-28-2		PCB-1221	T	ug/L	8082	<0.18		<0.17		<0.17			*
11141-16-5		PCB-1232	T	ug/L	8082	<0.14		<0.14		<0.14			*
53469-21-9		PCB-1242	T	ug/L	8082	<0.1		<0.1		<0.1			*
12672-29-6		PCB-1248	T	ug/L	8082	<0.12		<0.12		<0.12			*

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	<0.07		<0.07		<0.07			*
11096-82-5		PCB-1260	T	ug/L	8082	<0.05		<0.05		<0.05			*
11100-14-4		PCB-1268	T	ug/L	8082	<0.09		<0.09		<0.09			*
12587-46-1		Gross Alpha	T	pCi/L	9310	4.14	*	1.37	*	2.84	*		*
12587-47-2		Gross Beta	T	pCi/L	9310	40.3	*	1.65	*	4.35	*		*
10043-66-0		Iodine-131	T	pCi/L	RL-7124		*		*		*		*
13982-63-3		Radium-226	T	pCi/L	RL-7129	0.23	*	0.37	*	0.42	*		*
10098-97-2		Strontium-90	T	pCi/L	RL-7140	0.458	*	0.517	*	0.456	*		*
14133-76-7		Technetium-99	T	pCi/L	RL-7100	63.7	*	0.972	*	-1.47	*		*
14269-63-7		Thorium-230	T	pCi/L	RL-7128	0.0588	*	0.0896	*	-0.0128	*		*
10028-17-8		Tritium	T	pCi/L	704R6	-498	*	-409	*	-820	*		*
S0130- -		Chemical Oxygen Demand	T	mg/L	410.4	<25		<25		<25			*
57-12-5		Cyanide	T	mg/L	9010	<0.04	J	<0.04		<0.04	J		*
20461-54-5		Iodide	T	mg/L	345.1	<2		<2		<2			*
S0268- -		Total Organic Carbon	T	mg/L	9060	1		2.1		2.3			*
S0586- -		Total Organic Halides	T	mg/L	9020	0.04		0.041		0.043			*

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		4/4/2013 07:15		4/3/2013 09:20		4/2/2013 07:25	
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		RI1UG3-13		FB1UG3-13		TB1UG3-13	
Laboratory Sample ID Number (if applicable)						NA		C13094115001		C13093035001		C13092039001	
Date of Analysis (Month/Day/Year) For Volatile Organics Analysis						NA		4/5/2013		4/5/2013		4/5/2013	
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	9214		*		*		*		*
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

NOTE: The following parameters have updated method numbers: aluminum, 6010; arsenic, 6020; and tritium, EPA-906. The methods will be updated in an upcoming permit modification.

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, 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		*	<0.2		<0.2			*
7440-36-0		Antimony	T	mg/L	6020		*	<0.005		<0.005	B		*
7440-38-2		Arsenic	T	mg/L	7060		*	<0.001		<0.001			*
7440-39-3		Barium	T	mg/L	6020		*	<0.005	*	<0.005			*
7440-41-7		Beryllium	T	mg/L	6020		*	<0.001		<0.001			*
7440-42-8		Boron	T	mg/L	6010		*	<0.2	B	<0.2	B		*
7440-43-9		Cadmium	T	mg/L	6020		*	<0.001		<0.001			*
7440-70-2		Calcium	T	mg/L	6010		*	<1		<1			*
7440-47-3		Chromium	T	mg/L	6020		*	<0.01		<0.01			*
7440-48-4		Cobalt	T	mg/L	6020		*	<0.001		<0.001	B*		*
7440-50-8		Copper	T	mg/L	6020		*	<0.02		<0.02			*
7439-89-6		Iron	T	mg/L	6010		*	<0.1		<0.1			*
7439-92-1		Lead	T	mg/L	6020		*	<0.0013		<0.0013	B		*
7439-95-4		Magnesium	T	mg/L	6010		*	<0.025		<0.025			*
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
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FINDS/UNIT: KY8-890-008-982 / 1
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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		*	<0.001	B	<0.001	B		*
7440-02-0		Nickel	T	mg/L	6020		*	<0.005		<0.005	*		*
7440-09-7		Potassium	T	mg/L	6010		*	<0.2	B	<0.2	B		*
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	*B	<0.001			*
7440-23-5		Sodium	T	mg/L	6010		*	<1		<1			*
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		*	<0.001		<0.001			*
7440-62-2		Vanadium	T	mg/L	6020		*	<0.02		<0.02			*
7440-66-6		Zinc	T	mg/L	6020		*	<0.02		<0.02	B		*
108-05-4		Vinyl acetate	T	mg/L	8260		*	<0.01		<0.01		<0.01	
67-64-1		Acetone	T	mg/L	8260		*	<0.01	J	<0.01	J	<0.01	J
107-02-8		Acrolein	T	mg/L	8260		*	<0.01		<0.01		<0.01	
107-13-1		Acrylonitrile	T	mg/L	8260		*	<0.01		<0.01		<0.01	
71-43-2		Benzene	T	mg/L	8260		*	<0.005		<0.005		<0.005	
108-90-7		Chlorobenzene	T	mg/L	8260		*	<0.005		<0.005		<0.005	
1330-20-7		Xylenes	T	mg/L	8260		*	<0.015		<0.015		<0.015	
100-42-5		Styrene	T	mg/L	8260		*	<0.005		<0.005		<0.005	
108-88-3		Toluene	T	mg/L	8260		*	<0.005		<0.005		<0.005	
74-97-5		Chlorobromomethane	T	mg/L	8260		*	<0.005		<0.005		<0.005	

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
75-27-4		Bromodichloromethane	T	mg/L	8260		*	<0.005		<0.005		<0.005	
75-25-2		Tribromomethane	T	mg/L	8260		*	<0.005		<0.005		<0.005	
74-83-9		Methyl bromide	T	mg/L	8260		*	<0.005		<0.005		<0.005	
78-93-3		Methyl ethyl ketone	T	mg/L	8260		*	<0.01		<0.01		<0.01	
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		*	<0.005		<0.005		<0.005	
67-66-3		Chloroform	T	mg/L	8260		*	<0.001		<0.001		<0.001	
74-87-3		Methyl chloride	T	mg/L	8260		*	<0.005		<0.005		<0.005	
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		*	<0.005		<0.005		<0.005	
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		*	<0.005		<0.005		<0.005	
79-34-5		Ethane, 1,1,2,2-Tetrachloro	T	mg/L	8260		*	<0.005	J	<0.005	J	<0.005	J
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	J	<0.001	J	<0.001	J
630-20-6		Ethane, 1,1,1,2-Tetrachloro	T	mg/L	8260		*	<0.005		<0.005		<0.005	
75-01-4		Vinyl chloride	T	mg/L	8260		*	<0.002		<0.002		<0.002	
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
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						8004-0989		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		*	<0.005		<0.005		<0.005	
591-78-6		2-Hexanone	T	mg/L	8260		*	<0.01		<0.01		<0.01	
74-88-4		Iodomethane	T	mg/L	8260		*	<0.01		<0.01		<0.01	
124-48-1		Methane, Dibromochloro-	T	mg/L	8260		*	<0.005		<0.005		<0.005	
56-23-5		Carbon Tetrachloride	T	mg/L	8260		*	<0.005		<0.005		<0.005	
75-09-2		Dichloromethane	T	mg/L	8260		*	<0.005		<0.005		<0.005	
108-10-1		Methyl isobutyl ketone	T	mg/L	8260		*	<0.01		<0.01		<0.01	
96-12-8		Propane, 1,2-Dibromo-3-chloro	T	mg/L	8011		*	<0.0002		<0.0002		<0.0002	
78-87-5		Propane, 1,2-Dichloro-	T	mg/L	8260		*	<0.005		<0.005		<0.005	
10061-02-6		trans-1,3-Dichloro-1-propene	T	mg/L	8260		*	<0.005		<0.005		<0.005	
10061-01-5		cis-1,3-Dichloro-1-propene	T	mg/L	8260		*	<0.005		<0.005		<0.005	
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		*	<0.005		<0.005		<0.005	
96-18-4		1,2,3-Trichloropropane	T	mg/L	8260		*	<0.005		<0.005		<0.005	
95-50-1		Benzene, 1,2-Dichloro-	T	mg/L	8260		*	<0.005		<0.005		<0.005	
106-46-7		Benzene, 1,4-Dichloro-	T	mg/L	8260		*	<0.005		<0.005		<0.005	
1336-36-3		PCB,Total	T	ug/L	8082		*	<0.17		<0.17			*
12674-11-2		PCB-1016	T	ug/L	8082		*	<0.16		<0.16			*
11104-28-2		PCB-1221	T	ug/L	8082		*	<0.17		<0.17			*
11141-16-5		PCB-1232	T	ug/L	8082		*	<0.14		<0.13			*
53469-21-9		PCB-1242	T	ug/L	8082		*	<0.1		<0.1			*
12672-29-6		PCB-1248	T	ug/L	8082		*	<0.12		<0.11			*

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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		*	<0.07		<0.07			*
11096-82-5		PCB-1260	T	ug/L	8082		*	<0.05		<0.05			*
11100-14-4		PCB-1268	T	ug/L	8082		*	<0.09		<0.09			*
12587-46-1		Gross Alpha	T	pCi/L	9310		*	0.909	*	0.202	*		*
12587-47-2		Gross Beta	T	pCi/L	9310		*	1.7	*	-0.153	*		*
10043-66-0		Iodine-131	T	pCi/L	RL-7124		*		*		*		*
13982-63-3		Radium-226	T	pCi/L	RL-7129		*	0.686	*	0.00391	*		*
10098-97-2		Strontium-90	T	pCi/L	RL-7140		*	0.491	*	0.472	*		*
14133-76-7		Technetium-99	T	pCi/L	RL-7100		*	-0.216	*	5.2	*		*
14269-63-7		Thorium-230	T	pCi/L	RL-7128		*	0.109	*	0.1	*		*
10028-17-8		Tritium	T	pCi/L	704R6		*	-536	*	-580	*		*
S0130- -		Chemical Oxygen Demand	T	mg/L	410.4		*		*		*		*
57-12-5		Cyanide	T	mg/L	9010		*		*		*		*
20461-54-5		Iodide	T	mg/L	345.1		*	<2		<2			*
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
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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)						4/3/2013 07:20		4/4/2013 07:10		4/8/2013 07:20		4/9/2013 07:15	
Duplicate ("Y" or "N")[2]						N		N		N		N	
Split ("Y" or "N")[3]						N		N		N		N	
Facility Sample ID Number (if applicable)						TB2UG3-13		TB3UG3-13		TB4UG3-13		TB5UG3-13	
Laboratory Sample ID Number (if applicable)						C13093048001		C13094114001		C13098032001		C13099028001	
Date of Analysis (Month/Day/Year) For Volatile Organics Analysis						4/5/2013		4/5/2013		4/12/2013		4/12/2013	
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	9214		*		*		*		*
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		*		*		*		*

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[2]Respond "Y" if the sample was a duplicate of another sample in this report.
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* = See Comments
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NOTE: The following parameters have updated method numbers: aluminum, 6010; arsenic, 6020; and tritium, EPA-906. The methods will be updated in an upcoming permit modification.

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						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	°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	7060		*		*		*		*
7440-39-3		Barium	T	mg/L	6020		*		*		*		*
7440-41-7		Beryllium	T	mg/L	6020		*		*		*		*
7440-42-8		Boron	T	mg/L	6010		*		*		*		*
7440-43-9		Cadmium	T	mg/L	6020		*		*		*		*
7440-70-2		Calcium	T	mg/L	6010		*		*		*		*
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	6010		*		*		*		*
7439-92-1		Lead	T	mg/L	6020		*		*		*		*
7439-95-4		Magnesium	T	mg/L	6010		*		*		*		*
7439-96-5		Manganese	T	mg/L	6020		*		*		*		*
7439-97-6		Mercury	T	mg/L	7470		*		*		*		*

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
7439-98-7		Molybdenum	T	mg/L	6020		*		*		*		*
7440-02-0		Nickel	T	mg/L	6020		*		*		*		*
7440-09-7		Potassium	T	mg/L	6010		*		*		*		*
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	6010		*		*		*		*
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	6020		*		*		*		*
7440-66-6		Zinc	T	mg/L	6020		*		*		*		*
108-05-4		Vinyl acetate	T	mg/L	8260	<0.01		<0.01		<0.01		<0.01	
67-64-1		Acetone	T	mg/L	8260	<0.01	J	<0.01	J	<0.01		<0.01	
107-02-8		Acrolein	T	mg/L	8260	<0.01		<0.01		<0.01	J	<0.01	J
107-13-1		Acrylonitrile	T	mg/L	8260	<0.01		<0.01		<0.01		<0.01	
71-43-2		Benzene	T	mg/L	8260	<0.005		<0.005		<0.005		<0.005	
108-90-7		Chlorobenzene	T	mg/L	8260	<0.005		<0.005		<0.005		<0.005	
1330-20-7		Xylenes	T	mg/L	8260	<0.015		<0.015		<0.015		<0.015	
100-42-5		Styrene	T	mg/L	8260	<0.005		<0.005		<0.005		<0.005	
108-88-3		Toluene	T	mg/L	8260	<0.005		<0.005		<0.005		<0.005	
74-97-5		Chlorobromomethane	T	mg/L	8260	<0.005		<0.005		<0.005		<0.005	

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	<0.005		<0.005		<0.005		<0.005	
75-25-2		Tribromomethane	T	mg/L	8260	<0.005		<0.005		<0.005	*	<0.005	*
74-83-9		Methyl bromide	T	mg/L	8260	<0.005		<0.005		<0.005	J	<0.005	J
78-93-3		Methyl ethyl ketone	T	mg/L	8260	<0.01		<0.01		<0.01		<0.01	
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	<0.005		<0.005		<0.005	*J	<0.005	*J
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	<0.005		<0.005		<0.005	J	<0.005	J
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	<0.005		<0.005		<0.005		<0.005	
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	<0.005		<0.005		<0.005		<0.005	
79-34-5		Ethane, 1,1,2,2-Tetrachloro	T	mg/L	8260	<0.005	J	<0.005	J	<0.005	J	<0.005	J
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	J	<0.001	J	<0.001		<0.001	
630-20-6		Ethane, 1,1,1,2-Tetrachloro	T	mg/L	8260	<0.005		<0.005		<0.005		<0.005	
75-01-4		Vinyl chloride	T	mg/L	8260	<0.002		<0.002		<0.002	*	<0.002	*
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	<0.005		<0.005		<0.005		<0.005	
591-78-6		2-Hexanone	T	mg/L	8260	<0.01		<0.01		<0.01		<0.01	
74-88-4		Iodomethane	T	mg/L	8260	<0.01		<0.01		<0.01		<0.01	
124-48-1		Methane, Dibromochloro-	T	mg/L	8260	<0.005		<0.005		<0.005	*	<0.005	*
56-23-5		Carbon Tetrachloride	T	mg/L	8260	<0.005		<0.005		<0.005		<0.005	
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	<0.01		<0.01		<0.01		<0.01	
96-12-8		Propane, 1,2-Dibromo-3-chloro	T	mg/L	8011	<0.0002		<0.0002		<0.0002		<0.0002	
78-87-5		Propane, 1,2-Dichloro-	T	mg/L	8260	<0.005		<0.005		<0.005		<0.005	
10061-02-6		trans-1,3-Dichloro-1-propene	T	mg/L	8260	<0.005		<0.005		<0.005		<0.005	
10061-01-5		cis-1,3-Dichloro-1-propene	T	mg/L	8260	<0.005		<0.005		<0.005	*	<0.005	*
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	<0.005		<0.005		<0.005		<0.005	
96-18-4		1,2,3-Trichloropropane	T	mg/L	8260	<0.005		<0.005		<0.005		<0.005	
95-50-1		Benzene, 1,2-Dichloro-	T	mg/L	8260	<0.005		<0.005		<0.005		<0.005	
106-46-7		Benzene, 1,4-Dichloro-	T	mg/L	8260	<0.005		<0.005		<0.005		<0.005	
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	RL-7124		*		*		*		*
13982-63-3		Radium-226	T	pCi/L	RL-7129		*		*		*		*
10098-97-2		Strontium-90	T	pCi/L	RL-7140		*		*		*		*
14133-76-7		Technetium-99	T	pCi/L	RL-7100		*		*		*		*
14269-63-7		Thorium-230	T	pCi/L	RL-7128		*		*		*		*
10028-17-8		Tritium	T	pCi/L	704R6		*		*		*		*
S0130- -		Chemical Oxygen Demand	T	mg/L	410.4		*		*		*		*
57-12-5		Cyanide	T	mg/L	9010		*		*		*		*
20461-54-5		Iodide	T	mg/L	345.1		*		*		*		*
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						0000-0000		0000-0000		8004-4819				
Facility's Local Well or Spring Number (e.g., MW-1, MW-2, etc.)						T. BLANK 6		T. BLANK 7		371				
Sample Sequence #						1		1		2				
If sample is a Blank, specify Type: (F)ield, (T)rip, (M)ethod, or (E)quipment						T		T		NA				
Sample Date and Time (Month/Day/Year hour: minutes)						4/10/2013 07:25		4/15/2013 07:30		4/9/2013 08:11				
Duplicate ("Y" or "N")[2]						N		N		Y				
Split ("Y" or "N")[3]						N		N		N				
Facility Sample ID Number (if applicable)						TB6UG3-13		TB7UG3-13		MW371DUG3-13				
Laboratory Sample ID Number (if applicable)						C13100030001		C13105023001		C13099017002				
Date of Analysis (Month/Day/Year) For Volatile Organics Analysis						4/12/2013		4/15/2013		4/12/2013				
Gradient with respect to Monitored Unit (UP, DOWN, SIDE, UNKNOWN)						NA		NA		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		*		*	<2			
16887-00-6		Chloride(s)	T	mg/L	9056		*		*	8.5			
16984-48-8		Fluoride	T	mg/L	9214		*		*	0.32			
S0595- -		Nitrate & Nitrite	T	mg/L	9056		*		*	<1			
14808-79-8		Sulfate	T	mg/L	9056		*		*	14			
NS1894		Barometric Pressure Reading	T	Inches/Hg	Field		*		*	29.96			
S0145- -		Specific Conductance	T	µMH0/cm	Field		*		*	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

NOTE: The following parameters have updated method numbers: aluminum, 6010; arsenic, 6020; and tritium, EPA-906. The methods will be updated in an upcoming permit modification.

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		8004-4819			
Facility's Local Well or Spring Number (e.g., MW-1, MW-2, BLANK-F, etc.)						T. BLANK 6		T. BLANK 7		371			
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		*		*	339.69			
N238		Dissolved Oxygen	T	mg/L	Field		*		*	1.61			
S0266- -		Total Dissolved Solids	T	mg/L	160.1		*		*	423			
S0296- -		pH	T	Units	Field		*		*	6.79			
NS215		Eh	T	mV	Field		*		*	690			
S0907 - -		Temperature	T	°C	Field		*		*	16.5			
7429-90-5		Aluminum	T	mg/L	6020		*		*	0.741			
7440-36-0		Antimony	T	mg/L	6020		*		*	<0.005			
7440-38-2		Arsenic	T	mg/L	7060		*		*	<0.001			
7440-39-3		Barium	T	mg/L	6020		*		*	0.146	*		
7440-41-7		Beryllium	T	mg/L	6020		*		*	<0.001			
7440-42-8		Boron	T	mg/L	6010		*		*	<0.2	B		
7440-43-9		Cadmium	T	mg/L	6020		*		*	<0.001			
7440-70-2		Calcium	T	mg/L	6010		*		*	24.3			
7440-47-3		Chromium	T	mg/L	6020		*		*	<0.01			
7440-48-4		Cobalt	T	mg/L	6020		*		*	<0.001			
7440-50-8		Copper	T	mg/L	6020		*		*	<0.02			
7439-89-6		Iron	T	mg/L	6010		*		*	0.369			
7439-92-1		Lead	T	mg/L	6020		*		*	<0.0013			
7439-95-4		Magnesium	T	mg/L	6010		*		*	10.3			
7439-96-5		Manganese	T	mg/L	6020		*		*	<0.005	*		
7439-97-6		Mercury	T	mg/L	7470		*		*	<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						0000-0000		0000-0000		8004-4819			
Facility's Local Well or Spring Number (e.g., MW-1, MW-2, etc.)						T. BLANK 6		T. BLANK 7		371			
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		*		*	<0.001	B		
7440-02-0		Nickel	T	mg/L	6020		*		*	<0.005			
7440-09-7		Potassium	T	mg/L	6010		*		*	0.418	B		
7440-16-6		Rhodium	T	mg/L	6020		*		*	<0.005			
7782-49-2		Selenium	T	mg/L	6020		*		*	<0.005			
7440-22-4		Silver	T	mg/L	6020		*		*	<0.001	*B		
7440-23-5		Sodium	T	mg/L	6010		*		*	113			
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		*		*	0.00147			
7440-62-2		Vanadium	T	mg/L	6020		*		*	<0.02			
7440-66-6		Zinc	T	mg/L	6020		*		*	<0.02			
108-05-4		Vinyl acetate	T	mg/L	8260	<0.01		<0.01		<0.01			
67-64-1		Acetone	T	mg/L	8260	<0.01	J	<0.01	J	<0.01			
107-02-8		Acrolein	T	mg/L	8260	<0.01		<0.01		<0.01	J		
107-13-1		Acrylonitrile	T	mg/L	8260	<0.01		<0.01		<0.01			
71-43-2		Benzene	T	mg/L	8260	<0.005		<0.005		<0.005			
108-90-7		Chlorobenzene	T	mg/L	8260	<0.005		<0.005		<0.005			
1330-20-7		Xylenes	T	mg/L	8260	<0.015		<0.015		<0.015			
100-42-5		Styrene	T	mg/L	8260	<0.005		<0.005		<0.005			
108-88-3		Toluene	T	mg/L	8260	<0.005		<0.005		<0.005			
74-97-5		Chlorobromomethane	T	mg/L	8260	<0.005		<0.005		<0.005			

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AKGWA NUMBER[1], Facility Well/Spring Number						0000-0000		0000-0000		8004-4819			
Facility's Local Well or Spring Number (e.g., MW-1, MW-2, etc.)						T. BLANK 6		T. BLANK 7		371			
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	<0.005		<0.005		<0.005			
75-25-2		Tribromomethane	T	mg/L	8260	<0.005		<0.005		<0.005	*		
74-83-9		Methyl bromide	T	mg/L	8260	<0.005	J	<0.005	J	<0.005	J		
78-93-3		Methyl ethyl ketone	T	mg/L	8260	<0.01	J	<0.01	J	<0.01			
110-57-6		trans-1,4-Dichloro-2-butene	T	mg/L	8260	<0.005	J	<0.005	J	<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	<0.005	J	<0.005	J	<0.005	*J		
67-66-3		Chloroform	T	mg/L	8260	<0.001		<0.001		<0.001			
74-87-3		Methyl chloride	T	mg/L	8260	<0.005		<0.005		<0.005	J		
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	<0.005		<0.005		<0.005			
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	<0.005		<0.005		<0.005			
79-34-5		Ethane, 1,1,2,2-Tetrachloro	T	mg/L	8260	<0.005	J	<0.005	J	<0.005	J		
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	<0.005		<0.005		<0.005			
75-01-4		Vinyl chloride	T	mg/L	8260	<0.002	J	<0.002	J	<0.002	*		
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			

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GROUNDWATER SAMPLE ANALYSIS - (Cont.)

AKGWA NUMBER[1], Facility Well/Spring Number						0000-0000		0000-0000		8004-4819			
Facility's Local Well or Spring Number (e.g., MW-1, MW-2, etc.)						T. BLANK 6		T. BLANK 7		371			
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	<0.005		<0.005		<0.005			
591-78-6		2-Hexanone	T	mg/L	8260	<0.01	J	<0.01	J	<0.01			
74-88-4		Iodomethane	T	mg/L	8260	<0.01		<0.01		<0.01			
124-48-1		Methane, Dibromochloro-	T	mg/L	8260	<0.005		<0.005		<0.005	*		
56-23-5		Carbon Tetrachloride	T	mg/L	8260	<0.005		<0.005		<0.005			
75-09-2		Dichloromethane	T	mg/L	8260	<0.005		<0.005		<0.005	*		
108-10-1		Methyl isobutyl ketone	T	mg/L	8260	<0.01		<0.01		<0.01			
96-12-8		Propane, 1,2-Dibromo-3-chloro	T	mg/L	8011	<0.0002		<0.0002	*	<0.0002			
78-87-5		Propane, 1,2-Dichloro-	T	mg/L	8260	<0.005		<0.005		<0.005			
10061-02-6		trans-1,3-Dichloro-1-propene	T	mg/L	8260	<0.005		<0.005		<0.005			
10061-01-5		cis-1,3-Dichloro-1-propene	T	mg/L	8260	<0.005		<0.005		<0.005	*		
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	<0.005		<0.005		<0.005			
96-18-4		1,2,3-Trichloropropane	T	mg/L	8260	<0.005		<0.005		<0.005			
95-50-1		Benzene, 1,2-Dichloro-	T	mg/L	8260	<0.005		<0.005		<0.005			
106-46-7		Benzene, 1,4-Dichloro-	T	mg/L	8260	<0.005		<0.005		<0.005			
1336-36-3		PCB,Total	T	ug/L	8082		*		*	<0.18			
12674-11-2		PCB-1016	T	ug/L	8082		*		*	<0.17			
11104-28-2		PCB-1221	T	ug/L	8082		*		*	<0.18			
11141-16-5		PCB-1232	T	ug/L	8082		*		*	<0.14			
53469-21-9		PCB-1242	T	ug/L	8082		*		*	<0.1			
12672-29-6		PCB-1248	T	ug/L	8082		*		*	<0.12			

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GROUNDWATER SAMPLE ANALYSIS - (Cont.)

AKGWA NUMBER[1], Facility Well/Spring Number						0000-0000		0000-0000		8004-4819			
Facility's Local Well or Spring Number (e.g., MW-1, MW-2, etc.)						T. BLANK 6		T. BLANK 7		371			
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		*		*	<0.07			
11096-82-5		PCB-1260	T	ug/L	8082		*		*	<0.05			
11100-14-4		PCB-1268	T	ug/L	8082		*		*	<0.09			
12587-46-1		Gross Alpha	T	pCi/L	9310		*		*	0.148	*		
12587-47-2		Gross Beta	T	pCi/L	9310		*		*	2.37	*		
10043-66-0		Iodine-131	T	pCi/L	RL-7124		*		*		*		
13982-63-3		Radium-226	T	pCi/L	RL-7129		*		*	0.47	*		
10098-97-2		Strontium-90	T	pCi/L	RL-7140		*		*	0.134	*		
14133-76-7		Technetium-99	T	pCi/L	RL-7100		*		*	-1.42	*		
14269-63-7		Thorium-230	T	pCi/L	RL-7128		*		*	0.0248	*		
10028-17-8		Tritium	T	pCi/L	704R6		*		*	-885	*		
S0130- -		Chemical Oxygen Demand	T	mg/L	410.4		*		*	<25			
57-12-5		Cyanide	T	mg/L	9010		*		*	<0.04			
20461-54-5		Iodide	T	mg/L	345.1		*		*	<2			
S0268- -		Total Organic Carbon	T	mg/L	9060		*		*	1.8			
S0586- -		Total Organic Halides	T	mg/L	9020		*		*	0.025			

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Monitoring Point	Facility Sample ID	Constituent	Flag	Description
8004-4798 MW357	MW357UG3-13	Barium	X	Other specific flags and footnotes may be required to properly define the results.
		Manganese	X	Other specific flags and footnotes may be required to properly define the results.
		Silver	N	Sample spike recovery not within control limits.
		Gross alpha	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 1.32. Rad error is 1.21.
		Gross beta		TPU is 3.08. Rad error is 2.75.
		Iodine-131		Analysis of constituent not required and not performed.
		Radium-226	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.365. Rad error is 0.168.
		Strontium-90	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.0142. Rad error is 0.0101.
		Technetium-99		TPU is 12.5. Rad error is 12.4.
		Thorium-230	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.12. Rad error is 0.0897.
		Tritium	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 605. Rad error is 603.
8004-4799 MW358	MW358UG3-13	Barium	X	Other specific flags and footnotes may be required to properly define the results.
		Manganese	X	Other specific flags and footnotes may be required to properly define the results.
		Silver	N	Sample spike recovery not within control limits.
		Gross alpha	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 1.44. Rad error is 1.32.
		Gross beta		TPU is 3.18. Rad error is 2.83.
		Iodine-131		Analysis of constituent not required and not performed.
		Radium-226	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.405. Rad error is 0.241.
		Strontium-90	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.0411. Rad error is 0.0288.
		Technetium-99		TPU is 12.6. Rad error is 12.6.
		Thorium-230	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.0982. Rad error is 0.0584.
		Tritium	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 606. Rad error is 604.
		Total Organic Carbon	X	Other specific flags and footnotes may be required to properly define the results.

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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	MW360UG3-13	Barium	X	Other specific flags and footnotes may be required to properly define the results.
		Manganese	X	Other specific flags and footnotes may be required to properly define the results.
		Silver	N	Sample spike recovery not within control limits.
		Gross alpha	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.0231. Rad error is 0.0222.
		Gross beta		TPU is 1.08. Rad error is 1.01.
		Iodine-131		Analysis of constituent not required and not performed.
		Radium-226	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.388. Rad error is 0.17.
		Strontium-90	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.00372. Rad error is 0.00263.
		Technetium-99	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 11.3. Rad error is 11.3.
		Thorium-230	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.13. Rad error is 0.103.
		Tritium	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 603. Rad error is 601.
8004-4795 MW361	MW361UG3-13	Barium	X	Other specific flags and footnotes may be required to properly define the results.
		Manganese	X	Other specific flags and footnotes may be required to properly define the results.
		Silver	N	Sample spike recovery not within control limits.
		Gross alpha		TPU is 2.13. Rad error is 1.89.
		Gross beta		TPU is 3.71. Rad error is 3.26.
		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 0.197.
		Strontium-90	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.122. Rad error is 0.0837.
		Technetium-99		TPU is 12.6. Rad error is 12.6.
		Thorium-230	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.12. Rad error is 0.0894.
		Tritium	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 616. Rad error is 615.

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Monitoring Point	Facility Sample ID	Constituent	Flag	Description
8004-0986 MW362		Bromide		During sampling the well became partially dry, this analysis was not collected.
		Chloride		During sampling the well became partially dry, this analysis was not collected.
		Fluoride		During sampling the well became partially dry, this analysis was not collected.
		Nitrate & Nitrite		During sampling the well became partially dry, this analysis was not collected.
		Sulfate		During sampling the well became partially dry, this analysis was not collected.
		Barometric Pressure Reading		During sampling the well became partially dry, this analysis was not collected.
		Specific Conductance		During sampling the well became partially dry, this analysis was not collected.
		Static Water Level Elevation		During sampling the well became partially dry, this analysis was not collected.
		Dissolved Oxygen		During sampling the well became partially dry, this analysis was not collected.
		Total Dissolved Solids		During sampling the well became partially dry, this analysis was not collected.
		pH		During sampling the well became partially dry, this analysis was not collected.
		Eh		During sampling the well became partially dry, this analysis was not collected.
		Temperature		During sampling the well became partially dry, this analysis was not collected.
		Aluminum		During sampling the well became partially dry, this analysis was not collected.
		Antimony		During sampling the well became partially dry, this analysis was not collected.
		Arsenic		During sampling the well became partially dry, this analysis was not collected.
		Barium		During sampling the well became partially dry, this analysis was not collected.
		Beryllium		During sampling the well became partially dry, this analysis was not collected.
		Boron		During sampling the well became partially dry, this analysis was not collected.
		Cadmium		During sampling the well became partially dry, this analysis was not collected.
		Calcium		During sampling the well became partially dry, this analysis was not collected.
		Chromium		During sampling the well became partially dry, this analysis was not collected.
		Cobalt		During sampling the well became partially dry, this analysis was not collected.
		Copper		During sampling the well became partially dry, this analysis was not collected.
		Iron		During sampling the well became partially dry, this analysis was not collected.
		Lead		During sampling the well became partially dry, this analysis was not collected.

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Monitoring Point	Facility Sample ID	Constituent	Flag	Description
8004-0986	MW362	Magnesium		During sampling the well became partially dry, this analysis was not collected.
		Manganese		During sampling the well became partially dry, this analysis was not collected.
		Mercury		During sampling the well became partially dry, this analysis was not collected.
		Molybdenum		During sampling the well became partially dry, this analysis was not collected.
		Nickel		During sampling the well became partially dry, this analysis was not collected.
		Potassium		During sampling the well became partially dry, this analysis was not collected.
		Rhodium		During sampling the well became partially dry, this analysis was not collected.
		Selenium		During sampling the well became partially dry, this analysis was not collected.
		Silver		During sampling the well became partially dry, this analysis was not collected.
		Sodium		During sampling the well became partially dry, this analysis was not collected.
		Tantalum		During sampling the well became partially dry, this analysis was not collected.
		Thallium		During sampling the well became partially dry, this analysis was not collected.
		Uranium		During sampling the well became partially dry, this analysis was not collected.
		Vanadium		During sampling the well became partially dry, this analysis was not collected.
		Zinc		During sampling the well became partially dry, this analysis was not collected.
		Vinyl acetate		During sampling the well became partially dry, this analysis was not collected.
		Acetone		During sampling the well became partially dry, this analysis was not collected.
		Acrolein		During sampling the well became partially dry, this analysis was not collected.
		Acrylonitrile		During sampling the well became partially dry, this analysis was not collected.
		Benzene		During sampling the well became partially dry, this analysis was not collected.
		Chlorobenzene		During sampling the well became partially dry, this analysis was not collected.
		Xylenes		During sampling the well became partially dry, this analysis was not collected.
		Styrene		During sampling the well became partially dry, this analysis was not collected.
		Toluene		During sampling the well became partially dry, this analysis was not collected.
		Chlorobromomethane		During sampling the well became partially dry, this analysis was not collected.
		Bromodichloromethane		During sampling the well became partially dry, this analysis was not collected.

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Monitoring Point	Facility Sample ID	Constituent	Flag	Description
8004-0986 MW362		Tribromomethane		During sampling the well became partially dry, this analysis was not collected.
		Methyl bromide		During sampling the well became partially dry, this analysis was not collected.
		Methyl Ethyl Ketone		During sampling the well became partially dry, this analysis was not collected.
		trans-1,4-Dichloro-2-butene		During sampling the well became partially dry, this analysis was not collected.
		Carbon disulfide		During sampling the well became partially dry, this analysis was not collected.
		Chloroethane		During sampling the well became partially dry, this analysis was not collected.
		Chloroform		During sampling the well became partially dry, this analysis was not collected.
		Methyl chloride		During sampling the well became partially dry, this analysis was not collected.
		cis-1,2-Dichloroethene		During sampling the well became partially dry, this analysis was not collected.
		Methylene bromide		During sampling the well became partially dry, this analysis was not collected.
		1,1-Dichloroethane		During sampling the well became partially dry, this analysis was not collected.
		1,2-Dichloroethane		During sampling the well became partially dry, this analysis was not collected.
		1,1-Dichloroethylene		During sampling the well became partially dry, this analysis was not collected.
		1,2-Dibromoethane		During sampling the well became partially dry, this analysis was not collected.
		1,1,2,2-Tetrachloroethane		During sampling the well became partially dry, this analysis was not collected.
		1,1,1-Trichloroethane		During sampling the well became partially dry, this analysis was not collected.
		1,1,2-Trichloroethane		During sampling the well became partially dry, this analysis was not collected.
		1,1,1,2-Tetrachloroethane		During sampling the well became partially dry, this analysis was not collected.
		Vinyl chloride		During sampling the well became partially dry, this analysis was not collected.
		Tetrachloroethene		During sampling the well became partially dry, this analysis was not collected.
		Trichloroethene		During sampling the well became partially dry, this analysis was not collected.
		Ethylbenzene		During sampling the well became partially dry, this analysis was not collected.
		2-Hexanone		During sampling the well became partially dry, this analysis was not collected.
		Iodomethane		During sampling the well became partially dry, this analysis was not collected.
		Dibromochloromethane		During sampling the well became partially dry, this analysis was not collected.
		Carbon tetrachloride		During sampling the well became partially dry, this analysis was not collected.

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Monitoring Point	Facility Sample ID	Constituent	Flag	Description
8004-0986 MW362		Dichloromethane		During sampling the well became partially dry, this analysis was not collected.
		Methyl Isobutyl Ketone		During sampling the well became partially dry, this analysis was not collected.
		1,2-Dibromo-3-chloropropane		During sampling the well became partially dry, this analysis was not collected.
		1,2-Dichloropropane		During sampling the well became partially dry, this analysis was not collected.
		trans-1,3-Dichloropropene		During sampling the well became partially dry, this analysis was not collected.
		cis-1,3-Dichloropropene		During sampling the well became partially dry, this analysis was not collected.
		trans-1,2-Dichloroethene		During sampling the well became partially dry, this analysis was not collected.
		Trichlorofluoromethane		During sampling the well became partially dry, this analysis was not collected.
		1,2,3-Trichloropropane		During sampling the well became partially dry, this analysis was not collected.
		1,2-Dichlorobenzene		During sampling the well became partially dry, this analysis was not collected.
		1,4-Dichlorobenzene		During sampling the well became partially dry, this analysis was not collected.
		PCB, Total		During sampling the well became partially dry, this analysis was not collected.
		PCB-1016		During sampling the well became partially dry, this analysis was not collected.
		PCB-1221		During sampling the well became partially dry, this analysis was not collected.
		PCB-1232		During sampling the well became partially dry, this analysis was not collected.
		PCB-1242		During sampling the well became partially dry, this analysis was not collected.
		PCB-1248		During sampling the well became partially dry, this analysis was not collected.
		PCB-1254		During sampling the well became partially dry, this analysis was not collected.
		PCB-1260		During sampling the well became partially dry, this analysis was not collected.
		PCB-1268		During sampling the well became partially dry, this analysis was not collected.
		Gross alpha		During sampling the well became partially dry, this analysis was not collected.
		Gross beta		During sampling the well became partially dry, this analysis was not collected.
		Iodine-131		During sampling the well became partially dry, this analysis was not collected.
		Radium-226		During sampling the well became partially dry, this analysis was not collected.
		Strontium-90		During sampling the well became partially dry, this analysis was not collected.
		Technetium-99		During sampling the well became partially dry, this analysis was not collected.

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Monitoring Point	Facility Sample ID	Constituent	Flag	Description
8004-0986 MW362		Thorium-230		During sampling the well became partially dry, this analysis was not collected.
		Tritium		During sampling the well became partially dry, this analysis was not collected.
		Chemical Oxygen Demand		During sampling the well became partially dry, this analysis was not collected.
		Cyanide		During sampling the well became partially dry, this analysis was not collected.
		Iodide		During sampling the well became partially dry, this analysis was not collected.
		Total Organic Carbon		During sampling the well became partially dry, this analysis was not collected.
		Total Organic Halides		During sampling the well became partially dry, this analysis was not collected.
8004-4796 MW363	MW363UG3-13	Barium	X	Other specific flags and footnotes may be required to properly define the results.
		Manganese	X	Other specific flags and footnotes may be required to properly define the results.
		Silver	N	Sample spike recovery not within control limits.
		1,2-Dibromo-3-chloropropane	X	Other specific flags and footnotes may be required to properly define the results.
		Gross alpha	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.318. Rad error is 0.304.
		Gross beta		TPU is 1.35. Rad error is 1.25.
		Iodine-131		Analysis of constituent not required and not performed.
		Radium-226	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.395. Rad error is 0.226.
		Strontium-90	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.0252. Rad error is 0.0176.
		Technetium-99	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 11.2. Rad error is 11.2.
		Thorium-230	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.0973. Rad error is 0.0575.
		Tritium	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 600. Rad error is 595.

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Monitoring Point	Facility Sample ID	Constituent	Flag	Description
8004-4797 MW364	MW364UG3-13	Nitrate & Nitrite	*	Duplicate analysis not within control limits.
		Barium	X	Other specific flags and footnotes may be required to properly define the results.
		Manganese	X	Other specific flags and footnotes may be required to properly define the results.
		Silver	N	Sample spike recovery not within control limits.
		Gross alpha	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.477. Rad error is 0.434.
		Gross beta		TPU is 4.87. Rad error is 4.15.
		Iodine-131		Analysis of constituent not required and not performed.
		Radium-226	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.373. Rad error is 0.182.
		Strontium-90	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.165. Rad error is 0.122.
		Technetium-99		TPU is 12.8. Rad error is 12.8.
		Thorium-230	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.105. Rad error is 0.0693.
		Tritium	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 605. Rad error is 603.
8004-0984 MW365	MW365UG3-13	Barium	X	Other specific flags and footnotes may be required to properly define the results.
		Manganese	X	Other specific flags and footnotes may be required to properly define the results.
		Silver	N	Sample spike recovery not within control limits.
		1,2-Dibromo-3-chloropropane	X	Other specific flags and footnotes may be required to properly define the results.
		Gross alpha	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.956. Rad error is 0.912.
		Gross beta	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.041. Rad error is 0.039.
		Iodine-131		Analysis of constituent not required and not performed.
		Radium-226	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.404. Rad error is 0.0601.
		Strontium-90	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.23. Rad error is 0.174.
		Technetium-99	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 10.2. Rad error is 10.2.
		Thorium-230	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.098. Rad error is 0.058.
		Tritium	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 609. Rad error is 609.

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Monitoring Point	Facility Sample ID	Constituent	Flag	Description
8004-0982 MW366	MW366UG3-13	Nitrate & Nitrite	*	Duplicate analysis not within control limits.
		Barium	X	Other specific flags and footnotes may be required to properly define the results.
		Manganese	X	Other specific flags and footnotes may be required to properly define the results.
		Silver	N	Sample spike recovery not within control limits.
		Gross alpha	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.24. Rad error is 0.221.
		Gross beta		TPU is 4.35. Rad error is 3.76.
		Iodine-131		Analysis of constituent not required and not performed.
		Radium-226	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.396. Rad error is 0.226.
		Strontium-90	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.0531. Rad error is 0.0381.
		Technetium-99		TPU is 12.9. Rad error is 12.9.
		Thorium-230	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.0914. Rad error is 0.0467.
		Tritium	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 603. Rad error is 600.
8004-4793 MW367	MW367UG3-13	Barium	X	Other specific flags and footnotes may be required to properly define the results.
		Manganese	X	Other specific flags and footnotes may be required to properly define the results.
		Silver	N	Sample spike recovery not within control limits.
		Tribromomethane	Y	MS,MSD recovery and/or RPD failed acceptance criteria.
		Chloroethane	Y	MS,MSD recovery and/or RPD failed acceptance criteria.
		Vinyl chloride	Y	MS,MSD recovery and/or RPD failed acceptance criteria.
		Dibromochloromethane	Y	MS,MSD recovery and/or RPD failed acceptance criteria.
		Dichloromethane	Y	MS,MSD recovery and/or RPD failed acceptance criteria.
		cis-1,3-Dichloropropene	Y	MS,MSD recovery and/or RPD failed acceptance criteria.
		Gross alpha	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 1.65. Rad error is 1.47.
		Gross beta		TPU is 4.12. Rad error is 3.58.
		Iodine-131		Analysis of constituent not required and not performed.
		Radium-226	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.461. Rad error is 0.32.
		Strontium-90	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.111. Rad error is 0.0763.
		Technetium-99		TPU is 12.3. Rad error is 12.3.
		Thorium-230	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.0924. Rad error is 0.0469.
		Tritium	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 611. Rad error is 610.

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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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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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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	MW369UG3-13	Cobalt	X	Other specific flags and footnotes may be required to properly define the results.
		Manganese	NX	Sample spike recovery not within control limits. Other specific flags and footnotes may be required to properly define the results.
		Nickel	X	Other specific flags and footnotes may be required to properly define the results.
		Gross alpha	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 1.53. Rad error is 1.39.
		Gross beta		TPU is 2.91. Rad error is 2.61.
		Iodine-131		Analysis of constituent not required and not performed.
		Radium-226	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.466. Rad error is 0.334.
		Strontium-90	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.0187. Rad error is 0.0131.
		Technetium-99		TPU is 11.4. Rad error is 11.4.
		Thorium-230	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.106. Rad error is 0.0679.
		Tritium	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 607. Rad error is 606.

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Monitoring Point	Facility Sample ID	Constituent	Flag	Description
8004-4818 MW370	MW370UG3-13	Barium	X	Other specific flags and footnotes may be required to properly define the results.
		Manganese	X	Other specific flags and footnotes may be required to properly define the results.
		Silver	N	Sample spike recovery not within control limits.
		Tribromomethane	Y	MS,MSD recovery and/or RPD failed acceptance criteria.
		Chloroethane	Y	MS,MSD recovery and/or RPD failed acceptance criteria.
		Vinyl chloride	Y	MS,MSD recovery and/or RPD failed acceptance criteria.
		Dibromochloromethane	Y	MS,MSD recovery and/or RPD failed acceptance criteria.
		Dichloromethane	Y	MS,MSD recovery and/or RPD failed acceptance criteria.
		cis-1,3-Dichloropropene	Y	MS,MSD recovery and/or RPD failed acceptance criteria.
		Gross alpha	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 1.41. Rad error is 1.3.
		Gross beta		TPU is 2.39. Rad error is 2.17.
		Iodine-131		Analysis of constituent not required and not performed.
		Radium-226	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.403. Rad error is 0.239.
		Strontium-90	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.317. Rad error is 0.206.
		Technetium-99	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 10.9. Rad error is 10.9.
		Thorium-230	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.0995. Rad error is 0.0609.
		Tritium	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 604. Rad error is 600.

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Monitoring Point	Facility Sample ID	Constituent	Flag	Description
8004-4819 MW371	MW371UG3-13	Cobalt	X	Other specific flags and footnotes may be required to properly define the results.
		Manganese	NX	Sample spike recovery not within control limits. Other specific flags and footnotes may be required to properly define the results.
		Nickel	X	Other specific flags and footnotes may be required to properly define the results.
		Tribromomethane	Y	MS,MSD recovery and/or RPD failed acceptance criteria.
		Chloroethane	Y	MS,MSD recovery and/or RPD failed acceptance criteria.
		Vinyl chloride	Y	MS,MSD recovery and/or RPD failed acceptance criteria.
		Dibromochloromethane	Y	MS,MSD recovery and/or RPD failed acceptance criteria.
		Dichloromethane	Y	MS,MSD recovery and/or RPD failed acceptance criteria.
		cis-1,3-Dichloropropene	Y	MS,MSD recovery and/or RPD failed acceptance criteria.
		Gross alpha	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 1.91. Rad error is 1.81.
		Gross beta	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.303. Rad error is 0.288.
		Iodine-131		Analysis of constituent not required and not performed.
		Radium-226	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.482. Rad error is 0.352.
		Strontium-90	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.178. Rad error is 0.12.
		Technetium-99	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 11.1. Rad error is 11.1.
		Thorium-230	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.0973. Rad error is 0.0559.
		Tritium	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 607. Rad error is 605.

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Monitoring Point	Facility Sample ID	Constituent	Flag	Description
8004-4808 MW372	MW372UG3-13	Barium	X	Other specific flags and footnotes may be required to properly define the results.
		Manganese	X	Other specific flags and footnotes may be required to properly define the results.
		Silver	N	Sample spike recovery not within control limits.
		Tribromomethane	Y	MS,MSD recovery and/or RPD failed acceptance criteria.
		Chloroethane	Y	MS,MSD recovery and/or RPD failed acceptance criteria.
		Vinyl chloride	Y	MS,MSD recovery and/or RPD failed acceptance criteria.
		Dibromochloromethane	Y	MS,MSD recovery and/or RPD failed acceptance criteria.
		Dichloromethane	Y	MS,MSD recovery and/or RPD failed acceptance criteria.
		cis-1,3-Dichloropropene	Y	MS,MSD recovery and/or RPD failed acceptance criteria.
		Gross alpha	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.119. Rad error is 0.113.
		Gross beta		TPU is 3.07. Rad error is 2.76.
		Iodine-131		Analysis of constituent not required and not performed.
		Radium-226	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.352. Rad error is 0.138.
		Strontium-90	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.151. Rad error is 0.102.
		Technetium-99		TPU is 12.7. Rad error is 12.7.
		Thorium-230	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.106. Rad error is 0.0694.
		Tritium	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 598. Rad error is 594.

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Monitoring Point	Facility Sample ID	Constituent	Flag	Description
8004-4792 MW373	MW373UG3-13	Barium	X	Other specific flags and footnotes may be required to properly define the results.
		Manganese	X	Other specific flags and footnotes may be required to properly define the results.
		Silver	N	Sample spike recovery not within control limits.
		Tribromomethane	Y	MS,MSD recovery and/or RPD failed acceptance criteria.
		Chloroethane	Y	MS,MSD recovery and/or RPD failed acceptance criteria.
		Vinyl chloride	Y	MS,MSD recovery and/or RPD failed acceptance criteria.
		Dibromochloromethane	Y	MS,MSD recovery and/or RPD failed acceptance criteria.
		Dichloromethane	Y	MS,MSD recovery and/or RPD failed acceptance criteria.
		cis-1,3-Dichloropropene	Y	MS,MSD recovery and/or RPD failed acceptance criteria.
		Gross alpha	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 1.88. Rad error is 1.69.
		Gross beta		TPU is 4.65. Rad error is 4.02.
		Iodine-131		Analysis of constituent not required and not performed.
		Radium-226	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.454. Rad error is 0.318.
		Strontium-90	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.137. Rad error is 0.0931.
		Technetium-99		TPU is 13.3. Rad error is 13.3.
		Thorium-230	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.0973. Rad error is 0.0565.
		Tritium	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 605. Rad error is 603.

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Monitoring Point	Facility Sample ID	Constituent	Flag	Description
8004-0990 MW374	MW374UG3-13	Barium	X	Other specific flags and footnotes may be required to properly define the results.
		Manganese	X	Other specific flags and footnotes may be required to properly define the results.
		Silver	N	Sample spike recovery not within control limits.
		Tribromomethane	Y	MS,MSD recovery and/or RPD failed acceptance criteria.
		Chloroethane	Y	MS,MSD recovery and/or RPD failed acceptance criteria.
		Vinyl chloride	Y	MS,MSD recovery and/or RPD failed acceptance criteria.
		Dibromochloromethane	Y	MS,MSD recovery and/or RPD failed acceptance criteria.
		Dichloromethane	Y	MS,MSD recovery and/or RPD failed acceptance criteria.
		1,2-Dibromo-3-chloropropane	X	Other specific flags and footnotes may be required to properly define the results.
		cis-1,3-Dichloropropene	Y	MS,MSD recovery and/or RPD failed acceptance criteria.
		Gross alpha	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.95. Rad error is 0.91.
		Gross beta	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.302. Rad error is 0.287.
		Iodine-131		Analysis of constituent not required and not performed.
		Radium-226	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.43. Rad error is 0.28.
		Strontium-90	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.155. Rad error is 0.104.
		Technetium-99	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 11.2. Rad error is 11.2.
		Thorium-230	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.107. Rad error is 0.0707.
		Tritium	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 607. Rad error is 605.
8004-0985 MW375	MW375UG3-13	Barium	X	Other specific flags and footnotes may be required to properly define the results.
		Manganese	X	Other specific flags and footnotes may be required to properly define the results.
		Silver	N	Sample spike recovery not within control limits.
		Gross alpha	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 1.62. Rad error is 1.52.
		Gross beta	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.748. Rad error is 0.704.
		Iodine-131		Analysis of constituent not required and not performed.
		Radium-226	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.431. Rad error is 0.28.
		Strontium-90	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.137. Rad error is 0.0936.
		Technetium-99	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 10.2. Rad error is 10.2.
		Thorium-230	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.0935. Rad error is 0.00743.
		Tritium	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 597. Rad error is 591.

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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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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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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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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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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
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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GROUNDWATER
WRITTEN COMMENTS

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.

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Monitoring Point	Facility Sample ID	Constituent	Flag	Description
0000-0000 QC	RI1UG3-13	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.
		Barium	X	Other specific flags and footnotes may be required to properly define the results.
		Manganese	X	Other specific flags and footnotes may be required to properly define the results.
		Silver	N	Sample spike recovery not within control limits.
		Gross alpha	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.577. Rad error is 0.548.
		Gross beta	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.308. Rad error is 0.291.
		Iodine-131		Analysis of constituent not required and not performed.
		Radium-226	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.481. Rad error is 0.344.
		Strontium-90	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.148. Rad error is 0.1.
		Technetium-99	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 13.9. Rad error is 13.9.
		Thorium-230	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.106. Rad error is 0.0689.
		Tritium	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 602. Rad error is 599.
		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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WRITTEN COMMENTS

Monitoring Point	Facility Sample ID	Constituent	Flag	Description
0000-0000 QC	FB1UG3-13	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.
		Cobalt	X	Other specific flags and footnotes may be required to properly define the results.
		Manganese	NX	Sample spike recovery not within control limits. Other specific flags and footnotes may be required to properly define the results.
		Nickel	X	Other specific flags and footnotes may be required to properly define the results.
		Gross alpha	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.158. Rad error is 0.153.
		Gross beta	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.0293. Rad error is 0.0279.
		Iodine-131		Analysis of constituent not required and not performed.
		Radium-226	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.379. Rad error is 0.00782.
		Strontium-90	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.142. Rad error is 0.0968.
		Technetium-99	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 11.4. Rad error is 11.4.
		Thorium-230	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.117. Rad error is 0.0846.
		Tritium	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 601. Rad error is 598.
		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	TB1UG3-13	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	TB1UG3-13	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	TB2UG3-13	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	TB2UG3-13	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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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	TB3UG3-13	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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GROUNDWATER
WRITTEN COMMENTS

Monitoring Point	Facility Sample ID	Constituent	Flag	Description
0000-0000 QC	TB3UG3-13	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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LAB ID:None
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WRITTEN COMMENTS

Monitoring Point	Facility Sample ID	Constituent	Flag	Description
0000-0000 QC	TB4UG3-13	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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LAB ID:None
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WRITTEN COMMENTS

Monitoring Point	Facility Sample ID	Constituent	Flag	Description
0000-0000 QC	TB4UG3-13	Zinc		Analysis of constituent not required and not performed.
		Tribromomethane	Y	MS,MSD recovery and/or RPD failed acceptance criteria.
		Chloroethane	Y	MS,MSD recovery and/or RPD failed acceptance criteria.
		Vinyl chloride	Y	MS,MSD recovery and/or RPD failed acceptance criteria.
		Dibromochloromethane	Y	MS,MSD recovery and/or RPD failed acceptance criteria.
		Dichloromethane	Y	MS,MSD recovery and/or RPD failed acceptance criteria.
		cis-1,3-Dichloropropene	Y	MS,MSD recovery and/or RPD failed acceptance criteria.
		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	TB5UG3-13	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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WRITTEN COMMENTS

Monitoring Point	Facility Sample ID	Constituent	Flag	Description
0000-0000 QC	TB5UG3-13	Zinc		Analysis of constituent not required and not performed.
		Tribromomethane	Y	MS,MSD recovery and/or RPD failed acceptance criteria.
		Chloroethane	Y	MS,MSD recovery and/or RPD failed acceptance criteria.
		Vinyl chloride	Y	MS,MSD recovery and/or RPD failed acceptance criteria.
		Dibromochloromethane	Y	MS,MSD recovery and/or RPD failed acceptance criteria.
		Dichloromethane	Y	MS,MSD recovery and/or RPD failed acceptance criteria.
		cis-1,3-Dichloropropene	Y	MS,MSD recovery and/or RPD failed acceptance criteria.
		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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WRITTEN COMMENTS

Monitoring Point	Facility Sample ID	Constituent	Flag	Description
0000-0000 QC	TB6UG3-13	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	TB6UG3-13	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	TB7UG3-13	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	TB7UG3-13	Zinc		Analysis of constituent not required and not performed.
		1,2-Dibromo-3-chloropropane	X	Other specific flags and footnotes may be required to properly define the results.
		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
8004-4819 MW371	MW371DUG3-13	Barium	X	Other specific flags and footnotes may be required to properly define the results.
		Manganese	X	Other specific flags and footnotes may be required to properly define the results.
		Silver	N	Sample spike recovery not within control limits.
		Tribromomethane	Y	MS,MSD recovery and/or RPD failed acceptance criteria.
		Chloroethane	Y	MS,MSD recovery and/or RPD failed acceptance criteria.
		Vinyl chloride	Y	MS,MSD recovery and/or RPD failed acceptance criteria.
		Dibromochloromethane	Y	MS,MSD recovery and/or RPD failed acceptance criteria.
		Dichloromethane	Y	MS,MSD recovery and/or RPD failed acceptance criteria.
		cis-1,3-Dichloropropene	Y	MS,MSD recovery and/or RPD failed acceptance criteria.
		Gross alpha	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.116. Rad error is 0.112.
		Gross beta	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.426. Rad error is 0.403.
		Iodine-131		Analysis of constituent not required and not performed.
		Radium-226	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.425. Rad error is 0.269.
		Strontium-90	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.0414. Rad error is 0.0289.
		Technetium-99	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 11.2. Rad error is 11.2.
		Thorium-230	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.0948. Rad error is 0.0529.
		Tritium	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 595. Rad error is 587.

APPENDIX D

STATISTICAL ANALYSES AND QUALIFICATION STATEMENT

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RESIDENTIAL/CONTAINED – QUARTERLY, 2nd Quarter 2013 Finds/Unit: _____
Facility: U.S. DOE – Paducah Gaseous Diffusion Plant Lab ID: None
Permit Number: 073-00045 For Official Use Only

GROUNDWATER STATISTICAL COMMENTS

Introduction

The statistical analyses conducted on the second quarter 2013 groundwater data collected from the C-746-U Contained Landfill monitoring wells (MWs) were performed in accordance with Permit GSTR0001, Standard Requirement 3, using the U.S. Environmental Protection Agency (EPA) guidance document, *EPA Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities, Interim Final Guidance* (1989), with the exception of pH. The method for conducting the statistical analysis of pH was selected by the project statistician.

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 included two background wells for comparison with at least three test wells or sidegradient wells (Exhibit 1). The second quarter 2013 data used to conduct the statistical analyses was collected in April 2013. 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 of this appendix.

Statistical Analysis Process

For chemicals with established maximum contaminant levels (MCLs), no statistical analysis was performed. Parameters that have MCLs can be found in 401 *KAR* 47:030, Section 6. For parameters with no established MCL, 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. Results of the one-sided tolerance interval statistical test conclude whether the data show a statistically significant increase of concentrations with respect to upgradient (background) well data. For the statistical analysis of pH, a two-sided tolerance interval statistical test was conducted. 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. The tolerance interval statistical analysis was conducted separately for each parameter in each well (no pooling of downgradient data).

Statistical analyses are performed on historical background data, not on the data for the current quarter. Once a statistical result is obtained using the background data, the data for the current quarter is compared to that value. If the value is exceeded, the well has a statistically significant increase in concentration compared to the 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.

    - 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 potentially normally distributed. Data sets with CV > 1.0 are assumed to be log-normally distributed; 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 x 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 has increased concentration with respect to background data.

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 from the available data set and the statistical test performed using the one-sided tolerance interval.

Excluding parameters that have an MCL, Exhibits 3, 4, and 5 list the number of analyses (observations), nondetects (censored observations), detects (uncensored observations), and missing observations by parameter in the UCRS, the URGA, and the LRGA, respectively. Those parameters displayed with bold-face type indicate the one-sided tolerance interval statistical test was performed. The data presented in Exhibits 3, 4, and 5 were collected during the current quarter, second quarter 2013. The observations that are listed are not background data. Background data are presented on pages D-17 through D-77. The sampling dates associated with background data are listed next to the result on pages D-17 through D-77. When field duplicate data are available, the higher of the two readings is retained for further evaluation.

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

Exhibit 1. Station Identification for Monitoring Wells Analyzed

Station	Type	Aquifer
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	SG	URGA
MW367	SG	LRGA
MW368*	SG	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

BG: upgradient or background wells
TW: downgradient or test wells
SG: sidegradient wells
* Well was dry this quarter.

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

Parameters
Aluminum
Boron
Calcium
Chloride
Cobalt
Conductivity
Dissolved Oxygen
Dissolved Solids
Iron
Magnesium
Manganese
Nickel
Oxidation-Reduction Potential
PCB, Total
PCB-1242
pH*
Potassium
Sodium
Sulfate
Technetium-99
Total Organic Carbon (TOC)
Total Organic Halides (TOX)
Uranium

***** For pH, the test well results were compared to both an upper and lower TL to determine if statistically significant deviations exist in concentrations with respect to upgradient well data.

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**	**3**	**1**	**YES**
Antimony	4	0	4	0	no
Beryllium	4	0	4	0	no
Boron	4	0	4	0	no
Bromide	4	0	4	0	no
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	4	0	no
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**	**3**	**1**	**YES**
Conductivity	**4**	**0**	**0**	**4**	**YES**
Copper	4	0	4	0	no
Cyanide	4	0	4	0	no
Dibromochloromethane	4	0	4	0	no
Dibromomethane	4	0	4	0	no
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

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

Molybdenum	4	0	4	0	no
Nickel	**4**	**0**	**3**	**1**	**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	4	0	no
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
Trichlorofluoromethane	4	0	4	0	no
Uranium	**4**	**0**	**3**	**1**	**YES**
Vanadium	4	0	4	0	no
Vinyl acetate	4	0	4	0	no
Zinc	4	0	4	0	no

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**	**5**	**1**	**YES**
Antimony	6	0	6	0	no
Beryllium	6	0	6	0	no
Boron	**6**	**0**	**4**	**2**	**YES**
Bromide	6	0	6	0	no
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	6	0	no
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**	**4**	**2**	**YES**
Conductivity	**6**	**0**	**0**	**6**	**YES**
Copper	6	0	6	0	no
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**
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**	**2**	**4**	**YES**
Magnesium	**6**	**0**	**0**	**6**	**YES**
Manganese	**6**	**0**	**0**	**6**	**YES**
Methylene chloride	6	0	6	0	no

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

Molybdenum	6	0	6	0	no
Nickel	**6**	**0**	**5**	**1**	**YES**
Oxidation-Reduction Potential	**6**	**0**	**0**	**6**	**YES**
PCB, Total	**6**	**0**	**5**	**1**	**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**	**5**	**1**	**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	6	0	no
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**	**2**	**4**	**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
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	6	0	no
Vinyl acetate	6	0	6	0	no
Zinc	6	0	6	0	no

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?
1,2,3-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	6	0	no
Antimony	6	0	6	0	no
Beryllium	6	0	6	0	no
Boron	**6**	**0**	**3**	**3**	**YES**
Bromide	6	0	6	0	no
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	6	0	no
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**	**4**	**2**	**YES**
Conductivity	**6**	**0**	**0**	**6**	**YES**
Copper	6	0	6	0	no
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**
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**	**3**	**3**	**YES**
Magnesium	**6**	**0**	**0**	**6**	**YES**
Manganese	**6**	**0**	**2**	**4**	**YES**
Methylene chloride	6	0	6	0	no
Molybdenum	6	0	6	0	no
Nickel	**6**	**0**	**5**	**1**	**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

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

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	6	0	no
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**	**4**	**2**	**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
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	6	0	no
Vinyl acetate	6	0	6	0	no
Zinc	6	0	6	0	no

Bold denotes parameters with at least one uncensored observation.

Discussion of Results

For the UCRS, URGA, and LRGA, the results of the one-sided upper tolerance interval test are presented on pages D-17 through D-77 and the statistician qualification statement is presented on page D-78. For the UCRS, URGA, and LRGA, the test was applied to 19, 22, and 19 parameters, respectively, listed in bold print in Exhibits 3, 4, and 5. A summary of statistically significant increases by well number is shown in Exhibit 6.

UCRS

In this quarter, statistical test results indicated there were statistically significant increases for dissolved oxygen, oxidation-reduction potential, and sulfate.

URGA

In this quarter, statistical test results indicated that there were statistically significant increases for calcium, conductivity, dissolved solids, magnesium, oxidation-reduction potential, and sulfate.

LRGA

In this quarter, statistical test results indicated that there were statistically significant increases for oxidation reduction potential, and technetium-99.

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 7, Exhibit 8, and Exhibit 9, respectively.

Exhibit 6. Summary of Statistically Significant Increases

UCRS	URGA	LRGA
MW365: dissolved oxygen, sulfate	MW357: oxidation-reduction potential	MW358: oxidation-reduction potential
MW371: (upgradient): oxidation-reduction potential	MW360: oxidation-reduction potential	MW361: oxidation-reduction potential
MW374: (upgradient): dissolved oxygen, 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: (upgradient): oxidation-reduction potential	MW370: (upgradient): oxidation-reduction potential
	MW372: (upgradient): calcium, conductivity, dissolved solids, magnesium, sulfate	MW373: (upgradient): oxidation-reduction potential, technetium-99

Exhibit 7. Tests Summary for Qualified Parameters—UCRS

Parameter	Performed Test	CV Normality Test	Results of Tolerance Interval Test Conducted
Aluminum	Tolerance Interval	2.08	No statistically significant increases relative to background data
Calcium	Tolerance Interval	0.40	No statistically significant increases relative to background data
Chloride	Tolerance Interval	0.95	No statistically significant increases relative to background data
Cobalt	Tolerance Interval	1.31	No statistically significant increases relative to background data
Conductivity	Tolerance Interval	0.45	No statistically significant increases relative to background data
Dissolved Oxygen	Tolerance Interval	0.55	Statistically significant increases relative to background data in MW365 and MW374
Dissolved Solids	Tolerance Interval	0.42	No statistically significant increases relative to background data
Iron	Tolerance Interval	0.98	No statistically significant increases relative to background data
Magnesium	Tolerance Interval	0.27	No statistically significant increases relative to background data
Manganese	Tolerance Interval	0.89	No statistically significant increases relative to background data
Nickel	Tolerance Interval	0.98	No statistically significant increases relative to background data
Oxidation-Reduction Potential	Tolerance Interval	3.54	Statistically significant increases relative to background data in MW371, MW374, and MW375
pH	Tolerance Interval	0.05	No statistically significant deviations relative to background data
Potassium	Tolerance Interval	0.72	No statistically significant increases relative to background data
Sodium	Tolerance Interval	0.40	No statistically significant increases relative to background data
Sulfate	Tolerance Interval	0.49	Statistically significant increases relative to background data in MW365 and MW375
Total Organic Carbon	Tolerance Interval	1.38	No statistically significant increases relative to background data

Exhibit 7. Test Summary for qualified Parameters—UCRS (Continued)

Parameter	Performed Test	CV Normality Test	Results of Tolerance Interval Test Conducted
Total Organic Halides	Tolerance Interval	1.08	No statistically significant increases relative to background data
Uranium	Tolerance Interval	1.68	No statistically significant increases relative to background data

CV: coefficient of variation

Exhibit 8. Tests Summary for Qualified Parameters—URGA

Parameter	Performed Test	CV Normality Test	Results of Tolerance Interval Test Conducted
Aluminum	Tolerance Interval	1.24	No statistically significant increases relative to background data
Boron	Tolerance Interval	0.84	No statistically significant increases relative to background data
Calcium	Tolerance Interval	0.29	Statistically significant increase relative to background data in MW372
Chloride	Tolerance Interval	0.10	No statistically significant increases relative to background data
Cobalt	Tolerance Interval	0.85	No statistically significant increases relative to background data
Conductivity	Tolerance Interval	0.12	Statistically significant increase relative to background data in MW372
Dissolved Oxygen	Tolerance Interval	0.76	No statistically significant increases relative to background data
Dissolved Solids	Tolerance Interval	0.16	Statistically significant increase relative to background data in MW372
Iron	Tolerance Interval	0.95	No statistically significant increases relative to background data
Magnesium	Tolerance Interval	0.27	Statistically significant increase relative to background data in MW372
Manganese	Tolerance Interval	0.66	No statistically significant increases relative to background data
Nickel	Tolerance Interval	0.91	No statistically significant increases relative to background data
Oxidation-Reduction Potential	Tolerance Interval	1.26	Statistically significant increases relative to background data in MW357, MW360, MW363, MW366, and MW369
PCB, Total	Tolerance Interval	0.90	No statistically significant increases relative to background data
PCB-1242	Tolerance Interval	1.36	No statistically significant increases relative to background data
pH	Tolerance Interval	0.03	No statistically significant deviations relative to background data

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

Parameter	Performed Test	CV Normality Test	Results of Tolerance Interval Test Conducted
Potassium	Tolerance Interval	0.72	No statistically significant increases relative to background data
Sodium	Tolerance Interval	0.26	No statistically significant increases relative to background data
Sulfate	Tolerance Interval	0.75	Statistically significant increase relative to background data in MW372
Technetium-99	Tolerance Interval	0.87	No statistically significant increases relative to background data
Total Organic Carbon	Tolerance Interval	1.23	No statistically significant increases relative to background data
Total Organic Halides	Tolerance Interval	0.95	No statistically significant increases relative to background data

CV: coefficient of variation

Exhibit 9. Tests Summary for Qualified Parameters—LRGA

Parameter	Performed Test	CV Normality Test	Results of Tolerance Interval Test Conducted
Boron	Tolerance Interval	0.68	No statistically significant increases relative to background data
Calcium	Tolerance Interval	0.31	No statistically significant increases relative to background data
Chloride	Tolerance Interval	0.16	No statistically significant increases relative to background data
Cobalt	Tolerance Interval	1.17	No statistically significant increases relative to background data
Conductivity	Tolerance Interval	0.26	No statistically significant increases relative to background data
Dissolved Oxygen	Tolerance Interval	0.83	No statistically significant increases relative to background data
Dissolved Solids	Tolerance Interval	0.30	No statistically significant increases relative to background data
Iron	Tolerance Interval	0.96	No statistically significant increases relative to background data
Magnesium	Tolerance Interval	0.34	No statistically significant increases relative to background data
Manganese	Tolerance Interval	0.62	No statistically significant increases relative to background data
Nickel	Tolerance Interval	0.90	No statistically significant increases relative to background data
Oxidation-Reduction Potential	Tolerance Interval	1.31	Statistically significant increases relative to background data in MW358, MW361, MW364, MW367, MW370, and MW373
pH	Tolerance Interval	0.03	No statistically significant deviations relative to background data
Potassium	Tolerance Interval	0.19	No statistically significant increases relative to background data
Sodium	Tolerance Interval	0.30	No statistically significant increases relative to background data
Sulfate	Tolerance Interval	1.59	No statistically significant increases relative to background data

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

Parameter	Performed Test	CV Normality Test	Results of Tolerance Interval Test Conducted
Technetium-99	Tolerance Interval	1.73	Statistically significant increase relative to background data in MW373
Total Organic Carbon	Tolerance Interval	1.96	No statistically significant increases relative to background data
Total Organic Halides	Tolerance Interval	0.98	No statistically significant increases relative to background data

CV: coefficient of variation

C-746-U Second Quarter 2013 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 statistically significant evidence of elevated 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

Second Quarter 2013 Data Collected in April 2013

Well No.	Result	Gradient	Result >TL?
MW365	0.200	Downgradient	N/A
MW371	1.310	Upgradient	N/A
MW374	0.200	Upgradient	N/A
MW375	0.200	Sidegradient	N/A

Second Quarter 2013 Dry/Partially Dry Wells

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

Transformed Second Quarter 2013 Data Collected in April 2013

Well Number	LN(Result)	Result >TL?
MW365	-1.609	NO
MW371	0.270	NO
MW374	-1.609	NO
MW375	-1.609	NO

Conclusion of Statistical Analysis on Transformed Data

None of the test wells exceeded the Upper Tolerance Limit, which is statistically significant evidence that these wells have no elevated concentrations with respect to background data.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
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 Second Quarter 2013 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 statistically significant evidence of elevated 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 anaylsis.

Second Quarter 2013 Data Collected in April 2013

Well No.	Result	Gradient	Result >TL?
MW365	18.800	Downgradient	NO
MW371	29.300	Upgradient	NO
MW374	20.800	Upgradient	NO
MW375	15.300	Sidegradient	NO

Second Quarter 2013 Dry/Partially Dry Wells

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

Conclusion of Statistical Analysis on Data

None of the test wells exceeded the Upper Tolerance Limit, which is statistically significant evidence that these wells have no elevated concentrations with respect to background data.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
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 Second Quarter 2013 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 statistically significant evidence of elevated 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 anaylsis.

Second Quarter 2013 Data Collected in April 2013

Well No.	Result	Gradient	Result >TL?
MW365	5.500	Downgradient	NO
MW371	8.500	Upgradient	NO
MW374	88.000	Upgradient	NO
MW375	5.900	Sidegradient	NO

Second Quarter 2013 Dry/Partially Dry Wells

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

Conclusion of Statistical Analysis on Data

None of the test wells exceeded the Upper Tolerance Limit, which is statistically significant evidence that these wells have no elevated concentrations with respect to background data.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
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 Second Quarter 2013 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 statistically significant evidence of elevated 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

Second Quarter 2013 Data Collected in April 2013

Well No.	Result	Gradient	Result >TL?
MW365	0.002	Downgradient	N/A
MW371	0.001	Upgradient	N/A
MW374	0.001	Upgradient	N/A
MW375	0.001	Sidegradient	N/A

Second Quarter 2013 Dry/Partially Dry Wells

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

Transformed Second Quarter 2013 Data Collected in April 2013

Well Number	LN(Result)	Result >TL?
MW365	-6.470	NO
MW371	-6.908	NO
MW374	-6.908	NO
MW375	-6.908	NO

Conclusion of Statistical Analysis on Transformed Data

None of the test wells exceeded the Upper Tolerance Limit, which is statistically significant evidence that these wells have no elevated concentrations with respect to background data.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
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 Second Quarter 2013 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 statistically significant evidence of elevated 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 anaylsis.

Second Quarter 2013 Data Collected in April 2013

Well No.	Result	Gradient	Result >TL?
MW365	391.00	Downgradient	NO
MW371	766.00	Upgradient	NO
MW374	750.00	Upgradient	NO
MW375	449.00	Sidegradient	NO

Second Quarter 2013 Dry/Partially Dry Wells

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

Conclusion of Statistical Analysis on Data

None of the test wells exceeded the Upper Tolerance Limit, which is statistically significant evidence that these wells have no elevated concentrations with respect to background data.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
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 Second Quarter 2013 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
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 anaylsis.

Second Quarter 2013 Data Collected in April 2013

Well No.	Result	Gradient	Result >TL?
MW365	5.540	Downgradient	**YES**
MW371	1.610	Upgradient	NO
MW374	6.520	Upgradient	**YES**
MW375	0.740	Sidegradient	NO

Second Quarter 2013 Dry/Partially Dry Wells

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

Conclusion of Statistical Analysis on Data

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

MW365

MW374

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
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 Second Quarter 2013 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 statistically significant evidence of elevated 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 anaylsis.

Second Quarter 2013 Data Collected in April 2013

Well No.	Result	Gradient	Result >TL?
MW365	244.00	Downgradient	NO
MW371	475.00	Upgradient	NO
MW374	421.00	Upgradient	NO
MW375	286.00	Sidegradient	NO

Second Quarter 2013 Dry/Partially Dry Wells

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

Conclusion of Statistical Analysis on Data

None of the test wells exceeded the Upper Tolerance Limit, which is statistically significant evidence that these wells have no elevated concentrations with respect to background data.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
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 Second Quarter 2013 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 statistically significant evidence of elevated 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 anaylsis.

Second Quarter 2013 Data Collected in April 2013

Well No.	Result	Gradient	Result >TL?
MW365	0.126	Downgradient	NO
MW371	0.852	Upgradient	NO
MW374	0.140	Upgradient	NO
MW375	0.244	Sidegradient	NO

Second Quarter 2013 Dry/Partially Dry Wells

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

Conclusion of Statistical Analysis on Data

None of the test wells exceeded the Upper Tolerance Limit, which is statistically significant evidence that these wells have no elevated concentrations with respect to background data.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
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 Second Quarter 2013 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 statistically significant evidence of elevated 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 anaylsis.

Second Quarter 2013 Data Collected in April 2013

Well No.	Result	Gradient	Result >TL?
MW365	8.520	Downgradient	NO
MW371	12.600	Upgradient	NO
MW374	5.900	Upgradient	NO
MW375	6.040	Sidegradient	NO

Second Quarter 2013 Dry/Partially Dry Wells

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

Conclusion of Statistical Analysis on Data

None of the test wells exceeded the Upper Tolerance Limit, which is statistically significant evidence that these wells have no elevated concentrations with respect to background data.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
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 Second Quarter 2013 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 statistically significant evidence of elevated 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 anaylsis.

Second Quarter 2013 Data Collected in April 2013

Well No.	Result	Gradient	Result >TL?
MW365	0.054	Downgradient	NO
MW371	0.011	Upgradient	NO
MW374	0.007	Upgradient	NO
MW375	0.016	Sidegradient	NO

Second Quarter 2013 Dry/Partially Dry Wells

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

Conclusion of Statistical Analysis on Data

None of the test wells exceeded the Upper Tolerance Limit, which is statistically significant evidence that these wells have no elevated concentrations with respect to background data.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
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 Second Quarter 2013 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 statistically significant evidence of elevated 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 anaylsis.

Second Quarter 2013 Data Collected in April 2013

Well No.	Result	Gradient	Result >TL?
MW365	0.006	Downgradient	NO
MW371	0.005	Upgradient	NO
MW374	0.005	Upgradient	NO
MW375	0.005	Sidegradient	NO

Second Quarter 2013 Dry/Partially Dry Wells

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

Conclusion of Statistical Analysis on Data

None of the test wells exceeded the Upper Tolerance Limit, which is statistically significant evidence that these wells have no elevated concentrations with respect to background data.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
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 Second Quarter 2013 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
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

Second Quarter 2013 Data Collected in April 2013

Well No.	Result	Gradient	Result >TL?
MW365	99.000	Downgradient	N/A
MW371	690.000	Upgradient	N/A
MW374	313.000	Upgradient	N/A
MW375	403.000	Sidegradient	N/A

Second Quarter 2013 Dry/Partially Dry Wells

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

Transformed Second Quarter 2013 Data Collected in April 2013

Well Number	LN(Result)	Result >TL?
MW365	4.595	NO
MW371	6.537	**YES**
MW374	5.746	**YES**
MW375	5.999	**YES**

Conclusion of Statistical Analysis on Transformed Data

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

MW371

MW374

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 Second Quarter 2013 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 anaylsis.

Second Quarter 2013 Data Collected in April 2013

Well No.	Result	Gradient	Result >TL?	Result <LL?
MW365	6.400	Downgradient	NO	NO
MW371	6.790	Upgradient	NO	NO
MW374	6.860	Upgradient	NO	NO
MW375	6.590	Sidegradient	NO	NO

Second Quarter 2013 Dry/Partially Dry Wells

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

Conclusion of Statistical Analysis on Data

None of the test wells exceeded the Upper Tolerance Limit or were less than the Lower Tolerance Limit, which is statistically significant evidence that these wells have no deviated concentrations with respect to background data.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
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 Second Quarter 2013 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 statistically significant evidence of elevated 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 anaylsis.

Second Quarter 2013 Data Collected in April 2013

Well No.	Result	Gradient	Result >TL?
MW365	0.312	Downgradient	NO
MW371	0.477	Upgradient	NO
MW374	0.536	Upgradient	NO
MW375	0.338	Sidegradient	NO

Second Quarter 2013 Dry/Partially Dry Wells

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

Conclusion of Statistical Analysis on Data

None of the test wells exceeded the Upper Tolerance Limit, which is statistically significant evidence that these wells have no elevated concentrations with respect to background data.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
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 Second Quarter 2013 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 statistically significant evidence of elevated 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 anaylsis.

Second Quarter 2013 Data Collected in April 2013

Well No.	Result	Gradient	Result >TL?
MW365	41.200	Downgradient	NO
MW371	121.00	Upgradient	NO
MW374	120.00	Upgradient	NO
MW375	75.600	Sidegradient	NO

Second Quarter 2013 Dry/Partially Dry Wells

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

Conclusion of Statistical Analysis on Data

None of the test wells exceeded the Upper Tolerance Limit, which is statistically significant evidence that these wells have no elevated concentrations with respect to background data.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
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 Second Quarter 2013 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
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 anaylsis.

Second Quarter 2013 Data Collected in April 2013

Well No.	Result	Gradient	Result >TL?
MW365	62.000	Downgradient	**YES**
MW371	14.000	Upgradient	NO
MW374	6.000	Upgradient	NO
MW375	35.000	Sidegradient	**YES**

Second Quarter 2013 Dry/Partially Dry Wells

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

Conclusion of Statistical Analysis on Data

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

MW365

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 Second Quarter 2013 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 statistically significant evidence of elevated 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

Second Quarter 2013 Data Collected in April 2013

Well No.	Result	Gradient	Result >TL?
MW365	1.900	Downgradient	N/A
MW371	1.800	Upgradient	N/A
MW374	2.100	Upgradient	N/A
MW375	2.300	Sidegradient	N/A

Second Quarter 2013 Dry/Partially Dry Wells

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

Transformed Second Quarter 2013 Data Collected in April 2013

Well Number	LN(Result)	Result >TL?
MW365	0.642	NO
MW371	0.588	NO
MW374	0.742	NO
MW375	0.833	NO

Conclusion of Statistical Analysis on Transformed Data

None of the test wells exceeded the Upper Tolerance Limit, which is statistically significant evidence that these wells have no elevated concentrations with respect to background data.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
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 Second Quarter 2013 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 statistically significant evidence of elevated 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

Second Quarter 2013 Data Collected in April 2013

Well No.	Result	Gradient	Result >TL?
MW365	16.000	Downgradient	N/A
MW371	25.000	Upgradient	N/A
MW374	41.000	Upgradient	N/A
MW375	43.000	Sidegradient	N/A

Second Quarter 2013 Dry/Partially Dry Wells

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

Transformed Second Quarter 2013 Data Collected in April 2013

Well Number	LN(Result)	Result >TL?
MW365	2.773	NO
MW371	3.219	NO
MW374	3.714	NO
MW375	3.761	NO

Conclusion of Statistical Analysis on Transformed Data

None of the test wells exceeded the Upper Tolerance Limit, which is statistically significant evidence that these wells have no elevated concentrations with respect to background data.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
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 Second Quarter 2013 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 statistically significant evidence of elevated 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

Second Quarter 2013 Data Collected in April 2013

Well No.	Result	Gradient	Result >TL?
MW365	0.001	Downgradient	N/A
MW371	0.002	Upgradient	N/A
MW374	0.001	Upgradient	N/A
MW375	0.001	Sidegradient	N/A

Second Quarter 2013 Dry/Partially Dry Wells

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

Transformed Second Quarter 2013 Data Collected in April 2013

Well Number	LN(Result)	Result >TL?
MW365	-6.908	NO
MW371	-6.220	NO
MW374	-6.908	NO
MW375	-6.908	NO

Conclusion of Statistical Analysis on Transformed Data

None of the test wells exceeded the Upper Tolerance Limit, which is statistically significant evidence that these wells have no elevated concentrations with respect to background data.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
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 Second Quarter 2013 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 statistically significant evidence of elevated 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

Second Quarter 2013 Data Collected in April 2013

Well No.	Result	Gradient	Result >TL?
MW357	0.200	Downgradient	N/A
MW360	0.200	Downgradient	N/A
MW363	0.200	Downgradient	N/A
MW366	0.200	Sidegradient	N/A
MW369	0.201	Upgradient	N/A
MW372	0.200	Upgradient	N/A

Transformed Second Quarter 2013 Data Collected in April 2013

Well Number	LN(Result)	Result >TL?
MW357	-1.609	NO
MW360	-1.609	NO
MW363	-1.609	NO
MW366	-1.609	NO
MW369	-1.604	NO
MW372	-1.609	NO

Conclusion of Statistical Analysis on Transformed Data

None of the test wells exceeded the Upper Tolerance Limit, which is statistically significant evidence that these wells have no elevated concentrations with respect to background data.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
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 Second Quarter 2013 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 statistically significant evidence of elevated 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 anaylsis.

Second Quarter 2013 Data Collected in April 2013

Well No.	Result	Gradient	Result >TL?
MW357	0.369	Downgradient	NO
MW360	0.200	Downgradient	NO
MW363	0.200	Downgradient	NO
MW366	0.200	Sidegradient	NO
MW369	0.200	Upgradient	NO
MW372	1.430	Upgradient	NO

Conclusion of Statistical Analysis on Data

None of the test wells exceeded the Upper Tolerance Limit, which is statistically significant evidence that these wells have no elevated concentrations with respect to background data.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
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 Second Quarter 2013 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
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 anaylsis.

Second Quarter 2013 Data Collected in April 2013

Well No.	Result	Gradient	Result >TL?
MW357	27.800	Downgradient	NO
MW360	25.900	Downgradient	NO
MW363	23.800	Downgradient	NO
MW366	27.100	Sidegradient	NO
MW369	16.400	Upgradient	NO
MW372	65.900	Upgradient	**YES**

Conclusion of Statistical Analysis on Data

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

MW372

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
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 Second Quarter 2013 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 statistically significant evidence of elevated 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 anaylsis.

Second Quarter 2013 Data Collected in April 2013

Well No.	Result	Gradient	Result >TL?
MW357	32.000	Downgradient	NO
MW360	11.000	Downgradient	NO
MW363	30.000	Downgradient	NO
MW366	39.000	Sidegradient	NO
MW369	36.000	Upgradient	NO
MW372	47.000	Upgradient	NO

Conclusion of Statistical Analysis on Data

None of the test wells exceeded the Upper Tolerance Limit, which is statistically significant evidence that these wells have no elevated concentrations with respect to background data.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
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 Second Quarter 2013 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 statistically significant evidence of elevated 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 anaylsis.

Second Quarter 2013 Data Collected in April 2013

Well No.	Result	Gradient	Result >TL?
MW357	0.001	Downgradient	NO
MW360	0.040	Downgradient	NO
MW363	0.001	Downgradient	NO
MW366	0.001	Sidegradient	NO
MW369	0.023	Upgradient	NO
MW372	0.001	Upgradient	NO

Conclusion of Statistical Analysis on Data

None of the test wells exceeded the Upper Tolerance Limit, which is statistically significant evidence that these wells have no elevated concentrations with respect to background data.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
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 Second Quarter 2013 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
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 anaylsis.

Second Quarter 2013 Data Collected in April 2013

Well No.	Result	Gradient	Result >TL?
MW357	437.00	Downgradient	NO
MW360	526.00	Downgradient	NO
MW363	369.00	Downgradient	NO
MW366	443.00	Sidegradient	NO
MW369	392.00	Upgradient	NO
MW372	879.00	Upgradient	**YES**

Conclusion of Statistical Analysis on Data

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

MW372

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
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 Second Quarter 2013 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 statistically significant evidence of elevated 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 anaylsis.

Second Quarter 2013 Data Collected in April 2013

Well No.	Result	Gradient	Result >TL?
MW357	3.970	Downgradient	NO
MW360	1.230	Downgradient	NO
MW363	1.030	Downgradient	NO
MW366	0.860	Sidegradient	NO
MW369	1.190	Upgradient	NO
MW372	0.760	Upgradient	NO

Conclusion of Statistical Analysis on Data

None of the test wells exceeded the Upper Tolerance Limit, which is statistically significant evidence that these wells have no elevated concentrations with respect to background data.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
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 Second Quarter 2013 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
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 anaylsis.

Second Quarter 2013 Data Collected in April 2013

Well No.	Result	Gradient	Result >TL?
MW357	251.00	Downgradient	NO
MW360	305.00	Downgradient	NO
MW363	208.00	Downgradient	NO
MW366	251.00	Sidegradient	NO
MW369	237.00	Upgradient	NO
MW372	526.00	Upgradient	**YES**

Conclusion of Statistical Analysis on Data

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

MW372

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
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 Second Quarter 2013 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 statistically significant evidence of elevated 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 anaylsis.

Second Quarter 2013 Data Collected in April 2013

Well No.	Result	Gradient	Result >TL?
MW357	0.100	Downgradient	NO
MW360	5.300	Downgradient	NO
MW363	0.575	Downgradient	NO
MW366	0.100	Sidegradient	NO
MW369	0.725	Upgradient	NO
MW372	1.880	Upgradient	NO

Conclusion of Statistical Analysis on Data

None of the test wells exceeded the Upper Tolerance Limit, which is statistically significant evidence that these wells have no elevated concentrations with respect to background data.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
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 Second Quarter 2013 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
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 anaylsis.

Second Quarter 2013 Data Collected in April 2013

Well No.	Result	Gradient	Result >TL?
MW357	11.400	Downgradient	NO
MW360	9.810	Downgradient	NO
MW363	9.410	Downgradient	NO
MW366	11.000	Sidegradient	NO
MW369	6.380	Upgradient	NO
MW372	26.000	Upgradient	**YES**

Conclusion of Statistical Analysis on Data

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

MW372

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
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 Second Quarter 2013 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 statistically significant evidence of elevated 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 anaylsis.

Second Quarter 2013 Data Collected in April 2013

Well No.	Result	Gradient	Result >TL?
MW357	0.028	Downgradient	NO
MW360	0.220	Downgradient	NO
MW363	0.174	Downgradient	NO
MW366	0.022	Sidegradient	NO
MW369	0.218	Upgradient	NO
MW372	0.061	Upgradient	NO

Conclusion of Statistical Analysis on Data

None of the test wells exceeded the Upper Tolerance Limit, which is statistically significant evidence that these wells have no elevated concentrations with respect to background data.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
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 Second Quarter 2013 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 statistically significant evidence of elevated 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 anaylsis.

Second Quarter 2013 Data Collected in April 2013

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	0.007	Upgradient	NO
MW372	0.005	Upgradient	NO

Conclusion of Statistical Analysis on Data

None of the test wells exceeded the Upper Tolerance Limit, which is statistically significant evidence that these wells have no elevated concentrations with respect to background data.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
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 Second Quarter 2013 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
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

Second Quarter 2013 Data Collected in April 2013

Well No.	Result	Gradient	Result >TL?
MW357	746.000	Downgradient	N/A
MW360	362.000	Downgradient	N/A
MW363	451.000	Downgradient	N/A
MW366	365.000	Sidegradient	N/A
MW369	580.000	Upgradient	N/A
MW372	28.000	Upgradient	N/A

Transformed Second Quarter 2013 Data Collected in April 2013

Well Number	LN(Result)	Result >TL?
MW357	6.615	**YES**
MW360	5.892	**YES**
MW363	6.111	**YES**
MW366	5.900	**YES**
MW369	6.363	**YES**
MW372	3.332	NO

Conclusion of Statistical Analysis on Transformed Data
The following test well(s) exceeded the Upper Tolerance Limit, which is statistically significant evidence of elevated concentration with respect to background data.
MW357
MW360
MW363
MW366
MW369

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
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 Second Quarter 2013 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 statistically significant evidence of elevated 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 anaylsis.

Second Quarter 2013 Data Collected in April 2013

Well No.	Result	Gradient	Result >TL?
MW357	0.170	Downgradient	NO
MW360	0.170	Downgradient	NO
MW363	0.180	Downgradient	NO
MW366	0.180	Sidegradient	NO
MW369	0.170	Upgradient	NO
MW372	0.180	Upgradient	NO

Conclusion of Statistical Analysis on Data

None of the test wells exceeded the Upper Tolerance Limit, which is statistically significant evidence that these wells have no elevated concentrations with respect to background data.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
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 Second Quarter 2013 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 statistically significant evidence of elevated 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

Second Quarter 2013 Data Collected in April 2013

Well No.	Result	Gradient	Result >TL?
MW357	0.100	Downgradient	N/A
MW360	0.100	Downgradient	N/A
MW363	0.180	Downgradient	N/A
MW366	0.100	Sidegradient	N/A
MW369	0.100	Upgradient	N/A
MW372	0.100	Upgradient	N/A

Transformed Second Quarter 2013 Data Collected in April 2013

Well Number	LN(Result)	Result >TL?
MW357	-2.303	NO
MW360	-2.303	NO
MW363	-1.715	NO
MW366	-2.303	NO
MW369	-2.303	NO
MW372	-2.303	NO

Conclusion of Statistical Analysis on Transformed Data

None of the test wells exceeded the Upper Tolerance Limit, which is statistically significant evidence that these wells have no elevated concentrations with respect to background data.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
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 Second Quarter 2013 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 anaylsis.

Second Quarter 2013 Data Collected in April 2013

Well No.	Result	Gradient	Result >TL?	Result <LL?
MW357	6.370	Downgradient	NO	NO
MW360	6.230	Downgradient	NO	NO
MW363	6.270	Downgradient	NO	NO
MW366	6.110	Sidegradient	NO	NO
MW369	6.320	Upgradient	NO	NO
MW372	6.240	Upgradient	NO	NO

Conclusion of Statistical Analysis on Data

None of the test wells exceeded the Upper Tolerance Limit or were less than the Lower Tolerance Limit, which is statistically significant evidence that these wells have no deviated concentrations with respect to background data.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
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 Second Quarter 2013 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 statistically significant evidence of elevated 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 anaylsis.

Second Quarter 2013 Data Collected in April 2013

Well No.	Result	Gradient	Result >TL?
MW357	1.810	Downgradient	NO
MW360	0.899	Downgradient	NO
MW363	1.130	Downgradient	NO
MW366	1.930	Sidegradient	NO
MW369	0.568	Upgradient	NO
MW372	2.720	Upgradient	NO

Conclusion of Statistical Analysis on Data

None of the test wells exceeded the Upper Tolerance Limit, which is statistically significant evidence that these wells have no elevated concentrations with respect to background data.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
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 Second Quarter 2013 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
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 anaylsis.

Second Quarter 2013 Data Collected in April 2013

Well No.	Result	Gradient	Result >TL?
MW357	39.100	Downgradient	NO
MW360	58.300	Downgradient	NO
MW363	31.700	Downgradient	NO
MW366	40.600	Sidegradient	NO
MW369	52.400	Upgradient	NO
MW372	59.700	Upgradient	NO

Conclusion of Statistical Analysis on Data

None of the test wells exceeded the Upper Tolerance Limit, which is statistically significant evidence that these wells have no elevated concentrations with respect to background data.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
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 Second Quarter 2013 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 statistically significant evidence of elevated 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 anaylsis.

Second Quarter 2013 Data Collected in April 2013

Well No.	Result	Gradient	Result >TL?
MW357	62.000	Downgradient	NO
MW360	89.000	Downgradient	NO
MW363	23.000	Downgradient	NO
MW366	42.000	Sidegradient	NO
MW369	7.500	Upgradient	NO
MW372	170.00	Upgradient	**YES**

Conclusion of Statistical Analysis on Data

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

MW372

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
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 Second Quarter 2013 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
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 anaylsis.

Second Quarter 2013 Data Collected in April 2013

Well No.	Result	Gradient	Result >TL?
MW357	35.100	Downgradient	NO
MW360	2.710	Downgradient	NO
MW363	1.400	Downgradient	NO
MW366	48.000	Sidegradient	NO
MW369	25.500	Upgradient	NO
MW372	42.900	Upgradient	NO

Conclusion of Statistical Analysis on Data

None of the test wells exceeded the Upper Tolerance Limit, which is statistically significant evidence that these wells have no elevated concentrations with respect to background data.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
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 Second Quarter 2013 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 statistically significant evidence of elevated 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

Second Quarter 2013 Data Collected in April 2013

Well No.	Result	Gradient	Result >TL?
MW357	1.000	Downgradient	N/A
MW360	1.700	Downgradient	N/A
MW363	1.500	Downgradient	N/A
MW366	1.000	Sidegradient	N/A
MW369	1.700	Upgradient	N/A
MW372	2.500	Upgradient	N/A

Transformed Second Quarter 2013 Data Collected in April 2013

Well Number	LN(Result)	Result >TL?
MW357	0.000	NO
MW360	0.531	NO
MW363	0.405	NO
MW366	0.000	NO
MW369	0.531	NO
MW372	0.916	NO

Conclusion of Statistical Analysis on Transformed Data

None of the test wells exceeded the Upper Tolerance Limit, which is statistically significant evidence that these wells have no elevated concentrations with respect to background data.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
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 Second Quarter 2013 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 statistically significant evidence of elevated 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 anaylsis.

Second Quarter 2013 Data Collected in April 2013

Well No.	Result	Gradient	Result >TL?
MW357	34.000	Downgradient	NO
MW360	40.000	Downgradient	NO
MW363	14.000	Downgradient	NO
MW366	23.000	Sidegradient	NO
MW369	48.000	Upgradient	NO
MW372	25.000	Upgradient	NO

Conclusion of Statistical Analysis on Data

None of the test wells exceeded the Upper Tolerance Limit, which is statistically significant evidence that these wells have no elevated concentrations with respect to background data.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
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 Second Quarter 2013 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 statistically significant evidence of elevated 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 anaylsis.

Second Quarter 2013 Data Collected in April 2013

Well No.	Result	Gradient	Result >TL?
MW358	0.368	Downgradient	NO
MW361	0.293	Downgradient	NO
MW364	0.200	Downgradient	NO
MW367	0.200	Sidegradient	NO
MW370	0.200	Upgradient	NO
MW373	1.800	Upgradient	NO

Conclusion of Statistical Analysis on Data

None of the test wells exceeded the Upper Tolerance Limit, which is statistically significant evidence that these wells have no elevated concentrations with respect to background data.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
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 Second Quarter 2013 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 statistically significant evidence of elevated 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 anaylsis.

Second Quarter 2013 Data Collected in April 2013

Well No.	Result	Gradient	Result >TL?
MW358	36.500	Downgradient	NO
MW361	31.000	Downgradient	NO
MW364	27.000	Downgradient	NO
MW367	25.700	Sidegradient	NO
MW370	28.200	Upgradient	NO
MW373	76.100	Upgradient	NO

Conclusion of Statistical Analysis on Data

None of the test wells exceeded the Upper Tolerance Limit, which is statistically significant evidence that these wells have no elevated concentrations with respect to background data.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
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 Second Quarter 2013 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 statistically significant evidence of elevated 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 anaylsis.

Second Quarter 2013 Data Collected in April 2013

Well No.	Result	Gradient	Result >TL?
MW358	32.000	Downgradient	NO
MW361	33.000	Downgradient	NO
MW364	32.000	Downgradient	NO
MW367	33.000	Sidegradient	NO
MW370	43.000	Upgradient	NO
MW373	47.000	Upgradient	NO

Conclusion of Statistical Analysis on Data

None of the test wells exceeded the Upper Tolerance Limit, which is statistically significant evidence that these wells have no elevated concentrations with respect to background data.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
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 Second Quarter 2013 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 statistically significant evidence of elevated 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

Second Quarter 2013 Data Collected in April 2013

Well No.	Result	Gradient	Result >TL?
MW358	0.003	Downgradient	N/A
MW361	0.001	Downgradient	N/A
MW364	0.001	Downgradient	N/A
MW367	0.001	Sidegradient	N/A
MW370	0.001	Upgradient	N/A
MW373	0.001	Upgradient	N/A

Transformed Second Quarter 2013 Data Collected in April 2013

Well Number	LN(Result)	Result >TL?
MW358	-5.757	NO
MW361	-6.908	NO
MW364	-6.908	NO
MW367	-6.522	NO
MW370	-6.908	NO
MW373	-6.908	NO

Conclusion of Statistical Analysis on Transformed Data

None of the test wells exceeded the Upper Tolerance Limit, which is statistically significant evidence that these wells have no elevated concentrations with respect to background data.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
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 Second Quarter 2013 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 statistically significant evidence of elevated 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 anaylsis.

Second Quarter 2013 Data Collected in April 2013

Well No.	Result	Gradient	Result >TL?
MW358	525.00	Downgradient	NO
MW361	466.00	Downgradient	NO
MW364	443.00	Downgradient	NO
MW367	397.00	Sidegradient	NO
MW370	432.00	Upgradient	NO
MW373	921.00	Upgradient	NO

Conclusion of Statistical Analysis on Data

None of the test wells exceeded the Upper Tolerance Limit, which is statistically significant evidence that these wells have no elevated concentrations with respect to background data.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
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 Second Quarter 2013 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 statistically significant evidence of elevated 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 anaylsis.

Second Quarter 2013 Data Collected in April 2013

Well No.	Result	Gradient	Result >TL?
MW358	0.640	Downgradient	NO
MW361	3.170	Downgradient	NO
MW364	2.180	Downgradient	NO
MW367	0.790	Sidegradient	NO
MW370	3.250	Upgradient	NO
MW373	1.460	Upgradient	NO

Conclusion of Statistical Analysis on Data

None of the test wells exceeded the Upper Tolerance Limit, which is statistically significant evidence that these wells have no elevated concentrations with respect to background data.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
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 Second Quarter 2013 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 statistically significant evidence of elevated 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 anaylsis.

Second Quarter 2013 Data Collected in April 2013

Well No.	Result	Gradient	Result >TL?
MW358	307.00	Downgradient	NO
MW361	274.00	Downgradient	NO
MW364	257.00	Downgradient	NO
MW367	230.00	Sidegradient	NO
MW370	239.00	Upgradient	NO
MW373	585.00	Upgradient	NO

Conclusion of Statistical Analysis on Data

None of the test wells exceeded the Upper Tolerance Limit, which is statistically significant evidence that these wells have no elevated concentrations with respect to background data.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
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 Second Quarter 2013 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 statistically significant evidence of elevated 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 anaylsis.

Second Quarter 2013 Data Collected in April 2013

Well No.	Result	Gradient	Result >TL?
MW358	1.560	Downgradient	NO
MW361	0.100	Downgradient	NO
MW364	0.116	Downgradient	NO
MW367	1.220	Sidegradient	NO
MW370	0.100	Upgradient	NO
MW373	0.100	Upgradient	NO

Conclusion of Statistical Analysis on Data

None of the test wells exceeded the Upper Tolerance Limit, which is statistically significant evidence that these wells have no elevated concentrations with respect to background data.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
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 Second Quarter 2013 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 statistically significant evidence of elevated 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 anaylsis.

Second Quarter 2013 Data Collected in April 2013

Well No.	Result	Gradient	Result >TL?
MW358	15.600	Downgradient	NO
MW361	12.700	Downgradient	NO
MW364	11.100	Downgradient	NO
MW367	10.400	Sidegradient	NO
MW370	11.500	Upgradient	NO
MW373	29.400	Upgradient	NO

Conclusion of Statistical Analysis on Data

None of the test wells exceeded the Upper Tolerance Limit, which is statistically significant evidence that these wells have no elevated concentrations with respect to background data.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
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 Second Quarter 2013 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 statistically significant evidence of elevated 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 anaylsis.

Second Quarter 2013 Data Collected in April 2013

Well No.	Result	Gradient	Result >TL?
MW358	0.447	Downgradient	NO
MW361	0.005	Downgradient	NO
MW364	0.019	Downgradient	NO
MW367	0.731	Sidegradient	NO
MW370	0.005	Upgradient	NO
MW373	0.056	Upgradient	NO

Conclusion of Statistical Analysis on Data

None of the test wells exceeded the Upper Tolerance Limit, which is statistically significant evidence that these wells have no elevated concentrations with respect to background data.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
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 Second Quarter 2013 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 statistically significant evidence of elevated 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 anaylsis.

Second Quarter 2013 Data Collected in April 2013

Well No.	Result	Gradient	Result >TL?
MW358	0.005	Downgradient	NO
MW361	0.005	Downgradient	NO
MW364	0.034	Downgradient	NO
MW367	0.005	Sidegradient	NO
MW370	0.005	Upgradient	NO
MW373	0.005	Upgradient	NO

Conclusion of Statistical Analysis on Data

None of the test wells exceeded the Upper Tolerance Limit, which is statistically significant evidence that these wells have no elevated concentrations with respect to background data.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
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 Second Quarter 2013 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
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

Second Quarter 2013 Data Collected in April 2013

Well No.	Result	Gradient	Result >TL?
MW358	329.000	Downgradient	N/A
MW361	487.000	Downgradient	N/A
MW364	385.000	Downgradient	N/A
MW367	250.000	Sidegradient	N/A
MW370	505.000	Upgradient	N/A
MW373	498.000	Upgradient	N/A

Transformed Second Quarter 2013 Data Collected in April 2013

Well Number	LN(Result)	Result >TL?
MW358	5.796	**YES**
MW361	6.188	**YES**
MW364	5.953	**YES**
MW367	5.521	**YES**
MW370	6.225	**YES**
MW373	6.211	**YES**

Conclusion of Statistical Analysis on Transformed Data

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

MW358
MW361
MW364
MW367
MW370

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
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 Second Quarter 2013 Statistical Analysis	LRGA
Oxidation-Reduction Potential (Continued)	UNITS: mV

MW373

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
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 Second Quarter 2013 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 anaylsis.

Second Quarter 2013 Data Collected in April 2013

Well No.	Result	Gradient	Result >TL?	Result <LL?
MW358	6.330	Downgradient	NO	NO
MW361	6.590	Downgradient	NO	NO
MW364	6.260	Downgradient	NO	NO
MW367	6.200	Sidegradient	NO	NO
MW370	6.250	Upgradient	NO	NO
MW373	6.210	Upgradient	NO	NO

Conclusion of Statistical Analysis on Data

None of the test wells exceeded the Upper Tolerance Limit or were less than the Lower Tolerance Limit, which is statistically significant evidence that these wells have no deviated concentrations with respect to background data.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
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 Second Quarter 2013 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 statistically significant evidence of elevated 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 anaylsis.

Second Quarter 2013 Data Collected in April 2013

Well No.	Result	Gradient	Result >TL?
MW358	2.640	Downgradient	NO
MW361	2.090	Downgradient	NO
MW364	2.040	Downgradient	NO
MW367	2.720	Sidegradient	NO
MW370	2.480	Upgradient	NO
MW373	3.290	Upgradient	NO

Conclusion of Statistical Analysis on Data

None of the test wells exceeded the Upper Tolerance Limit, which is statistically significant evidence that these wells have no elevated concentrations with respect to background data.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
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 Second Quarter 2013 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 statistically significant evidence of elevated 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 anaylsis.

Second Quarter 2013 Data Collected in April 2013

Well No.	Result	Gradient	Result >TL?
MW358	40.400	Downgradient	NO
MW361	39.900	Downgradient	NO
MW364	38.700	Downgradient	NO
MW367	33.300	Sidegradient	NO
MW370	37.200	Upgradient	NO
MW373	64.100	Upgradient	NO

Conclusion of Statistical Analysis on Data

None of the test wells exceeded the Upper Tolerance Limit, which is statistically significant evidence that these wells have no elevated concentrations with respect to background data.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
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 Second Quarter 2013 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 statistically significant evidence of elevated 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

Second Quarter 2013 Data Collected in April 2013

Well No.	Result	Gradient	Result >TL?
MW358	87.000	Downgradient	N/A
MW361	76.000	Downgradient	N/A
MW364	64.000	Downgradient	N/A
MW367	36.000	Sidegradient	N/A
MW370	18.000	Upgradient	N/A
MW373	200.000	Upgradient	N/A

Transformed Second Quarter 2013 Data Collected in April 2013

Well Number	LN(Result)	Result >TL?
MW358	4.466	NO
MW361	4.331	NO
MW364	4.159	NO
MW367	3.584	NO
MW370	2.890	NO
MW373	5.298	NO

Conclusion of Statistical Analysis on Transformed Data

None of the test wells exceeded the Upper Tolerance Limit, which is statistically significant evidence that these wells have no elevated concentrations with respect to background data.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
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 Second Quarter 2013 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 statistically significant evidence of elevated 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

Second Quarter 2013 Data Collected in April 2013

Well No.	Result	Gradient	Result >TL?
MW358	38.300	Downgradient	N/A
MW361	39.500	Downgradient	N/A
MW364	45.500	Downgradient	N/A
MW367	29.600	Sidegradient	N/A
MW370	12.000	Upgradient	N/A
MW373	63.700	Upgradient	N/A

Transformed Second Quarter 2013 Data Collected in April 2013

Well Number	LN(Result)	Result >TL?
MW358	3.645	NO
MW361	3.676	NO
MW364	3.818	NO
MW367	3.388	NO
MW370	2.485	NO
MW373	4.154	**YES**

Conclusion of Statistical Analysis on Transformed Data

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

MW373

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, S = [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 Second Quarter 2013 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 statistically significant evidence of elevated 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

Second Quarter 2013 Data Collected in April 2013

Well No.	Result	Gradient	Result >TL?
MW358	1.000	Downgradient	N/A
MW361	1.000	Downgradient	N/A
MW364	1.000	Downgradient	N/A
MW367	1.000	Sidegradient	N/A
MW370	1.000	Upgradient	N/A
MW373	1.000	Upgradient	N/A

Transformed Second Quarter 2013 Data Collected in April 2013

Well Number	LN(Result)	Result >TL?
MW358	0.000	NO
MW361	0.000	NO
MW364	0.000	NO
MW367	0.000	NO
MW370	0.000	NO
MW373	0.000	NO

Conclusion of Statistical Analysis on Transformed Data

None of the test wells exceeded the Upper Tolerance Limit, which is statistically significant evidence that these wells have no elevated concentrations with respect to background data.

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
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 Second Quarter 2013 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 statistically significant evidence of elevated 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 anaylsis.

Second Quarter 2013 Data Collected in April 2013

Well No.	Result	Gradient	Result >TL?
MW358	34.000	Downgradient	NO
MW361	18.000	Downgradient	NO
MW364	25.000	Downgradient	NO
MW367	25.000	Sidegradient	NO
MW370	15.000	Upgradient	NO
MW373	40.000	Upgradient	NO

Conclusion of Statistical Analysis on Data

None of the test wells exceeded the Upper Tolerance Limit, which is statistically significant evidence that these wells have no elevated concentrations with respect to background data.

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

756 Park Meadow Road
Westerville, Ohio 43081

August 2, 2013

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 Geologist, with a Bachelor of Science degree, I have over eight years of experience in reviewing and assessing laboratory analytical results associated with environmental sampling and investigation activities.

For this project, the statistical analyses conducted on the second quarter 2013 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,

C. Travis Debnam
LATA Project Geologist

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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 C-746-U Landfill is the Regional Gravel Aquifer (RGA). Water level measurements currently are recorded in several wells at the landfill on a quarterly basis. These measurements were used to plot the potentiometric surface of the RGA for the second quarter 2013 and determine groundwater flow rate and direction.

Water levels during this reporting period were measured on April 16, 2013. 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 MW359, MW362, MW368, 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 the URGA at the C-746-U Landfill was 1.22×10^{-4} ft/ft and for the LRGA was 1.25×10^{-4} ft/ft. Water level measurements in wells at the C-746-U Landfill and in wells of the surrounding region (MW98, MW100, MW125, MW139, MW173, MW193, MW197, and MW200), along with the C-746-S&T Landfill wells, were used to contour the general RGA potentiometric surface (Figure E.4). The hydraulic gradient for the RGA, as a whole, in the vicinity of the C-746-U Landfill was 2.62×10^{-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 landfill typically trends northeastward toward the Ohio River. However, during the period of April 9 through May 2, 2013, the Ohio River stage rose dramatically resulting in unusual groundwater flow trends on April 16, 2013. Groundwater flow arced northwest to northeast beneath the C-746-U Landfill during this reporting period.

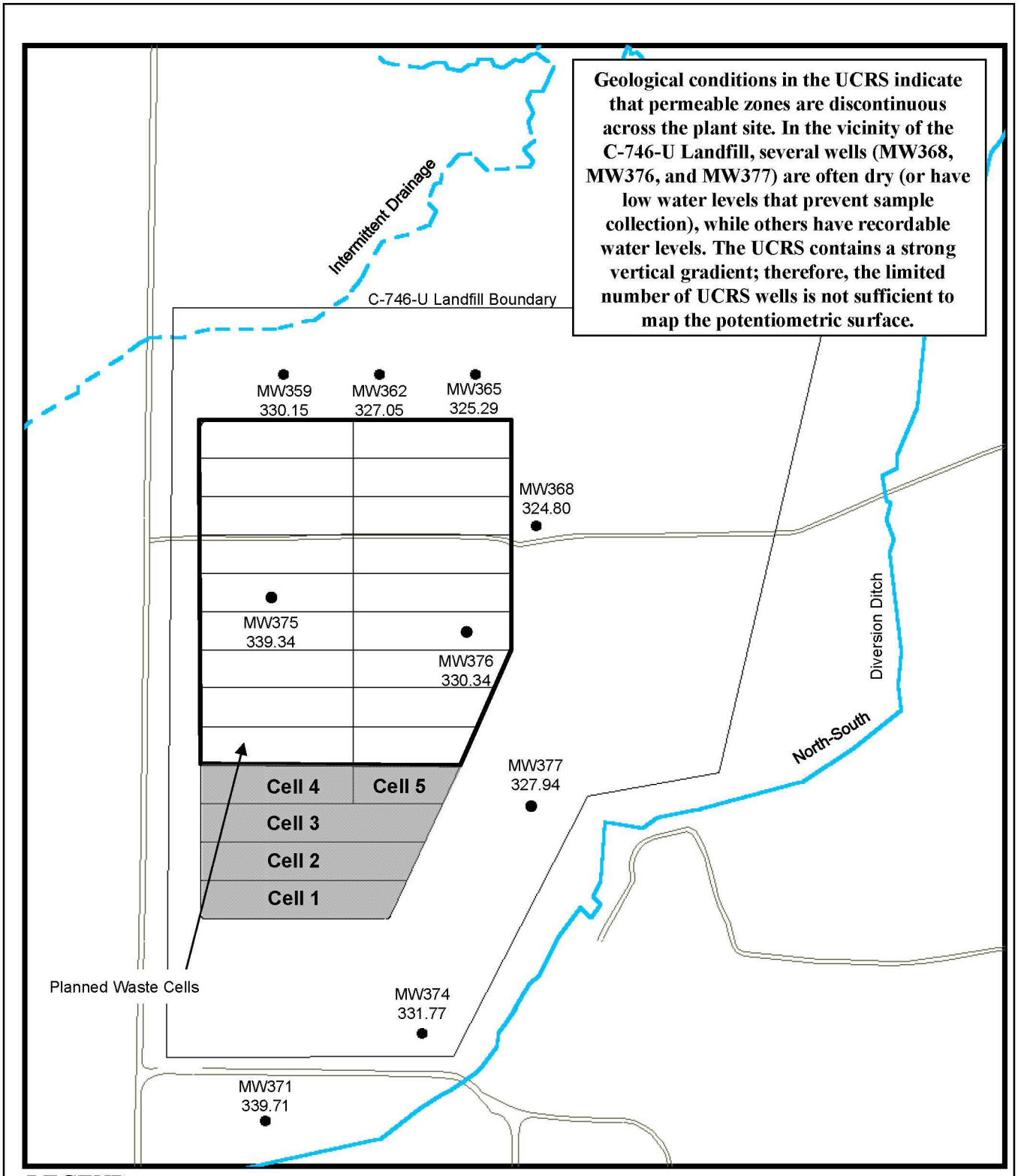


Figure E.1. Potentiometric Surface of the Upper Continental Recharge System at the C-746-U Landfill, April 16, 2013

Table E.1. C-746-U Landfill Second Quarter 2013 (April) Water Levels

C-746-U Landfill (April 2013) 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)
4/16/2013	09:27	MW357	URGA	368.90	30.04	0.00	46.60	322.30	46.60	322.30
4/16/2013	09:30	MW358	LRGA	369.05	30.04	0.00	46.77	322.28	46.77	322.28
4/16/2013	09:29	MW359	UCRS	369.07	30.04	0.00	38.92	330.15	38.92	330.15
4/16/2013	09:24	MW360	URGA	362.20	30.04	0.00	39.94	322.26	39.94	322.26
4/16/2013	09:20	MW361	LRGA	361.47	30.04	0.00	39.19	322.28	39.19	322.28
4/16/2013	09:22	MW362	UCRS	361.95	30.04	0.00	34.90	327.05	34.90	327.05
4/16/2013	09:37	MW363	URGA	368.68	30.04	0.00	46.53	322.15	46.53	322.15
4/16/2013	09:41	MW364	LRGA	367.63	30.04	0.00	45.50	322.13	45.50	322.13
4/16/2013	09:39	MW365	UCRS	368.27	30.04	0.00	42.98	325.29	42.98	325.29
4/16/2013	13:55	MW366	URGA	369.06	30.00	0.05	46.80	322.26	46.85	322.21
4/16/2013	13:58	MW367	LRGA	369.45	30.00	0.05	47.21	322.24	47.26	322.19
4/16/2013	09:46	MW368	UCRS	369.14	30.04	0.00	44.34	324.80	44.34	324.80
4/16/2013	08:44	MW369	URGA	364.28	30.04	0.00	41.78	322.50	41.78	322.50
4/16/2013	08:47	MW370	LRGA	365.15	30.04	0.00	42.68	322.47	42.68	322.47
4/16/2013	08:45	MW371	UCRS	364.71	30.04	0.00	25.00	339.71	25.00	339.71
4/16/2013	08:56	MW372	URGA	359.49	30.04	0.00	37.01	322.48	37.01	322.48
4/16/2013	08:51	MW373	LRGA	359.79	30.04	0.00	37.33	322.46	37.33	322.46
4/16/2013	08:53	MW374	UCRS	359.50	30.04	0.00	27.73	331.77	27.73	331.77
4/16/2013	09:07	MW375	UCRS	370.24	30.04	0.00	30.90	339.34	30.90	339.34
4/16/2013	09:03	MW376	UCRS	370.44	30.04	0.00	40.10	330.34	40.10	330.34
4/16/2013	09:00	MW377	UCRS	365.76	30.04	0.00	37.82	327.94	37.82	327.94

Initial Barometric Pressure **30.04**

Elev = elevation

amsl = above mean sea level

BP = barometric pressure

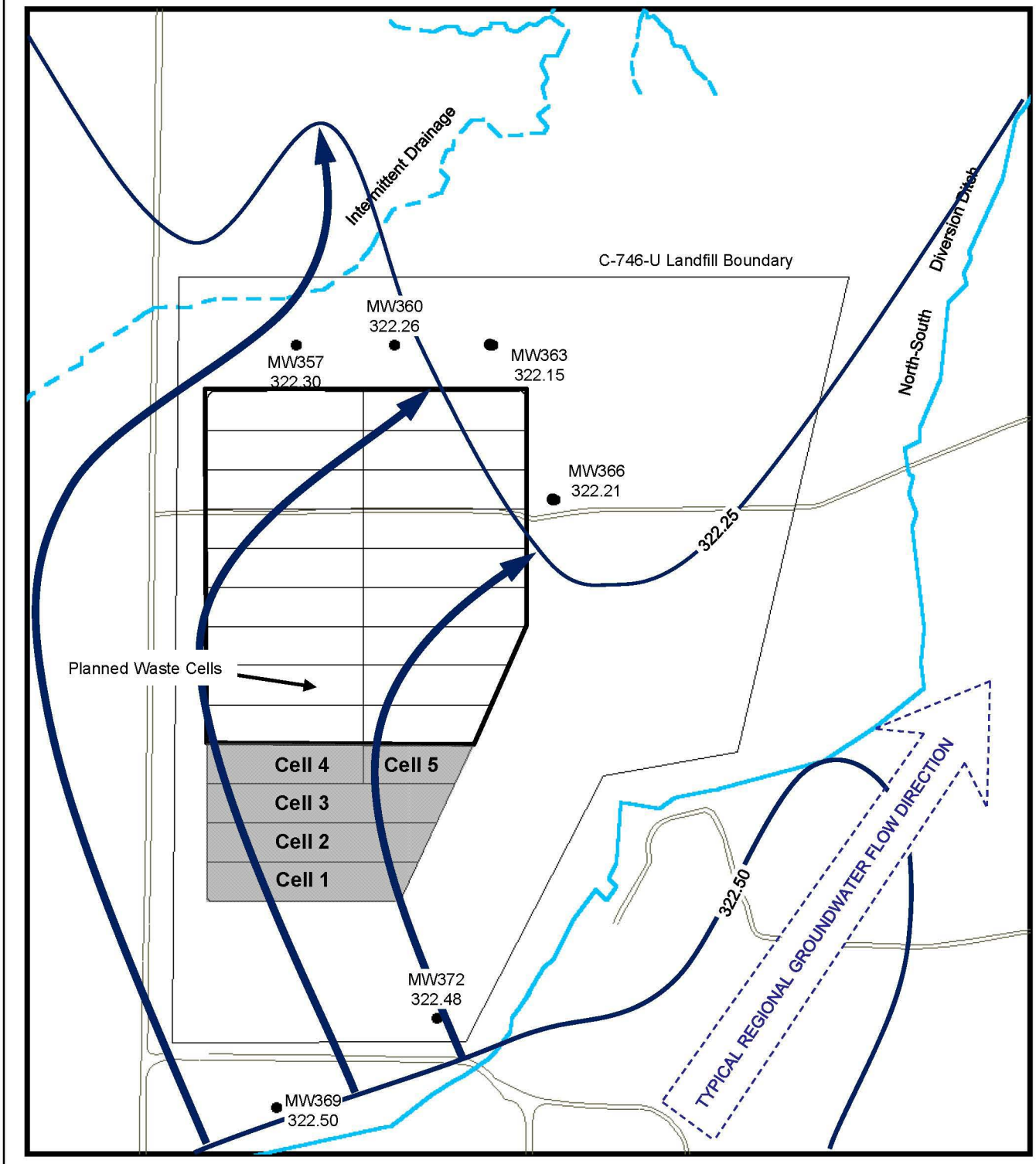
DTW = depth to water in feet below datum

URGA = Upper Regional Gravel Aquifer

LRGA = Lower Regional Gravel Aquifer

UCRS = Upper Continental Recharge System

*Assumes a barometric efficiency of 1.0



LEGEND

400 0 400 Feet

Contour Interval = 0.25 ft

Groundwater Flow Direction

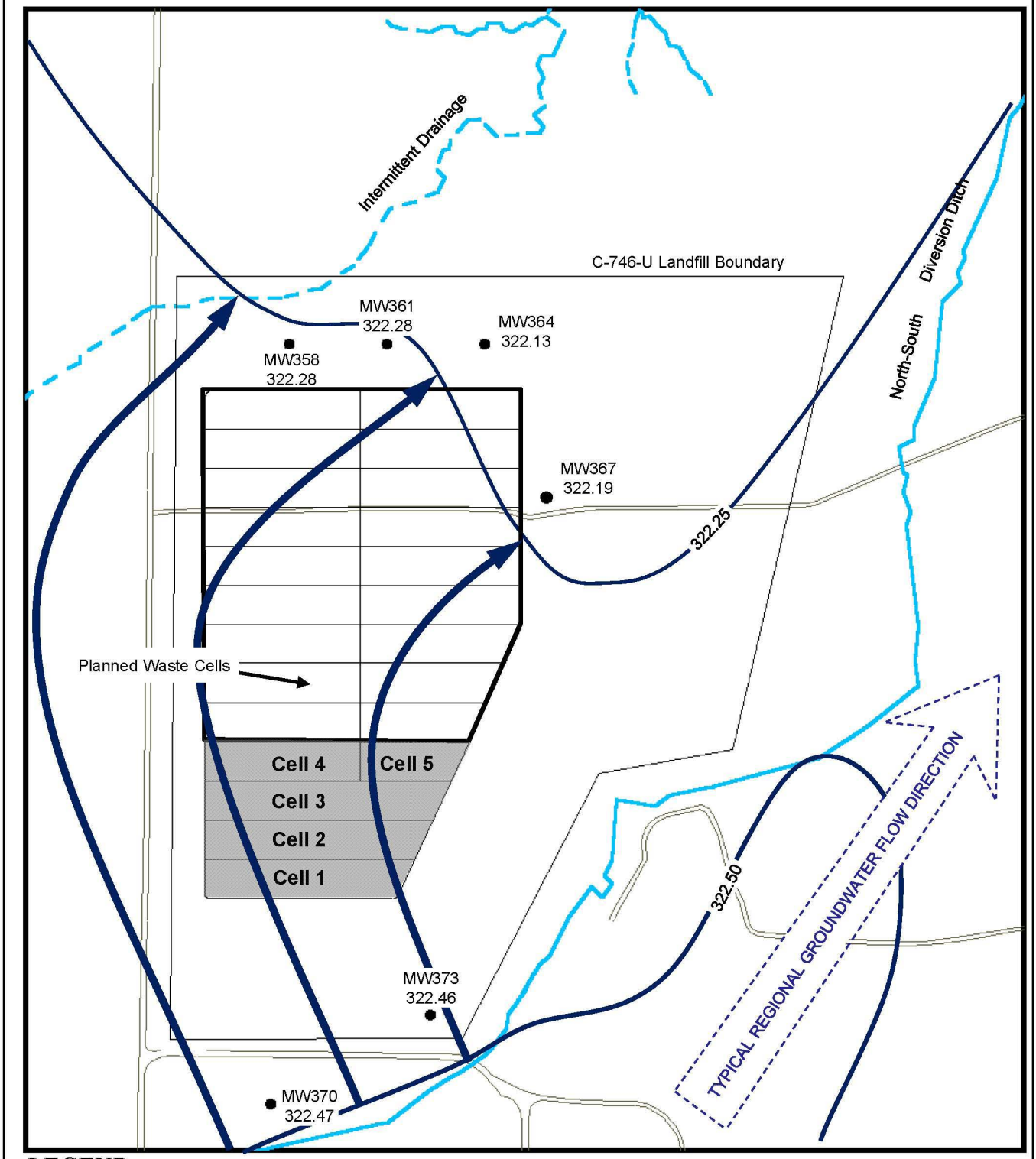
324.00 Potentiometric Surface Contour

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.2. Potentiometric Surface of the Upper Regional Gravel Aquifer at the C-746-U Landfill, April 16, 2013



LEGEND

400 0 400 Feet

Contour Interval = 0.25 ft

Groundwater Flow Direction

324.00 Potentiometric Surface Contour

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.3. Potentiometric Surface of the Lower Regional Gravel Aquifer at the C-746-U Landfill, April 16, 2013

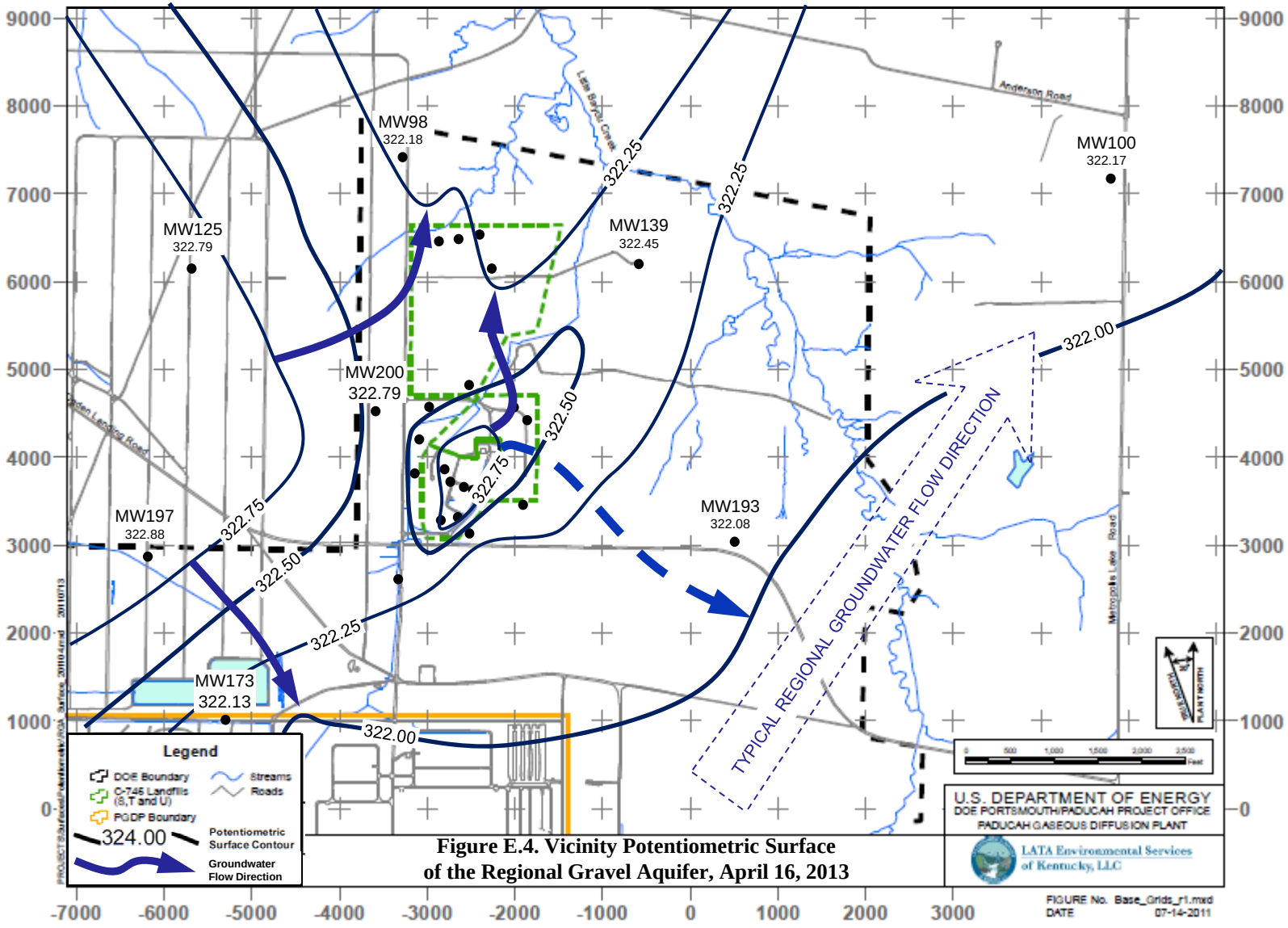


Figure E.4. Vicinity Potentiometric Surface of the Regional Gravel Aquifer, April 16, 2013

Table E.2. C-746-U Hydraulic Gradients

	ft/ft
Beneath Landfill Mound – Upper RGA	1.22×10^{-4}
Beneath Landfill Mound – Lower RGA	1.25×10^{-4}
Vicinity	2.62×10^{-4}

Table E.3. C-746-U 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	0.09	3.12×10^{-5}	0.35	1.25×10^{-4}
425	0.150	0.05	1.83×10^{-5}	0.21	7.32×10^{-5}
Lower RGA					
725	0.256	0.09	3.20×10^{-5}	0.36	1.28×10^{-4}
425	0.150	0.05	1.88×10^{-5}	0.21	7.51×10^{-5}

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APPENDIX F

NOTIFICATIONS

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NOTIFICATIONS

In accordance with 401 *KAR* 48:300, Section 7, the notification for parameters that exceed the maximum contaminant level (MCL) has been submitted to the Kentucky Division of Waste Management. 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 second quarter 2013 groundwater data collected from the C-746-U Landfill monitoring wells (MW) were performed in accordance with Permit Condition GSTR0001, Standard Requirement 3, using the U.S. Environmental Protection Agency guidance document, *EPA Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Interim Final Guidance* (1989), with the exception of pH. The method for conducting the statistical analysis of pH was selected by the project statistician.

The following are the parameters in 40 *CFR* § 302.4, Appendix A, which had statistically significant increased concentrations relative to background concentrations.

Parameter	**Monitoring Well**
Upper Continental Recharge System	
None	
Upper Regional Gravel Aquifer	
None	
Lower Regional Gravel Aquifer	
Technetium-99	MW373

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.

MCL Notification

A notification was submitted for parameters that exceeded the MCL. The parameters submitted are listed on the following page.

5/28/2013

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/OA7302E	5.9	ug/L	5
8004-4799	MW358	Trichloroethene	8260B/OA7302E	5.6	ug/L	5
8004-4795	MW361	Trichloroethene	8260B/OA7302E	6	ug/L	5
8004-4808	MW372	Trichloroethene	8260B/OA7302E	6.2	ug/L	5
8004-4792	MW373	Trichloroethene	8260B/OA7302E	6.4	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 EXCEEDANCES AND STATISTICALLY SIGNIFICANT INCREASES

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Chart of MCL Exceedances and Statistical Increases for 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	D	U	U
Monitoring Well	368	375	376	377	359	362	365	371	374	366	360	363	357	369	372	367	361	364	358	370	373
ACETONE																					
Quarter 3, 2002										*	*	*									
Quarter 4, 2002										*	*	*									
Quarter 1, 2003											*	*									
Quarter 2, 2003											*	*									
Quarter 3, 2003	*						*			*	*	*			*			*			
Quarter 4, 2003						*	*				*			*							
Quarter 3, 2004						*										*					
Quarter 3, 2005						*															
Quarter 4, 2005						*															
ALPHA ACTIVITY																					
Quarter 1, 2004																					■
Quarter 2, 2004						■															
Quarter 3, 2009						■															
ALUMINUM																					
Quarter 3, 2003											*										
BETA ACTIVITY																					
Quarter 1, 2004															■						
Quarter 2, 2004															■						■
Quarter 3, 2004															■						
Quarter 4, 2004															■						
Quarter 4, 2005															■						
Quarter 1, 2006															■						■
Quarter 2, 2006																					■
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Quarter 4, 2006															■						■
Quarter 1, 2007										■					■						■
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Quarter 3, 2007										■					■						
Quarter 4, 2007										■					■						■
Quarter 1, 2008										■					■						
Quarter 2, 2008														■		■					
Quarter 3, 2008										■					■				■		
Quarter 4, 2008										■					■				■		
Quarter 1, 2009										■					■						
Quarter 2, 2009															■	■	■				
Quarter 3, 2009										■					■						
Quarter 4, 2009										■					■						
Quarter 1, 2010															■						
Quarter 2, 2010										■						■					
Quarter 3, 2010										■											
Quarter 4, 2010															■						
Quarter 2, 2011										■						■					
Quarter 4, 2011															■						
Quarter 1, 2012										■											
Quarter 2, 2012										■								■			
Quarter 3, 2012										■					■						
Quarter 4, 2012															■						■

Chart of MCL Exceedances and Statistical Increases for 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	D	U	U
Monitoring Well	368	375	376	377	359	362	365	371	374	366	360	363	357	369	372	367	361	364	358	370	373
Quarter 1, 2013															■						■
BROMIDE																					
Quarter 2, 2004													✱								
CALCIUM																					
Quarter 3, 2003										✱											
Quarter 2, 2005																					✱
Quarter 3, 2006															✱						
Quarter 2, 2008															✱						
Quarter 3, 2009															✱						
Quarter 4, 2009															✱						
Quarter 1, 2010															✱						
Quarter 2, 2010															✱						
Quarter 3, 2010															✱						
Quarter 1, 2011															✱						
Quarter 2, 2011															✱						
Quarter 3, 2011																					✱
Quarter 4, 2011															✱						✱
Quarter 1, 2012															✱						✱
Quarter 2, 2012															✱						✱
Quarter 3, 2012															✱						✱
Quarter 4, 2012															✱						
Quarter 1, 2013															✱						✱
Quarter 2, 2013															✱						
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																				✱	
COBALT																					
Quarter 3, 2003	✱						✱			✱	✱		✱	✱	✱	✱	✱	✱		✱	
Quarter 1, 2004														✱							

Chart of MCL Exceedances and Statistical Increases for 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	D	U	U
Monitoring Well	368	375	376	377	359	362	365	371	374	366	360	363	357	369	372	367	361	364	358	370	373
CONDUCTIVITY																					
Quarter 4, 2002										*											
Quarter 1, 2003										*											
Quarter 2, 2003										*	*										
Quarter 4, 2003										*											
Quarter 1, 2004										*											
Quarter 2, 2004										*											
Quarter 3, 2004										*											
Quarter 1, 2005															*						
Quarter 2, 2005															*						
Quarter 3, 2005						*													*		
Quarter 4, 2005															*			*			
Quarter 1, 2006															*						
Quarter 2, 2006															*						
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Quarter 1, 2010															*						
Quarter 2, 2010															*						
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Quarter 2, 2011															*						
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Quarter 1, 2012														*	*						
Quarter 2, 2012															*						
Quarter 3, 2012															*						
Quarter 4, 2012															*						
Quarter 1, 2013															*						
Quarter 2, 2013															*						
DISSOLVED OXYGEN																					
Quarter 1, 2003					*	*				*											
Quarter 3, 2003					*					*											
Quarter 4, 2003					*																
Quarter 1, 2004					*																
Quarter 2, 2004								*								*					
Quarter 1, 2005					*																
Quarter 2, 2005								*													

Chart of MCL Exceedances and Statistical Increases for 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	D	U	U
Monitoring Well	368	375	376	377	359	362	365	371	374	366	360	363	357	369	372	367	361	364	358	370	373
Quarter 1, 2006					*																
Quarter 2, 2006					*			*													
Quarter 3, 2006					*			*													
Quarter 4, 2006					*				*												
Quarter 2, 2007					*			*													
Quarter 3, 2007					*			*	*												
Quarter 1, 2008					*														*		
Quarter 2, 2008								*	*												
Quarter 3, 2008								*													
Quarter 1, 2009							*														
Quarter 2, 2009					*			*	*												
Quarter 3, 2009						*		*	*												
Quarter 1, 2010					*		*														
Quarter 2, 2010					*	*		*	*											*	*
Quarter 3, 2010					*	*															
Quarter 4, 2010							*					*								*	
Quarter 1, 2011						*															
Quarter 2, 2011					*	*	*	*	*					*							
Quarter 3, 2011						*			*												
Quarter 1, 2012							*		*												
Quarter 2, 2012	*			*	*	*		*	*												
Quarter 3, 2012						*															
Quarter 4, 2012									*												
Quarter 1, 2013						*			*												
Quarter 2, 2013							*		*												
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 1, 2011															*						
Quarter 2, 2011															*						
Quarter 3, 2011															*						
Quarter 4, 2011															*						
Quarter 1, 2012														*	*						

Chart of MCL Exceedances and Statistical Increases for 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	D	U	U
Monitoring Well	368	375	376	377	359	362	365	371	374	366	360	363	357	369	372	367	361	364	358	370	373
Quarter 2, 2012															✱						✱
Quarter 3, 2012															✱						✱
Quarter 4, 2012															✱						
Quarter 1, 2013															✱						
Quarter 2, 2013															✱						
IODIDE																					
Quarter 2, 2003																✱					
Quarter 3, 2003	✱									✱											
Quarter 4, 2003							✱														
Quarter 3, 2010						✱		✱					✱				✱				
IODINE-131																					
Quarter 3, 2010																		■			
IODOMETHANE																					
Quarter 4, 2003						✱															
IRON																					
Quarter 4, 2002						✱															
Quarter 3, 2003																✱					
Quarter 4, 2003										✱						✱					
Quarter 1, 2004										✱						✱					
Quarter 2, 2004										✱											
Quarter 3, 2004										✱											
Quarter 3, 2005																✱					
MAGNESIUM																					
Quarter 2, 2005															✱						✱
Quarter 3, 2005						✱															✱
Quarter 2, 2006															✱						✱
Quarter 3, 2006															✱						
Quarter 1, 2007															✱						
Quarter 2, 2008															✱						
Quarter 2, 2009															✱						
Quarter 3, 2009															✱						
Quarter 4, 2009															✱						
Quarter 1, 2010															✱						
Quarter 2, 2010															✱						
Quarter 3, 2010															✱						
Quarter 1, 2011															✱						
Quarter 2, 2011															✱						
Quarter 3, 2011															✱						
Quarter 4, 2011															✱						
Quarter 1, 2012															✱						
Quarter 2, 2012															✱						
Quarter 3, 2012															✱						
Quarter 4, 2012															✱						
Quarter 1, 2013															✱						
Quarter 2, 2013															✱						
MANGANESE																					
Quarter 3, 2002										✱		✱									
Quarter 4, 2002		✱				✱	✱			✱		✱		✱							
Quarter 2, 2003										✱		✱									

Chart of MCL Exceedances and Statistical Increases for 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	D	U	U
Monitoring Well	368	375	376	377	359	362	365	371	374	366	360	363	357	369	372	367	361	364	358	370	373
Quarter 3, 2003										*		*	*			*	*	*	*		
Quarter 4, 2003										*	*	*	*				*	*			
Quarter 1, 2004										*	*	*				*	*	*			
Quarter 2, 2004							*			*	*	*						*			
Quarter 3, 2004							*			*	*	*				*					
Quarter 4, 2004										*		*				*					
Quarter 1, 2005										*		*									
Quarter 2, 2005										*		*									
Quarter 3, 2005										*		*				*					
Quarter 4, 2005										*						*					
Quarter 1, 2006										*											
Quarter 2, 2006							*			*		*									
Quarter 3, 2006										*						*					
Quarter 4, 2006										*											
Quarter 1, 2007										*											
Quarter 2, 2007							*			*											
Quarter 3, 2007							*														
Quarter 3, 2008							*														
Quarter 4, 2008							*														
Quarter 3, 2009							*														
Quarter 3, 2011							*														
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							*	*		*		*	*					*		*	

Chart of MCL Exceedances and Statistical Increases for 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	D	U	U
Monitoring Well	368	375	376	377	359	362	365	371	374	366	360	363	357	369	372	367	361	364	358	370	373
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		*						*	*	*	*	*	*	*	*	*	*	*	*	*	*
PCB, TOTAL																					
Quarter 4, 2003																	*				
Quarter 3, 2004												*									
Quarter 3, 2005							*														
Quarter 2, 2006							*														
Quarter 3, 2006							*														
Quarter 1, 2007							*														
Quarter 2, 2007							*														
Quarter 3, 2007							*														
Quarter 1, 2008							*														
Quarter 2, 2008							*														
Quarter 4, 2008							*														
Quarter 3, 2009							*														
Quarter 1, 2010							*														
Quarter 2, 2010							*														
Quarter 4, 2010							*														
PCB-1016																					
Quarter 3, 2004												*									
Quarter 2, 2006							*					*									
Quarter 1, 2007							*														
Quarter 2, 2007							*														
Quarter 3, 2007							*														
Quarter 2, 2008							*														
Quarter 4, 2008							*														
Quarter 3, 2009							*														
Quarter 1, 2010							*														
Quarter 2, 2010							*														
Quarter 4, 2010							*														
PCB-1242																					
Quarter 3, 2006							*					*									
Quarter 4, 2006										*											
Quarter 1, 2008							*														

Chart of MCL Exceedances and Statistical Increases for 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	D	U	U
Monitoring Well	368	375	376	377	359	362	365	371	374	366	360	363	357	369	372	367	361	364	358	370	373
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										✱		✱				✱					
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														✱							
STRONTIUM-90																					
Quarter 3, 2003							■														
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															✱						

Chart of MCL Exceedances and Statistical Increases for 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	D	U	U
Monitoring Well	368	375	376	377	359	362	365	371	374	366	360	363	357	369	372	367	361	364	358	370	373
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		*													*						
TECHNETIUM-99																					
Quarter 4, 2002																	*	*	*		
Quarter 2, 2003							*						*			*	*	*	*		*
Quarter 3, 2003																	*				
Quarter 4, 2003																	*				*
Quarter 1, 2004															*		*				*
Quarter 2, 2004															*						*
Quarter 3, 2004															*						*
Quarter 4, 2004															*		*				*
Quarter 3, 2005																	*				
Quarter 1, 2006															*						*
Quarter 2, 2006		*							*												*
Quarter 3, 2006																					*
Quarter 4, 2006															*						*
Quarter 1, 2007																					*
Quarter 2, 2007													*		*					*	
Quarter 3, 2007															*		*	*			
Quarter 4, 2007										*					*				*		*
Quarter 1, 2008															*					*	*
Quarter 2, 2008							*	*						*		*			*		

Chart of MCL Exceedances and Statistical Increases for 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	D	U	U
Monitoring Well	368	375	376	377	359	362	365	371	374	366	360	363	357	369	372	367	361	364	358	370	373
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																					✱
TOTAL ORGANIC CARBON																					
Quarter 3, 2002										✱	✱	✱		✱							✱
Quarter 4, 2002										✱	✱			✱							
Quarter 1, 2003											✱										
Quarter 3, 2003	✱									✱	✱					✱					
Quarter 4, 2003										✱	✱										
Quarter 1, 2004											✱										
Quarter 3, 2005						✱				✱					✱	✱			✱		
Quarter 4, 2005						✱												✱	✱		
Quarter 1, 2006																			✱		
TOTAL ORGANIC HALIDES																					
Quarter 4, 2002										✱											
Quarter 1, 2003										✱											
Quarter 2, 2003										✱											
Quarter 1, 2004																✱					
TRICHLOROETHENE																					
Quarter 3, 2002														■						■	
Quarter 4, 2002															■					■	
Quarter 1, 2003																				■	■
Quarter 2, 2003															■					■	
Quarter 3, 2003							■													■	■
Quarter 4, 2003															■					■	■
Quarter 1, 2004															■					■	■
Quarter 2, 2004															■					■	■
Quarter 3, 2004															■					■	■
Quarter 4, 2004															■					■	■
Quarter 1, 2005															■					■	■
Quarter 2, 2005															■					■	■
Quarter 3, 2005															■					■	■
Quarter 4, 2005															■					■	■
Quarter 1, 2006															■					■	■

Chart of MCL Exceedances and Statistical Increases for 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	D	U	U
Monitoring Well	368	375	376	377	359	362	365	371	374	366	360	363	357	369	372	367	361	364	358	370	373
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													■		■		■		■		■
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
S	Sidegradient; D Downgradient; U Upgradient

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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: June 11, 2013

Time	Location	% LEL of Methane Reading	Remarks	Weather Conditions
1235	C-746-U1	0	Checked @ Floor Level	Inside office
1240	C-746-U2	0	Checked @ Floor Level	Inside Office
1243	C-746-U-T-14	0	Checked @ Floor Level	Change out trailer
1305	C-746-U15	0	Checked @ Floor Level	Treatment building
1247	MG1	0	Dry casing	Wind out of S. 90°
1251	MG2	0	Small amount of water in casing	Wind out of S. 90°
1256	MG3	0	Dry casing	Wind out of S. 90°
1259	MG4	0	Dry casing	Wind out of S. 90°
N/A	Suspect or Problem Areas	N/A	No problems noted	N/A

Tammy Smith 6/11/13

Tammy Smith
Signature

WD-F-0053 (2/20/13)
PAD-WD-0017 Review the Identified Source Document for This Form Prior to Attempting Completion

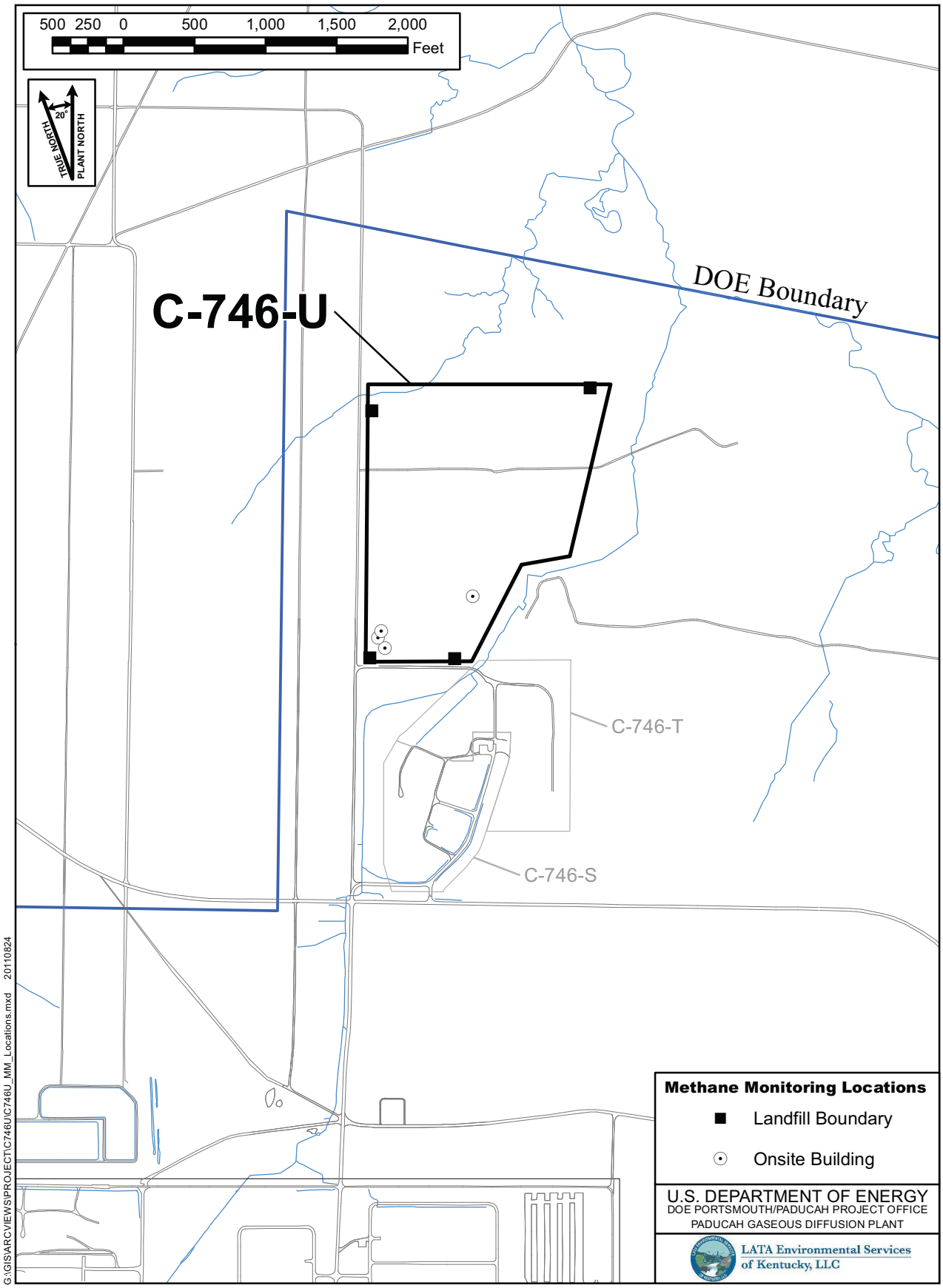

Figure H.1. C-746-U Methane Monitoring Locations

APPENDIX I

SURFACE WATER MONITORING DATA

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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

SURFACE WATER SAMPLE ANALYSIS (S)

Monitoring Point (KPDES Discharge Number, or "UPSTREAM", or "DOWNSTREAM")						L150 AT SITE		L154 UPSTREAM		L351 DOWNSTREAM			
Sample Sequence #						1		1		1			
If sample is a Blank, specify Type: (F)ield, (T)rip, (M)ethod, or (E)quipment						NA		NA		NA			
Sample Date and Time (Month/Day/Year hour: minutes)						4/11/2013 08:22		4/11/2013 08:35		4/11/2013 07:59			
Duplicate ("Y" or "N")[1]						N		N		N			
Split ('Y' or "N")[2]						N		N		N			
Facility Sample ID Number (if applicable)						L150US3-13		L154US3-13		L351US3-13			
Laboratory Sample ID Number (if applicable)						C13101018002		C13101018003		C13101018001			
Date of Analysis (Month/Day/Year)						5/1/2013		5/1/2013		5/1/2013			
CAS RN[3]		CONSTITUENT	TD[4]	Unit OF MEASURE	METHOD	DETECTED VALUE OR PQL[5]	FLAGS[7]	DETECTED VALUE OR PQL[5]	FLAGS[7]	DETECTED VALUE OR PQL[5]	FLAGS[7]	DETECTED VALUE OR PQL[5]	FLAGS[7]
A200-00-0	0	Flow	T	MGD	Field		*	1.43		3.26			
16887-00-6	2	Chloride(s)	T	MG/L	300.0	<2		<2		<2			
14808-79-8	0	Sulfate	T	MG/L	300.0	27		4		5.3			
7439-89-6	0	Iron	T	MG/L	200.7 R3.3	1.84		2.97		2.84			
7440-23-5	0	Sodium	T	MG/L	200.7 R3.3	1.81		1.94		2.24			
S0268- -	0	Organic Carbon[6]	T	MG/L	9060	16.5	D	22.5	D*	21.8	D*		
S0097- -	0	BOD[6]	T	MG/L	not applicable		*		*		*		
S0130- -	0	Chemical Oxygen Demand	T	MG/L	410.4	35		47		42			

[1]Respond "Y" if the sample was a duplicate of another sample in this report
[2]Respond "Y" if the sample was split and analyzed by separate laboratories.
[3]Chemical Abstracts Service Registry Number or unique identifier number assigned by agency.
[4]"T" = Total; "D" = Dissolved
[5]"<" indicates a non-detect; do not use "ND" or "BDL". Value then shown is Practical Quantification Limit
[6]Facility has either/or option on Organic Carbon and (BOD) Biochemical Oxygen Demand - both are not required
[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 factor

SURFACE WATER - 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

SURFACE WATER SAMPLE ANALYSIS - (Cont.)

Monitoring Point (KPDES Discharge Number, or "UPSTREAM" or "DOWNSTREAM")						L150 AT SITE		L154 UPSTREAM		L351 DOWNSTREAM			
CAS RN[3]		CONSTITUENT	TD[4]	Unit OF MEASURE	METHOD	DETECTED VALUE OR PQL[5]	FLAGS[7]	DETECTED VALUE OR PQL[5]	FLAGS[7]	DETECTED VALUE OR PQL[5]	FLAGS[7]	DETECTED VALUE OR PQL[5]	FLAGS[7]
S0145- -	1	Specific Conductance	T	µHMS/CM	Field	2.8		95		94			
S0270- -	0	Total Suspended Solids	T	MG/L	160.1	27		23		<50			
S0266- -	0	Total Dissolved Solids	T	MG/L	160.2	184	*	187	*	<87	*		
S0269- -	0	Total Solids	T	MG/L	160.3	230		231		155			
S0296- -	0	pH	T	Units	Field	7.27		7.5		6.98			
7440-61-1		Uranium	T	MG/L	IN7105	0.024		0.00168		0.00253			
12587-46-1		Gross Alpha (α)	T	pCi/L	900.0	8.94	*	2.32	*	2.38	*		
12587-47-2		Gross Beta (β)	T	pCi/L	900.0	12.5	*	6.46	*	13.5	*		

RESIDENTIAL/CONTAINED – QUARTERLY **Finds/Unit: KY8-890-008-982 / 1**

Facility: US DOE - Paducah Gaseous Diffusion Plant **LAB ID: None**

Permit Numbers: 073-00045 **For Official Use Only**

SURFACE WATER
WRITTEN COMMENTS

Monitoring Point	Facility Sample ID	Constituent	Flag	Description
L150	L150US3-13	Flow Rate		Analysis of constituent not required and not performed.
		Biochemical Oxygen Demand (BOD)		Analysis of constituent not required and not performed.
		Dissolved Solids	*	Duplicate analysis not within control limits.
		Alpha activity		TPU is 4.25. Rad error is 3.65.
		Beta activity		TPU is 2.53. Rad error is 2.11.
L154	L154US3-13	Total Organic Carbon (TOC)	E	Concentration exceeds calibration range of the instrument.
		Biochemical Oxygen Demand (BOD)		Analysis of constituent not required and not performed.
		Dissolved Solids	*	Duplicate analysis not within control limits.
		Alpha activity	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 1.41. Rad error is 1.29.
		Beta activity	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 1.39. Rad error is 1.2.
L351	L351US3-13	Total Organic Carbon (TOC)	E	Concentration exceeds calibration range of the instrument.
		Biochemical Oxygen Demand (BOD)		Analysis of constituent not required and not performed.
		Dissolved Solids	*	Duplicate analysis not within control limits.
		Alpha activity	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 1.4. Rad error is 1.27.
		Beta activity		TPU is 2.69. Rad error is 2.24.

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APPENDIX J

ANNUAL LEACHATE MONITORING DATA

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Paducah OREIS Report for ULS13-01

ULS13-01-01 from: C-746-U on 4/17/2013 Media: WW SmpMethod: GR

Comments:

Analysis	Results	Counting Error	Units	Result Qual	Foot Note	Reporting Limit	TPU	Method	V/V/A*
ANION									
Bromide	2		mg/L	U		2		SW846-9056	/ X /
Chloride	4.1		mg/L			2		SW846-9056	S / X /
Fluoride	0.4		mg/L			0.1		9214	/ X /
Nitrate as Nitrogen	1		mg/L	U		1		SW846-9056	/ X /
Sulfate	270		mg/L			20		SW846-9056	/ X /
FS									
Conductivity	1.345		umho/cm					FS	/ /
Dissolved Oxygen	11		mg/L					FS	/ /
pH	7.14		Std Unit					FS	/ /
Redox	287		mV					FS	/ /
Temperature	67.5		deg F					FS	/ /
METAL									
Aluminum	13.2		mg/L			0.2		SW846-6010B	/ X /
Antimony	0.005		mg/L	UB		0.005		SW846-6020	/ X /
Arsenic	0.0166		mg/L	X		0.01		SW846-6020	/ X /
Barium	0.159		mg/L			0.005		SW846-6020	S / X /
Beryllium	0.00333		mg/L			0.001		SW846-6020	/ X /
Boron	0.46		mg/L			0.2		SW846-6010B	/ X /
Cadmium	0.001		mg/L	U		0.001		SW846-6020	/ X /
Calcium	174		mg/L			1		SW846-6010B	S / X /
Chromium	0.0119		mg/L			0.01		SW846-6020	S / X /
Cobalt	0.0061		mg/L	BX		0.001		SW846-6020	/ X /
Copper	0.00651		mg/L			0.0052		SW846-6020	/ X /
Iron	16.2		mg/L			0.1		SW846-6010B	/ X /
Lead	0.0103		mg/L			0.0013		SW846-6020	/ X /
Magnesium	42		mg/L	N		0.025		SW846-6010B	/ X /
Manganese	0.28		mg/L	NX		0.005		SW846-6020	/ X /
Mercury	0.0002		mg/L	U		0.0002		SW846-7470A	/ X /
Molybdenum	0.00114		mg/L	B		0.001		SW846-6020	/ X /
Nickel	0.0158		mg/L	X		0.005		SW846-6020	/ X /
Phosphorous	0.87		mg/L			0.08		EPA-365.3	/ X /
Potassium	4.68		mg/L			0.2		SW846-6010B	/ X /
Rhodium	0.005		mg/L	U		0.005		SW846-6020	/ X /
Selenium	0.005		mg/L	U		0.005		SW846-6020	/ X /
Silver	0.001		mg/L	U		0.001		SW846-6020	/ X /
Sodium	77		mg/L			1		SW846-6010B	/ X /
Tantalum	0.005		mg/L	U		0.005		SW846-6020	/ X /
Thallium	0.002		mg/L	U		0.002		SW846-6020	/ X /
Tin	0.005		mg/L	UB		0.005		SW846-6020	/ X /
Titanium	0.0731		mg/L			0.005		SW846-6020	/ X /
Uranium	0.162		mg/L			0.01		SW846-6020	I / X /
Vanadium	0.0205		mg/L			0.02		SW846-6020	/ X /
Zinc	0.0613		mg/L	B		0.02		SW846-6020	/ X /
METAL-D									
Antimony, Dissolved	0.005		mg/L	U		0.005		SW846-6020	/ X /
Arsenic, Dissolved	0.00352		mg/L			0.001		SW846-6020	S / X /
Barium, Dissolved	0.114		mg/L			0.005		SW846-6020	/ X /
Cadmium, Dissolved	0.001		mg/L	U		0.001		SW846-6020	/ X /
Chromium, Dissolved	0.01		mg/L	U		0.01		SW846-6020	/ X /
Cobalt, Dissolved	0.00174		mg/L	BX		0.001		SW846-6020	/ X /

*Verification/Validation/Assessment

Copper, Dissolved	0.0052		mg/L	UN	0.0052		SW846-6020	/ X /
Lead, Dissolved	0.0013		mg/L	U	0.0013		SW846-6020	/ X /
Manganese, Dissolved	0.277		mg/L		0.005		SW846-6020	S / X /
Nickel, Dissolved	0.00741		mg/L		0.005		SW846-6020	/ X /
Selenium, Dissolved	0.005		mg/L	U	0.005		SW846-6020	/ X /
Silver, Dissolved	0.001		mg/L	UNB	0.001		SW846-6020	/ X /
Tin, Dissolved	0.005		mg/L	U	0.005		SW846-6020	/ X /
Titanium, Dissolved	0.005		mg/L	U	0.005		SW846-6020	/ X /
Uranium, Dissolved	0.147		mg/L		0.01		SW846-6020	S / X /
Vanadium, Dissolved	0.02		mg/L	U	0.02		SW846-6020	/ X /
Zinc, Dissolved	0.02		mg/L	U	0.02		SW846-6020	/ X /
OTHOR								
Oil and Grease	7		mg/L	U	7		EPA-1664	/ X /
PPCB								
PCB-1016	0.16		ug/L	UX	0.16		SW846-8082	/ X /
PCB-1221	0.17		ug/L	UX	0.17		SW846-8082	/ X /
PCB-1232	0.14		ug/L	UX	0.14		SW846-8082	/ X /
PCB-1242	0.1		ug/L	UX	0.1		SW846-8082	/ X /
PCB-1248	0.12		ug/L	UX	0.12		SW846-8082	/ X /
PCB-1254	0.07		ug/L	UX	0.07		SW846-8082	/ X /
PCB-1260	0.05		ug/L	UX	0.05		SW846-8082	/ X /
PCB-1268	0.09		ug/L	UX	0.09		SW846-8082	/ X /
Polychlorinated biphenyl	0.17		ug/L	UX	0.17		SW846-8082	/ X /
RADS								
Alpha activity	38.1	7.95	pCi/L		10.8	12.2	SW846-9310	I / X /
Americium-241	-0.00258	0.0174	pCi/L	U	0.217	0.0876	RL-7128	/ X /
Beta activity	58.7	4.87	pCi/L		8.39	8.14	SW846-9310	/ X /
Cesium-137	1.2	2.41	pCi/L	U	1.91	2.41	RL-7124	/ X /
Cobalt-60	0.117	0.234	pCi/L	U	2.05	1.41	RL-7124	/ X /
Dissolved Alpha	52.3	13.5	pCi/L		15.1	18.6	RL-7111	/ X /
Dissolved Beta	57.4	6.79	pCi/L		11.1	9.32	RL-7111	/ X /
Neptunium-237	0.00918	0.0239	pCi/L	U	0.145	0.0557	RL-7128	/ X /
Plutonium-239/240	-0.00187	0.0123	pCi/L	U	0.235	0.094	RL-7128	/ X /
Radium-226	0.524	0.297	pCi/L	U	0.771	0.419	RL-7129	/ X /
Strontium-90	0.0914	0.0198	pCi/L	U	2.06	0.0283	RL-7140	/ X /
Technetium-99	21.1	10.1	pCi/L		14.7	10.1	RL-7100	/ X /
Thorium-230	0.27	0.105	pCi/L		0.224	0.143	RL-7128	/ X /
Thorium-234	35.8	71.6	pCi/L	U	50	71.6	RL-7124	/ X /
Tritium	42.8	599	pCi/L	U	240	599	RL-7155	/ X /
Uranium	66.9	15.7	pCi/L		0.802	26.7	RL-7128	/ X /
Uranium-234	11.6	0.763	pCi/L		0.444	2.28	RL-7128	/ X /
Uranium-235	1.29	0.29	pCi/L		0.162	0.379	RL-7128	/ X /
Uranium-238	54.1	1.64	pCi/L		0.196	10.1	RL-7128	/ X /
RADS-D								
Americium-241	-0.014	0.00184	pCi/L	U	0.218	0.0875	RL-7128	/ X /
Cesium-137	-0.512	1.02	pCi/L	U	1.65	1.14	RL-7124	/ X /
Cobalt-60	0.277	0.554	pCi/L	U	2.01	1.43	RL-7124	/ X /
Neptunium-237	-0.00743	0.00673	pCi/L	U	0.139	0.0558	RL-7128	/ X /
Plutonium-239/240	-0.00636	0.00336	pCi/L	U	0.233	0.0957	RL-7128	/ X /
Technetium-99	23.1	10.1	pCi/L		14.7	10.1	RL-7100	/ X /
Thorium-230	0.0426	0.0549	pCi/L	U	0.232	0.101	RL-7128	/ X /
Thorium-234	-15.2	30.5	pCi/L	U	49.9	31.5	RL-7124	/ X /
Uranium, Dissolved	56.3	16.9	pCi/L		0.795	24.7	RL-7128	/ X /
Uranium-234	9.69	0.666	pCi/L		0.476	1.89	RL-7128	/ X /
Uranium-235	0.677	0.199	pCi/L		0.139	0.238	RL-7128	/ X /

Uranium-238	46	1.44	pCi/L		0.18	8.45	RL-7128	/ X /
VOA								
1,1,1,2-Tetrachloroethane	5		ug/L	U	5		SW846-8260B	/ X /
1,1,1-Trichloroethane	1		ug/L	U	1		SW846-8260B	/ X /
1,1,2,2-Tetrachloroethane	5		ug/L	UJ	5		SW846-8260B	/ X /
1,1,2-Trichloroethane	1		ug/L	U	1		SW846-8260B	/ X /
1,1-Dichloroethane	1		ug/L	U	1		SW846-8260B	/ X /
1,1-Dichloroethene	1		ug/L	U	1		SW846-8260B	/ X /
1,2,3-Trichloropropane	5		ug/L	U	5		SW846-8260B	/ X /
1,2-Dibromo-3-chloropropane	0.2		ug/L	U	0.2		SW846-8011	/ X /
1,2-Dibromoethane	5		ug/L	U	5		SW846-8260B	/ X /
1,2-Dichlorobenzene	5		ug/L	U	5		SW846-8260B	/ X /
1,2-Dichloroethane	1		ug/L	U	1		SW846-8260B	/ X /
1,2-Dichloropropane	5		ug/L	U	5		SW846-8260B	/ X /
1,2-Dimethylbenzene	5		ug/L	U	5		SW846-8260B	/ X /
1,4-Dichlorobenzene	5		ug/L	U	5		SW846-8260B	/ X /
2-Butanone	10		ug/L	U	10		SW846-8260B	/ X /
2-Hexanone	10		ug/L	U	10		SW846-8260B	/ X /
4-Methyl-2-pentanone	10		ug/L	U	10		SW846-8260B	/ X /
Acetone	10		ug/L	U	10		SW846-8260B	/ X /
Acrolein	10		ug/L	U	10		SW846-8260B	/ X /
Acrylonitrile	10		ug/L	U	10		SW846-8260B	/ X /
Benzene	5		ug/L	U	5		SW846-8260B	/ X /
Bromochloromethane	5		ug/L	U	5		SW846-8260B	/ X /
Bromodichloromethane	5		ug/L	U	5		SW846-8260B	/ X /
Bromoform	5		ug/L	U	5		SW846-8260B	/ X /
Bromomethane	5		ug/L	U	5		SW846-8260B	/ X /
Carbon disulfide	5		ug/L	U	5		SW846-8260B	/ X /
Carbon tetrachloride	5		ug/L	U	5		SW846-8260B	/ X /
Chlorobenzene	5		ug/L	U	5		SW846-8260B	/ X /
Chloroethane	5		ug/L	JU	5		SW846-8260B	/ X /
Chloroform	1		ug/L	U	1		SW846-8260B	/ X /
Chloromethane	5		ug/L	U	5		SW846-8260B	/ X /
cis-1,2-Dichloroethene	1		ug/L	U	1		SW846-8260B	/ X /
cis-1,3-Dichloropropene	5		ug/L	U	5		SW846-8260B	/ X /
Dibromochloromethane	5		ug/L	U	5		SW846-8260B	/ X /
Dibromomethane	5		ug/L	U	5		SW846-8260B	/ X /
Ethylbenzene	5		ug/L	U	5		SW846-8260B	/ X /
Iodomethane	10		ug/L	U	10		SW846-8260B	/ X /
m,p-Xylene	10		ug/L	U	10		SW846-8260B	/ X /
Methylene chloride	5		ug/L	U	5		SW846-8260B	/ X /
Styrene	5		ug/L	U	5		SW846-8260B	/ X /
Tetrachloroethene	1		ug/L	U	1		SW846-8260B	/ X /
Toluene	5		ug/L	U	5		SW846-8260B	/ X /
Total Xylene	15		ug/L	U	15		SW846-8260B	/ X /
trans-1,2-Dichloroethene	1		ug/L	U	1		SW846-8260B	/ X /
trans-1,3-Dichloropropene	5		ug/L	U	5		SW846-8260B	/ X /
Trans-1,4-Dichloro-2-butene	5		ug/L	U	5		SW846-8260B	/ X /
Trichloroethene	1		ug/L	U	1		SW846-8260B	/ X /
Trichlorofluoromethane	5		ug/L	U	5		SW846-8260B	/ X /
Vinyl acetate	10		ug/L	UJ	10		SW846-8260B	/ X /
Vinyl chloride	2		ug/L	U	2		SW846-8260B	/ X /
WETCHEM								
Carbonaceous Biochemical Oxygen Demand (CBOD)	5		mg/L	U	5		SM-5210 B	/ X /
Chemical Oxygen Demand (COD)	25		mg/L	U	25		EPA-410.4	/ X /

Cyanide	0.04	mg/L	U	0.04	SW846-9010C	/ X /
Dissolved Solids	875	mg/L		87	EPA-160.1	S / X /
Hardness - Total as CaCO3	600	mg/L		20	EPA-130.2	S / X /
Iodide	2	mg/L	U	2	EPA-345.1	/ X /
Suspended Solids	560	mg/L		200	EPA-160.2	/ X /
Total Organic Carbon (TOC)	9.3	mg/L	D	2	SW846-9060	/ X /
Total Organic Halides (TOX)	38	ug/L		5	SW846-9020B	/ X /

Paducah OREIS Report for ULS13-01

FBULS13-01 from: QC on 4/17/2013 Media: WQ SmpMethod:

Comments:

Analysis	Results	Counting Error	Units	Result Qual	Foot Note	Reporting Limit	TPU	Method	V/V/A*
ANION									
Bromide	2		mg/L	U		2		SW846-9056	/ X /
Chloride	2		mg/L	U		2		SW846-9056	/ X /
Fluoride	0.1		mg/L	U		0.1		9214	/ X /
Nitrate as Nitrogen	1		mg/L	U		1		SW846-9056	/ X /
Sulfate	2		mg/L	U		2		SW846-9056	/ X /
METAL									
Aluminum	0.2		mg/L	U		0.2		SW846-6010B	/ X /
Antimony	0.005		mg/L	UB		0.005		SW846-6020	/ X /
Arsenic	0.001		mg/L	U		0.001		SW846-6020	/ X /
Barium	0.005		mg/L	U		0.005		SW846-6020	/ X /
Beryllium	0.001		mg/L	U		0.001		SW846-6020	/ X /
Boron	0.2		mg/L	UB		0.2		SW846-6010B	/ X /
Cadmium	0.001		mg/L	U		0.001		SW846-6020	/ X /
Calcium	1		mg/L	U		1		SW846-6010B	/ X /
Chromium	0.01		mg/L	U		0.01		SW846-6020	/ X /
Cobalt	0.001		mg/L	UBX		0.001		SW846-6020	/ X /
Copper	0.0052		mg/L	U		0.0052		SW846-6020	/ X /
Iron	0.1		mg/L	U		0.1		SW846-6010B	/ X /
Lead	0.0013		mg/L	UB		0.0013		SW846-6020	/ X /
Magnesium	0.025		mg/L	UN		0.025		SW846-6010B	/ X /
Manganese	0.005		mg/L	UNX		0.005		SW846-6020	/ X /
Mercury	0.0002		mg/L	U		0.0002		SW846-7470A	/ X /
Molybdenum	0.001		mg/L	UB		0.001		SW846-6020	/ X /
Nickel	0.005		mg/L	UX		0.005		SW846-6020	/ X /
Phosphorous	0.04		mg/L	U		0.04		EPA-365.3	/ X /
Potassium	0.2		mg/L	UB		0.2		SW846-6010B	/ X /
Rhodium	0.005		mg/L	U		0.005		SW846-6020	/ X /
Selenium	0.005		mg/L	U		0.005		SW846-6020	/ X /
Silver	0.001		mg/L	U		0.001		SW846-6020	/ X /
Sodium	1		mg/L	U		1		SW846-6010B	/ X /
Tantalum	0.005		mg/L	U		0.005		SW846-6020	/ X /
Thallium	0.002		mg/L	U		0.002		SW846-6020	/ X /
Tin	0.005		mg/L	UB		0.005		SW846-6020	/ X /
Titanium	0.005		mg/L	U		0.005		SW846-6020	/ X /
Uranium	0.001		mg/L	U		0.001		SW846-6020	/ X /
Vanadium	0.02		mg/L	U		0.02		SW846-6020	/ X /
Zinc	0.02		mg/L	UB		0.02		SW846-6020	/ X /
OTHOR									
Oil and Grease	7		mg/L	U		7		EPA-1664	/ X /
PPCB									
PCB-1016	0.17		ug/L	U		0.17		SW846-8082	/ X /
PCB-1221	0.18		ug/L	U		0.18		SW846-8082	/ X /
PCB-1232	0.14		ug/L	U		0.14		SW846-8082	/ X /
PCB-1242	0.1		ug/L	U		0.1		SW846-8082	/ X /
PCB-1248	0.12		ug/L	U		0.12		SW846-8082	/ X /
PCB-1254	0.07		ug/L	U		0.07		SW846-8082	/ X /
PCB-1260	0.05		ug/L	U		0.05		SW846-8082	/ X /
PCB-1268	0.09		ug/L	U		0.09		SW846-8082	/ X /
Polychlorinated biphenyl	0.18		ug/L	U		0.18		SW846-8082	/ X /

*Verification/Validation/Assessment

Paducah OREIS Report for ULS13-01

RADS								
Alpha activity	-0.748	0.611	pCi/L	U	5.59	0.638	SW846-9310	/ X /
Americium-241	0.0264	0.0342	pCi/L	U	0.216	0.0926	RL-7128	/ X /
Beta activity	0.842	0.174	pCi/L	U	8.82	0.197	SW846-9310	/ X /
Cesium-137	-0.0848	0.17	pCi/L	U	1.65	0.961	RL-7124	/ X /
Cobalt-60	-0.727	1.45	pCi/L	U	1.75	1.45	RL-7124	/ X /
Neptunium-237	-0.00477	0.00143	pCi/L	U	0.143	0.0588	RL-7128	/ X /
Plutonium-239/240	-0.00804	0	pCi/L	U	0.232	0.132	RL-7128	/ X /
Radium-226	-0.157	0.118	pCi/L	U	0.81	0.311	RL-7129	/ X /
Strontium-90	-0.129	0.0291	pCi/L	U	2.37	0.0407	RL-7140	/ X /
Technetium-99	-4.33	9.09	pCi/L	U	14.7	9.1	RL-7100	/ X /
Thorium-230	0.0283	0.0501	pCi/L	U	0.242	0.0978	RL-7128	/ X /
Thorium-234	9.04	18.1	pCi/L	U	50	31.4	RL-7124	/ X /
Tritium	-149	593	pCi/L	U	240	593	RL-7155	/ X /
Uranium	0.489	0.504	pCi/L	U	0.699	0.766	RL-7128	/ X /
Uranium-234	0.307	0.0995	pCi/L	U	0.417	0.201	RL-7128	/ X /
Uranium-235	0.033	0.0379	pCi/L	U	0.128	0.0563	RL-7128	/ X /
Uranium-238	0.15	0.0656	pCi/L	U	0.154	0.0861	RL-7128	/ X /
VOA								
1,1,1,2-Tetrachloroethane	5		ug/L	U	5		SW846-8260B	/ X /
1,1,1-Trichloroethane	1		ug/L	U	1		SW846-8260B	/ X /
1,1,2,2-Tetrachloroethane	5		ug/L	UJ	5		SW846-8260B	/ X /
1,1,2-Trichloroethane	1		ug/L	U	1		SW846-8260B	/ X /
1,1-Dichloroethane	1		ug/L	U	1		SW846-8260B	/ X /
1,1-Dichloroethene	1		ug/L	U	1		SW846-8260B	/ X /
1,2,3-Trichloropropane	5		ug/L	U	5		SW846-8260B	/ X /
1,2-Dibromo-3-chloropropane	0.2		ug/L	U	0.2		SW846-8011	/ X /
1,2-Dibromoethane	5		ug/L	U	5		SW846-8260B	/ X /
1,2-Dichlorobenzene	5		ug/L	U	5		SW846-8260B	/ X /
1,2-Dichloroethane	1		ug/L	U	1		SW846-8260B	/ X /
1,2-Dichloropropane	5		ug/L	U	5		SW846-8260B	/ X /
1,2-Dimethylbenzene	5		ug/L	U	5		SW846-8260B	/ X /
1,4-Dichlorobenzene	5		ug/L	U	5		SW846-8260B	/ X /
2-Butanone	10		ug/L	U	10		SW846-8260B	/ X /
2-Hexanone	10		ug/L	U	10		SW846-8260B	/ X /
4-Methyl-2-pentanone	10		ug/L	U	10		SW846-8260B	/ X /
Acetone	10		ug/L	U	10		SW846-8260B	/ X /
Acrolein	10		ug/L	U	10		SW846-8260B	/ X /
Acrylonitrile	10		ug/L	U	10		SW846-8260B	/ X /
Benzene	5		ug/L	U	5		SW846-8260B	/ X /
Bromochloromethane	5		ug/L	U	5		SW846-8260B	/ X /
Bromodichloromethane	5		ug/L	U	5		SW846-8260B	/ X /
Bromoform	5		ug/L	U	5		SW846-8260B	/ X /
Bromomethane	5		ug/L	U	5		SW846-8260B	/ X /
Carbon disulfide	5		ug/L	U	5		SW846-8260B	/ X /
Carbon tetrachloride	5		ug/L	U	5		SW846-8260B	/ X /
Chlorobenzene	5		ug/L	U	5		SW846-8260B	/ X /
Chloroethane	5		ug/L	JU	5		SW846-8260B	/ X /
Chloroform	1		ug/L	U	1		SW846-8260B	/ X /
Chloromethane	5		ug/L	U	5		SW846-8260B	/ X /
cis-1,2-Dichloroethene	1		ug/L	U	1		SW846-8260B	/ X /
cis-1,3-Dichloropropene	5		ug/L	U	5		SW846-8260B	/ X /
Dibromochloromethane	5		ug/L	U	5		SW846-8260B	/ X /
Dibromomethane	5		ug/L	U	5		SW846-8260B	/ X /
Ethylbenzene	5		ug/L	U	5		SW846-8260B	/ X /
Iodomethane	10		ug/L	U	10		SW846-8260B	/ X /

m,p-Xylene	10	ug/L	U	10	SW846-8260B	/ X /
Methylene chloride	5	ug/L	U	5	SW846-8260B	/ X /
Styrene	5	ug/L	U	5	SW846-8260B	/ X /
Tetrachloroethene	1	ug/L	U	1	SW846-8260B	/ X /
Toluene	5	ug/L	U	5	SW846-8260B	/ X /
Total Xylene	15	ug/L	U	15	SW846-8260B	/ X /
trans-1,2-Dichloroethene	1	ug/L	U	1	SW846-8260B	/ X /
trans-1,3-Dichloropropene	5	ug/L	U	5	SW846-8260B	/ X /
Trans-1,4-Dichloro-2-butene	5	ug/L	U	5	SW846-8260B	/ X /
Trichloroethene	1	ug/L	U	1	SW846-8260B	/ X /
Trichlorofluoromethane	5	ug/L	U	5	SW846-8260B	/ X /
Vinyl acetate	10	ug/L	UJ	10	SW846-8260B	/ X /
Vinyl chloride	2	ug/L	U	2	SW846-8260B	/ X /
WETCHEM						
Chemical Oxygen Demand (COD)	25	mg/L	U	25	EPA-410.4	/ X /
Hardness - Total as CaCO3	10	mg/L	U	10	EPA-130.2	/ X /
Iodide	2	mg/L	U	2	EPA-345.1	/ X /
Total Organic Carbon (TOC)	1	mg/L	U	1	SW846-9060	/ X /

Paducah OREIS Report for ULS13-01

TBULS13-01 from: QC on 4/17/2013 Media: WQ SmpMethod:

Comments:

Analysis	Results	Counting Error	Units	Result Qual	Foot Note	Reporting Limit	TPU	Method	V/V/A*
VOA									
1,1,1,2-Tetrachloroethane	5		ug/L	U		5		SW846-8260B	/ X /
1,1,1-Trichloroethane	1		ug/L	U		1		SW846-8260B	/ X /
1,1,2,2-Tetrachloroethane	5		ug/L	UJ		5		SW846-8260B	/ X /
1,1,2-Trichloroethane	1		ug/L	U		1		SW846-8260B	/ X /
1,1-Dichloroethane	1		ug/L	U		1		SW846-8260B	/ X /
1,1-Dichloroethene	1		ug/L	U		1		SW846-8260B	/ X /
1,2,3-Trichloropropane	5		ug/L	U		5		SW846-8260B	/ X /
1,2-Dibromo-3-chloropropane	0.2		ug/L	UX		0.2		SW846-8011	/ X /
1,2-Dibromoethane	5		ug/L	U		5		SW846-8260B	/ X /
1,2-Dichlorobenzene	5		ug/L	U		5		SW846-8260B	/ X /
1,2-Dichloroethane	1		ug/L	U		1		SW846-8260B	/ X /
1,2-Dichloropropane	5		ug/L	U		5		SW846-8260B	/ X /
1,2-Dimethylbenzene	5		ug/L	U		5		SW846-8260B	/ X /
1,4-Dichlorobenzene	5		ug/L	U		5		SW846-8260B	/ X /
2-Butanone	10		ug/L	U		10		SW846-8260B	/ X /
2-Hexanone	10		ug/L	U		10		SW846-8260B	/ X /
4-Methyl-2-pentanone	10		ug/L	U		10		SW846-8260B	/ X /
Acetone	10		ug/L	U		10		SW846-8260B	/ X /
Acrolein	10		ug/L	U		10		SW846-8260B	/ X /
Acrylonitrile	10		ug/L	U		10		SW846-8260B	/ X /
Benzene	5		ug/L	U		5		SW846-8260B	/ X /
Bromochloromethane	5		ug/L	U		5		SW846-8260B	/ X /
Bromodichloromethane	5		ug/L	U		5		SW846-8260B	/ X /
Bromoform	5		ug/L	U		5		SW846-8260B	/ X /
Bromomethane	5		ug/L	U		5		SW846-8260B	/ X /
Carbon disulfide	5		ug/L	U		5		SW846-8260B	/ X /
Carbon tetrachloride	5		ug/L	U		5		SW846-8260B	/ X /
Chlorobenzene	5		ug/L	U		5		SW846-8260B	/ X /
Chloroethane	5		ug/L	JU		5		SW846-8260B	/ X /
Chloroform	1		ug/L	U		1		SW846-8260B	/ X /
Chloromethane	5		ug/L	U		5		SW846-8260B	/ X /
cis-1,2-Dichloroethene	1		ug/L	U		1		SW846-8260B	/ X /
cis-1,3-Dichloropropene	5		ug/L	U		5		SW846-8260B	/ X /
Dibromochloromethane	5		ug/L	U		5		SW846-8260B	/ X /
Dibromomethane	5		ug/L	U		5		SW846-8260B	/ X /
Ethylbenzene	5		ug/L	U		5		SW846-8260B	/ X /
Iodomethane	10		ug/L	U		10		SW846-8260B	/ X /
m,p-Xylene	10		ug/L	U		10		SW846-8260B	/ X /
Methylene chloride	5		ug/L	U		5		SW846-8260B	/ X /
Styrene	5		ug/L	U		5		SW846-8260B	/ X /
Tetrachloroethene	1		ug/L	U		1		SW846-8260B	/ X /
Toluene	5		ug/L	U		5		SW846-8260B	/ X /
Total Xylene	15		ug/L	U		15		SW846-8260B	/ X /
trans-1,2-Dichloroethene	1		ug/L	U		1		SW846-8260B	/ X /
trans-1,3-Dichloropropene	5		ug/L	U		5		SW846-8260B	/ X /
Trans-1,4-Dichloro-2-butene	5		ug/L	U		5		SW846-8260B	/ X /
Trichloroethene	1		ug/L	U		1		SW846-8260B	/ X /
Trichlorofluoromethane	5		ug/L	U		5		SW846-8260B	/ X /
Vinyl acetate	10		ug/L	UJ		10		SW846-8260B	/ X /
Vinyl chloride	2		ug/L	U		2		SW846-8260B	/ X /

*Verification/Validation/Assessment

PEMS/OREIS CODES

Media Codes

AG	Soil Gas
AQ	Air Quality Control Matrix
DC	Drill Cuttings
FR	Filter Residue
FT	Filter
GR	Grout
LD	Drilling Fluid
LF	Floating/Free Product on Groundwater Table
LO	Oil, All Types (Transformer, Waste, Motor, Mineral)
LT	Liquid from tank
LZ	Liquid Waste
MD	Meteorological
MS	Metal Shavings
NA	Not Available
NW	Non-Water Liquid
QA	Aquatic Animal
QB	Aquatic Bird
QC	Aquatic (Some combination of at least 2) of bird, plant, animal; Excludes benthic organism
QN	Benthic Organism
QP	Aquatic Plant
SC	Cement
DIL	Laboratory dilution
SE	Sediment (associated with surface water)
SF	Filter Sandpack
SL	Sludge
SO	Soil
SP	Floor Sweepings
SQ	Soil/Solid Quality Control Matrix
SS	Scrapings
SW	Swab or Wipe
SZ	Solid Waste
TB	Terrestrial Bird
TC	Terrestrial (Some combination at least 2) of bird, plant, or animal.
TW	Treated Water
WC	Wall corings
WG	Groundwater
WL	Water that has leached through waste
WQ	Water Quality Control Matrix
WS	Surface Water
WW	Waste Water
WZ	Special Water Control Matrix

Smp Method Codes

?	Other, defined in COMMENTS column
CSF	Continuous Sample Flow
ES	Estimate
FPC	Flow Proportional Composite
GR	Grab
NA	Not Applicable
SC	Spatial Composite
SPLT	Split
TC	Temporal Composite

Sample Type Codes

?	Other, defined in COMMENTS column
DI	Deionized Water used for preparing blanks, etc.
FB	Field Blank
FR	Field Replicate (Code used for Field Duplicate)
FTB	Filter Blank
PRBL	Preservative blank
RB	Refrigerator blank
REG	Regular
REG2	Regular sample, secondary analysis
REP	Replicate
REP1	Replicate 1
RI	QC Equipment Rinseate/Decon
TB	Trip Blank
TLC	Toxicity Laboratory Control Sample

Verification Codes

?	Other, defined in COMMENTS column
B	Result exceeds background criteria
I	Result exceeds established criteria
S	Result exceeds statistical controls based on historical data
T	Holding time exceeded for this analysis
X	Result exceeds permit limits

Validation Codes

=	Validated result, which is detected and unqualified
?	Other, defined in COMMENTS column
D	Analyte, compound or nuclide detected above the reported detection limit, and the reported detection limit is approximated due to quality deficiency.
J	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
N	The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification."
R	Result rejected by validator.
U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
X	Not validated; Refer to the RSLTQUAL field for more information

Assessment Codes

?	Other, defined in COMMENTS column.
BH-CONT	Result may be biased high due to contamination of the sample from the field or laboratory.
BH-CONT, NOVAL	Result may be biased high due to contamination of the sample from the field or laboratory; Validation requested but qualifier not provided due to missing Form I.
BH-ER	Result may be biased high; chemical detected in associated equipment rinseate.
BH-FB	Result may be biased high; chemical detected in associated field blank.
BH-FB BH-RI	Result may be biased high; chemical detected in associated field blank and Result may be biased high, chemical detected in associated equipment rinseate.
BH-FB BH-TB	Result may be biased high; chemical detected in associated field blank and result may be biased high; chemical detected in associated trip blank.
BH-FB, ?	Result may be biased high; chemical detected in associated field blank & Other, defined in COMMENTS column.
BH-FB,&	Result may be biased high; chemical detected in associate field blank. See comments for additional assessment qualifiers.

PEMS/OREIS CODES

Assessment Codes (cont.)

BH-LAB	Result may be biased high; compound is a known or probable lab contaminant.
BH-LABPR	Result biased high due to laboratory process.
BH-PURGE	Result may be biased high; sample may be diluted with drilling fluid due to insufficient purging prior to sampling.
BH-QC	Result may be biased high based upon lab QC (i.e. surrogate, MS/MSD, etc.).
BH-RB	Result may be biased high; chemical detected in associated refrigerator blank.
BH-RI	Result may be biased high, chemical detected in associated equipment rinseate.
BH-SOLID	Result biased high due to sampling containing a large amount of solids.
BH-SS	Results may be biased high; sample may contain particles of the acetate sampling sleeve.
BH-TB	Result may be biased high, chemical detected in associated trip blank.
BH-TB, BL-TEMP	Result may be biased high, chemical detected in associated trip blank, result biased high due to a temperature exceedance.
BH-TEMP	Result biased high due to a temperature exceedance.
BL-AIR	Biased low due to air rotary drilling method.
BL-AIR,&	Biased low due to air rotary drilling method. See comments for additional assessment qualifiers.
BL-HS	Biased low due to headspace in sample container.
BL-HS, BL-TEMP	Biased low due to headspace in sample container & result biased low due to a temperature exceedance.
BL-LAB	Result may be biased low; compound is a known or probable lab contaminant.
BL-LABPR	Result may be biased low due to laboratory process.
BL-PRES	Result may be biased low due to improper preservative added.
BL-PRES, ?	Result may be biased low due to improper preservative added., Other defined in COMMENTS column.
BL-PURGE	Result may be biased low; sample may be diluted with drilling fluid due to the insufficient purging prior to sampling.
BL-PURGE,&	Result may be biased low; sample may be diluted with drilling fluid due to insufficient purging prior to sampling. See comments for additional assessment qualifiers.
BL-QC	Result may be biased low based upon lab QC (i.e. surrogate, MS/MSD, etc.)
BL-T	Result may be biased low; sample holding time exceeded.
BL-T, BL-QC	Result may be biased low; sample holding time exceeded and result may be biased low based upon lab QC (i.e. surrogate, MS/MSD, etc.)
BL-T,J	Result may be biased low; sample holding time exceeded, estimated.
BL-TEMP	Result may be biased low due to temperature exceedance.
BL-TEMP, BL-PRES	Result biased low due to a temperature exceedance, Result may be biased low due to improper preservative added.
BL-TEMP, J	Result biased low due to a temperature exceedance, estimated.
BL-TEMP, NOVAL	Result biased low due to a temperature exceedance, Validation requested but qualifier not provided due to missing Form I.
BL-TEMP, U	Result biased low due to a temperature exceedance, not detected.
BL-TEMP, U, BH-QC	Result biased high due to a temperature exceedance, Not detected, may be biased high based upon lab QC.
CCCSEXP	Continuous Calibration Check Standard Expired
DIL	Result is obtained from dilution
DIS-EDDF1	Discrepancies between the EDD and the Form 1. Form 1s are generated by instrument software that automatically reports all detected compounds. It is the lab's policy to not report quantities below LCRs within their EDD format. Both sets of data are correct. However, the EDD format data, which feeds OREIS, will be used for reporting.
DR	Discrepancy between summary data report and raw data.
FDUP-OUT	Field duplicate exceeds the RPD criterion.
ICPTIMS-ER	ICP-MS and TIMS error for the concentration of Uranium-235 is less than the 285 pCi/g level at one standard deviation.
ICSEXP	Initial Calibration Standard Expired.
IN-LAB	Result should be considered information only. Compound is a known or probable lab contaminant.
IN-LAB,&	Result should be considered information only. Compound is a known or probable lab contaminant. See comments for additional assessment qualifiers
IN-LABQC	Result should be considered information only. Quality control requirements of the laboratory method were not met.
IN-METH	Result should be considered information only. Lab utilized a modified method.
J	Result estimated
KYRHTAB-50	Kentucky Radiation Health and Toxic Agents Branch (KYRHTAB) has performed an independent data evaluation (not to be confused with data verification and validation) and the rad error accounts for greater than 50% of the results.
KYRHTAB-ER	Kentucky Radiation Health and Toxic Agents Branch (KYRHTAB) has performed an independent data evaluation (not to be confused with data verification and validation) and the data presents error problems (ie., no counting uncertainty or zero counting uncertainty).
KYRHTAB-LT	Kentucky Radiation Health and Toxic Agents Branch (KYRHTAB) has performed an independent data evaluation (not to be confused with data verification and validation) and the results are less than (LT) the maximum detectable activity (MDA) or detection limit and should not be plotted.

Assessment Codes (cont.)

KYRHTAB-NE	Kentucky Radiation Health and Toxic Agents Branch (KYRHTAB) has performed an independent data evaluation (not to be confused with data verification and validation) and the rad error exhibits a negative value, which is a statistical outlier.
KYRHTAB-OK	Kentucky Radiation Health and Toxic Agents Branch (KYRHTAB) has performed an independent data evaluation (not to be confused with data verification and validation) and the data is acceptable for use.
LAB-PREP	Prep method used by the lab valid but not proceduralized.
LCSEXP	LCS Expired
LCSNA	Laboratory control sample not analyzed.
LCSNI	LCS Not Independent
MDA-METHOD	The recalculated MDA is considered a method-wide MDA. Batch specific MDAs were not calculated.
MDA-RECALC	The original MDA of 21.4 pCi/L was calculated incorrectly and was recalculated during the Field Laboratory evaluation. The recalculated MDA is 24.7 pCi/L.
MSMSDEXP	Matrix Spike/Matrix Spike Duplicate Standard Expired.
N/A	Not Applicable.
NOVAL	Validation requested but qualifier not provided due to missing Form I.
NOVAL-FLAB	Validation targeted for this project but not required for field laboratory data.
NR	Assessment question not resolved.
PENP	PE Sample Not Performed.
QUAL	This data should be considered qualitative due to the sampling process, the variability in the medium sampled or issues with the analytical process.
R	Result unusable.
R-C	Result questionable, credibility at issue.
R-C, ?	Result questionable, credibility at issue, other defined in COMMENTS column.
R-C, BH-RI	Result questionable, credibility at issue. Result may be biased high, chemical detected in associated equipment rinseate.
R-C, &	Result questionable, credibility at issue. See comments for additional assessment qualifiers.
R-DUPVAR	Result questionable, measured variability of the field duplicate is outside PARCC parameter expectations, therefore population estimates of variability may be off by several orders of magnitude.
R-H	Result unusable due to historical trending (i.e., other).
R-HSS	Rejected due to high suspended solids content.
R-MTRX	Result rejected due to matrix interference.
R-NORAD	Result unusable; Uranium-235 portion of calculation is below reliable detection limits.
R-NORAD,&	Result unusable; Uranium-235 portion of calculation is below reliable detection limits. See comments for additional assessment qualifiers.
R-NTRS	Result rejected; not a true representative sample.
R-NTRSFW	Result rejected; not a true representative sample of formation water.
R-PRES	Result rejected due to improper preservative added.
R-RERUN	Result unusable; results for re-analysis should be used.
R-T	Result rejected due to missing holding time.
REM	Location sampled has been remediated due to a CERCLA or RCRA action and should not be considered representative of current site conditions.
U	Not detected.
U,J	Not detected and result estimated.
U-RAD	Result considered a non-detect; instrument measurement error is equal to or greater than the reported result.
U-RAD,&	Result considered a non-detect; instrument measurement error is equal to or greater than the reported result, see comments for additional assessment qualifiers.
USECNITRIC-CF	During the period from May 2004 to September 2009, the USEC-PGDP lab used method RL-7128-NITRIC for isotopic uranium analysis by alpha spec. Method RL-7128-NITRIC utilizes only nitric acid for dissolution rather than hydrofluoric/nitric acid. The use of nitric acid only is a less aggressive dissolution for isotopic uranium analysis by alpha spec. It has been demonstrated that Method RL-7128-NITRIC can only be utilized for isotopic uranium analysis of soil with activity greater than 10 pCi/g due to low recoveries below that level. Therefore, if the data from Method RL-7128-NITRIC will be screened against the background values reported in Background Levels of Selected Radionuclides and Metals in Soils and Geologic Media at the PGDP (1997), the following adjusted background values must be used: U-234: 1.73 pCi/g surface and 1.63 pCi/g subsurface, U-235: 0.10 pCi/g, and U-238: 0.40 pCi/g (Methods for Conducting Risk Assessments and Risk Evaluations at the Paducah Gaseous Diffusion Plant, Appendix E (2009)). Risk assessors may use data from this time period for comparison against other thresholds below 10 pCi/g without adjusting the values as long as the level of uncertainty and its impact on the risk assessment/evaluation are adequately discussed. No additional action is required for comparisons to thresholds above 10 pCi/g.

Laboratory Footnotes and Qualifiers

Footnote

A. Insufficient uranium present in the sample to determine an assay.
B. Maximum assay was used to calculate the MDA for total uranium activities.
C. Normal assay was used to calculate the MDA for total uranium activities.
D. The relative bias for the LCS is greater than 25%.
E. Gross activities are a calculated value. Gamma activity is converted to the corresponding gross alpha/beta measurement.
F. Insufficient sample available/provided for gross beta analysis.
G. TIMS assay used to calculate total uranium activity.
H. No nuclide meet criteria for gross gamma.
I. The MDA of all principle nuclide not identified and nuclide identified were summed to provide max, reportable activity
J. No analysis result available. Sample signal too weak.
K. No analysis result available. Total U below reporting limit.
L. No minor isotope determination available. Signal strength insufficient.
M. Result is biased high and MDA is biased low due to interfering lines and/or increases in BKG due to sample activity.
N. Measured U-235 act/mass was below MDA therefore all other cal. U isotopes & U-total will be rpt as below their resp. MDAs.
O. Gross Gamma has no output error.
P. The max plant assay was assumed since the calculated assay was not within the range of the plant cascade assays.
Q. Mass of U-235 is < or = MDM, thus mass of total U/U isotopes won't be reported. Total U/U isotopes will be < their MDAs
Asbestos – Not Detected
R. Cs-134 activity will be understated due to the short half-life and will exclude any previous site induced Cs-134.
S. Gross gamma is a Cs-137 equivalence. Activity assumes branch yield and det eff of Cs-137 for all line in spectrum.
T. Analyte is a common volatile laboratory contaminant
T1. Sample analysis is below LCR for concent.,however above report. limit for assay.
T1Z1. Samp analysis below LCR concent,above report.limit assay/.05wt% = or >2 sigma?
V. Method 5030A (Purge & Trap)
W. Analyte is present at the LCR.
X. See comments for explanation
Y. U/U-234 act are estimated. Assay used was determined by gamma. U/U-234 results can't be used for any NCS/NMC&A purposes. - Uranium
Z. Std Dev is calculated based on controls (SRM) prepared and analyzed with each sample batch. SRM is ~0.711 wt% U-235.
Z1. This 0.05 wt% value equal to or > 2 sigma for controls associated w/data.

Inorganic Qualifiers

* Duplicate analysis not within control limits.
\+ Method of standard additions (MSA) correlation coefficient less than 0.995.
A Indicates that a TIC is suspected aldol-condensation product.
B Applies when the analyte is found in the associated blank
D All compounds identified in the analysis at the secondary dilution factor.
E Result estimated due to interferences.
J Indicates an estimated value
M Duplicate injection precision not met.
N Sample spike recovery not within control limits.
Q No analytical result available or not required because total analyses< PQL.
R QC indicates that data are not usable. Resampling and re-analysis are necessary for verification.
S Result determined by method of standard additions (MSA).
U Analyte analyzed for but not detected at or below the lowest concentration reported.
W Post-digestion spike recovery out of control limits.
X Other specific flags and footnotes may be required to properly define the results.

Organic Qualifiers

A Tentatively identified compound (TIC) is suspected aldol-condensation product.
B Compound found in blank as well as sample.
C Compound presence confirmed by GC/MS (GC/MS flag).
D Compounds identified in an analysis at a secondary dilution filter.
E Result exceeds calibration range (GC/MS flag).
J Indicates an estimated value.
N Presumption evidence of a compound GC/MS flag).
P Difference between results from two GC columns unacceptable.
U Compound analyzed for but not detected at or below the lowest concentration reported.
X Other specific flags and footnotes may be required to properly define the results.
Y MS, MSD recovery and/or RPD failed acceptance criteria.
Z (Reserved by CLP for a laboratory-defined organic date qualifier.)

Rad Qualifiers

A Analyzed but not detected at the analyte quantitation limit.
B Method blank not statistically different from sample at 95% level of confidence.
D Sample is statistically different from duplicate at 95% level of confidence.

J Indicates an estimated value.
L Expected and measured value for LCS is statistically different at 95% level of confidence.
M Expected and measured value for MS is statistically different at 95% level of confidence.
R QC indicates that data are not usable. Resampling and reanalysis are necessary for verification.
T Tracer recovery is < or equal to 30% or > or equal to 105%.
U Value reported is < the MDA and/or < 2 sigma TPE.
X Other specific flags and footnotes may be required to properly define the results.

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