PAD-ENM-0086/V3

C-746-U Contained Landfill
Third Quarter Calendar Year 2013
(July–September)
Compliance Monitoring Report
Paducah Gaseous Diffusion Plant,
Paducah, Kentucky

This document is approved for public release per review by:

Merlin Shown 11-18-2013

LATA Kentucky Classification Support Date

PAD-ENM-0086/V3

C-746-U Contained Landfill
Third Quarter Calendar Year 2013
(July–September)
Compliance Monitoring Report
Paducah Gaseous Diffusion Plant,
Paducah, Kentucky

Date Issued—November 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
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 Third Quarter Calendar Year 2013 (July–September) 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.

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 third quarter 2013, during July, 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 MW376 and MW377 (screened in the UCRS), which had an insufficient amount of water to obtain samples; therefore, there are no analytical results for these locations.

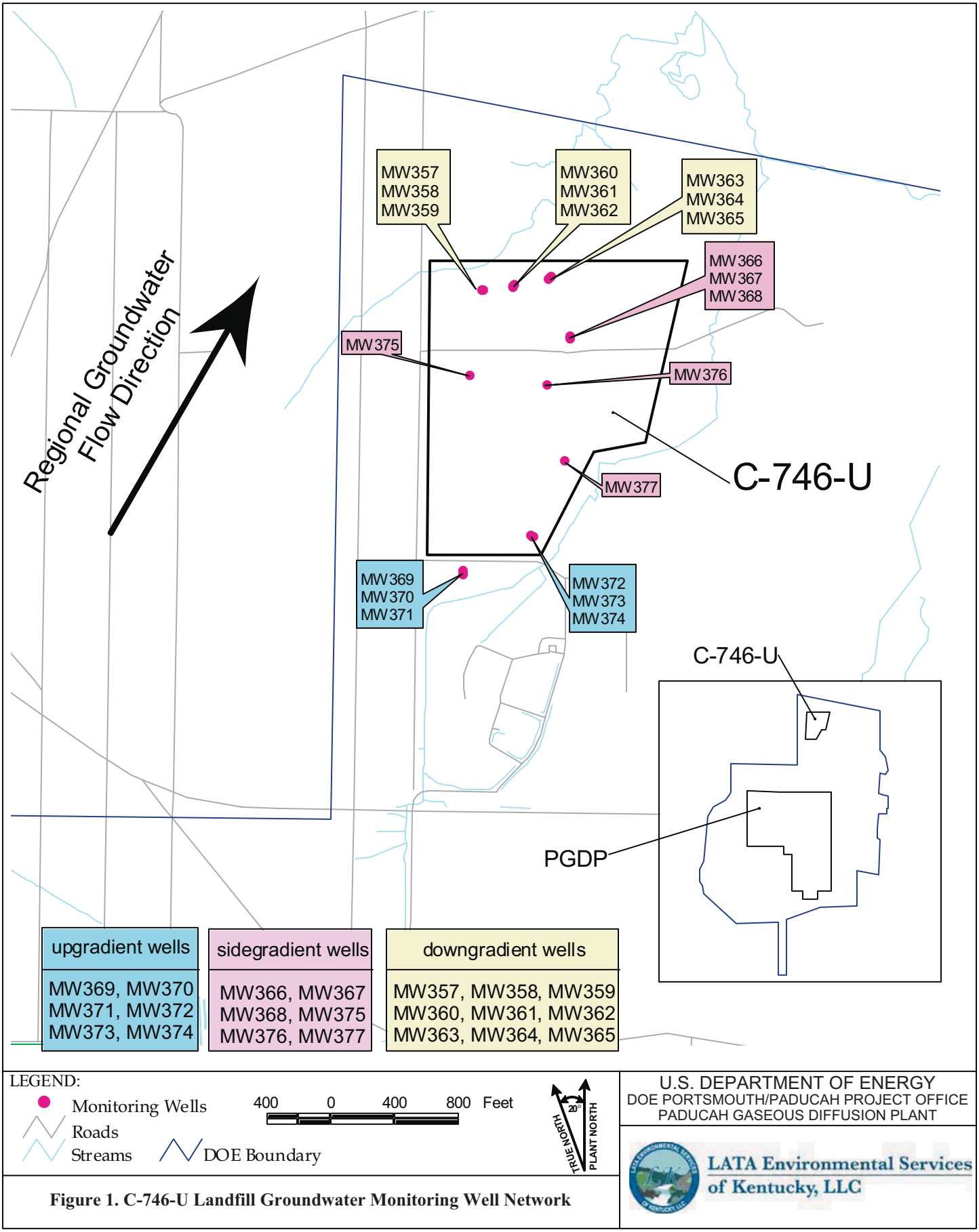

Figure 1. C-746-U Landfill Groundwater Monitoring Well Network

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 August 5 and 6, 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 38 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 August was 3.41×10^{-4} ft/ft, while the hydraulic gradient for the upper RGA at the C-746-U Landfill was 5.00×10^{-4} ft/ft and for the lower RGA was 4.92×10^{-4} ft/ft. Calculated groundwater flow rates (average linear velocity) at the C-746-U Landfill range from 0.85 to 1.45 ft/day for the URGA and 0.84 to 1.43 ft/day for the LRGA (see Table E.3).

1.2.2 Methane Monitoring

Landfill operations staff monitored for the occurrence of methane on September 18, 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 C-746-U Landfill Methane Log provided in Appendix H.

1.2.3 Surface Water Monitoring

Surface water sampling was conducted on August 7, 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, Section 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 in the previous report indicated a concentration of uranium above those levels generally observed. The third quarter surface water sample at L150 indicated a uranium level that was lower than the previous quarter and consistent with historical levels.

[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.

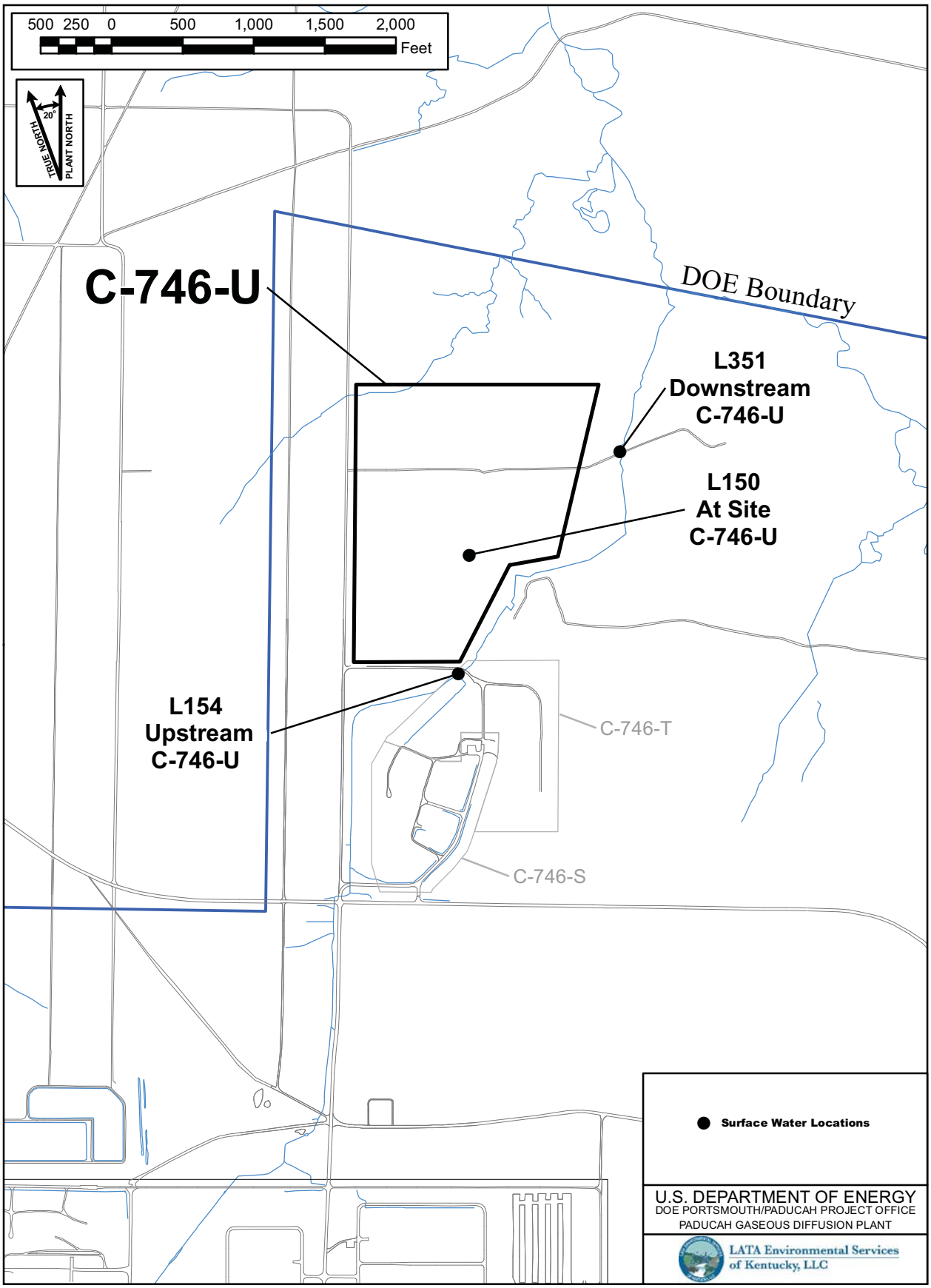

Figure 2. C-746-U Landfill Surface Water Monitoring Locations

1.3 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 third quarter 2013.

Table 1. Summary of MCL Exceedances

UCRS	URGA	LRGA
(none)	MW357: trichloroethene MW372: beta activity, trichloroethene	MW373: beta activity, trichloroethene

Table 2. Summary of Statistically Significant Increases

UCRS	URGA	LRGA
MW359: dissolved oxygen, oxidation-reduction potential, sulfate	MW357: oxidation-reduction potential	MW358: oxidation-reduction potential
MW362: oxidation-reduction potential, sulfate	MW360: oxidation-reduction potential	MW361: oxidation-reduction potential, technetium-99
MW365: dissolved oxygen, oxidation-reduction potential, sulfate	MW363: oxidation-reduction potential	MW364: oxidation-reduction potential, technetium-99
MW368: dissolved oxygen, oxidation-reduction potential, sulfate	MW366: oxidation-reduction potential, technetium-99	MW367: oxidation-reduction potential
MW371: (upgradient): dissolved oxygen, oxidation-reduction potential, sulfate	MW369: (upgradient): oxidation-reduction potential	MW370: (upgradient): oxidation-reduction potential
MW374: (upgradient): dissolved oxygen, oxidation-reduction potential	MW372: (upgradient): calcium, conductivity, dissolved solids, oxidation reduction-potential, magnesium, sulfate, technetium-99	MW373: (upgradient): calcium, oxidation-reduction potential, technetium-99
MW375: oxidation-reduction potential, sulfate		

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

There were no new MCL exceedances for this quarter. The MCL exceedances—beta activity in MW372 and MW373 and trichloroethene in MW357, MW372, and MW373—are related to sources of contamination that are upgradient of the C-746-U Landfill. The notification of parameters that exceeded the MCL has been submitted electronically to the KDWM in accordance with 401 *KAR* 48:300, Section 7, prior to the submittal of this report.

There were no new statistically significant increases in this quarter. All 36 statistically significant increases have occurred previously at least once since fourth quarter calendar year 2002.

This report serves as the notification of parameters that had statistically significant increased concentrations relative to background concentrations, as required by Permit Number 073-00045, Condition GSTR0001, Requirement 8, and 401 *KAR* 48:300, Section 7.

[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).

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2. DATA EVALUATION/STATISTICAL SYNOPSIS

The statistical analyses conducted on the third 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 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 (D19–D83).

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 one-side tolerance interval statistical procedures applied to the data is provided in Appendix D under Statistical Analysis Process. The statistical analysis was conducted separately for each parameter in each well. The MWs included historically in the statistical analyses are listed in Table 3.

Table 3. Monitoring Wells Included Historically in Statistical Analysis*

UCRS	URGA	LRGA
MW359	MW357	MW358
MW362	MW360	MW361
MW365	MW363	MW364
MW368 (partially 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.

**MW376 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, 22 parameters required statistical analysis in the UCRS. During the third 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, 21 parameters required statistical analysis in the URGA. During the third quarter, calcium, conductivity, dissolved solids, magnesium, oxidation-reduction potential, sulfate, and technetium-99 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, 17 parameters required statistical analysis in the LRGA. During the third quarter, calcium, 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*
Third Quarter Calendar Year 2013 (July–September)
Compliance Monitoring Report,
Paducah Gaseous Diffusion Plant,
Paducah, Kentucky (PAD-ENM-0086/V3)

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

November 18, 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 3rd Qtr. CY 2013

Please check the following as applicable:

_____ Characterization X Quarterly _____ Semiannual ____ Annual _____ Assessment

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

_____ Leachate X Methane Monitoring

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

I certify under penalty of law that 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.

Craig S. Jones, Manager of Projects
LATA Environmental Services of Kentucky, LLC

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: July 2013 Surface Water: August 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)	7/22/2013 13:42	7/22/2013 07:52	7/23/2013 13:34	7/22/2013 12:37
Duplicate ("Y" or "N")[2]	N	N	N	N
Split ("Y" or "N")[3]	N	N	N	N
Facility Sample ID Number (if applicable)	MW357UG4-13	MW358UG4-13	MW359UG4-13	MW360UG4-13
Laboratory Sample ID Number (if applicable)	C13203033001	C13203021001	C13205024001	C13203033002
Date of Analysis (Month/Day/Year) For Volatile Organics Analysis	7/23/2013	7/23/2013	7/25/2013	7/23/2013
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		<2	
16887-00-6		Chloride(s)	T	mg/L	9056	34		33		<2		11	
16984-48-8		Fluoride	T	mg/L	9214	0.15		0.17		<0.1		0.24	
S0595- -		Nitrate & Nitrite	T	mg/L	9056	1.1		<1		1.8		<1	
14808-79-8		Sulfate	T	mg/L	9056	62		83		45		100	
NS1894		Barometric Pressure Reading	T	Inches/Hg	Field	29.86		29.86		29.92		29.86	
S0145- -		Specific Conductance	T	μMH0/cm	Field	461		529		337		628	

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

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

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

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

GROUNDWATER SAMPLE ANALYSIS - (Cont.)

AKGWA NUMBER[1], Facility Well/Spring Number						8004-4798		8004-4799		8004-0981		8004-4800	
Facility's Local Well or Spring Number (e.g., MW-1, MW-2, BLANK-F, etc.)						357		358		359		360	
CAS RN[4]		CONSTITUENT	TD[5]	Unit OF MEASURE	METHOD	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS
S0906 - -		Static Water Level Elevation	T	Ft. MSL	Field	325.12		325.13		330.27		325.11	
N238		Dissolved Oxygen	T	mg/L	Field	3.37		1.08		5.76		2.01	
S0266- -		Total Dissolved Solids	T	mg/L	160.1	259		303		183		355	
S0296- -		pH	T	Units	Field	6.2		6.38		6.47		6.28	
NS215		Eh	T	mV	Field	420		236		432		257	
S0907 - -		Temperature	T	°C	Field	20.5		18.5		19.94		21.56	
7429-90-5		Aluminum	T	mg/L	6020	<0.2		<0.2		<0.2		<0.2	
7440-36-0		Antimony	T	mg/L	6020	<0.005	*	<0.005	*	<0.005	*B	<0.005	*
7440-38-2		Arsenic	T	mg/L	7060	0.00104		0.00146		<0.001	B	0.00108	
7440-39-3		Barium	T	mg/L	6020	0.0597		0.0451		0.0295		0.152	
7440-41-7		Beryllium	T	mg/L	6020	<0.001		<0.001		<0.001		<0.001	
7440-42-8		Boron	T	mg/L	6010	0.33		0.364		<0.2	B	<0.2	
7440-43-9		Cadmium	T	mg/L	6020	<0.001		<0.001		<0.001		<0.001	
7440-70-2		Calcium	T	mg/L	6010	29.5		36.6		8.21		30.5	
7440-47-3		Chromium	T	mg/L	6020	<0.01		<0.01		<0.01	*	<0.01	
7440-48-4		Cobalt	T	mg/L	6020	<0.001	*	0.00208	*	<0.001		0.0327	*
7440-50-8		Copper	T	mg/L	6020	<0.02	*	<0.02	*	<0.02	*	<0.02	*
7439-89-6		Iron	T	mg/L	6010	<0.1		0.363		<0.1		7.25	
7439-92-1		Lead	T	mg/L	6020	<0.0013		<0.0013		<0.0013		<0.0013	
7439-95-4		Magnesium	T	mg/L	6010	11.7		14.8		3.84		10.4	
7439-96-5		Manganese	T	mg/L	6020	0.0073		0.108		<0.005		0.276	
7439-97-6		Mercury	T	mg/L	7470	<0.0002		<0.0002		<0.0002		<0.0002	

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

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

GROUNDWATER SAMPLE ANALYSIS - (Cont.)

AKGWA NUMBER[1], Facility Well/Spring Number						8004-4798		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	<0.001	B
7440-02-0		Nickel	T	mg/L	6020	<0.005	*	<0.005	*	<0.005		<0.005	*
7440-09-7		Potassium	T	mg/L	6010	1.73	*	2.36	*	<0.2		0.824	*
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		0.00507		<0.005		<0.005	
7440-22-4		Silver	T	mg/L	6020	<0.001	*	<0.001	*	<0.001		<0.001	*
7440-23-5		Sodium	T	mg/L	6010	40.4		41.9		34.9		68.3	
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		<0.001		<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		<0.02		<0.02		<0.02	
108-05-4		Vinyl acetate	T	mg/L	8260	<0.01	J	<0.01	J	<0.01	J	<0.01	J
67-64-1		Acetone	T	mg/L	8260	<0.01		<0.01		<0.01		<0.01	
107-02-8		Acrolein	T	mg/L	8260	<0.01		<0.01		<0.01		<0.01	
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						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		<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		<0.005	
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		<0.005	
67-66-3		Chloroform	T	mg/L	8260	<0.005		<0.005		<0.005		<0.005	
74-87-3		Methyl chloride	T	mg/L	8260	<0.005		<0.005		<0.005		<0.005	
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	<0.005		<0.005		<0.005		<0.005	
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		<0.002		<0.002		<0.002	
127-18-4		Ethene, Tetrachloro-	T	mg/L	8260	<0.005		<0.005		<0.005		<0.005	
79-01-6		Ethene, Trichloro-	T	mg/L	8260	0.0069		0.0049		<0.001		<0.001	

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

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

GROUNDWATER SAMPLE ANALYSIS - (Cont.)

AKGWA NUMBER[1], Facility Well/Spring Number						8004-4798		8004-4799		8004-0981		8004-4800	
Facility's Local Well or Spring Number (e.g., MW-1, MW-2, etc.)						357		358		359		360	
CAS RN[4]		CONSTITUENT	TD[5]	Unit OF MEASURE	METHOD	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS
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	J	<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	<0.18		<0.18		<0.18		<0.18	
12674-11-2		PCB-1016	T	ug/L	8082	<0.17		<0.17		<0.17		<0.17	
11104-28-2		PCB-1221	T	ug/L	8082	<0.18		<0.18		<0.18		<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
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Permit Number: 073-00045

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

GROUNDWATER SAMPLE ANALYSIS - (Cont.)

AKGWA NUMBER[1], Facility Well/Spring Number						8004-4798		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		<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	1.95	*	0.218	*	1.68	*	2.25	*
12587-47-2		Gross Beta	T	pCi/L	9310	27.7	*	32	*	0.792	*	3.82	*
10043-66-0		Iodine-131	T	pCi/L	RL-7124		*		*		*		*
13982-63-3		Radium-226	T	pCi/L	RL-7129	0.164	*	0.0589	*	0.0356	*	-0.207	*
10098-97-2		Strontium-90	T	pCi/L	RL-7140	0.252	*B	0.279	*B	0.494	*B	0.581	*B
14133-76-7		Technetium-99	T	pCi/L	RL-7100	48.8	*	45.4	*	15.4	*	9.42	*
14269-63-7		Thorium-230	T	pCi/L	RL-7128	0.0122	*	-0.0131	*	0.00788	*	0.021	*
10028-17-8		Tritium	T	pCi/L	704R6	132	*	542	*	127	*	429	*
S0130- -		Chemical Oxygen Demand	T	mg/L	410.4	<36		<36		<36		<36	
57-12-5		Cyanide	T	mg/L	9010	<0.04		<0.04		<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	B	<1	B	1.5		3	B
S0586- -		Total Organic Halides	T	mg/L	9020	0.014		0.021		0.014		0.034	

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)						7/18/2013 13:49		7/23/2013 12:27		7/17/2013 13:15		7/18/2013 08:39	
Duplicate ("Y" or "N")[2]						N		N		N		N	
Split ("Y" or "N")[3]						N		N		N		N	
Facility Sample ID Number (if applicable)						MW361UG4-13		MW362UG4-13		MW363UG4-13		MW364UG4-13	
Laboratory Sample ID Number (if applicable)						C13199038001		C13204019001		C13198019001		C13199004001	
Date of Analysis (Month/Day/Year) For Volatile Organics Analysis						7/19/2013		7/23/2013		7/19/2013		7/19/2013	
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		<2	
16887-00-6		**Chloride(s)**	**T**	**mg/L**	**9056**	33		10		36		31	
16984-48-8		**Fluoride**	**T**	**mg/L**	**9214**	0.15		0.3		0.18		0.15	
S0595- -		**Nitrate & Nitrite**	**T**	**mg/L**	**9056**	<1	J	<1		4.5	*	<1	J
14808-79-8		**Sulfate**	**T**	**mg/L**	**9056**	79		71		21		61	
NS1894		**Barometric Pressure Reading**	**T**	**Inches/Hg**	**Field**	30.17		29.92		30.29		30.17	
S0145- -		**Specific Conductance**	**T**	**μMH0/cm**	**Field**	482		540		423		465	

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

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

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

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

AKGWA NUMBER[1], Facility Well/Spring Number						8004-4795		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	324.89		334.52		324.62		324.76	
N238		Dissolved Oxygen	T	mg/L	Field	3.07		1.96		0.64		0.97	
S0266- -		Total Dissolved Solids	T	mg/L	160.1	294		459		243		250	
S0296- -		pH	T	Units	Field	6.03		6.95		6.16		6.06	
NS215		Eh	T	mV	Field	520		549		455		350	
S0907 - -		Temperature	T	°C	Field	20.89		21.22		19.33		18.72	
7429-90-5		Aluminum	T	mg/L	6020	<0.2		7.86		<0.2		<0.2	
7440-36-0		Antimony	T	mg/L	6020	<0.005	*	<0.005	*B	<0.005	*B	<0.005	*B
7440-38-2		Arsenic	T	mg/L	7060	0.00106		<0.01	B	<0.001		0.00114	
7440-39-3		Barium	T	mg/L	6020	0.0539		0.137		0.174		0.0744	
7440-41-7		Beryllium	T	mg/L	6020	<0.001		<0.001		<0.001		<0.001	
7440-42-8		Boron	T	mg/L	6010	0.222		<0.2	B	<0.2		<0.2	
7440-43-9		Cadmium	T	mg/L	6020	<0.001		<0.001		<0.001		<0.001	
7440-70-2		Calcium	T	mg/L	6010	33.5		15.8		28.2		28.7	
7440-47-3		Chromium	T	mg/L	6020	<0.01		<0.1	*	<0.01		<0.01	
7440-48-4		Cobalt	T	mg/L	6020	<0.001	*	<0.01		0.00139	*	<0.001	*
7440-50-8		Copper	T	mg/L	6020	<0.02	*	<0.2	*	<0.02	*	<0.02	*
7439-89-6		Iron	T	mg/L	6010	<0.1		6.12		<0.1		0.189	
7439-92-1		Lead	T	mg/L	6020	<0.0013		0.00886		<0.0013		<0.0013	
7439-95-4		Magnesium	T	mg/L	6010	13.4		6.84		10.5		11.3	
7439-96-5		Manganese	T	mg/L	6020	0.00586		<0.05		0.247		0.0228	
7439-97-6		Mercury	T	mg/L	7470	<0.0002		<0.0002		<0.0002		<0.0002	

RESIDENTIAL/CONTAINED-QUARTERLY
Facility: US DOE - Paducah Gaseous Diffusion Plant
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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						8004-4795		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	0.00302	B	<0.001	B	<0.001	B
7440-02-0		Nickel	T	mg/L	6020	<0.005	*	<0.05		<0.005	*	<0.005	*
7440-09-7		Potassium	T	mg/L	6010	1.92	*	0.815		1.28		1.96	
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		<0.005		<0.005		0.00504	
7440-22-4		Silver	T	mg/L	6020	<0.001	*	<0.001		<0.001	*	<0.001	*
7440-23-5		Sodium	T	mg/L	6010	42.8		96.5		37		41.6	
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		0.00561		<0.001		<0.001	
7440-62-2		Vanadium	T	mg/L	6020	<0.02		<0.2		<0.02		<0.02	
7440-66-6		Zinc	T	mg/L	6020	<0.02		<0.2		<0.02		<0.02	
108-05-4		Vinyl acetate	T	mg/L	8260	<0.01	*J	<0.01	J	<0.01	*J	<0.01	*J
67-64-1		Acetone	T	mg/L	8260	<0.01	J	<0.01		<0.01	J	<0.01	J
107-02-8		Acrolein	T	mg/L	8260	<0.01		<0.01		<0.01		<0.01	
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						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		<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		<0.005	
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	J	<0.005		<0.005	J	<0.005	J
67-66-3		Chloroform	T	mg/L	8260	<0.001		<0.005		<0.001		<0.001	
74-87-3		Methyl chloride	T	mg/L	8260	<0.005		<0.005		<0.005		<0.005	
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		<0.005		<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		<0.002		<0.002		<0.002	
127-18-4		Ethene, Tetrachloro-	T	mg/L	8260	<0.001		<0.005		<0.001		<0.001	
79-01-6		Ethene, Trichloro-	T	mg/L	8260	0.0042		<0.001		<0.001		0.0027	

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		<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	<0.18		<0.18		0.19		<0.17	
12674-11-2		PCB-1016	T	ug/L	8082	<0.17		<0.17		<0.17		<0.16	
11104-28-2		PCB-1221	T	ug/L	8082	<0.18		<0.18		<0.18		<0.17	
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		0.19		<0.1	
12672-29-6		PCB-1248	T	ug/L	8082	<0.12		<0.12		<0.12		<0.12	

RESIDENTIAL/CONTAINED-QUARTERLY
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Permit Number: 073-00045

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

GROUNDWATER SAMPLE ANALYSIS - (Cont.)

AKGWA NUMBER[1], Facility Well/Spring Number						8004-4795		8004-0986		8004-4796		8004-4797	
Facility's Local Well or Spring Number (e.g., MW-1, MW-2, etc.)						361		362		363		364	
CAS RN[4]		CONSTITUENT	TD[5]	Unit OF MEASURE	METHOD	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS
11097-69-1		PCB-1254	T	ug/L	8082	<0.07		<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	3.67	*	5.74	*	1.41	*	2.79	*
12587-47-2		Gross Beta	T	pCi/L	9310	38.3	*	6.09	*	10.9	*	35.3	*
10043-66-0		Iodine-131	T	pCi/L	RL-7124		*		*		*		*
13982-63-3		Radium-226	T	pCi/L	RL-7129	-0.0000000107	*	0.117	*	0.14	*	0.0836	*
10098-97-2		Strontium-90	T	pCi/L	RL-7140	0.334	*B	-0.0864	*B	0.516	*B	0.895	*B
14133-76-7		Technetium-99	T	pCi/L	RL-7100	51.3	*	7.82	*	13.4	*	46.4	*
14269-63-7		Thorium-230	T	pCi/L	RL-7128	-0.0787	*	0.0126	*	-0.0166	*	-0.0066	*
10028-17-8		Tritium	T	pCi/L	704R6	324	*	35	*	-409	*	-531	*
S0130- -		Chemical Oxygen Demand	T	mg/L	410.4	<36		<36		<36	J	<36	
57-12-5		Cyanide	T	mg/L	9010	<0.04		<0.04		<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		5.4		<1		<1	
S0586- -		Total Organic Halides	T	mg/L	9020	0.021		0.014		0.012		0.014	

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)	7/18/2013 07:37	7/17/2013 14:13	7/17/2013 09:30	7/18/2013 12:44
Duplicate ("Y" or "N")[2]	N	N	N	N
Split ("Y" or "N")[3]	N	N	N	N
Facility Sample ID Number (if applicable)	MW365UG4-13	MW366UG4-13	MW367UG4-13	MW368UG4-13
Laboratory Sample ID Number (if applicable)	C13199004002	C13198019002	C13198017001	C13199038002
Date of Analysis (Month/Day/Year) For Volatile Organics Analysis	7/19/2013	7/19/2013	7/19/2013	7/19/2013
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		<2	
16887-00-6		Chloride(s)	T	mg/L	9056	6.5		38		35		7.8	
16984-48-8		Fluoride	T	mg/L	9214	0.26		0.16		0.14		0.2	
S0595- -		Nitrate & Nitrite	T	mg/L	9056	<1	J	<1	*	<1	*	<1	J
14808-79-8		Sulfate	T	mg/L	9056	59		53		39		110	
NS1894		Barometric Pressure Reading	T	Inches/Hg	Field	30.17		30.29		30.29		30.17	
S0145- -		Specific Conductance	T	μMH0/cm	Field	401		475		420		842	

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

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

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

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

GROUNDWATER SAMPLE ANALYSIS - (Cont.)

AKGWA NUMBER[1], Facility Well/Spring Number						8004-0984		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	329.62		324.74		324.66		327.83	
N238		Dissolved Oxygen	T	mg/L	Field	4.6		0.98		0.74		6.9	
S0266- -		Total Dissolved Solids	T	mg/L	160.1	263		266		242		519	
S0296- -		pH	T	Units	Field	6.6		6.11		6.13		6.59	
NS215		Eh	T	mV	Field	741		407		330		450	
S0907 - -		Temperature	T	°C	Field	19.72		18.78		18.28		21.44	
7429-90-5		Aluminum	T	mg/L	6020	<0.2		<0.2		<0.2		2.41	
7440-36-0		Antimony	T	mg/L	6020	<0.005	*B	<0.005	*B	<0.005	*B	<0.005	*
7440-38-2		Arsenic	T	mg/L	7060	<0.001		0.00139		0.00119		0.00848	
7440-39-3		Barium	T	mg/L	6020	0.107		0.174		0.19		0.0204	
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		<0.2		<0.2		<0.2	
7440-43-9		Cadmium	T	mg/L	6020	<0.001		<0.001		<0.001		<0.001	
7440-70-2		Calcium	T	mg/L	6010	22.5		31.2		29.1		25	
7440-47-3		Chromium	T	mg/L	6020	<0.01		<0.01		<0.01		<0.01	
7440-48-4		Cobalt	T	mg/L	6020	0.00176	*	<0.001	*	0.0021	*	0.00263	*
7440-50-8		Copper	T	mg/L	6020	<0.02	*	<0.02	*	<0.02	*	<0.02	*
7439-89-6		Iron	T	mg/L	6010	<0.1		<0.1		2.06		1.09	
7439-92-1		Lead	T	mg/L	6020	<0.0013		<0.0013		<0.0013		0.00156	
7439-95-4		Magnesium	T	mg/L	6010	9.67		12.2		11		8.43	
7439-96-5		Manganese	T	mg/L	6020	0.0407		0.0265		0.564		0.0222	
7439-97-6		Mercury	T	mg/L	7470	<0.0002		<0.0002		<0.0002		<0.0002	

RESIDENTIAL/CONTAINED-QUARTERLY
Facility: US DOE - Paducah Gaseous Diffusion Plant
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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						8004-0984		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	0.00582	
7440-02-0		Nickel	T	mg/L	6020	0.00643	*	<0.005	*	<0.005	*	0.0103	*
7440-09-7		Potassium	T	mg/L	6010	0.254		1.98		2.9		0.689	*
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		0.00581		<0.005		<0.005	
7440-22-4		Silver	T	mg/L	6020	<0.001	*	<0.001	*	<0.001	*	<0.001	*
7440-23-5		Sodium	T	mg/L	6010	49.2		43.5		36.2		154	
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		<0.001		<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		<0.02		<0.02		<0.02	
108-05-4		Vinyl acetate	T	mg/L	8260	<0.01	*J	<0.01	*J	<0.01	*J	<0.01	*J
67-64-1		Acetone	T	mg/L	8260	<0.01	J	<0.01	J	<0.01	J	<0.01	J
107-02-8		Acrolein	T	mg/L	8260	<0.01		<0.01		<0.01		<0.01	
107-13-1		Acrylonitrile	T	mg/L	8260	<0.01		<0.01		<0.01		<0.005	
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
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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						8004-0984		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		<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		<0.005	
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	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		<0.005		<0.005	
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		<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		0.0039		0.0024		<0.001	

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

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

GROUNDWATER SAMPLE ANALYSIS - (Cont.)

AKGWA NUMBER[1], Facility Well/Spring Number						8004-0984		8004-0982		8004-4793		8004-0983	
Facility's Local Well or Spring Number (e.g., MW-1, MW-2, etc.)						365		366		367		368	
CAS RN[4]		CONSTITUENT	TD[5]	Unit OF MEASURE	METHOD	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS
100-41-4		Ethylbenzene	T	mg/L	8260	<0.005		<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		<0.001	
75-09-2		Dichloromethane	T	mg/L	8260	<0.005	*	<0.005	*	<0.005	*	<0.005	*
108-10-1		Methyl isobutyl ketone	T	mg/L	8260	<0.01		<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	0.31		<0.18		<0.18		0.22	
12674-11-2		PCB-1016	T	ug/L	8082	<0.17		<0.17		<0.17		<0.17	
11104-28-2		PCB-1221	T	ug/L	8082	<0.18		<0.18		<0.18		<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	0.31		<0.1		<0.1		0.22	
12672-29-6		PCB-1248	T	ug/L	8082	<0.12		<0.12		<0.12		<0.12	

RESIDENTIAL/CONTAINED-QUARTERLY
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Permit Number: 073-00045

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

GROUNDWATER SAMPLE ANALYSIS - (Cont.)

AKGWA NUMBER[1], Facility Well/Spring Number						8004-0984		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		<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	-1.44	*	2.74	*	5.94	*	5.04	*
12587-47-2		Gross Beta	T	pCi/L	9310	0.18	*	41.5	*	29.3	*	6.38	*
10043-66-0		Iodine-131	T	pCi/L	RL-7124		*		*		*		*
13982-63-3		Radium-226	T	pCi/L	RL-7129	-0.029	*	0.0972	*	0.456	*		*
10098-97-2		Strontium-90	T	pCi/L	RL-7140	0.766	*B	-0.0165	*B	0.363	*B		*
14133-76-7		Technetium-99	T	pCi/L	RL-7100	7.45	*	69.9	*	42.8	*	4.26	*
14269-63-7		Thorium-230	T	pCi/L	RL-7128	-0.0427	*	-0.00141	*	-0.000505	*		*
10028-17-8		Tritium	T	pCi/L	704R6	-165	*	279	*	-23.4	*	278	*
S0130- -		Chemical Oxygen Demand	T	mg/L	410.4	<36		<36	J	<36	J	<36	
57-12-5		Cyanide	T	mg/L	9010	<0.04		<0.04		<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	1.4		<1		<1		2.3	
S0586- -		Total Organic Halides	T	mg/L	9020	0.026		0.014		0.02		0.029	

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)	7/16/2013 08:34	7/16/2013 14:21	7/16/2013 13:17	7/16/2013 12:18
Duplicate ("Y" or "N")[2]	N	N	N	N
Split ("Y" or "N")[3]	N	N	N	N
Facility Sample ID Number (if applicable)	MW369UG4-13	MW370UG4-13	MW371UG4-13	MW372UG4-13
Laboratory Sample ID Number (if applicable)	C13197007001	C13197020001	C13197020002	C13197019001
Date of Analysis (Month/Day/Year) For Volatile Organics Analysis	7/16/2013	7/19/2013	7/19/2013	7/16/2013
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	40		43		8.1		49	
16984-48-8		Fluoride	T	mg/L	9214	0.54		0.16		0.27		0.17	
S0595- -		Nitrate & Nitrite	T	mg/L	9056	<1		1.2		1.1		<1	
14808-79-8		Sulfate	T	mg/L	9056	8.7		18		19		150	
NS1894		Barometric Pressure Reading	T	Inches/Hg	Field	30.28		29.44		29.44		29.44	
S0145- -		Specific Conductance	T	μMH0/cm	Field	427		469		704		822	

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

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

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

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

GROUNDWATER SAMPLE ANALYSIS - (Cont.)

AKGWA NUMBER[1], Facility Well/Spring Number						8004-4820		8004-4818		8004-4819		8004-4808	
Facility's Local Well or Spring Number (e.g., MW-1, MW-2, BLANK-F, etc.)						369		370		371		372	
CAS RN[4]		CONSTITUENT	TD[5]	Unit OF MEASURE	METHOD	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS
S0906 - -		Static Water Level Elevation	T	Ft. MSL	Field	325.26		325.26		340.54		325.28	
N238		Dissolved Oxygen	T	mg/L	Field	0.79		3.39		2.76		0.61	
S0266- -		Total Dissolved Solids	T	mg/L	160.1	232		230		423		503	
S0296- -		pH	T	Units	Field	6.27		6.27		6.68		6.14	
NS215		Eh	T	mV	Field	284		387		390		273	
S0907 - -		Temperature	T	°C	Field	19.22		21.67		21.28		19.72	
7429-90-5		Aluminum	T	mg/L	6020	<0.2		<0.2		0.563		<0.2	
7440-36-0		Antimony	T	mg/L	6020	<0.005	*B	<0.005	*B	<0.005	*B	<0.005	*B
7440-38-2		Arsenic	T	mg/L	7060	0.00249		0.00144		<0.001		0.0024	
7440-39-3		Barium	T	mg/L	6020	0.402		0.182		0.138		0.0675	
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		<0.2		<0.2		1.19	
7440-43-9		Cadmium	T	mg/L	6020	<0.001		<0.001		<0.001		<0.001	
7440-70-2		Calcium	T	mg/L	6010	19.9		29.2		26.9		63.5	
7440-47-3		Chromium	T	mg/L	6020	<0.01		<0.01		<0.01		<0.01	
7440-48-4		Cobalt	T	mg/L	6020	0.0274	*	<0.001	*	<0.001	*	<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	2.38		<0.1		0.333		0.81	
7439-92-1		Lead	T	mg/L	6020	<0.0013		<0.0013		<0.0013		<0.0013	
7439-95-4		Magnesium	T	mg/L	6010	7.62		11.5		11.2		23.8	
7439-96-5		Manganese	T	mg/L	6020	0.271		<0.005		<0.005		0.0209	
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	0.00929	*	<0.005	*	<0.005	*	<0.005	*
7440-09-7		Potassium	T	mg/L	6010	0.734		2.51		0.361		2.44	
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		0.00556		<0.005		0.00722	
7440-22-4		Silver	T	mg/L	6020	<0.001	*	<0.001	*	<0.001	*	<0.001	*
7440-23-5		Sodium	T	mg/L	6010	54.7		38.4		122		61.6	
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		0.00145		<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		<0.02		<0.02		<0.02	
108-05-4		Vinyl acetate	T	mg/L	8260	<0.01	J	<0.01	*J	<0.01	*J	<0.01	J
67-64-1		Acetone	T	mg/L	8260	<0.01		<0.01	J	<0.01	J	<0.01	
107-02-8		Acrolein	T	mg/L	8260	<0.01		<0.01		<0.01		<0.01	
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
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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
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		<0.005	
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	J	<0.005	J	<0.005	
67-66-3		Chloroform	T	mg/L	8260	<0.005		<0.001		<0.001		<0.005	
74-87-3		Methyl chloride	T	mg/L	8260	<0.005		<0.005		<0.005		<0.005	
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	<0.005		<0.001		<0.001		<0.005	
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		<0.005	J	<0.005	J	<0.005	
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		<0.002		<0.002		<0.002	
127-18-4		Ethene, Tetrachloro-	T	mg/L	8260	<0.005		<0.001		<0.001		<0.005	
79-01-6		Ethene, Trichloro-	T	mg/L	8260	<0.001		0.0017		<0.001		0.0073	

RESIDENTIAL/CONTAINED-QUARTERLY
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Permit Number: 073-00045

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

GROUNDWATER SAMPLE ANALYSIS - (Cont.)

AKGWA NUMBER[1], Facility Well/Spring Number						8004-4820		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		<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	<0.17		<0.18		<0.18		<0.18	
12674-11-2		PCB-1016	T	ug/L	8082	<0.16		<0.17		<0.17		<0.17	
11104-28-2		PCB-1221	T	ug/L	8082	<0.17		<0.18		<0.18		<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	0.11		<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	1.47	*	-1.08	*	0.855	*	11.5	*
12587-47-2		Gross Beta	T	pCi/L	9310	16.7	*	19	*	4.75	*	115	*
10043-66-0		Iodine-131	T	pCi/L	RL-7124		*		*		*		*
13982-63-3		Radium-226	T	pCi/L	RL-7129	0.104	*	0.177	*	0.236	*	0.135	*
10098-97-2		Strontium-90	T	pCi/L	RL-7140	0.411	*B	0.394	*B	0.289	*B	1.39	*B
14133-76-7		Technetium-99	T	pCi/L	RL-7100	23	*	33.2	*	9.29	*	176	*
14269-63-7		Thorium-230	T	pCi/L	RL-7128	-0.0191	*	-0.0424	*	0.0134	*	-0.0278	*
10028-17-8		Tritium	T	pCi/L	704R6	-99.4	*	-377	*	-404	*	-212	*
S0130- -		Chemical Oxygen Demand	T	mg/L	410.4	<36	J	<36	J	<36	J	<36	J
57-12-5		Cyanide	T	mg/L	9010	<0.04	J	<0.04		<0.04		<0.04	J
20461-54-5		Iodide	T	mg/L	345.1	<2		<2		<2		<2	
S0268- -		Total Organic Carbon	T	mg/L	9060	1.7		<1		1.6		<1	
S0586- -		Total Organic Halides	T	mg/L	9020	0.059		0.016		0.015		0.022	

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)	7/16/2013 08:29	7/16/2013 09:25	7/17/2013 08:06	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)	MW373UG4-13	MW374UG4-13	MW375UG4-13	NA
Laboratory Sample ID Number (if applicable)	C13197019002	C13197019003	C13198017002	NA
Date of Analysis (Month/Day/Year) For Volatile Organics Analysis	7/17/2013	7/16/2013	7/19/2013	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	46		84		6			*
16984-48-8		Fluoride	T	mg/L	9214	0.16		0.17		0.3			*
S0595- -		Nitrate & Nitrite	T	mg/L	9056	<1		<1		<1	*		*
14808-79-8		Sulfate	T	mg/L	9056	220		5.6		32			*
NS1894		Barometric Pressure Reading	T	Inches/Hg	Field	29.44		29.44		30.29			*
S0145- -		Specific Conductance	T	μMH0/cm	Field	918		804		424			*

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

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

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

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

GROUNDWATER SAMPLE ANALYSIS - (Cont.)

AKGWA NUMBER[1], Facility Well/Spring Number						8004-4792		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	325.25		333.56		333.46			*
N238		Dissolved Oxygen	T	mg/L	Field	1.38		3.41		0.51			*
S0266- -		Total Dissolved Solids	T	mg/L	160.1	618		597		255			*
S0296- -		pH	T	Units	Field	6.13		6.62		6.51			*
NS215		Eh	T	mV	Field	500		344		641			*
S0907 - -		Temperature	T	°C	Field	19.94		20.28		17.89			*
7429-90-5		Aluminum	T	mg/L	6020	<0.2		<0.2		<0.2			*
7440-36-0		Antimony	T	mg/L	6020	<0.005	*B	<0.005	*B	<0.005	*B		*
7440-38-2		Arsenic	T	mg/L	7060	0.00157		0.00242		<0.001			*
7440-39-3		Barium	T	mg/L	6020	0.0294		0.151		0.145			*
7440-41-7		Beryllium	T	mg/L	6020	<0.001		<0.001		<0.001			*
7440-42-8		Boron	T	mg/L	6010	1.75		<0.2		<0.2			*
7440-43-9		Cadmium	T	mg/L	6020	<0.001		<0.001		<0.001			*
7440-70-2		Calcium	T	mg/L	6010	79		22.8		14.8			*
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		0.113		<0.1			*
7439-92-1		Lead	T	mg/L	6020	<0.0013		<0.0013		<0.0013			*
7439-95-4		Magnesium	T	mg/L	6010	29.2		6.09		5.9			*
7439-96-5		Manganese	T	mg/L	6020	0.00911		<0.005		<0.005			*
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						8004-4792		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	3.09		0.507		0.3			*
7440-16-6		Rhodium	T	mg/L	6020	<0.005		<0.005		<0.005			*
7782-49-2		Selenium	T	mg/L	6020	0.00672		0.0241		<0.005			*
7440-22-4		Silver	T	mg/L	6020	<0.001	*	<0.001	*	<0.001	*		*
7440-23-5		Sodium	T	mg/L	6010	66.5		128		66.2			*
7440-25-7		Tantalum	T	mg/L	6020	<0.005		<0.005		<0.005			*
7440-28-0		Thallium	T	mg/L	6020	<0.002		<0.002		<0.002			*
7440-61-1		Uranium	T	mg/L	6020	<0.001		<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	J	<0.01	J	<0.01	*J		*
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		<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			*

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		<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	J		*
67-66-3		Chloroform	T	mg/L	8260	<0.005		<0.005		<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	<0.005		<0.005		<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		<0.005		<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			*
127-18-4		Ethene, Tetrachloro-	T	mg/L	8260	<0.005		<0.005		<0.001			*
79-01-6		Ethene, Trichloro-	T	mg/L	8260	0.0076		<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						8004-4792		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			*
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		<0.18			*
12674-11-2		PCB-1016	T	ug/L	8082	<0.17		<0.16		<0.17			*
11104-28-2		PCB-1221	T	ug/L	8082	<0.18		<0.17		<0.18			*
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	4.6	*	3.52	*	2.39	*		*
12587-47-2		Gross Beta	T	pCi/L	9310	52.2	*	3.35	*	1.89	*		*
10043-66-0		Iodine-131	T	pCi/L	RL-7124		*		*		*		*
13982-63-3		Radium-226	T	pCi/L	RL-7129	0.249	*	0.353	*	0.26	*		*
10098-97-2		Strontium-90	T	pCi/L	RL-7140	0.139	*B	0.242	*B	0.202	*B		*
14133-76-7		Technetium-99	T	pCi/L	RL-7100	63.7	*	11.5	*	12	*		*
14269-63-7		Thorium-230	T	pCi/L	RL-7128	0.00578	*	0.0191	*	0.0111	*		*
10028-17-8		Tritium	T	pCi/L	704R6	-163	*	-510	*	-77.5	*		*
S0130- -		Chemical Oxygen Demand	T	mg/L	410.4	<36	J	<36	J	<36	J		*
57-12-5		Cyanide	T	mg/L	9010	<0.04	J	<0.04	J	<0.04			*
20461-54-5		Iodide	T	mg/L	345.1	<2		<2		<2			*
S0268- -		Total Organic Carbon	T	mg/L	9060	<1		1.6		1.1			*
S0586- -		Total Organic Halides	T	mg/L	9020	0.022		0.033		0.027			*

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	7/18/2013 11:35	7/18/2013 12:55	7/16/2013 07:23
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	RI1UG4-13	FB1UG4-13	TB1UG4-13
Laboratory Sample ID Number (if applicable)	NA	C13199028001	C13199039001	C13197018001
Date of Analysis (Month/Day/Year) For Volatile Organics Analysis	NA	7/19/2013	7/19/2013	7/16/2013
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

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	*		*
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		<0.2			*
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	*		*
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			*
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
Facility: US DOE - Paducah Gaseous Diffusion Plant
Permit Number: 073-00045

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

GROUNDWATER SAMPLE ANALYSIS - (Cont.)

AKGWA NUMBER[1], Facility Well/Spring Number						8004-0989		0000-0000		0000-0000		0000-0000	
Facility's Local Well or Spring Number (e.g., MW-1, MW-2, etc.)						377		E. BLANK		F. BLANK		T. BLANK 1	
CAS RN[4]		CONSTITUENT	TD[5]	Unit OF MEASURE	METHOD	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS
7439-98-7		Molybdenum	T	mg/L	6020		*	<0.001	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		<0.2	*		*
7440-16-6		Rhodium	T	mg/L	6020		*	<0.005		<0.005			*
7782-49-2		Selenium	T	mg/L	6020		*	<0.005		<0.005			*
7440-22-4		Silver	T	mg/L	6020		*	<0.001	*	<0.001	*		*
7440-23-5		Sodium	T	mg/L	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			*
108-05-4		Vinyl acetate	T	mg/L	8260		*	<0.01	*J	<0.01	*J	<0.01	J
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	
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						8004-0989		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	J	<0.005	J	<0.005	
67-66-3		Chloroform	T	mg/L	8260		*	<0.001		<0.001		<0.005	
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		<0.005	
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	
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	
127-18-4		Ethene, Tetrachloro-	T	mg/L	8260		*	<0.001		<0.001		<0.005	
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
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
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		*	<0.18		<0.17			*
12674-11-2		PCB-1016	T	ug/L	8082		*	<0.17		<0.16			*
11104-28-2		PCB-1221	T	ug/L	8082		*	<0.18		<0.17			*
11141-16-5		PCB-1232	T	ug/L	8082		*	<0.14		<0.14			*
53469-21-9		PCB-1242	T	ug/L	8082		*	<0.1		<0.1			*
12672-29-6		PCB-1248	T	ug/L	8082		*	<0.12		<0.12			*

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

FINDS/UNIT: KY8-890-008-982 / 1
LAB ID: None
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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		*	0.0417	*	1.19	*		*
12587-47-2		Gross Beta	T	pCi/L	9310		*	-0.55	*	-1.14	*		*
10043-66-0		Iodine-131	T	pCi/L	RL-7124		*		*		*		*
13982-63-3		Radium-226	T	pCi/L	RL-7129		*	0.0278	*	-0.178	*		*
10098-97-2		Strontium-90	T	pCi/L	RL-7140		*	0.635	*B	0.402	*B		*
14133-76-7		Technetium-99	T	pCi/L	RL-7100		*	4.26	*	5.64	*		*
14269-63-7		Thorium-230	T	pCi/L	RL-7128		*	-0.0317	*	-0.0761	*		*
10028-17-8		Tritium	T	pCi/L	704R6		*	97.6	*	-93.9	*		*
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
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		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)						7/16/2013 07:45		7/17/2013 06:50		7/17/2013 12:30		7/18/2013 07:00	
Duplicate ("Y" or "N")[2]						N		N		N		N	
Split ("Y" or "N")[3]						N		N		N		N	
Facility Sample ID Number (if applicable)						TB2UG4-13		TB3UG4-13		TB4UG4-13		TB5UG4-13	
Laboratory Sample ID Number (if applicable)						C13198001001		C13198016001		C13198020001		C13199040001	
Date of Analysis (Month/Day/Year) For Volatile Organics Analysis						7/17/2013		7/19/2013		7/19/2013		7/19/2013	
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**		*		*		*		*

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

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

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

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

GROUNDWATER SAMPLE ANALYSIS - (Cont.)

AKGWA NUMBER[1], Facility Well/Spring Number						0000-0000		0000-0000		0000-0000		0000-0000	
Facility's Local Well or Spring Number (e.g., MW-1, MW-2, BLANK-F, etc.)						T. BLANK 2		T. BLANK 3		T. BLANK 4		T. BLANK 5	
CAS RN[4]		CONSTITUENT	TD[5]	Unit OF MEASURE	METHOD	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS
S0906 - -		Static Water Level Elevation	T	Ft. MSL	Field		*		*		*		*
N238		Dissolved Oxygen	T	mg/L	Field		*		*		*		*
S0266- -		Total Dissolved Solids	T	mg/L	160.1		*		*		*		*
S0296- -		pH	T	Units	Field		*		*		*		*
NS215		Eh	T	mV	Field		*		*		*		*
S0907 - -		Temperature	T	°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	*J	<0.01	*J	<0.01	*J	<0.01	*J
67-64-1		Acetone	T	mg/L	8260	0.011	J	0.011	J	0.011	J	0.011	J
107-02-8		Acrolein	T	mg/L	8260	<0.01		<0.01		<0.01		<0.01	
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	

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		<0.005	
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	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		<0.005		<0.005	
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		<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		0000-0000		8004-4799	
Facility's Local Well or Spring Number (e.g., MW-1, MW-2, etc.)						T. BLANK 6		T. BLANK 7		T. BLANK 8		358	
Sample Sequence #						1		1		1		2	
If sample is a Blank, specify Type: (F)ield, (T)rip, (M)ethod, or (E)quipment						T		T		T		NA	
Sample Date and Time (Month/Day/Year hour: minutes)						7/22/2013 06:55		7/23/2013 11:30		7/23/2013 11:30		7/22/2013 07:52	
Duplicate ("Y" or "N")[2]						N		N		N		Y	
Split ("Y" or "N")[3]						N		N		N		N	
Facility Sample ID Number (if applicable)						TB6UG4-13		TB7UG4-13		TB8UG4-13		MW358DUG4-13	
Laboratory Sample ID Number (if applicable)						C13203034001		C13204020001		C13205045001		C13203021002	
Date of Analysis (Month/Day/Year) For Volatile Organics Analysis						7/23/2013		7/23/2013		7/25/2013		7/23/2013	
Gradient with respect to Monitored Unit (UP, DOWN, SIDE, UNKNOWN)						NA		NA		NA		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	
16887-00-6		**Chloride(s)**	**T**	**mg/L**	**9056**		*		*		*	34	
16984-48-8		**Fluoride**	**T**	**mg/L**	**9214**		*		*		*	0.16	
S0595- -		**Nitrate & Nitrite**	**T**	**mg/L**	**9056**		*		*		*	<1	
14808-79-8		**Sulfate**	**T**	**mg/L**	**9056**		*		*		*	87	
NS1894		**Barometric Pressure Reading**	**T**	**Inches/Hg**	**Field**		*		*		*	29.86	
S0145- -		**Specific Conductance**	**T**	**μMH0/cm**	**Field**		*		*		*	529	

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

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

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

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

AKGWA NUMBER[1], Facility Well/Spring Number						0000-0000		0000-0000		0000-0000		8004-4799	
Facility's Local Well or Spring Number (e.g., MW-1, MW-2, BLANK-F, etc.)						T. BLANK 6		T. BLANK 7		T. BLANK 8		358	
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		*		*		*	325.13	
N238		Dissolved Oxygen	T	mg/L	Field		*		*		*	1.08	
S0266- -		Total Dissolved Solids	T	mg/L	160.1		*		*		*	297	
S0296- -		pH	T	Units	Field		*		*		*	6.38	
NS215		Eh	T	mV	Field		*		*		*	236	
S0907 - -		Temperature	T	°C	Field		*		*		*	18.5	
7429-90-5		Aluminum	T	mg/L	6020		*		*		*	<0.2	
7440-36-0		Antimony	T	mg/L	6020		*		*		*	<0.005	*
7440-38-2		Arsenic	T	mg/L	7060		*		*		*	0.00133	
7440-39-3		Barium	T	mg/L	6020		*		*		*	0.0449	
7440-41-7		Beryllium	T	mg/L	6020		*		*		*	<0.001	
7440-42-8		Boron	T	mg/L	6010		*		*		*	0.362	
7440-43-9		Cadmium	T	mg/L	6020		*		*		*	<0.001	
7440-70-2		Calcium	T	mg/L	6010		*		*		*	36.3	
7440-47-3		Chromium	T	mg/L	6020		*		*		*	<0.01	
7440-48-4		Cobalt	T	mg/L	6020		*		*		*	0.00183	*
7440-50-8		Copper	T	mg/L	6020		*		*		*	<0.02	*
7439-89-6		Iron	T	mg/L	6010		*		*		*	0.262	
7439-92-1		Lead	T	mg/L	6020		*		*		*	<0.0013	
7439-95-4		Magnesium	T	mg/L	6010		*		*		*	14.7	
7439-96-5		Manganese	T	mg/L	6020		*		*		*	0.0892	
7439-97-6		Mercury	T	mg/L	7470		*		*		*	<0.0002	

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GROUNDWATER SAMPLE ANALYSIS - (Cont.)

AKGWA NUMBER[1], Facility Well/Spring Number						0000-0000		0000-0000		0000-0000		8004-4799	
Facility's Local Well or Spring Number (e.g., MW-1, MW-2, etc.)						T. BLANK 6		T. BLANK 7		T. BLANK 8		358	
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		*		*		*	2.3	*
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	*
7440-23-5		Sodium	T	mg/L	6010		*		*		*	41.7	
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		*		*		*	<0.001	
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	J	<0.01	J	<0.01	J	<0.01	J
67-64-1		Acetone	T	mg/L	8260	<0.01		<0.01		<0.01		<0.01	
107-02-8		Acrolein	T	mg/L	8260	<0.01		<0.01		<0.01		<0.01	
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	

GROUNDWATER SAMPLE ANALYSIS - (Cont.)

AKGWA NUMBER[1], Facility Well/Spring Number						0000-0000		0000-0000		0000-0000		8004-4799	
Facility's Local Well or Spring Number (e.g., MW-1, MW-2, etc.)						T. BLANK 6		T. BLANK 7		T. BLANK 8		358	
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		<0.005	
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		<0.005	
67-66-3		Chloroform	T	mg/L	8260	<0.005		<0.005		<0.005		<0.005	
74-87-3		Methyl chloride	T	mg/L	8260	<0.005		<0.005		<0.005		<0.005	
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	<0.005		<0.005		<0.005		<0.005	
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		<0.002		<0.002		<0.002	
127-18-4		Ethene, Tetrachloro-	T	mg/L	8260	<0.005		<0.005		<0.005		<0.005	
79-01-6		Ethene, Trichloro-	T	mg/L	8260	<0.001		<0.001		<0.001		0.0043	

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GROUNDWATER SAMPLE ANALYSIS - (Cont.)

AKGWA NUMBER[1], Facility Well/Spring Number						0000-0000		0000-0000		0000-0000		8004-4799	
Facility's Local Well or Spring Number (e.g., MW-1, MW-2, etc.)						T. BLANK 6		T. BLANK 7		T. BLANK 8		358	
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	J
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	J	<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		*		*		*	<0.18	
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		0000-0000		8004-4799	
Facility's Local Well or Spring Number (e.g., MW-1, MW-2, etc.)						T. BLANK 6		T. BLANK 7		T. BLANK 8		358	
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		*		*		*	-2.97	*
12587-47-2		Gross Beta	T	pCi/L	9310		*		*		*	33.6	*
10043-66-0		Iodine-131	T	pCi/L	RL-7124		*		*		*		*
13982-63-3		Radium-226	T	pCi/L	RL-7129		*		*		*	0.134	*
10098-97-2		Strontium-90	T	pCi/L	RL-7140		*		*		*	0.0508	*B
14133-76-7		Technetium-99	T	pCi/L	RL-7100		*		*		*	40.8	*
14269-63-7		Thorium-230	T	pCi/L	RL-7128		*		*		*	-0.0926	*
10028-17-8		Tritium	T	pCi/L	704R6		*		*		*	-85.6	*
S0130- -		Chemical Oxygen Demand	T	mg/L	410.4		*		*		*	<36	
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	B
S0586- -		Total Organic Halides	T	mg/L	9020		*		*		*	0.022	

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Monitoring Point	Facility Sample ID	Constituent	Flag	Description
8004-4798 MW357	MW357UG4-13	Antimony	X	Other specific flags and footnotes may be required to properly define the results.
		Cobalt	N	Sample spike recovery not within control limits.
		Copper	N	Sample spike recovery not within control limits.
		Nickel	X	Other specific flags and footnotes may be required to properly define the results.
		Potassium	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 0.961. Rad error is 0.893.
		Gross beta		TPU is 4.37. Rad error is 3.23.
		Iodine-131		Analysis of constituent not required and not performed.
		Radium-226	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.269. Rad error is 0.224.
		Strontium-90	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.0841. Rad error is 0.0529.
		Technetium-99		TPU is 12.2. Rad error is 12.2.
		Thorium-230	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.115. Rad error is 0.0579.
		Tritium	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 555. Rad error is 555.
8004-4799 MW358	MW358UG4-13	Antimony	X	Other specific flags and footnotes may be required to properly define the results.
		Cobalt	N	Sample spike recovery not within control limits.
		Copper	N	Sample spike recovery not within control limits.
		Nickel	X	Other specific flags and footnotes may be required to properly define the results.
		Potassium	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 0.116. Rad error is 0.109.
		Gross beta		TPU is 4.94. Rad error is 3.57.
		Iodine-131		Analysis of constituent not required and not performed.
		Radium-226	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.201. Rad error is 0.118.
		Strontium-90	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.0929. Rad error is 0.0582.
		Technetium-99		TPU is 12.1. Rad error is 12.
		Thorium-230	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.11. Rad error is 0.0473.
		Tritium	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 573. Rad error is 570.

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Monitoring Point	Facility Sample ID	Constituent	Flag	Description
8004-0981 MW359	MW359UG4-13	Antimony	X	Other specific flags and footnotes may be required to properly define the results.
		Chromium	N	Sample spike recovery not within control limits.
		Copper	N	Sample spike recovery not within control limits.
		Gross alpha	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.704. Rad error is 0.634.
		Gross beta	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.139. Rad error is 0.111.
		Iodine-131		Analysis of constituent not required and not performed.
		Radium-226	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.237. Rad error is 0.0712.
		Strontium-90	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.162. Rad error is 0.0999.
		Technetium-99	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 11. Rad error is 11.
		Thorium-230	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.112. Rad error is 0.0498.
		Tritium	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 555. Rad error is 555.
8004-4800 MW360	MW360UG4-13	Antimony	X	Other specific flags and footnotes may be required to properly define the results.
		Cobalt	N	Sample spike recovery not within control limits.
		Copper	N	Sample spike recovery not within control limits.
		Nickel	X	Other specific flags and footnotes may be required to properly define the results.
		Potassium	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 0.932. Rad error is 0.837.
		Gross beta	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.636. Rad error is 0.488.
		Iodine-131		Analysis of constituent not required and not performed.
		Radium-226	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.324. Rad error is 0.287.
		Strontium-90	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.19. Rad error is 0.116.
		Technetium-99	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 10.8. Rad error is 10.8.
		Thorium-230	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.124. Rad error is 0.0728.
		Tritium	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 568. Rad error is 566.

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Monitoring Point	Facility Sample ID	Constituent	Flag	Description
8004-4795 MW361	MW361UG4-13	Antimony	X	Other specific flags and footnotes may be required to properly define the results.
		Cobalt	N	Sample spike recovery not within control limits.
		Copper	N	Sample spike recovery not within control limits.
		Nickel	X	Other specific flags and footnotes may be required to properly define the results.
		Potassium	X	Other specific flags and footnotes may be required to properly define the results.
		Silver	N	Sample spike recovery not within control limits.
		Vinyl acetate	Y	MS,MSD recovery and/or RPD failed acceptance criteria.
		Styrene	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 1.64. Rad error is 1.5.
		Gross beta		TPU is 5.72. Rad error is 4.
		Iodine-131		Analysis of constituent not required and not performed.
		Radium-226	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.21. Rad error is 0.0000000213.
		Strontium-90	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.111. Rad error is 0.0692.
		Technetium-99		TPU is 12.3. Rad error is 12.2.
		Thorium-230	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.105. Rad error is 0.032.
		Tritium	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 563. Rad error is 562.
8004-0986 MW362	MW362UG4-13	Antimony	X	Other specific flags and footnotes may be required to properly define the results.
		Chromium	N	Sample spike recovery not within control limits.
		Copper	N	Sample spike recovery not within control limits.
		Gross alpha	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 2.08. Rad error is 1.79.
		Gross beta		TPU is 0.98. Rad error is 0.735.
		Iodine-131		Analysis of constituent not required and not performed.
		Radium-226	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.224. Rad error is 0.169.
		Strontium-90	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.0295. Rad error is 0.0192.
		Technetium-99	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 10.8. Rad error is 10.8.
		Thorium-230	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.11. Rad error is 0.0457.
		Tritium	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 557. Rad error is 557.

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Monitoring Point	Facility Sample ID	Constituent	Flag	Description
8004-4796 MW363	MW363UG4-13	Nitrate & Nitrite	*	Duplicate analysis not within control limits.
		Antimony	X	Other specific flags and footnotes may be required to properly define the results.
		Cobalt	N	Sample spike recovery not within control limits.
		Copper	N	Sample spike recovery not within control limits.
		Nickel	X	Other specific flags and footnotes may be required to properly define the results.
		Silver	N	Sample spike recovery not within control limits.
		Vinyl acetate	Y	MS,MSD recovery and/or RPD failed acceptance criteria.
		Styrene	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 0.774. Rad error is 0.73.
		Gross beta		TPU is 2.01. Rad error is 1.64.
		Iodine-131		Analysis of constituent not required and not performed.
		Radium-226	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.208. Rad error is 0.146.
		Strontium-90	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.169. Rad error is 0.104.
		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 0.115. Rad error is 0.057.
		Tritium	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 567. Rad error is 566.

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Monitoring Point	Facility Sample ID	Constituent	Flag	Description
8004-4797 MW364	MW364UG4-13	Antimony	X	Other specific flags and footnotes may be required to properly define the results.
		Cobalt	N	Sample spike recovery not within control limits.
		Copper	N	Sample spike recovery not within control limits.
		Nickel	X	Other specific flags and footnotes may be required to properly define the results.
		Silver	N	Sample spike recovery not within control limits.
		Vinyl acetate	Y	MS,MSD recovery and/or RPD failed acceptance criteria.
		Styrene	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 1.3. Rad error is 1.19.
		Gross beta		TPU is 5.33. Rad error is 3.78.
		Iodine-131		Analysis of constituent not required and not performed.
		Radium-226	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.222. Rad error is 0.166.
		Strontium-90	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.288. Rad error is 0.171.
		Technetium-99		TPU is 12.1. Rad error is 12.1.
		Thorium-230	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.118. Rad error is 0.0639.
		Tritium	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 567. Rad error is 564.

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Monitoring Point	Facility Sample ID	Constituent	Flag	Description
8004-0984 MW365	MW365UG4-13	Antimony	X	Other specific flags and footnotes may be required to properly define the results.
		Cobalt	N	Sample spike recovery not within control limits.
		Copper	N	Sample spike recovery not within control limits.
		Nickel	X	Other specific flags and footnotes may be required to properly define the results.
		Silver	N	Sample spike recovery not within control limits.
		Vinyl acetate	Y	MS,MSD recovery and/or RPD failed acceptance criteria.
		Styrene	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 1.12. Rad error is 1.09.
		Gross beta	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.0411. Rad error is 0.0363.
		Iodine-131		Analysis of constituent not required and not performed.
		Radium-226	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.219. Rad error is 0.058.
		Strontium-90	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.247. Rad error is 0.148.
		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 0.113. Rad error is 0.00978.
		Tritium	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 568. Rad error is 568.

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Monitoring Point	Facility Sample ID	Constituent	Flag	Description
8004-0982 MW366	MW366UG4-13	Nitrate & Nitrite	*	Duplicate analysis not within control limits.
		Antimony	X	Other specific flags and footnotes may be required to properly define the results.
		Cobalt	N	Sample spike recovery not within control limits.
		Copper	N	Sample spike recovery not within control limits.
		Nickel	X	Other specific flags and footnotes may be required to properly define the results.
		Silver	N	Sample spike recovery not within control limits.
		Vinyl acetate	Y	MS,MSD recovery and/or RPD failed acceptance criteria.
		Styrene	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 1.25. Rad error is 1.14.
		Gross beta		TPU is 6.09. Rad error is 4.19.
		Iodine-131		Analysis of constituent not required and not performed.
		Radium-226	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.199. Rad error is 0.133.
		Strontium-90	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.00561. Rad error is 0.00363.
		Technetium-99		TPU is 13.1. Rad error is 13.
		Thorium-230	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.11. Rad error is 0.0474.
		Tritium	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 592. Rad error is 591.

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Monitoring Point	Facility Sample ID	Constituent	Flag	Description
8004-4793 MW367	MW367UG4-13	Nitrate & Nitrite	*	Duplicate analysis not within control limits.
		Antimony	X	Other specific flags and footnotes may be required to properly define the results.
		Cobalt	N	Sample spike recovery not within control limits.
		Copper	N	Sample spike recovery not within control limits.
		Nickel	X	Other specific flags and footnotes may be required to properly define the results.
		Silver	N	Sample spike recovery not within control limits.
		Vinyl acetate	Y	MS,MSD recovery and/or RPD failed acceptance criteria.
		Styrene	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 2.49. Rad error is 2.24.
		Gross beta		TPU is 4.58. Rad error is 3.35.
		Iodine-131		Analysis of constituent not required and not performed.
		Radium-226	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.3. Rad error is 0.255.
		Strontium-90	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.12. Rad error is 0.0749.
		Technetium-99		TPU is 12.2. Rad error is 12.1.
		Thorium-230	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.116. Rad error is 0.0601.
		Tritium	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 615. Rad error is 615.

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Monitoring Point	Facility Sample ID	Constituent	Flag	Description
8004-0983 MW368	MW368UG4-13	Antimony	X	Other specific flags and footnotes may be required to properly define the results.
		Cobalt	N	Sample spike recovery not within control limits.
		Copper	N	Sample spike recovery not within control limits.
		Nickel	X	Other specific flags and footnotes may be required to properly define the results.
		Potassium	X	Other specific flags and footnotes may be required to properly define the results.
		Silver	N	Sample spike recovery not within control limits.
		Vinyl acetate	Y	MS,MSD recovery and/or RPD failed acceptance criteria.
		Styrene	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 2.03. Rad error is 1.81.
		Gross beta	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 1.07. Rad error is 0.827.
		Iodine-131		Analysis of constituent not required and not performed.
		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	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 10.6. Rad error is 10.6.
		Thorium-230		During sampling the well became partially dry, this analysis was not collected.
		Tritium	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 562. Rad error is 562.

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Monitoring Point	Facility Sample ID	Constituent	Flag	Description
8004-4820 MW369	MW369UG4-13	Antimony	X	Other specific flags and footnotes may be required to properly define the results.
		Cobalt	N	Sample spike recovery not within control limits.
		Copper	N	Sample spike recovery not within control limits.
		Nickel	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 0.78. Rad error is 0.733.
		Gross beta		TPU is 2.89. Rad error is 2.28.
		Iodine-131		Analysis of constituent not required and not performed.
		Radium-226	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.254. Rad error is 0.206.
		Strontium-90	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.136. Rad error is 0.0852.
		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 0.133. Rad error is 0.057.
		Tritium	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 558. Rad error is 558.
8004-4818 MW370	MW370UG4-13	Antimony	X	Other specific flags and footnotes may be required to properly define the results.
		Cobalt	N	Sample spike recovery not within control limits.
		Copper	N	Sample spike recovery not within control limits.
		Nickel	X	Other specific flags and footnotes may be required to properly define the results.
		Silver	N	Sample spike recovery not within control limits.
		Vinyl acetate	Y	MS,MSD recovery and/or RPD failed acceptance criteria.
		Styrene	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 0.682. Rad error is 0.653.
		Gross beta		TPU is 3.2. Rad error is 2.48.
		Iodine-131		Analysis of constituent not required and not performed.
		Radium-226	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.262. Rad error is 0.215.
		Strontium-90	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.131. Rad error is 0.0817.
		Technetium-99		TPU is 11.9. Rad error is 11.8.
		Thorium-230	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.121. Rad error is 0.0103.
		Tritium	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 572. Rad error is 571.

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8004-4819 MW371	MW371UG4-13	Antimony	X	Other specific flags and footnotes may be required to properly define the results.
		Cobalt	N	Sample spike recovery not within control limits.
		Copper	N	Sample spike recovery not within control limits.
		Nickel	X	Other specific flags and footnotes may be required to properly define the results.
		Silver	N	Sample spike recovery not within control limits.
		Vinyl acetate	Y	MS,MSD recovery and/or RPD failed acceptance criteria.
		Styrene	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 0.517. Rad error is 0.494.
		Gross beta	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.98. Rad error is 0.839.
		Iodine-131		Analysis of constituent not required and not performed.
		Radium-226	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.337. Rad error is 0.301.
		Strontium-90	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.0962. Rad error is 0.0605.
		Technetium-99	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 11. Rad error is 11.
		Thorium-230	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.115. Rad error is 0.0571.
		Tritium	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 572. Rad error is 571.
8004-4808 MW372	MW372UG4-13	Antimony	X	Other specific flags and footnotes may be required to properly define the results.
		Cobalt	N	Sample spike recovery not within control limits.
		Copper	N	Sample spike recovery not within control limits.
		Nickel	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 3.94. Rad error is 3.35.
		Gross beta		TPU is 14.5. Rad error is 7.83.
		Iodine-131		Analysis of constituent not required and not performed.
		Radium-226	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.229. Rad error is 0.175.
		Strontium-90	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.444. Rad error is 0.259.
		Technetium-99		TPU is 16.5. Rad error is 16.
		Thorium-230	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.152. Rad error is 0.0396.
		Tritium	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 575. Rad error is 575.

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8004-4792 MW373	MW373UG4-13	Antimony	X	Other specific flags and footnotes may be required to properly define the results.
		Cobalt	N	Sample spike recovery not within control limits.
		Copper	N	Sample spike recovery not within control limits.
		Nickel	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 1.66. Rad error is 1.44.
		Gross beta		TPU is 7.09. Rad error is 4.4.
		Iodine-131		Analysis of constituent not required and not performed.
		Radium-226	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.218. Rad error is 0.157.
		Strontium-90	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.0468. Rad error is 0.0298.
		Technetium-99		TPU is 13. Rad error is 12.9.
		Thorium-230	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.113. Rad error is 0.0538.
		Tritium	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 574. Rad error is 573.
8004-0990 MW374	MW374UG4-13	Antimony	X	Other specific flags and footnotes may be required to properly define the results.
		Cobalt	N	Sample spike recovery not within control limits.
		Copper	N	Sample spike recovery not within control limits.
		Nickel	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 1.87. Rad error is 1.76.
		Gross beta	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.711. Rad error is 0.614.
		Iodine-131		Analysis of constituent not required and not performed.
		Radium-226	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.257. Rad error is 0.206.
		Strontium-90	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.0811. Rad error is 0.0514.
		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 0.121. Rad error is 0.0682.
		Tritium	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 570. Rad error is 567.

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8004-0985 MW375	MW375UG4-13	Nitrate & Nitrite	*	Duplicate analysis not within control limits.
		Antimony	X	Other specific flags and footnotes may be required to properly define the results.
		Cobalt	N	Sample spike recovery not within control limits.
		Copper	N	Sample spike recovery not within control limits.
		Nickel	X	Other specific flags and footnotes may be required to properly define the results.
		Silver	N	Sample spike recovery not within control limits.
		Vinyl acetate	Y	MS,MSD recovery and/or RPD failed acceptance criteria.
		Styrene	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 1.31. Rad error is 1.23.
		Gross beta	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.412. Rad error is 0.36.
		Iodine-131		Analysis of constituent not required and not performed.
		Radium-226	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.271. Rad error is 0.225.
		Strontium-90	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.0676. Rad error is 0.0428.
		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 0.117. Rad error is 0.0615.
		Tritium	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 565. Rad error is 565.

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

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

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

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

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

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

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

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Monitoring Point	Facility Sample ID	Constituent	Flag	Description
8004-0989	MW377	Thorium-230		During sampling, the well went dry; therefore, no sample was collected.
		Tritium		During sampling, the well went dry; therefore, no sample was collected.
		Chemical Oxygen Demand		During sampling, the well went dry; therefore, no sample was collected.
		Cyanide		During sampling, the well went dry; therefore, no sample was collected.
		Iodide		During sampling, the well went dry; therefore, no sample was collected.
		Total Organic Carbon		During sampling, the well went dry; therefore, no sample was collected.
		Total Organic Halides		During sampling, the well went dry; therefore, no sample was collected.

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Monitoring Point	Facility Sample ID	Constituent	Flag	Description
0000-0000 QC	RI1UG4-13	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.
		Antimony	X	Other specific flags and footnotes may be required to properly define the results.
		Cobalt	N	Sample spike recovery not within control limits.
		Copper	N	Sample spike recovery not within control limits.
		Nickel	X	Other specific flags and footnotes may be required to properly define the results.
		Silver	N	Sample spike recovery not within control limits.
		Vinyl acetate	Y	MS,MSD recovery and/or RPD failed acceptance criteria.
		Styrene	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 0.0274. Rad error is 0.0264.
		Gross beta	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.129. Rad error is 0.115.
		Iodine-131		Analysis of constituent not required and not performed.
		Radium-226	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.176. Rad error is 0.0556.
		Strontium-90	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.207. Rad error is 0.125.
		Technetium-99	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 10.7. Rad error is 10.7.
		Thorium-230	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.106. Rad error is 0.0317.
		Tritium	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 554. Rad error is 554.
		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.

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Monitoring Point	Facility Sample ID	Constituent	Flag	Description
0000-0000 QC	RI1UG4-13	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	FB1UG4-13	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.
		Antimony	X	Other specific flags and footnotes may be required to properly define the results.
		Cobalt	N	Sample spike recovery not within control limits.
		Copper	N	Sample spike recovery not within control limits.
		Nickel	X	Other specific flags and footnotes may be required to properly define the results.
		Potassium	X	Other specific flags and footnotes may be required to properly define the results.
		Silver	N	Sample spike recovery not within control limits.
		Vinyl acetate	Y	MS,MSD recovery and/or RPD failed acceptance criteria.
		Styrene	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 0.653. Rad error is 0.615.
		Gross beta	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.274. Rad error is 0.245.
		Iodine-131		Analysis of constituent not required and not performed.
		Radium-226	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.254. Rad error is 0.206.
		Strontium-90	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.132. Rad error is 0.082.
		Technetium-99	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 10.7. Rad error is 10.7.
		Thorium-230	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.12. Rad error is 0.0572.
		Tritium	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 564. Rad error is 564.
		Chemical Oxygen Demand		Analysis of constituent not required and not performed.
		Cyanide		Analysis of constituent not required and not performed.

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0000-0000 QC	FB1UG4-13	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	TB1UG4-13	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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Facility: US DOE - Paducah Gaseous Diffusion Plant
Permit Numbers: 073-00045

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

GROUNDWATER
WRITTEN COMMENTS

Monitoring Point	Facility Sample ID	Constituent	Flag	Description
0000-0000 QC	TB1UG4-13	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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Finds/Unit: KY8-890-008-982 / 1
LAB ID:None
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GROUNDWATER
WRITTEN COMMENTS

Monitoring Point	Facility Sample ID	Constituent	Flag	Description
0000-0000 QC	TB2UG4-13	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	TB2UG4-13	Zinc		Analysis of constituent not required and not performed.
		Vinyl acetate	Y	MS,MSD recovery and/or RPD failed acceptance criteria.
		Styrene	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	TB3UG4-13	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	TB3UG4-13	Zinc		Analysis of constituent not required and not performed.
		Vinyl acetate	Y	MS,MSD recovery and/or RPD failed acceptance criteria.
		Styrene	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	TB4UG4-13	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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GROUNDWATER
WRITTEN COMMENTS

Monitoring Point	Facility Sample ID	Constituent	Flag	Description
0000-0000 QC	TB4UG4-13	Zinc		Analysis of constituent not required and not performed.
		Vinyl acetate	Y	MS,MSD recovery and/or RPD failed acceptance criteria.
		Styrene	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	TB5UG4-13	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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Monitoring Point	Facility Sample ID	Constituent	Flag	Description
0000-0000 QC	TB5UG4-13	Zinc		Analysis of constituent not required and not performed.
		Vinyl acetate	Y	MS,MSD recovery and/or RPD failed acceptance criteria.
		Styrene	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	TB6UG4-13	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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GROUNDWATER
WRITTEN COMMENTS

Monitoring Point	Facility Sample ID	Constituent	Flag	Description
0000-0000 QC	TB6UG4-13	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.

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

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

GROUNDWATER
WRITTEN COMMENTS

Monitoring Point	Facility Sample ID	Constituent	Flag	Description
0000-0000 QC	TB7UG4-13	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.

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

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

GROUNDWATER
WRITTEN COMMENTS

Monitoring Point	Facility Sample ID	Constituent	Flag	Description
0000-0000 QC	TB7UG4-13	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.

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

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

GROUNDWATER
WRITTEN COMMENTS

Monitoring Point	Facility Sample ID	Constituent	Flag	Description
0000-0000 QC	TB8UG4-13	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.

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

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

GROUNDWATER
WRITTEN COMMENTS

Monitoring Point	Facility Sample ID	Constituent	Flag	Description
0000-0000 QC	TB8UG4-13	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.

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

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

GROUNDWATER
WRITTEN COMMENTS

Monitoring Point	Facility Sample ID	Constituent	Flag	Description
8004-4799 MW358	MW358DUG4-13	Antimony	X	Other specific flags and footnotes may be required to properly define the results.
		Cobalt	N	Sample spike recovery not within control limits.
		Copper	N	Sample spike recovery not within control limits.
		Nickel	X	Other specific flags and footnotes may be required to properly define the results.
		Potassium	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 1.95. Rad error is 1.88.
		Gross beta		TPU is 5.14. Rad error is 3.68.
		Iodine-131		Analysis of constituent not required and not performed.
		Radium-226	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.228. Rad error is 0.173.
		Strontium-90	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.0172. Rad error is 0.011.
		Technetium-99		TPU is 11.9. Rad error is 11.9.
		Thorium-230	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.133. Rad error is 0.0884.
		Tritium	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 540. Rad error is 540.

APPENDIX D

STATISTICAL ANALYSES AND QUALIFICATION STATEMENT

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GROUNDWATER STATISTICAL COMMENTS

Introduction

The statistical analyses conducted on the third quarter 2013 groundwater data collected from the C-746-U Landfill monitoring wells (MWs) were performed in accordance with Permit GSTR0001, Standard Requirement 3, using the U.S. Environmental Protection Agency (EPA) guidance document, *EPA Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities, Interim Final Guidance* (1989), 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 third quarter 2013 data used to conduct the statistical analyses was collected in July 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 ≤ 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, third quarter 2013. The observations that are listed are not background data. Background data are presented on pages D-19 through D-83. The sampling dates associated with background data are listed next to the result on pages D-19 through D-83. 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, and a groundwater sample could not be collected.

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
Molybdenum
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	7	0	7	0	no
1,1,2,2-Tetrachloroethane	7	0	7	0	no
1,1,2-Trichloroethane	7	0	7	0	no
1,1-Dichloroethane	7	0	7	0	no
1,2,3-Trichloropropane	7	0	7	0	no
1,2-Dibromo-3-chloropropane	7	0	7	0	no
1,2-Dibromoethane	7	0	7	0	no
1,2-Dichlorobenzene	7	0	7	0	no
1,2-Dichloropropane	7	0	7	0	no
2-Butanone	7	0	7	0	no
2-Hexanone	7	0	7	0	no
4-Methyl-2-pentanone	7	0	7	0	no
Acetone	7	0	7	0	no
Acrolein	7	0	7	0	no
Acrylonitrile	7	0	7	0	no
Aluminum	**7**	**0**	**4**	**3**	**YES**
Antimony	7	0	7	0	no
Beryllium	7	0	7	0	no
Boron	7	0	7	0	no
Bromide	7	0	7	0	no
Bromochloromethane	7	0	7	0	no
Bromodichloromethane	7	0	7	0	no
Bromoform	7	0	7	0	no
Bromomethane	7	0	7	0	no
Calcium	**7**	**0**	**0**	**7**	**YES**
Carbon disulfide	7	0	7	0	no
Chemical Oxygen Demand (COD)	7	0	7	0	no
Chloride	**7**	**0**	**1**	**6**	**YES**
Chlorobenzene	7	0	7	0	no
Chloroethane	7	0	7	0	no
Chloroform	7	0	7	0	no
Chloromethane	7	0	7	0	no
cis-1,2-Dichloroethene	7	0	7	0	no
cis-1,3-Dichloropropene	7	0	7	0	no
Cobalt	**7**	**0**	**5**	**2**	**YES**
Conductivity	**7**	**0**	**0**	**7**	**YES**
Copper	7	0	7	0	no
Cyanide	7	0	7	0	no
Dibromochloromethane	7	0	7	0	no
Dibromomethane	7	0	7	0	no
Dimethylbenzene, Total	7	0	7	0	no
Dissolved Oxygen	**7**	**0**	**0**	**7**	**YES**
Dissolved Solids	**7**	**0**	**0**	**7**	**YES**
Ethylbenzene	7	0	7	0	no
Iodide	7	0	7	0	no
Iodomethane	7	0	7	0	no
Iron	**7**	**0**	**3**	**4**	**YES**
Magnesium	**7**	**0**	**0**	**7**	**YES**
Manganese	**7**	**0**	**5**	**2**	**YES**
Methylene chloride	7	0	7	0	no

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

Molybdenum	**7**	**0**	**5**	**2**	**YES**
Nickel	**7**	**0**	**5**	**2**	**YES**
Oxidation-Reduction Potential	**7**	**0**	**0**	**7**	**YES**
PCB, Total	**7**	**0**	**5**	**2**	**YES**
PCB-1016	7	0	7	0	no
PCB-1221	7	0	7	0	no
PCB-1232	7	0	7	0	no
PCB-1242	**7**	**0**	**5**	**2**	**YES**
PCB-1248	7	0	7	0	no
PCB-1254	7	0	7	0	no
PCB-1260	7	0	7	0	no
PCB-1268	7	0	7	0	no
pH	**7**	**0**	**0**	**7**	**YES**
Potassium	**7**	**0**	**1**	**6**	**YES**
Radium-226	7	1	6	0	no
Rhodium	7	0	7	0	no
Sodium	**7**	**0**	**0**	**7**	**YES**
Styrene	7	0	7	0	no
Sulfate	**7**	**0**	**0**	**7**	**YES**
Tantalum	7	0	7	0	no
Technetium-99	7	0	7	0	no
Tetrachloroethene	7	0	7	0	no
Thallium	7	0	7	0	no
Thorium-230	7	1	6	0	no
Toluene	7	0	7	0	no
Total Organic Carbon (TOC)	**7**	**0**	**0**	**7**	**YES**
Total Organic Halides (TOX)	**7**	**0**	**0**	**7**	**YES**
trans-1,2-Dichloroethene	7	0	7	0	no
trans-1,3-Dichloropropene	7	0	7	0	no
Trans-1,4-Dichloro-2-butene	7	0	7	0	no
Trichlorofluoromethane	7	0	7	0	no
Uranium	**7**	**0**	**5**	**2**	**YES**
Vanadium	7	0	7	0	no
Vinyl acetate	7	0	7	0	no
Zinc	7	0	7	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	6	0	no
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**	**3**	**3**	**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**	**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**	**4**	**2**	**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**	**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.

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

Parameters	Observations	Missing Observation	Censored Observation	Uncensored Observation	Statistical Analysis?
1,1,1,2-Tetrachloroethane	6	0	6	0	no
1,1,2,2-Tetrachloroethane	6	0	6	0	no
1,1,2-Trichloroethane	6	0	6	0	no
1,1-Dichloroethane	6	0	6	0	no
1,2,3-Trichloropropane	6	0	6	0	no
1,2-Dibromo-3-chloropropane	6	0	6	0	no
1,2-Dibromoethane	6	0	6	0	no
1,2-Dichlorobenzene	6	0	6	0	no
1,2-Dichloropropane	6	0	6	0	no
2-Butanone	6	0	6	0	no
2-Hexanone	6	0	6	0	no
4-Methyl-2-pentanone	6	0	6	0	no
Acetone	6	0	6	0	no
Acrolein	6	0	6	0	no
Acrylonitrile	6	0	6	0	no
Aluminum	6	0	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**	**1**	**5**	**YES**
Methylene chloride	6	0	6	0	no
Molybdenum	6	0	6	0	no
Nickel	6	0	6	0	no
Oxidation-Reduction Potential	**6**	**0**	**0**	**6**	**YES**

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

PCB, Total	6	0	6	0	no
PCB-1016	6	0	6	0	no
PCB-1221	6	0	6	0	no
PCB-1232	6	0	6	0	no
PCB-1242	6	0	6	0	no
PCB-1248	6	0	6	0	no
PCB-1254	6	0	6	0	no
PCB-1260	6	0	6	0	no
PCB-1268	6	0	6	0	no
pH	**6**	**0**	**0**	**6**	**YES**
Potassium	**6**	**0**	**0**	**6**	**YES**
Radium-226	6	0	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**	**0**	**6**	**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	6	0	no
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-19 through D-83 and the statistician qualification statement is presented on page D-84. For the UCRS, URGA, and LRGA, the test was applied to 22, 21, and 17 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, sulfate, and technetium-99.

LRGA

In this quarter, statistical test results indicated that there were statistically significant increases for calcium, 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
MW359: dissolved oxygen, oxidation-reduction potential, sulfate	MW357: oxidation-reduction potential	MW358: oxidation-reduction potential
MW362: oxidation-reduction potential, sulfate	MW360: oxidation-reduction potential	MW361: oxidation-reduction potential, technetium-99
MW365: dissolved oxygen, oxidation-reduction potential, sulfate	MW363: oxidation-reduction potential	MW364: oxidation-reduction potential, technetium-99
MW368: dissolved oxygen, oxidation-reduction potential, sulfate	MW366: oxidation-reduction potential, technetium-99	MW367: oxidation-reduction potential
MW371: (upgradient): dissolved oxygen, oxidation- reduction potential, sulfate	MW369: (upgradient): oxidation-reduction potential	MW370: (upgradient): oxidation-reduction potential
MW374: (upgradient): dissolved oxygen, oxidation- reduction potential	MW372: (upgradient): calcium, conductivity, dissolved solids, oxidation reduction-potential magnesium, sulfate, technetium-99	MW373: (upgradient): calcium, oxidation-reduction potential, technetium-99
MW375: oxidation-reduction potential, sulfate		

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 MW359, MW365, MW368, MW371, 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
Molybdenum	Tolerance Interval	1.65	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 MW359, MW362, MW365, MW368, MW371, MW374, and MW375
PCB, Total	Tolerance Interval	0.92	No statistically significant deviations relative to background data
PCB-1242	Tolerance Interval	1.41	No statistically significant deviations relative to background data
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

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

Parameter	Performed Test	CV Normality Test	Results of Tolerance Interval Test Conducted
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 MW359, MW362, MW365, MW368, MW371, and MW375
Total Organic Carbon	Tolerance Interval	1.38	No statistically significant increases relative to background data
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
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, MW369, and MW372
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
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

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

Parameter	Performed Test	CV Normality Test	Results of Tolerance Interval Test Conducted
Sulfate	Tolerance Interval	0.75	Statistically significant increase relative to background data in MW372
Technetium-99	Tolerance Interval	0.87	Statistically significant increases relative to background data in MW366 and MW372
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	Statistically significant increase relative to background data in MW373
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
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
Technetium-99	Tolerance Interval	1.73	Statistically significant increases relative to background data in MW361, MW364, and MW373
Total Organic Halides	Tolerance Interval	0.98	No statistically significant increases relative to background data

CV: coefficient of variation

C-746-U Third 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

Third Quarter 2013 Data Collected in July 2013

Well No.	Result	Gradient	Result >TL?
MW359	0.200	Downgradient	N/A
MW362	7.860	Downgradient	N/A
MW365	0.200	Downgradient	N/A
MW368	2.410	Sidegradient	N/A
MW371	0.563	Upgradient	N/A
MW374	0.200	Upgradient	N/A
MW375	0.200	Sidegradient	N/A

Third Quarter 2013 Dry/Partially Dry Wells

Well No.	Gradient
MW368	Sidegradient
MW376	Sidegradient
MW377	Sidegradient

Transformed Third Quarter 2013 Data Collected in July 2013

Well Number	LN(Result)	Result >TL?
MW359	-1.609	NO
MW362	2.062	NO
MW365	-1.609	NO
MW368	0.880	NO
MW371	-0.574	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 Third 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.

Third Quarter 2013 Data Collected in July 2013

Well No.	Result	Gradient	Result >TL?
MW359	8.210	Downgradient	NO
MW362	15.800	Downgradient	NO
MW365	22.500	Downgradient	NO
MW368	25.000	Sidegradient	NO
MW371	26.900	Upgradient	NO
MW374	22.800	Upgradient	NO
MW375	14.800	Sidegradient	NO

Third Quarter 2013 Dry/Partially Dry Wells

Well No.	Gradient
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 Third 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.

Third Quarter 2013 Data Collected in July 2013

Well No.	Result	Gradient	Result >TL?
MW359	2.000	Downgradient	NO
MW362	10.000	Downgradient	NO
MW365	6.500	Downgradient	NO
MW368	7.800	Sidegradient	NO
MW371	8.100	Upgradient	NO
MW374	84.000	Upgradient	NO
MW375	6.000	Sidegradient	NO

Third Quarter 2013 Dry/Partially Dry Wells

Well No.	Gradient
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 Third 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

Third Quarter 2013 Data Collected in July 2013

Well No.	Result	Gradient	Result >TL?
MW359	0.001	Downgradient	N/A
MW362	0.010	Downgradient	N/A
MW365	0.002	Downgradient	N/A
MW368	0.003	Sidegradient	N/A
MW371	0.001	Upgradient	N/A
MW374	0.001	Upgradient	N/A
MW375	0.001	Sidegradient	N/A

Third Quarter 2013 Dry/Partially Dry Wells

Well No.	Gradient
MW368	Sidegradient
MW376	Sidegradient
MW377	Sidegradient

Transformed Third Quarter 2013 Data Collected in July 2013

Well Number	LN(Result)	Result >TL?
MW359	-6.908	NO
MW362	-4.605	NO
MW365	-6.342	NO
MW368	-5.941	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 Third 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.

Third Quarter 2013 Data Collected in July 2013

Well No.	Result	Gradient	Result >TL?
MW359	337.00	Downgradient	NO
MW362	540.00	Downgradient	NO
MW365	401.00	Downgradient	NO
MW368	842.00	Sidegradient	NO
MW371	704.00	Upgradient	NO
MW374	804.00	Upgradient	NO
MW375	424.00	Sidegradient	NO

Third Quarter 2013 Dry/Partially Dry Wells

Well No.	Gradient
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 Third 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.

Third Quarter 2013 Data Collected in July 2013

Well No.	Result	Gradient	Result >TL?
MW359	5.760	Downgradient	**YES**
MW362	1.960	Downgradient	NO
MW365	4.600	Downgradient	**YES**
MW368	6.900	Sidegradient	**YES**
MW371	2.760	Upgradient	**YES**
MW374	3.410	Upgradient	**YES**
MW375	0.510	Sidegradient	NO

Third Quarter 2013 Dry/Partially Dry Wells

Well No.	Gradient
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.

MW359

MW365

MW368

MW371

CV Coefficient-of-Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
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 Third Quarter 2013 Statistical Analysis	UCRS
Dissolved Oxygen (Continued)	UNITS: mg/L

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 Third 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.

Third Quarter 2013 Data Collected in July 2013

Well No.	Result	Gradient	Result >TL?
MW359	183.00	Downgradient	NO
MW362	459.00	Downgradient	NO
MW365	263.00	Downgradient	NO
MW368	519.00	Sidegradient	NO
MW371	423.00	Upgradient	NO
MW374	597.00	Upgradient	NO
MW375	255.00	Sidegradient	NO

Third Quarter 2013 Dry/Partially Dry Wells

Well No.	Gradient
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 Third 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.

Third Quarter 2013 Data Collected in July 2013

Well No.	Result	Gradient	Result >TL?
MW359	0.100	Downgradient	NO
MW362	6.120	Downgradient	NO
MW365	0.100	Downgradient	NO
MW368	1.090	Sidegradient	NO
MW371	0.333	Upgradient	NO
MW374	0.113	Upgradient	NO
MW375	0.100	Sidegradient	NO

Third Quarter 2013 Dry/Partially Dry Wells

Well No.	Gradient
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 Third 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.

Third Quarter 2013 Data Collected in July 2013

Well No.	Result	Gradient	Result >TL?
MW359	3.840	Downgradient	NO
MW362	6.840	Downgradient	NO
MW365	9.670	Downgradient	NO
MW368	8.430	Sidegradient	NO
MW371	11.200	Upgradient	NO
MW374	6.090	Upgradient	NO
MW375	5.900	Sidegradient	NO

Third Quarter 2013 Dry/Partially Dry Wells

Well No.	Gradient
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 Third 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.

Third Quarter 2013 Data Collected in July 2013

Well No.	Result	Gradient	Result >TL?
MW359	0.005	Downgradient	NO
MW362	0.050	Downgradient	NO
MW365	0.041	Downgradient	NO
MW368	0.022	Sidegradient	NO
MW371	0.005	Upgradient	NO
MW374	0.005	Upgradient	NO
MW375	0.005	Sidegradient	NO

Third Quarter 2013 Dry/Partially Dry Wells

Well No.	Gradient
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 Third Quarter 2013 Statistical Analysis — UCRS
Molybdenum — UNITS: mg/L

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is 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	0.002
1/7/2003	0.002
4/2/2003	0.002
7/9/2003	0.002
10/7/2003	0.001
1/6/2004	0.001
4/7/2004	0.001
7/14/2004	0.001

Statistics on Background Data

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

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

Statistics on Transformed Background Data

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

Transformed Background Data from Upgradient Wells

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

Third Quarter 2013 Data Collected in July 2013

Well No.	Result	Gradient	Result >TL?
MW359	0.001	Downgradient	N/A
MW362	0.003	Downgradient	N/A
MW365	0.001	Downgradient	N/A
MW368	0.006	Sidegradient	N/A
MW371	0.001	Upgradient	N/A
MW374	0.001	Upgradient	N/A
MW375	0.001	Sidegradient	N/A

Third Quarter 2013 Dry/Partially Dry Wells

Well No.	Gradient
MW368	Sidegradient
MW376	Sidegradient
MW377	Sidegradient

Transformed Third Quarter 2013 Data Collected in July 2013

Well Number	LN(Result)	Result >TL?
MW359	-6.908	NO
MW362	-5.802	NO
MW365	-6.908	NO
MW368	-5.146	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 Third 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.

Third Quarter 2013 Data Collected in July 2013

Well No.	Result	Gradient	Result >TL?
MW359	0.005	Downgradient	NO
MW362	0.050	Downgradient	NO
MW365	0.006	Downgradient	NO
MW368	0.010	Sidegradient	NO
MW371	0.005	Upgradient	NO
MW374	0.005	Upgradient	NO
MW375	0.005	Sidegradient	NO

Third Quarter 2013 Dry/Partially Dry Wells

Well No.	Gradient
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 Third 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

Third Quarter 2013 Data Collected in July 2013

Well No.	Result	Gradient	Result >TL?
MW359	432.000	Downgradient	N/A
MW362	549.000	Downgradient	N/A
MW365	741.000	Downgradient	N/A
MW368	450.000	Sidegradient	N/A
MW371	390.000	Upgradient	N/A
MW374	344.000	Upgradient	N/A
MW375	641.000	Sidegradient	N/A

Third Quarter 2013 Dry/Partially Dry Wells

Well No.	Gradient
MW368	Sidegradient
MW376	Sidegradient
MW377	Sidegradient

Transformed Third Quarter 2013 Data Collected in July 2013

Well Number	LN(Result)	Result >TL?
MW359	6.068	**YES**
MW362	6.308	**YES**
MW365	6.608	**YES**
MW368	6.109	**YES**
MW371	5.966	**YES**
MW374	5.841	**YES**
MW375	6.463	**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.

MW359

MW362

MW365

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

MW368
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 Third Quarter 2013 Statistical Analysis UCRS
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:	MW371
Date Collected	Result
3/18/2002	1.000
4/22/2002	0.170
7/15/2002	0.170
7/9/2003	0.170
10/6/2003	0.170
7/13/2004	0.180
7/25/2005	0.170
4/5/2006	0.180

Well Number:	MW374
Date Collected	Result
7/9/2003	0.170
10/7/2003	0.170
7/14/2004	0.180
7/26/2005	0.170
4/6/2006	0.180
7/10/2006	0.170
10/12/2006	0.170
1/8/2007	0.170

Statistics on Background Data

X= 0.224
S= 0.207
CV= 0.922
K factor = 2.523**
TL= 0.746

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

Third Quarter 2013 Data Collected in July 2013

Well No.	Result	Gradient	Result >TL?
MW359	0.180	Downgradient	NO
MW362	0.180	Downgradient	NO
MW365	0.310	Downgradient	NO
MW368	0.220	Sidegradient	NO
MW371	0.180	Upgradient	NO
MW374	0.170	Upgradient	NO
MW375	0.180	Sidegradient	NO

Third Quarter 2013 Dry/Partially Dry Wells

Well No.	Gradient
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 Third Quarter 2013 Statistical Analysis UCRS
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:	MW371
Date Collected	Result
3/18/2002	1.000
4/22/2002	0.110
7/15/2002	0.110
7/9/2003	0.130
10/6/2003	0.090
7/13/2004	0.100
7/25/2005	0.090
4/5/2006	0.100
Well Number:	MW374
Date Collected	Result
7/9/2003	0.130
10/7/2003	0.090
7/14/2004	0.100
7/26/2005	0.100
4/6/2006	0.100
7/10/2006	0.100
7/10/2006	0.100
10/12/2006	0.100

Statistics on Background Data

X= 0.159
S= 0.224
CV= 1.409
K factor = 2.523**
TL= 0.726

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

Statistics on Transformed Background Data

X= -2.134
S= 0.579
CV= -0.272
K factor = 2.523**
TL= -0.672

Transformed Background Data from Upgradient Wells

Well Number:	MW371
Date Collected	LN(Result)
3/18/2002	0.000
4/22/2002	-2.207
7/15/2002	-2.207
7/9/2003	-2.040
10/6/2003	-2.408
7/13/2004	-2.303
7/25/2005	-2.408
4/5/2006	-2.303
Well Number:	MW374
Date Collected	LN(Result)
7/9/2003	-2.040
10/7/2003	-2.408
7/14/2004	-2.303
7/26/2005	-2.303
4/6/2006	-2.303
7/10/2006	-2.303
7/10/2006	-2.303
10/12/2006	-2.303

Third Quarter 2013 Data Collected in July 2013

Well No.	Result	Gradient	Result >TL?
MW359	0.100	Downgradient	N/A
MW362	0.100	Downgradient	N/A
MW365	0.310	Downgradient	N/A
MW368	0.220	Sidegradient	N/A
MW371	0.100	Upgradient	N/A
MW374	0.100	Upgradient	N/A
MW375	0.100	Sidegradient	N/A

Third Quarter 2013 Dry/Partially Dry Wells

Well No.	Gradient
MW368	Sidegradient
MW376	Sidegradient
MW377	Sidegradient

Transformed Third Quarter 2013 Data Collected in July 2013

Well Number	LN(Result)	Result >TL?
MW359	-2.303	NO
MW362	-2.303	NO
MW365	-1.171	NO
MW368	-1.514	NO
MW371	-2.303	NO
MW374	-2.303	NO
MW375	-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 Third 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.

Third Quarter 2013 Data Collected in July 2013

Well No.	Result	Gradient	Result >TL?	Result <LL?
MW359	6.470	Downgradient	NO	NO
MW362	6.950	Downgradient	NO	NO
MW365	6.600	Downgradient	NO	NO
MW368	6.590	Sidegradient	NO	NO
MW371	6.680	Upgradient	NO	NO
MW374	6.620	Upgradient	NO	NO
MW375	6.510	Sidegradient	NO	NO

Third Quarter 2013 Dry/Partially Dry Wells

Well No.	Gradient
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 Third 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.

Third Quarter 2013 Data Collected in July 2013

Well No.	Result	Gradient	Result >TL?
MW359	0.200	Downgradient	NO
MW362	0.815	Downgradient	NO
MW365	0.254	Downgradient	NO
MW368	0.689	Sidegradient	NO
MW371	0.361	Upgradient	NO
MW374	0.507	Upgradient	NO
MW375	0.300	Sidegradient	NO

Third Quarter 2013 Dry/Partially Dry Wells

Well No.	Gradient
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 Third 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.

Third Quarter 2013 Data Collected in July 2013

Well No.	Result	Gradient	Result >TL?
MW359	34.900	Downgradient	NO
MW362	96.500	Downgradient	NO
MW365	49.200	Downgradient	NO
MW368	154.00	Sidegradient	NO
MW371	122.00	Upgradient	NO
MW374	128.00	Upgradient	NO
MW375	66.200	Sidegradient	NO

Third Quarter 2013 Dry/Partially Dry Wells

Well No.	Gradient
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 Third 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.

Third Quarter 2013 Data Collected in July 2013

Well No.	Result	Gradient	Result >TL?
MW359	45.000	Downgradient	**YES**
MW362	71.000	Downgradient	**YES**
MW365	59.000	Downgradient	**YES**
MW368	110.00	Sidegradient	**YES**
MW371	19.000	Upgradient	**YES**
MW374	5.600	Upgradient	NO
MW375	32.000	Sidegradient	**YES**

Third Quarter 2013 Dry/Partially Dry Wells

Well No.	Gradient
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.

MW359
MW362
MW365
MW368

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

MW371
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 Third 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

Third Quarter 2013 Data Collected in July 2013

Well No.	Result	Gradient	Result >TL?
MW359	1.500	Downgradient	N/A
MW362	5.400	Downgradient	N/A
MW365	1.400	Downgradient	N/A
MW368	2.300	Sidegradient	N/A
MW371	1.600	Upgradient	N/A
MW374	1.600	Upgradient	N/A
MW375	1.100	Sidegradient	N/A

Third Quarter 2013 Dry/Partially Dry Wells

Well No.	Gradient
MW368	Sidegradient
MW376	Sidegradient
MW377	Sidegradient

Transformed Third Quarter 2013 Data Collected in July 2013

Well Number	LN(Result)	Result >TL?
MW359	0.405	NO
MW362	1.686	NO
MW365	0.336	NO
MW368	0.833	NO
MW371	0.470	NO
MW374	0.470	NO
MW375	0.095	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 Third 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

Third Quarter 2013 Data Collected in July 2013

Well No.	Result	Gradient	Result >TL?
MW359	14.000	Downgradient	N/A
MW362	14.000	Downgradient	N/A
MW365	26.000	Downgradient	N/A
MW368	29.000	Sidegradient	N/A
MW371	15.000	Upgradient	N/A
MW374	33.000	Upgradient	N/A
MW375	27.000	Sidegradient	N/A

Third Quarter 2013 Dry/Partially Dry Wells

Well No.	Gradient
MW368	Sidegradient
MW376	Sidegradient
MW377	Sidegradient

Transformed Third Quarter 2013 Data Collected in July 2013

Well Number	LN(Result)	Result >TL?
MW359	2.639	NO
MW362	2.639	NO
MW365	3.258	NO
MW368	3.367	NO
MW371	2.708	NO
MW374	3.497	NO
MW375	3.296	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 Third 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

Third Quarter 2013 Data Collected in July 2013

Well No.	Result	Gradient	Result >TL?
MW359	0.001	Downgradient	N/A
MW362	0.006	Downgradient	N/A
MW365	0.001	Downgradient	N/A
MW368	0.001	Sidegradient	N/A
MW371	0.001	Upgradient	N/A
MW374	0.001	Upgradient	N/A
MW375	0.001	Sidegradient	N/A

Third Quarter 2013 Dry/Partially Dry Wells

Well No.	Gradient
MW368	Sidegradient
MW376	Sidegradient
MW377	Sidegradient

Transformed Third Quarter 2013 Data Collected in July 2013

Well Number	LN(Result)	Result >TL?
MW359	-6.908	NO
MW362	-5.183	NO
MW365	-6.908	NO
MW368	-6.908	NO
MW371	-6.536	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 Third 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.

Third Quarter 2013 Data Collected in July 2013

Well No.	Result	Gradient	Result >TL?
MW357	0.330	Downgradient	NO
MW360	0.200	Downgradient	NO
MW363	0.200	Downgradient	NO
MW366	0.200	Sidegradient	NO
MW369	0.200	Upgradient	NO
MW372	1.190	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 Third 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.

Third Quarter 2013 Data Collected in July 2013

Well No.	Result	Gradient	Result >TL?
MW357	29.500	Downgradient	NO
MW360	30.500	Downgradient	NO
MW363	28.200	Downgradient	NO
MW366	31.200	Sidegradient	NO
MW369	19.900	Upgradient	NO
MW372	63.500	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 Third 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.

Third Quarter 2013 Data Collected in July 2013

Well No.	Result	Gradient	Result >TL?
MW357	34.000	Downgradient	NO
MW360	11.000	Downgradient	NO
MW363	36.000	Downgradient	NO
MW366	38.000	Sidegradient	NO
MW369	40.000	Upgradient	NO
MW372	49.000	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 Third 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.

Third Quarter 2013 Data Collected in July 2013

Well No.	Result	Gradient	Result >TL?
MW357	0.001	Downgradient	NO
MW360	0.033	Downgradient	NO
MW363	0.001	Downgradient	NO
MW366	0.001	Sidegradient	NO
MW369	0.027	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 Third 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.

Third Quarter 2013 Data Collected in July 2013

Well No.	Result	Gradient	Result >TL?
MW357	461.00	Downgradient	NO
MW360	628.00	Downgradient	NO
MW363	423.00	Downgradient	NO
MW366	475.00	Sidegradient	NO
MW369	427.00	Upgradient	NO
MW372	822.00	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 Third 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.

Third Quarter 2013 Data Collected in July 2013

Well No.	Result	Gradient	Result >TL?
MW357	3.370	Downgradient	NO
MW360	2.010	Downgradient	NO
MW363	0.640	Downgradient	NO
MW366	0.980	Sidegradient	NO
MW369	0.790	Upgradient	NO
MW372	0.610	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 Third 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.

Third Quarter 2013 Data Collected in July 2013

Well No.	Result	Gradient	Result >TL?
MW357	259.00	Downgradient	NO
MW360	355.00	Downgradient	NO
MW363	243.00	Downgradient	NO
MW366	266.00	Sidegradient	NO
MW369	232.00	Upgradient	NO
MW372	503.00	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 Third 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.

Third Quarter 2013 Data Collected in July 2013

Well No.	Result	Gradient	Result >TL?
MW357	0.100	Downgradient	NO
MW360	7.250	Downgradient	NO
MW363	0.100	Downgradient	NO
MW366	0.100	Sidegradient	NO
MW369	2.380	Upgradient	NO
MW372	0.810	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 Third 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.

Third Quarter 2013 Data Collected in July 2013

Well No.	Result	Gradient	Result >TL?
MW357	11.700	Downgradient	NO
MW360	10.400	Downgradient	NO
MW363	10.500	Downgradient	NO
MW366	12.200	Sidegradient	NO
MW369	7.620	Upgradient	NO
MW372	23.800	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 Third 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.

Third Quarter 2013 Data Collected in July 2013

Well No.	Result	Gradient	Result >TL?
MW357	0.007	Downgradient	NO
MW360	0.276	Downgradient	NO
MW363	0.247	Downgradient	NO
MW366	0.027	Sidegradient	NO
MW369	0.271	Upgradient	NO
MW372	0.021	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 Third 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.

Third Quarter 2013 Data Collected in July 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	0.009	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 Third 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

Third Quarter 2013 Data Collected in July 2013

Well No.	Result	Gradient	Result >TL?
MW357	420.000	Downgradient	N/A
MW360	257.000	Downgradient	N/A
MW363	455.000	Downgradient	N/A
MW366	407.000	Sidegradient	N/A
MW369	284.000	Upgradient	N/A
MW372	273.000	Upgradient	N/A

Transformed Third Quarter 2013 Data Collected in July 2013

Well Number	LN(Result)	Result >TL?
MW357	6.040	**YES**
MW360	5.549	**YES**
MW363	6.120	**YES**
MW366	6.009	**YES**
MW369	5.649	**YES**
MW372	5.609	**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.

MW357

MW360

MW363

MW366

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

MW369
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 Third 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.

Third Quarter 2013 Data Collected in July 2013

Well No.	Result	Gradient	Result >TL?
MW357	0.180	Downgradient	NO
MW360	0.180	Downgradient	NO
MW363	0.190	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 Third 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

Third Quarter 2013 Data Collected in July 2013

Well No.	Result	Gradient	Result >TL?
MW357	0.100	Downgradient	N/A
MW360	0.100	Downgradient	N/A
MW363	0.190	Downgradient	N/A
MW366	0.100	Sidegradient	N/A
MW369	0.110	Upgradient	N/A
MW372	0.100	Upgradient	N/A

Transformed Third Quarter 2013 Data Collected in July 2013

Well Number	LN(Result)	Result >TL?
MW357	-2.303	NO
MW360	-2.303	NO
MW363	-1.661	NO
MW366	-2.303	NO
MW369	-2.207	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 Third 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.

Third Quarter 2013 Data Collected in July 2013

Well No.	Result	Gradient	Result >TL?	Result <LL?
MW357	6.200	Downgradient	NO	NO
MW360	6.280	Downgradient	NO	NO
MW363	6.160	Downgradient	NO	NO
MW366	6.110	Sidegradient	NO	NO
MW369	6.270	Upgradient	NO	NO
MW372	6.140	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 Third 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.

Third Quarter 2013 Data Collected in July 2013

Well No.	Result	Gradient	Result >TL?
MW357	1.730	Downgradient	NO
MW360	0.824	Downgradient	NO
MW363	1.280	Downgradient	NO
MW366	1.980	Sidegradient	NO
MW369	0.734	Upgradient	NO
MW372	2.440	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 Third 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.

Third Quarter 2013 Data Collected in July 2013

Well No.	Result	Gradient	Result >TL?
MW357	40.400	Downgradient	NO
MW360	68.300	Downgradient	NO
MW363	37.000	Downgradient	NO
MW366	43.500	Sidegradient	NO
MW369	54.700	Upgradient	NO
MW372	61.600	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 Third 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.

Third Quarter 2013 Data Collected in July 2013

Well No.	Result	Gradient	Result >TL?
MW357	62.000	Downgradient	NO
MW360	100.00	Downgradient	NO
MW363	21.000	Downgradient	NO
MW366	53.000	Sidegradient	NO
MW369	8.700	Upgradient	NO
MW372	150.00	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 Third 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.

Third Quarter 2013 Data Collected in July 2013

Well No.	Result	Gradient	Result >TL?
MW357	48.800	Downgradient	NO
MW360	9.420	Downgradient	NO
MW363	13.400	Downgradient	NO
MW366	69.900	Sidegradient	**YES**
MW369	23.000	Upgradient	NO
MW372	176.00	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.

MW366

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 Third 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

Third Quarter 2013 Data Collected in July 2013

Well No.	Result	Gradient	Result >TL?
MW357	1.000	Downgradient	N/A
MW360	3.000	Downgradient	N/A
MW363	1.000	Downgradient	N/A
MW366	1.000	Sidegradient	N/A
MW369	1.700	Upgradient	N/A
MW372	1.000	Upgradient	N/A

Transformed Third Quarter 2013 Data Collected in July 2013

Well Number	LN(Result)	Result >TL?
MW357	0.000	NO
MW360	1.099	NO
MW363	0.000	NO
MW366	0.000	NO
MW369	0.531	NO
MW372	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 Third 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.

Third Quarter 2013 Data Collected in July 2013

Well No.	Result	Gradient	Result >TL?
MW357	14.000	Downgradient	NO
MW360	34.000	Downgradient	NO
MW363	12.000	Downgradient	NO
MW366	14.000	Sidegradient	NO
MW369	59.000	Upgradient	NO
MW372	22.000	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 Third 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.

Third Quarter 2013 Data Collected in July 2013

Well No.	Result	Gradient	Result >TL?
MW358	0.364	Downgradient	NO
MW361	0.222	Downgradient	NO
MW364	0.200	Downgradient	NO
MW367	0.200	Sidegradient	NO
MW370	0.200	Upgradient	NO
MW373	1.750	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 Third 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.

Third Quarter 2013 Data Collected in July 2013

Well No.	Result	Gradient	Result >TL?
MW358	36.600	Downgradient	NO
MW361	33.500	Downgradient	NO
MW364	28.700	Downgradient	NO
MW367	29.100	Sidegradient	NO
MW370	29.200	Upgradient	NO
MW373	79.000	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.

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 Third 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.

Third Quarter 2013 Data Collected in July 2013

Well No.	Result	Gradient	Result >TL?
MW358	34.000	Downgradient	NO
MW361	33.000	Downgradient	NO
MW364	31.000	Downgradient	NO
MW367	35.000	Sidegradient	NO
MW370	43.000	Upgradient	NO
MW373	46.000	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 Third 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

Third Quarter 2013 Data Collected in July 2013

Well No.	Result	Gradient	Result >TL?
MW358	0.002	Downgradient	N/A
MW361	0.001	Downgradient	N/A
MW364	0.001	Downgradient	N/A
MW367	0.002	Sidegradient	N/A
MW370	0.001	Upgradient	N/A
MW373	0.001	Upgradient	N/A

Transformed Third Quarter 2013 Data Collected in July 2013

Well Number	LN(Result)	Result >TL?
MW358	-6.175	NO
MW361	-6.908	NO
MW364	-6.908	NO
MW367	-6.166	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 Third 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.

Third Quarter 2013 Data Collected in July 2013

Well No.	Result	Gradient	Result >TL?
MW358	529.00	Downgradient	NO
MW361	482.00	Downgradient	NO
MW364	465.00	Downgradient	NO
MW367	420.00	Sidegradient	NO
MW370	469.00	Upgradient	NO
MW373	918.00	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 Third 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.

Third Quarter 2013 Data Collected in July 2013

Well No.	Result	Gradient	Result >TL?
MW358	1.080	Downgradient	NO
MW361	3.070	Downgradient	NO
MW364	0.970	Downgradient	NO
MW367	0.740	Sidegradient	NO
MW370	3.390	Upgradient	NO
MW373	1.380	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 Third 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.

Third Quarter 2013 Data Collected in July 2013

Well No.	Result	Gradient	Result >TL?
MW358	303.00	Downgradient	NO
MW361	294.00	Downgradient	NO
MW364	250.00	Downgradient	NO
MW367	242.00	Sidegradient	NO
MW370	230.00	Upgradient	NO
MW373	618.00	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 Third 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.

Third Quarter 2013 Data Collected in July 2013

Well No.	Result	Gradient	Result >TL?
MW358	0.363	Downgradient	NO
MW361	0.100	Downgradient	NO
MW364	0.189	Downgradient	NO
MW367	2.060	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 Third 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.

Third Quarter 2013 Data Collected in July 2013

Well No.	Result	Gradient	Result >TL?
MW358	14.800	Downgradient	NO
MW361	13.400	Downgradient	NO
MW364	11.300	Downgradient	NO
MW367	11.000	Sidegradient	NO
MW370	11.500	Upgradient	NO
MW373	29.200	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 Third 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.

Third Quarter 2013 Data Collected in July 2013

Well No.	Result	Gradient	Result >TL?
MW358	0.108	Downgradient	NO
MW361	0.006	Downgradient	NO
MW364	0.023	Downgradient	NO
MW367	0.564	Sidegradient	NO
MW370	0.005	Upgradient	NO
MW373	0.009	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 Third 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

Third Quarter 2013 Data Collected in July 2013

Well No.	Result	Gradient	Result >TL?
MW358	236.000	Downgradient	N/A
MW361	520.000	Downgradient	N/A
MW364	350.000	Downgradient	N/A
MW367	330.000	Sidegradient	N/A
MW370	387.000	Upgradient	N/A
MW373	500.000	Upgradient	N/A

Transformed Third Quarter 2013 Data Collected in July 2013

Well Number	LN(Result)	Result >TL?
MW358	5.464	**YES**
MW361	6.254	**YES**
MW364	5.858	**YES**
MW367	5.799	**YES**
MW370	5.958	**YES**
MW373	6.215	**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

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

MW370
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 Third 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.

Third Quarter 2013 Data Collected in July 2013

Well No.	Result	Gradient	Result >TL?	Result <LL?
MW358	6.380	Downgradient	NO	NO
MW361	6.030	Downgradient	NO	NO
MW364	6.060	Downgradient	NO	NO
MW367	6.130	Sidegradient	NO	NO
MW370	6.270	Upgradient	NO	NO
MW373	6.130	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 Third 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.

Third Quarter 2013 Data Collected in July 2013

Well No.	Result	Gradient	Result >TL?
MW358	2.360	Downgradient	NO
MW361	1.920	Downgradient	NO
MW364	1.960	Downgradient	NO
MW367	2.900	Sidegradient	NO
MW370	2.510	Upgradient	NO
MW373	3.090	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 Third 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.

Third Quarter 2013 Data Collected in July 2013

Well No.	Result	Gradient	Result >TL?
MW358	41.900	Downgradient	NO
MW361	42.800	Downgradient	NO
MW364	41.600	Downgradient	NO
MW367	36.200	Sidegradient	NO
MW370	38.400	Upgradient	NO
MW373	66.500	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 Third 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

Third Quarter 2013 Data Collected in July 2013

Well No.	Result	Gradient	Result >TL?
MW358	87.000	Downgradient	N/A
MW361	79.000	Downgradient	N/A
MW364	61.000	Downgradient	N/A
MW367	39.000	Sidegradient	N/A
MW370	18.000	Upgradient	N/A
MW373	220.000	Upgradient	N/A

Transformed Third Quarter 2013 Data Collected in July 2013

Well Number	LN(Result)	Result >TL?
MW358	4.466	NO
MW361	4.369	NO
MW364	4.111	NO
MW367	3.664	NO
MW370	2.890	NO
MW373	5.394	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 Third 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

Third Quarter 2013 Data Collected in July 2013

Well No.	Result	Gradient	Result >TL?
MW358	45.400	Downgradient	N/A
MW361	51.300	Downgradient	N/A
MW364	46.400	Downgradient	N/A
MW367	42.800	Sidegradient	N/A
MW370	33.200	Upgradient	N/A
MW373	63.700	Upgradient	N/A

Transformed Third Quarter 2013 Data Collected in July 2013

Well Number	LN(Result)	Result >TL?
MW358	3.816	NO
MW361	3.938	**YES**
MW364	3.837	**YES**
MW367	3.757	NO
MW370	3.503	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.
MW361
MW364
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 Third 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.

Third Quarter 2013 Data Collected in July 2013

Well No.	Result	Gradient	Result >TL?
MW358	22.000	Downgradient	NO
MW361	21.000	Downgradient	NO
MW364	14.000	Downgradient	NO
MW367	20.000	Sidegradient	NO
MW370	16.000	Upgradient	NO
MW373	22.000	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

October 16, 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 third 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

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 third quarter 2013 and determine groundwater flow rate and direction.

Water levels during this reporting period were measured on August 5 and 6, 2013. As shown on Figure E.1, all Upper Continental Recharge System (UCRS) wells but MW377 had sufficient water to permit water level measurement during this reporting period. Both 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 5.00×10^{-4} ft/ft and for the LRGA was 4.92×10^{-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 3.41×10^{-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 Solid Waste Landfill Permit No. 073-00045 and range from 425 to 725 ft/day (0.150 to 0.256cm/s). RGA (both URGA and LRGA) effective porosity is assumed to be 25%. Flow velocities were calculated for the URGA and LRGA using the low and high values for hydraulic conductivity, as shown in the Table E.3.

Groundwater flow beneath the C-746-U Landfill typically trends northeastward toward the Ohio River. In August, groundwater flow was northeastward with the regional flow.

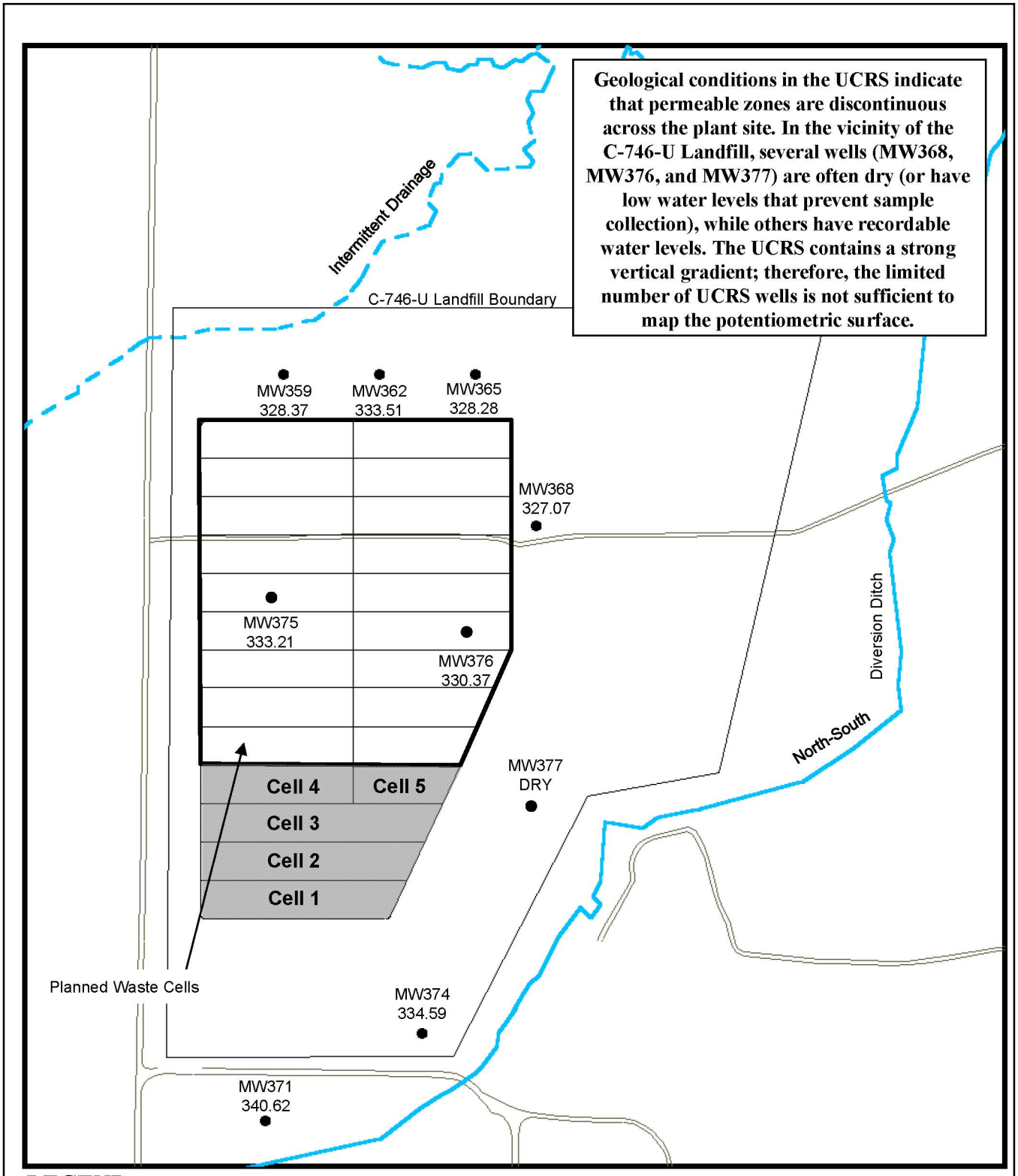


Figure E.1. Potentiometric Measurements of the Upper Continental Recharge System at the C-746-U Landfill, August 5, 2013

Table E.1. C-746-U Landfill Third Quarter 2013 (August) Water Levels

C-746-U Landfill (August 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)
8/5/2013	11:17	MW357	URGA	368.90	30.07	-0.01	44.38	324.52	44.37	324.53
8/5/2013	11:10	MW358	LRGA	369.05	30.07	-0.01	44.55	324.50	44.54	324.51
8/5/2013	11:13	MW359	UCRS	369.07	30.07	-0.01	40.71	328.36	40.70	328.37
8/5/2013	11:20	MW360	URGA	362.20	30.07	-0.01	37.70	324.50	37.69	324.51
8/5/2013	11:25	MW361	LRGA	361.47	30.07	-0.01	36.95	324.52	36.94	324.53
8/5/2013	11:22	MW362	UCRS	361.95	30.07	-0.01	28.45	333.50	28.44	333.51
8/5/2013	11:40	MW363	URGA	368.68	30.07	-0.01	44.26	324.42	44.25	324.43
8/5/2013	11:36	MW364	LRGA	367.63	30.07	-0.01	43.26	324.37	43.25	324.38
8/5/2013	11:38	MW365	UCRS	368.27	30.07	-0.01	40.00	328.27	39.99	328.28
8/5/2013	11:29	MW366	URGA	369.06	30.07	-0.01	44.52	324.54	44.51	324.55
8/5/2013	11:33	MW367	LRGA	369.45	30.07	-0.01	44.94	324.51	44.93	324.52
8/5/2013	11:31	MW368	UCRS	369.14	30.07	-0.01	42.08	327.06	42.07	327.07
8/5/2013	9:55	MW369	URGA	364.28	30.06	0.00	38.84	325.44	38.84	325.44
8/6/2013	10:05	MW370	LRGA	365.15	29.96	0.11	39.66	325.49	39.77	325.38
8/5/2013	9:53	MW371	UCRS	364.71	30.06	0.00	24.09	340.62	24.09	340.62
8/5/2013	9:47	MW372	URGA	359.49	30.06	0.00	34.01	325.48	34.01	325.48
8/5/2013	9:42	MW373	LRGA	359.79	30.06	0.00	34.33	325.46	34.33	325.46
8/5/2013	9:45	MW374	UCRS	359.50	30.06	0.00	24.91	334.59	24.91	334.59
8/5/2013	9:38	MW375	UCRS	370.24	30.06	0.00	37.03	333.21	37.03	333.21
8/5/2013	9:35	MW376	UCRS	370.44	30.06	0.00	40.07	330.37	40.07	330.37
8/5/2013	9:33	MW377	UCRS	365.76	30.06	0.00	Dry	--	--	--

Initial Barometric Pressure **30.06**

Elev = elevation

amsl = above mean sea level

BP = barometric pressure

DTW = depth to water in feet below datum

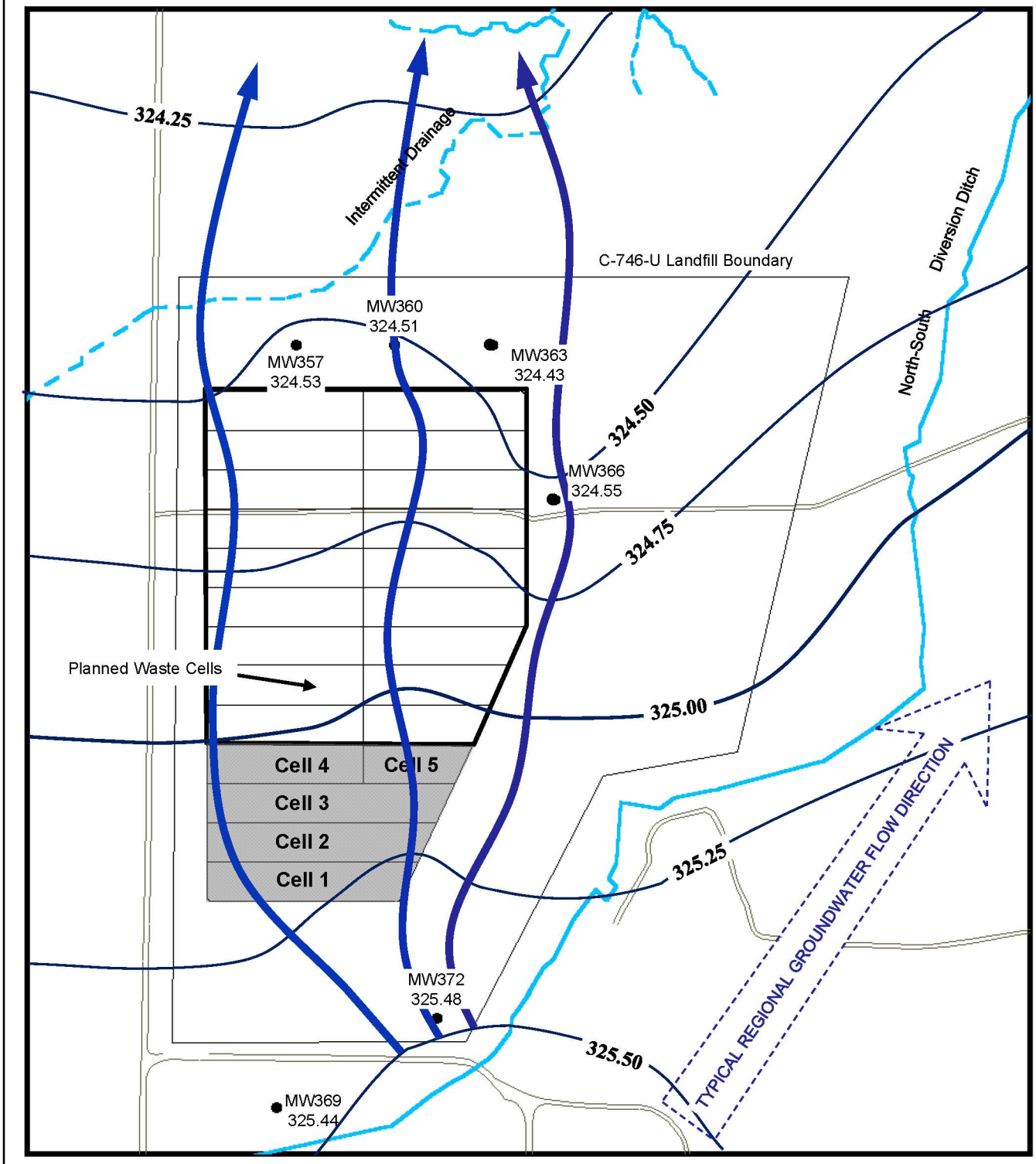
URGA = Upper Regional Gravel Aquifer

LRGA = Lower Regional Gravel Aquifer

UCRS = Upper Continental Recharge System

ND = No Data acquired

*Assumes a barometric efficiency of 1.0



LEGEND

400 0 400 Feet

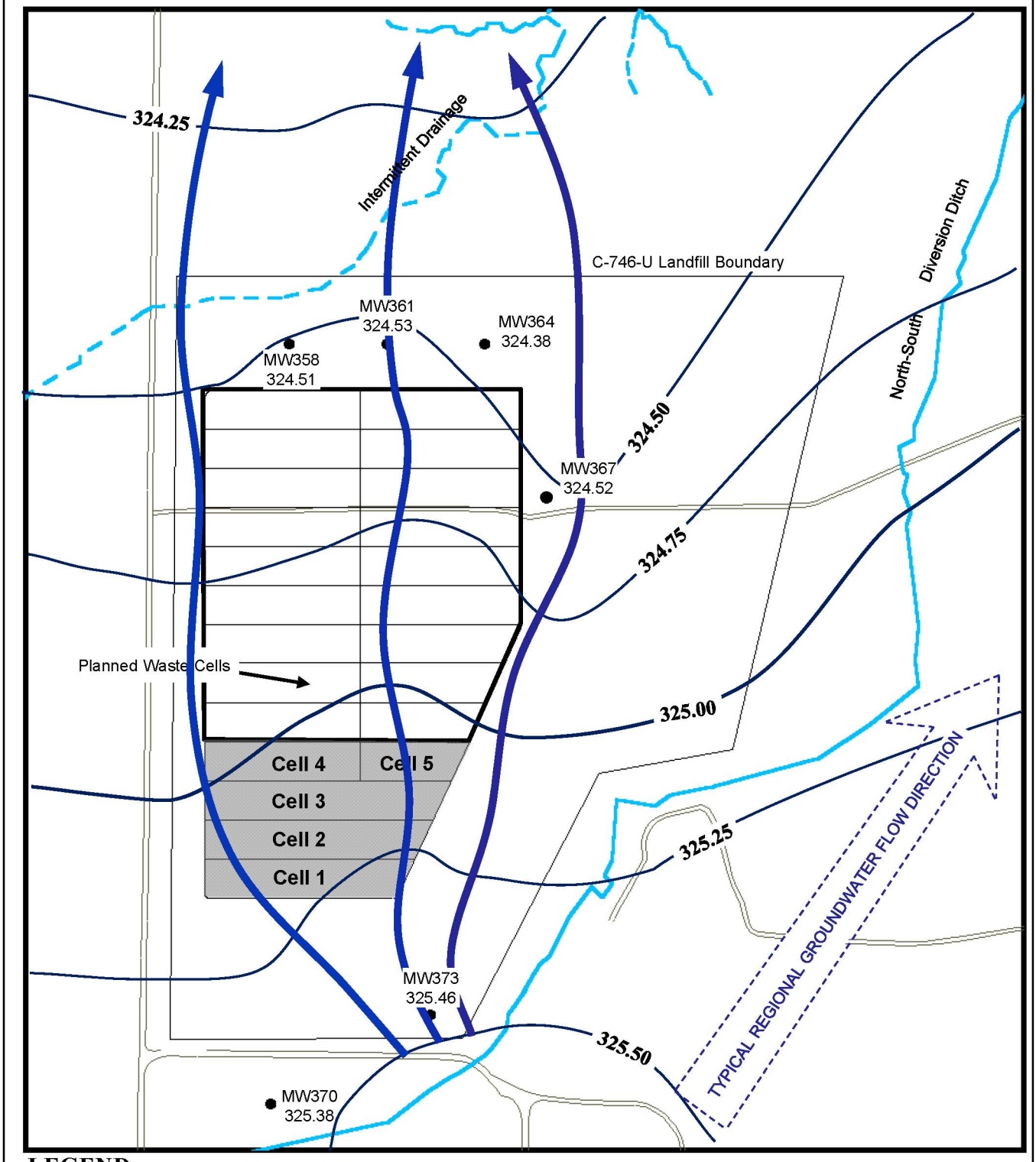
Contour Interval = 0.25 ft
Groundwater Flow Direction
324.50 Potentiometric Surface Contour

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, August 5, 2013



LEGEND

400 0 400 Feet

Contour Interval = 0.25 ft

Groundwater Flow Direction

324.50 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, August 5 and 6, 2013

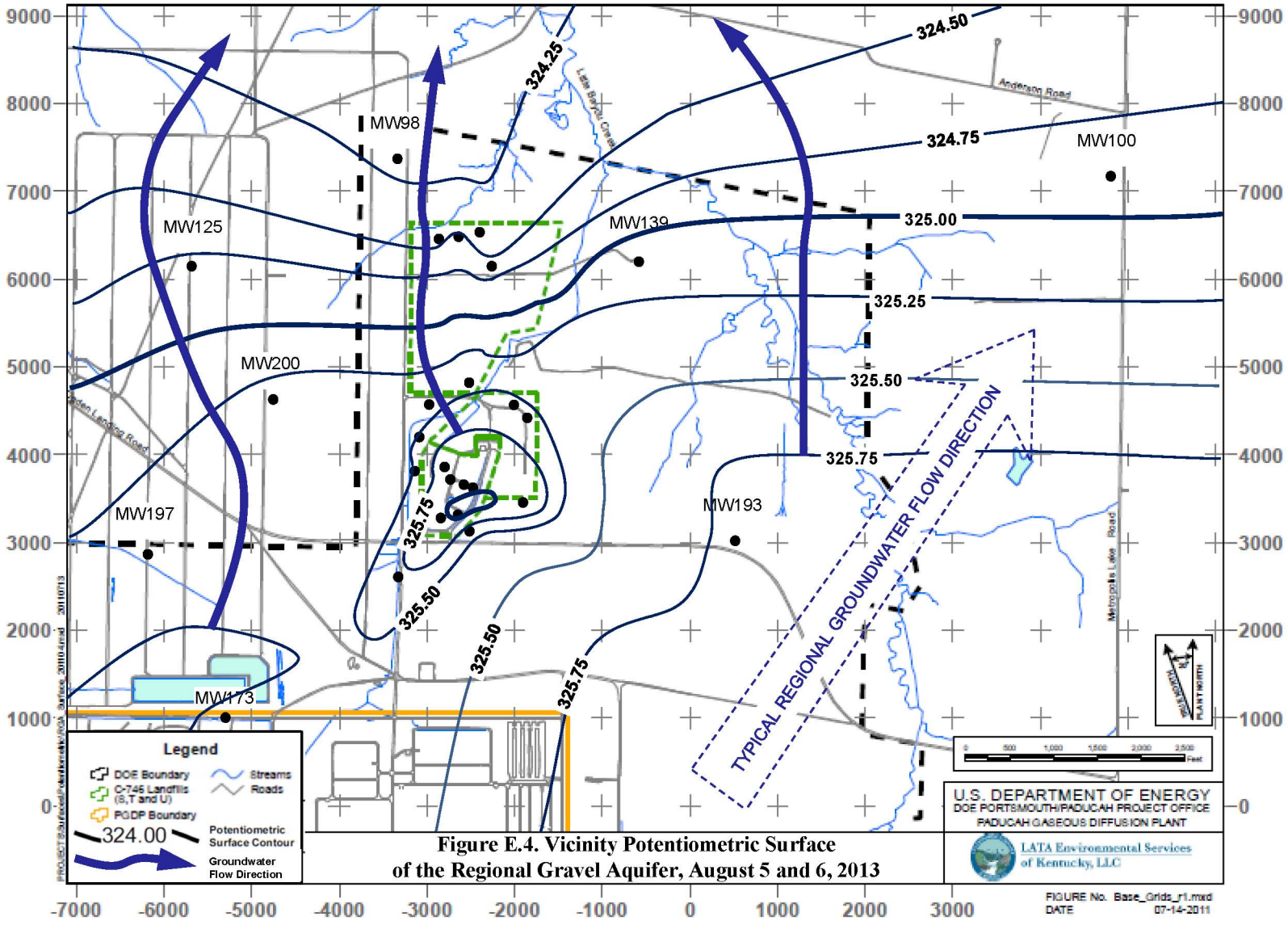


Figure E.4. Vicinity Potentiometric Surface of the Regional Gravel Aquifer, August 5 and 6, 2013

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

	ft/ft
Beneath Landfill – Upper RGA	5.00×10^{-4}
Beneath Landfill – Lower RGA	4.92×10^{-4}
Vicinity	3.41×10^{-4}

Table E.3. C-746-U Landfill Groundwater Flow Rate

Hydraulic Conductivity (K)		Specific Discharge (q)		Average Linear Velocity (v)	
ft/day	cm/s	ft/day	cm/s	ft/day	cm/s
Upper RGA					
725	0.256	0.36	1.28×10^{-4}	1.45	5.12×10^{-4}
425	0.150	0.21	7.50×10^{-5}	0.85	3.00×10^{-4}
Lower RGA					
725	0.256	0.36	1.26×10^{-4}	1.43	5.04×10^{-4}
425	0.150	0.21	7.38×10^{-5}	0.84	2.95×10^{-4}

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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 third 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	
Technetium-99	MW366, MW372
Lower Regional Gravel Aquifer	
Technetium-99	MW361, MW364, 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.

8/28/2013

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	6.9	ug/L	5
8004-4808	MW372	Beta activity	9310/RL7111	115	pCi/L	50
		Trichloroethene	8260B/OA7302E	7.3	ug/L	5
8004-4792	MW373	Beta activity	9310/RL7111	52.2	pCi/L	50
		Trichloroethene	8260B/OA7302E	7.6	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																					■
Quarter 3, 2006															■						■
Quarter 4, 2006															■						■
Quarter 1, 2007										■					■						■
Quarter 2, 2007															■						■
Quarter 3, 2007										■					■						
Quarter 4, 2007										■					■						■
Quarter 1, 2008										■					■						
Quarter 2, 2008														■		■					
Quarter 3, 2008										■					■				■		
Quarter 4, 2008										■					■				■		
Quarter 1, 2009										■					■						
Quarter 2, 2009															■	■	■				
Quarter 3, 2009										■					■						
Quarter 4, 2009										■					■						
Quarter 1, 2010															■						
Quarter 2, 2010										■						■					
Quarter 3, 2010										■											
Quarter 4, 2010															■						
Quarter 2, 2011										■						■					
Quarter 4, 2011															■						
Quarter 1, 2012										■											
Quarter 2, 2012										■								■			
Quarter 3, 2012										■					■						
Quarter 4, 2012															■						■

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															■						■
Quarter 3, 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															✱						
Quarter 3, 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																				✱	

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
COBALT																					
Quarter 3, 2003	*						*			*	*		*	*	*	*	*	*		*	
Quarter 1, 2004														*							
CONDUCTIVITY																					
Quarter 4, 2002										*											
Quarter 1, 2003										*											
Quarter 2, 2003										*	*										
Quarter 4, 2003										*											
Quarter 1, 2004										*											
Quarter 2, 2004										*											
Quarter 3, 2004										*											
Quarter 1, 2005															*						
Quarter 2, 2005															*						
Quarter 3, 2005						*													*		
Quarter 4, 2005															*			*			
Quarter 1, 2006															*						
Quarter 2, 2006															*						
Quarter 3, 2006															*						
Quarter 1, 2007															*						
Quarter 2, 2007															*						
Quarter 3, 2007															*						
Quarter 4, 2007															*						
Quarter 1, 2008															*						
Quarter 2, 2008															*						
Quarter 3, 2008															*						
Quarter 4, 2008															*						
Quarter 1, 2009															*						
Quarter 2, 2009															*						
Quarter 3, 2009															*						
Quarter 4, 2009															*						
Quarter 1, 2010															*						
Quarter 2, 2010															*						
Quarter 3, 2010															*						
Quarter 4, 2010															*						
Quarter 1, 2011															*						
Quarter 2, 2011															*						
Quarter 3, 2011															*						
Quarter 4, 2011															*						
Quarter 1, 2012														*	*						
Quarter 2, 2012															*						
Quarter 3, 2012															*						
Quarter 4, 2012															*						
Quarter 1, 2013															*						
Quarter 2, 2013															*						
Quarter 3, 2013															*						
DISSOLVED OXYGEN																					
Quarter 1, 2003					*	*				*											
Quarter 3, 2003					*					*											
Quarter 4, 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 1, 2004					*																
Quarter 2, 2004								*								*					
Quarter 1, 2005					*																
Quarter 2, 2005								*													
Quarter 1, 2006					*																
Quarter 2, 2006					*			*													
Quarter 3, 2006					*			*													
Quarter 4, 2006					*				*												
Quarter 2, 2007					*			*													
Quarter 3, 2007					*			*	*												
Quarter 1, 2008					*														*		
Quarter 2, 2008								*	*												
Quarter 3, 2008								*													
Quarter 1, 2009							*														
Quarter 2, 2009					*			*	*												
Quarter 3, 2009						*		*	*												
Quarter 1, 2010					*		*														
Quarter 2, 2010					*	*		*	*											*	*
Quarter 3, 2010					*	*															
Quarter 4, 2010							*					*								*	
Quarter 1, 2011						*															
Quarter 2, 2011					*	*	*	*	*					*							
Quarter 3, 2011						*			*												
Quarter 1, 2012							*		*												
Quarter 2, 2012	*			*	*	*		*	*												
Quarter 3, 2012						*															
Quarter 4, 2012									*												
Quarter 1, 2013						*			*												
Quarter 2, 2013							*		*												
Quarter 3, 2013	*				*		*	*	*												
DISSOLVED SOLIDS																					
Quarter 4, 2002										*											
Quarter 1, 2003										*											
Quarter 2, 2003										*											
Quarter 3, 2003							*			*	*										
Quarter 4, 2003										*											
Quarter 3, 2005						*															
Quarter 4, 2006															*						
Quarter 1, 2007															*						
Quarter 2, 2007															*						
Quarter 4, 2008															*						
Quarter 1, 2009															*						
Quarter 2, 2009															*						
Quarter 3, 2009															*						
Quarter 4, 2009															*						
Quarter 1, 2010															*						
Quarter 2, 2010															*						
Quarter 3, 2010															*						
Quarter 4, 2010															*						

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, 2011															*						
Quarter 2, 2011															*						
Quarter 3, 2011															*						
Quarter 4, 2011															*						
Quarter 1, 2012														*	*						
Quarter 2, 2012															*						*
Quarter 3, 2012															*						*
Quarter 4, 2012															*						
Quarter 1, 2013															*						
Quarter 2, 2013															*						
Quarter 3, 2013															*						
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															*						

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															*						
Quarter 2, 2013															*						
Quarter 3, 2013															*						
MANGANESE																					
Quarter 3, 2002										*		*									
Quarter 4, 2002		*				*	*			*		*		*							
Quarter 2, 2003										*		*									
Quarter 3, 2003										*		*	*			*	*	*	*		
Quarter 4, 2003										*	*	*	*				*	*			
Quarter 1, 2004										*	*	*				*	*	*			
Quarter 2, 2004							*			*	*	*						*			
Quarter 3, 2004							*			*	*	*				*					
Quarter 4, 2004										*		*				*					
Quarter 1, 2005										*		*									
Quarter 2, 2005										*		*									
Quarter 3, 2005										*		*				*					
Quarter 4, 2005										*						*					
Quarter 1, 2006										*											
Quarter 2, 2006							*			*		*									
Quarter 3, 2006										*						*					
Quarter 4, 2006										*											
Quarter 1, 2007										*											
Quarter 2, 2007							*			*											
Quarter 3, 2007							*														
Quarter 3, 2008							*														
Quarter 4, 2008							*														
Quarter 3, 2009							*														
Quarter 3, 2011							*														
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					*								*				*			*	*

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, 2007					*			*									*			*	
Quarter 4, 2007																	*			*	*
Quarter 1, 2008					*			*				*	*						*	*	
Quarter 2, 2008					*			*		*			*	*				*		*	*
Quarter 3, 2008					*		*	*	*	*		*	*	*			*	*	*	*	*
Quarter 4, 2008								*		*		*	*				*	*		*	*
Quarter 1, 2009							*	*		*		*	*					*		*	
Quarter 2, 2009					*		*	*		*		*	*				*	*		*	*
Quarter 3, 2009		*			*	*	*	*	*	*		*	*	*			*	*	*	*	*
Quarter 4, 2009		*				*	*	*	*	*		*	*				*	*	*	*	*
Quarter 1, 2010		*			*		*	*		*			*			*	*	*		*	
Quarter 2, 2010					*	*		*		*	*	*	*			*	*	*	*	*	*
Quarter 3, 2010		*			*	*	*	*	*	*	*		*	*	*		*	*	*	*	*
Quarter 4, 2010		*				*	*	*	*	*	*	*	*	*		*	*	*	*	*	*
Quarter 1, 2011						*		*		*	*	*	*	*		*	*	*	*	*	
Quarter 2, 2011		*			*	*	*	*	*	*	*	*	*	*		*	*	*	*	*	*
Quarter 3, 2011		*				*		*	*	*		*	*	*		*	*	*	*	*	*
Quarter 4, 2011		*				*		*	*	*	*	*	*	*		*	*	*		*	*
Quarter 1, 2012		*				*	*	*	*	*	*	*	*	*		*	*	*	*	*	*
Quarter 2, 2012	*	*		*	*	*	*	*	*	*	*	*	*	*		*	*	*	*	*	*
Quarter 3, 2012		*				*		*		*		*	*	*		*	*	*	*	*	*
Quarter 4, 2012		*				*		*	*	*	*	*	*	*		*	*	*	*	*	*
Quarter 1, 2013		*				*		*	*	*	*	*	*	*		*	*	*		*	
Quarter 2, 2013		*						*	*	*	*	*	*	*	*	*	*	*	*	*	*
Quarter 3, 2013	*	*			*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
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							*														

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, 2009							✱														
Quarter 1, 2010							✱														
Quarter 2, 2010							✱														
Quarter 4, 2010							✱														
PCB-1242																					
Quarter 3, 2006							✱					✱									
Quarter 4, 2006										✱											
Quarter 1, 2008							✱														
Quarter 2, 2012							✱														
PCB-1248																					
Quarter 2, 2008							✱														
PCB-1260																					
Quarter 2, 2006							✱														
pH																					
Quarter 3, 2002										✱											
Quarter 4, 2002										✱											
Quarter 1, 2003										✱											
Quarter 2, 2003										✱											
Quarter 3, 2003	✱						✱			✱											
Quarter 4, 2003							✱									✱					
Quarter 1, 2004							✱									✱					
Quarter 3, 2005						✱												✱	✱		
Quarter 4, 2005						✱													✱		
Quarter 3, 2006																✱					
Quarter 2, 2011														✱							
Quarter 3, 2011														✱							
Quarter 4, 2011														✱							
Quarter 1, 2012																✱	✱				
Quarter 2, 2012												✱									
Quarter 1, 2013										✱		✱				✱					
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	✱					✱															

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 4, 2003					*		*														
Quarter 1, 2004					*	*	*														
Quarter 2, 2004					*	*	*														
Quarter 3, 2004					*	*	*														
Quarter 1, 2005					*	*			*												
Quarter 2, 2005					*		*		*						*						
Quarter 3, 2005					*	*	*														
Quarter 4, 2005															*						
Quarter 1, 2006					*				*												
Quarter 2, 2006						*	*		*						*						
Quarter 3, 2006							*														
Quarter 1, 2007							*														
Quarter 2, 2007							*														
Quarter 3, 2007							*														
Quarter 4, 2007		*																			
Quarter 1, 2008		*			*		*		*												
Quarter 2, 2008		*			*	*	*														
Quarter 3, 2008		*			*	*	*														
Quarter 4, 2008		*				*	*														
Quarter 1, 2009		*					*														
Quarter 2, 2009		*			*	*	*														
Quarter 3, 2009		*			*	*	*								*						
Quarter 4, 2009		*			*	*									*						
Quarter 1, 2010		*			*	*	*								*						
Quarter 2, 2010		*			*	*	*								*						
Quarter 3, 2010		*			*	*	*								*						
Quarter 4, 2010		*				*	*								*						
Quarter 1, 2011		*																			
Quarter 2, 2011		*			*	*	*								*						
Quarter 3, 2011		*				*	*	*							*						
Quarter 4, 2011		*				*									*						
Quarter 1, 2012		*					*	*							*						
Quarter 2, 2012	*	*		*	*	*	*	*	*						*						
Quarter 3, 2012		*				*									*						
Quarter 4, 2012		*													*						
Quarter 1, 2013		*				*									*						
Quarter 2, 2013		*													*						
Quarter 3, 2013	*	*		*	*	*	*								*						
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															*						*

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 2, 2010										✱						✱	✱	✱	✱		
Quarter 3, 2010										✱					✱						
Quarter 4, 2010																		✱			
Quarter 1, 2011		✱								✱							✱				
Quarter 2, 2011																✱	✱	✱	✱		
Quarter 1, 2012																	✱	✱			
Quarter 2, 2012								✱										✱			
Quarter 3, 2012																	✱	✱			
Quarter 4, 2012															✱			✱			✱
Quarter 1, 2013																		✱			✱
Quarter 2, 2013																					✱
Quarter 3, 2013										✱											✱
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							■													■	■

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 4, 2003															■					■	■
Quarter 1, 2004															■					■	■
Quarter 2, 2004															■					■	■
Quarter 3, 2004															■					■	■
Quarter 4, 2004															■					■	■
Quarter 1, 2005															■					■	■
Quarter 2, 2005															■					■	■
Quarter 3, 2005															■					■	■
Quarter 4, 2005															■					■	■
Quarter 1, 2006															■					■	■
Quarter 2, 2006															■					■	■
Quarter 3, 2006															■					■	■
Quarter 4, 2006															■						■
Quarter 1, 2007															■					■	■
Quarter 2, 2007															■						■
Quarter 3, 2007															■						■
Quarter 4, 2007															■						■
Quarter 1, 2008															■						■
Quarter 2, 2008															■				■		■
Quarter 3, 2008															■						■
Quarter 4, 2008															■						■
Quarter 1, 2009															■						■
Quarter 2, 2009															■						■
Quarter 3, 2009															■						■
Quarter 4, 2009						■	■				■		■	■	■		■				■
Quarter 1, 2010													■		■						■
Quarter 2, 2010													■		■						■
Quarter 3, 2010													■		■						■
Quarter 4, 2010													■		■						■
Quarter 1, 2011													■		■						■
Quarter 2, 2011															■				■		■
Quarter 3, 2011													■		■				■		■
Quarter 4, 2011													■		■						■
Quarter 1, 2012													■		■		■		■		■
Quarter 2, 2012															■						■
Quarter 3, 2012															■						■
Quarter 4, 2012														■	■						■
Quarter 1, 2013													■		■						■
Quarter 2, 2013													■		■		■		■		■
Quarter 3, 2013													■		■						■
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

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

UCRS	Upper Continental Recharge System
URGA	Upper Regional Gravel Aquifer
LRGA	Lower Regional Gravel Aquifer
S	Sidegradient; D Downgradient; U Upgradient

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: September 18, 2013

Time	Location	% LEL of Methane Reading	Remarks	Weather Conditions
1300	C-746-U1	0	Checked at floor level	Inside office
1304	C-746-U2	0	Checked at floor level	Inside office
1309	C-746-U-T-14	0	Checked at floor level	Change out trailer
1315	C-746-U15	0	Checked at floor level	Treatment building
1323	MG1	0	Dry casing	Wind out of S. 83.4 °F
1338	MG2	0	Dry casing	Wind out of S. 84.6 °F
1334	MG3	0	Dry casing	Wind out of S. 84.8 °F
1330	MG4	0	Dry casing	Wind out of S. 85.2 °F
N/A	Suspect or Problem Areas	N/A	No problems noted	N/A

Tammy Smith 9-18-13

Tammy Smith
Signature

WD-F-0053 (2/20/13)
PAD-WD-0017

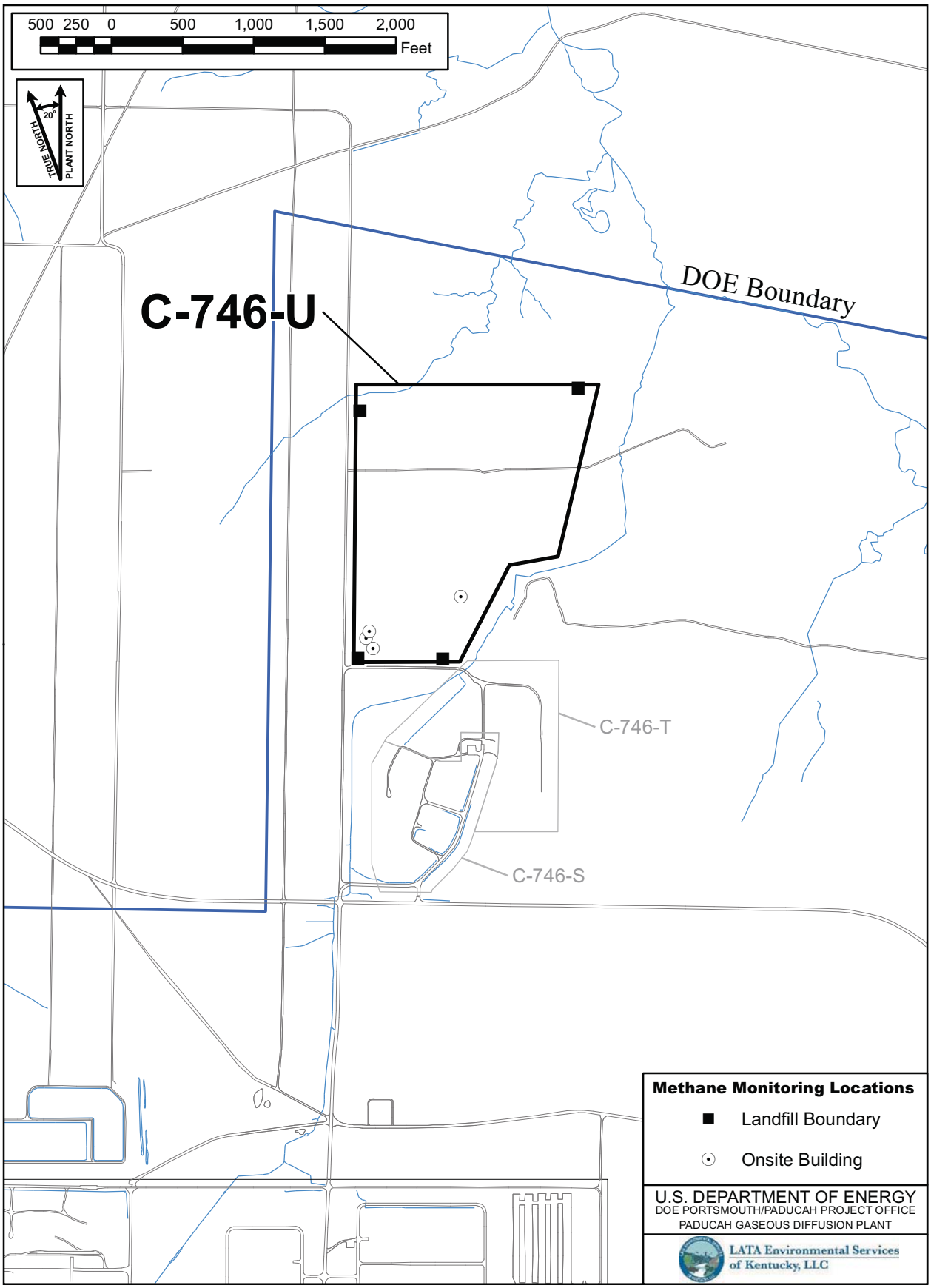

Figure H.1. C-746-U Methane Monitoring Locations

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)						8/7/2013 09:08		8/7/2013 09:25		8/7/2013 08:42			
Duplicate ("Y" or "N")[1]						N		N		N			
Split ('Y' or "N")[2]						N		N		N			
Facility Sample ID Number (if applicable)						L150US4-13		L154US4-13		L351US4-13			
Laboratory Sample ID Number (if applicable)						C13219020002		C13224025001		C13219020001			
Date of Analysis (Month/Day/Year)						9/3/2013		9/3/2013		9/3/2013			
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	0.01		0.21		2.09			
16887-00-6	2	Chloride(s)	T	MG/L	300.0	3.4		2.3		2.5			
14808-79-8	0	Sulfate	T	MG/L	300.0	37		4		4.3			
7439-89-6	0	Iron	T	MG/L	200.7 R3.3	0.902		0.997		1.17			
7440-23-5	0	Sodium	T	MG/L	200.7 R3.3	3.22		1.26		0.971			
S0268- -	0	Organic Carbon[6]	T	MG/L	9060	8.1	*D	14.4	*D	16.8	*D		
S0097- -	0	BOD[6]	T	MG/L	not applicable		*		*		*		
S0130- -	0	Chemical Oxygen Demand	T	MG/L	410.4	<36		<36		76			

[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	267		113		97			
S0270- -	0	Total Suspended Solids	T	MG/L	160.1	32	*	<20	*	<25	*		
S0266- -	0	Total Dissolved Solids	T	MG/L	160.2	180		98		97			
S0269- -	0	Total Solids	T	MG/L	160.3	202		110		104			
S0296- -	0	pH	T	Units	Field	8.28		8.23		8.38			
7440-61-1		Uranium	T	MG/L	IN7105	0.00117		0.00101		0.00205			
12587-46-1		Gross Alpha (α)	T	pCi/L	900.0	2.44	*	2.34	*	0.443	*		
12587-47-2		Gross Beta (β)	T	pCi/L	900.0	6.96	*	10.9	*	14	*		

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	L150US4-13	Total Organic Carbon (TOC)	Y	MS,MSD recovery and/or RPD failed acceptance criteria.
		Biochemical Oxygen Demand (BOD)		Analysis of constituent not required and not performed.
		Suspended Solids	*	Duplicate analysis not within control limits.
		Alpha activity	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 1.23. Rad error is 1.15.
		Beta activity		TPU is 1.36. Rad error is 1.14.
L154	L154US4-13	Total Organic Carbon (TOC)	Y	MS,MSD recovery and/or RPD failed acceptance criteria.
		Biochemical Oxygen Demand (BOD)		Analysis of constituent not required and not performed.
		Suspended Solids	*	Duplicate analysis not within control limits.
		Alpha activity	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.939. Rad error is 0.816.
		Beta activity		TPU is 1.77. Rad error is 1.31.
L351	L351US4-13	Total Organic Carbon (TOC)	Y	MS,MSD recovery and/or RPD failed acceptance criteria.
		Biochemical Oxygen Demand (BOD)		Analysis of constituent not required and not performed.
		Suspended Solids	*	Duplicate analysis not within control limits.
		Alpha activity	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.243. Rad error is 0.229.
		Beta activity		TPU is 2.44. Rad error is 1.94.

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