PAD-ENM-0085/V2

C-746-S&T Landfills
Second Quarter Calendar Year 2013
(April–June)
Compliance Monitoring Report,
Paducah Gaseous Diffusion Plant,
Paducah, Kentucky

This document is approved for public release per review by:

T. Hubbard 8-22-13

LATA Kentucky Classification Support — Date

PAD-ENM-0085/V2

C-746-S&T Landfills
Second Quarter Calendar Year 2013
(April–June)
Compliance Monitoring Report,
Paducah Gaseous Diffusion Plant,
Paducah, Kentucky

Date Issued—August 2013

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

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

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ACRONYMS

CFR	*Code of Federal Regulations*
EPA	U.S. Environmental Protection Agency
KAR	*Kentucky Administrative Regulations*
KDWM	Kentucky Division of Waste Management
LEL	lower explosive limit
LRGA	Lower Regional Gravel Aquifer
MCL	maximum contaminant level
MW	monitoring well
PGDP	Paducah Gaseous Diffusion Plant
RGA	Regional Gravel Aquifer
UCRS	Upper Continental Recharge System
URGA	Upper Regional Gravel Aquifer

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1. INTRODUCTION

This report, *C-746-S&T Landfills Second Quarter Calendar Year 2013 (April–June) Compliance Monitoring Report, Paducah Gaseous Diffusion Plant, Paducah, Kentucky,* is being submitted in accordance with Solid Waste Landfill Permit Number 073-00014 for the C-746-S Residential Landfill and Permit Number 073-00015 for the C-746-T Inert Landfill.

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 GSTR0003, 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-S&T Landfill Methane Monitoring Report form provided in Appendix H. The form includes pertinent remarks/observations as required by 401 *KAR* 48:090 § 4. Appendix I contains the surface water monitoring data. Appendix J contains the annual leachate data, as required by landfill permit condition ACTV0004, Special Condition 3.

1.1 BACKGROUND

The C-746-S&T Landfills are closed solid waste landfills located north of the Paducah Gaseous Diffusion Plant (PGDP) and south of the C-746-U Landfill. Construction and operation of the C-746-S Residential Landfill were permitted in April 1981 under Solid Waste Landfill Permit Number 073-00014. The permitted C-746-S Landfill area covers about 16 acres and contains a clay liner with a cover of compacted soil. The C-746-S Landfill was a sanitary landfill for PGDP. The C-746-S Landfill is closed and has been inactive since July 1995.

Construction and operation of the C-746-T Inert Landfill were permitted in February 1985 under Solid Waste Landfill Permit Number 073-00015. The permitted C-746-T Landfill area covers about 20 acres and contains a clay liner with a cover of compacted soil. The C-746-T Landfill was used to dispose of construction debris (e.g., concrete, wood, and rock) and steam plant fly ash from PGDP. The C-746-T Landfill is closed and has been inactive since June 1992.

1.2 MONITORING PERIOD ACTIVITIES

1.2.1 Groundwater Monitoring

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

Three zones are monitored at the site: the Upper Continental Recharge System (UCRS), Upper Regional Gravel Aquifer (URGA), and the Lower Regional Gravel Aquifer (LRGA). There are 23 monitoring wells (MWs) under permit for the C-746-S&T Landfills: 5 UCRS wells, 11 URGA wells, and 7 LRGA wells. A map of the monitoring well locations is presented in Figure 1. All MWs were sampled this quarter except 2. MW389 and MW390, screened in the UCRS, had an insufficient amount of water to obtain samples this quarter; therefore, there are no analytical results for these locations. The parameters specified in Permit Condition GSTR0003, Special Condition 3, were analyzed for all locations sampled.

The groundwater flow rate and direction determination are provided in Appendix E. Depth-to-water measurements were collected on April 16, 2013, in MWs of the C-746-S&T Landfills (see Table E.1), in MWs of the C-746-U Landfill, and in MWs of the surrounding region (shown on Figure E.4). Water level measurements in 35 vicinity wells define the potentiometric surface for the Regional Gravel Aquifer (RGA).[1] As in previous quarters, a groundwater mound under the C-746-S&T Landfills resulted in radial flow away from the landfill area. Normal regional flow in the RGA is northeastward, toward the Ohio River. The hydraulic gradient for the RGA in the vicinity of the C-746-S&T Landfills in April was 2.62×10^{-4} ft/ft, while the gradient beneath the C-746-S&T Landfills was 6.20×10^{-4} ft/ft. Calculated groundwater flow rates (average linear velocities) for the RGA at the C-746-S&T Landfills range from 1.05 to 1.80 ft/day (see Table E.3). The mound is an area of high hydraulic potential in the RGA that approximately mirrors the land topography in the area of the landfill.

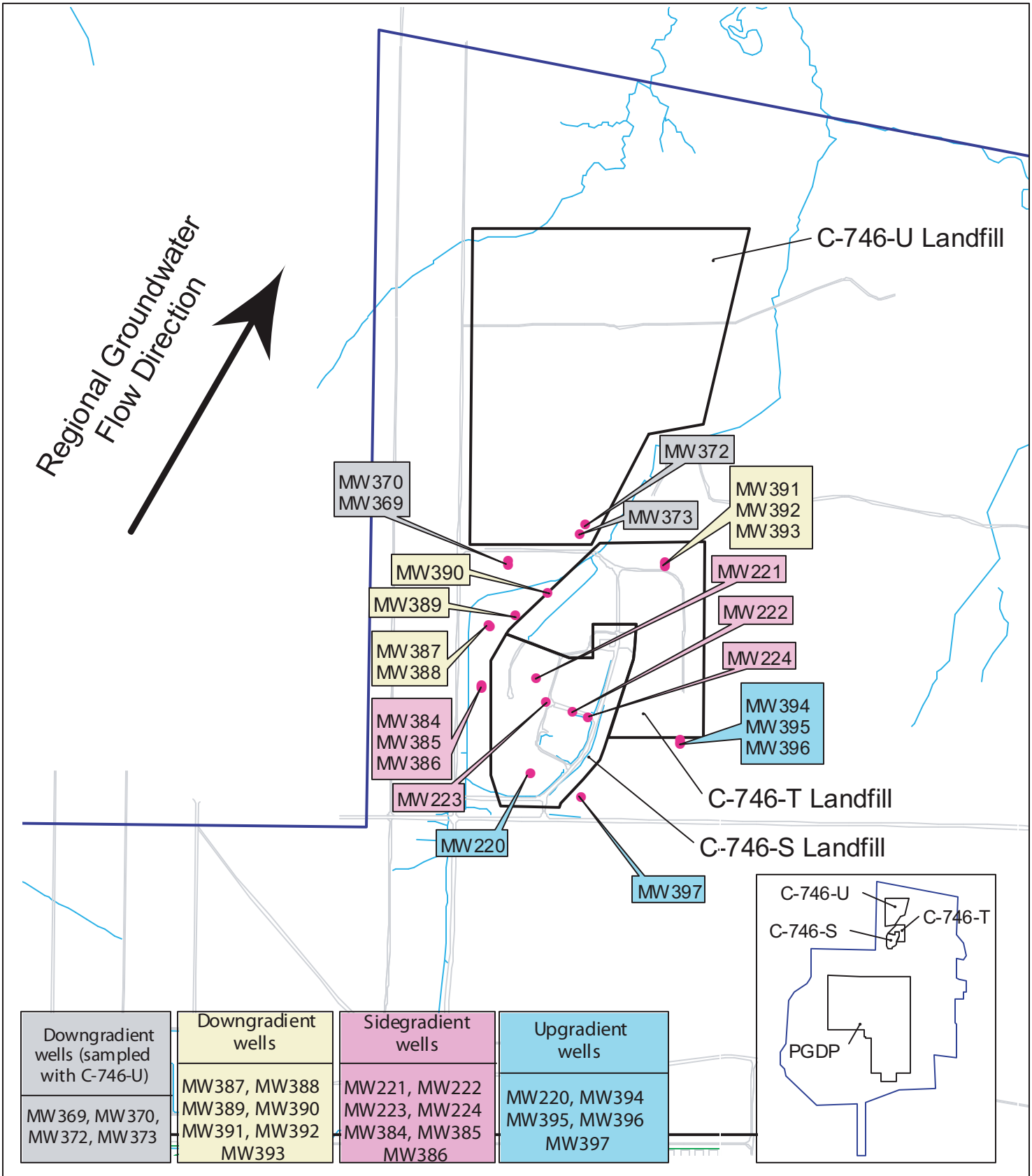
1.2.2 Methane Monitoring

Landfill operations staff monitored for the occurrence of methane on June 11, 2013, in 1 on-site building location, 4 locations along the landfill boundary, and 27 gas-passive vents located in Cells 1, 2, and 3 of the C-746-S Landfill. See Appendix H for a map of the monitoring locations. No potential gas problem areas (i.e., suspect or problem areas) were identified. Monitoring identified 0% of the lower explosive limit (LEL) of methane at all locations, which is compliant with the regulatory requirement of < 100% LEL at boundary locations and < 25% LEL at all other locations. The results are documented on the approved C-746-S&T Landfill Methane Monitoring Report form provided in Appendix H.

1.2.3 Surface Water Monitoring

Surface water sampling was conducted on April 11 and May 21, 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. The landfills have an upgradient location, L135; a downgradient location, L154; and a location capturing runoff from the landfill surface, L136. A map of the surface water monitoring locations is presented in Figure 2. Surface water was monitored as specified in 401 *KAR* 48:300 § 2, and the approved surface water monitoring plan. The parameters identified in the Solid Waste Landfill Permit were analyzed for the three locations sampled for reporting only, pursuant to Permit Condition GMNP0003, Standard Requirement 1.

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



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

LATA Environmental Services of Kentucky, LLC

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

FIGURE No. c5ac90002sk149.apr
DATE 04-27-11

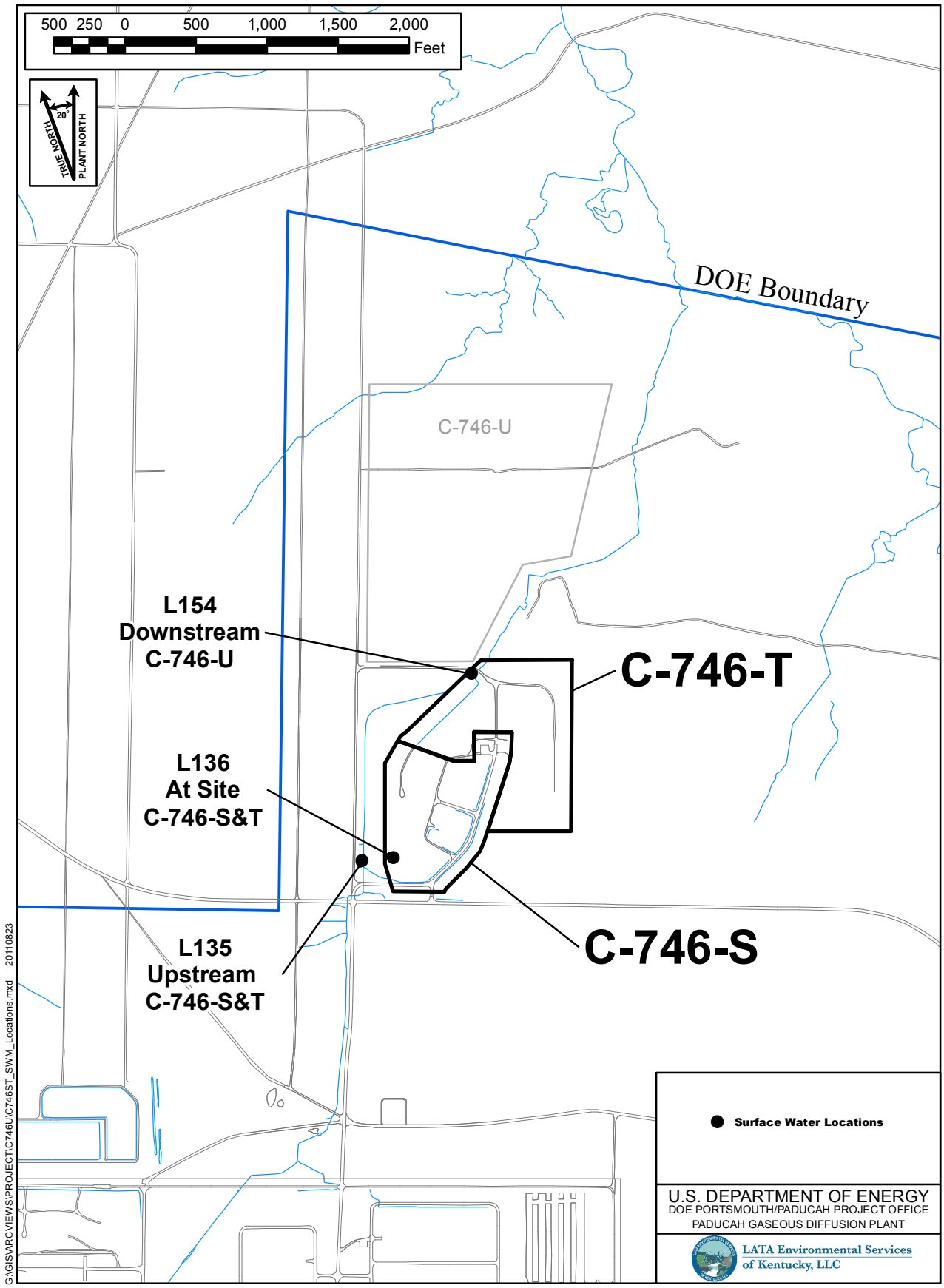


Figure 2. C-746-S&T Landfill Surface Water Monitoring Locations

1.2.4 Annual Leachate Monitoring

C-746-S Landfill leachate was tested on April 17, 2013, pursuant to Permit ACTV0004, Special Condition 3. The annual leachate sampling data for calendar year 2013 is presented in Appendix J. There are no release standards for this leachate because it is sampled prior to treatment in a Kentucky Pollutant Discharge Elimination Treatment System.

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 second quarter 2013.

Table 1. Summary of MCL Exceedances

UCRS	URGA	LRGA
None	MW372: trichloroethene	MW373: trichloroethene
	MW384: beta activity	MW385: beta activity
	MW387: beta activity	MW388: beta activity
	MW391: trichloroethene	MW392: trichloroethene

Table 2. Summary of Statistically Significant Increases

UCRS	URGA	LRGA
MW386: oxidation-reduction potential	MW222: oxidation-reduction potential	MW370: oxidation-reduction potential, sulfate
MW393: oxidation-reduction potential	MW224: oxidation-reduction potential	MW373: calcium, conductivity, dissolved solids, magnesium, oxidation-reduction potential, potassium, sulfate, technetium-99
	MW369: oxidation-reduction potential	MW385: sulfate, technetium-99, oxidation-reduction potential
	MW372: calcium, conductivity, dissolved solids, magnesium sodium, sulfate, technetium-99	MW388: oxidation-reduction potential, sulfate, technetium-99
	MW384: iodide, sulfate technetium-99	MW392: oxidation-reduction potential
	MW387: sulfate, technetium-99	
	MW391: oxidation-reduction potential, sulfate	

Sidegradient wells: MW221, MW222, MW223, MW224, MW384, MW385, MW386
Downgradient wells: MW369, MW370, MW372, MW373, MW387, MW388, MW389, MW390, MW391, MW392, MW393
Upgradient wells: MW220, MW394, MW395, MW396, MW397

There were no new MCL exceedances for this quarter. MCL exceedances for beta activity in MW384, MW385, MW387, and MW388 are related to sources of contamination that are upgradient of the C-746-S&T Landfills. The trichloroethene detected in MW372, MW373, MW391, and MW392 is derived from an alternate source in the vicinity of the C-746-S&T Landfills. The notification of parameters that exceeded the MCL has been submitted electronically to KDWM in accordance with 401 *KAR* 48:300 § 7 prior to the submittal of this report.

[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.

There was one new statistically significant increase during this quarter. There was a statistically significant increase of iodide in MW384. The other 35 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 Numbers 073-00014 and 073-00015, Condition GSTR0003, Standard Requirement 8, and 401 *KAR* 48:300 § 7.

In accordance with Permit Condition GSTR0003, Variance 2, of the Solid Waste Permit (Permit), the groundwater assessment and corrective action requirements of 401 *KAR* 48:300 § 8 shall not apply to the C-746-S Residential Landfill and the C-746-T Inert Landfill. This variance in the Permit provides that groundwater assessment and corrective actions for these landfills will be conducted in accordance with the corrective action requirements of 401 *KAR* 34:060 § 12.

2. DATA EVALUATION/STATISTICAL SYNOPSIS

The statistical analyses conducted on the second quarter 2013 groundwater data collected from the C-746-S&T Residential/Inert Landfills MWs were performed in accordance with Permit Condition, GSTR0003, Standard Requirement 3, using EPA guidance (EPA 1989), with the exception of pH. The method for conducting the statistical analysis of pH was selected by the project statistician. The statistical analyses for this report utilize data from the first eight quarters that were sampled for each parameter, beginning with the first two baseline sampling events in 2002, when available. The sampling dates associated with background data are listed next to the result in the statistical analysis sheets in Appendix D (D17–D72).

For chemicals with an established MCL, no statistical analysis was performed. Parameters that have an MCL can be found in 401 *KAR* 47:030 § 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 concentration 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 exist in concentrations with respect to upgradient (background) well data. 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
MW386	MW220 (upgradient)**	MW370
MW389 (dry)	MW221	MW373
MW390 (dry)***	MW222	MW385
MW393	MW223	MW388
MW396 (upgradient)**	MW224	MW392
	MW369	MW395 (upgradient)**
	MW372	MW397 (upgradient)**
	MW384	
	MW387	
	MW391	
	MW394 (upgradient)**	

*A map showing the monitoring well locations is shown in Figure 1.
**Included as background only.
***MW390 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, statistical analysis was performed on 15 parameters in the UCRS. The statistical analysis was conducted separately for each parameter in each well. During the second quarter, oxidation-reduction potential displayed an elevated concentration that was determined to qualify as a statistically significant increase.

Upper Regional Gravel Aquifer

In this quarter, statistical analysis was performed on 22 parameters in the URGA. The statistical analysis was conducted separately for each parameter in each well. During the second quarter, calcium, conductivity, dissolved solids, iodide, magnesium, oxidation-reduction potential, sodium, sulfate, and technetium-99 displayed elevated concentrations that were determined to qualify as statistically significant increases.

Lower Regional Gravel Aquifer

In this quarter, statistical analysis was performed on 17 parameters in the LRGA. The statistical analysis was conducted separately for each parameter in each well. During the second quarter, calcium, conductivity, dissolved solids, magnesium, oxidation-reduction potential, potassium, sulfate, and technetium-99 displayed elevated concentrations that were determined to qualify as statistically significant increases.

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-S&T Landfills*
Second Quarter Calendar Year 2013
(April–June)
Compliance Monitoring Report,
Paducah Gaseous Diffusion Plant,
Paducah, Kentucky (PAD-ENM-0085/V2)

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

Kenneth R. Davis — Kenneth R. Davis

PG1194

August 22, 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.

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APPENDIX A

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

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GROUNDWATER, SURFACE WATER, 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-S&T Landfills

Permit No: 073-00014 & 073-00015 Finds/Unit No: _____ Quarter & Year 2nd Qtr. CY 2013

Please check the following as applicable:

_____ Characterization X Quarterly _____ Semiannual X Annual _____ Assessment

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

X Leachate X Methane Monitoring

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

I certify under penalty of law that the document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for such violations.

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

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

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APPENDIX B

FACILITY INFORMATION SHEET

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FACILITY INFORMATION SHEET

Sampling Date: Groundwater: April 2013; Surface Water: April and May 2013; Leachate: April 2013 | County: McCracken | Permit Nos. 073-00014 & 073-00015

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/INERT-QUARTERLY
Facility: US DOE - Paducah Gaseous Diffusion Plant
Permit Number: 073-00014 & 073-00015

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	8000-5201	8000-5202	8000-5242	8000-5243
Facility's Local Well or Spring Number (e.g., MW-1, MW-2, etc.)	220	221	222	223
Sample Sequence #	1	1	1	1
If sample is a Blank, specify Type: (F)ield, (T)rip, (M)ethod, or (E)quipment	NA	NA	NA	NA
Sample Date and Time (Month/Day/Year hour: minutes)	4/17/2013 14:06	4/18/2013 09:10	4/18/2013 08:30	4/18/2013 10:30
Duplicate ("Y" or "N")[2]	N	N	N	N
Split ("Y" or "N")[3]	N	N	N	N
Facility Sample ID Number (if applicable)	MW220SG3-13	MW221SG3-13	MW222SG3-13	MW223SG3-13
Laboratory Sample ID Number (if applicable)	C13107023001	C13108008001	C13108004001	C13108008002
Date of Analysis (Month/Day/Year) For Volatile Organics Analysis	4/26/2013	5/1/2013	4/26/2013	5/1/2013
Gradient with respect to Monitored Unit (UP, DOWN, SIDE, UNKNOWN)	UP	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	22		37		35		35	
16984-48-8		Fluoride	T	mg/L	9214	0.19		0.18		0.25		0.2	
S0595- -		Nitrate & Nitrite	T	mg/L	9056	1.4		1.2	*J	<1	*J	<1	*J
14808-79-8		Sulfate	T	mg/L	9056	19		13		11		16	
NS1894		Barometric Pressure Reading	T	Inches/Hg	Field	30.08		29.86		29.77		29.99	
S0145- -		Specific Conductance	T	µMH0/cm	Field	390		390		363		421	

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

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

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

RESIDENTIAL/INERT-QUARTERLY
Facility: US DOE - Paducah Gaseous Diffusion Plant
Permit Number: 073-00014 & 073-00015

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						8000-5201		8000-5202		8000-5242		8000-5243	
Facility's Local Well or Spring Number (e.g., MW-1, MW-2, BLANK-F, etc.)						220		221		222		223	
CAS RN[4]		CONSTITUENT	TD[5]	Unit OF MEASURE	METHOD	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS
S0906 - -		Static Water Level Elevation	T	Ft. MSL	Field	322.95		323.29		323.26		323.29	
N238		Dissolved Oxygen	T	mg/L	Field	4.21		4.58		3.07		3.83	
S0266- -		Total Dissolved Solids	T	mg/L	160.1	218		202		203		206	
S0296- -		pH	T	Units	Field	6.36		6.42		6.34		6.06	
NS215		Eh	T	mV	Field	558		373		663		382	
S0907 - -		Temperature	T	°C	Field	18		18.44		17.89		18.94	
7429-90-5		Aluminum	T	mg/L	6020	<0.2		<0.2		0.27		<0.2	
7440-36-0		Antimony	T	mg/L	6020	<0.005		<0.005		<0.005		<0.005	
7440-38-2		Arsenic	T	mg/L	7060	<0.001		<0.001		0.00109		0.00102	
7440-39-3		Barium	T	mg/L	6020	0.219		0.215		0.32		0.263	
7440-41-7		Beryllium	T	mg/L	6020	<0.001		<0.001		<0.001		<0.001	
7440-42-8		Boron	T	mg/L	6010	<0.2	B	<0.2	B	<0.2	B	<0.2	B
7440-43-9		Cadmium	T	mg/L	6020	<0.001	B	<0.001	B	<0.001	B	<0.001	B
7440-70-2		Calcium	T	mg/L	6010	23.7		17.9		18.6		20.2	
7440-47-3		Chromium	T	mg/L	6020	<0.01		0.0171		0.0109		<0.01	
7440-48-4		Cobalt	T	mg/L	6020	<0.001	B	<0.001	B	0.00374	B	0.00305	B
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		0.55		<0.1	
7439-92-1		Lead	T	mg/L	6020	<0.0013	B	<0.0013	B	<0.0013	B	<0.0013	B
7439-95-4		Magnesium	T	mg/L	6010	9.73		8.32		7.83		8.83	
7439-96-5		Manganese	T	mg/L	6020	0.00587		<0.005		0.0699		0.0499	
7439-97-6		Mercury	T	mg/L	7470	<0.0002		<0.0002		<0.0002		<0.0002	

GROUNDWATER SAMPLE ANALYSIS - (Cont.)

AKGWA NUMBER[1], Facility Well/Spring Number						8000-5201		8000-5202		8000-5242		8000-5243	
Facility's Local Well or Spring Number (e.g., MW-1, MW-2, etc.)						220		221		222		223	
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	0.00136	B	0.0038		<0.001	B	0.00222	
7440-02-0		Nickel	T	mg/L	6020	0.143		0.0697		0.181		0.332	
7440-09-7		Potassium	T	mg/L	6010	2.2	B	1.17	B	0.478	B	1.3	B
7440-16-6		Rhodium	T	mg/L	6020	<0.005		<0.005		<0.005		<0.005	
7782-49-2		Selenium	T	mg/L	6020	<0.005		0.00513		<0.005		0.00535	
7440-22-4		Silver	T	mg/L	6020	<0.001	*	<0.001	*	<0.001	*	<0.001	*
7440-23-5		Sodium	T	mg/L	6010	41.4	B	35.7	B	41.5	B	39.4	B
7440-25-7		Tantalum	T	mg/L	6020	<0.005		<0.005	B	<0.005		<0.005	B
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	J	<0.01	*	<0.01	J
107-13-1		Acrylonitrile	T	mg/L	8260	<0.01	*	<0.01	J	<0.01	*	<0.01	J
71-43-2		Benzene	T	mg/L	8260	<0.005	J	<0.005	J	<0.005	J	<0.005	J
108-90-7		Chlorobenzene	T	mg/L	8260	<0.005	J	<0.005	J	<0.005	J	<0.005	J
1330-20-7		Xylenes	T	mg/L	8260	<0.015	J	<0.015	J	<0.015	J	<0.015	J
100-42-5		Styrene	T	mg/L	8260	<0.005	J	<0.005	J	<0.005	J	<0.005	J
108-88-3		Toluene	T	mg/L	8260	<0.005	J	<0.005	J	<0.005	J	<0.005	J
74-97-5		Chlorobromomethane	T	mg/L	8260	<0.005	J	<0.005	J	<0.005	J	<0.005	J

RESIDENTIAL/INERT-QUARTERLY
Facility: US DOE - Paducah Gaseous Diffusion Plant
Permit Number: 073-00014 & 073-00015

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						8000-5201		8000-5202		8000-5242		8000-5243	
Facility's Local Well or Spring Number (e.g., MW-1, MW-2, etc.)						220		221		222		223	
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	J	<0.005	J	<0.005	J	<0.005	J
75-25-2		Tribromomethane	T	mg/L	8260	<0.005	J	<0.005	J	<0.005	J	<0.005	J
74-83-9		Methyl bromide	T	mg/L	8260	<0.005	J	<0.005	J	<0.005	J	<0.005	J
78-93-3		Methyl ethyl ketone	T	mg/L	8260	<0.01	J	<0.01	J	<0.01	J	<0.01	J
110-57-6		trans-1,4-Dichloro-2-butene	T	mg/L	8260	<0.005	J	<0.005	J	<0.005	J	<0.005	J
75-15-0		Carbon disulfide	T	mg/L	8260	<0.005	J	<0.005	J	<0.005	J	<0.005	J
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	J	<0.001	J	<0.001	J	<0.001	J
74-87-3		Methyl chloride	T	mg/L	8260	<0.005	J	<0.005	J	<0.005	J	<0.005	J
156-59-2		cis-1,2-Dichloroethene	T	mg/L	8260	<0.001	J	<0.001	J	<0.001	J	<0.001	J
74-95-3		Methylene bromide	T	mg/L	8260	<0.005	J	<0.005	J	<0.005	J	<0.005	J
75-34-3		1,1-Dichloroethane	T	mg/L	8260	<0.001	J	<0.001	J	<0.001	J	<0.001	J
107-06-2		1,2-Dichloroethane	T	mg/L	8260	<0.001	J	<0.001	J	<0.001	J	<0.001	J
75-35-4		1,1-Dichloroethylene	T	mg/L	8260	<0.001	J	<0.001	J	<0.001	J	<0.001	J
106-93-4		Ethane, 1,2-dibromo	T	mg/L	8260	<0.005	J	<0.005	J	<0.005	J	<0.005	J
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	J	<0.001	J	<0.001	J	<0.001	J
79-00-5		Ethane, 1,1,2-Trichloro	T	mg/L	8260	<0.001	J	<0.001	J	<0.001	J	<0.001	J
630-20-6		Ethane, 1,1,1,2-Tetrachloro	T	mg/L	8260	<0.005	J	<0.005	J	<0.005	J	<0.005	J
75-01-4		Vinyl chloride	T	mg/L	8260	<0.002	J	<0.002	J	<0.002	J	<0.002	J
127-18-4		Ethene, Tetrachloro-	T	mg/L	8260	<0.001	J	<0.001	J	<0.001	J	<0.001	J
79-01-6		Ethene, Trichloro-	T	mg/L	8260	<0.001	J	<0.001	J	<0.001	J	<0.001	J

RESIDENTIAL/CONTAINED-QUARTERLY
Facility: US DOE - Paducah Gaseous Diffusion Plant
Permit Number: 073-00014 & 073-00015

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						8000-5201		8000-5202		8000-5242		8000-5243	
Facility's Local Well or Spring Number (e.g., MW-1, MW-2, etc.)						220		221		222		223	
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	J	<0.005	J	<0.005	J	<0.005	J
591-78-6		2-Hexanone	T	mg/L	8260	<0.01	J	<0.01	J	<0.01	J	<0.01	J
74-88-4		Iodomethane	T	mg/L	8260	<0.01	J	<0.01	J	<0.01	J	<0.01	J
124-48-1		Methane, Dibromochloro-	T	mg/L	8260	<0.005	J	<0.005	J	<0.005	J	<0.005	J
56-23-5		Carbon Tetrachloride	T	mg/L	8260	<0.005	J	<0.005	J	<0.005	J	<0.005	J
75-09-2		Dichloromethane	T	mg/L	8260	<0.005	J	<0.005	J	<0.005	J	<0.005	J
108-10-1		Methyl isobutyl ketone	T	mg/L	8260	<0.01	J	<0.01	J	<0.01	J	<0.01	J
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	J	<0.005	J	<0.005	J	<0.005	J
10061-02-6		trans-1,3-Dichloro-1-propene	T	mg/L	8260	<0.005	J	<0.005	J	<0.005	J	<0.005	J
10061-01-5		cis-1,3-Dichloro-1-propene	T	mg/L	8260	<0.005	J	<0.005	J	<0.005	J	<0.005	J
156-60-5		trans-1,2-Dichloroethene	T	mg/L	8260	<0.001	J	<0.001	J	<0.001	J	<0.001	J
75-69-4		Trichlorofluoromethane	T	mg/L	8260	<0.005	J	<0.005	J	<0.005	J	<0.005	J
96-18-4		1,2,3-Trichloropropane	T	mg/L	8260	<0.005	J	<0.005	J	<0.005	J	<0.005	J
95-50-1		Benzene, 1,2-Dichloro-	T	mg/L	8260	<0.005	J	<0.005	J	<0.005	J	<0.005	J
106-46-7		Benzene, 1,4-Dichloro-	T	mg/L	8260	<0.005	J	<0.005	J	<0.005	J	<0.005	J
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: 073-00014 & 073-00015

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						8000-5201		8000-5202		8000-5242		8000-5243	
Facility's Local Well or Spring Number (e.g., MW-1, MW-2, etc.)						220		221		222		223	
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	-0.835	*	0.744	*	-0.328	*	-0.0195	*
12587-47-2		Gross Beta	T	pCi/L	9310	16.5	*	6.4	*	4.33	*	5.45	*
10043-66-0		Iodine-131	T	pCi/L	RL-7124		*		*		*		*
13982-63-3		Radium-226	T	pCi/L	RL-7129	0.0543	*	0.129	*	-0.15	*	-0.00532	*
10098-97-2		Strontium-90	T	pCi/L	RL-7140	0.86	*	0.941	*B	-0.35	*B	-0.211	*B
14133-76-7		Technetium-99	T	pCi/L	RL-7100	6.61	*	10.3	*	0.611	*	1.39	*
14269-63-7		Thorium-230	T	pCi/L	RL-7128	0.0628	*	0.0365	*	-0.0108	*	0.0761	*
10028-17-8		Tritium	T	pCi/L	704R6	-72.8	*	63.1	*	-207	*	-147	*
S0130- -		Chemical Oxygen Demand	T	mg/L	410.4	<25		<25		<25		<25	
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		<1		<1		<1	
S0586- -		Total Organic Halides	T	mg/L	9020	0.013		0.0094	B	0.012		0.016	

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

RESIDENTIAL/INERT-QUARTERLY
Facility: US DOE - Paducah Gaseous Diffusion Plant
Permit Number:073-00014 & 073-00015

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						8000-5244		8004-4820		8004-4818		8004-4808		
Facility's Local Well or Spring Number (e.g., MW-1, MW-2, etc.)						224		369		370		372		
Sample Sequence #						1		1		1		1		
If sample is a Blank, specify Type: (F)ield, (T)rip, (M)ethod, or (E)quipment						NA		NA		NA		NA		
Sample Date and Time (Month/Day/Year hour: minutes)						4/17/2013 12:59		4/10/2013 08:22		4/10/2013 09:32		4/8/2013 08:12		
Duplicate ("Y" or "N")[2]						N		N		N		N		
Split ("Y" or "N")[3]						N		N		N		N		
Facility Sample ID Number (if applicable)						MW224SG3-13		MW369UG3-13		MW370UG3-13		MW372UG3-13		
Laboratory Sample ID Number (if applicable)						C13107023002		C13100018001		C13100018002		C13098018001		
Date of Analysis (Month/Day/Year) For Volatile Organics Analysis						4/26/2013		4/15/2013		4/12/2013		4/12/2013		
Gradient with respect to Monitored Unit (UP, DOWN, SIDE, UNKNOWN)						SIDE		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	28		36		43		47		
16984-48-8		Fluoride	T	mg/L	9214	0.26		0.2		0.16		0.18		
S0595- -		Nitrate & Nitrite	T	mg/L	9056	<1		<1		1.2		<1		
14808-79-8		Sulfate	T	mg/L	9056	14		7.5		18		170		
NS1894		Barometric Pressure Reading	T	Inches/Hg	Field	30.08		29.88		29.88		29.86		
S0145- -		Specific Conductance	T	µMH0/cm	Field	448		392		432		879		

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

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

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

RESIDENTIAL/INERT-QUARTERLY
Facility: US DOE - Paducah Gaseous Diffusion Plant
Permit Number: 073-00014 & 073-00015

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						8000-5244		8004-4820		8004-4818		8004-4808	
Facility's Local Well or Spring Number (e.g., MW-1, MW-2, BLANK-F, etc.)						224		369		370		372	
CAS RN[4]		CONSTITUENT	TD[5]	Unit OF MEASURE	METHOD	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS
S0906 - -		Static Water Level Elevation	T	Ft. MSL	Field	322.98		322.52		322.47		322.48	
N238		Dissolved Oxygen	T	mg/L	Field	2.14		1.19		3.25		0.76	
S0266- -		Total Dissolved Solids	T	mg/L	160.1	260		237		239		526	
S0296- -		pH	T	Units	Field	6.29		6.32		6.25		6.24	
NS215		Eh	T	mV	Field	483		580		505		28	
S0907 - -		Temperature	T	°C	Field	18.72		18.72		17.83		16.67	
7429-90-5		Aluminum	T	mg/L	6020	<0.2		0.201		<0.2		<0.2	
7440-36-0		Antimony	T	mg/L	6020	<0.005		<0.005	B	<0.005		<0.005	
7440-38-2		Arsenic	T	mg/L	7060	<0.001		0.00158		0.00151		0.00296	
7440-39-3		Barium	T	mg/L	6020	0.268		0.388		0.199	*	0.0768	*
7440-41-7		Beryllium	T	mg/L	6020	<0.001		<0.001		<0.001		<0.001	
7440-42-8		Boron	T	mg/L	6010	<0.2	B	<0.2	B	<0.2	B	1.43	
7440-43-9		Cadmium	T	mg/L	6020	<0.001	B	<0.001		<0.001		<0.001	
7440-70-2		Calcium	T	mg/L	6010	23.1		16.4		28.2		65.9	
7440-47-3		Chromium	T	mg/L	6020	<0.01		<0.01		<0.01		<0.01	
7440-48-4		Cobalt	T	mg/L	6020	<0.001	B	0.0234	*B	<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	<0.1		0.725		<0.1		1.88	
7439-92-1		Lead	T	mg/L	6020	<0.0013	B	<0.0013	B	<0.0013		<0.0013	
7439-95-4		Magnesium	T	mg/L	6010	9.61		6.38		11.5		26	
7439-96-5		Manganese	T	mg/L	6020	0.0153		0.218	*	<0.005	*	0.0612	*
7439-97-6		Mercury	T	mg/L	7470	<0.0002		<0.0002		<0.0002		<0.0002	

GROUNDWATER SAMPLE ANALYSIS - (Cont.)

AKGWA NUMBER[1], Facility Well/Spring Number						8000-5244		8004-4820		8004-4818		8004-4808	
Facility's Local Well or Spring Number (e.g., MW-1, MW-2, etc.)						224		369		370		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	0.0179		0.00706	*	<0.005		<0.005	
7440-09-7		Potassium	T	mg/L	6010	0.875	B	0.568		2.48		2.72	B
7440-16-6		Rhodium	T	mg/L	6020	<0.005		<0.005		<0.005		<0.005	
7782-49-2		Selenium	T	mg/L	6020	<0.005		<0.005		0.00623		0.00603	
7440-22-4		Silver	T	mg/L	6020	<0.001	*	<0.001		<0.001	*B	<0.001	*B
7440-23-5		Sodium	T	mg/L	6010	54.3	B	52.4		37.2		59.7	
7440-25-7		Tantalum	T	mg/L	6020	<0.005		<0.005		<0.005		<0.005	
7440-28-0		Thallium	T	mg/L	6020	<0.002		<0.002		<0.002		<0.002	
7440-61-1		Uranium	T	mg/L	6020	<0.001		<0.001		<0.001		<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	B	<0.02		<0.02	
108-05-4		Vinyl acetate	T	mg/L	8260	<0.01	J	<0.01		<0.01		<0.01	
67-64-1		Acetone	T	mg/L	8260	<0.01	J	<0.01	J	<0.01		<0.01	
107-02-8		Acrolein	T	mg/L	8260	<0.01	J	<0.01		<0.01	J	<0.01	J
107-13-1		Acrylonitrile	T	mg/L	8260	<0.01	J	<0.01		<0.01		<0.01	
71-43-2		Benzene	T	mg/L	8260	<0.005	J	<0.005		<0.005		<0.005	
108-90-7		Chlorobenzene	T	mg/L	8260	<0.005	J	<0.005		<0.005		<0.005	
1330-20-7		Xylenes	T	mg/L	8260	<0.015	J	<0.015		<0.015		<0.015	
100-42-5		Styrene	T	mg/L	8260	<0.005	J	<0.005		<0.005		<0.005	
108-88-3		Toluene	T	mg/L	8260	<0.005	J	<0.005		<0.005		<0.005	
74-97-5		Chlorobromomethane	T	mg/L	8260	<0.005	J	<0.005		<0.005		<0.005	

GROUNDWATER SAMPLE ANALYSIS - (Cont.)

AKGWA NUMBER[1], Facility Well/Spring Number						8000-5244		8004-4820		8004-4818		8004-4808	
Facility's Local Well or Spring Number (e.g., MW-1, MW-2, etc.)						224		369		370		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	J	<0.005		<0.005		<0.005	
75-25-2		Tribromomethane	T	mg/L	8260	<0.005	J	<0.005		<0.005	*	<0.005	*
74-83-9		Methyl bromide	T	mg/L	8260	<0.005	J	<0.005	J	<0.005	J	<0.005	J
78-93-3		Methyl ethyl ketone	T	mg/L	8260	<0.01	J	<0.01	J	<0.01		<0.01	
110-57-6		trans-1,4-Dichloro-2-butene	T	mg/L	8260	<0.005	J	<0.005	J	<0.005		<0.005	
75-15-0		Carbon disulfide	T	mg/L	8260	<0.005	J	<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	J	<0.001		<0.001		<0.001	
74-87-3		Methyl chloride	T	mg/L	8260	<0.005	J	<0.005		<0.005	J	<0.005	J
156-59-2		cis-1,2-Dichloroethene	T	mg/L	8260	<0.001	J	<0.001		<0.001		<0.001	
74-95-3		Methylene bromide	T	mg/L	8260	<0.005	J	<0.005		<0.005		<0.005	
75-34-3		1,1-Dichloroethane	T	mg/L	8260	<0.001	J	<0.001		<0.001		<0.001	
107-06-2		1,2-Dichloroethane	T	mg/L	8260	<0.001	J	<0.001		<0.001		<0.001	
75-35-4		1,1-Dichloroethylene	T	mg/L	8260	<0.001	J	<0.001		<0.001		<0.001	
106-93-4		Ethane, 1,2-dibromo	T	mg/L	8260	<0.005	J	<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	J	<0.001		<0.001		<0.001	
79-00-5		Ethane, 1,1,2-Trichloro	T	mg/L	8260	<0.001	J	<0.001		<0.001		<0.001	
630-20-6		Ethane, 1,1,1,2-Tetrachloro	T	mg/L	8260	<0.005	J	<0.005		<0.005		<0.005	
75-01-4		Vinyl chloride	T	mg/L	8260	<0.002	J	<0.002	J	<0.002	*	<0.002	*
127-18-4		Ethene, Tetrachloro-	T	mg/L	8260	<0.001	J	<0.001		<0.001		<0.001	
79-01-6		Ethene, Trichloro-	T	mg/L	8260	<0.001	J	<0.001		0.0013		0.0062	

RESIDENTIAL/CONTAINED-QUARTERLY
Facility: US DOE - Paducah Gaseous Diffusion Plant
Permit Number: 073-00014 & 073-00015

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						8000-5244		8004-4820		8004-4818		8004-4808	
Facility's Local Well or Spring Number (e.g., MW-1, MW-2, etc.)						224		369		370		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	J	<0.005		<0.005		<0.005	
591-78-6		2-Hexanone	T	mg/L	8260	<0.01	J	<0.01	J	<0.01		<0.01	
74-88-4		Iodomethane	T	mg/L	8260	<0.01	J	<0.01		<0.01		<0.01	
124-48-1		Methane, Dibromochloro-	T	mg/L	8260	<0.005	J	<0.005		<0.005	*	<0.005	*
56-23-5		Carbon Tetrachloride	T	mg/L	8260	<0.005	J	<0.005		<0.005		<0.005	
75-09-2		Dichloromethane	T	mg/L	8260	<0.005	J	<0.005		<0.005	*	<0.005	*
108-10-1		Methyl isobutyl ketone	T	mg/L	8260	<0.01	J	<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	J	<0.005		<0.005		<0.005	
10061-02-6		trans-1,3-Dichloro-1-propene	T	mg/L	8260	<0.005	J	<0.005		<0.005		<0.005	
10061-01-5		cis-1,3-Dichloro-1-propene	T	mg/L	8260	<0.005	J	<0.005		<0.005	*	<0.005	*
156-60-5		trans-1,2-Dichloroethene	T	mg/L	8260	<0.001	J	<0.001		<0.001		<0.001	
75-69-4		Trichlorofluoromethane	T	mg/L	8260	<0.005	J	<0.005		<0.005		<0.005	
96-18-4		1,2,3-Trichloropropane	T	mg/L	8260	<0.005	J	<0.005		<0.005		<0.005	
95-50-1		Benzene, 1,2-Dichloro-	T	mg/L	8260	<0.005	J	<0.005		<0.005		<0.005	
106-46-7		Benzene, 1,4-Dichloro-	T	mg/L	8260	<0.005	J	<0.005		<0.005		<0.005	
1336-36-3		PCB,Total	T	ug/L	8082		*	<0.17		<0.17		<0.18	
12674-11-2		PCB-1016	T	ug/L	8082		*	<0.16		<0.16		<0.17	
11104-28-2		PCB-1221	T	ug/L	8082		*	<0.17		<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: 073-00014 & 073-00015

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						8000-5244		8004-4820		8004-4818		8004-4808	
Facility's Local Well or Spring Number (e.g., MW-1, MW-2, etc.)						224		369		370		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	
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	0.82	*	3.19	*	2.82	*	-0.195	*
12587-47-2		Gross Beta	T	pCi/L	9310	2.47	*	22	*	17.2	*	23.2	*
10043-66-0		Iodine-131	T	pCi/L	RL-7124		*		*		*		*
13982-63-3		Radium-226	T	pCi/L	RL-7129	0.193	*	0.214	*	0.162	*	0.152	*
10098-97-2		Strontium-90	T	pCi/L	RL-7140	0.627	*	0.0601	*	1.09	*	0.502	*
14133-76-7		Technetium-99	T	pCi/L	RL-7100	3.89	*	25.5	*	12	*	42.9	*
14269-63-7		Thorium-230	T	pCi/L	RL-7128	0.0374	*	0.0249	*	0.0331	*	0.0953	*
10028-17-8		Tritium	T	pCi/L	704R6	214	*	-404	*	-633	*	-645	*
S0130- -		Chemical Oxygen Demand	T	mg/L	410.4	<25	B	<25		<25		<25	
57-12-5		Cyanide	T	mg/L	9010	<0.04		<0.04	J	<0.04	J	<0.04	
20461-54-5		Iodide	T	mg/L	345.1	<2		<2		<2		<2	
S0268- -		Total Organic Carbon	T	mg/L	9060	<1		1.7		<1		2.5	
S0586- -		Total Organic Halides	T	mg/L	9020	0.014		0.048		0.015		0.025	

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

RESIDENTIAL/INERT-QUARTERLY
Facility: US DOE - Paducah Gaseous Diffusion Plant
Permit Number: 073-00014 & 073-00015

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		8004-4809		8004-4810		8004-4804	
Facility's Local Well or Spring Number (e.g., MW-1, MW-2, etc.)						373		384		385		386	
Sample Sequence #						1		1		1		1	
If sample is a Blank, specify Type: (F)ield, (T)rip, (M)ethod, or (E)quipment						NA		NA		NA		NA	
Sample Date and Time (Month/Day/Year hour: minutes)						4/9/2013 12:46		4/16/2013 08:27		4/16/2013 12:41		4/16/2013 09:24	
Duplicate ("Y" or "N")[2]						N		N		N		N	
Split ("Y" or "N")[3]						N		N		N		N	
Facility Sample ID Number (if applicable)						MW373UG3-13		MW384SG3-13		MW385SG3-13		MW386SG3-13	
Laboratory Sample ID Number (if applicable)						C13099030001		C13106005001		C13106016001		C13106005002	
Date of Analysis (Month/Day/Year) For Volatile Organics Analysis						4/12/2013		4/25/2013		4/25/2013		4/25/2013	
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	47		38		32		18	
16984-48-8		Fluoride	T	mg/L	9214	0.18		0.17		0.14		0.61	
S0595- -		Nitrate & Nitrite	T	mg/L	9056	<1		1		<1		<1	
14808-79-8		Sulfate	T	mg/L	9056	200		20		21		50	
NS1894		Barometric Pressure Reading	T	Inches/Hg	Field	29.96		29.99		29.99		29.99	
S0145- -		Specific Conductance	T	µMH0/cm	Field	921		444		422		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

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

RESIDENTIAL/INERT-QUARTERLY
Facility: US DOE - Paducah Gaseous Diffusion Plant
Permit Number: 073-00014 & 073-00015

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		8004-4809		8004-4810		8004-4804	
Facility's Local Well or Spring Number (e.g., MW-1, MW-2, BLANK-F, etc.)						373		384		385		386	
CAS RN[4]		CONSTITUENT	TD[5]	Unit OF MEASURE	METHOD	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS
S0906 - -		Static Water Level Elevation	T	Ft. MSL	Field	322.39		322.56		322.52		345.41	
N238		Dissolved Oxygen	T	mg/L	Field	1.46		4.09		3.08		0.98	
S0266- -		Total Dissolved Solids	T	mg/L	160.1	585		225		219		386	
S0296- -		pH	T	Units	Field	6.21		6.28		6.18		7.03	
NS215		Eh	T	mV	Field	498		339		506		392	
S0907 - -		Temperature	T	°C	Field	18.33		17.06		19.11		17.28	
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		<0.005	
7440-38-2		Arsenic	T	mg/L	7060	0.00168		0.00158		0.00116		0.00158	
7440-39-3		Barium	T	mg/L	6020	0.03	*	0.189		0.21		0.154	
7440-41-7		Beryllium	T	mg/L	6020	<0.001		<0.001		<0.001		<0.001	
7440-42-8		Boron	T	mg/L	6010	1.8		<0.2	B	<0.2	B	<0.2	B
7440-43-9		Cadmium	T	mg/L	6020	<0.001		<0.001	B	<0.001	B	<0.001	B
7440-70-2		Calcium	T	mg/L	6010	76.1		24.9		26.7		22.2	
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		<0.001	B	<0.001	B	<0.001	B
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		0.628		<0.1		1.09	
7439-92-1		Lead	T	mg/L	6020	<0.0013		<0.0013	B	<0.0013	B	<0.0013	B
7439-95-4		Magnesium	T	mg/L	6010	29.4		9.47		9.13		9.26	
7439-96-5		Manganese	T	mg/L	6020	0.0558	*	0.0144		<0.005		0.0827	
7439-97-6		Mercury	T	mg/L	7470	<0.0002		<0.0002		<0.0002		<0.0002	

GROUNDWATER SAMPLE ANALYSIS - (Cont.)

AKGWA NUMBER[1], Facility Well/Spring Number						8004-4792		8004-4809		8004-4810		8004-4804	
Facility's Local Well or Spring Number (e.g., MW-1, MW-2, etc.)						373		384		385		386	
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	3.29		1.48		1.7	B	0.356	B
7440-16-6		Rhodium	T	mg/L	6020	<0.005		<0.005		<0.005		<0.005	
7782-49-2		Selenium	T	mg/L	6020	0.00747		<0.005		<0.005		<0.005	
7440-22-4		Silver	T	mg/L	6020	<0.001	*B	<0.001	*	<0.001	*	<0.001	*
7440-23-5		Sodium	T	mg/L	6010	64.1		47.1		44.7	B	101	B
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		<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	J	<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						8004-4792		8004-4809		8004-4810		8004-4804	
Facility's Local Well or Spring Number (e.g., MW-1, MW-2, etc.)						373		384		385		386	
CAS RN[4]		CONSTITUENT	TD[5]	Unit OF MEASURE	METHOD	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS
75-27-4		Bromodichloromethane	T	mg/L	8260	<0.005		<0.005	*	<0.005		<0.005	
75-25-2		Tribromomethane	T	mg/L	8260	<0.005	*	<0.005	*	<0.005		<0.005	
74-83-9		Methyl bromide	T	mg/L	8260	<0.005	J	<0.005	*	<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	J	<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	*	<0.005		<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	<0.001		<0.001	*	<0.001		<0.001	
79-01-6		Ethene, Trichloro-	T	mg/L	8260	0.0064		<0.001	*	<0.001		<0.001	

RESIDENTIAL/CONTAINED-QUARTERLY
Facility: US DOE - Paducah Gaseous Diffusion Plant
Permit Number: 073-00014 & 073-00015

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		8004-4809		8004-4810		8004-4804	
Facility's Local Well or Spring Number (e.g., MW-1, MW-2, etc.)						373		384		385		386	
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			*		*		*
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			*		*		*

RESIDENTIAL/CONTAINED-QUARTERLY
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Permit Number: 073-00014 & 073-00015

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		8004-4809		8004-4810		8004-4804	
Facility's Local Well or Spring Number (e.g., MW-1, MW-2, etc.)						373		384		385		386	
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	4.14	*	6.13	*	2.7	*	1.95	*
12587-47-2		Gross Beta	T	pCi/L	9310	40.3	*	157	*	111	*	0.689	*
10043-66-0		Iodine-131	T	pCi/L	RL-7124		*		*		*		*
13982-63-3		Radium-226	T	pCi/L	RL-7129	0.23	*	0.199	*	0.148	*	0.119	*
10098-97-2		Strontium-90	T	pCi/L	RL-7140	0.458	*	0.133	*B	0.134	*B	0.778	*B
14133-76-7		Technetium-99	T	pCi/L	RL-7100	63.7	*	193	*	170	*	4.38	*
14269-63-7		Thorium-230	T	pCi/L	RL-7128	0.0588	*	0.124	*	0.0563	*	0.0999	*
10028-17-8		Tritium	T	pCi/L	704R6	-498	*	-336	*	-61	*	-18.2	*
S0130- -		Chemical Oxygen Demand	T	mg/L	410.4	<25		<25	B	<25	B	<25	B
57-12-5		Cyanide	T	mg/L	9010	<0.04	J	<0.04		<0.04		<0.04	
20461-54-5		Iodide	T	mg/L	345.1	<2		2.6	*B	<2	*B	<2	*B
S0268- -		Total Organic Carbon	T	mg/L	9060	1		<1		<1		10.4	D
S0586- -		Total Organic Halides	T	mg/L	9020	0.04		0.015	B	0.021		0.28	

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

RESIDENTIAL/INERT-QUARTERLY
Facility: US DOE - Paducah Gaseous Diffusion Plant
Permit Number:073-00014 & 073-00015

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	8004-4815	8004-4816	8004-4812	8004-4811
Facility's Local Well or Spring Number (e.g., MW-1, MW-2, etc.)	387	388	389	390
Sample Sequence #	1	1	1	1
If sample is a Blank, specify Type: (F)ield, (T)rip, (M)ethod, or (E)quipment	NA	NA	NA	NA
Sample Date and Time (Month/Day/Year hour: minutes)	4/11/2013 12:49	4/11/2013 13:46	NA	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)	MW387SG3-13	MW388SG3-13	NA	NA
Laboratory Sample ID Number (if applicable)	C13101024001	C13101024002	NA	NA
Date of Analysis (Month/Day/Year) For Volatile Organics Analysis	4/15/2013	4/15/2013	NA	NA
Gradient with respect to Monitored Unit (UP, DOWN, SIDE, UNKNOWN)	DOWN	DOWN	SIDE	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			*		*
16887-00-6		Chloride(s)	T	mg/L	9056	40		33			*		*
16984-48-8		Fluoride	T	mg/L	9214	0.7		0.28			*		*
S0595- -		Nitrate & Nitrite	T	mg/L	9056	1		<1			*		*
14808-79-8		Sulfate	T	mg/L	9056	28		23			*		*
NS1894		Barometric Pressure Reading	T	Inches/Hg	Field	29.66		29.66			*		*
S0145- -		Specific Conductance	T	µMH0/cm	Field	536		453			*		*

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

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

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

RESIDENTIAL/INERT-QUARTERLY
Facility: US DOE - Paducah Gaseous Diffusion Plant
Permit Number: 073-00014 & 073-00015

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						8004-4815		8004-4816		8004-4812		8004-4811	
Facility's Local Well or Spring Number (e.g., MW-1, MW-2, BLANK-F, etc.)						387		388		389		390	
CAS RN[4]		CONSTITUENT	TD[5]	Unit OF MEASURE	METHOD	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS
S0906 - -		Static Water Level Elevation	T	Ft. MSL	Field	322.7		322.62			*		*
N238		Dissolved Oxygen	T	mg/L	Field	3.7		4.59			*		*
S0266- -		Total Dissolved Solids	T	mg/L	160.1	291		243			*		*
S0296- -		pH	T	Units	Field	6.4		6.3			*		*
NS215		Eh	T	mV	Field	381		393			*		*
S0907 - -		Temperature	T	°C	Field	15.33		15.78			*		*
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	0.00275		0.00165			*		*
7440-39-3		Barium	T	mg/L	6020	0.127		0.181			*		*
7440-41-7		Beryllium	T	mg/L	6020	<0.001		<0.001			*		*
7440-42-8		Boron	T	mg/L	6010	<0.2	B	<0.2	B		*		*
7440-43-9		Cadmium	T	mg/L	6020	<0.001	B	<0.001	B		*		*
7440-70-2		Calcium	T	mg/L	6010	36.2		29.2			*		*
7440-47-3		Chromium	T	mg/L	6020	<0.01		<0.01			*		*
7440-48-4		Cobalt	T	mg/L	6020	<0.001	B	<0.001	B		*		*
7440-50-8		Copper	T	mg/L	6020	<0.02		<0.02			*		*
7439-89-6		Iron	T	mg/L	6010	<0.1		<0.1			*		*
7439-92-1		Lead	T	mg/L	6020	<0.0013	B	<0.0013	B		*		*
7439-95-4		Magnesium	T	mg/L	6010	14.4		11.8			*		*
7439-96-5		Manganese	T	mg/L	6020	<0.005		<0.005			*		*
7439-97-6		Mercury	T	mg/L	7470	<0.0002		<0.0002			*		*

GROUNDWATER SAMPLE ANALYSIS - (Cont.)

AKGWA NUMBER[1], Facility Well/Spring Number						8004-4815		8004-4816		8004-4812		8004-4811	
Facility's Local Well or Spring Number (e.g., MW-1, MW-2, etc.)						387		388		389		390	
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	1.94		1.95			*		*
7440-16-6		Rhodium	T	mg/L	6020	<0.005		<0.005			*		*
7782-49-2		Selenium	T	mg/L	6020	0.00596		<0.005			*		*
7440-22-4		Silver	T	mg/L	6020	<0.001	*	<0.001	*		*		*
7440-23-5		Sodium	T	mg/L	6010	50		45.4			*		*
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		<0.01			*		*
67-64-1		Acetone	T	mg/L	8260	<0.01	J	<0.01	J		*		*
107-02-8		Acrolein	T	mg/L	8260	<0.01		<0.01			*		*
107-13-1		Acrylonitrile	T	mg/L	8260	<0.01		<0.01			*		*
71-43-2		Benzene	T	mg/L	8260	<0.005		<0.005			*		*
108-90-7		Chlorobenzene	T	mg/L	8260	<0.005		<0.005			*		*
1330-20-7		Xylenes	T	mg/L	8260	<0.015		<0.015			*		*
100-42-5		Styrene	T	mg/L	8260	<0.005		<0.005			*		*
108-88-3		Toluene	T	mg/L	8260	<0.005		<0.005			*		*
74-97-5		Chlorobromomethane	T	mg/L	8260	<0.005		<0.005			*		*

GROUNDWATER SAMPLE ANALYSIS - (Cont.)

AKGWA NUMBER[1], Facility Well/Spring Number						8004-4815		8004-4816		8004-4812		8004-4811	
Facility's Local Well or Spring Number (e.g., MW-1, MW-2, etc.)						387		388		389		390	
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			*		*
75-25-2		Tribromomethane	T	mg/L	8260	<0.005		<0.005			*		*
74-83-9		Methyl bromide	T	mg/L	8260	<0.005	J	<0.005	J		*		*
78-93-3		Methyl ethyl ketone	T	mg/L	8260	<0.01	J	<0.01	J		*		*
110-57-6		trans-1,4-Dichloro-2-butene	T	mg/L	8260	<0.005	J	<0.005	J		*		*
75-15-0		Carbon disulfide	T	mg/L	8260	<0.005		<0.005			*		*
75-00-3		Chloroethane	T	mg/L	8260	<0.005	J	<0.005	J		*		*
67-66-3		Chloroform	T	mg/L	8260	<0.001		<0.001			*		*
74-87-3		Methyl chloride	T	mg/L	8260	<0.005		<0.005			*		*
156-59-2		cis-1,2-Dichloroethene	T	mg/L	8260	<0.001		<0.001			*		*
74-95-3		Methylene bromide	T	mg/L	8260	<0.005		<0.005			*		*
75-34-3		1,1-Dichloroethane	T	mg/L	8260	<0.001		<0.001			*		*
107-06-2		1,2-Dichloroethane	T	mg/L	8260	<0.001		<0.001			*		*
75-35-4		1,1-Dichloroethylene	T	mg/L	8260	<0.001		<0.001			*		*
106-93-4		Ethane, 1,2-dibromo	T	mg/L	8260	<0.005		<0.005			*		*
79-34-5		Ethane, 1,1,2,2-Tetrachloro	T	mg/L	8260	<0.005	J	<0.005	J		*		*
71-55-6		Ethane, 1,1,1-Trichloro-	T	mg/L	8260	<0.001		<0.001			*		*
79-00-5		Ethane, 1,1,2-Trichloro	T	mg/L	8260	<0.001		<0.001			*		*
630-20-6		Ethane, 1,1,1,2-Tetrachloro	T	mg/L	8260	<0.005		<0.005			*		*
75-01-4		Vinyl chloride	T	mg/L	8260	<0.002	J	<0.002	J		*		*
127-18-4		Ethene, Tetrachloro-	T	mg/L	8260	<0.001		<0.001			*		*
79-01-6		Ethene, Trichloro-	T	mg/L	8260	<0.001		<0.001			*		*

RESIDENTIAL/CONTAINED-QUARTERLY
Facility: US DOE - Paducah Gaseous Diffusion Plant
Permit Number: 073-00014 & 073-00015

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						8004-4815		8004-4816		8004-4812		8004-4811	
Facility's Local Well or Spring Number (e.g., MW-1, MW-2, etc.)						387		388		389		390	
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			*		*
591-78-6		2-Hexanone	T	mg/L	8260	<0.01	J	<0.01	J		*		*
74-88-4		Iodomethane	T	mg/L	8260	<0.01		<0.01			*		*
124-48-1		Methane, Dibromochloro-	T	mg/L	8260	<0.005		<0.005			*		*
56-23-5		Carbon Tetrachloride	T	mg/L	8260	<0.005		<0.005			*		*
75-09-2		Dichloromethane	T	mg/L	8260	<0.005		<0.005			*		*
108-10-1		Methyl isobutyl ketone	T	mg/L	8260	<0.01		<0.01			*		*
96-12-8		Propane, 1,2-Dibromo-3-chloro	T	mg/L	8011	<0.0002	*	<0.0002	*		*		*
78-87-5		Propane, 1,2-Dichloro-	T	mg/L	8260	<0.005		<0.005			*		*
10061-02-6		trans-1,3-Dichloro-1-propene	T	mg/L	8260	<0.005		<0.005			*		*
10061-01-5		cis-1,3-Dichloro-1-propene	T	mg/L	8260	<0.005		<0.005			*		*
156-60-5		trans-1,2-Dichloroethene	T	mg/L	8260	<0.001		<0.001			*		*
75-69-4		Trichlorofluoromethane	T	mg/L	8260	<0.005		<0.005			*		*
96-18-4		1,2,3-Trichloropropane	T	mg/L	8260	<0.005		<0.005			*		*
95-50-1		Benzene, 1,2-Dichloro-	T	mg/L	8260	<0.005		<0.005			*		*
106-46-7		Benzene, 1,4-Dichloro-	T	mg/L	8260	<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: 073-00014 & 073-00015

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						8004-4815		8004-4816		8004-4812		8004-4811	
Facility's Local Well or Spring Number (e.g., MW-1, MW-2, etc.)						387		388		389		390	
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	4.75	*	10	*		*		*
12587-47-2		Gross Beta	T	pCi/L	9310	148	*	85.2	*		*		*
10043-66-0		Iodine-131	T	pCi/L	RL-7124		*		*		*		*
13982-63-3		Radium-226	T	pCi/L	RL-7129	-0.0489	*	0.562	*		*		*
10098-97-2		Strontium-90	T	pCi/L	RL-7140	0.126	*B	0.785	*B		*		*
14133-76-7		Technetium-99	T	pCi/L	RL-7100	238	*	113	*		*		*
14269-63-7		Thorium-230	T	pCi/L	RL-7128	0.0343	*	0.0232	*		*		*
10028-17-8		Tritium	T	pCi/L	704R6	-311	*	78.2	*		*		*
S0130- -		Chemical Oxygen Demand	T	mg/L	410.4	<25	B	<25	B		*		*
57-12-5		Cyanide	T	mg/L	9010	<0.04		<0.04			*		*
20461-54-5		Iodide	T	mg/L	345.1	<2		<2			*		*
S0268- -		Total Organic Carbon	T	mg/L	9060	<1		<1			*		*
S0586- -		Total Organic Halides	T	mg/L	9020	0.02	B	0.02	B		*		*

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

RESIDENTIAL/INERT-QUARTERLY
Facility: US DOE - Paducah Gaseous Diffusion Plant
Permit Number: 073-00014 & 073-00015

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						8004-4805		8004-4806		8004-4807		8004-4802		
Facility's Local Well or Spring Number (e.g., MW-1, MW-2, etc.)						391		392		393		394		
Sample Sequence #						1		1		1		1		
If sample is a Blank, specify Type: (F)ield, (T)rip, (M)ethod, or (E)quipment						NA		NA		NA		NA		
Sample Date and Time (Month/Day/Year hour: minutes)						4/17/2013 09:22		4/17/2013 08:24		4/18/2013 13:32		4/22/2013 08:00		
Duplicate ("Y" or "N")[2]						N		N		N		N		
Split ("Y" or "N")[3]						N		N		N		N		
Facility Sample ID Number (if applicable)						MW391SG3-13		MW392SG3-13		MW393SG3-13		MW394SG3-13		
Laboratory Sample ID Number (if applicable)						C13107013001		C13107013002		C13108008003		C13112020001		
Date of Analysis (Month/Day/Year) For Volatile Organics Analysis						4/25/2013		4/25/2013		5/1/2013		5/2/2013		
Gradient with respect to Monitored Unit (UP, DOWN, SIDE, UNKNOWN)						DOWN		DOWN		DOWN		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	38		47		17		54		
16984-48-8		Fluoride	T	mg/L	9214	0.16		0.2		0.21		0.14		
S0595- -		Nitrate & Nitrite	T	mg/L	9056	<1		<1		<1	*J	1.7		
14808-79-8		Sulfate	T	mg/L	9056	25		6.7		14		9.8		
NS1894		Barometric Pressure Reading	T	Inches/Hg	Field	30.08		30.08		30		30.22		
S0145- -		Specific Conductance	T	μMH0/cm	Field	408		370		441		393		

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

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

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

GROUNDWATER SAMPLE ANALYSIS - (Cont.)

AKGWA NUMBER[1], Facility Well/Spring Number						8004-4805		8004-4806		8004-4807		8004-4802	
Facility's Local Well or Spring Number (e.g., MW-1, MW-2, BLANK-F, etc.)						391		392		393		394	
CAS RN[4]		CONSTITUENT	TD[5]	Unit OF MEASURE	METHOD	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS
S0906 - -		Static Water Level Elevation	T	Ft. MSL	Field	322.57		322.52		337.77		322.64	
N238		Dissolved Oxygen	T	mg/L	Field	2.52		0.83		3.93		4.61	
S0266- -		Total Dissolved Solids	T	mg/L	160.1	223		203		294		223	
S0296- -		pH	T	Units	Field	6.36		6.44		6.08		6.28	
NS215		Eh	T	mV	Field	602		757		142		823	
S0907 - -		Temperature	T	°C	Field	17.72		16.44		20.22		15.06	
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		<0.005	
7440-38-2		Arsenic	T	mg/L	7060	0.00106		0.00153		0.00603		0.00103	
7440-39-3		Barium	T	mg/L	6020	0.248		0.214		0.135		0.255	
7440-41-7		Beryllium	T	mg/L	6020	<0.001		<0.001		<0.001		<0.001	
7440-42-8		Boron	T	mg/L	6010	<0.2	B	<0.2	B	<0.2	B	<0.2	B
7440-43-9		Cadmium	T	mg/L	6020	<0.001	B	<0.001	B	<0.001	B	<0.001	B
7440-70-2		Calcium	T	mg/L	6010	26.4		26.6		10.8		28	
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	B	<0.001	B	<0.001	B	<0.001	B
7440-50-8		Copper	T	mg/L	6020	<0.02		<0.02		<0.02		<0.02	
7439-89-6		Iron	T	mg/L	6010	0.115		<0.1		3.98		<0.1	
7439-92-1		Lead	T	mg/L	6020	<0.0013	B	<0.0013	B	<0.0013	B	<0.0013	B
7439-95-4		Magnesium	T	mg/L	6010	10.3		9.52		3.08		10.9	
7439-96-5		Manganese	T	mg/L	6020	<0.005		0.18		0.0492		<0.005	
7439-97-6		Mercury	T	mg/L	7470	<0.0002		<0.0002		<0.0002		<0.0002	

GROUNDWATER SAMPLE ANALYSIS - (Cont.)

AKGWA NUMBER[1], Facility Well/Spring Number						8004-4805		8004-4806		8004-4807		8004-4802	
Facility's Local Well or Spring Number (e.g., MW-1, MW-2, etc.)						391		392		393		394	
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	1.53	B	1.89	B	0.47	B	1.29	B
7440-16-6		Rhodium	T	mg/L	6020	<0.005		<0.005		<0.005		<0.005	
7782-49-2		Selenium	T	mg/L	6020	0.00596		0.0054		<0.005		0.0054	
7440-22-4		Silver	T	mg/L	6020	<0.001	*	<0.001	*	<0.001	*	<0.001	*
7440-23-5		Sodium	T	mg/L	6010	37.9	B	33.3	B	76.3	B	28.2	B
7440-25-7		Tantalum	T	mg/L	6020	<0.005		<0.005		<0.005	B	<0.005	B
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	J	<0.01	*J	<0.01	J
107-13-1		Acrylonitrile	T	mg/L	8260	<0.01		<0.01	J	<0.01	*	<0.01	
71-43-2		Benzene	T	mg/L	8260	<0.005	J	<0.005	J	<0.005	J	<0.005	J
108-90-7		Chlorobenzene	T	mg/L	8260	<0.005	J	<0.005	J	<0.005	J	<0.005	J
1330-20-7		Xylenes	T	mg/L	8260	<0.015	J	<0.015	J	<0.015	J	<0.015	J
100-42-5		Styrene	T	mg/L	8260	<0.005	J	<0.005	J	<0.005	J	<0.005	J
108-88-3		Toluene	T	mg/L	8260	<0.005	J	<0.005	J	<0.005	J	<0.005	J
74-97-5		Chlorobromomethane	T	mg/L	8260	<0.005	J	<0.005	J	<0.005	J	<0.005	J

GROUNDWATER SAMPLE ANALYSIS - (Cont.)

AKGWA NUMBER[1], Facility Well/Spring Number						8004-4805		8004-4806		8004-4807		8004-4802	
Facility's Local Well or Spring Number (e.g., MW-1, MW-2, etc.)						391		392		393		394	
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	J	<0.005	J	<0.005	J	<0.005	J
75-25-2		Tribromomethane	T	mg/L	8260	<0.005	J	<0.005	J	<0.005	J	<0.005	J
74-83-9		Methyl bromide	T	mg/L	8260	<0.005	J	<0.005	J	<0.005	J	<0.005	J
78-93-3		Methyl ethyl ketone	T	mg/L	8260	<0.01	J	<0.01	J	<0.01	J	<0.01	J
110-57-6		trans-1,4-Dichloro-2-butene	T	mg/L	8260	<0.005	J	<0.005	J	<0.005	J	<0.005	J
75-15-0		Carbon disulfide	T	mg/L	8260	<0.005	J	<0.005	J	<0.005	J	<0.005	J
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	J	<0.001	J	<0.001	J	<0.001	J
74-87-3		Methyl chloride	T	mg/L	8260	<0.005	J	<0.005	J	<0.005	J	<0.005	J
156-59-2		cis-1,2-Dichloroethene	T	mg/L	8260	<0.001	J	<0.001	J	<0.001	J	<0.001	J
74-95-3		Methylene bromide	T	mg/L	8260	<0.005	J	<0.005	J	<0.005	J	<0.005	J
75-34-3		1,1-Dichloroethane	T	mg/L	8260	<0.001	J	<0.001	J	<0.001	J	<0.001	J
107-06-2		1,2-Dichloroethane	T	mg/L	8260	<0.001	J	<0.001	J	<0.001	J	<0.001	J
75-35-4		1,1-Dichloroethylene	T	mg/L	8260	<0.001	J	<0.001	J	<0.001	J	<0.001	J
106-93-4		Ethane, 1,2-dibromo	T	mg/L	8260	<0.005	J	<0.005	J	<0.005	J	<0.005	J
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	J	<0.001	J	<0.001	J	<0.001	J
79-00-5		Ethane, 1,1,2-Trichloro	T	mg/L	8260	<0.001	J	<0.001	J	<0.001	J	<0.001	J
630-20-6		Ethane, 1,1,1,2-Tetrachloro	T	mg/L	8260	<0.005	J	<0.005	J	<0.005	J	<0.005	J
75-01-4		Vinyl chloride	T	mg/L	8260	<0.002	J	<0.002	J	<0.002	J	<0.002	J
127-18-4		Ethene, Tetrachloro-	T	mg/L	8260	<0.001	J	<0.001	J	<0.001	J	<0.001	J
79-01-6		Ethene, Trichloro-	T	mg/L	8260	0.008	J	0.013	J	<0.001	J	0.0041	J

RESIDENTIAL/CONTAINED-QUARTERLY
Facility: US DOE - Paducah Gaseous Diffusion Plant FINDS/UNIT: KY8-890-008-982 / 1
Permit Number: 073-00014 & 073-00015 LAB ID: None
For Official Use Only

GROUNDWATER SAMPLE ANALYSIS - (Cont.)

AKGWA NUMBER[1], Facility Well/Spring Number						8004-4805		8004-4806		8004-4807		8004-4802	
Facility's Local Well or Spring Number (e.g., MW-1, MW-2, etc.)						391		392		393		394	
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	J	<0.005	J	<0.005	J	<0.005	J
591-78-6		2-Hexanone	T	mg/L	8260	<0.01	J	<0.01	J	<0.01	J	<0.01	J
74-88-4		Iodomethane	T	mg/L	8260	<0.01	J	<0.01	J	<0.01	J	<0.01	J
124-48-1		Methane, Dibromochloro-	T	mg/L	8260	<0.005	J	<0.005	J	<0.005	J	<0.005	J
56-23-5		Carbon Tetrachloride	T	mg/L	8260	<0.005	J	<0.005	J	<0.005	J	<0.005	J
75-09-2		Dichloromethane	T	mg/L	8260	<0.005	J	<0.005	J	<0.005	J	<0.005	J
108-10-1		Methyl isobutyl ketone	T	mg/L	8260	<0.01	J	<0.01	J	<0.01	J	<0.01	J
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	J	<0.005	J	<0.005	J	<0.005	J
10061-02-6		trans-1,3-Dichloro-1-propene	T	mg/L	8260	<0.005	J	<0.005	J	<0.005	J	<0.005	J
10061-01-5		cis-1,3-Dichloro-1-propene	T	mg/L	8260	<0.005	J	<0.005	J	<0.005	J	<0.005	J
156-60-5		trans-1,2-Dichloroethene	T	mg/L	8260	<0.001	J	<0.001	J	<0.001	J	<0.001	J
75-69-4		Trichlorofluoromethane	T	mg/L	8260	<0.005	J	<0.005	J	<0.005	J	<0.005	J
96-18-4		1,2,3-Trichloropropane	T	mg/L	8260	<0.005	J	<0.005	J	<0.005	J	<0.005	J
95-50-1		Benzene, 1,2-Dichloro-	T	mg/L	8260	<0.005	J	<0.005	J	<0.005	J	<0.005	J
106-46-7		Benzene, 1,4-Dichloro-	T	mg/L	8260	<0.005	J	<0.005	J	<0.005	J	<0.005	J
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: 073-00014 & 073-00015

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						8004-4805		8004-4806		8004-4807		8004-4802	
Facility's Local Well or Spring Number (e.g., MW-1, MW-2, etc.)						391		392		393		394	
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	1.7	*	1.88	*	1.75	*	0.766	*
12587-47-2		Gross Beta	T	pCi/L	9310	6.02	*	3.78	*	4.42	*	9.39	*
10043-66-0		Iodine-131	T	pCi/L	RL-7124		*		*		*		*
13982-63-3		Radium-226	T	pCi/L	RL-7129	0.187	*	0.139	*	0.0109	*	0.125	*
10098-97-2		Strontium-90	T	pCi/L	RL-7140	0.555	*B	0.536	*B	0.437	*B	-0.509	*B
14133-76-7		Technetium-99	T	pCi/L	RL-7100	5.89	*	-7	*	1.44	*	13.9	*
14269-63-7		Thorium-230	T	pCi/L	RL-7128	0.11	*	0.0368	*	0.101	*	0.0744	*
10028-17-8		Tritium	T	pCi/L	704R6	-85.6	*	-327	*	-262	*	-412	*
S0130- -		Chemical Oxygen Demand	T	mg/L	410.4	<25	B	<25	B	<25		<25	
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		1.1		4		<1	
S0586- -		Total Organic Halides	T	mg/L	9020	0.022		0.043		0.035		0.021	

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

RESIDENTIAL/INERT-QUARTERLY
Facility: US DOE - Paducah Gaseous Diffusion Plant
Permit Number: 073-00014 & 073-00015

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						8004-4801		8004-4803		8004-4817		0000-0000	
Facility's Local Well or Spring Number (e.g., MW-1, MW-2, etc.)						395		396		397		E. BLANK	
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		E	
Sample Date and Time (Month/Day/Year hour: minutes)						4/22/2013 09:00		4/16/2013 13:41		4/18/2013 12:22		04/18/2013 11:45	
Duplicate ("Y" or "N")[2]						N		N		N		N	
Split ("Y" or "N")[3]						N		N		N		N	
Facility Sample ID Number (if applicable)						MW395SG3-13		MW396SG3-13		MW397SG3-13		RI1SG3-13	
Laboratory Sample ID Number (if applicable)						C13112020002		C13106016002		C13108008004		C13108007001	
Date of Analysis (Month/Day/Year) For Volatile Organics Analysis						5/2/2013		4/25/2013		5/1/2013		4/23/2013	
Gradient with respect to Monitored Unit (UP, DOWN, SIDE, UNKNOWN)						UP		UP		UP		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	<2		<2		<2			*
16887-00-6		Chloride(s)	T	mg/L	9056	53		80		39			*
16984-48-8		Fluoride	T	mg/L	9214	0.12		0.58		0.14			*
S0595- -		Nitrate & Nitrite	T	mg/L	9056	1.7		<1		1.2	*J		*
14808-79-8		Sulfate	T	mg/L	9056	9.8		26		11			*
NS1894		Barometric Pressure Reading	T	Inches/Hg	Field	30.22		29.99		30			*
S0145- -		Specific Conductance	T	µMH0/cm	Field	394		848		362			*

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

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

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

RESIDENTIAL/INERT-QUARTERLY
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LAB ID: None
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GROUNDWATER SAMPLE ANALYSIS - (Cont.)

AKGWA NUMBER[1], Facility Well/Spring Number						8004-4801		8004-4803		8004-4817		0000-0000	
Facility's Local Well or Spring Number (e.g., MW-1, MW-2, BLANK-F, etc.)						395		396		397		E. BLANK	
CAS RN[4]		CONSTITUENT	TD[5]	Unit OF MEASURE	METHOD	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS
S0906 - -		Static Water Level Elevation	T	Ft. MSL	Field	323.03		369.75		322.8			*
N238		Dissolved Oxygen	T	mg/L	Field	3.52		1.04		5.2			*
S0266- -		Total Dissolved Solids	T	mg/L	160.1	226		476		166			*
S0296- -		pH	T	Units	Field	6.21		6.57		5.97			*
NS215		Eh	T	mV	Field	635		251		383			*
S0907 - -		Temperature	T	°C	Field	16.22		18.5		18.28			*
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		<0.005	
7440-38-2		Arsenic	T	mg/L	7060	0.00108		0.00183		<0.001		<0.001	
7440-39-3		Barium	T	mg/L	6020	0.262		0.411		0.15		<0.005	
7440-41-7		Beryllium	T	mg/L	6020	<0.001		<0.001		<0.001		<0.001	
7440-42-8		Boron	T	mg/L	6010	<0.2	B	<0.2	B	<0.2	B	<0.2	B
7440-43-9		Cadmium	T	mg/L	6020	<0.001	B	<0.001	B	<0.001	B	<0.001	B
7440-70-2		Calcium	T	mg/L	6010	28.7		38		18.1		<1	
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	B	<0.001	B	<0.001	B	<0.001	B
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		0.64		0.108		<0.1	
7439-92-1		Lead	T	mg/L	6020	<0.0013	B	<0.0013	B	<0.0013	B	<0.0013	B
7439-95-4		Magnesium	T	mg/L	6010	11.1		16.7		7.4		<0.025	
7439-96-5		Manganese	T	mg/L	6020	<0.005		0.216		<0.005		<0.005	
7439-97-6		Mercury	T	mg/L	7470	<0.0002		<0.0002		<0.0002		<0.0002	

GROUNDWATER SAMPLE ANALYSIS - (Cont.)

AKGWA NUMBER[1], Facility Well/Spring Number						8004-4801		8004-4803		8004-4817		0000-0000	
Facility's Local Well or Spring Number (e.g., MW-1, MW-2, etc.)						395		396		397		E. BLANK	
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	1.65	B	0.91	B	1.62	B	<0.2	B
7440-16-6		Rhodium	T	mg/L	6020	<0.005		<0.005		<0.005		<0.005	
7782-49-2		Selenium	T	mg/L	6020	0.00539		0.00798		0.0058		<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	28.4	B	105	B	30.4	B	<1	B
7440-25-7		Tantalum	T	mg/L	6020	<0.005	B	<0.005		<0.005	B	<0.005	B
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		<0.01	*	<0.01	
107-02-8		Acrolein	T	mg/L	8260	<0.01	J	<0.01		<0.01	*J	<0.01	J
107-13-1		Acrylonitrile	T	mg/L	8260	<0.01		<0.01		<0.01	*	<0.01	
71-43-2		Benzene	T	mg/L	8260	<0.005	J	<0.005		<0.005	*	<0.005	
108-90-7		Chlorobenzene	T	mg/L	8260	<0.005	J	<0.005		<0.005	*	<0.005	
1330-20-7		Xylenes	T	mg/L	8260	<0.015	J	<0.015		<0.015	*	<0.015	
100-42-5		Styrene	T	mg/L	8260	<0.005	J	<0.005		<0.005	*	<0.005	
108-88-3		Toluene	T	mg/L	8260	<0.005	J	<0.005		<0.005	*J	<0.005	J
74-97-5		Chlorobromomethane	T	mg/L	8260	<0.005	J	<0.005		<0.005	*	<0.005	

GROUNDWATER SAMPLE ANALYSIS - (Cont.)

AKGWA NUMBER[1], Facility Well/Spring Number						8004-4801		8004-4803		8004-4817		0000-0000	
Facility's Local Well or Spring Number (e.g., MW-1, MW-2, etc.)						395		396		397		E. BLANK	
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	J	<0.005		<0.005	*	<0.005	
75-25-2		Tribromomethane	T	mg/L	8260	<0.005	J	<0.005		<0.005	*	<0.005	
74-83-9		Methyl bromide	T	mg/L	8260	<0.005	J	<0.005		<0.005	*	<0.005	
78-93-3		Methyl ethyl ketone	T	mg/L	8260	<0.01	J	<0.01		<0.01	*	<0.01	
110-57-6		trans-1,4-Dichloro-2-butene	T	mg/L	8260	<0.005	J	<0.005		<0.005	*J	<0.005	J
75-15-0		Carbon disulfide	T	mg/L	8260	<0.005	J	<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	J	<0.001		<0.001	*	<0.001	
74-87-3		Methyl chloride	T	mg/L	8260	<0.005	J	<0.005		<0.005	*	<0.005	
156-59-2		cis-1,2-Dichloroethene	T	mg/L	8260	<0.001	J	<0.001		<0.001	*	<0.001	
74-95-3		Methylene bromide	T	mg/L	8260	<0.005	J	<0.005		<0.005	*	<0.005	
75-34-3		1,1-Dichloroethane	T	mg/L	8260	<0.001	J	<0.001		<0.001	*	<0.001	
107-06-2		1,2-Dichloroethane	T	mg/L	8260	<0.001	J	<0.001		<0.001	*	<0.001	
75-35-4		1,1-Dichloroethylene	T	mg/L	8260	<0.001	J	<0.001		<0.001	*	<0.001	
106-93-4		Ethane, 1,2-dibromo	T	mg/L	8260	<0.005	J	<0.005		<0.005	*	<0.005	
79-34-5		Ethane, 1,1,2,2-Tetrachloro	T	mg/L	8260	<0.005	J	<0.005		<0.005	*	<0.005	
71-55-6		Ethane, 1,1,1-Trichloro-	T	mg/L	8260	<0.001	J	<0.001		<0.001	*	<0.001	
79-00-5		Ethane, 1,1,2-Trichloro	T	mg/L	8260	<0.001	J	<0.001		<0.001	*	<0.001	
630-20-6		Ethane, 1,1,1,2-Tetrachloro	T	mg/L	8260	<0.005	J	<0.005		<0.005	*	<0.005	
75-01-4		Vinyl chloride	T	mg/L	8260	<0.002	J	<0.002		<0.002	*J	<0.002	J
127-18-4		Ethene, Tetrachloro-	T	mg/L	8260	<0.001	J	<0.001		<0.001	*J	<0.001	J
79-01-6		Ethene, Trichloro-	T	mg/L	8260	0.0035	J	<0.001		<0.001	*	<0.001	

RESIDENTIAL/CONTAINED-QUARTERLY
Facility: US DOE - Paducah Gaseous Diffusion Plant
Permit Number: 073-00014 & 073-00015

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						8004-4801		8004-4803		8004-4817		0000-0000	
Facility's Local Well or Spring Number (e.g., MW-1, MW-2, etc.)						395		396		397		E. BLANK	
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	J	<0.005		<0.005	*	<0.005	
591-78-6		2-Hexanone	T	mg/L	8260	<0.01	J	<0.01		<0.01	*	<0.01	
74-88-4		Iodomethane	T	mg/L	8260	<0.01	J	<0.01		<0.01	*J	<0.01	J
124-48-1		Methane, Dibromochloro-	T	mg/L	8260	<0.005	J	<0.005		<0.005	*	<0.005	
56-23-5		Carbon Tetrachloride	T	mg/L	8260	<0.005	J	<0.005		<0.005	*	<0.005	
75-09-2		Dichloromethane	T	mg/L	8260	<0.005	J	<0.005		<0.005	*	<0.005	
108-10-1		Methyl isobutyl ketone	T	mg/L	8260	<0.01	J	<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	J	<0.005		<0.005	*	<0.005	
10061-02-6		trans-1,3-Dichloro-1-propene	T	mg/L	8260	<0.005	J	<0.005		<0.005	*J	<0.005	J
10061-01-5		cis-1,3-Dichloro-1-propene	T	mg/L	8260	<0.005	J	<0.005		<0.005	*	<0.005	
156-60-5		trans-1,2-Dichloroethene	T	mg/L	8260	<0.001	J	<0.001		<0.001	*	<0.001	
75-69-4		Trichlorofluoromethane	T	mg/L	8260	<0.005	J	<0.005		<0.005	*	<0.005	
96-18-4		1,2,3-Trichloropropane	T	mg/L	8260	<0.005	J	<0.005		<0.005	*	<0.005	
95-50-1		Benzene, 1,2-Dichloro-	T	mg/L	8260	<0.005	J	<0.005		<0.005	*J	<0.005	J
106-46-7		Benzene, 1,4-Dichloro-	T	mg/L	8260	<0.005	J	<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
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FINDS/UNIT: KY8-890-008-982 / 1
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GROUNDWATER SAMPLE ANALYSIS - (Cont.)

AKGWA NUMBER[1], Facility Well/Spring Number						8004-4801		8004-4803		8004-4817		0000-0000	
Facility's Local Well or Spring Number (e.g., MW-1, MW-2, etc.)						395		396		397		E. BLANK	
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	0.272	*	7.19	*	1.01	*	1.15	*
12587-47-2		Gross Beta	T	pCi/L	9310	6.42	*	1.61	*	14.4	*	0.307	*
10043-66-0		Iodine-131	T	pCi/L	RL-7124		*		*		*		*
13982-63-3		Radium-226	T	pCi/L	RL-7129	0.222	*	0.00273	*	0.0654	*	0.218	*
10098-97-2		Strontium-90	T	pCi/L	RL-7140	0.0294	*B	0.348	*B	-0.208	*B	0.191	*B
14133-76-7		Technetium-99	T	pCi/L	RL-7100	3.11	*	-1.17	*	16.6	*	-6.17	*
14269-63-7		Thorium-230	T	pCi/L	RL-7128	0.0372	*	-0.0354	*	0.16	*	0.187	*
10028-17-8		Tritium	T	pCi/L	704R6	-269	*	-39.6	*	114	*	53.5	*
S0130- -		Chemical Oxygen Demand	T	mg/L	410.4	<25		<25	B	<25			*
57-12-5		Cyanide	T	mg/L	9010	<0.04		<0.04		<0.04			*
20461-54-5		Iodide	T	mg/L	345.1	<2		<2	*B	<2		<2	
S0268- -		Total Organic Carbon	T	mg/L	9060	<1		9.1		<1			*
S0586- -		Total Organic Halides	T	mg/L	9020	0.021		0.24	B	0.012			*

Division of Waste Management
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14 Reilly Road
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RESIDENTIAL/INERT-QUARTERLY
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FINDS/UNIT: KY8-890-008-982 / 1
LAB ID: None
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GROUNDWATER SAMPLE ANALYSIS(S)

AKGWA NUMBER[1], Facility Well/Spring Number						0000-0000		0000-0000		0000-0000		0000-0000	
Facility's Local Well or Spring Number (e.g., MW-1, MW-2, etc.)						F. BLANK		T. BLANK 1		T. BLANK 2		T. BLANK 3	
Sample Sequence #						1		1		1		1	
If sample is a Blank, specify Type: (F)ield, (T)rip, (M)ethod, or (E)quipment						F		T		T		T	
Sample Date and Time (Month/Day/Year hour: minutes)						4/17/2013 08:25		4/11/2013 11:56		4/16/2013 07:15		4/17/2013 07:20	
Duplicate ("Y" or "N")[2]						N		N		N		N	
Split ("Y" or "N")[3]						N		N		N		N	
Facility Sample ID Number (if applicable)						FB1SG3-13		TB1SG3-13		TB2SG3-13		TB3SG3-13	
Laboratory Sample ID Number (if applicable)						C13107012001		C13101028001		C13106049001		C13107025001	
Date of Analysis (Month/Day/Year) For Volatile Organics Analysis						4/21/2013		4/15/2013		4/20/2013		4/20/2013	
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

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

RESIDENTIAL/INERT-QUARTERLY
Facility: US DOE - Paducah Gaseous Diffusion Plant
Permit Number: 073-00014 & 073-00015

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.)						F. BLANK		T. BLANK 1		T. BLANK 2		T. BLANK 3	
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			*		*		*
7440-36-0		Antimony	T	mg/L	6020	<0.005			*		*		*
7440-38-2		Arsenic	T	mg/L	7060	<0.001			*		*		*
7440-39-3		Barium	T	mg/L	6020	<0.005			*		*		*
7440-41-7		Beryllium	T	mg/L	6020	<0.001			*		*		*
7440-42-8		Boron	T	mg/L	6010	<0.2	B		*		*		*
7440-43-9		Cadmium	T	mg/L	6020	<0.001	B		*		*		*
7440-70-2		Calcium	T	mg/L	6010	<1			*		*		*
7440-47-3		Chromium	T	mg/L	6020	<0.01			*		*		*
7440-48-4		Cobalt	T	mg/L	6020	<0.001	B		*		*		*
7440-50-8		Copper	T	mg/L	6020	<0.02			*		*		*
7439-89-6		Iron	T	mg/L	6010	<0.1			*		*		*
7439-92-1		Lead	T	mg/L	6020	<0.0013	B		*		*		*
7439-95-4		Magnesium	T	mg/L	6010	<0.025			*		*		*
7439-96-5		Manganese	T	mg/L	6020	<0.005			*		*		*
7439-97-6		Mercury	T	mg/L	7470	<0.0002			*		*		*

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.)						F. BLANK		T. BLANK 1		T. BLANK 2		T. BLANK 3	
CAS RN[4]		CONSTITUENT	TD[5]	Unit OF MEASURE	METHOD	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS
7439-98-7		Molybdenum	T	mg/L	6020	<0.001	B		*		*		*
7440-02-0		Nickel	T	mg/L	6020	<0.005			*		*		*
7440-09-7		Potassium	T	mg/L	6010	<0.2	B		*		*		*
7440-16-6		Rhodium	T	mg/L	6020	<0.005			*		*		*
7782-49-2		Selenium	T	mg/L	6020	<0.005			*		*		*
7440-22-4		Silver	T	mg/L	6020	<0.001	*		*		*		*
7440-23-5		Sodium	T	mg/L	6010	<1	B		*		*		*
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		<0.01	J	<0.01	*J
67-64-1		Acetone	T	mg/L	8260	<0.01		<0.01	J	<0.01		<0.01	*
107-02-8		Acrolein	T	mg/L	8260	<0.01	J	<0.01		<0.01		<0.01	*
107-13-1		Acrylonitrile	T	mg/L	8260	<0.01	J	<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.)						F. BLANK		T. BLANK 1		T. BLANK 2		T. BLANK 3	
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	J	<0.005		<0.005	*
78-93-3		Methyl ethyl ketone	T	mg/L	8260	<0.01		<0.01	J	<0.01		<0.01	*
110-57-6		trans-1,4-Dichloro-2-butene	T	mg/L	8260	<0.005		<0.005	J	<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		<0.005	J	<0.005		<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	J	<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: 073-00014 & 073-00015

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.)						F. BLANK		T. BLANK 1		T. BLANK 2		T. BLANK 3	
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	J	<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: 073-00014 & 073-00015

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.)						F. BLANK		T. BLANK 1		T. BLANK 2		T. BLANK 3	
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	0.0705	*		*		*		*
12587-47-2		Gross Beta	T	pCi/L	9310	0.0728	*		*		*		*
10043-66-0		Iodine-131	T	pCi/L	RL-7124		*		*		*		*
13982-63-3		Radium-226	T	pCi/L	RL-7129	-0.132	*		*		*		*
10098-97-2		Strontium-90	T	pCi/L	RL-7140	0.493	*B		*		*		*
14133-76-7		Technetium-99	T	pCi/L	RL-7100	5.11	*		*		*		*
14269-63-7		Thorium-230	T	pCi/L	RL-7128	0.0377	*		*		*		*
10028-17-8		Tritium	T	pCi/L	704R6	38.5	*		*		*		*
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			*		*		*
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/INERT-QUARTERLY
Facility: US DOE - Paducah Gaseous Diffusion Plant
Permit Number: 073-00014 & 073-00015

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		8000-5242	
Facility's Local Well or Spring Number (e.g., MW-1, MW-2, etc.)						T. BLANK 4		T. BLANK 5		T. BLANK 6		222	
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)						4/18/2013 07:25		04/18/2013 07:30		4/22/2013 07:00		4/18/2013 08:30	
Duplicate ("Y" or "N")[2]						N		N		N		Y	
Split ("Y" or "N")[3]						N		N		N		N	
Facility Sample ID Number (if applicable)						TB4SG3-13		TB5SG3-13		TB6SG3-13		MW222DSG3-13	
Laboratory Sample ID Number (if applicable)						C13108009001		C13108009002		C13112019001		C13108004002	
Date of Analysis (Month/Day/Year) For Volatile Organics Analysis						4/23/2013		4/23/2013		4/23/2013		4/22/2013	
Gradient with respect to Monitored Unit (UP, DOWN, SIDE, UNKNOWN)						NA		NA		NA		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	
16887-00-6		Chloride(s)	T	mg/L	9056		*		*		*	35	
16984-48-8		Fluoride	T	mg/L	9214		*		*		*	0.25	
S0595- -		Nitrate & Nitrite	T	mg/L	9056		*		*		*	<1	*J
14808-79-8		Sulfate	T	mg/L	9056		*		*		*	11	
NS1894		Barometric Pressure Reading	T	Inches/Hg	Field		*		*		*	29.77	
S0145- -		Specific Conductance	T	µMH0/cm	Field		*		*		*	363	

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

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

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

GROUNDWATER SAMPLE ANALYSIS - (Cont.)

AKGWA NUMBER[1], Facility Well/Spring Number						0000-0000		0000-0000		0000-0000		8000-5242	
Facility's Local Well or Spring Number (e.g., MW-1, MW-2, BLANK-F, etc.)						T. BLANK 4		T. BLANK 5		T. BLANK 6		222	
CAS RN[4]		CONSTITUENT	TD[5]	Unit OF MEASURE	METHOD	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS	DETECTED VALUE OR PQL[6]	FLAGS
S0906 - -		Static Water Level Elevation	T	Ft. MSL	Field		*		*		*	323.26	
N238		Dissolved Oxygen	T	mg/L	Field		*		*		*	3.07	
S0266- -		Total Dissolved Solids	T	mg/L	160.1		*		*		*	199	
S0296- -		pH	T	Units	Field		*		*		*	6.34	
NS215		Eh	T	mV	Field		*		*		*	663	
S0907 - -		Temperature	T	°C	Field		*		*		*	17.89	
7429-90-5		Aluminum	T	mg/L	6020		*		*		*	0.366	
7440-36-0		Antimony	T	mg/L	6020		*		*		*	<0.005	
7440-38-2		Arsenic	T	mg/L	7060		*		*		*	0.00108	
7440-39-3		Barium	T	mg/L	6020		*		*		*	0.312	
7440-41-7		Beryllium	T	mg/L	6020		*		*		*	<0.001	
7440-42-8		Boron	T	mg/L	6010		*		*		*	<0.2	B
7440-43-9		Cadmium	T	mg/L	6020		*		*		*	<0.001	B
7440-70-2		Calcium	T	mg/L	6010		*		*		*	19.3	
7440-47-3		Chromium	T	mg/L	6020		*		*		*	<0.01	
7440-48-4		Cobalt	T	mg/L	6020		*		*		*	0.00242	B
7440-50-8		Copper	T	mg/L	6020		*		*		*	<0.02	
7439-89-6		Iron	T	mg/L	6010		*		*		*	0.559	
7439-92-1		Lead	T	mg/L	6020		*		*		*	<0.0013	B
7439-95-4		Magnesium	T	mg/L	6010		*		*		*	8.15	
7439-96-5		Manganese	T	mg/L	6020		*		*		*	0.045	
7439-97-6		Mercury	T	mg/L	7470		*		*		*	<0.0002	

GROUNDWATER SAMPLE ANALYSIS - (Cont.)

AKGWA NUMBER[1], Facility Well/Spring Number						0000-0000		0000-0000		0000-0000		8000-5242	
Facility's Local Well or Spring Number (e.g., MW-1, MW-2, etc.)						T. BLANK 4		T. BLANK 5		T. BLANK 6		222	
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		*		*		*	0.142	
7440-09-7		Potassium	T	mg/L	6010		*		*		*	0.552	B
7440-16-6		Rhodium	T	mg/L	6020		*		*		*	<0.005	
7782-49-2		Selenium	T	mg/L	6020		*		*		*	<0.005	
7440-22-4		Silver	T	mg/L	6020		*		*		*	<0.001	*
7440-23-5		Sodium	T	mg/L	6010		*		*		*	43.5	B
7440-25-7		Tantalum	T	mg/L	6020		*		*		*	<0.005	B
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	J	<0.01		<0.01	*	<0.01	*
107-02-8		Acrolein	T	mg/L	8260	<0.01	*J	<0.01	*J	<0.01	*J	<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	J	<0.005		<0.005	*	<0.005	*
108-90-7		Chlorobenzene	T	mg/L	8260	<0.005	J	<0.005		<0.005	*	<0.005	*
1330-20-7		Xylenes	T	mg/L	8260	<0.015	J	<0.015		<0.015	*	<0.015	*
100-42-5		Styrene	T	mg/L	8260	<0.005	J	<0.005		<0.005	*	<0.005	*
108-88-3		Toluene	T	mg/L	8260	<0.005	J	<0.005	J	<0.005	*J	<0.005	*
74-97-5		Chlorobromomethane	T	mg/L	8260	<0.005	J	<0.005		<0.005	*	<0.005	*

GROUNDWATER SAMPLE ANALYSIS - (Cont.)

AKGWA NUMBER[1], Facility Well/Spring Number						0000-0000		0000-0000		0000-0000		8000-5242	
Facility's Local Well or Spring Number (e.g., MW-1, MW-2, etc.)						T. BLANK 4		T. BLANK 5		T. BLANK 6		222	
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	J	<0.005		<0.005	*	<0.005	*
75-25-2		Tribromomethane	T	mg/L	8260	<0.005	J	<0.005		<0.005	*	<0.005	*
74-83-9		Methyl bromide	T	mg/L	8260	<0.005	J	<0.005		<0.005	*	<0.005	*
78-93-3		Methyl ethyl ketone	T	mg/L	8260	<0.01	J	<0.01		<0.01	*	<0.01	*
110-57-6		trans-1,4-Dichloro-2-butene	T	mg/L	8260	<0.005	J	<0.005	J	<0.005	*J	<0.005	*
75-15-0		Carbon disulfide	T	mg/L	8260	<0.005	J	<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	J	<0.001		<0.001	*	<0.001	*
74-87-3		Methyl chloride	T	mg/L	8260	<0.005	J	<0.005		<0.005	*	<0.005	*
156-59-2		cis-1,2-Dichloroethene	T	mg/L	8260	<0.001	J	<0.001		<0.001	*	<0.001	*
74-95-3		Methylene bromide	T	mg/L	8260	<0.005	J	<0.005		<0.005	*	<0.005	*
75-34-3		1,1-Dichloroethane	T	mg/L	8260	<0.001	J	<0.001		<0.001	*	<0.001	*
107-06-2		1,2-Dichloroethane	T	mg/L	8260	<0.001	J	<0.001		<0.001	*	<0.001	*
75-35-4		1,1-Dichloroethylene	T	mg/L	8260	<0.001	J	<0.001		<0.001	*	<0.001	*
106-93-4		Ethane, 1,2-dibromo	T	mg/L	8260	<0.005	J	<0.005		<0.005	*	<0.005	*
79-34-5		Ethane, 1,1,2,2-Tetrachloro	T	mg/L	8260	<0.005	J	<0.005		<0.005	*	<0.005	*J
71-55-6		Ethane, 1,1,1-Trichloro-	T	mg/L	8260	<0.001	J	<0.001		<0.001	*	<0.001	*
79-00-5		Ethane, 1,1,2-Trichloro	T	mg/L	8260	<0.001	J	<0.001		<0.001	*	<0.001	*
630-20-6		Ethane, 1,1,1,2-Tetrachloro	T	mg/L	8260	<0.005	J	<0.005		<0.005	*	<0.005	*
75-01-4		Vinyl chloride	T	mg/L	8260	<0.002	J	<0.002	J	<0.002	*J	<0.002	*
127-18-4		Ethene, Tetrachloro-	T	mg/L	8260	<0.001	J	<0.001	J	<0.001	*J	<0.001	*
79-01-6		Ethene, Trichloro-	T	mg/L	8260	<0.001	J	<0.001		<0.001	*	<0.001	*

RESIDENTIAL/CONTAINED-QUARTERLY
Facility: US DOE - Paducah Gaseous Diffusion Plant
Permit Number: 073-00014 & 073-00015

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		8000-5242	
Facility's Local Well or Spring Number (e.g., MW-1, MW-2, etc.)						T. BLANK 4		T. BLANK 5		T. BLANK 6		222	
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	J	<0.005		<0.005	*	<0.005	*
591-78-6		2-Hexanone	T	mg/L	8260	<0.01	J	<0.01		<0.01	*	<0.01	*
74-88-4		Iodomethane	T	mg/L	8260	<0.01	J	<0.01	J	<0.01	*J	<0.01	*
124-48-1		Methane, Dibromochloro-	T	mg/L	8260	<0.005	J	<0.005		<0.005	*	<0.005	*
56-23-5		Carbon Tetrachloride	T	mg/L	8260	<0.005	J	<0.005		<0.005	*	<0.005	*
75-09-2		Dichloromethane	T	mg/L	8260	<0.005	J	<0.005		<0.005	*	<0.005	*
108-10-1		Methyl isobutyl ketone	T	mg/L	8260	<0.01	J	<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	J	<0.005		<0.005	*	<0.005	*
10061-02-6		trans-1,3-Dichloro-1-propene	T	mg/L	8260	<0.005	J	<0.005	J	<0.005	*J	<0.005	*
10061-01-5		cis-1,3-Dichloro-1-propene	T	mg/L	8260	<0.005	J	<0.005		<0.005	*	<0.005	*
156-60-5		trans-1,2-Dichloroethene	T	mg/L	8260	<0.001	J	<0.001		<0.001	*	<0.001	*
75-69-4		Trichlorofluoromethane	T	mg/L	8260	<0.005	J	<0.005		<0.005	*	<0.005	*
96-18-4		1,2,3-Trichloropropane	T	mg/L	8260	<0.005	J	<0.005		<0.005	*	<0.005	*
95-50-1		Benzene, 1,2-Dichloro-	T	mg/L	8260	<0.005	J	<0.005	J	<0.005	*J	<0.005	*
106-46-7		Benzene, 1,4-Dichloro-	T	mg/L	8260	<0.005	J	<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: 073-00014 & 073-00015

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		8004-4805	
Facility's Local Well or Spring Number (e.g., MW-1, MW-2, etc.)						T. BLANK 4		T. BLANK 5		T. BLANK 6		391	
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		*		*		*	-0.378	*
12587-47-2		Gross Beta	T	pCi/L	9310		*		*		*	8.69	*
10043-66-0		Iodine-131	T	pCi/L	RL-7124		*		*		*		*
13982-63-3		Radium-226	T	pCi/L	RL-7129		*		*		*	0.052	*
10098-97-2		Strontium-90	T	pCi/L	RL-7140		*		*		*	0.605	*B
14133-76-7		Technetium-99	T	pCi/L	RL-7100		*		*		*	3.39	*
14269-63-7		Thorium-230	T	pCi/L	RL-7128		*		*		*	0.157	*
10028-17-8		Tritium	T	pCi/L	704R6		*		*		*	-274	*
S0130- -		Chemical Oxygen Demand	T	mg/L	410.4		*		*		*	<25	
57-12-5		Cyanide	T	mg/L	9010		*		*		*	<0.04	
20461-54-5		Iodide	T	mg/L	345.1		*		*		*	<2	
S0268- -		Total Organic Carbon	T	mg/L	9060		*		*		*	<1	
S0586- -		Total Organic Halides	T	mg/L	9020		*		*		*	0.016	

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

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

Permit Numbers: 073-00014 and 073-00015 For Official Use Only

GROUNDWATER
WRITTEN COMMENTS

Monitoring Point	Facility Sample ID	Constituent	Flag	Description
8000-5201 MW220	MW220SG3-13	Silver	*N	Duplicate analysis not within control limits. Sample spike recovery not within control limits.
		Acrolein	X	Other specific flags and footnotes may be required to properly define the results.
		Acrylonitrile	X	Other specific flags and footnotes may be required to properly define the results.
		PCB, Total		Analysis of constituent not required and not performed.
		PCB-1016		Analysis of constituent not required and not performed.
		PCB-1221		Analysis of constituent not required and not performed.
		PCB-1232		Analysis of constituent not required and not performed.
		PCB-1242		Analysis of constituent not required and not performed.
		PCB-1248		Analysis of constituent not required and not performed.
		PCB-1254		Analysis of constituent not required and not performed.
		PCB-1260		Analysis of constituent not required and not performed.
		PCB-1268		Analysis of constituent not required and not performed.
		Gross alpha	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.566. Rad error is 0.528.
		Gross beta		TPU is 2.93. 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 0.349. Rad error is 0.111.
		Strontium-90	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.258. Rad error is 0.176.
		Technetium-99	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 10.5. Rad error is 10.5.
		Thorium-230	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.0994. Rad error is 0.06.
		Tritium	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 605. Rad error is 605.

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

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

Permit Numbers: 073-00014 and 073-00015 For Official Use Only

GROUNDWATER
WRITTEN COMMENTS

Monitoring Point	Facility Sample ID	Constituent	Flag	Description
8000-5202 MW221	MW221SG3-13	Nitrate & Nitrite	*	Duplicate analysis not within control limits.
		Silver	*N	Duplicate analysis not within control limits. Sample spike recovery not within control limits.
		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	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.484. Rad error is 0.448.
		Gross beta		TPU is 1.3. Rad error is 1.09.
		Iodine-131		Analysis of constituent not required and not performed.
		Radium-226	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.344. Rad error is 0.189.
		Strontium-90	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.278. Rad error is 0.185.
		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 0.0916. Rad error is 0.0468.
		Tritium	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 600. Rad error is 600.

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

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

Permit Numbers: 073-00014 and 073-00015 For Official Use Only

GROUNDWATER
WRITTEN COMMENTS

Monitoring Point	Facility Sample ID	Constituent	Flag	Description
8000-5242 MW222	MW222SG3-13	Nitrate & Nitrite	*	Duplicate analysis not within control limits.
		Silver	*N	Duplicate analysis not within control limits. Sample spike recovery not within control limits.
		Acrolein	X	Other specific flags and footnotes may be required to properly define the results.
		Acrylonitrile	X	Other specific flags and footnotes may be required to properly define the results.
		PCB, Total		Analysis of constituent not required and not performed.
		PCB-1016		Analysis of constituent not required and not performed.
		PCB-1221		Analysis of constituent not required and not performed.
		PCB-1232		Analysis of constituent not required and not performed.
		PCB-1242		Analysis of constituent not required and not performed.
		PCB-1248		Analysis of constituent not required and not performed.
		PCB-1254		Analysis of constituent not required and not performed.
		PCB-1260		Analysis of constituent not required and not performed.
		PCB-1268		Analysis of constituent not required and not performed.
		Gross alpha	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.245. Rad error is 0.232.
		Gross beta	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.92. Rad error is 0.784.
		Iodine-131		Analysis of constituent not required and not performed.
		Radium-226	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.312. Rad error is 0.122.
		Strontium-90	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.112. Rad error is 0.0818.
		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 0.0849. Rad error is 0.00338.
		Tritium	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 593. Rad error is 592.

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

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

Permit Numbers: 073-00014 and 073-00015 For Official Use Only

GROUNDWATER
WRITTEN COMMENTS

Monitoring Point	Facility Sample ID	Constituent	Flag	Description
8000-5243 MW223	MW223SG3-13	Nitrate & Nitrite	*	Duplicate analysis not within control limits.
		Silver	*N	Duplicate analysis not within control limits. Sample spike recovery not within control limits.
		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	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.0139. Rad error is 0.013.
		Gross beta		TPU is 1.13. Rad error is 0.957.
		Iodine-131		Analysis of constituent not required and not performed.
		Radium-226	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.335. Rad error is 0.00805.
		Strontium-90	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.0667. Rad error is 0.0478.
		Technetium-99	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 10.2. Rad error is 10.2.
		Thorium-230	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.0991. Rad error is 0.059.
		Tritium	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 588. Rad error is 588.

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

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

Permit Numbers: 073-00014 and 073-00015 For Official Use Only

GROUNDWATER
WRITTEN COMMENTS

Monitoring Point	Facility Sample ID	Constituent	Flag	Description
8000-5244 MW224	MW224SG3-13	Silver	*N	Duplicate analysis not within control limits. Sample spike recovery not within control limits.
		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	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.556. Rad error is 0.519.
		Gross beta	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.549. Rad error is 0.475.
		Iodine-131		Analysis of constituent not required and not performed.
		Radium-226	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.35. Rad error is 0.199.
		Strontium-90	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.189. Rad error is 0.129.
		Technetium-99	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 10.4. Rad error is 10.4.
		Thorium-230	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.095. Rad error is 0.0531.
		Tritium	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 602. Rad error is 601.
8004-4820 MW369	MW369UG3-13	Cobalt	X	Other specific flags and footnotes may be required to properly define the results.
		Manganese	NX	Sample spike recovery not within control limits. Other specific flags and footnotes may be required to properly define the results.
		Nickel	X	Other specific flags and footnotes may be required to properly define the results.
		Gross alpha	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 1.53. Rad error is 1.39.
		Gross beta		TPU is 2.91. Rad error is 2.61.
		Iodine-131		Analysis of constituent not required and not performed.
		Radium-226	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.466. Rad error is 0.334.
		Strontium-90	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.0187. Rad error is 0.0131.
		Technetium-99		TPU is 11.4. Rad error is 11.4.
		Thorium-230	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.106. Rad error is 0.0679.
		Tritium	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 607. Rad error is 606.

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

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

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

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

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Monitoring Point	Facility Sample ID	Constituent	Flag	Description
8004-4809 MW384	MW384SG3-13	Silver	*N	Duplicate analysis not within control limits. Sample spike recovery not within control limits.
		Vinyl acetate	X	Other specific flags and footnotes may be required to properly define the results.
		Acetone	X	Other specific flags and footnotes may be required to properly define the results.
		Benzene	X	Other specific flags and footnotes may be required to properly define the results.
		Chlorobenzene	X	Other specific flags and footnotes may be required to properly define the results.
		Xylenes	X	Other specific flags and footnotes may be required to properly define the results.
		Styrene	X	Other specific flags and footnotes may be required to properly define the results.
		Toluene	X	Other specific flags and footnotes may be required to properly define the results.
		Chlorobromomethane	X	Other specific flags and footnotes may be required to properly define the results.
		Bromodichloromethane	X	Other specific flags and footnotes may be required to properly define the results.
		Tribromomethane	X	Other specific flags and footnotes may be required to properly define the results.
		Methyl bromide	X	Other specific flags and footnotes may be required to properly define the results.
		Methyl Ethyl Ketone	X	Other specific flags and footnotes may be required to properly define the results.
		trans-1,4-Dichloro-2-butene	X	Other specific flags and footnotes may be required to properly define the results.
		Carbon disulfide	X	Other specific flags and footnotes may be required to properly define the results.
		Chloroethane	X	Other specific flags and footnotes may be required to properly define the results.
		Chloroform	X	Other specific flags and footnotes may be required to properly define the results.
		Methyl chloride	X	Other specific flags and footnotes may be required to properly define the results.
		cis-1,2-Dichloroethene	X	Other specific flags and footnotes may be required to properly define the results.
		Methylene bromide	X	Other specific flags and footnotes may be required to properly define the results.
		1,1-Dichloroethane	X	Other specific flags and footnotes may be required to properly define the results.
		1,2-Dichloroethane	X	Other specific flags and footnotes may be required to properly define the results.
		1,1-Dichloroethylene	X	Other specific flags and footnotes may be required to properly define the results.
		1,2-Dibromoethane	X	Other specific flags and footnotes may be required to properly define the results.
		1,1,2,2-Tetrachloroethane	X	Other specific flags and footnotes may be required to properly define the results.
		1,1,1-Trichloroethane	X	Other specific flags and footnotes may be required to properly define the results.

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Monitoring Point	Facility Sample ID	Constituent	Flag	Description
8004-4809 MW384	MW384SG3-13	1,1,2-Trichloroethane	X	Other specific flags and footnotes may be required to properly define the results.
		1,1,1,2-Tetrachloroethane	X	Other specific flags and footnotes may be required to properly define the results.
		Vinyl chloride	X	Other specific flags and footnotes may be required to properly define the results.
		Tetrachloroethene	X	Other specific flags and footnotes may be required to properly define the results.
		Trichloroethene	X	Other specific flags and footnotes may be required to properly define the results.
		Ethylbenzene	X	Other specific flags and footnotes may be required to properly define the results.
		2-Hexanone	X	Other specific flags and footnotes may be required to properly define the results.
		Iodomethane	X	Other specific flags and footnotes may be required to properly define the results.
		Dibromochloromethane	X	Other specific flags and footnotes may be required to properly define the results.
		Carbon tetrachloride	X	Other specific flags and footnotes may be required to properly define the results.
		Dichloromethane	X	Other specific flags and footnotes may be required to properly define the results.
		Methyl Isobutyl Ketone	X	Other specific flags and footnotes may be required to properly define the results.
		1,2-Dibromo-3-chloropropane	X	Other specific flags and footnotes may be required to properly define the results.
		1,2-Dichloropropane	X	Other specific flags and footnotes may be required to properly define the results.
		trans-1,3-Dichloropropene	X	Other specific flags and footnotes may be required to properly define the results.
		cis-1,3-Dichloropropene	X	Other specific flags and footnotes may be required to properly define the results.
		trans-1,2-Dichloroethene	X	Other specific flags and footnotes may be required to properly define the results.
		Trichlorofluoromethane	X	Other specific flags and footnotes may be required to properly define the results.
		1,2,3-Trichloropropane	X	Other specific flags and footnotes may be required to properly define the results.
		1,2-Dichlorobenzene	X	Other specific flags and footnotes may be required to properly define the results.
		1,4-Dichlorobenzene	X	Other specific flags and footnotes may be required to properly define the results.
		PCB, Total		Analysis of constituent not required and not performed.
		PCB-1016		Analysis of constituent not required and not performed.
		PCB-1221		Analysis of constituent not required and not performed.
		PCB-1232		Analysis of constituent not required and not performed.
		PCB-1242		Analysis of constituent not required and not performed.
		PCB-1248		Analysis of constituent not required and not performed.
		PCB-1254		Analysis of constituent not required and not performed.

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Monitoring Point	Facility Sample ID	Constituent	Flag	Description
8004-4809 MW384	MW384SG3-13	PCB-1260		Analysis of constituent not required and not performed.
		PCB-1268		Analysis of constituent not required and not performed.
		Gross alpha		TPU is 2.17. Rad error is 1.57.
		Gross beta		TPU is 19.6. Rad error is 8.97.
		Iodine-131		Analysis of constituent not required and not performed.
		Radium-226	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.377. Rad error is 0.244.
		Strontium-90	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.041. Rad error is 0.0287.
		Technetium-99		TPU is 16.7. Rad error is 16.
		Thorium-230	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.108. Rad error is 0.0704.
		Tritium	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 580. Rad error is 579.
		Iodide	*N	Duplicate analysis not within control limits. Sample spike recovery not within control limits.

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Monitoring Point	Facility Sample ID	Constituent	Flag	Description
8004-4810 MW385	MW385SG3-13	Silver	*N	Duplicate analysis not within control limits. Sample spike recovery not within control limits.
		Acrolein	X	Other specific flags and footnotes may be required to properly define the results.
		Acrylonitrile	X	Other specific flags and footnotes may be required to properly define the results.
		1,2-Dibromo-3-chloropropane	X	Other specific flags and footnotes may be required to properly define the results.
		PCB, Total		Analysis of constituent not required and not performed.
		PCB-1016		Analysis of constituent not required and not performed.
		PCB-1221		Analysis of constituent not required and not performed.
		PCB-1232		Analysis of constituent not required and not performed.
		PCB-1242		Analysis of constituent not required and not performed.
		PCB-1248		Analysis of constituent not required and not performed.
		PCB-1254		Analysis of constituent not required and not performed.
		PCB-1260		Analysis of constituent not required and not performed.
		PCB-1268		Analysis of constituent not required and not performed.
		Gross alpha	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 1.06. Rad error is 0.833.
		Gross beta		TPU is 14.4. Rad error is 7.42.
		Iodine-131		Analysis of constituent not required and not performed.
		Radium-226	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.346. Rad error is 0.193.
		Strontium-90	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.0415. Rad error is 0.0291.
		Technetium-99		TPU is 16. Rad error is 15.4.
		Thorium-230	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.104. Rad error is 0.0669.
		Tritium	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 580. Rad error is 580.
		Iodide	*N	Duplicate analysis not within control limits. Sample spike recovery not within control limits.

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Monitoring Point	Facility Sample ID	Constituent	Flag	Description
8004-4804 MW386	MW386SG3-13	Silver	*N	Duplicate analysis not within control limits. Sample spike recovery not within control limits.
		1,2-Dibromo-3-chloropropane	X	Other specific flags and footnotes may be required to properly define the results.
		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	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 1.27. Rad error is 1.18.
		Gross beta	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.161. Rad error is 0.141.
		Iodine-131		Analysis of constituent not required and not performed.
		Radium-226	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.343. Rad error is 0.187.
		Strontium-90	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.232. Rad error is 0.156.
		Technetium-99	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 11.5. Rad error is 11.5.
		Thorium-230	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.106. Rad error is 0.0685.
		Tritium	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 606. Rad error is 606.
		Iodide	*N	Duplicate analysis not within control limits. Sample spike recovery not within control limits.

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Monitoring Point	Facility Sample ID	Constituent	Flag	Description
8004-4815 MW387	MW387SG3-13	Silver	*N	Duplicate analysis not within control limits. Sample spike recovery not within control limits.
		1,2-Dibromo-3-chloropropane	X	Other specific flags and footnotes may be required to properly define the results.
		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	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 1.74. Rad error is 1.29.
		Gross beta		TPU is 18.6. Rad error is 8.78.
		Iodine-131		Analysis of constituent not required and not performed.
		Radium-226	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.348. Rad error is 0.0952.
		Strontium-90	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.0391. Rad error is 0.0274.
		Technetium-99		TPU is 19. Rad error is 18.
		Thorium-230	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.111. Rad error is 0.0785.
		Tritium	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 583. Rad error is 582.

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Monitoring Point	Facility Sample ID	Constituent	Flag	Description
8004-4816 MW388	MW388SG3-13	Silver	*N	Duplicate analysis not within control limits. Sample spike recovery not within control limits.
		1,2-Dibromo-3-chloropropane	X	Other specific flags and footnotes may be required to properly define the results.
		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		TPU is 3.72. Rad error is 2.8.
		Gross beta		TPU is 11.4. Rad error is 6.43.
		Iodine-131		Analysis of constituent not required and not performed.
		Radium-226	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.44. Rad error is 0.325.
		Strontium-90	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.235. Rad error is 0.159.
		Technetium-99		TPU is 15.2. Rad error is 14.9.
		Thorium-230	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.104. Rad error is 0.0646.
		Tritium	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 592. Rad error is 592.

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Monitoring Point	Facility Sample ID	Constituent	Flag	Description
8004-4812 MW389		Bromide		During sampling, the well was dry; therefore, no sample was collected.
		Chloride		During sampling, the well was dry; therefore, no sample was collected.
		Fluoride		During sampling, the well was dry; therefore, no sample was collected.
		Nitrate & Nitrite		During sampling, the well was dry; therefore, no sample was collected.
		Sulfate		During sampling, the well was dry; therefore, no sample was collected.
		Barometric Pressure Reading		During sampling, the well was dry; therefore, no sample was collected.
		Specific Conductance		During sampling, the well was dry; therefore, no sample was collected.
		Static Water Level Elevation		During sampling, the well was dry; therefore, no sample was collected.
		Dissolved Oxygen		During sampling, the well was dry; therefore, no sample was collected.
		Total Dissolved Solids		During sampling, the well was dry; therefore, no sample was collected.
		pH		During sampling, the well was dry; therefore, no sample was collected.
		Eh		During sampling, the well was dry; therefore, no sample was collected.
		Temperature		During sampling, the well was dry; therefore, no sample was collected.
		Aluminum		During sampling, the well was dry; therefore, no sample was collected.
		Antimony		During sampling, the well was dry; therefore, no sample was collected.
		Arsenic		During sampling, the well was dry; therefore, no sample was collected.
		Barium		During sampling, the well was dry; therefore, no sample was collected.
		Beryllium		During sampling, the well was dry; therefore, no sample was collected.
		Boron		During sampling, the well was dry; therefore, no sample was collected.
		Cadmium		During sampling, the well was dry; therefore, no sample was collected.
		Calcium		During sampling, the well was dry; therefore, no sample was collected.
		Chromium		During sampling, the well was dry; therefore, no sample was collected.
		Cobalt		During sampling, the well was dry; therefore, no sample was collected.
		Copper		During sampling, the well was dry; therefore, no sample was collected.
		Iron		During sampling, the well was dry; therefore, no sample was collected.
		Lead		During sampling, the well was dry; therefore, no sample was collected.

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WRITTEN COMMENTS

Monitoring Point	Facility Sample ID	Constituent	Flag	Description
8004-4812 MW389		Magnesium		During sampling, the well was dry; therefore, no sample was collected.
		Manganese		During sampling, the well was dry; therefore, no sample was collected.
		Mercury		During sampling, the well was dry; therefore, no sample was collected.
		Molybdenum		During sampling, the well was dry; therefore, no sample was collected.
		Nickel		During sampling, the well was dry; therefore, no sample was collected.
		Potassium		During sampling, the well was dry; therefore, no sample was collected.
		Rhodium		During sampling, the well was dry; therefore, no sample was collected.
		Selenium		During sampling, the well was dry; therefore, no sample was collected.
		Silver		During sampling, the well was dry; therefore, no sample was collected.
		Sodium		During sampling, the well was dry; therefore, no sample was collected.
		Tantalum		During sampling, the well was dry; therefore, no sample was collected.
		Thallium		During sampling, the well was dry; therefore, no sample was collected.
		Uranium		During sampling, the well was dry; therefore, no sample was collected.
		Vanadium		During sampling, the well was dry; therefore, no sample was collected.
		Zinc		During sampling, the well was dry; therefore, no sample was collected.
		Vinyl acetate		During sampling, the well was dry; therefore, no sample was collected.
		Acetone		During sampling, the well was dry; therefore, no sample was collected.
		Acrolein		During sampling, the well was dry; therefore, no sample was collected.
		Acrylonitrile		During sampling, the well was dry; therefore, no sample was collected.
		Benzene		During sampling, the well was dry; therefore, no sample was collected.
		Chlorobenzene		During sampling, the well was dry; therefore, no sample was collected.
		Xylenes		During sampling, the well was dry; therefore, no sample was collected.
		Styrene		During sampling, the well was dry; therefore, no sample was collected.
		Toluene		During sampling, the well was dry; therefore, no sample was collected.
		Chlorobromomethane		During sampling, the well was dry; therefore, no sample was collected.
		Bromodichloromethane		During sampling, the well was dry; therefore, no sample was collected.

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

Permit Numbers: 073-00014 and 073-00015 For Official Use Only

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Monitoring Point	Facility Sample ID	Constituent	Flag	Description
8004-4812 MW389		Tribromomethane		During sampling, the well was dry; therefore, no sample was collected.
		Methyl bromide		During sampling, the well was dry; therefore, no sample was collected.
		Methyl Ethyl Ketone		During sampling, the well was dry; therefore, no sample was collected.
		trans-1,4-Dichloro-2-butene		During sampling, the well was dry; therefore, no sample was collected.
		Carbon disulfide		During sampling, the well was dry; therefore, no sample was collected.
		Chloroethane		During sampling, the well was dry; therefore, no sample was collected.
		Chloroform		During sampling, the well was dry; therefore, no sample was collected.
		Methyl chloride		During sampling, the well was dry; therefore, no sample was collected.
		cis-1,2-Dichloroethene		During sampling, the well was dry; therefore, no sample was collected.
		Methylene bromide		During sampling, the well was dry; therefore, no sample was collected.
		1,1-Dichloroethane		During sampling, the well was dry; therefore, no sample was collected.
		1,2-Dichloroethane		During sampling, the well was dry; therefore, no sample was collected.
		1,1-Dichloroethylene		During sampling, the well was dry; therefore, no sample was collected.
		1,2-Dibromoethane		During sampling, the well was dry; therefore, no sample was collected.
		1,1,2,2-Tetrachloroethane		During sampling, the well was dry; therefore, no sample was collected.
		1,1,1-Trichloroethane		During sampling, the well was dry; therefore, no sample was collected.
		1,1,2-Trichloroethane		During sampling, the well was dry; therefore, no sample was collected.
		1,1,1,2-Tetrachloroethane		During sampling, the well was dry; therefore, no sample was collected.
		Vinyl chloride		During sampling, the well was dry; therefore, no sample was collected.
		Tetrachloroethene		During sampling, the well was dry; therefore, no sample was collected.
		Trichloroethene		During sampling, the well was dry; therefore, no sample was collected.
		Ethylbenzene		During sampling, the well was dry; therefore, no sample was collected.
		2-Hexanone		During sampling, the well was dry; therefore, no sample was collected.
		Iodomethane		During sampling, the well was dry; therefore, no sample was collected.
		Dibromochloromethane		During sampling, the well was dry; therefore, no sample was collected.
		Carbon tetrachloride		During sampling, the well was dry; therefore, no sample was collected.

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

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Monitoring Point	Facility Sample ID	Constituent	Flag	Description
8004-4812 MW389		Dichloromethane		During sampling, the well was dry; therefore, no sample was collected.
		Methyl Isobutyl Ketone		During sampling, the well was dry; therefore, no sample was collected.
		1,2-Dibromo-3-chloropropane		During sampling, the well was dry; therefore, no sample was collected.
		1,2-Dichloropropane		During sampling, the well was dry; therefore, no sample was collected.
		trans-1,3-Dichloropropene		During sampling, the well was dry; therefore, no sample was collected.
		cis-1,3-Dichloropropene		During sampling, the well was dry; therefore, no sample was collected.
		trans-1,2-Dichloroethene		During sampling, the well was dry; therefore, no sample was collected.
		Trichlorofluoromethane		During sampling, the well was dry; therefore, no sample was collected.
		1,2,3-Trichloropropane		During sampling, the well was dry; therefore, no sample was collected.
		1,2-Dichlorobenzene		During sampling, the well was dry; therefore, no sample was collected.
		1,4-Dichlorobenzene		During sampling, the well was dry; therefore, no sample was collected.
		PCB, Total		During sampling, the well was dry; therefore, no sample was collected.
		PCB-1016		During sampling, the well was dry; therefore, no sample was collected.
		PCB-1221		During sampling, the well was dry; therefore, no sample was collected.
		PCB-1232		During sampling, the well was dry; therefore, no sample was collected.
		PCB-1242		During sampling, the well was dry; therefore, no sample was collected.
		PCB-1248		During sampling, the well was dry; therefore, no sample was collected.
		PCB-1254		During sampling, the well was dry; therefore, no sample was collected.
		PCB-1260		During sampling, the well was dry; therefore, no sample was collected.
		PCB-1268		During sampling, the well was dry; therefore, no sample was collected.
		Gross alpha		During sampling, the well was dry; therefore, no sample was collected.
		Gross beta		During sampling, the well was dry; therefore, no sample was collected.
		Iodine-131		During sampling, the well was dry; therefore, no sample was collected.
		Radium-226		During sampling, the well was dry; therefore, no sample was collected.
		Strontium-90		During sampling, the well was dry; therefore, no sample was collected.
		Technetium-99		During sampling, the well was dry; therefore, no sample was collected.

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Monitoring Point	Facility Sample ID	Constituent	Flag	Description
8004-4812 MW389		Thorium-230		During sampling, the well was dry; therefore, no sample was collected.
		Tritium		During sampling, the well was dry; therefore, no sample was collected.
		Chemical Oxygen Demand		During sampling, the well was dry; therefore, no sample was collected.
		Cyanide		During sampling, the well was dry; therefore, no sample was collected.
		Iodide		During sampling, the well was dry; therefore, no sample was collected.
		Total Organic Carbon		During sampling, the well was dry; therefore, no sample was collected.
		Total Organic Halides		During sampling, the well was dry; therefore, no sample was collected.

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Monitoring Point	Facility Sample ID	Constituent	Flag	Description
8004-4811 MW390		Bromide		During sampling, the well was dry; therefore, no sample was collected.
		Chloride		During sampling, the well was dry; therefore, no sample was collected.
		Fluoride		During sampling, the well was dry; therefore, no sample was collected.
		Nitrate & Nitrite		During sampling, the well was dry; therefore, no sample was collected.
		Sulfate		During sampling, the well was dry; therefore, no sample was collected.
		Barometric Pressure Reading		During sampling, the well was dry; therefore, no sample was collected.
		Specific Conductance		During sampling, the well was dry; therefore, no sample was collected.
		Static Water Level Elevation		During sampling, the well was dry; therefore, no sample was collected.
		Dissolved Oxygen		During sampling, the well was dry; therefore, no sample was collected.
		Total Dissolved Solids		During sampling, the well was dry; therefore, no sample was collected.
		pH		During sampling, the well was dry; therefore, no sample was collected.
		Eh		During sampling, the well was dry; therefore, no sample was collected.
		Temperature		During sampling, the well was dry; therefore, no sample was collected.
		Aluminum		During sampling, the well was dry; therefore, no sample was collected.
		Antimony		During sampling, the well was dry; therefore, no sample was collected.
		Arsenic		During sampling, the well was dry; therefore, no sample was collected.
		Barium		During sampling, the well was dry; therefore, no sample was collected.
		Beryllium		During sampling, the well was dry; therefore, no sample was collected.
		Boron		During sampling, the well was dry; therefore, no sample was collected.
		Cadmium		During sampling, the well was dry; therefore, no sample was collected.
		Calcium		During sampling, the well was dry; therefore, no sample was collected.
		Chromium		During sampling, the well was dry; therefore, no sample was collected.
		Cobalt		During sampling, the well was dry; therefore, no sample was collected.
		Copper		During sampling, the well was dry; therefore, no sample was collected.
		Iron		During sampling, the well was dry; therefore, no sample was collected.
		Lead		During sampling, the well was dry; therefore, no sample was collected.

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Monitoring Point	Facility Sample ID	Constituent	Flag	Description
8004-4811 MW390		Magnesium		During sampling, the well was dry; therefore, no sample was collected.
		Manganese		During sampling, the well was dry; therefore, no sample was collected.
		Mercury		During sampling, the well was dry; therefore, no sample was collected.
		Molybdenum		During sampling, the well was dry; therefore, no sample was collected.
		Nickel		During sampling, the well was dry; therefore, no sample was collected.
		Potassium		During sampling, the well was dry; therefore, no sample was collected.
		Rhodium		During sampling, the well was dry; therefore, no sample was collected.
		Selenium		During sampling, the well was dry; therefore, no sample was collected.
		Silver		During sampling, the well was dry; therefore, no sample was collected.
		Sodium		During sampling, the well was dry; therefore, no sample was collected.
		Tantalum		During sampling, the well was dry; therefore, no sample was collected.
		Thallium		During sampling, the well was dry; therefore, no sample was collected.
		Uranium		During sampling, the well was dry; therefore, no sample was collected.
		Vanadium		During sampling, the well was dry; therefore, no sample was collected.
		Zinc		During sampling, the well was dry; therefore, no sample was collected.
		Vinyl acetate		During sampling, the well was dry; therefore, no sample was collected.
		Acetone		During sampling, the well was dry; therefore, no sample was collected.
		Acrolein		During sampling, the well was dry; therefore, no sample was collected.
		Acrylonitrile		During sampling, the well was dry; therefore, no sample was collected.
		Benzene		During sampling, the well was dry; therefore, no sample was collected.
		Chlorobenzene		During sampling, the well was dry; therefore, no sample was collected.
		Xylenes		During sampling, the well was dry; therefore, no sample was collected.
		Styrene		During sampling, the well was dry; therefore, no sample was collected.
		Toluene		During sampling, the well was dry; therefore, no sample was collected.
		Chlorobromomethane		During sampling, the well was dry; therefore, no sample was collected.
		Bromodichloromethane		During sampling, the well was dry; therefore, no sample was collected.

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Monitoring Point	Facility Sample ID	Constituent	Flag	Description
8004-4811 MW390		Tribromomethane		During sampling, the well was dry; therefore, no sample was collected.
		Methyl bromide		During sampling, the well was dry; therefore, no sample was collected.
		Methyl Ethyl Ketone		During sampling, the well was dry; therefore, no sample was collected.
		trans-1,4-Dichloro-2-butene		During sampling, the well was dry; therefore, no sample was collected.
		Carbon disulfide		During sampling, the well was dry; therefore, no sample was collected.
		Chloroethane		During sampling, the well was dry; therefore, no sample was collected.
		Chloroform		During sampling, the well was dry; therefore, no sample was collected.
		Methyl chloride		During sampling, the well was dry; therefore, no sample was collected.
		cis-1,2-Dichloroethene		During sampling, the well was dry; therefore, no sample was collected.
		Methylene bromide		During sampling, the well was dry; therefore, no sample was collected.
		1,1-Dichloroethane		During sampling, the well was dry; therefore, no sample was collected.
		1,2-Dichloroethane		During sampling, the well was dry; therefore, no sample was collected.
		1,1-Dichloroethylene		During sampling, the well was dry; therefore, no sample was collected.
		1,2-Dibromoethane		During sampling, the well was dry; therefore, no sample was collected.
		1,1,2,2-Tetrachloroethane		During sampling, the well was dry; therefore, no sample was collected.
		1,1,1-Trichloroethane		During sampling, the well was dry; therefore, no sample was collected.
		1,1,2-Trichloroethane		During sampling, the well was dry; therefore, no sample was collected.
		1,1,1,2-Tetrachloroethane		During sampling, the well was dry; therefore, no sample was collected.
		Vinyl chloride		During sampling, the well was dry; therefore, no sample was collected.
		Tetrachloroethene		During sampling, the well was dry; therefore, no sample was collected.
		Trichloroethene		During sampling, the well was dry; therefore, no sample was collected.
		Ethylbenzene		During sampling, the well was dry; therefore, no sample was collected.
		2-Hexanone		During sampling, the well was dry; therefore, no sample was collected.
		Iodomethane		During sampling, the well was dry; therefore, no sample was collected.
		Dibromochloromethane		During sampling, the well was dry; therefore, no sample was collected.
		Carbon tetrachloride		During sampling, the well was dry; therefore, no sample was collected.

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Monitoring Point	Facility Sample ID	Constituent	Flag	Description
8004-4811 MW390		Dichloromethane		During sampling, the well was dry; therefore, no sample was collected.
		Methyl Isobutyl Ketone		During sampling, the well was dry; therefore, no sample was collected.
		1,2-Dibromo-3-chloropropane		During sampling, the well was dry; therefore, no sample was collected.
		1,2-Dichloropropane		During sampling, the well was dry; therefore, no sample was collected.
		trans-1,3-Dichloropropene		During sampling, the well was dry; therefore, no sample was collected.
		cis-1,3-Dichloropropene		During sampling, the well was dry; therefore, no sample was collected.
		trans-1,2-Dichloroethene		During sampling, the well was dry; therefore, no sample was collected.
		Trichlorofluoromethane		During sampling, the well was dry; therefore, no sample was collected.
		1,2,3-Trichloropropane		During sampling, the well was dry; therefore, no sample was collected.
		1,2-Dichlorobenzene		During sampling, the well was dry; therefore, no sample was collected.
		1,4-Dichlorobenzene		During sampling, the well was dry; therefore, no sample was collected.
		PCB, Total		During sampling, the well was dry; therefore, no sample was collected.
		PCB-1016		During sampling, the well was dry; therefore, no sample was collected.
		PCB-1221		During sampling, the well was dry; therefore, no sample was collected.
		PCB-1232		During sampling, the well was dry; therefore, no sample was collected.
		PCB-1242		During sampling, the well was dry; therefore, no sample was collected.
		PCB-1248		During sampling, the well was dry; therefore, no sample was collected.
		PCB-1254		During sampling, the well was dry; therefore, no sample was collected.
		PCB-1260		During sampling, the well was dry; therefore, no sample was collected.
		PCB-1268		During sampling, the well was dry; therefore, no sample was collected.
		Gross alpha		During sampling, the well was dry; therefore, no sample was collected.
		Gross beta		During sampling, the well was dry; therefore, no sample was collected.
		Iodine-131		During sampling, the well was dry; therefore, no sample was collected.
		Radium-226		During sampling, the well was dry; therefore, no sample was collected.
		Strontium-90		During sampling, the well was dry; therefore, no sample was collected.
		Technetium-99		During sampling, the well was dry; therefore, no sample was collected.

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Monitoring Point	Facility Sample ID	Constituent	Flag	Description
8004-4811 MW390		Thorium-230		During sampling, the well was dry; therefore, no sample was collected.
		Tritium		During sampling, the well was dry; therefore, no sample was collected.
		Chemical Oxygen Demand		During sampling, the well was dry; therefore, no sample was collected.
		Cyanide		During sampling, the well was dry; therefore, no sample was collected.
		Iodide		During sampling, the well was dry; therefore, no sample was collected.
		Total Organic Carbon		During sampling, the well was dry; therefore, no sample was collected.
		Total Organic Halides		During sampling, the well was dry; therefore, no sample was collected.
8004-4805 MW391	MW391SG3-13	Silver	*N	Duplicate analysis not within control limits. Sample spike recovery not within control limits.
		1,2-Dibromo-3-chloropropane	X	Other specific flags and footnotes may be required to properly define the results.
		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	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 1.03. Rad error is 0.943.
		Gross beta		TPU is 1.24. Rad error is 1.04.
		Iodine-131		Analysis of constituent not required and not performed.
		Radium-226	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.347. Rad error is 0.193.
		Strontium-90	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.167. Rad error is 0.114.
		Technetium-99	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 10.5. Rad error is 10.5.
		Thorium-230	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.117. Rad error is 0.0842.
		Tritium	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 599. Rad error is 599.

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Monitoring Point	Facility Sample ID	Constituent	Flag	Description
8004-4806 MW392	MW392SG3-13	Silver	*N	Duplicate analysis not within control limits. Sample spike recovery not within control limits.
		1,2-Dibromo-3-chloropropane	X	Other specific flags and footnotes may be required to properly define the results.
		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	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 1.14. Rad error is 1.04.
		Gross beta	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.814. Rad error is 0.697.
		Iodine-131		Analysis of constituent not required and not performed.
		Radium-226	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.361. Rad error is 0.219.
		Strontium-90	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.162. Rad error is 0.111.
		Technetium-99	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 9.92. Rad error is 9.92.
		Thorium-230	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.0946. Rad error is 0.0524.
		Tritium	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 589. Rad error is 588.

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Monitoring Point	Facility Sample ID	Constituent	Flag	Description
8004-4807 MW393	MW393SG3-13	Nitrate & Nitrite	*	Duplicate analysis not within control limits.
		Silver	*N	Duplicate analysis not within control limits. Sample spike recovery not within control limits.
		Acrolein	X	Other specific flags and footnotes may be required to properly define the results.
		Acrylonitrile	X	Other specific flags and footnotes may be required to properly define the results.
		PCB, Total		Analysis of constituent not required and not performed.
		PCB-1016		Analysis of constituent not required and not performed.
		PCB-1221		Analysis of constituent not required and not performed.
		PCB-1232		Analysis of constituent not required and not performed.
		PCB-1242		Analysis of constituent not required and not performed.
		PCB-1248		Analysis of constituent not required and not performed.
		PCB-1254		Analysis of constituent not required and not performed.
		PCB-1260		Analysis of constituent not required and not performed.
		PCB-1268		Analysis of constituent not required and not performed.
		Gross alpha	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 1.1. Rad error is 1.01.
		Gross beta	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.941. Rad error is 0.803.
		Iodine-131		Analysis of constituent not required and not performed.
		Radium-226	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.315. Rad error is 0.0243.
		Strontium-90	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.132. Rad error is 0.0906.
		Technetium-99	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 10.3. Rad error is 10.3.
		Thorium-230	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.1. Rad error is 0.0596.
		Tritium	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 585. Rad error is 584.

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Monitoring Point	Facility Sample ID	Constituent	Flag	Description
8004-4802 MW394	MW394SG3-13	Silver	*N	Duplicate analysis not within control limits. Sample spike recovery not within control limits.
		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	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.48. Rad error is 0.442.
		Gross beta		TPU is 1.81. Rad error is 1.48.
		Iodine-131		Analysis of constituent not required and not performed.
		Radium-226	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.341. Rad error is 0.183.
		Strontium-90	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.166. Rad error is 0.122.
		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 0.103. Rad error is 0.066.
		Tritium	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 579. Rad error is 577.

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Monitoring Point	Facility Sample ID	Constituent	Flag	Description
8004-4801 MW395	MW395SG3-13	Silver	*N	Duplicate analysis not within control limits. Sample spike recovery not within control limits.
		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	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.184. Rad error is 0.172.
		Gross beta		TPU is 1.31. Rad error is 1.09.
		Iodine-131		Analysis of constituent not required and not performed.
		Radium-226	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.368. Rad error is 0.229.
		Strontium-90	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.00914. Rad error is 0.00644.
		Technetium-99	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 10.3. Rad error is 10.3.
		Thorium-230	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.0928. Rad error is 0.0492.
		Tritium	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 581. Rad error is 581.

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

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WRITTEN COMMENTS

Monitoring Point	Facility Sample ID	Constituent	Flag	Description
8004-4803 MW396	MW396SG3-13	Silver	*N	Duplicate analysis not within control limits. Sample spike recovery not within control limits.
		1,2-Dibromo-3-chloropropane	X	Other specific flags and footnotes may be required to properly define the results.
		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	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 3.74. Rad error is 3.3.
		Gross beta	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.367. Rad error is 0.32.
		Iodine-131		Analysis of constituent not required and not performed.
		Radium-226	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.398. Rad error is 0.00804.
		Strontium-90	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.106. Rad error is 0.0731.
		Technetium-99	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 10.1. Rad error is 10.1.
		Thorium-230	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.115. Rad error is 0.0527.
		Tritium	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 586. Rad error is 586.
		Iodide	*N	Duplicate analysis not within control limits. Sample spike recovery not within control limits.

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Monitoring Point	Facility Sample ID	Constituent	Flag	Description
8004-4817 MW397	MW397SG3-13	Nitrate & Nitrite	*	Duplicate analysis not within control limits.
		Silver	*N	Duplicate analysis not within control limits. Sample spike recovery not within control limits.
		Vinyl acetate	X	Other specific flags and footnotes may be required to properly define the results.
		Acetone	X	Other specific flags and footnotes may be required to properly define the results.
		Acrolein	X	Other specific flags and footnotes may be required to properly define the results.
		Acrylonitrile	X	Other specific flags and footnotes may be required to properly define the results.
		Benzene	X	Other specific flags and footnotes may be required to properly define the results.
		Chlorobenzene	X	Other specific flags and footnotes may be required to properly define the results.
		Xylenes	X	Other specific flags and footnotes may be required to properly define the results.
		Styrene	X	Other specific flags and footnotes may be required to properly define the results.
		Toluene	X	Other specific flags and footnotes may be required to properly define the results.
		Chlorobromomethane	X	Other specific flags and footnotes may be required to properly define the results.
		Bromodichloromethane	X	Other specific flags and footnotes may be required to properly define the results.
		Tribromomethane	X	Other specific flags and footnotes may be required to properly define the results.
		Methyl bromide	X	Other specific flags and footnotes may be required to properly define the results.
		Methyl Ethyl Ketone	X	Other specific flags and footnotes may be required to properly define the results.
		trans-1,4-Dichloro-2-butene	X	Other specific flags and footnotes may be required to properly define the results.
		Carbon disulfide	X	Other specific flags and footnotes may be required to properly define the results.
		Chloroethane	X	Other specific flags and footnotes may be required to properly define the results.
		Chloroform	X	Other specific flags and footnotes may be required to properly define the results.
		Methyl chloride	X	Other specific flags and footnotes may be required to properly define the results.
		cis-1,2-Dichloroethene	X	Other specific flags and footnotes may be required to properly define the results.
		Methylene bromide	X	Other specific flags and footnotes may be required to properly define the results.
		1,1-Dichloroethane	X	Other specific flags and footnotes may be required to properly define the results.
		1,2-Dichloroethane	X	Other specific flags and footnotes may be required to properly define the results.
		1,1-Dichloroethylene	X	Other specific flags and footnotes may be required to properly define the results.

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Monitoring Point	Facility Sample ID	Constituent	Flag	Description
8004-4817 MW397	MW397SG3-13	1,2-Dibromoethane	X	Other specific flags and footnotes may be required to properly define the results.
		1,1,2,2-Tetrachloroethane	X	Other specific flags and footnotes may be required to properly define the results.
		1,1,1-Trichloroethane	X	Other specific flags and footnotes may be required to properly define the results.
		1,1,2-Trichloroethane	X	Other specific flags and footnotes may be required to properly define the results.
		1,1,1,2-Tetrachloroethane	X	Other specific flags and footnotes may be required to properly define the results.
		Vinyl chloride	X	Other specific flags and footnotes may be required to properly define the results.
		Tetrachloroethene	X	Other specific flags and footnotes may be required to properly define the results.
		Trichloroethene	X	Other specific flags and footnotes may be required to properly define the results.
		Ethylbenzene	X	Other specific flags and footnotes may be required to properly define the results.
		2-Hexanone	X	Other specific flags and footnotes may be required to properly define the results.
		Iodomethane	X	Other specific flags and footnotes may be required to properly define the results.
		Dibromochloromethane	X	Other specific flags and footnotes may be required to properly define the results.
		Carbon tetrachloride	X	Other specific flags and footnotes may be required to properly define the results.
		Dichloromethane	X	Other specific flags and footnotes may be required to properly define the results.
		Methyl Isobutyl Ketone	X	Other specific flags and footnotes may be required to properly define the results.
		1,2-Dichloropropane	X	Other specific flags and footnotes may be required to properly define the results.
		trans-1,3-Dichloropropene	X	Other specific flags and footnotes may be required to properly define the results.
		cis-1,3-Dichloropropene	X	Other specific flags and footnotes may be required to properly define the results.
		trans-1,2-Dichloroethene	X	Other specific flags and footnotes may be required to properly define the results.
		Trichlorofluoromethane	X	Other specific flags and footnotes may be required to properly define the results.
		1,2,3-Trichloropropane	X	Other specific flags and footnotes may be required to properly define the results.
		1,2-Dichlorobenzene	X	Other specific flags and footnotes may be required to properly define the results.
		1,4-Dichlorobenzene	X	Other specific flags and footnotes may be required to properly define the results.
		PCB, Total		Analysis of constituent not required and not performed.
		PCB-1016		Analysis of constituent not required and not performed.
		PCB-1221		Analysis of constituent not required and not performed.
		PCB-1232		Analysis of constituent not required and not performed.

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Monitoring Point	Facility Sample ID	Constituent	Flag	Description
8004-4817 MW397	MW397SG3-13	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	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.594. Rad error is 0.54.
		Gross beta		TPU is 2.61. Rad error is 2.05.
		Iodine-131		Analysis of constituent not required and not performed.
		Radium-226	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.326. Rad error is 0.133.
		Strontium-90	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.0658. Rad error is 0.0473.
		Technetium-99		TPU is 10.9. Rad error is 10.9.
		Thorium-230	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.112. Rad error is 0.0748.
		Tritium	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 596. Rad error is 596.

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Monitoring Point	Facility Sample ID	Constituent	Flag	Description
0000-0000 QC	RI1SG3-13	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.
		Silver	*N	Duplicate analysis not within control limits. Sample spike recovery not within control limits.
		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	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.696. Rad error is 0.637.
		Gross beta	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.0722. Rad error is 0.0636.
		Iodine-131		Analysis of constituent not required and not performed.
		Radium-226	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.349. Rad error is 0.198.
		Strontium-90	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.0587. Rad error is 0.0409.
		Technetium-99	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 10. Rad error is 10.
		Thorium-230	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.124. Rad error is 0.0905.
		Tritium	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 598. Rad error is 598.
		Chemical Oxygen Demand		Analysis of constituent not required and not performed.
		Cyanide		Analysis of constituent not required and not performed.
		Total Organic Carbon		Analysis of constituent not required and not performed.
		Total Organic Halides		Analysis of constituent not required and not performed.

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

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Monitoring Point	Facility Sample ID	Constituent	Flag	Description
0000-0000 QC	FB1SG3-13	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.
		Silver	*N	Duplicate analysis not within control limits. Sample spike recovery not within control limits.
		1,2-Dibromo-3-chloropropane	X	Other specific flags and footnotes may be required to properly define the results.
		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	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.0527. Rad error is 0.0498.
		Gross beta	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.0173. Rad error is 0.0153.
		Iodine-131		Analysis of constituent not required and not performed.
		Radium-226	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.332. Rad error is 0.167.
		Strontium-90	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.149. Rad error is 0.102.
		Technetium-99	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 10.5. Rad error is 10.5.
		Thorium-230	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.103. Rad error is 0.0662.
		Tritium	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 590. Rad error is 590.
		Chemical Oxygen Demand		Analysis of constituent not required and not performed.
		Cyanide		Analysis of constituent not required and not performed.

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

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Monitoring Point	Facility Sample ID	Constituent	Flag	Description
0000-0000 QC	FB1SG3-13	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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WRITTEN COMMENTS

Monitoring Point	Facility Sample ID	Constituent	Flag	Description
0000-0000 QC	TB1SG3-13	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.

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Monitoring Point	Facility Sample ID	Constituent	Flag	Description
0000-0000 QC	TB1SG3-13	Vanadium		Analysis of constituent not required and not performed.
		Zinc		Analysis of constituent not required and not performed.
		1,2-Dibromo-3-chloropropane	X	Other specific flags and footnotes may be required to properly define the results.
		PCB, Total		Analysis of constituent not required and not performed.
		PCB-1016		Analysis of constituent not required and not performed.
		PCB-1221		Analysis of constituent not required and not performed.
		PCB-1232		Analysis of constituent not required and not performed.
		PCB-1242		Analysis of constituent not required and not performed.
		PCB-1248		Analysis of constituent not required and not performed.
		PCB-1254		Analysis of constituent not required and not performed.
		PCB-1260		Analysis of constituent not required and not performed.
		PCB-1268		Analysis of constituent not required and not performed.
		Gross alpha		Analysis of constituent not required and not performed.
		Gross beta		Analysis of constituent not required and not performed.
		Iodine-131		Analysis of constituent not required and not performed.
		Radium-226		Analysis of constituent not required and not performed.
		Strontium-90		Analysis of constituent not required and not performed.
		Technetium-99		Analysis of constituent not required and not performed.
		Thorium-230		Analysis of constituent not required and not performed.
		Tritium		Analysis of constituent not required and not performed.
		Chemical Oxygen Demand		Analysis of constituent not required and not performed.
		Cyanide		Analysis of constituent not required and not performed.
		Iodide		Analysis of constituent not required and not performed.
		Total Organic Carbon		Analysis of constituent not required and not performed.
		Total Organic Halides		Analysis of constituent not required and not performed.

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Monitoring Point	Facility Sample ID	Constituent	Flag	Description
0000-0000 QC	TB2SG3-13	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.

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GROUNDWATER
WRITTEN COMMENTS

Monitoring Point	Facility Sample ID	Constituent	Flag	Description
0000-0000 QC	TB2SG3-13	Vanadium		Analysis of constituent not required and not performed.
		Zinc		Analysis of constituent not required and not performed.
		1,2-Dibromo-3-chloropropane	X	Other specific flags and footnotes may be required to properly define the results.
		PCB, Total		Analysis of constituent not required and not performed.
		PCB-1016		Analysis of constituent not required and not performed.
		PCB-1221		Analysis of constituent not required and not performed.
		PCB-1232		Analysis of constituent not required and not performed.
		PCB-1242		Analysis of constituent not required and not performed.
		PCB-1248		Analysis of constituent not required and not performed.
		PCB-1254		Analysis of constituent not required and not performed.
		PCB-1260		Analysis of constituent not required and not performed.
		PCB-1268		Analysis of constituent not required and not performed.
		Gross alpha		Analysis of constituent not required and not performed.
		Gross beta		Analysis of constituent not required and not performed.
		Iodine-131		Analysis of constituent not required and not performed.
		Radium-226		Analysis of constituent not required and not performed.
		Strontium-90		Analysis of constituent not required and not performed.
		Technetium-99		Analysis of constituent not required and not performed.
		Thorium-230		Analysis of constituent not required and not performed.
		Tritium		Analysis of constituent not required and not performed.
		Chemical Oxygen Demand		Analysis of constituent not required and not performed.
		Cyanide		Analysis of constituent not required and not performed.
		Iodide		Analysis of constituent not required and not performed.
		Total Organic Carbon		Analysis of constituent not required and not performed.
		Total Organic Halides		Analysis of constituent not required and not performed.

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

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

Permit Numbers: 073-00014 and 073-00015 For Official Use Only

GROUNDWATER
WRITTEN COMMENTS

Monitoring Point	Facility Sample ID	Constituent	Flag	Description
0000-0000 QC	TB3SG3-13	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.

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

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

Permit Numbers: 073-00014 and 073-00015 For Official Use Only

GROUNDWATER
WRITTEN COMMENTS

Monitoring Point	Facility Sample ID	Constituent	Flag	Description
0000-0000 QC	TB3SG3-13	Vanadium		Analysis of constituent not required and not performed.
		Zinc		Analysis of constituent not required and not performed.
		Vinyl acetate	X	Other specific flags and footnotes may be required to properly define the results.
		Acetone	X	Other specific flags and footnotes may be required to properly define the results.
		Acrolein	X	Other specific flags and footnotes may be required to properly define the results.
		Acrylonitrile	X	Other specific flags and footnotes may be required to properly define the results.
		Benzene	X	Other specific flags and footnotes may be required to properly define the results.
		Chlorobenzene	X	Other specific flags and footnotes may be required to properly define the results.
		Xylenes	X	Other specific flags and footnotes may be required to properly define the results.
		Styrene	X	Other specific flags and footnotes may be required to properly define the results.
		Toluene	X	Other specific flags and footnotes may be required to properly define the results.
		Chlorobromomethane	X	Other specific flags and footnotes may be required to properly define the results.
		Bromodichloromethane	X	Other specific flags and footnotes may be required to properly define the results.
		Tribromomethane	X	Other specific flags and footnotes may be required to properly define the results.
		Methyl bromide	X	Other specific flags and footnotes may be required to properly define the results.
		Methyl Ethyl Ketone	X	Other specific flags and footnotes may be required to properly define the results.
		trans-1,4-Dichloro-2-butene	X	Other specific flags and footnotes may be required to properly define the results.
		Carbon disulfide	X	Other specific flags and footnotes may be required to properly define the results.
		Chloroethane	X	Other specific flags and footnotes may be required to properly define the results.
		Chloroform	X	Other specific flags and footnotes may be required to properly define the results.
		Methyl chloride	X	Other specific flags and footnotes may be required to properly define the results.
		cis-1,2-Dichloroethene	X	Other specific flags and footnotes may be required to properly define the results.
		Methylene bromide	X	Other specific flags and footnotes may be required to properly define the results.
		1,1-Dichloroethane	X	Other specific flags and footnotes may be required to properly define the results.
		1,2-Dichloroethane	X	Other specific flags and footnotes may be required to properly define the results.
		1,1-Dichloroethylene	X	Other specific flags and footnotes may be required to properly define the results.

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

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

Permit Numbers: 073-00014 and 073-00015 For Official Use Only

GROUNDWATER
WRITTEN COMMENTS

Monitoring Point	Facility Sample ID	Constituent	Flag	Description
0000-0000 QC	TB3SG3-13	1,2-Dibromoethane	X	Other specific flags and footnotes may be required to properly define the results.
		1,1,2,2-Tetrachloroethane	X	Other specific flags and footnotes may be required to properly define the results.
		1,1,1-Trichloroethane	X	Other specific flags and footnotes may be required to properly define the results.
		1,1,2-Trichloroethane	X	Other specific flags and footnotes may be required to properly define the results.
		1,1,1,2-Tetrachloroethane	X	Other specific flags and footnotes may be required to properly define the results.
		Vinyl chloride	X	Other specific flags and footnotes may be required to properly define the results.
		Tetrachloroethene	X	Other specific flags and footnotes may be required to properly define the results.
		Trichloroethene	X	Other specific flags and footnotes may be required to properly define the results.
		Ethylbenzene	X	Other specific flags and footnotes may be required to properly define the results.
		2-Hexanone	X	Other specific flags and footnotes may be required to properly define the results.
		Iodomethane	X	Other specific flags and footnotes may be required to properly define the results.
		Dibromochloromethane	X	Other specific flags and footnotes may be required to properly define the results.
		Carbon tetrachloride	X	Other specific flags and footnotes may be required to properly define the results.
		Dichloromethane	X	Other specific flags and footnotes may be required to properly define the results.
		Methyl Isobutyl Ketone	X	Other specific flags and footnotes may be required to properly define the results.
		1,2-Dibromo-3-chloropropane	X	Other specific flags and footnotes may be required to properly define the results.
		1,2-Dichloropropane	X	Other specific flags and footnotes may be required to properly define the results.
		trans-1,3-Dichloropropene	X	Other specific flags and footnotes may be required to properly define the results.
		cis-1,3-Dichloropropene	X	Other specific flags and footnotes may be required to properly define the results.
		trans-1,2-Dichloroethene	X	Other specific flags and footnotes may be required to properly define the results.
		Trichlorofluoromethane	X	Other specific flags and footnotes may be required to properly define the results.
		1,2,3-Trichloropropane	X	Other specific flags and footnotes may be required to properly define the results.
		1,2-Dichlorobenzene	X	Other specific flags and footnotes may be required to properly define the results.
		1,4-Dichlorobenzene	X	Other specific flags and footnotes may be required to properly define the results.
		PCB, Total		Analysis of constituent not required and not performed.
		PCB-1016		Analysis of constituent not required and not performed.
		PCB-1221		Analysis of constituent not required and not performed.

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

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

Permit Numbers: 073-00014 and 073-00015 For Official Use Only

GROUNDWATER
WRITTEN COMMENTS

Monitoring Point	Facility Sample ID	Constituent	Flag	Description
0000-0000 QC	TB3SG3-13	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/INERT – QUARTERLY Finds/Unit: KY8-890-008-982 / 1

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

Permit Numbers: 073-00014 and 073-00015 For Official Use Only

GROUNDWATER
WRITTEN COMMENTS

Monitoring Point	Facility Sample ID	Constituent	Flag	Description
0000-0000 QC	TB4SG3-13	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.

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

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

Permit Numbers: 073-00014 and 073-00015 For Official Use Only

GROUNDWATER
WRITTEN COMMENTS

Monitoring Point	Facility Sample ID	Constituent	Flag	Description
0000-0000 QC	TB4SG3-13	Vanadium		Analysis of constituent not required and not performed.
		Zinc		Analysis of constituent not required and not performed.
		Acrolein	X	Other specific flags and footnotes may be required to properly define the results.
		Acrylonitrile	X	Other specific flags and footnotes may be required to properly define the results.
		PCB, Total		Analysis of constituent not required and not performed.
		PCB-1016		Analysis of constituent not required and not performed.
		PCB-1221		Analysis of constituent not required and not performed.
		PCB-1232		Analysis of constituent not required and not performed.
		PCB-1242		Analysis of constituent not required and not performed.
		PCB-1248		Analysis of constituent not required and not performed.
		PCB-1254		Analysis of constituent not required and not performed.
		PCB-1260		Analysis of constituent not required and not performed.
		PCB-1268		Analysis of constituent not required and not performed.
		Gross alpha		Analysis of constituent not required and not performed.
		Gross beta		Analysis of constituent not required and not performed.
		Iodine-131		Analysis of constituent not required and not performed.
		Radium-226		Analysis of constituent not required and not performed.
		Strontium-90		Analysis of constituent not required and not performed.
		Technetium-99		Analysis of constituent not required and not performed.
		Thorium-230		Analysis of constituent not required and not performed.
		Tritium		Analysis of constituent not required and not performed.
		Chemical Oxygen Demand		Analysis of constituent not required and not performed.
		Cyanide		Analysis of constituent not required and not performed.
		Iodide		Analysis of constituent not required and not performed.
		Total Organic Carbon		Analysis of constituent not required and not performed.
		Total Organic Halides		Analysis of constituent not required and not performed.

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

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

Permit Numbers: 073-00014 and 073-00015 For Official Use Only

GROUNDWATER
WRITTEN COMMENTS

Monitoring Point	Facility Sample ID	Constituent	Flag	Description
0000-0000 QC	TB5SG3-13	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.

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

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

Permit Numbers: 073-00014 and 073-00015 For Official Use Only

GROUNDWATER
WRITTEN COMMENTS

Monitoring Point	Facility Sample ID	Constituent	Flag	Description
0000-0000 QC	TB5SG3-13	Vanadium		Analysis of constituent not required and not performed.
		Zinc		Analysis of constituent not required and not performed.
		Acrolein	X	Other specific flags and footnotes may be required to properly define the results.
		Acrylonitrile	X	Other specific flags and footnotes may be required to properly define the results.
		PCB, Total		Analysis of constituent not required and not performed.
		PCB-1016		Analysis of constituent not required and not performed.
		PCB-1221		Analysis of constituent not required and not performed.
		PCB-1232		Analysis of constituent not required and not performed.
		PCB-1242		Analysis of constituent not required and not performed.
		PCB-1248		Analysis of constituent not required and not performed.
		PCB-1254		Analysis of constituent not required and not performed.
		PCB-1260		Analysis of constituent not required and not performed.
		PCB-1268		Analysis of constituent not required and not performed.
		Gross alpha		Analysis of constituent not required and not performed.
		Gross beta		Analysis of constituent not required and not performed.
		Iodine-131		Analysis of constituent not required and not performed.
		Radium-226		Analysis of constituent not required and not performed.
		Strontium-90		Analysis of constituent not required and not performed.
		Technetium-99		Analysis of constituent not required and not performed.
		Thorium-230		Analysis of constituent not required and not performed.
		Tritium		Analysis of constituent not required and not performed.
		Chemical Oxygen Demand		Analysis of constituent not required and not performed.
		Cyanide		Analysis of constituent not required and not performed.
		Iodide		Analysis of constituent not required and not performed.
		Total Organic Carbon		Analysis of constituent not required and not performed.
		Total Organic Halides		Analysis of constituent not required and not performed.

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

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

Permit Numbers: 073-00014 and 073-00015 For Official Use Only

GROUNDWATER
WRITTEN COMMENTS

Monitoring Point	Facility Sample ID	Constituent	Flag	Description
0000-0000 QC	TB6SG3-13	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.

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

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

Permit Numbers: 073-00014 and 073-00015 For Official Use Only

GROUNDWATER
WRITTEN COMMENTS

Monitoring Point	Facility Sample ID	Constituent	Flag	Description
0000-0000 QC	TB6SG3-13	Vanadium		Analysis of constituent not required and not performed.
		Zinc		Analysis of constituent not required and not performed.
		Vinyl acetate	X	Other specific flags and footnotes may be required to properly define the results.
		Acetone	X	Other specific flags and footnotes may be required to properly define the results.
		Acrolein	X	Other specific flags and footnotes may be required to properly define the results.
		Acrylonitrile	X	Other specific flags and footnotes may be required to properly define the results.
		Benzene	X	Other specific flags and footnotes may be required to properly define the results.
		Chlorobenzene	X	Other specific flags and footnotes may be required to properly define the results.
		Xylenes	X	Other specific flags and footnotes may be required to properly define the results.
		Styrene	X	Other specific flags and footnotes may be required to properly define the results.
		Toluene	X	Other specific flags and footnotes may be required to properly define the results.
		Chlorobromomethane	X	Other specific flags and footnotes may be required to properly define the results.
		Bromodichloromethane	X	Other specific flags and footnotes may be required to properly define the results.
		Tribromomethane	X	Other specific flags and footnotes may be required to properly define the results.
		Methyl bromide	X	Other specific flags and footnotes may be required to properly define the results.
		Methyl Ethyl Ketone	X	Other specific flags and footnotes may be required to properly define the results.
		trans-1,4-Dichloro-2-butene	X	Other specific flags and footnotes may be required to properly define the results.
		Carbon disulfide	X	Other specific flags and footnotes may be required to properly define the results.
		Chloroethane	X	Other specific flags and footnotes may be required to properly define the results.
		Chloroform	X	Other specific flags and footnotes may be required to properly define the results.
		Methyl chloride	X	Other specific flags and footnotes may be required to properly define the results.
		cis-1,2-Dichloroethene	X	Other specific flags and footnotes may be required to properly define the results.
		Methylene bromide	X	Other specific flags and footnotes may be required to properly define the results.
		1,1-Dichloroethane	X	Other specific flags and footnotes may be required to properly define the results.
		1,2-Dichloroethane	X	Other specific flags and footnotes may be required to properly define the results.
		1,1-Dichloroethylene	X	Other specific flags and footnotes may be required to properly define the results.

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

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

Permit Numbers: 073-00014 and 073-00015 For Official Use Only

GROUNDWATER
WRITTEN COMMENTS

Monitoring Point	Facility Sample ID	Constituent	Flag	Description
0000-0000 QC	TB6SG3-13	1,2-Dibromoethane	X	Other specific flags and footnotes may be required to properly define the results.
		1,1,2,2-Tetrachloroethane	X	Other specific flags and footnotes may be required to properly define the results.
		1,1,1-Trichloroethane	X	Other specific flags and footnotes may be required to properly define the results.
		1,1,2-Trichloroethane	X	Other specific flags and footnotes may be required to properly define the results.
		1,1,1,2-Tetrachloroethane	X	Other specific flags and footnotes may be required to properly define the results.
		Vinyl chloride	X	Other specific flags and footnotes may be required to properly define the results.
		Tetrachloroethene	X	Other specific flags and footnotes may be required to properly define the results.
		Trichloroethene	X	Other specific flags and footnotes may be required to properly define the results.
		Ethylbenzene	X	Other specific flags and footnotes may be required to properly define the results.
		2-Hexanone	X	Other specific flags and footnotes may be required to properly define the results.
		Iodomethane	X	Other specific flags and footnotes may be required to properly define the results.
		Dibromochloromethane	X	Other specific flags and footnotes may be required to properly define the results.
		Carbon tetrachloride	X	Other specific flags and footnotes may be required to properly define the results.
		Dichloromethane	X	Other specific flags and footnotes may be required to properly define the results.
		Methyl Isobutyl Ketone	X	Other specific flags and footnotes may be required to properly define the results.
		1,2-Dichloropropane	X	Other specific flags and footnotes may be required to properly define the results.
		trans-1,3-Dichloropropene	X	Other specific flags and footnotes may be required to properly define the results.
		cis-1,3-Dichloropropene	X	Other specific flags and footnotes may be required to properly define the results.
		trans-1,2-Dichloroethene	X	Other specific flags and footnotes may be required to properly define the results.
		Trichlorofluoromethane	X	Other specific flags and footnotes may be required to properly define the results.
		1,2,3-Trichloropropane	X	Other specific flags and footnotes may be required to properly define the results.
		1,2-Dichlorobenzene	X	Other specific flags and footnotes may be required to properly define the results.
		1,4-Dichlorobenzene	X	Other specific flags and footnotes may be required to properly define the results.
		PCB, Total		Analysis of constituent not required and not performed.
		PCB-1016		Analysis of constituent not required and not performed.
		PCB-1221		Analysis of constituent not required and not performed.
		PCB-1232		Analysis of constituent not required and not performed.

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

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

Permit Numbers: 073-00014 and 073-00015 For Official Use Only

GROUNDWATER
WRITTEN COMMENTS

Monitoring Point	Facility Sample ID	Constituent	Flag	Description
0000-0000 QC	TB6SG3-13	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/INERT – QUARTERLY Finds/Unit: KY8-890-008-982 / 1

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

Permit Numbers: 073-00014 and 073-00015 For Official Use Only

GROUNDWATER
WRITTEN COMMENTS

Monitoring Point	Facility Sample ID	Constituent	Flag	Description
8000-5242 MW222	MW222DSG3-13	Nitrate & Nitrite	*	Duplicate analysis not within control limits.
		Silver	*N	Duplicate analysis not within control limits. Sample spike recovery not within control limits.
		Vinyl acetate	X	Other specific flags and footnotes may be required to properly define the results.
		Acetone	X	Other specific flags and footnotes may be required to properly define the results.
		Benzene	X	Other specific flags and footnotes may be required to properly define the results.
		Chlorobenzene	X	Other specific flags and footnotes may be required to properly define the results.
		Xylenes	X	Other specific flags and footnotes may be required to properly define the results.
		Styrene	X	Other specific flags and footnotes may be required to properly define the results.
		Toluene	X	Other specific flags and footnotes may be required to properly define the results.
		Chlorobromomethane	X	Other specific flags and footnotes may be required to properly define the results.
		Bromodichloromethane	X	Other specific flags and footnotes may be required to properly define the results.
		Tribromomethane	X	Other specific flags and footnotes may be required to properly define the results.
		Methyl bromide	X	Other specific flags and footnotes may be required to properly define the results.
		Methyl Ethyl Ketone	X	Other specific flags and footnotes may be required to properly define the results.
		trans-1,4-Dichloro-2-butene	X	Other specific flags and footnotes may be required to properly define the results.
		Carbon disulfide	X	Other specific flags and footnotes may be required to properly define the results.
		Chloroethane	X	Other specific flags and footnotes may be required to properly define the results.
		Chloroform	X	Other specific flags and footnotes may be required to properly define the results.
		Methyl chloride	X	Other specific flags and footnotes may be required to properly define the results.
		cis-1,2-Dichloroethene	X	Other specific flags and footnotes may be required to properly define the results.
		Methylene bromide	X	Other specific flags and footnotes may be required to properly define the results.
		1,1-Dichloroethane	X	Other specific flags and footnotes may be required to properly define the results.
		1,2-Dichloroethane	X	Other specific flags and footnotes may be required to properly define the results.
		1,1-Dichloroethylene	X	Other specific flags and footnotes may be required to properly define the results.
		1,2-Dibromoethane	X	Other specific flags and footnotes may be required to properly define the results.
		1,1,2,2-Tetrachloroethane	X	Other specific flags and footnotes may be required to properly define the results.

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

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

Permit Numbers: 073-00014 and 073-00015 For Official Use Only

GROUNDWATER
WRITTEN COMMENTS

Monitoring Point	Facility Sample ID	Constituent	Flag	Description
8000-5242 MW222	MW222DSG3-13	1,1,1-Trichloroethane	X	Other specific flags and footnotes may be required to properly define the results.
		1,1,2-Trichloroethane	X	Other specific flags and footnotes may be required to properly define the results.
		1,1,1,2-Tetrachloroethane	X	Other specific flags and footnotes may be required to properly define the results.
		Vinyl chloride	X	Other specific flags and footnotes may be required to properly define the results.
		Tetrachloroethene	X	Other specific flags and footnotes may be required to properly define the results.
		Trichloroethene	X	Other specific flags and footnotes may be required to properly define the results.
		Ethylbenzene	X	Other specific flags and footnotes may be required to properly define the results.
		2-Hexanone	X	Other specific flags and footnotes may be required to properly define the results.
		Iodomethane	X	Other specific flags and footnotes may be required to properly define the results.
		Dibromochloromethane	X	Other specific flags and footnotes may be required to properly define the results.
		Carbon tetrachloride	X	Other specific flags and footnotes may be required to properly define the results.
		Dichloromethane	X	Other specific flags and footnotes may be required to properly define the results.
		Methyl Isobutyl Ketone	X	Other specific flags and footnotes may be required to properly define the results.
		1,2-Dichloropropane	X	Other specific flags and footnotes may be required to properly define the results.
		trans-1,3-Dichloropropene	X	Other specific flags and footnotes may be required to properly define the results.
		cis-1,3-Dichloropropene	X	Other specific flags and footnotes may be required to properly define the results.
		trans-1,2-Dichloroethene	X	Other specific flags and footnotes may be required to properly define the results.
		Trichlorofluoromethane	X	Other specific flags and footnotes may be required to properly define the results.
		1,2,3-Trichloropropane	X	Other specific flags and footnotes may be required to properly define the results.
		1,2-Dichlorobenzene	X	Other specific flags and footnotes may be required to properly define the results.
		1,4-Dichlorobenzene	X	Other specific flags and footnotes may be required to properly define the results.
		PCB, Total		Analysis of constituent not required and not performed.
		PCB-1016		Analysis of constituent not required and not performed.
		PCB-1221		Analysis of constituent not required and not performed.
		PCB-1232		Analysis of constituent not required and not performed.
		PCB-1242		Analysis of constituent not required and not performed.
		PCB-1248		Analysis of constituent not required and not performed.
		PCB-1254		Analysis of constituent not required and not performed.

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

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

Permit Numbers: 073-00014 and 073-00015 For Official Use Only

GROUNDWATER
WRITTEN COMMENTS

Monitoring Point	Facility Sample ID	Constituent	Flag	Description
8000-5242 MW222	MW222DSG3-13	PCB-1260		Analysis of constituent not required and not performed.
		PCB-1268		Analysis of constituent not required and not performed.
		Gross alpha	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.268. Rad error is 0.252.
		Gross beta		TPU is 1.7. Rad error is 1.4.
		Iodine-131		Analysis of constituent not required and not performed.
		Radium-226	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.346. Rad error is 0.107.
		Strontium-90	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.181. Rad error is 0.122.
		Technetium-99	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 10.4. Rad error is 10.4.
		Thorium-230	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.111. Rad error is 0.0735.
		Tritium	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 591. Rad error is 590.

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APPENDIX D

STATISTICAL ANALYSES AND QUALIFICATION STATEMENT

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RESIDENTIAL/INERT – QUARTERLY, 2nd Quarter 2013 Finds/Unit: _____
Facility: U.S. DOE – Paducah Gaseous Diffusion Plant Lab ID: None
Permit Numbers: 073-00014 and 073-00015 For Official Use Only

GROUNDWATER STATISTICAL COMMENTS

Introduction

The statistical analyses conducted on the second quarter 2013 groundwater data collected from the C-746-S&T Landfills monitoring wells (MWs) were performed in accordance with Permit Condition GSTR0003, Standard Requirement 3, using the U.S. Environmental Protection Agency (EPA) guidance document, *EPA Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Interim Final Guidance* (1989), with the exception of pH. The method for conducting the statistical analysis of pH was selected by the project statistician.

The statistical 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 a minimum of one background well for comparison with at least three test wells (Exhibit 1). The second quarter 2013 data used to conduct the statistical analyses were sampled in April 2013. The statistical analyses for this report utilize data from the first eight quarters that were collected 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 data from the current quarter. Once a statistical result is obtained using the background data, the data from 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 first eight sampling events results 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-S&T Residential/Inert Landfills. Exhibit 2 presents the parameters from the available data set and the statistical test performed using the one-sided tolerance interval.

Excluding parameters which have an MCL, Exhibits 3, 4, and 5 list the number of analyses (observations), nondetects (censored observations), detects (uncensored observations), and missing observations by parameter in the UCRS, the URGA, and the LRGA, respectively. Those parameters displayed with bold-face type indicate the one-sided tolerance interval statistical test was performed. The data presented in Exhibits 3, 4, and 5 were collected during the current quarter, second quarter 2013. The observations that are listed are not background data. Background data are presented on pages D-17 through D-72. The sampling dates associated with background data are listed next to the result on pages D-17 through D-72. When field duplicate data are available, the higher of the two readings is retained for further evaluation.

[1] For pH, two-sided TLs (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
MW220	BG	URGA
MW221	SG	URGA
MW222	SG	URGA
MW223	SG	URGA
MW224	SG	URGA
MW369	TW	URGA
MW370	TW	LRGA
MW372	TW	URGA
MW373	TW	LRGA
MW384	SG	URGA
MW385	SG	LRGA
MW386	SG	UCRS
MW387	TW	URGA
MW388	TW	LRGA
MW389*	TW	UCRS
MW390*	TW	UCRS
MW391	TW	URGA
MW392	TW	LRGA
MW393	TW	UCRS
MW394	BG	URGA
MW395	BG	LRGA
MW396	BG	UCRS
MW397	BG	LRGA

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

Exhibit 2. List of Parameters Tested Using the Tolerance Level Test

Analysis
Aluminum
Boron
Calcium
Chloride
Cobalt
Conductivity
Dissolved Oxygen
Dissolved Solids
Iodide
Iron
Magnesium
Manganese
Molybdenum
Nickel
Oxidation-Reduction Potential
pH
Potassium
Sodium
Sulfate
Technetium-99
Total Organic Carbon (TOC)
Total Organic Halides (TOX)

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

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

Dissolved Oxygen	**3**	**0**	**0**	**3**	**YES**
Dissolved Solids	**3**	**0**	**0**	**3**	**YES**
Ethylbenzene	3	0	3	0	no
Iodide	3	0	3	0	no
Iodomethane	3	0	3	0	no
Iron	**3**	**0**	**0**	**3**	**YES**
Magnesium	**3**	**0**	**0**	**3**	**YES**
Manganese	**3**	**0**	**0**	**3**	**YES**
Methylene chloride	3	0	3	0	no
Molybdenum	3	0	3	0	no
Nickel	3	0	3	0	no
Oxidation-Reduction Potential	**3**	**0**	**0**	**3**	**YES**
PCB, Total	3	3	0	0	no
PCB-1016	3	3	0	0	no
PCB-1221	3	3	0	0	no
PCB-1232	3	3	0	0	no
PCB-1242	3	3	0	0	no
PCB-1248	3	3	0	0	no
PCB-1254	3	3	0	0	no
PCB-1260	3	3	0	0	no
PCB-1268	3	3	0	0	no
pH	**3**	**0**	**0**	**3**	**YES**
Potassium	**3**	**0**	**0**	**3**	**YES**
Radium-226	3	0	3	0	no
Rhodium	3	0	3	0	no
Sodium	**3**	**0**	**0**	**3**	**YES**
Styrene	3	0	3	0	no
Sulfate	**3**	**0**	**0**	**3**	**YES**
Tantalum	3	0	3	0	no
Technetium-99	3	0	3	0	no
Tetrachloroethene	3	0	3	0	no
Thallium	3	0	3	0	no
Thorium-230	3	0	3	0	no
Toluene	3	0	3	0	no
Total Organic Carbon (TOC)	**3**	**0**	**0**	**3**	**YES**
Total Organic Halides (TOX)	**3**	**0**	**0**	**3**	**YES**
trans-1,2-Dichloroethene	3	0	3	0	no
trans-1,3-Dichloropropene	3	0	3	0	no
Trans-1,4-Dichloro-2-butene	3	0	3	0	no
Trichlorofluoromethane	3	0	3	0	no
Uranium	3	0	3	0	no
Vanadium	3	0	3	0	no
Vinyl acetate	3	0	3	0	no
Zinc	3	0	3	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	11	0	11	0	no
1,1,2,2-Tetrachloroethane	11	0	11	0	no
1,1,2-Trichloroethane	11	0	11	0	no
1,1-Dichloroethane	11	0	11	0	no
1,2,3-Trichloropropane	11	0	11	0	no
1,2-Dibromo-3-chloropropane	11	0	11	0	no
1,2-Dibromoethane	11	0	11	0	no
1,2-Dichlorobenzene	11	0	11	0	no
1,2-Dichloropropane	11	0	11	0	no
2-Butanone	11	0	11	0	no
2-Hexanone	11	0	11	0	no
4-Methyl-2-pentanone	11	0	11	0	no
Acetone	11	0	11	0	no
Acrolein	11	0	11	0	no
Acrylonitrile	11	0	11	0	no
Aluminum	**11**	**0**	**9**	**2**	**YES**
Antimony	11	0	11	0	no
Beryllium	11	0	11	0	no
Boron	**11**	**0**	**10**	**1**	**YES**
Bromide	11	0	11	0	no
Bromochloromethane	11	0	11	0	no
Bromodichloromethane	11	0	11	0	no
Bromoform	11	0	11	0	no
Bromomethane	11	0	11	0	no
Calcium	**11**	**0**	**0**	**11**	**YES**
Carbon disulfide	11	0	11	0	no
Chemical Oxygen Demand	11	0	11	0	no
Chloride	**11**	**0**	**0**	**11**	**YES**
Chlorobenzene	11	0	11	0	no
Chloroethane	11	0	11	0	no
Chloroform	11	0	11	0	no
Chloromethane	11	0	11	0	no
cis-1,2-Dichloroethene	11	0	11	0	no
cis-1,3-Dichloropropene	11	0	11	0	no
Cobalt	**11**	**0**	**8**	**3**	**YES**
Conductivity	**11**	**0**	**0**	**11**	**YES**
Copper	11	0	11	0	no
Cyanide	11	0	11	0	no
Dibromochloromethane	11	0	11	0	no
Dibromomethane	11	0	11	0	no
Dimethylbenzene, Total	11	0	11	0	no
Dissolved Oxygen	**11**	**0**	**0**	**11**	**YES**
Dissolved Solids	**11**	**0**	**0**	**11**	**YES**
Ethylbenzene	11	0	11	0	no
Iodide	**11**	**0**	**10**	**1**	**YES**
Iodomethane	11	0	11	0	no
Iron	**11**	**0**	**6**	**5**	**YES**

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

Magnesium	**11**	**0**	**0**	**11**	**YES**
Manganese	**11**	**0**	**4**	**7**	**YES**
Methylene chloride	11	0	11	0	no
Molybdenum	**11**	**0**	**8**	**3**	**YES**
Nickel	**11**	**0**	**5**	**6**	**YES**
Oxidation-Reduction Potential	**11**	**0**	**0**	**11**	**YES**
PCB, Total	11	9	2	0	no
PCB-1016	11	9	2	0	no
PCB-1221	11	9	2	0	no
PCB-1232	11	9	2	0	no
PCB-1242	11	9	2	0	no
PCB-1248	11	9	2	0	no
PCB-1254	11	9	2	0	no
PCB-1260	11	9	2	0	no
PCB-1268	11	9	2	0	no
pH	**11**	**0**	**0**	**11**	**YES**
Potassium	**11**	**0**	**0**	**11**	**YES**
Radium-226	11	0	11	0	no
Rhodium	11	0	11	0	no
Sodium	**11**	**0**	**0**	**11**	**YES**
Styrene	11	0	11	0	no
Sulfate	**11**	**0**	**0**	**11**	**YES**
Tantalum	11	0	11	0	no
Technetium-99	**11**	**0**	**7**	**4**	**YES**
Tetrachloroethene	11	0	11	0	no
Thallium	11	0	11	0	no
Thorium-230	11	0	11	0	no
Toluene	11	0	11	0	no
Total Organic Carbon (TOC)	**11**	**0**	**9**	**2**	**YES**
Total Organic Halides (TOX)	**11**	**0**	**0**	**11**	**YES**
trans-1,2-Dichloroethene	11	0	11	0	no
trans-1,3-Dichloropropene	11	0	11	0	no
Trans-1,4-Dichloro-2-butene	11	0	11	0	no
Trichlorofluoromethane	11	0	11	0	no
Uranium	11	0	11	0	no
Vanadium	11	0	11	0	no
Vinyl acetate	11	0	11	0	no
Zinc	11	0	11	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	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	7	0	no
Antimony	7	0	7	0	no
Beryllium	7	0	7	0	no
Boron	**7**	**0**	**6**	**1**	**YES**
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**	**0**	**7**	**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	7	0	no
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**	**6**	**1**	**YES**
Magnesium	**7**	**0**	**0**	**7**	**YES**
Manganese	**7**	**0**	**5**	**2**	**YES**
Methylene chloride	7	0	7	0	no

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

Molybdenum	7	0	7	0	no
Nickel	7	0	7	0	no
Oxidation-Reduction Potential	**7**	**0**	**0**	**7**	**YES**
PCB, Total	7	5	2	0	no
PCB-1016	7	5	2	0	no
PCB-1221	7	5	2	0	no
PCB-1232	7	5	2	0	no
PCB-1242	7	5	2	0	no
PCB-1248	7	5	2	0	no
PCB-1254	7	5	2	0	no
PCB-1260	7	5	2	0	no
PCB-1268	7	5	2	0	no
pH	**7**	**0**	**0**	**7**	**YES**
Potassium	**7**	**0**	**0**	**7**	**YES**
Radium-226	7	0	7	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**	**3**	**4**	**YES**
Tetrachloroethene	7	0	7	0	no
Thallium	7	0	7	0	no
Thorium-230	7	0	7	0	no
Toluene	7	0	7	0	no
Total Organic Carbon (TOC)	**7**	**0**	**5**	**2**	**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	7	0	no
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.

Discussion of Results

For the UCRS, URGA, and LRGA, the results of the tolerance interval tests are presented on pages D-17 through D-72 and the statistician qualification statement is presented on page D-73. For the UCRS, URGA, and LRGA, the test was applied to 15, 22, and 17 parameters, respectively, listed in Exhibits 3, 4, and 5. A summary of statistical exceedances by well number is shown in Exhibit 6.

UCRS

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

URGA

In this quarter, statistical test results indicated there were statistically significant increases for calcium, conductivity, dissolved solids, iodide, magnesium, oxidation-reduction potential, sodium, sulfate, and technetium-99.

LRGA

In this quarter, statistical test results indicated there were statistically significant increases for calcium, conductivity, dissolved solids, magnesium, oxidation-reduction potential, potassium, sulfate, and technetium-99.

Conclusion

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

Exhibit 6. Summary of Statistically Significant Increases

UCRS	URGA	LRGA
MW386: oxidation-reduction potential	MW222: oxidation-reduction potential	MW370: oxidation-reduction potential, sulfate
MW393: oxidation-reduction potential	MW224: oxidation-reduction potential	MW373: calcium, conductivity, dissolved solids, magnesium, oxidation-reduction potential, potassium, sulfate, technetium-99
	MW369: oxidation-reduction potential	MW385: sulfate, technetium-99, oxidation-reduction potential
	MW372: calcium, conductivity, dissolved solids, magnesium, sodium, sulfate, technetium-99	MW388: oxidation-reduction potential, sulfate, technetium-99
	MW384: iodide, sulfate, technetium-99	MW392: oxidation-reduction potential
	MW387: sulfate, technetium-99	
	MW391: oxidation-reduction potential, sulfate	

Exhibit 7. Summary of Parameters Identified for Statistical Analysis and the Test Results—UCRS

Parameter	Performed Test	CV Normality Test	Results of Tolerance Interval Test Conducted
Calcium	Tolerance Interval	0.20	No statistically significant increases relative to background data
Chloride	Tolerance Interval	0.05	No statistically significant increases relative to background data
Conductivity	Tolerance Interval	0.12	No statistically significant increases relative to background data
Dissolved Oxygen	Tolerance Interval	1.20	No statistically significant increases relative to background data
Dissolved Solids	Tolerance Interval	0.19	No statistically significant increases relative to background data
Iron	Tolerance Interval	0.48	No statistically significant increases relative to background data
Magnesium	Tolerance Interval	0.20	No statistically significant increases relative to background data
Manganese	Tolerance Interval	0.46	No statistically significant increases relative to background data
Oxidation-Reduction Potential	Tolerance Interval	4.77	Statistically significant increases relative to background data in MW386 and MW393
pH	Tolerance Interval	0.05	No statistically significant deviations relative to background data
Potassium	Tolerance Interval	0.28	No statistically significant increases relative to background data
Sodium	Tolerance Interval	0.30	No statistically significant increases relative to background data
Sulfate	Tolerance Interval	0.40	No statistically significant increases relative to background data
Total Organic Carbon	Tolerance Interval	0.47	No statistically significant increases relative to background data
Total Organic Halides	Tolerance Interval	0.38	No statistically significant increases relative to background data

CV: coefficient of variation

Exhibit 8. Summary of Parameters Identified for Statistical Analysis and the Test Results—URGA

Parameter	Performed Test	CV Normality Test	Results of Tolerance Interval Test Conducted
Aluminum	Tolerance Interval	0.38	No statistically significant increases relative to background data
Boron	Tolerance Interval	1.45	No statistically significant increases relative to background data
Calcium	Tolerance Interval	0.17	Statistically significant increase relative to background data in MW372
Chloride	Tolerance Interval	0.23	No statistically significant increases relative to background data
Cobalt	Tolerance Interval	2.44	No statistically significant increases relative to background data
Conductivity	Tolerance Interval	0.28	Statistically significant increase relative to background data in MW372
Dissolved Oxygen	Tolerance Interval	0.50	No statistically significant increases relative to background data
Dissolved Solids	Tolerance Interval	0.12	Statistically significant increase relative to background data in MW372
Iodide	Tolerance Interval	0.00	Statistically significant increase relative to background data in MW384
Iron	Tolerance Interval	1.17	No statistically significant increases relative to background data
Magnesium	Tolerance Interval	0.16	Statistically significant increase relative to background data in MW372
Manganese	Tolerance Interval	2.16	No statistically significant increases relative to background data
Molybdenum	Tolerance Interval	1.26	No statistically significant increases relative to background data
Nickel	Tolerance Interval	1.79	No statistically significant increases relative to background data
Oxidation-Reduction Potential	Tolerance Interval	0.48	Statistically significant increases relative to background data in MW222, MW224, MW369, and MW391
pH	Tolerance Interval	0.05	No statistically significant deviations relative to background data
Potassium	Tolerance Interval	1.40	No statistically significant increases relative to background data

Parameter	Performed Test	CV Normality Test	Results of Tolerance Interval Test Conducted
Sodium	Tolerance Interval	0.24	Statistically significant increase relative to background data in MW372
Sulfate	Tolerance Interval	0.25	Statistically significant increases relative to background data in MW372, MW384, MW387, and MW391
Technetium-99	Tolerance Interval	0.99	Statistically significant increases relative to background data in MW372, MW384, and MW387
Total Organic Carbon	Tolerance Interval	0.49	No statistically significant increases relative to background data
Total Organic Halides	Tolerance Interval	0.59	No statistically significant increases relative to background data

CV: coefficient of variation

Exhibit 9. Summary of Parameters Identified for Statistical Analysis and the Test Results—LRGA

Parameter	Performed Test	CV Normality Test	Results of Tolerance Interval Test Conducted
Boron	Tolerance Interval	1.24	No statistically significant increases relative to background data
Calcium	Tolerance Interval	0.50	Statistically significant increase relative to background data in MW373
Chloride	Tolerance Interval	0.23	No statistically significant increases relative to background data
Conductivity	Tolerance Interval	0.14	Statistically significant increase relative to background data in MW373
Dissolved Oxygen	Tolerance Interval	0.52	No statistically significant increases relative to background data
Dissolved Solids	Tolerance Interval	0.16	Statistically significant increase relative to background data in MW373
Iron	Tolerance Interval	1.29	No statistically significant increases relative to background data
Magnesium	Tolerance Interval	0.52	Statistically significant increase relative to background data in MW373
Manganese	Tolerance Interval	1.49	No statistically significant increases relative to background data
Oxidation-Reduction Potential	Tolerance Interval	0.33	Statistically significant increases relative to background data in MW370, MW373, MW385, MW388, and MW392
pH	Tolerance Interval	0.04	No statistically significant deviations relative to background data
Potassium	Tolerance Interval	0.40	Statistically significant increase relative to background data in MW373
Sodium	Tolerance Interval	0.47	No statistically significant increases relative to background data
Sulfate	Tolerance Interval	0.20	Statistically significant increases relative to background data in MW370, MW373, MW385, and MW388
Technetium-99	Tolerance Interval	0.81	Statistically significant increases relative to background data in MW373, MW385, and MW388
Total Organic Carbon	Tolerance Interval	0.55	No statistically significant increases relative to background data

Parameter	Performed Test	CV Normality Test	Results of Tolerance Interval Test Conducted
Total Organic Halides	Tolerance Interval	0.59	No statistically significant increases relative to background data

CV: coefficient of variation

C-746-S and C-746-T Second Quarter 2013 Statistical Analysis UCRS
Calcium UNITS: mg/L

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is statistically significant evidence of elevated concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW396
Date Collected	Result
8/13/2002	38.400
9/16/2002	42.900
10/16/2002	40.200
1/13/2003	46.700
4/8/2003	49.800
7/16/2003	43.300
10/14/2003	49.700
1/14/2004	23.600

Statistics on Background Data

X= 41.825
S= 8.445
CV= 0.202
K factor = 3.188**
TL= 68.748

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

Second Quarter 2013 Data Collected in April 2013

Well No.	Result	Gradient	Result > TL?
MW386	22.200	Sidegradient	NO
MW393	10.800	Downgradient	NO

Second Quarter 2013 Dry/Partially Dry Wells

Well No.	Gradient
MW389	Downgradient

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-S and C-746-T Second Quarter 2013 Statistical Analysis UCRS
Chloride UNITS: mg/L

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is statistically significant evidence of elevated concentration in that well.

Background Data from Upgradient Wells

Well Number: MW396

Date Collected	Result
8/13/2002	91.600
9/16/2002	98.300
10/16/2002	101.400
1/13/2003	108.300
4/8/2003	100.500
7/16/2003	102.500
10/14/2003	106.800
1/14/2004	104.400

Statistics on Background Data

X= 101.725
S= 5.245
CV= 0.052
K factor = 3.188**
TL= 118.447

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

Second Quarter 2013 Data Collected in April 2013

Well No.	Result	Gradient	Result > TL?
MW386	18.000	Sidegradient	NO
MW393	17.000	Downgradient	NO

Second Quarter 2013 Dry/Partially Dry Wells

Well No.	Gradient
MW389	Downgradient

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-S and C-746-T Second Quarter 2013 Statistical Analysis UCRS
Conductivity UNITS: umho/cm

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is statistically significant evidence of elevated concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW396
Date Collected	Result
8/13/2002	784.000
9/30/2002	871.000
10/16/2002	868.000
1/13/2003	912.000
4/8/2003	942.000
7/16/2003	910.000
10/14/2003	935.000
1/14/2004	1158.00

Statistics on Background Data

X= 922.500
S= 107.616
CV= 0.117
K factor = 3.188**
TL= 1265.579

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

Second Quarter 2013 Data Collected in April 2013

Well No.	Result	Gradient	Result > TL?
MW386	628.00	Sidegradient	NO
MW393	441.00	Downgradient	NO

Second Quarter 2013 Dry/Partially Dry Wells

Well No.	Gradient
MW389	Downgradient

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-S and C-746-T Second Quarter 2013 Statistical Analysis UCRS
Dissolved Oxygen UNITS: mg/L

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is statistically significant evidence of elevated concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW396
Date Collected	Result
8/13/2002	5.450
9/16/2002	0.400
10/16/2002	0.540
1/13/2003	0.720
4/8/2003	0.690
7/16/2003	1.100
10/14/2003	0.710
1/14/2004	1.550

Statistics on Background Data

X= 1.395
S= 1.677
CV= 1.202
K factor = 3.188**
TL= 6.743

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

Statistics on Transformed Background Data

X= -0.043
S= 0.814
CV= -18.867
K factor = 3.188**
TL= 2.553

Transformed Background Data from Upgradient Wells

Well Number:	MW396
Date Collected	LN(Result)
8/13/2002	1.696
9/16/2002	-0.916
10/16/2002	-0.616
1/13/2003	-0.329
4/8/2003	-0.371
7/16/2003	0.095
10/14/2003	-0.342
1/14/2004	0.438

Second Quarter 2013 Data Collected in April 2013

Well No.	Result	Gradient	Result > TL?
MW386	0.980	Sidegradient	N/A
MW393	3.930	Downgradient	N/A

Second Quarter 2013 Dry/Partially Dry Wells

Well No.	Gradient
MW389	Downgradient

Transformed Second Quarter 2013 Data Collected in April 2013

Well Number	LN(Result)	Result > TL?
MW386	-0.020	NO
MW393	1.369	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-S and C-746-T Second Quarter 2013 Statistical Analysis UCRS
Dissolved Solids UNITS: mg/L

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is statistically significant evidence of elevated concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW396
Date Collected	Result
8/13/2002	502.000
9/16/2002	506.000
10/16/2002	543.000
1/13/2003	521.000
4/8/2003	504.000
7/16/2003	532.000
10/14/2003	490.000
1/14/2004	805.000

Statistics on Background Data

X= 550.375
S= 104.330
CV= 0.190
K factor = 3.188**
TL= 882.980

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

Second Quarter 2013 Data Collected in April 2013

Well No.	Result	Gradient	Result > TL?
MW386	386.00	Sidegradient	NO
MW393	294.00	Downgradient	NO

Second Quarter 2013 Dry/Partially Dry Wells

Well No.	Gradient
MW389	Downgradient

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-S and C-746-T Second Quarter 2013 Statistical Analysis UCRS
Iron UNITS: mg/L

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is statistically significant evidence of elevated concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW396
Date Collected	Result
8/13/2002	1.800
9/16/2002	9.530
10/16/2002	7.430
1/13/2003	9.930
4/8/2003	10.200
7/16/2003	9.160
10/14/2003	11.900
1/14/2004	2.420

Statistics on Background Data

X= 7.796
S= 3.723
CV= 0.478
K factor = 3.188**
TL= 19.666

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

Second Quarter 2013 Data Collected in April 2013

Well No.	Result	Gradient	Result > TL?
MW386	1.090	Sidegradient	NO
MW393	3.980	Downgradient	NO

Second Quarter 2013 Dry/Partially Dry Wells

Well No.	Gradient
MW389	Downgradient

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-S and C-746-T Second Quarter 2013 Statistical Analysis UCRS
Magnesium UNITS: mg/L

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is statistically significant evidence of elevated concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW396
Date Collected	Result
8/13/2002	15.500
9/16/2002	17.300
10/16/2002	17.800
1/13/2003	19.200
4/8/2003	17.800
7/16/2003	17.800
10/14/2003	20.200
1/14/2004	9.410

Statistics on Background Data

X= 16.876
S= 3.313
CV= 0.196
K factor = 3.188**
TL= 27.438

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

Second Quarter 2013 Data Collected in April 2013

Well No.	Result	Gradient	Result > TL?
MW386	9.260	Sidegradient	NO
MW393	3.080	Downgradient	NO

Second Quarter 2013 Dry/Partially Dry Wells

Well No.	Gradient
MW389	Downgradient

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-S and C-746-T Second Quarter 2013 Statistical Analysis UCRS
Manganese UNITS: mg/L

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is statistically significant evidence of elevated concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW396
Date Collected	Result
8/13/2002	0.570
9/16/2002	0.647
10/16/2002	0.880
1/13/2003	1.132
4/8/2003	0.965
7/16/2003	0.983
10/14/2003	0.984
1/14/2004	0.031

Statistics on Background Data

X= 0.774
S= 0.353
CV= 0.456
K factor = 3.188**
TL= 1.900

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

Second Quarter 2013 Data Collected in April 2013

Well No.	Result	Gradient	Result > TL?
MW386	0.083	Sidegradient	NO
MW393	0.049	Downgradient	NO

Second Quarter 2013 Dry/Partially Dry Wells

Well No.	Gradient
MW389	Downgradient

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-S and C-746-T Second Quarter 2013 Statistical Analysis UCRS
Oxidation-Reduction Potential UNITS: mV

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is statistically significant evidence of elevated concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW396
Date Collected	Result
8/13/2002	60.000
4/8/2003	71.000
7/16/2003	-56.000
10/14/2003	-54.000
1/14/2004	-22.000
4/12/2004	-6.000
7/20/2004	-3.000
10/12/2004	114.000

Statistics on Background Data

X= 13.000
S= 61.952
CV= 4.766
K factor = 3.188**
TL= 210.502

Because CV 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 = 3.188**
TL# = 4.736

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:	MW396
Date Collected	LN(Result)
8/13/2002	4.094
4/8/2003	4.263
7/16/2003	#Func!
10/14/2003	#Func!
1/14/2004	#Func!
4/12/2004	#Func!
7/20/2004	#Func!
10/12/2004	4.736

Second Quarter 2013 Data Collected in April 2013

Well No.	Result	Gradient	Result > TL?
MW386	392.000	Sidegradient	N/A
MW393	142.000	Downgradient	N/A

Second Quarter 2013 Dry/Partially Dry Wells

Well No.	Gradient
MW389	Downgradient

Transformed Second Quarter 2013 Data Collected in April 2013

Well Number	LN(Result)	Result >TL?
MW386	5.971	**YES**
MW393	4.956	**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.

MW386

MW393

CV Coefficient of Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
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-S and C-746-T Second Quarter 2013 Statistical Analysis UCRS
pH UNITS: Std Unit

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

Background Data from Upgradient Wells

Well Number:	MW396
Date Collected	Result
8/13/2002	6.170
9/16/2002	6.400
10/16/2002	5.900
1/13/2003	6.400
4/8/2003	6.650
7/16/2003	6.400
10/14/2003	6.710
1/14/2004	7.050

Statistics on Background Data

X= 6.460
S= 0.350
CV= 0.054
K factor = 3.736**
TL= 7.766
LL= 5.154

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

Second Quarter 2013 Data Collected in April 2013

Well No.	Result	Gradient	Result >TL?	Result <LL?
MW386	7.030	Sidegradient	NO	NO
MW393	6.080	Downgradient	NO	NO

Second Quarter 2013 Dry/Partially Dry Wells

Well No.	Gradient
MW389	Downgradient

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-S and C-746-T Second Quarter 2013 Statistical Analysis UCRS
Potassium UNITS: mg/L

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is statistically significant evidence of elevated concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW396
Date Collected	Result
8/13/2002	2.000
9/16/2002	2.000
10/16/2002	0.978
1/13/2003	1.080
4/8/2003	1.120
7/16/2003	1.380
10/14/2003	1.240
1/14/2004	1.490

Statistics on Background Data

X= 1.411
S= 0.399
CV= 0.282
K factor = 3.188**
TL= 2.682

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

Second Quarter 2013 Data Collected in April 2013

Well No.	Result	Gradient	Result > TL?
MW386	0.356	Sidegradient	NO
MW393	0.470	Downgradient	NO

Second Quarter 2013 Dry/Partially Dry Wells

Well No.	Gradient
MW389	Downgradient

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-S and C-746-T Second Quarter 2013 Statistical Analysis UCRS
Sodium UNITS: mg/L

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is statistically significant evidence of elevated concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW396
Date Collected	Result
8/13/2002	115.000
9/16/2002	116.000
10/16/2002	117.000
1/13/2003	122.000
4/8/2003	106.000
7/16/2003	117.000
10/14/2003	132.000
1/14/2004	29.600

Statistics on Background Data

X= 106.825
S= 32.041
CV= 0.300
K factor = 3.188**
TL= 208.973

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

Second Quarter 2013 Data Collected in April 2013

Well No.	Result	Gradient	Result > TL?
MW386	101.00	Sidegradient	NO
MW393	76.300	Downgradient	NO

Second Quarter 2013 Dry/Partially Dry Wells

Well No.	Gradient
MW389	Downgradient

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-S and C-746-T Second Quarter 2013 Statistical Analysis UCRS
Sulfate UNITS: mg/L

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is statistically significant evidence of elevated concentration in that well.

Background Data from Upgradient Wells

Well Number: MW396

Date Collected	Result
8/13/2002	41.900
9/16/2002	26.300
10/16/2002	20.600
1/13/2003	16.600
4/8/2003	23.900
7/16/2003	18.800
10/14/2003	12.900
1/14/2004	18.700

Statistics on Background Data

X= 22.463
S= 8.876
CV= 0.395
K factor = 3.188**
TL= 50.759

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

Second Quarter 2013 Data Collected in April 2013

Well No.	Result	Gradient	Result > TL?
MW386	50.000	Sidegradient	NO
MW393	14.000	Downgradient	NO

Second Quarter 2013 Dry/Partially Dry Wells

Well No.	Gradient
MW389	Downgradient

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-S and C-746-T Second Quarter 2013 Statistical Analysis UCRS
Total Organic Carbon (TOC) UNITS: mg/L

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is statistically significant evidence of elevated concentration in that well.

Background Data from Upgradient Wells

Well Number: MW396

Date Collected	Result
8/13/2002	19.000
9/16/2002	14.600
10/16/2002	10.400
1/13/2003	4.400
4/8/2003	7.000
7/16/2003	7.300
10/14/2003	9.100
1/14/2004	8.100

Statistics on Background Data

X= 9.988
S= 4.696
CV= 0.470
K factor = 3.188**
TL= 24.959

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

Second Quarter 2013 Data Collected in April 2013

Well No.	Result	Gradient	Result > TL?
MW386	10.400	Sidegradient	NO
MW393	4.000	Downgradient	NO

Second Quarter 2013 Dry/Partially Dry Wells

Well No.	Gradient
MW389	Downgradient

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-S and C-746-T Second Quarter 2013 Statistical Analysis UCRS
Total Organic Halides (TOX) UNITS: ug/L

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is statistically significant evidence of elevated concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW396
Date Collected	Result
8/13/2002	193.000
9/16/2002	190.000
10/16/2002	221.000
1/13/2003	106.000
4/8/2003	77.800
7/16/2003	122.000
10/14/2003	86.400
1/14/2004	145.000

Statistics on Background Data

X= 142.650
S= 53.533
CV= 0.375
K factor = 3.188**
TL= 313.314

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

Second Quarter 2013 Data Collected in April 2013

Well No.	Result	Gradient	Result > TL?
MW386	280.00	Sidegradient	NO
MW393	35.000	Downgradient	NO

Second Quarter 2013 Dry/Partially Dry Wells

Well No.	Gradient
MW389	Downgradient

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-S and C-746-T Second Quarter 2013 Statistical Analysis URGA
Aluminum UNITS: mg/L

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is statistically significant evidence of elevated concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW220
Date Collected	Result
10/14/2002	0.200
1/15/2003	0.200
4/10/2003	0.200
7/14/2003	0.200
10/13/2003	0.427
1/13/2004	0.309
4/13/2004	0.200
7/21/2004	0.202
Well Number:	MW394
Date Collected	Result
8/13/2002	0.200
9/16/2002	0.200
10/16/2002	0.200
1/13/2003	0.200
4/10/2003	0.200
7/16/2003	0.200
10/14/2003	0.200
1/13/2004	0.200

Statistics on Background Data

X= 0.221
S= 0.061
CV= 0.277
K factor = 2.523**
TL= 0.376

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

Second Quarter 2013 Data Collected in April 2013

Well No.	Result	Gradient	Result > TL?
MW221	0.200	Sidegradient	NO
MW222	0.366	Sidegradient	NO
MW223	0.200	Sidegradient	NO
MW224	0.200	Sidegradient	NO
MW369	0.201	Downgradient	NO
MW372	0.200	Downgradient	NO
MW384	0.200	Sidegradient	NO
MW387	0.200	Downgradient	NO
MW391	0.200	Downgradient	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-S and C-746-T Second Quarter 2013 Statistical Analysis URGA
Boron UNITS: mg/L

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is statistically significant evidence of elevated concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW220
Date Collected	Result
10/14/2002	0.200
1/15/2003	0.200
4/10/2003	0.200
7/14/2003	0.200
10/13/2003	0.200
1/13/2004	0.200
4/13/2004	0.200
7/21/2004	0.200
Well Number:	MW394
Date Collected	Result
8/13/2002	2.000
9/16/2002	2.000
10/16/2002	0.200
1/13/2003	0.200
4/10/2003	0.200
7/16/2003	0.200
10/14/2003	0.200
1/13/2004	0.200

Statistics on Background Data

X= 0.425
S= 0.615
CV= 1.447
K factor = 2.523**
TL= 1.976

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

Statistics on Transformed Background Data

X= -1.322
S= 0.786
CV= -0.595
K factor = 2.523**
TL= 0.663

Transformed Background Data from Upgradient Wells

Well Number:	MW220
Date Collected	LN(Result)
10/14/2002	-1.609
1/15/2003	-1.609
4/10/2003	-1.609
7/14/2003	-1.609
10/13/2003	-1.609
1/13/2004	-1.609
4/13/2004	-1.609
7/21/2004	-1.609
Well Number:	MW394
Date Collected	LN(Result)
8/13/2002	0.693
9/16/2002	0.693
10/16/2002	-1.609
1/13/2003	-1.609
4/10/2003	-1.609
7/16/2003	-1.609
10/14/2003	-1.609
1/13/2004	-1.609

Second Quarter 2013 Data Collected in April 2013

Well No.	Result	Gradient	Result > TL?
MW221	0.200	Sidegradient	N/A
MW222	0.200	Sidegradient	N/A
MW223	0.200	Sidegradient	N/A
MW224	0.200	Sidegradient	N/A
MW369	0.200	Downgradient	N/A
MW372	1.430	Downgradient	N/A
MW384	0.200	Sidegradient	N/A
MW387	0.200	Downgradient	N/A
MW391	0.200	Downgradient	N/A

Transformed Second Quarter 2013 Data Collected in April 2013

Well Number	LN(Result)	Result > TL?
MW221	-1.609	NO
MW222	-1.609	NO
MW223	-1.609	NO
MW224	-1.609	NO
MW369	-1.609	NO
MW372	0.358	NO
MW384	-1.609	NO
MW387	-1.609	NO
MW391	-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-S and C-746-T Second Quarter 2013 Statistical Analysis URGA
Calcium UNITS: mg/L

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is statistically significant evidence of elevated concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW220
Date Collected	Result
10/14/2002	23.600
1/15/2003	25.900
4/10/2003	30.400
7/14/2003	33.900
10/13/2003	21.300
1/13/2004	20.300
4/13/2004	23.800
7/21/2004	19.000
Well Number:	MW394
Date Collected	Result
8/13/2002	29.500
9/16/2002	29.900
10/16/2002	31.200
1/13/2003	30.700
4/10/2003	34.400
7/16/2003	29.600
10/14/2003	30.300
1/13/2004	28.400

Statistics on Background Data

X= 27.638
S= 4.743
CV= 0.172
K factor = 2.523**
TL= 39.604

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

Second Quarter 2013 Data Collected in April 2013

Well No.	Result	Gradient	Result > TL?
MW221	17.900	Sidegradient	NO
MW222	19.300	Sidegradient	NO
MW223	20.200	Sidegradient	NO
MW224	23.100	Sidegradient	NO
MW369	16.400	Downgradient	NO
MW372	65.900	Downgradient	**YES**
MW384	24.900	Sidegradient	NO
MW387	36.200	Downgradient	NO
MW391	26.400	Downgradient	NO

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-S and C-746-T Second Quarter 2013 Statistical Analysis URGA
Chloride UNITS: mg/L

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is statistically significant evidence of elevated concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW220
Date Collected	Result
10/14/2002	44.600
1/15/2003	43.200
4/10/2003	31.500
7/14/2003	30.800
10/13/2003	40.900
1/13/2004	40.800
4/13/2004	37.500
7/21/2004	40.800
Well Number:	MW394
Date Collected	Result
8/13/2002	60.400
9/16/2002	60.300
10/16/2002	58.000
1/13/2003	60.700
4/10/2003	62.900
7/16/2003	58.100
10/14/2003	58.200
1/13/2004	56.000

Statistics on Background Data

X= 49.044
S= 11.278
CV= 0.230
K factor = 2.523**
TL= 77.499

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

Second Quarter 2013 Data Collected in April 2013

Well No.	Result	Gradient	Result > TL?
MW221	37.000	Sidegradient	NO
MW222	35.000	Sidegradient	NO
MW223	35.000	Sidegradient	NO
MW224	28.000	Sidegradient	NO
MW369	36.000	Downgradient	NO
MW372	47.000	Downgradient	NO
MW384	38.000	Sidegradient	NO
MW387	40.000	Downgradient	NO
MW391	38.000	Downgradient	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-S and C-746-T Second Quarter 2013 Statistical Analysis URGA
Cobalt UNITS: mg/L

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is statistically significant evidence of elevated concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW220
Date Collected	Result
10/14/2002	0.004
1/15/2003	0.005
4/10/2003	0.003
7/14/2003	0.161
10/13/2003	0.023
1/13/2004	0.005
4/13/2004	0.001
7/21/2004	0.003
Well Number:	MW394
Date Collected	Result
8/13/2002	0.025
9/16/2002	0.025
10/16/2002	0.001
1/13/2003	0.001
4/10/2003	0.001
7/16/2003	0.001
10/14/2003	0.001
1/13/2004	0.001

Statistics on Background Data

X= 0.016
S= 0.040
CV= 2.440
K factor = 2.523**
TL= 0.116

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

Statistics on Transformed Background Data

X= -5.582
S= 1.573
CV= -0.282
K factor = 2.523**
TL= -1.613

Transformed Background Data from Upgradient Wells

Well Number:	MW220
Date Collected	LN(Result)
10/14/2002	-5.497
1/15/2003	-5.306
4/10/2003	-5.846
7/14/2003	-1.826
10/13/2003	-3.790
1/13/2004	-5.373
4/13/2004	-6.908
7/21/2004	-5.937
Well Number:	MW394
Date Collected	LN(Result)
8/13/2002	-3.689
9/16/2002	-3.689
10/16/2002	-6.908
1/13/2003	-6.908
4/10/2003	-6.908
7/16/2003	-6.908
10/14/2003	-6.908
1/13/2004	-6.908

Second Quarter 2013 Data Collected in April 2013

Well No.	Result	Gradient	Result > TL?
MW221	0.001	Sidegradient	N/A
MW222	0.004	Sidegradient	N/A
MW223	0.003	Sidegradient	N/A
MW224	0.001	Sidegradient	N/A
MW369	0.023	Downgradient	N/A
MW372	0.001	Downgradient	N/A
MW384	0.001	Sidegradient	N/A
MW387	0.001	Downgradient	N/A
MW391	0.001	Downgradient	N/A

Transformed Second Quarter 2013 Data Collected in April 2013

Well Number	LN(Result)	Result > TL?
MW221	-6.908	NO
MW222	-5.589	NO
MW223	-5.793	NO
MW224	-6.908	NO
MW369	-3.755	NO
MW372	-6.908	NO
MW384	-6.908	NO
MW387	-6.908	NO
MW391	-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-S and C-746-T Second Quarter 2013 Statistical Analysis URGA
Conductivity UNITS: umho/cm

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is statistically significant evidence of elevated concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW220
Date Collected	Result
10/14/2002	368.000
1/15/2003	433.200
4/10/2003	489.000
7/14/2003	430.000
10/13/2003	346.000
1/13/2004	365.000
4/13/2004	416.000
7/21/2004	353.000
Well Number:	MW394
Date Collected	Result
8/13/2002	406.000
9/16/2002	418.000
10/16/2002	411.000
1/13/2003	422.000
4/10/2003	420.000
7/16/2003	438.000
10/14/2003	3.910
1/13/2004	395.000

Statistics on Background Data

X= 382.132
S= 107.134
CV= 0.280
K factor = 2.523**
TL= 652.432

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

Second Quarter 2013 Data Collected in April 2013

Well No.	Result	Gradient	Result > TL?
MW221	390.00	Sidegradient	NO
MW222	363.00	Sidegradient	NO
MW223	421.00	Sidegradient	NO
MW224	448.00	Sidegradient	NO
MW369	392.00	Downgradient	NO
MW372	879.00	Downgradient	**YES**
MW384	444.00	Sidegradient	NO
MW387	536.00	Downgradient	NO
MW391	408.00	Downgradient	NO

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-S and C-746-T Second Quarter 2013 Statistical Analysis URGA
Dissolved Oxygen UNITS: mg/L

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is statistically significant evidence of elevated concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW220
Date Collected	Result
10/14/2002	6.790
1/15/2003	7.250
4/10/2003	3.600
7/14/2003	0.940
10/13/2003	1.650
1/13/2004	3.480
4/13/2004	1.050
7/21/2004	4.460
Well Number:	MW394
Date Collected	Result
8/13/2002	6.090
9/16/2002	3.850
10/16/2002	5.110
1/13/2003	3.830
4/10/2003	4.150
7/16/2003	1.830
10/14/2003	3.330
1/13/2004	3.140

Statistics on Background Data

X= 3.784
S= 1.887
CV= 0.499
K factor = 2.523**
TL= 8.545

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

Second Quarter 2013 Data Collected in April 2013

Well No.	Result	Gradient	Result > TL?
MW221	4.580	Sidegradient	NO
MW222	3.070	Sidegradient	NO
MW223	3.830	Sidegradient	NO
MW224	2.140	Sidegradient	NO
MW369	1.190	Downgradient	NO
MW372	0.760	Downgradient	NO
MW384	4.090	Sidegradient	NO
MW387	3.700	Downgradient	NO
MW391	2.520	Downgradient	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-S and C-746-T Second Quarter 2013 Statistical Analysis URGA
Dissolved Solids UNITS: mg/L

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is statistically significant evidence of elevated concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW220
Date Collected	Result
10/14/2002	208.000
1/15/2003	257.000
4/10/2003	288.000
7/14/2003	262.000
10/13/2003	197.000
1/13/2004	198.000
4/13/2004	245.000
7/21/2004	204.000
Well Number:	MW394
Date Collected	Result
8/13/2002	247.000
9/16/2002	259.000
10/16/2002	201.000
1/13/2003	228.000
4/10/2003	249.000
7/16/2003	240.000
10/14/2003	230.000
1/13/2004	210.000

Statistics on Background Data

X= 232.688
S= 27.490
CV= 0.118
K factor = 2.523**
TL= 302.045

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

Second Quarter 2013 Data Collected in April 2013

Well No.	Result	Gradient	Result > TL?
MW221	202.00	Sidegradient	NO
MW222	203.00	Sidegradient	NO
MW223	206.00	Sidegradient	NO
MW224	260.00	Sidegradient	NO
MW369	237.00	Downgradient	NO
MW372	526.00	Downgradient	**YES**
MW384	225.00	Sidegradient	NO
MW387	291.00	Downgradient	NO
MW391	223.00	Downgradient	NO

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-S and C-746-T Second Quarter 2013 Statistical Analysis URGA
Iodide 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:	MW220
Date Collected	Result
10/14/2002	2.000
1/15/2003	2.000
4/10/2003	2.000
7/14/2003	2.000
10/13/2003	2.000
1/13/2004	2.000
4/13/2004	2.000
7/21/2004	2.000

Well Number:	MW394
Date Collected	Result
8/13/2002	2.000
9/16/2002	2.000
10/16/2002	2.000
1/13/2003	2.000
4/10/2003	2.000
7/16/2003	2.000
10/14/2003	2.000
1/13/2004	2.000

Statistics on Background Data

X= 2.000
S= 0.000
CV= 0.000
K factor = 2.523**
TL= 2.000

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

Second Quarter 2013 Data Collected in April 2013

Well No.	Result	Gradient	Result > TL?
MW221	2.000	Sidegradient	NO
MW222	2.000	Sidegradient	NO
MW223	2.000	Sidegradient	NO
MW224	2.000	Sidegradient	NO
MW369	2.000	Downgradient	NO
MW372	2.000	Downgradient	NO
MW384	2.600	Sidegradient	**YES**
MW387	2.000	Downgradient	NO
MW391	2.000	Downgradient	NO

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.

MW384

CV Coefficient of Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
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-S and C-746-T Second Quarter 2013 Statistical Analysis URGA
Iron UNITS: mg/L

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is statistically significant evidence of elevated concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW220
Date Collected	Result
10/14/2002	0.200
1/15/2003	0.200
4/10/2003	0.429
7/14/2003	4.330
10/13/2003	1.810
1/13/2004	0.793
4/13/2004	0.130
7/21/2004	0.382
Well Number:	MW394
Date Collected	Result
8/13/2002	1.340
9/16/2002	0.328
10/16/2002	1.380
1/13/2003	1.300
4/10/2003	0.494
7/16/2003	0.620
10/14/2003	0.370
1/13/2004	0.251

Statistics on Background Data

X= 0.897
S= 1.050
CV= 1.170
K factor = 2.523**
TL= 3.545

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

Statistics on Transformed Background Data

X= -0.565
S= 0.951
CV= -1.683
K factor = 2.523**
TL= 1.834

Transformed Background Data from Upgradient Wells

Well Number:	MW220
Date Collected	LN(Result)
10/14/2002	-1.609
1/15/2003	-1.609
4/10/2003	-0.846
7/14/2003	1.466
10/13/2003	0.593
1/13/2004	-0.232
4/13/2004	-2.040
7/21/2004	-0.962
Well Number:	MW394
Date Collected	LN(Result)
8/13/2002	0.293
9/16/2002	-1.115
10/16/2002	0.322
1/13/2003	0.262
4/10/2003	-0.705
7/16/2003	-0.478
10/14/2003	-0.994
1/13/2004	-1.382

Second Quarter 2013 Data Collected in April 2013

Well No.	Result	Gradient	Result > TL?
MW221	0.100	Sidegradient	N/A
MW222	0.559	Sidegradient	N/A
MW223	0.100	Sidegradient	N/A
MW224	0.100	Sidegradient	N/A
MW369	0.725	Downgradient	N/A
MW372	1.880	Downgradient	N/A
MW384	0.628	Sidegradient	N/A
MW387	0.100	Downgradient	N/A
MW391	0.115	Downgradient	N/A

Transformed Second Quarter 2013 Data Collected in April 2013

Well Number	LN(Result)	Result > TL?
MW221	-2.303	NO
MW222	-0.582	NO
MW223	-2.303	NO
MW224	-2.303	NO
MW369	-0.322	NO
MW372	0.631	NO
MW384	-0.465	NO
MW387	-2.303	NO
MW391	-2.163	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-S and C-746-T Second Quarter 2013 Statistical Analysis URGA
Magnesium UNITS: mg/L

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is statistically significant evidence of elevated concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW220
Date Collected	Result
10/14/2002	9.160
1/15/2003	10.000
4/10/2003	10.800
7/14/2003	14.700
10/13/2003	9.030
1/13/2004	8.490
4/13/2004	9.700
7/21/2004	8.060
Well Number:	MW394
Date Collected	Result
8/13/2002	11.800
9/16/2002	12.100
10/16/2002	11.300
1/13/2003	10.300
4/10/2003	11.700
7/16/2003	12.000
10/14/2003	12.200
1/13/2004	11.400

Statistics on Background Data

X= 10.796
S= 1.703
CV= 0.158
K factor = 2.523**
TL= 15.092

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

Second Quarter 2013 Data Collected in April 2013

Well No.	Result	Gradient	Result > TL?
MW221	8.320	Sidegradient	NO
MW222	8.150	Sidegradient	NO
MW223	8.830	Sidegradient	NO
MW224	9.610	Sidegradient	NO
MW369	6.380	Downgradient	NO
MW372	26.000	Downgradient	**YES**
MW384	9.470	Sidegradient	NO
MW387	14.400	Downgradient	NO
MW391	10.300	Downgradient	NO

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-S and C-746-T Second Quarter 2013 Statistical Analysis URGA
Manganese UNITS: mg/L

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is statistically significant evidence of elevated concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW220
Date Collected	Result
10/14/2002	0.031
1/15/2003	0.029
4/10/2003	0.014
7/14/2003	2.540
10/13/2003	0.378
1/13/2004	0.159
4/13/2004	0.007
7/21/2004	0.084
Well Number:	MW394
Date Collected	Result
8/13/2002	0.542
9/16/2002	0.155
10/16/2002	0.103
1/13/2003	0.128
4/10/2003	0.005
7/16/2003	0.272
10/14/2003	0.080
1/13/2004	0.066

Statistics on Background Data

X= 0.287
S= 0.619
CV= 2.156
K factor = 2.523**
TL= 1.848

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

Statistics on Transformed Background Data

X= -2.455
S= 1.619
CV= -0.659
K factor = 2.523**
TL= 1.630

Transformed Background Data from Upgradient Wells

Well Number:	MW220
Date Collected	LN(Result)
10/14/2002	-3.487
1/15/2003	-3.537
4/10/2003	-4.290
7/14/2003	0.932
10/13/2003	-0.973
1/13/2004	-1.839
4/13/2004	-4.952
7/21/2004	-2.476
Well Number:	MW394
Date Collected	LN(Result)
8/13/2002	-0.612
9/16/2002	-1.864
10/16/2002	-2.273
1/13/2003	-2.056
4/10/2003	-5.298
7/16/2003	-1.302
10/14/2003	-2.532
1/13/2004	-2.721

Second Quarter 2013 Data Collected in April 2013

Well No.	Result	Gradient	Result > TL?
MW221	0.005	Sidegradient	N/A
MW222	0.070	Sidegradient	N/A
MW223	0.050	Sidegradient	N/A
MW224	0.015	Sidegradient	N/A
MW369	0.218	Downgradient	N/A
MW372	0.061	Downgradient	N/A
MW384	0.014	Sidegradient	N/A
MW387	0.005	Downgradient	N/A
MW391	0.005	Downgradient	N/A

Transformed Second Quarter 2013 Data Collected in April 2013

Well Number	LN(Result)	Result > TL?
MW221	-5.298	NO
MW222	-2.661	NO
MW223	-2.998	NO
MW224	-4.180	NO
MW369	-1.523	NO
MW372	-2.794	NO
MW384	-4.241	NO
MW387	-5.298	NO
MW391	-5.298	NO

Conclusion of Statistical Analysis on Transformed Data

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

CV Coefficient of Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5
TL Upper Tolerance Limit, TL = X + (K * S)
X Mean, X = (sum of background results)/(count of background results)
** Read from Table 5, Appendix B of *Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,* Interim Guidance, EPA, 1989, based on total number of background results

C-746-S and C-746-T Second Quarter 2013 Statistical Analysis URGA
Molybdenum UNITS: mg/L

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is statistically significant evidence of elevated concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW220
Date Collected	Result
10/14/2002	0.006
1/15/2003	0.010
4/10/2003	0.011
7/14/2003	0.002
10/13/2003	0.006
1/13/2004	0.006
4/13/2004	0.001
7/21/2004	0.004
Well Number:	MW394
Date Collected	Result
8/13/2002	0.025
9/16/2002	0.025
10/16/2002	0.001
1/13/2003	0.001
4/10/2003	0.001
7/16/2003	0.001
10/14/2003	0.001
1/13/2004	0.001

Statistics on Background Data

X= 0.006
S= 0.008
CV= 1.261
K factor = 2.523**
TL= 0.026

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

Statistics on Transformed Background Data

X= -5.747
S= 1.205
CV= -0.210
K factor = 2.523**
TL= -2.708

Transformed Background Data from Upgradient Wells

Well Number:	MW220
Date Collected	LN(Result)
10/14/2002	-5.189
1/15/2003	-4.622
4/10/2003	-4.519
7/14/2003	-6.012
10/13/2003	-5.174
1/13/2004	-5.164
4/13/2004	-6.908
7/21/2004	-5.542
Well Number:	MW394
Date Collected	LN(Result)
8/13/2002	-3.689
9/16/2002	-3.689
10/16/2002	-6.908
1/13/2003	-6.908
4/10/2003	-6.908
7/16/2003	-6.908
10/14/2003	-6.908
1/13/2004	-6.908

Second Quarter 2013 Data Collected in April 2013

Well No.	Result	Gradient	Result > TL?
MW221	0.004	Sidegradient	N/A
MW222	0.001	Sidegradient	N/A
MW223	0.002	Sidegradient	N/A
MW224	0.001	Sidegradient	N/A
MW369	0.001	Downgradient	N/A
MW372	0.001	Downgradient	N/A
MW384	0.001	Sidegradient	N/A
MW387	0.001	Downgradient	N/A
MW391	0.001	Downgradient	N/A

Transformed Second Quarter 2013 Data Collected in April 2013

Well Number	LN(Result)	Result > TL?
MW221	-5.573	NO
MW222	-6.908	NO
MW223	-6.110	NO
MW224	-6.908	NO
MW369	-6.908	NO
MW372	-6.908	NO
MW384	-6.908	NO
MW387	-6.908	NO
MW391	-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-S and C-746-T Second Quarter 2013 Statistical Analysis URGA
Nickel UNITS: mg/L

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is statistically significant evidence of elevated concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW220
Date Collected	Result
10/14/2002	0.418
1/15/2003	0.738
4/10/2003	0.544
7/14/2003	0.106
10/13/2003	0.053
1/13/2004	0.021
4/13/2004	0.005
7/21/2004	0.019
Well Number:	MW394
Date Collected	Result
8/13/2002	0.050
9/16/2002	0.050
10/16/2002	0.005
1/13/2003	0.005
4/10/2003	0.005
7/16/2003	0.005
10/14/2003	0.005
1/13/2004	0.005

Statistics on Background Data

X= 0.127
S= 0.228
CV= 1.790
K factor = 2.523**
TL= 0.701

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

Statistics on Transformed Background Data

X= -3.617
S= 1.837
CV= -0.508
K factor = 2.523**
TL= 1.019

Transformed Background Data from Upgradient Wells

Well Number:	MW220
Date Collected	LN(Result)
10/14/2002	-0.872
1/15/2003	-0.304
4/10/2003	-0.609
7/14/2003	-2.244
10/13/2003	-2.939
1/13/2004	-3.868
4/13/2004	-5.298
7/21/2004	-3.953
Well Number:	MW394
Date Collected	LN(Result)
8/13/2002	-2.996
9/16/2002	-2.996
10/16/2002	-5.298
1/13/2003	-5.298
4/10/2003	-5.298
7/16/2003	-5.298
10/14/2003	-5.298
1/13/2004	-5.298

Second Quarter 2013 Data Collected in April 2013

Well No.	Result	Gradient	Result > TL?
MW221	0.070	Sidegradient	N/A
MW222	0.181	Sidegradient	N/A
MW223	0.332	Sidegradient	N/A
MW224	0.018	Sidegradient	N/A
MW369	0.007	Downgradient	N/A
MW372	0.005	Downgradient	N/A
MW384	0.005	Sidegradient	N/A
MW387	0.005	Downgradient	N/A
MW391	0.005	Downgradient	N/A

Transformed Second Quarter 2013 Data Collected in April 2013

Well Number	LN(Result)	Result > TL?
MW221	-2.664	NO
MW222	-1.709	NO
MW223	-1.103	NO
MW224	-4.023	NO
MW369	-4.953	NO
MW372	-5.298	NO
MW384	-5.298	NO
MW387	-5.298	NO
MW391	-5.298	NO

Conclusion of Statistical Analysis on Transformed Data

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

CV Coefficient of Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5
TL Upper Tolerance Limit, TL = X + (K * S)
X Mean, X = (sum of background results)/(count of background results)
** Read from Table 5, Appendix B of *Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,* Interim Guidance, EPA, 1989, based on total number of background results

C-746-S and C-746-T Second Quarter 2013 Statistical Analysis URGA
Oxidation-Reduction Potential UNITS: mV

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is statistically significant evidence of elevated concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW220
Date Collected	Result
10/14/2002	205.000
1/15/2003	1.950
4/10/2003	203.000
7/14/2003	30.000
10/13/2003	107.000
1/13/2004	295.000
4/13/2004	190.000
7/21/2004	319.000
Well Number:	MW394
Date Collected	Result
8/13/2002	90.000
9/16/2002	240.000
10/16/2002	185.000
1/13/2003	220.000
4/10/2003	196.000
7/16/2003	172.000
10/14/2003	175.000
1/13/2004	249.000

Statistics on Background Data

X= 179.872
S= 86.318
CV= 0.480
K factor = 2.523**
TL= 397.652

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

Second Quarter 2013 Data Collected in April 2013

Well No.	Result	Gradient	Result > TL?
MW221	373.00	Sidegradient	NO
MW222	663.00	Sidegradient	**YES**
MW223	382.00	Sidegradient	NO
MW224	483.00	Sidegradient	**YES**
MW369	580.00	Downgradient	**YES**
MW372	28.000	Downgradient	NO
MW384	339.00	Sidegradient	NO
MW387	381.00	Downgradient	NO
MW391	602.00	Downgradient	**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.

MW222

MW224

MW369

CV Coefficient of Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5
TL Upper Tolerance Limit, TL = X + (K * S)
X Mean, X = (sum of background results)/(count of background results)
** Read from Table 5, Appendix B of *Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,* Interim Guidance, EPA, 1989, based on total number of background results

C-746-S and C-746-T Second Quarter 2013 Statistical Analysis	URGA
Oxidation-Reduction Potential (Continued)	UNITS: mV

MW391

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

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-S and C-746-T Second Quarter 2013 Statistical Analysis URGA
pH UNITS: Std Unit

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

Background Data from Upgradient Wells

Well Number:	MW220
Date Collected	Result
10/14/2002	6.040
1/15/2003	6.310
4/10/2003	6.500
7/14/2003	6.300
10/13/2003	6.340
1/13/2004	6.330
4/13/2004	6.300
7/21/2004	5.900
Well Number:	MW394
Date Collected	Result
8/13/2002	5.800
9/30/2002	5.930
10/16/2002	5.420
1/13/2003	6.000
4/10/2003	6.040
7/16/2003	6.200
10/14/2003	6.400
1/13/2004	6.390

Statistics on Background Data

X= 6.138
S= 0.282
CV= 0.046
K factor = 2.904**
TL= 6.957
LL= 5.318

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

Second Quarter 2013 Data Collected in April 2013

Well No.	Result	Gradient	Result >TL?	Result <LL?
MW221	6.420	Sidegradient	NO	NO
MW222	6.340	Sidegradient	NO	NO
MW223	6.060	Sidegradient	NO	NO
MW224	6.290	Sidegradient	NO	NO
MW369	6.320	Downgradient	NO	NO
MW372	6.240	Downgradient	NO	NO
MW384	6.280	Sidegradient	NO	NO
MW387	6.400	Downgradient	NO	NO
MW391	6.360	Downgradient	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-S and C-746-T Second Quarter 2013 Statistical Analysis URGA
Potassium UNITS: mg/L

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is statistically significant evidence of elevated concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW220
Date Collected	Result
10/14/2002	6.700
1/15/2003	29.700
4/10/2003	24.900
7/14/2003	1.130
10/13/2003	3.430
1/13/2004	6.710
4/13/2004	19.300
7/21/2004	3.970
Well Number:	MW394
Date Collected	Result
8/13/2002	2.000
9/16/2002	2.000
10/16/2002	1.030
1/13/2003	1.100
4/10/2003	1.240
7/16/2003	1.140
10/14/2003	1.050
1/13/2004	1.070

Statistics on Background Data

X= 6.654
S= 9.310
CV= 1.399
K factor = 2.523**
TL= 30.144

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

Statistics on Transformed Background Data

X= 1.130
S= 1.208
CV= 1.069
K factor = 2.523**
TL= 4.178

Transformed Background Data from Upgradient Wells

Well Number:	MW220
Date Collected	LN(Result)
10/14/2002	1.902
1/15/2003	3.391
4/10/2003	3.215
7/14/2003	0.122
10/13/2003	1.233
1/13/2004	1.904
4/13/2004	2.960
7/21/2004	1.379
Well Number:	MW394
Date Collected	LN(Result)
8/13/2002	0.693
9/16/2002	0.693
10/16/2002	0.030
1/13/2003	0.095
4/10/2003	0.215
7/16/2003	0.131
10/14/2003	0.049
1/13/2004	0.068

Second Quarter 2013 Data Collected in April 2013

Well No.	Result	Gradient	Result > TL?
MW221	1.170	Sidegradient	N/A
MW222	0.552	Sidegradient	N/A
MW223	1.300	Sidegradient	N/A
MW224	0.875	Sidegradient	N/A
MW369	0.568	Downgradient	N/A
MW372	2.720	Downgradient	N/A
MW384	1.480	Sidegradient	N/A
MW387	1.940	Downgradient	N/A
MW391	1.530	Downgradient	N/A

Transformed Second Quarter 2013 Data Collected in April 2013

Well Number	LN(Result)	Result > TL?
MW221	0.157	NO
MW222	-0.594	NO
MW223	0.262	NO
MW224	-0.134	NO
MW369	-0.566	NO
MW372	1.001	NO
MW384	0.392	NO
MW387	0.663	NO
MW391	0.425	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-S and C-746-T Second Quarter 2013 Statistical Analysis URGA
Sodium UNITS: mg/L

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is statistically significant evidence of elevated concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW220
Date Collected	Result
10/14/2002	35.400
1/15/2003	40.600
4/10/2003	51.000
7/14/2003	58.200
10/13/2003	38.100
1/13/2004	37.000
4/13/2004	43.200
7/21/2004	33.800
Well Number:	MW394
Date Collected	Result
8/13/2002	32.900
9/16/2002	29.900
10/16/2002	29.000
1/13/2003	27.100
4/10/2003	24.800
7/16/2003	35.600
10/14/2003	33.900
1/13/2004	31.300

Statistics on Background Data

X= 36.363
S= 8.666
CV= 0.238
K factor = 2.523**
TL= 58.227

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

Second Quarter 2013 Data Collected in April 2013

Well No.	Result	Gradient	Result > TL?
MW221	35.700	Sidegradient	NO
MW222	43.500	Sidegradient	NO
MW223	39.400	Sidegradient	NO
MW224	54.300	Sidegradient	NO
MW369	52.400	Downgradient	NO
MW372	59.700	Downgradient	**YES**
MW384	47.100	Sidegradient	NO
MW387	50.000	Downgradient	NO
MW391	37.900	Downgradient	NO

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-S and C-746-T Second Quarter 2013 Statistical Analysis URGA
Sulfate UNITS: mg/L

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is statistically significant evidence of elevated concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW220
Date Collected	Result
10/14/2002	10.400
1/15/2003	9.800
4/10/2003	15.400
7/14/2003	14.900
10/13/2003	13.500
1/13/2004	10.300
4/13/2004	14.300
7/21/2004	10.500
Well Number:	MW394
Date Collected	Result
8/13/2002	11.200
9/16/2002	8.300
10/16/2002	8.000
1/13/2003	8.500
4/10/2003	7.900
7/16/2003	8.400
10/14/2003	8.200
1/13/2004	8.100

Statistics on Background Data

X= 10.481
S= 2.648
CV= 0.253
K factor = 2.523**
TL= 17.161

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

Second Quarter 2013 Data Collected in April 2013

Well No.	Result	Gradient	Result > TL?
MW221	13.000	Sidegradient	NO
MW222	11.000	Sidegradient	NO
MW223	16.000	Sidegradient	NO
MW224	14.000	Sidegradient	NO
MW369	7.500	Downgradient	NO
MW372	170.00	Downgradient	**YES**
MW384	20.000	Sidegradient	**YES**
MW387	28.000	Downgradient	**YES**
MW391	25.000	Downgradient	**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

MW384

MW387

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

MW391

CV Coefficient of Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
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-S and C-746-T Second Quarter 2013 Statistical Analysis URGA
Technetium-99 UNITS: pCi/L

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is statistically significant evidence of elevated concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW220
Date Collected	Result
10/14/2002	19.700
1/15/2003	26.100
4/10/2003	3.560
7/14/2003	0.000
10/13/2003	21.000
1/13/2004	6.320
4/13/2004	3.000
7/21/2004	14.600
Well Number:	MW394
Date Collected	Result
8/13/2002	14.000
9/16/2002	5.450
10/16/2002	2.490
1/13/2003	18.300
4/10/2003	-1.450
7/16/2003	-1.710
10/14/2003	18.300
1/13/2004	0.000

Statistics on Background Data

X= 9.354
S= 9.280
CV= 0.992
K factor = 2.523**
TL= 32.768

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

Second Quarter 2013 Data Collected in April 2013

Well No.	Result	Gradient	Result > TL?
MW221	10.300	Sidegradient	NO
MW222	0.611	Sidegradient	NO
MW223	1.390	Sidegradient	NO
MW224	3.890	Sidegradient	NO
MW369	25.500	Downgradient	NO
MW372	42.900	Downgradient	**YES**
MW384	193.00	Sidegradient	**YES**
MW387	238.00	Downgradient	**YES**
MW391	5.890	Downgradient	NO

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

MW384

MW387

CV Coefficient of Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
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-S and C-746-T Second Quarter 2013 Statistical Analysis URGA
Total Organic Carbon (TOC) UNITS: mg/L

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is statistically significant evidence of elevated concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW220
Date Collected	Result
10/14/2002	1.000
1/15/2003	1.100
4/10/2003	1.000
7/14/2003	3.300
10/13/2003	1.800
1/13/2004	1.000
4/13/2004	2.000
7/21/2004	3.100
Well Number:	MW394
Date Collected	Result
8/13/2002	1.300
9/16/2002	1.000
10/16/2002	1.000
1/13/2003	1.600
4/10/2003	1.000
7/16/2003	1.400
10/14/2003	1.300
1/13/2004	1.000

Statistics on Background Data

X= 1.494
S= 0.737
CV= 0.493
K factor = 2.523**
TL= 3.353

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

Second Quarter 2013 Data Collected in April 2013

Well No.	Result	Gradient	Result > TL?
MW221	1.000	Sidegradient	NO
MW222	1.000	Sidegradient	NO
MW223	1.000	Sidegradient	NO
MW224	1.000	Sidegradient	NO
MW369	1.700	Downgradient	NO
MW372	2.500	Downgradient	NO
MW384	1.000	Sidegradient	NO
MW387	1.000	Downgradient	NO
MW391	1.000	Downgradient	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-S and C-746-T Second Quarter 2013 Statistical Analysis URGA
Total Organic Halides (TOX) UNITS: ug/L

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is statistically significant evidence of elevated concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW220
Date Collected	Result
10/14/2002	50.000
1/15/2003	10.000
4/10/2003	10.000
7/14/2003	10.000
10/13/2003	10.000
1/13/2004	10.000
4/13/2004	10.000
7/21/2004	10.000
Well Number:	MW394
Date Collected	Result
8/13/2002	50.000
9/16/2002	672.000
10/16/2002	50.000
1/13/2003	36.100
4/10/2003	10.000
7/16/2003	42.700
10/14/2003	22.000
1/13/2004	12.800

Statistics on Background Data

X= 63.475
S= 163.135
CV= 2.570
K factor = 2.523**
TL= 475.063

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

Statistics on Transformed Background Data

X= 3.103
S= 1.145
CV= 0.369
K factor = 2.523**
TL= 5.992

Transformed Background Data from Upgradient Wells

Well Number:	MW220
Date Collected	LN(Result)
10/14/2002	3.912
1/15/2003	2.303
4/10/2003	2.303
7/14/2003	2.303
10/13/2003	2.303
1/13/2004	2.303
4/13/2004	2.303
7/21/2004	2.303
Well Number:	MW394
Date Collected	LN(Result)
8/13/2002	3.912
9/16/2002	6.510
10/16/2002	3.912
1/13/2003	3.586
4/10/2003	2.303
7/16/2003	3.754
10/14/2003	3.091
1/13/2004	2.549

Second Quarter 2013 Data Collected in April 2013

Well No.	Result	Gradient	Result > TL?
MW221	9.400	Sidegradient	N/A
MW222	16.000	Sidegradient	N/A
MW223	16.000	Sidegradient	N/A
MW224	14.000	Sidegradient	N/A
MW369	48.000	Downgradient	N/A
MW372	25.000	Downgradient	N/A
MW384	15.000	Sidegradient	N/A
MW387	20.000	Downgradient	N/A
MW391	22.000	Downgradient	N/A

Transformed Second Quarter 2013 Data Collected in April 2013

Well Number	LN(Result)	Result > TL?
MW221	2.241	NO
MW222	2.773	NO
MW223	2.773	NO
MW224	2.639	NO
MW369	3.871	NO
MW372	3.219	NO
MW384	2.708	NO
MW387	2.996	NO
MW391	3.091	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-S and C-746-T Second Quarter 2013 Statistical Analysis LRGA
Boron UNITS: mg/L

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is statistically significant evidence of elevated concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW395
Date Collected	Result
8/13/2002	2.000
9/16/2002	2.000
10/16/2002	0.200
1/13/2003	0.200
4/10/2003	0.200
7/16/2003	0.200
10/14/2003	0.200
1/13/2004	0.200
Well Number:	MW397
Date Collected	Result
8/13/2002	2.000
9/16/2002	2.000
10/17/2002	0.200
1/13/2003	0.200
4/8/2003	0.200
7/16/2003	0.200
10/14/2003	0.200
1/13/2004	0.200

Statistics on Background Data

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

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

Statistics on Transformed Background Data

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

Transformed Background Data from Upgradient Wells

Well Number:	MW395
Date Collected	LN(Result)
8/13/2002	0.693
9/16/2002	0.693
10/16/2002	-1.609
1/13/2003	-1.609
4/10/2003	-1.609
7/16/2003	-1.609
10/14/2003	-1.609
1/13/2004	-1.609
Well Number:	MW397
Date Collected	LN(Result)
8/13/2002	0.693
9/16/2002	0.693
10/17/2002	-1.609
1/13/2003	-1.609
4/8/2003	-1.609
7/16/2003	-1.609
10/14/2003	-1.609
1/13/2004	-1.609

Second Quarter 2013 Data Collected in April 2013

Well No.	Result	Gradient	Result > TL?
MW370	0.200	Downgradient	N/A
MW373	1.800	Downgradient	N/A
MW385	0.200	Sidegradient	N/A
MW388	0.200	Downgradient	N/A
MW392	0.200	Downgradient	N/A

Transformed Second Quarter 2013 Data Collected in April 2013

Well Number	LN(Result)	Result > TL?
MW370	-1.609	NO
MW373	0.588	NO
MW385	-1.609	NO
MW388	-1.609	NO
MW392	-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-S and C-746-T Second Quarter 2013 Statistical Analysis LRGA
Calcium UNITS: mg/L

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is statistically significant evidence of elevated concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW395
Date Collected	Result
8/13/2002	32.200
9/16/2002	33.000
10/16/2002	0.030
1/13/2003	32.100
4/10/2003	40.200
7/16/2003	32.400
10/14/2003	33.900
1/13/2004	31.200
Well Number:	MW397
Date Collected	Result
8/13/2002	19.400
9/16/2002	19.000
10/17/2002	0.018
1/13/2003	17.800
4/8/2003	20.300
7/16/2003	19.400
10/14/2003	19.900
1/13/2004	18.800

Statistics on Background Data

X= 23.103
S= 11.538
CV= 0.499
K factor = 2.523**
TL= 52.213

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

Second Quarter 2013 Data Collected in April 2013

Well No.	Result	Gradient	Result > TL?
MW370	28.200	Downgradient	NO
MW373	76.100	Downgradient	**YES**
MW385	26.700	Sidegradient	NO
MW388	29.200	Downgradient	NO
MW392	26.600	Downgradient	NO

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-S and C-746-T Second Quarter 2013 Statistical Analysis LRGA
Chloride UNITS: mg/L

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is statistically significant evidence of elevated concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW395
Date Collected	Result
8/13/2002	62.200
9/16/2002	64.700
10/16/2002	62.200
1/13/2003	63.500
4/10/2003	64.100
7/16/2003	64.000
10/14/2003	63.200
1/13/2004	60.600
Well Number:	MW397
Date Collected	Result
8/13/2002	38.900
9/16/2002	39.800
10/17/2002	39.300
1/13/2003	40.500
4/8/2003	42.100
7/16/2003	42.000
10/14/2003	40.800
1/13/2004	41.600

Statistics on Background Data

X= 51.844
S= 11.652
CV= 0.225
K factor = 2.523**
TL= 81.242

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

Second Quarter 2013 Data Collected in April 2013

Well No.	Result	Gradient	Result > TL?
MW370	43.000	Downgradient	NO
MW373	47.000	Downgradient	NO
MW385	32.000	Sidegradient	NO
MW388	33.000	Downgradient	NO
MW392	47.000	Downgradient	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-S and C-746-T Second Quarter 2013 Statistical Analysis LRGA
Conductivity UNITS: umho/cm

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is statistically significant evidence of elevated concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW395
Date Collected	Result
8/13/2002	405.000
9/16/2002	401.000
10/16/2002	392.000
1/13/2003	404.000
4/10/2003	488.000
7/16/2003	450.000
10/14/2003	410.000
1/13/2004	413.000

Well Number:	MW397
Date Collected	Result
8/13/2002	322.000
9/16/2002	315.000
10/17/2002	317.000
1/13/2003	320.000
4/8/2003	390.000
7/16/2003	354.000
10/14/2003	331.000
1/13/2004	334.000

Statistics on Background Data

X= 377.875
S= 52.101
CV= 0.138
K factor = 2.523**
TL= 509.326

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

Second Quarter 2013 Data Collected in April 2013

Well No.	Result	Gradient	Result > TL?
MW370	432.00	Downgradient	NO
MW373	921.00	Downgradient	**YES**
MW385	422.00	Sidegradient	NO
MW388	453.00	Downgradient	NO
MW392	370.00	Downgradient	NO

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-S and C-746-T Second Quarter 2013 Statistical Analysis LRGA
Dissolved Oxygen UNITS: mg/L

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is statistically significant evidence of elevated concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW395
Date Collected	Result
8/13/2002	7.290
9/30/2002	4.030
10/16/2002	3.850
1/13/2003	2.360
4/10/2003	1.140
7/16/2003	1.760
10/14/2003	4.050
1/13/2004	4.260
Well Number:	MW397
Date Collected	Result
8/13/2002	11.560
9/16/2002	5.860
10/17/2002	5.940
1/13/2003	4.660
4/8/2003	3.770
7/16/2003	3.470
10/14/2003	5.340
1/13/2004	5.510

Statistics on Background Data

X= 4.678
S= 2.431
CV= 0.520
K factor = 2.523**
TL= 10.812

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

Second Quarter 2013 Data Collected in April 2013

Well No.	Result	Gradient	Result > TL?
MW370	3.250	Downgradient	NO
MW373	1.460	Downgradient	NO
MW385	3.080	Sidegradient	NO
MW388	4.590	Downgradient	NO
MW392	0.830	Downgradient	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-S and C-746-T Second Quarter 2013 Statistical Analysis LRGA
Dissolved Solids UNITS: mg/L

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is statistically significant evidence of elevated concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW395
Date Collected	Result
8/13/2002	249.000
9/16/2002	272.000
10/16/2002	255.000
1/13/2003	211.000
4/10/2003	289.000
7/16/2003	236.000
10/14/2003	224.000
1/13/2004	235.000

Well Number:	MW397
Date Collected	Result
8/13/2002	187.000
9/16/2002	197.000
10/17/2002	183.000
1/13/2003	182.000
4/8/2003	217.000
7/16/2003	196.000
10/14/2003	198.000
1/13/2004	177.000

Statistics on Background Data

X= 219.250
S= 34.107
CV= 0.156
K factor = 2.523**
TL= 305.301

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

Second Quarter 2013 Data Collected in April 2013

Well No.	Result	Gradient	Result > TL?
MW370	239.00	Downgradient	NO
MW373	585.00	Downgradient	**YES**
MW385	219.00	Sidegradient	NO
MW388	243.00	Downgradient	NO
MW392	203.00	Downgradient	NO

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-S and C-746-T Second Quarter 2013 Statistical Analysis LRGA
Iron UNITS: mg/L

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is statistically significant evidence of elevated concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW395
Date Collected	Result
8/13/2002	0.294
9/16/2002	0.200
10/16/2002	0.000
1/13/2003	1.330
4/10/2003	1.310
7/16/2003	0.200
10/14/2003	0.100
1/13/2004	0.100
Well Number:	MW397
Date Collected	Result
8/13/2002	1.580
9/16/2002	0.232
10/17/2002	0.000
1/13/2003	0.453
4/8/2003	0.200
7/16/2003	0.200
10/14/2003	0.100
1/13/2004	0.100

Statistics on Background Data

X= 0.400
S= 0.514
CV= 1.286
K factor = 2.523**
TL= 1.698

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

Statistics on Transformed Background Data

X= -2.197
S= 2.634
CV= -1.199
K factor = 2.523**
TL= 4.449

Transformed Background Data from Upgradient Wells

Well Number:	MW395
Date Collected	LN(Result)
8/13/2002	-1.224
9/16/2002	-1.609
10/16/2002	-8.517
1/13/2003	0.285
4/10/2003	0.270
7/16/2003	-1.609
10/14/2003	-2.303
1/13/2004	-2.303
Well Number:	MW397
Date Collected	LN(Result)
8/13/2002	0.457
9/16/2002	-1.461
10/17/2002	-8.517
1/13/2003	-0.792
4/8/2003	-1.609
7/16/2003	-1.609
10/14/2003	-2.303
1/13/2004	-2.303

Second Quarter 2013 Data Collected in April 2013

Well No.	Result	Gradient	Result > TL?
MW370	0.100	Downgradient	N/A
MW373	0.100	Downgradient	N/A
MW385	0.100	Sidegradient	N/A
MW388	0.100	Downgradient	N/A
MW392	0.100	Downgradient	N/A

Transformed Second Quarter 2013 Data Collected in April 2013

Well Number	LN(Result)	Result > TL?
MW370	-2.303	NO
MW373	-2.303	NO
MW385	-2.303	NO
MW388	-2.303	NO
MW392	-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-S and C-746-T Second Quarter 2013 Statistical Analysis LRGA
Magnesium UNITS: mg/L

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is statistically significant evidence of elevated concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW395
Date Collected	Result
8/13/2002	12.500
9/16/2002	13.000
10/16/2002	0.013
1/13/2003	11.200
4/10/2003	17.500
7/16/2003	12.900
10/14/2003	13.400
1/13/2004	12.400
Well Number:	MW397
Date Collected	Result
8/13/2002	7.830
9/16/2002	7.640
10/17/2002	0.007
1/13/2003	6.690
4/8/2003	7.280
7/16/2003	7.820
10/14/2003	7.940
1/13/2004	7.510

Statistics on Background Data

X= 9.102
S= 4.685
CV= 0.515
K factor = 2.523**
TL= 20.922

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

Second Quarter 2013 Data Collected in April 2013

Well No.	Result	Gradient	Result > TL?
MW370	11.500	Downgradient	NO
MW373	29.400	Downgradient	**YES**
MW385	9.130	Sidegradient	NO
MW388	11.800	Downgradient	NO
MW392	9.520	Downgradient	NO

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-S and C-746-T Second Quarter 2013 Statistical Analysis LRGA
Manganese UNITS: mg/L

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is statistically significant evidence of elevated concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW395
Date Collected	Result
8/13/2002	0.361
9/16/2002	0.028
10/16/2002	0.026
1/13/2003	0.071
4/10/2003	0.629
7/16/2003	0.297
10/14/2003	0.020
1/13/2004	0.013
Well Number:	MW397
Date Collected	Result
8/13/2002	0.466
9/16/2002	0.077
10/17/2002	0.028
1/13/2003	0.016
4/8/2003	0.041
7/16/2003	0.017
10/14/2003	0.006
1/13/2004	0.005

Statistics on Background Data

X= 0.131
S= 0.195
CV= 1.487
K factor = 2.523**
TL= 0.624

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

Statistics on Transformed Background Data

X= -3.104
S= 1.529
CV= -0.493
K factor = 2.523**
TL= 0.755

Transformed Background Data from Upgradient Wells

Well Number:	MW395
Date Collected	LN(Result)
8/13/2002	-1.019
9/16/2002	-3.576
10/16/2002	-3.650
1/13/2003	-2.641
4/10/2003	-0.464
7/16/2003	-1.214
10/14/2003	-3.922
1/13/2004	-4.374
Well Number:	MW397
Date Collected	LN(Result)
8/13/2002	-0.764
9/16/2002	-2.564
10/17/2002	-3.576
1/13/2003	-4.110
4/8/2003	-3.202
7/16/2003	-4.092
10/14/2003	-5.194
1/13/2004	-5.298

Second Quarter 2013 Data Collected in April 2013

Well No.	Result	Gradient	Result > TL?
MW370	0.005	Downgradient	N/A
MW373	0.056	Downgradient	N/A
MW385	0.005	Sidegradient	N/A
MW388	0.005	Downgradient	N/A
MW392	0.180	Downgradient	N/A

Transformed Second Quarter 2013 Data Collected in April 2013

Well Number	LN(Result)	Result > TL?
MW370	-5.298	NO
MW373	-2.886	NO
MW385	-5.298	NO
MW388	-5.298	NO
MW392	-1.715	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-S and C-746-T Second Quarter 2013 Statistical Analysis LRGA
Oxidation-Reduction Potential UNITS: mV

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is statistically significant evidence of elevated concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW395
Date Collected	Result
8/13/2002	80.000
9/16/2002	145.000
10/16/2002	125.000
1/13/2003	85.000
4/10/2003	159.000
7/16/2003	98.000
10/14/2003	138.000
1/13/2004	233.000

Well Number:	MW397
Date Collected	Result
8/13/2002	115.000
9/30/2002	140.000
10/17/2002	185.000
1/13/2003	230.000
4/8/2003	155.000
7/16/2003	188.000
10/14/2003	187.000
1/13/2004	253.000

Statistics on Background Data

X= 157.250
S= 52.376
CV= 0.333
K factor = 2.523**
TL= 289.395

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

Second Quarter 2013 Data Collected in April 2013

Well No.	Result	Gradient	Result > TL?
MW370	505.00	Downgradient	**YES**
MW373	498.00	Downgradient	**YES**
MW385	506.00	Sidegradient	**YES**
MW388	393.00	Downgradient	**YES**
MW392	757.00	Downgradient	**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.

MW370
MW373
MW385
MW388
MW392

CV Coefficient of Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
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-S and C-746-T Second Quarter 2013 Statistical Analysis LRGA
pH UNITS: Std Unit

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

Background Data from Upgradient Wells

Well Number:	MW395
Date Collected	Result
8/13/2002	5.800
9/16/2002	6.000
10/16/2002	5.470
1/13/2003	6.000
4/10/2003	6.180
7/16/2003	6.000
10/14/2003	6.310
1/13/2004	6.240
Well Number:	MW397
Date Collected	Result
8/13/2002	5.840
9/30/2002	6.000
10/17/2002	5.750
1/13/2003	6.000
4/8/2003	6.300
7/16/2003	6.200
10/14/2003	6.360
1/13/2004	6.320

Statistics on Background Data

X= 6.048
S= 0.248
CV= 0.041
K factor = 2.904**
TL= 6.767
LL= 5.329

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

Second Quarter 2013 Data Collected in April 2013

Well No.	Result	Gradient	Result >TL?	Result <LL?
MW370	6.250	Downgradient	NO	NO
MW373	6.210	Downgradient	NO	NO
MW385	6.180	Sidegradient	NO	NO
MW388	6.300	Downgradient	NO	NO
MW392	6.440	Downgradient	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-S and C-746-T Second Quarter 2013 Statistical Analysis LRGA
Potassium UNITS: mg/L

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is statistically significant evidence of elevated concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW395
Date Collected	Result
8/13/2002	2.000
9/16/2002	2.000
10/16/2002	0.001
1/13/2003	1.510
4/10/2003	1.670
7/16/2003	1.730
10/14/2003	1.700
1/13/2004	1.580
Well Number:	MW397
Date Collected	Result
8/13/2002	2.030
9/16/2002	2.000
10/17/2002	0.001
1/13/2003	1.690
4/8/2003	1.730
7/16/2003	2.000
10/14/2003	1.920
1/13/2004	1.870

Statistics on Background Data

X= 1.590
S= 0.642
CV= 0.404
K factor = 2.523**
TL= 3.208

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

Second Quarter 2013 Data Collected in April 2013

Well No.	Result	Gradient	Result > TL?
MW370	2.480	Downgradient	NO
MW373	3.290	Downgradient	**YES**
MW385	1.700	Sidegradient	NO
MW388	1.950	Downgradient	NO
MW392	1.890	Downgradient	NO

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-S and C-746-T Second Quarter 2013 Statistical Analysis LRGA
Sodium UNITS: mg/L

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is statistically significant evidence of elevated concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW395
Date Collected	Result
8/13/2002	27.000
9/16/2002	27.200
10/16/2002	0.025
1/13/2003	22.600
4/10/2003	53.900
7/16/2003	30.000
10/14/2003	29.100
1/13/2004	26.400
Well Number:	MW397
Date Collected	Result
8/13/2002	35.200
9/16/2002	34.300
10/17/2002	0.034
1/13/2003	31.300
4/8/2003	46.100
7/16/2003	38.400
10/14/2003	37.100
1/13/2004	34.300

Statistics on Background Data

X= 29.560
S= 13.894
CV= 0.470
K factor = 2.523**
TL= 64.616

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

Second Quarter 2013 Data Collected in April 2013

Well No.	Result	Gradient	Result > TL?
MW370	37.200	Downgradient	NO
MW373	64.100	Downgradient	NO
MW385	44.700	Sidegradient	NO
MW388	45.400	Downgradient	NO
MW392	33.300	Downgradient	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-S and C-746-T Second Quarter 2013 Statistical Analysis LRGA
Sulfate UNITS: mg/L

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is statistically significant evidence of elevated concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW395
Date Collected	Result
8/13/2002	10.300
9/16/2002	9.100
10/16/2002	8.800
1/13/2003	9.000
4/10/2003	8.300
7/16/2003	8.200
10/14/2003	8.300
1/13/2004	8.200
Well Number:	MW397
Date Collected	Result
8/13/2002	14.000
9/16/2002	12.800
10/17/2002	12.300
1/13/2003	12.700
4/8/2003	12.800
7/16/2003	13.100
10/14/2003	12.100
1/13/2004	12.100

Statistics on Background Data

X= 10.756
S= 2.147
CV= 0.200
K factor = 2.523**
TL= 16.173

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

Second Quarter 2013 Data Collected in April 2013

Well No.	Result	Gradient	Result > TL?
MW370	18.000	Downgradient	**YES**
MW373	200.00	Downgradient	**YES**
MW385	21.000	Sidegradient	**YES**
MW388	23.000	Downgradient	**YES**
MW392	6.700	Downgradient	NO

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.

MW370

MW373

MW385

MW388

CV Coefficient of Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
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-S and C-746-T Second Quarter 2013 Statistical Analysis LRGA
Technetium-99 UNITS: pCi/L

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is statistically significant evidence of elevated concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW395
Date Collected	Result
8/13/2002	20.800
9/16/2002	16.200
10/16/2002	8.280
1/13/2003	13.000
4/10/2003	-9.370
7/16/2003	0.826
10/14/2003	14.100
1/13/2004	0.000
Well Number:	MW397
Date Collected	Result
8/13/2002	6.060
9/16/2002	17.300
10/17/2002	25.700
1/13/2003	20.900
4/8/2003	20.100
7/16/2003	9.200
10/14/2003	10.100
1/13/2004	8.540

Statistics on Background Data

X= 11.359
S= 9.138
CV= 0.805
K factor = 2.523**
TL= 34.414

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

Second Quarter 2013 Data Collected in April 2013

Well No.	Result	Gradient	Result > TL?
MW370	12.000	Downgradient	NO
MW373	63.700	Downgradient	**YES**
MW385	170.00	Sidegradient	**YES**
MW388	113.00	Downgradient	**YES**
MW392	-7.000	Downgradient	NO

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

MW385

MW388

CV Coefficient of Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
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-S and C-746-T Second Quarter 2013 Statistical Analysis LRGA
Total Organic Carbon (TOC) UNITS: mg/L

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is statistically significant evidence of elevated concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW395
Date Collected	Result
8/13/2002	1.600
9/16/2002	1.100
10/16/2002	1.000
1/13/2003	2.000
4/10/2003	3.400
7/16/2003	2.000
10/14/2003	1.000
1/13/2004	1.000
Well Number:	MW397
Date Collected	Result
8/13/2002	1.000
9/16/2002	1.000
10/17/2002	1.000
1/13/2003	3.600
4/8/2003	1.900
7/16/2003	1.100
10/14/2003	1.000
1/13/2004	1.000

Statistics on Background Data

X= 1.544
S= 0.856
CV= 0.554
K factor = 2.523**
TL= 3.702

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

Second Quarter 2013 Data Collected in April 2013

Well No.	Result	Gradient	Result > TL?
MW370	1.000	Downgradient	NO
MW373	1.000	Downgradient	NO
MW385	1.000	Sidegradient	NO
MW388	1.000	Downgradient	NO
MW392	1.100	Downgradient	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-S and C-746-T Second Quarter 2013 Statistical Analysis LRGA
Total Organic Halides (TOX) UNITS: ug/L

The CV is calculated to determine if background data are normally distributed. If so, the current test well results are compared to the TL. If not, a transformation is performed on the background and test well results, then each transformed test well result is compared to the transformed TL. If the test well result exceeds the TL, that is statistically significant evidence of elevated concentration in that well.

Background Data from Upgradient Wells

Well Number:	MW395
Date Collected	Result
8/13/2002	50.000
9/16/2002	50.000
10/16/2002	50.000
1/13/2003	18.300
4/10/2003	51.200
7/16/2003	42.600
10/14/2003	12.300
1/13/2004	10.000

Well Number:	MW397
Date Collected	Result
8/13/2002	50.000
9/16/2002	50.000
10/17/2002	50.000
1/13/2003	12.000
4/8/2003	19.900
7/16/2003	17.900
10/14/2003	10.000
1/13/2004	10.000

Statistics on Background Data

X= 31.513
S= 18.609
CV= 0.591
K factor = 2.523**
TL= 78.462

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

Second Quarter 2013 Data Collected in April 2013

Well No.	Result	Gradient	Result > TL?
MW370	15.000	Downgradient	NO
MW373	40.000	Downgradient	NO
MW385	21.000	Sidegradient	NO
MW388	20.000	Downgradient	NO
MW392	43.000	Downgradient	NO

Conclusion of Statistical Analysis on Data

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

CV Coefficient of Variation, CV = S/X If CV is less than or equal to 1 assume normal distribution.
S Standard Deviation, S = [Sum ([(background result-X)^2]/[count of background results -1])]^0.5
TL Upper Tolerance Limit, TL = X + (K * S)
X Mean, X = (sum of background results)/(count of background results)
** Read from Table 5, Appendix B of *Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities,* Interim Guidance, EPA, 1989, based on total number of background results

756 Park Meadow Road
Westerville, Ohio 43081

August 2, 2013

Mr. Craig Jones
LATA Environmental Services of Kentucky, LLC
761 Veterans Avenue
Kevil, Kentucky 42053

Dear Mr. Jones:

This statement is submitted in response to your request that it be included with the completed statistical analysis that I have performed on the groundwater data for the C-746-S&T and C-746-U Landfills at the Paducah Gaseous Diffusion Plant.

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

For this project, the statistical analyses conducted on the second quarter 2013 monitoring well data collected from the C-746-S&T and C-746-U Landfills were performed in accordance with guidance provided in the U.S. Environmental Protection Agency guidance document, *EPA Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities, Interim Final Guidance* (1989). For pH, an additional lower tolerance interval was established. For pH only, the test well data was compared to both the upper and lower tolerance intervals to determine if statistically significant deviations in concentration with respect to upgradient well exist.

Sincerely,

C. Travis Debnam
LATA Project Geologist

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APPENDIX E

GROUNDWATER FLOW RATE AND DIRECTION

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GROUNDWATER
FLOW RATE AND DIRECTION

Whenever monitoring wells (MWs) are sampled, 401 *KAR* 48:300 § 11, requires determination of groundwater flow rate and direction of flow in the uppermost aquifer. The uppermost aquifer below C-746-S&T is the Regional Gravel Aquifer (RGA). Water level measurements currently are recorded in several wells at the landfill on a quarterly basis. These measurements were used to plot the potentiometric surface of the RGA for the second quarter 2013 and to determine the groundwater flow rate and direction.

Water levels during this reporting period were measured on April 16, 2013. As shown on Figure E.1, MW389, screened in the Upper Continental Recharge System (UCRS), is usually dry, while other UCRS wells have recordable water levels. During this reporting period, MW389 had insufficient water to permit water level measurement. UCRS wells MW389 and MW390 had insufficient water to sampling.

The UCRS has a strong vertical hydraulic gradient; therefore, the limited number of available UCRS wells, screened over different elevations, is not sufficient for mapping the potentiometric surface. Figure E.1 shows the location of UCRS MWs. The Upper Regional Gravel Aquifer (URGA) and Lower Regional Gravel Aquifer (LRGA) data were corrected for barometric pressure, if necessary, and converted to elevations to plot the potentiometric surface of the RGA, as a whole, as shown on Table E.1. Figure E.2 is a composite or average map of the URGA and LRGA elevations where well clusters exist. The contour lines are placed based on the average water level elevations of the clusters.[1] Based on the site potentiometric map (Figure E.2), the hydraulic gradient beneath the landfill is 6.20×10^{-4} ft/ft. Additional water level measurements in April (Figure E.3) document the vicinity groundwater hydraulic gradient for the RGA to be 2.62×10^{-4} ft/ft. The hydraulic gradients are shown in Table E.2.

The average linear groundwater flow velocity (v) is determined by multiplying the hydraulic gradient (i) by the hydraulic conductivity (K) [resulting in the specific discharge (q)] and dividing by the effective porosity (n_e). The RGA hydraulic conductivity values used are reported in the Administrative Application for the New Solid Waste Landfill Permit No. 073-00045NWC1 and range from 425 to 725 ft/day (0.150 to 0.256 cm/s). RGA effective porosity is assumed to be 25%. Vicinity and site flow velocities were calculated using the low and high values for hydraulic conductivity, as shown in Table E.3.

Regional groundwater flow near C-746-S&T typically trends northeastward toward the Ohio River. However, during the period of April 9 through May 2, 2013, the Ohio River stage rose dramatically resulting in unusual groundwater flow trends on April 16, 2013. Groundwater flow directions were north, east, and south from the C-746-S&T Landfill on April 16, 2013.

[1] Additional 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), were used to contour the RGA potentiometric surface.

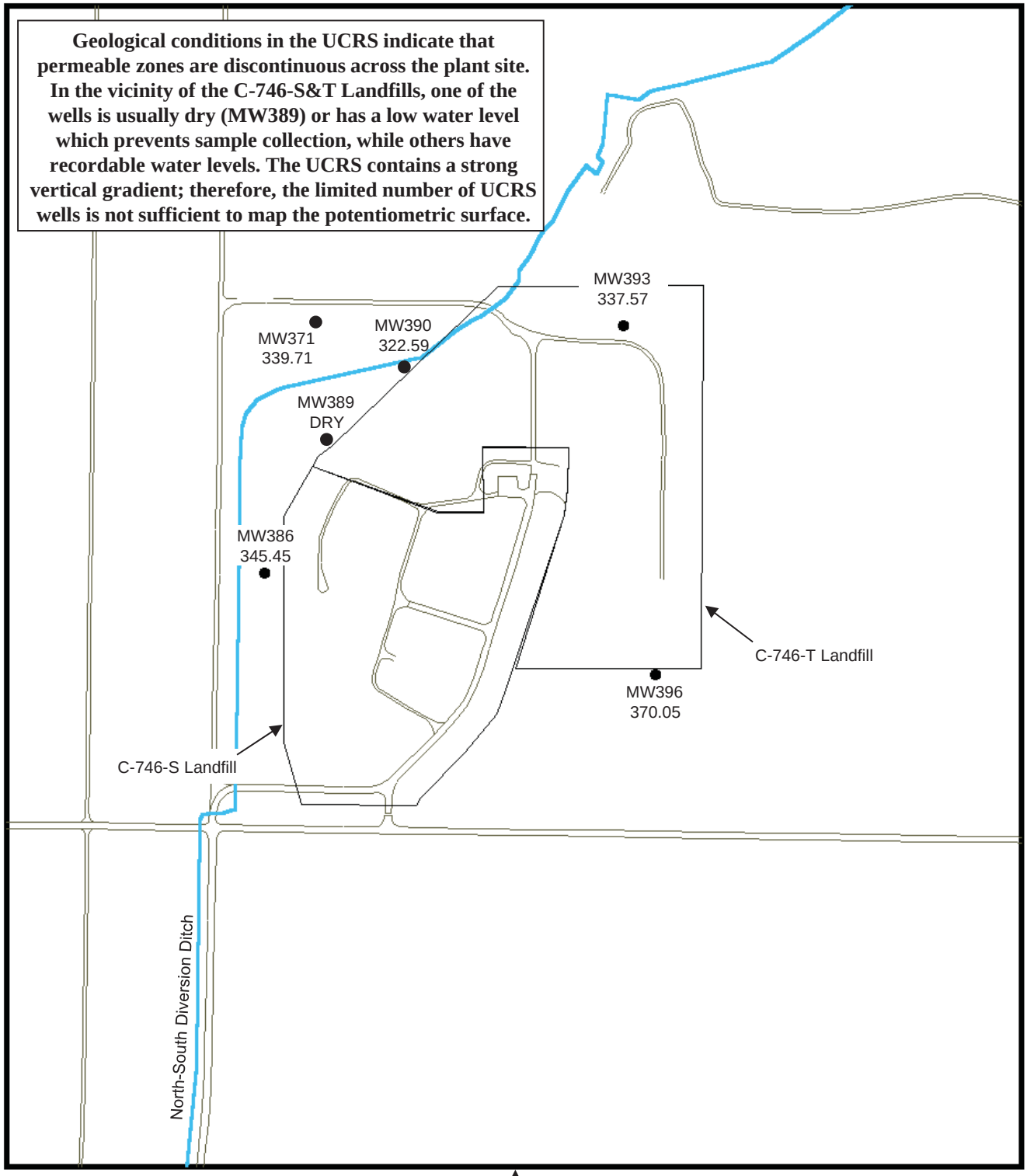

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Figure E.1. Potentiometric Surface of the Upper Continental Recharge System at the C-746 S&T Landfills
Permit Numbers 073-00014 & 073-00015
April 16, 2013

LATA Environmental Services of Kentucky, LLC

Table E.1. C-746-S&T Landfills (April 2013) Water Levels

Date	Time	Well	Formation	Datum Elev (ft amsl)	BP (in Hg)	Delta BP (ft H_20)	Raw Data DTW (ft)	Raw Data Elev (ft amsl)	*Corrected Data DTW (ft)	*Corrected Data Elev (ft amsl)
4/16/2013	07:56	MW220	URGA	381.65	30.03	0.01	58.86	322.79	58.87	322.78
4/16/2013	08:30	MW221	URGA	391.14	30.04	0.00	68.21	322.93	68.21	322.93
4/16/2013	08:37	MW222	URGA	395.20	30.04	0.00	72.34	322.86	72.34	322.86
4/16/2013	08:34	MW223	URGA	394.34	30.04	0.00	71.44	322.90	71.44	322.90
4/16/2013	08:40	MW224	URGA	395.70	30.04	0.00	72.85	322.85	72.85	322.85
4/16/2013	07:59	MW225	URGA	385.86	30.03	0.01	63.03	322.83	63.04	322.82
4/16/2013	10:14	MW353	LRGA	374.97	30.04	0.00	52.54	322.43	52.54	322.43
4/16/2013	08:44	MW369	URGA	364.28	30.04	0.00	41.78	322.50	41.78	322.50
4/16/2013	08:47	MW370	LRGA	365.15	30.04	0.00	42.68	322.47	42.68	322.47
4/16/2013	08:45	MW371	UCRS	364.71	30.04	0.00	25.00	339.71	25.00	339.71
4/16/2013	08:56	MW372	URGA	359.49	30.04	0.00	37.01	322.48	37.01	322.48
4/16/2013	08:51	MW373	LRGA	359.79	30.04	0.00	37.33	322.46	37.33	322.46
4/16/2013	07:48	MW384	URGA	365.00	30.03	0.01	42.44	322.56	42.45	322.55
4/16/2013	07:51	MW385	LRGA	365.42	30.03	0.01	42.89	322.53	42.90	322.52
4/16/2013	07:49	MW386	UCRS	365.17	30.03	0.01	19.71	345.46	19.72	345.45
4/16/2013	07:44	MW387	URGA	363.21	30.03	0.01	40.58	322.63	40.59	322.62
4/16/2013	07:42	MW388	LRGA	363.18	30.03	0.01	40.58	322.60	40.59	322.59
4/16/2013	07:39	MW389	UCRS	363.81	30.03	--	DRY	--	--	--
4/16/2013	07:36	MW390	UCRS	360.31	30.03	0.01	37.71	322.60	37.72	322.59
4/16/2013	08:23	MW391	URGA	366.51	30.04	0.00	43.96	322.55	43.96	322.55
4/16/2013	08:26	MW392	LRGA	365.63	30.04	0.00	43.10	322.53	43.10	322.53
4/16/2013	08:25	MW393	UCRS	366.64	30.04	0.00	29.07	337.57	29.07	337.57
4/16/2013	08:07	MW394	URGA	378.23	30.04	0.00	55.81	322.42	55.81	322.42
4/16/2013	08:10	MW395	LRGA	378.87	30.04	0.00	56.47	322.40	56.47	322.40
4/16/2013	08:09	MW396	UCRS	378.62	30.04	0.00	8.57	370.05	8.57	370.05
4/16/2013	08:03	MW397	LRGA	386.84	30.04	0.00	64.48	322.36	64.48	322.36

Initial Barometric Pressure **30.04**

Elev = elevation

amsl = above mean sea level

BP = barometric pressure

DTW = depth to water in feet below datum

URGA = Upper Regional Gravel Aquifer

LRGA = Lower Regional Gravel Aquifer

UCRS = Upper Continental Recharge System

*Assumes a barometric efficiency of 1.0

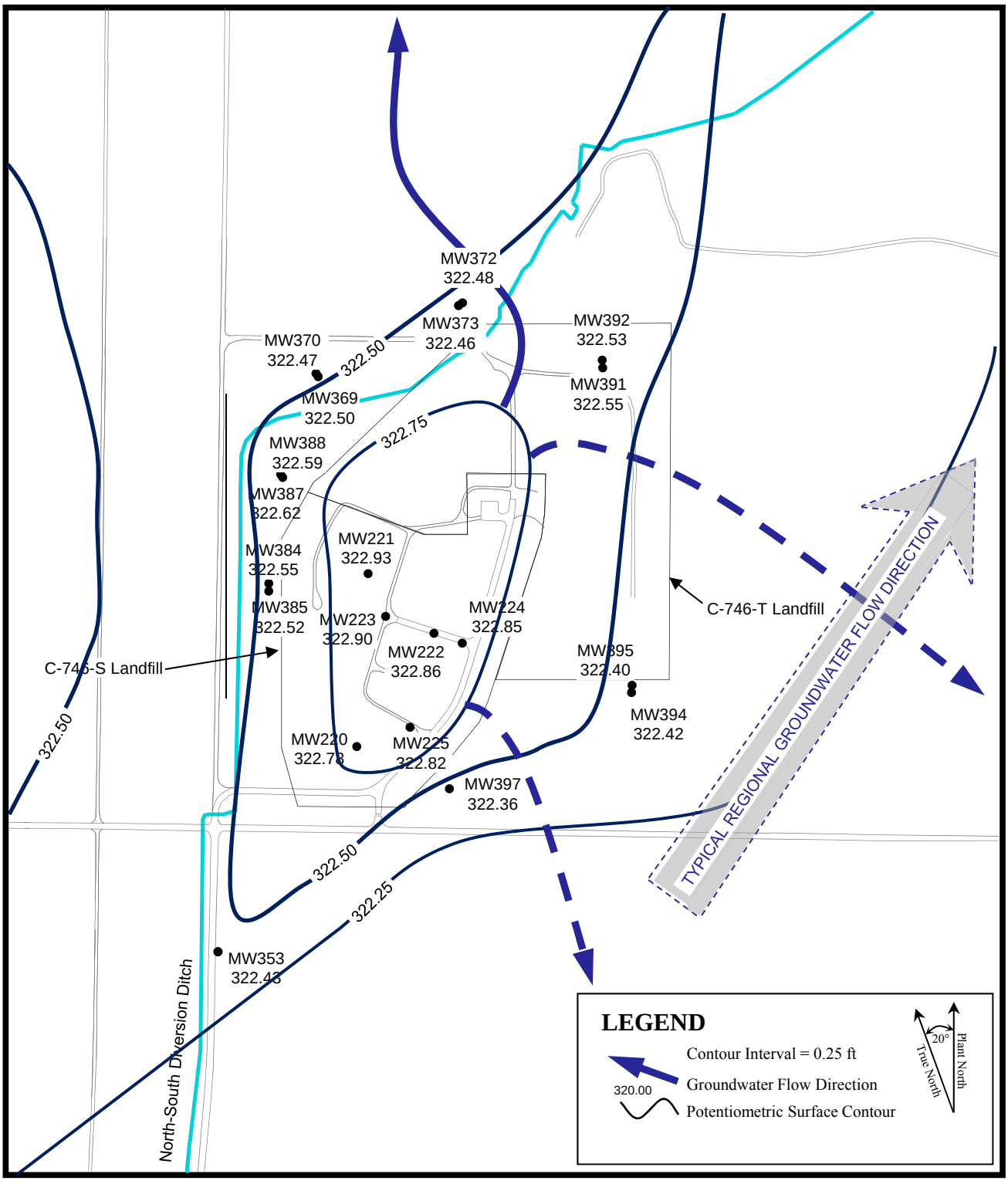

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Figure E.2. Composite Potentiometric Surface of the Regional Gravel Aquifer at the C-746-S&T Landfills Permit Numbers 073-00014 & 073-00015 April 16, 2013

LATA Environmental Services of Kentucky, LLC

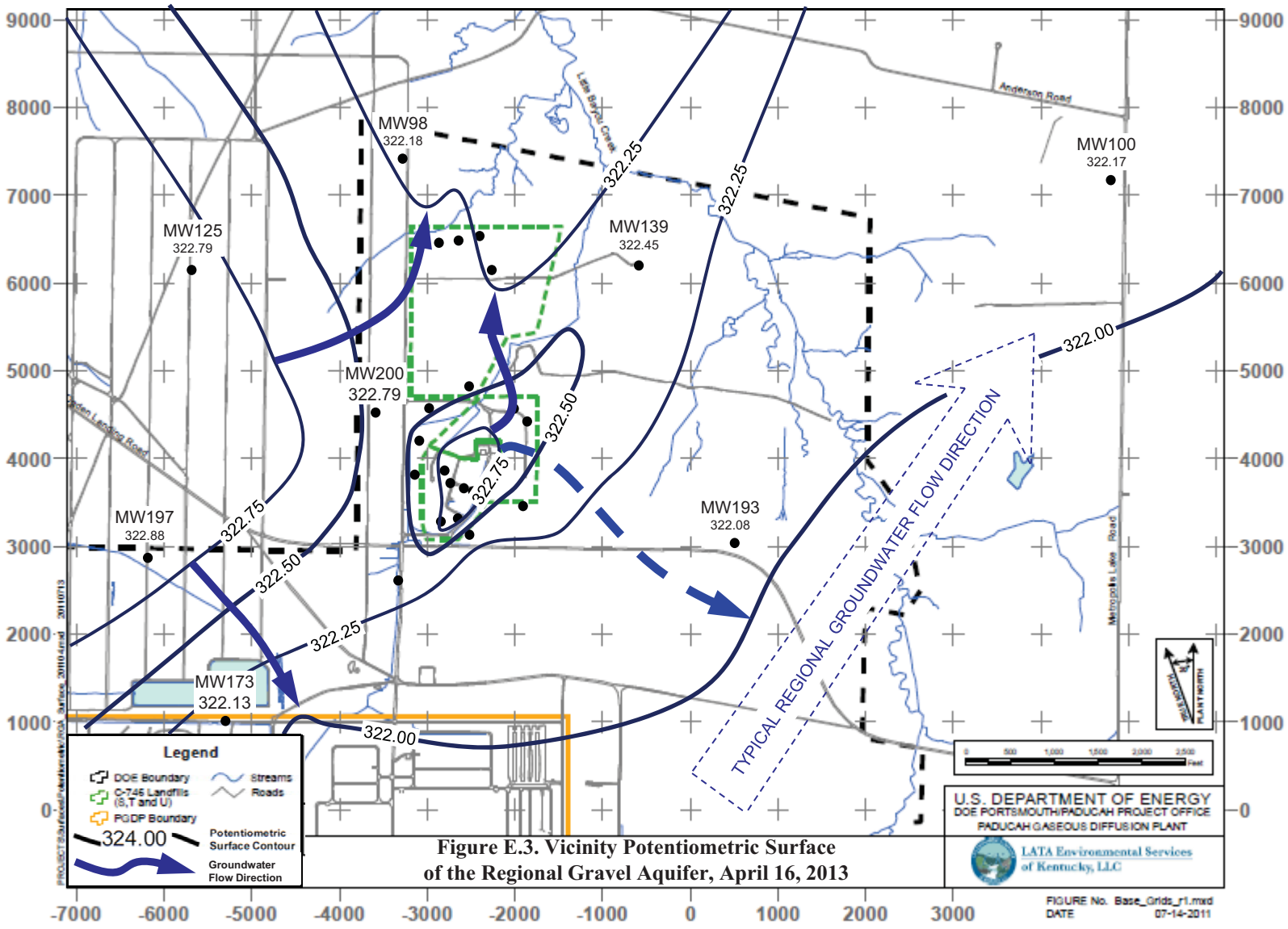

Figure E.3. Vicinity Potentiometric Surface of the Regional Gravel Aquifer, April 16, 2013

Table E.2. C-746-S&T Hydraulic Gradients

	ft/ft
Beneath Landfill Mound	6.20×10^{-4}
Vicinity	2.62×10^{-4}

Table E.3. C-746-S&T 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
Beneath Landfill Mound					
725	0.256	0.45	1.59×10^{-4}	1.80	6.35×10^{-4}
425	0.150	0.26	9.30×10^{-5}	1.05	3.72×10^{-4}
Vicinity					
725	0.256	0.19	6.71×10^{-5}	0.76	2.68×10^{-4}
425	0.150	0.11	3.93×10^{-5}	0.45	1.57×10^{-4}

APPENDIX F

NOTIFICATIONS

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NOTIFICATIONS

In accordance with 401 *KAR* 48:300 § 7, the notification for parameters that exceed the maximum contaminant level (MCL) has been submitted to the Kentucky Division of Waste Management. The notification for parameters that had statistically significant increased concentrations relative to background concentrations is provided below.

STATISTICAL ANALYSIS OF PARAMETERS NOTIFICATION

The statistical analyses conducted on the second quarter 2013 groundwater data collected from the C-746-S&T Landfills monitoring wells (MWs) were performed in accordance with Permit Condition, GSTR0003, 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	MW372, MW384, MW387
Lower Regional Gravel Aquifer	
Technetium-99	MW373, MW385, MW388

NOTE: Although technetium-99 is not cited in 40 *CFR* § 302.4, Appendix A, these radionuclides are being reported along with the parameters of this regulation.

MCL NOTIFICATION

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

5/28/2013

LATA Environmental Services of Kentucky
PROJECT ENVIRONMENTAL MEASUREMENTS SYSTEM
C-746-S and -T LANDFILLS
PERMIT NUMBERS 073-00014 and 073-00015
MAXIMUM CONTAMINANT LIMIT (MCL) EXCEEDANCE REPORT
Quarterly Groundwater Sampling

AKGWA	Station	Analysis	Method		Results	Units	MCL
8004-4808	MW372	Trichloroethene	8260B/OA7302E		6.2	ug/L	5
8004-4792	MW373	Trichloroethene	8260B/OA7302E		6.4	ug/L	5
8004-4809	MW384	Beta activity	9310/RL7111		157	pCi/L	50
8004-4810	MW385	Beta activity	9310/RL7111		111	pCi/L	50
8004-4815	MW387	Beta activity	9310/RL7111		148	pCi/L	50
8004-4816	MW388	Beta activity	9310/RL7111		85.2	pCi/L	50
8004-4805	MW391	Trichloroethene	8260B/OA7302E	J	8	ug/L	5
8004-4806	MW392	Trichloroethene	8260B/OA7302E	J	13	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-S&T Landfills

Groundwater Flow System	UCRS					URGA											LRGA						
Gradient	S	D	D	D	U	S	S	S	S	S	D	D	D	D	U	U	S	D	D	D	D	U	U
Monitoring Well	386	389	390	393	396	221	222	223	224	384	369	372	387	391	220	394	385	370	373	388	392	395	397
1,2,3-TRICHLOROPROPANE																							
Quarter 2, 2009			✱																				
ACETONE																							
Quarter 3, 2003							✱					✱											
Quarter 4, 2003											✱								✱				
Quarter 1, 2005									✱														
ALPHA ACTIVITY																							
Quarter 4, 2002				■	■								■										
Quarter 4, 2008										■													
Quarter 4, 2010										■													
ALUMINUM																							
Quarter 1, 2003			✱				✱					✱	✱	✱									
Quarter 2, 2003			✱				✱						✱	✱									
Quarter 3, 2003			✱				✱	✱					✱	✱									
Quarter 4, 2003							✱	✱			✱			✱									
Quarter 1, 2004			✱				✱	✱			✱												
Quarter 2, 2004							✱							✱									
Quarter 3, 2004							✱							✱									
Quarter 4, 2004			✱																				
Quarter 1, 2005			✱																				
Quarter 2, 2005			✱				✱																
Quarter 3, 2005			✱				✱			✱											✱		
Quarter 4, 2005			✱				✱				✱												
Quarter 1, 2006							✱						✱										
Quarter 2, 2006			✱				✱																
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 4, 2008							✱																
Quarter 1, 2009			✱				✱				✱												
Quarter 1, 2010			✱				✱				✱												
Quarter 2, 2010			✱								✱												
Quarter 3, 2010			✱								✱			✱			✱			✱			
Quarter 1, 2011							✱				✱												
Quarter 2, 2011			✱								✱												
Quarter 2, 2012			✱																				

Chart of MCL Exceedances and Statistical Increases for C-746-S&T Landfills

Groundwater Flow System	UCRS					URGA											LRGA						
Gradient	S	D	D	D	U	S	S	S	S	S	D	D	D	D	U	U	S	D	D	D	D	U	U
Monitoring Well	386	389	390	393	396	221	222	223	224	384	369	372	387	391	220	394	385	370	373	388	392	395	397
Quarter 3, 2012							✱																
Quarter 1, 2013							✱				✱												
BARIUM																							
Quarter 3, 2003							■	■															
Quarter 4, 2003							■	■															
BETA ACTIVITY																							
Quarter 4, 2002													■										
Quarter 1, 2003													■				■						
Quarter 2, 2003			■	■													■			■			
Quarter 3, 2003			■										■				■						
Quarter 4, 2003			■							■			■										
Quarter 1, 2004			■										■				■						
Quarter 2, 2004			■									■	■				■		■	■			
Quarter 3, 2004			■									■	■				■						
Quarter 4, 2004			■									■	■				■						
Quarter 1, 2005			■							■			■				■						
Quarter 2, 2005			■										■				■			■			
Quarter 3, 2005										■			■										
Quarter 4, 2005										■		■	■				■						
Quarter 1, 2006										■		■	■				■		■	■			
Quarter 2, 2006			■							■			■				■		■	■			
Quarter 3, 2006										■		■	■				■		■	■			
Quarter 4, 2006	■		■							■		■	■						■	■			
Quarter 1, 2007			■							■		■	■				■		■	■			
Quarter 2, 2007			■							■		■	■				■		■	■			
Quarter 3, 2007										■		■	■				■			■			
Quarter 4, 2007			■							■		■	■				■		■	■			
Quarter 1, 2008			■							■		■	■				■			■			
Quarter 2, 2008			■							■	■		■				■			■			
Quarter 3, 2008										■		■	■				■			■			
Quarter 4, 2008										■		■	■				■						
Quarter 1, 2009			■							■		■	■				■						
Quarter 2, 2009										■		■	■				■						
Quarter 3, 2009										■		■	■				■			■			
Quarter 4, 2009										■		■	■				■						
Quarter 1, 2010												■	■										
Quarter 2, 2010			■							■			■				■						
Quarter 3, 2010										■			■				■						
Quarter 4, 2010										■		■	■				■						
Quarter 1, 2011										■			■				■						
Quarter 2, 2011			■							■			■				■						

Chart of MCL Exceedances and Statistical Increases for C-746-S&T Landfills

Groundwater Flow System	UCRS					URGA											LRGA						
Gradient	S	D	D	D	U	S	S	S	S	S	D	D	D	D	U	U	S	D	D	D	D	U	U
Monitoring Well	386	389	390	393	396	221	222	223	224	384	369	372	387	391	220	394	385	370	373	388	392	395	397
Quarter 3, 2011										■			■				■			■			
Quarter 4, 2011										■		■	■				■						
Quarter 1, 2012			■							■			■				■			■			
Quarter 2, 2012			■							■			■				■			■			
Quarter 3, 2012										■		■	■				■						
Quarter 4, 2012										■		■	■				■		■	■			
Quarter 1, 2013										■		■	■						■	■			
Quarter 2, 2013										■			■				■			■			
BROMIDE																							
Quarter 1, 2003			*																				
Quarter 4, 2003			*																				
Quarter 1, 2004			*																				
Quarter 2, 2004			*																				
Quarter 3, 2004			*																				
Quarter 4, 2004			*																				
Quarter 1, 2005			*																				
Quarter 3, 2006			*																				
CALCIUM																							
Quarter 1, 2003			*																				
Quarter 2, 2003			*									*											
Quarter 3, 2003			*																				
Quarter 4, 2003			*									*							*				
Quarter 1, 2004			*									*		*					*				
Quarter 2, 2004			*									*							*				
Quarter 3, 2004			*									*							*				
Quarter 4, 2004			*									*							*				
Quarter 1, 2005												*							*				
Quarter 2, 2005												*							*				
Quarter 3, 2005												*							*				
Quarter 4, 2005												*							*				
Quarter 1, 2006												*							*				
Quarter 2, 2006												*							*				
Quarter 3, 2006												*							*				
Quarter 4, 2006												*							*				
Quarter 1, 2007												*							*				
Quarter 2, 2007												*							*				
Quarter 3, 2007												*							*				
Quarter 4, 2007												*							*				
Quarter 1, 2008												*							*				
Quarter 2, 2008												*							*				
Quarter 3, 2008												*							*				

Chart of MCL Exceedances and Statistical Increases for C-746-S&T Landfills

Groundwater Flow System	UCRS					URGA											LRGA						
Gradient	S	D	D	D	U	S	S	S	S	S	D	D	D	D	U	U	S	D	D	D	D	U	U
Monitoring Well	386	389	390	393	396	221	222	223	224	384	369	372	387	391	220	394	385	370	373	388	392	395	397
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												*							*				
CARBON DISULFIDE																							
Quarter 4, 2010											*												
Quarter 1, 2011												*									*		
CHEMICAL OXYGEN DEMAND																							
Quarter 1, 2003				*																			
Quarter 2, 2003				*																			
Quarter 3, 2003				*			*			*													
Quarter 4, 2003				*																			
Quarter 1, 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-S&T Landfills

Groundwater Flow System	UCRS					URGA											LRGA						
Gradient	S	D	D	D	U	S	S	S	S	S	D	D	D	D	U	U	S	D	D	D	D	U	U
Monitoring Well	386	389	390	393	396	221	222	223	224	384	369	372	387	391	220	394	385	370	373	388	392	395	397
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 3, 2011	*																						
Quarter 4, 2011	*																						
Quarter 1, 2012	*																						
Quarter 1, 2013	*																						
CHLORIDE																							
Quarter 1, 2003			*																				
Quarter 2, 2003			*																				
Quarter 3, 2003			*																				
Quarter 4, 2003			*																				
Quarter 1, 2004			*																				
Quarter 2, 2004			*																				
Quarter 3, 2004			*																				
Quarter 4, 2004			*																				
Quarter 1, 2005			*																				
Quarter 2, 2005			*																				
Quarter 3, 2005			*																				
Quarter 4, 2005			*																				
Quarter 1, 2006																		*					
Quarter 2, 2006			*																				
Quarter 3, 2006			*																				
Quarter 4, 2006			*																				
Quarter 1, 2007			*																				
Quarter 2, 2007			*																				
Quarter 3, 2007			*																				

Chart of MCL Exceedances and Statistical Increases for C-746-S&T Landfills

Groundwater Flow System	UCRS					URGA											LRGA						
Gradient	S	D	D	D	U	S	S	S	S	S	D	D	D	D	U	U	S	D	D	D	D	U	U
Monitoring Well	386	389	390	393	396	221	222	223	224	384	369	372	387	391	220	394	385	370	373	388	392	395	397
Quarter 4, 2007			✱																				
Quarter 1, 2008			✱																				
Quarter 2, 2008			✱																				
Quarter 3, 2008			✱																				
Quarter 4, 2008			✱																				
Quarter 1, 2009			✱																				
Quarter 2, 2009			✱																				
Quarter 3, 2009			✱																				
Quarter 4, 2009			✱																				
Quarter 1, 2010			✱																				
Quarter 2, 2010			✱																				
Quarter 3, 2010			✱																				
Quarter 4, 2010			✱																				
Quarter 2, 2011			✱																				
Quarter 3, 2011			✱																				
Quarter 4, 2011			✱																				
Quarter 3, 2012			✱																				
CHROMIUM																							
Quarter 4, 2002								■															
Quarter 1, 2003								■														■	
Quarter 2, 2003							■	■															
Quarter 3, 2009						■																	
COBALT																							
Quarter 3, 2003							✱																
CONDUCTIVITY																							
Quarter 4, 2002										✱									✱				
Quarter 1, 2003			✱							✱									✱				
Quarter 2, 2003			✱							✱									✱				
Quarter 3, 2003			✱					✱		✱									✱				
Quarter 4, 2003			✱							✱									✱				
Quarter 1, 2004																			✱				
Quarter 2, 2004										✱									✱				
Quarter 3, 2004										✱									✱				
Quarter 4, 2004			✱							✱									✱				
Quarter 1, 2005										✱		✱							✱				
Quarter 2, 2005												✱							✱				
Quarter 3, 2005																			✱				
Quarter 4, 2005										✱		✱							✱				
Quarter 1, 2006												✱							✱				
Quarter 2, 2006												✱							✱				
Quarter 3, 2006												✱							✱				

Chart of MCL Exceedances and Statistical Increases for C-746-S&T Landfills

Groundwater Flow System	UCRS					URGA											LRGA						
Gradient	S	D	D	D	U	S	S	S	S	S	D	D	D	D	U	U	S	D	D	D	D	U	U
Monitoring Well	386	389	390	393	396	221	222	223	224	384	369	372	387	391	220	394	385	370	373	388	392	395	397
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												*							*				
DISSOLVED OXYGEN																							
Quarter 3, 2006			*					*															
DISSOLVED SOLIDS																							
Quarter 4, 2002										*									*				
Quarter 1, 2003			*							*									*				
Quarter 2, 2003			*							*									*				
Quarter 3, 2003			*				*	*		*		*							*				
Quarter 4, 2003			*				*		*	*		*							*				
Quarter 1, 2004			*									*							*				
Quarter 2, 2004										*		*							*				
Quarter 3, 2004										*		*							*				
Quarter 4, 2004										*		*							*				
Quarter 1, 2005												*							*				
Quarter 2, 2005																			*				
Quarter 3, 2005																	*	*	*	*	*		
Quarter 4, 2005																	*	*	*	*	*		

Chart of MCL Exceedances and Statistical Increases for C-746-S&T Landfills

Groundwater Flow System	UCRS					URGA											LRGA						
Gradient	S	D	D	D	U	S	S	S	S	S	D	D	D	D	U	U	S	D	D	D	D	U	U
Monitoring Well	386	389	390	393	396	221	222	223	224	384	369	372	387	391	220	394	385	370	373	388	392	395	397
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												*							*				
IODIDE																							
Quarter 4, 2002																					*		
Quarter 2, 2003						*																	
Quarter 3, 2003													*										
Quarter 1, 2004				*																			
Quarter 3, 2010																					*		
Quarter 2, 2013										*													
IRON																							
Quarter 1, 2003							*			*	*			*									

Chart of MCL Exceedances and Statistical Increases for C-746-S&T Landfills

Groundwater Flow System	UCRS					URGA											LRGA						
Gradient	S	D	D	D	U	S	S	S	S	S	D	D	D	D	U	U	S	D	D	D	D	U	U
Monitoring Well	386	389	390	393	396	221	222	223	224	384	369	372	387	391	220	394	385	370	373	388	392	395	397
Quarter 2, 2003										*	*	*	*										
Quarter 3, 2003							*	*	*	*	*	*											
Quarter 4, 2003											*												
Quarter 1, 2004											*												
Quarter 2, 2004										*	*												
Quarter 3, 2004										*													
Quarter 4, 2004										*													
Quarter 1, 2005												*											
Quarter 2, 2005											*	*											
Quarter 1, 2006							*																
Quarter 2, 2006												*											
Quarter 3, 2006											*												
Quarter 1, 2007											*	*											
Quarter 2, 2007											*												
Quarter 2, 2008												*											
Quarter 3, 2008												*											
MAGNESIUM																							
Quarter 1, 2003			*																				
Quarter 2, 2003			*									*							*				
Quarter 3, 2003			*				*					*											
Quarter 4, 2003			*									*							*				
Quarter 1, 2004			*									*		*					*				
Quarter 2, 2004			*									*							*				
Quarter 3, 2004			*									*							*				
Quarter 4, 2004			*									*							*				
Quarter 1, 2005												*							*				
Quarter 2, 2005												*							*				
Quarter 3, 2005												*							*				
Quarter 4, 2005												*							*				
Quarter 1, 2006												*							*				
Quarter 2, 2006												*							*				
Quarter 3, 2006												*							*				
Quarter 4, 2006												*							*				
Quarter 1, 2007												*							*				
Quarter 2, 2007												*							*				
Quarter 3, 2007												*							*				
Quarter 4, 2007												*							*				
Quarter 1, 2008												*							*				

Chart of MCL Exceedances and Statistical Increases for C-746-S&T Landfills

Groundwater Flow System	UCRS					URGA											LRGA						
Gradient	S	D	D	D	U	S	S	S	S	S	D	D	D	D	U	U	S	D	D	D	D	U	U
Monitoring Well	386	389	390	393	396	221	222	223	224	384	369	372	387	391	220	394	385	370	373	388	392	395	397
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												*							*				
MANGANESE																							
Quarter 4, 2002																					*		
Quarter 3, 2003							*	*															
Quarter 4, 2003							*	*															
Quarter 1, 2004							*																
Quarter 2, 2004							*																
Quarter 4, 2004							*	*															
Quarter 1, 2005							*																
Quarter 3, 2005																					*		
Quarter 3, 2009	*																						
OXIDATION-REDUCTION POTENTIAL																							
Quarter 4, 2003			*																				
Quarter 2, 2004			*																				
Quarter 3, 2004			*															*					
Quarter 4, 2004			*			*																	
Quarter 1, 2005			*															*					
Quarter 2, 2005	*		*																				

Chart of MCL Exceedances and Statistical Increases for C-746-S&T Landfills

Groundwater Flow System	UCRS					URGA											LRGA						
Gradient	S	D	D	D	U	S	S	S	S	S	D	D	D	D	U	U	S	D	D	D	D	U	U
Monitoring Well	386	389	390	393	396	221	222	223	224	384	369	372	387	391	220	394	385	370	373	388	392	395	397
Quarter 3, 2005	*		*																				
Quarter 4, 2005			*																				
Quarter 2, 2006			*																				
Quarter 3, 2006			*															*					
Quarter 4, 2006			*																				
Quarter 1, 2007			*																				
Quarter 2, 2007			*				*																
Quarter 3, 2007			*				*																
Quarter 4, 2007			*																				
Quarter 1, 2008			*			*			*														
Quarter 2, 2008	*		*	*		*							*				*		*	*			
Quarter 3, 2008			*	*		*							*				*		*	*			
Quarter 4, 2008			*	*		*	*	*	*				*				*	*		*			
Quarter 1, 2009			*				*	*	*				*	*				*		*			
Quarter 3, 2009			*	*		*											*	*	*	*			
Quarter 4, 2009			*			*			*									*		*			
Quarter 1, 2010	*		*																	*			
Quarter 2, 2010	*		*	*					*				*				*	*		*			
Quarter 3, 2010	*		*	*		*											*	*	*	*			
Quarter 4, 2010			*					*			*			*			*	*	*	*			
Quarter 1, 2011	*			*		*	*	*	*		*		*	*			*	*		*	*		
Quarter 2, 2011	*		*	*			*	*	*	*	*		*	*			*	*	*	*	*		
Quarter 3, 2011	*		*	*			*		*		*		*				*	*	*	*			
Quarter 4, 2011	*		*	*			*				*						*	*		*			
Quarter 1, 2012	*		*	*		*	*	*	*	*			*	*			*	*	*	*	*		
Quarter 2, 2012	*		*				*		*		*		*	*			*	*	*	*	*		
Quarter 3, 2012	*		*			*	*	*	*	*			*	*			*	*	*	*	*		
Quarter 4, 2012				*		*		*	*	*	*		*	*			*	*	*	*	*		
Quarter 1, 2013				*		*		*	*		*		*	*				*		*	*		
Quarter 2, 2013	*			*			*		*		*		*				*	*	*	*	*		
PCB, 1016																							
Quarter 4, 2003							*	*	*		*							*					
Quarter 3, 2004											*												
Quarter 3, 2005							*				*												
Quarter 1, 2006											*												
Quarter 2, 2006											*												
Quarter 4, 2006											*												
Quarter 1, 2007											*	*											

Chart of MCL Exceedances and Statistical Increases for C-746-S&T Landfills

Groundwater Flow System	UCRS					URGA											LRGA						
Gradient	S	D	D	D	U	S	S	S	S	S	D	D	D	D	U	U	S	D	D	D	D	U	U
Monitoring Well	386	389	390	393	396	221	222	223	224	384	369	372	387	391	220	394	385	370	373	388	392	395	397
Quarter 2, 2007												*											
Quarter 3, 2007											*												
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											*												
PCB-1232																							
Quarter 1, 2011											*												
PCB-1248																							
Quarter 2, 2008												*											
PCB-1260																							
Quarter 2, 2006																		*					
pH																							
Quarter 4, 2002																	*						
Quarter 2, 2003																	*						
Quarter 3, 2003																	*						
Quarter 4, 2003							*										*						
Quarter 1, 2004							*										*						
Quarter 2, 2004																	*						
Quarter 3, 2004																	*						
Quarter 4, 2004																	*						
Quarter 3, 2005										*							*				*		
Quarter 4, 2005										*							*						
Quarter 1, 2006																	*						
Quarter 2, 2006																	*						
Quarter 3, 2006																	*						
Quarter 3, 2007																	*						
Quarter 4, 2007																	*						
Quarter 4, 2008																	*						
Quarter 1, 2009																	*						
Quarter 1, 2011																	*						

Chart of MCL Exceedances and Statistical Increases for C-746-S&T Landfills

Groundwater Flow System	UCRS					URGA											LRGA						
Gradient	S	D	D	D	U	S	S	S	S	S	D	D	D	D	U	U	S	D	D	D	D	U	U
Monitoring Well	386	389	390	393	396	221	222	223	224	384	369	372	387	391	220	394	385	370	373	388	392	395	397
Quarter 2, 2011											✱												
Quarter 3, 2011											✱												
Quarter 1, 2012														✱									
Quarter 1, 2013										✱			✱				✱						
POTASSIUM																							
Quarter 4, 2002																		✱	✱				
Quarter 3, 2004																			✱				
Quarter 2, 2005																			✱				
Quarter 3, 2005																			✱				
Quarter 4, 2005																			✱				
Quarter 2, 2006																			✱				
Quarter 3, 2006																			✱				
Quarter 4, 2006																			✱				
Quarter 4, 2008																			✱				
Quarter 3, 2012																			✱				
Quarter 1, 2013																			✱				
Quarter 2, 2013																			✱				
RADIUM-226																							
Quarter 4, 2002			✱										✱	✱							✱		
Quarter 2, 2004																			✱				
Quarter 2, 2005									✱														
Quarter 1, 2009											✱												
RADIUM-228																							
Quarter 2, 2005							■				■												
Quarter 3, 2005			■																				
Quarter 4, 2005							■		■														
Quarter 1, 2006					■																		
SELENIUM																							
Quarter 4, 2002			■		■																		
Quarter 1, 2003					■																	■	
Quarter 2, 2003			■																				
Quarter 3, 2003			■		■																		
Quarter 4, 2003			■																				
SODIUM																							
Quarter 4, 2002																			✱		✱		
Quarter 1, 2003				✱					✱	✱	✱												
Quarter 2, 2003				✱						✱	✱		✱										
Quarter 3, 2003							✱	✱		✱													

Chart of MCL Exceedances and Statistical Increases for C-746-S&T Landfills

Groundwater Flow System	UCRS					URGA										LRGA						
Gradient	S	D	D	D	U	S	S	S	S	S	D	D	D	D	U	U	S	D	D	D	D	U	U
Monitoring Well	386	389	390	393	396	221	222	223	224	384	369	372	387	391	220	394	385	370	373	388	392	395	397
Quarter 4, 2003							*		*	*													
Quarter 1, 2004									*	*				*									
Quarter 2, 2004										*													
Quarter 3, 2004										*													
Quarter 4, 2004									*	*													
Quarter 1, 2005										*									*				
Quarter 2, 2005										*									*				
Quarter 3, 2005									*	*									*				
Quarter 4, 2005									*	*													
Quarter 1, 2006									*	*													
Quarter 2, 2006									*														
Quarter 3, 2006									*	*		*							*				
Quarter 4, 2006									*	*							*						
Quarter 1, 2007									*			*											
Quarter 2, 2007									*	*													
Quarter 3, 2007									*														
Quarter 4, 2007									*														
Quarter 1, 2008									*														
Quarter 3, 2008												*											
Quarter 4, 2008									*	*													
Quarter 1, 2009									*			*							*				
Quarter 3, 2009												*											
Quarter 4, 2009									*			*											
Quarter 1, 2010												*											
Quarter 2, 2010										*		*											
Quarter 3, 2010										*													
Quarter 4, 2010									*	*													
Quarter 1, 2011										*													
Quarter 2, 2011									*														
Quarter 4, 2011																			*				
Quarter 1, 2012											*												
Quarter 3, 2012												*							*				
Quarter 4, 2012												*											
Quarter 1, 2013										*		*							*				
Quarter 2, 2013												*											
STRONTIUM-90																							
Quarter 2, 2003										■													
Quarter 1, 2004										■													

Chart of MCL Exceedances and Statistical Increases for C-746-S&T Landfills

Groundwater Flow System	UCRS					URGA											LRGA						
Gradient	S	D	D	D	U	S	S	S	S	S	D	D	D	D	U	U	S	D	D	D	D	U	U
Monitoring Well	386	389	390	393	396	221	222	223	224	384	369	372	387	391	220	394	385	370	373	388	392	395	397
SULFATE																							
Quarter 4, 2002																			*				
Quarter 1, 2003												*	*				*		*				
Quarter 2, 2003										*		*	*					*	*				
Quarter 3, 2003										*		*	*						*				
Quarter 4, 2003										*		*	*						*				
Quarter 1, 2004										*		*	*					*	*				
Quarter 2, 2004										*		*	*				*	*	*	*			
Quarter 3, 2004									*	*		*	*					*	*				
Quarter 4, 2004										*		*	*					*	*				
Quarter 1, 2005										*		*	*				*	*	*				
Quarter 2, 2005										*		*	*					*	*				
Quarter 3, 2005										*		*	*				*	*	*				
Quarter 4, 2005										*		*	*					*	*	*			
Quarter 1, 2006										*		*	*				*	*	*	*			
Quarter 2, 2006									*	*		*	*				*	*	*	*			
Quarter 3, 2006									*	*		*	*				*		*	*			
Quarter 4, 2006									*	*		*	*				*		*				
Quarter 1, 2007									*	*		*	*				*		*	*			
Quarter 2, 2007									*	*		*	*				*		*	*			
Quarter 3, 2007									*	*		*	*				*		*	*			
Quarter 4, 2007										*		*	*				*	*	*	*			
Quarter 1, 2008										*		*	*				*	*	*	*			
Quarter 2, 2008								*		*	*	*	*	*			*	*	*	*			
Quarter 3, 2008										*		*	*				*	*	*	*			
Quarter 4, 2008										*		*	*				*		*				
Quarter 1, 2009										*		*	*				*	*	*				
Quarter 2, 2009									*	*		*	*				*	*	*	*			
Quarter 3, 2009									*	*		*	*				*	*	*	*			
Quarter 4, 2009	*									*		*	*				*	*	*				
Quarter 1, 2010	*								*	*		*	*				*		*				
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										*		*	*				*	*	*	*			

Chart of MCL Exceedances and Statistical Increases for C-746-S&T Landfills

Groundwater Flow System	UCRS					URGA											LRGA						
Gradient	S	D	D	D	U	S	S	S	S	S	D	D	D	D	U	U	S	D	D	D	D	U	U
Monitoring Well	386	389	390	393	396	221	222	223	224	384	369	372	387	391	220	394	385	370	373	388	392	395	397
Quarter 1, 2013										*		*	*				*	*	*	*			
Quarter 2, 2013										*		*	*	*			*	*	*	*			
TECHNETIUM-99																							
Quarter 4, 2002																			*				
Quarter 1, 2003													*				*		*				
Quarter 2, 2003	*		*							*			*				*						
Quarter 3, 2003			*										*				*			*			
Quarter 4, 2003			*							*		*	*				*		*	*			
Quarter 1, 2004			*									*	*				*		*				
Quarter 2, 2004			*									*	*				*		*	*			
Quarter 3, 2004			*									*					*		*				
Quarter 4, 2004			*							*		*	*				*	*	*				
Quarter 1, 2005			*							*		*	*				*			*			
Quarter 2, 2005			*							*			*				*	*	*	*			
Quarter 3, 2005			*							*			*				*	*	*	*			
Quarter 4, 2005			*							*		*	*				*		*	*			
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			*							*			*				*			*			

Chart of MCL Exceedances and Statistical Increases for C-746-S&T Landfills

Groundwater Flow System	UCRS					URGA										LRGA						
Gradient	S	D	D	D	U	S	S	S	S	S	D	D	D	D	U	U	S	D	D	D	D	U	U
Monitoring Well	386	389	390	393	396	221	222	223	224	384	369	372	387	391	220	394	385	370	373	388	392	395	397
Quarter 2, 2012			*							*			*				*		*	*			
Quarter 3, 2012			*							*		*	*				*						
Quarter 4, 2012										*		*	*				*		*	*			
Quarter 1, 2013										*			*				*		*	*			
Quarter 2, 2013										*		*	*				*		*	*			
THORIUM-230																							
Quarter 1, 2012	*								*					*									
THORIUM-234																							
Quarter 2, 2003						*			*					*									
Quarter 4, 2007									*														
TOTAL ORGANIC CARBON																							
Quarter 4, 2002																					*		
Quarter 1, 2003				*						*	*							*	*		*		
Quarter 2, 2003										*	*		*								*		
Quarter 3, 2003							*	*	*	*	*	*											
Quarter 4, 2003							*		*	*													
Quarter 1, 2004										*													
Quarter 2, 2004										*	*												
Quarter 3, 2004										*													
Quarter 4, 2004										*													
Quarter 1, 2005										*													
Quarter 2, 2005										*											*		
Quarter 3, 2005										*		*									*		
Quarter 4, 2005										*											*		
Quarter 1, 2006										*													
Quarter 2, 2006										*		*											
Quarter 4, 2006																	*						
Quarter 1, 2007	*									*													
Quarter 3, 2007	*					*	*	*	*	*			*	*			*						
Quarter 2, 2011											*												
Quarter 3, 2012	*																						
TOTAL ORGANIC HALIDES																							
Quarter 4, 2002																		*	*		*		
Quarter 1, 2003				*														*			*		
Quarter 3, 2003				*																	*		
Quarter 2, 2004																					*		
Quarter 3, 2004	*																						
Quarter 1, 2005	*																						
Quarter 2, 2005	*																						

Chart of MCL Exceedances and Statistical Increases for C-746-S&T Landfills

Groundwater Flow System	UCRS					URGA											LRGA						
Gradient	S	D	D	D	U	S	S	S	S	S	D	D	D	D	U	U	S	D	D	D	D	U	U
Monitoring Well	386	389	390	393	396	221	222	223	224	384	369	372	387	391	220	394	385	370	373	388	392	395	397
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 1, 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	✱																						
TRICHLOROETHENE																							
Quarter 4, 2002														■		■					■	■	
Quarter 1, 2003														■		■					■	■	
Quarter 2, 2003														■		■					■	■	
Quarter 3, 2003														■		■					■	■	
Quarter 4, 2003														■		■					■	■	
Quarter 1, 2004														■		■					■	■	
Quarter 2, 2004												■		■		■		■	■		■	■	
Quarter 3, 2004												■		■		■		■	■		■	■	
Quarter 4, 2004												■		■		■		■	■		■	■	
Quarter 1, 2005												■		■		■		■	■		■	■	
Quarter 2, 2005												■		■		■		■	■		■	■	
Quarter 3, 2005												■		■		■		■	■		■	■	
Quarter 4, 2005												■		■		■		■	■		■	■	
Quarter 1, 2006												■		■		■		■	■		■	■	
Quarter 2, 2006												■		■		■		■	■		■	■	
Quarter 2, 2007												■		■		■			■		■	■	
Quarter 3, 2007												■		■		■			■		■	■	
Quarter 4, 2007												■		■		■			■		■	■	

Chart of MCL Exceedances and Statistical Increases for C-746-S&T Landfills

Groundwater Flow System	UCRS					URGA											LRGA						
Gradient	S	D	D	D	U	S	S	S	S	S	D	D	D	D	U	U	S	D	D	D	D	U	U
Monitoring Well	386	389	390	393	396	221	222	223	224	384	369	372	387	391	220	394	385	370	373	388	392	395	397
Quarter 1, 2008												■		■		■			■		■		
Quarter 2, 2008												■		■		■			■		■		
Quarter 3, 2008												■		■		■			■		■		
Quarter 4, 2008												■		■		■			■		■		
Quarter 1, 2009												■		■		■			■		■		
Quarter 2, 2009												■		■		■			■		■		
Quarter 3, 2009												■		■		■			■		■		
Quarter 4, 2009											■	■		■		■			■		■		
Quarter 1, 2010												■		■		■			■		■		
Quarter 2, 2010												■		■		■			■		■		
Quarter 3, 2010												■		■		■			■		■	■	
Quarter 4, 2010												■		■		■			■		■	■	
Quarter 1, 2011												■		■		■			■		■	■	
Quarter 2, 2011												■		■		■			■		■		
Quarter 3, 2011												■		■		■			■		■		
Quarter 4, 2011												■		■		■			■		■	■	
Quarter 1, 2012												■		■		■			■		■	■	
Quarter 2, 2012												■		■					■		■		
Quarter 3, 2012												■		■					■		■		
Quarter 4, 2012											■	■		■		■			■		■		
Quarter 1, 2013												■		■		■			■		■		
Quarter 2, 2013												■		■					■		■		
TURBIDITY																							
Quarter 4, 2002																					✱		
Quarter 1, 2003							✱					✱		✱									
URANIUM																							
Quarter 4, 2002																		✱	✱				
Quarter 1, 2003																			✱				
Quarter 4, 2003							✱																
Quarter 1, 2004							✱	✱	✱					✱			✱						
Quarter 4, 2004																	✱						
Quarter 4, 2006																			✱		✱		
ZINC																							
Quarter 3, 2003												✱											
Quarter 4, 2003							✱		✱			✱											
Quarter 4, 2004							✱																
Quarter 4, 2007							✱	✱	✱														

✱	Statistical test results indicate an elevated concentration (i.e., a statistically significant increase)
■	MCL Exceedance
UCRS	Upper Continental Recharge System
URGA	Upper Regional Gravel Aquifer
LRGA	Lower Regional Gravel Aquifer

Chart of MCL Exceedances and Statistical Increases for C-746-S&T Landfills

Groundwater Flow System	UCRS					URGA										LRGA						
Gradient	S	D	D	D	U	S	S	S	S	S	D	D	D	D	U	U	S	D	D	D	D	U	U
Monitoring Well	386	389	390	393	396	221	222	223	224	384	369	372	387	391	220	394	385	370	373	388	392	395	397

S Sidegradient; D Downgradient; U Upgradient

APPENDIX H

METHANE MONITORING DATA

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C-746-S & T LANDFILL METHANE MONITORING REPORT

Date:	06/11/2013	Time:	13:12	Monitor:	Tammy Smith

Weather Conditions:
Sunny and Dry 90°

Monitoring Equipment:
Innova LS

Monitoring Location		Reading (% LEL)
Ogden Landing Road Entrance	Checked @ Ground Level	0
North Landfill Gate	Checked @ Ground Level	0
West Side of Landfill: North 37° 07.652' West 88° 48.029'	Checked @ Ground Level	0
East Side of Landfill: North 37° 07.628' West 88° 47.798'	Checked @ Ground Level	0
Cell 1 Gas Vent (17)	10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170	N/A
Cell 2 Gas Vent (3)	10 20 30	N/A
Cell 3 Gas Vent (7)	10 20 30 40 50 60 70	N/A
Landfill Office	Checked @ Floor Level	N/A
Suspect or Problem Areas	No Areas Noted	N/A

Remarks:

ALL VENTS CHECKED 1' FROM MOUTH OF VENT

Performed by: Tammy Smith (Signature) 6/11/13 (Date)

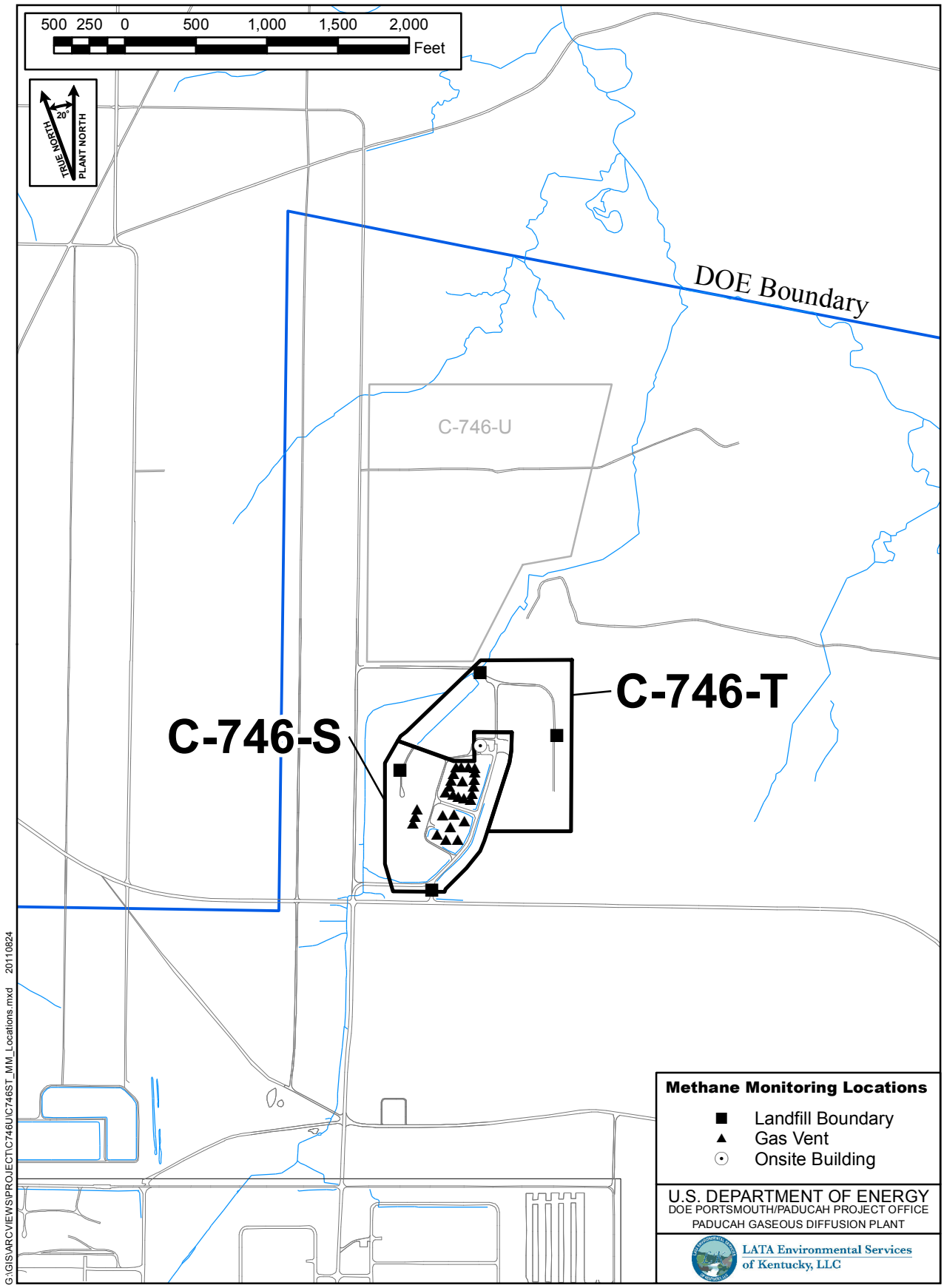

Figure H.1. C-746-S&T Methane Monitoring Locations

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/INERT-QUARTERLY
Facility: US DOE - Paducah Gaseous Diffusion Plant
Permit Number: 073-00014 & 073-00015

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")						L135 UPSTREAM		L136 AT SITE		L154 DOWNSTREAM			
Sample Sequence #						1		1		1			
If sample is a Blank, specify Type: (F)ield, (T)rip, (M)ethod, or (E)quipment						NA		NA		NA			
Sample Date and Time (Month/Day/Year hour: minutes)						4/11/2013 08:49		5/21/2013 18:44		4/11/2013 08:35			
Duplicate ("Y" or "N")[1]						N		N		N			
Split ('Y' or "N")[2]						N		N		N			
Facility Sample ID Number (if applicable)						L135SS3-13		L136SS3-13		L154US3-13			
Laboratory Sample ID Number (if applicable)						C13101020001		C13142006001		C13101018003			
Date of Analysis (Month/Day/Year)						5/7/2013		6/6/2013		5/1/2013			
CAS RN[3]		CONSTITUENT	TD[4]	Unit OF MEASURE	METHOD	DETECTED VALUE OR PQL[5]	FLAGS[7]	DETECTED VALUE OR PQL[5]	FLAGS[7]	DETECTED VALUE OR PQL[5]	FLAGS[7]	DETECTED VALUE OR PQL[5]	FLAGS[7]
A200-00-0	0	Flow	T	MGD	Field	1.62		2.5		1.43			
16887-00-6	2	Chloride(s)	T	MG/L	300.0	<2		<2		<2			
14808-79-8	0	Sulfate	T	MG/L	300.0	4.4		11		4			
7439-89-6	0	Iron	T	MG/L	200.7 R3.3	3.19		0.671		2.97			
7440-23-5	0	Sodium	T	MG/L	200.7 R3.3	2.03		1.06		1.94			
S0268- -	0	Organic Carbon[6]	T	MG/L	9060	24.8	D	15.1	D	22.5	D*		
S0097- -	0	BOD[6]	T	MG/L	not applicable		*		*		*		
S0130- -	0	Chemical Oxygen Demand	T	MG/L	410.4	<25	B	39		47			

[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: **073-00014 & 073-00015**

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")						L135 UPSTREAM		L136 AT SITE		L154 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	102		108		95			
S0270- -	0	Total Suspended Solids	T	MG/L	160.1	<50		<20		23			
S0266- -	0	Total Dissolved Solids	T	MG/L	160.2	96	*	86		187	*		
S0269- -	0	Total Solids	T	MG/L	160.3	166		118		231			
S0296- -	0	pH	T	Units	Field	7.44		6.79		7.5			
7440-61-1		Uranium	T	MG/L	IN7105	0.00229		<0.001		0.00168			
12587-46-1		Gross Alpha (α)	T	pCi/L	900.0	3.17	*	0.322	*	2.32	*		
12587-47-2		Gross Beta (β)	T	pCi/L	900.0	9.13	*	7.94	*	6.46	*		

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

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

Permit Numbers: 073-00014 & 073-00015 **For Official Use Only**

SURFACE WATER
WRITTEN COMMENTS

Monitoring Point	Facility Sample ID	Constituent	Flag	Description
L135	L135SS3-13	Biochemical Oxygen Demand (BOD		Analysis of constituent not required and not performed.
		Dissolved Solids	*	Duplicate analysis not within control limits.
		Alpha activity	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 1.81. Rad error is 1.64.
		Beta activity	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 1.91. Rad error is 1.61.
L136	L136SS3-13	Biochemical Oxygen Demand (BOD		Analysis of constituent not required and not performed.
		Alpha activity	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 0.186. Rad error is 0.179.
		Beta activity		TPU is 1.22. Rad error is 1.15.
L154	L154US3-13	Total Organic Carbon (TOC)	E	Concentration exceeds calibration range of the instrument.
		Biochemical Oxygen Demand (BOD		Analysis of constituent not required and not performed.
		Dissolved Solids	*	Duplicate analysis not within control limits.
		Alpha activity	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 1.41. Rad error is 1.29.
		Beta activity	U	Indicates analyte/nuclide was analyzed for, but not detected. TPU is 1.39. Rad error is 1.2.

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APPENDIX J

ANNUAL LEACHATE MONITORING DATA

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Paducah OREIS Report for SLS13-01

SLS13-01-01 from: C-746-S on 4/17/2013 Media: WW SmpMethod: GR

Comments:

Analysis	Results	Counting Error	Units	Result Qual	Foot Note	Reporting Limit	TPU	Method	V/V/A*
ANION									
Bromide	2		mg/L	U		2		SW846-9056	/ X /
Chloride	35		mg/L			2		SW846-9056	/ X /
Fluoride	0.64		mg/L			0.1		9214	/ X /
Nitrate as Nitrogen	2.7		mg/L			1		SW846-9056	/ X /
Sulfate	130		mg/L			10		SW846-9056	/ X /
FS									
Conductivity	0.927		umho/cm					FS	/ /
Dissolved Oxygen	16.8		mg/L					FS	/ /
pH	7.33		Std Unit					FS	/ /
Redox	267		mV					FS	/ /
Temperature	63.3		deg F					FS	/ /
METAL									
Aluminum	0.2		mg/L	U		0.2		SW846-6010B	/ X /
Antimony	0.005		mg/L	UB		0.005		SW846-6020	/ X /
Arsenic	0.001		mg/L	U		0.001		SW846-6020	/ X /
Barium	0.109		mg/L			0.005		SW846-6020	/ X /
Beryllium	0.001		mg/L	U		0.001		SW846-6020	/ X /
Boron	0.2		mg/L	UB		0.2		SW846-6010B	/ X /
Cadmium	0.001		mg/L	U		0.001		SW846-6020	/ X /
Calcium	149		mg/L			1		SW846-6010B	/ X /
Chromium	0.01		mg/L	U		0.01		SW846-6020	/ X /
Cobalt	0.001		mg/L	UBX		0.001		SW846-6020	/ X /
Copper	0.019		mg/L			0.0052		SW846-6020	/ X /
Iron	0.396		mg/L			0.1		SW846-6010B	/ X /
Lead	0.0013		mg/L	UB		0.0013		SW846-6020	/ X /
Magnesium	21.7		mg/L	N		0.025		SW846-6010B	/ X /
Manganese	0.265		mg/L	NX		0.005		SW846-6020	/ X /
Mercury	0.0002		mg/L	U		0.0002		SW846-7470A	/ X /
Molybdenum	0.001		mg/L	UB		0.001		SW846-6020	/ X /
Nickel	0.00642		mg/L	X		0.005		SW846-6020	/ X /
Phosphorous	0.06		mg/L			0.04		EPA-365.3	/ X /
Potassium	0.647		mg/L			0.2		SW846-6010B	S / X /
Rhodium	0.005		mg/L	U		0.005		SW846-6020	/ X /
Selenium	0.005		mg/L	U		0.005		SW846-6020	/ X /
Silver	0.001		mg/L	U		0.001		SW846-6020	/ X /
Sodium	19.8		mg/L			1		SW846-6010B	/ X /
Tantalum	0.005		mg/L	U		0.005		SW846-6020	/ X /
Thallium	0.002		mg/L	U		0.002		SW846-6020	/ X /
Tin	0.005		mg/L	UB		0.005		SW846-6020	/ X /
Titanium	0.005		mg/L	U		0.005		SW846-6020	/ X /
Uranium	0.0131		mg/L			0.001		SW846-6020	/ X /
Vanadium	0.02		mg/L	U		0.02		SW846-6020	/ X /
Zinc	0.0262		mg/L	B		0.02		SW846-6020	/ X /
METAL-D									
Antimony, Dissolved	0.005		mg/L	U		0.005		SW846-6020	/ X /
Arsenic, Dissolved	0.001		mg/L	U		0.001		SW846-6020	/ X /
Barium, Dissolved	0.107		mg/L			0.005		SW846-6020	/ X /
Cadmium, Dissolved	0.001		mg/L	U		0.001		SW846-6020	/ X /
Chromium, Dissolved	0.01		mg/L	U		0.01		SW846-6020	/ X /
Cobalt, Dissolved	0.001		mg/L	UBX		0.001		SW846-6020	/ X /

*Verification/Validation/Assessment

Copper, Dissolved	0.0052		mg/L	UN	0.0052		SW846-6020	/ X /
Lead, Dissolved	0.0013		mg/L	U	0.0013		SW846-6020	/ X /
Manganese, Dissolved	0.265		mg/L		0.005		SW846-6020	/ X /
Nickel, Dissolved	0.00585		mg/L		0.005		SW846-6020	/ X /
Selenium, Dissolved	0.005		mg/L	U	0.005		SW846-6020	/ X /
Silver, Dissolved	0.001		mg/L	UNB	0.001		SW846-6020	/ X /
Tin, Dissolved	0.005		mg/L	U	0.005		SW846-6020	/ X /
Titanium, Dissolved	0.005		mg/L	U	0.005		SW846-6020	/ X /
Uranium, Dissolved	0.0131		mg/L		0.001		SW846-6020	/ X /
Vanadium, Dissolved	0.02		mg/L	U	0.02		SW846-6020	/ X /
Zinc, Dissolved	0.02		mg/L	U	0.02		SW846-6020	/ X /
OTHOR								
Oil and Grease	7		mg/L	U	7		EPA-1664	/ X /
PPCB								
PCB-1016	0.17		ug/L	U	0.17		SW846-8082	/ X /
PCB-1221	0.18		ug/L	U	0.18		SW846-8082	/ X /
PCB-1232	0.14		ug/L	U	0.14		SW846-8082	/ X /
PCB-1242	0.1		ug/L	U	0.1		SW846-8082	/ X /
PCB-1248	0.12		ug/L	U	0.12		SW846-8082	/ X /
PCB-1254	0.07		ug/L	U	0.07		SW846-8082	/ X /
PCB-1260	0.05		ug/L	U	0.05		SW846-8082	/ X /
PCB-1268	0.09		ug/L	U	0.09		SW846-8082	/ X /
Polychlorinated biphenyl	0.18		ug/L	U	0.18		SW846-8082	/ X /
RADS								
Alpha activity	11.8	5.16	pCi/L	U	12	5.91	SW846-9310	/ X /
Americium-241	-0.00163	0.0187	pCi/L	U	0.218	0.0878	RL-7128	/ X /
Beta activity	2.95	0.587	pCi/L	U	10.5	0.672	SW846-9310	/ X /
Cesium-137	-0.52	1.04	pCi/L	U	2.06	1.21	RL-7124	/ X /
Cobalt-60	-0.08	0.16	pCi/L	U	2.32	1.42	RL-7124	/ X /
Dissolved Alpha	5.47	2.83	pCi/L	U	11.7	3.12	RL-7111	/ X /
Dissolved Beta	9.28	1.67	pCi/L	U	10.5	1.96	RL-7111	/ X /
Neptunium-237	-0.0158	0.0234	pCi/L	U	0.162	0.0559	RL-7128	/ X /
Plutonium-239/240	-0.00658	0.00292	pCi/L	U	0.231	0.0951	RL-7128	/ X /
Radium-226	0.0129	0.0284	pCi/L	U	0.805	0.324	RL-7129	/ X /
Strontium-90	0.916	0.177	pCi/L	U	2.27	0.269	RL-7140	/ X /
Technetium-99	-1.32	8.93	pCi/L	U	14.7	8.93	RL-7100	/ X /
Thorium-230	0.0353	0.0475	pCi/L	U	0.254	0.0966	RL-7128	/ X /
Thorium-234	-14.2	28.4	pCi/L	U	50	28.5	RL-7124	/ X /
Tritium	4.17	568	pCi/L	U	240	568	RL-7155	/ X /
Uranium	8.77	3.67	pCi/L		0.701	4.79	RL-7128	S / X /
Uranium-234	4.25	0.327	pCi/L		0.412	0.799	RL-7128	/ X /
Uranium-235	0.199	0.0843	pCi/L		0.132	0.0999	RL-7128	/ X /
Uranium-238	4.33	0.328	pCi/L		0.157	0.791	RL-7128	/ X /
RADS-D								
Americium-241	0.0262	0.0335	pCi/L	U	0.218	0.0924	RL-7128	/ X /
Cesium-137	-1.32	2.65	pCi/L	U	1.82	2.65	RL-7124	/ X /
Cobalt-60	-0.884	1.77	pCi/L	U	2.4	1.77	RL-7124	/ X /
Neptunium-237	-0.0199	0.0318	pCi/L	U	0.147	0.0613	RL-7128	/ X /
Plutonium-239/240	-0.0017	0.0127	pCi/L	U	0.232	0.0949	RL-7128	/ X /
Technetium-99	-3.77	8.98	pCi/L	U	14.7	8.98	RL-7100	/ X /
Thorium-230	0.0747	0.055	pCi/L	U	0.278	0.101	RL-7128	/ X /
Thorium-234	-30	59.9	pCi/L	U	50	59.9	RL-7124	/ X /
Uranium, Dissolved	9.59	3.99	pCi/L		0.672	5.3	RL-7128	S / X /
Uranium-234	5.07	0.324	pCi/L		0.403	0.906	RL-7128	/ X /
Uranium-235	0.171	0.0729	pCi/L		0.119	0.0887	RL-7128	/ X /

Uranium-238	4.34	0.3	pCi/L		0.15	0.768	RL-7128	/ X /
VOA								
1,1,1,2-Tetrachloroethane	5		ug/L	U	5		SW846-8260B	/ X /
1,1,1-Trichloroethane	1		ug/L	U	1		SW846-8260B	/ X /
1,1,2,2-Tetrachloroethane	5		ug/L	UJ	5		SW846-8260B	/ X /
1,1,2-Trichloroethane	1		ug/L	U	1		SW846-8260B	/ X /
1,1-Dichloroethane	1		ug/L	U	1		SW846-8260B	/ X /
1,1-Dichloroethene	1		ug/L	U	1		SW846-8260B	/ X /
1,2,3-Trichloropropane	5		ug/L	U	5		SW846-8260B	/ X /
1,2-Dibromo-3-chloropropane	0.2		ug/L	U	0.2		SW846-8011	/ X /
1,2-Dibromoethane	5		ug/L	U	5		SW846-8260B	/ X /
1,2-Dichlorobenzene	5		ug/L	U	5		SW846-8260B	/ X /
1,2-Dichloroethane	1		ug/L	U	1		SW846-8260B	/ X /
1,2-Dichloropropane	5		ug/L	U	5		SW846-8260B	/ X /
1,2-Dimethylbenzene	5		ug/L	U	5		SW846-8260B	/ X /
1,4-Dichlorobenzene	5		ug/L	U	5		SW846-8260B	/ X /
2-Butanone	10		ug/L	U	10		SW846-8260B	/ X /
2-Hexanone	10		ug/L	U	10		SW846-8260B	/ X /
4-Methyl-2-pentanone	10		ug/L	U	10		SW846-8260B	/ X /
Acetone	10		ug/L	U	10		SW846-8260B	/ X /
Acrolein	10		ug/L	U	10		SW846-8260B	/ X /
Acrylonitrile	10		ug/L	U	10		SW846-8260B	/ X /
Benzene	5		ug/L	U	5		SW846-8260B	/ X /
Bromochloromethane	5		ug/L	U	5		SW846-8260B	/ X /
Bromodichloromethane	5		ug/L	U	5		SW846-8260B	/ X /
Bromoform	5		ug/L	U	5		SW846-8260B	/ X /
Bromomethane	5		ug/L	U	5		SW846-8260B	/ X /
Carbon disulfide	5		ug/L	U	5		SW846-8260B	/ X /
Carbon tetrachloride	5		ug/L	U	5		SW846-8260B	/ X /
Chlorobenzene	5		ug/L	U	5		SW846-8260B	/ X /
Chloroethane	5		ug/L	JU	5		SW846-8260B	/ X /
Chloroform	1		ug/L	U	1		SW846-8260B	/ X /
Chloromethane	5		ug/L	U	5		SW846-8260B	/ X /
cis-1,2-Dichloroethene	1		ug/L	U	1		SW846-8260B	/ X /
cis-1,3-Dichloropropene	5		ug/L	U	5		SW846-8260B	/ X /
Dibromochloromethane	5		ug/L	U	5		SW846-8260B	/ X /
Dibromomethane	5		ug/L	U	5		SW846-8260B	/ X /
Ethylbenzene	5		ug/L	U	5		SW846-8260B	/ X /
Iodomethane	10		ug/L	U	10		SW846-8260B	/ X /
m,p-Xylene	10		ug/L	U	10		SW846-8260B	/ X /
Methylene chloride	5		ug/L	U	5		SW846-8260B	/ X /
Styrene	5		ug/L	U	5		SW846-8260B	/ X /
Tetrachloroethene	1		ug/L	U	1		SW846-8260B	/ X /
Toluene	5		ug/L	U	5		SW846-8260B	/ X /
Total Xylene	15		ug/L	U	15		SW846-8260B	/ X /
trans-1,2-Dichloroethene	1		ug/L	U	1		SW846-8260B	/ X /
trans-1,3-Dichloropropene	5		ug/L	U	5		SW846-8260B	/ X /
Trans-1,4-Dichloro-2-butene	5		ug/L	U	5		SW846-8260B	/ X /
Trichloroethene	1		ug/L	U	1		SW846-8260B	/ X /
Trichlorofluoromethane	5		ug/L	U	5		SW846-8260B	/ X /
Vinyl acetate	10		ug/L	UJ	10		SW846-8260B	/ X /
Vinyl chloride	2		ug/L	U	2		SW846-8260B	/ X /
WETCHEM								
Carbonaceous Biochemical Oxygen Demand (CBOD)	5		mg/L	U	5		SM-5210 B	/ X /
Chemical Oxygen Demand (COD)	25		mg/L	U	25		EPA-410.4	/ X /

Cyanide	0.04	mg/L	U	0.04	SW846-9010C	/ X /
Dissolved Solids	566	mg/L		35	EPA-160.1	/ X /
Hardness - Total as CaCO3	470	mg/L		20	EPA-130.2	/ X /
Iodide	2	mg/L	U	2	EPA-345.1	/ X /
Suspended Solids	10	mg/L	U	10	EPA-160.2	/ X /
Total Organic Carbon (TOC)	2.7	mg/L		1	SW846-9060	/ X /
Total Organic Halides (TOX)	16	ug/L		5	SW846-9020B	/ X /

Paducah OREIS Report for SLS13-01

SLS13-01-02 from: C-746-S on 4/17/2013 Media: WW SmpMethod: GR

Comments:

Analysis	Results	Counting Error	Units	Result Qual	Foot Note	Reporting Limit	TPU	Method	V/V/A*
ANION									
Bromide	2		mg/L	U		2		SW846-9056	/ X /
Chloride	28		mg/L			2		SW846-9056	/ X /
Fluoride	0.25		mg/L			0.1		9214	S / X /
Nitrate as Nitrogen	1		mg/L	U		1		SW846-9056	/ X /
Sulfate	450		mg/L			20		SW846-9056	S / X /
FS									
Conductivity	1276		umho/cm					FS	/ /
Dissolved Oxygen	5.31		mg/L					FS	/ /
pH	6.61		Std Unit					FS	/ /
Redox	153		mV					FS	/ /
Temperature	62		deg F					FS	/ /
METAL									
Aluminum	0.2		mg/L	U		0.2		SW846-6010B	/ X /
Antimony	0.005		mg/L	UB		0.005		SW846-6020	/ X /
Arsenic	0.0041		mg/L			0.001		SW846-6020	S / X /
Barium	0.155		mg/L			0.005		SW846-6020	/ X /
Beryllium	0.001		mg/L	U		0.001		SW846-6020	/ X /
Boron	0.2		mg/L	UB		0.2		SW846-6010B	/ X /
Cadmium	0.001		mg/L	U		0.001		SW846-6020	/ X /
Calcium	189		mg/L			1		SW846-6010B	/ X /
Chromium	0.01		mg/L	U		0.01		SW846-6020	/ X /
Cobalt	0.0121		mg/L	BX		0.001		SW846-6020	/ X /
Copper	0.0052		mg/L	U		0.0052		SW846-6020	/ X /
Iron	57.2		mg/L			0.1		SW846-6010B	/ X /
Lead	0.0013		mg/L	UB		0.0013		SW846-6020	/ X /
Magnesium	51.5		mg/L	N		0.025		SW846-6010B	S / X /
Manganese	3.39		mg/L	NX		0.05		SW846-6020	/ X /
Mercury	0.0002		mg/L	U		0.0002		SW846-7470A	/ X /
Molybdenum	0.001		mg/L	UB		0.001		SW846-6020	/ X /
Nickel	0.00882		mg/L	X		0.005		SW846-6020	/ X /
Phosphorous	0.11		mg/L			0.04		EPA-365.3	/ X /
Potassium	3.4		mg/L			0.2		SW846-6010B	/ X /
Rhodium	0.005		mg/L	U		0.005		SW846-6020	/ X /
Selenium	0.005		mg/L	U		0.005		SW846-6020	/ X /
Silver	0.001		mg/L	U		0.001		SW846-6020	/ X /
Sodium	35.8		mg/L			1		SW846-6010B	/ X /
Tantalum	0.005		mg/L	U		0.005		SW846-6020	/ X /
Thallium	0.002		mg/L	U		0.002		SW846-6020	/ X /
Tin	0.005		mg/L	UB		0.005		SW846-6020	/ X /
Titanium	0.005		mg/L	U		0.005		SW846-6020	/ X /
Uranium	0.00381		mg/L			0.001		SW846-6020	/ X /
Vanadium	0.02		mg/L	U		0.02		SW846-6020	/ X /
Zinc	0.068		mg/L	B		0.02		SW846-6020	/ X /
METAL-D									
Antimony, Dissolved	0.005		mg/L	U		0.005		SW846-6020	/ X /
Arsenic, Dissolved	0.00172		mg/L			0.001		SW846-6020	S / X /
Barium, Dissolved	0.127		mg/L			0.005		SW846-6020	/ X /
Cadmium, Dissolved	0.001		mg/L	U		0.001		SW846-6020	/ X /
Chromium, Dissolved	0.01		mg/L	U		0.01		SW846-6020	/ X /
Cobalt, Dissolved	0.0116		mg/L	BX		0.001		SW846-6020	S / X /

*Verification/Validation/Assessment

Copper, Dissolved	0.0052		mg/L	UN	0.0052		SW846-6020	/ X /
Lead, Dissolved	0.0013		mg/L	U	0.0013		SW846-6020	/ X /
Manganese, Dissolved	3.61		mg/L		0.05		SW846-6020	S / X /
Nickel, Dissolved	0.00836		mg/L		0.005		SW846-6020	S / X /
Selenium, Dissolved	0.005		mg/L	U	0.005		SW846-6020	/ X /
Silver, Dissolved	0.001		mg/L	UNB	0.001		SW846-6020	/ X /
Tin, Dissolved	0.005		mg/L	U	0.005		SW846-6020	/ X /
Titanium, Dissolved	0.005		mg/L	U	0.005		SW846-6020	/ X /
Uranium, Dissolved	0.00333		mg/L		0.001		SW846-6020	/ X /
Vanadium, Dissolved	0.02		mg/L	U	0.02		SW846-6020	/ X /
Zinc, Dissolved	0.0274		mg/L		0.02		SW846-6020	/ X /
OTHOR								
Oil and Grease	7		mg/L	U	7		EPA-1664	/ X /
PPCB								
PCB-1016	0.17		ug/L	U	0.17		SW846-8082	/ X /
PCB-1221	0.18		ug/L	U	0.18		SW846-8082	/ X /
PCB-1232	0.14		ug/L	U	0.14		SW846-8082	/ X /
PCB-1242	0.1		ug/L	U	0.1		SW846-8082	/ X /
PCB-1248	0.12		ug/L	U	0.12		SW846-8082	/ X /
PCB-1254	0.07		ug/L	U	0.07		SW846-8082	/ X /
PCB-1260	0.05		ug/L	U	0.05		SW846-8082	/ X /
PCB-1268	0.09		ug/L	U	0.09		SW846-8082	/ X /
Polychlorinated biphenyl	0.18		ug/L	U	0.18		SW846-8082	/ X /
RADS								
Alpha activity	2.01	0.899	pCi/L	U	11.9	1.02	SW846-9310	/ X /
Americium-241	0.044	0.0416	pCi/L	U	0.221	0.0959	RL-7128	/ X /
Beta activity	8.9	1.15	pCi/L		8.59	1.52	SW846-9310	/ X /
Cesium-137	-0.172	0.344	pCi/L	U	2.14	1.22	RL-7124	/ X /
Cobalt-60	-1.15	2.31	pCi/L	U	2.15	2.31	RL-7124	/ X /
Dissolved Alpha	2.51	1.51	pCi/L	U	15.8	1.63	RL-7111	/ X /
Dissolved Beta	10.6	1.88	pCi/L	U	11.2	2.22	RL-7111	/ X /
Neptunium-237	-0.0267	0.035	pCi/L	U	0.146	0.0614	RL-7128	/ X /
Plutonium-239/240	-0.00218	0.0117	pCi/L	U	0.239	0.0939	RL-7128	/ X /
Radium-226	0.167	0.17	pCi/L	U	0.779	0.334	RL-7129	/ X /
Strontium-90	0.253	0.054	pCi/L	U	2.73	0.0777	RL-7140	/ X /
Technetium-99	-1.22	9.35	pCi/L	U	14.7	9.35	RL-7100	/ X /
Thorium-230	0.0268	0.0661	pCi/L	U	0.234	0.109	RL-7128	/ X /
Thorium-234	-17.2	34.4	pCi/L	U	50	34.4	RL-7124	/ X /
Tritium	-99.1	610	pCi/L	U	240	610	RL-7155	/ X /
Uranium	2.53	1.86	pCi/L	U	0.676	2.69	RL-7128	/ X /
Uranium-234	1.14	0.171	pCi/L		0.405	0.307	RL-7128	/ X /
Uranium-235	0.0498	0.0418	pCi/L	U	0.122	0.0594	RL-7128	/ X /
Uranium-238	1.34	0.181	pCi/L		0.15	0.291	RL-7128	/ X /
RADS-D								
Americium-241	0.00867	0.0272	pCi/L	U	0.222	0.0901	RL-7128	/ X /
Cesium-137	0.45	0.9	pCi/L	U	2.11	1.16	RL-7124	/ X /
Cobalt-60	-1.1	2.2	pCi/L	U	2.18	2.2	RL-7124	/ X /
Neptunium-237	-0.0523	0.0542	pCi/L	U	0.218	0.0746	RL-7128	/ X /
Plutonium-239/240	0.00358	0.0232	pCi/L	U	0.251	0.096	RL-7128	/ X /
Technetium-99	-3.28	9.07	pCi/L	U	14.7	9.07	RL-7100	/ X /
Thorium-230	0.081	0.111	pCi/L	U	0.305	0.14	RL-7128	/ X /
Thorium-234	4.38	8.75	pCi/L	U	49.9	28.5	RL-7124	/ X /
Uranium, Dissolved	2.04	1.3	pCi/L		0.701	1.91	RL-7128	/ X /
Uranium-234	0.913	0.141	pCi/L		0.423	0.266	RL-7128	/ X /
Uranium-235	0.0594	0.0415	pCi/L	U	0.122	0.0594	RL-7128	/ X /

Uranium-238	1.07	0.148	pCi/L		0.156	0.234	RL-7128	/ X /
VOA								
1,1,1,2-Tetrachloroethane	5		ug/L	UX	5		SW846-8260B	/ X /
1,1,1-Trichloroethane	1		ug/L	UX	1		SW846-8260B	/ X /
1,1,2,2-Tetrachloroethane	5		ug/L	UJX	5		SW846-8260B	/ X /
1,1,2-Trichloroethane	1		ug/L	UX	1		SW846-8260B	/ X /
1,1-Dichloroethane	1		ug/L	UX	1		SW846-8260B	/ X /
1,1-Dichloroethene	1		ug/L	UX	1		SW846-8260B	/ X /
1,2,3-Trichloropropane	5		ug/L	UX	5		SW846-8260B	/ X /
1,2-Dibromo-3-chloropropane	0.2		ug/L	U	0.2		SW846-8011	/ X /
1,2-Dibromoethane	5		ug/L	UX	5		SW846-8260B	/ X /
1,2-Dichlorobenzene	5		ug/L	UX	5		SW846-8260B	/ X /
1,2-Dichloroethane	1		ug/L	UX	1		SW846-8260B	/ X /
1,2-Dichloropropane	5		ug/L	UX	5		SW846-8260B	/ X /
1,2-Dimethylbenzene	5		ug/L	UX	5		SW846-8260B	/ X /
1,4-Dichlorobenzene	5		ug/L	UX	5		SW846-8260B	/ X /
2-Butanone	10		ug/L	UX	10		SW846-8260B	/ X /
2-Hexanone	10		ug/L	UX	10		SW846-8260B	/ X /
4-Methyl-2-pentanone	10		ug/L	UX	10		SW846-8260B	/ X /
Acetone	13		ug/L	X	10		SW846-8260B	/ X /
Acrolein	10		ug/L	UX	10		SW846-8260B	/ X /
Acrylonitrile	10		ug/L	UX	10		SW846-8260B	/ X /
Benzene	5		ug/L	UX	5		SW846-8260B	/ X /
Bromochloromethane	5		ug/L	UX	5		SW846-8260B	/ X /
Bromodichloromethane	5		ug/L	UX	5		SW846-8260B	/ X /
Bromoform	5		ug/L	UX	5		SW846-8260B	/ X /
Bromomethane	5		ug/L	UX	5		SW846-8260B	/ X /
Carbon disulfide	5		ug/L	UX	5		SW846-8260B	/ X /
Carbon tetrachloride	5		ug/L	UX	5		SW846-8260B	/ X /
Chlorobenzene	5		ug/L	UX	5		SW846-8260B	/ X /
Chloroethane	5		ug/L	JUX	5		SW846-8260B	/ X /
Chloroform	1		ug/L	UX	1		SW846-8260B	/ X /
Chloromethane	5		ug/L	UX	5		SW846-8260B	/ X /
cis-1,2-Dichloroethene	1		ug/L	UX	1		SW846-8260B	/ X /
cis-1,3-Dichloropropene	5		ug/L	UX	5		SW846-8260B	/ X /
Dibromochloromethane	5		ug/L	UX	5		SW846-8260B	/ X /
Dibromomethane	5		ug/L	UX	5		SW846-8260B	/ X /
Ethylbenzene	5		ug/L	UX	5		SW846-8260B	/ X /
Iodomethane	10		ug/L	UX	10		SW846-8260B	/ X /
m,p-Xylene	10		ug/L	UX	10		SW846-8260B	/ X /
Methylene chloride	5		ug/L	UX	5		SW846-8260B	/ X /
Styrene	5		ug/L	UX	5		SW846-8260B	/ X /
Tetrachloroethene	1		ug/L	UX	1		SW846-8260B	/ X /
Toluene	5		ug/L	UX	5		SW846-8260B	/ X /
Total Xylene	15		ug/L	UX	15		SW846-8260B	/ X /
trans-1,2-Dichloroethene	1		ug/L	UX	1		SW846-8260B	/ X /
trans-1,3-Dichloropropene	5		ug/L	UX	5		SW846-8260B	/ X /
Trans-1,4-Dichloro-2-butene	5		ug/L	UX	5		SW846-8260B	/ X /
Trichloroethene	1		ug/L	UX	1		SW846-8260B	/ X /
Trichlorofluoromethane	5		ug/L	UX	5		SW846-8260B	/ X /
Vinyl acetate	10		ug/L	UXJ	10		SW846-8260B	/ X /
Vinyl chloride	2		ug/L	UX	2		SW846-8260B	/ X /
WETCHEM								
Carbonaceous Biochemical Oxygen Demand (CBOD)	5		mg/L	U	5		SM-5210 B	/ X /
Chemical Oxygen Demand (COD)	33		mg/L		25		EPA-410.4	/ X /

Cyanide	0.04	mg/L	U	0.04	SW846-9010C	/ X /
Dissolved Solids	995	mg/L		35	EPA-160.1	/ X /
Hardness - Total as CaCO3	690	mg/L		20	EPA-130.2	/ X /
Iodide	2	mg/L	U	2	EPA-345.1	/ X /
Suspended Solids	64	mg/L		20	EPA-160.2	/ X /
Total Organic Carbon (TOC)	9.7	mg/L		1	SW846-9060	/ X /
Total Organic Halides (TOX)	330	ug/L		5	SW846-9020B	S / X /

Paducah OREIS Report for SLS13-01

FBSLS13-01 from: QC on 4/17/2013 Media: WQ SmpMethod:

Comments:

Analysis	Results	Counting Error	Units	Result Qual	Foot Note	Reporting Limit	TPU	Method	V/V/A*
ANION									
Bromide	2		mg/L	U		2		SW846-9056	/ X /
Chloride	2		mg/L	U		2		SW846-9056	/ X /
Fluoride	0.1		mg/L	U		0.1		9214	/ X /
Nitrate as Nitrogen	1		mg/L	U		1		SW846-9056	/ X /
Sulfate	2		mg/L	U		2		SW846-9056	/ X /
METAL									
Aluminum	0.2		mg/L	U		0.2		SW846-6010B	/ X /
Antimony	0.005		mg/L	UB		0.005		SW846-6020	/ X /
Arsenic	0.001		mg/L	U		0.001		SW846-6020	/ X /
Barium	0.005		mg/L	U		0.005		SW846-6020	/ X /
Beryllium	0.001		mg/L	U		0.001		SW846-6020	/ X /
Boron	0.2		mg/L	UB		0.2		SW846-6010B	/ X /
Cadmium	0.001		mg/L	U		0.001		SW846-6020	/ X /
Calcium	1		mg/L	U		1		SW846-6010B	/ X /
Chromium	0.01		mg/L	U		0.01		SW846-6020	/ X /
Cobalt	0.001		mg/L	UBX		0.001		SW846-6020	/ X /
Copper	0.0052		mg/L	U		0.0052		SW846-6020	/ X /
Iron	0.1		mg/L	U		0.1		SW846-6010B	/ X /
Lead	0.0013		mg/L	UB		0.0013		SW846-6020	/ X /
Magnesium	0.025		mg/L	UN		0.025		SW846-6010B	/ X /
Manganese	0.005		mg/L	UNX		0.005		SW846-6020	/ X /
Mercury	0.0002		mg/L	U		0.0002		SW846-7470A	/ X /
Molybdenum	0.001		mg/L	UB		0.001		SW846-6020	/ X /
Nickel	0.005		mg/L	UX		0.005		SW846-6020	/ X /
Phosphorous	0.04		mg/L	U		0.04		EPA-365.3	/ X /
Potassium	0.2		mg/L	UB		0.2		SW846-6010B	/ X /
Rhodium	0.005		mg/L	U		0.005		SW846-6020	/ X /
Selenium	0.005		mg/L	U		0.005		SW846-6020	/ X /
Silver	0.001		mg/L	U		0.001		SW846-6020	/ X /
Sodium	1		mg/L	U		1		SW846-6010B	/ X /
Tantalum	0.005		mg/L	U		0.005		SW846-6020	/ X /
Thallium	0.002		mg/L	U		0.002		SW846-6020	/ X /
Tin	0.005		mg/L	UB		0.005		SW846-6020	/ X /
Titanium	0.005		mg/L	U		0.005		SW846-6020	/ X /
Uranium	0.001		mg/L	U		0.001		SW846-6020	/ X /
Vanadium	0.02		mg/L	U		0.02		SW846-6020	/ X /
Zinc	0.02		mg/L	UB		0.02		SW846-6020	/ X /
OTHOR									
Oil and Grease	7		mg/L	U		7		EPA-1664	/ X /
PPCB									
PCB-1016	0.16		ug/L	U		0.16		SW846-8082	/ X /
PCB-1221	0.17		ug/L	U		0.17		SW846-8082	/ X /
PCB-1232	0.13		ug/L	U		0.13		SW846-8082	/ X /
PCB-1242	0.1		ug/L	U		0.1		SW846-8082	/ X /
PCB-1248	0.11		ug/L	U		0.11		SW846-8082	/ X /
PCB-1254	0.07		ug/L	U		0.07		SW846-8082	/ X /
PCB-1260	0.05		ug/L	U		0.05		SW846-8082	/ X /
PCB-1268	0.09		ug/L	U		0.09		SW846-8082	/ X /
Polychlorinated biphenyl	0.17		ug/L	U		0.17		SW846-8082	/ X /

*Verification/Validation/Assessment

Paducah OREIS Report for SLS13-01

RADS								
Alpha activity	0.352	0.249	pCi/L	U	6.33	0.264	SW846-9310	/ X /
Americium-241	-0.00217	0.018	pCi/L	U	0.217	0.0877	RL-7128	/ X /
Beta activity	-2.96	0.67	pCi/L	U	9.08	0.746	SW846-9310	/ X /
Cesium-137	-1.17	2.34	pCi/L	U	2.05	2.34	RL-7124	/ X /
Cobalt-60	-0.092	0.184	pCi/L	U	2.27	1.39	RL-7124	/ X /
Neptunium-237	0.00337	0.0149	pCi/L	U	0.145	0.0559	RL-7128	/ X /
Plutonium-239/240	0.0109	0.0293	pCi/L	U	0.233	0.0977	RL-7128	/ X /
Radium-226	-0.0318	0.0611	pCi/L	U	0.8	0.293	RL-7129	/ X /
Strontium-90	-0.282	0.0652	pCi/L	U	2.39	0.0902	RL-7140	/ X /
Technetium-99	-2.99	9.14	pCi/L	U	14.7	9.14	RL-7100	/ X /
Thorium-230	0.0523	0.0508	pCi/L	U	0.223	0.0984	RL-7128	/ X /
Thorium-234	-0.999	2	pCi/L	U	49.9	28.1	RL-7124	/ X /
Tritium	-93.9	578	pCi/L	U	240	578	RL-7155	/ X /
Uranium	0.467	0.529	pCi/L	U	0.688	0.873	RL-7128	/ X /
Uranium-234	0.332	0.0963	pCi/L	U	0.409	0.201	RL-7128	/ X /
Uranium-235	0.0221	0.0315	pCi/L	U	0.124	0.052	RL-7128	/ X /
Uranium-238	0.113	0.0554	pCi/L	U	0.155	0.0764	RL-7128	/ X /
VOA								
1,1,1,2-Tetrachloroethane	5		ug/L	U	5		SW846-8260B	/ X /
1,1,1-Trichloroethane	1		ug/L	U	1		SW846-8260B	/ X /
1,1,2,2-Tetrachloroethane	5		ug/L	UJ	5		SW846-8260B	/ X /
1,1,2-Trichloroethane	1		ug/L	U	1		SW846-8260B	/ X /
1,1-Dichloroethane	1		ug/L	U	1		SW846-8260B	/ X /
1,1-Dichloroethene	1		ug/L	U	1		SW846-8260B	/ X /
1,2,3-Trichloropropane	5		ug/L	U	5		SW846-8260B	/ X /
1,2-Dibromo-3-chloropropane	0.2		ug/L	U	0.2		SW846-8011	/ X /
1,2-Dibromoethane	5		ug/L	U	5		SW846-8260B	/ X /
1,2-Dichlorobenzene	5		ug/L	U	5		SW846-8260B	/ X /
1,2-Dichloroethane	1		ug/L	U	1		SW846-8260B	/ X /
1,2-Dichloropropane	5		ug/L	U	5		SW846-8260B	/ X /
1,2-Dimethylbenzene	5		ug/L	U	5		SW846-8260B	/ X /
1,4-Dichlorobenzene	5		ug/L	U	5		SW846-8260B	/ X /
2-Butanone	10		ug/L	U	10		SW846-8260B	/ X /
2-Hexanone	10		ug/L	U	10		SW846-8260B	/ X /
4-Methyl-2-pentanone	10		ug/L	U	10		SW846-8260B	/ X /
Acetone	10		ug/L	U	10		SW846-8260B	/ X /
Acrolein	10		ug/L	U	10		SW846-8260B	/ X /
Acrylonitrile	10		ug/L	U	10		SW846-8260B	/ X /
Benzene	5		ug/L	U	5		SW846-8260B	/ X /
Bromochloromethane	5		ug/L	U	5		SW846-8260B	/ X /
Bromodichloromethane	5		ug/L	U	5		SW846-8260B	/ X /
Bromoform	5		ug/L	U	5		SW846-8260B	/ X /
Bromomethane	5		ug/L	U	5		SW846-8260B	/ X /
Carbon disulfide	5		ug/L	U	5		SW846-8260B	/ X /
Carbon tetrachloride	5		ug/L	U	5		SW846-8260B	/ X /
Chlorobenzene	5		ug/L	U	5		SW846-8260B	/ X /
Chloroethane	5		ug/L	JU	5		SW846-8260B	/ X /
Chloroform	1		ug/L	U	1		SW846-8260B	/ X /
Chloromethane	5		ug/L	U	5		SW846-8260B	/ X /
cis-1,2-Dichloroethene	1		ug/L	U	1		SW846-8260B	/ X /
cis-1,3-Dichloropropene	5		ug/L	U	5		SW846-8260B	/ X /
Dibromochloromethane	5		ug/L	U	5		SW846-8260B	/ X /
Dibromomethane	5		ug/L	U	5		SW846-8260B	/ X /
Ethylbenzene	5		ug/L	U	5		SW846-8260B	/ X /
Iodomethane	10		ug/L	U	10		SW846-8260B	/ X /

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

Paducah OREIS Report for SLS13-01

TBSLS13-01 from: QC on 4/17/2013 Media: WQ SmpMethod:

Comments:

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

*Verification/Validation/Assessment

PEMS/OREIS CODES

Media Codes

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

Smp Method Codes

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

Sample Type Codes

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

Verification Codes

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

Validation Codes

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

Assessment Codes

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

PEMS/OREIS CODES

Assessment Codes (cont.)

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

Assessment Codes (cont.)

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

Laboratory Footnotes and Qualifiers

Footnote

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

Inorganic Qualifiers

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

Organic Qualifiers

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

Rad Qualifiers

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

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

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