



## Department of Energy

Portsmouth/Paducah Project Office  
1017 Majestic Drive, Suite 200  
Lexington, Kentucky 40513  
(859) 219-4000

APR 15 2019

Ms. Jamie Nielsen, Supervisor  
Permit Administration Section  
Division of Waste Management, Solid Waste Branch  
Kentucky Department for Environmental Protection  
300 Sower Boulevard, 2nd Floor  
Frankfort, Kentucky 40601

PPPO-02-5522240-19B

Dear Ms. Nielsen:

**C-746-S&T AND C-746-U SOLID WASTE LANDFILLS FIRST QUARTER CALENDAR YEAR 2019 WASTE OPERATING REPORT, PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY, FRNP-RPT-0089/V1, PERMIT NO. SW07300014, SW07300015, SW07300045, AGENCY INTEREST NO. 3059**

The U.S. Department of Energy has prepared the first quarter operating report for calendar year 2019 for the C-746-S&T and C-746-U Landfills at the Paducah Gaseous Diffusion Plant. Kentucky Solid Waste Regulation 401 KAR 47:190 § 8(1) and Solid Waste Permit SW07300014, SW07300015, SW07300045, Permit Condition ACTV0006, Special Condition 10, require submittal of quarterly reports from operators of solid waste landfills.

The groundwater data, surface water data, and methane monitoring results are submitted as separate reports for the C-746-S&T Landfills and the C-746-U Landfill.

If you have any questions or require additional information, please contact David Dollins at (270) 441-6819.

Sincerely,

Jennifer Woodard  
Paducah Site Lead  
Portsmouth/Paducah Project Office

Enclosures:

1. Certification Page
2. C-746-S&T and C-746-U Solid Waste Landfill First Qtr CY 2019 Waste Operating Report, FRNP-RPT-0089/V1

e-copy w/enclosures:

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## CERTIFICATION

**Document Identification:** *C-746-S&T and C-746-U Solid Waste Landfills First Quarter Calendar Year 2019 Waste Operating Report, Paducah Gaseous Diffusion Plant, Paducah, Kentucky, FRNP-RPT-0089/V1, Solid Waste Landfill Permit SW07300014, SW07300015, SW07300045, dated April 2019*

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

Four Rivers Nuclear Partnership, LLC  
Permittee (Operator)

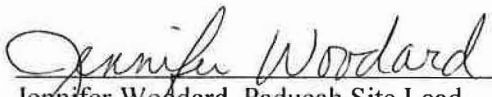


Myrna E. Redfield, Deputy Program Manager  
Four Rivers Nuclear Partnership, LLC

4/15/19  
Date Signed

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

U.S. Department of Energy



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

4/15/19  
Date Signed

**C-746-S&T and C-746-U Solid Waste Landfills  
First Quarter Calendar Year 2019  
Waste Operating Report  
Paducah Gaseous Diffusion Plant,  
Paducah, Kentucky**



This document is approved for public release per review by:

*Daniel Hayden*                      4-11-19  
FRNP Classification Support                      Date



**C-746-S&T and C-746-U Solid Waste Landfills  
First Quarter Calendar Year 2019  
Waste Operating Report  
Paducah Gaseous Diffusion Plant,  
Paducah, Kentucky**

Date Issued—April 2019

U.S. DEPARTMENT OF ENERGY  
Office of Environmental Management

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

**CLEARED FOR PUBLIC RELEASE**

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## REPORT SUMMARY

The information contained herein is submitted in accordance with the requirements of Solid Waste Permit Number SW07300014, SW07300015, SW07300045, and 401 *KAR* 47:190 § 8(1)(a) through (c) and (e), for the first quarter of calendar year 2019 for the Paducah Gaseous Diffusion Plant, McCracken County, Kentucky.

In the first quarter of calendar year 2019, a total of 366.73 tons of demolition debris and scrap metal was disposed of in the C-746-U Contained Landfill. No special waste, spill-residue-containing materials, or asbestos-containing materials were disposed of in the landfill this quarter.

The C-746-S Residential Landfill has been inactive since July 1995, and the C-746-T Inert Landfill has been inactive since June 1992.

Analytical results for surface water monitoring, groundwater monitoring, and methane monitoring are submitted in separate quarterly Compliance Monitoring Reports for the C-746-U Landfill and C-746-S&T Landfills [401 *KAR* 47:190 § 8(1)(d)].

### **Leachate Collection and Disposition**

A total of 537,000 gal of leachate from the C-746-U Landfill was treated at the C-746-U15 Leachate Treatment Facility this quarter. A total of 6,000 gal of leachate from the C-746-S Landfill also was treated during the quarter at the C-746-U15 Leachate Treatment Facility. There was no leachate transported to the other treatment facilities. The leachate is stored in five permitted holding tanks (F-001, F-002, F-007, F-008, and F-009) with a total capacity of 104,200 gal. Tank F-004 is a 2,500-gal surge tank for the leachate treatment system. Tanks F-005 and F-006 were removed in 2014. The tank volume reported on the leachate log is the volume at the time of measurement. Calculation of the next day tank volume by subtraction of disposal volume may not reflect the measured tank volume because additional leachate had entered the system. The annual leachate sampling event was completed on February 19, 2019. The analytical results are provided in this report.

### **Construction Activities and Cover Maintenance**

There were no construction activities for the C-746-S & T Landfills or C-746-U Landfill. The C-746-S & T Landfills were inspected for subsidence in accordance with the cover requirements [401 *KAR* 48:080 § 9(6)(f)]. No repairs were necessary during the quarter.

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## FACILITY INFORMATION SHEET

Sampling Date: February 19, 2019

County: McCracken Permit No.: SW07300014, SW07300015,  
SW07300045

Facility Name: U.S. Department of Energy—Paducah Gaseous Diffusion Plant  
(as officially shown on DWM permit face)

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

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

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### OWNER INFORMATION

Facility Owner: U.S. DOE—Robert E. Edwards III, Manager Phone No.: (859) 227-5020

Contact Person: James Miller Phone No.: (270) 441-5068

Contact Person Title: Director, Technical Services,  
Four Rivers Nuclear Partnership, LLC

Mailing Address: 5511 Hobbs Road Kevil, Kentucky 42053  
Street City/State Zip

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### SAMPLING PERSONNEL (if other than landfill or laboratory)

Company: GEO Consultants, LLC

Contact Person: Sam Martin Phone No. (270) 441-6755

Mailing Address: 325 Kentucky Avenue Kevil, Kentucky 42053  
Street City/State Zip

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### LABORATORY RECORD #1

Laboratory: GEL Laboratories, LLC Lab ID No.: KY90129

Contact Person: Valerie Davis Phone No.: (843) 769-7391

Mailing Address: P.O. Box 30712 Charleston, South Carolina 29417  
Street City/State Zip

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### LABORATORY RECORD #2

Laboratory: N/A Lab ID No.: N/A

Contact Person: N/A Phone No.: N/A

Mailing Address: N/A  
Street City/State Zip

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## **COVER LOG**

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**CP3-WM-0017-F02 - COVER LOG**

DEPARTMENT OF ENERGY

PERMIT NUMBER: 073-00045

COUNTY: McCracken

Month & Year: January 2019

Day of Month	Daily Cell Location	Daily Cover Applied?	Interim Cover	Long Term Cover	Final Cap	Temporary Diversion Ditch Yes/No
1						
2						
3						
4						
5						
6						
7						
8						
9		<p align="center">There were no waste disposal activities during the month of January 2019</p>				
10						
11						
12						
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24						
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26						
27						
28						
29						
30						
31						



# CP3-WM-0017-F02 - COVER LOG

DEPARTMENT OF ENERGY

PERMIT NUMBER: 073-00045

COUNTY: McCracken

Month & Year: February 2019

Day of Month	Daily Cell Location	Daily Cover Applied?	Interim Cover	Long Term Cover	Final Cap	Temporary Diversion Ditch Yes/No
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26	<b>C-2</b>	<b>YES</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>YES</b>
27	<b>C-2</b>	<b>YES</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>YES</b>
28						
29						
30						
31						

**CP3-WM-0017-F02 - COVER LOG**

**DEPARTMENT OF ENERGY**  
**COUNTY: McCracken**

**PERMIT NUMBER: 073-00045**  
**Month & Year: March 2019**

Day of Month	Daily Cell Location	Daily Cover Applied?	Interim Cover	Long Term Cover	Final Cap	Temporary Diversion Ditch Yes/No
1						
2						
3						
4						
5	<b>C-2</b>	<b>YES</b>	<b>YES</b>	<b>NO</b>	<b>NO</b>	<b>YES</b>
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18	<b>D-3</b>	<b>YES</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>YES</b>
19	<b>D-3 &amp; D-2</b>	<b>YES</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>YES</b>
20						
21						
22						
23						
24						
25						
26						
27	<b>D-2</b>	<b>YES</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>YES</b>
28	<b>D-2</b>	<b>YES</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>YES</b>
29						
30						
31						

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## **LEACHATE LOG**

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**CP3-WM-0018-F01 - PGDP SOLID WASTE LANDFILL – LEACHATE LOG**

Permit No. 073-00045

McCracken County, Kentucky

Month January Year 2019

Date	Phase	Collection Tank Number	Mobile Tanker	Tank Volume (Gallons)	Disposal Volume (Gallons)	Disposal Method*
1-02-19	1,2,3,4,5	F-001		19300		
1-02-19	1,2,3,4,5	F-002		27600	10100	L
1-02-19	1,2,3,4,5	F-007		500		
1-02-19	1,2,3,4,5	F-008		500		
1-02-19	1,2,3,4,5	F-009		11000		
1-03-19	1,2,3,4,5	F-001		25500		
1-03-19	1,2,3,4,5	F-002		17500	9000	L
1-03-19	1,2,3,4,5	F-007		500		
1-03-19	1,2,3,4,5	F-008		500		
1-03-19	1,2,3,4,5	F-009		11000		
1-07-19	1,2,3,4,5	F-001		30100	10000	L
1-07-19	1,2,3,4,5	F-002		29300		
1-07-19	1,2,3,4,5	F-007		500		
1-07-19	1,2,3,4,5	F-008		500		
1-07-19	1,2,3,4,5	F-009		11000		
1-08-19	1,2,3,4,5	F-001		25300		
1-08-19	1,2,3,4,5	F-002		30300	10100	L
1-08-19	1,2,3,4,5	F-007		500		
1-08-19	1,2,3,4,5	F-008		500		
1-08-19	1,2,3,4,5	F-009		11000		
1-09-19	1,2,3,4,5	F-001		30000		
1-09-19	1,2,3,4,5	F-002		20200	8400	L
1-09-19	1,2,3,4,5	F-007		500		
1-09-19	1,2,3,4,5	F-008		500		
1-09-19	1,2,3,4,5	F-009		11000		
1-10-19	1,2,3,4,5	F-001		30200	9800	L
1-10-19	1,2,3,4,5	F-002		14800		

**CP3-WM-0018-F01 - PGDP SOLID WASTE LANDFILL – LEACHATE LOG**

Permit No. 073-00045

McCracken County, Kentucky

Month January Year 2019

Date	Phase	Collection Tank Number	Mobile Tanker	Tank Volume (Gallons)	Disposal Volume (Gallons)	Disposal Method*
1-10-19	1,2,3,4,5	F-007		500		
1-10-19	1,2,3,4,5	F-008		500		
1-10-19	1,2,3,4,5	F-009		11000		
1-14-19	1,2,3,4,5	F-001		22800		
1-14-19	1,2,3,4,5	F-002		30300	3000	L
1-14-19	1,2,3,4,5	F-007		500		
1-14-19	1,2,3,4,5	F-008		500		
1-14-19	1,2,3,4,5	F-009		11000	10500	L
1-15-19	1,2,3,4,5	F-001		24500		
1-15-19	1,2,3,4,5	F-002		27300	9800	L
1-15-19	1,2,3,4,5	F-007		500		
1-15-19	1,2,3,4,5	F-008		500		
1-15-19	1,2,3,4,5	F-009		3500		
1-16-19	1,2,3,4,5	F-001		27600	5000	L
1-16-19	1,2,3,4,5	F-002		17500	2300	L
1-16-19	1,2,3,4,5	F-007		500		
1-16-19	1,2,3,4,5	F-008		500		
1-16-19	1,2,3,4,5	F-009		6200		
1-17-19	1,2,3,4,5	F-001		22600	2600	L
1-17-19	1,2,3,4,5	F-002		17500		
1-17-19	1,2,3,4,5	F-007		500		
1-17-19	1,2,3,4,5	F-008		500		
1-17-19	1,2,3,4,5	F-009		7800	7300	L
1-22-19	1,2,3,4,5	F-001		28300	10500	L
1-22-19	1,2,3,4,5	F-002		30100		
1-22-19	1,2,3,4,5	F-007		500		
1-22-19	1,2,3,4,5	F-008		500		

**CP3-WM-0018-F01 - PGDP SOLID WASTE LANDFILL – LEACHATE LOG**

Permit No. 073-00045

McCracken County, Kentucky

Month January Year 2019

Date	Phase	Collection Tank Number	Mobile Tanker	Tank Volume (Gallons)	Disposal Volume (Gallons)	Disposal Method*
1-22-19	1,2,3,4,5	F-009		12800		
1-23-19	1,2,3,4,5	F-001		21200	11700	L
1-23-19	1,2,3,4,5	F-002		31000		
1-23-19	1,2,3,4,5	F-007		500		
1-23-19	1,2,3,4,5	F-008		500		
1-23-19	1,2,3,4,5	F-009		15900		
1-24-19	1,2,3,4,5	F-001		19100	11400	L
1-24-19	1,2,3,4,5	F-002		31000		
1-24-19	1,2,3,4,5	F-007		7700		
1-24-19	1,2,3,4,5	F-008		500		
1-24-19	1,2,3,4,5	F-009		15900		
1-28-19	1,2,3,4,5	F-001		27200	9700	L
1-28-19	1,2,3,4,5	F-002		31000		
1-28-19	1,2,3,4,5	F-007		12600		
1-28-19	1,2,3,4,5	F-008		4200		
1-28-19	1,2,3,4,5	F-009		15900		
1-29-19	1,2,3,4,5	F-001		21600	9300	L
1-29-19	1,2,3,4,5	F-002		31000		
1-29-19	1,2,3,4,5	F-007		12600		
1-29-19	1,2,3,4,5	F-008		5500		
1-29-19	1,2,3,4,5	F-009		15900		
1-30-19	1,2,3,4,5	F-001		14600	9200	L
1-30-19	1,2,3,4,5	F-002		31000		
1-30-19	1,2,3,4,5	F-007		12700		
1-30-19	1,2,3,4,5	F-008		7200		
1-30-19	1,2,3,4,5	F-009		15900		
1-31-19	1,2,3,4,5	F-001		7700	7200	L





**CP3-WM-0018-F01 - PGDP SOLID WASTE LANDFILL – LEACHATE LOG**

Permit No. 073-00045

McCracken County, Kentucky

Month February Year 2019

Date	Phase	Collection Tank Number	Mobile Tanker	Tank Volume (Gallons)	Disposal Volume (Gallons)	Disposal Method*
2-04-19	1,2,3,4,5	F-001		11800	10400	L
2-04-19	1,2,3,4,5	F-002		27100		
2-04-19	1,2,3,4,5	F-007		12700		
2-04-19	1,2,3,4,5	F-008		10400		
2-04-19	1,2,3,4,5	F-009		15900		
2-05-19	1,2,3,4,5	F-001		2900	2400	L
2-05-19	1,2,3,4,5	F-002		27900		
2-05-19	1,2,3,4,5	F-007		12700		
2-05-19	1,2,3,4,5	F-008		10400		
2-05-19	1,2,3,4,5	F-009		15900	8000	L
2-06-19	1,2,3,4,5	F-001		4200	2400	L
2-06-19	1,2,3,4,5	F-002		28600		
2-06-19	1,2,3,4,5	F-007		12700		
2-06-19	1,2,3,4,5	F-008		10400		
2-06-19	1,2,3,4,5	F-009		7900	7400	L
2-07-19	1,2,3,4,5	F-001		10400	9900	L
2-07-19	1,2,3,4,5	F-002		30600		
2-07-19	1,2,3,4,5	F-007		12700		
2-07-19	1,2,3,4,5	F-008		10400	3100	L
2-07-19	1,2,3,4,5	F-009		500		
2-08-19	1,2,3,4,5	F-001		11200	9700	L
2-08-19	1,2,3,4,5	F-002		30600		
2-08-19	1,2,3,4,5	F-007		12700		
2-08-19	1,2,3,4,5	F-008		7300		
2-08-19	1,2,3,4,5	F-009		15100		
2-11-19	1,2,3,4,5	F-001		15000	16200	L
2-11-19	1,2,3,4,5	F-002		30600		

**CP3-WM-0018-F01 - PGDP SOLID WASTE LANDFILL – LEACHATE LOG**

Permit No. 073-00045

McCracken County, Kentucky

Month February Year 2019

Date	Phase	Collection Tank Number	Mobile Tanker	Tank Volume (Gallons)	Disposal Volume (Gallons)	Disposal Method*
2-11-19	1,2,3,4,5	F-007		12700		
2-11-19	1,2,3,4,5	F-008		7300		
2-11-19	1,2,3,4,5	F-009		15100		
2-12-19	1,2,3,4,5	F-001		15000	15400	L
2-12-19	1,2,3,4,5	F-002		30600		
2-12-19	1,2,3,4,5	F-007		12700		
2-12-19	1,2,3,4,5	F-008		7300		
2-12-19	1,2,3,4,5	F-009		15100		
2-13-19	1,2,3,4,5	F-001		15500	16200	L
2-13-19	1,2,3,4,5	F-002		30600		
2-13-19	1,2,3,4,5	F-007		12700		
2-13-19	1,2,3,4,5	F-008		7300		
2-13-19	1,2,3,4,5	F-009		15100		
2-14-19	1,2,3,4,5	F-001		10600	12300	L
2-14-19	1,2,3,4,5	F-002		30600		
2-14-19	1,2,3,4,5	F-007		12700		
2-14-19	1,2,3,4,5	F-008		7300		
2-14-19	1,2,3,4,5	F-009		15100		
2-15-19	1,2,3,4,5	F-001		5000	3800	L
2-15-19	1,2,3,4,5	F-002		30600	7600	L
2-15-19	1,2,3,4,5	F-007		12700		
2-15-19	1,2,3,4,5	F-008		7300		
2-15-19	1,2,3,4,5	F-009		15100		
2-18-19	1,2,3,4,5	F-001		7700		
2-18-19	1,2,3,4,5	F-002		23000	13500	L
2-18-19	1,2,3,4,5	F-007		12700		
2-18-19	1,2,3,4,5	F-008		7300		

**CP3-WM-0018-F01 - PGDP SOLID WASTE LANDFILL – LEACHATE LOG**

Permit No. 073-00045

McCracken County, Kentucky

Month February Year 2019

Date	Phase	Collection Tank Number	Mobile Tanker	Tank Volume (Gallons)	Disposal Volume (Gallons)	Disposal Method*
2-18-19	1,2,3,4,5	F-009		15100		
2-19-19	1,2,3,4,5	F-001		14100	3200	L
2-19-19	1,2,3,4,5	F-002		9500	8400	L
2-19-19	1,2,3,4,5	F-007		12700		
2-19-19	1,2,3,4,5	F-008		7300		
2-19-19	1,2,3,4,5	F-009		15100		
2-20-19	1,2,3,4,5	F-001		12300	11800	L
2-20-19	1,2,3,4,5	F-002		11100	4900	L
2-20-19	1,2,3,4,5	F-007		12700		
2-20-19	1,2,3,4,5	F-008		7300		
2-20-19	1,2,3,4,5	F-009		15100		
2-21-19	1,2,3,4,5	F-001		5900		
2-21-19	1,2,3,4,5	F-002		6200	5200	L
2-21-19	1,2,3,4,5	F-007		12700		
2-21-19	1,2,3,4,5	F-008		7300		
2-21-19	1,2,3,4,5	F-009		15100	11300	L
2-22-19	1,2,3,4,5	F-001		15700	12800	L
2-22-19	1,2,3,4,5	F-002		1000		
2-22-19	1,2,3,4,5	F-007		12700		
2-22-19	1,2,3,4,5	F-008		7300		
2-22-19	1,2,3,4,5	F-009		600		
2-25-19	1,2,3,4,5	F-001		2900	1700	L
2-25-19	1,2,3,4,5	F-002		23700	1400	L
2-25-19	1,2,3,4,5	F-007		12700		
2-25-19	1,2,3,4,5	F-008		7300		
2-25-19	1,2,3,4,5	F-009		600		
2-26-19	1,2,3,4,5	F-001		6100		

CP3-WM-0018-F01 - PGDP SOLID WASTE LANDFILL – LEACHATE LOG

Permit No. 073-00045

McCracken County, Kentucky

Month February Year 2019

Date	Phase	Collection Tank Number	Mobile Tanker	Tank Volume (Gallons)	Disposal Volume (Gallons)	Disposal Method*
2-26-19	1,2,3,4,5	F-002		22300	7300	L
2-26-19	1,2,3,4,5	F-007		12700		
2-26-19	1,2,3,4,5	F-008		7300		
2-26-19	1,2,3,4,5	F-009		600		
2-27-19	1,2,3,4,5	F-001		12800		
2-27-19	1,2,3,4,5	F-002		15000	9300	L
2-27-19	1,2,3,4,5	F-007		12700		
2-27-19	1,2,3,4,5	F-008		7300		
2-27-19	1,2,3,4,5	F-009		600		
2-28-19	1,2,3,4,5	F-001		19000	4200	L
2-28-19	1,2,3,4,5	F-002		5900	4700	L
2-28-19	1,2,3,4,5	F-007		12700		
2-28-19	1,2,3,4,5	F-008		7300		
2-28-19	1,2,3,4,5	F-009		600		

*Henry Smith 2-28-19*

\* R – Re-circulated to Working Phas  
 W – Transported to Wastewater Treatment Facility  
 L – Disposed at on-site Leachate Treatment Facility

**CP3-WM-0018-F01 - PGDP SOLID WASTE LANDFILL – LEACHATE LOG**

Permit No. 073-00045

McCracken County, Kentucky

Month March Year 2019

Date	Phase	Collection Tank Number	Mobile Tanker	Tank Volume (Gallons)	Disposal Volume (Gallons)	Disposal Method*
3-04-19	1,2,3,4,5	F-001		14800	10800	L
3-04-19	1,2,3,4,5	F-002		19500		
3-04-19	1,2,3,4,5	F-007		12700		
3-04-19	1,2,3,4,5	F-008		7300		
3-04-19	1,2,3,4,5	F-009		600		
3-05-19	1,2,3,4,5	F-001		4000	2800	L
3-05-19	1,2,3,4,5	F-002		23500	8500	L
3-05-19	1,2,3,4,5	F-007		12700		
3-05-19	1,2,3,4,5	F-008		7300		
3-05-19	1,2,3,4,5	F-009		600		
3-06-19	1,2,3,4,5	F-001		4300	1500	L
3-06-19	1,2,3,4,5	F-002		15500	7500	L
3-06-19	1,2,3,4,5	F-007		12700		
3-06-19	1,2,3,4,5	F-008		7300		
3-06-19	1,2,3,4,5	F-009		600		
3-07-19	1,2,3,4,5	F-001		6700	3300	L
3-07-19	1,2,3,4,5	F-002		8000	6800	L
3-07-19	1,2,3,4,5	F-007		12700		
3-07-19	1,2,3,4,5	F-008		7300		
3-07-19	1,2,3,4,5	F-009		600		
3-11-19	1,2,3,4,5	F-001		3400		
3-11-19	1,2,3,4,5	F-002		19500	10500	L
3-11-19	1,2,3,4,5	F-007		12700		
3-11-19	1,2,3,4,5	F-008		7300		
3-11-19	1,2,3,4,5	F-009		600		
3-12-19	1,2,3,4,5	F-001		9600	2000	L
3-12-19	1,2,3,4,5	F-002		9000	7800	L

**CP3-WM-0018-F01 - PGDP SOLID WASTE LANDFILL – LEACHATE LOG**

Permit No. 073-00045

McCracken County, Kentucky

Month March Year 2019

Date	Phase	Collection Tank Number	Mobile Tanker	Tank Volume (Gallons)	Disposal Volume (Gallons)	Disposal Method*
3-12-19	1,2,3,4,5	F-007		12700		
3-12-19	1,2,3,4,5	F-008		7300		
3-12-19	1,2,3,4,5	F-009		600		
3-13-19	1,2,3,4,5	F-001		7600	6400	L
3-13-19	1,2,3,4,5	F-002		5100	3900	L
3-13-19	1,2,3,4,5	F-007		12700		
3-13-19	1,2,3,4,5	F-008		7300		
3-13-19	1,2,3,4,5	F-009		600		
3-14-19	1,2,3,4,5	F-001		9400	5700	L
3-14-19	1,2,3,4,5	F-002		1200		
3-14-19	1,2,3,4,5	F-007		12700		
3-14-19	1,2,3,4,5	F-008		7300		
3-14-19	1,2,3,4,5	F-009		600		
3-18-19	1,2,3,4,5	F-001		3800		
3-18-19	1,2,3,4,5	F-002		21000	9000	L
3-18-19	1,2,3,4,5	F-007		12700		
3-18-19	1,2,3,4,5	F-008		7300		
3-18-19	1,2,3,4,5	F-009		600		
3-19-19	1,2,3,4,5	F-001		8500		
3-19-19	1,2,3,4,5	F-002		12000	5100	L
3-19-19	1,2,3,4,5	F-007		12700		
3-19-19	1,2,3,4,5	F-008		7300		
3-19-19	1,2,3,4,5	F-009		600		
3-20-19	1,2,3,4,5	F-001		13900	4600	L
3-20-19	1,2,3,4,5	F-002		6900	5700	L
3-20-19	1,2,3,4,5	F-007		12700		
3-20-19	1,2,3,4,5	F-008		7300		

**CP3-WM-0018-F01 - PGDP SOLID WASTE LANDFILL – LEACHATE LOG**

Permit No. 073-00045

McCracken County, Kentucky

Month March Year 2019

Date	Phase	Collection Tank Number	Mobile Tanker	Tank Volume (Gallons)	Disposal Volume (Gallons)	Disposal Method*
3-20-19	1,2,3,4,5	F-009		600		
3-21-19	1,2,3,4,5	F-001		9300	8200	L
3-21-19	1,2,3,4,5	F-002		4400		
3-21-19	1,2,3,4,5	F-007		12700		
3-21-19	1,2,3,4,5	F-008		7300		
3-21-19	1,2,3,4,5	F-009		600		
3-25-19	1,2,3,4,5	F-001		1200		
3-25-19	1,2,3,4,5	F-002		16800	10800	L
3-25-19	1,2,3,4,5	F-007		12700		
3-25-19	1,2,3,4,5	F-008		7300		
3-25-19	1,2,3,4,5	F-009		600		
3-26-19	1,2,3,4,5	F-001		5000	4500	L
3-26-19	1,2,3,4,5	F-002		6000	4000	L
3-26-19	1,2,3,4,5	F-007		12700		
3-26-19	1,2,3,4,5	F-008		7300		
3-26-19	1,2,3,4,5	F-009		600		
3-27-19	1,2,3,4,5	F-001		500		
3-27-19	1,2,3,4,5	F-002		3600	1400	L
3-27-19	1,2,3,4,5	F-007		12700	6100	L
3-27-19	1,2,3,4,5	F-008		7300		
3-27-19	1,2,3,4,5	F-009		600		
3-28-19	1,2,3,4,5	F-001		4100		
3-28-19	1,2,3,4,5	F-002		1200		
3-28-19	1,2,3,4,5	F-007		6600	4800	L
3-28-19	1,2,3,4,5	F-008		7300	2500	L
3-28-19	1,2,3,4,5	F-009		600		
		<i>James Smith</i>		<i>3-28-19</i>		



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## **LEACHATE ANALYTICAL RESULTS**

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## Paducah OREIS Report for SLS19-01

**SLS19-01-01**

from: C-746-S

on 2/19/2019

Media: WW

SmpMethod: GR

Comments:

Samples collected from Cell #2 at the S&amp;T Landfill. Water is clear. Used a peristaltic pump to collect samples. CB 2-19-19

Analysis	Results	Units	Result Qual	Foot Note	Reporting Limit	Counting Error	TPU	Method	LabCode	V/V/A*
<b>ANION</b>										
Bromide	0.14	mg/L	J		0.2			SW846-9056	GEL	/X/
Chloride	15.1	mg/L	W		0.4			SW846-9056	GEL	/X/
Fluoride	0.805	mg/L			0.1			SW846-9056	GEL	S/X/
Nitrate as Nitrogen	0.5	mg/L	HU		0.5			SW846-9056	GEL	T/X/
Sulfate	34.6	mg/L	W		0.8			SW846-9056	GEL	/X/
<b>FS</b>										
Conductivity	1002	umho/cm						FS	FS	//
Dissolved Oxygen	7.41	mg/L						FS	FS	//
pH	7.45	Std Unit						FS	FS	//
Redox	196	mV						FS	FS	//
Temperature	46.5	deg F						FS	FS	//
<b>METAL</b>										
Aluminum	0.05	mg/L	U		0.05			SW846-6020	GEL	/X/
Antimony	0.003	mg/L	U		0.003			SW846-6020	GEL	/X/
Arsenic	0.00393	mg/L	J		0.005			SW846-6020	GEL	/X/
Barium	0.308	mg/L			0.002			SW846-6020	GEL	/X/
Beryllium	0.0005	mg/L	U		0.0005			SW846-6020	GEL	/X/
Boron	0.0301	mg/L			0.015			SW846-6020	GEL	/X/
Cadmium	0.001	mg/L	U		0.001			SW846-6020	GEL	/X/
Calcium	160	mg/L			2			SW846-6020	GEL	/X/
Chromium	0.01	mg/L	U		0.01			SW846-6020	GEL	/X/
Cobalt	0.00571	mg/L			0.001			SW846-6020	GEL	/X/
Copper	0.000557	mg/L	J		0.001			SW846-6020	GEL	BH-FB /X/
Iron	1.51	mg/L			0.1			SW846-6020	GEL	/X/
Lead	0.002	mg/L	U		0.002			SW846-6020	GEL	/X/
Magnesium	22.8	mg/L			0.03			SW846-6020	GEL	/X/
Manganese	4.07	mg/L			0.05			SW846-6020	GEL	/X/
Mercury	0.0002	mg/L	U		0.0002			SW846-7470A	GEL	/X/
Molybdenum	0.00204	mg/L			0.0005			SW846-6020	GEL	/X/
Nickel	0.0195	mg/L			0.002			SW846-6020	GEL	/X/
Phosphorous	0.0265	mg/L	J		0.05			EPA-365.4	GEL	/X/
Potassium	1.34	mg/L			0.3			SW846-6020	GEL	/X/
Rhodium	0.005	mg/L	U		0.005			SW846-6020	GEL	/X/
Selenium	0.005	mg/L	U		0.005			SW846-6020	GEL	/X/
Silver	0.001	mg/L	U		0.001			SW846-6020	GEL	/X/
Sodium	39.5	mg/L			0.25			SW846-6020	GEL	/X/
Tantalum	0.005	mg/L	U		0.005			SW846-6020	GEL	/X/
Thallium	0.002	mg/L	U		0.002			SW846-6020	GEL	/X/
Tin	0.005	mg/L	U		0.005			SW846-6020	GEL	/X/
Titanium	0.01	mg/L	U		0.01			SW846-6020	GEL	/X/
Uranium	0.00402	mg/L			0.0002			SW846-6020	GEL	/X/
Vanadium	0.01	mg/L	U		0.01			SW846-6020	GEL	/X/
Zinc	0.00419	mg/L	J		0.01			SW846-6020	GEL	S/X/
<b>METAL-D</b>										
Antimony, Dissolved	0.003	mg/L	U		0.003			SW846-6020	GEL	/X/
Arsenic, Dissolved	0.00392	mg/L	J		0.005			SW846-6020	GEL	/X/
Barium, Dissolved	0.298	mg/L			0.002			SW846-6020	GEL	/X/
Cadmium, Dissolved	0.001	mg/L	U		0.001			SW846-6020	GEL	/X/
Chromium, Dissolved	0.01	mg/L	U		0.01			SW846-6020	GEL	/X/

**Paducah OREIS Report for SLS19-01**

Cobalt, Dissolved	0.00565	mg/L		0.001			SW846-6020	GEL	/ X/
Copper, Dissolved	0.000759	mg/L	J	0.001			SW846-6020	GEL	/ X/
Lead, Dissolved	0.002	mg/L	U	0.002			SW846-6020	GEL	/ X/
Manganese, Dissolved	3.95	mg/L		0.05			SW846-6020	GEL	S / X/
Nickel, Dissolved	0.0193	mg/L		0.002			SW846-6020	GEL	S / X/
Selenium, Dissolved	0.005	mg/L	U	0.005			SW846-6020	GEL	/ X/
Silver, Dissolved	0.001	mg/L	U	0.001			SW846-6020	GEL	/ X/
Tin, Dissolved	0.005	mg/L	U	0.005			SW846-6020	GEL	/ X/
Titanium, Dissolved	0.01	mg/L	U	0.01			SW846-6020	GEL	/ X/
Uranium, Dissolved	0.00408	mg/L		0.0002			SW846-6020	GEL	/ X/
Vanadium, Dissolved	0.01	mg/L	U	0.01			SW846-6020	GEL	/ X/
Zinc, Dissolved	0.01	mg/L	U	0.01			SW846-6020	GEL	/ X/

**OTHOR**

Oil and Grease	1.6	mg/L	J	4.2			EPA-1664A	GEL	/ X/
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**PCCB**

PCB-1016	0.098	ug/L	U	0.098			SW846-8082	GEL	/ X/
PCB-1221	0.098	ug/L	U	0.098			SW846-8082	GEL	/ X/
PCB-1232	0.098	ug/L	U	0.098			SW846-8082	GEL	/ X/
PCB-1242	0.098	ug/L	U	0.098			SW846-8082	GEL	/ X/
PCB-1248	0.098	ug/L	U	0.098			SW846-8082	GEL	/ X/
PCB-1254	0.098	ug/L	U	0.098			SW846-8082	GEL	/ X/
PCB-1260	0.098	ug/L	U	0.098			SW846-8082	GEL	/ X/
PCB-1268	0.098	ug/L	U	0.098			SW846-8082	GEL	/ X/
Polychlorinated biphenyl	0.098	ug/L	U	0.098			SW846-8082	GEL	/ X/

**RADS**

Alpha activity	5.05	pCi/L		3.74	2.61	2.74	SW846-9310	GEL	/ X/
Americium-241	-0.558	pCi/L	U	1.61	0.445	0.445	HASL 300, Am-05-RC M	GEL	/ X/
Beta activity	0.305	pCi/L	U	4.55	2.64	2.64	SW846-9310	GEL	/ X/
Cesium-137	-0.565	pCi/L	U	1.74	1.06	1.09	EPA-901.1	GEL	/ X/
Cobalt-60	0.441	pCi/L	U	1.78	1.08	1.1	EPA-901.1	GEL	/ X/
Dissolved Alpha	0.228	pCi/L	U	2.39	1.31	1.31	SW846-9310	GEL	/ X/
Dissolved Beta	0.928	pCi/L	U	1.31	0.787	0.802	SW846-9310	GEL	/ X/
Neptunium-237	-0.364	pCi/L	U	2.98	1.17	1.17	ASTM-1475-00aM	GEL	/ X/
Plutonium-239/240	0.272	pCi/L	U	0.992	0.626	0.627	HASL 300, Pu-11-RC M	GEL	/ X/
Radium-226	0.304	pCi/L	U	0.807	0.482	0.483	AN-1418	GEL	/ X/
Radium-228	-1.58	pCi/L	U	3.91	1.78	1.78	EPA-904-M	GEL	/ X/
Strontium-90	-1.22	pCi/L	U	4.3	2.02	2.03	EPA-905.0-M	GEL	/ X/
Technetium-99	-4.35	pCi/L	U	23.5	13.5	13.5	HASL 300, Tc-02-RC M	GEL	/ X/
Thorium-230	0.314	pCi/L	U	1.51	0.838	0.843	HASL 300, Th-01-RC M	GEL	/ X/
Thorium-232	0.611	pCi/L	U	0.777	0.819	0.827	HASL 300, Th-01-RC M	GEL	/ X/
Thorium-234	8.28	pCi/L	U	26.2	38.2	38.2	EPA-901.1	GEL	/ X/
Tritium	18.3	pCi/L	U	242	140	140	EPA-906.0-M	GEL	/ X/
Uranium	8.27	pCi/L		3.37	3.16	3.25	HASL 300, U-02-RC M	GEL	S / X/
Uranium-234	4.14	pCi/L		2.29	2.18	2.28	HASL 300, U-02-RC M	GEL	/ X/
Uranium-235	1.77	pCi/L		1.72	1.59	1.61	HASL 300, U-02-RC M	GEL	S / X/
Uranium-238	2.36	pCi/L		1.77	1.64	1.68	HASL 300, U-02-RC M	GEL	/ X/

**RADS-D**

Americium-241, Dissolved	0.251	pCi/L	U	0.683	0.493	0.494	HASL 300, Am-05-RC M	GEL	/ X/
Cesium-137, Dissolved	-0.871	pCi/L	U	4.8	2.56	2.6	EPA-901.1	GEL	/ X/
Cobalt-60, Dissolved	-0.316	pCi/L	U	3.79	1.87	1.88	EPA-901.1	GEL	/ X/
Neptunium-237, Dissolved	0.0139	pCi/L	U	1.41	0.64	0.641	ASTM-1475-00aM	GEL	/ X/
Plutonium-239/240, Dissolved	-0.415	pCi/L	U	1.59	0.534	0.535	HASL 300, Pu-11-RC M	GEL	/ X/
Technetium-99, Dissolved	-10.6	pCi/L	U	17.4	9.82	9.82	HASL 300, Tc-02-RC M	GEL	/ X/
Thorium-230, Dissolved	0.186	pCi/L	U	1.32	0.688	0.69	HASL 300, Th-01-RC M	GEL	/ X/
Thorium-234, Dissolved	158	pCi/L	U	389	268	280	EPA-901.1	GEL	/ X/

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Uranium, Dissolved	3.87	pCi/L		1.84	1.83	1.86	HASL 300, U-02-RC M	GEL	S / X /
Uranium-234, Dissolved	0.862	pCi/L	U	1.43	0.981	0.991	HASL 300, U-02-RC M	GEL	/ X /
Uranium-235, Dissolved	1.01	pCi/L		0.604	0.97	0.98	HASL 300, U-02-RC M	GEL	/ X /
Uranium-238, Dissolved	2	pCi/L		0.994	1.2	1.23	HASL 300, U-02-RC M	GEL	/ X /

**VOA**

1,1,1,2-Tetrachloroethane	1	ug/L	U	1			EPA-624.1	GEL	/ X /
1,1,1-Trichloroethane	1	ug/L	U	1			EPA-624.1	GEL	/ X /
1,1,2,2-Tetrachloroethane	1	ug/L	U	1			EPA-624.1	GEL	/ X /
1,1,2-Trichloroethane	1	ug/L	U	1			EPA-624.1	GEL	/ X /
1,1-Dichloroethane	1	ug/L	U	1			EPA-624.1	GEL	/ X /
1,1-Dichloroethene	1	ug/L	U	1			EPA-624.1	GEL	/ X /
1,2,3-Trichloropropane	1	ug/L	U	1			EPA-624.1	GEL	/ X /
1,2-Dibromo-3-chloropropane	0.0198	ug/L	U	0.0198			SW846-8011	GEL	/ X /
1,2-Dibromoethane	1	ug/L	U	1			EPA-624.1	GEL	/ X /
1,2-Dichlorobenzene	1	ug/L	U	1			EPA-624.1	GEL	/ X /
1,2-Dichloroethane	1	ug/L	U	1			EPA-624.1	GEL	/ X /
1,2-Dichloropropane	1	ug/L	U	1			EPA-624.1	GEL	/ X /
1,2-Dimethylbenzene	1	ug/L	U	1			EPA-624.1	GEL	/ X /
1,4-Dichlorobenzene	1	ug/L	U	1			EPA-624.1	GEL	/ X /
2-Butanone	5	ug/L	U	5			EPA-624.1	GEL	/ X /
2-Hexanone	5	ug/L	U	5			EPA-624.1	GEL	/ X /
4-Methyl-2-pentanone	5	ug/L	U	5			EPA-624.1	GEL	/ X /
Acetone	5	ug/L	U	5			EPA-624.1	GEL	/ X /
Acrolein	5	ug/L	U	5			EPA-624.1	GEL	/ X /
Acrylonitrile	5	ug/L	U	5			EPA-624.1	GEL	/ X /
Benzene	1	ug/L	U	1			EPA-624.1	GEL	/ X /
Bromochloromethane	1	ug/L	U	1			EPA-624.1	GEL	/ X /
Bromodichloromethane	1	ug/L	U	1			EPA-624.1	GEL	/ X /
Bromoform	1	ug/L	U	1			EPA-624.1	GEL	/ X /
Bromomethane	1	ug/L	U	1			EPA-624.1	GEL	/ X /
Carbon disulfide	5	ug/L	U	5			EPA-624.1	GEL	/ X /
Carbon tetrachloride	1	ug/L	U	1			EPA-624.1	GEL	/ X /
Chlorobenzene	1	ug/L	U	1			EPA-624.1	GEL	/ X /
Chloroethane	1	ug/L	U	1			EPA-624.1	GEL	/ X /
Chloroform	1	ug/L	U	1			EPA-624.1	GEL	/ X /
Chloromethane	1	ug/L	U	1			EPA-624.1	GEL	/ X /
cis-1,2-Dichloroethene	1	ug/L	U	1			EPA-624.1	GEL	/ X /
cis-1,3-Dichloropropene	1	ug/L	U	1			EPA-624.1	GEL	/ X /
Dibromochloromethane	1	ug/L	U	1			EPA-624.1	GEL	/ X /
Dibromomethane	1	ug/L	U	1			EPA-624.1	GEL	/ X /
Ethylbenzene	1	ug/L	U	1			EPA-624.1	GEL	/ X /
Iodomethane	5	ug/L	U	5			EPA-624.1	GEL	/ X /
m,p-Xylene	2	ug/L	U	2			EPA-624.1	GEL	/ X /
Methylene chloride	2	ug/L	U	2			EPA-624.1	GEL	/ X /
Styrene	1	ug/L	U	1			EPA-624.1	GEL	/ X /
Tetrachloroethene	1	ug/L	U	1			EPA-624.1	GEL	/ X /
Toluene	1	ug/L	U	1			EPA-624.1	GEL	/ X /
Total Xylene	3	ug/L	U	3			EPA-624.1	GEL	/ X /
trans-1,2-Dichloroethene	1	ug/L	U	1			EPA-624.1	GEL	/ X /
trans-1,3-Dichloropropene	1	ug/L	U	1			EPA-624.1	GEL	/ X /
Trans-1,4-Dichloro-2-butene	5	ug/L	U	5			EPA-624.1	GEL	/ X /
Trichloroethene	1	ug/L	U	1			EPA-624.1	GEL	/ X /
Trichlorofluoromethane	1	ug/L	U	1			EPA-624.1	GEL	/ X /
Vinyl acetate	5	ug/L	U	5			EPA-624.1	GEL	/ X /
Vinyl chloride	1	ug/L	U	1			EPA-624.1	GEL	/ X /

**WETCHEM**

### Paducah OREIS Report for SLS19-01

Carbonaceous Biochemical Oxygen Demand (CBOD)	6	mg/L	UX	6	SM-5210 B	GEL	/ X /
Chemical Oxygen Demand (COD)	44.1	mg/L		20	EPA-410.4	GEL	/ X /
Cyanide	0.2	mg/L	U	0.2	SW846-9012B	GEL	/ X /
Dissolved Solids	527	mg/L	*	14.3	EPA-160.1	GEL	/ X /
Hardness - Total as CaCO3	448	mg/L		10	EPA-130.2	GEL	/ X /
Iodide	0.412	mg/L	J	0.5	EPA-300.0	GEL	/ X /
Suspended Solids	2.8	mg/L	J	10	EPA-160.2	GEL	/ X /
Total Organic Carbon (TOC)	3.43	mg/L		2	SW846-9060A	GEL	/ X /
Total Organic Halides (TOX)	6.18	ug/L	J	10	SW846-9020B	GEL	S / X /

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## Paducah OREIS Report for SLS19-01

**SLS19-01-02**

from: C-746-S

on 2/19/2019

Media: WW

SmpMethod: GR

Comments:

Samplers collected samples from Cell #3 at the S&T Landfill. Water is clear. Used a peristaltic pump to collect samples. CB 2-19-19

Analysis	Results	Units	Result Qual	Foot Note	Reporting Limit	Counting Error	TPU	Method	LabCode	V/V/A*
<b>ANION</b>										
Bromide	0.2	mg/L	U		0.2			SW846-9056	GEL	/X/
Chloride	18.7	mg/L	W		0.4			SW846-9056	GEL	/X/
Fluoride	0.296	mg/L			0.1			SW846-9056	GEL	/X/
Nitrate as Nitrogen	0.5	mg/L	HU		0.5			SW846-9056	GEL	T/X/
Sulfate	12.8	mg/L	W		0.4			SW846-9056	GEL	/X/
<b>FS</b>										
Conductivity	1182	umho/cm						FS	FS	//
Dissolved Oxygen	7.03	mg/L						FS	FS	//
pH	6.69	Std Unit						FS	FS	//
Redox	150	mV						FS	FS	//
Temperature	48.2	deg F						FS	FS	//
<b>METAL</b>										
Aluminum	0.05	mg/L	U		0.05			SW846-6020	GEL	/X/
Antimony	0.003	mg/L	U		0.003			SW846-6020	GEL	/X/
Arsenic	0.0103	mg/L			0.005			SW846-6020	GEL	/X/
Barium	0.531	mg/L			0.002			SW846-6020	GEL	/X/
Beryllium	0.0005	mg/L	U		0.0005			SW846-6020	GEL	/X/
Boron	0.0349	mg/L			0.015			SW846-6020	GEL	/X/
Cadmium	0.001	mg/L	U		0.001			SW846-6020	GEL	/X/
Calcium	140	mg/L			1			SW846-6020	GEL	/X/
Chromium	0.01	mg/L	U		0.01			SW846-6020	GEL	/X/
Cobalt	0.000365	mg/L	J		0.001			SW846-6020	GEL	/X/
Copper	0.00037	mg/L	J		0.001			SW846-6020	GEL	BH-FB /X/
Iron	75.7	mg/L			0.5			SW846-6020	GEL	/X/
Lead	0.002	mg/L	U		0.002			SW846-6020	GEL	/X/
Magnesium	23.1	mg/L			0.03			SW846-6020	GEL	/X/
Manganese	1.42	mg/L			0.025			SW846-6020	GEL	/X/
Mercury	0.000215	mg/L			0.0002			SW846-7470A	GEL	/X/
Molybdenum	0.0005	mg/L	U		0.0005			SW846-6020	GEL	/X/
Nickel	0.00077	mg/L	J		0.002			SW846-6020	GEL	/X/
Phosphorous	0.236	mg/L			0.05			EPA-365.4	GEL	/X/
Potassium	5.17	mg/L			0.3			SW846-6020	GEL	/X/
Rhodium	0.005	mg/L	U		0.005			SW846-6020	GEL	/X/
Selenium	0.005	mg/L	U		0.005			SW846-6020	GEL	/X/
Silver	0.001	mg/L	U		0.001			SW846-6020	GEL	/X/
Sodium	26.5	mg/L			0.25			SW846-6020	GEL	/X/
Tantalum	0.005	mg/L	U		0.005			SW846-6020	GEL	/X/
Thallium	0.002	mg/L	U		0.002			SW846-6020	GEL	/X/
Tin	0.005	mg/L	U		0.005			SW846-6020	GEL	/X/
Titanium	0.01	mg/L	U		0.01			SW846-6020	GEL	/X/
Uranium	0.000627	mg/L			0.0002			SW846-6020	GEL	/X/
Vanadium	0.01	mg/L	U		0.01			SW846-6020	GEL	/X/
Zinc	0.01	mg/L	U		0.01			SW846-6020	GEL	/X/
<b>METAL-D</b>										
Antimony, Dissolved	0.003	mg/L	U		0.003			SW846-6020	GEL	/X/
Arsenic, Dissolved	0.00714	mg/L			0.005			SW846-6020	GEL	/X/
Barium, Dissolved	0.443	mg/L			0.002			SW846-6020	GEL	/X/
Cadmium, Dissolved	0.001	mg/L	U		0.001			SW846-6020	GEL	/X/
Chromium, Dissolved	0.01	mg/L	U		0.01			SW846-6020	GEL	/X/



**Paducah OREIS Report for SLS19-01**

Cobalt, Dissolved	0.000398	mg/L	J	0.001			SW846-6020	GEL	/ X/
Copper, Dissolved	0.000613	mg/L	J	0.001			SW846-6020	GEL	/ X/
Lead, Dissolved	0.002	mg/L	U	0.002			SW846-6020	GEL	/ X/
Manganese, Dissolved	1.44	mg/L		0.025			SW846-6020	GEL	/ X/
Nickel, Dissolved	0.000748	mg/L	J	0.002			SW846-6020	GEL	S / X/
Selenium, Dissolved	0.005	mg/L	U	0.005			SW846-6020	GEL	/ X/
Silver, Dissolved	0.001	mg/L	U	0.001			SW846-6020	GEL	/ X/
Tin, Dissolved	0.005	mg/L	U	0.005			SW846-6020	GEL	/ X/
Titanium, Dissolved	0.01	mg/L	U	0.01			SW846-6020	GEL	/ X/
Uranium, Dissolved	0.00064	mg/L		0.0002			SW846-6020	GEL	/ X/
Vanadium, Dissolved	0.01	mg/L	U	0.01			SW846-6020	GEL	/ X/
Zinc, Dissolved	0.01	mg/L	U	0.01			SW846-6020	GEL	/ X/

**OTHOR**

Oil and Grease	4.35	mg/L	U	4.35			EPA-1664A	GEL	/ X/
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**PCCB**

PCB-1016	0.0952	ug/L	U	0.0952			SW846-8082	GEL	/ X/
PCB-1221	0.0952	ug/L	U	0.0952			SW846-8082	GEL	/ X/
PCB-1232	0.0952	ug/L	U	0.0952			SW846-8082	GEL	/ X/
PCB-1242	0.0952	ug/L	U	0.0952			SW846-8082	GEL	/ X/
PCB-1248	0.0952	ug/L	U	0.0952			SW846-8082	GEL	/ X/
PCB-1254	0.0952	ug/L	U	0.0952			SW846-8082	GEL	/ X/
PCB-1260	0.0952	ug/L	U	0.0952			SW846-8082	GEL	/ X/
PCB-1268	0.0952	ug/L	U	0.0952			SW846-8082	GEL	/ X/
Polychlorinated biphenyl	0.0952	ug/L	U	0.0952			SW846-8082	GEL	/ X/

**RADS**

Alpha activity	7.59	pCi/L		4.94	3.52	3.76	SW846-9310	GEL	/ X/
Americium-241	0.127	pCi/L	U	1.11	0.569	0.57	HASL 300, Am-05-RC M	GEL	/ X/
Beta activity	1.24	pCi/L	U	4.97	2.92	2.93	SW846-9310	GEL	/ X/
Cesium-137	-0.173	pCi/L	U	1.44	0.859	0.863	EPA-901.1	GEL	/ X/
Cobalt-60	-0.0799	pCi/L	U	1.41	0.798	0.799	EPA-901.1	GEL	/ X/
Dissolved Alpha	1.34	pCi/L	U	3.04	1.79	1.8	SW846-9310	GEL	/ X/
Dissolved Beta	1.93	pCi/L		1.71	1.06	1.13	SW846-9310	GEL	/ X/
Neptunium-237	-0.489	pCi/L	U	2.44	0.725	0.726	ASTM-1475-00aM	GEL	/ X/
Plutonium-239/240	-0.176	pCi/L	U	1.21	0.409	0.409	HASL 300, Pu-11-RC M	GEL	/ X/
Radium-226	1.64	pCi/L		0.696	0.815	0.843	AN-1418	GEL	/ X/
Radium-228	2.09	pCi/L	U	4.57	2.69	2.75	EPA-904-M	GEL	/ X/
Strontium-90	0.0444	pCi/L	U	4.78	2.5	2.5	EPA-905.0-M	GEL	/ X/
Technetium-99	-5.62	pCi/L	U	19.7	11.4	11.4	HASL 300, Tc-02-RC M	GEL	/ X/
Thorium-230	0.274	pCi/L	U	1.43	0.767	0.77	HASL 300, Th-01-RC M	GEL	/ X/
Thorium-232	0.677	pCi/L	U	0.865	0.741	0.749	HASL 300, Th-01-RC M	GEL	/ X/
Thorium-234	20.5	pCi/L	U	37.9	31.9	33.6	EPA-901.1	GEL	/ X/
Tritium	-33.4	pCi/L	U	251	143	143	EPA-906.0-M	GEL	/ X/
Uranium	3.47	pCi/L		2.92	2.14	2.17	HASL 300, U-02-RC M	GEL	S / X/
Uranium-234	1.68	pCi/L	U	2.1	1.51	1.54	HASL 300, U-02-RC M	GEL	/ X/
Uranium-235	0.072	pCi/L	U	1.57	0.752	0.753	HASL 300, U-02-RC M	GEL	/ X/
Uranium-238	1.72	pCi/L		1.27	1.3	1.33	HASL 300, U-02-RC M	GEL	/ X/

**RADS-D**

Americium-241, Dissolved	0.305	pCi/L	U	0.818	0.54	0.541	HASL 300, Am-05-RC M	GEL	/ X/
Cesium-137, Dissolved	1.17	pCi/L	U	4.54	2.14	2.21	EPA-901.1	GEL	/ X/
Cobalt-60, Dissolved	2.51	pCi/L	U	5.7	2.2	2.49	EPA-901.1	GEL	/ X/
Neptunium-237, Dissolved	0.051	pCi/L	U	1.23	0.581	0.581	ASTM-1475-00aM	GEL	/ X/
Plutonium-239/240, Dissolved	0.751	pCi/L	U	1.22	0.878	0.884	HASL 300, Pu-11-RC M	GEL	/ X/
Technetium-99, Dissolved	-3.98	pCi/L	U	15.9	9.09	9.09	HASL 300, Tc-02-RC M	GEL	/ X/
Thorium-230, Dissolved	1.08	pCi/L	U	1.37	1.05	1.08	HASL 300, Th-01-RC M	GEL	/ X/
Thorium-234, Dissolved	8.25	pCi/L	U	273	156	157	EPA-901.1	GEL	/ X/

**Paducah OREIS Report for SLS19-01**

Uranium, Dissolved	0.693	pCi/L	U	2.17	1.19	1.19	HASL 300, U-02-RC M	GEL	/ X/
Uranium-234, Dissolved	0.162	pCi/L	U	1.55	0.785	0.786	HASL 300, U-02-RC M	GEL	/ X/
Uranium-235, Dissolved	0.0991	pCi/L	U	1.06	0.55	0.551	HASL 300, U-02-RC M	GEL	/ X/
Uranium-238, Dissolved	0.432	pCi/L	U	1.08	0.698	0.701	HASL 300, U-02-RC M	GEL	/ X/

**VOA**

1,1,1,2-Tetrachloroethane	1	ug/L	U	1			EPA-624.1	GEL	/ X/
1,1,1-Trichloroethane	1	ug/L	U	1			EPA-624.1	GEL	/ X/
1,1,2,2-Tetrachloroethane	1	ug/L	U	1			EPA-624.1	GEL	/ X/
1,1,2-Trichloroethane	1	ug/L	U	1			EPA-624.1	GEL	/ X/
1,1-Dichloroethane	1	ug/L	U	1			EPA-624.1	GEL	/ X/
1,1-Dichloroethene	1	ug/L	U	1			EPA-624.1	GEL	/ X/
1,2,3-Trichloropropane	1	ug/L	U	1			EPA-624.1	GEL	/ X/
1,2-Dibromo-3-chloropropane	0.0198	ug/L	U	0.0198			SW846-8011	GEL	/ X/
1,2-Dibromoethane	1	ug/L	U	1			EPA-624.1	GEL	/ X/
1,2-Dichlorobenzene	1	ug/L	U	1			EPA-624.1	GEL	/ X/
1,2-Dichloroethane	1	ug/L	U	1			EPA-624.1	GEL	/ X/
1,2-Dichloropropane	1	ug/L	U	1			EPA-624.1	GEL	/ X/
1,2-Dimethylbenzene	1	ug/L	U	1			EPA-624.1	GEL	/ X/
1,4-Dichlorobenzene	2.31	ug/L		1			EPA-624.1	GEL	/ X/
2-Butanone	5	ug/L	U	5			EPA-624.1	GEL	/ X/
2-Hexanone	5	ug/L	U	5			EPA-624.1	GEL	/ X/
4-Methyl-2-pentanone	5	ug/L	U	5			EPA-624.1	GEL	/ X/
Acetone	2.27	ug/L	J	5			EPA-624.1	GEL	S / X/
Acrolein	5	ug/L	U	5			EPA-624.1	GEL	/ X/
Acrylonitrile	5	ug/L	U	5			EPA-624.1	GEL	/ X/
Benzene	1	ug/L	U	1			EPA-624.1	GEL	/ X/
Bromochloromethane	1	ug/L	U	1			EPA-624.1	GEL	/ X/
Bromodichloromethane	1	ug/L	U	1			EPA-624.1	GEL	/ X/
Bromoform	1	ug/L	U	1			EPA-624.1	GEL	/ X/
Bromomethane	1	ug/L	U	1			EPA-624.1	GEL	/ X/
Carbon disulfide	5	ug/L	U	5			EPA-624.1	GEL	/ X/
Carbon tetrachloride	1	ug/L	U	1			EPA-624.1	GEL	/ X/
Chlorobenzene	1	ug/L	U	1			EPA-624.1	GEL	/ X/
Chloroethane	1	ug/L	U	1			EPA-624.1	GEL	/ X/
Chloroform	1	ug/L	U	1			EPA-624.1	GEL	/ X/
Chloromethane	1	ug/L	U	1			EPA-624.1	GEL	/ X/
cis-1,2-Dichloroethene	1	ug/L	U	1			EPA-624.1	GEL	/ X/
cis-1,3-Dichloropropene	1	ug/L	U	1			EPA-624.1	GEL	/ X/
Dibromochloromethane	1	ug/L	U	1			EPA-624.1	GEL	/ X/
Dibromomethane	1	ug/L	U	1			EPA-624.1	GEL	/ X/
Ethylbenzene	1	ug/L	U	1			EPA-624.1	GEL	/ X/
Iodomethane	5	ug/L	U	5			EPA-624.1	GEL	/ X/
m,p-Xylene	2	ug/L	U	2			EPA-624.1	GEL	/ X/
Methylene chloride	2	ug/L	U	2			EPA-624.1	GEL	/ X/
Styrene	1	ug/L	U	1			EPA-624.1	GEL	/ X/
Tetrachloroethene	1	ug/L	U	1			EPA-624.1	GEL	/ X/
Toluene	1	ug/L	U	1			EPA-624.1	GEL	/ X/
Total Xylene	3	ug/L	U	3			EPA-624.1	GEL	/ X/
trans-1,2-Dichloroethene	1	ug/L	U	1			EPA-624.1	GEL	/ X/
trans-1,3-Dichloropropene	1	ug/L	U	1			EPA-624.1	GEL	/ X/
Trans-1,4-Dichloro-2-butene	5	ug/L	U	5			EPA-624.1	GEL	/ X/
Trichloroethene	1	ug/L	U	1			EPA-624.1	GEL	/ X/
Trichlorofluoromethane	1	ug/L	U	1			EPA-624.1	GEL	/ X/
Vinyl acetate	5	ug/L	U	5			EPA-624.1	GEL	/ X/
Vinyl chloride	1	ug/L	U	1			EPA-624.1	GEL	/ X/

**WETCHEM**

### Paducah OREIS Report for SLS19-01

Carbonaceous Biochemical Oxygen Demand (CBOD)	4.76	mg/L	J	6	SM-5210 B	GEL	/ X /
Chemical Oxygen Demand (COD)	42.5	mg/L		20	EPA-410.4	GEL	/ X /
Cyanide	0.2	mg/L	U	0.2	SW846-9012B	GEL	/ X /
Dissolved Solids	650	mg/L	*	14.3	EPA-160.1	GEL	/ X /
Hardness - Total as CaCO3	512	mg/L		10	EPA-130.2	GEL	/ X /
Iodide	1.1	mg/L		0.5	EPA-300.0	GEL	/ X /
Suspended Solids	76	mg/L		25	EPA-160.2	GEL	/ X /
Total Organic Carbon (TOC)	8.88	mg/L		2	SW846-9060A	GEL	/ X /
Total Organic Halides (TOX)	7.7	ug/L	J	10	SW846-9020B	GEL	S / X /

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## Paducah OREIS Report for SLS19-01

**FBSLS19-01**

from: QC

on 2/19/2019

Media: WQ

SmpMethod:

Comments:

Analysis	Results	Units	Result Qual	Foot Note	Reporting Limit	Counting Error	TPU	Method	LabCode	V/V/A*
<b>ANION</b>										
Bromide	0.2	mg/L	U		0.2			SW846-9056	GEL	/X/
Chloride	0.2	mg/L	UW		0.2			SW846-9056	GEL	/X/
Fluoride	0.1	mg/L	U		0.1			SW846-9056	GEL	/X/
Nitrate as Nitrogen	0.1	mg/L	U		0.1			SW846-9056	GEL	/X/
Sulfate	0.4	mg/L	UW		0.4			SW846-9056	GEL	/X/
<b>METAL</b>										
Aluminum	0.05	mg/L	U		0.05			SW846-6020	GEL	/X/
Antimony	0.003	mg/L	U		0.003			SW846-6020	GEL	/X/
Arsenic	0.00214	mg/L	J		0.005			SW846-6020	GEL	/X/
Barium	0.002	mg/L	U		0.002			SW846-6020	GEL	/X/
Beryllium	0.0005	mg/L	U		0.0005			SW846-6020	GEL	/X/
Boron	0.015	mg/L	U		0.015			SW846-6020	GEL	/X/
Cadmium	0.001	mg/L	U		0.001			SW846-6020	GEL	/X/
Calcium	0.2	mg/L	U		0.2			SW846-6020	GEL	/X/
Chromium	0.00608	mg/L	J		0.01			SW846-6020	GEL	/X/
Cobalt	0.001	mg/L	U		0.001			SW846-6020	GEL	/X/
Copper	0.018	mg/L			0.001			SW846-6020	GEL	/X/
Iron	0.1	mg/L	U		0.1			SW846-6020	GEL	/X/
Lead	0.00172	mg/L	J		0.002			SW846-6020	GEL	/X/
Magnesium	0.03	mg/L	U		0.03			SW846-6020	GEL	/X/
Manganese	0.005	mg/L	U		0.005			SW846-6020	GEL	/X/
Mercury	0.0002	mg/L	U		0.0002			SW846-7470A	GEL	/X/
Molybdenum	0.0005	mg/L	U		0.0005			SW846-6020	GEL	/X/
Nickel	0.002	mg/L	U		0.002			SW846-6020	GEL	/X/
Phosphorous	0.0201	mg/L	J		0.05			EPA-365.4	GEL	/X/
Potassium	0.3	mg/L	U		0.3			SW846-6020	GEL	/X/
Rhodium	0.005	mg/L	U		0.005			SW846-6020	GEL	/X/
Selenium	0.005	mg/L	U		0.005			SW846-6020	GEL	/X/
Silver	0.001	mg/L	U		0.001			SW846-6020	GEL	/X/
Sodium	0.25	mg/L	U		0.25			SW846-6020	GEL	/X/
Tantalum	0.005	mg/L	U		0.005			SW846-6020	GEL	/X/
Thallium	0.002	mg/L	U		0.002			SW846-6020	GEL	/X/
Tin	0.00203	mg/L	J		0.005			SW846-6020	GEL	/X/
Titanium	0.01	mg/L	U		0.01			SW846-6020	GEL	/X/
Uranium	0.0002	mg/L	U		0.0002			SW846-6020	GEL	/X/
Vanadium	0.01	mg/L	U		0.01			SW846-6020	GEL	/X/
Zinc	0.01	mg/L	U		0.01			SW846-6020	GEL	/X/
<b>OTHOR</b>										
Oil and Grease	1.31	mg/L	J		4.1			EPA-1664A	GEL	/X/
<b>PPCB</b>										
PCB-1016	0.0952	ug/L	U		0.0952			SW846-8082	GEL	/X/
PCB-1221	0.0952	ug/L	U		0.0952			SW846-8082	GEL	/X/
PCB-1232	0.0952	ug/L	U		0.0952			SW846-8082	GEL	/X/
PCB-1242	0.0952	ug/L	U		0.0952			SW846-8082	GEL	/X/
PCB-1248	0.0952	ug/L	U		0.0952			SW846-8082	GEL	/X/
PCB-1254	0.0952	ug/L	U		0.0952			SW846-8082	GEL	/X/
PCB-1260	0.0952	ug/L	U		0.0952			SW846-8082	GEL	/X/
PCB-1268	0.0952	ug/L	U		0.0952			SW846-8082	GEL	/X/
Polychlorinated biphenyl	0.0952	ug/L	U		0.0952			SW846-8082	GEL	/X/

**Paducah OREIS Report for SLS19-01**

<b>RADS</b>									
Alpha activity	0.637	pCi/L	U	1.85	1.05	1.06	SW846-9310	GEL	/X/
Americium-241	0.468	pCi/L	U	0.812	0.673	0.676	HASL 300, Am-05-RC M	GEL	/X/
Beta activity	-2.82	pCi/L	U	4.05	2.23	2.23	SW846-9310	GEL	/X/
Cesium-137	-0.131	pCi/L	U	1.66	0.983	0.985	EPA-901.1	GEL	/X/
Cobalt-60	0.132	pCi/L	U	1.82	1.01	1.01	EPA-901.1	GEL	/X/
Neptunium-237	0.183	pCi/L	U	2.56	1.24	1.24	ASTM-1475-00aM	GEL	/X/
Plutonium-239/240	0.0997	pCi/L	U	1.32	0.644	0.644	HASL 300, Pu-11-RC M	GEL	/X/
Radium-226	0.185	pCi/L	U	0.617	0.359	0.36	AN-1418	GEL	/X/
Radium-228	0.657	pCi/L	U	3.45	1.9	1.91	EPA-904-M	GEL	/X/
Strontium-90	-1.45	pCi/L	U	4.82	2.19	2.19	EPA-905.0-M	GEL	/X/
Technetium-99	-7.94	pCi/L	U	25	14.3	14.3	HASL 300, Tc-02-RC M	GEL	/X/
Thorium-230	0.13	pCi/L	U	1.32	0.665	0.667	HASL 300, Th-01-RC M	GEL	/X/
Thorium-232	-0.0107	pCi/L	U	0.718	0.383	0.384	HASL 300, Th-01-RC M	GEL	/X/
Thorium-234	-31.7	pCi/L	U	46.8	31.9	35.7	EPA-901.1	GEL	/X/
Tritium	-11.1	pCi/L	U	231	133	133	EPA-906.0-M	GEL	/X/
Uranium	3.2	pCi/L	U	3.85	2.5	2.52	HASL 300, U-02-RC M	GEL	/X/
Uranium-234	1.31	pCi/L	U	2.59	1.63	1.64	HASL 300, U-02-RC M	GEL	/X/
Uranium-235	0.995	pCi/L	U	1.57	1.26	1.27	HASL 300, U-02-RC M	GEL	/X/
Uranium-238	0.897	pCi/L	U	2.38	1.42	1.43	HASL 300, U-02-RC M	GEL	/X/

<b>VOA</b>									
1,1,1,2-Tetrachloroethane	1	ug/L	U	1			EPA-624.1	GEL	/X/
1,1,1-Trichloroethane	1	ug/L	U	1			EPA-624.1	GEL	/X/
1,1,2,2-Tetrachloroethane	1	ug/L	U	1			EPA-624.1	GEL	/X/
1,1,2-Trichloroethane	1	ug/L	U	1			EPA-624.1	GEL	/X/
1,1-Dichloroethane	1	ug/L	U	1			EPA-624.1	GEL	/X/
1,1-Dichloroethene	1	ug/L	U	1			EPA-624.1	GEL	/X/
1,2,3-Trichloropropane	1	ug/L	U	1			EPA-624.1	GEL	/X/
1,2-Dibromo-3-chloropropane	0.0201	ug/L	U	0.0201			SW846-8011	GEL	/X/
1,2-Dibromoethane	1	ug/L	U	1			EPA-624.1	GEL	/X/
1,2-Dichlorobenzene	1	ug/L	U	1			EPA-624.1	GEL	/X/
1,2-Dichloroethane	1	ug/L	U	1			EPA-624.1	GEL	/X/
1,2-Dichloropropane	1	ug/L	U	1			EPA-624.1	GEL	/X/
1,2-Dimethylbenzene	1	ug/L	U	1			EPA-624.1	GEL	/X/
1,4-Dichlorobenzene	1	ug/L	U	1			EPA-624.1	GEL	/X/
2-Butanone	2.83	ug/L	J	5			EPA-624.1	GEL	/X/
2-Hexanone	5	ug/L	U	5			EPA-624.1	GEL	/X/
4-Methyl-2-pentanone	5	ug/L	U	5			EPA-624.1	GEL	/X/
Acetone	10.3	ug/L		5			EPA-624.1	GEL	/X/
Acrolein	5	ug/L	U	5			EPA-624.1	GEL	/X/
Acrylonitrile	5	ug/L	U	5			EPA-624.1	GEL	/X/
Benzene	1	ug/L	U	1			EPA-624.1	GEL	/X/
Bromochloromethane	1	ug/L	U	1			EPA-624.1	GEL	/X/
Bromodichloromethane	1	ug/L	U	1			EPA-624.1	GEL	/X/
Bromoform	1	ug/L	U	1			EPA-624.1	GEL	/X/
Bromomethane	1	ug/L	U	1			EPA-624.1	GEL	/X/
Carbon disulfide	5	ug/L	U	5			EPA-624.1	GEL	/X/
Carbon tetrachloride	1	ug/L	U	1			EPA-624.1	GEL	/X/
Chlorobenzene	1.11	ug/L		1			EPA-624.1	GEL	/X/
Chloroethane	1	ug/L	U	1			EPA-624.1	GEL	/X/
Chloroform	1	ug/L	U	1			EPA-624.1	GEL	/X/
Chloromethane	1	ug/L	U	1			EPA-624.1	GEL	/X/
cis-1,2-Dichloroethene	1	ug/L	U	1			EPA-624.1	GEL	/X/
cis-1,3-Dichloropropene	1	ug/L	U	1			EPA-624.1	GEL	/X/
Dibromochloromethane	1	ug/L	U	1			EPA-624.1	GEL	/X/
Dibromomethane	1	ug/L	U	1			EPA-624.1	GEL	/X/

## Paducah OREIS Report for SLS19-01

Ethylbenzene	1	ug/L	U	1	EPA-624.1	GEL	/X/
Iodomethane	5	ug/L	U	5	EPA-624.1	GEL	/X/
m,p-Xylene	2	ug/L	U	2	EPA-624.1	GEL	/X/
Methylene chloride	2	ug/L	U	2	EPA-624.1	GEL	/X/
Styrene	1	ug/L	U	1	EPA-624.1	GEL	/X/
Tetrachloroethene	1	ug/L	U	1	EPA-624.1	GEL	/X/
Toluene	1	ug/L	U	1	EPA-624.1	GEL	/X/
Total Xylene	3	ug/L	U	3	EPA-624.1	GEL	/X/
trans-1,2-Dichloroethene	1	ug/L	U	1	EPA-624.1	GEL	/X/
trans-1,3-Dichloropropene	1	ug/L	U	1	EPA-624.1	GEL	/X/
Trans-1,4-Dichloro-2-butene	5	ug/L	U	5	EPA-624.1	GEL	/X/
Trichloroethene	1	ug/L	U	1	EPA-624.1	GEL	/X/
Trichlorofluoromethane	1	ug/L	U	1	EPA-624.1	GEL	/X/
Vinyl acetate	5	ug/L	U	5	EPA-624.1	GEL	/X/
Vinyl chloride	1	ug/L	U	1	EPA-624.1	GEL	/X/
<b>WETCHEM</b>							
Chemical Oxygen Demand (COD)	73.1	mg/L		20	EPA-410.4	GEL	/X/
Hardness - Total as CaCO3	2	mg/L	U	2	EPA-130.2	GEL	/X/
Iodide	0.5	mg/L	U	0.5	EPA-300.0	GEL	/X/
Total Organic Carbon (TOC)	0.506	mg/L	J	2	SW846-9020B	GEL	/X/

**Paducah OREIS Report for SLS19-01**

**TBSLS19-01**

from: QC

on 2/19/2019

Media: WQ

SmpMethod:

Comments:

Analysis	Results	Units	Result Qual	Foot Note	Reporting Limit	Counting Error	TPU	Method	LabCode	V/V/A*
<b>VOA</b>										
1,1,1,2-Tetrachloroethane	1	ug/L	U		1			EPA-624.1	GEL	/X/
1,1,1-Trichloroethane	1	ug/L	U		1			EPA-624.1	GEL	/X/
1,1,2,2-Tetrachloroethane	1	ug/L	U		1			EPA-624.1	GEL	/X/
1,1,2-Trichloroethane	1	ug/L	U		1			EPA-624.1	GEL	/X/
1,1-Dichloroethane	1	ug/L	U		1			EPA-624.1	GEL	/X/
1,1-Dichloroethene	1	ug/L	U		1			EPA-624.1	GEL	/X/
1,2,3-Trichloropropane	1	ug/L	U		1			EPA-624.1	GEL	/X/
1,2-Dibromo-3-chloropropane	0.0197	ug/L	U		0.0197			SW846-8011	GEL	/X/
1,2-Dibromoethane	1	ug/L	U		1			EPA-624.1	GEL	/X/
1,2-Dichlorobenzene	1	ug/L	U		1			EPA-624.1	GEL	/X/
1,2-Dichloroethane	1	ug/L	U		1			EPA-624.1	GEL	/X/
1,2-Dichloropropane	1	ug/L	U		1			EPA-624.1	GEL	/X/
1,2-Dimethylbenzene	1	ug/L	U		1			EPA-624.1	GEL	/X/
1,4-Dichlorobenzene	1	ug/L	U		1			EPA-624.1	GEL	/X/
2-Butanone	5	ug/L	U		5			EPA-624.1	GEL	/X/
2-Hexanone	5	ug/L	U		5			EPA-624.1	GEL	/X/
4-Methyl-2-pentanone	5	ug/L	U		5			EPA-624.1	GEL	/X/
Acetone	8.25	ug/L			5			EPA-624.1	GEL	/X/
Acrolein	5	ug/L	U		5			EPA-624.1	GEL	/X/
Acrylonitrile	5	ug/L	U		5			EPA-624.1	GEL	/X/
Benzene	1	ug/L	U		1			EPA-624.1	GEL	/X/
Bromochloromethane	1	ug/L	U		1			EPA-624.1	GEL	/X/
Bromodichloromethane	1	ug/L	U		1			EPA-624.1	GEL	/X/
Bromoform	1	ug/L	U		1			EPA-624.1	GEL	/X/
Bromomethane	1	ug/L	U		1			EPA-624.1	GEL	/X/
Carbon disulfide	5	ug/L	U		5			EPA-624.1	GEL	/X/
Carbon tetrachloride	1	ug/L	U		1			EPA-624.1	GEL	/X/
Chlorobenzene	1.7	ug/L			1			EPA-624.1	GEL	/X/
Chloroethane	1	ug/L	U		1			EPA-624.1	GEL	/X/
Chloroform	1	ug/L	U		1			EPA-624.1	GEL	/X/
Chloromethane	1	ug/L	U		1			EPA-624.1	GEL	/X/
cis-1,2-Dichloroethene	1	ug/L	U		1			EPA-624.1	GEL	/X/
cis-1,3-Dichloropropene	1	ug/L	U		1			EPA-624.1	GEL	/X/
Dibromochloromethane	1	ug/L	U		1			EPA-624.1	GEL	/X/
Dibromomethane	1	ug/L	U		1			EPA-624.1	GEL	/X/
Ethylbenzene	1	ug/L	U		1			EPA-624.1	GEL	/X/
Iodomethane	5	ug/L	U		5			EPA-624.1	GEL	/X/
m,p-Xylene	2	ug/L	U		2			EPA-624.1	GEL	/X/
Methylene chloride	2	ug/L	U		2			EPA-624.1	GEL	/X/
Styrene	1	ug/L	U		1			EPA-624.1	GEL	/X/
Tetrachloroethene	1	ug/L	U		1			EPA-624.1	GEL	/X/
Toluene	1	ug/L	U		1			EPA-624.1	GEL	/X/
Total Xylene	3	ug/L	U		3			EPA-624.1	GEL	/X/
trans-1,2-Dichloroethene	1	ug/L	U		1			EPA-624.1	GEL	/X/
trans-1,3-Dichloropropene	1	ug/L	U		1			EPA-624.1	GEL	/X/
Trans-1,4-Dichloro-2-butene	5	ug/L	U		5			EPA-624.1	GEL	/X/
Trichloroethene	1	ug/L	U		1			EPA-624.1	GEL	/X/
Trichlorofluoromethane	1	ug/L	U		1			EPA-624.1	GEL	/X/
Vinyl acetate	5	ug/L	U		5			EPA-624.1	GEL	/X/
Vinyl chloride	1	ug/L	U		1			EPA-624.1	GEL	/X/

## Paducah OREIS Report for ULS19-01

**ULS19-01-01**

from: C-746-U

on 2/19/2019

Media: WW

SmpMethod: GR

Comments: Sample collected from 01 tank, valve HV-011. Water has a light yellow color. CB 2-19-19

Analysis	Results	Units	Result Qual	Foot Note	Reporting Limit	Counting Error	TPU	Method	LabCode	V/V/A*
<b>ANION</b>										
Bromide	0.141	mg/L	J		0.2			SW846-9056	GEL	/X/
Chloride	30.8	mg/L	W		1			SW846-9056	GEL	/X/
Fluoride	0.506	mg/L			0.1			SW846-9056	GEL	/X/
Nitrate as Nitrogen	2.84	mg/L			0.5			SW846-9056	GEL	/X/
Sulfate	215	mg/L			8			SW846-9056	GEL	/X/
<b>FS</b>										
Conductivity	1259	umho/cm						FS	FS	//
Dissolved Oxygen	8.73	mg/L						FS	FS	//
pH	7.6	Std Unit						FS	FS	//
Redox	456	mV						FS	FS	//
Temperature	59.3	deg F						FS	FS	//
<b>METAL</b>										
Aluminum	4.02	mg/L	N		0.05			SW846-6020	GEL	/X/
Antimony	0.003	mg/L	U		0.003			SW846-6020	GEL	/X/
Arsenic	0.00402	mg/L	J		0.005			SW846-6020	GEL	/X/
Barium	0.11	mg/L			0.002			SW846-6020	GEL	/X/
Beryllium	0.000775	mg/L			0.0005			SW846-6020	GEL	/X/
Boron	0.553	mg/L			0.075			SW846-6020	GEL	/X/
Cadmium	0.001	mg/L	U		0.001			SW846-6020	GEL	/X/
Calcium	139	mg/L			1			SW846-6020	GEL	/X/
Chromium	0.00709	mg/L	J		0.01			SW846-6020	GEL	/X/
Cobalt	0.00405	mg/L			0.001			SW846-6020	GEL	/X/
Copper	0.00337	mg/L			0.001			SW846-6020	GEL	/X/
Iron	3.08	mg/L			0.1			SW846-6020	GEL	/X/
Lead	0.0015	mg/L	J		0.002			SW846-6020	GEL	/X/
Magnesium	40.2	mg/L			0.03			SW846-6020	GEL	/X/
Manganese	0.176	mg/L			0.005			SW846-6020	GEL	/X/
Mercury	0.0002	mg/L	U		0.0002			SW846-7470A	GEL	/X/
Molybdenum	0.000987	mg/L			0.0005			SW846-6020	GEL	/X/
Nickel	0.00848	mg/L			0.002			SW846-6020	GEL	/X/
Phosphorous	0.0651	mg/L			0.05			EPA-365.4	GEL	/X/
Potassium	5.05	mg/L			0.3			SW846-6020	GEL	/X/
Rhodium	0.005	mg/L	U		0.005			SW846-6020	GEL	/X/
Selenium	0.005	mg/L	U		0.005			SW846-6020	GEL	/X/
Silver	0.001	mg/L	U		0.001			SW846-6020	GEL	/X/
Sodium	79	mg/L			1.25			SW846-6020	GEL	/X/
Tantalum	0.005	mg/L	UN		0.005			SW846-6020	GEL	/X/
Thallium	0.002	mg/L	U		0.002			SW846-6020	GEL	/X/
Tin	0.005	mg/L	U		0.005			SW846-6020	GEL	/X/
Titanium	0.0403	mg/L			0.01			SW846-6020	GEL	/X/
Uranium	0.217	mg/L			0.0002			SW846-6020	GEL	/X/
Vanadium	0.00819	mg/L	J		0.01			SW846-6020	GEL	/X/
Zinc	0.0407	mg/L			0.01			SW846-6020	GEL	/X/
<b>METAL-D</b>										
Antimony, Dissolved	0.003	mg/L	U		0.003			SW846-6020	GEL	/X/
Arsenic, Dissolved	0.00324	mg/L	J		0.005			SW846-6020	GEL	/X/
Barium, Dissolved	0.0976	mg/L			0.002			SW846-6020	GEL	/X/
Cadmium, Dissolved	0.001	mg/L	U		0.001			SW846-6020	GEL	/X/
Chromium, Dissolved	0.01	mg/L	U		0.01			SW846-6020	GEL	/X/



**Paducah OREIS Report for ULS19-01**

Cobalt, Dissolved	0.00126	mg/L		0.001			SW846-6020	GEL	/ X/
Copper, Dissolved	0.00175	mg/L		0.001			SW846-6020	GEL	/ X/
Lead, Dissolved	0.002	mg/L	U	0.002			SW846-6020	GEL	/ X/
Manganese, Dissolved	0.0588	mg/L		0.005			SW846-6020	GEL	/ X/
Nickel, Dissolved	0.00448	mg/L		0.002			SW846-6020	GEL	/ X/
Selenium, Dissolved	0.005	mg/L	U	0.005			SW846-6020	GEL	/ X/
Silver, Dissolved	0.001	mg/L	U	0.001			SW846-6020	GEL	/ X/
Tin, Dissolved	0.005	mg/L	U	0.005			SW846-6020	GEL	/ X/
Titanium, Dissolved	0.01	mg/L	U	0.01			SW846-6020	GEL	/ X/
Uranium, Dissolved	0.216	mg/L		0.0002			SW846-6020	GEL	/ X/
Vanadium, Dissolved	0.01	mg/L	U	0.01			SW846-6020	GEL	/ X/
Zinc, Dissolved	0.0157	mg/L		0.01			SW846-6020	GEL	/ X/

**OTHOR**

Oil and Grease	4.17	mg/L	U	4.17			EPA-1664A	GEL	/ X/
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**PCCB**

PCB-1016	0.0952	ug/L	U	0.0952			SW846-8082	GEL	/ X/
PCB-1221	0.0952	ug/L	U	0.0952			SW846-8082	GEL	/ X/
PCB-1232	0.0952	ug/L	U	0.0952			SW846-8082	GEL	/ X/
PCB-1242	0.0952	ug/L	U	0.0952			SW846-8082	GEL	/ X/
PCB-1248	0.0952	ug/L	U	0.0952			SW846-8082	GEL	/ X/
PCB-1254	0.0952	ug/L	U	0.0952			SW846-8082	GEL	/ X/
PCB-1260	0.0952	ug/L	U	0.0952			SW846-8082	GEL	/ X/
PCB-1268	0.0952	ug/L	U	0.0952			SW846-8082	GEL	/ X/
Polychlorinated biphenyl	0.0952	ug/L	U	0.0952			SW846-8082	GEL	/ X/

**RADS**

Alpha activity	93.4	pCi/L		5.08	8.15	17.6	SW846-9310	GEL	/ X/
Americium-241	0.242	pCi/L	U	1.42	0.759	0.76	HASL 300, Am-05-RC M	GEL	/ X/
Beta activity	58.9	pCi/L		4.87	4.3	10.8	SW846-9310	GEL	/ X/
Cesium-137	0.167	pCi/L	U	1.83	1.06	1.07	EPA-901.1	GEL	/ X/
Cobalt-60	-0.09	pCi/L	U	1.85	1.05	1.05	EPA-901.1	GEL	/ X/
Dissolved Alpha	72.9	pCi/L		2.43	5.07	13	SW846-9310	GEL	/ X/
Dissolved Beta	58.9	pCi/L		2.53	2.68	10.2	SW846-9310	GEL	/ X/
Neptunium-237	0.151	pCi/L	U	1.57	0.818	0.819	ASTM-1475-00aM	GEL	/ X/
Plutonium-239/240	0.186	pCi/L	U	1.18	0.635	0.636	HASL 300, Pu-11-RC M	GEL	/ X/
Radium-226	0.814	pCi/L		0.652	0.582	0.583	AN-1418	GEL	/ X/
Radium-228	4	pCi/L	U	4.83	3.01	3.2	EPA-904-M	GEL	/ X/
Strontium-90	-4.19	pCi/L	U	7.72	3.58	3.58	EPA-905.0-M	GEL	/ X/
Technetium-99	11.7	pCi/L	U	17.8	10.7	10.7	HASL 300, Tc-02-RC M	GEL	/ X/
Thorium-230	0.244	pCi/L	U	1.34	0.718	0.721	HASL 300, Th-01-RC M	GEL	/ X/
Thorium-232	0.266	pCi/L	U	0.784	0.544	0.545	HASL 300, Th-01-RC M	GEL	/ X/
Thorium-234	16.2	pCi/L	U	26.1	35.2	35.4	EPA-901.1	GEL	/ X/
Tritium	16.5	pCi/L	U	236	137	137	EPA-906.0-M	GEL	/ X/
Uranium	89.8	pCi/L		2.94	8.83	14.1	HASL 300, U-02-RC M	GEL	/ X/
Uranium-234	14.9	pCi/L		1.81	3.64	4.27	HASL 300, U-02-RC M	GEL	/ X/
Uranium-235	2.79	pCi/L		1.66	1.86	1.91	HASL 300, U-02-RC M	GEL	/ X/
Uranium-238	72.1	pCi/L		1.62	7.83	13.3	HASL 300, U-02-RC M	GEL	/ X/

**RADS-D**

Americium-241, Dissolved	0.111	pCi/L	U	0.703	0.418	0.419	HASL 300, Am-05-RC M	GEL	/ X/
Cesium-137, Dissolved	1.93	pCi/L	U	4.07	3.62	3.63	EPA-901.1	GEL	/ X/
Cobalt-60, Dissolved	-0.816	pCi/L	U	5.36	2.84	2.86	EPA-901.1	GEL	/ X/
Neptunium-237, Dissolved	0.152	pCi/L	U	1.25	0.639	0.639	ASTM-1475-00aM	GEL	/ X/
Plutonium-239/240, Dissolved	0.39	pCi/L	U	0.977	0.631	0.633	HASL 300, Pu-11-RC M	GEL	/ X/
Technetium-99, Dissolved	9.45	pCi/L	U	19.2	11.4	11.5	HASL 300, Tc-02-RC M	GEL	/ X/
Thorium-230, Dissolved	0.161	pCi/L	U	1.2	0.631	0.634	HASL 300, Th-01-RC M	GEL	/ X/
Thorium-234, Dissolved	21.7	pCi/L	U	240	198	198	EPA-901.1	GEL	/ X/

**Paducah OREIS Report for ULS19-01**

Uranium, Dissolved	86.1	pCi/L		2.13	7.17	11.5	HASL 300, U-02-RC M	GEL	/ X/
Uranium-234, Dissolved	15.6	pCi/L		1.5	3.09	3.71	HASL 300, U-02-RC M	GEL	/ X/
Uranium-235, Dissolved	2.86	pCi/L		1.14	1.52	1.57	HASL 300, U-02-RC M	GEL	/ X/
Uranium-238, Dissolved	67.7	pCi/L		0.997	6.29	10.8	HASL 300, U-02-RC M	GEL	/ X/

**VOA**

1,1,1,2-Tetrachloroethane	1	ug/L	U	1			EPA-624.1	GEL	/ X/
1,1,1-Trichloroethane	1	ug/L	U	1			EPA-624.1	GEL	/ X/
1,1,2,2-Tetrachloroethane	1	ug/L	U	1			EPA-624.1	GEL	/ X/
1,1,2-Trichloroethane	1	ug/L	U	1			EPA-624.1	GEL	/ X/
1,1-Dichloroethane	1	ug/L	U	1			EPA-624.1	GEL	/ X/
1,1-Dichloroethene	1	ug/L	U	1			EPA-624.1	GEL	/ X/
1,2,3-Trichloropropane	1	ug/L	U	1			EPA-624.1	GEL	/ X/
1,2-Dibromo-3-chloropropane	0.02	ug/L	U	0.02			SW846-8011	GEL	/ X/
1,2-Dibromoethane	1	ug/L	U	1			EPA-624.1	GEL	/ X/
1,2-Dichlorobenzene	1	ug/L	U	1			EPA-624.1	GEL	/ X/
1,2-Dichloroethane	1	ug/L	U	1			EPA-624.1	GEL	/ X/
1,2-Dichloropropane	1	ug/L	U	1			EPA-624.1	GEL	/ X/
1,2-Dimethylbenzene	1	ug/L	U	1			EPA-624.1	GEL	/ X/
1,4-Dichlorobenzene	1	ug/L	U	1			EPA-624.1	GEL	/ X/
2-Butanone	5	ug/L	U	5			EPA-624.1	GEL	/ X/
2-Hexanone	5	ug/L	U	5			EPA-624.1	GEL	/ X/
4-Methyl-2-pentanone	5	ug/L	U	5			EPA-624.1	GEL	/ X/
Acetone	5	ug/L	U	5			EPA-624.1	GEL	/ X/
Acrolein	5	ug/L	U	5			EPA-624.1	GEL	/ X/
Acrylonitrile	5	ug/L	U	5			EPA-624.1	GEL	/ X/
Benzene	1	ug/L	U	1			EPA-624.1	GEL	/ X/
Bromochloromethane	1	ug/L	U	1			EPA-624.1	GEL	/ X/
Bromodichloromethane	1	ug/L	U	1			EPA-624.1	GEL	/ X/
Bromoform	1	ug/L	U	1			EPA-624.1	GEL	/ X/
Bromomethane	1	ug/L	U	1			EPA-624.1	GEL	/ X/
Carbon disulfide	5	ug/L	U	5			EPA-624.1	GEL	/ X/
Carbon tetrachloride	1	ug/L	U	1			EPA-624.1	GEL	/ X/
Chlorobenzene	1	ug/L	U	1			EPA-624.1	GEL	/ X/
Chloroethane	1	ug/L	U	1			EPA-624.1	GEL	/ X/
Chloroform	1	ug/L	U	1			EPA-624.1	GEL	/ X/
Chloromethane	1	ug/L	U	1			EPA-624.1	GEL	/ X/
cis-1,2-Dichloroethene	1	ug/L	U	1			EPA-624.1	GEL	/ X/
cis-1,3-Dichloropropene	1	ug/L	U	1			EPA-624.1	GEL	/ X/
Dibromochloromethane	1	ug/L	U	1			EPA-624.1	GEL	/ X/
Dibromomethane	1	ug/L	U	1			EPA-624.1	GEL	/ X/
Ethylbenzene	1	ug/L	U	1			EPA-624.1	GEL	/ X/
Iodomethane	5	ug/L	U	5			EPA-624.1	GEL	/ X/
m,p-Xylene	2	ug/L	U	2			EPA-624.1	GEL	/ X/
Methylene chloride	2	ug/L	U	2			EPA-624.1	GEL	/ X/
Styrene	1	ug/L	U	1			EPA-624.1	GEL	/ X/
Tetrachloroethene	1	ug/L	U	1			EPA-624.1	GEL	/ X/
Toluene	1	ug/L	U	1			EPA-624.1	GEL	/ X/
Total Xylene	3	ug/L	U	3			EPA-624.1	GEL	/ X/
trans-1,2-Dichloroethene	1	ug/L	U	1			EPA-624.1	GEL	/ X/
trans-1,3-Dichloropropene	1	ug/L	U	1			EPA-624.1	GEL	/ X/
Trans-1,4-Dichloro-2-butene	5	ug/L	U	5			EPA-624.1	GEL	/ X/
Trichloroethene	1	ug/L	U	1			EPA-624.1	GEL	/ X/
Trichlorofluoromethane	0.58	ug/L	J	1			EPA-624.1	GEL	S / X/
Vinyl acetate	5	ug/L	U	5			EPA-624.1	GEL	/ X/
Vinyl chloride	1	ug/L	U	1			EPA-624.1	GEL	/ X/

**WETCHEM**

**Paducah OREIS Report for ULS19-01**

Carbonaceous Biochemical Oxygen Demand (CBOD)	2	mg/L	UX	2	SM-5210 B	GEL	/ X /
Chemical Oxygen Demand (COD)	55.4	mg/L		20	EPA-410.4	GEL	/ X /
Cyanide	0.005	mg/L	U	0.005	SW846-9012B	GEL	/ X /
Dissolved Solids	811	mg/L	*	14.3	EPA-160.1	GEL	/ X /
Hardness - Total as CaCO3	570	mg/L		2	EPA-130.2	GEL	/ X /
Iodide	0.5	mg/L	U	0.5	EPA-300.0	GEL	/ X /
Suspended Solids	67.2	mg/L		10	EPA-160.2	GEL	/ X /
Total Organic Carbon (TOC)	6.9	mg/L		2	SW846-9060A	GEL	/ X /
Total Organic Halides (TOX)	40.2	ug/L		10	SW846-9020B	GEL	/ X /

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## Paducah OREIS Report for ULS19-01

**FBULS19-01**

from: QC

on 2/19/2019

Media: WQ

SmpMethod:

Comments:

Analysis	Results	Units	Result Qual	Foot Note	Reporting Limit	Counting Error	TPU	Method	LabCode	V/V/A*
<b>ANION</b>										
Bromide	0.2	mg/L	U		0.2			SW846-9056	GEL	/X/
Chloride	0.2	mg/L	UW		0.2			SW846-9056	GEL	/X/
Fluoride	0.1	mg/L	U		0.1			SW846-9056	GEL	/X/
Nitrate as Nitrogen	0.1	mg/L	U		0.1			SW846-9056	GEL	/X/
Sulfate	12.7	mg/L			0.4			SW846-9056	GEL	/X/
<b>METAL</b>										
Aluminum	0.05	mg/L	UN		0.05			SW846-6020	GEL	/X/
Antimony	0.003	mg/L	U		0.003			SW846-6020	GEL	/X/
Arsenic	0.005	mg/L	U		0.005			SW846-6020	GEL	/X/
Barium	0.002	mg/L	U		0.002			SW846-6020	GEL	/X/
Beryllium	0.0005	mg/L	U		0.0005			SW846-6020	GEL	/X/
Boron	0.015	mg/L	U		0.015			SW846-6020	GEL	/X/
Cadmium	0.001	mg/L	U		0.001			SW846-6020	GEL	/X/
Calcium	0.2	mg/L	U		0.2			SW846-6020	GEL	/X/
Chromium	0.01	mg/L	U		0.01			SW846-6020	GEL	/X/
Cobalt	0.001	mg/L	U		0.001			SW846-6020	GEL	/X/
Copper	0.001	mg/L	U		0.001			SW846-6020	GEL	/X/
Iron	0.1	mg/L	U		0.1			SW846-6020	GEL	/X/
Lead	0.002	mg/L	U		0.002			SW846-6020	GEL	/X/
Magnesium	0.03	mg/L	U		0.03			SW846-6020	GEL	/X/
Manganese	0.005	mg/L	U		0.005			SW846-6020	GEL	/X/
Mercury	0.0002	mg/L	U		0.0002			SW846-7470A	GEL	/X/
Molybdenum	0.0005	mg/L	U		0.0005			SW846-6020	GEL	/X/
Nickel	0.002	mg/L	U		0.002			SW846-6020	GEL	/X/
Phosphorous	0.05	mg/L	U		0.05			EPA-365.4	GEL	/X/
Potassium	0.3	mg/L	U		0.3			SW846-6020	GEL	/X/
Rhodium	0.005	mg/L	U		0.005			SW846-6020	GEL	/X/
Selenium	0.005	mg/L	U		0.005			SW846-6020	GEL	/X/
Silver	0.001	mg/L	U		0.001			SW846-6020	GEL	/X/
Sodium	0.25	mg/L	U		0.25			SW846-6020	GEL	/X/
Tantalum	0.005	mg/L	UN		0.005			SW846-6020	GEL	/X/
Thallium	0.002	mg/L	U		0.002			SW846-6020	GEL	/X/
Tin	0.005	mg/L	U		0.005			SW846-6020	GEL	/X/
Titanium	0.01	mg/L	U		0.01			SW846-6020	GEL	/X/
Uranium	0.0002	mg/L	U		0.0002			SW846-6020	GEL	/X/
Vanadium	0.01	mg/L	U		0.01			SW846-6020	GEL	/X/
Zinc	0.01	mg/L	U		0.01			SW846-6020	GEL	/X/
<b>OTHOR</b>										
Oil and Grease	4.24	mg/L	U		4.24			EPA-1664A	GEL	/X/
<b>PPCB</b>										
PCB-1016	0.098	ug/L	U		0.098			SW846-8082	GEL	/X/
PCB-1221	0.098	ug/L	U		0.098			SW846-8082	GEL	/X/
PCB-1232	0.098	ug/L	U		0.098			SW846-8082	GEL	/X/
PCB-1242	0.098	ug/L	U		0.098			SW846-8082	GEL	/X/
PCB-1248	0.098	ug/L	U		0.098			SW846-8082	GEL	/X/
PCB-1254	0.098	ug/L	U		0.098			SW846-8082	GEL	/X/
PCB-1260	0.098	ug/L	U		0.098			SW846-8082	GEL	/X/
PCB-1268	0.098	ug/L	U		0.098			SW846-8082	GEL	/X/
Polychlorinated biphenyl	0.098	ug/L	U		0.098			SW846-8082	GEL	/X/

**Paducah OREIS Report for ULS19-01**

**RADS**

Alpha activity	-0.468	pCi/L	U	1.97	0.928	0.928	SW846-9310	GEL	/ X /
Americium-241	0.242	pCi/L	U	1.99	1.01	1.01	HASL 300, Am-05-RC M	GEL	/ X /
Beta activity	-0.0773	pCi/L	U	4.42	2.55	2.55	SW846-9310	GEL	/ X /
Cesium-137	0.363	pCi/L	U	1.48	0.851	0.867	EPA-901.1	GEL	/ X /
Cobalt-60	-0.289	pCi/L	U	1.43	0.831	0.841	EPA-901.1	GEL	/ X /
Neptunium-237	0.187	pCi/L	U	1.49	0.821	0.821	ASTM-1475-00aM	GEL	/ X /
Plutonium-239/240	-0.13	pCi/L	U	1.1	0.392	0.393	HASL 300, Pu-11-RC M	GEL	/ X /
Radium-226	0.182	pCi/L	U	0.708	0.404	0.404	AN-1418	GEL	/ X /
Radium-228	0.438	pCi/L	U	3.2	1.7	1.7	EPA-904-M	GEL	/ X /
Strontium-90	0.157	pCi/L	U	6.24	3.41	3.41	EPA-905.0-M	GEL	/ X /
Technetium-99	4.27	pCi/L	U	19.8	11.6	11.6	HASL 300, Tc-02-RC M	GEL	/ X /
Thorium-230	0.19	pCi/L	U	1.16	0.619	0.622	HASL 300, Th-01-RC M	GEL	/ X /
Thorium-232	0.259	pCi/L	U	0.764	0.53	0.531	HASL 300, Th-01-RC M	GEL	/ X /
Thorium-234	-22.2	pCi/L	U	37.2	30.2	32.2	EPA-901.1	GEL	/ X /
Tritium	-0.289	pCi/L	U	248	143	143	EPA-906.0-M	GEL	/ X /
Uranium	2.35	pCi/L	U	3.87	2.37	2.38	HASL 300, U-02-RC M	GEL	/ X /
Uranium-234	0.624	pCi/L	U	2.6	1.44	1.44	HASL 300, U-02-RC M	GEL	/ X /
Uranium-235	1.28	pCi/L	U	1.57	1.38	1.4	HASL 300, U-02-RC M	GEL	/ X /
Uranium-238	0.441	pCi/L	U	2.39	1.28	1.28	HASL 300, U-02-RC M	GEL	/ X /

**VOA**

1,1,1,2-Tetrachloroethane	1	ug/L	U	1			EPA-624.1	GEL	/ X /
1,1,1-Trichloroethane	1	ug/L	U	1			EPA-624.1	GEL	/ X /
1,1,2,2-Tetrachloroethane	1	ug/L	U	1			EPA-624.1	GEL	/ X /
1,1,2-Trichloroethane	1	ug/L	U	1			EPA-624.1	GEL	/ X /
1,1-Dichloroethane	1	ug/L	U	1			EPA-624.1	GEL	/ X /
1,1-Dichloroethene	1	ug/L	U	1			EPA-624.1	GEL	/ X /
1,2,3-Trichloropropane	1	ug/L	U	1			EPA-624.1	GEL	/ X /
1,2-Dibromo-3-chloropropane	0.0202	ug/L	U	0.0202			SW846-8011	GEL	/ X /
1,2-Dibromoethane	1	ug/L	U	1			EPA-624.1	GEL	/ X /
1,2-Dichlorobenzene	1	ug/L	U	1			EPA-624.1	GEL	/ X /
1,2-Dichloroethane	1	ug/L	U	1			EPA-624.1	GEL	/ X /
1,2-Dichloropropane	1	ug/L	U	1			EPA-624.1	GEL	/ X /
1,2-Dimethylbenzene	1	ug/L	U	1			EPA-624.1	GEL	/ X /
1,4-Dichlorobenzene	1	ug/L	U	1			EPA-624.1	GEL	/ X /
2-Butanone	3.1	ug/L	J	5			EPA-624.1	GEL	/ X /
2-Hexanone	5	ug/L	U	5			EPA-624.1	GEL	/ X /
4-Methyl-2-pentanone	5	ug/L	U	5			EPA-624.1	GEL	/ X /
Acetone	11.9	ug/L		5			EPA-624.1	GEL	/ X /
Acrolein	5	ug/L	U	5			EPA-624.1	GEL	/ X /
Acrylonitrile	5	ug/L	U	5			EPA-624.1	GEL	/ X /
Benzene	1	ug/L	U	1			EPA-624.1	GEL	/ X /
Bromochloromethane	1	ug/L	U	1			EPA-624.1	GEL	/ X /
Bromodichloromethane	1	ug/L	U	1			EPA-624.1	GEL	/ X /
Bromoform	1	ug/L	U	1			EPA-624.1	GEL	/ X /
Bromomethane	1	ug/L	U	1			EPA-624.1	GEL	/ X /
Carbon disulfide	5	ug/L	U	5			EPA-624.1	GEL	/ X /
Carbon tetrachloride	1	ug/L	U	1			EPA-624.1	GEL	/ X /
Chlorobenzene	1.21	ug/L		1			EPA-624.1	GEL	/ X /
Chloroethane	1	ug/L	U	1			EPA-624.1	GEL	/ X /
Chloroform	1	ug/L	U	1			EPA-624.1	GEL	/ X /
Chloromethane	1	ug/L	U	1			EPA-624.1	GEL	/ X /
cis-1,2-Dichloroethene	1	ug/L	U	1			EPA-624.1	GEL	/ X /
cis-1,3-Dichloropropene	1	ug/L	U	1			EPA-624.1	GEL	/ X /
Dibromochloromethane	1	ug/L	U	1			EPA-624.1	GEL	/ X /
Dibromomethane	1	ug/L	U	1			EPA-624.1	GEL	/ X /

### Paducah OREIS Report for ULS19-01

Ethylbenzene	1	ug/L	U	1	EPA-624.1	GEL	/X/
Iodomethane	5	ug/L	U	5	EPA-624.1	GEL	/X/
m,p-Xylene	2	ug/L	U	2	EPA-624.1	GEL	/X/
Methylene chloride	2	ug/L	U	2	EPA-624.1	GEL	/X/
Styrene	1	ug/L	U	1	EPA-624.1	GEL	/X/
Tetrachloroethene	1	ug/L	U	1	EPA-624.1	GEL	/X/
Toluene	1	ug/L	U	1	EPA-624.1	GEL	/X/
Total Xylene	3	ug/L	U	3	EPA-624.1	GEL	/X/
trans-1,2-Dichloroethene	1	ug/L	U	1	EPA-624.1	GEL	/X/
trans-1,3-Dichloropropene	1	ug/L	U	1	EPA-624.1	GEL	/X/
Trans-1,4-Dichloro-2-butene	5	ug/L	U	5	EPA-624.1	GEL	/X/
Trichloroethene	1	ug/L	U	1	EPA-624.1	GEL	/X/
Trichlorofluoromethane	1	ug/L	U	1	EPA-624.1	GEL	/X/
Vinyl acetate	5	ug/L	U	5	EPA-624.1	GEL	/X/
Vinyl chloride	1	ug/L	U	1	EPA-624.1	GEL	/X/
<b>WETCHEM</b>							
Chemical Oxygen Demand (COD)	45.7	mg/L		20	EPA-410.4	GEL	/X/
Hardness - Total as CaCO3	25.6	mg/L		2	EPA-130.2	GEL	/X/
Iodide	0.5	mg/L	U	0.5	EPA-300.0	GEL	/X/
Total Organic Carbon (TOC)	0.392	mg/L	J	2	SW846-9060A	GEL	/X/

**Paducah OREIS Report for ULS19-01**

**TBULS19-01**

from: QC

on 2/19/2019

Media: WQ

SmpMethod:

Comments:

Analysis	Results	Units	Result Qual	Foot Note	Reporting Limit	Counting Error	TPU	Method	LabCode	V/V/A*
<b>VOA</b>										
1,1,1,2-Tetrachloroethane	1	ug/L	U		1			EPA-624.1	GEL	/X/
1,1,1-Trichloroethane	1	ug/L	U		1			EPA-624.1	GEL	/X/
1,1,2,2-Tetrachloroethane	1	ug/L	U		1			EPA-624.1	GEL	/X/
1,1,2-Trichloroethane	1	ug/L	U		1			EPA-624.1	GEL	/X/
1,1-Dichloroethane	1	ug/L	U		1			EPA-624.1	GEL	/X/
1,1-Dichloroethene	1	ug/L	U		1			EPA-624.1	GEL	/X/
1,2,3-Trichloropropane	1	ug/L	U		1			EPA-624.1	GEL	/X/
1,2-Dibromo-3-chloropropane	0.02	ug/L	U		0.02			SW846-8011	GEL	/X/
1,2-Dibromoethane	1	ug/L	U		1			EPA-624.1	GEL	/X/
1,2-Dichlorobenzene	1	ug/L	U		1			EPA-624.1	GEL	/X/
1,2-Dichloroethane	1	ug/L	U		1			EPA-624.1	GEL	/X/
1,2-Dichloropropane	1	ug/L	U		1			EPA-624.1	GEL	/X/
1,2-Dimethylbenzene	1	ug/L	U		1			EPA-624.1	GEL	/X/
1,4-Dichlorobenzene	1	ug/L	U		1			EPA-624.1	GEL	/X/
2-Butanone	5	ug/L	U		5			EPA-624.1	GEL	/X/
2-Hexanone	5	ug/L	U		5			EPA-624.1	GEL	/X/
4-Methyl-2-pentanone	5	ug/L	U		5			EPA-624.1	GEL	/X/
Acetone	6.04	ug/L			5			EPA-624.1	GEL	/X/
Acrolein	5	ug/L	U		5			EPA-624.1	GEL	/X/
Acrylonitrile	5	ug/L	U		5			EPA-624.1	GEL	/X/
Benzene	1	ug/L	U		1			EPA-624.1	GEL	/X/
Bromochloromethane	1	ug/L	U		1			EPA-624.1	GEL	/X/
Bromodichloromethane	1	ug/L	U		1			EPA-624.1	GEL	/X/
Bromoform	1	ug/L	U		1			EPA-624.1	GEL	/X/
Bromomethane	1	ug/L	U		1			EPA-624.1	GEL	/X/
Carbon disulfide	5	ug/L	U		5			EPA-624.1	GEL	/X/
Carbon tetrachloride	1	ug/L	U		1			EPA-624.1	GEL	/X/
Chlorobenzene	1.49	ug/L			1			EPA-624.1	GEL	/X/
Chloroethane	1	ug/L	U		1			EPA-624.1	GEL	/X/
Chloroform	1	ug/L	U		1			EPA-624.1	GEL	/X/
Chloromethane	1	ug/L	U		1			EPA-624.1	GEL	/X/
cis-1,2-Dichloroethene	1	ug/L	U		1			EPA-624.1	GEL	/X/
cis-1,3-Dichloropropene	1	ug/L	U		1			EPA-624.1	GEL	/X/
Dibromochloromethane	1	ug/L	U		1			EPA-624.1	GEL	/X/
Dibromomethane	1	ug/L	U		1			EPA-624.1	GEL	/X/
Ethylbenzene	1	ug/L	U		1			EPA-624.1	GEL	/X/
Iodomethane	5	ug/L	U		5			EPA-624.1	GEL	/X/
m,p-Xylene	2	ug/L	U		2			EPA-624.1	GEL	/X/
Methylene chloride	2	ug/L	U		2			EPA-624.1	GEL	/X/
Styrene	1	ug/L	U		1			EPA-624.1	GEL	/X/
Tetrachloroethene	1	ug/L	U		1			EPA-624.1	GEL	/X/
Toluene	1	ug/L	U		1			EPA-624.1	GEL	/X/
Total Xylene	3	ug/L	U		3			EPA-624.1	GEL	/X/
trans-1,2-Dichloroethene	1	ug/L	U		1			EPA-624.1	GEL	/X/
trans-1,3-Dichloropropene	1	ug/L	U		1			EPA-624.1	GEL	/X/
Trans-1,4-Dichloro-2-butene	5	ug/L	U		5			EPA-624.1	GEL	/X/
Trichloroethene	1	ug/L	U		1			EPA-624.1	GEL	/X/
Trichlorofluoromethane	1	ug/L	U		1			EPA-624.1	GEL	/X/
Vinyl acetate	5	ug/L	U		5			EPA-624.1	GEL	/X/
Vinyl chloride	1	ug/L	U		1			EPA-624.1	GEL	/X/



## Department of Energy

Portsmouth/Paducah Project Office  
1017 Majestic Drive, Suite 200  
Lexington, Kentucky 40513  
(859) 219-4000

**APR 15 2019**

**RECEIVED**  
By Carolee.Thompson at 5:20 am, Apr 16, 2019

Ms. Jamie Nielsen, Supervisor  
Permit Administration Section  
Division of Waste Management, Solid Waste Branch  
Kentucky Department for Environmental Protection  
300 Sower Boulevard, 2nd Floor  
Frankfort, Kentucky 40601

PPPO-02-5521116-19B

Dear Ms. Nielsen:

**C-746-U SOLID WASTE LANDFILL FIRST QUARTER CALENDAR YEAR 2019  
WASTE QUANTITY REPORT, PERMIT NO. SW07300014, SW07300015, SW07300045,  
AGENCY INTEREST NO. 3059**

Enclosed is the subject report for the first quarter calendar year 2019. This report is required in accordance with Permit Condition ACTV0006, Special Condition Number 12, of Solid Waste Landfill Permit No. SW07300014, SW07300015, SW07300045, issued July 11, 2018.

If you have any questions or require additional information, please contact David Dollins at (270) 441-6819.

Sincerely,

A handwritten signature in cursive script that reads "Jennifer Woodard".

Jennifer Woodard  
Paducah Site Lead  
Portsmouth/Paducah Project Office

Enclosure:

C-746-U Solid Waste Landfill First Quarter Calendar Year 2019 Waste Quantity Report



e-copy w/enclosure:

april.ladd@pppo.gov, PPPO  
april.webb@ky.gov, KDEP  
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Department for Environmental Protection / Division of Waste Management / Solid Waste Branch  
 Quarterly Waste Quantity Report - DEP 7046-Q (Revised 2-05)

Page 1 of 1

**WASTE ACTIVITY: CONTAINED LANDFILL**

Facility Name: U.S. Department of Energy- Paducah Gaseous Diffusion Plant Permit Number: SW07300014, SW07300015, SW07300045

County where landfill is located: McCracken Agency Interest Number: 3059

Report for the Months of: January, February, March For the Year of: 2019


Waste Source (County and State)	Type of Waste			**Waste Used as Alternate Daily Cover As Approved (Tons Only)
	*Municipal Solid Waste (Tons Only)	*Industrial Waste (Tons Only)	*Special Waste (Tons Only)	
Paducah Gaseous Diffusion Plant, McCracken County, Kentucky (January)	0.00	0.00	0.00	0.00
Paducah Gaseous Diffusion Plant, McCracken County, Kentucky (February)	0.00	119.76	0.00	0.00
Paducah Gaseous Diffusion Plant, McCracken County, Kentucky (March)	0.00	246.97	0.00	0.00
<b>Total for this page</b>	0.00	366.73	0.00	0.00
<b>Grand Total of all pages</b>	0.00	366.73	0.00	0.00

**\*Grand Total of Municipal, Industrial, and Special from all pages** 366.73

\*Does not include waste used as Alternate Daily Cover.

\*\*Indicate the amount of waste used as Alternate Daily Cover. Please note this requires prior approval by the Cabinet.

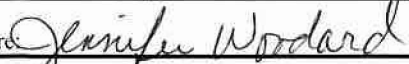
I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons directly responsible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

Signature: 

Phone Number: (270) 441-5113

Name - Please Print: Myrna E. Redfield

Date: 4/15/19

Signature: 

Phone Number: (270) 441-6820

Name - Please Print: Jennifer Woodard

Date: 4/15/19

This Certification clause shall be signed by the responsible person(s) described in 401 KAR 47:160, Section 6(1), and/or (2) and is required by 401 KAR 47:160, Section 6(4).