Department of Energy

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

SEP 16 2015

Ms. Julie Corkran
Federal Facility Agreement Manager
U.S. Environmental Protection Agency, Region 4
61 Forsyth Street
Atlanta, Georgia 30303

PPPO-02-3024331-15B

Ms. April Webb
Acting Interim Federal Facility Agreement Manager
Division of Waste Management
Kentucky Department for Environmental Protection
200 Fair Oaks Lane, 2nd Floor
Frankfort, Kentucky 40601

Dear Ms. Corkran and Ms. Webb:

TRANSMITTAL OF THE ADDENDUM TO THE SOILS OPERABLE UNIT REMEDIAL INVESTIGATION REPORT FOR SOLID WASTE MANAGEMENT UNIT 27 AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY, DOE/LX/07-0358&D2/R1/A1

Please find enclosed the certified *Addendum to the Soils Operable Unit Remedial Investigation Report for Solid Waste Management Unit 27 at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky,* DOE/LX/07-0358&D2/R1/A1. This Addendum incorporates the results from recently collected samples of the contents of the C-722 Neutralization Tank (Solid Waste Management Unit 27).

Although historic documentation indicates all the material was removed from the tank in 1992, observations made during the recent sampling event indicated approximately 2 to 4 inches of sludge and liquid were present in the bottom of the unit. It is recommended that the FFA Project Managers discuss the appropriate path forward for this unit in the context of the upcoming update to the Site Management Plan for fiscal year 2016.

If you have any questions or require additional information, please contact David Dollins at (270) 441-6804.

Sincerely,

Jennifer Woodard

Jennifer Woodard
Paducah Site Lead
Portsmouth/Paducah Project Office

Enclosures:
1. Certification Page
2. Soils Operable Unit Remedial Investigation Report Addendum for SWMU 27

e-copy w/enclosures:
april.webb@ky.gov, KDEP/Frankfort
brian.begley@ky.gov, KDEP/Frankfort
corkran.julie@epamail.epa.gov, EPA/Atlanta
craig.jones@ffspaducah.com.com, LSRS/Kevil
dave.dollins@lex.doe.gov, PPPO/PAD
dennis.greene@lex.doe.gov, P2S/PAD
gaye.brewer@ky.gov, KDEP/PAD
jennifer.woodard@lex.doe.gov, PPPO/PAD
john.kelly@ffspaducah.com.com, FFS/Kevil
ffscorrespondence@ffspaducah.com, FFS/Kevil
leo.williamson@ky.gov, KDEP/Frankfort
mark.duff@ffspaducah.com, FFS/Kevil
mike.guffey@ky.gov, KDEP/Frankfort
myrna.redfield@ffspaducah.com.com, FFS/Kevil
nathan.garner@ky.gov, KYRHB/Frankfort
reinhard.knerr@lex.doe.gov, PPPO/PAD
richards.jon@epamail.epa.gov, EPA/Atlanta
stephaniec.brock@ky.gov, KYRHB/Frankfort

CERTIFICATION

Document Identification: ***Addendum to the Soils Operable Unit Remedial Investigation Report for Solid Waste Management Unit 27 at the Paducah Gaseous Diffusion Plant Paducah, Kentucky*, DOE/LX/07-0358&D2/R1/A1**

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 ensure 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 knowing violations.

Fluor Federal Services, Inc.

Mark Duff, Director of Environmental Management

9-16-15
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 ensure 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 knowing violations.

U.S. Department of Energy

Jennifer Woodard, Site Lead
Portsmouth/Paducah Project Office

9/16/15
Date Signed

DOE/LX/07-0358&D2/R1/A1
Primary Document

Addendum to the Soils Operable Unit Remedial Investigation Report for Solid Waste Management Unit 27 at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky

CLEARED FOR PUBLIC RELEASE

DOE/LX/07-0358&D2/R1/A1
Primary Document

Addendum to the Soils Operable Unit Remedial Investigation Report for Solid Waste Management Unit 27 at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky

Date Issued—September 2015

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

Prepared by
FLUOR FEDERAL SERVICES, INC.
Paducah Deactivation Project
managing the
Deactivation Project at the
Paducah Gaseous Diffusion Plant
under Task Order DE-DT-0007774

THIS PAGE INTENTIONALLY LEFT BLANK

CONTENTS

FIGURE v

TABLE v

ACRONYMS vii

EXECUTIVE SUMMARY ix

1. SWMU 27, C-722 ACID NEUTRALIZATION TANK 1

2. REMEDIAL INVESTIGATION REPORT CONCLUSIONS 3

3. SUBSEQUENT INVESTIGATION 5
   3.1 EXAMINATION OF SWMU 27 5
   3.2 INVESTIGATION FINDINGS 5

4. REFERENCES 19

APPENDIX: TANK INTERIOR EXAMINATION VIDEO (CD) A-1

THIS PAGE INTENTIONALLY LEFT BLANK

FIGURE

1.1. SWMU 27, C-722 Acid Neutralization Tank, Northeast Corner of C-720 1

TABLE

1.1. SWMU 27 Analytical Data of Tank Contents 6

THIS PAGE INTENTIONALLY LEFT BLANK

ACRONYMS

COPC	chemical of potential concern
ELCR	excess lifetime cancer risk
FS	feasibility study
HI	hazard index
NFA	no further action
OU	operable unit
PCB	polychlorinated biphenyl
RI	remedial investigation
SVOC	semivolatile organic compound
SWMU	solid waste management unit
VOC	volatile organic compound
WAG	waste area grouping

THIS PAGE INTENTIONALLY LEFT BLANK

EXECUTIVE SUMMARY

Solid Waste Management Unit (SWMU) 27 was investigated further as part of a subsequent investigation under the Soils Operable Unit (OU), as described in the *Addendum to the Work Plan for the Soils Operable Unit Remedial Investigation/Feasibility Study at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, Remedial Investigation 2, Sampling and Analysis Plan,* DOE/LX/07-0120&D2/R2/A1. The scope for the subsequent investigation of SWMU 27 included an observation of the tank to determine if the tank contained any material (e.g, concrete, sludge, liquid); an examination of the interior using a recording device (e.g., camera, scope); and collection and analysis of any material contained within the tank. This addendum to the Soils OU Remedial Investigation Report (DOE 2013) presents the findings from the investigation.

The tank was observed to contain liquid and sludge. An examination of the interior was performed and recorded using a video device. Both media were sampled and analyzed for metals, radionuclides, polychlorinated biphenyls (PCBs), volatile organic compounds (VOCs), and semivolatile organic compounds (SVOCs). Metals, radionuclides, and VOCs were detected at low concentrations in the liquid sample. Metals, radionuclides, PCBs, VOCs, and SVOCs were detected in the sludge sample.

THIS PAGE INTENTIONALLY LEFT BLANK

1. SWMU 27, C-722 ACID NEUTRALIZATION TANK

Solid Waste Management Unit (SWMU) 27, the C-722 Acid Neutralization Tank, was investigated further, as described in the *Addendum to the Work Plan for the Soils Operable Unit Remedial Investigation/Feasibility Study at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, Remedial Investigation 2, Sampling and Analysis Plan* (DOE/LX/07-0120&D2/R2/A1). The 2013 Soils Operable Unit (OU) Remedial Investigation (RI) Report (DOE 2013) states, "Examination of the interior of the tank is necessary to support an NFA decision for SWMU 27. Future disposition of SWMU 27 will be based upon findings of the examination. The future disposition may include the following: alternative development in the feasibility study (FS), further sampling as part of the subsequent RI, or an NFA." The surface of SWMU 27 is presented in Figure 1.1.

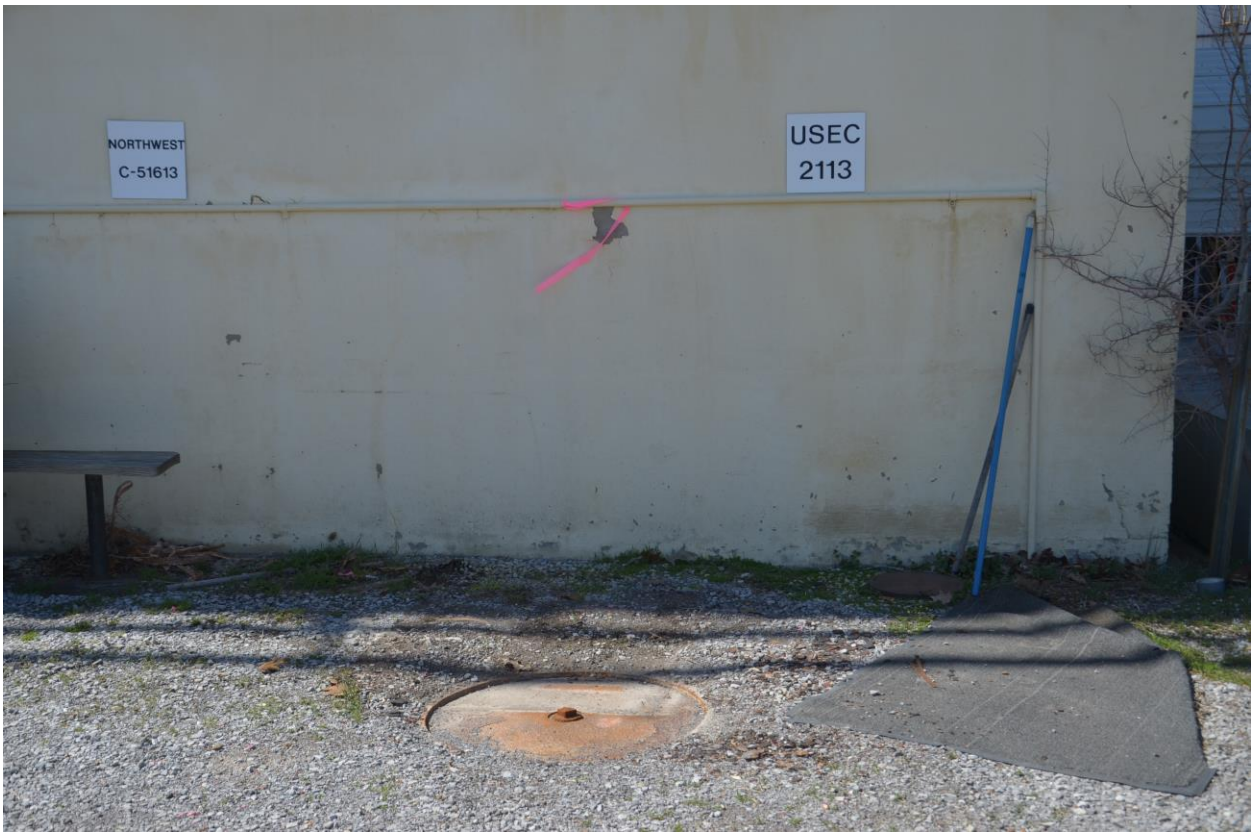

Figure 1.1. SWMU 27, C-722 Acid Neutralization Tank, Northeast Corner of C-720

BACKGROUND

This SWMU previously was reported in the Soils OU RI Report (DOE 2013). The background information is reprinted here for reference.

> The C-722 Acid Neutralization Tank (SWMU 27) is an underground concrete tank lined with an acid-resistant membrane and acid brick. SWMU 27 is located at the northeast corner of the C-720 Building in the central portion of the plant site. The tank pad is approximately 180 ft^2. There is no direct connection between this SWMU and surface water.

The C-722 Acid Neutralization Tank was designed as a holdup tank for instrument shop effluent from the 1950s. All lines from the instrument shop were capped. All sludge and water were removed after the lines were capped. Discharge to the tank was stopped in 1992.

A sludge sample from 1989 indicated a high level of mercury (DOE 1999). In 1992, sludge in the tank was removed and the sample collected indicated that the sludge contained trichloroethene (TCE), 1,1,1-trichloroethane (TCA), polychlorinated biphenyls (PCBs), total uranium, and technetium-99 (DOE 1999). The area soils were sampled further as part of the site evaluation for Waste Area Groupings (WAGs) 9 and 11 (DOE 1999), and it was determined that contamination present at SWMU 27 does not present potential risks and hazards that exceed *de minimis* levels to industrial workers, potential residential groundwater users, or nonhuman receptors. Direct contact potential risks and hazards are *de minimis* because contaminated media are not available for direct contact at SWMU 27. Potential risks and hazards from use of groundwater contaminated by migration from soil are *de minimis* because the concentrations of all contaminants in soil were below the groundwater protection screening criteria. A no further action (NFA) was proposed.

2. REMEDIAL INVESTIGATION REPORT CONCLUSIONS

Under the Soils OU, it was determined that the site evaluation for WAGs 9 and 11 adequately defined the nature and extent of contamination of the area soils and additional sampling was not needed. The Soils OU RI Report evaluated nature and extent, fate and transport, baseline human health risk assessment, and screening-level ecological risk assessment for SWMU 27 (DOE 2013).

The following text summarizes the results for SWMU 27 using the goals for the project identified during the data quality objectives process for RI scoping (DOE 2013).

Goal 1. Characterize Nature of Source Zone

Plant processes that could have contributed to contamination at this site are releases from the tank during neutralization activities.

Chemicals of potential concern (COPCs) for subsurface soils from SWMU 27 are shown on Table 7.1.2 of the Soils OU RI Report as those analytes with green boxes under the "Industrial Worker/FOE" columns for surface and shallow subsurface soil and those with blue boxes under the "GW Protection Screen/RGA/UCRS" columns for groundwater. The COPCs for this SWMU are metals and radionuclides in the subsurface soil.

Contaminants were detected greater than background to a maximum depth of 14 ft below ground surface. A complete list of sampling results is provided in Appendix G of the Soils OU RI Report (DOE 2013).

Goal 2. Determine Surface and Subsurface Transport Mechanisms and Pathways

The contaminants at SWMU 27 are adsorbed readily to soil particles, so they do not migrate without a direct connection to surface water. SWMU 27 is an underground tank, and there are no known underground pipelines remaining at SWMU 27. The conceptual site model can be found in Appendix D of the Soils OU RI Report (DOE 2013).

Goal 3. Complete a Baseline Risk Assessment for the Soils OU

Neither cumulative excess lifetime cancer risks (ELCRs) nor hazard indexes (HIs) exceeded their benchmarks of 1E-06 and 1, respectively, for the evaluated scenarios.

For SWMU 27, there are no contaminants of potential ecological concern exceeding ecological screening values.

Goal 4. Support Evaluation of Remedial Alternatives

The representative data set used for SWMU 27 is sufficient to support decision making and indicates that this SWMU should be considered for a "No Further Action" decision. Possible remedial technologies applicable for this unit, as discussed in the *Work Plan for the Soils Operable Unit Remedial Investigation/Feasibility Study at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky,* DOE/LX/07-0120&D2/R2, are posting, fencing (or other means of limiting access), *in situ* treatment, and excavation. SWMU 27 is adjacent to the north of the C-720 Maintenance and Stores Building and SWMU 31, the C-720 Compressor Pit Water Storage Tank, which is part of the Soils OU. A response action at

SWMU 27 could have a logistical impact on the C-720 operations, but would not affect other integrator OUs.

SWMU 27 CONCLUSIONS

Previous sampling evaluated by this RI adequately defined the nature and extent of contamination in soils at SWMU 27. Data are available to develop ELCRs only for exposure scenarios that encompass subsurface soil, the future outdoor worker (surface and subsurface soil), and the excavation worker, which were less than 1E-06 and the HI < 1. The reasonably anticipated land use for SWMU 27, now and in the future, is industrial, as shown in the Site Management Plan (DOE 2012a). Because the only completed exposure pathway for this SWMU has an ELCR/HI lesser than the U.S. Environmental Protection Agency's accepted values, this SWMU should be considered for a "No Further Action"; however, to finalize this determination, an examination of the interior of the tank is required.

3. SUBSEQUENT INVESTIGATION

SWMU 27 was investigated further as part of a subsequent investigation under an addendum to the Soils OU Work Plan (DOE 2014).

3.1 EXAMINATION OF SWMU 27

The Work Plan Addendum defined the scope for the subsequent investigation of SWMU 27 (DOE 2014). The underground tank would be breached and an initial observation would be conducted to determine if the tank contains any material (i.e., concrete, sludge, liquid, etc.). If the tank was filled with soil or concrete, the tank would be resealed and the unit would be recommended for an NFA decision. If the tank was not filled, an examination of the interior would be conducted using a recording device (e.g., camera, scope). If the tank was determined to contain sludge or liquid, a sample of the material would be collected and analyzed for metals, radionuclides, polychlorinated biphenyls (PCBs), volatile organic compounds (VOCs), and semivolatile organic compounds (SVOCs). The examination and analytical results would be documented in an addendum to the Soils OU RI Report (DOE 2013).

3.2 INVESTIGATION FINDINGS

The underground tank was opened and an initial observation was conducted to determine if the tank contained any material (i.e., concrete, sludge, liquid, etc.). The tank had not been filled with concrete or any other similar material. The tank is approximately 5-ft deep. The tank contained approximately 3.5 ft of water and sludge. An examination of the interior was conducted (see Appendix). No apparent structural issues were observed.

Although the Work Plan Addendum specified collection of a sludge or liquid sample, both were found in the tank; therefore, a liquid sample and a sludge sample were collected. The samples were analyzed for metals, radionuclides, PCBs, VOCs, and SVOCs. The analytical data is presented in Table 1.1. Metals, radionuclides, and VOCs were detected at low concentrations in the liquid sample. Metals, radionuclides, PCBs, VOCs, and SVOCs were detected in the sludge sample. The sludge sample contained 7,200 mg/kg of mercury; 12,000 mg/kg of TCE; 44,000 mg/kg of 1,1,1-TCA; 1,300 mg/kg of PCBs (Aroclor-1254); 692 pCi/g of uranium-238; and 3,980 pCi/g of technetium-99.

Table 1.1. SWMU 27 Analytical Data of Tank Contents

Sample ID	Method	Analysis	Result	Units	Qualifier	Detection Limit	Dilution Factor	Station	Date Collected	LabCode
LIQUID SAMPLE										
C722TANK-LIQ	1110	Corrosivity	7.42	Std Units		1	1	027-TANK	2/5/2015	MCL
C722TANK-LIQ	6020A	Aluminum	0.043	mg/L	B	0.03	2	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	6020A	Antimony	0.0017	mg/L	J	0.005	2	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	6020A	Arsenic	0.01	mg/L	U	0.01	2	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	6020A	Barium	0.036	mg/L		0.002	2	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	6020A	Beryllium	0.0005	mg/L	U	0.0005	2	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	6020A	Cadmium	0.00026	mg/L	J	0.0005	2	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	6020A	Calcium	180	mg/L		0.1	2	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	6020A	Chromium	0.0022	mg/L	J	0.01	2	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	6020A	Cobalt	0.00034	mg/L	J	0.002	2	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	6020A	Copper	0.0057	mg/L		0.001	2	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	6020A	Iron	0.5	mg/L		0.05	2	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	6020A	Lead	0.0007	mg/L	J	0.003	2	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	6020A	Magnesium	16	mg/L		0.05	2	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	6020A	Manganese	0.041	mg/L	B	0.002	2	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	6020A	Molybdenum	0.0017	mg/L	J	0.005	2	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	6020A	Nickel	0.018	mg/L		0.005	2	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	6020A	Selenium	0.0032	mg/L	J,B	0.005	2	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	6020A	Silver	0.002	mg/L	U	0.002	2	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	6020A	Sodium	54	mg/L	B	0.05	2	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	6020A	Thallium	0.002	mg/L	U	0.002	2	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	6020A	Uranium	0.03	mg/L		0.001	2	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	6020A	Vanadium	0.01	mg/L	U	0.01	2	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	6020A	Zinc	0.021	mg/L		0.01	2	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	7470A	Mercury	0.000078	mg/L	J	0.0002	1	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8082A	Aroclor-1016	0.95	µg/L	U	0.95	1	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8082A	Aroclor-1221	0.95	µg/L	U	0.95	1	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8082A	Aroclor-1232	0.95	µg/L	U	0.95	1	027-TANK	2/5/2015	TALMO

Table 1.1. SWMU 27 Analytical Data of Tank Contents (Continued)

Sample ID	Method	Analysis	Result	Units	Qualifier	Detection Limit	Dilution Factor	Station	Date Collected	LabCode
C722TANK-LIQ	8082A	Aroclor-1242	0.95	µg/L	U	0.95	1	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8082A	Aroclor-1248	0.95	µg/L	U	0.95	1	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8082A	Aroclor-1254	0.95	µg/L	U	0.95	1	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8082A	Aroclor-1260	0.95	µg/L	U	0.95	1	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8082A	PCB, Total	0.95	µg/L	U	0.95	1	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8260C	1,1,1,2-Tetrachloroethane	25	µg/L	U	25	25	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8260C	1,1,1-Trichloroethane	4700	µg/L		250	250	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8260C	1,1,2,2-Tetrachloroethane	25	µg/L	U	25	25	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8260C	1,1,2-Trichloroethane	17	µg/L	J	25	25	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8260C	1,1-Dichloroethane	890	µg/L		25	25	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8260C	1,1-Dichloroethene	220	µg/L		25	25	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8260C	1,2,3-Trichloropropane	25	µg/L	U	25	25	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8260C	1,2-Dichloroethane	12	µg/L	J	25	25	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8260C	1,2-Dichloropropane	25	µg/L	U	25	25	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8260C	2-Butanone	130	µg/L	U	130	25	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8260C	2-Chloroethyl vinyl ether	50	µg/L	U	50	25	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8260C	2-Hexanone	130	µg/L	U	130	25	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8260C	4-Methyl-2-pentanone	130	µg/L	U	130	25	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8260C	Acetone	50	µg/L	U	50	25	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8260C	Acrolein	250	µg/L	U	250	25	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8260C	Acrylonitrile	250	µg/L	U	250	25	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8260C	Benzene	25	µg/L	U	25	25	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8260C	Bromodichloromethane	25	µg/L	U	25	25	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8260C	Bromoform	25	µg/L	U	25	25	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8260C	Bromomethane	50	µg/L	U	50	25	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8260C	Carbon disulfide	25	µg/L	U	25	25	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8260C	Carbon tetrachloride	25	µg/L	U	25	25	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8260C	Chlorobenzene	25	µg/L	U	25	25	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8260C	Chloroethane	76	µg/L		50	25	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8260C	Chloroform	3.5	µg/L	J	25	25	027-TANK	2/5/2015	TALMO

Table 1.1. SWMU 27 Analytical Data of Tank Contents (Continued)

Sample ID	Method	Analysis	Result	Units	Qualifier	Detection Limit	Dilution Factor	Station	Date Collected	LabCode
C722TANK-LIQ	8260C	Chloromethane	50	µg/L	U	50	25	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8260C	*cis*-1,2-Dichloroethene	2,500	µg/L		100	100	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8260C	*cis*-1,3-Dichloropropene	25	µg/L	U	25	25	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8260C	Dibromochloromethane	25	µg/L	U	25	25	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8260C	Dibromomethane	25	µg/L	U	25	25	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8260C	Dichlorodifluoromethane	50	µg/L	U	50	25	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8260C	Ethyl benzene	25	µg/L	U	25	25	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8260C	Ethyl methacrylate	25	µg/L	U	25	25	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8260C	Iodomethane	50	µg/L	U	50	25	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8260C	m,p-xylene	50	µg/L	U	50	25	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8260C	Methylene Chloride	25	µg/L	U	25	25	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8260C	o-xylene	25	µg/L	U	25	25	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8260C	Styrene	25	µg/L	U	25	25	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8260C	Tetrachloroethene	84	µg/L		25	25	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8260C	Toluene	25	µg/L	U	25	25	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8260C	*trans*-1,2-Dichloroethene	25	µg/L	U	25	25	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8260C	*trans*-1,3-Dichloropropene	25	µg/L	U	25	25	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8260C	*trans*-1,4-Dichloro-2-butene	50	µg/L	U	50	25	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8260C	Trichloroethene	830	µg/L		25	25	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8260C	Trichlorofluoromethane	25	µg/L	U	25	25	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8260C	Vinyl acetate	50	µg/L	U	50	25	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8260C	Vinyl chloride	50	µg/L	U	50	25	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8270D	1,2,4-Trichlorobenzene	13	µg/L	U	13	1	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8270D	1,2-Dichlorobenzene	13	µg/L	U	13	1	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8270D	1,3-Dichlorobenzene	13	µg/L	U	13	1	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8270D	1,4-Dichlorobenzene	13	µg/L	U	13	1	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8270D	2,4,5-Trichlorophenol	13	µg/L	U	13	1	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8270D	2,4,6-Trichlorophenol	13	µg/L	U	13	1	027-TANK	2/5/2015	TALMO

Table 1.1. SWMU 27 Analytical Data of Tank Contents (Continued)

Sample ID	Method	Analysis	Result	Units	Qualifier	Detection Limit	Dilution Factor	Station	Date Collected	LabCode
C722TANK-LIQ	8270D	2,4-Dichlorophenol	13	µg/L	U	13	1	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8270D	2,4-Dimethylphenol	13	µg/L	U	13	1	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8270D	2,4-Dinitrophenol	63	µg/L	U	63	1	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8270D	2,4-Dinitrotoluene	13	µg/L	U	13	1	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8270D	2,6-Dinitrotoluene	13	µg/L	U	13	1	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8270D	2-Chloronaphthalene	13	µg/L	U	13	1	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8270D	2-Chlorophenol	13	µg/L	U	13	1	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8270D	2-Methyl-4,6-dinitrophenol	13	µg/L	U	13	1	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8270D	2-Methylnaphthalene	13	µg/L	U	13	1	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8270D	2-Nitroaniline	13	µg/L	U	13	1	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8270D	2-Nitrophenol	13	µg/L	U	13	1	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8270D	3,3'-Dichlorobenzidine	63	µg/L	U	63	1	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8270D	3-Nitroaniline	13	µg/L	U	13	1	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8270D	4-Bromophenyl phenyl ether	13	µg/L	U	13	1	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8270D	4-Chloro-3-methylphenol	13	µg/L	U	13	1	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8270D	4-Chloroaniline	13	µg/L	U,X	13	1	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8270D	4-Chlorophenylphenyl ether	13	µg/L	U	13	1	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8270D	4-Nitroaniline	13	µg/L	U	13	1	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8270D	4-Nitrophenol	13	µg/L	U	13	1	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8270D	Acenaphthene	13	µg/L	U	13	1	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8270D	Acenaphthylene	13	µg/L	U	13	1	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8270D	Anthracene	13	µg/L	U	13	1	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8270D	Benz(a)anthracene	13	µg/L	U	13	1	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8270D	Benzo(a)pyrene	13	µg/L	U	13	1	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8270D	Benzo(b)fluoranthene	13	µg/L	U	13	1	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8270D	Benzo(ghi)perylene	13	µg/L	U	13	1	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8270D	Benzo(k)fluoranthene	13	µg/L	U	13	1	027-TANK	2/5/2015	TALMO

Table 1.1. SWMU 27 Analytical Data of Tank Contents (Continued)

Sample ID	Method	Analysis	Result	Units	Qualifier	Detection Limit	Dilution Factor	Station	Date Collected	LabCode
C722TANK-LIQ	8270D	Benzoic acid	63	µg/L	U	63	1	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8270D	Benzyl alcohol	13	µg/L	U	13	1	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8270D	Bis(2-chloroethoxy)methane	13	µg/L	U	13	1	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8270D	Bis(2-chloroethyl) ether	13	µg/L	U	13	1	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8270D	Bis(2-chloroisopropyl) ether	13	µg/L	U	13	1	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8270D	Bis(2-ethylhexyl)phthalate	13	µg/L	U	13	1	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8270D	Butyl benzyl phthalate	13	µg/L	U	13	1	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8270D	Chrysene	13	µg/L	U	13	1	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8270D	Dibenz(a,h)anthracene	13	µg/L	U	13	1	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8270D	Dibenzofuran	13	µg/L	U	13	1	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8270D	Diethylphthalate	13	µg/L	U	13	1	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8270D	Dimethylphthalate	13	µg/L	U	13	1	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8270D	Di-n-butylphthalate	13	µg/L	U	13	1	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8270D	Di-n-octylphthalate	13	µg/L	U	13	1	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8270D	Fluoranthene	13	µg/L	U	13	1	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8270D	Fluorene	13	µg/L	U	13	1	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8270D	Hexachlorobenzene	13	µg/L	U	13	1	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8270D	Hexachlorobutadiene	13	µg/L	U	13	1	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8270D	Hexachlorocyclopentadiene	13	µg/L	U	13	1	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8270D	Hexachloroethane	13	µg/L	U	13	1	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8270D	Indeno(1,2,3-cd)pyrene	13	µg/L	U	13	1	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8270D	Isophorone	13	µg/L	U	13	1	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8270D	m,p-cresol	25	µg/L	U	25	1	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8270D	Naphthalene	13	µg/L	U	13	1	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8270D	Nitrobenzene	13	µg/L	U	13	1	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8270D	N-Nitroso-di-n-propylamine	13	µg/L	U	13	1	027-TANK	2/5/2015	TALMO

Table 1.1. SWMU 27 Analytical Data of Tank Contents (Continued)

Sample ID	Method	Analysis	Result	Units	Qualifier	Detection Limit	Dilution Factor	Station	Date Collected	LabCode
C722TANK-LIQ	8270D	N-Nitrosodiphenylamine	13	µg/L	U	13	1	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8270D	o-cresol	13	µg/L	U	13	1	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8270D	Pentachlorophenol	13	µg/L	U	13	1	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8270D	Phenanthrene	13	µg/L	U	13	1	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8270D	Phenol	13	µg/L	U	13	1	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8270D	Pyrene	13	µg/L	U	13	1	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	8270D	Pyridine	25	µg/L	U	25	1	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	900.0	Gross Alpha	8.48	pCi/L		4.28	1	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	900.0	Gross Beta	9.25	pCi/L		1.91	1	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	A-01-R	Americium-241	0.0375	pCi/L	U	0.113	1	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	A-01-R	Neptunium-237	-0.0635	pCi/L	U	0.312	1	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	A-01-R	Plutonium-238	0.0777	pCi/L	U	0.116	1	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	A-01-R	Plutonium-239/240	0.0222	pCi/L	U	0.0829	1	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	A-01-R	Thorium-228	-0.0358	pCi/L	U	0.18	1	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	A-01-R	Thorium-230	0.178	pCi/L		0.108	1	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	A-01-R	Thorium-232	0.0209	pCi/L	U	0.0836	1	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	A-01-R	Uranium-234	6.66	pCi/L		0.0899	1	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	A-01-R	Uranium-235	0.277	pCi/L		0.0693	1	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	A-01-R	Uranium-238	9.75	pCi/L		0.0556	1	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	GA-01-R	Cesium-137	0.371	pCi/L	U	11.3	1	027-TANK	2/5/2015	TALMO
C722TANK-LIQ	TC-02-RC	Technetium-99	8.28	pCi/L		2.11	1	027-TANK	2/5/2015	TALMO
SLUDGE SAMPLE										
C722TANK-SLDG	6020A	Aluminum	1,300	mg/kg		17	2	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	6020A	Antimony	250	mg/kg		1.8	2	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	6020A	Arsenic	2.4	mg/kg	J	3.4	2	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	6020A	Barium	47	mg/kg		6.9	2	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	6020A	Beryllium	0.17	mg/kg	J	0.34	2	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	6020A	Cadmium	10	mg/kg		0.17	2	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	6020A	Calcium	2,200	mg/kg		170	2	027-TANK	2/11/2015	TALMO

Table 1.1. SWMU 27 Analytical Data of Tank Contents (Continued)

Sample ID	Method	Analysis	Result	Units	Qualifier	Detection Limit	Dilution Factor	Station	Date Collected	LabCode
C722TANK-SLDG	6020A	Chromium	530	mg/kg		3.4	2	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	6020A	Cobalt	4.2	mg/kg		0.69	2	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	6020A	Copper	3,100	mg/kg		3.4	2	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	6020A	Iron	4,500	mg/kg		17	2	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	6020A	Lead	1,000	mg/kg		1	2	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	6020A	Magnesium	140	mg/kg	J	170	2	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	6020A	Manganese	25	mg/kg		1.7	2	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	6020A	Molybdenum	30	mg/kg		1.7	2	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	6020A	Nickel	500	mg/kg		1.7	2	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	6020A	Selenium	1.7	mg/kg	U	1.7	2	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	6020A	Silver	160	mg/kg	B	0.69	2	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	6020A	Sodium	200	mg/kg		69	2	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	6020A	Thallium	1.7	mg/kg	U	1.7	2	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	6020A	Uranium	1,700	mg/kg	Y	0.86	5	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	6020A	Vanadium	9.9	mg/kg		3.4	2	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	6020A	Zinc	250	mg/kg		17	2	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	7471B	Mercury	7,200	mg/kg		1100	10000	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8082A	Aroclor-1016	120,000	µg/kg	U	120000	100	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8082A	Aroclor-1221	120,000	µg/kg	U	120000	100	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8082A	Aroclor-1232	120,000	µg/kg	U	120000	100	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8082A	Aroclor-1242	120,000	µg/kg	U	120000	100	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8082A	Aroclor-1248	120,000	µg/kg	U	120000	100	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8082A	Aroclor-1254	1,300,000	µg/kg		120000	100	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8082A	Aroclor-1260	120,000	µg/kg	U	120000	100	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8082A	PCB, Total	1,300,000	µg/kg		120000	100	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8260C	1,1,1,2-Tetrachloroethane	180,000	µg/kg	U	180000	200	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8260C	1,1,1-Trichloroethane	44,000,000	µg/kg		1800000	2000	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8260C	1,1,2,2-Tetrachloroethane	180,000	µg/kg	U	180000	200	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8260C	1,1,2-Trichloroethane	180,000	µg/kg	U	180000	200	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8260C	1,1-Dichloroethane	260,000	µg/kg		180000	200	027-TANK	2/11/2015	TALMO

Table 1.1. SWMU 27 Analytical Data of Tank Contents (Continued)

Sample ID	Method	Analysis	Result	Units	Qualifier	Detection Limit	Dilution Factor	Station	Date Collected	LabCode
C722TANK-SLDG	8260C	1,1-Dichloroethene	1,300,000	µg/kg		180000	200	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8260C	1,2,3-Trichloropropane	180,000	µg/kg	U	180000	200	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8260C	1,2-Dichloroethane	180,000	µg/kg	U	180000	200	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8260C	1,2-Dichloropropane	180,000	µg/kg	U	180000	200	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8260C	2-Butanone	360,000	µg/kg	U	360000	200	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8260C	2-Chloroethyl vinyl ether	730,000	µg/kg	U	730000	200	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8260C	2-Hexanone	730,000	µg/kg	U	730000	200	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8260C	4-Methyl-2-pentanone	730,000	µg/kg	U	730000	200	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8260C	Acetone	730,000	µg/kg	U	730000	200	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8260C	Acrolein	1,800,000	µg/kg	U	1800000	200	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8260C	Acrylonitrile	1,800,000	µg/kg	U	1800000	200	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8260C	Benzene	180,000	µg/kg	U	180000	200	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8260C	Bromodichloromethane	180,000	µg/kg	U	180000	200	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8260C	Bromoform	180,000	µg/kg	U	180000	200	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8260C	Bromomethane	360,000	µg/kg	U	360000	200	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8260C	Carbon disulfide	180,000	µg/kg	U	180000	200	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8260C	Carbon tetrachloride	180,000	µg/kg	U	180000	200	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8260C	Chlorobenzene	180,000	µg/kg	U	180000	200	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8260C	Chloroethane	360,000	µg/kg	U	360000	200	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8260C	Chloroform	180,000	µg/kg	U	180000	200	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8260C	Chloromethane	360,000	µg/kg	U	360000	200	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8260C	*cis*-1,2-Dichloroethene	290,000	µg/kg		180000	200	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8260C	*cis*-1,3-Dichloropropene	360,000	µg/kg	U	360000	200	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8260C	Dibromochloromethane	180,000	µg/kg	U	180000	200	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8260C	Dibromomethane	180,000	µg/kg	U	180000	200	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8260C	Dichlorodifluoromethane	360,000	µg/kg	U	360000	200	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8260C	Ethyl benzene	14,000	µg/kg	J	180000	200	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8260C	Ethyl methacrylate	180,000	µg/kg	U	180000	200	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8260C	Iodomethane	140,000	µg/kg	J	180000	200	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8260C	m,p-Xylene	45,000	µg/kg	J	360000	200	027-TANK	2/11/2015	TALMO

Table 1.1. SWMU 27 Analytical Data of Tank Contents (Continued)

Sample ID	Method	Analysis	Result	Units	Qualifier	Detection Limit	Dilution Factor	Station	Date Collected	LabCode
C722TANK-SLDG	8260C	Methylene chloride	180,000	µg/kg	U	180000	200	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8260C	o-Xylene	180,000	µg/kg	U	180000	200	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8260C	Styrene	180,000	µg/kg	U	180000	200	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8260C	Tetrachloroethene	5,600,000	µg/kg		180000	200	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8260C	Toluene	310,000	µg/kg		180000	200	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8260C	*trans*-1,2-Dichloroethene	180,000	µg/kg	U	180000	200	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8260C	*trans*-1,3-Dichloropropene	180,000	µg/kg	U	180000	200	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8260C	*trans*-1,4-Dichloro-2-butene	360,000	µg/kg	U	360000	200	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8260C	Trichloroethene	12,000,000	µg/kg		1800000	2000	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8260C	Trichlorofluoromethane	180,000	µg/kg	U	180000	200	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8260C	Vinyl acetate	180,000	µg/kg	U,X	180000	200	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8260C	Vinyl chloride	180,000	µg/kg	U	180000	200	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8270D	1,2,4-Trichlorobenzene	11,000	µg/kg	J	12000	1	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8270D	1,2-Dichlorobenzene	12,000	µg/kg	U	12000	1	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8270D	1,3-Dichlorobenzene	12,000	µg/kg	U	12000	1	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8270D	1,4-Dichlorobenzene	11,000	µg/kg	J	12000	1	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8270D	2,4,5-Trichlorophenol	12,000	µg/kg	U	12000	1	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8270D	2,4,6-Trichlorophenol	12,000	µg/kg	U	12000	1	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8270D	2,4-Dichlorophenol	12,000	µg/kg	U	12000	1	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8270D	2,4-Dimethylphenol	12,000	µg/kg	U	12000	1	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8270D	2,4-Dinitrophenol	57,000	µg/kg	U,Y	57000	1	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8270D	2,4-Dinitrotoluene	12,000	µg/kg	U	12000	1	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8270D	2,6-Dinitrotoluene	12,000	µg/kg	U	12000	1	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8270D	2-Chloronaphthalene	12,000	µg/kg	U	12000	1	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8270D	2-Chlorophenol	12,000	µg/kg	U	12000	1	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8270D	2-Methyl-4,6-dinitrophenol	57,000	µg/kg	U,Y	57000	1	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8270D	2-Methylnaphthalene	7,000	µg/kg	J	12000	1	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8270D	2-Nitroaniline	12,000	µg/kg	U	12000	1	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8270D	2-Nitrophenol	12,000	µg/kg	U	12000	1	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8270D	3,3'-Dichlorobenzidine	57,000	µg/kg	U	57000	1	027-TANK	2/11/2015	TALMO

Table 1.1. SWMU 27 Analytical Data of Tank Contents (Continued)

Sample ID	Method	Analysis	Result	Units	Qualifier	Detection Limit	Dilution Factor	Station	Date Collected	LabCode
C722TANK-SLDG	8270D	3-Nitroaniline	12,000	µg/kg	U	12000	1	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8270D	4-Bromophenyl phenyl ether	12,000	µg/kg	U	12000	1	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8270D	4-Chloro-3-methylphenol	12,000	µg/kg	U	12000	1	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8270D	4-Chloroaniline	12,000	µg/kg	U	12000	1	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8270D	4-Chlorophenylphenyl ether	12,000	µg/kg	U	12000	1	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8270D	4-Nitroaniline	57,000	µg/kg	U	57000	1	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8270D	4-Nitrophenol	57,000	µg/kg	U	57000	1	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8270D	Acenaphthene	12,000	µg/kg	U	12000	1	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8270D	Acenaphthylene	12,000	µg/kg	U	12000	1	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8270D	Anthracene	12,000	µg/kg	U	12000	1	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8270D	Benz(a)anthracene	12,000	µg/kg	U,Y	12000	1	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8270D	Benzo(a)pyrene	12,000	µg/kg	U	12000	1	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8270D	Benzo(b)fluoranthene	12,000	µg/kg	U	12000	1	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8270D	Benzo(ghi)perylene	12,000	µg/kg	U,Y	12000	1	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8270D	Benzo(k)fluoranthene	12,000	µg/kg	U,X	12000	1	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8270D	Benzoic acid	57,000	µg/kg	U	57000	1	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8270D	Benzyl alcohol	12,000	µg/kg	U	12000	1	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8270D	Bis(2-chloroethoxy)methane	12,000	µg/kg	U	12000	1	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8270D	Bis(2-chloroethyl) ether	12,000	µg/kg	U	12000	1	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8270D	bis(2-chloroisopropyl) ether	12,000	µg/kg	U	12000	1	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8270D	Bis(2-ethylhexyl)phthalate	180,000	µg/kg	Y	12000	1	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8270D	Butyl benzyl phthalate	4,000	µg/kg	J	12000	1	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8270D	Chrysene	12,000	µg/kg	U	12000	1	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8270D	Dibenz(a,h)anthracene	12,000	µg/kg	U,Y	12000	1	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8270D	Dibenzofuran	12,000	µg/kg	U	12000	1	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8270D	Diethylphthalate	12,000	µg/kg	U	12000	1	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8270D	Dimethylphthalate	12,000	µg/kg	U	12000	1	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8270D	Di-n-butylphthalate	89,000	µg/kg	Y	12000	1	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8270D	Di-n-octylphthalate	12,000	µg/kg	U	12000	1	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8270D	Fluoranthene	3,600	µg/kg	J	12000	1	027-TANK	2/11/2015	TALMO

Table 1.1. SWMU 27 Analytical Data of Tank Contents (Continued)

Sample ID	Method	Analysis	Result	Units	Qualifier	Detection Limit	Dilution Factor	Station	Date Collected	LabCode
C722TANK-SLDG	8270D	Fluorene	12,000	µg/kg	U	12000	1	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8270D	Hexachlorobenzene	12,000	µg/kg	U	12000	1	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8270D	Hexachlorobutadiene	12,000	µg/kg	U	12000	1	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8270D	Hexachlorocyclopentadiene	57,000	µg/kg	U	57000	1	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8270D	Hexachloroethane	12,000	µg/kg	U	12000	1	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8270D	Indeno(1,2,3-cd)pyrene	12,000	µg/kg	U,Y	12000	1	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8270D	Isophorone	12,000	µg/kg	U	12000	1	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8270D	m,p-cresol	24,000	µg/kg	U	24000	1	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8270D	Naphthalene	14,000	µg/kg		12000	1	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8270D	Nitrobenzene	12,000	µg/kg	U	12000	1	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8270D	N-Nitroso-di-n-propylamine	12,000	µg/kg	U	12000	1	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8270D	N-Nitrosodiphenylamine	12,000	µg/kg	U	12000	1	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8270D	o-Cresol	12,000	µg/kg	U	12000	1	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8270D	Pentachlorophenol	24,000	µg/kg	U,X	24000	1	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8270D	Phenanthrene	5,000	µg/kg	J	12000	1	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8270D	Phenol	12,000	µg/kg	U	12000	1	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8270D	Pyrene	2,500	µg/kg	J	12000	1	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	8270D	Pyridine	24,000	µg/kg	U	24000	1	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	9310	Alpha activity	1,770	pCi/g		5.71	1	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	9310	Beta activity	6,900	pCi/g		10.7	1	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	A-01-R	Americium-241	0.465	pCi/g		0.0884	1	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	A-01-R	Neptunium-237	1.92	pCi/g		0.0504	1	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	A-01-R	Plutonium-238	0.051	pCi/g		0.0381	1	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	A-01-R	Plutonium-239/240	5.59	pCi/g		0.0329	1	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	A-01-R	Thorium-228	0.496	pCi/g		0.0826	1	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	A-01-R	Thorium-230	4.41	pCi/g		0.0481	1	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	A-01-R	Thorium-232	0.32	pCi/g		0.0478	1	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	A-01-R	Uranium-234	557	pCi/g		1.48	1	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	A-01-R	Uranium-235	37.6	pCi/g		0.997	1	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	A-01-R	Uranium-238	692	pCi/g		0.8	1	027-TANK	2/11/2015	TALMO

Table 1.1. SWMU 27 Analytical Data of Tank Contents (Continued)

Sample ID	Method	Analysis	Result	Units	Qualifier	Detection Limit	Dilution Factor	Station	Date Collected	LabCode
C722TANK-SLDG	GA-01-R	Cesium-137	0.219	pCi/g	U	0.465	1	027-TANK	2/11/2015	TALMO
C722TANK-SLDG	TC-02-RC	Technetium-99	3,980	pCi/g		3.19	1	027-TANK	2/11/2015	TALMO

THIS PAGE INTENTIONALLY LEFT BLANK

4. REFERENCES

DOE (U.S. Department of Energy) 1999. *WAGs 9 & 11 Site Evaluation Report at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/OR/07-1785&D2, U.S. Department of Energy, Paducah, KY, June.

DOE 2012a. *Site Management Plan Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, FY 2012, DOE/LX/07-1301&D2/R1, U.S. Department of Energy, Paducah, KY, April.

DOE 2013. *Soils Operable Unit Remedial Investigation Report at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-0358&D2/R1, U.S. Department of Energy, Paducah, KY, February.

DOE 2014. *Addendum to the Work Plan for the Soils Operable Unit Remedial Investigation/Feasibility Study at the Paducah Gaseous Diffusion Plant Paducah, Kentucky, Remedial Investigation 2, Sampling and Analysis Plan*, DOE/LX/07-0120&D2/R2/A1/R1, U.S. Department of Energy, Paducah, KY, August.

THIS PAGE INTENTIONALLY LEFT BLANK

APPENDIX

TANK INTERIOR EXAMINATION VIDEO (CD)

THIS PAGE INTENTIONALLY LEFT BLANK

APPENDIX

TANK INTERIOR EXAMINATION VIDEO (CD)

THIS PAGE INTENTIONALLY LEFT BLANK