

**Groundwater Protection Plan
for the
Paducah Gaseous Diffusion Plant,
Paducah, Kentucky**



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LATA Kentucky Classification Support

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Date

PAD-PROJ-0018/R2

**Groundwater Protection Plan
for the
Paducah Gaseous Diffusion Plant
Paducah, Kentucky**

Date Issued— May 2015

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

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

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CONTENTS

FIGURES.....	v
TABLE.....	v
ACRONYMS.....	vii
EXECUTIVE SUMMARY	ix
1. GENERAL INFORMATION	1
2. PHYSICAL CHARACTERISTICS	3
2.1 GEOMORPHOLOGY.....	3
2.2 SITE GEOLOGY	3
2.3 SITE HYDROLOGY	8
3. ACTIVITIES THAT HAVE THE POTENTIAL TO POLLUTE GROUNDWATER	11
4. PRACTICES SELECTED TO PROTECT GROUNDWATER FROM POLLUTION.....	17
4.1 GROUNDWATER MONITORING	17
4.1.1 RCRA Subtitle C Monitoring	17
4.1.2 Underground Storage Tank Monitoring	18
4.1.3 RCRA 3004 (u/v) Monitoring	18
4.1.4 RCRA Subtitle D Landfill Groundwater Monitoring.....	18
4.1.5 Monitoring Well Preventive Maintenance.....	20
4.1.6 Evaluation of Floor Drains	20
4.1.7 Evaluation of Loading and Unloading Areas	20
4.2 ENVIRONMENTAL SURVEILLANCE MONITORING.....	20
4.3 KENTUCKY POLLUTANT DISCHARGE ELIMINATION SYSTEM OUTFALLS	20
4.4 SAMPLE COLLECTION	21
4.4.1 Surface Water [401 KAR 5:037 § 2(2)(o)].....	23
4.4.2 Surface and Subsurface Soil [401 KAR 5:037 § 2(2)(m)]	24
4.4.3 Well Sampling [401 KAR 5:037 § 2(2)(m)]	24
4.5 SUBSURFACE PENETRATIONS [401 KAR 5:037 § 2(2)(m)].....	24
4.6 STORAGE OF BULK QUANTITIES OF MATERIALS, RECYCLABLES, AND WASTES [401 KAR 5:037 § 2(2)(A), (G), & (J)].....	25
4.6.1 Fuel Storage Tanks	25
4.6.2 Used Oil.....	25
4.6.3 Intermodals with Cold Traps	25
4.6.4 Storage of UF ₆	25
4.6.5 Storage of Aqueous Hydrogen Fluoride	25
4.6.6 Storage of Posi-Shell® Chemicals	25
4.6.7 Storage of Flocculants	25
4.6.8 Storage of Road Oils and Deicing Materials	26
4.6.9 Storage of Herbicides and Pesticides.....	26
4.7 WASTE MANAGEMENT [401 KAR 5:037 § 2(2)(F)].....	26
4.7.1 Release Prevention and Control	27
4.7.2 Release Control.....	27
4.8 MATERIAL TRANSFERS OFF-SITE [401 KAR 5:037 § 2(2)(P)]	27

4.9	TREATMENT	28
4.9.1	Groundwater [401 KAR 5:037 § 2(2)(n)].....	28
4.9.2	Decontamination, Well Development, and Well Purge Wastewater [401 KAR 5:037 § 2(2)(n)].....	29
4.9.3	C-746-S and C-746-U Landfill Leachate [401 KAR 5:037 § 2(2)(n)].....	30
4.9.4	Miscellaneous Wastewater [401 KAR 5:037 § 2(2)(n)].....	30
4.9.5	Noncontact Cooling Water [401 KAR 5:037 § 2(2)(n)].....	30
4.9.6	C-613 Storm Water Control Basin [401 KAR 5:037 § 2(2)(o)].....	30
4.9.7	Use of Surface Impoundments, Lagoons, Ditches in CERCLA Projects [401 KAR 5:037 § 2(2)(o)].....	30
5.	IMPLEMENTATION SCHEDULE	31
6.	EMPLOYEE TRAINING	33
7.	INSPECTION SCHEDULE.....	35
8.	CERTIFICATION STATEMENT	37
9.	REVIEW LOCATION FOR GROUNDWATER PROTECTION PLAN.....	39
10.	REFERENCES.....	41
APPENDIX A:	U.S. DEPARTMENT OF ENERGY FACILITIES AND AREAS	A-1
APPENDIX B:	SOLID WASTE MANAGEMENT UNIT DESIGNATIONS	B-1
APPENDIX C:	U.S. DEPARTMENT OF ENERGY CONTRACTOR PROCEDURES	C-1

FIGURES

1. Reasonably Anticipated Future Land Use at PGDP	4
2. Current Land Use at PGDP	5
3. Lithostratigraphic Column of the Jackson Purchase Region	6
4. Schematic of Stratigraphic and Structural Relationships near PGDP	7
5. KPDES Outfall Locations at PGDP	22

TABLE

1. Summary Information on USTs	19
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ACRONYMS

AOC	area of concern
amsl	above mean sea level
BWCS	B&W Conversion Services, LLC
CAT	Consolidated Annual Training
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
<i>CFR</i>	<i>Code of Federal Regulations</i>
D&D	decontamination and decommissioning
DOE	U.S. Department of Energy
DOD	U.S. Department of Defense
EMP	Environmental Monitoring Plan
EPA	U.S. Environmental Protection Agency
ERH	electrical resistance heating
ERPP	Environmental Radiological Protection Program
ETS	effluent treatment system
FFA	Federal Facility Agreement
GET	General Employee Training
GPP	Groundwater Protection Plan
HSWA	Hazardous and Solid Waste Amendments
<i>KAR</i>	<i>Kentucky Administrative Regulations</i>
KDEP	Kentucky Department for Environmental Protection
KDWM	Kentucky Division of Waste Management
KPDES	Kentucky Pollutant Discharge Elimination System
LATA Kentucky	LATA Environmental Services of Kentucky, LLC
LCD	Lower Continental Deposits
MW	monitoring well
PGDP	Paducah Gaseous Diffusion Plant
RCRA	Resource Conservation and Recovery Act
RGA	Regional Gravel Aquifer
ROD	Record of Decision
SPCC	Spill Prevention, Control, and Countermeasure Plan
SST	Swift & Staley Team
SWMU	solid waste management unit
TPD	training position description
UCD	Upper Continental Deposits
UCRS	Upper Continental Recharge System
USEC	United States Enrichment Corporation
UST	underground storage tank
VOC	volatile organic compound
WAG	waste area group
WKWMA	West Kentucky Wildlife Management Area

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EXECUTIVE SUMMARY

The U.S. Department of Energy (DOE) prepared and began implementation of a Groundwater Protection Plan (GPP) in August 1995 for the Paducah Gaseous Diffusion Plant (PGDP). Stated in 401 KAR 5:037 § 4(3) is the following requirement regarding the review of the GPP:

Each groundwater protection plan shall be reviewed in its entirety every three (3) years, by the persons responsible for the plan, updated if necessary, and recertified. To the extent possible, the review shall include a reevaluation of the design and operation procedures for the pollution prevention practices previously selected for the plan to ensure that they are effective.

This GPP incorporates revisions resulting from the three-year review required by 401 KAR 5:037 § 4(3). This document addresses the following specific requirements listed in 401 KAR 5:037 § 3(3) and the guidance document relating to 401 KAR 5:037 § 3(3)(a) through (g) (*Preparing a Groundwater Protection Plan*, KDEP 2013): (1) general information regarding the facility and its operation; (2) identification of activities associated with the facility as identified in Section 2(2) of the regulation; (3) identification of all practices chosen for the plan to protect groundwater from pollution; (4) implementation schedules for the protection practices; (5) description of and implementation schedule for employee training necessary to ensure implementation of the plan; (6) schedule of required inspections, as applicable to ensure that all practices established are in place and properly functioning; and (7) certification of the plan by the appropriate PGDP representative and that the person responsible for implementing the plan has reviewed the terms of the plan and will implement its provisions.

This revision includes changes to reflect the return and management of formerly leased facilities from the United States Enrichment Corporation to DOE.

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1. GENERAL INFORMATION

This Groundwater Protection Plan (GPP) has been written in accordance with 401 KAR 5:037 to ensure protection for all current and future uses of groundwater and to prevent additional groundwater pollution at the following facility.

Name and Address of Facility

Paducah Gaseous Diffusion Plant
5501 Hobbs Road
Kevil, Kentucky 42053
McCracken County
latitude 37°6'41.95" and longitude 88°48'46.09"

Person Developing GPP

Project Manager
LATA Environmental Services of Kentucky, LLC
761 Veterans Ave
Kevil, Kentucky 42053
Phone: (270) 441-5000

Person Responsible for Implementing GPP

Manager
Portsmouth/Paducah Project Office
U.S. Department of Energy
1017 Majestic Drive, Suite 200
Lexington, Kentucky 40513
Phone: (859) 219-4010

This plan will be implemented under the direction of the U.S. Department of Energy (DOE) Manager, Portsmouth/Paducah Project Office, and is applicable to the DOE activities at the Paducah Gaseous Diffusion Plant (PGDP). In support of DOE, this plan was developed by LATA Environmental Services of Kentucky, LLC, (LATA Kentucky) and is implemented by DOE and its contractors:

- DOE, 5501 Hobbs Road, Kevil, Kentucky 42053, (270) 441-6800
- LATA Kentucky, 761 Veterans Ave, Kevil, Kentucky 42053, (270) 441-5000
- Fluor Federal Services, Inc., P.O. Box 369, Kevil, Kentucky 42053, (270) 441-5000
- Swift & Staley Inc., P.O. Box 520, West Paducah, Kentucky 42086, (270) 441-5413
- B&W Conversion Services, LLC, 1020 Monarch Street, Suite 300, Lexington, Kentucky 40513, (859) 685-2060

As required by 401 KAR 5:037 Section 4(3), this GPP is to be reviewed every three years. Records associated with GPP implementation [e.g., Resource Conservation & Recovery Act (RCRA) facility inspections, C-404 sump integrity tests, storm water inspections, waste inspections] will be retained for a period of at least six years after their preparation. Reference documents listed herein are available through the Environmental Information Center located at Barkley Centre, 115 Memorial Drive, Paducah,

Kentucky, or the Web site – <http://www.paducaheic.com>. Records of GPP activities are maintained under other programs, as identified in Section 4 of this Plan.

Brief Description of Facility Operation. PGDP, located in western Kentucky, is a former uranium enrichment facility owned by DOE. Since its initial operation in 1952, PGDP's primary function has been the enrichment of the fissionable isotope uranium-235 from natural assay uranium using a gaseous diffusion process with uranium hexafluoride (UF₆). Plant activities have included utility, laboratory, and maintenance support; conversion of uranium dioxide to UF₆ (to feed the diffusion process) and uranium tetrafluoride; metal production from depleted UF₆; and uranium metal processing, metals recovery, and other small operations performed for DOE and the U.S. Department of Defense such as precision machining and protective metal coating application. PGDP also has an enrichment cascade housed in four large process buildings, four sets of cooling towers, phosphate reduction facility, and water treatment plant.

In August 1988, volatile organic compounds (VOCs) and radionuclides were detected in private water wells north of PGDP. PGDP was placed on the National Priorities List in 1994. Since 1998, DOE, U.S. Environmental Protection Agency (EPA), and Kentucky Department for Environment Protection (KDEP) have been operating under the Federal Facility Agreement (FFA), with DOE as the lead agency and EPA and KDEP as support agencies providing oversight. LATA Kentucky is the current remediation contractor working with DOE to remove/mitigate past contamination at PGDP.

In 2004, DOE awarded a contract to convert depleted uranium hexafluoride (DUF₆) to a safer form for long-term storage and disposal. In March 2011, B&W Conversion Services, LLC, (BWCS) assumed operation of the DUF₆ Conversion Facility as the DUF₆ Conversion Project contractor.

In May 2013, United States Enrichment Corporation (USEC) ceased uranium enrichment operations at PGDP and issued a formal two-year notification in August 2013 for the return of PGDP to DOE. DOE and USEC worked together to develop turnover plans that would effect a safe, secure, and successful return of PGDP. DOE awarded a deactivation contract to Fluor Federal Services, Inc., on July 22, 2014, to support deactivation and to accept PGDP for utility operations, surveillance and maintenance, and to prepare PGDP for decontamination and decommissioning (D&D). DOE and its deactivation contractor conducted walkdowns, facility evaluations, necessary environmental permit transfers, and procedure and document development in preparation for the return of PGDP to DOE. Once USEC completed the lease turnover requirements and DOE verified completion of these activities, PGDP was returned to DOE on October 21, 2014.

Appendix A is a generalized list of facilities and areas, which show DOE retained property and formerly leased facilities. Because USEC no longer leases the facilities, all facilities on this map now are under DOE control.

2. PHYSICAL CHARACTERISTICS

The PGDP limited area is heavily industrialized; however, the area surrounding the plant is mostly agricultural and open land, with some forested areas. The West Kentucky Wildlife Management Area (WKWMA) that borders PGDP to the north, west, and south is an important recreational resource. Figures 1 and 2 illustrate the reasonably anticipated future land use and the current mixed industrial and recreational land use of the PGDP area, respectively. The geomorphology, geology, and hydrology of this facility and surrounding areas have undergone extensive study, review, and documentation. In-depth area descriptions may be found in numerous other DOE documents describing the DOE property at the PGDP (site). See Section 4.4 for a short list of DOE document references.

2.1 GEOMORPHOLOGY

Located in the Jackson Purchase Region of western Kentucky, PGDP lies within the northern tip of the Mississippi Embayment portion of the Gulf Coastal Plain Province (Clausen et al. 1992). The DOE property is characterized by mostly flat areas and low, gently sloped hills (< 50 ft of vertical relief). Drainage patterns are naturally dendritic, but have been modified to follow roads within the area surrounded by the PGDP security fence.

2.2 SITE GEOLOGY

The stratigraphic sequence in the region consists of Cretaceous, Tertiary, and Quaternary sediments overlying eroded Mississippian bedrock. Figure 3 shows a columnar section of the geology of the Jackson Purchase Region, and Figure 4 presents a schematic cross section that illustrates regional stratigraphic relationships near PGDP.

Bedrock beneath the PGDP site is comprised of Mississippian-age limestone. In the vicinity of PGDP, the bedrock is directly overlain by interbedded and interlensing sand, silt, and clay of the Upper Cretaceous McNairy Formation. Data indicate that sand may account for 40 to 50 percent of the McNairy Formation at PGDP. The Upper Cretaceous Tuscaloosa Formation, which directly overlies Paleozoic bedrock to the north, has not been encountered during drilling activities conducted at PGDP.

The Paleocene Porters Creek Clay occurs in the southern portions of the site and consists of dark gray to black clay with varying amounts of silt and fine-grained micaceous, commonly glauconitic, sand. The Porters Creek Clay subcrops along a buried terrace slope that extends east-west across the site. Eocene sediments, consisting of interbedded and interlensing sand, silt, and clay, overlie the Porters Creek Clay in the extreme southern portion of the DOE Reservation.

Miocene,¹ Pliocene, and Pleistocene continental deposits unconformably overlie Cretaceous through Eocene strata at the PGDP site. The thicker sequence of Pleistocene continental deposits represents a valley fill that comprehensively comprises a thick, fining upward sequence. The continental deposits extend from the southern end of the plant to the Ohio River and overlay an unconformity that exhibits

¹ Historically, the geologic section used at PGDP reflects the stratigraphy as mapped by Wilds W. Olive in the United States Geological Survey publication "*Geologic Maps of the Jackson Purchase Region, Kentucky*" (USGS 1980). This document was published in 1980 in cooperation with the Kentucky Geologic Society. At PGDP, the Miocene (?) designation indicates the probable age of the Terrace Gravel.

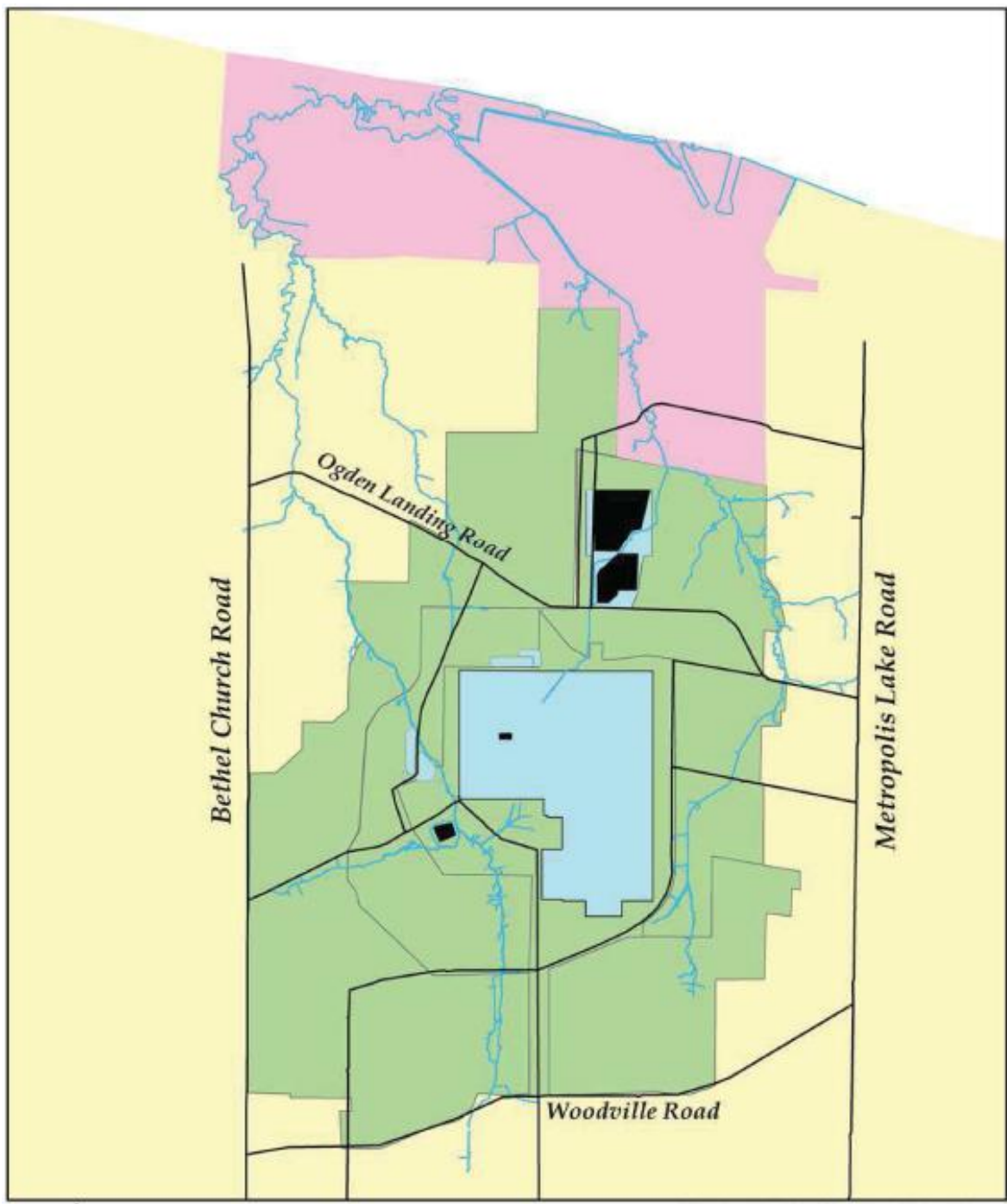
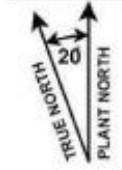


FIGURE No. SMP\LandUse_FutureR7.mxd
DATE 11-02-12



2000 0 2000 4000 Feet

- Industrial
- Recreational
- Rural Residential
- TVA
- Waste Management Area (see note)

Note: These areas include landfills that are active or certified closed and under long-term custodial care (i.e., C-404, C-746 S&T, C-746-U), or that are under an Interim Corrective Measure (i.e., C-746-K). As such, these areas are not amenable to unrestricted future industrial use.

Figure 1. Reasonably Anticipated Future Land Use at PGDP

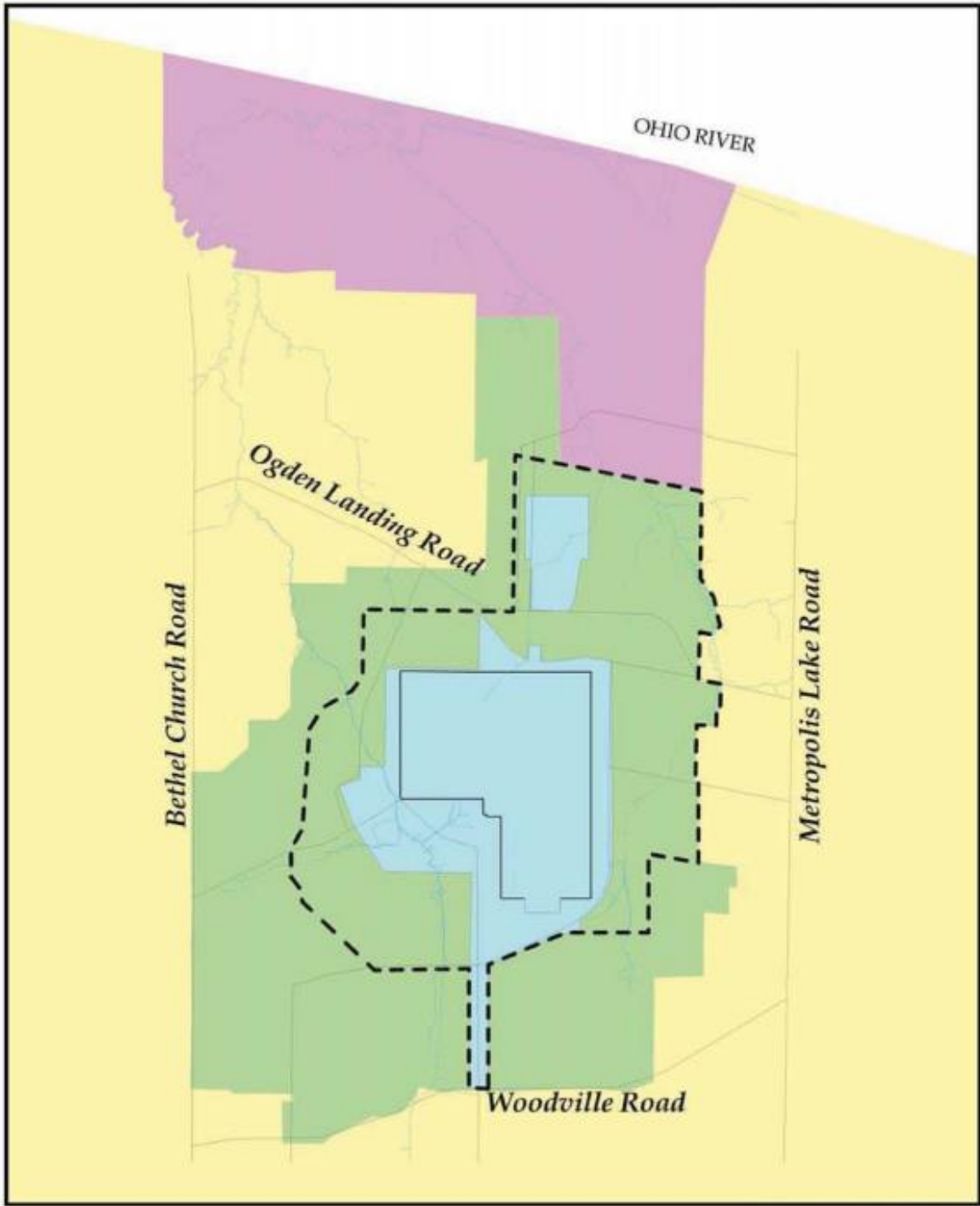


FIGURE No. landuse_r1.apr
DATE 11-07-08



Figure 2. Current Land Use at PGDP

SYSTEM	SERIES	FORMATION	THICKNESS (IN FT)	DESCRIPTION	HYDROGEOLOGIC SYSTEMS
QUATERNARY	PLEISTOCENE AND RECENT	ALLUVIUM	0–40	Brown or gray sand and silty clay or clayey silt with streaks of sand.	Upper Continental Recharge System (UCRS)
	PLEISTOCENE	LOESS	0–43	Brown or yellowish-brown to tan unstratified silty clay	
	PLEISTOCENE	CONTINENTAL DEPOSITS	3–121	Upper Continental Deposits (Clay Facies)—mottled gray and yellowish brown to brown clayey silt and silty clay with some very fine sand. Trace of gravel. Often micaceous	
	PLIOCENE-MIOCENE (?)			Lower Continental Deposits (Gravel Facies)—reddish-brown clayey, silty, sandy chert, gravel, and beds of gray sand.	Regional Gravel Aquifer (RGA)
TERTIARY	EOCENE	JACKSON, CLAIBORNE, AND WILCOX FORMATIONS	0–200+	Red, brown, or white fine-to-coarse grained sand. Beds of white to dark gray clay are distributed at random.	McNairy Flow System
			0–100+	White to gray sandy clay, clay conglomerates and boulders, scattered clay lenses and lenses of coarse red sand. Black to dark gray lignitic clay, silt or fine-grained sand.	
	PALEOCENE	PORTERS CREEK CLAY	0–200	Dark gray, slightly to very micaceous clay. Fine-grained clayey sand, commonly glauconitic in the upper part. Glauconitic sand and clay at the base.	
		CLAYTON FORMATION	Undetermined	Lithologically similar to the underlying McNairy Formation.	
UPPER CRETACEOUS		McNAIRY FORMATION	200–300	Grayish-white to dark gray micaceous clay, often silty, interbedded with light gray to yellowish-brown very fine-to-medium grained sand with lignite and pyrite. The upper part is interbedded clay and sand, and the lower part is sand.	
		TUSCALOOSA FORMATION	Undetermined	White, well rounded, or broken chert gravel with clay.	
MISSISSIPPIAN		MISSISSIPPIAN CARBONATES	500+	Dark gray limestone and interbedded chert with some shale.	

Adapted from Olive 1980.

Figure 3. Lithostratigraphic Column of the Jackson Purchase Region

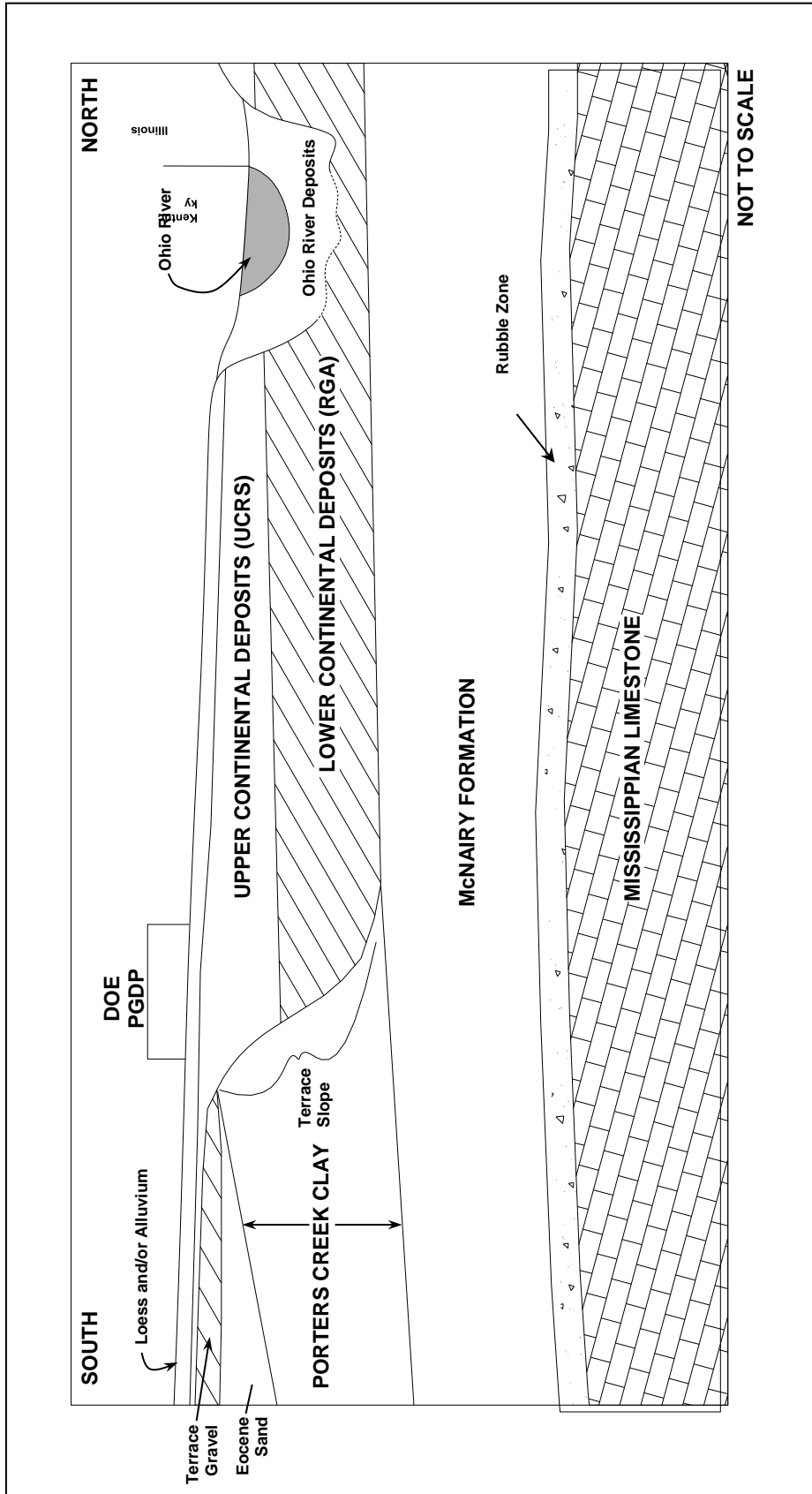


Figure 4. Schematic of Stratigraphic and Structural Relationships near PGDP

steps, or terraces. These continental deposits have been divided into a basal gravel facies [Lower Continental Deposits (LCDs)] and an upper, fine-grained clastic facies [Upper Continental Deposits (UCDs)].

The LCD consists of chert gravel in a matrix of poorly sorted sand and silt. This basal gravel facies has been identified at three horizons at PGDP. A Miocene-to-Pliocene-aged facies, ranging in thickness from 1 to 30 ft and averaging less than 10 ft, exists in the southern portions of the site, occurring on the upper surfaces of a buried terrace at elevations greater than 350 ft above mean sea level (amsl). A second gravel facies, ranging in thickness from 15 to 20 ft, exists in southeastern and eastern portions of the site occurring on an erosional surface at approximately 320 to 345 ft amsl. The third and most prominent of the three gravel facies beneath the site consists of Pleistocene deposits that overlie an erosional surface north of the buried Porters Creek Clay Terrace. Elevations of this facies vary from approximately 245 to 310 ft amsl. Overall the LCD has an average thickness of approximately 30 ft, but thicker deposits, up to 70 ft, exist in deeper scour channels that trend east-west across the site.

The UCD is primarily a fine-grained, clastic facies varying in thickness from 15 to 55 ft and consisting of clayey silt with lenses of sand and occasional gravel. The UCD represents fluvial and lacustrine environments (Finch 1967; Frye et al. 1972). Lacustrine sediments were deposited along the present Ohio and Tennessee River Valleys when the Mississippi River Valley and ancestral Ohio River Valley became choked from draining glaciated areas. These sediments dammed valleys of tributaries, creating slackwater lakes, and resulting in deposition of fine-grained sediments. Depending on stages of glaciation, periods of lacustrine deposition were followed by periods of erosion. As aggradation of the fluvial system continued, stream gradients in the ancestral Tennessee River and tributaries lessened. Lower gradients likely favored a transition from a braided environment to a meandering environment. A very gravelly lower sequence that becomes sandier upward identifies the transition in the Pleistocene continental deposits.

Loess, consisting of yellowish-brown silt and clayey silt, overlies the continental deposits at the site, and varies in thickness from approximately 5 to 25 ft with an average of approximately 15 ft. Holocene alluvial deposits are found at lower elevations within the Ohio River floodplain north of the plant site.

The general soil map for Ballard and McCracken counties indicates three soil associations are found in the vicinity of the PGDP (USDA 1976): the Rosebloom-Wheeling-Dubbs association, the Grenada-Calloway association, and the Calloway-Henry association. The predominant soil association in the vicinity of PGDP is the Calloway-Henry association, which consists of nearly level, somewhat poorly drained to poorly drained, medium-textured soils on upland positions. Many of the characteristics of the original soil have been lost due to industrial activity that has occurred over the past 60 years.

2.3 SITE HYDROLOGY

Local groundwater flow near PGDP occurs in the unconsolidated sediments of the Cretaceous McNairy Formation, Terrace Gravel, and Pleistocene LCD and UCD. Terms describing the hydrogeologic-flow systems that generally correspond to these lithostratigraphic units are the McNairy Flow System, Terrace Gravel, Regional Gravel Aquifer (RGA), and Upper Continental Recharge System (UCRS). The following are brief descriptions of the four components of the groundwater flow system:

- (1) **McNairy Flow System:** Formerly termed “the deep groundwater system,” this component consists of the interbedded and interlensing sand, silt, and clay of the McNairy Formation. Sand facies account for 40 to 50 percent of the total formation thickness of approximately 225 ft.

- (2) **Terrace Gravel:** This component consists of Miocene-to-Pliocene-aged gravel deposits found at elevations higher than 350 ft amsl in the southern portion of the plant site. These deposits usually lack sufficient thickness and saturation to constitute an aquifer and typically are characterized by an unsorted mix of sand to cobble-sized materials.
- (3) **RGA:** This component consists of the Pleistocene sand and gravel facies of the LCD and Holocene alluvium found adjacent to the Ohio River. In addition, the RGA includes contiguous sands of the UCD and the McNairy Formation. The RGA is commonly thicker than the Pliocene gravel deposits, with an average thickness of 30 ft, and ranges up to 70 ft in thickness along an axis that trends east to west through the plant site. The RGA, which extends well beyond the site boundary, is the primary aquifer used locally and serves as the main conduit for groundwater flow to the north where it discharges to the Ohio River. Some of the RGA groundwater discharges in springs/boils in tributaries to the Ohio River.
- (4) **UCRS:** Formerly termed “the shallow groundwater system,” this component consists of the UCD, excluding sand adjacent to the LCD. The sand and gravel lithofacies are relatively discontinuous. The most prevalent sand and gravel deposits occur at an elevation of approximately 345 to 351 ft amsl, with less prevalent deposits occurring at an elevation of 337 to 341 ft amsl. Groundwater flows downward into the RGA from the UCRS in the vicinity of PGDP.

The local groundwater flow system at PGDP is bound by topographically controlled recharge and discharge areas to the south and north, respectively. Recharge within the Pliocene Terrace Gravel and Eocene sands has resulted in a groundwater divide located southwest of PGDP. Locally, groundwater within the Terrace Gravel and Eocene sands either discharges to streams or flows northward into the RGA, which eventually discharges to the Ohio River, the regional base level for the system. The main recharge for the RGA is throughflow from the UCRS.

Toward the southern part of PGDP, the RGA either is truncated or thins and grades laterally into the Terrace Gravel; high hydraulic potential causes groundwater to discharge into adjoining streams. In the north-central portion of the plant site, the lower gradients are a result of the thicker LCD. The hydraulic gradient increases closer to the Ohio River as a result of a thinner section of the RGA or the low permeability of bottom sediments in the Ohio River. The primary pathway of groundwater flow at PGDP is within the RGA, which dominates the flow regime.

The discontinuous nature of sands and gravels in the UCRS and the large vertical gradient within the UCRS require groundwater flow in the UCRS to be oriented predominantly downward into the RGA. Some horizontal flow in the UCRS likely occurs; however, it is insignificant near the PGDP site due to the lateral discontinuity of shallow sand and gravel lenses. Groundwater flow in the RGA is to the north and discharges into the Ohio River and into Little Bayou Creek in the vicinity of the Tennessee Valley Authority plant. Hydraulic conductivities of the RGA range from 100 to 1,000 ft per day. Existing regional maps and borehole logs indicate the RGA is thin or absent beneath the Ohio River, suggesting that flow under the Ohio River is unlikely.

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3. ACTIVITIES THAT HAVE THE POTENTIAL TO POLLUTE GROUNDWATER

Activities for which groundwater protection plans shall be prepared and implemented are listed in 401 KAR 5:037 § 2(2). The following activities are performed by DOE and its contractors/subcontractors at PGDP:

- (a) Store or handle bulk quantities of pesticides or fertilizers. This primarily is performed by Swift & Staley Team (SST) as the infrastructure contractor. Examples include the following:
 - Storage of concentrated herbicides is in a secure, weatherproof “clamshell” structure north of C-755-A. Only personnel with current state certifications for herbicide application are allowed to access the chemicals, mix, and apply the chemicals.
 - Fertilizers are used in aiding in sowing down landfill vegetation. Fertilizers are stored in a Poly-Overpack[®], which is stored inside wooden storage facility.
- (d) Apply fertilizers or pesticides for public right-of-way maintenance or institutional lawn care. This primarily is performed by SST as the infrastructure contractor. This activity is performed around each facility listed in Appendix A.
- (f) Store, treat, dispose, or handle hazardous waste, solid waste, or special waste in landfills, incinerators, surface impoundments, tanks, drums or other containers, or in piles. This primarily is performed by the remediation contractor and deactivation contractor.
 - C-733, C-746-Q, and C-752-A are permitted hazardous waste storage and treatment units in accordance with the permit issued by Kentucky Division of Waste Management (KDWM).
 - C-746-U receives and disposes of solid wastes in accordance with a contained landfill permit issued by KDWM. The C-746-U Landfill also has several large storage tanks to facilitate the collection and treatment of leachate generated at the landfill.
 - C-600 generates fly ash that is managed in accordance with operational procedures for off-site transfer and disposal.
 - Various projects/facilities are used for the temporary staging/storage of hazardous/solid waste per applicable regulations. These areas would include Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) waste staging area managed in accordance with an approved work plan.
- (g) Store or handle bulk quantities of raw materials, intermediate substances or products, finished products, substances held for recycling, or other pollutants held in tanks, drums or other containers, or in piles. This is performed by each contractor in differing amounts and purposes. Examples include the following:
 - A 1,000-gal stationary tank used to store diesel fuel for heavy equipment and a 500-gal stationary tank that stores gasoline for vehicles are located at the C-746-U Landfill.

- One 420,000-gal tank used to store fuel oil for operation of the C-600 Steam Plant is located in a secondary containment area near C-600.
 - Bulk coal is staged outside, near C-600 for use in the operation of the C-600 Steam Plant.
 - Two stationary 4,000-gal aboveground tanks used to store gasoline and diesel fuel for vehicles are located at C-752-B.
 - A 150-gal tank containing used oil at C-755-Y.
 - Twenty intermodal containers in C-746-Q holding uranium compounds for potential reuse/recycle.
 - Six 10,000-gal aboveground, polymer-lined carbon steel bulk storage tanks outside the DUF₆ Conversion Building (tanks C-0-HFS-550 to 555) for the storage of aqueous hydrogen fluoride (HF).
 - DUF₆ is stored in the site's cylinder storage yards east of the DUF₆ Conversion Plant in approximately 36,000 steel cylinders.
 - UF₆ is stored in facilities and cylinders located in the site's cylinder storage yards and processing facilities (e.g., C-310, C-315, C-331, C-333, C-335, C-337, and C-360).
 - Posi-Shell® is an alternative daily cover material that is stored in metal Sealand containers at the C-746-U Landfill.
 - Flocculants are used for the treatment of suspended solids in the sedimentation pond and are stored in a metal Sealand container at the C-746-U Landfill.
- (h) Transmit in pipelines raw materials, intermediate substances or products, finished products, or other pollutants. This is performed by each contractor in different amounts and for different purposes. Examples include the following:
- UF₆ piping between process buildings
 - C-400 nitric acid piping
 - C-600 No. 2 fuel oil piping
 - Transformer oil piping
 - Piping for C-611, C-616, C-752-B aboveground storage tanks
- (i) Install or operate on-site sewage disposal systems. This is performed by the deactivation contractor and remediation contractor. Examples include the following:
- C-615 Sewage Treatment Plant
 - C-333-A and C-337-A Extended Aeration Systems
 - C-611 and C-746-B Septic Systems
- (j) Store or handle non-chlorine based road oils, dust suppressants, or deicing agents at a central location. This primarily is performed by infrastructure contractor and deactivation contractor.

- Road deicer is stored at the C-732 storage building and in two locations in C-755 Area; C-755-U and C-755-V. Each structure is an approximately 20 ft tall, covered metal storage buildings with an open front for loading/unloading. The floors of storage buildings are concrete to minimize moisture intrusion and loss of salt material to the environment.
- (k) Apply or handle non-chlorine based road oils, dust suppressants or deicing materials.” This primarily is performed by the infrastructure contractor and deactivation contractor, although each of the contractors will apply small amounts of deicing materials around facility entryways/walkways. This activity is performed around each facility listed in Appendix A.
- (m) Install, construct, operate, or abandon wells, bore holes, or core holes. PGDP was placed on the National Priorities List in 1994 for groundwater contamination. As a result, wells and bore holes are installed in accordance with CERCLA and as such would be exempt from administrative requirements in this plan. Rather, they are conducted in accordance with the substantive requirements of an approved CERCLA decision document. Wells installed under other programs (e.g., hazardous waste landfill, solid waste landfill) would be completed in accordance with this plan and applicable regulations under 401 KAR.
- (n) Collect or dispose of pollutants in an industrial or commercial facility through the use of floor drains, which are not connected to on-site sewage disposal systems, closed-loop collection or recovery systems, or a waste treatment system permitted under the Kentucky Pollutant Discharge Elimination System. This is performed by the remediation contractor, deactivation contractor, and DUF₆ Conversion Project contractor. Examples include the following:
- C-612 and C-614 are pump-and-treat facilities used to remove trichloroethene (TCE) and other VOCs from groundwater. C-612 also is used to treat decontamination waters, well development waters, etc.
 - C-752-C is a decontamination facility that is used to clean equipment, as well as to treat various wastewaters to remove suspended solids.
 - C-746-U15 treats landfill leachate prior to discharge in accordance with the Solid Waste Landfill Permit (SW07300014, SW07300015, SW07300045) and Kentucky Pollutant Discharge Elimination System (KPDES) permit (KY0004049).
 - C-752-A is permitted for both hazardous waste and KPDES wastewater treatment. This facility treats leachate, decontamination solutions, collected storm waters (e.g., C-733 Sump), etc., as necessary to facilitate discharge to KPDES Outfalls.
 - The DUF₆ Conversion Facility cooling tower blowdown contains a biocide and deposit control agent and is discharged through the effluent treatment system (ETS) in accordance with the KPDES permit.
- (o) Impound or contain pollutants in surface impoundments, lagoons, pits, or ditches. This is performed by the remediation contractor, the deactivation contractor, and the DUF₆ Conversion Project contractor. Examples include these:
- C-613 is a containment basin that was constructed as part of a CERCLA action for the scrap metal yard project to hold potentially contaminated storm water run-off from the northwest portion of the industrial plant.

- C-611-V, C-611-Y, C-611-H, and C-611-U are containment basins used for the backwash from the treatment of Ohio River Water for potable uses on-site.
 - C-616 is a series of containment basins constructed to hold recirculating cooling water for phosphate reduction prior to discharge.
 - C-617 Lagoons collect storm water and various industrial wastewaters. Sodium thiosulfate and carbon dioxide are fed into the lagoon to dechlorinate the effluent and control pH before discharge.
 - Fifteen outfall ditches convey storm water and treated industrial waste waters off-site in accordance with KPDES permits. Each of these ditches contains devices with the potential to impound or contain wastewaters during transport off-site (e.g., inverted pipe dams, culverts).
 - C-745-G1 is a large concrete basin to collect storm water runoff from the C-746-G cylinder yard prior to lifting runoff to Outfall 017.
 - CERCLA activities at the PGDP require implementation of best management practices that could result in holdup or impounding of water within impoundments or ditches. These activities and controls are described, as appropriate, in the approved work plan.
- (p) Commercial or industrial transfer, including loading and unloading, in bulk quantities of raw materials, intermediate substances or products, finished products, substances held for recycling, or other pollutants. This is performed by each contractor in differing amounts and for different purposes. Examples include the following.
- C-760, C-759, rail lines, and staging/receiving area along Hobbs Road are used to stage wastes being shipped off-site for treatment and/or disposal.
 - C-720 Shipping and Receiving Area and C-400 Main Equipment Entrance are used to stage incoming bulk materials for use at the site.
 - Aqueous HF is pumped from the storage tanks (tanks C-0-HFS-TK-550 to 555) into a railcar or tank truck for off-site shipment.
 - C-333-A Autoclave Feed Facility, C-337-A Autoclave Feed Facility, C-360 Transfer and Sampling Facility, C-310 Product Removal Facility, and C-315 Tails Removal Facility are used to transfer UF₆ from process lines/equipment to cylinders.
 - Used oil is pumped directly from the 150-gal tank at C-755-Y for off-site shipment.

Additionally, 401 KAR 5:037 § 2(4) lists several activities performed at PGDP that are excluded from the provisions of this administrative regulation. These activities include, but are not limited to, the following:

- (a) Normal use or consumption of products sized and packaged for personal use by individuals. This is performed by each contractor in differing amounts and for different purposes.
- (c) Activities that are conducted entirely inside enclosed buildings. Several facilities used by contractors/subcontractors qualify for this exclusion.

- (d) Store, handle, or transmit in pipelines pollutants that are gases at standard temperature and pressure. This exclusion applies to the storage and transfer of gases in cylinders and process piping, such as fluorine, chlorine, Freon™, and chlorine trifluoride.
- (e) Store municipal solid waste in a container located on property where the municipal solid waste is generated and which is used solely for the purpose of collection and temporary storage of that municipal solid waste prior to off-site disposal. This is performed by each contractor in differing amounts throughout the facility.
- (f) Install and operate sewer lines or waterlines approved by the Cabinet. This exclusion applies to the septic water lines that run from the process and operating buildings to the on-site sewage treatment plant.
- (g) Store water in ponds, lakes, or reservoirs. This exclusion applies to Ohio River Water storage at the C-611 Water Treatment Plant.
- (h) Impound storm water, silt, or sediment in surface impoundments. Several facilities used by contractors/subcontractors qualify for this exclusion, including the DUF₆ detention basin, C-613 basin, C-617 basin, etc.
- (i) Apply chloride-based deicing materials used on roads or parking lots. This primarily is performed by the infrastructure contractor, although each of the contractors will keep small amounts of deicing materials near facility entryways/walkways for use in clearing ice on walkways.
- (j) Conduct emergency response activities in accordance with local, state, and federal law. These are performed by each contractor in differing amounts and for different purposes.
- (k) Perform firefighting activities. This will be performed by contractors/subcontractors.
- (l) Convey or handle motor vehicle, rolling stock, vessel, or aircraft. This primarily is performed by the remediation contractor, deactivation contractor, and DUF₆ Conversion Project contractor.

Operations at PGDP are conducted in numerous facilities and areas. Appendix A lists facilities and areas at PGDP that are associated with DOE activities. In this table, each facility or area is described by name, location (in accordance with the commonly used plant map), operational status, solid waste management unit (SWMU), drainage, and monitoring activities. Locations of primary facilities and areas are noted in Figure A.1. SWMUs are listed in Appendix B and their locations are noted in Figure B.1. Contractors/subcontractors control these facilities and areas to ensure established waste management practices that result in groundwater protection practices are in place and properly functioning.

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4. PRACTICES SELECTED TO PROTECT GROUNDWATER FROM POLLUTION

DOE uses contractors at PGDP under the Environmental Management cleanup mission. Currently, the major contractors include Fluor Federal Services, Inc., SST, LATA Kentucky, and BWCS. Fluor Federal Services, Inc., is responsible for the deactivation of the uranium enrichment facilities and operations. SST is responsible for infrastructure services such as surveillance and maintenance of selected facilities, property and records management, janitorial services, and grounds and roadway maintenance. LATA Kentucky is responsible for the implementation of environmental restoration activities (cleanup and closure of facilities and cleanup of soil, groundwater, burial grounds, and disposal of legacy waste) at PGDP. BWCS is responsible for the operation of a DUF₆ Conversion Plant. To ensure groundwater at PGDP is protected from site-based pollution, DOE, Fluor Federal Services, Inc., SST, LATA Kentucky, and BWCS use standardized procedures to assure quality and consistency in the implementation of groundwater protection practices. Procedures for the following general programs at PGDP are maintained by DOE contractors:

- Environment, Safety, and Health
- Integrated Safety and Environmental Management Systems
- Spill Prevention, Control, and Countermeasures Plans
- Best Management Practices Plans
- Uranium Programs
- Waste Management
- Radiological Controls
- Environmental Monitoring
- Data and Sampling
- Well Maintenance
- D&D

A list of relevant plans and procedures are in Appendix C.

The following sections provide brief descriptions of the groundwater protection practices that have been implemented at PGDP.

4.1 GROUNDWATER MONITORING

4.1.1 RCRA Subtitle C Monitoring

Currently, the only RCRA-permitted facility at PGDP that requires groundwater monitoring is the C-404 Low-Level Radioactive Waste Burial Ground. The C-404 unit was used as a low-level waste lagoon/burial ground from the early 1950s until 1986. At that time, routine testing determined that, of the wastes disposed there, gold-dissolver precipitate was considered a hazardous waste under RCRA. The landfill was covered with a RCRA-compliant clay cap (final cover) and was certified “closed” in 1987 as a hazardous waste landfill. A postclosure permit application was prepared and submitted to the Commonwealth of Kentucky in June 1989. The landfill now is monitored under RCRA Subtitle C postclosure monitoring requirements.

Monitoring wells (MWs) were installed to monitor groundwater quality during the postclosure care period. The MWs were installed in the UCRS and the underlying RGA, which is considered to be the

uppermost regulatory aquifer. A statistical evaluation of the indicator parameters was conducted using quarterly sample results from the initial year of monitoring. As a result, the Commonwealth of Kentucky determined that additional information was needed to support the postclosure permit application, and subsequent MWs were installed to provide upgradient monitoring on the Lower RGA and the Upper RGA [Appendix B of Environmental Monitoring Plan (EMP)].

The MW network at C-404 is sampled and monitored in accordance with the requirements associated with the Hazardous Waste Facility Permit (KY8-890-008-982), Part GSTR 2. The data resulting from sampling is statistically analyzed to determine if the landfill is impacting the groundwater. This analysis is supplied in semiannual reports to the Commonwealth of Kentucky.

4.1.2 Underground Storage Tank Monitoring

Hazardous and Solid Waste Amendments (HSWA), under Subtitle I of RCRA regulation (40 *CFR* Part 280), established a comprehensive regulatory program for USTs. The Subtitle I regulations generally pertain to all USTs used to store “regulated substances.” Regulated substance means (a) any substance defined in section 101(14) of CERCLA (but not including any substance regulated as a hazardous waste under subtitle C); and (b) petroleum, including crude oil or any fraction thereof that is liquid at standard conditions of temperature and pressure (60°F and 14.7 pounds per square inch absolute). The term “regulated substance” includes, but is not limited to, petroleum and petroleum-based substances comprised of a complex blend of hydrocarbons derived from crude oil through processes of separation, conversion, upgrading, and finishing, such as motor fuels, jet fuels, distillate fuel oils, residual fuel oils, lubricants, petroleum solvents, and used oils. RCRA-regulated wastes are specifically exempt from the Subtitle I (UST) regulations, and releases from USTs that contain RCRA wastes are addressed under the regulations governing corrective action. In addition to these federal regulations, USTs at PGDP also are subject to 401 *KAR* Chapter 42.

DOE is responsible for 18 site USTs that have been reported to KDWM in accordance with regulatory notification requirements. All of these USTs are closed or are undergoing closure. Table 1 provides summary information on the USTs at PGDP. The PGDP Identification Number provided in Table 1 may be used to locate the UST sites on the drawing in Appendix A.

4.1.3 RCRA 3004 (u/v) Monitoring

Additional groundwater monitoring performed relates to RCRA 3004 (u/v) and CERCLA requirements for characterization of areas of contamination at a facility that has had releases with the potential to contaminate groundwater. Groundwater contamination currently present at PGDP has been labeled as the Northeast Plume, Northwest Plume, Southwest Plume, and the Technetium-99 Plume (see Figures B.2 and B.3). Results of monitoring are used to determine and implement remedial actions, as necessary, to protect human health and the environment. Specific actions/procedures to protect groundwater during MW installation and groundwater remediation are identified in the CERCLA response work plans.

4.1.4 RCRA Subtitle D Landfill Groundwater Monitoring

Both C-746-S and C-746-T Landfills are closed landfills in postclosure care under a joint site permit issued by KDWM on April 21, 2006. The C-746-S Residential Landfill stopped receiving solid waste before July 1, 1995, and was certified “closed” October 31, 1995. The groundwater monitoring system for the C-746-S Residential Landfill also encompasses the C-746-T Inert Landfill, which was certified “closed” in November 1992.

Table 1. Summary Information on USTs

State Identification Number	PGDP Identification Number	SWMU Designation/ Status	Regulatory Status
0001	C-750-A	142	Removed 3/91; closure complete per KDWM letter of 3/25/99.
0002	C-750-B	143	Removed 3/91; closure complete per KDWM letter of 3/25/99.
0003	C-750-C	25	Removed 10/93; not Subtitle I—clean closed under RCRA Subtitle C.
0004	C-750-D	24	Rinsed with TCE and emptied 6/79; filled with cement 10/97; closure complete per KDWM letter of 11/23/99.
0005	C-746-A1	139	Emptied 9/88; filled with cement 10/97; revised closure assessment report submitted 07/15/03; additional information requested from KDWM on 03/18/04; closure complete per KDWM letter.
0006	C-710-B	73	EXEMPT—emptied 7/85; filled with cement 10/97; closure complete per KDWM letter of 02/19/02.
0007	C-200-A	72	EXEMPT—grouted in 1977; closure complete per KDWM letter of 11/23/99.
0008	C-746-A2	140	During the WAG 15 Site Investigation, this UST was determined (and documented) to be nonexistent.
0009	C-751-W	186	Removal and closure underway.
0010	C-751-E	186	Removal and closure underway.
0011	C-611-1	130	Last used before 1975; clean closed per KDWM letter of 12/6/96.
0012	C-611-3	134	Last used before 1975; filled with cement 9/97; clean closed per KDWM letter of 12/6/96.
0013	C-611-2	131	This UST was determined to be nonexistent—no further action required per state correspondence of 12/6/96.
0014	C-611-4	132	Last used before 1975; filled with sand; clean closed per KDWM letter of 12/6/96.
0015	C-611-5	133	Filled with grout before 1975; clean closed per KDWM letter of 12/6/96.
0016	C-200-B	72	Filled with concrete around 1981; closure complete per KDWM letter of 02/19/02.
0017	C-745-K	490	UST discovered 08/16/01; tank and soils removed 02/02, clean closed per KDWM letter of 12/04/02.
0018	C-745-K2	534	UST discovered 04/10/02; tank removed 04/02; clean closed per KDWM letter of 12/04/02.

A solid waste landfill, C-746-U, was constructed in 1996 north of C-746-S and C-746-T. The C-746-U Landfill currently operates and receives wastes as a contained landfill under the joint site Solid Waste Permit (No. 073-00014, 073-00015, 073-00045). MWs for the C-746-S, C-746-T, and C-746-U Landfills are sampled quarterly for analytes dictated by a KDWM-approved solid waste landfill permit modification.

The data resulting from groundwater sampling at C-746-U and C-746-S&T Landfills are statistically analyzed to determine if the landfills are impacting the groundwater. This analysis is supplied in quarterly reports to the Commonwealth of Kentucky.

4.1.5 Monitoring Well Preventive Maintenance

To protect and maintain the integrity of the MW network at PGDP, a preventive maintenance plan was implemented in 2002. A complete description of this program can be found in the current approved *Monitoring Well Maintenance Implementation Plan for the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, PAD-PROJ-0025. This program combines regular monitoring of each well's physical condition and performance during routine sampling activities. If problems requiring attention are identified, a schedule to repair or rehabilitate wells is developed. The maintenance monitoring program also includes, as needed, visual inspection of downhole equipment, downhole video inspection, evaluation of physicochemical water quality data, microbial sampling and analysis, and assessment of well performance indicators. Typical efforts to rehabilitate MWs involve the use of physical treatment methods, such as brushing and surging.

4.1.6 Evaluation of Floor Drains

401 KAR 5:037 § 3(5)(c), requires an evaluation of floor drains before groundwater protection practices are selected. Floor drains must be connected to an on-site sewage disposal system, to a closed-loop collection or recovery system, a waste treatment system permitted under KPDES, or be terminated. Floor drains at PGDP historically were evaluated as documented in the USEC Groundwater Protection Plan, KY/E-181.

4.1.7 Evaluation of Loading and Unloading Areas

401 KAR 5:037 § 3(5)(a) states:

Loading and unloading areas shall have spill prevention and control procedures and operation procedures designed to prevent groundwater pollution. Spill containment and cleanup equipment shall be readily accessible.

All unloading areas have emergency response procedures and spill containment and cleanup equipment available 24 hours per day throughout the plant E-squad. A complete listing of emergency response organizations and equipment is included in the Facility Response Plan, KY/E-160.

4.2 ENVIRONMENTAL SURVEILLANCE MONITORING

Groundwater surveillance monitoring, as required by DOE Order 436.1, *Departmental Sustainability*, is implemented at PGDP. The approved EMP discusses this program and its components including MWs, sample parameters, and sampling frequencies. The plan is maintained as a living document that will be modified to meet new requirements and needs. Any changes in MW status, locations, or sampling frequency will be documented in the annual EMP. The EMP also describes other environmental monitoring activities, such as surface water monitoring at the C-746-S/T/U Landfills, KPDES outfall monitoring, and in-stream monitoring of Bayou and Little Bayou Creeks.

4.3 KENTUCKY POLLUTANT DISCHARGE ELIMINATION SYSTEM OUTFALLS

The KPDES permit (number KY0004049) requires PGDP to monitor effluent discharges through permitted Outfalls 001, 015, 017, 019, and 020 (Figure 5). The KPDES permit (number KY0102083) requires that PGDP monitor effluent discharges through permitted Outfalls 002, 004, 006, 008, 009, 010, 011, 012, 013, and 016 (Figure 5). Assessment parameters include both physical and chemical

constituents. Results are assessed and submitted to the proper regulatory agencies. Activities include field testing (pH, conductivity, and temperature), field measurements (flow measurements), and laboratory analysis for pollutants identified in the KPDES permit. If data indicate increasing contaminant levels, information pertaining to upstream operations is reviewed to identify the potential cause and implement appropriate best management practices to minimize pollutants per the KPDES permit, Part V, as documented in *Best Management Practices Plan, Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, PAD-REG-1006 (LATA Kentucky 2011a), or latest version, for the remediation, deactivation, and infrastructure contractors and in *Paducah Storm Water Pollution Prevention and Best Management Practices Plan*, DUF6-BWCS-PLN-079, (BWCS 2012) for the DUF₆ Conversion Project contractor.

4.4 SAMPLE COLLECTION

Surface water bodies (streams, the Ohio River, lagoons, and ponds), surface and subsurface soil, and groundwater (from MWs) are sampled as part of the environmental assessment and possible remediation efforts conducted at PGDP. To provide protection of groundwater during the performance of these activities, task-specific procedures are utilized that allow quantification of site conditions without degradation of the sampling site. These procedures, maintained and implemented by DOE contractors, are specified and described in project-specific sampling and analysis plans that are reviewed and approved prior to sampling. In addition, the procedures utilized during sample-collection tasks are documented in the associated investigation or evaluation report published following completion of the assessment. The following sections in this report provide generic information on the types of procedures that are applicable to sampling surface water, surface and subsurface soil, and groundwater at PGDP. Specific procedures that have been used in past assessment efforts are identified in published documents, such as the following:

- *Treatability Study Work Plan for the Permeable Treatment Zones at the Paducah Gaseous Diffusion Plant, Paducah Kentucky* (DOE 2000);
- *Treatability Study Work Plan for the Six-Phase Heating Groundwater Operable Unit at the Paducah Gaseous Diffusion Plant, Paducah Kentucky* (DOE 2001);
- *Sampling and Analysis Plan for Site Investigation and Risk Assessment of the Surface Water Operable Unit (On-Site) at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky* (DOE 2005a);
- *Site Investigation Report for the C-746-S&T Landfills at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky* (DOE 2006);
- *Surface Water Operable Unit (On-site) Site Investigation and Baseline Risk Assessment Report at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky* (DOE 2007a);
- *Addendum to the Work Plan for the Burial Grounds Operable Unit Remedial Investigation/Feasibility Study at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky—Solid Waste Management Unit (SWMU) 13 field Sampling Plan* (DOE 2010a);
- *Remedial Investigation Report for the Burial Grounds Operable Unit at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky* (DOE 2010b);
- *Work Plan for the Soils Operable Unit Remedial Investigation/Feasibility Study at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky* (DOE 2010c);

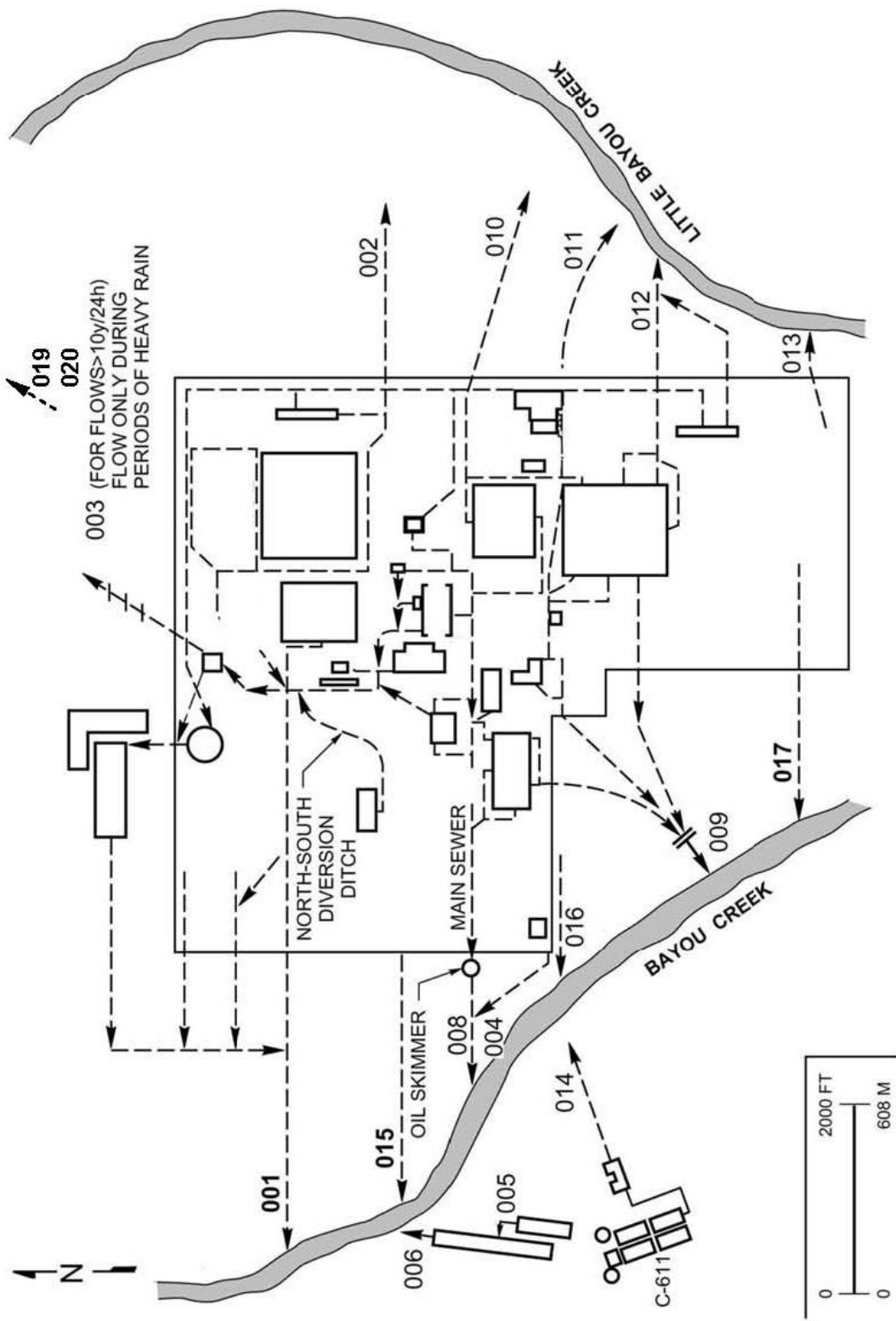


Figure 5. KPDES Outfall Locations at PGDP

- *Feasibility Study for the Burial Grounds Operable Unit at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky* (DOE 2010d);
- *Focused Feasibility Study for the Southwest Groundwater Plume Volatile Organic Compound Sources (Oil Landfarm and C-720 Northeast and Southeast Sites) at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky* (DOE 2010e);
- *Remedial Action Work Plan for the Interim Remedial Action for the Volatile Organic Compound Contamination at the C-400 Cleaning Building at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*. DOE/LX/07-0004&D2/R2/A1/R2, issued July 2009, revised April 2011 (DOE 2011a); and
- *Addendum to the Work Plan for the Burial Grounds Operable Unit Remedial Investigation/Feasibility Study at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, Solid Waste Management Unit 4 Sampling and Analysis Plan*, DOE/OR/07-2179&D2/A2/R2, issued June 2012 (DOE 2012a).

Appendix C provides a partial list of procedures that are implemented for specific tasks at PGDP.

4.4.1 Surface Water [401 KAR 5:037 § 2(2)(o)]

Surface water sampling activities can be divided into two types: observation and water sampling. Observations include presampling visual assessment and determination of flow rates or volumes using flow meters and calibrated flumes. The sampling protocol is designed to allow representative samples to be taken from a location and protect sampling personnel while preventing the spread of contamination. Collected samples then are tested for specific constituents using either field measurement methods or laboratory analysis. Hydrogeologic evidence has demonstrated that Bayou Creek and Little Bayou Creek are losing streams over some intervals; therefore, sampling and protecting surface water aid in ensuring groundwater protection.

Several SWMUs/areas of concern (AOCs) at PGDP are located in areas without an outfall and are grass covered and under normal conditions would not have discharges. The *Best Management Practices Plan, Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, PAD-REG-1006 (LATA Kentucky 2011a), which is undergoing revision, states that during extreme rainfall events these areas may become saturated, which may allow storm water to flow over or through the SWMU/AOC increasing the potential for surface water discharge. If the soils covering the SWMU/AOC become saturated, the SWMUs/AOCs will be checked for signs of erosion and releases. Storm water runoff periodically will be inspected visually to look for signs of contamination (e.g., an oily sheen, cloudy or discolored water, etc.) and, if necessary, sampled.

The following types of activities are used during surface water sampling as appropriate to the specific task:

- Collection of surface water samples
- Field measurement of water temperature
- Field measurement of pH
- Field measurement of dissolved oxygen
- Field measurement of residual chlorine
- Field measurement of specific conductance
- Field measurement of alkalinity

4.4.2 Surface and Subsurface Soil [401 KAR 5:037 § 2(2)(m)]

Surface and subsurface soil samples are taken prior to or during construction, excavation, and remediation activities or as part of environmental characterization activities. Procedures for soil sampling enable characterization while protecting sampling personnel and reducing the risk of increasing contaminant migration and are identified in project specific work instructions and/or CERCLA work plans.

The following activities may be used during surface and subsurface soil sampling as appropriate to the requirement of the specific task:

- Surface soil sampling
- Subsurface soil sampling
- Soil gas sampling
- Lithologic logging

4.4.3 Well Sampling [401 KAR 5:037 § 2(2)(m)]

Numerous MWs and residential wells are sampled on a regular basis (Appendix B of EMP). This sampling is conducted to monitor the existing groundwater contamination plumes and to detect any additional releases of contamination into the RGA. The procedures that guide these activities help ensure that analytical results are representative of aquifer conditions. In addition to chemical and physical conditions, aquifer parameters such as transmissivity and conductivity are determined as needed. Additional information on the well sampling program at PGDP is available in the current approved EMP.

The following types of activities may be used during well sampling, as appropriate to the specific task:

- Groundwater sampling
- Water level measurements
- Monitoring well purging

4.5 SUBSURFACE PENETRATIONS [401 KAR 5:037 § 2(2)(M)]

To characterize subsurface conditions, numerous subsoil penetrations have been made under various investigation and remedial activities. These penetrations have been in the form of MWs, production/extraction wells, piezometers, and sample borings (including shallow direct push holes and drilled borings to the McNairy Formation and deeper). DOE's subsurface penetrations are designed to reflect accurately the parameters of the soil or aquifer zone selected. Installation/drilling techniques are selected specifically to prevent undesirable alteration of contaminant migration while providing the maximum information required for characterization of the geological and hydrogeological conditions. Excavation permits are required by facility procedures prior to any installation/drilling activity anywhere on-site in order to satisfy ISMS/EMS principles. Completed sample borings and MWs no longer required for sampling are properly abandoned per 401 KAR 6:350 § 11 (as appropriate) to prevent downward migration of contaminants.

4.6 STORAGE OF BULK QUANTITIES OF MATERIALS, RECYCLABLES, AND WASTES [401 KAR 5:037 § 2(2)(A), (G), & (J)]

4.6.1 Fuel Storage Tanks

Fuel storage tanks located at PGDP, including C-600, C-746-U, C-751, and C-752-B, are subject to the Spill Prevention, Control, and Countermeasure Plan (SPCC) (Section 4.1.4.1). Each of the tanks is equipped with appropriate secondary containment and is inspected at least monthly. Collected storm water is inspected for sheen prior to discharge. Additionally, spill control and cleanup equipment is located near each facility to allow for prompt cleanup of spills.

4.6.2 Used Oil

Used oil is collected for recycle in a 150-gal tank at C-755-Y. This tank is single walled, but located within a double walled secondary containment. This tank is inspected every other week for evidence of leaks/drips. Once the waste oil tank is full, SST schedules pick up of the used oil. Generally, a tanker truck is used to transfer used oil from the used oil tank to their tanker truck for off-site shipment.

4.6.3 Intermodals with Cold Traps

Sealand-type containers with cold traps containing uranium compounds are stored inside C-746-Q, pending recovery of the uranium. C-746-Q is permitted under the hazardous waste facility permit and is a structure with a concrete base with curbs. The facility/containers are inspected weekly per the permit for signs of leaks. Spill containment and cleanup supplies are available in the facility.

4.6.4 Storage of UF₆

Bulk UF₆ is stored in on-site cylinders and various facilities around PGDP.

DUF₆ cylinders are stored on concrete pads in the cylinder yards. Storm water run-off from the cylinder yards is channeled to Outfalls 008, 013, 015, and 017 for discharge/monitoring under the KPDES permits (Nos. KY0004049 and KY0102083).

4.6.5 Storage of Aqueous Hydrogen Fluoride

HF is stored in six aboveground, outdoor, carbon steel 10,000-gal tanks (tanks C-0-HFS-TK-550 to 555) and each tank has the following:

- Polymer lining;
- Remote level monitoring;
- High-level and high-high level alarms to warn operators of potential overflow; and
- Concrete secondary containment (21,166 ft² × 3.5-ft high, 11,729-gal capacity).

4.6.6 Storage of Posi-Shell[®] Chemicals

Posi-Shell[®] is an alternative daily cover material that is stored in metal Sealand containers.

4.6.7 Storage of Flocculants

Flocculants are used for the treatment of suspended solids in the sedimentation pond and are stored in a metal Sealand container.

4.6.8 Storage of Road Oils and Deicing Materials

The infrastructure contractor is responsible for road maintenance. As such, road salt is stored at the C-732 storage building and in two locations in C-755 Area; C-755-U and C-755-V. Each structure is an approximately 20 ft tall, fully covered metal storage buildings with an open front for loading/unloading. The floors of both storage buildings are concrete to minimize moisture intrusion and loss of salt material to the environment. Road salt is used during winter months on sidewalks, decks, and steps to improve personal safety. Salt is dissolved in water into a high salinity solution (brine) suitable for road and parking lot pretreatment. If weather is severe enough to defeat the pretreatment, the road salt would be applied directly to road and parking lot surfaces. By using pretreatment, the infrastructure contractor minimizes the amount of salt used and therefore salt runoff to the site's ditches and outfalls.

4.6.9 Storage of Herbicides and Pesticides

The infrastructure contractor utilizes herbicide as one form of weed control and plant management. A minimum amount of concentrate is purchased for use in a one year period. Storage of concentrate is outside in a dedicated 'clamshell' weatherproof structure north of C-755-A. Access to the chemical is restricted by use of a lock and key. Only personnel with current state certifications for herbicide application are allowed to access the chemicals, mix, and apply the chemicals. The herbicide is stored, applied and the container disposed of in accordance with the manufacturer's instructions and Commonwealth of Kentucky law.

4.7 WASTE MANAGEMENT [401 KAR 5:037 § 2(2)(F)]

Due to the magnitude of its investigation and remediation efforts, DOE and its contractors/subcontractors generate, handle, and store a significant quantity of waste materials. Activities that deal with waste are addressed in procedures established to ensure proper storage, maintain accountability, and eliminate the possibility of a release to the environment. At each area of generation, facilities are provided for the proper containerization of waste materials.

Waste handling activities include segregation, transportation, sampling, storage, and treatment and/or disposal. Beginning at generation, wastes are segregated (i.e., liquid from solid) and similar materials are consolidated in containers. To the extent practical, waste is containerized in accordance with 49 *CFR* § 172.101, "Hazardous Material Table," and 49 *CFR* § 173 at the point of generation. This step ensures proper storage and handling until treatment and/or disposal. After wastes are containerized and secured, they are transported to a waste staging or storage area for further processing, transfer to another container, or storage pending treatment and/or disposal. Temporary storage of wastes at the generating project is conducted in accordance with applicable regulations based upon the type of waste [e.g., 40 *CFR* § 262.34 for hazardous wastes, DOE Order 435.1, Chapter 4, for radioactive wastes, and/or 40 *CFR* § 761.65 for wastes containing polychlorinated biphenyls (PCBs)]. Long-term storage of hazardous waste is done in accordance with the hazardous waste facility permit in a facility constructed with concrete secondary containment basins and structures to prevent rain from contacting waste. Long-term storage of other industrial wastes (e.g., radioactive, PCBs) is conducted in the same facilities to the extent practical.

Solid wastes are staged in covered roll-offs, trucks, and/or intermodals prior to transfer to the C-746-U Landfill for disposal to prevent accumulation of precipitation or condensation in the waste containers. Receipt/processing of wastes at the landfill are performed in accordance with the solid waste landfill permit, which prohibits the receipt of free liquids in the waste. Wastes are disposed of within

2 hours of receipt at the landfill and covered with daily cover by the end of each day. Interim and long-term cover is used at areas of the landfill that are not used for extended periods per the permit to minimize infiltration of water into the waste.

4.7.1 Release Prevention and Control

One of the first steps in preventing groundwater contamination is release prevention. To this end, DOE operates under DOE Order 435.1, Change 1, *Radioactive Waste Management* (DOE 1999), and DOE Order 458.1, *Radiation Protection of the Public and the Environment*, which direct the acceptable conditions for treatment, storage, and disposal of DOE-generated waste. In addition, each project task is required to have a Waste Management Plan, which specifically relates to the expected waste stream, the quantities of waste generated, and also includes, but is not limited to, information on required container inspection, diking, repackaging of waste, and transferring of liquid wastes.

The Environmental Radiological Protection Program (ERPP) is designed to meet the requirements in the DOE Order 458.1, *Radiation Protection of the Public and the Environment*. The purpose of the order is to minimize radiation exposure to the public, control the radiological clearance of personnel, ensure that any exposure to the public is as low as reasonably possible, monitor routine and nonroutine radiological releases, and to provide protection of the environment from effects of radiation. The ERPP provides an overview of the measures implemented by DOE and its contractors/subcontractors at PGDP.

4.7.2 Release Control

Because the potential for release to the environment exists at all facilities that handle hazardous waste, DOE has developed and continues to update the *Spill Prevention Control and Countermeasure Plan*, PAD-REG-1005. This “living” document stipulates the procedures to be followed and the equipment to be used in the event of a liquid release. It also maintains a record of these releases.

4.8 MATERIAL TRANSFERS OFF-SITE [401 KAR 5:037 § 2(2)(P)]

Loading of wastes and/or materials into containers is performed inside of structures to the extent practical. Any spills are promptly cleaned up. Containers are loaded in a manner to avoid/prevent damage to containers during loading/transfer.

LATA Environmental Services of Kentucky, LLC, Transportation Security Plan for the Transport of Hazardous Materials in Commerce, PAD-WD-0025, has been prepared for waste to be shipped off-site from the remediation and deactivation contractors. Procedure BWCS-U-WMP-2001, *Shipping*, has been prepared for off-site shipments of U.S. Department of Transportation (DOT)-regulated hazardous materials except HF. Procedure BWCS-U-WMP-2003, *Hydrogen Fluoride (HF) Shipping*, has been prepared for off-site shipments of HF. These plans/procedures describe the process to ensure compliance with applicable DOT Hazardous Material Regulations. A hazard classification is assigned to waste/material being shipped in accordance with 49 *CFR* § 172.101 and 49 *CFR* § 173.2a. Waste/material is containerized in accordance with 49 *CFR* § 172.101, *Hazardous Material Table*, and 49 *CFR* § 173. Radiation levels are not allowed to exceed the threshold values provided in 49 *CFR* § 173.441, *Radiation Level*, and 49 *CFR* § 173.443, *Contamination Controls*. Shipping papers are prepared for each shipment in accordance with 49 *CFR* § 172.200 and/or 40 *CFR* § 262. Additional information/shipping papers are provided to comply with applicable requirements of the Nuclear Regulatory Commission, National Emission Standards for Hazardous Air Pollutants, and TSCA. All marking, labeling, and placarding of waste materials and waste containers are completed in accordance with 40 *CFR* § 172.300, 49 *CFR* § 172.400, and 49 *CFR* § 172.500,

respectively. An Emergency Response Plan is completed and provided for the carrier to use to comply with 49 *CFR* § 171.15, 49 *CFR* § 171.16, and 49 *CFR* § 390.15.

4.9 TREATMENT

4.9.1 Groundwater [401 KAR 5:037 § 2(2)(n)]

PGDP currently operates two groundwater pump-and-treat systems. The Northwest Plume Pump-and-Treat System involves the use of an air stripper, ion exchange units, and a vapor-phase activated carbon exchange unit. The Northeast Plume Containment System uses an air stripper. The groundwater pump-and-treat systems are located northwest and northeast of PGDP. Additionally, projects have been started and/or completed to remediate source contamination at SWMU 91, C-400, and the Southwest Plume.

4.9.1.1 Northwest Plume Pump-and-Treat System and Northeast Plume Containment System

The groundwater pump-and-treat systems were constructed and are operated in accordance with two separate CERCLA Interim Records of Decision (RODs) approved by EPA. These RODs are the *Record of Decision for Interim Remedial Action of the Northwest Plume at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky* (DOE 1993) and the *Record of Decision for Interim Remedial Action at the Northeast Plume, Paducah Gaseous Diffusion Plant, Paducah, Kentucky* (DOE 1995). The purpose of these facilities is to retard further migration of the northwest and northeast groundwater contaminant plumes. Prior to the implementation of the interim RODs, a water policy was implemented for residences located within the affected areas. This policy was established in an Administrative Consent Order between DOE and EPA, pursuant to Sections 104 and 106 of CERCLA.

Beginning in August 2010, the Northwest Plume Pump-and-Treat System switched from withdrawal from the original four extraction wells to withdrawal from two new extraction wells located at the north boundary of the industrial area of PGDP (in the vicinity of the original south well field). The location of these extraction wells was optimized to capture the core and the lateral extent of the Northwest Plume in the area of the north plant boundary. DOE issued an *Explanation of Significant Differences* for this action in December 2010 (DOE 2010f).

In 2011, the FFA managers identified optimization of the Northeast Plume Containment System as a priority, consistent with the sitewide strategy that includes a series of sequenced activities consisting of source actions and control of off-site groundwater migration followed by a final action for the overall dissolved-phased plume. Consequently, a new extraction well field, consisting of two extraction wells, currently is being designed for the Northeast Plume, with extraction wells located near the east PGDP security fence in the two centroids of the Northeast Plume. In addition to installation of two new extraction wells at locations closer to the upgradient extent of the plume, the redesign of the extraction well field includes the installation of modular treatment units near each extraction well to treat influent groundwater. One of these modular treatment units is addressing the effluent from the current extraction well field, since operation of the C-613 Cooling Towers (the previous treatment system) ceased with closure of uranium enrichment activities at PGDP and will continue to provide treatment of effluent from one of the new extraction wells. Like the C-613 Cooling Towers, the primary treatment technology of these treatment units is air stripping.

4.9.1.2 SWMU 91 source remediation

In July 1998, DOE issued the CERCLA *Record of Decision for Remedial Action at Solid Waste Management Unit 91 of Waste Area Group 27 at the Paducah Gaseous Diffusion Plant, Paducah,*

Kentucky (DOE 1998). This ROD designated Lasagna™ as the selected remedial alternative for reducing the concentration of TCE in SWMU 91 to levels that would decrease the potential groundwater risk to human health and the environment at the point of exposure. Installed on the south side of the C-745-B cylinder yard in 1999, the electroosmosis system was operated for two years and reduced the concentration of TCE in SWMU 91 soil from an average of 84 mg/kg to an average of less than 5.6 mg/kg. This was verified in sample results taken in the spring of 2002 and 2003. Additional information about the Lasagna™ technology and its development can be found in the *Final Soil Characterization Work Plan for the Paducah Gaseous Diffusion Plant Lasagna™ Pilot Test in the Cylinder Drop Test Area, Paducah, Kentucky* (MMES 1994), and the *DNAPL Site Characterization and Lasagna™ Technology Demonstration at Solid Waste Management Unit 91 of the Paducah Gaseous Diffusion Plant, Paducah, Kentucky* (LMES 1996).

4.9.1.3 C-400 source remediation

In August 2005, DOE issued the *Record of Decision for Interim Remedial Action for the Groundwater Operable Unit for the Volatile Organic Compound Contamination at the C-400 Cleaning Building at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky* (DOE 2005b). This interim remedial action includes the design, installation, operation, and subsequent decommissioning of an electrical resistance heating (ERH) system to heat discrete intervals of the subsurface TCE source zone resulting in volatilization, removal, and recovery of volatile organic compounds from the southern end of the C-400 Cleaning Building. The system became operational in 2010.

The first phase of the ERH was completed in December 2010. Based on the evaluation and the lessons learned from Phase I, it was determined that the ERH base design was successful in reaching target temperatures in the subsurface and removing contaminants in the UCRS and upper RGA. The evaluation of Phase I also indicated that target temperatures were not achieved in the lower RGA (DOE 2011b), which resulted in the split of the Phase II interim remedial action for the southeast source areas into two separate actions: (1) UCRS and Upper RGA action (Phase IIa) and (2) Lower RGA action (Phase IIb). Construction of the Phase IIa ERH system was completed in April 2013, and heating is ongoing. DOE and the FFA parties currently are evaluating alternative remedies for Phase IIb.

4.9.1.4 Southwest Plume source remediation

DOE conducted a site investigation of the Southwest Plume and four potential source areas in 2004, *Site Investigation Report for the Southwest Groundwater Plume at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky* (DOE 2007b). As a result, a Focused Feasibility Study for the Southwest Groundwater Plume VOC Sources (Oil Landfarm and C-720 Northeast and Southeast Sites) was conducted (DOE 2011c). Sources to the Southwest Plume included in this action are the SWMU 1 Oil Landfarm, SWMU 211-A C-720 Building TCE Northeast Spill Site, and the SWMU 211-B C-720 Building Southeast Spill Site.

DOE completed a ROD for these Southwest Plume sources in March 2012 (DOE 2012b). The ROD for these SWMUs implements deep soil mixing to treat the VOC source zone at SWMU 1 and field data collection followed by either enhanced *in situ* bioremediation or long-term monitoring for SWMUs 211-A and 211-B. Deep soil mixing at SWMU 1 is scheduled to begin in 2014. A decision for SWMUs 211-A and 211-B is pending.

4.9.2 Decontamination, Well Development, and Well Purge Wastewater [401 KAR 5:037 § 2(2)(n)]

C-752-C is a large concrete containment pad covered by a roof. This facility is used to decontaminate equipment and to treat wastewaters to remove suspended solids in accordance with the KPDES permit.

These actions generally are defined in CERCLA work plans. This treatment usually serves as pretreatment for water that is further treated in the C-612 facility.

4.9.3 C-746-S and C-746-U Landfill Leachate [401 KAR 5:037 § 2(2)(n)]

The C-746-U15 leachate treatment system has a large concrete secondary containment pad covered by a permanent structure. Wet wells in this facility are designed to automatically pump any releases back into the influent tank. This facility treats C-746-S and C-746-U Landfill leachate using particulate filtration and carbon filtration prior to discharge in accordance with the solid waste landfill permit and KPDES permit.

4.9.4 Miscellaneous Wastewater [401 KAR 5:037 § 2(2)(n)]

The C-752-A permitted hazardous waste treatment facility has a large concrete secondary containment pad covered by a permanent structure. This facility also is used to treat miscellaneous wastewaters generated at the PGDP, such as decontamination solutions, contamination storm waters, leachate from C-404 or C-746-U, etc., in accordance with the KPDES permit. Treatment in this facility includes chemical precipitation, photocatalytic reaction, particulate filtration, and/or carbon filtration.

4.9.5 Noncontact Cooling Water [401 KAR 5:037 § 2(2)(n)]

The DUF₆ Conversion Facility cooling tower blowdown contains a biocide and deposit control agent and is discharged through the ETS in accordance with the KPDES permit.

4.9.6 C-613 Storm Water Control Basin [401 KAR 5:037 § 2(2)(o)]

C-613 collects storm water from the northeast part of the PGDP limited area. This facility originally was constructed to contain contaminated run-off from the scrap metal yards under CERCLA. The basin is lined to minimize migration of contaminants to groundwater. The basin is approved under the KPDES permit (KY0004049) to treat wastewater with high levels of suspended contaminants prior to discharge through Outfall 001.

4.9.7 Use of Surface Impoundments, Lagoons, Ditches in CERCLA Projects [401 KAR 5:037 § 2(2)(o)]

Many of the remediation projects require the holding/collecting of storm waters to prevent/minimize contaminated run-off. Specific control measures and technologies are addressed in the project specific CERCLA work plan.

5. IMPLEMENTATION SCHEDULE

The controls and measures described in this plan have been established in accordance with regulatory requirements and, as a result, already have been implemented.

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6. EMPLOYEE TRAINING

DOE ensures that contractor personnel are trained and qualified for their functional positions. Each contractor employee has an individualized Training Position Description (TPD). Each contractor employee is required to complete his/her assigned training prior to implementing any work associated with their respective TPD. This training complies with state and federal regulations, DOE orders, contractor policies and procedures, and PGDP site-specific requirements, as applicable. This training ensures that all employees implement proper practices for protection of the environment, including groundwater protection. Applicable training courses include the following:

- **General Employee Training (GET):** This training session covers general topics for performing work at a DOE facility, including the Quality Assurance Program, classification security, the Industrial Hygiene Program, emergency preparedness, fire protection, Radiological Program, criticality safety, and hazard communication. Training includes elements on storage and use of hazardous materials. Many of these topics incorporate the requirements for groundwater protection measures required for work conducted at PGDP. Personnel who require access to PGDP, except escorted visitors, must complete this course. Testing is required to complete the course and it must be renewed every two years. GET consists of Web-based training.
- **Consolidated Annual Training (CAT):** This training session covers general topics for performing work at a DOE facility, including the Integrated Safety/Environmental Management Systems, Quality Assurance Program, use of fire extinguishers, and waste minimization/management. These are key components for the overall environmental management activities conducted at PGDP in support of groundwater and other environmental protection programs. Testing is required to complete the course, and it must be renewed every year. CAT consists of Web-based training.
- **Radiological Worker Training I and II:** Radiological Worker Training is required for all unescorted personnel who work in, or require access to, radiological areas. Radiological areas, as defined by the site Radiological Control Program procedures, include contamination areas, high contamination areas, radiation areas, high radiation areas, very high radiation areas, airborne radioactivity areas, radioactive material areas, fixed contamination areas, underground radioactive material areas, and radiological buffer areas. Training focuses on spread of contaminants, which prevents potential for discharge to groundwater. This training is designed to be accomplished in approximately 16 hours; however, the core material may be reviewed as self-study followed by a Web-based examination. This training must be recertified every two years.
- **Waste Generator Training:** The following training is required for personnel who generate, package, and handle RCRA-hazardous waste, including personnel who work in areas that generate hazardous waste and who manage satellite or 90-day accumulation areas: Satellite Accumulation Area Training, 90-Day Accumulation Area Training, RCRA Waste Characterization, and RCRA Permit Training. This training gives instruction on the proper identification, management, and temporary storage of wastes generated during the performance of hazardous waste activities at PGDP. In addition to this training, the Waste Management Plan and project-specific plans, as needed, are required reading for personnel handling and managing waste. Proper waste management minimizes the risk of a release of contaminants to groundwater at PGDP.
- **Hazard Communication Training:** Hazard Communication Training is required for personnel who use or come in contact with hazardous materials defined under Occupational Safety & Health Act. The course covers appropriate identification, storage, use, and labeling. This is a one-time course with

refresher training required annually, with additional requirements for supervisory personnel. Proper hazardous materials management minimizes the risk of a release of hazardous materials to groundwater at PGDP.

7. INSPECTION SCHEDULE

Due to the nature and extent of the types of controls, inspections of each system for control of groundwater pollution are unique to each type of activity. Inspection forms are driven by the SPCC Plan (LATA Kentucky 2011b); the hazardous waste facility permit; and the solid waste facility permit. Pursuant to each of those requirements, the checklists include the date, name of inspector, what the inspection pertains to, observations, and any actions taken. An example inspection form for oil-containing tanks, containers, and equipment is shown on the following page.

EXAMPLE FORM

Oil-Containing Tanks, Containers, and Equipment

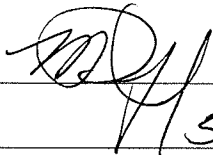
Container Type (tank, drum, etc.)	Responsible Person/Phone #	Size	Contents	Use	Material of Construction	Location (provide map if available)
1.						
2.						
3.						
4.						
5.						
DIRECTIONS: Please complete both top and bottom portions for each item containing 55 gal or greater of oil or oil by-products.						
Secondary Containment (describe)	Inspections for Leaks (describe)	Integrity/Leak Tests (describe)	Spill Controls/Materials (describe)	Procedure # for Transfer of Contents	Spill History (describe releases and to whom they were reported)	
1.						
2.						
3.						
4.						
5.						

Attach additional sheet if needed.

8. CERTIFICATION STATEMENT

DOCUMENTATION IDENTIFICATION: *Groundwater Protection Plan for the Paducah Gaseous Diffusion Plant, Paducah, Kentucky,*
PAD-PROJ-0018/R2

I, Mark J. Duff, LATA Environmental Services of Kentucky, LLC, Project Manager, certify that this Groundwater Protection Plan complies with the requirements of 401 KAR 5:037. I have read the terms of the plan and will implement its provisions.

Signature:  _____
Date: 5-22-15

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9. REVIEW LOCATION FOR GROUNDWATER PROTECTION PLAN

Public inspection of GPPs is a provision of 401 *KAR* 5:037 § 4(7). This plan is made available for access at the following Web site: http://www.latakentucky.com/public_documents.asp. Hard copies may be requested through the Paducah Environmental Information Center at the address listed below.

115 Memorial Drive
Paducah, Kentucky 42001
Phone: (270) 554-3004
Hours: Monday through Friday from 8 a.m. to noon

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APPENDIX A

U.S. DEPARTMENT OF ENERGY FACILITIES AND AREAS

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ACRONYMS

BC	Bayou Creek
D&D	decontamination and decommissioning
DGW	downgradient well
DMSA	U.S. Department of Energy Material Storage Area
ER	environmental restoration
KOW	Kentucky Ordnance Works
KPDES	Kentucky Pollutant Discharge Elimination system
LBC	Little Bayou Creek
MW	monitoring well
NA	not applicable
RCW	recirculating cooling water
RCRA	Resource Conservation and Recovery Act
SWMU	solid waste management unit
TSCA	Toxic Substances Control Act of 1976
UST	underground storage tank
WAG	waste area group
WKWMA	West Kentucky Wildlife Management Area

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Table A.1. U.S. Department of Energy Facilities and Areas

Name	Location (Plant Grid/Off-Site)	Operational Status	Status (SWMU/WAG) if Applicable	Surface Drainage	Subsurface Drainage	Monitoring (Surface)	Monitoring (Groundwater)
C-100 Administration Building	D-6	Active	138, 166	KPDES Outfall BC/009	KPDES Outfall	KPDES Outfall	NA
C-100 South Lawn South Side Berms	D-6	Active	138	KPDES Outfall/BC-009	NA	KPDES Outfall	NA
C-102 Hospital & Office Trailer Complex	D-5	Active	532	KPDES Outfall BC/009	KPDES Outfall	KPDES Outfall	NA
C-103 DOE Office Building	D-7	Active	193	KPDES Outfall/BC	KPDES Outfall	KPDES Outfall	NA
C-200 Guard & Fire Headquarters	D-5	Active	NA	KPDES Outfall BC/009	KPDES Outfall	KPDES Outfall	NA
C-200 (USTs)	D-5	Inactive	72/4	KPDES Outfall/BC-008	NA	KPDES Outfall	MW's
C-201 Emergency Equipment Storage Building	D-5	Active	NA	KPDES Outfall BC/009	KPDES Outfall	KPDES Outfall	NA
C-202 Guard Training Building	D-5	Active	NA	KPDES Outfall BC/009	KPDES Outfall	KPDES Outfall	NA
C-203 Emergency Vehicle Shelter	D-5	Active	NA	KPDES Outfall BC/009	KPDES Outfall	KPDES Outfall	NA
C-204 Disintegrator Building (Shredder)	D-5	Active	479	NA	NA	NA	NA
C-205 Respirator Issue Building	D-5	Active	NA	KPDES Outfall BC/009	KPDES Outfall	KPDES Outfall	NA
C-206 Pumper Drafting Pit	C-5	Active	NA	KPDES Outfall BC/016	KPDES Outfall	KPDES Outfall	NA
C-206 A-B Storage Trailer/Smoke Training	C-5	Active	NA	KPDES Outfall BC/016	KPDES Outfall	KPDES Outfall	NA
C-207 Fire Training Facility	C-5	Active	NA	KPDES Outfall BC/016	KPDES Outfall	KPDES Outfall	NA
C-212 Office Building/Guard Post	D-5	Active	NA	KPDES Outfall BC/009	KPDES Outfall	KPDES Outfall	NA
C-214 Post 57	Off-Site	Active	NA	BC	NA	BC Sampling	NA
C-215 Portals 18 & 19	D-5	Active	NA	KPDES Outfall BC/009	KPDES Outfall	KPDES Outfall	NA

Table A.1. U.S. Department of Energy Facilities and Areas (Continued)

Name	Location (Plant Grid/Off-Site)	Operational Status	Status (SWMU/WAG) if Applicable	Surface Drainage	Subsurface Drainage	Monitoring (Surface)	Monitoring (Groundwater)
C-216 Post 47	E-3	Active	NA	KPDES Outfall LC/002	KPDES Outfall	KPDES Outfall	NA
C-217 Slab Only	D-1	Active	NA	KPDES Outfall BC/001	KPDES Outfall	KPDES Outfall	NA
C-218 Outdoor Firing Range (PGDP)	B-5	Active	181/21	KPDES Outfall/BC-008	NA	KPDES Outfall	NA
C-218-B Outdoor Firing Range (WKWMA)	Off-Site	Active	180/21	BC	NA	BC Sampling	NA
C-220 Power Distribution System/Phone System	Off-Site	Active	NA	LC	NA	LC Sampling	NA
C-223 Post 49	D-8	Active	NA	KPDES Outfall BC/017	KPDES Outfall	KPDES Outfall	NA
C-224 Post 15	D-5	Active	NA	KPDES Outfall BC/009	KPDES Outfall	KPDES Outfall	NA
C-225 Post 48	E-4	Active	NA	KPDES Outfall LC/010	KPDES Outfall	KPDES Outfall	NA
C-229 Post 229	C-5	Active	NA	KPDES Outfall BC/016	KPDES Outfall	KPDES Outfall	NA
C-230 A-J Water Systems	Off-Site	Active	NA	BC	NA	BC Sampling	NA
C-232 A-E Gaseous Systems	Off-Site	Active	NA	BC	NA	BC Sampling	NA
C-233 Post 233 Guard Shack	B-5	Active	NA	KPDES Outfall BC/008	KPDES Outfall	KPDES Outfall	NA
C-300 Central Control Building/Instrumentation Tunnels	D-5	Active	NA	KPDES Outfall BC/009	KPDES Outfall	KPDES Outfall	NA
C-301 Fire Training/Storage Building	E-4	Inactive	223	KPDES Outfall/LBC-002, 010	NA	LBC Sampling	NA
C-302 Operations Division Data Center	D-5	Active	NA	KPDES Outfall BC/009	KPDES Outfall	KPDES Outfall	NA
C-303 Supervisor Control & Data System Building	D-5	Active	NA	KPDES Outfall BC/009	KPDES Outfall	KPDES Outfall	NA
C-304 Train & Cascade Office Building	D-5	Active	163	KPDES Outfall BC/009	KPDES Outfall	KPDES Outfall	NA
C-310 Polychlorinated Biphenyl (PCB) Soil Contamination (West Side)	D-5	Inactive	156/19	KPDES Outfall/BC-009	KPDES Outfall	KPDES Outfall	NA

Table A.1. U.S. Department of Energy Facilities and Areas (Continued)

Name	Location (Plant Grid/ Off-Site)	Operational Status	Status (SWMU/WAG) if Applicable	Surface Drainage	Subsurface Drainage	Monitoring (Surface)	Monitoring (Groundwater)
C-310 Purge & Product Building	D-5	Active	230-231/DMSA	KPDES Outfall/ BC-009/ LBC-010, 011	KPDES Outfall	KPDES Outfall	NA
C-315 Surge & Waste Building	E-5	Active	NA	KPDES Outfall/ LBC-010, 011	KPDES Outfall	KPDES Outfall	NA
C-320 Communication Building/Temporary Storage	D-5	Active	NA	KPDES Outfall BC/009	KPDES Outfall	KPDES Outfall	NA
C-331 PCB Soil Contamination (Southeast Side)	E-5	Inactive	154/19	KPDES Outfall/ LBC-010, 011	KPDES Outfall	KPDES Outfall	NA
C-331 PCB Soil Contamination (West Side)	E-5	Inactive	153/19	KPDES Outfall/ BC-009	KPDES Outfall	KPDES Outfall	NA
C-331 RCW Leak (East Side)	E-5	Inactive	177/21	KPDES Outfall/ LBC-010, 011	KPDES Outfall	KPDES Outfall	NA
C-331 RCW Leak (Northwest Side)	E-5	Inactive	176/21	KPDES Outfall/ BC-008	KPDES Outfall	KPDES Outfall	NA
C-331 Process Building	E-5	Active	235-255/DMSAs	KPDES Outfall/ LBC-010, 011	NA	KPDES Outfall	NA
C-333 PCB Soil Contamination (North Side)	E-5	Inactive	135/16	KPDES Outfall/ LBC-010, 011	KPDES Outfall	KPDES Outfall	NA
C-333 PCB Soil Contamination (West Side)	E-6	Inactive	155/19	KPDES Outfall/ BC-009	KPDES Outfall	KPDES Outfall	NA
C-333 PCB Waste Staging Area	E-6	Active	37	KPDES Outfall/ LBC-010, 011	KPDES Outfall	KPDES Outfall	NA
C-333-A Sewage Treatment Aeration Tank	E-6	Active	191	KPDES Outfall/ LBC-012	KPDES Outfall	KPDES Outfall	NA
C-333 Process Building	E-6	Active	256-296/DMSAs	KPDES Outfall/ LBC-010, 011	NA	KPDES Outfall	NA
C-335 Process Building	D-3	Active	297-307/DMSAs	KPDES Outfall/ BC-001, 015	NA	KPDES Outfall	NA
C-337-A Sewage Treatment Aeration Tank	E-3	Active	190/D-13	KPDES Outfall/ BC-001, LBC-002	KPDES Outfall	KPDES Outfall	NA

Table A.1. U.S. Department of Energy Facilities and Areas (Continued)

Name	Location (Plant Grid/Off-Site)	Operational Status	Status (SWMU/WAG) if Applicable	Surface Drainage	Subsurface Drainage	Monitoring (Surface)	Monitoring (Groundwater)
C-337 Process Building	E-3	Active	308-348/DMSAs	KPDES Outfall/ LBC-002, 010, 011	NA	KPDES Outfall	NA
C-340 Complex (A-Powder Bldg, B-Metals Bldg., C-Slag Bldg., D-Magnesium Storage Bldg., and E-Emergency Power for Critical Alarms)	E-5	Inactive	477	KPDES Outfall/ LBC-010, 011	NA	KPDES Outfall	NA
C-340 Hydraulic System	E-5	Inactive	101/5	KPDES Outfall/ LBC-010, 011	NA	KPDES Outfall	NA
C-340-PCB Spill Site	E-5	Inactive	74/23	KPDES Outfall/ LBC-010, 011	NA	KPDES Outfall	NA
C-342 and C-342-A Ammonia Dissociator Storage Facility and Addition	E-5	Inactive	D&D	KPDES Outfall/ LBC-010, 011	KPDES Outfall	KPDES Outfall	NA
C-342-B Ammonia Dissociator Tank Shell	E-5	Inactive	D&D	KPDES Outfall/ LBC-010, 011	KPDES Outfall	KPDES Outfall	NA
C-350 Drying Agent Storage Building	D-4	Active	NA	KPDES Outfall/ BC-001, 008	KPDES Outfall	KPDES Outfall	NA
C-360 Toll Trans & Sampling Building	E-4	Active	NA	KPDES Outfall/ LBC-002	KPDES Outfall	KPDES Outfall	NA
C-370-E Inactive Water Quality Monitoring Station (Little Bayou Creek)	Off-Site	Inactive	NA	LBC	NA	LBC Sampling	NA
C-370-W Inactive Water Quality Monitoring Station (Big Bayou Creek)	Off-Site	Inactive	199/18	BC	NA	BC Sampling	NA
C-375-N North-South Diversion Ditch (Inside Security Fence)	D-3	Active	59/18	KPDES Outfall/ Outfall/BC-001	NA	KPDES Outfall	NA
C-375-N1 North-South Diversion Ditch (Outside Security Fence)	D-1	Active	58/18	KPDES Outfall/ BC-001	NA	KPDES Outfall	NA
C-375-S7 KPDES Outfall Ditch 017 Flume-Soil Backfill	D-8	Inactive	164/19	KPDES Outfall/ BC-017	NA	KPDES Outfall	NA
C-375-W8 Oil Control Dam KPDES 015	B-4	Active	68/18	KPDES Outfall/ BC-015	NA	KPDES Outfall	NA
C375-W9 Oil Control Dam KPDES 001	B-2	Active	69/18	KPDES Outfall/ BC-001	NA	KPDES Outfall	NA
C-375-17 Plant Sur. Runoff Outfall	D-8	Active	164	KPDES Outfall/ BC-017	NA	KPDES Outfall	NA

Table A.1. U.S. Department of Energy Facilities and Areas (Continued)

Name	Location (Plant Grid/ Off-Site)	Operational Status	Status (SWMU/WAG) if Applicable	Surface Drainage	Subsurface Drainage	Monitoring (Surface)	Monitoring (Groundwater)
C-375-19 Landfill Runoff Outfall	Off-Site	Active	208	KPDES Outfall/ LBC-019	NA	KPDES Outfall	NA
C-400-L Storm Water Lift Station	D-3	Active	98/6	KPDES Outfall/ BC-008	NA	NA	DGW
C-400 Degreaser Solvent Recovery Unit	D-4	Inactive/ RCRA Closure	54	KPDES Outfall/ BC-001, 008	NA	KPDES Outfall	DGW
C-400 Gold Dissolver Storage Tank	D-4	Inactive	48	KPDES Outfall/ BC-001, 008	NA	KPDES Outfall	DGW
C-400 NaOH (sodium hydroxide) Precipitation Tank	D-4	Inactive	53	KPDES Outfall/ BC-001, 008	NA	KPDES Outfall	DGW
C-400 Technetium-99 Storage Tank Pad	D-4	Inactive	47/6	KPDES Outfall/ BC-001, 008	NA	KPDES Outfall	DGW
C-400 TCE Leak Site	D-4	Inactive	11/6	LBC	KPDES Outfall	LBC Sampling	DGW
C-400-B Waste Solution Storage Tank	D-4	RCRA Closure	49	NA	NA	NA	NA
C-400-C Nickel Stripper Evaporation Tank	D-4	RCRA Closure	50	NA	NA	NA	DGW
C-402 Lime House	D-4	Inactive	480	NA	NA	NA	NA
C-401 Transfer Line/Neutralizing System	D-3	Inactive	26/14	KPDES Outfall/ BC-001, 015	KPDES Outfall	KPDES Outfall	NA
C-403 Neutralizing Pit	D-4	Inactive	40/6	KPDES Outfall/ BC-008	NA	Pre-Discharge/ KPDES Outfall	NA
C-404 Low-Level Radioactive Waste Burial Ground	C-3	RCRA Closure	3/22	KPDES Outfall/ BC-015	Collected for Treatment	NA	DGW
C-404-A Sump	C-3	RCRA Post- Closure	3/22	KPDES Outfall/ BC-015	Collected for Treatment	Leachate is sampled following treatment	DGW
C-405 Incinerator	D-4	Inactive	55/11	KPDES Outfall/ BC-015	NA	KPDES Outfall	NA
C-407 Nitric Acid Storage Tank	D-4	Active	NA	KPDES Outfall/ BC-008	NA	KPDES Outfall	NA
C-408 50-ton Truck Scale	D-4	Active	NA	KPDES Outfall/ BC-008	NA	KPDES Outfall	NA

Table A.1. U.S. Department of Energy Facilities and Areas (Continued)

Name	Location (Plant Grid/ Off-Site)	Operational Status	Status (SWMU/WAG) if Applicable	Surface Drainage	Subsurface Drainage	Monitoring (Surface)	Monitoring (Groundwater)
C-409 Stabilization Building	D-4	Active	46, 354,355/ DMSA	KPDES Outfall/ BC-008	NA	KPDES Outfall	NA
C-410 Feed Plant	D-4	Inactive	478	KPDES Outfall/ BC-001/008; LBC-010	NA	KPDES Outfall	NA
C-410-A Hydrogen Holder	D-4	Inactive	481	KPDES Outfall/ BC-001/008; LBC-010	NA	KPDES Outfall	NA
C-410-B Sludge Lagoon	D-4	Inactive	19/11	KPDES Outfall/ BC-001/008; LBC-010	NA	KPDES Outfall	NA
C-410-C Hydrofluoric Acid Neutralization Building	D-4	Inactive	41/11	KPDES Outfall/ BC-001/008; LBC-010	NA	KPDES Outfall	NA
C-410-E HF Emergency Holding Pond	D-4	Inactive	20/10	KPDES Outfall/ BC-001/008; LBC-010	NA	KPDES Outfall	NA
C-410-E HF Vent-Surge Protection Tank	D-4	Inactive	169/16	KPDES Outfall/ BC-001/008; LBC-010	NA	KPDES Outfall	NA
C-410-F, G, H Hydrofluoric Acid Storage Buildings	D-4	Inactive	478	KPDES Outfall/ BC-001/008; LBC-010	NA	KPDES Outfall	NA
C-410-I Ash Receiver Shelter	D-4	Inactive	478	KPDES Outfall/ BC-001/008; LBC-010	NA	KPDES Outfall	NA
C-410-J Hydrofluoric Acid Storage Building (East)	D-4	Inactive	478	KPDES Outfall/ BC-001/008; LBC-010	NA	KPDES Outfall	NA
C-411 Cell Maintenance Building	D-4	Inactive	D&D Program	KPDES Outfall BC-001/008; LBC-010	NA	KPDES Outfall	NA
C-411-A Staging Area	D-4	Inactive	D&D Program	KPDES Outfall/ BC-001/008; LBC-010	NA	KPDES Outfall	NA

Table A.1. U.S. Department of Energy Facilities and Areas (Continued)

Name	Location (Plant Grid/ Off-Site)	Operational Status	Status (SWMU/WAG) if Applicable	Surface Drainage	Subsurface Drainage	Monitoring (Surface)	Monitoring (Groundwater)
C-412-T01-T014 D&D/DMSA Trailers	D-5	Inactive	D&D Program	KPDES Outfall/ BC-001/008; LBC-010	NA	KPDES Outfall	NA
C-415 Feed Plant Storage Building	D-4	Inactive	482	KPDES Outfall/ BC-001/008; LBC-010	NA	KPDES Outfall	NA
C-416 Equipment Cleaning Facility (Decontamination Pad)	E-4	Inactive	388/Future D&D Program	KPDES Outfall/ BC-008	NA	KPDES Outfall	NA
C-417 Laydown Area	E-4	Active	NA	KPDES Outfall/ BC-008	NA	KPDES Outfall	NA
C-420 Uranium Tetrafluoride Green Salt Plant	D-4	Inactive	478	KPDES Outfall/ BC-001/008; LBC-010	NA	KPDES Outfall	NA
C-420 PCB Spill Site	D-4	Inactive	78/6	KPDES Outfall/ BC-008	NA	KPDES Outfall	NA
C-531 Switch House/Switchyard/Fire Valve House # 1-2	E-5	Active	82	KPDES Outfall/ LBC-010, 011	NA	KPDES Outfall	NA
C-532 Relay House	E-5	Active	NA	KPDES Outfall/ LBC-010, 011	NA	KPDES Outfall	NA
C-533 Switch House/Switchyard/Fire Valve House # 1-4	E-6	Active	83	KPDES Outfall/ LBC-010, 011	NA	KPDES Outfall	NA
C-535 Switch House/Switchyard./Fire Valve House # 1-2, Test Shop	D-2	Active	84, 360	KPDES Outfall/ BC-001	NA	KPDES Outfall	NA
C-536 Relay House	D-2	Active	NA	KPDES Outfall/ BC-001	NA	KPDES Outfall	NA
C-537 Switch House, Switchyard, Fire Valve House # 1-4, Test Shop	E-2	Active	85	KPDES Outfall/ LBC-002	NA	KPDES Outfall	NA
C-540 PCB Spill Site	E-5	Inactive	80/23	KPDES Outfall/ LBC-010, 011	NA	KPDES Outfall	NA
C-541 PCB Spill Site	D-2	Inactive	81/23	KPDES Outfall/ BC-003	NA	KPDES Outfall	NA
C-600 Steam Plant	D-4	Active	NA	KPDES Outfall/ BC-001, 008, 015	NA	KPDES Outfall	NA

Table A.1. U.S. Department of Energy Facilities and Areas (Continued)

Name	Location (Plant Grid/ Off-Site)	Operational Status	Status (SWMU/WAG) if Applicable	Surface Drainage	Subsurface Drainage	Monitoring (Surface)	Monitoring (Groundwater)
C-601 A-D Nitrogen General Building/ Steam Plant Fuel Storage	D-4	Active	97	KPDES Outfall/ BC-001, 008, 015	NA	KPDES Outfall	NA
C-602 Coal Storage Yard	D-4	Active	NA	KPDES Outfall/ BC-001, 008, 015	NA	KPDES Outfall	NA
C-603 Nitrogen Complex (A, B, C, D, H, and I)	D-4	Inactive	483	NA	NA	NA	NA
C-604 Utilities Maintenance Building	D-4	Active	NA	KPDES Outfall/ BC-001, 008, 015	NA	KPDES Outfall	NA
C-605 Subst Building	D-4	Active	NA	KPDES Outfall/ BC-001, 008, 015	NA	KPDES Outfall	NA
C-606 Coal Crusher Building	D-4	Active	NA	KPDES Outfall/ BC-001, 008, 015	NA	KPDES Outfall	NA
C-607 Emergency Air Compressor General Building	D-4	Active	NA	KPDES Outfall/ BC-001, 008, 015	NA	KPDES Outfall	NA
C-611 PCB Spill Site	B-6	Inactive	79/23	BC	NA	BC Sampling	NA
C-611 UST-50-Gal Gas Tank (East)	B-6	Inactive	131/7	BC	NA	BC Sampling	NA
C-611 UST-550-Gal Gas Tank (West)	B-6	Inactive	130/7	BC	NA	BC Sampling	NA
C-611 UST-1000-Gal Diesel/Gas Tank (Southeast)	B-6	Inactive	134/7	BC	NA	BC Sampling	NA
C-611 UST-2000-Gal Oil Tank (North)	B-6	Inactive	132/7	BC	NA	BC Sampling	NA
C-611 UST-Unknown Size, Grouted Tank (South)	B-6	Inactive	133/7	NA	NA	NA	NA
C-611-M.N. Conc. San. Water S. Tank	B-6	Inactive	484	BC	NA	BC Sampling	NA
C-611-N S. Conc. San. Water S. Tank	B-6	Inactive	485	BC	NA	BC Sampling	NA

Table A.1. U.S. Department of Energy Facilities and Areas (Continued)

Name	Location (Plant Grid/Off-Site)	Operational Status	Status (SWMU/WAG) if Applicable	Surface Drainage	Subsurface Drainage	Monitoring (Surface)	Monitoring (Groundwater)
C-612 Pilot Pump-and-Treat	B-1	Active	NA	KPDES Outfall/BC-001	KPDES Outfall	KPDES Outfall	MW's
C-612-A Pump-and-Treat Decontamination Pad	B-2	Active	NA	KPDES Outfall/BC-001	KPDES Outfall	KPDES Outfall	NA
C-612-B Underground Storm Shelter	B-1	Active	NA	KPDES Outfall/BC-001	KPDES Outfall	KPDES Outfall	NA
C-612-T-01 Through C-612-T-04 Pump and Treat (Trailers) Office, Change Facilities, and Laboratory	B-1	Active	NA	KPDES Outfall/BC-001	KPDES Outfall	KPDES Outfall	NA
C-612-T05-T12 Sealand Storage Trailer	B-1	Active	NA	KPDES Outfall/BC-001	KPDES Outfall	KPDES Outfall	NA
C-613 Scrap Yard Sedimentation Basin	B-2	Active	NA	KPDES Outfall/BC-001	NA	KPDES Outfall	NA
C-613-A Process and Office Trailer	B-2	Active	NA	KPDES Outfall/BC-001	NA	KPDES Outfall	NA
C-613-B Soil Borrow Stockpile	B-2	Active	NA	BC	NA	BC Sampling	NA
C-614-A Northeast Plume Equipment Pad	G-2	Active	NE Groundwater Contaminant Plume	LBC	NA	LBC Sampling	NA
C-614-B Northeast Plume Equipment Vault	G-2	Active	Northeast Groundwater Contaminant Plume	LBC	NA	LBC Sampling	NA
C-614-C Northeast Plume Equipment Vault	G-2	Active	Northeast Groundwater Contaminant Plume	LBC	NA	LBC Sampling	NA
C-615 Sewage Disposal Plant, Primary Settling Tank (A), Final Settling Tank (B), Oil Control Building (C), Digester (D), Trickling Filter (E), Trickling Filter Sludge Beds (F)	C-5	Active	38	KPDES Outfall/BC-004, 008	NA	KPDES Outfall	NA
C-615-G Sewage Lift Station	D-5	Active	38	KPDES Outfall/BC-001/008; LBC-010	NA	KPDES Outfall	NA

Table A.1. U.S. Department of Energy Facilities and Areas (Continued)

Name	Location (Plant Grid/ Off-Site)	Operational Status	Status (SWMU/WAG) if Applicable	Surface Drainage	Subsurface Drainage	Monitoring (Surface)	Monitoring (Groundwater)
C-615-H Sewage Lift Station	D-3	Active	38	KPDES Outfall/ BC-001/008	NA	KPDES Outfall	NA
C-615-H1 Sewage Lift Station	E-3	Active	38	KPDES Outfall/ LBC-002, 010	NA	KPDES Outfall	NA
C-615-H2 Sewage Lift Station	D-3	Active	38	KPDES Outfall/ BC-001/008	NA	KPDES Outfall	NA
C-615-H3 Sewage Lift Station	F-4	Active	38	KPDES Outfall/ LBC-002, 010	NA	KPDES Outfall	NA
C-615-H4 & 4A Sewage Lift Station	D-7	Active	38	KPDES Outfall/ BC-009	NA	KPDES Outfall	NA
C-615-H5 Sewage Lift Station	E-4	Active	38	KPDES Outfall/ LBC-002, 010	NA	KPDES Outfall	NA
C-615-H6 Sewage Lift Station	C-2	Active	38	KPDES Outfall/ BC-001	NA	KPDES Outfall	NA
C-615-H7 Sewage Lift Station	D-3	Active	38	KPDES Outfall/ BC-001/008	NA	KPDES Outfall	NA
C-615-H8 Sewage Lift Station	E-4	Active	38	KPDES Outfall/ LBC-002, 010	NA	KPDES Outfall	NA
C-615-J Lift Station (Abandoned)	D-5	Inactive	38	NA	NA	NA	NA
C-615-K Chromate Station (Abandoned)	D-3	Inactive	38	NA	NA	NA	NA
C-615 Oil Control Monitoring Station (L), Oil Control Structure (M)	B-4	Active	38	KPDES Outfall/ BC-004/008	NA	KPDES Outfall	NA
C-615-N Oil Containment Lagoon	B-5	Active	38	KPDES Outfall/ BC-004/008	NA	KPDES Outfall	NA
C-615-O Oil Control Building/T01-T05 Storage Trailers	C-4	Active	38	KPDES Outfall/ BC-004/008	NA	KPDES Outfall	NA
C-616 Chemical Feed Building (A), Clarifier East (B), Lift Station (C), Sludge Vault & Valve Pit (D)	D-2	Active	42	KPDES Outfall/ BC-001	NA	KPDES Outfall	NA
C-616-E Sludge Lagoon	D-1	Inactive	17	KPDES Outfall/ BC-001	NA	KPDES Outfall	NA
C-616-F Full Flow Lagoon	C-1	Active	42	KPDES Outfall/ BC-001	NA	KPDES Outfall	NA

Table A.1. U.S. Department of Energy Facilities and Areas (Continued)

Name	Location (Plant Grid/ Off-Site)	Operational Status	Status (SWMU/WAG) if Applicable	Surface Drainage	Subsurface Drainage	Monitoring (Surface)	Monitoring (Groundwater)
C-616 (G-Q) Tank Farm	D-2	Active	42	KPDES Outfall/ BC-001	NA	KPDES Outfall	NA
C-617 Effluent Control Station (A). Effluent Control Lagoon (B)	E-5	Active	162, 171	KPDES Outfall/ LBC-002, 010, 011	NA	KPDES Outfall	NA
C-617-C Outfall 013 Wetland & Pond	F-8	Active	61	KPDES Outfall/ LBC-013	NA	KPDES Outfall	NA
C-617-A San Water Line-Soil Backfill	E-5	Active	162	KPDES Outfall/ LBC-010, 011	NA	KPDES Outfall	NA
C-620 Air Compressor Room	E-5	Active	NA	KPDES Outfall/ LBC-010, 011	NA	KPDES Outfall	NA
C-631 (1-16) Pump House/Cooling Towers/Trailer Complex	E-4	Active	86	KPDES Outfall/ LBC-002, 010, 011	NA	KPDES Outfall	NA
C-632-B H ₂ SO ₄ Storage Tank	D-4	Inactive	76/5	KPDES Outfall/ BC-001	NA	KPDES Outfall	NA
C-633 (1-6) Pump House/Cooling Towers	E-7	Active	87	KPDES Outfall/ LBC-010, 011, 012	NA	KPDES Outfall	NA
C-633 PCB Spill Site	E-7	Inactive	75/5	KPDES Outfall/ LBC-012	NA	KPDES Outfall	NA
C-634-B H ₂ SO ₄ Storage Tank	E-7	Inactive	77/10	KPDES Outfall/ LBC-012	NA	KPDES Outfall	NA
C-635 (1-6) Pump House & Piping/ Cooling Towers	D-3	Active	88	KPDES Outfall/ BC-001	NA	KPDES Outfall	NA
C-637 (1-6) Pump house/Cooling Towers/Health Office Trailer	E-3	Active	89, 189	KPDES Outfall/ LBC-002, 010, 011	NA	KPDES Outfall	NA
C-709 Plant Laboratory Annex	D-5	Active	NA	KPDES Outfall/ BC-009	NA	KPDES Outfall	NA
C-710 Technical Services Building	D-5	Active	192, 489	KPDES Outfall/ BC-009	NA	KPDES Outfall	NA
C-710 Underground Gasoline Tanks	D-5	Inactive	73/4	KPDES Outfall/ BC-008	NA	KPDES Outfall	NA
C-711 Gas Manifold	D-5	Active	NA	KPDES Outfall/ BC-009	NA	KPDES Outfall	NA

Table A.1. U.S. Department of Energy Facilities and Areas (Continued)

Name	Location (Plant Grid/ Off-Site)	Operational Status	Status (SWMU/WAG) if Applicable	Surface Drainage	Subsurface Drainage	Monitoring (Surface)	Monitoring (Groundwater)
C-712 Acid Neutralization Pit	D-5	Active	28	KPDES Outfall/ BC-009	NA	KPDES Outfall	NA
C-720 Maintenance and Stores Building	C-5	Active	356-359/DMSA	KPDES Outfall/ BC-009	NA	KPDES Outfall	NA
C-720 Compressor Pit Water Storage Tank	D-5	Inactive	31/9	KPDES Outfall/ BC-008	NA	KPDES Outfall	NA
C-720 Inactive TCE Degreaser	C-5	Inactive	141	KPDES Outfall/ BC-008, 009	NA	KPDES Outfall	NA
C-720 Underground Petroleum Naphtha Pipeline	D-4	Inactive	90	NA	NA	NA	NA
C-721 Gas Manifold Storage	D-5	Active	NA	KPDES Outfall/ BC-009	NA	KPDES Outfall	NA
C-722 Acid Neutralization Pit	D-5	Active	27	KPDES Outfall/ BC-009	NA	KPDES Outfall	NA
C-724 (A-D) Carpentry/Paint/Lumber Shops/Storage	C-5	Active	178	KPDES Outfall/ BC-008, 015	NA	KPDES Outfall	NA
C-725 Paint Shop Equipment Storage	C-4	Active	NA	KPDES Outfall/ BC-008, 015	NA	KPDES Outfall	NA
C-726 Sandblast Building	D-4	Active	172	KPDES Outfall/ BC-008, 015	NA	KPDES Outfall	NA
C-727 Low Level Waste Storage	D-5	Active	361	KPDES Outfall/ BC-009	NA	KPDES Outfall	NA
C-728 Motor Cleaning Facility	D-4	Inactive	32/33	KPDES Outfall/ BC-008	NA	KPDES Outfall	NA
C-729 Acetylene Building Drain Pits	D-5	Active	170	KPDES Outfall/ BC-008,009	NA	KPDES Outfall	NA
C-730 Maintenance Service Building	C-5	Active	NA	KPDES Outfall/ BC-009	NA	KPDES Outfall	NA
C-730-A-B Underground Storm Shelter/ Wooden Storage Shed	C-5	Active	NA	KPDES Outfall/ BC-009	NA	KPDES Outfall	NA
C-730-T01- T02 Office Trailer	C-5	Active	NA	KPDES Outfall/ BC-009	NA	KPDES Outfall	NA
C-730-T05-T06 Office Trailer	C-5	Active	NA	KPDES Outfall/ BC-009	NA	KPDES Outfall	NA

Table A.1. U.S. Department of Energy Facilities and Areas (Continued)

Name	Location (Plant Grid/Off-Site)	Operational Status	Status (SWMU/WAG) if Applicable	Surface Drainage	Subsurface Drainage	Monitoring (Surface)	Monitoring (Groundwater)
C-730-T08 Office Trailer	C-5	Active	NA	KPDES Outfall/BC-009	NA	KPDES Outfall	NA
C-731 RR Repair Equip Storage Building	C-4	Active	NA	KPDES Outfall/BC-008	KPDES Outfall	Pre-Discharge/KPDES Outfall	NA
C-732 Maintenance Materials Storage Building	C-4	Active	NA	KPDES Outfall/BC-008	KPDES Outfall	Pre-Discharge/KPDES Outfall	NA
C-733 Hazardous Waste Storage Area	C-4	Active	44	KPDES Outfall/BC-008	KPDES Outfall	Pre-Discharge/KPDES Outfall	NA
C-740 Material Yard	C-5	Active	136	KPDES Outfall/BC-009	NA	KPDES Outfall	NA
C-741 Mobile Equipment Building	C-5	Active	NA	KPDES Outfall/C-009	NA	KPDES Outfall	NA
C-742 Cylinder Storage Building	C-5	Active	NA	KPDES Outfall/BC-009	NA	KPDES Outfall	NA
C-743 Office Trailer Complex	C-5	Active	NA	KPDES Outfall/BC-009, 016	NA	KPDES Outfall	NA
C-743-B & C-743-C Underground Storm Shelter	C-4	Active	161	KPDES Outfall/BC-008, 016	NA	KPDES Outfall	NA
C-743-T01-T04 Shower Trailer	C-5	Active	161	KPDES Outfall/BC-008, 016	NA	KPDES Outfall	NA
C-743-17 Field Support Lab Trailer	C-5	Active	569	KPDES Outfall	NA	KPDES Outfall	NA
C-743-T17A Storage Shed	C-5	Active	569	KPDES Outfall/BC-008, 016	NA	KPDES Outfall	NA
C-744 Material Handling Building	C-4	Active	NA	KPDES Outfall/BC-008	KPDES Outfall	Pre-Discharge/KPDES Outfall	NA
C-745-A-SW Cylinder Storage Yard SW	C-5	Active	212	KPDES Outfall/BC-015	NA	KPDES Outfall	NA
C-745 Cylinder Yard Spoils Area-PCB Soil Contamination	L-12	Inactive	160/19	KPDES Outfall/LBC-012, 013	NA	KPDES Outfall	NA
C-745-B1 Cylinder Storage Yard	C-3	Active	NA	KPDES Outfall	NA	KPDES Outfall	NA
C-745-B-T01 Sample/Control Trailer	C-3	Active	NA	KPDES Outfall	NA	KPDES Outfall	NA
C-745-B-T02 Rectifier Trailer (Lasagna)	C-3	Active	NA	KPDES Outfall	NA	KPDES Outfall	NA

Table A.1. U.S. Department of Energy Facilities and Areas (Continued)

Name	Location (Plant Grid/ Off-Site)	Operational Status	Status (SWMU/WAG) if Applicable	Surface Drainage	Subsurface Drainage	Monitoring (Surface)	Monitoring (Groundwater)
C-745-C Cylinder Yard	C-3	Active	Low-Level Radiologic Materials Storage	KPDES Outfall	KPDES Outfall	KPDES Outfall	NA
C-745-F Cylinder Yard	D-7	Active	Low-Level Radiologic Materials Storage	KPDES Outfall	KPDES Outfall	KPDES Outfall	NA
C-745-G Cylinder Yard	E-7	Active	Low-Level Radiologic Materials Storage	KPDES Outfall	KPDES Outfall	KPDES Outfall	NA
C-745-G1 Basin Lift Station	E-7	Active	NA	KPDES Outfall	KPDES Outfall	KPDES Outfall	NA
C-745-G2 – G5 Temp. Cyl. Paint Facility	E-7	Active	475,528	KPDES Outfall/ BC-001	KPDES Outfall	KPDES Outfall	NA
C-745-G-T01 Temp. Office Trailer	E-7	Active	NA	KPDES Outfall	KPDES Outfall	KPDES Outfall	NA
C-745-K Cylinder Storage Yard	D-7	Active	Low-Level Radiologic Materials Storage	KPDES Outfall	KPDES Outfall	KPDES Outfall	NA
C-745-L Cylinder Storage Yard	E-7	Active	Low-Level Radiologic Materials Storage	KPDES Outfall	KPDES Outfall	KPDES Outfall	NA
C-745-M Cylinder Storage Yard	D-8	Active	Low-Level Radiologic Materials Storage	KPDES Outfall	KPDES Outfall	KPDES Outfall	NA
C-745-N Cylinder Storage Yard	E-8	Active	Low-Level Radiologic Materials Storage	KPDES Outfall	KPDES Outfall	KPDES Outfall	NA
C-745-P Cylinder Storage Yard	E-8	Active	Low-Level Radiologic Materials Storage	KPDES Outfall	KPDES Outfall	KPDES Outfall	NA
C-745-S Cylinder Yard	D-8	Active	Low-Level Radiologic Materials Storage	KPDES Outfall	KPDES Outfall	KPDES Outfall	NA
C-745-T Cylinder Yard	E-9	Active	Low-Level Radiologic Materials Storage	KPDES Outfall	KPDES Outfall	KPDES Outfall	NA

Table A.1. U.S. Department of Energy Facilities and Areas (Continued)

Name	Location (Plant Grid/Off-Site)	Operational Status	Status (SWMU/WAG) if Applicable	Surface Drainage	Subsurface Drainage	Monitoring (Surface)	Monitoring (Groundwater)
C-746-A Building (RCRA/TSCA Storage)	C-2	Active	SWMUs 173-174 Permitted Storage	KPDES Outfall/BC-001, 017	KPDES Outfall	KPDES Outfall	NA
C-746-A Building (Smelter Area)	C-2	Inactive	463,464	KPDES Outfall/BC-001	KPDES Outfall	KPDES Outfall	NA
C-746-A Inactive PCB Transformer/Sump	C-2	Inactive	137/15	KPDES Outfall/BC-015	KPDES Outfall	KPDES Outfall	NA
C-746-A Septic Tanks	C-2	Inactive	196/15	NA	NA	NA	NA
C-746-A Loading Dock Sump	C-2	Inactive	NA	NA	KPDES Outfall 001	KPDES Outfall	NA
C-746-A1 UST	C-2	Inactive	139/15	NA	NA	NA	NA
C-746-A2 UST	C-2	Inactive	140/15	NA	NA	NA	NA
C-746-B Building (RCRA TSCA Storage)	C-2	Active	43, 39, 29	KPDES Outfall/BC-001	NA	KPDES Outfall	NA
C-746-C, C1 Clean Scrapyards	C-2	Active	15/24	KPDES Outfall/BC-001	NA	KPDES Outfall	DGW
C-746-D Classified Scrapyard	E-4	Active	16/5	KPDES Outfall/LBC-010, 011	To Be Determined	KPDES Outfall	NA
C-746-E, E1 Contaminated Scrapyards	C-2	Active	14/24	KPDES Outfall/BC-001	NA	KPDES Outfall	DGW
C-746-F Classified Scrap Burial Yard	C-2	Inactive	5/3	KPDES Outfall/BC-001, 015	NA	KPDES Outfall	DGW
C-746-G Electric Equipment Storage	E-4	Active	NA	KPDES Outfall/LBC-010, 011	NA	KPDES Outfall	NA
C-746-H1/H2 Pem Storage Slab	D-4	Active	NA	KPDES Outfall/BC-008	NA	Pre-Discharge/KPDES Outfall	NA
C-746-H3 Storage Pad	C-4	Active	159/9	KPDES Outfall/BC-008	NA	KPDES Outfall	NA
C-746-H4 Nickel Ingot Storage Pad	C-2	Active	531	KPDES Outfall 001	NA	KPDES Outfall	DGW
C-746-K Sanitary Landfill	B-6	Inactive	8/7	KPDES Outfall/BC-001	NA	KPDES Outfall	DGW
C-746-L Tractor Storage Area	Off-site	Active	208	KPDES Outfall/LBC-19	NA	KPDES Outfall	NA

Table A.1. U.S. Department of Energy Facilities and Areas (Continued)

Name	Location (Plant Grid/ Off-Site)	Operational Status	Status (SWMU/WAG) if Applicable	Surface Drainage	Subsurface Drainage	Monitoring (Surface)	Monitoring (Groundwater)
C-746-M PCB Waste Storage Area	C-4	Active	34	KPDES Outfall/ BC-008, 015	NA	KPDES Outfall	NA
C-746-P, P1 Scrap Metal Yards	C-2	Inactive	13/3	KPDES Outfall/ BC-001	NA	KPDES Outfall	DGW
C-746-P T01-T05 Scrap Metal Trailer	C-2	Active	NA	KPDES Outfall/ BC-001	NA	KPDES Outfall	NA
C-746-Q Hazardous and Low-Level Waste Storage Building	E-7	Active	46A	KPDES Outfall/ LBC-011, 012	NA	KPDES Outfall	NA
C-746-R Organic Waste Storage Area	D-7	Inactive	45	KPDES Outfall/ BC-017	NA	KPDES Outfall	NA
C-746-S Residential Landfill	Off-Site	Active	9	LBC	Leachate Collection System	LBC Sampling	DGW
C-746-T Inert Landfill	Off-Site	Inactive	10	LBC	NA	LBC Sampling	DGW
C-746-U Contained Landfill	Off-Site	Active	208	KPDES Outfall/ LBC-019/020	Leachate Collection System	KPDES Outfall	DGW
C-746-U1 Soil Waste Landfill Office Bldg.	Off-Site	Active	208	KPDES Outfall/ LBC-019/02	NA	KPDES Outfall	NA
C-746-U2 Soil Waste Landfill Equip. Bldg.	Off-Site	Active	208	KPDES Outfall/ LBC-019/02	NA	KPDES Outfall	DGW
C-746-U3 Soil Waste Landfill Leachate Fac.	Off-Site	Active	208	KPDES Outfall/ LBC-019/02	NA	KPDES Outfall	DGW
C-746-U4 Underground Storm Shelter	Off-Site	Active	208	KPDES Outfall/ LBC-019/02	NA	KPDES Outfall	DGW
C-746-U5-U12 Storage Facilities	Off-Site	Active	208	KPDES Outfall/ LBC-019/02	NA	KPDES Outfall	DGW
C-746-U13 Shower Trailer	Off-Site	Active	208	KPDES Outfall/ LBC-019/02	NA	KPDES Outfall	DGW
C-746-U16 Leachate Storage Tanks	Off-Site	Active	209	KPDES Outfall/ LBC-020	NA	KPDES Outfall	DGW
C-746-V ER Storage Pad	D-3	Active	470	KPDES Outfall/ BC-001	KPDES Outfall	KPDES Outfall	DGW
C-746-X Electrical Equipment Storage Building	E-2	Active	NA	KPDES Outfall/ LBC-002	NA	KPDES Outfall	NA

Table A.1. U.S. Department of Energy Facilities and Areas (Continued)

Name	Location (Plant Grid/ Off-Site)	Operational Status	Status (SWMU/WAG) if Applicable	Surface Drainage	Subsurface Drainage	Monitoring (Surface)	Monitoring (Groundwater)
C-747- Burial Area	C-4	Inactive	6/3	KPDES Outfall/ BC-001	NA	KPDES Outfall	DGW
C-747-A Burn and Burial Area	C-2	Inactive	12,30,7/22	KPDES Outfall 001	NA	KPDES Outfall	DGW
C-747-B Burial Area	C-2	Inactive	6,12/24	KPDES Outfall/ BC-001, 008	NA	KPDES Outfall	DGW
C-747-C Oil Landfarm	C-4	Inactive	1/23	KPDES Outfall/ BC-015	NA	KPDES Outfall	DGW
C-747C & C-748 Burial Area	C-4	Inactive	4/2	KPDES Outfall/ BC-015	NA	KPDES Outfall	DGW
C-747-D H3 Pad Clamshell	C-4	Active	159	KPDES Outfall/ BC-015	NA	KPDES Outfall	DGW
C-747-E H3 Pad Clamshell	C-4	Active	159	KPDES Outfall/ BC-015	NA	KPDES Outfall	DGW
C-747-F H3 Pad Office Trailer	C-4	Inactive	159	KPDES Outfall/ BC-015	NA	KPDES Outfall	DGW
C-748-A Inactive KOW Disposal Area	C-6	Inactive	95/1	BC	NA	BC Sampling	NA
C-748-B Burial Area	C-4	Inactive	4	KPDES Outfall/ BC-015	NA	KPDES Outfall	DGW
C-749 Uranium Burial Ground	C-3	Inactive	2/22	KPDES Outfall/ BC-015	NA	KPDES Outfall	DGW
C-750 UST (Waste Oil) Garage	D-5	Inactive	25	KPDES Outfall/ BC-008	NA	KPDES Outfall	NA
C-750 A UST (Gasoline)	D-5	Inactive	142/4	KPDES Outfall/ BC-008, 009	NA	KPDES Outfall	NA
C-750 B UST (Diesel)	D-5	Inactive	143/4	KPDES Outfall/ BC-008, 009	NA	KPDES Outfall	NA
C-750-D UST	D-5	Inactive	24/9	KPDES Outfall/ BC-008	NA	KPDES Outfall	NA
C-752-A T09 & T10 Waste Operations Office	D-3	Active	207	KPDES Outfall	KPDES Outfall	KPDES Outfall	NA
C-752 RA Waste Holding Facility	D-3	Active	207	KPDES Outfall	NA	KPDES Outfall	NA
C-752 RA Waste Holding Facility and Decontamination Pad	D-3	Active	207	KPDES Outfall	KPDES Outfall	KPDES Outfall	NA

Table A.1. U.S. Department of Energy Facilities and Areas (Continued)

Name	Location (Plant Grid/Off-Site)	Operational Status	Status (SWMU/WAG) if Applicable	Surface Drainage	Subsurface Drainage	Monitoring (Surface)	Monitoring (Groundwater)
C-752-A ER Waste Storage Facility	C-3	Active	207	KPDES Outfall/BC-001, 015	KPDES Outfall	KPDES Outfall	NA
C-752-B Fuel Station/Fuel Facility Trailer (T01)	C-5	Active	NA	KPDES Outfall	KPDES Outfall	KPDES Outfall	NA
C-752-C Off-Site Decontamination Pad	C-5	Active	419	KPDES Outfall/BC-009, 016	NA	KPDES Outfall	NA
C-752-D ER Clamshell	C-6	Inactive	NA	KPDES Outfall/BC-009	NA	KPDES Outfall	NA
C-752-T-01 Through C-752-T-08 Warehouse Trailers	C-5	Active	420	KPDES Outfall/BC-009, 016	NA	KPDES Outfall	NA
C-753-A TSCA Storage Facility	D-3	Active	206	KPDES Outfall/BC-001, 015	NA	KPDES Outfall	NA
C-755-A Decontamination Pad	F-4	Active	NA	KPDES Outfall/LBC-002,010	KPDES Outfall	KPDES Outfall	NA
C-755-A1 Brine Storage Tank	F-4	Active	NA	KPDES Outfall/LBC-002,010	KPDES Outfall	KPDES Outfall	NA
C-755-B Change House	F-4	Active	NA	KPDES Outfall/LBC-002,010	KPDES Outfall	KPDES Outfall	NA
C-755-C Storage Shed	F-4	Active	NA	KPDES Outfall/LBC-002,010	KPDES Outfall	KPDES Outfall	NA
C-755-D Guard Shack	F-4	Active	NA	KPDES Outfall/LBC-002,010	KPDES Outfall	KPDES Outfall	NA
C-755-E Thru -H Underground Storm Shelters	F-4	Active	NA	KPDES Outfall/LBC-002,010	KPDES Outfall	KPDES Outfall	NA
C-755 (J-L,Q) Sealand Storage	F-4	Active	NA	KPDES Outfall/LBC-002,010	KPDES Outfall	KPDES Outfall	NA
C-755 Wooden Storage Building (M), East Extended Parking Lot (N), Gravel Parking Lot (P)	F-4	Active	NA	KPDES Outfall/LBC-002,010	KPDES Outfall	KPDES Outfall	NA
C-755-T01-T09 Office Trailer	F-4	Active	535	KPDES Outfall/LBC-002,010	KPDES Outfall	KPDES Outfall	NA
C-755-T10-T12 Groundwater Sto Trailer	F-4	Active	NA	KPDES Outfall/LBC	KPDES Outfall	KPDES Outfall	NA
C-755 T13 & T14 Sealand Storage	F-4	Active	NA	KPDES Outfall/LBC-002,010	KPDES Outfall	KPDES Outfall	NA

Table A.1. U.S. Department of Energy Facilities and Areas (Continued)

Name	Location (Plant Grid/Off-Site)	Operational Status	Status (SWMU/WAG) if Applicable	Surface Drainage	Subsurface Drainage	Monitoring (Surface)	Monitoring (Groundwater)
C-755 (T16-T23) RADCON Trailer, Break Trailer, Change Trailer, Instrument Lab Trailer, Offices	F-4	Active	NA	KPDES Outfall/ LBC-002,010	KPDES Outfall	KPDES Outfall	NA
C-755 T24 & T25 Sealant Storage	F-4	Active	NA	KPDES Outfall/ LBC-002,010	KPDES Outfall	KPDES Outfall	NA
C-755-U (Contains Salt Storage Bin)	F-4	Active	NA	KPDES Outfall/ LBC-002,010	KPDES Outfall	KPDES Outfall	NA
C-755-V Salt Storage Bin	F-4	Active	NA	KPDES Outfall/ LBC-002,010	KPDES Outfall	KPDES Outfall	NA
C-755-X Storage Shed	F-4	Active	NA	KPDES Outfall/ LBC-002,010	KPDES Outfall	KPDES Outfall	NA
C-755-Y Sealant (Contains Used Oil Tank, Antifreeze, and Spent Fuel)	F-4	Active	NA	KPDES Outfall/ LBC-002,010	KPDES Outfall	KPDES Outfall	NA
C-755-Z Storage Trailer	F-4	Active	NA	KPDES Outfall/ LBC-002,010	KPDES Outfall	KPDES Outfall	NA
C-757 Solid & Low-Level Waste Proc Facility/T01 HP Office Trailer	D-2	Active	NA	KPDES Outfall/ BC-001	NA	KPDES Outfall	NA
C-759 Scrap Metal Staging Area/ISOCS	D-3	Active	NA	KPDES Outfall/ BC-015	NA	KPDES Outfall	NA
C-760 NSDD Laydown Gravel Pad/ Surge Basin	D-2	Active	NA	KPDES Outfall/ BC-001	NA	KPDES Outfall	NA
C-761 Scrap Metal Staging Area/ Shipping Trailer	Off-Site	Active	NA	BC	NA	BC Sampling	NA
C-762 Equipment Staging Pad	E-1	Active	NA	NSDD	NA	LBC Sampling	NA
C-764 (T01-T11) Office Trailers/Parking Area	C-5	Active	NA	KPDES Outfall/ BC-008	NA	KPDES Outfall	NA
C-770 Vortec Demonstration Plant	B-3	Inactive	NA	KPDES Outfall/ BC-001	NA	KPDES Outfall	NA
Concrete Disposal Area East of Plant Security Area	Off-Site	Inactive	93/17	KPDES Outfall/ LBC-013	NA	KPDES Outfall	NA
Concrete Rubble Pile (1)	Off-Site	Inactive	103/17	BC	NA	BC Sampling	NA
Concrete Rubble Pile (2)	Off-Site	Inactive	104/17	BC	NA	BC Sampling	NA

Table A.1. U.S. Department of Energy Facilities and Areas (Continued)

Name	Location (Plant Grid/ Off-Site)	Operational Status	Status (SWMU/WAG) if Applicable	Surface Drainage	Subsurface Drainage	Monitoring (Surface)	Monitoring (Groundwater)
Concrete Rubble Pile (3)	Off-Site	Inactive	105/17	KPDES Outfall/ LBC-011	NA	KPDES Outfall	NA
Concrete Rubble Pile (4)	Off-Site	Inactive	106/17	KPDES Outfall/ BC-010	NA	KPDES Outfall	NA
Concrete Rubble Pile (5)	Off-Site	Inactive	107/17	KPDES Outfall/ LBC-002	NA	KPDES Outfall	NA
Concrete Rubble Pile (6)	Off-Site	Inactive	108/17	LBC	NA	LBC Sampling	NA
Concrete Rubble Pile (7)	Off-Site	Inactive	109/17	LBC	NA	NA	NA
Concrete Rubble Pile (28)	E-4	Inactive	175/17	KPDES Outfall/ LBC-002	NA	KPDES Outfall	NA
Concrete Rubble Pile (29)	B-7	Inactive	184/17	BC	NA	BC Sampling	NA
Concrete Rubble Pile (30)	Off-Site	Inactive	197/17	BC	NA	BC Sampling	NA
Concrete Rubble Pile (40)	Off-Site	Inactive	146/17	NA	NA	NA	NA
Concrete Rubble Pile (41)	Off-Site	Inactive	147/17	NA	NA	NA	NA
Concrete Rubble Pile (42)	Off-Site	Inactive	148/17	NA	NA	NA	NA
Concrete Rubble Pile (43)	Off-Site	Inactive	149/17	NA	NA	NA	NA
Concrete Rubble Pile (44)	Off-Site	Inactive	150/17	NA	NA	NA	NA
Concrete Rubble Pile (45)	Off-Site	Inactive	151/17	NA	NA	NA	NA
Concrete Rubble Pile (46)	Off-Site	Inactive	152/17	NA	NA	NA	NA
Creek (Big Bayou)	B-5	Active	65/25	BC	NA	BC Sampling	NA
Creek (Big Bayou) Monitoring System	Off-Site	Inactive	199	BC	NA	BC Sampling	NA
Creek (Little Bayou)	Off-Site	Active	64/25	LBC	NA	LBC Sampling	NA
Cylinder Drop Test Area (uranium hexafluoride)	C-4	Inactive	91/6	KPDES Outfall/ BC-015	NA	KPDES Outfall	DGW

Table A.1. U.S. Department of Energy Facilities and Areas (Continued)

Name	Location (Plant Grid/Off-Site)	Operational Status	Status (SWMU/WAG) if Applicable	Surface Drainage	Subsurface Drainage	Monitoring (Surface)	Monitoring (Groundwater)
Fill Area for Dirt From C-420 PCB Spill Site	D-4	Inactive	92/10	KPDES Outfall/ LBC-010, BC-008	NA	KPDES Outfall	NA
KOW Standpipe	B-12	Inactive	182	BC	BC	BC Sampling	NA
KOW Toluene Spill Area	Off-Site	Inactive	157/7	BC	NA	BC Sampling	DGW
KOW Tricking Filter and Leach Field	Off-Site	Inactive	94/1	BC	Inactive	BC Sampling	DGW
McGraw Construction Facilities (South Side, Cylinder Yards, Inside Security Fence)	E-8	Inactive	193/15	KPDES Outfall/ LBC-013	KPDES Outfall	KPDES Outfall	NA
Concrete Rubble Pile (8)	E-3	Inactive	110/17	KPDES Outfall/ LBC-010, 011	NA	KPDES Outfall	NA
Concrete Rubble Pile (9)	D-1	Inactive	111/17	LBC	NA	LBC Sampling	NA
Concrete Rubble Pile (10)	Off-Site	Inactive	112/17	LBC	NA	LBC Sampling	NA
Concrete Rubble Pile (11)	Off-Site	Inactive	113/17	LBC	NA	LBC Sampling	NA
Concrete Rubble Pile (12)	Off-Site	Inactive	114/17	LBC	NA	LBC Sampling	NA
Concrete Rubble Pile (13)	Off-Site	Inactive	115/17	River	NA	NA	NA
Concrete Rubble Pile (14)	Off-Site	Inactive	116/17	River	NA	NA	NA
Concrete Rubble Pile (15)	Off-Site	Inactive	117/17	River	NA	NA	NA
Concrete Rubble Pile (16)	Off-Site	Inactive	118/17	BC	NA	BC Sampling	NA
Concrete Rubble Pile (17)	B-2	Inactive	119/17	BC	NA	BC Sampling	NA
Concrete Rubble Pile (18)	B-3	Inactive	120/17	BC	NA	BC Sampling	NA
Concrete Rubble Pile (19)	Off-Site	Inactive	121/17	BC	NA	BC Sampling	NA
Concrete Rubble Pile (20)	Off-Site	Inactive	122/17	NA	NA	NA	NA

Table A.1. U.S. Department of Energy Facilities and Areas (Continued)

Name	Location (Plant Grid/Off-Site)	Operational Status	Status (SWMU/WAG) if Applicable	Surface Drainage	Subsurface Drainage	Monitoring (Surface)	Monitoring (Groundwater)
Concrete Rubble Pile (21)	Off-Site	Inactive	123/17	BC	NA	BC Sampling	NA
Concrete Rubble Pile (22)	Off-Site	Inactive	124/17	BC	NA	BC Sampling	NA
Concrete Rubble Pile (23)	Off-Site	Inactive	125/17	BC	NA	BC Sampling	NA
Concrete Rubble Pile (24)	Off-Site	Inactive	126/17	BC	NA	BC Sampling	NA
Concrete Rubble Pile (25)	Off-Site	Inactive	127/17	BC	NA	BC Sampling	NA
Concrete Rubble Pile (26)	Off-Site	Inactive	128/17	BC	NA	BC Sampling	NA
Concrete Rubble Pile (27)	Off-Site	Inactive	129/17	BC	NA	BC Sampling	NA
McGraw Construction Facilities (South Side, Outside Security Fence)	D-8	Inactive	194/15	KPDES Outfall/BC-017	KPDES Outfall	KPDES Outfall	NA
McGraw UST	E-8	Inactive	183	KPDES Outfall/BC-017	NA	KPDES Outfall	NA
Residential/Inert (Spoils) Area	Off-Site	Inactive	145	LBC	NA	LBC Sampling	NA
Soil Contamination Site 1	D-4	Inactive		KPDES Outfall	NA	KPDES Outfall	NA
Curlee Road Contaminated Soil Mound	C-6	Inactive	195/10	KPDES Outfall/BC-009, 016	NA	KPDES Outfall	NA
Residential Landfill Borrow Area	Off-Site	Inactive	145	LBC	NA	LBC Sampling	NA
McGraw UST	D-8	Inactive	183	KPDES Outfall/BC-017	NA	KPDES Outfall	NA
C-800 Motorcycle Parking Area/Technician Office Trailer	D-6	Active	NA	KPDES Outfall/BC-009	NA	KPDES Outfall	NA
C-801 Ohio DR Bus Shelter	D-5	Active	NA	KPDES Outfall/BC-009	NA	KPDES Outfall	NA
C-802 (A-B) Meteorological Communication/Equipment Buildings	D-8	Active	NA	KPDES Outfall/BC-009	NA	KPDES Outfall	NA
C-810 & C-811 Parking Areas	D-6	Active	NA	KPDES Outfall/BC-009	NA	KPDES Outfall	NA

Table A.1. U.S. Department of Energy Facilities and Areas (Continued)

Name	Location (Plant Grid/ Off-Site)	Operational Status	Status (SWMU/WAG) if Applicable	Surface Drainage	Subsurface Drainage	Monitoring (Surface)	Monitoring (Groundwater)
C-900 (01-08) Institutional Controls	F-5	Active	NA	KPDES Outfall/ LBC-011	NA	KPDES Outfall	NA
C-1100 Administration Building	D-8	Active	194	KPDES Outfall/ BC-017	NA	KPDES Outfall	NA
C-1100-T-01 Office Trailer	D-8	Active	194	KPDES Outfall/ BC-017	NA	KPDES Outfall	NA
C-1100-T-02 QA Office Trailer	D-8	Active	194	KPDES Outfall/ BC-017	NA	KPDES Outfall	NA
C-1100-T-03 Rest Room Trailer	D-8	Active	194	KPDES Outfall/ BC-017	NA	KPDES Outfall	NA
C-1100-T-04 Training and Procedures Trailer	D-8	Active	194	KPDES Outfall/ BC-017	NA	KPDES Outfall	NA
C-1100-T-05 Operations Shower Trailer	D-8	Active	194	KPDES Outfall/ BC-017	NA	KPDES Outfall	NA
C-1100-T-06 Training and Office Trailer	D-8	Active	194	KPDES Outfall/ BC-017	NA	KPDES Outfall	NA
C-1100-T-08 Training Trailer	D-8	Active	194	KPDES Outfall/ BC-017	NA	KPDES Outfall	NA
C-1300-T-01 ES&H PPE Trailer	D-7	Active	194	KPDES Outfall/ BC-017	NA	KPDES Outfall	NA
C-1200 Parking Area	D-8	Active	194	KPDES Outfall BC-017	NA	KPDES Outfall	NA
C-1215 Vehicle Access House "A"	D-8	Active	194	KPDES Outfall/ BC-017	NA	KPDES Outfall	NA
C-1220 Vehicle Access House "B"	D-8	Active	194	KPDES Outfall/ BC-017	NA	KPDES Outfall	NA
C-1300 DUF ₆ Conversion Building	D-7	Active	194	KPDES Outfall/ BC-017	NA	KPDES Outfall	NA
C-1300A CCW Chemical Treatment Building	D-7	Active	194	KPDES Outfall/ BC-017	NA	KPDES Outfall	NA
C-1305 HF Storage Tank Area	D-7	Active	194	KPDES Outfall/ BC-017	NA	KPDES Outfall	NA
C-1305A HF Tanker Car Load Area	D-7	Active	194	KPDES Outfall/ BC-017	NA	KPDES Outfall	NA
C-1305B HF Storage Tank Area Change	D-7	Active	194	KPDES Outfall/ BC-017	NA	KPDES Outfall	NA

Table A.1. U.S. Department of Energy Facilities and Areas (Continued)

Name	Location (Plant Grid/ Off-Site)	Operational Status	Status (SWMU/WAG) if Applicable	Surface Drainage	Subsurface Drainage	Monitoring (Surface)	Monitoring (Groundwater)
House				BC-017			
C-1310 Nitrogen Supply System Area	D-7	Active	194	KPDES Outfall/ BC-017	NA	KPDES Outfall	NA
C-1310A Nitrogen Supply Office/Server Building	D-7	Active	194	KPDES Outfall/ BC-017	NA	KPDES Outfall	NA
C-1310B Nitrogen Supply Warm Skid Building	D-7	Active	194	KPDES Outfall/ BC-017	NA	KPDES Outfall	NA
C-1310C Nitrogen Supply Compressor Building	D-7	Active	194	KPDES Outfall/ BC-017	NA	KPDES Outfall	NA
C-1320 KOH Regeneration Building	D-8	Active	194	KPDES Outfall/ BC-017	NA	KPDES Outfall	NA
C-1330 Hydrogen Supply System Area	D-7	Active	194	KPDES Outfall/ BC-017	NA	KPDES Outfall	NA
C-1605 Service Water Pump House	D-7	Active	194	KPDES Outfall/ BC-017	NA	KPDES Outfall	NA
C-1700 Warehouse/Maintenance Building	D-8	Active	194	KPDES Outfall/ BC-017	NA	KPDES Outfall	NA
C-1700-WH-03 Chemical Storage Building	D-8	Active	194	KPDES Outfall/ BC-017	NA	KPDES Outfall	NA
C-1700-WH-04 Chemical Storage Building	D-8	Active	194	KPDES Outfall/ BC-017	NA	KPDES Outfall	NA

APPENDIX B

SOLID WASTE MANAGEMENT UNIT DESIGNATIONS

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Appendix B, Solid Waste Management Unit (SWMU) Designations, contains a listing of SWMUs [or areas of concern (AOCs)], followed by a map showing their locations.

Table B.1. Description of Solid Waste Management Units at the Paducah Site

SWMU or AOC	Description	Contaminants of Concern^a	Discharge Location and Outfall^b
1	C-747-C Oil Landfarm	TCE; PCB; <i>cis</i> -1,2-DCE; Cr; Cs-137; Np-237; Th-230; U-238 ^c	BC, 15
2	C-749 Uranium Burial Ground	U; TCE; <i>cis</i> -1,2-DCE; naphthalene; PCBs; Tc-99; U-234; U-235; U-238 ^d	BC, 15
3	C-404 Low-level Rad Waste Burial Ground	U, Tc-99, U-234, U-235, U-238 ^d	BC, 15
4	C-747 Contaminated Burial Ground	U; TCE; <i>cis</i> -1,2-DCE; VC; PCBs; dioxins/furans; Tc-99; U-238 ^d	BC, 15
5	C-746-F Classified Burial Ground	Naphthalene, PCBs, Tc-99 ^d	BC, 1
6	C-747-B Burial Ground	None ^d	BC, 1
7	C-747-A Burial Ground	U; TCE; 1,1-DCE; <i>cis</i> -1,2-DCE; VC; PCBs; Np-237; Pu-239; Tc-99; U-234; U-235; U-238 ^d	BC, 1
8	C-746-K Inactive Sanitary Landfill	Antimony, As, Be, iron, manganese, vanadium ^e	BC
9	C-746-S Residential Landfill	NFA ^f	BC, Mile 6.71 (km 10.83)
10	C-746-T Inert Landfill	NFA ^f	LBC, Mile 2.89 (km 4.65)
11	C-400 Trichloroethylene Leak Site	Metals; 1,1-DCE; TCE; VC; PCBs; PAHs; Cs-137 ^g	BC, 1 and 8
12	C-747-A UF ₄ Drum Yard	NFA ^c	BC, 1
13	C-746-P Clean Scrap Yard	SVOAs, PCBs, PAHs, Metals, Rad ^h	BC, 1
14	C-746-E Contaminated Scrap Yard	As, Cr, PCBs, PAHs, Cs-137, Np-237, Tc-99, Th-230, U-234, U-235, U-238 ^c	BC, 1
15	C-746-C Scrap Yard	PCBs, Np-237, U-238 ^h	BC, 1
16	C-746-D Classified Scrap Yard	TCE, SVOAs, PCBs, Metals, Rad ^h	LBC, 10
17	C-616-E Sludge Lagoon (Active)	PCBs, Metals, Rad ^h	BC, 1
18	C-616-F Full Flow Lagoon (Active)	PCBs, Metals, Rad ^h	BC, 1
19	C-410-B HF Neutralization Lagoon	PAHs ^c	BC, 8, NSDD to 1
20	C-410 E HF Emergency Holding Pond	None ^h	BC, 8, NSDD to 1
21	C-611-W Sludge Lagoon (Active)	TCE; <i>cis</i> -1,2-DCE; PCBs; metals; Rad ^h	BC, 6
22	C-611-Y Overflow Lagoon (Active)	None ^h	BC, 6
23	C-611-V Lagoons (Active)	None ^h	BC, 6
24	C-750-D Undergrounds Storage Tank	NFA ^f	BC, 8
25	C-750 1000-gal, Waste Oil Tank	NFA ^f	BC, 8
26	C-400 to C-404 Underground Transfer Line	PAHs, metals, Rad ^g	BC, 8
27	C-722 Acid Neutralization Tank (Active)	NFA proposed ^c	BC, 4 to 8
28	C-712 Acid Neutralization Tank (Active)	None ^h	BC, 4 to 8
29	C-746-B TRU Storage Area	NFA ^f	BC, 1

Table B.1. Description of Solid Waste Management Units at the Paducah Site (Continued)

SWMU or AOC	Description	Contaminants of Concern^a	Discharge Location and Outfall^b
30	C-747-A Burn Area	U; TCE; 1,1-DCE; PCBs; Np-237; Pu-239; Tc-99; U-234; U-235; U-238 ^d	BC, 1
31	C-720 Compressor Pit Water Storage Area	None ^h	BC, 8
32	C-728 Clean Waste Oil Tank (Active)	PCBs, PAHs, metals, Rad ^h	BC, 8
33	C-728 Motor Cleaning Facility (Active)	None ^h	BC, 8
34	C-746-M PCB Waste Storage Area	NFA ^f	BC, 1 and 15
35	C-337 PCB Waste Staging Area	NFA ^f	LBC, 2
36	C-337 PCB Waste Storage Area Unit 6	NFA ^f	LBC, 2
37	C-333 PCB Waste Storage Area	NFA ^f	LBC, 10 and 11
38	C-615 Sewage Treatment Plant (Active)	Carbon tet, SVOAs, PCBs, PAHs, Metals, Rad ^h	BC, 4
39	C-746-B PCB Waste Storage Area	NFA ^f	BC, 1
40	C-403 Neutralization Tank	None ^h	BC, 8
41	C-410-C Neutralization Tank	None ^h	BC, 8
42	C-616 Chromate Reduction Facility (Active)	PCBs, U-238 ^h	BC, 1
43	C-746-B Waste Chemical Storage Area	NFA ^f	BC, 1
44	C-733 Hazardous Waste Storage Area	NA, permitted ^f	BC, 8
45	C-746-R Water Solvent Storage Area	NFA ^f	BC, 17
46	C-409 Hazardous Waste Pilot Plant	NFA ^f	BC, 1 and 8
46-A	C-746-Q Hazardous and Low-Level Mixed Waste Storage Building	NA, permitted ^f	LBC, 11 and 12
47	C-400 Technetium Storage Tank Area	Metals, PCBs, PAHs, Rad ^g	BC, 1 and 8
48	C-400-A Gold Dissolver Storage Tank	NFA ^f	BC, 1 and 8
49	C-400-B Waste Solution Storage Tank	NFA ^f	BC, 1 and 8
50	C-400-C Nickel Stripper Evaporation Tank	NFA ^f	BC, 1 and 8
51	C-400-D Lime Precipitation Tank	NFA ^f	BC, 1 and 8
52	C-400 Waste Decontamination Solution Storage Tank	NFA ^f	BC, 1 and 8
53	C-400 NaOH Precipitation Unit	NFA ^f	BC, 1 and 8
54	C-400 Degreaser Solvent Recovery Unit	NFA ^f	BC, 1 and 8
55	C-405 Incinerator	None ^h	BC, 15
56	C-540-A PCB Waste Staging Area	PCBs, Metals, U-238 ^h	LBC, 10 and 11
57	C-541-A PCB Waste Staging Area	As, Cr, U, PCBs, PAHs, U-238 ^c	BC, 1
58	N-S Diversion Ditch (outside plant security fence)	As, Be, U, PCBs, Am-241, Co-60, Cs-137, Np-237, Pu-239/240, Tc-99, Th-230, Th-232, U-234, U-235, U-238 ⁱ	LBC
59	N-S Diversion Ditch (inside Plant Security fence)	PCBs, PAHs, metals, Rad ^j	BC, 1
60	C-375-E2 Effluent Ditch (KPDES 002) (Active)	As, Be, U, PCBs, Am-241, Co-60, Cs-137, Np-237, Pu-239/240, Tc-99, Th-230, Th-232, U-234, U-235, U-238 ⁱ	LBC, 2
61	C-375-E5 Effluent Ditch (KPDES 013) (Active)	As, Be, U, PCBs, Am-241, Co-60, Cs-137, Np-237, Pu-239/240, Tc-99, Th-230, Th-232, U-234, U-235, U-238 ⁱ	LBC, 13
62	C-375-S6 Southwest Ditch (KPDES 009) (Active)	As, Be, U, PCBs, Am-241, Co-60, Cs-137, Np-237, Pu-239/240, Tc-99, Th-230, Th-232, U-234, U-235, U-238 ⁱ	BC, 9

Table B.1. Description of Solid Waste Management Units at the Paducah Site (Continued)

SWMU or AOC	Description	Contaminants of Concern^a	Discharge Location and Outfall^b
63	C-375-W7 Oil Skimmer Ditch (KPDES 008) (Active)	As, Be, U, PCBs, Am-241, Co-60, Cs-137, Np-237, Pu-239/240, Tc-99, Th-230, Th-232, U-234, U-235, U-238 ⁱ	BC, 8
64	Little Bayou Creek	SVOAs, PCBs, PAHs, metals, Rad ^h	LBC
65	Big Bayou Creek	SVOAs, PCBs, PAHs, metals, Rad ^h	BC
66	C-375-E3 Effluent Ditch (KPDES 010) (Active)	As, Be, U, PCBs, Am-241, Co-60, Cs-137, Np-237, Pu-239/240, Tc-99, Th-230, Th-232, U-234, U-235, U-238 ⁱ	LBC, 10
67	C-375-E4 Effluent Ditch (KPDES 011) (Active)	As, Be, U, PCBs, Am-241, Co-60, Cs-137, Np-237, Pu-239/240, Tc-99, Th-230, Th-232, U-234, U-235, U-238 ⁱ	LBC, 11
68	C-375-W8 Effluent Ditch (KPDES 015) (Active)	As, Be, U, PCBs, Am-241, Co-60, Cs-137, Np-237, Pu-239/240, Tc-99, Th-230, Th-232, U-234, U-235, U-238 ⁱ	BC, 15
69	C-375-W9 Effluent Ditch (KPDES 001) (Active)	As, Be, U, PCBs, Am-241, Co-60, Cs-137, Np-237, Pu-239/240, Tc-99, Th-230, Th-232, U-234, U-235, U-238 ⁱ	BC, 1
70	C-333-A Vaporizer (Active)	None ^h	LBC, 2, 10, 11, or 12 (C-617-B Lift Station)
71	C-337-A Vaporizer (Active)	None ^h	LBC, 2, 10, 11, or 12 (C-617-B Lift Station)
72	C-200 Underground Gasoline Tanks	NFA ^f	BC, 8
73	C-710 Underground Gasoline Tanks	NFA ^f	BC, 8
74	C-340 PCB Spill Site	None ^h	LBC, 2, 10, 11, or 12 (C-617-B Lift Station)
75	C-633 PCB Spill Site	PCBs ^h	LBC, 2, 10, 11, or 12 (C-617-B Lift Station)
76	C-632-B Sulfuric Acid Storage Tank	PCBs, PAHs ^c	BC, 1
77	C-634-B Sulfuric Acid Storage Tank	Rad ^h	LBC, 12
78	C-420 PCB Spill Site	None ^h	BC, 8
79	C-611 PCB Spill Site	PCBs ^h	BC, Mile 6.52 (km 10.49)
80	C-540-A PCB Spill Site	None ^h	LBC, 2, 10, 11, or 12 (C-617-B Lift Station)
81	C-541-A PCB Spill Site	As, Cr, U, PCBs, PAHs, U-238 ^c	BC, 1
82	C-531 Switchyard (Active)	SVOAs, PCBs, PAHs, metals, Rad ^h	LBC, 2, 10, 11, or 12 (C-617-B Lift Station)
83	C-533 Switchyard (Active)	SVOAs, PCBs, PAHs, metals, Rad ^h	BC, 1
84	C-535 Switchyard (Active)	SVOAs, PCBs, PAHs, metals, Rad ^h	BC, 1
85	C-537 Switchyard (Active)	PCBs, PAHs ^h	BC, 1
86	C-631 Pumphouse and Cooling Tower (Active)	PCBs, U-238 ^h	BC, 8
87	C-633 Pumphouse and Cooling Tower (Active)	PCBs ^h	LBC, 12
88	C-635 Pumphouse and Cooling Tower (Active)	PCBs, U-238 ^h	BC, 1
89	C-637 Pumphouse and Cooling Tower (Active)	PCBs, U-238 ^h	LBC, 2
90	C-720 Underground Petroleum Naptha Pipe	NFA ^f	Does Not Exist

Table B.1. Description of Solid Waste Management Units at the Paducah Site (Continued)

SWMU or AOC	Description	Contaminants of Concern^a	Discharge Location and Outfall^b
91	UF ₆ Cylinder Drop Test Pit	TCE ^k	BC, 8 and 15
92	Fill Area for Dirt from the C-420 PCB Sill Site	As, Be, U, PCBs, Am-241, Co-60, Cs-137, Np-237, Pu-239/240, Tc-99, Th-230, Th-232, U-234, U-235, U-238 ⁱ	LBC, 10 and BC, 8
93	Concrete Disposal Area East of PGDP	None ^h	LBC, 13
94	KOW Trickling Filter and Leach Field	COE ^f	BC, Mile 6.73 (km 10.83)
95	KOW Burn Area	COE ^f	BC, Mile 6.52 (km 10.49)
96	C-333 Cooling Tower Scrap Wood Pile	NFA ^f	Removed
97	C-601 Diesel Spill	As, Be, U, PCBs, Am-241, Co-60, Cs-137, Np-237, Pu-239/240, Tc-99, Th-230, Th-232, U-234, U-235, U-238 ⁱ	BC, 15
98	C-400 Basement Sump	None ^h	BC, 8
99A	C-745 Kellogg Building Site	Pyrene, PCBs, PAHs, metals ^h	LBC, 2, 10, 11, or 12 (C-617-B Lift Station)
99B	C-745 Kellogg Building Site	Cr ^m	LBC, 2, 10, 11, or 12 (C-617-B Lift Station)
100	Fire Training Area	None ^e	BC, 8 and 16
101	C-340 Hydraulic System	NA ⁿ	Removed
102	Plant Storm Sewer (Active)	As, Be, U, PCBs, Am-241, Co-60, Cs-137, Np-237, Pu-239/240, Tc-99, Th-230, Th-232, U-234, U-235, U-238 ⁱ	Outfalls 2, 8, 9, 10, 11, 12, 15, 16, and 17
103	Concrete Rubble Pile (1)	NFA ^f	BC, Mile 7.68 (km 12.35)
104	Concrete Rubble Pile (2)	NFA ^f	BC, Mile 7.73 (km 8.27)
105	Concrete Rubble Pile (3)	None ^h	LBC, 11
106	Concrete Rubble Pile (4)	None ^h	LBC, 10
107	Concrete Rubble Pile (5)	None ^h	LBC, 2
108	Concrete Rubble Pile (6)	None ^h	LBC, Mile 5.36 (km 8.63)
109	Concrete Rubble Pile (7)	Be, Cr, U, PCBs, Rad ^h	LBC
110	Concrete Rubble Pile (8)	NFA ^f	LBC, 10 and 11
111	Concrete Rubble Pile (9)	NFA ^f	LBC, Mile 2.89 (km 4.65)
112	Concrete Rubble Pile (10)	NFA ^f	LBC, Mile 2.39 (km 3.58)
113	Concrete Rubble Pile (11)	SVOA, PCBs, PAHs, metals, Rad ^h	LBC, Mile 2.39 (km 3.58)
114	Concrete Rubble Pile (12)	NFA ^f	LBC, Mile 1.23 (km 1.98)
115	Concrete Rubble Pile (13)	NFA ^f	River
116	Concrete Rubble Pile (14)	NFA ^f	River
117	Concrete Rubble Pile (15)	NFA ^f	River
118	Concrete Rubble Pile (16)	NFA ^f	BC, Mile 5.49 (km 8.84)
119	Concrete Rubble Pile (17)	NFA ^f	BC, Mile 5.93 (km 9.54)
120	Concrete Rubble Pile (18)	NFA ^f	BC, 6 and Mile 6.05
121	Concrete Rubble Pile (19)	NFA ^f	BC, Mile 6.73 (km 10.83)

Table B.1. Description of Solid Waste Management Units at the Paducah Site (Continued)

SWMU or AOC	Description	Contaminants of Concern^a	Discharge Location and Outfall^b
122	Concrete Rubble Pile (20)	NFA ^f	Does Not Exist
123	Concrete Rubble Pile (21)	NFA ^f	BC, Mile 6.79 (km 10.93)
124	Concrete Rubble Pile (22)	NFA ^f	BC, Mile 6.79 (km 10.93)
125	Concrete Rubble Pile (23)	NFA ^f	BC, Mile 6.79 (km 10.93)
126	Concrete Rubble Pile (24)	NFA ^f	BC, Mile 6.79 (km 10.93)
127	Concrete Rubble Pile (25)	NFA ^f	BC, Mile 8.16 (km 13.13)
128	Concrete Rubble Pile (26)	NFA ^f	BC, Mile 7.68 (km 12.35)
129	Concrete Rubble Pile (27)	None ^h	BC, 8
130	C-611 550-Gal Gasoline UST (west of C-611)	NFA ^f	BC, Mile 6.52 (km 10.49)
131	C-611 50-Gal Gasoline UST (east of C-611)	NFA ^f	BC, Mile 6.52 (km 10.49)
132	C-611 2,000-Gal Oil UST (north of C-611)	NFA ^f	BC, Mile 6.52 (km 10.49)
133	C-611 Unknown Size, Grouted UST (south of C-611)	NFA ^f	BC, Mile 6.52 (km 10.49)
134	C-611 1,000-Gal Diesel/Gasoline Tank (southeast of C-611)	NFA ^f	BC, Mile 6.52 (km 10.49)
135	C-333 PCB Soil Contamination (north side of C-333)	PCBs, metals ^h	LBC, 10 and 11
136	C-740 TCE Spill Site (northwest Corner, C-740 Concrete Pad)	NFA ^f	BC, 8
137	C-746-A Inactive PCB Transformer Sump Area	None ^h	BC, 1
138	C-100 South Side Berms	As, Cr, PCBs, PAHs ^c	BC, 9
139	C-746-A1 Underground Storage Tank	NFA ^f	BC, 1
140	C-746-A2 Underground Storage Tank	NFA ^f	Does Not Exist
141	C-720 Inactive TCE Degreaser Unit	NFA ^f	BC, 8 and 9
142	C-750-A 10,000-gal Gasoline UST	NFA ^f	BC, 8 and 9
143	C-750-B 10,000-gal Diesel UST	NFA ^f	BC, 8 and 9
144	C-746-A Hazardous and Mixed Waste Storage Facility	NFA ^f	BC, 1
145	Residential/Inert Landfill Borrow Area	TCE, SVOA, PCBs, PAHs, metals, Rad ^h	LBC, Mile 2.89 (km 4.65)
146 thru 152	Concrete Rubble Piles (40-46)	NFA ^f	Ballard County
153	C-331 PCB Soil Contamination (West)	PCBs, PAHs ^c	BC, 9
154	C-331 PCB Soil Contamination (Southeast)	PCBs, U ^h	LBC, 10 and 11
155	C-333 PCB Soil Contamination (West)	PCBs, metals ^h	BC, 9
156	C-310 PCB Soil Contamination (West)	Cr, PCBs, PAHs, U-238 ^c	BC, 9
157	KOW Toluene Spill Area	COE ^f	BC, Mile 6.79 (km 10.93)
158	Chilled Water System Leak Site	As, Cr, PAHs, U-238 ^c	BC, 9
159	C-746-H3 Storage Pad (Active)	None ^h	BC, 8
160	C-745 Cylinder Yard Spoils Area (PCB Soils)	None ^c	LBC, 12 and 13
161	C-743-T01 Training Trailer Complex (Soil Backfill) (Active)	PCBs, Rad ^h	BC, 8 and 16
162	C-617-A Sanitary Water Line (Soil Backfill) (Active)	SVOA, PCBs, PAHs, Rad ^h	LBC, 10 and 11

Table B.1. Description of Solid Waste Management Units at the Paducah Site (Continued)

SWMU or AOC	Description	Contaminants of Concern^a	Discharge Location and Outfall^b
163	C-304 Building/HB + VAC Piping System (Soil Backfill)	None ^h	BC, 9
164	KPDES Outfall Ditch 017 Flume (Soil Backfill)	D&D Operable Unit ^f	BC, 17
165	C-616-L Pipeline and Vault Soil Contamination (Active)	As, Cr, PCBs, PAHs, Cs-137, Np-237, U-234, U-235, U-238 ^c	BC, 1 and 15
166	C-100 Trailer Complex Soil Contamination (East) (Active)	PCBs, Rad ^h	BC, 9
167	C-720 White Room Sump	None ^h	BC, 8 and 9
168	KPDES Outfall Ditch 013 (Active)	As, Be, U, PCBs, Am-241, Co-60, Cs-137, Np-237, Pu-239/240, Tc-99, Th-230, Th-232, U-234, U-235, U-238 ⁱ	LBC, 13
169	C-410-E HF Vent Surge Protection Tank	As, Cr, PAHs, U-235, U-238 ^c	BC, 8
170	C-729 Acetylene Building Drain Pits	None ^c	BC, 8 and 9
171	C-617-A Lagoons (Active)	None ^h	LBC, 10 and 11
172	C-726 Sandblasting Facility (Active)	None ^h	BC, 15
173	C-746-A Trash Sorting Facility	NFA ^f	BC, 1
174	C-746-K Low-Level Storage Area	NFA ^f	BC, 17
175	Concrete Rubble Pile (28)	None ^h	LBC, 2
176	C-331 Recirculation Cooling Water (RCW) Leak Northwest Side	None ^h	BC, 8
177	C-331 RCW Leak East Side	None ^h	LBC, 10 and 11
178	C-724-A Paint Spray Booth	None ^h	BC, 8
179	Plant Sanitary Sewer System (Active)	SVOA, PCBs, PAHs, metals, Rad ^h	BC, 4 and 8
180	Outdoor Firing Range (WKWMA) (Active)	As, Cr, Lead, PAHs ^c	BC, Mile 6.73 (km 10.83)
181	Outdoor Firing Range (PGDP) (Active)	None ^c	BC, 8
182	KOW Standpipe	COE ^f	BC, Mile 6.73 (km 10.83)
183	McGraw UST	None ^h	BC, 17
184	Concrete Rubble Pile (29)	NFA ^f	BC, Mile 6.73 (km 10.83)
185	C-611-4 Horseshoe Lagoon	metals ^h	BC, Mile 6.43 (km 10.35)
186	C-751 Fuel Facility	NFA ^f	Removed
187	C-611 Septic System	NFA ^f	BC, Mile 6.71 (km 10.83)
188	C-633 Septic System	NFA ^f	LBC, 12, 13, 11, and 10
189	C-637 Septic System	NFA ^f	LBC, 2
190	C-337-A Sewage Treatment Aeration Tank	NFA ^f	BC, 1, LBC, 2
191	C-333-A Sewage Treatment Aeration Tank	NFA ^f	LBC, 12
192	C-710 Acid Interceptor Pit	None ^h	BC, 9
193	McGraw Construction Facilities (Southside Cylinder Yards)	SVOAs, PCBs, PAHs, metals, Rad ^h	LBC, 13
194	McGraw Construction Facilities (Southside)	PCBs, PAHs, As, Co, Cr, Mn, Cs-137, U-238 ^m	BC, 17
195	Curlee Road Contaminated Soil Mound	As, Cr, PCBs, PAHs, U-238 ^m	BC, 9 and 16
196	C-746-A Septic Tank	Antimony, Cd, Co, Th, PCBs, PAHs, Np-237, U-238 ^c	BC, 1
197	Concrete Rubble Pile (30)	NFA ^f	BC, Mile 5.24 (km 8.43)
198	C-410-D Area Soil Contamination	None ^h	BC, 8

Table B.1. Description of Solid Waste Management Units at the Paducah Site (Continued)

SWMU or AOC	Description	Contaminants of Concern^a	Discharge Location and Outfall^b
199	Big Bayou Creek Monitoring Station	PCBs, metals ^h	BC, Mile 5.93 (km 8.90)
200	Soil Contamination South of TSCA Waste Storage Facility	PCBs, Cr, Cs-137, U-238 ^c	BC, 1 and 15
201	Northwest Groundwater Contamination Plume	TCE, Tc-99 ^o	Underground Plume
202	Northeast Groundwater Contamination Plume	TCE; 1,1-DCE ^p	Underground Plume
203	C-400 Discard Waste System	Metals, PCBs, PAHs, n-nitroso-di-n-propylamine, Rad ^g	BC, 1 and 8
204	Dykes Road Historical Staging Area	TCE, SVOAs, VOAs, PCBs, metals, Rad ^h	LBC, 10 and 11
205	Eastern Portion of Yellow Water Line	metals ^h	BC, Mile 6.14 (km 9.88)
206	C-753-A TSCA Waste Storage Building	NFA ^t	BC, 1 and 15
207	C-752-A ER Waste Storage Building	NA, permitted ^f	BC, 1 and 15
208	C-746-U Contained Landfill	NFA ^f	LBC, Mile 2.89 (km 4.65)
209	C-720 Compressor Shop Pit Sump	None ^h	BC, 8
210	Southwest Groundwater Contamination Plume	TCE; 1,1-DCE; <i>cis</i> -1,2-DCE; chloroform; VC ^q	Underground Plume
211	C-720 TCE Spill Sites (211-A and 211-B)	TCE; 1,1-DCE; <i>cis</i> -1,2-DCE; chloroform; VC ^q	BC, 8 and 9
212	C-745-A Radiological Contamination Area	As, Cr, Cs-137, Np-237, Th-230, U-238 ^c	BC, 15
213	Outside Area DMSA-02	Cr, PAHs, U-238 ^c	BC, 15
214	Outside Area DMSA-03	None ^c	BC
215	Outside Area DMSA-04	Cr, PAHs ^c	BC, 16
216	Outside Area DMSA-05	PAHs ^c	BC, 8
217	Outside Area DMSA-06	As, Cr, PAHs ^c	BC, 8
218	Outside Area DMSA-07	Soils and Slabs Operable Unit ^f	BC, 8
219	Outside Area DMSA-08	PAHs, Np-237, U-238 ^c	BC, 8 and 15
220	Outside Area DMSA-09	Soils and Slabs Operable Unit ^f	BC, 8
221	Outside Area DMSA-10	PCBs, PAHs, Cr, U-238 ^c	BC, 1
222	Outside Area DMSA-11	PCBs, PAHs, Cr, U-235, U-238 ^c	BC, 8
223	Outside Area DMSA-12	Soils and Slabs Operable Unit ^f	LBC, 2 and 10
224	Outside Area DMSA-13	Soils Operable Unit ^f	LBC, 11
225	Outside Area DMSA-14	Soils Operable Unit ^f	LBC, 12
226	Outside Area DMSA-15	Soils Operable Unit ^f	BC, 1
227	Outside Area DMSA-16	PCBs, PAHs, Cr, Cs-137, Np-237, U-235, U-238 ^c	BC, 1
228	Outside Area DMSA-17	PAHs, Cr, Np-237, U-238 ^c	BC, 1
229	Outside Area DMSA-18	Soils Operable Unit ^f	BC, 1
230	DMSA C-310A-01	NFA ^r	Inside—No Discharge
231	DMSA C-310-02	NFA ^s	Inside—No Discharge
232	DMSA C-310-03	NFA ^r	Inside—No Discharge
233	DMSA C-310-04	NFA ^t	Inside—No Discharge
234	DMSA C-310-05	NFA ^r	Inside—No Discharge
235	DMSA C-331-01	NFA ^r	Inside—No Discharge
236	DMSA C-331-02	NFA ^t	Inside—No Discharge
237	DMSA C-331-03	NFA ^r	Inside—No Discharge
238	DMSA C-331-04	NFA ^r	Inside—No Discharge
239	DMSA C-331-05	NFA ^u	Inside—No Discharge
240	DMSA C-331-06	NFA ^u	Inside—No Discharge
241	DMSA C-331-07	NFA ^t	Inside—No Discharge

Table B.1. Description of Solid Waste Management Units at the Paducah Site (Continued)

SWMU or AOC	Description	Contaminants of Concern^a	Discharge Location and Outfall^b
242	DMSA C-331-08	NFA ^t	Inside—No Discharge
243	DMSA C-331-09	NFA ^t	Inside—No Discharge
244	DMSA C-331-10	NFA ^u	Inside—No Discharge
245	DMSA C-331-11	NFA ^r	Inside—No Discharge
246	DMSA C-331-12	NFA ^r	Inside—No Discharge
247	DMSA C-331-13	NFA ^s	Inside—No Discharge
248	DMSA C-331-14	NFA ^r	Inside—No Discharge
249	DMSA C-331-15	NFA ^r	Inside—No Discharge
250	DMSA C-331-16	NFA ^r	Inside—No Discharge
251	DMSA C-331-19	NFA ^r	Inside—No Discharge
252	DMSA C-331-20	NFA ^t	Inside—No Discharge
253	DMSA C-331-22	NFA ^r	Inside—No Discharge
254	DMSA C-331-23	NFA ^t	Inside—No Discharge
255	DMSA C-331-24	NFA ^r	Inside—No Discharge
256	DMSA C-333-01	NFA ^r	Inside—No Discharge
257	DMSA C-333-02	NFA ^v	Inside—No Discharge
258	DMSA C-333-03	NFA ^v	Inside—No Discharge
259	DMSA C-333-04	NFA ^v	Inside—No Discharge
260	DMSA C-333-05	NFA ^v	Inside—No Discharge
261	DMSA C-333-06	NFA ^v	Inside—No Discharge
262	DMSA C-333-07	NFA ^v	Inside—No Discharge
263	DMSA C-333-08	NFA ^r	Inside—No Discharge
264	DMSA C-333-09	NFA ^s	Inside—No Discharge
265	DMSA C-333-10	NFA ^v	Inside—No Discharge
266	DMSA C-333-11	NFA ^r	Inside—No Discharge
267	DMSA C-333-12	NFA ^v	Inside—No Discharge
268	DMSA C-333-13 and DMSA C-333-32	NFA ^v	Inside—No Discharge
269	DMSA C-333-14	NFA ^v	Inside—No Discharge
270	DMSA C-333-15 and DMSA C-333-33	NFA ^v	Inside—No Discharge
271	DMSA C-333-16 (East)	NFA ^u	Inside—No Discharge
272	DMSA C-333-16 (West)	NFA ^u	Inside—No Discharge
273	DMSA C-333-17 and DMSA C-333-36	NFA ^v	Inside—No Discharge
274	DMSA C-333-18	NFA ^t	Inside—No Discharge
275	DMSA C-333-19	NFA ^r	Inside—No Discharge
276	DMSA C-333-20	NFA ^u	Inside—No Discharge
277	DMSA C-333-21	NFA ^u	Inside—No Discharge
278	DMSA C-333-22	NFA ^t	Inside—No Discharge
279	DMSA C-333-23	NFA ^t	Inside—No Discharge
280	DMSA C-333-24	NFA ^v	Inside—No Discharge
281	DMSA C-333-25	NFA ^s	Inside—No Discharge
282	DMSA C-333-26	NFA ^t	Inside—No Discharge
283	DMSA C-333-27	NFA ^v	Inside—No Discharge
284	DMSA C-333-28	NFA ^s	Inside—No Discharge
285	DMSA C-333-29	NFA ^v	Inside—No Discharge
286	DMSA C-333-30	NFA ^v	Inside—No Discharge
287	DMSA C-333-31	NFA ^u	Inside—No Discharge
288	DMSA C-333-34	NFA ^s	Inside—No Discharge
289	DMSA C-333-35	NFA ^v	Inside—No Discharge
290	DMSA C-333-37	NFA ^r	Inside—No Discharge
291	DMSA C-333-38	NFA ^t	Inside—No Discharge
292	DMSA C-333-39	NFA ^r	Inside—No Discharge
293	DMSA C-333-40	NFA ^r	Inside—No Discharge
294	DMSA C-333-41	NFA ^r	Inside—No Discharge
295	DMSA C-333-42	NFA ^t	Inside—No Discharge

Table B.1. Description of Solid Waste Management Units at the Paducah Site (Continued)

SWMU or AOC	Description	Contaminants of Concern^a	Discharge Location and Outfall^b
296	DMSA C-333-43	NFA ^t	Inside—No Discharge
297	DMSA C-335-01	NFA ^r	Inside—No Discharge
298	DMSA C-335-02	NFA ^r	Inside—No Discharge
299	DMSA C-335-03	NFA ^r	Inside—No Discharge
300	DMSA C-335-04	NFA ^t	Inside—No Discharge
301	DMSA C-335-05	NFA ^s	Inside—No Discharge
302	DMSA C-335-06	NFA ^r	Inside—No Discharge
303	DMSA C-335-07	NFA ^t	Inside—No Discharge
304	DMSA C-335-08	NFA ^s	Inside—No Discharge
305	DMSA C-335-09	NFA ^t	Inside—No Discharge
306	DMSA C-335-11	NFA ^r	Inside—No Discharge
307	DMSA C-335-12	NFA ^r	Inside—No Discharge
308	DMSA C-337-01	NFA ^r	Inside—No Discharge
309	DMSA C-337-02	NFA ^r	Inside—No Discharge
310	DMSA C-337-03	NFA ^s	Inside—No Discharge
311	DMSA C-337-04	NFA ^v	Inside—No Discharge
312	DMSA C-337-05	NFA ^t	Inside—No Discharge
313	DMSA C-337-06	NFA ^r	Inside—No Discharge
314	DMSA C-337-07	NFA ^r	Inside—No Discharge
315	DMSA C-337-08	NFA ^r	Inside—No Discharge
316	DMSA C-337-09	NFA ^r	Inside—No Discharge
317	DMSA C-337-10	NFA ^r	Inside—No Discharge
318	DMSA C-337-11	NFA ^r	Inside—No Discharge
319	DMSA C-337-12	NFA ^v	Inside—No Discharge
320	DMSA C-337-13	NFA ^v	Inside—No Discharge
321	DMSA C-337-14	NFA ^r	Inside—No Discharge
322	DMSA C-337-15	NFA ^r	Inside—No Discharge
323	DMSA C-337-16	NFA ^r	Inside—No Discharge
324	DMSA C-337-17	NFA ^r	Inside—No Discharge
325	DMSA C-337-18	NFA ^r	Inside—No Discharge
326	DMSA C-337-19	NFA ^v	Inside—No Discharge
327	DMSA C-337-20	NFA ^v	Inside—No Discharge
328	DMSA C-337-21	NFA ^v	Inside—No Discharge
329	DMSA C-337-23	NFA ^t	Inside—No Discharge
330	DMSA C-337-25	NFA ^r	Inside—No Discharge
331	DMSA C-337-27	NFA ^u	Inside—No Discharge
332	DMSA C-337-29	NFA ^v	Inside—No Discharge
333	DMSA C-337-30	NFA ^r	Inside—No Discharge
334	DMSA C-337-31	NFA ^r	Inside—No Discharge
335	DMSA C-337-32	NFA ^r	Inside—No Discharge
336	DMSA C-337-33	NFA ^r	Inside—No Discharge
337	DMSA C-337-34	NFA ^r	Inside—No Discharge
338	DMSA C-337-35	NFA ^s	Inside—No Discharge
339	DMSA C-337-36	NFA ^s	Inside—No Discharge
340	DMSA C-337-37	NFA ^s	Inside—No Discharge
341	DMSA C-337-38	NFA ^r	Inside—No Discharge
342	DMSA C-337-39	NFA ^r	Inside—No Discharge
343	DMSA C-337-40	NFA ^v	Inside—No Discharge
344	DMSA C-337-41	NFA ^s	Inside—No Discharge
345	DMSA C-337-42	NFA ^s	Inside—No Discharge
346	DMSA C-337-43	NFA ^r	Inside—No Discharge
347	DMSA C-337-44	NFA ^r	Inside—No Discharge
348	DMSA C-337-45	NFA ^r	Inside—No Discharge
349	DMSA C-400-01	NFA ^s	Inside—No Discharge

Table B.1. Description of Solid Waste Management Units at the Paducah Site (Continued)

SWMU or AOC	Description	Contaminants of Concern^a	Discharge Location and Outfall^b
350	DMSA C-400-04	NFA ^t	Inside—No Discharge
351	DMSA C-400-05	NFA ^s	Inside—No Discharge
352	DMSA C-400-06	NFA ^r	Inside—No Discharge
353	DMSA C-400-07	NFA ^v	Inside—No Discharge
354	DMSA C-409-01	NFA ^u	Inside—No Discharge
355	DMSA C-409-02	NFA ^v	Inside—No Discharge
356	DMSA C-720-01	NFA ^u	Inside—No Discharge
357	DMSA C-720-02	NFA ^r	Inside—No Discharge
358	DMSA C-720-03	NFA ^r	Inside—No Discharge
359	DMSA C-720-04	NFA ^r	Inside—No Discharge
360	DMSA C-535	NFA ^f	Inside—No Discharge
361	DMSA C-727-90 day	NFA ^f	Inside—No Discharge
362	Generator Staging Area G-310-04	NFA ^f	Inside—No Discharge
363	Generator Staging Area G-331-03	NFA ^f	Inside—No Discharge
364	Generator Staging Area G-331-05	NFA ^f	Inside—No Discharge
365	Generator Staging Area G-333-02	NFA ^f	Inside—No Discharge
366	Generator Staging Area G-333-03	NFA ^f	Inside—No Discharge
367	Generator Staging Area G-333-04	NFA ^f	Inside—No Discharge
368	Generator Staging Area G-333-08	NFA ^f	Inside—No Discharge
369	Generator Staging Area G-333-10	NFA ^f	Inside—No Discharge
370	Generator Staging Area G-333-20	NFA ^f	Inside—No Discharge
371	Generator Staging Area G-335-01	NFA ^f	Inside—No Discharge
372	Generator Staging Area G-337-02	NFA ^f	Inside—No Discharge
373	Generator Staging Area G-337-03	NFA ^f	Inside—No Discharge
374	Generator Staging Area G-337-13	NFA ^f	Inside—No Discharge
375	Generator Staging Area G-337-14	NFA ^f	Inside—No Discharge
376	Generator Staging Area G-337-15	NFA ^f	Inside—No Discharge
377	Generator Staging Area G-337-22	NFA ^f	Inside—No Discharge
378	Generator Staging Area G-340-01	NA ⁿ	Removed
379	Generator Staging Area G-340-03	NA ⁿ	Removed
380	Generator Staging Area G-340-04	NA ⁿ	Removed
381	Generator Staging Area G-340-05	NA ⁿ	Removed
382	Generator Staging Area G-340-06	NFA ^{n,f}	Removed
383	Generator Staging Area G-400-01	NFA ^f	Inside—No Discharge
384	Generator Staging Area G-400-02	NFA ^f	Inside—No Discharge
385	Generator Staging Area G-409-25	NFA ^f	Inside—No Discharge
386	Generator Staging Area G-410-01	NFA ^f	Inside—No Discharge
387	Generator Staging Area G-416-01	NFA ^f	LBC, 2
388	C-416 Decontamination Pad	NFA ^f	LBC, 2
389	Generator Staging Area G-533-01	NFA ^f	Inside—No Discharge
390	Generator Staging Area G-535-02	NFA ^f	BC, 1
391	Generator Staging Area G-537-01	NFA ^f	Inside—No Discharge
392	Generator Staging Area G-540-A-01	NFA ^f	Inside—No Discharge
393	Generator Staging Area G-540-A-1-02	NFA ^f	LBC, 10 and 11
394	Generator Staging Area G-541-A-01	NFA ^f	BC, 1
395	Generator Staging Area G-600-01	NFA ^f	BC, 8
396	Generator Staging Area G-611-U-01	NFA ^f	BC
397	Generator Staging Area G-612-01	NFA ^f	Inside—No Discharge
398	Generator Staging Area G-612-02	NFA ^f	Inside—No Discharge
399	Generator Staging Area G-612-A-01	NFA ^f	BC, 1
400	Generator Staging Area G-635-01	NFA ^f	BC, 1
401	Generator Staging Area G-710	NFA ^f	BC, 9
402	Generator Staging Area G-710-04	NFA ^f	BC, 9
403	Generator Staging Area G-710-20	NFA ^f	BC, 9

Table B.1. Description of Solid Waste Management Units at the Paducah Site (Continued)

SWMU or AOC	Description	Contaminants of Concern^a	Discharge Location and Outfall^b
404	Generator Staging Area G-710-24	NFA ^f	Inside—No Discharge
405	Generator Staging Area G-720-22	NFA ^f	Inside—No Discharge
406	Generator Staging Area G-743-T-17-01	NFA ^f	Inside—No Discharge
407	Generator Staging Area G-743-T-17-02	NFA ^f	Inside—No Discharge
408	Generator Staging Area G-745-B-01	NFA ^f	BC, 15
409	Generator Staging Area G-745-T-01	NFA ^f	BC, 17
410	Generator Staging Area G-746-G-01	NFA ^f	Inside—No Discharge
411	Generator Staging Area G-746-G-1-01	NFA ^f	Inside—No Discharge
412	Generator Staging Area G-746-G-2-01	NFA ^f	LBC, 2 and 10
413	Generator Staging Area G-746-G-3-01	NFA ^f	LBC, 2 and 10
414	Generator Staging Area G-746-F-01	NFA ^f	BC, 1
415	Generator Staging Area G-746-S-01	NFA ^f	LBC
416	Generator Staging Area G-746-X-01 (PCBs)	NFA ^f	BC, 1
417	Generator Staging Area G-746-X-01 (Asbestos)	NFA ^f	BC, 1
418	Generator Staging Area G-748-B-01	NFA ^f	BC, 8 and 15
419	Generator Staging Area G-752-C-01	NFA ^f	BC, 9 and 16
420	Generator Staging Area G-752-C-02	NFA ^f	BC, 9 and 16
421	Generator Staging Area G-754-01	NFA ^f	BC, 8
422	Generator Staging Area G-755-A-01	NFA ^f	LBC, 2
423	Generator Staging Area G-755-C-01	NFA ^f	Inside—No Discharge
424	Generator Staging Area G-755-T-07-01	NFA ^f	Inside—No Discharge
425	Generator Staging Area G-755-T-08	NFA ^f	Inside—No Discharge
426	Generator Staging Area G-755-T-2-3-01	NFA ^f	LBC, 2
427	Generator Staging Area G-755-T-3-1-01	NFA ^f	LBC, 2
428	Generator Staging Area G-755-T-3-2-01	NFA ^f	LBC, 2
429	Satellite Access Area S-310-04	NFA ^f	Inside—No Discharge
430	Satellite Access Area S-331-02	NFA ^f	Inside—No Discharge
431	Satellite Access Area S-333-12	NFA ^f	Inside—No Discharge
432	Satellite Access Area S-335-09	NFA ^f	Inside—No Discharge
433	Satellite Access Area S-337-11	NFA ^f	Inside—No Discharge
434	Satellite Access Area S-340-01	NA ⁿ	Removed
435	Satellite Access Area S-409-100	NFA ^f	Inside—No Discharge
436	Satellite Access Area S-409-20	NFA ^f	Inside—No Discharge
437	Satellite Access Area S-409-40	NFA ^f	Inside—No Discharge
438	Satellite Access Area S-409-60	NFA ^f	Inside—No Discharge
439	Satellite Access Area S-409-80	NFA ^f	Inside—No Discharge
440	Satellite Access Area S-410-05	NFA ^f	Inside—No Discharge
441	Satellite Access Area S-540-A-2-01	NFA ^f	LBC, 11
442	Satellite Access Area S-612-01	NFA ^f	Inside—No Discharge
443	Satellite Access Area S-709-01	NFA ^f	Inside—No Discharge
444	Satellite Access Area S-709-02	NFA ^f	Inside—No Discharge
445	Satellite Access Area S-710-05	NFA ^f	Inside—No Discharge
446	Satellite Access Area S-710-06	NFA ^f	Inside—No Discharge
447	Satellite Access Area S-710-09	NFA ^f	Inside—No Discharge
448	Satellite Access Area S-710-16	NFA ^f	Inside—No Discharge
449	Satellite Access Area S-710-18	NFA ^f	Inside—No Discharge
450	Satellite Access Area S-710-32	NFA ^f	Inside—No Discharge
451	Satellite Access Area S-710-41	NFA ^f	Inside—No Discharge
452	Satellite Access Area S-710-44	NFA ^f	Inside—No Discharge
453	Satellite Access Area S-710-46	NFA ^f	Inside—No Discharge
454	Satellite Access Area S-743-T-17-01	NFA ^f	Inside—No Discharge
455	Satellite Access Area S-755-T-16-01	NFA ^f	LBC, 2
456	Satellite Access Area S-755-T-16-02	NFA ^f	LBC, 2
457	Satellite Access Area S-755-T-16-03	NFA ^f	LBC, 2

Table B.1. Description of Solid Waste Management Units at the Paducah Site (Continued)

SWMU or AOC	Description	Contaminants of Concern^a	Discharge Location and Outfall^b
458	Satellite Access Area S-755-T-2-3-01	NFA ^f	LBC, 2
459	Satellite Access Area S-755-T-3-1-01	NFA ^f	LBC, 2
460	Satellite Access Area S-755-T-3-2-01	NFA ^f	LBC, 2
461	Satellite Access Area S-755-T-3-2-02	NFA ^f	LBC, 2
462	Satellite Access Area S-755-7-3-2-03	NFA ^f	LBC, 2
463	C-746-A East End Smelter	D&D Operable Unit Soils and Slabs Operable Unit ^f	BC, 1
464	C-746-A West End Smelter	Soils and Slabs Operable Unit ^f	BC, 1
465	G Yard Rubble Pile and Crushate Storage Area	NFA ^f	BC, 9 and 17
466	South of Dykes Road, Pond Area	NFA ^f	LBC
467	Concrete Cylinders Storage Area on WKWMA	NFA ^f	BC
468	Area West of Plant, North of Outfall 015	NFA ^f	BC, 15
469	C-745-J Yard	Soils and Slabs Operable Unit ^f	LBC, 12
470	C-746-V Yard	Soils and Slabs Operable Unit ^f	BC, 1
471	South Area outside C-746-B Storage Area	NFA ^f	BC, 1
472	C-746-B Pad	Additional Burial Grounds Sources Operable Unit ^f	BC, 1
473	West of C-746-B Pad	NFA ^f	BC, 1
474	West of Vortec Site	Soils and Slabs Operable Unit ^f	BC, 1
475	C-745-G5-01	NFA ^f	BC, 17
476	Concrete Crusher	NFA ^f	BC, 9
477	C-340 Metals Plant	NA ⁿ	LBC, 10
478	C-410/420 Feed Plant	PCBs and Uranium, D&D Operable Unit Soils and Slabs Operable Unit ^f	BC, 1 and 8; LBC, 10
479	C-204 Disintegrator Building	NFA ^f	Inside—No Discharge
480	C-402 Lime House	Soils and Slabs Operable Unit ^f	BC, 1
481	C-410-A Hydrogen Holder	NFA ^f	Inside—No Discharge
482	C-415 Feed Plant Storage Building	D&D Operable Unit ^f	Inside—No Discharge
483	Nitrogen Generating Facilities	Soils and Slabs Operable Unit ^f	BC, 8
484	C-611-M Storage Tank	NFA ^f	Removed
485	C-611-N Sanitary Water Storage Tank	NFA ^f	Removed
486	WKWMA southwest of plant, rubble pile	Cs-137 ^m	Off-site
487	WKWMA southwest of plant, rubble pile	Cs-137 ^m	Off-site
488	PCB contamination area near the C-410 Trailer Complex	PCBs, PAHs, Cs-137, U-238 ^c	BC, 8
489	Septic Tank, north of the C-710 Laboratory	Cr, PAHs ^c	BC, 9
490	McGraw Fuel Facility Waste Oil Underground Storage Tank	NFA ^f	LBC, 13
491	Mercury Spill at the C-611 Water Treatment Plant Vault	NFA ^f	BC, Mile 6.71 (km 10.83)
492	Contaminated Soil Area North of Outfall 010	As, Cr, U, PCBs, U-234, U-235, U-238 ^m	LBC
493	Concrete Rubble Piles near Outfall 001 ditch	Cr, PCBs, PAHs, U-238 ^m	BC, 1
494	C-410 Ash Removal Systems	D&D Operable Unit, Soils and Slabs Operable Unit ^f	BC, 1
495	C-410-I Ash Receiver Shed	D&D Operable Unit, Soils and Slabs Operable Unit ^f	BC, 1
496	C-410 Fluorine/Hydrogen Filters	D&D Operable Unit	Inside—No Discharge
497	C-410 Neutralization Room Inverter Vat	D&D Operable Unit, Soils and Slabs Operable Unit ^f	Inside—No Discharge
498	C-410/420 Complex—Sump at D and E 1 2	D&D Operable Unit, Soils and Slabs Operable Unit ^f	Inside—No Discharge
499	C-410/420 Complex—Sump at H-9 and 10	D&D Operable Unit, Soils and Slabs Operable Unit ^f	Inside—No Discharge

Table B.1. Description of Solid Waste Management Units at the Paducah Site (Continued)

SWMU or AOC	Description	Contaminants of Concern^a	Discharge Location and Outfall^b
500	C-410/420 Complex—Sump at U-10 and 11	D&D Operable Unit, Soils and Slabs Operable Unit ^f	Inside—No Discharge
501	C-410/420 Complex—Scale Pit Sumps A and B	D&D Operable Unit, Soils and Slabs Operable Unit ^f	Inside—No Discharge
502	C-410/420 Complex—Sump at Column U-9	D&D Operable Unit, Soils and Slabs Operable Unit ^f	Inside—No Discharge
503	C-410/420 Complex—Sump at Column G-1	D&D Operable Unit, Soils and Slabs Operable Unit ^f	Inside—No Discharge
504	C-410/420 Complex—Sump at Column L-10	D&D Operable Unit, Soils and Slabs Operable Unit ^f	Inside—No Discharge
505	C-410/420 Complex—Sump at Column A-3N	D&D Operable Unit, Soils and Slabs Operable Unit ^f	Inside—No Discharge
506	C-410/420 Complex—Sump at Column Wa-9	D&D Operable Unit, Soils and Slabs Operable Unit ^f	Inside—No Discharge
507	C-410/420 Complex—Condensate Tank Pit	D&D Operable Unit, Soils and Slabs Operable Unit ^f	Inside—No Discharge
508	C-410/420 Complex—Settling Basin	D&D Operable Unit, Soils and Slabs Operable Unit ^f	Inside—No Discharge
509	C-410/420 Complex—Drain Pit	D&D Operable Unit, Soils and Slabs Operable Unit ^f	Inside—No Discharge
510	C-410/420 Complex—Sump at Column P and Q-2	D&D Operable Unit, Soils and Slabs Operable Unit ^f	Inside—No Discharge
511	C-410/420 Complex—Sump at Column Q and R-2	D&D Operable Unit, Soils and Slabs Operable Unit ^f	Inside—No Discharge
512	C-410/420 Complex—Sump at Column R-2	D&D Operable Unit, Soils and Slabs Operable Unit ^f	Inside—No Discharge
513	C-411 Cell Maintenance Room Sump Pit	D&D Operable Unit, Soils and Slabs Operable Unit ^f	Inside—No Discharge
514	C-340 Reject Magnesium Fluoride Storage Silo	NFA ^w	Removed
515	C-340 “Dirty” Dust Collection System	NFA ^w	Removed
516	C-340 Derby Preparation Area Sludge Collection System	NFA ^w	Removed
517	Rubble and Debris Erosion Control Fill Area	Cr, PCBs, Np-237, U-238 ^m	BC, 1
518	Field South of C-746-P Yard	PCBs, PAHs ^c	BC, 1
519	C-410 Sulfuric Acid Tank (C-634-B Tank)	NFA ^t	Inside—No Discharge
520	Scrap Material West of C-746-A	Cr, PAHs, Cs-137, Np-237, U-238 ^c	BC, 1
521	C-340 Saw System Degreaser	NFA ^w	Removed
522	Work Pit Ground Floor at B-7 to B-9	Soils and Slabs Operable Unit ^f	LBC, 10
523	C-340 Metals Plant Pit Ground Floor F6 to F11	Soils and Slabs Operable Unit ^f	LBC, 10
524	C-340 Pickling Spray Booth Sump at B-10 to B-11	Soils and Slabs Operable Unit ^f	LBC, 10
525	Concrete Water Tower Supports	NFA ^t	BC, 1
526	Internal Plant Drainage Ditches	As, Be, U, PCBs, Am-241, Co-60, Cs-137, Np-237, Pu-239/240, Tc-99, Th-230, Th-232, U-234, U-235, U-238 ⁱ	All Outfalls
527	C-410 GSA/SAA at Column J-6	NFA ^t	Inside—No Discharge
528	GSA/SAA at the northwest corner of the C-745-G3 Paint Enclosure	NFA ^f	Inside—No Discharge
529	C-340 Powder Plant Sump at Ground Floor Level	Soils and Slabs Operable Unit ^f	LBC, 10
530	Soil and Debris Storage Area by C-745-T Yard	NFA ^t	LBC, 13
531	Aluminum Slag Reacting (C-746-H4) Area near the C-746-A Facility	As, Cr, U-238 ^c	Inside—No Discharge

Table B.1. Description of Solid Waste Management Units at the Paducah Site (Continued)

SWMU or AOC	Description	Contaminants of Concern^a	Discharge Location and Outfall^b
532	Photographic Solution Treatment Area in the C-102 building	NFA ^f	Inside—No Discharge
533	TCE spill site from historical TCE unloading operations at C-400	TCE; 1,1-DCE; VC ^l	BC, 8
534	UST #18 within SWMU 193	NFA ^f	LBC, 13
535	SAA—located in trailer C-755-08 (S-755-T08-01)	NFA ^f	Inside—No Discharge
536	Concrete truck washout area—west of gate 49	NFA ^f	BC, 17
537	SAA—located outside at the southeast corner of C-400 (S-400-001)	NFA ^f	Contained—No Discharge
538	SAAs in groundwater sampling trailer 01 (S-MST01-01 and S-MST-01-02)	NFA ^f	Inside—No Discharge
539	SAAs in groundwater sampling trailer 02 (S-MST-02-01 and S-MST-02-02)	NFA ^f	Inside—No Discharge
540	SAAs in groundwater sampling trailer 03 (S-MST-03-01 and S-MST-03-02)	NFA ^f	Inside—No Discharge
541	Contaminated Soil Area, South of Outfall 011	Cr, U, PCBs, PAHs, Cs-137, U-234, U-235, U-238 ^m	LBC
542	SAAs and GSA located outside south of C-746-B (G-746-B-01, S-746-B-01, S-746-B-02) and (G-746-A-01, S-746-A-01, S-746-A-03)	NFA ^f	Contained—No Discharge
543	90-Day Storage Area near C-746-S (T-746-S-01)	NFA ^f	Contained—No Discharge
544	90-Day Storage Area at C-752-C (T-752-C-01)	NFA ^f	Contained—No Discharge
545	Generator Staging Area and a Satellite Accumulation Area located at C-755-T-22 (S-755-T-22-01 and G-755-T-22)	NFA ^f	Contained—No Discharge
546	PGDP Post 67 Diesel Spill Area	NFA ^f	Contained—No Discharge
547	PGDP Post 38 Diesel Spill Area	NFA ^f	Contained—No Discharge
548	Staging Area for Concrete Piers, Rubble and Wood from C-745-B Cylinder Yard	NFA ^f	Contained—No Discharge
549	Dirt/Concrete Rubble Pile Near Outfall 008	Surface Water Operable Unit ^f	BC, 8
550	Concrete Culvert Sections Located on the West Bank of the Ditch Leading to Outfall 001	Surface Water Operable Unit ^f	BC, 1
551	GSA G-755-DMSA-23 located at C-755 on the East Fence Line	NFA ^f	Contained—No Discharge
552	90-Day Storage Area Located at C-760 Gravel Pad	NFA ^f	Contained—No Discharge
553	DMSA C-331-17	NFA ^r	Inside—No Discharge
554	DMSA C-331-18	NFA ^r	Inside—No Discharge
555	DMSA C-331-21	NFA ^r	Inside—No Discharge
556	DMSA C-337-22	NFA ^r	Inside—No Discharge
557	DMSA C-337-24	NFA ^r	Inside—No Discharge
558	DMSA C-337-26	NFA ^r	Inside—No Discharge
559	DMSA C-337-28	NFA ^r	Inside—No Discharge
560	DMSA C-333-16	NFA ^u	Inside—No Discharge
561	Soil Pile 1	As, Cr, Co, U, PCBs, PAHs, Cs-137, U-234, U-235, U-238 ^m	LBC
562	Contaminated Soil Area North of Soil Pile 1 on West Bank of Little Bayou Creek	Cr, PCBs, PAHs, U-234, U-235, U-238 ^m	LBC

Table B.1. Description of Solid Waste Management Units at the Paducah Site (Continued)

SWMU or AOC	Description	Contaminants of Concern^a	Discharge Location and Outfall^b
563	Contaminated Soil Area North of Outfall 012 West of Little Bayou Creek	Cr, PCBs, Cs-137, U-238 ^m	LBC
564	Contaminated Soil Areas on the East Side of the North-South Diversion Ditch North of the P-, S-, and T-Landfills	As, Cr, iron, Tl, PCBs, Cs-137, Th-230, U-234, U-238 ^m	LBC
565	Rubble Pile North of C-611	Soils Operable Unit ^f	BC
566	C-340 Main Floor Locker Room 90-Day Accumulation Area	NFA ^f	Removed
567	Contaminated Soil Area K013	None ^m	LBC, 13
568	C-340 ST-90 Boxes	NFA ^f	Removed
569	C-743-T17 Sample Return Refrigerator	NFA ^f	Inside—No Discharge
570	Sample Return Sealand	NFA ^f	Contained—No Discharge

^a Am-241 = americium-241; As = arsenic; Be = beryllium; carbon tet = carbon tetrachloride; Co-60 = cobalt-60; *cis*-1,2-DCE = *cis*-1,2-dichloroethene; Cr = chromium; Cs-137 = cesium-137; 1,1-DCE = 1,1-dichloroethene; NA = not applicable; NFA = no further action; Np-237 = neptunium-237; PAHs = polycyclic aromatic hydrocarbons; PCBs = polychlorinated biphenyls; Pu-239/240 = plutonium-239/240; Rad = radionuclides; SVOA = semivolatile organic analytes; Tc-99 = technetium-99; TCE = trichloroethene; Th-230 = thorium-230; Th-232 = thorium-232; Tl = thallium; U = uranium; U-234 = uranium-234; U-235 = uranium-235; U-238 = uranium-238; VC = vinyl chloride
^b 1–17 = Kentucky Pollutant Discharge Elimination System outfall locations (DOE and USEC); BC = Bayou Creek; LBC = Little Bayou Creek; River = Ohio River

^c COCs are based on the future industrial worker and excavation worker from the Soils OU RI Report, DOE/LX/07-0358&D2/R1, February 2013.

^d COCs are based on the industrial worker from the BGOU RI Report, DOE/LX/07-0030&D2/R1, February 2010.

^e COCs are taken from the ROD for WAGs 1 and 7, DOE/OR/06-1470&D3, February 1998.

^f Information is taken from the Site Management Plan, DOE/LX/07-1292&D2, December 2013.

^g COCs are based on the future industrial worker and excavation worker from the WAG 6 RI Report, DOE/OR/06-1727&D2, May 1999.

^h Information is taken from Appendix A of the Site-Wide Risk Assessment, DOE/OR/07-2104, September 2003. Constituents listed are COPCs. COCs are determined during a baseline risk assessment.

ⁱ COCs are based on the Baseline Risk Assessment completed as part of the SWOU (On-Site) SI/BRA Report, DOE/LX/07-0001&D2/R1, February 2008, and summarized in the EE/CA for the industrial worker, DOE/LX/07-0012&D2, September 2008.

^j COCs are taken from the ROD for Interim Remedial Action North-South Diversion Ditch, DOE/OR/07-1948&D2, August 2002.

^k COCs are taken from the ROD for SWMU 91, DOE/OR/06-1527&D1, September 1998.

^l COCs are taken from the Interim ROD for Volatile Organic Compound Contamination at the C-400 Building, DOE/OR/07-2150&D2/R2, July 2005.

^m COCs are based on the outdoor worker and excavation worker from the Soils OU RI Report, DOE/LX/07-0358&D2/R1, February 2013.

ⁿ SWMU has been removed (Site Management Plan, DOE/LX/07-1292&D2, December 2013).

^o COCs are taken from the Interim ROD for the Northwest Plume, DOE/OR/06-1143&D2, April 1993.

^p COCs are taken from the Interim ROD for the Northeast Plume, DOE/OR/06-1356&D1, May 1995.

^q COCs are taken from the ROD for Volatile Organic Compound Sources for the Southwest Groundwater Plume, DOE/LX/07-0365&D2/R1, March 2012.

^r NFA designation is based on the April 24, 2009, letter from the KDWM.

^s NFA designation is based on the July 8, 2010, letter from the KDWM.

^t NFA designation is based on the February 12, 2010, letter from the KDWM.

^u NFA designation is based on the March 24, 2008, letter from the KDWM.

^v NFA designation is based on the April 6, 2010, letter from the KDWM.

^w Information is taken from the Site Management Plan, DOE/LX/07-1301&D2/R1, April 2015.

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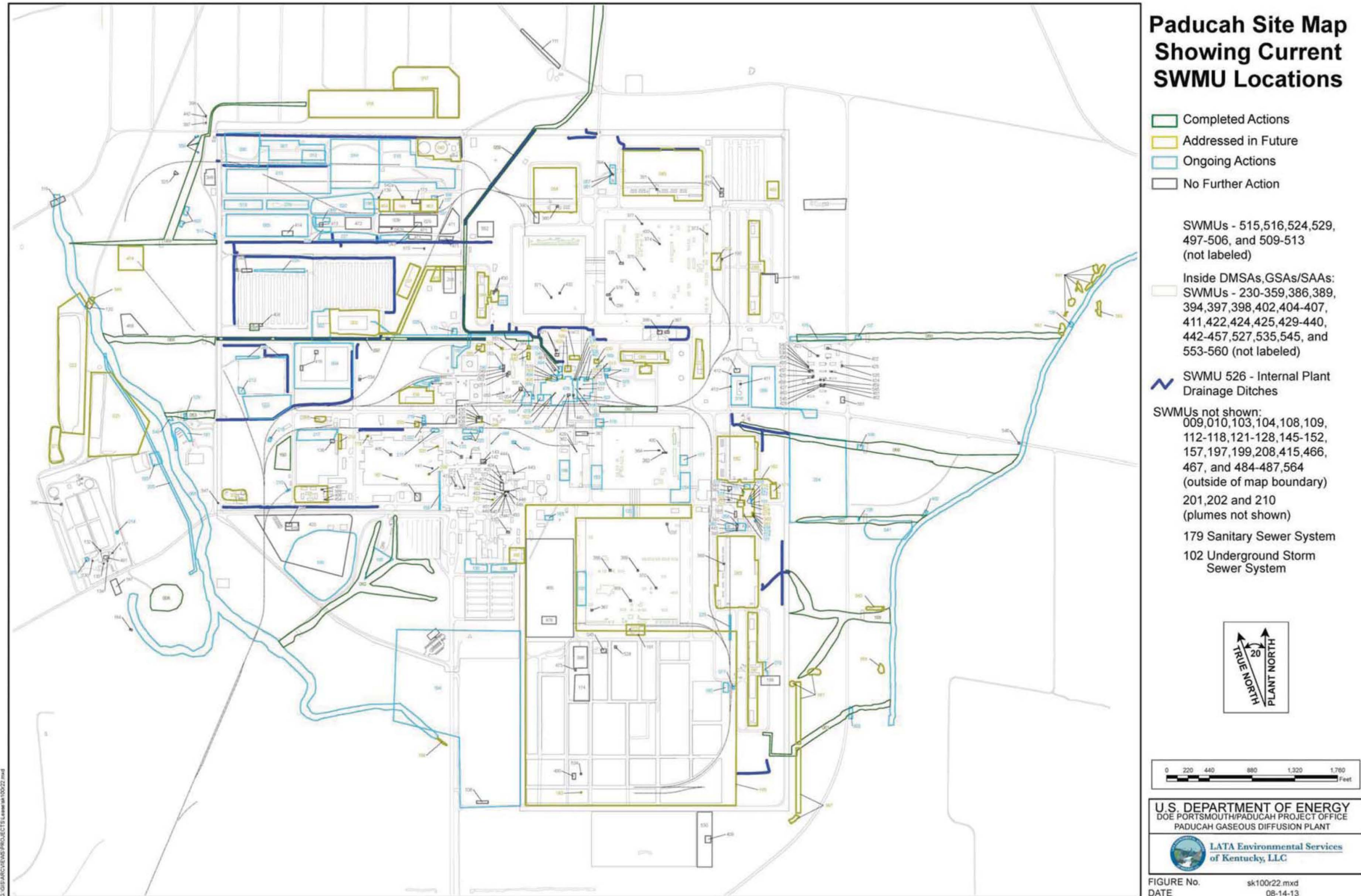
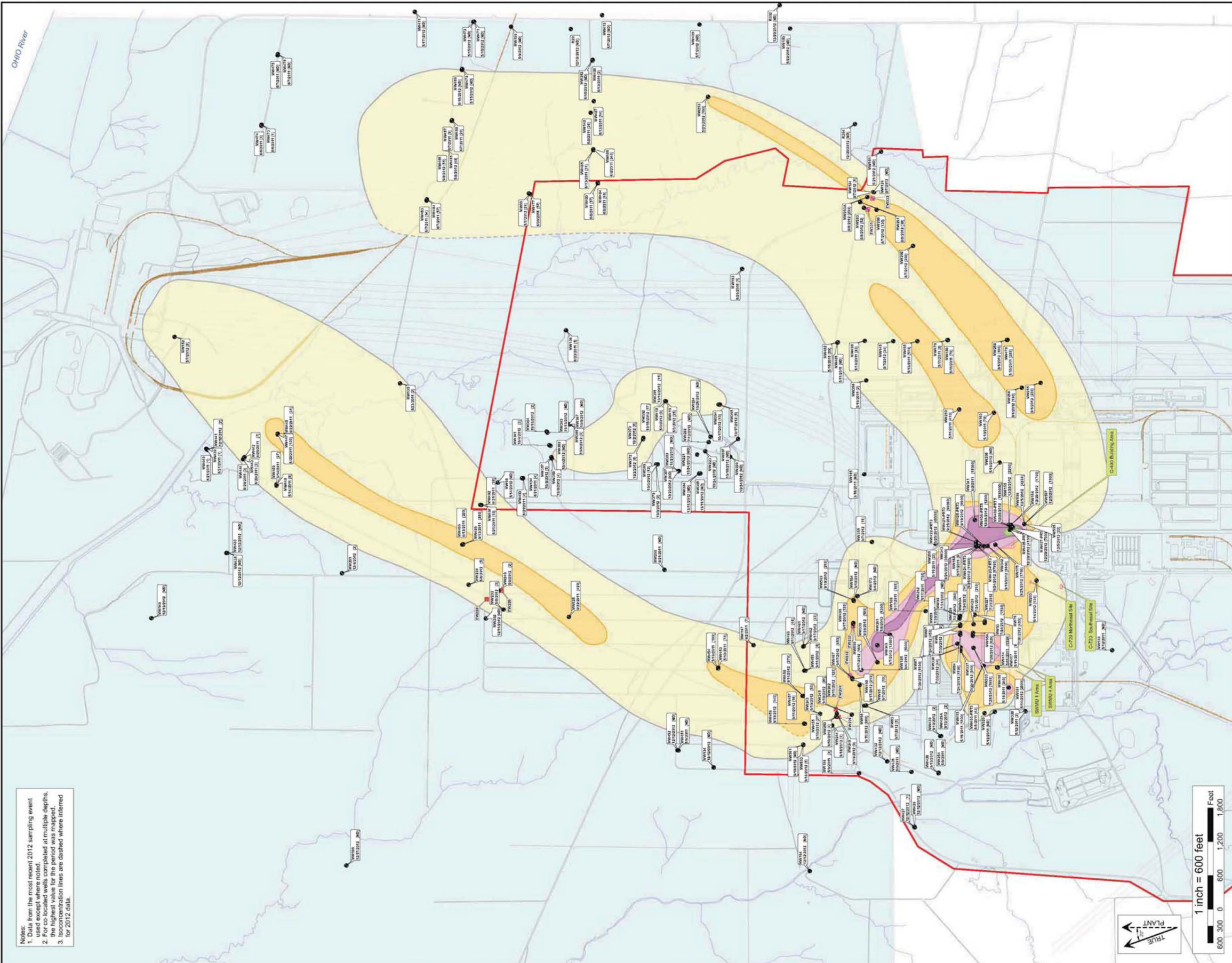


Figure B.1. Paducah Site Map Showing Current SWMU Locations

Notes:
 1. Data from the most recent 2012 sampling event are used for this map.
 2. For co-located wells, the highest value for the period was mapped.
 3. Isoconcentration lines are dashed where inferred for 2012 data.



LATA Environmental Services
of Kentucky, LLC

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

Figure B.2. 2012 TCE Plume --Regional Gravel Aquifer

FILE NAME: Fig_C02_2012_TCE_PlumeR2

PROJECT #: EM

SCALE: AS NOTED

DATE: 6/27/2013

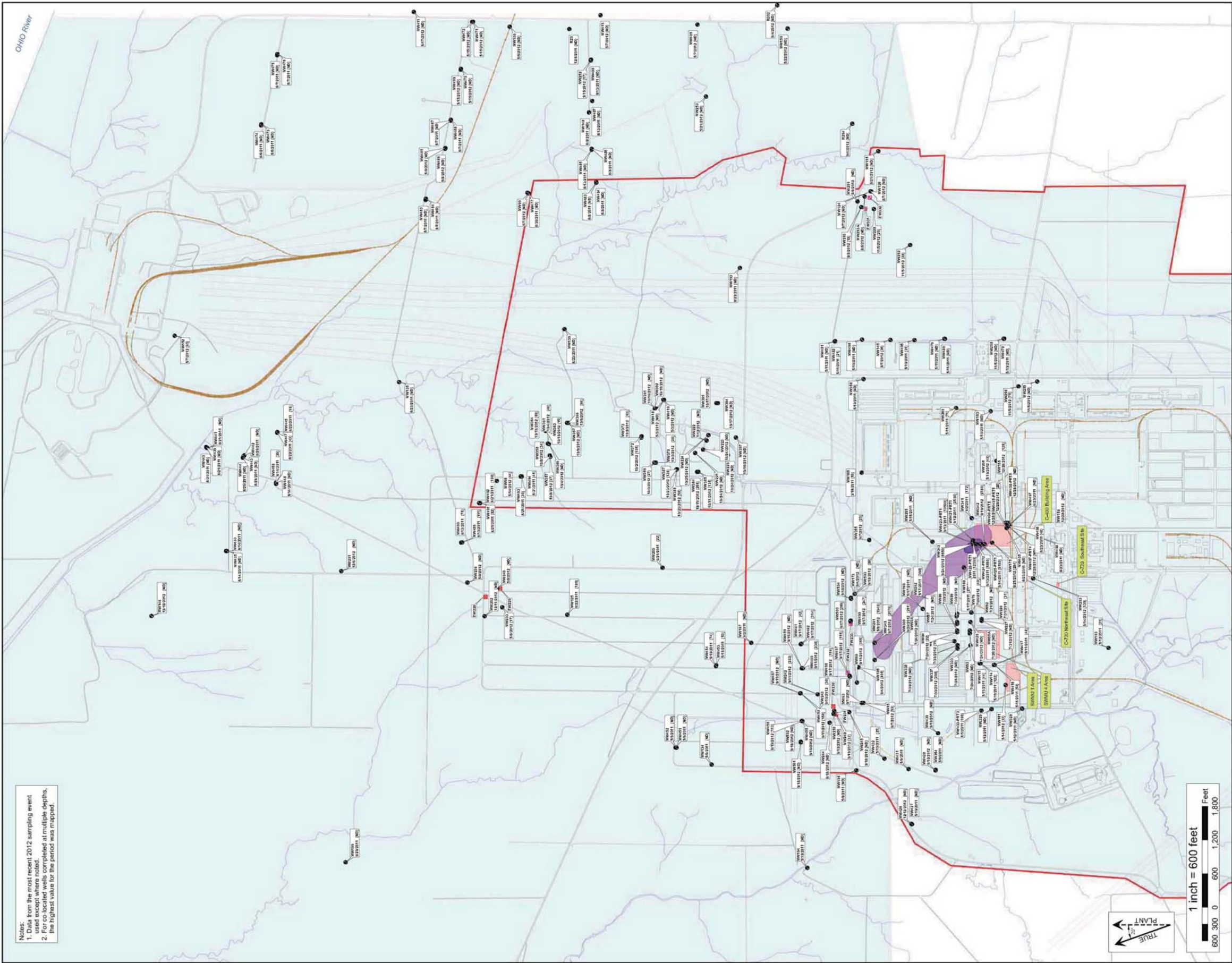
2012 Plume Concentration Fields

- TCE ≥ 5 µg/L
- TCE ≥ 100 µg/L
- TCE ≥ 1,000 µg/L
- TCE ≥ 10,000 µg/L
- TCE ≥ 100,000 µg/L

LEGEND

- Water Policy Area
- Area of Investigation during 2011-2012
- Monitoring Well Identification
- Well Status with Sample Value
- R20
- RGA Well
- Extraction Well
- Inactive Extraction Well
- DOE Property Boundary
- Roadways
- Streams
- Railroad
- TVA Powerlines

Notes:
 1. Data from the most recent 2012 sampling event
 2. For co-located wells completed at multiple depths, the highest value for the period was mapped.



2012 Plume Concentration Fields

- Tc-99 ≥ 900 pCi/L
- Tc-99 ≥ 3,790 pCi/L

LEGEND

- Water Policy Area
- Area of Investigation during 2011-2012
- Monitoring Well Identification, R20 - Permit Less than MDA
- Residential Well
- RGW Well
- Extraction Well
- Inactive Extraction Well

- DOE Property Boundary
- Roadways
- Streams
- Railroad
- TVA Powerlines



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 PADUCAH GASEOUS DIFFUSION PLANT

Figure B.3. 2012 Tc-99 Plume --Regional Gravel Aquifer

FILE NAME: Fig_C03_2012_Tc99_PlumeR2	PROJECT #:	EM	SCALE:	AS NOTED	DATE:	6/27/2013
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APPENDIX C

U.S. DEPARTMENT OF ENERGY CONTRACTOR PROCEDURES

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Table C.1. U.S. Department of Energy Contractor Procedures

Project-Wide Procedures		
Procedure No.	Procedure Title	Comments
PAD-POL-0001	<i>LATA Environmental Services of Kentucky Environmental Policy Statement</i>	LATA Kentucky Policy
PAD-PROG-0014	<i>Environmental Compliance and Protection Program Description for LATA Environmental Services of Kentucky LLC</i>	LATA Kentucky Program Description
PAD-PROG-0015	<i>Pollution Prevention/Waste Minimization Program for the U.S. DOE Paducah Remediation Project</i>	LATA Kentucky Program Description
PAD-PROG-0034	<i>Chemical Safety Management Program for LATA Environmental Services of Kentucky, LLC</i>	LATA Kentucky Program Description
PAD-PLA-PM-013	<i>LATA Environmental Services of Kentucky, LLC, Project Management Plan for the Paducah Remediation Project</i>	LATA Kentucky Plan
PAD-PLA-QM-001	<i>Quality Assurance Program and Implementation Plan for the Paducah Environmental Remediation Project</i>	LATA Kentucky Plan
PAD-WC-0018	<i>Work Planning and Control Program for the Paducah Environmental Remediation Project Paducah, Kentucky</i>	LATA Kentucky Program Description
PAD-PLA-PM-009	<i>LATA Environmental Services of Kentucky, LLC, Maintenance Implementation Plan for the Paducah Remediation Project</i>	LATA Kentucky Plan
SST-6.1.1	<i>Paducah Work Control Process</i>	SST Procedure
PAD-ENG-0011	<i>Configuration Management</i>	LATA Kentucky Procedure
PAD-FM-0016	<i>Facility Management and Operations</i>	LATA Kentucky Procedure
PAD-QA-1009	<i>Identification, Control, and Disposition of Suspect/Counterfeit Items</i>	LATA Kentucky Procedure

Environment, Safety, and Health Procedures		
Procedure No.	Procedure Title	Comments
PAD-POL-0002	<i>LATA Environmental Services of Kentucky Environment, Safety and Health Policy Statement</i>	LATA Kentucky Policy
PAD-PLA-HS-001	<i>LATA Environmental Services of Kentucky, LLC, Worker Safety Health Plan Paducah Remediation Services Project</i>	LATA Kentucky Plan
PAD-ENG-0026	<i>Excavation/Penetration Permit</i>	LATA Kentucky Procedure
SST-11.2.3	<i>Excavation Penetration Activities</i>	SST Procedure
PAD-IH-5181	<i>Hazardous Material Information and Inventory Process</i>	LATA Kentucky Procedure
PAD-IH-1008	<i>Facility Hazard Assessment</i>	LATA Kentucky Procedure
PAD-SH-2020	<i>Hotwork</i>	LATA Kentucky Procedure
SST-3.2.6	<i>Welding, Burning, and Hotwork</i>	SST Procedure
SST-3.2.12	<i>Paducah Confined Space Program</i>	SST Procedure
CP2-SH-IS1065	<i>Instructions for Lockout/Tagout</i>	USEC Procedure implemented by LATA Kentucky and SST
PAD-SH-2001	<i>Identifying Defective Equipment</i>	LATA Kentucky Procedure
SST-3.2.11	<i>Defective Equipment Tags—Paducah</i>	SST Procedure

Table C.1. U.S. Department of Energy Contractor Procedures (Continued)

Uranium Program Procedures		
Procedure No.	Procedure Title	Comments
DUF6-UDS-PLN-117	<i>Paducah Groundwater Protection Plan</i>	Blue sheet status; being revised and updated to BWCS Plan.
DUF6-BWCS-PLN-079	<i>Paducah Storm Water Pollution Prevention and Best Management Practices Plan</i>	BWCS Procedure

Waste Management Procedures		
Procedure No.	Procedure Title	Comments
PAD-PLA-ENV-001	<i>LATA Environmental Services of Kentucky, LLC, Waste Management Plan for the Paducah Environmental Remediation Project</i>	LATA Kentucky Plan
PAD-WD-1017	<i>Safe Handling and Opening of Sealed Containers</i>	LATA Kentucky Procedure
PAD-WD-3010	<i>Waste Generator Responsibilities for Temporary On-Site Storage of Regulated Waste Materials at Paducah</i>	LATA Kentucky Procedure
PAD-WD-3011	<i>Waste Certification</i>	LATA Kentucky Procedure
PAD-WD-3012	<i>Procurement, Inspection, and Management of Items Critical for Paducah Off-Site Waste Shipments</i>	LATA Kentucky Procedure
SST-3.6.1	<i>Storage and Disposition of Spent Material</i>	SST Procedure
PAD-WD-3015	<i>Waste Packaging</i>	LATA Kentucky Procedure

Data and Sampling Procedures		
Procedure No.	Procedure Title	Comments
PAD-ENM-0811	<i>Pesticide and PCB Data Verification and Validation</i>	LATA Kentucky Procedure
PAD-ENM-2708	<i>Chain-of-Custody Forms, Field Sample Logs, Sample Labels, and Custody Seals</i>	LATA Kentucky Procedure
PAD-ENM-5003	<i>Quality Assured Data</i>	LATA Kentucky Procedure
PAD-ENM-5004	<i>Sample Tracking, Laboratory Coordination, and Sample Handling Guidance</i>	LATA Kentucky Procedure
PAD-ENM-5007	<i>Data Management Coordination</i>	LATA Kentucky Procedure
PAD-ENM-5102	<i>Radiochemical Data Verification and Validation</i>	LATA Kentucky Procedure
PAD-ENM-5103	<i>Polychlorinated Dibenzodioxins/Polychlorinated Dibenzofurans Data Verification and Validation</i>	LATA Kentucky Procedure
PAD-ENM-5105	<i>Volatile and Semivolatile Data Verification and Validation</i>	LATA Kentucky Procedure
PAD-ENM-5107	<i>Inorganic Data Verification and Validation</i>	LATA Kentucky Procedure