

**McGraw Construction Facilities South-Side Cylinder Yards
Solid Waste Management Unit (SWMU) Assessment Report**

SWMU/AOC NUMBER: 193

DATE OF ORIGINAL SAR: 6/11/93

DATE OF SAR REVISIONS: 9/6/02, 2/20/03, 9/8/03, 12/27/10

REGULATORY STATUS: SWMU

LOCATION: South side of the Paducah Gaseous Diffusion Plant (PGDP), east of Patrol Road 5 and west of 16th Street.

APPROXIMATE DIMENSION OR CAPACITY: Approximately 104 acres: 2,100 ft by 1,800 ft (cylinder yards); 500 ft by 1,200 ft (west side of C-333); and 1,200 ft by 120 ft (north side of C-333). Sixteen other SWMUs are included in the footprint of SWMU 193 (See attached table and map).

FUNCTION: Temporary storage of materials and cylinder storage yards

BRIEF HISTORY: In the 1950s, this area was used for infrastructure support facilities associated with the construction and operation of PGDP. Currently, the C-745-D, -F, -G, -K, -L, -M, -N, -P, -Q, -R, -S, -U, and -V depleted uranium hexafluoride (DUF₆) Cylinder Storage Yards are located in this area.

From 1996 to 1999, cylinder painting activities were conducted in this SWMU. From 1995 to 2004, concrete rubble (SWMU 465) was staged along the west side of SWMU 193 until it was crushed and properly dispositioned. As indicated in Table 1, numerous additional SWMUs have been identified within the footprint for SWMU 193.

In the 1990s, various remedial investigations (RIs) were conducted on this SWMU. See Summary of Environmental Sampling Data section.

PRESENT OPERATIONAL STATUS: Active

DATES OPERATED: 1950s to present

SITE/PROCESS DESCRIPTION: Cylinder storage yards. Satellite accumulation areas (SAAs) and generator storage areas (GSAs) are established in this SWMU, as necessary, to support PGDP operations.

WASTE DESCRIPTION: Several underground storage tanks (USTs) have been removed from this unit. The characterized waste previously stored included materials such as oils, batteries, electrical switches, ballasts, circuit boards, light bulbs, non-oily liquids, construction debris, scrap metal, cylinder valves, soil filter bags, light fixtures, water/tank residuals, and oil contaminated dirt.

WASTE QUANTITY: The current waste quantity is not static because waste is routinely added to the storage area and moved out of the area for off-site shipment or disposal.

SUMMARY OF ENVIRONMENTAL SAMPLING DATA: Results from the 1995 Site Evaluation of SWMUs 193 and 194, the Groundwater Phase IV Investigation, and existing monitoring well data indicate that volatile organic compounds [primarily trichloroethene (TCE) and its degradation products] are contaminants of concern in the groundwater. No volatiles or radionuclides were detected in subsurface soils; however, cadmium, lead, and chromium were detected.

Additional sampling for the development of a baseline risk assessment was conducted during the Waste Area Group (WAG) 28 RI and are included in the WAG 28 RI/Feasibility Study (FS) Report (DOE/OR/07-1846/V1&D2, August 2000). The results, documented in the WAG 28 RI/FS Report, indicate the presence of 1,2-dichloroethene, TCE, boron, chromium, lead, and zinc.

DUF₆ cylinder painting project occurred from 1996 to 1999. During that time frame, intermittent toxicity was noted in Outfall 017, which may have been caused by the painting activities (See BJC/PAD-380, 2002 Toxicity Reduction Evaluation Report for Outfall 017, June 2002).

Closure activities were initiated for UST #18 in April 2002 in accordance with Kentucky UST regulations. Acknowledgement of the closure of this tank was provided in correspondence dated December 4, 2002, from Kentucky Division of Waste Management. Pit soil samples were analyzed for benzene, toluene, ethylbenzene, xylene, polyaromatic hydrocarbons, and lead and found to be within acceptable levels for clean closure. Samples collected for volatiles, semivolatiles, metals, radionuclides, and PCBs around the septic tank area showed no contamination in the soils.

DESCRIPTION OF RELEASE AND MEDIA AFFECTED:

GROUNDWATER:	See Summary of Environmental Sampling Data above
SURFACE WATER:	See Summary of Environmental Sampling Data above
SOIL:	See Summary of Environmental Sampling Data above
ECOLOGY AFFECTED (i.e., endanger/threatened species):	None known

DOCUMENTATION OF NO RELEASE: See description of release and media affected above.

IMPACT ON OR BY OTHER SWMUs OR AOCs: See Table 1

PRG COMPARISON: N/A

RCRA Facility Investigation: Yes. This entire SWMU will be investigated in accordance with the Paducah Site Federal Facility Agreement.

OPERABLE UNIT ASSIGNMENT: Gaseous Diffusion Plant Decontamination and Decommissioning (D&D) Operable Unit (OU).

TABLE 1
SWMUs Located within the Footprint of SWMU 193

ID#	SWMU	Dimensions	Location	Status (as of 10/31/09)*
C-746-R Waste Solvent Storage Area	45	54 ft x 40 ft	South of C-333 Cascade Building	NFA
C-746-Q Hazardous and Low-Level Mixed Waste Storage Building	46A	270 ft x 175 ft	South of C-333 Cascade Building	RCRA Permitted
C-634-B Sulfuric Acid Storage Tank	77	21 ft x 37 ft	East of C-745-R Cylinder Yard	Soils OU
C-333 Cooling Tower Scrap Wood Pile	96	140 ft x 220 ft	West of 14th Street and South of C-333 Cascade Building	NFA
C-745 Cylinder Yard Spoils Area (PCB Soil Contamination)	160	50 ft x 100 ft	East of C-745-R Cylinder Yard	Soils OU
C-745 Cylinder Yard Spoils Area (PCB Soil Contamination)	163	82 ft x 44 ft	East of C-304 Building	Soils OU
C-746-K Low-Level Storage Area	174	150 ft x 268 ft	West of 14th Street and South of C-333 Cascade Building	NFA
McGraw UST	183	8 ft x 8 ft	C-745-S Cylinder Yard	D&D OU
C-337A Sewage Treatment Aeration Tank	191	21 ft x 37 ft	South of C-333 Cascade Building	NFA
DMSA OS-14	225	7,800 ft ²	South of C-553-1	Proposed NFA
Yard Rubble Pile and Crushate Storage Area	465	400 ft x 1000 ft	West of C-333 Cascade Building	NFA
C-745-G5-01	475	4 ft x 4 ft	C-745-G5	NFA
Concrete Crusher	476	15 ft x 40 ft	West of C-333 Cascade Building	NFA
McGraw Fuel Facility Waste Oil UST	490	18 ft x 7 ft	Middle of C-745-K Cylinder Yard	NFA
GSA/SAA at the Northwest Corner of the C-745-G3 Paint Enclosure	528	10 ft x 10 ft	C-745-G3	NFA
UST #18 within SWMU 193	534	10 ft x 10 ft	C-745-K South Cylinder Yard	NFA

UST=underground storage tank

SWMU= solid waste management unit

PCB= polychlorinated biphenyl

GSA= generator storage area

* All of the soils underlying SWMU 193 will be investigated as part of the D&D OU.

SAA=satellite accumulation area

DMSA= DOE Material Storage Area

NFA= no further action

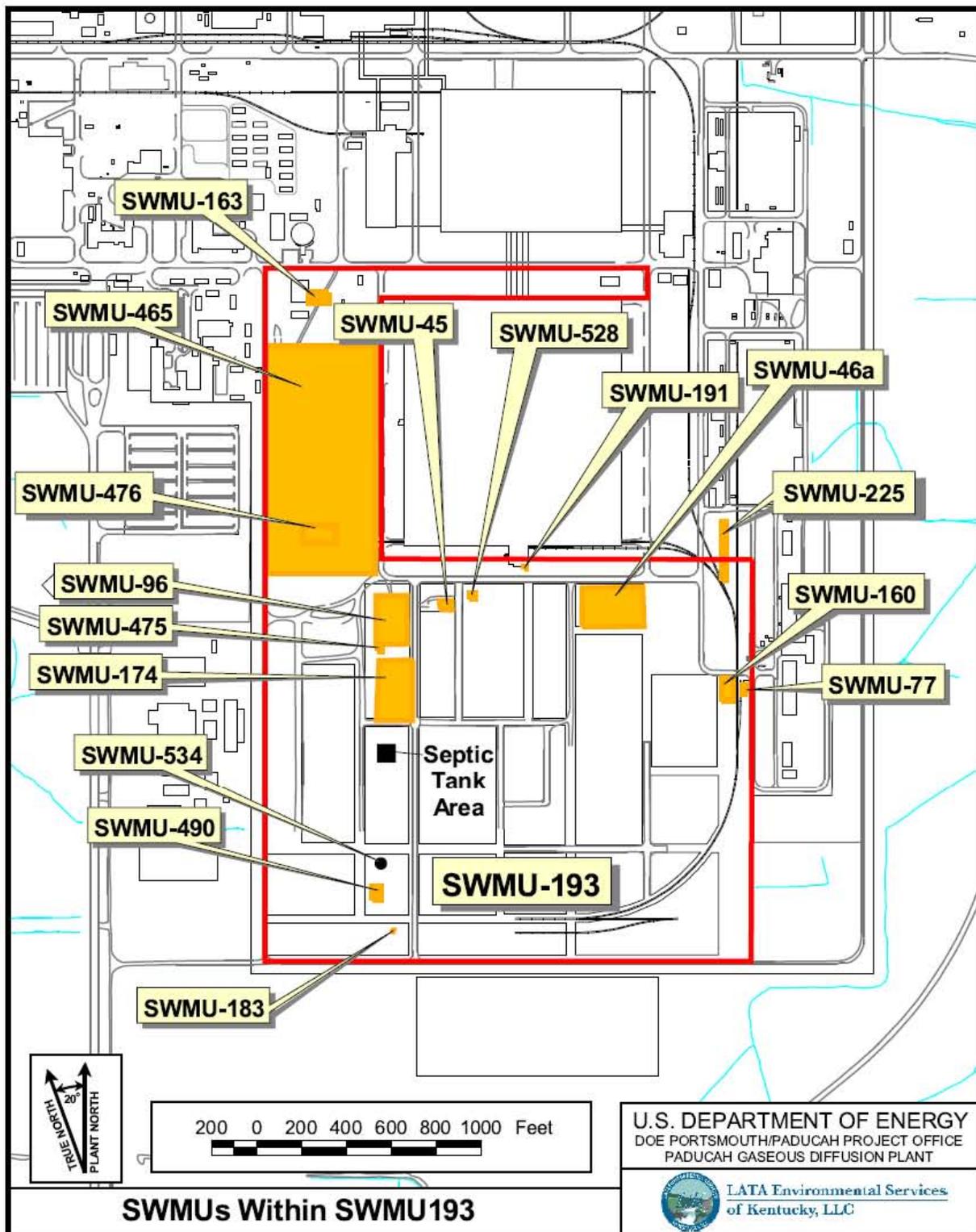
OU= operable unit



**SWMU 193 Cylinder Yards facing South West
Early 1993**



**SWMU 193 Cylinder Yards facing South East
Mid 2003**



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

 LATA Environmental Services
 of Kentucky, LLC

SWMUs Within SWMU193

FIGURE No. c5ac90000sk905r4.apr
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