

**Contaminated Soil Area North of Outfall 012 West of Little Bayou Creek
Solid Waste Management Unit (SWMU) Assessment Report**

SWMU/AOC NUMBER: 563

DATE OF SAR: 06/10/09

REGULATORY STATUS: Area of Concern (AOC)

LOCATION: Soil Piles 20 and BW in subunit 4 are north of outfall 012 west of Little Bayou Creek See enclosed map.

APPROXIMATE DIMENSION OR CAPACITY: Soil Pile 20 consists of one conically-shaped small pile approximately 25 ft by 25 ft by 6 ft high. Soil Pile BW consists of one rectangular-shaped pile approximately 150 ft by 25 ft generally uniform in height, approximately 5 ft, with an irregular surface.

FUNCTION: No known use.

BRIEF HISTORY: This area was discovered between November 2006 and March 2007, when an area with elevated radiological readings above background was identified. The area contained soil piles that likely were generated as a result of past construction activities at Paducah Gaseous Diffusion Plant. This area was characterized in October 2008 during the Soil Pile Addendum 1-B investigation. Soil Piles 20 and BW are grouped as one AOC because of their proximity to each other and similarities in physiology and contaminant content possibly indicating a common source.

PRESENT OPERATIONAL STATUS: Inactive

DATES OPERATED: Unknown

SITE/PROCESS DESCRIPTION: Unknown

WASTE DESCRIPTION: Contaminated Soils

WASTE QUANTITY: Soil Pile 20 waste quantity is estimated to be 40 yd³ and Soil Pile BW waste quantity is estimated to be 275 yd³; therefore, the total waste quantity estimated for the AOC is approximately 315 yd³.

SUMMARY OF ENVIRONMENTAL SAMPLING DATA: The area was surveyed upon initial discovery and the radiological scan indicated readings less than twice the background gamma scan. During the October 2008 sampling event, alpha and beta/gamma measurements were recorded at less than detectable. As a result of the December 2008 sampling event, risk screening determined the following chemicals of potential concern in the soil piles:

Soil Pile 20

COPC	Depth	Soil Pile	Maximum Value Detected
<i>Metals (mg/kg)</i>			
Chromium	Surface	20	2.85E+02
	Subsurface	20	3.14E+02

<i>Total PCBs (mg/kg)</i>			
	Surface	20	7.40E-01
	Subsurface	20	3.54E+00

Soil Pile BW

COPC	Depth	Soil Pile	Maximum Value Detected
<i>Total PCBs (mg/kg)</i>			
	Surface	BW	5.90E-01
	Subsurface	BW	4.40E-01

DESCRIPTION OF RELEASE AND MEDIA AFFECTED:

GROUNDWATER: None known
SURFACE WATER: None known
SOIL: See Above
ECOLOGY AFFECTED (i.e., threatened/endangered species): None known

DOCUMENTATION OF NO RELEASE: No documentation identified.

IMPACT ON OR BY OTHER SWMU/AOC: There is no evidence that this AOC impacts or is being impacted by other SWMUs/AOCs.

PRG COMPARISON: Chromium and Total polychlorinated biphenyls (PCBs) exceeded the preliminary remediation goals (PRGs) (no-action levels for screening criteria) in the surface and subsurface soil sample from location LBC2001 at Soil Pile 20. In addition, Total PCBs exceeded the PRGs in the surface and subsurface sample from location LBCBW02 at Soil Pile BW

RFI NECESSARY: Yes, as identified in the Hazardous Waste Facility Permit (KY8-890-008-982).

OPERABLE UNIT ASSIGNMENT: Soils Operable Unit

PHOTOGRAPHS OF SOIL PILES AOC 563



Soil Pile 20: May 19, 2009



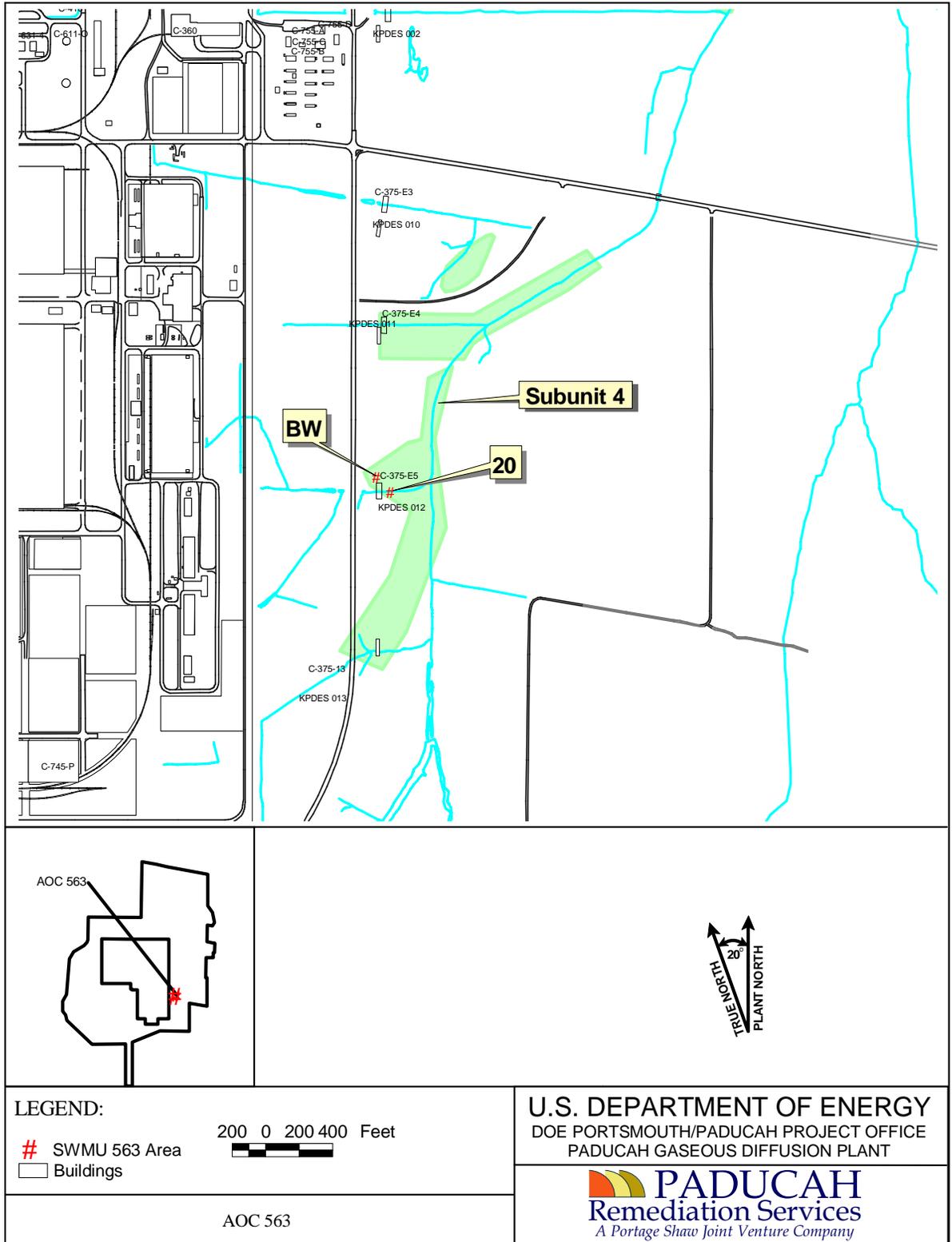
Soil Pile 20: May 19, 2009



Soil Pile BW: May 19, 2009



Soil Pile BW: May 19, 2009



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

PADUCAH
 Remediation Services
 A Portage Shaw Joint Venture Company

FIGURE No. 563_SAR_MAP.apr
 DATE 05-27-09