

**Contaminated Soil Areas on the East side of the North-South Diversion Ditch North of the P-, S-, and T-Landfills.
Solid Waste Management Unit (SWMU) Assessment Report**

SWMU/AOC NUMBER: 564

DATE OF SAR: 06/01/09

REGULATORY STATUS: Area of Concern (AOC)

LOCATION: Soil Pile AT in subunit 5 consists of 3 soil areas on the east side of the North-South Diversion Ditch north of the P-, S-, and T-Landfills. See enclosed map.

APPROXIMATE DIMENSION OR CAPACITY: This consists of two discrete, small soil areas (sub-piles) with low relief in close proximity. The first sub-pile is approximately 7.5 ft by 5 ft by 1 ft high and the second sub-pile is approximately 5 ft by 3 ft by 1 ft high.

FUNCTION: No known use.

BRIEF HISTORY: This area was discovered between November 2006 and March 2007, when an area with elevated radiological readings was identified. The area contained soil piles that likely were generated as a result of past construction activities at the Paducah Gaseous Diffusion Plant. This area was characterized in December 2008 during the Soil Pile Addendum 1-B investigation.

PRESENT OPERATIONAL STATUS: Inactive

DATES OPERATED: Unknown

SITE/PROCESS DESCRIPTION: Unknown

WASTE DESCRIPTION: Contaminated Soils

WASTE QUANTITY: Soil Pile AT waste quantity is estimated to be 2 yd³ each sub-pile being less than 1 yd³ each.

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 AT

COPC	Depth	Soil Pile	Maximum Value Detected
<i>Metals (mg/kg)</i>			
Arsenic	Surface	AT	4.30E+01
Beryllium	Surface	AT	2.12E+00
Uranium	Surface	AT	5.83E+01
	Subsurface	AT	5.45E+01
Vanadium	Surface	AT	7.40E+01
	Subsurface	AT	6.39E+01

<i>Radionuclides (pCi/g)</i>			
Uranium-238	Surface	AT	8.33E+00
<i>Total PCBs (mg/kg)</i>			
	Surface	AT	1.15E+00
	Subsurface	AT	7.40E-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: Arsenic and beryllium exceeded the preliminary remediation goals (PRGs) (no-action levels for screening criteria) in the surface soil sample from location LBCAT01. Uranium, vanadium and Total polychlorinated biphenyls (PCBs) exceeded the PRGs in the surface soil and subsurface soil samples from location LBCAT01.

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 564



Soil Pile AT: May 19, 2009



Soil Pile AT: May 19, 2009

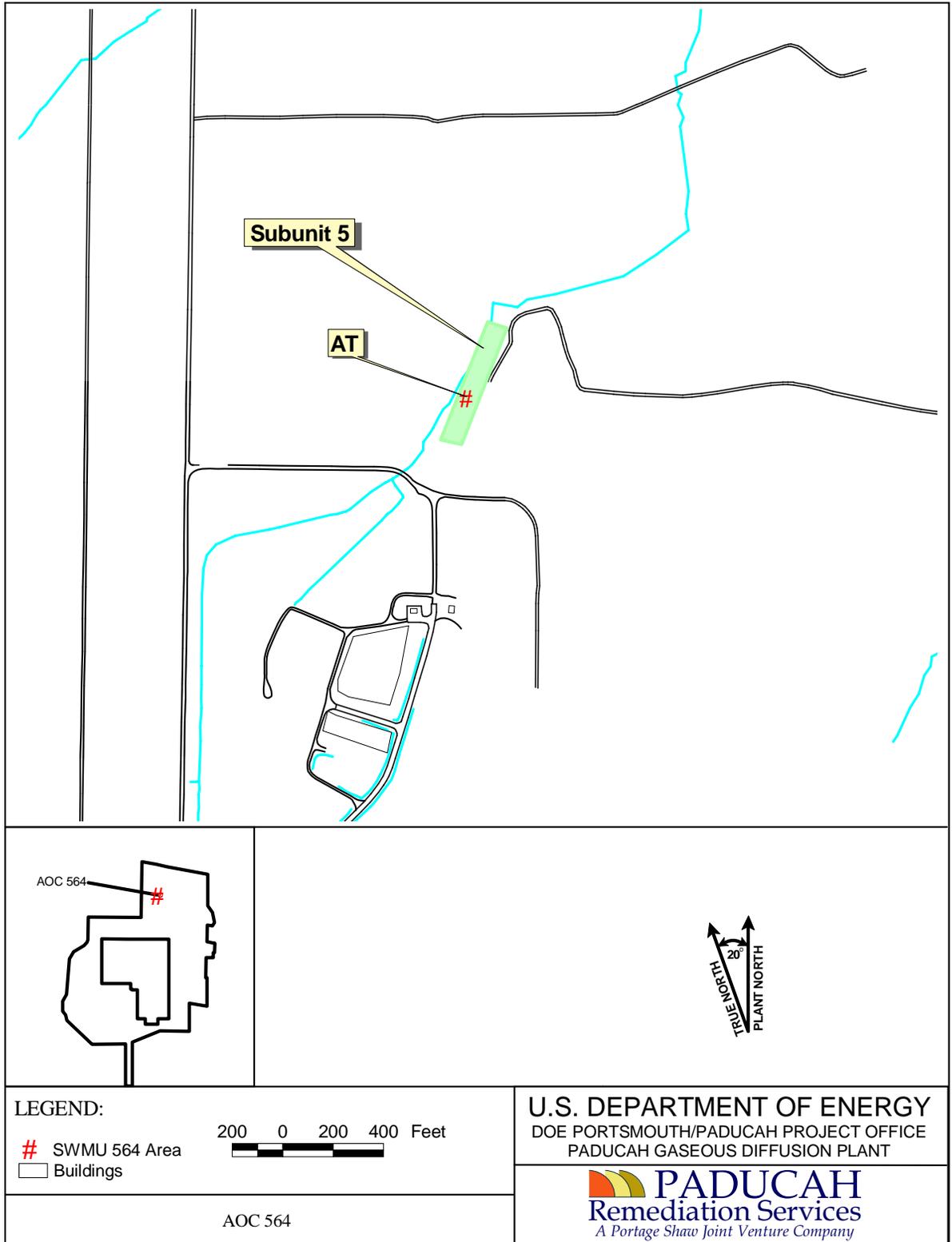


FIGURE No. 564_SAR_MAP.apr
DATE 05-26-09