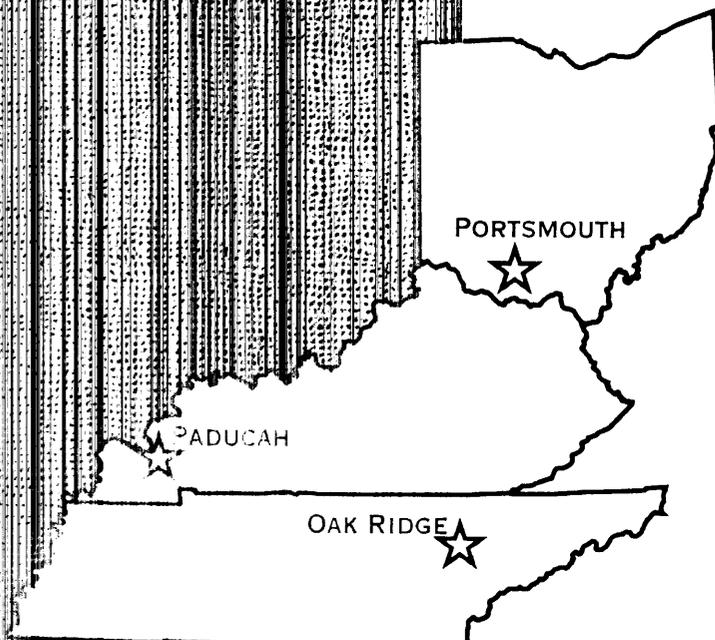


ENVIRONMENTAL MANAGEMENT  
& ENRICHMENT FACILITIES  
MANAGEMENT AND INTEGRATION CONTRACT

**Final Inventory/Characterization  
Report for the C-337-33  
Department of Energy  
Material Storage Area at the  
Paducah Gaseous Diffusion Plant,  
Paducah, Kentucky**



MANAGED BY  
JACOBS  
FOR THE UNITED STATES  
DEPARTMENT OF ENERGY

This document has received the appropriate reviews  
for release to the public.

**Final Inventory/Characterization Report for the C-337-33  
Department of Energy Material Storage Area (DMSA)  
at the Paducah Gaseous Diffusion Plant,  
Paducah, Kentucky**

Date Issued – September 16,2002

Prepared by  
WESKEM, LLC  
Under subcontract 23900-BA-RM005F  
Prepared for the  
US Department of Energy  
Office of Environmental Management

BECHTEL JACOBS COMPANY LLC  
managing the  
Environmental Management Activities at the  
East Tennessee Technology Park  
Oak Ridge Y-12 Plant      Oak Ridge National Laboratory  
Paducah Gaseous Diffusion Plant      Portsmouth Gaseous Diffusion Plant  
Under contract DE-AC05-98OR22700  
for the  
U.S. DEPARTMENT OF ENERGY

This report is an abridged edition. The following sections have been omitted from this report, but are included in the full report.

C-337-33 DMSA ZONE MAP

**HP SURVEY DATA**

SME INSPECTION / SAMPLING SUMMARY

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**WASTE OPERATIONS INVENTORY**

## ACRONYMS

ADC	Authorized Derivative Classifier
DMSA	Department of Energy Material Storage Area
DOE	Department of Energy
dpm	Disintegrations per Minute
ft <sup>2</sup>	Square Feet
ft <sup>3</sup>	Cubic Feet
HP	Health Physics
IH	Industrial Hygiene
lbs	Pounds
Lc	Level Sub C
LLW	Low Level Waste
NCS	Nuclear Criticality Safety
PCB	Polychlorinated Biphenyl
PEL	Permissible Exposure Limits
PGDP	Paducah Gaseous Diffusion Plant
<b>RCRA</b>	Resource Conservation and Recovery Act
RFD	Request for Disposal
SME	Subject Matter Expert
SWMU	Solid Waste Management Unit
TIO	Technical Information Officer
TSCA	Toxic Substances Control Act

## Executive Summary

Department of Energy Material Storage Area (DMSA) C-337-33 is located in the C-337 Process Building at columns E16-17/Ea 16-17. It occupies approximately 485 square feet. It is also designated as Solid Waste Management Unit (SWMU) #336. This DMSA was originally classified as a Phase 1 DMSA (expected to have no fissionable material but not fully characterized). The area is a diked storage area for out of service polychlorinated biphenyl (PCB) transformers. Four electrical transformers, which have been drained of PCB fluid but not decontaminated, are located in the DMSA. Request for Disposal (RFD) forms were completed for each of the transformers in the 1991 time frame. These RFD numbers and other pertinent information were utilized during current characterization activities and can be located in the C-743 Document Center. The current activities began in this DMSA in December 2001 and were completed in January 2002. The area is under routine management and inspection by Waste Operations personnel to ensure compliance with plant procedures and Toxic Substances Control Act (TSCA) regulations. This DMSA now qualifies as a Phase 3 DMSA since it has been fully characterized and contains no fissionable material.

### RCRA/Mixed

There were no Resource Conservation and Recovery Act (RCRA) items identified in this DMSA.

### TSCA/LLW

The four transformers are classified as PCB/low level waste (LLW). The transformers have an estimated weight of 33,800 pounds and an estimated volume of 1,976 cubic feet (ft<sup>3</sup>). The transformers remain in the DMSA.

### NCS

There were no Nuclear Criticality Safety concerns identified in this DMSA.

### IH

All Industrial Hygiene (IH) data has been reviewed. All quality control samples were within normal acceptable guidelines, except PCB samples 3733PCBB01, 3733PCBB01B, 3733PCBB01D, 3733PCBB02, 3733PCBB03, and 3733PCBB04. The PCB samples are not useable due to exceeding the holding time. No personnel were exposed to any airborne concentrations above a permissible exposure limit (PEL) or threshold limit value (TLV).

### HP

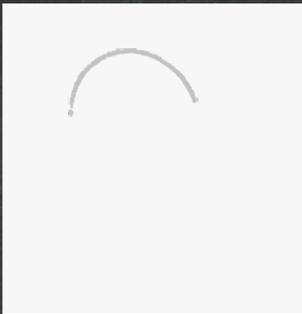
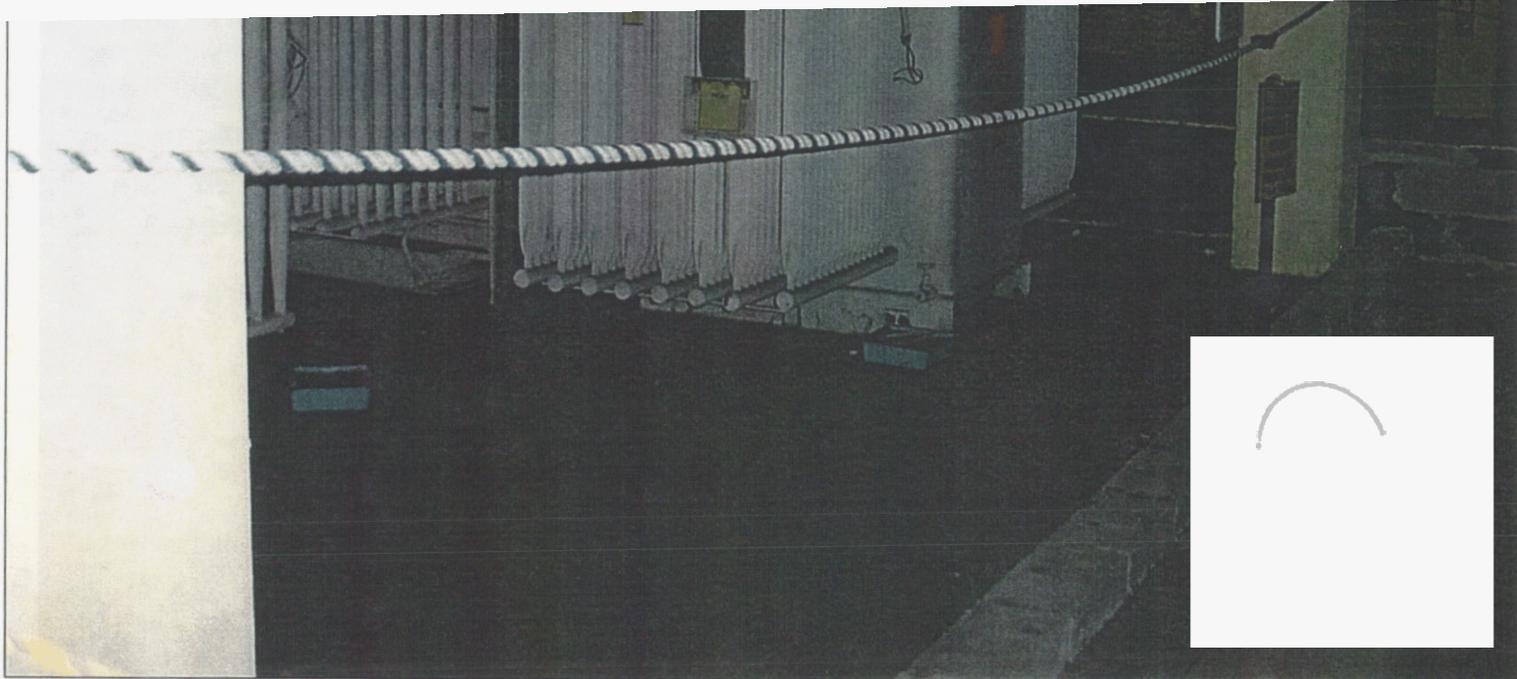
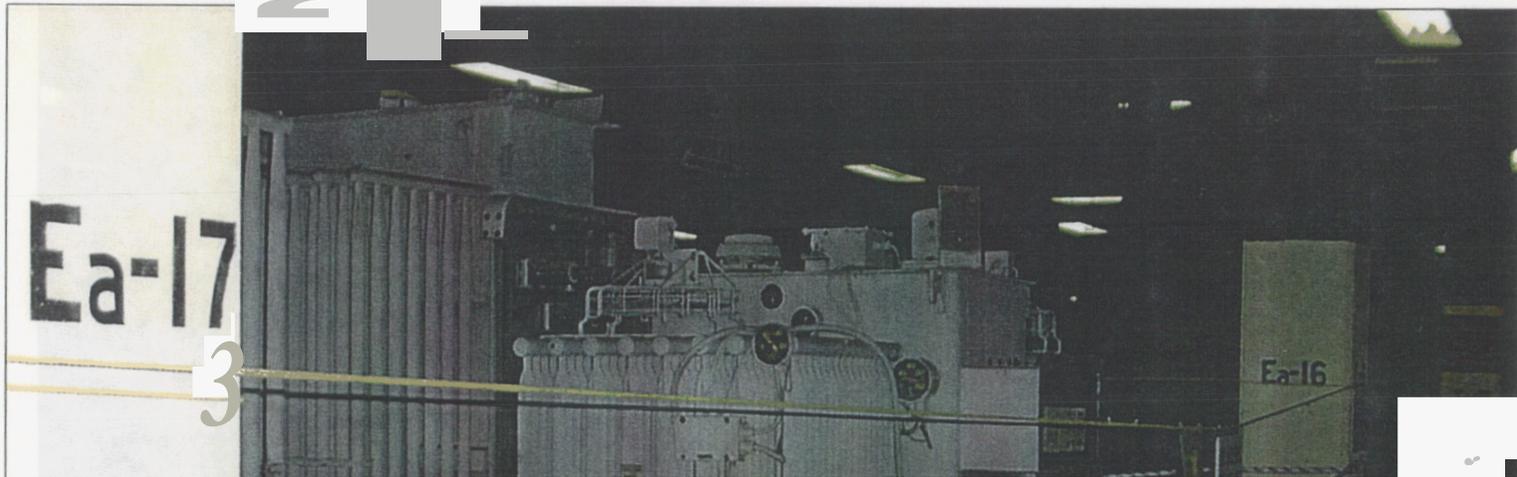
The Health Physics (HP) radiological surveys concluded the highest alpha reading was 100 disintegrations per minute (dpm)/100 cm<sup>2</sup> on RFD #35024. The highest beta/gamma reading was 23,371 dpm/100cm<sup>2</sup> on RFD #08640.

### Safety

There were no safety related events during the field activities. All workers had stop work authority to ensure unusual or unexpected events were evaluated before work was allowed to proceed. A safety officer was in attendance during all phases of work to evaluate conditions and provide safety related input to the workers.

All actions involved in this characterization were documented and have been retained in permanent files. Part of the documentation includes photographs. Several of these photographs are included in this report.

# DMSA C-337-33 PCB Transformer



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# DMSA C-337-33 PCB Transformers



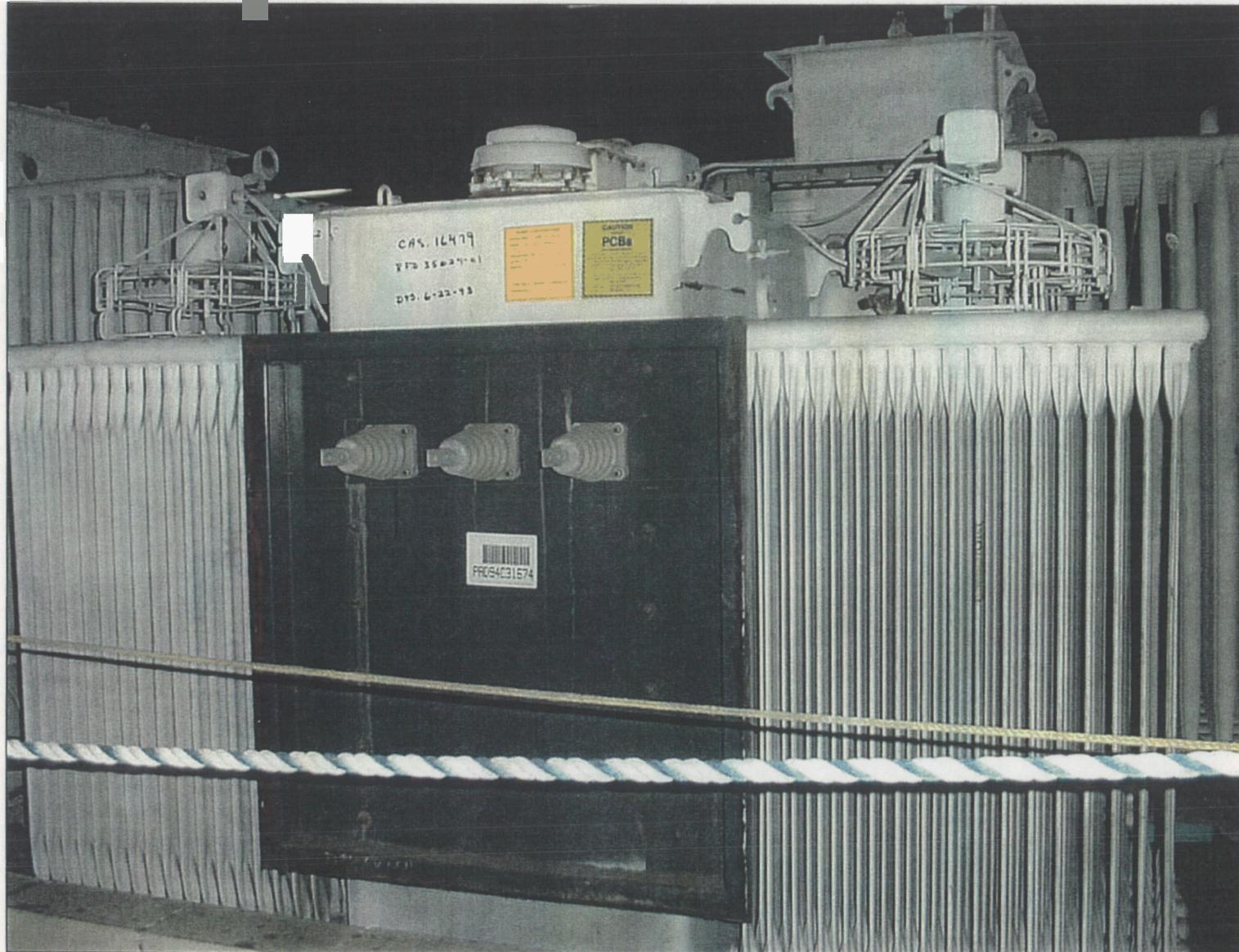
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DMSA C-337-33 PCB Transformer Diked Area



h1

# DMSA C-337-33 PCB Transformers Tags & Labeling



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### 337-33 WASTE OPERATIONS INVENTORY

Facility	GRID	GRID EX	Container ID	Waste Item	RHD	WASTE DESC	NET VOL	GROSS WT	CE ST	DATE	DATE INV	DRIC	EGTY	DRIC AREA	DESC
2-337			PAD94C31675	CAS-14796	8640	GE TRANSFORMER, RP1, DRAINED	610	10200		04/01/1991	12/20/1999	C-340		C-340	
2-337			PAD94C31673	CAS-14795	8658	GE TRANSFORMER, RP2, DRAINED	610	10200		12/27/1991	12/20/1999	C-340		C-340	
2-337			PAD94C31676	CAS-15450	8680	WESTINGHOUSE TRANSFORMER, DRAINED	378	6700		07/14/1992	12/20/1999	C-409		C-409	
2-337			PAD94C31674	CAS-16479	35024	WESTINGHOUSE TRANSFORMER-DRAINED	378	6700		06/22/1993	12/20/1999	C-409		C-409	

Totals     $\text{ft}^3$     lbs  
 1,976    33,800

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