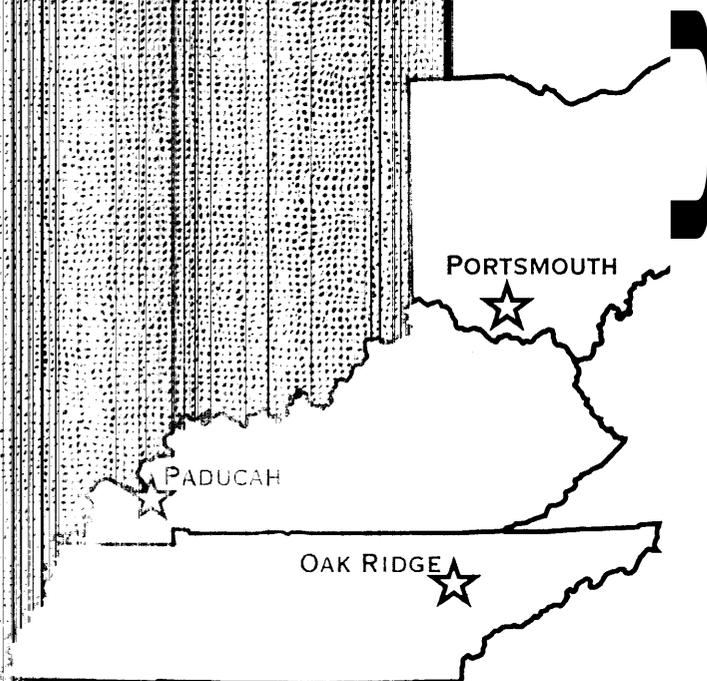


ENVIRONMENTAL MANAGEMENT  
& ENRICHMENT FACILITIES  
MANAGEMENT AND INTEGRATION CONTRACT

**Final Inventory/Characterization  
Report for the C-337-32  
Department of Energy  
Material Storage Area at the  
Paducah Gaseous Diffusion Plant,  
Paducah, Kentucky**



MANAGED BY  
JACOBS COMPANY LLC  
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-337-32  
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-337-32 DMSA ZONE MAP

HP SURVEY DATA

SME INSPECTION / SAMPLING SUMMARY

RFD FORMS

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WASTE REMOVED INVENTORY

## Executive Summary

The C-337-32 Department of Energy Material Storage Area (DMSA) occupies approximately 450 square feet (ft<sup>2</sup>) on the central/south side of the C-337 Building. It has been identified as Solid Waste Management Unit (SWMU) #335. C-337-32 has been identified as a Phase 1 DMSA (expected to have no fissionable material but not fully characterized). The field activities for this DMSA began December 26, 2001 and ended January 4, 2002. The area contains two polychlorinated biphenyl (PCB) transformers that have been managed by Waste Operations since 1991.

### RCRA

One light bulb was removed from each of the two transformers during field characterization activities in January 2002. The bulbs were properly managed as hazardous waste and taken to C-752-A Resource Conservation and Recovery Act (RCRA) permitted storage facility. A photograph of the hazardous waste is included in this report.

### TSCA/PCB/LLW

In 1991 two PCB oil filled transformers were stored in what is now known as DMSA C-337-32. Dike walls were required to be erected around the perimeter of the storage area. The transformers were properly labeled and Request for Disposal (RFD) form #23000 was written for the items. Barcodes were added in 1994. In 1992 the oil in the transformers was drained and shipped to the Department of Energy (DOE) Toxic Substances Control Act (TSCA) Incinerator Site in Oak Ridge, Tennessee. A routine inspection schedule for this area has been established and is performed by Waste Operations. Photographs of the transformers have been incorporated in this report.

### Solid Waste

During the characterization process, no solid waste was identified.

### NCS

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

### IH

All Industrial Hygiene (IH) data have been reviewed. All quality control samples were within normal acceptable guidelines, except PCB samples 3732PCBB01, 3732PCBB01B, 3732PCBB01D, 3732PCBB02, and 3732PCBB04. The first four PCB samples were usable with qualifiers because samples exceeded the holding times by less than 50%. Sample 3732PCBB04 was not useable due to exceeding the holding time by greater than 50%. No personnel were exposed to any airborne concentrations above the permissible exposure limit (PEL) or threshold limit value (TLV).

### HP

Health Physics (HP) smear samples were conducted. The radiological data concluded the highest readings were on a transformer. The Alpha reading was 257 disintegrations per minute (dpm)/100 cm<sup>2</sup> and the highest Beta/Gamma reading was 17,648 dpm/100 cm<sup>2</sup>.

### 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.

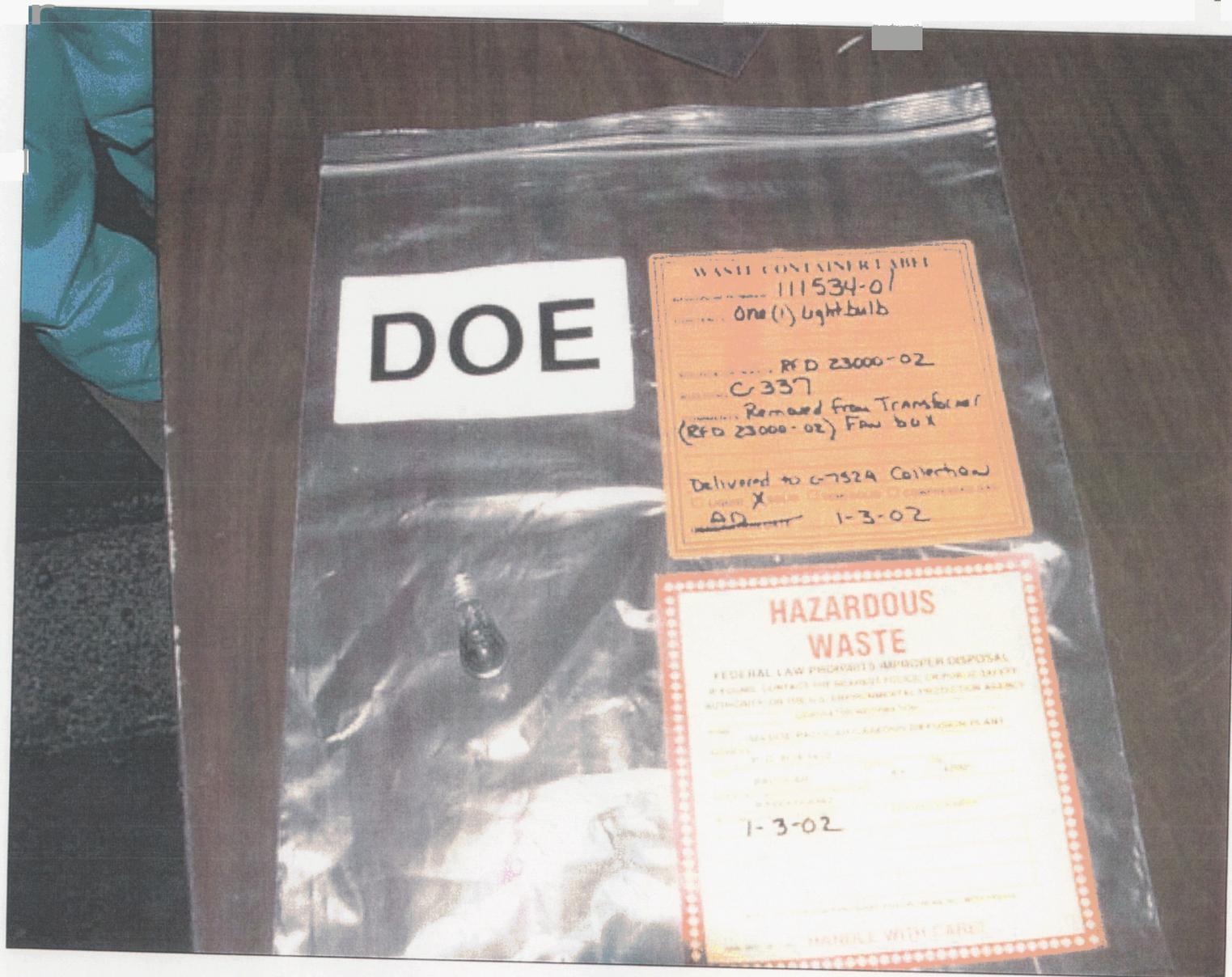
All actions involved in this characterization were documented and the documents have been retained in permanent files. Part of this documentation also included photographs of items in the DMSA. Some of these photographs are included in this report. The remaining photographs are on file.

## ACRONYMS

ADC	Authorized Derivative Classifier
DMSA	Department of Energy Material Storage Area
DOE	Department of Energy
dpm	Disintegrations per Minute
EPA	Environmental Protection Agency
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
RCRA	Resource Conservation and Recovery Act
RFD	Request for Disposal
SME	Subject Matter Expert
SWMU	Solid Waste Management Unit
TIO	Technical Information Officer
TLV	Threshold Limit Value
TSCA	Toxic Substances Control Act
USEC	United States Enrichment Corporation

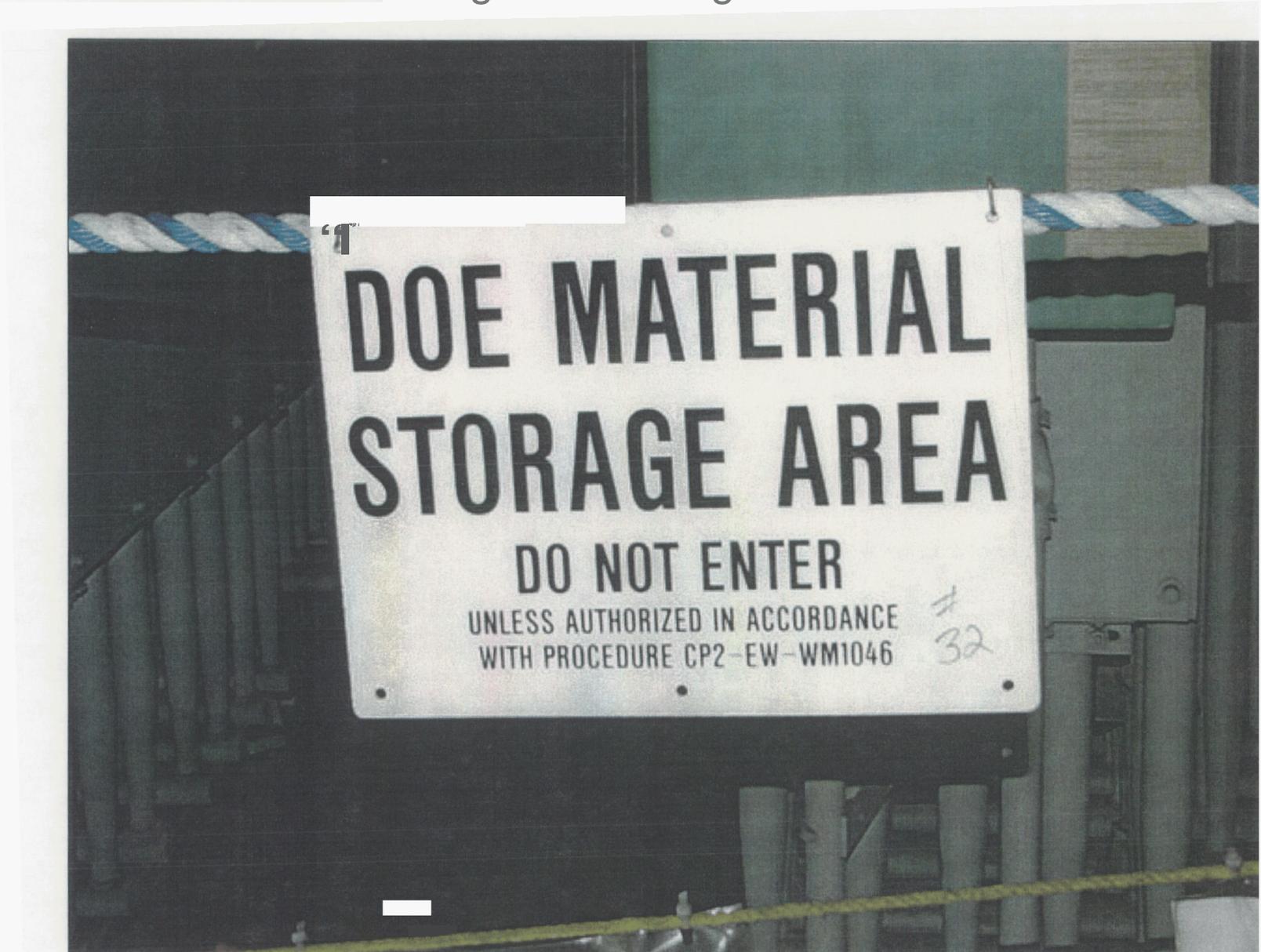
# DMSA C-337-32 Labeling and Packaging Details for Hazardous Waste Light Bulb

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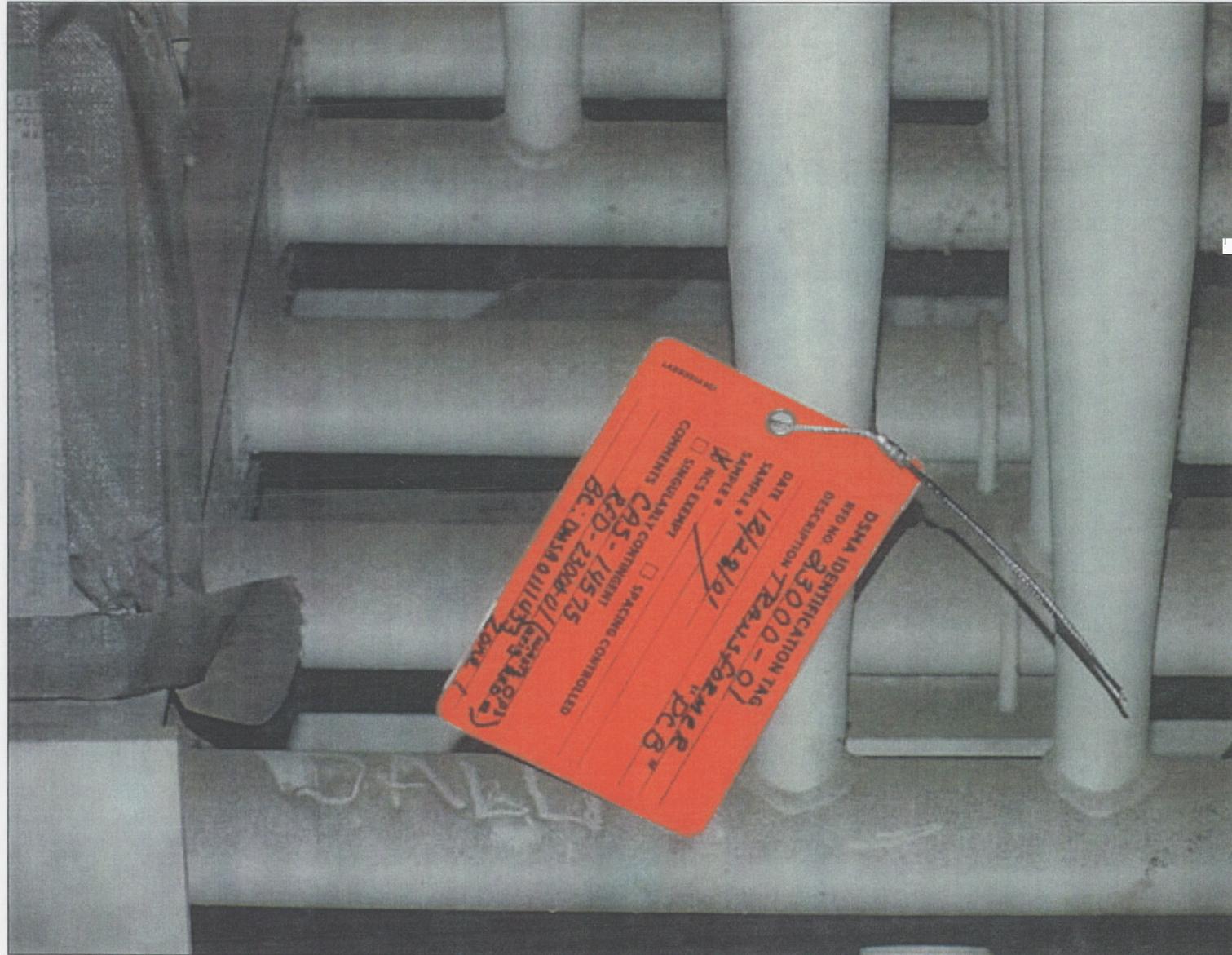


DOE Material Storage Area Designation for DMSA C-337-32

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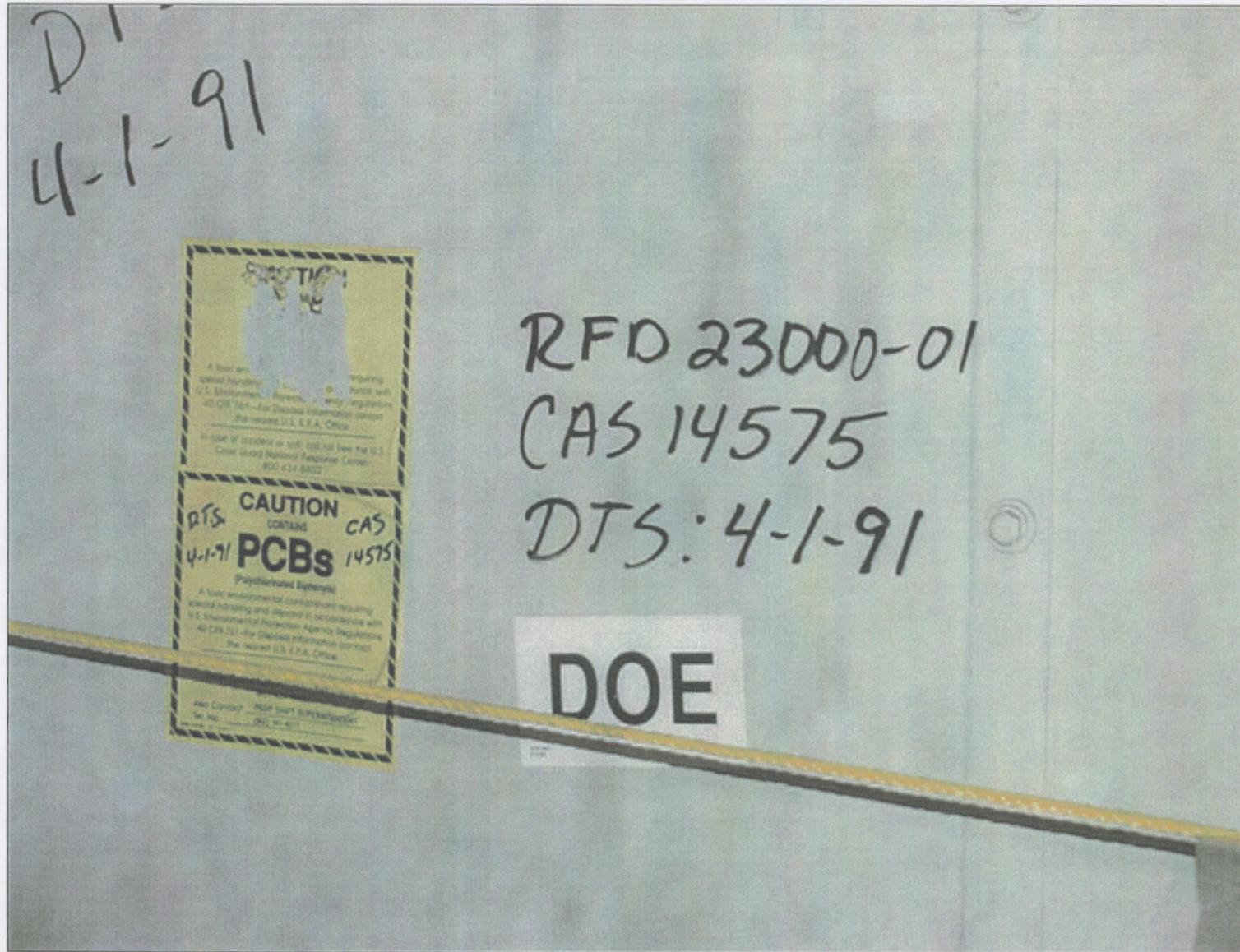


View of DMSA Identification Tag Attached to Equipment



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# Labeling Showing RFD Number and Date to Storage



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# View of PCB Transformer Showing Cooling Coils



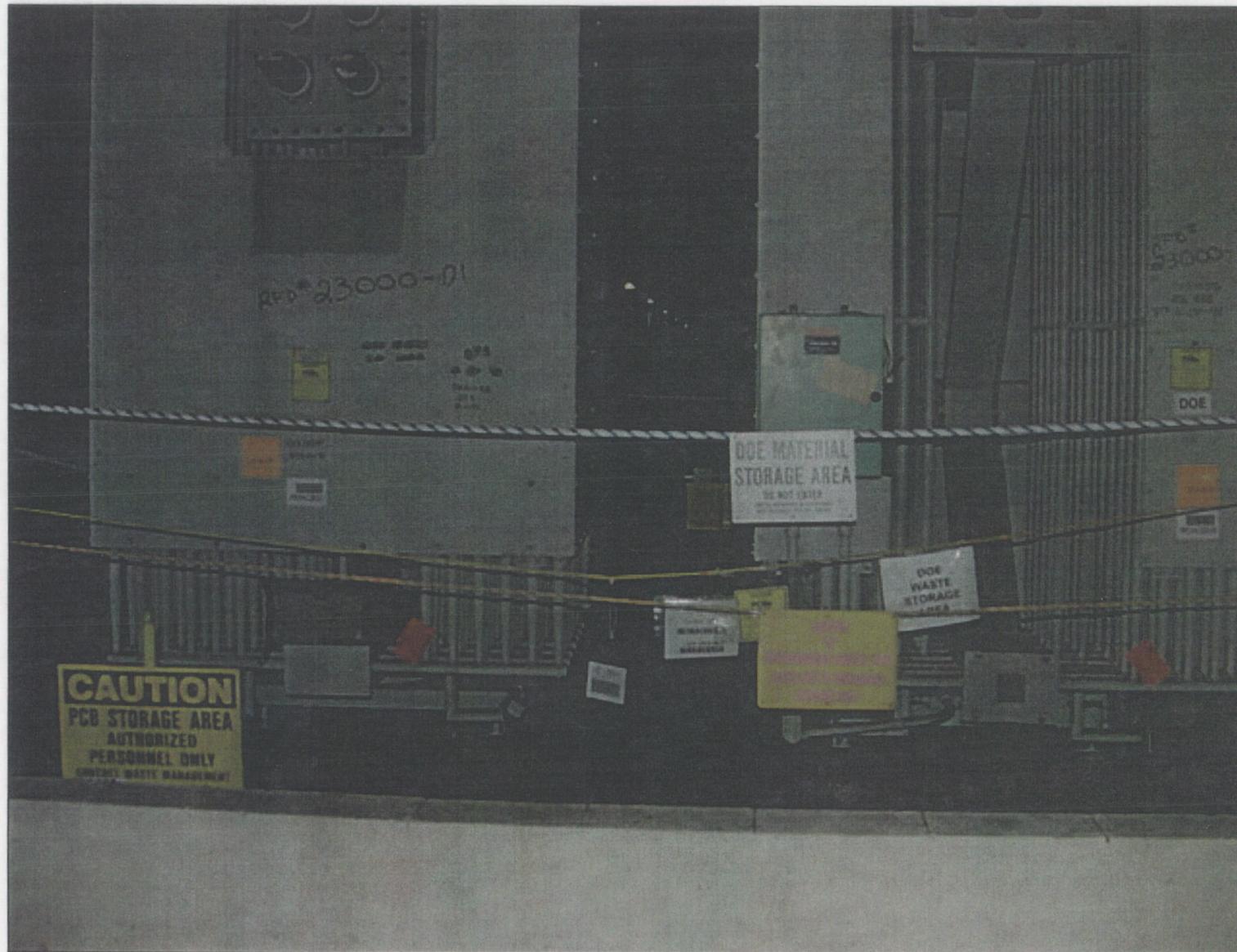
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General View of Stored Equipment in DMSA C-337-32



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# General View of Stored Equipment in DMSA C-337-32



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# Inventory And Characterization Report

<i>Curr. Zone</i>	<i>Item ID</i>	<i>Barcode #</i>	<i>Description</i>	<i>Vol. ft3</i>	<i>llw</i>	<i>tsca</i>	<i>rcra</i>	<i>mix</i>	<i>asb</i>	<i>fis</i>	<i>lnd</i>	<i>Gen. Date</i>	<i>Char. Date</i>	<i>Transferred To</i>
<b>C-337-32</b>														
	111533-01		ONE LIGHT BULB	0.001	<input type="checkbox"/>	1/3/02	1/3/02	C-752-A						
	111534-01		ONE LIGHT BULB	0.001	<input type="checkbox"/>	1/3/02	1/3/02	C-752-A						
<i>Summary for C-337-32 (2 RFDs)</i>				<b>0.002 Ft3</b>										
<b>Grand Total (2 RFDs)</b>				<b>0.002 Total Ft3</b>										

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## Legend

asb	Asbestos	Char	Characterization Date	fis	Fissionable
Gen	Generation Date	llw	Low Level Waste	lnd	Landfill
mix	Mixed Waste	rcra	Resource Conservation Recovery Act	tsca	Toxic Substances Control Act

<b>Waste Material</b>	<b>Original RFD #</b>	<b>Material Classification</b>	<b>Column #</b>	<b>Barcode</b>	<b># Items</b>	<b>Estimated Volume (ft<sup>3</sup>)</b>	<b>Estimated Weight (lbs)</b>	<b>Transferred to USEC</b>
Light Bulb	111533	RCRA	1	PAD01C03801	1	0.001	0.25	No
Light Bulb	111534	RCRA	1	PAD01C03801	1	0.001	0.25	No

**Total Estimated**    **Total Estimated**  
**Volume (ft3)**        **Weight (lbs)**  
**0.002**                **0.5**

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