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**REMOVAL SITE EVALUATION HEPA FILTER  
FOR LAUNDRY DRYERS MAY 1992**

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**DOE/WEMCO**

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**RSE**

REMOVAL SITE EVALUATION  
HEPA FILTER FOR LAUNDRY DRYERS

Fernald Site Office

U. S. Department of Energy

May 1992

REMOVAL SITE EVALUATION  
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Page 1

INTRODUCTION

The Laundry dryers located on the west end of the Service Building will be drying contaminated shoe covers and cloth Anti-C clothing. To meet environmental regulations, a new lint filter and HEPA filter system will be installed outside of the Service Building on the west end, south of the existing lint filter.

The scope of the project involves the construction of a concrete pad that will be placed on top of the existing grade. An existing HEPA filtration system on the third floor of Plant 5 will be dismantled from the rest of the system and moved over to the Service Building and placed on the concrete pad. The existing lint filter and wood frame will be removed and ductwork and utilities will be rerouted and tied in with the new filtration system.

Demolition for this project involves the removal of approximately 300 pounds of lint filter equipment, 500 pounds of lumber, and 50 pounds of ductwork. Although the interior of the lint filter and ductwork cannot be directly monitored, it is considered contaminated because it handled contaminated laundry. This material will be placed in a white metal box. The lumber was frisked clean and will be reused on the process side. All construction waste will be handled in accordance with SSOP-0044, "Controlling the Generation of Construction/Maintenance Waste."

This Removal Site Evaluation (RSE) has been completed by the Department of Energy (DOE) under authorities delegated by Executive Order 12580 under section 104 of CERCLA and is consistent with Section 300.410 of the National Oil and Hazardous Substance Pollution Contingency Plan (NCP). This RSE addresses the construction and demolition of activities related to the HEPA filter for the laundry dryers at the Fernald Environmental Management Project and has been completed to support the decision as to whether the present conditions warrant a removal action.

SOURCE TERM

A total of 25 points were surveyed on the surface of the lint filter, ductwork, wood frame, and gravel area. Radiological Survey Reports show that all the points are below the free release limit of 1000 dpm fixed and 400 dpm removable, as per DOE Order 5400.5 except one point on the lint trap bag which registered 1500 dpm beta/gamma indicating potentially that the interior of the filter and ductwork are contaminated due to contaminated laundry being run through the system. The survey results for each point are included in Table 1, while frisk locations are depicted in Figure 1.

- a. All probe points on the gravel surface are less than 1000 dpm beta/gamma.

**REMOVAL SITE EVALUATION**  
**HEPA FILTER FOR LAUNDRY DRYERS**

Page 2

- b. All points showing removable contamination on the outside surface of the lint filter were less than 400 dpm beta/gamma and fixed points were less than 1000 dpm beta/gamma.
- c. All survey points showing removable contamination on the HVAC duct were less than 400 dpm beta/gamma and less than 1000 dpm beta/gamma for fixed contamination.
- d. One point on the lint trap bag registered 1500 dpm beta/gamma.

**EVALUATION OF THE MAGNITUDE OF THE POTENTIAL THREAT**

The following control measures will be implemented to prevent the migration of contamination and mitigate any potential human or environmental threats.

1. Radiation Technicians will be present during demolition to monitor for possible contamination.
2. Control methods for possible fugitive emissions during demolition will include the wetting of surfaces, plastic tarps, HEPA vacuums.
3. The lint filter, wood, and metal duct will be dispositioned per SSOP-0044, "Controlling the Generation of Construction/Maintenance Waste."
4. Tools and equipment will be frisked before leaving the construction area. If equipment is contaminated, it will be decontaminated at Building 69.

**ASSESSMENT OF THE NEED FOR REMOVAL ACTION**

Consistent with Section 40 CFR 300.410 of the NCP, the Department of Energy shall determine the appropriateness of a removal action. Eight factors to be considered in this determination are listed in 40 CFR 300.415 (b) (2) of the NCP. Two of these factors listed below are considered appropriate as a result of the potential exposure to, or release of hazardous waste constituents, pollutants, or contaminants where the demolition will take place:

- (b)(2)(i) Actual or potential exposure to hazardous substances or pollutants or contaminants to nearby populations, animals, or food chain.
- (b)(2)(v) Weather conditions that may cause hazardous waste constituents, or contaminants to migrate or be released.

REMOVAL SITE EVALUATION  
HEPA FILTER FOR LAUNDRY DRYERS

APPROPRIATENESS OF A RESPONSE

If it is determined that a response action is appropriate due to the levels of contamination found in this construction area and the potential threat associated with the existing situation of the contaminants migrating, a removal action may be required to address the existing situation.

If a planning period of less than six months exists prior to initiation of a response action, DOE will issue an Action Memorandum. The Action Memorandum will describe the selected response and provide supporting documentation for the decision.

If it is determined that there is a planning period of greater than six months before a response action is initiated, DOE will issue an Engineering Evaluation /Cost Analysis (EE/CA) Approval Memorandum. This memorandum is to be used to document the threat to public health and the environment and to evaluate viable alternative response actions. It will also serve as a decision document to be included in the Administrative Record.

Based on the evaluation of the above factors, it has been determined that existing controls for the planned action are adequate and a removal action is not required.

REMOVAL SITE EVALUATION  
HEPA FILTER FOR LAUNDRY DRYERS

ATTACHMENT 1

TABLE 1  
 RADIOLOGICAL SURVEY REPORT

Item Number	Beta-Gamma Smear	Beta-Gamma Fixed + Removable
1	Items 1-8	<1k
2	Gravel Surface	<1k
3		<1k
4		<1k
5		<1k
6		<1k
7		<1k
8		<1k
9	Lint Bag	<400
10	Items 10-18	<400
11	Filter Surface	<400
12		<400
13		<400
14		<400
15		<400
16		<400
17		<400
18		<400
19	Items 19-21	<400
20	Duct Surface	<400
21		<400
22	Items 22-23	<400
23	Wood Frame	<400
24	Gravel Surface	<1k
25	Lint Trap Bag	<400



Figure 1  
Radiological Survey  
Locations

