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**REMOVAL SITE EVALUATION DUPLEX  
OFFICE TRAILERS SEPTEMBER 1991**

**DOE-FSO/WEMCO**

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**REMOVAL SITE EVALUATION**

**DUPLEX OFFICE TRAILERS**

Fernald Environmental Management Project

Fernald Office

U. S. Department of Energy

September 1991

**REMOVAL SITE EVALUATION  
DUPLEX OFFICE TRAILERS**

**INTRODUCTION**

This project is developed in response to the need to relocate employees located in post-production facilities; thereby, reducing exposure to hazardous materials and environments. The Duplex Office Trailers project will install four (4) duplex office trailers with water, sewage, electrical power, and telecommunications. The duplexes will be located west of Plant #5 as indicated on Sketch #1.

In order to accomplish this project, soil must be excavated for most utilities. This activity will generate approximately 120 cubic yards of soil excavation. It is anticipated that soils which exceed Category 2 will not exceed 2 cubic yards. The soil will be handled according to Site Policy and Procedure FMPC-720.

This Removal Site Evaluation (RSE) has been completed by the 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 has been completed to support the decision as to whether the Duplex Office Trailers project conditions warrant a removal action.

**SOURCE TERM**

Site characterization, historical records, and process knowledge of the project work area did not reveal known prior production use of the project area. There is no data to support that any production related operations, including the storage, treatment, or disposal of materials, may have contributed to the release of hazardous substances to the environment. The site characterization data presented herein supports this position in that of the nine sampling points, three "hot spots" which exceed Category 2 were noted while the rest of the samples were Category 1. Radiological surveys and process knowledge reviews were performed relative to the project work areas and the soil.

As part of the site characterization activities, surface and subsurface soil sampling was performed along the proposed excavation areas. The location, depth, and analytical results of these samples are provided in Tables 1 and 2.

As indicated by these analytical results, some samples contain above background levels of total uranium. The attached sketch and the table included within the next section identify the location at which the samples were taken, the depths of the samples, and their respective analytical results.

Site Policy and Procedure FMPC-720 will adequately address the handling and disposal of these materials.

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

The Duplex Office Trailers project involves excavation soil containing elevated concentrations of hazardous substances. Surface sample points 16, 21, and 22 (Tables 1, 2, and Sketch 1) exceed 100 pCi/gm contamination limits. Precautions, such as periodic monitoring of soils, will be employed to ensure that this action will not result in the release or a substantial threat of release of hazardous substances into the environment. All construction activities will also be governed by site Health and Safety guidelines.

As part of the project, a contamination survey will be conducted on the soil as it is removed, the soil will be placed in boxes for storage until the RCRA sampling and analysis is completed. This action will allow construction to proceed without delay.

Less than 100 pCi/gm contaminated soil will be dispositioned in the controlled area stockpile north of Plant 1 Pad. Wastes that exceed 100 pCi/gm criteria will be containerized and shipped off-site per procedure FMPC-720.

Characterization sampling and analysis will be conducted during preconstruction, construction, and post-construction build-over activities.

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**TABLE 1**

Duplex Office Trailers Project Sampling Data							
Sample Point	Depth		Total Thorium pCi/gm	C A T	Total Uranium pCi/gm	C A T	COMMENT:
	S	ft.					
14	X		3.2	1	<6.1	1	
15	X		2.8	1	<7.8	1	
16	X		3.9	1	62.0	2	
17	X		2.6	1	8.6	1	
18	X		3.9	1	23.0	1	
19	X		5.6	1	19.0	1	
20	X		1.5	1	6.8	1	
21	X		23.0	2	350.0	E	
22	X		11.0	2	370.0	E	

X - Surface Sample

E - Exceeds Category 2

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TABLE 2

Duplex Office Trailers Project Sampling Data					
Sample Point	Depth S   ft.	Total Thorium pCi/gm	C		COMMENT:
			A	T	
		Total Uranium pCi/gm	C	A	
14	1	<3.9	1	9.4	1
14	2	<3.9	1	12.8	1
14	3	<3.9	1	<7.4	1
15	1	<3.9	1	10.7	1
15	2	<3.9	1	25.6	1
15	3	<3.9	1	10.1	1
16	1	<3.9	1	160.2	E
16	2	<3.9	1	19.0	1
16	3	<3.9	1	<7.4	1
17	1	<3.9	1	10.1	1
17	2	<3.9	1	12.8	1
17	3	<3.9	1	7.4	1
18	1	<3.9	1	29.0	1
18	2	<3.9	1	30.3	1
18	3	<3.9	1	19.5	1
19	1	<3.9	1	8.1	1
19	2	<3.9	1	7.4	1
19	3	<3.9	1	7.4	1
20	1	<3.9	1	10.8	1
20	2	<3.9	1	10.8	1
20	3	<3.9	1	10.8	1
21	1	<3.9	1	197.0	E
21	2	<3.9	1	590.0	E
21	3	<3.9	1	32.3	1
22	1	<3.9	1	127.0	E
22	2	<3.9	1	7.4	1
22	3	<3.9	1	9.4	1

X - Surface Sample

E - Exceeds Category 2

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**ASSESSMENT OF THE NEED FOR REMOVAL ACTION**

Consistent with Section 40 CFR of the National Contingency Plan (NCP), the Department of Energy shall determine the appropriateness of a removal action. Eight factors to be considered in this determination are listed in the NCP, 40 CFR 300.415 (b) (2). The following apply specifically to the concentration of total uranium occurring in the soil to be excavated:

**40 CFR 300.415 (b)(2)(iv)**

High levels of hazardous substances or pollutants or contaminants in soils largely at or near the surface that may migrate.

Based on the sampling data presented herein, one of the eight factors listed in the NCP may be applicable to the Duplex Office Trailers project.

**APPROPRIATENESS OF A RESPONSE**

If it is determined that a response action is appropriate due to the levels of contamination found in the soil, 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 greater than six months before a response is initiated, DOE will issue an Engineering Evaluation/Cost Analysis (EE/CA) Approval Memorandum. This memorandum is to be used to document the threat of 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.

Site characterization activities completed to support the Duplex Office Trailers project indicate that hazardous substances are present in the environment at the proposed project site. Site Policy and Procedure FMPC-720 and IH&S-IH-03 adequately address concerns associated with potential releases. Therefore, there are sufficient controls available to mitigate the threat of contaminant release to the environment associated with this project and a Removal Action is not required.

