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MODIFICATION OF REMOVAL ACTION NO. 28, CONTAMINATION AT THE FIRE TRAINING FACILITY

05/01/95

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DOE-FN EPAS
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LETTER

Department of Energy
Fernald Environmental Management Project
P. O. Box 398705
Cincinnati, Ohio 45239-8705
(513) 648-3155

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MAY 01 1995

DOE-0900-95

Mr. James A. Saric, Remedial Project Director
U.S. Environmental Protection Agency
Region V - 5HRE-BJ
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

Mr. Tom Schneider, Project Manager
Ohio Environmental Protection Agency
401 East 5th Street
Dayton, Ohio 45402-2911

Dear Mr. Saric and Mr. Schneider:

MODIFICATION OF REMOVAL ACTION NO. 28, CONTAMINATION AT THE FIRE TRAINING FACILITY

References: 1) Letter, DOE-2319-93, from J.R. Craig to Saric, Mitchell, Pardi, "Removal Action No. 28, Contamination at the Fire Training Facility Removal Action Work Plan and Closure Plan Information and Data Package"

2) Letter, DOE-2320-93, from J.R. Craig to Schregardus, "Removal Action No. 28, Contamination at the Fire Training Facility Removal Action Work Plan and Closure Plan Information and Data Package"

As discussed at a meeting held on April 5, 1995, this is to provide additional detailed information and request your concurrence to modify Removal Action No. 28, "Contamination at the Fire Training Facility" as follows:

1. Excavation of soils:

A 6-inch layer of soil has been excavated from the Fire Training Facility (FTF) rather than a 12-inch layer, as indicated in the Removal Action Work Plan (RAWP). After the soil was excavated, the excavation base was resurveyed using a hand held sodium iodide detector at the 6-inch level (RAWP, Pages 3-37). The results were all below the field correlated action level, indicating that radiological contamination had been removed below the RAWP guidelines for uranium, thorium, and radium. These represented the major constituents of contamination at this facility.

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The change from 12-inch to 6-inch lifts was made to minimize both the volume of excavated soil to be stockpiled and the volume of soil required for backfill. The Department of Energy, Fernald Area Office (DOE-FN) believes that this change will not present an environmental or health and safety concern since the final survey indicated that the objective of contamination removal has been achieved. Additional remediation of the soils in the FTF area will be accomplished in accordance with the Operable Unit 5 (OU5) Record of Decision (ROD). Accordingly, the DOE-FN does not believe it is necessary at this time to excavate the additional 6-inch layer of soil.

2. Skid-tank pond excavation and placement of soil boring:

Excavation of the skid-tank pond resulted in the removal and containerization of approximately 330 cubic yards of soils containing both radiological and organic contaminants. The eastern half of the pond has been excavated to a depth of two to three feet. The western half of the pond has been excavated to a depth of four to five feet. Field screening with a Photoionization Detector (PID) was used to direct the excavation (RAWP, Pages 3-18). At the 5-foot depth, in the western half of the pond, the PID field screen indicated that there was still limited soil contamination. Excavation of contaminated surface soil in the area of the skid-tank pond was halted at this depth, which is the upper surface of the seasonally fluctuating perched water layer (average depth 5.37 feet below the protective well casing). This initial decision to halt the excavation was based on: 1) removal of contaminated soil to this depth satisfies the removal action objectives for surface source control and mitigation of near-term risks to human health and the environment, and, 2) deeper excavation would risk penetrating the geologic features forming the perched water layer. As stated in the Remedial Action Work Plan/Closure Plan Information and Data Package (RAWP/CPID), soil excavation into the perched water layer was not planned as an element of the removal action. The persistence of the perched water at the FTF is evidence that conditions currently exist within the vadose zone that restrict or retard downward migration of contaminants present within the soil.

Samples were collected from the excavation base and analyzed for Volatile Organic Compounds (VOCs). The results are shown in Table 1 (enclosed). Although limited contamination remains in the pond base at the 5-foot depth, the source of the contamination (e.g., petroleum stained soils) has been removed and the objective of the removal action met.

The RAWP states, in Section 3.2.2.5 (Pages 3-22), that four source area soil borings will be installed to characterize contaminants at depth. On Page 3-24, the RAWP states that three shallow borings will be installed outside the source area to confirm detections made in the soil gas survey. Figure 3-2 (Pages 3-23)

provides locations for the proposed borings. The OU5 has completed its Feasibility Study and since there is no need for additional data, no more borings have been installed. Final remediation of the FTF area will be performed according to the cleanup levels established in the OU5 ROD. Given that the intent of the removal action has been met, we believe that remedial action would be a more appropriate mechanism to address any remaining contamination. If further investigation of the FTF area is required, appropriate characterization would be performed at that time.

Additionally, based on the Director's Findings & Orders (DF&O), currently under negotiation with the Ohio Environmental Protection Agency (OEPA) and expected to be signed in April 1995, the remediation of the FTF contaminated media will be accomplished as a single integrated Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Remedial Action.

3. Building debris:

The debris generated by the demolition of the two-story block building is currently on the outer edges of the asphalt pad, under proper cover. In order to complete the excavation of the asphalt pad, the debris pile will be relocated to a nearby area where the asphalt has already been removed. The relocated pile will be properly covered and the remainder of the asphalt pad excavated and containerized. The covered debris pile will remain in place pending disposal. The debris will be disposed of either at the Fernald Environmental Management Project (FEMP) site or at a designated off-site facility. Issues associated with free-release of concrete, a porous material, need resolution before the disposition decision can be made.

Upon receipt of the U.S. EPA and OEPA concurrence with the contents of this letter, these field changes will be documented in the Final Report for the FTF.

If you have any questions regarding Removal Action No. 28, Contamination at the Fire Training Facility, please contact Anand Shah at (513) 648-3146.

Sincerely,

Johnny Raising

for Jack R. Craig
Fernald Remedial Action
Project Manager

FN:Shah

Enclosure: As Stated

cc w/enc:

K. H. Chaney, EM-423/GTN
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AR Coordinator, FERMCO

cc w/o enc:

J. Thiesing, FERMCO
M. Yates, FERMCO/9

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TABLE 1

VOC Analytical Results (ug/kg) of Soil Samples from the Skid-Tank Pond Excavation
Removal Action No 28 Contamination at the Fire Training Facility

ANALYTE	SAMPLE POINT #1	SAMPLE POINT #2	SAMPLE POINT #3	SAMPLE POINT #4	SAMPLE POINT #5	SAMPLE POINT #6	SAMPLE POINT #7
Acetone	7.17	16.12	18,706.43	7.13	6.27	11.07	16.44
Chlorobenzene	ND	ND	ND	ND	3.02	ND	ND
1,1-Dichloroethane	ND	1.47	ND	ND	ND	ND	13.66
1,1-Dichloroethene	ND	ND	ND	ND	ND	ND	1.31
1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	48.45
Ethylbenzene	ND	ND	3812.12	1.42	ND	ND	28.08
Methylene Chloride	ND	ND	2268.36	1.24	ND	ND	1.36
Tetrachloroethene	52.94	4.8	85,965.53	43.37	52.07	15.14	81.97
Toluene	ND	ND	7555.28	ND	ND	ND	6.18
1,1,1 Trichloroethane	13.07	ND	6131.60	8.13	9.39	ND	113.07
Trichloroethylene	ND	ND	ND	ND	ND	ND	5.07
Xylene	ND	10.74	24,492.63	8.0	ND	ND	134.32

ND= Not Detected