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**OPERABLE UNIT 3 RECORD OF DECISION FOR
INTERIM REMEDIAL ACTION PROPOSED PLAN
APRIL 1994 REF: 5415**

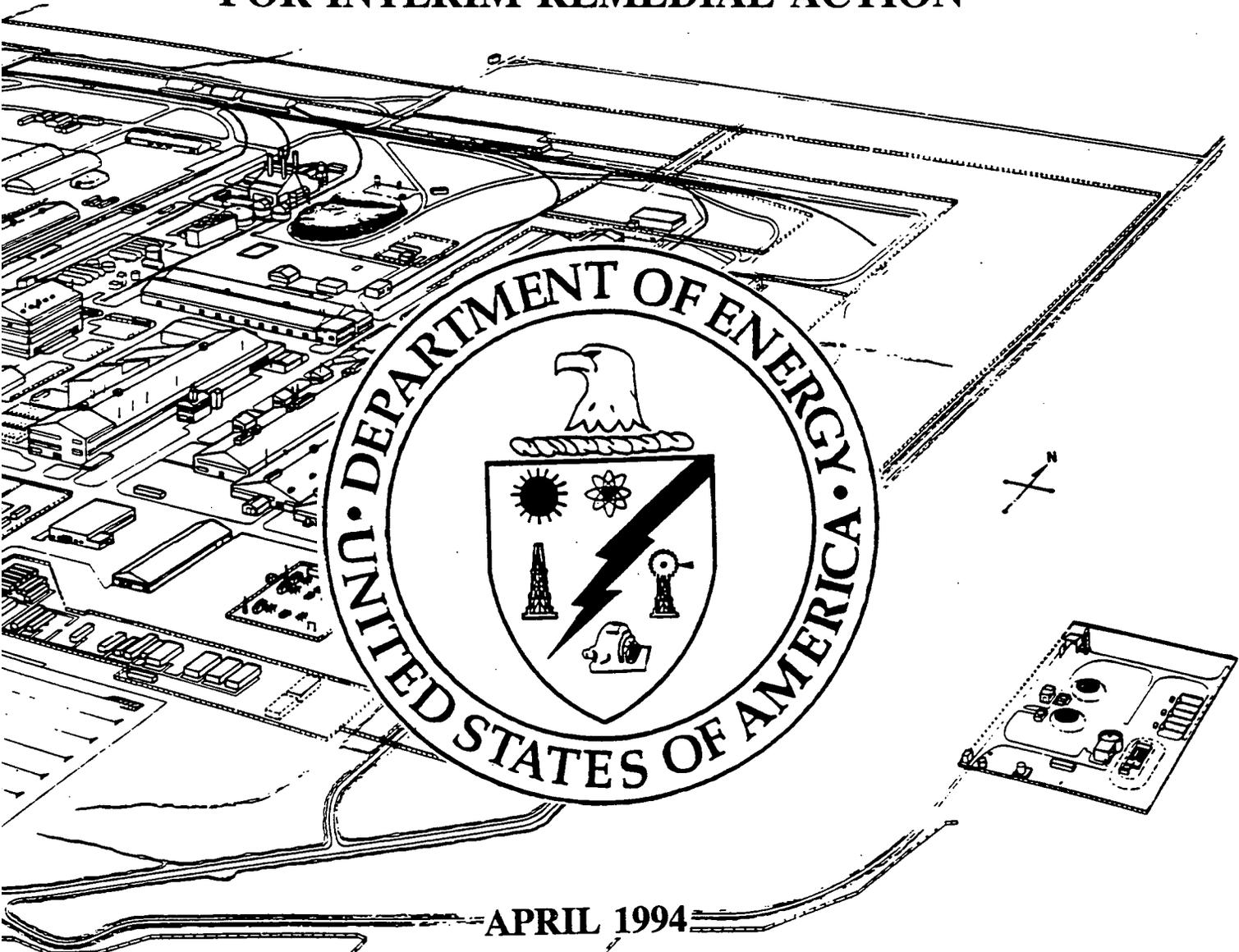
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**DOE-FN/EPA
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REPORT
OU3**

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OPERABLE UNIT 3

RECORD OF DECISION FOR INTERIM REMEDIAL ACTION



APRIL 1994

FERNALD ENVIRONMENTAL MANAGEMENT PROJECT
FERNALD, OHIO

U.S. DEPARTMENT OF ENERGY
FERNALD FIELD OFFICE

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PROPOSED
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FOR

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FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

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RECORD OF DECISION DECLARATION
INTERIM REMEDIAL ACTION FOR OPERABLE UNIT 3

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SITE NAME AND LOCATION:

U.S. Department of Energy
Fernald Environmental Management Project¹ -- Operable Unit 3
Fernald, Ohio

STATEMENT OF BASIS AND PURPOSE:

This decision document presents the selected interim remedial action for Operable Unit 3 at the U.S. Department of Energy (DOE) Fernald Environmental Management Project in Fernald, Ohio, which was chosen in accordance with the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA), and, to the extent practicable, the National Oil and Hazardous Substances Pollution Contingency Plan (NCP).

The proposed interim remedial action for OU3 represents a major portion of the remedial action for the operable unit and for the site as a whole. While DOE maintains an active maintenance program, the former uranium processing support facilities contained within OU3 are, in general, at or beyond their design life and in a state of advancing deterioration. These current conditions indicate an increasing probability of future releases of hazardous substances to the environment due to structural collapse or other failure mechanisms. While the DOE and EPA are proceeding toward a decision on the final disposition of these structures as part of the OU3 RI/FS process, the decision resulting from this effort will not likely occur until late 1997.

The decision presented herein for the interim remedial action is based on information available in the administrative record for Operable Unit 3 maintained in accordance with CERCLA. This

¹ The Fernald Environmental Management Project was formerly known as the Feed Materials Production Center, as referenced on the National Priorities List.

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document was made available for public review and comment. This decision is also based on the issues raised at the public meeting held on January 5, 1994 and the comments received during the public comment period following the issuance of the Proposed Plan/Environmental Assessment. DOE and EPA have considered all comments received during the public comment period on the Proposed Plan/Environmental Assessment in making this decision.

The State of Ohio concurs with the selected remedy.

ASSESSMENT OF THE SITE:

Actual or threatened releases of hazardous substances from Operable Unit 3, if not addressed by implementing the response action selected in this Record of Decision for Interim Remedial Action, may present a current or potential threat to public health, welfare, or the environment.

DESCRIPTION OF THE SELECTED REMEDY:

This Interim Record of Decision addresses contamination of all Operable Unit 3 facilities and structures, including former uranium production process buildings and equipment, support structures, below-grade and above-grade utilities, and identified ponds and basins. The Fernald Environmental Management Project is divided into five operable units, of which Operable Unit 3 is one, under investigation pursuant to the Amended Consent Agreement (EPA 1991a) between DOE and EPA. In addition to these five operable units, a comprehensive site-wide operable unit would evaluate the protectiveness of all site-wide remedial response actions.

The interim action selected remedy consists of decontaminating and dismantling all Operable Unit 3 structures and related facilities. The bulk of the debris and remediation waste generated will be placed into temporary storage; decisions concerning treatment and final disposition of stored remediation wastes and debris will be addressed and documented in the final remedial action Record of Decision for Operable Unit 3 in 1997.

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The major components of the selected interim remedy include:

- Decontamination of more than 200 buildings and structures in Operable Unit 3 by removing loose contamination; 2
- Dismantlement of the above-grade structures; 3
- Removal of foundations, storage pads, ponds, basins, underground utilities, and other at- and below-grade structures; 4
- Use of existing facilities or construction and operation of new interim storage facilities in or near the former production area; 5
- Off-site disposal at Nevada Test Site of some non-recoverable or non-recyclable waste and debris generated by dismantlement; 6
- Off-site recycling of some recyclable material from dismantlement; 7
- Storage of the remaining waste and debris in interim storage facilities or existing facilities until treatment and disposition are selected in the final remedial action Record of Decision for Operable Unit 3. 8

STATUTORY DETERMINATIONS: 15

The selected interim remedial action is protective of human health and the environment, complies with Federal and State applicable or relevant and appropriate requirements directly associated with this action, and is cost effective. The selected interim remedy best meets the evaluation criteria by addressing risks to human health and the environment, accelerating the remediation process by nearly four years, and reducing overall costs associated with Operable Unit 3 remediation. 16

This action does not constitute the final remedy for Operable Unit 3, the statutory preference for permanent solutions and remedies that employ treatment to reduce toxicity, mobility, or volume as a principal element will be addressed by the final remedial action for Operable Unit 3. However, this action does utilize permanent solutions and alternative treatment (or resource recovery through recycling and reuse) technologies to the maximum extent practicable, given the limited scope of the action. A subsequent final remedial action is planned to address the remaining scope of Operable Unit 3. Although this remedy will result 22

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temporarily in radiological and/or hazardous substances remaining on site above material free release limits, the final remedial action will address the disposition of these remediation wastes and determine the need for future review to ensure that the final remedial action provides adequate protection of human health and the environment. Because this is an interim remedial action ROD, review of this site and of this remedy will continue as DOE and EPA develop final remedial alternatives for Operable Unit 3.

Assistant Secretary for Environmental Management
U.S. Department of Energy

Date

Regional Administrator
U.S. Environmental Protection Agency, Region V

Date

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RECORD OF DECISION FOR INTERIM REMEDIAL ACTION

APRIL 1994

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NOTATION

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Abbreviations, Acronyms, and Initials

ADM	Action Description Memorandum
AEC	Atomic Energy Commission
ALARA	as low as reasonably achievable
ARAR(s)	applicable or relevant and appropriate requirement(s)
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act of 1980
CFR	Code of Federal Regulations
CSF	central storage facility
DOE	United States Department of Energy
DOT	United States Department of Transportation
EE/CA	engineering evaluation/cost analysis
EIS	environmental impact statement
EPA	United States Environmental Protection Agency
FEMP	Fernald Environmental Management Project
FFCA	Federal Facilities Compliance Agreement
FMPC	Feed Materials Production Center
FONSI	finding of no significant impact
FR	Federal Register
FRESH	Fernald Residents for Environmental Safety & Health
FS	feasibility study
HVAC	heating, ventilating, and air conditioning
HWMU	hazardous waste management unit
IROD	Record of Decision for Interim Remedial Action
MCL(s)	maximum contaminant level(s)
MCLG(s)	maximum contaminant level goal(s)
NCP	National Oil and Hazardous Substances Pollution Contingency Plan, 40 CFR Part 300
NCRP	National Council of Radiation Protection and Measurements
NEPA	National Environmental Policy Act
NTS	Nevada Test Site
O&M	operation and maintenance
OAC	Ohio Administrative Code
OEPA	Ohio Environmental Protection Agency
OSHA	Occupational Safety and Health Administration
OU3	Operable Unit 3
OU4	Operable Unit 4
OU5	Operable Unit 5

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PCB(s)	polychlorinated biphenyl(s)
PEIC	Public Environmental Information Center
RCRA	Resource Conservation and Recovery Act
RD/RA	Remedial Design/Remedial Action
RI	remedial investigation
RI/FS	remedial investigation and feasibility study
ROD	Record of Decision
S.R.	State Route
SARA	Superfund Amendments and Reauthorization Act of 1986
SBDC	Small Business Development Center
STEP	Science, Technology, Environment, and the Public
SVOC(s)	semivolatile organic compound(s)
TBC	to be considered
TSS	tension support structure
USC	United States Code
VOC(s)	volatile organic compounds(s)

1.0 SITE NAME, LOCATION, AND DESCRIPTION

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The Fernald Environmental Management Project (FEMP) or "the site" is located on a 1,050-acre site¹ in a rural agricultural area about 18 miles northwest of downtown Cincinnati, Ohio (Figure 1-1). The site is near the villages of Fernald, New Baltimore, New Haven, Ross, and Shandon, Ohio, located west and south of Ohio State Routes (S.R.) 128 and 126, respectively. The street address of the Fernald site is: 7400 Willey Road, Fernald, Ohio 45030.

The FEMP is a government-owned, contractor-operated federal facility that produced high-purity uranium metal products for the U.S. Department of Energy (DOE) and its predecessor agencies during the period 1952-1989. Thorium also was processed, but on a smaller scale, and still is stored on the site. Production activities were stopped in 1989, and the production mission of the facility was formally ended in 1991.

Approximately 200 buildings and structures are located at the site and are all included in the scope of Operable Unit 3 (OU3). Most of these structures are located within the former Production Area, which occupies about 136 acres near the center of the FEMP site (see Figure 1-2). Most buildings on-site are generally steel frame structures with transite siding, concrete block structures, or pre-engineered facilities with metal siding and roofing. The tallest building on-site is approximately 100 feet high and the tallest structure, the Elevated Water Storage Tank, is about 265 feet high.

Most facilities and structures rest on a relatively flat plain about 580 feet above mean sea level. The elevation slopes slightly toward Paddys Run, a small intermittent stream on the west side of the site. Natural drainage at the FEMP generally flows from east to west, with the exception of the extreme northeast corner, which drains east toward the Great Miami River.

A portion of the FEMP property along the north-south corridor of Paddys Run at the site lies within the 100- and 500-year floodplain. On-site surface waters are confined to Paddys Run

¹ As used in this Record of Decision for Interim Remedial Action, the term "site" refers to all areas within the property boundary of the FEMP (1050 acres). "Off-site" refers to all areas not included in this definition of "site."

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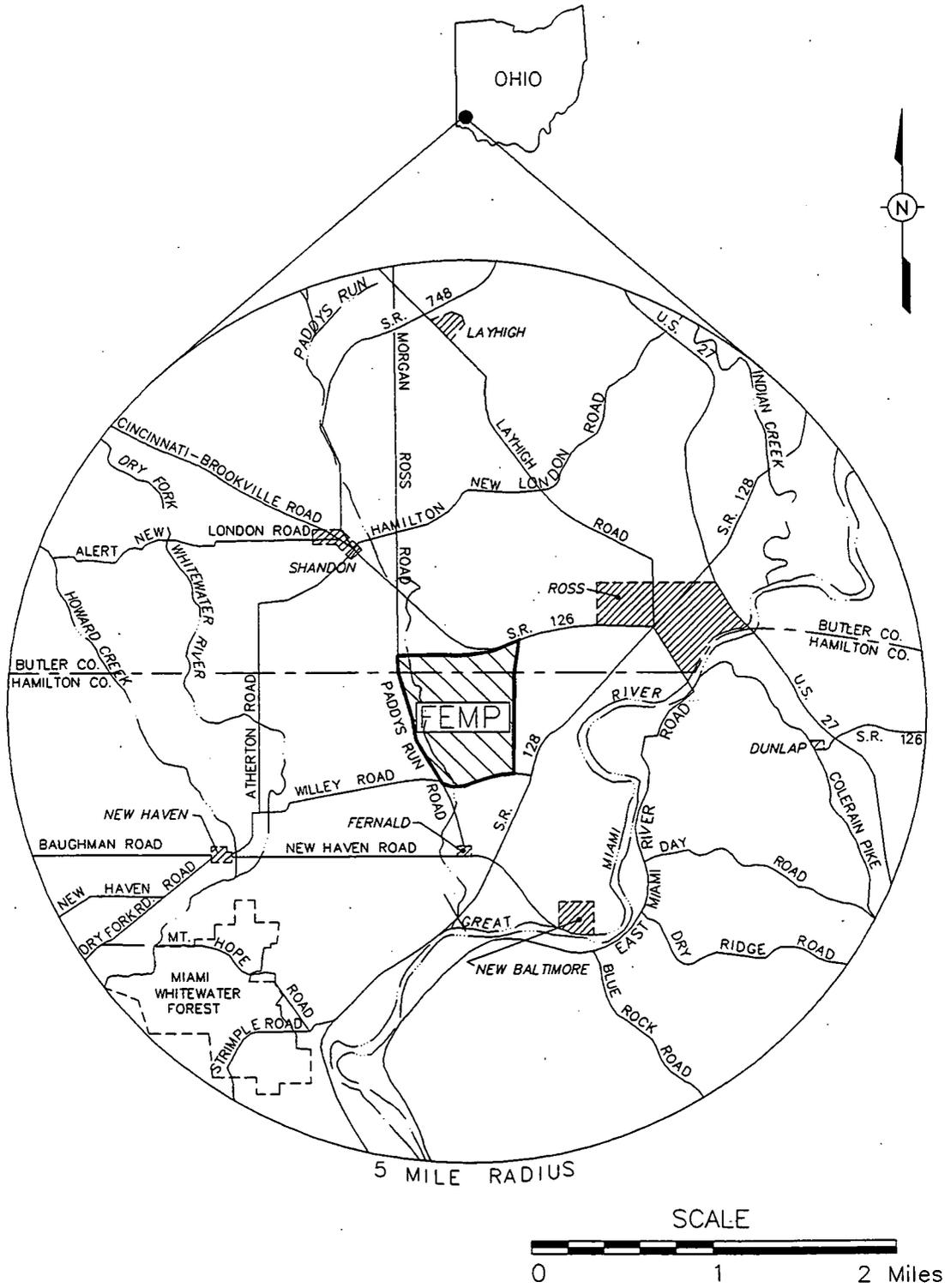
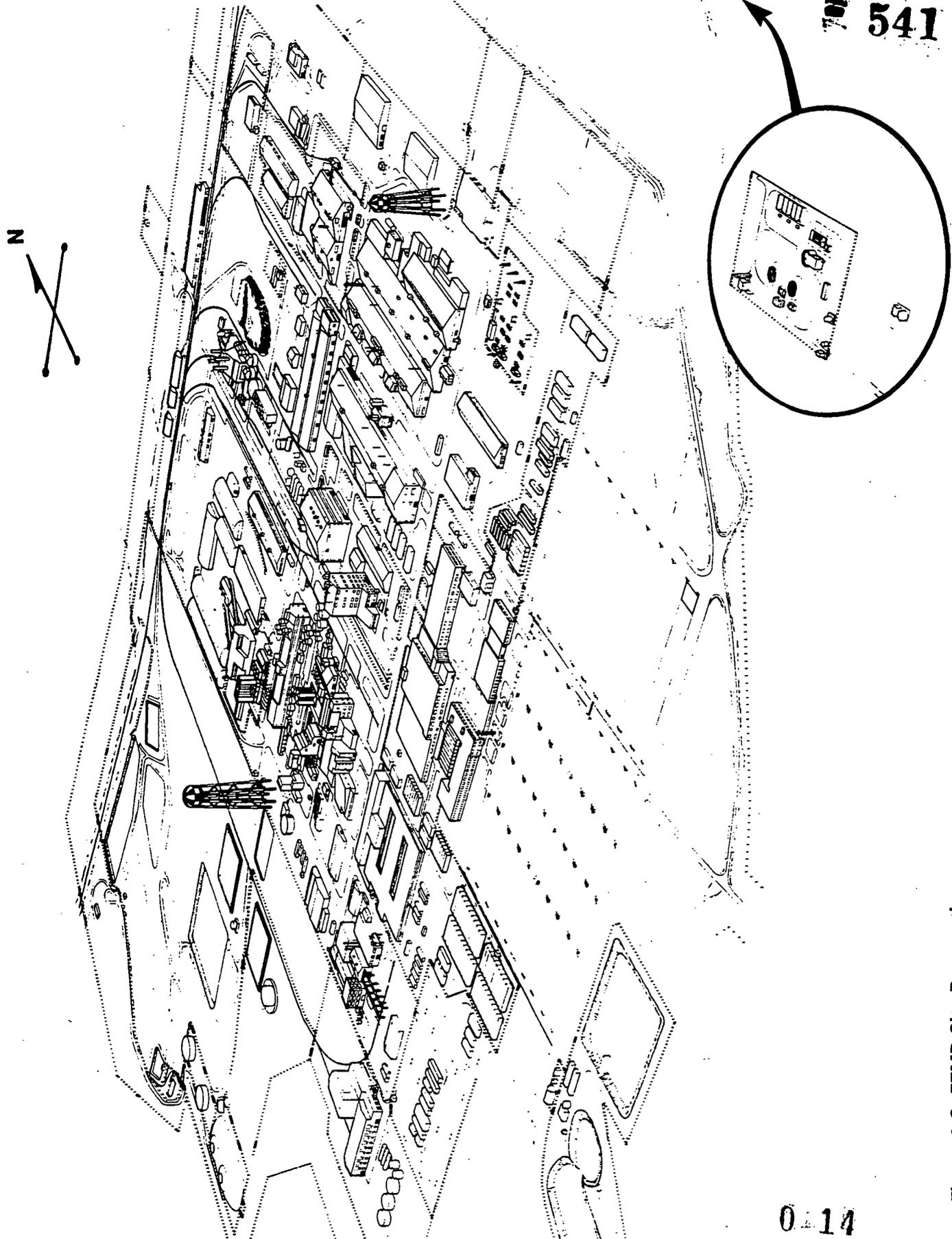


FIGURE 1-1 Location of the FEMP Facility

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The sewage treatment plant shown in the circled 6 is located on the east side of the FEMP.

Figure 1-2 FEMP Site Perspective

and its unnamed tributaries and total approximately 8.9 acres. Results from a site-wide wetlands delineation indicate a total of 35.9 acres of freshwater wetlands on the site. The Great Miami Aquifer is the principal aquifer within the FEMP study area and has been designated a sole-source aquifer under the provisions of the Safe Drinking Water Act.

The land adjacent to the FEMP is primarily devoted to open land use such as agriculture and recreation. There is some commercial activity adjacent to the site such as a panel truss company and several nursery suppliers. However, the majority of commercial activity is generally restricted to the village of Ross, approximately 2 miles northeast of the facility, and along S.R. 128 just south of Ross. Industrial usage is concentrated in the areas south of the FEMP, along Paddys Run Road, in Fernald, and in a small industrial park on S.R. 128 between Willey Road and New Haven Road. Open acreage on the FEMP is currently being leased to local dairies for livestock grazing, but there are no areas within the FEMP boundaries considered to be prime farmland under the Farmland Protection Act of 1981.

Concentrations of residential units are situated northeast of the FEMP in Ross and southeast of the FEMP in a trailer park adjacent to the intersection of Willey Road and S.R. 128. Other residences are scattered around the area, generally in association with farmsteads. An estimated 23,000 residents live within a 5-mile radius of the FEMP.

2.0 SITE HISTORY AND ENFORCEMENT ACTIVITIES

The Fernald site was constructed in the early 1950s to produce materials needed for the nation's nuclear weapons program. The original Fernald project was developed on an accelerated schedule by the Atomic Energy Commission (AEC) with the aid of the U.S. Army Corps of Engineers. The site was selected in 1950, and site preparation and construction began in May 1951. Construction of the main facilities (including ore receiving, refinery, hydrofluorination, hexafluoride reduction, reduction and casting, metals fabrication, special products, pilot plant, recovery, laboratory, boiler plant, and administration) was completed in three years, and operation began in May 1954.

This facility produced high-grade uranium metal used for plutonium production in government reactors at Richland, Washington, and Aiken, South Carolina. Thorium was also processed but on a smaller scale. The site produced uranium and other special products for 37 years.

Production activities were stopped in 1989, and the production mission of the facility was formally ended in 1991. The Feed Materials Production Center (FMPC)² was included on the National Priorities List in 1989. Subsequently the site was renamed the FEMP reflecting its new mission of environmental restoration. This current mission is in accordance with the requirements of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA), here after jointly referred to as CERCLA, and the National Oil and Hazardous Substances Pollution Contingency Plan (NCP).

The CERCLA activities for the FEMP are defined by several agreements in addition to the primary governing regulations, including the following:

- In 1986, DOE entered into a Federal Facilities Compliance Agreement (FFCA) with the U.S. Environmental Protection Agency (EPA) that provided for a Remedial Investigation/Feasibility Study (RI/FS) and remedial action at the site.
- In 1988, DOE entered into a Consent Decree with the State of Ohio that provided for management of water pollution and hazardous wastes. This was amended by the Stipulated Amendment to the Consent Decree, in 1993.
- In 1990, DOE and EPA entered into a Consent Agreement that amended the 1986 FFCA.
- In 1991, the 1990 Consent Agreement was amended. The Amended Consent Agreement (EPA 1991a) defined five distinct operable units at the site: Operable Unit 1, the Waste Pit Area (waste pits 1-6, clearwell, burnpit, berms, liners, and soil within the operable unit boundary); Operable Unit 2, Other

² Throughout this Record of Decision for Interim Remedial Action, the acronym "FEMP" is used for this site, even though it was known as the FMPC when in operation and also on the National Priorities List.

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Waste Units (flyash piles, other south field disposal areas, lime sludge ponds, solid waste landfill, berms, liners, and soil within the operable unit boundary); Operable Unit 3, the Production Area; Operable Unit 4, Silos 1-4 (silos 1-4, berms, decant tank system, and soil within the operable unit boundary); Operable Unit 5, Environmental Media (groundwater, surface water, soil not included in the definitions of Operable Units 1-4, sediments, flora and fauna). A Comprehensive Site-Wide Operable Unit was also defined in the Amended Consent Agreement. In addition, the Amended Consent Agreement defined several EPA-approved removal actions which represented major projects within OU3 and which will be coordinated with the selected remedy from this Record of Decision (ROD).

This Record of Decision for Interim Remedial Action (subsequently referred to as the IROD) addresses OU3, which consists of the former Production Area, production associated facilities and equipment, and all support facilities. It incorporates all above-, at-, and below-grade improvements, including, but not limited to: all structures, equipment, utilities, drums, tanks, solid waste, waste products, thorium, effluent lines, K-65 transfer line, wastewater treatment facilities, fire training facilities, scrap metal and soil piles, feedstocks, and a coal pile.

The former Production Area occupies about 136 acres near the center of the site and contains many buildings, scrap metal piles, containerized materials, storage pads, a parking lot, roads, railroad tracks, above-ground and underground tanks, utilities, and equipment. Several impoundments, ponds, and basins are also included. OU3 does not specifically include the soil and groundwater under the various facilities. These environmental media are important as potential pathways between sources of contamination in the operable unit and the various potential receptors. Soil and groundwater remediation will take place as part of Operable Unit 5 (OU5).

3.0 HIGHLIGHTS OF COMMUNITY PARTICIPATION

At the FEMP, selection of the interim remedial action for OU3 was conducted in accordance with the requirements of CERCLA. The Proposed Plan/Environmental Assessment for Interim Remedial Action (DOE 1993c) was developed and submitted to the public for review and

comment on December 8, 1993. A notice of availability for a 30-day public comment period was published on December 8, 1993 in the legal section of the Cincinnati Enquirer, Hamilton Journal-News, and Harrison Press newspapers. In an attempt to notify a larger segment of the public, display advertisements were run in the same three newspapers on December 15, 1993 announcing the public comment period and the public meeting held on January 5, 1994. Also on December 15, 1993 an announcement of the public comment period and a fact sheet were mailed to approximately 1,000 stakeholders within the 3-mile radius of the site as well as other key stakeholders and the media. An invitation advertisement for the public meeting was published in the Hamilton Journal-News and Harrison Press on December 29, 1993 and in the Cincinnati Enquirer on January 2, 1994.

The Proposed Plan/Environmental Assessment, along with other documents in the administrative record, have been made available for public review at the Public Environmental Information Center, JAMTEK Building, 10845 Hamilton-Cleves Highway, Harrison, Ohio, 45030. An additional location of the administrative record is also maintained at EPA Region 5, Waste Management Division Records Center, 77 West Jackson Boulevard, Chicago, Illinois 60604.

During the public meeting on January 5, 1994, the Proposed Plan/Environmental Assessment was discussed in detail. The format for the meeting included presentations, a question and answer session, and a formal public comment session. During the meeting, at the public's request, DOE extended the comment period for another 30 days until February 8, 1994. Representatives from DOE and Ohio EPA (OEPA) answered questions and responded to comments about the remedial alternatives under consideration. During the meeting both written and oral comments were received and are attached as Appendix B of this IROD. The transcript from this public meeting is contained in the administrative record.

Judging from the comments made during the public meeting, residents needed additional explanation about the purpose of the Proposed Plan/Environmental Assessment as well as more information about the preferred alternative. Issues of particular concern to the public were material transportation, interim storage facilities, air monitoring, and integration of the requirements of CERCLA and the National Environmental Policy Act (NEPA). To provide more information about the regulatory process, DOE held a roundtable meeting on January 24, 1994 to discuss the CERCLA/NEPA integration approach for the site and OU3.

Based on the written and oral comments received during the 60-day public comment period, a responsiveness summary was developed and is attached as Appendix A of this IROD. Copies of the written and oral comments are contained in Appendix B. This decision document presents the selected remedial action for the FEMP chosen in accordance with CERCLA, and, to the extent practicable, the NCP. The decision for this site is based on the administrative record; a listing of the administrative record for this decision is contained in Appendix C.

4.0 SCOPE AND ROLE OF OPERABLE UNIT

The Amended Consent Agreement defined five operable units to organize the evaluation and selection of appropriate actions to remediate the FEMP. The existing site strategy for cleanup is the remediation of each individual operable unit with coordination among the operable units with respect to treatment or disposition options, when appropriate. The proposed interim remedial action for OU3 represents a major portion of the remedial action for the operable unit and for the site as a whole. The OU3 RI/FS and the final OU3 remedial action ROD will contribute the remaining portion (treatment and disposition of wastes generated by the interim remedial action) to the overall OU3 cleanup strategy.

Remedial actions for each operable unit will be coordinated to achieve overall risk reduction for the FEMP. The selected OU3 interim remedial action will be consistent with planned future actions for OU3 and the entire site, and will not preclude implementation of the expected final remedy. The interim and final remedial actions for OU3 combined with the other operable unit remedial and removal actions will constitute the overall remediation of the FEMP.

Many buildings, equipment and other facilities contained within OU3 exhibit levels of radiological and other hazardous substances that exceed certain standards and guidelines for protecting human health and the environment. The presence of these contaminants results in ongoing exposures to workers and presents an unacceptable threat to off-site residents through the potential for release.

While DOE maintains an active maintenance program, the former uranium processing support facilities contained within OU3 are, in general, at or beyond their design life and in a state of

advancing deterioration. These current conditions indicate an increasing probability of future releases of hazardous substances to the environment due to structural collapse or other failure mechanisms. While the DOE and EPA are proceeding toward a decision on the final disposition of these structures as part of the OU3 RI/FS process, the decision resulting from this effort will not likely occur until late 1997.

DOE, as the lead agency for the FEMP, has the responsibility to reduce potential risks to human health and the environment. Therefore, DOE is implementing an interim remedial action in accordance with CERCLA and the NCP to accelerate the cleanup process within OU3 by eliminating potential sources of contaminant releases to the environment. DOE's selected interim remedy is the decontamination and dismantlement of contaminated buildings, equipment, and facilities within OU3. Included within the scope of this interim remedial action is removal of all OU3 facilities, including former uranium processing buildings and equipment, support structures, above-, at-, and below-grade utilities, and identified ponds and basins.

This action is considered reasonable due to: (1) the early opportunity to implement cleanup actions to address the advanced state of facility deterioration and continued potential for contaminant release; (2) the resulting reduced exposures to site workers; (3) the substantial cost savings to the public from reduced maintenance costs; and (4) lack of a future land use as yet identified for the OU3 facilities. Therefore, DOE considers the removal of these facilities to be a prudent measure to ensure the protection of human health and the environment.

An Interim Remedial Action Remedial Design/Remedial Action (RD/RA) Work Plan will be issued subsequent to the IROD, to provide more details on how facilities are to be decontaminated and dismantled, consistent with the selected interim remedial alternative. Remediation plans associated with current Removal No. 13 (Plant 1 Ore Silos) and Removal No. 19 (Plant 7 Dismantling) will form a basis to develop and support the Interim Remedial Action RD/RA Work Plan design. Before implementation of this interim remedial action, it is anticipated that both of these removal actions will be complete or nearly complete. Therefore, lessons learned from the design and implementation of these removal actions will be incorporated into the Interim Remedial Action RD/RA Work Plan and subsequent designs.

The selected interim remedial action will be coordinated and integrated with ongoing approved removal actions or newly identified removal actions. It is anticipated that most removal actions will be completed before beginning the interim remedial action. The exceptions are the currently ongoing removal actions: Removal of Waste Inventories (Removal No. 9), Safe Shutdown (Removal No. 12), Improved Storage of Soil and Debris (Removal No. 17), and Asbestos Abatement (Removal No. 26). These removal actions are programmatic in nature and represent actions being applied to the site as a whole. Each of these removal actions is connected to the interim remedial action and requires coordination of activities to ensure effective implementation.

Contaminated environmental media, including soils and groundwater in the vicinity of or underlying the OU3 facilities, are being addressed within OU5, which is examining such media on a site-wide basis. Interfaces between OU3 and OU5 will be required to ensure removal of above-, at-, and below-grade facilities in coordination with remediation of environmental media. OU3 interfaces with OUs 1, 2, and 4 are physically minimal due to boundaries established around each operable unit; however, remediation activities and waste storage facilities planning for all operable units are coordinated to maximize the use of available resources and limited space.

The effect of this selected interim remedial action will be to isolate decisions concerning decontamination and dismantlement activities from those concerning the final disposition of wastes and potentially allow decontamination and dismantlement of OU3 structures and facilities to begin four years ahead of the current Amended Consent Agreement schedule. Since the interim remedial action will remove the buildings and structures through decontamination and dismantlement, the final remedial action ROD will not evaluate these technologies or process options. The OU3 RI/FS will focus upon the evaluation of waste treatment technologies, and methods and locations for the final disposal of the OU3 remediation wastes. Through implementation of this interim remedial action and the final remedial action decision, all of OU3 will be remediated.

In parallel with the completion of the OU3 RI Report, final treatment and disposal options will be considered in the OU3 FS Report. Upon issuing the final OU3 remedial action ROD for treatment and disposition, materials generated during the interim remedial action will be controlled and managed to meet the requirements of the final remedial action ROD in order

to provide a total remediation approach. Discussion of this unified remedial strategy will be provided within the RD/RA Work Plan issued subsequent to the final remedial action ROD.

To support this decision, DOE developed a Proposed Plan/Environmental Assessment which evaluated remedial alternatives and documented the preferred alternative for interim remedial action. To provide a NEPA review for the action, the Proposed Plan/Environmental Assessment was written to incorporate NEPA values at the level of an Environmental Assessment. Based on the analyses in the Proposed Plan/Environmental Assessment, DOE has determined that the selected interim remedial action is not a major Federal action significantly affecting the quality of the human environment, within the meaning of NEPA. Therefore, the preparation of an Environmental Impact Statement is not needed and DOE will issue a finding of no significant impact (FONSI).

5.0 SUMMARY OF SITE CHARACTERISTICS

The processes and operations within the former Production Area at the FEMP required the use of a variety of source feed materials and other radioactive and chemical materials for both production and secondary operations. The production operations also generated a wide variety of waste materials containing both radiological and chemical constituents. During operations at the FEMP, material handling procedures resulted in chemical and radiological contamination within many OU3 facilities. As a result, these facilities may serve as current and future sources of environmental contamination.

Table 5-1 presents the volumes of materials estimated to be within the scope of OU3. All of the materials have been grouped into the major categories listed under media. The second column gives the estimated volumes of materials provided in the FEMP Waste Information Manual (DOE 1993a) and portrays in-place volumes as the materials exist in their current state. The third column represents estimated bulking factors that would apply to in-place volumes after dismantlement actions occur. This results in a total estimated bulked volume as depicted in the fourth column. The bulking factors represent the anticipated increase to the volume of materials as a result of the dismantlement activities.

Table 5-1 Total Volume of OU3 Materials

Media	In-Place Volume (cubic yards)	Bulking Percent (%)	Total Bulked Volume (cubic yards)
Concrete	88,000	130	114,000
Cement Block	11,000	130	14,300
Steel	2,100	300	6,300
Transite	1,500	120	1,800
Other Metal	5,600	200	11,200
Soil/Rubble	36,000	100	36,000
Asphalt	16,500	130	21,500
Other	110,000	200	220,000
Total	270,700		425,100

The following subsections present an overview of contaminant pathways and exposure routes and existing information on chemical, radiological, and mixed waste contamination associated with the OU3 facilities. This summary is based upon data presented in the OU3 RI/FS Work Plan Addendum (DOE 1993d) wherein additional information is available.

5.1 Potential Contaminant Pathways and Exposure Routes

From the sources of contamination in OU3, contaminants could potentially migrate via numerous pathways to reach potential receptors. Each pathway that potentially could contribute significantly to overall risks if OU3 remediation is not undertaken is detailed below.

- *Air:* Removable contamination from building surfaces, equipment, containerized waste, piles of waste and contaminated soils could be suspended into the air as particulates by wind action or by human action. Exposure routes for the air pathway could include inhalation, dermal contact, and ingestion.
- *Groundwater:* Material from OU3 components could cause groundwater contamination through direct leakage from buildings and structures to perched groundwater and leaching of contaminants from soils surrounding buildings and

structures. Exposure routes for the groundwater pathway could include ingestion, inhalation and dermal contact during showering, human consumption of livestock and crops that used groundwater, and dermal contact during incidental activities.

- *Surface Water and Sediments:* Surface waters and associated sediments of Paddys Run and its tributaries could be contaminated by runoff from leaks or spills, the erosion of contaminants from soil piles, and the deposition of contaminated particulates originating from building and storage pad surfaces. Exposure routes for this pathway could include direct human consumption of contaminated water, dermal contact during recreational activities (e.g., swimming), incidental sediment ingestion, direct radiation exposure, consumption of livestock watered with contaminated surface waters, consumption of crops irrigated with contaminated surface waters, and consumption of fish from contaminated surface waters.

- *Soil:* Soils represent a potential exposure pathway to human receptors via incidental ingestion, pica, dermal contact, and direct radiation. However, soils are not considered a primary source of contamination in OU3 because environmental media are addressed under OU5.

- *Direct Contact:* Direct contact allows the direct transfer of contaminants from waste materials or contaminated components to a receptor. This may take place through direct irradiation from contaminated building materials or direct exposure to contaminated components or wastes by dermal contact or ingestion.

5.2 Radiological Contamination

Historical information and process knowledge indicate that the primary radiological contaminants in OU3 are uranium (isotopes 234, 235, 236, 238, and, to a lesser degree, 233), thorium (isotopes 228, 230, and 232), radium (isotopes 226 and 228), and the associated daughters, including isotopes of lead and polonium. Additional radionuclides within

OU3, which have been identified through analysis, include isotopes of neptunium, plutonium, technetium, strontium, cesium, and americium.

Through the ongoing radiation protection program at the FEMP, radiation data on most structures is available. As part of this program, the following radiological information was collected:

- Radiation smear and direct measurements for many individual OU3 structures,
- Smear and direct survey information on some abandoned in-place equipment,
- Radon-222 and radon-220 monitoring, and
- Airborne alpha and beta radiation concentrations.

It should be noted that although some radiological information is available for most structures and facilities, not all of this radiological information is currently available for every structure or facility within OU3, and speciation of radioactive isotopes is generally not available at the current time.

5.3 Chemical Contamination

Current data on chemical contamination within OU3 is based on chemical analyses and process knowledge for the 37 years of operations. This data is largely qualitative in nature, and is presented in the OU3 RI/FS Work Plan Addendum. The information presented in Appendix B of the OU3 RI/FS Work Plan Addendum represents potential contamination which may be present in the facilities. Additional characterization of OU3 including chemical contamination data will be gathered as part of ongoing RI activities. This data will be integrated with the remedial design activities to implement the selected interim remedial action.

Several classes of chemical or contaminant groups of potential environmental concern may exist in OU3. Principal chemical contaminant groups of concern are trace metals, other inorganics, volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), asbestos, polychlorinated biphenyls (PCBs), and other materials such as oils used for lubricating and heat treating. Based on the materials and relative volumes of the materials

used at the site during operations, it is expected that radiological contaminants are a more significant source of carcinogenic risk than chemical contaminants.

Field characterization activities are scheduled to precede the selected interim remedial action. The results from the field characterization will be used in developing the design to implement the action for each component. Data will be used to develop health and safety requirements and to design monitoring, decontamination, dismantlement, packaging, transportation, and storage systems. Use of appropriate field monitoring equipment will be employed during implementation of the selected interim remedial action to minimize worker exposures.

5.4 Hazardous Waste Management Units

The Resource Conservation and Recovery Act (RCRA) program at the FEMP currently identifies a total of 43 Hazardous Waste Management Units (HWMUs) (36 inactive and 7 active units for storage of hazardous waste during remediation) within OU3. The closure strategy for these HWMUs is currently being negotiated with OEPA. The lead approach in the negotiations would employ three different closure strategies. Clean closure is anticipated to be complete for 17 of the inactive units before the interim action field activities begin within that unit/component. The remaining 19 inactive units would be remediated under the CERCLA/RCRA integration process associated with the selected interim remedial action, which is currently being developed. Each of the seven active units would be closed under RCRA after hazardous or mixed waste storage is no longer required of these units and notice of intent to close has been provided to OEPA.

5.5 Mixed Waste

Mixed wastes are hazardous (RCRA) wastes that also include radiological contaminants. Radiological contamination appears to be relatively widespread throughout many structures in OU3. Based on past materials handling practices and potential chemical contaminants, some of the materials and wastes associated with OU3 facilities may fall into the category of mixed waste. Mixed wastes resulting from the selected interim remedial action will be managed in accordance with RCRA requirements. The volumes of material included in this category are currently uncertain.

6.0 SUMMARY OF SITE RISKS

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OU3 consists of over 200 buildings and structures, including the process and support facilities at the FEMP, a large quantity of drummed inventory and waste, and various piles of soil and scrap metal. In particular, the process facilities are complex chemical and metallurgical process plants that contain equipment, process lines, dust collectors, and various tanks, sumps, and dikes. OU3 contains no environmental media except for previously excavated soil piles; the contaminated media in OU3 are generally the construction materials contained in the structures. Although DOE maintains an active maintenance program, the facilities in OU3 are generally at or beyond their design lives and in a state of advancing deterioration. For example, long-term exposure to nitric acid fumes and splashes from the uranium digestion process contained in Plant 2/3 has eroded the building support structure. Additionally, areas of Plant 6 and the thorium storage buildings (64 and 65) are in a deteriorated state and provide insufficient long-term protection of their contents from the elements. Various sumps contain contaminants that could potentially be released to soils or groundwater. Significant maintenance and renovation would be required in the future simply to maintain the integrity of the structures, without guarantee of contaminant immobility.

On the basis of process knowledge, the most significant potential contaminants in OU3 are expected to be uranium and thorium and their decay products, along with various trace metals, solvents, PCBs, and asbestos. These contaminants are expected to be located primarily in the former processing and maintenance buildings and in waste residues, though asbestos occurs in most of the original buildings at the site.

Under current conditions, the primary routes by which individuals could be exposed to OU3 contaminants are direct radiation, inhalation, and absorption of the contaminants present in the OU3 structures. Small quantities of contaminants, such as uranium dust, could be released to the air and discharged to surface water from sources in the operable unit. Also, a potential exists for releases of contaminants to groundwater from building sumps, buried piping, or other contaminated equipment.

Exposures of on-site workers and site visitors to contaminants could occur, as could the exposure of any trespassers in OU3. However, because DOE controls access to the site at this time, trespassers are not expected to have access to contaminated areas in OU3. On-site

workers currently have the highest likelihood of significant exposure to OU3 contaminants. Radiological doses to individuals currently working on-site are limited by DOE's standards and actual individual doses are relatively low compared to those standards.

Nearby off-site residents and users of foodstuffs produced near the site are potentially exposed to contaminants released from OU3. However, risks associated with exposures to OU3 contaminants are currently low for such off-site residents. It is estimated that a hypothetical maximally exposed off-site individual currently receives a total annual radiological dose from the FEMP (exclusive of the dose received from radon, which originates primarily from non-OU3 sources) of about 1 millirem as referenced in the 1992 Site Environmental Report (DOE 1993e). This dose corresponds to an excess risk of about 6×10^{-7} that such a hypothetical individual will develop cancer as a result of the exposure. This dose is equivalent to the natural radiation exposure received by an individual flying in an airplane at 39,000 feet for approximately two hours. Because OU3 contributes only a fraction of the 1 millirem annual dose from the site as a whole, this estimate provides an upper bound on the carcinogenic risk to an off-site individual that results from radiological contaminants from OU3. This is a small fraction of the dose received by the individual as a result of exposure to natural background radiation.

Carcinogenic risks associated with exposures to chemicals from or within OU3 are expected to be less than the risks associated with the exposures to radiological contaminants, on the basis of the materials utilized at the site. Non-carcinogenic effects of exposures to chemical contaminants from or within OU3 have not been quantified but are also expected to be low. In its current state, OU3 poses no significant threat to human health as long as access controls of contaminated areas are maintained and facilities and waste storage systems are maintained.

However, significant release of contaminants and resulting exposures could occur if no remediation of OU3 is undertaken, even if access controls are maintained. The major concern for OU3 is the potential for increased future risks as structures further deteriorate, increasing the potential for the release of contaminants. Actual or threatened releases of hazardous substances from OU3 in the future may present an imminent and substantial endangerment to public health, welfare, or the environment.

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7.0 DESCRIPTION OF ALTERNATIVES

Interim remedial action alternatives were developed in accordance with the NCP (40 CFR 300) and EPA's Guidance for Conducting RI/FS Under CERCLA (EPA 1988). A "No Action" alternative was considered in the Proposed Plan/Environmental Assessment which represented an "as is" condition for all facilities in OU3 with no further action occurring. Under that alternative, none of the approved removal actions, other future remedial actions, or maintenance activities would have been implemented. All facilities would have been abandoned and allowed to deteriorate further, with resulting increased probability for releases of radioactive and other contaminants to the environment. Because no action would occur and the NCP threshold criterion for overall protection of human health and the environment would not be met, the No Action Alternative was screened from further consideration. The following subsections identify the interim remedial action alternatives considered under this IROD.

7.1 Alternative 1 -- No Interim Action

The "No Interim Action" Alternative involves the continuation of all currently approved programs. No acceleration of site remediation would occur under this alternative. This alternative assumes that existing and approved removal actions and site maintenance programs would continue. As required, additional removal actions might be proposed to minimize potential risks. Other than ongoing maintenance activities and approved removal actions, no further containment, stabilization, or removal of contamination within facilities would be included in the scope of this alternative. Final remedial action for OU3 facilities would be determined in the final remedial action ROD, presently scheduled for submittal in draft to EPA in April 1997. This alternative would not incur additional costs and is considered the baseline for cost comparison.

7.2 Alternative 2 -- Decontaminate Surfaces Only

Alternative 2 involves in-situ gross decontamination of interior and exterior surfaces of OU3 above-grade structures and disposition of generated wastes through existing waste programs. In-situ decontamination of facilities within OU3 would be pursued to minimize releases of contaminants to the environment. This alternative would reduce existing surface

contamination levels, thereby reducing direct exposure potential, as well as reducing available sources for wind-borne or water-borne contamination. All previously approved programs, maintenance activities, and presently approved removal actions would continue under this alternative. As required, additional removal actions might be proposed at some future time to further minimize potential risks.

The methods that would be used for removing gross surface contamination would depend on the type and level of contamination present and the matrix on which it is found (for example, concrete block, transite, steel, etc). Surface decontamination technologies would be selected from proven and effective techniques. Surface decontamination measures would be used to remove contamination from interior and exterior walls, floors, ceilings, and structural members. Vacuum systems and/or directed air flow would be utilized in order to reduce the potential for contaminant release and migration during the decontamination activities. Table 7-1 lists a variety of proven, potential decontamination technologies that would be effective for use with the implementation of the action. The ultimate selection of decontamination technologies would not be limited to these listed. New and/or innovative technologies developed from the OU3 RI/FS Treatability Studies would be incorporated into the process as appropriate.

TABLE 7-1 Potential Decontamination Technologies

Technology	Media	Secondary Waste Stream
Brushing, scraping, wiping	Any solid	Dry residue
Scrubbing (manual or mechanical)	Concrete, metal, plastic, transite	Residue
Scabbling	Concrete	Concrete residue
Vacuuming	Any	Collected residue
Pressurized steam	Concrete, metal	Wet residue
Strippable coating	Any surface	Coating and contaminants
Water jet (high or low pressure)	Concrete, metal, plastic, transite	Contaminated water
Shot blasting	Metals, concrete	Shot and residue
Grit blasting	Metals, concrete	Grit and residue
CO ₂ pellet blasting	Concrete, metals, plastic, painted surfaces	Residue
Chemical foams, gels, pastes	Metals	Foams, gels, pastes, and removed contaminants

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Secondary liquid and/or solid waste streams generated during implementation of Alternative 2 would be treated to the extent feasible using existing site systems in a manner fully compliant with applicable or relevant and appropriate requirements (ARARs) and to be considered (TBC) criteria identified in Section 10.2 to facilitate the action in a manner which is timely and protective of human health and the environment. All activities performed will be in compliance with health and safety regulations and will follow the principles of ALARA (as low as reasonably achievable). Decontamination actions within HWMU areas would be separated from actions in non-HWMU areas to minimize generating mixed wastes.

After completion of this action, substantial removable contamination could exist in, under, and around equipment, corners, roofs, utilities, and piping. An additional decontamination procedure would then be necessary during dismantlement activities under the final remedial action ROD. Additionally, after decontamination the structures would remain in their current state of structural deterioration with ongoing maintenance activities potentially contaminating areas previously decontaminated.

It is estimated that about 900,000 person-hours would be required to implement Alternative 2. Using an assumption for reasonable funding levels, it is estimated that decontamination activities would take about 4 years and utilize approximately 108 full-time workers. This alternative would cost an estimated \$82 million (in 1994 dollars).

7.3 Alternative 3 -- Decontaminate and Dismantle

Alternative 3 primarily involves the decontamination and dismantlement of all OU3 facilities and structures and the interim storage of the resulting wastes until the final remedial action ROD. Implementing Alternative 3 would effectively separate remedial action decisions concerning the decontamination and dismantlement of OU3 structures from decisions concerning material and/or waste treatment and disposition. Generally, waste and material treatment and disposition would be addressed by the ongoing RI/FS process with a decision provided in the final remedial action ROD for OU3. All activities performed will be in compliance with health and safety regulations and will follow the principles of ALARA (as low as reasonably achievable).

Generally before implementation of the interim action within a facility, preparatory actions will have been completed. The Safe Shutdown removal action, for example, will probably have completed its assigned actions, the existing drummed wastes and inventories will have been removed previously (either dispositioned off-site or relocated to storage facilities), and, where appropriate, friable asbestos will have been removed under the Asbestos Abatement removal action. Facilities that are being used for storage of drummed wastes will likely be remediated last unless stored materials within it can be permanently dispositioned.

The primary scope of Alternative 3 is removal of gross surface contamination from material in structures, dismantlement of structures, and interim storage of the resulting material/wastes. Gross surface decontamination for this alternative would be identical to the techniques described under Alternative 2. To the extent practical, all efforts would maximize recycling and minimize waste generation. In order to facilitate the implementation of the interim remedial action and prevent constraints due to storage space limitations, a limited quantity of wastes would be shipped off-site to the Nevada Test Site (NTS).

After decontamination, the next step in the sequence of implementing the interim remedial action is the dismantlement of the structures. Most of the facilities associated with this action are buildings. The remaining various structures include such items as tanks, utilities, storage pads, roads, railroads, ponds and basins. Because many of the buildings and other structures are unique in terms of construction type and past use, dismantlement methods would vary with both building/structure type and configuration. Six main building types are identified as generally representative of buildings at the site:

- Structural steel with transite siding and roofing facilities (for example, Plants 4, 5, 6, and 9);
- Concrete block with built-up or composite roofing (for example, Administration building and Services building);
- Pre-engineered facilities with metal siding and roofing (for example, the newer RCRA storage warehouses);
- Wood frame with wood siding and metal roofing structures (for example, the guard houses);
- Tension support structures; and
- Open steel frame structures (for example, the Nitric Acid Recovery tower).

Decontamination and dismantlement procedures would be customized to deal with the unique features of any structure, as well as specific contaminants identified, action-specific ARARs, and HWMUs located within the structure.

The following procedure presents an example applicable to the dismantlement of a typical process building. The action would begin by removing yard structures and various exterior equipment and machinery that could restrict heavy equipment mobility and wall-removal operations. The surface decontamination process would typically begin with sealing off the structure or areas of the structure and applying directed air flow or negative pressure filtration to control airborne particles. A variety of surface decontamination techniques would then be employed to reduce the potential for generation of airborne contaminants during structure dismantlement. The dismantlement process of the facilities themselves would typically begin with the removal of asbestos materials followed, generally, with the removal of electrical equipment, piping, water lines, gas lines, tanks, heating, ventilation, and air conditioning (HVAC) duct work, and electrical lines. Depending on the structure, the specific dismantling activities may vary. For instance, the removal of transite panels would, generally, proceed from within the building outward. The last steps of the dismantling action would be the removal of any air filtration apparatus and the removal of the roof, exterior walls, and internal structural members.

After above-grade decontamination and dismantlement, foundations, slabs, and pads would be decontaminated or stabilized to minimize further soil contamination. Removal of foundations, slabs, pads, and subsurface utilities (pipes, electrical lines, etc.) would be scheduled to coincide with OU5 remedial actions involving soil excavation and treatment.

Materials resulting from dismantlement of the facilities would be segregated into two groups: one would go to interim storage facilities until the final remedial action ROD for OU3; the other would be containerized and transported off-site. Materials segregated for disposition off-site would either be recyclable/reusable materials or non-recyclable/non-recoverable materials.

Evaluation factors for the determination of which materials are recoverable, recyclable, or non-recoverable include, but are not limited to, the following: economic considerations, available decontamination and/or treatment technologies, volume of secondary waste generated,

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monitoring capabilities, applicable contamination limits, availability of uses for the materials, and the availability of disposition options. Materials transported off-site would be recycled or reused to the maximum extent practical. As stated, opportunities for employing resource recovery, recycling, and waste minimization would be factored into the planning process for each activity conducted under the interim remedial action. Materials not capable of being recycled would be dispositioned in accordance with the applicable waste acceptance criteria.

The remaining materials that can not be dispositioned off-site would be placed in interim storage until the final remedial action ROD for OU3 is issued. Depending on the material type, some sorting and packaging might be required for transportation of the materials to interim storage. For example, asbestos insulation from ducting would be wrapped or boxed and structural steel would probably be transported in covered dumpsters by truck. Materials that cannot be recycled or reused and that have no potential treatment would be packaged for final disposition at NTS before being placed in interim storage.

Table 7-2 details the estimated volume of materials from Appendix G of the Proposed Plan/ Environmental Assessment (DOE 1993d) to be addressed by this alternative in the interval period before the final remedial action ROD for OU3. These volumes represent the estimated quantity of material to be managed through interim storage or off-site disposition.

Table 7-2 Interval Period Debris Bulk Volume Estimates

Media	Total Bulked Volume (cubic yards)
Concrete/Cement Block	1,600
Structural Steel	600
Miscellaneous Metal	2,800
Equipment	21,100
Transite	400
Other	5,700
Decontamination Residues	2,600
Total	34,800

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Dust resuspension occurring from material and waste movements on site would be minimized by use of the existing paved roadways and the use of dust control measures, as necessary. Loose materials would be packaged and loads would be covered during transport, as necessary, to reduce the potential for contaminant release and migration. Concrete blocks, structural steel, or other materials which do not have high levels of remaining removable contamination would likely be stored without additional packaging. Specific storage requirements for the various types of wastes and materials that would be generated by Alternative 3 are outlined in the Removal Action No. 17 Work Plan, Improved Storage of Soil and Debris (DOE 1993b).

To prevent constraints on the decontamination and dismantlement action due to storage space limitations for the resulting construction debris, a limited quantity of wastes would be shipped off-site for disposition. A maximum of 10 percent of all remediation wastes (see Table 5-1) generated by implementing Alternative 3 would potentially be shipped off-site for disposition and recycling prior to the final disposition decision being determined by the final remedial action ROD for the majority of wastes in OU3. The 10 percent limitation on waste volumes allowed to be dispositioned off-site refers to 10 percent of the total OU3 volume of remediation wastes generated; this was chosen as a limit which would assure that a final disposition decision would not be biased by this action.

Small quantities of non-recoverable and non-recyclable materials destined for off-site dispositioning would be containerized, using strong-tight containers such as B-25 metal boxes (burial volume of 4 cubic yards) and/or SeaLand containers (burial volume of 50 cubic yards), and shipped off-site by truck for disposition at the NTS. The identification of the NTS in this document does not preclude the use of other licensed disposal facilities once NEPA requirements for these facilities are met. Following NEPA review, these facilities would be considered as options for receipt of interim remedial action wastes.

The shipment of wastes would be to the extent practical to facilitate the progress of the interim remedial action by ensuring the availability of adequate on-site storage. The quantity of non-recoverable/non-recyclable materials estimated to be transported off-site before the final remedial action ROD is approximately 18,500 cubic yards and represents approximately 650 truck shipments over a 3,300-kilometer trip to the NTS.

The proposed tension support structures are designed only for temporary storage, and as such cannot be used for long-term storage. The intent of building these facilities is twofold: for use as an interim or temporary storage area for wastes generated from the action if existing storage space is not available and for use as a staging area to support segregation, packaging, and transportation of materials for disposition. To minimize constructing additional interim storage facilities, available storage space within buildings or on the Plant 1 Pad would be utilized for interim storage or staging to the maximum extent practicable. If storage and staging space is obtained within existing facilities, it would not be necessary to construct all of the planned interim storage structures.

The final decision for material disposal, whether on-site or off-site, to be decided as part of the OU3 final remedial action ROD in 1997, will determine the location for disposition of OU3 remediation wastes including materials in interim storage and the storage structures. A decision for on-site disposition of remediation wastes would preclude the use of the interim storage structures for permanent storage and would require construction of structure(s) specifically to meet the stringent requirements of permanent disposal. Whether the decision is for on-site or off-site disposal, the interim storage structures would be used only long enough to support staging operations for remediation wastes resulting from dismantlement activities. Therefore, the timeframe for use of the structures is dependent upon the final decision for disposition of the OU3 remediation wastes, which is expected to be made in 1997. Once staging is no longer necessary to support remediation waste dispositioning, the structures would be removed as part of the OU3 interim remedial action and the resulting wastes would be dispositioned as part of the OU3 final remedial action.

If existing storage space is unavailable, the design, siting, procurement, construction, and operation of interim storage facilities (approximately five as presently envisioned) would be used to store the demolition debris and secondary remediation wastes generated during the decontamination and dismantlement action. The interim storage facilities as currently envisioned would each be approximately 100 feet wide and 400 feet long and provide approximately 30,000 square feet of usable floor space and approximately 300,000 cubic feet of storage space. These facilities are planned to store wastes generated from the action because the storage space necessary to support the action is not currently available. If storage space within existing buildings or on the Plant 1 Pad becomes available, it would be

utilized to the maximum extent possible, as opposed to construction of these storage facilities.

Based upon estimated maximum storage capacity needs, five storage facilities, in addition to the first phase of Removal Action No. 17, the Central Storage Facility (CSF), are presently envisioned. A worst-case interim storage situation would only if no waste generated by the interim remedial action was dispositioned off-site and no storage space was available in existing facilities. This would result in the construction of five interim storage facilities. However, it is anticipated that storage space would be available in existing facilities and that a portion of material can be dispositioned off-site resulting in no new additional storage facility needs.

To address the public's concern regarding a potential increase in airborne radionuclide concentrations above natural background levels, stringent engineering controls would be applied to ensure the safety of workers and the general public. Complementing engineering controls used to minimize releases, the extensive air monitoring program at the FEMP would continue to monitor air at both the site perimeter and at nearby locations for the duration of cleanup activities. Mobile air samplers would be used in work areas to ensure that airborne activity is maintained at low levels as a supplement to the existing air monitoring program. If airborne concentrations are detected above background levels at nearby receptor locations, contingency measures would be implemented to reduce contaminant emissions. For example, work could be stopped, exposed areas covered or otherwise controlled, and engineering measures could be increased prior to restarting work to ensure that nearby members of the general public are not adversely impacted.

Environmental monitoring and ongoing maintenance would be conducted during all decontamination and dismantling activities and during the interim storage period associated with the CSF. Administrative and engineering controls would be utilized throughout implementation of the interim remedial action to control airborne emissions, minimize releases, and maintain a safe work environment.

Using an assumption for reasonable funding levels, preliminary estimates have indicated that the decontamination and dismantlement action would take approximately 16 years to complete and utilize approximately 160 full-time workers to perform the decontamination and

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dismantlement action and other miscellaneous activities along with approximately 16 workers supporting the interim storage efforts. It is estimated that about 6 million person-hours would be required to implement Alternative 3, not including efforts related to ongoing site operations and maintenance. The cost of this alternative, in 1994 dollars, is estimated at \$1,076 million, and includes the decontamination and dismantlement of the OU3 buildings and structures, interim storage of debris, containers, transportation, and disposition of a limited quantity of material and remediation waste at the NTS. This cost does not include the care-taker maintenance costs associated with maintaining the structures each year.

8.0 SUMMARY OF COMPARATIVE ANALYSIS OF ALTERNATIVES

In this section, Alternatives 1, 2, and 3 are compared to allow selection of a preferred alternative. This comparative evaluation is performed based on the NCP's nine evaluation criteria. These nine criteria fall within three categories: threshold, balancing, and modifying. The threshold criteria are overall protection of human health and the environment and compliance with ARARs. Unless a specific ARAR is waived, each alternative must meet the threshold criteria in order to be eligible for selection. The five primary balancing criteria are long-term effectiveness and permanence; short-term effectiveness; reduction of toxicity, mobility, or volume through treatment; implementability; and cost. State and community acceptance are modifying criteria that shall be considered in remedy selection. These criteria are listed and briefly defined below:

- *Overall protection of human health and the environment* addresses how the alternative, as a whole, achieves and maintains protection of human health and the environment.
- *Compliance with Applicable or Relevant and Appropriate Requirements (ARARs)* addresses how the alternative complies with ARARs and other information from advisories, criteria, and guidance that the lead and support agencies have agreed is "to be considered".
- *Long-term effectiveness* evaluates the long-term effectiveness of alternatives in maintaining protection of human health and the environment after response objectives have been met.

- *Short-term effectiveness* examines the effectiveness of alternatives in protecting human health and the environment during the construction and implementation of a remedy until response objectives have been met.
- *Reduction of toxicity, mobility, or volume through treatment* evaluates the anticipated performance of the specific treatment technologies an alternative may employ.
- *Implementability* addresses the technical and administrative feasibility of alternatives and the availability of required goods and services.
- *Cost* evaluates the capital and operation and maintenance costs of each alternative.
- *State acceptance* reflects the state's apparent preferences among or concerns about the alternatives.
- *Community acceptance* reflects the community's apparent preferences among or concerns about the alternatives.

OU3 structures have generally exceeded their design life and no use has been identified for them other than support for remedial activities at the site. In time, the structures will pose a safety hazard. Therefore, DOE proposes eventual decontamination and dismantlement of the facilities independent of the interim remedial action implemented. As a consequence, the comparison of Alternatives 1, 2, and 3 presented here assumes eventual decontamination and dismantlement of OU3 facilities. This assumes that if Alternative 3 is not implemented, then decontamination and dismantlement will occur under the final remedial action. The comparative evaluation of the alternatives for interim remedial action is summarized in Sections 8.1 through 8.9.

8.1 Overall Protection of Human Health and the Environment

Without eventual remediation, protection of human health and the environment could not be ensured for the extended future because, over time, contaminants could migrate via groundwater and be released via air to off-site receptors, resulting in possible impacts. Therefore, through either the interim or final remedial action for OU3, each alternative would eventually involve decontamination and dismantlement of OU3 facilities, but at differing time periods. Because remediation of the facilities would ultimately occur, each alternative would be protective of human health and the environment after remediation has begun.

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Alternative 3 provides a more comprehensive decontamination scheme than the other alternatives evaluated, resulting in the greatest degree of overall protection of human health and the environment.

8.2 Compliance with Applicable or Relevant and Appropriate Requirements

The NCP (40 CFR 300.400) identifies two categories of requirements which must be identified by the lead and support agencies for a remedial action, ARARs and TBC criteria. Applicable requirements are those which upon an objective determination specifically address a hazardous substance, pollutant, contaminant, remedial action, location, or other circumstance found at a CERCLA site. Relevant and Appropriate requirements are those which, while not applicable to a specific release, may still address problems or situations sufficiently similar to the circumstances of the release or remedial action contemplated and be well-suited to the site.

In addition to ARARs, the lead and support agencies may, as appropriate, identify other advisories, criteria, or guidance to be considered for a particular release. The TBC category consists of advisories, criteria, or guidance that were developed by EPA, other federal agencies, or states that may be useful in developing CERCLA remedies.

Assuming that facilities are eventually decontaminated and dismantled, each alternative would comply with the ARARs identified in Section 10.2 during the decontamination and dismantlement activities. However, during the period before the final remedial action ROD, Alternatives 1 and 2 would allow the buildings to continue to age, weather, and deteriorate, resulting in the potential for public exposure to airborne contaminants and contaminant releases to air, surface water, and groundwater. Therefore, Alternatives 1 and 2 may not adequately comply with ARARs before the final remedial action ROD.

8.3 Long-Term Effectiveness and Permanence

This criterion addresses the results of a remedial action in terms of the risk remaining at a site after response objectives have been met. For an interim remedial action, no actions are intended to achieve final remediation. For this reason, long-term effectiveness is not meaningful in the context of an interim remedial action. The evaluation of alternatives with

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respect to this criterion will be performed in the OU3 FS to be completed in support of the final remedial action ROD.

8.4 Short-Term Effectiveness

Each alternative would be effective in protecting human health and the environment during remediation through the use of engineering and administrative controls, assuming that decontamination and dismantlement of OU3 facilities would eventually occur for Alternatives 1 and 2. However, a potential exists for increased risks to human health and impacts to the environment associated with the delayed remediation for Alternatives 1 and 2. Accelerating the decontamination and dismantling activities using Alternative 3 would allow remedial action objectives to be achieved sooner and would provide protection against threats earlier than Alternatives 1 or 2. It is estimated that the implementation of Alternative 3 would allow completion of remediation in the year 2012, in comparison to completion under the final remedial action ROD in the year 2016. Figure 8-1 compares schedules for the three alternatives and details the potential for early remediation offered by Alternative 3. Additionally, acceleration of the remediation within the Production Area may allow the advancement of the remediation of OU5 soils and perched groundwater underneath the Production Area.

8.5 Reduction of Toxicity, Mobility, or Volume Through Treatment

Assuming eventual decontamination and dismantlement of facilities independent of which alternative is selected, all three alternatives would result in gross surface decontamination.

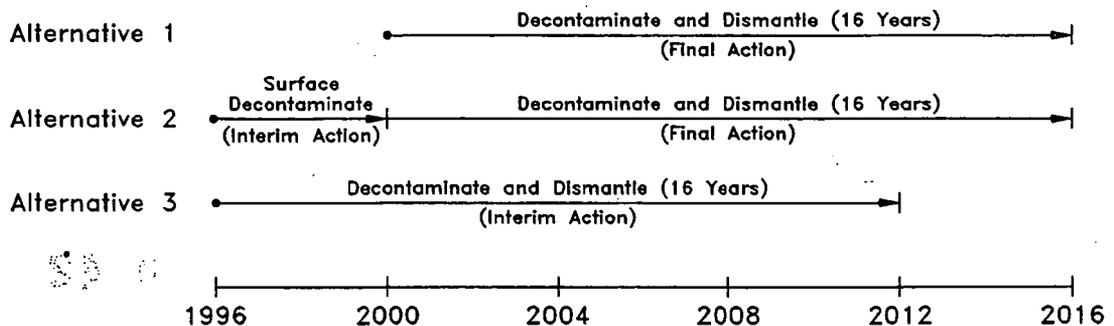


FIGURE 8-1 Comparison of Schedules for Alternatives 1, 2, and 3

Decontamination is a form of physical treatment, which does not fix the contaminants in the host media, but merely transfers them to a secondary medium. Storage or treatment would be used to manage removed contaminants collected in a secondary waste stream, thereby reducing contaminant mobility. Remediation waste residues from the decontamination process would be treated using existing on-site facilities. Because each alternative would eventually result in a reduction of contaminant mobility through decontamination, a comparison of alternatives requires an evaluation of the impacts of timing. In the period before final remediation, Alternative 1 and 2 could potentially result in additional contamination of soil and groundwater, increasing the volume of contaminated material at the site. In addition, under Alternative 2, two surface decontamination efforts would ultimately be required (during interim remedial action and final remedial action) and could result in an increased volume of decontamination waste.

Alternative 3 would reduce the mobility of contaminants by containing and managing removed contaminants in a secondary waste stream. Additionally, Alternative 3 would minimize the potential for an increase in volume of contaminated material due to migration of contaminants during the period before remediation is complete and would minimize the volume of decontamination residues and other remediation wastes.

8.6 Implementability

Alternative 1 would be the easiest to implement because it would require no action in the short-term with all remediation occurring under the final remedial action. However, continuing to use removal actions to proceed with cleanup would require duplication of studies, documents, regulatory reviews, and public comment periods for similar actions.

Alternatives 2 and 3 would use proven and reliable technologies, although the scope for Alternative 3 would be considerably larger than the scope of Alternative 2. In the long term, assuming eventual decontamination and dismantlement of OU3 facilities, implementability issues associated with the action would be similar for all alternatives.

8.7 Cost

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Costs associated with implementing each of the alternatives are presented in Table 8-1. The base cost, as discussed in Section 7, is the 1994 dollar value to implement the alternative itself. The total cost for Alternative 3 includes the costs for performing the alternative plus the costs for site maintenance and monitoring. In addition, the total costs for Alternatives 1 and 2 include the costs for performing the alternative plus the costs of eventual decontamination, dismantlement, and interim site maintenance and monitoring.

A second method of cost comparison presented in Table 8-1 utilizes a present worth analysis instead of comparing costs in 1994 dollars. A present worth analysis calculates the amount of money that would have to be invested today in order to pay for the cleanup over the entire duration of the project. The real discount rate applied in the present worth analysis is based on the October 1992 Office of Management and Budget's recommended value of 4.4 percent for a 20-year project (1996-2016).

The differences in overall costs for the alternatives result from four additional years of costs associated with the maintenance and monitoring of the structures and related facilities while they remain in place (including security forces, utilities, etc.).

TABLE 8-1 OU3 Remediation Cost Comparison (Millions of 1994 Dollars)

Alternative	Base Cost	Total Cost	Present Worth
1 -- No Interim remedial action	\$0	\$2,520	\$1,548
2 -- Surface Decontaminate Only	\$82	\$2,602	\$1,619
3 -- Decontaminate and Dismantle	\$1,076	\$2,164	\$1,476

Assuming eventual decontamination and dismantlement of OU3 facilities, Alternative 3 would result in the lowest overall cost. Alternatives 1 and 2 would be more costly due to costs associated with the continuing operation and maintenance of the site for an additional number of years. Additionally, for Alternative 2, the costs would increase due to the assumption that the decontamination effort would be repeated prior to the dismantlement of the structures under the final remedial action ROD. This effort would likely be required to meet the health

and safety requirements of the remediation activities. It is anticipated that substantial removable contamination will remain in, under, and around equipment, corners, roofs, utilities, and piping following decontamination in Alternative 2.

8.8 State Acceptance

The State of Ohio supports the preferred alternative, decontaminate and dismantle, as identified in the Proposed Plan/Environmental Assessment.

8.9 Community Acceptance

The DOE solicited input from the community on the OU3 Proposed Plan/Environmental Assessment for Interim Remedial Action during the 60-day public comment period. Verbal comments received during the public meeting and written comments from the public comment period indicate community support of the preferred remedial alternative (decontaminate and dismantle) that was identified in the Proposed Plan/Environmental Assessment. Significant issues raised during the public comment period are discussed in the Responsiveness Summary, Appendix A of this document; copies of the written and oral comments are contained in Appendix B.

9.0 SELECTED REMEDY

Based on the evaluation of the alternatives, Alternative 3 (Decontaminate and Dismantle) has been identified as the selected remedy for the interim remedial action for OU3. The selected remedy consists primarily of the removal of gross surface contamination from material in facilities, dismantlement of facilities, and a combination of interim storage for the majority of resulting remediation material/wastes and limited off-site disposal for non-recoverable or non-recyclable remediation wastes until a decision concerning waste disposition is made in the final remedial action ROD for OU3. The interim remedial action is neither inconsistent with nor precludes implementation of final remedial actions for OU3 or the Fernald site.

On the basis of currently available information, the selected remedy provides the best balance of trade-offs among the alternatives with respect to the pertinent evaluation criteria. DOE and

EPA believe the selected remedy will meet the threshold criteria established in the NCP: be protective of human health and the environment and comply with Federal, State, and local ARARs directly associated with the interim remedial action.

The major goal of the interim remedial action is to reduce risks early, improve the storage configuration of contaminated materials, minimize potential contaminant releases to the environment, and contribute to the performance of the final remedial action. This interim remedial action will achieve significant risk reduction early in the process. The final remedy concerning disposition of contaminated materials is not addressed in this interim remedial action ROD because such goals are beyond the limited scope of this action, but will be addressed in the final remedial action ROD for OU3.

Table 9-1 presents summary estimated costs for the selected remedy. These costs are based on preliminary conceptual design information. Some changes may be made to the remedy as a result of the remedial design and construction processes. Such changes reflect modifications resulting from the engineering design process and could modify the cost estimate identified in this table. This estimate summarizes the costs associated with the selected remedy by direct and indirect costs. The direct costs represent the labor and material costs associated with the decontamination, dismantlement, packaging, storage, and transportation of the generated remediation wastes. Indirect costs represent the expense of designing and managing the work including management, engineering, health and safety, sales tax, and contingency costs.

10.0 STATUTORY DETERMINATIONS

The selected remedy must meet the statutory requirements of CERCLA Section 121 (40 USC § 9621). The selected remedy must:

- Be protective of human health and the environment;
- Comply with ARARs;
- Be cost-effective;
- Utilize permanent solutions and alternative treatment technologies or resource recovery technologies to the maximum extent practicable; and

TABLE 9-1 Summary of Cost Estimate for Implementing the Selected Remedy

Itemized Description	Labor Cost (millions)	Materials & Expenses (millions)	Total Cost (millions)
Asbestos Abatement and Insulation Removal	\$24.7	\$17.2	\$41.9
Removal of Machinery, Process Equipment, and Piping	\$24.5		\$24.5
Building Demolition (includes removal of above-grade concrete, structural steel, ductwork, transite and metal paneling, doors, windows, and miscellaneous fixtures; also includes cost of cranes and other major rental equipment)	\$49.3	\$15.5	\$64.8
Grade and Below-Grade Demolition (includes roads, railroads, sidewalks, storage pads, parking lots, below-grade piping, building foundations, etc.)	\$17.4		\$17.4
Central Storage Facility (includes procurement, construction, and replacement of skins)	\$3.2	\$13.5	\$16.7
Debris Packaging and Handling	\$0.4	\$56.2	\$56.6
Direct Cost			\$221.9
Engineering Design and Procurement	\$222.9		\$222.9
Small Tools, Consumables, Minor Rental Equipment, and Temporary Facilities and Utilities	\$3.8	\$41.5	\$45.3
Health and Safety (includes training, personal protective equipment, housekeeping/job site clean-up, safety reports, health physics, environmental monitoring, and emission modeling)	\$13.2	\$154.7	\$167.9
Overhead, Burdens, and Project Management (includes construction, engineering, management, payroll, benefits, subcontractor bond, and office support)	\$171.8	\$48.8	\$220.6
Sales Tax (6%)		\$20.3	\$20.3
Contingency (20%)	\$104.4	\$72.3	\$176.7
Indirect Cost			\$853.7
Total Direct + Indirect Cost			\$1,075.8
Landlord (O&M) Cost			\$1,088.6
Cost of the Selected Remedy (in 1994 dollars)			\$2,164.4
Net Present Value of the Selected Remedy (calculated using a 4.4% real discount rate)			\$1,475.6

Note: All numbers have been rounded to the nearest one hundred thousand dollars. Refer to the "Preliminary Cost Estimate for the Operable Unit 3 Proposed Plan for Interim Remedial Action" (August 1993 draft) and the "Present Worth Analysis for the Operable Unit 3 Proposed Plan for Interim Remedial Action" (October 1993 final) for more detailed information concerning the values presented in this cost summary table.

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Satisfy the preference for treatment that reduces toxicity, mobility, or volume as a principal element.

Sections 10.1 through 10.5 discuss how the interim remedy will meet these statutory requirements. Consistent with Section 121 of CERCLA, Section 10.6 discusses the requirement for U. S. EPA to review the interim remedial action.

10.1 Protection of Human Health and the Environment

The selected interim remedy will be protective of human health and the environment through removal of contaminated structures and facilities and containment of the resulting remediation waste in existing facilities or interim storage facilities until a final decision is reached in the OU3 final remedial action ROD concerning waste disposition. Removal of the structures will eliminate the potential threat of exposure to contaminants in the structures. Short-term threats associated with the selected remedy can be adequately controlled by engineering measures and access restrictions. No adverse impacts are expected from the remedy.

10.2 Compliance with ARARs

The following sections discusses ARARs and Other Requirements that the selected remedy must comply with. The category of Other Requirements represents those laws, rules, or regulations that are not environmental protection standards, but do apply to activities performed at the Fernald site.

10.2.1 Contaminant-, Location-, and Action-Specific Requirements

The selected interim remedy will comply with all ARARs directly associated with the interim remedial action and will be performed in accordance with all pertinent DOE Orders. Listed below are those specific ARARs and TBC criteria that apply to the selected interim remedial action for OU3. The ARARs are grouped according to contaminant-specific, location-specific, and action-specific requirements.

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CONTAMINANT-SPECIFIC REQUIREMENTS

Applicable

Ohio Air Pollution Lead Control Regulations, Ohio Administrative Code, 3745-71-02, Lead Emissions Limits *[Sets the ambient air quality standards for lead, to be applicable throughout the state of Ohio, at a maximum arithmetic mean of 1.5 micrograms per cubic meter during any calendar quarter.]*

Ohio Air Pollution Regulations, Ohio Administrative Code 3745-20-02;03;04 and -05, Demolition and Renovation Procedures for Asbestos Emission Control *[Remove friable asbestos materials from a facility being demolished or renovated before any wrecking or dismantling that would break up materials or preclude access to the materials subsequent to removal. Wet and encase friable materials with a suitable leak-tight container.]*

National Emissions Standard for Hazardous Air Pollutants (40 CFR 61, Subpart M, Sections 145, 149, 150 and 153), **National Emissions Standard for Asbestos** *[Standards for demolition and renovation, asbestos waste disposal.]*

Ohio Water Quality Standards, Ohio Administrative Code (OAC) 3745-1-01, 3745-1-07; Ohio NPDES Permits, OAC 3745-33 *[Sets surface water quality standards for the state of Ohio. Discharges to surface waters must be pretreated to a level which precludes degradation below the minimum standards.]*

Relevant and Appropriate

National Emission Standards for Hazardous Air Pollutants (40 CFR 61), Subpart H, **National Emission Standards for Emissions of Radionuclides Other Than Radon from Department of Energy Facilities** *[Emissions of such radionuclides to the ambient air from DOE facilities shall not exceed those amounts that would cause any member of the public in any year an effective dose equivalent to 10 mrem/yr.]*

Ohio Air Pollution Control Regulations, Ohio Administrative Code, 3745-17-08, Restriction of emission of fugitive dust *[No person shall cause or permit any fugitive dust source to be operated; or any materials to be handled, transported or stored; or a building or its appurtenances or a road to be used, constructed, altered, repaired or demolished without taking or installing reasonably available control measures to prevent fugitive dust from becoming airborne.]*

Safe Drinking Water Act (42 USC 300G; PL 93-523), **National Primary Drinking Water Regulations** (40 CFR 141), Subpart B, Maximum Contaminant Levels (40 CFR 141.11 through .16); Subpart F, Maximum Contaminant Level Goals, (40 CFR 141.50 through .52); Subpart G, **National Revised Primary Drinking Water Regulations** (40 CFR 141.60 through .63); **Ohio Drinking Water Regulations**, Public Water System Primary Contaminant Control, OAC 3745-81 *[Sets maximum contaminant levels (MCLs) and non-zero maximum contaminant level goals (MCLGs) for drinking water. These requirements would apply to the interim remedial action if ground water that was used or potentially used as drinking water was impacted by the decontamination and dismantling activities.]*

To Be Considered

Toxic Substances Control Act, as amended (15 USC 2607-2629; PL 94-469 et seq.), **Polychlorinated Biphenyls (PCBs) Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions** (40 CFR 761), Subpart G, **PCB Spill Cleanup Policy** *[Sets cleanup standards for PCB contaminated materials.]*

Radiation Protection of the Public and the Environment (DOE Order 5400.5, especially Chapter III) [Sets limitations for residual concentrations of radionuclides in air in uncontrolled areas.]	1
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National Primary Drinking Water Regulations, Radionuclides (56 FR 33050, July 18, 1991, Proposed Rule) [Sets MCLs for radionuclides in drinking water.]	3
	4
Federal Water Pollution Control Act, Clean Water Act (33 USC 1251-1376), Water Quality Criteria (40 CFR 122) [Sets limits on the concentration of contaminants in surface water for the protection of human health and aquatic life. Federal water quality criteria are nonenforceable guidelines used by states to set water quality standards for surface water. These criteria may be considered if the decontamination and dismantling activities impact surface waters.]	5
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LOCATION-SPECIFIC REQUIREMENTS

Applicable	11
Protection of Wetlands (Executive Order 11990; 10 CFR 1022, 40 CFR Part 6) [Federal agencies must avoid, to the extent possible, any adverse impacts associated with the destruction or loss of wetlands and the support of new construction in wetlands if a practicable alternative exists.]	12
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Nationwide Permit Program (33 CFR 330) [Nationwide permits are a type of general permit issued by the US Army Corps of Engineers, in particular, under the Clean Water Act section 404.]	16
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Relevant and Appropriate	19
None	20
To Be Considered	21
None	22

ACTION-SPECIFIC REQUIREMENTS

Applicable	24
Noise Control Act, as Amended (42 USC 4901, et seq.); Noise Pollution and Abatement Act (40 USC 7641, et seq.) [The public must be protected from noises that jeopardize health and welfare.]	25
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Solid Waste Disposal Act, as amended (42 USC 6901, et seq.), Solid Wastes (40 CFR 262.11); Ohio Hazardous Waste Management Regulations, Ohio Administrative Code 3745-52-11 [Wastes must be evaluated (characterized) to determine if it is a hazardous waste, either listed or characteristic.]	28
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Solid Waste Disposal Act, as amended (42 USC 6901, et seq.), Solid Wastes (40 CFR 264), Subpart B, General Facility Standards (Ohio Hazardous Waste Management Regulations, Ohio Administrative Code (OAC) 3745-54-10 through -18); Subpart C, Preparedness and Prevention (OAC 3745-54-30 through -37); Subpart D, Contingency Plan and Emergency Procedures (OAC 3745-54-50 through -56); Subpart E, Manifest System, Record keeping and Reporting (OAC 3745-54-70 through -77) *[Establishes general requirements for storage and treatment facility location, design and inspection, waste compatibility determination, emergency contingency plans, preparedness plans, and worker training.]*

Solid Waste Disposal Act, as amended (42 USC 6901, et seq.), Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities (40 CFR 264) Subpart X for miscellaneous units; Ohio Hazardous Waste Management Regulations, Ohio Administrative Code 3745-57 *[Sets environmental performance standards and post closure requirements for miscellaneous units.]*

Solid Waste Disposal Act, as amended (42 USC 6901, et seq.); Solid Wastes (40 CFR 264), Subpart I, Use and Management of Containers (Ohio Hazardous Waste Management Regulations, Ohio Administrative Code (OAC) 3745-55-70); Subpart J, Tank Systems (OAC 3745-55-90); Subpart L, Waste Piles (OAC 3745-56-50 through 3745-56-60) *[Containers used to store hazardous waste must be closed and in good condition. Tank systems must be adequately designed and have sufficient structural strength and compatibility with the wastes to be stored or treated to ensure that it will not collapse, rupture, or fail, including secondary containment. Waste piles must be designed to prevent any migration of wastes out of the pile into adjacent subsurface soil or groundwater or surface water at any time during its active life.]*

Solid Waste Disposal Act, as amended (42 USC 6901, et seq.), Standards for Hazardous Waste Generators (40 CFR 262) and Standards for Hazardous Waste Transporters (40 CFR 263); Ohio Solid Waste Management Regulations, Ohio Administrative Code 3745-52 and -53, respectively *[General requirements for packaging, labelling, and marking hazardous wastes for temporary storage and transportation.]*

Solid Waste Disposal Act, as amended (42 USC 6901, et seq.), Standards for Owners and Operators of Interim Status Hazardous Waste Treatment, Storage and Disposal Facilities (40 CFR 265), Subpart G, Closure and Post-Closure; Ohio Hazardous Waste Management Regulations, Ohio Administrative Code 3745-66 *[Sets general requirements for closure of interim status hazardous waste management units.]*

Solid Waste Disposal Act, as amended (42 USC 6901, et seq.), Containment Buildings, (40 CFR 264), Subpart DD *[Hazardous waste and debris may be placed in units known as containment buildings for the purpose of interim storage or treatment.]*

Relevant and Appropriate

Toxic Substances Control Act, as amended (15 USC 2607 et seq., PL 94-469 et seq.), Polychlorinated Biphenyls (PCBs) Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions (40 CFR 761), Subpart A, General *[Inspection and testing are required for material contaminated with PCBs.]*

Solid Waste Disposal Act, as amended (42 USC 6901, et seq.), Solid Wastes (40 CFR 264) Subpart S), Corrective Action Management Unit *[Allows remediation waste treatment, storage and disposal within a corrective action management unit which can encompass one or more units or areas where contaminants are found.]*

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To Be Considered

Radiation Protection of the Public and the Environment (DOE Order 5400.5) *[Structural debris that is released from DOE facilities for reuse without radiological restrictions shall be decontaminated to specified levels.]*

Radioactive Waste Management (DOE Order 5820.2A, Chapter III) *[Sets external exposure limits to any member of the public, requirements for releases to the atmosphere, and an environmental monitoring program.]*

Radiation Protection of the Public and the Environment (DOE Order 5400.5, Chapter IV, Section 6) *[Sets standards for storage facility for waste containing uranium, thorium, and their decay products.]*

Effluent Control and Monitoring (DOE Order 6430.1A, Section 1324-7) *[Exhaust outlets that may contain fission products shall be provided with two monitoring systems.]*

Solid Waste Disposal Act, as amended (42 USC 6901, et seq.), Solid Waste, (40 CFR 264 subpart S), Corrective Action Rule (proposed at 55 FR 30797) *[Establishes cleanup criteria for RCRA solid waste management units.]*

10.2.2 Other Requirements

In addition to ARARs, there are other requirements from Occupational Safety and Health Administration (OSHA), Department of Transportation (DOT), and DOE Orders with which this interim remedial action must comply. These other requirements include standards which the EPA has determined not to be standards for environmental protection (for example, worker protection and off-site actions) and are therefore not ARARs. EPA classifies worker protection, particularly OSHA's 29 CFR 1910.120, as a requirement rather than an ARAR because: (1) it cannot be waived; and (2) it is not an environmental standard.

This listing of 'other requirements' is not an all inclusive list of requirements. There are additional requirements which could result from off-site actions and would be required under CERCLA Section 121(d)(3). Under this requirement, the CERCLA Off-Site Rule, activities that occur off-site shall be at facilities that are in compliance with RCRA, Toxic Substances Control Act, and other environmental laws and applicable state requirements. Determinations under this rule will be made during the interim remedial action. Listed below are only those other requirements that apply to the selected interim remedial action for OU3.

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Other Requirements

Radiation Protection for Occupational Workers (DOE Order 5480.11, Chapter 9) *[This requirement establishes DOE radiation protection standards to ensure protection of the worker from ionizing radiation. The requirements set forth in this order require the establishment of an ALARA policy, radiation protection standards for internal and external exposure for occupational workers, planned special exposure, radiation protection standards for internal and external exposure to minors and students, radiation protection standards for public entering a controlled area, and various procedural requirements.]*

Radiation Protection Rules, Ohio Administration Code; Chapter 3701-38: General Radiation Protection Standards; Rules 3701-38-13, 3701-38-15 and 3701-38-16 *[Individuals in restricted areas may not be exposed to airborne radioactive material in average concentrations in excess of those listed.]*

Occupational Safety and Health Administration Standards (29 CFR 1910; 1910.1000), Subpart Z, Toxic and Hazardous Substances; 1910.1025, Lead; 1910.1028, Benzene; 1910.1101, Asbestos; 1910.1018, Inorganic arsenic *[Sets worker exposure limits to toxic and hazardous substances and prescribes the methods for determinations of concentrations.]*

Occupational Safety and Health Administration Standards; Occupational Health and Environmental Control (29 CFR 1910; 1910.95), Subpart G, Occupational Noise Exposure *[Sets limits of worker exposure to noises during the performance of their duties.]*

Hazardous Material Transportation Act, as amended (49 USC 1801-1812); Solid Wastes (40 CFR 263), Standards Applicable to Transportation of Hazardous Waste *[Adopts certain DOT standards and requires compliance with the manifest system for hazardous wastes.]*

Hazardous Materials Regulations; Shippers -- General Requirements for Shipments and Packaging (49 CFR 173), Subpart I, Radioactive Materials *[Establishes requirements for the type and strength of various packaging used for the shipment of hazardous and radioactive materials.]*

Occupational Safety and Health Administration Standards for Hazardous Waste Operations and Emergency Response (29 CFR 1910.120) *[Sets the training standards for workers conducting hazardous waste operations and emergency response.]*

10.3 Cost-Effectiveness

OU3 facilities and structures have generally exceeded their design life and no use has been identified for them other than support for remedial activities at the site. In time, the facilities will pose a safety hazard. Therefore, DOE will propose eventual decontamination and dismantlement of the facilities independent of the interim remedial action implemented. By implementing the selected remedy as an interim remedial action, the remediation process is accelerated by nearly four years. The selected interim remedy is cost effective because it reduces costs associated with the continued operation and maintenance of the site; it costs less overall than the other alternatives (coupled with assumed eventual decontamination and dismantlement) and it is proactive toward protection of the public through early risk reduction.

10.4 Utilization of Permanent Solutions and Alternative Treatment Technologies or Resource Recovery Technologies to the Maximum Extent Practicable

Because the selected remedy is an interim remedial action rather than a final remedial action, the selected remedy does not utilize permanent solutions or consider alternative treatment technologies. The selected remedy provides the best balance of trade-offs among the alternatives with respect to the balancing criteria, given the limited scope of the action. It does not satisfy the statutory preference for remedial actions that employ treatment to reduce toxicity, mobility, or volume as a principal element of the action. However, permanent solutions will be utilized in the final remedial action and alternative treatment (or resource recovery) will be utilized to the maximum extent practicable. The final remedial action will satisfy the statutory preference for treatment as a principal element or will provide justification for not meeting the preference. During the interim remedial action, resource recovery through recycling and reuse will be utilized to the maximum extent practicable.

The selected interim remedy best meets the evaluation criteria by addressing risks to human health and the environment, accelerating the remediation process by nearly four years, and reducing overall costs associated with OU3 remediation. DOE and EPA believe the preferred alternative will protect human health and the environment. The community supports the selection of this interim remedy.

10.5 Preference for Treatment as a Principal Element

Through physical treatment of the materials that cause the principal threats for the operable unit (contaminated structural materials), the selected remedy attempts to satisfy the statutory preference for remedial actions that employ treatment to reduce toxicity, mobility, or volume as a principal element of the action. Through decontamination, surface contaminants will be removed and consolidated, thereby reducing their mobility. Secondary liquid waste streams resulting from the decontamination activities will be treated using the site water treatment system. Secondary solid wastes will be containerized and managed. Recycling and reuse will be pursued to the maximum extent practicable. Additionally, the final remedial action for OU3 will meet the statutory preference for treatment as a principal element or will provide justification for not meeting the preference.

10.6 Review of the Interim Remedial Action

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Section 121(c) of CERCLA and the Amended Consent Agreement require that EPA review remedial actions no less than each five (5) years after the installation of the final remedial actions to ensure that human health and the environment are being protected by the remedial actions being implemented. However, because this is an interim remedial action ROD, review of this site and this remedy will continue as DOE develops final remedial alternatives for OU3.

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11.0 COMMITMENT FOR FURTHER ANALYSIS AND SELECTION OF LONG-TERM RESPONSE ACTION

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Consistent with the terms of the Amended Consent Agreement, DOE is currently in the process of performing a RI/FS for OU3. The completion of the OU3 RI/FS will provide the selection of the long-term response action for the operable unit. In accordance with the milestones established in the Amended Consent Agreement, DOE must submit an RI and baseline risk assessment report to EPA by March 13, 1996, and an FS report and proposed plan by August 7, 1996. The proposed draft ROD for the final action is scheduled to be submitted to EPA by April 2, 1997.

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12.0 DOCUMENTATION OF SIGNIFICANT CHANGES

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The Proposed Plan/Environmental Assessment for Interim Remedial Action for OU3 was released for public comment in December 1993. The Proposed Plan/Environmental Assessment identified Alternative 3, Decontaminate and Dismantle, as the preferred alternative. The DOE reviewed all written and verbal comments submitted during the public comment period. Upon review of these comments, suggestions and observations from the public were incorporated into this IROD to further clarify the description of Alternative 3. Portions of Alternative 3 that required clarification were the maximum utilization of existing structures for purposes of interim storage (as a means to avoid construction of the CSF structures) and a guarantee that interim storage would not inadvertently become long-term storage. Additional comments received that did not require clarification, but that DOE is committed to satisfying, are to provide air monitoring information updates to the local public

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regularly and to emphasize the removal of waste from the site as an important step in allowing the interim action to proceed as planned. Finally, from the comments received, it was determined that no significant changes to the interim remedy, as it was originally identified in the Proposed Plan/Environmental Assessment, were necessary.

13.0 REFERENCES

Federal Register (FR), March 7, 1979, *Compliance with FloodPlain/Wetlands Environmental Review Requirements, 10 CFR Part 1022.*

Code of Federal Regulations (CFR), July 1, 1992, *National Oil and Hazardous Substances Pollution Contingency Plan; Final Rule, 40 CFR Part 300.*

State of Ohio vs. United States Department of Energy, et al, 1993, *Stipulated Amendment of Consent Decree Entered December 2, 1988*, as amended on January 22.

U. S. Department of Energy, 1990, *Radiation Protection of the Public and the Environment*, DOE Order 5400.5, Office of Environment, Safety and Health, Washington, D.C.

U. S. Department of Energy, 1993a, *FEMP Waste Information Manual*, prepared by the Fernald Environmental Restoration Management Corporation, Cincinnati, Ohio.

U. S. Department of Energy, 1993b, *Improved Storage of Soil and Debris, Removal Action 17 Work Plan*, prepared by the Fernald Environmental Restoration Management Corporation, Cincinnati, Ohio.

U. S. Department of Energy, 1993c, *Operable Unit 3 Proposed Plan/Environmental Assessment for Interim Remedial Action, Final*, prepared by the Fernald Environmental Restoration Management Corporation, Cincinnati, Ohio.

U. S. Department of Energy, 1993d, *Operable Unit 3 Remedial Investigation and Feasibility Study Work Plan Addendum, Final*, prepared by the Fernald Environmental Restoration Management Corporation, Cincinnati, Ohio.

U. S. Department of Energy, 1993e, *1992 Site Environmental Report*, prepared by the Fernald Environmental Restoration Management Corporation, Cincinnati, Ohio.

U. S. Environmental Protection Agency, 1988, *Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA*, Interim Final.

U. S. Environmental Protection Agency, 1989, *Guidance on Preparing Superfund Decision Documents: The Proposed Plan, The Record of Decision, Explanation of Significant Differences, The Record of Decision Amendment*, Interim Final.

U. S. Environmental Protection Agency, 1991a, *Consent Agreement as Amended under CERCLA Sections 120 and 106(a) in the Matter of: U.S. Department of Energy Feed Materials*

Production Center, Fernald, Ohio, Administrative Docket No. V-W-90-C-052, Region V, Chicago, Illinois, Sept. 18.

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U. S. Environmental Protection Agency, 1991b, Guide to Developing Superfund No Action, Interim Action, and Contingency Remedy RODs, Fact Sheet.

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APPENDIX A

RESPONSIVENESS SUMMARY

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RESPONSIVENESS SUMMARY

A.1 Purpose

As stated in U.S. Environmental Protection Agency (EPA) Guidance on Preparing Superfund Decision Documents (EPA 1989), the responsiveness summary serves three important purposes. First, it provides U.S. Department of Energy (DOE), the lead agency, with information about community preferences regarding both the proposed remedial alternative and general concerns about the site. Second, it demonstrates how public comments were integrated into the decision-making process. Third, it allows DOE to formally respond to public comments.

This responsiveness summary has been prepared pursuant to the terms of the 1991 Amended Consent Agreement between DOE and EPA, as well as relevant Federal laws, regulations, and guidelines, including:

- The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) as amended by the Superfund Amendments and Reauthorization Act, 42 United States Code, Sections 9601, *et. seq.*;
- National Oil and Hazardous Substances Pollution Contingency Plan (NCP), 40 Code of Federal Regulations, Part 300;
- Community Relations in Superfund: A Handbook, January 1992, EPA/540/R-92/009; and
- Guidance on Preparing Superfund Decision Documents: The Proposed Plan, The Record of Decision, Explanation of Significant Differences, The Record of Decision Amendment, Interim Final, July 1989, EPA/540/G-89/007.

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This responsiveness summary allows DOE to demonstrate the public's involvement in the development of the Proposed Plan/Environmental Assessment for Interim Remedial Action and the Record of Decision for Interim Remedial Action, subsequently referred to as the IROD. After public comments and concerns had been formally submitted to DOE, in oral and written form, the comments were then summarized into issue statements with DOE's responses and the comments are attached as Appendix B of this document.

Section A.2 of this responsiveness summary gives an overview of public involvement for the Fernald Environmental Management Project (FEMP). Section A.3 gives an overview of the public's involvement in the development of the interim remedial action concept. Section A.4 discusses the development of the issue statements and presents public concerns and DOE responses. Section A.5 summarizes the responsiveness of DOE to public comments by discussing the effects of public input on this IROD. Section A.6 discusses public comments not directly affecting the proposed action.

A.2 Public Involvement for the FEMP

Environmental issues at Fernald first became public in 1984 when it was reported that nearly 300 pounds of slightly enriched uranium oxide had been released to the atmosphere from the Plant 9 dust-collector system. It was also disclosed during this time that three off-property wells south of Fernald had been contaminated with uranium in 1981. In 1984, a citizen's group called FRESH, Fernald Residents for Environmental Safety and Health, was formed and sued the site for \$300 million; the residents settled for \$78 million.

In 1986, DOE entered into a Federal Facilities Compliance Agreement (FFCA) with EPA. The FFCA provided for a Remedial Investigation/Feasibility Study (RI/FS) followed by remedial action for the site. The RI/FS was initiated to assess the nature and extent of contamination at the site and to recommend cleanup strategies. In 1989, production was suspended. In that same year, Fernald was designated a Superfund site when it was placed on the National Priorities List. The FFCA was superseded in 1990 by a Consent Agreement between DOE and EPA, which established the operable units and cleanup schedules. Further refinement of this agreement occurred in 1991, with the Amended Consent Agreement, which modified the cleanup schedules and the operable unit definitions for the site. In that same year, Fernald

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officially closed as a production facility and its operations were transferred to DOE's Environmental Restoration and Waste Management Division.

When monitoring wells showed elevated levels of uranium in 1989 and 1990, DOE agreed to provide bottled water to homes with uranium levels above 2.7 parts per billion (ppb). As work on the RI/FS continued, DOE completed several near-term activities aimed at reducing the potential for a release of contamination that would endanger public health and the environment. Also in 1990, DOE authorized opening an information repository called the Public Environmental Information Center (PEIC) in the JAMTEK Building, 10845 Hamilton-Cleves Highway, Harrison, Ohio 45030. The administrative record, on which cleanup decisions are based, is also located at the JAMTEK Building; a copy of this administrative record is also maintained at EPA Region 5, Waste Management Division Records Center, 77 West Jackson Boulevard, Chicago, Illinois 60604.

DOE's community relations activities include the following:

- A community assessment (1986);
- A community assessment (June - July 1989);
- A Community Relations Plan (August 1992 version approved October 15, 1992);
- Public reading rooms and administrative record;
- Regular briefings at local township trustee meetings;
- Presentations to the local environmental group, FRESH;
- Community meetings approximately each quarter;
- Workshops and roundtables for interested parties;
- Press releases, fact sheets and a newsletter;
- Public comment periods for decision documents and responsiveness summaries;
- Tours, as requested;
- Annual environmental monitoring reports; and
- The Fernald Citizens Task Force.

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A.3 Public Involvement for Operable Unit 3

In addition to the sitewide community relations activities discussed above, a series of specific public involvement and response activities have been undertaken as part of Operable Unit 3 (OU3) initiatives. DOE proposed an interim remedial action to accelerate a remediation decision for the OU3 structures well ahead of the original schedule. The proposal was also consistent with addressing public concerns about the length of time before full-scale remedial action at the FEMP would begin. The following information illustrates the significant levels of public involvement in the project and the responsiveness of DOE to public concerns about the project since its beginning.

The concept for this interim remedial action was first formally discussed with EPA and Ohio EPA (acting on behalf of the state) on January 13, 1993 and met with favorable response. On February 18, 1993, DOE discussed the schedule, scope, and form of the project with EPA and Ohio EPA (OEPA). Following discussions at this meeting, DOE began detailed development of the project plans.

The local public was informed of DOE's intent to pursue the development of an interim remedial action during a January 12, 1993 public meeting for Removal Action 27, the Engineering Evaluation/Cost Analysis (EE/CA), known as the Management of Contaminated Structures at the FEMP. During that meeting the public expressed to DOE concerns about the lack of progress on large-scale remediation efforts at the site, reinforcing the benefits of the interim remedial action. In addition, notification to the public through the FFCA monthly report from the FEMP began highlighting the activities that were underway for development of the interim remedial action decision documents.

Several of the FEMP's regular events, which support the site's ongoing comprehensive public information program, included discussions of DOE's pursuit of an interim remedial action. During the spring and fall of 1993, updates on the DOE effort were included in several of the monthly meetings held with FRESH. The STEP program (Science, Technology, Environment, and the Public), which involves the public in the remediation decision-making process, held several meetings in September and October of 1993, and included displays and discussions on the interim remedial action being planned.

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During development of the Proposed Plan/Environmental Assessment for Interim Remedial Action, EPA and OEPA provided review comments and project guidance on behalf of the public through the process outlined in the Amended Consent Agreement. Approval of the Proposed Plan/Environmental Assessment was received from EPA and OEPA, on December 3 and 6, 1993, respectively. The public was formally notified of a 30-day public comment period by advertisement in the legal section of three local, general distribution newspapers on December 8, 1993, initiating the formal comment period. Additional public notification by display-type newspaper advertisement and direct mailing distribution to site's mailing list was also undertaken on December 15, 1993. Both the Proposed Plan/Environmental Assessment and a condensed fact sheet were made available to the public in the FEMP administrative record located at the PEIC. Over 1,000 copies of the fact sheet were distributed by direct mailing to local residents, local media, public officials, and other key stakeholders.

To facilitate public involvement in the project, a public meeting was held January 5, 1994, including a presentation session, a question-and-answer session, and a formal comment session. Invitation to the meeting had been provided through the fact sheet mailing, as well as the legal section and display advertisements in the local newspapers. The formal comment session provided an opportunity for the public to contribute oral and written comments. The entire meeting was transcribed by court reporter to provide an official transcript of the meeting. A copy of the transcript has been placed in the administrative record file for OU3 for public review. During that meeting, the public indicated a need for more time to fully evaluate the proposed action and to formulate comments on the plan; therefore, during that meeting, DOE extended the public comment period by 30 days to close on February 8, 1994. Additional advertisements were published in the same local newspapers to inform the public-at-large.

Issues of particular concern voiced during the January 5, 1994 public meeting included material transportation, interim storage facilities, safety from emissions, and National Environmental Policy Act (NEPA) and CERCLA integration in FEMP clean-up decision documents. To provide more information about the regulatory process, in particular the NEPA/CERCLA integration approach for the site and OU3, DOE held a roundtable meeting with the public on January 24, 1994. At the roundtable, issues of public concern were discussed including the Proposed Plan/Environmental Assessment and its relationship to the Operable

Unit 4 (OU4) Environmental Impact Statement (EIS) and future NEPA documents for the remaining operable units.

On February 4, 1994, a meeting was held with the vice president of FRESH to discuss the safety of the planned decontamination and dismantlement actions, using detailed air emissions monitoring data from two decontamination and dismantlement actions underway (Plant 1 Ore Silos and Plant 7).

Public comments were received in written and verbal form during the formal comment portion of the public meeting and in written form through the mail during the 60-day public comment period. DOE received comments from OEPA and the State of Nevada, as well. The following section summarizes the significant issues resulting from the public comment period and provides DOE's responses to these comments.

A.4 Issues Summary

This responsiveness summary focuses on the formal comments submitted during the Public Comment Period. Within this responsiveness summary, oral and written comments (see Appendix B) are categorized into significant issues. For each of these issues, an issue statement has been prepared that addresses the concerns expressed by one or more of the commentors. In many instances, the issue statements are paraphrased from the original comments to succinctly represent the concerns of several commentors. The issues resulting from formal comments have been compared with the questions raised during the question and answer sessions with the public to ensure that all significant issues have been represented by the following issue statements.

For the purpose of developing issue statements, a comment is considered significant if it involves:

- The definition or scope of the preferred alternative,
- Public or state acceptance of the preferred alternative,
- The implementation or impacts of the preferred alternative,

- Conclusions drawn from evaluations or assessments provided in the Proposed Plan/Environmental Assessment,
- Safety of the work performed, or
- The enforceability of the decision reached.

At the end of each issue statement, the specific comment letter(s) or oral comment(s) in which the issue was raised is identified by an alphabetic identifier. Table A-1 provides a cross-reference of the alphabetic identifiers with the commentors. These comments are included in Appendix B and are part of the administrative record for this action. Significant comments that were not considered to be issues have been addressed in Section A.6 with summary explanations.

Issue 1

The definition of the term "interim storage" should be presented within the Record of Decision for Interim Remedial Action. (Comments H, I, J, N, and O)

Response: For the interim remedial action, the definition of the time frame for interim storage is the period from the initiation of the interim action until the decision is reached for the final remedial action. In reality, once the final decision is reached, all materials in storage cannot immediately be removed for treatment or disposition. Some time will be required for the development of the treatment and/or disposal facilities before interim stored materials can be removed. Because the final treatment and disposal option for OU3 is not selected at this time (and won't be until the OU3 final remedial action Record of Decision [ROD], which is due in 1997), an estimate of the time frame for remediation of stored materials cannot be made until after the final remedial action decision. The time frame for removal of these materials and the dismantlement of the interim storage facility will be addressed in the Remedial Design/Remedial Action (RD/RA) Work Plan for the final remedial action.

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TABLE A-1 Written and Oral Comments Received

Letter	Commentor
WRITTEN COMMENTS	
A	Kenneth J. Wurzelbacher, Hamilton, Ohio
B	Carl A. Woycke, Harrison, Ohio
C	Maggie Merritt, Harrison, Ohio
D	Paul Ruttencutter, Hamilton, Ohio
E	Laura Jane Whitesides, Las Vegas, Nevada
F	Lawrence L. Stebbins, Hamilton, Ohio
G	Edwa Yocum, Harrison, Ohio
H	Vicky Dastillung, Vice President of FRESH, Hamilton, Ohio
I	Pam Dunn, Harrison, Ohio
J	Lisa Crawford, President of FRESH, Harrison, Ohio
K	Karen Bell, President Crosby Elementary PTA, Harrison, Ohio
L	Norma Nungester, Harrison, Ohio
M	Holly Schick, State Director of the Ohio Small Business Development Center (SBDC), Columbus, Ohio
N	Unsigned letter submitted by the Fernald Atomic Trades & Labor Council, Ross, Ohio
O	Graham E. Mitchell, Project Manager, Ohio Environmental Protection Agency, Dayton, Ohio
P	Maud Naroll, State Clearinghouse Coordinator, Department of Administration, Carson City, Nevada
ORAL COMMENTS AND ATTACHMENTS	
Q	Oral Comment by Bob Tabor
R	Oral Comment by Jerry Monahan
S	Submitted Attachment to Bob Tabor's Oral Comment
T	Oral Comment by Lisa Crawford
U	Oral Comment by Edwa Yocum
V	Oral Comment by Vicky Dastillung
W	Oral Comment by Robert Richardson
X	Oral Comment by Pam Dunn
Y	Submitted Attachment to Robert Richardson's Oral Comment
Z	Oral Comment by Richard Miller

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Issue 2

The interim action should make the maximum effort to utilize existing storage facilities and areas rather than construct new storage facilities. To support this, DOE should make a commitment to manage and ship existing waste residues to obtain space for interim storage. (Comments I, K, N, and O.)

Response: It is the intent of DOE to construct interim storage structures for storage of the interim remedial action wastes only if necessary. Available storage space within the Production Area will be utilized to the maximum extent practicable. To address the concern over the construction of new storage facilities, the following statements have been added to the IROD in Section 7.3 under the description of Alternative 3 (Decontaminate and Dismantle):

The proposed tension support structures are designed only for temporary storage, and as such cannot be used for long-term storage. The intent of building these facilities is twofold: for use as an interim or temporary storage area for wastes generated from the action if existing storage space is not available and for use as a staging area to support segregation, packaging, and transportation of materials for disposition. To minimize constructing additional interim storage facilities, available storage space within buildings or on the Plant 1 Pad will be utilized for interim storage or staging to the maximum extent practicable. If storage and staging space is obtained within existing facilities it will not be necessary to construct all of the planned interim storage structures.

The final decision for material disposal, whether on-site or off-site, to be decided as part of the OU3 final remedial action ROD in 1997, will determine the location for disposition of OU3 remediation wastes including materials in interim storage and the storage structures. A decision for on-site disposition of remediation wastes would preclude the use of the interim storage structures for permanent storage and would require construction of structure(s) specifically to meet the stringent requirements of permanent disposal. Whether the decision is for on-site or off-site disposal, the interim storage structures will be used only long enough to support staging operations for remediation wastes resulting from dismantlement activities.

Therefore, the time frame for use of the structures is dependent upon the final decision for disposition of the OU3 remediation wastes, which is expected to be made in 1997. Once staging is no longer necessary to support remediation waste dispositioning, the structures will be removed as part of the OU3 interim remedial action and the resulting wastes will be dispositioned as part of the OU3 final remedial action.

DOE recognizes the need to emphasize the removal of existing waste from buildings and pads to the maximum extent practicable to allow use of these structures for storage and staging of wastes generated during the interim remedial action. Under this approach, hazardous remediation wastes resulting from the interim remedial action would be stored in the existing permitted hazardous storage facilities on-site until a decision for their disposition is obtained.

Issue 3

Concern was expressed over placing interim storage facilities on the northeast corner of the site, outside of the Production Area, due to prevailing wind directions from the Southwest and the possibility for airborne emissions reaching off-site residents. Additional concern was expressed over potential leaks from these interim storage facilities and associated migration of contaminants to the Great Miami Aquifer. (Comment L.)

Response: The location of any new interim storage facilities for remediation wastes will be based on several requirements: (1) that it be large enough to house six 40,000 square foot tension support structures; (2) that there be no known chemical contaminants (hazardous, PCB, asbestos, or petroleum products); (3) that construction of the facility would not interfere with other planned uses (other remediation facilities); (4) that it not be in an environmentally sensitive area such as a floodplain, wetland, or habitat for threatened, rare, or endangered species; and (5) that it provide the greatest protection to the Great Miami Aquifer from the interim storage facility. Satisfying these requirements means that any interim storage facility needs to be located in the northeast corner of the site.

Although the prevailing winds tend to rise from the southwest, the risk associated with a storage facility at this location has been estimated to be low and acceptable, as detailed in Appendix E of the Proposed Plan/Environmental Assessment. Further, the facility should be viewed as an improvement to the existing storage configuration of contaminated building materials, since the first step in the interim remedial action will be in-place decontamination of the buildings. Following dry vacuuming, all exposed surfaces within the buildings will be washed with water to dislodge removable surface contamination; this will minimize the contaminants which could become airborne during dismantling of the building. The dismantled materials sent to interim storage would be cleaner than they had been as a standing structure prior to the action. After dismantlement, these construction materials will be placed in boxes or drums, if appropriate, to further contain and prepare the materials for eventual disposition. This process will allow for the safe storage of materials in interim storage.

If additional interim storage facilities are required to be constructed for the improved storage of debris, the interim storage facilities would be designed in accordance with the requirements of Removal No. 17, Improved Storage of Soil and Debris. The interim storage facilities would be designed as structural steel frames with heavy synthetic liner covers that are capable of withstanding severe weather conditions such as heavy snow, strong winds, and rainfall. In addition, rainwater collected at the interim storage facility would be routed to the existing stormwater collection system. By storing the bulk and containerized materials out of weathering conditions on pads and under structures, releases from the materials will be minimized. Therefore, it is not anticipated that water will be released from the interim storage facilities to the underlying till.

As discussed in the response to Issue 2, DOE would attempt to utilize existing facilities to the extent practical for interim storage and staging purposes to avoid constructing all of the proposed structures. The storage of materials in existing or new facilities would be in compliance with NEPA and CERCLA.

Issue 4

What happens if the Nevada Test Site (NTS) does not accept the wastes proposed for disposition at that site? (Comment G.)

Response: The FEMP waste management program has previously secured approval from NTS for the disposition of construction debris. NTS currently receives low level radiological waste shipments from the FEMP on a regular basis. At this time, it is anticipated that the volumes of materials estimated in the Proposed Plan/Environmental Assessment, Appendix G, will be accepted by NTS. Waste acceptance criteria for NTS are known, and non-hazardous radioactive wastes generated by this project are compatible with them. If these materials cannot be disposed of at NTS, onsite interim storage or commercial disposal could be utilized for the remediation wastes generated before the OU3 final remedial action ROD in 1997.

Issue 5

Would off-site traffic be increased as a result of the action and would construction traffic potentially spread contaminants? (Comment K.)

Response: The socioeconomic analysis performed for the Proposed Plan/Environmental Assessment estimates no significant increase in traffic. Any increase to current traffic could be attributable to off-site shipments of material, and this is expected to have minimal impact. As a result of the OU3 interim remedial action, it is anticipated that approximately 650 truck shipments of remediation waste would be shipped off-site for disposal at NTS, prior to the OU3 final remedial action ROD. These shipments would occur over a 3 year period equaling an average of less than 1 truck load per day and would have little impact on existing traffic.

During remediation activities, current procedures will be followed for inspecting vehicles exiting contaminated zones on-site. All exposed surfaces of the vehicle will be surveyed for contamination, and if contamination is detected, the vehicle will be washed to remove it. The procedures for containerization of materials for transportation minimize the possibility for removable contamination to be present on the exterior surfaces of the containers. In addition,

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all containers are surveyed during and after packaging. Therefore, no contamination is expected to be spread off-site as a result of construction or transportation traffic associated with the OU3 remediation wastes.

Issue 6

A commentor expressed that the use of NTS as the selected site for disposition of a limited quantity of materials is not technically in compliance with DOE Orders and NEPA because the OU3 Proposed Plan/ Environmental Assessment does not assess disposal impacts at the NTS and no other NEPA documentation exists supporting this action. (Comment P.)

Response: Low-level radioactive waste management, including receipt of off-site generated radioactive waste, is an ongoing activity at the NTS that was evaluated by the 1977 Site-Wide EIS for the NTS. Present waste management activities are neither new nor significantly changed from past practices. Currently, the volumes of waste being disposed of at NTS, annually, are substantially below the historical annual disposal rates. Low-level waste disposal operations are, therefore, in compliance with NEPA. However, DOE does recognize the need to update the NTS Site-Wide EIS and a Notice of Intent for the preparation of a new EIS should be published shortly.

Under DOE Orders, radiological performance assessments are required for disposal facilities and have been prepared for the NTS. A preliminary review of the Area 5 disposal facility performance assessment was conducted by a peer review panel. Although the panel agreed with NTS representatives that additional technical justification was necessary to finalize the performance assessment, it was generally accepted that the facility would easily meet the radiological performance objectives. The performance assessments for Area 5 and Area 3 are currently being revised and updated. Although these documents have not been finalized, the technical data collected indicates compliance with appropriate radiological criteria.

Issue 7

Environmental monitoring data should be collected as buildings are removed to ensure that engineering controls are effective in controlling potential environmental releases. Data collected for the RI/FS should be incorporated into the design to control any unexpected contaminants during remediation. Lead-based paint has been shown to be dangerous to children and, as such, should be included in any monitoring program. Monitoring data must be made available to the public via roundtable meetings, fact sheets, etc. (Comments F, H, J, K, and O.)

Response: The dismantlement techniques used for the OU3 interim remedial action will include a series of engineering controls and methodologies designed to minimize the release of loose airborne contaminants. Each structure will be subjected to gross decontamination prior to dismantlement, minimizing the potential for airborne contaminants during dismantlement. During decontamination, airflow control and collection of airborne contaminants within the buildings will be performed. RI/FS data is currently being collected for OU3 and will be extensively used to anticipate the contaminants to be encountered during the remedial activities. Some unknown or unexpected contaminants may be encountered during remedial activities, but precautions and procedures will be in place to account for these possibility. All data collected will be factored into the design approach to control unexpected contaminants, to minimize airborne releases, and to tailor the specific decontamination and dismantlement techniques to the contaminants present.

In addition, during decontamination and dismantlement, air monitoring will continue at both the FEMP fence line perimeter and at nearby off-site locations. Air samples for radiological and asbestos contaminants will also be collected at work area perimeters to verify that airborne releases from the job site are maintained at low levels and within limits established for respiratory protection and worker safety. If data collected during the OU3 RI/FS highlight other chemical contaminants of concern, such as lead, monitoring for these contaminants will also be performed.

Because interior decontamination work will utilize the building shell as a containment barrier in combination with directed airflow systems, minimal ambient airborne releases are expected.

Once the exterior building sides and roof have been removed, the materials left in the building would generally be the structural steel frame and concrete floors. Both of these will have been decontaminated leaving little surface contamination that could become airborne during dismantlement. Because of this approach to the building dismantlement and the engineering controls used, ambient airborne releases are expected to be maintained at low levels. If work zone or perimeter fence line airborne concentrations are detected at levels significantly above background, contingency measures will be implemented to reduce contaminant emissions. For example, work would be stopped, exposed areas covered or otherwise controlled, and engineering measures would be increased before restarting work to ensure that nearby members of the workforce and the general public would not be adversely impacted.

Data resulting from the interim remedial action will be made available to the public regularly through placement in the public reading room, roundtable meetings, and updates in fact sheets and monthly reports.

Issue 8

How will the preferred alternative reduce the costs of site remediation when interim storage structures requiring monitoring are constructed? What is the cost of each structure? (Comments G and I.)

Response: The cost of constructing and operating the interim storage structures at the site is very small compared to the overall cost of the decontamination and dismantlement of the OU3 structures. Their cost is also very small when compared to the projected savings from the early implementation of the interim remedial action; therefore, the preferred alternative could have required many more structures and still resulted in significant savings for the overall action. The savings primarily result from the early implementation of the action (with resulting early completion and avoidance of many costs associated with operating the buildings). However, during implementation of the action, every effort will be made to utilize existing facilities, such as the Plant 1 Pad, and avoid construction of additional structures.

Costs for engineering, siting, and construction of the interim storage structures of the size and type proposed for this project (40,000 square foot tension support structures) have been estimated at approximately \$2 million per structure (compared to a cost of about \$2,200 million for the entire interim remedial action and approximately \$350 million savings from early implementation). Costs for operation of storage/staging in new structures would likely be equivalent to costs of operations based in existing structures. Maintenance costs for the new structures would be significantly less than maintenance costs for the aging existing structures. Maintenance costs for the new structures would primarily be associated with the replacement of the fabric covering as needed.

Issue 9

While long-term effectiveness is not required to be considered for an interim action, it is important to the community that this evaluation criterion be considered as much as possible. (Comment H.)

Response: Long-term effectiveness addresses the results of a remedial action in terms of the risk remaining at the site after a final remedial action is implemented. It assesses the level of risk remaining at the site and how well human health and the environment will be protected from treatment residues and untreated materials. The long-term effectiveness of the OU3 remediation will be evaluated within the Feasibility Study for the final remedial action ROD.

For an interim remedial action, such as this, the actions are not intended to represent final remediation. The interim action is taken to reduce potential risks in the short-term while the site undergoes the RI/FS process. For this reason, long-term effectiveness is not addressed in the context of an interim remedial action and this is consistent with the NCP and CERCLA. This evaluation will be performed under the OU3 Feasibility Study to be completed in support of the OU3 final remedial action ROD.

However, long-term effectiveness is important to DOE as well, because this interim remedial action must be consistent with the final remedial action, which will include a formal assessment of the long-term effectiveness. DOE believes that the long-term impacts of

decontaminating and removing the aging and contaminated structures of OU3 are positive because through the action the reusable materials will be recycled, the contaminants and contaminated materials will be consolidated and stored in a more environmentally sound manner, and the physical hazards of the deteriorating structures will be eliminated. Decontamination and dismantlement of the structures would be consistent with the final remedial actions for the operable unit and the FEMP site because the action provides improved storage of contaminants and contaminated materials in the interim, but does not bias the treatment or disposal options available to the final remedial action ROD. Through this form of assessment, DOE believes that long-term effectiveness of the project has been satisfactorily considered.

Issue 10

The actions proposed for the interim remedial action must not bias the final remedial action ROD or eliminate options for final disposition of the remediation wastes. However, the interim remedial action proposed to decontaminate and dismantle the buildings will result in a final decision for how the buildings are to be remediated. The final disposal of the wastes must be evaluated and documented in the final remedial action ROD. (Comments H, K, and N).

Response: The OU3 final remedial action ROD will not be biased by the decision reached for the OU3 interim remedial action because decontamination and dismantlement is expected under all reasonable alternatives for remediation of OU3. The OU3 interim remedial action does represent a decision for removal of the buildings as a source for environmental releases; however, the OU3 final remedial action ROD will document the ultimate treatment and disposition for the OU3 remediation wastes. This final decision will result from consideration of many issues and inputs, including the Fernald Citizen's Task Force.

During the interim action, a limited quantity of material will be dispositioned off-site before the OU3 final remedial action ROD is issued. This waste quantity will be small compared to the overall volumes anticipated for the project and therefore would not produce a bias in the final disposition decision for the materials.

The interim action was proposed because DOE, as the lead agency for the FEMP, has the responsibility to reduce risks to human health and the environment as quickly as possible. Therefore, DOE is implementing an interim remedial action in accordance with CERCLA and the NCP to accelerate the cleanup process within OU3. The interim remedy is the decontamination and dismantlement of contaminated buildings, equipment, and facilities within OU3 which are potential sources of contaminant releases to the environment. This action is reasonable due to: (1) the early opportunity to implement cleanup actions to address the advanced state of facility deterioration and continued potential for contaminant release; (2) the resulting reduced exposures to site workers; and (3) the substantial cost savings to the public from reduced maintenance costs. DOE has identified no future use for the OU3 facilities, and therefore considers the removal of these facilities to be a prudent measure to ensure the protection of human health and the environment. Some facilities can be used to support remediation activities and will be decontaminated and dismantled late in the remediation sequencing, once they are no longer necessary.

The final decision for the disposal of OU3 remediation wastes will occur in the final remedial action ROD. The public will have opportunities to contribute to the evaluation of potential alternatives. Through operable unit Feasibility Study/Proposed Plan Public Comment Periods and ongoing public involvement programs, public involvement in the planning and final decision regarding disposal of remediation wastes is presently underway and will continue throughout the decision-making process.

Issue 11

The OU3 baseline schedule and budget estimate calls for the replacement of the current hourly workforce and is at odds with the Environmental Assessment evaluation of minimal socioeconomic impacts. (Comments K, L, N, Q, R, and Y.)

Response: The OU3 baseline is not inconsistent with the OU3 Proposed Plan/Environmental Assessment. The current planning baseline has anticipated a transition of the onsite work from that of maintenance activities to remediation project activities. This transition is not anticipated to result in fewer jobs for an hourly workforce, but may shift the definition of the

work from primarily managing the existing facilities (landlord activities) and legacy wastes to actively decontaminating and dismantling the site structures. The larger impact occurs for the salaried workforce, which is currently heavily involved with the preliminary and detailed planning of the remediation projects. This work will transition to implementation activities, which could be expected to involve a higher percentage of hourly workers.

The socioeconomic evaluation made in the OU3 Environmental Assessment was based on the following: (1) it is the DOE's position that current on-site employees will be used, where practical, for activities associated with environmental restoration at the Fernald site; and (2) DOE will help with the employee transition from production to restoration through the development of a workforce transition management program that focuses on such issues as skill level classification, training programs, and transition foresight schedules. Based on the understanding that DOE will comply with all labor laws applicable in this case, the evaluation was made that no net increase or decrease in the number of employees would result from the implementation of the interim remedial action. Consequently, minimal socioeconomic impacts would result, as is stated in the OU3 Proposed Plan/Environmental Assessment.

Issue 12

Concern was expressed over the methodology for incorporating NEPA values into a CERCLA document (the Proposed Plan/Environmental Assessment). Additional concern was expressed about the relationship between this Environmental Assessment and the OU4 Environmental Impact Statement. (Comments H, V, and Z.)

Response: It is DOE's policy to integrate the requirements of NEPA and CERCLA, whenever practical. The intent is to incorporate NEPA values in CERCLA documents when similar levels of study are conducted, thereby meeting the requirements of both NEPA and CERCLA. However, it is not DOE's intent to make a statement about the legal applicability of NEPA to CERCLA activities.

As such, the Proposed Plan/Environmental Assessment was developed to meet the requirements of both NEPA and CERCLA. The objective of both laws is to assess the impacts

from the action proposed and the Proposed Plan/Environmental Assessment meets these requirements. To clarify many of the issues involved in the integration of NEPA and CERCLA, a roundtable meeting was held for members of the public on January 24, 1994. At this roundtable, both the Proposed Plan/Environmental Assessment and the EIS for the OU4 remediation were discussed. The OU4 EIS includes a comprehensive assessment of the impacts resulting from the leading remedial alternative for each operable unit. Each subsequent operable unit will perform cumulative assessments updating the EIS.

The OU3 Proposed Plan/Environmental Assessment was not identified in the OU4 lead EIS because this interim remedial action was decided upon after the cumulative impact analysis was formulated for the lead EIS. Before the interim remedial action was conceived, the leading remedial alternative for OU3 was decontamination and dismantlement of OU3 buildings and structures in conjunction with a disposal decision. This alternative, assumed to be implemented after the final remedial action ROD, is addressed in the cumulative impact analysis for the lead EIS. In addition, final disposition of OU3 remediation waste from this interim remedial action will be addressed in the OU3 Feasibility Study/Proposed Plan (also incorporating NEPA values) which will tier from the OU4 lead Environmental Impact Statement and will include the updated cumulative assessment relevant at that time.

Issue 13

A Finding of No Significant Impact (FONSI) should not be developed before public comments are received on the Environmental Assessment. (Comments H, N, and Z.)

Response: Early in the development of the plan for the interim remedial action DOE prepared an Action Description Memorandum (ADM) to determine the appropriate level of NEPA documentation required for the project. Based on the ADM, a decision was made that an Environmental Assessment would be the most appropriate NEPA review for this project. An ADM is not required to be submitted for public comment or published in the Federal Register because it is an internal document prepared and used by DOE to facilitate a determination of the appropriate level of NEPA documentation required for a proposed action. Information provided in response to questions at the January 5, 1994 public meeting was incorrect in

indicating that the ADM had been published in the Federal Register for public comment and that the draft FONSI would be made available for a 30-day public review.

The purpose of an Environmental Assessment is to assess impacts to human health and the environment and to determine whether to prepare an Environmental Impact Statement or issue a FONSI. This decision is made by DOE. For the interim remedial action, comments received on the Proposed Plan also represent comments received on the Environmental Assessment. This responsiveness summary represents the summation of the public comments and concerns and will be used in determining whether a FONSI is appropriate. A draft FONSI may be prepared early by DOE to facilitate the overall timeliness of the NEPA process.

Under certain limited and unusual circumstances, DOE regulations require that a proposed FONSI be issued for public review and comment before DOE makes a final determination on the FONSI (10 CFR 1021.322(d)). The unusual circumstances are: (1) the proposed action is or is closely similar to one which normally requires an Environmental Impact Statement; and (2) the nature of the proposed action is one without precedent. Neither of these circumstances apply for this action. Public hearings are held if there is substantial environmental controversy concerning the proposed action or substantial interest in holding the hearing (40 CFR 1506.6 (c)). As a result, DOE does not plan to hold a public review or hearing on the draft FONSI. However, if DOE does issue a FONSI for this project, it will be available in the public reading room located at the PEIC in the JAMTEK Building, 10845 Hamilton-Cleves Highway, Harrison, Ohio 45030.

Issue 14

Risks associated with the interim action should be assessed before any dismantling of the buildings begin. An accident scenario should be considered for the storage facility. (Comments F and N.)

Response: A risk assessment was performed for the OU3 interim remedial action. This assessment is included in Appendices D, E, F, I and J of the Proposed Plan/Environmental Assessment. This assessment used the EPA recommended CAP88-PC model to determine

atmospheric dispersion of releases and also resultant radiation doses. Risks were calculated based on NCRP 116 ("Limitation of Exposure to Ionizing Radiation", National Council of Radiation Protection and Measurements, April, 1993). A major advantage of the model used is the capability to incorporate variables such as wind speed, mixing heights, deposition patterns, various isotopes, and different exposure routes (inhalation, immersion, external exposure, and ingestion). Doses and associated risks to the public were determined out to a five mile radius, in one mile increments, and in 16 directions from the site. The results show that the risks to off-site residents would be well below regulatory limits and applicable guidance. Estimated risks to off-site receptors are very small.

A credible accident scenario was considered for this action. The accident scenario considered assumes a rupture of the collection filter used during the decontamination activities. This filter would be the collection point for all airborne contaminants from within the building. Release of such collected contaminants over a 24-hour period would involve a greater hazard to off-site residents than an accident scenario involving the storage facility. A credible accident scenario involving the storage facility is anticipated to result in a lower risk because: (1) most surface contaminants that could become airborne and be a threat to off-site residents would have been removed through decontamination prior to storage; (2) most materials after decontamination would be containerized in boxes or drums for storage; and (3) the storage configuration for the materials would be improved by storage in the interim storage facility.

Impacts associated with a tornado striking the site have not been quantified. However, because the material located within the interim storage facility would have been decontaminated and many of the materials and waste streams would be containerized, the potential impacts to human health and the environment of a tornado striking a storage facility are anticipated to be less than those associated with the impact of a tornado striking an existing production facility. Even if a facility had been decontaminated, surface contamination would still exist within and around duct work, process lines, and process equipment. The proposed new storage facilities are designed to comply with current standards and are more than adequate to address normal and severe weather conditions. None of the site structures can be considered tornado-resistant, but the early removal of site structures and the improved storage of materials would be expected to result in a lower risk associated with tornado events.

Asbestos contamination is categorized by friable and non-friable asbestos, which defines the likelihood of asbestos fibers being released. Asbestos containing materials that are friable will be remediated under full enclosures to provide containment and collection of all airborne fibers. For these reasons, asbestos fiber emissions will be contained during remediation. For non-friable asbestos materials, engineering controls such as wetting will be used during remediation to prevent airborne asbestos releases. The site has undergone an extensive characterization program to identify and locate the friable and non-friable asbestos containing materials. For the reasons stated above, asbestos modeling has not been performed on this site and will not be performed.

In summary, the results of the risk assessment for both the normal action and the accident case show that the on-site workers and the off-site residents would be safe during the action. Additionally, during implementation of the action, monitoring will be continuously performed to assure that any releases resulting from the action remain within safe limits. The monitoring data that results from the interim remedial action will be made available to the public on a timely basis through placement in the public reading room, roundtable meetings, and updates in fact sheets and monthly reports.

Issue 15

A concern was expressed that historical risk data that is used in the Proposed Plan/Environmental Assessment is unreliable. Why were airborne concentrations increased by a factor of 10 for the risk assessment? (Comments H and N.)

Response: The historical results presented in the 1987 emissions report risk assessment were not used to estimate the discharges or risks associated with the proposed action because separate calculations were developed. The 1987 report, however, did contain analytical data for samples of airborne contaminants that were accumulated in dust collectors during production operations; this data was used to estimate the ambient airborne concentrations of significant radionuclides within the buildings. The 1993 revised emissions report also relied on these raw analytical data, but utilized a different calculation strategy for determining emissions from the data. The approach used for the 1987 and 1993 reports was not practical

for predicting emissions and risks associated with the proposed decontamination and dismantlement project because it estimated production stack emissions associated with production of uranium products.

In developing the risk assessment for the OU3 interim remedial action, the 1987 report data were used to confirm the radioactive isotopes present and the relative quantities of each for six major production facilities. Air sample data for these six facilities, provided in Appendix B of the Proposed Plan/Environmental Assessment and representing post-production airborne radioactivity measurements, were utilized to estimate levels for each of the 16 isotopes. The risk assessment for the OU3 Proposed Plan/Environmental Assessment utilized the calculated air concentrations for each of the isotopes and also 18 more associated radionuclides with short half-lives.

Typical work zone airborne concentrations that could be expected in these buildings during decontamination and dismantlement activities were multiplied by a factor of 10 and inserted into the CAP88-PC model, in order to conservatively assess airborne concentration levels, which could be created by the activities. Although speculative, increasing the existing airborne concentrations by a factor of ten allowed the assessment to conservatively estimate the potential conditions resulting from decontamination activities within the structures. The process of removing surface contamination through high pressure washing, scabbling, and other techniques is expected to increase airborne contaminant levels in the work areas as evidenced through the Plant 7 dismantling, but not by a factor of 10. Engineering controls will be implemented to collect, control, and maintain airborne levels as low as possible in accordance with the principles of ALARA (as low as reasonably achievable).

Issue 16

DOE, as the lead agency, should not be allowed to prepare risk assessments to estimate impacts from proposed actions due to potential conflicts of interest. An administrative agency may not delegate its public duties to private entities, particularly private entities whose objectivity may be questioned on grounds of conflict of interest. (Comment N.)

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Response: The FEMP performs its own risk assessments because it is specifically required to under the Consent Agreement and the Amended Consent Agreement between the DOE and EPA. Pursuant to Executive Order 12580, DOE is the lead agency for CERCLA response activities at the FEMP. As the lead agency, DOE is required to act in the best interest of the public. EPA's policy is that under certain circumstances the potentially responsible party may conduct risk assessments. In accordance with the Amended Consent Agreement, DOE as the lead agency and its contractors are required to perform the risk assessments to support all RI/FS documentation.

Issue 17

Commentors expressed that in the past, significant deficiencies have been found in the site health and safety plan for work performed at Fernald and that these deficiencies are inconsistent with the assumptions in the Proposed Plan/Environmental Assessment concerning the adequacy of safety standards and practices. Additionally, the Proposed Plan/Environmental Assessment estimates approximately 420 injuries as a result of the action. All work should be performed within the principles of ALARA. (Comments H, L, Q, R, and S).

Response: DOE's responsibility is to ensure that all work complies with DOE Orders, requirements, and health and safety plans. Any deficiencies in the health and safety plan would certainly be addressed and corrected before the interim remedial action work would be performed. DOE will ensure compliance with all health and safety regulations and will follow the principles of ALARA in conducting all activities at the FEMP, including this interim remedial action, to ensure protection of workers and the public.

Since work will only be performed under approved health and safety plans, no health and safety deficiencies have been incorporated into the assumptions of the Proposed Plan risk assessments. Additionally, all training programs associated with the approved health and safety plans to perform the work are assumed to be in place.

The Proposed Plan/Environmental Assessment calculated 420 potential injuries from approximately 5.7 million person-hours of work during the 16 years of the OU3 interim

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remedial action based on statistics from the Department of Labor for annual average injuries associated with heavy construction activities. The decontamination and dismantlement of the OU3 buildings and structures are categorized as heavy construction activities. In contrast to the number of injuries from the Department of Labor statistics, the number of injuries for Fluor Daniel, DOE, and the FEMP have been calculated for the last 6 years from 1988 through 1993. Using the projected personhours required for the 16 years of the OU3 interim remedial action and the statistics based on Fluor Daniel projects for heavy construction activities, an estimated 144 injuries is calculated. For all DOE sites and the FEMP specifically, the numbers are 87 and 81 injuries, respectively. The Proposed Plan/Environmental Assessment statistics calculated for the DOE and FEMP are based on operation statistics, and represent the site work conditions with work occurring under an approved health and safety plan.

Issue 18

The Assistant Secretary of Environmental Restoration and Waste Management, Mr. Thomas Grumbly, must sign the Record of Decision for the Interim Remedial Action with the Fernald Site Manager (Mr. Hamric), the U.S. EPA Director, and the President of FERMCO. Additionally, the Ohio EPA must submit a letter of concurrence with the document. (Comment H and J.)

Response: The Record of Decision for the Interim Remedial Action represents a legal document binding both DOE and EPA to implementation of the selected action. The signatures on the OU3 interim remedial action ROD will consist of the Assistant Secretary for Environmental Restoration and Waste Management (Mr. Grumbly) and the Regional Administrator for the EPA, Region V (Mr. Adamkus) or his designee. This Record of Decision will be an enforceable document for this site once it is signed by DOE and EPA, and as such, no other signatures are required. Additional signers and/or concurrences would not result in additional legal enforceability and potentially could delay the enactment of the action. DOE does anticipate that a concurrence letter will be submitted by the OEPA indicating State support for the OU3 interim remedial action ROD.

Issue 19

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A number of commentors concur with the selected alternative to decontaminate and dismantle the former production area at the Fernald site. The commentors also felt that it is about time that the site starts major field action. (Comments A, B, D, G, K, N, O.)

Response: DOE believes it has acted in the best interests of the public and the environment in proposing this interim remedial action and has been responsive to public concerns about the speed of the cleanup actions at the site. This action was proposed in part to address public concerns over the apparent lack of progress towards full-scale remediation actions similar to that expressed at the January 12, 1993 public meeting for the approved EE/CA, Removal Action 27. In addition, the interim remedial action itself is responsive to the public's request for accelerated remediation of the site. DOE appreciates the support expressed in these letters and looks forward to continuing to work with the nearby community in an open and productive manner as the cleanup proceeds in the most effective and expeditious manner possible.

A.5 Summary of Responsiveness to Public Comments

This section represents a summary of issue responses that have resulted in either a revision to the OU3 interim remedial action ROD, or in significant additional commitments by DOE to the public during the implementation of the interim remedial action.

Revisions/Commitments

- Maximize utilization of existing structures at the site for the purposes of interim storage and staging to avoid construction of new structures solely for these purposes. Compliance with this request hinges on the ability of the site to remove in the near-term significant quantities of waste inventory currently in storage in site structures and to comply with appropriate storage requirements for the remediation wastes.

The interim remedial action ROD provides additional commitment with respect to this issue.

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1 Guarantee that interim storage does not inadvertently become long-term storage. 1
 2 Since many of DOE's own orders and various regulations and legal agreements are in 2
 3 place to assure this cannot happen, it is unlikely that it could become long-term 3
 4 storage; however, this is a concern of the local public and is recognized as a sensitive 4
 5 issue which is addressed in the interim remedial action ROD. 5

6 The interim remedial action ROD provides additional commitment and explanation with 6
 7 respect to this issue. 7

- 8 • Provide the local public with regular air monitoring information updates representing 8
 9 the impacts of ongoing remediation projects. The format of this information transfer 9
 10 would be developed with members of the public to comply with their request. 10

11 Interim remedial action ROD language is not affected by this commitment. 11

- 12 • DOE concurs that continued emphasis on removal of waste from the site is important 12
 13 to allow the interim remedial action to proceed as planned, and is committed to 13
 14 expediting this process. 14

15 Interim remedial action ROD language is not affected by this commitment. 15

- 16 • DOE commits to maximize the public involvement in the environmental restoration 16
 17 process through information in the public reading room and updates in fact sheets and 17
 18 monthly reports. Specific additional public involvement initiatives are also planned 18
 19 during the RD/RA and implementation phases of the project. 19

20 Interim remedial action ROD language is not affected by this commitment. 20

- 21 • The interim remedial action ROD represents the fulfillment of the DOE commitment to 21
 22 expedite the remediation of the FEMP, and specifically OU3. 22

23 Interim remedial action ROD language is not affected by this commitment. 23

A.6 Summary of Comments Not Resulting In Issues

- 5418

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During the public comment period for the proposed interim remedial action, the project received several comments which were either not directly related or relevant to the action, or were of a more minor nature. Response to these unrelated comments can be handled within the regular FEMP programs for public involvement and education. Comments discussed below were not considered to be significant comments with respect to the decision document and are addressed below.

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Commentor E questioned the scope of Alternative 2. The commentor incorrectly assumes the decontamination actions under Alternative 2 and 3 differ in magnitude and scope. The commentor's proposal would generate significant volumes of waste to disposition without removing the OU3 structures. In addition, given the processing activities that occurred at this site for 37 years, it would be virtually impossible to perform a decontamination to the extent that allows an entire facility to be "free released". For this reason, this option was not examined.

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Commentor G indicated that monitoring and maintenance are not mentioned within the scope of the preferred alternative: This specific information was not included in the fact sheet, but is contained in the description of the alternative within the Proposed Plan/Environmental Assessment. Additionally, Removal Action 17, upon which the design and operation of interim storage facilities will be based, requires continuous monitoring and maintenance.

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Commentor H requested that accurate real-time monitoring techniques be developed. Real-time monitoring, which would provide quantitative results on a demand basis, is not currently possible when monitoring for airborne uranium and thorium. Due to current technology limitations, "real-time" monitoring for airborne uranium and thorium will probably not be available in the near future. This is due to the short-lived radon daughters that are present in the ambient air, which interfere with accurate alpha radiation detection.

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Commentor L questioned the reference to the average annual dose to a U.S. individual of 300 millirem per year. The 300 millirem dose per year reference is the dose that an average person living in the United States receives each year from natural background, and is unrelated

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to the interim remedial action. This apparent misunderstanding will be discussed with the
commentor.

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Commentor L expressed concern over scrap metal selections. Materials selected to fill scrap
metal shipments have been selected on the basis of contamination and recovery value. The
specific question has been forwarded for development of a specific answer to the commentor.

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*Commentor N requested information as to the environmental and health risks associated with
the Central Storage Facility if it becomes a long-term or permanent storage facility.* DOE has
stated in responses to this issue that these facilities are ineligible for consideration as long-
term or permanent storage facilities, and therefore no long-term assessment is to be
performed.

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*Commentor N questioned the worker exposure levels estimated in the Proposed Plan/
Environmental Assessment in comparison to the annual average exposure to an individual.*
The annual doses estimated for workers from the interim remedial action represent annual
doses that are in addition to average annual exposures from natural and manmade sources.

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Commentor N questioned the impacts of funding constraints on the interim storage facility.
Budget cuts by Congress could impact the interim action by minimizing the number of
structures and facilities to be remediated before the final remedial action ROD. Therefore, the
impact of budget cuts would reduce the quantity of materials placed within interim storage
and once the final remedial action decision is made, these materials will be dispositioned.

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APPENDIX B

WRITTEN AND ORAL COMMENTS

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APPENDIX B

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WRITTEN AND ORAL COMMENTS

The written comments received during the comment period and verbal comments received during the January 5, 1994 public meeting are contained in this appendix. Each specific comment letter, oral statement, and submitted attachments are referenced by an alphabetic identifier as noted in Table B-1. These comments are a formal part of the Administrative Record for this action.

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TABLE B-1 Written and Oral Comments Received

Letter	Commentor	Page Number	
WRITTEN COMMENTS			
A	Kenneth J. Wurzelbacher, Hamilton, Ohio	B-5	3
B	Carl A. Woycke, Harrison, Ohio	B-6	4
C	Maggie Merritt, Harrison, Ohio	B-7	5
D	Paul Ruttencutter, Hamilton, Ohio	B-8	6
E	Laura Jane Whitesides, Las Vegas, Nevada	B-9	7
F	Lawrence L. Stebbins, Hamilton, Ohio	B-10	8
G	Edwa Yocum, Harrison, Ohio	B-12	9
H	Vicky Dastillung, Vice President of Fernald Residents for Environmental Safety and Health (FRESH), Hamilton, Ohio	B-13	10
I	Pam Dunn, Harrison, Ohio	B-15	11
J	Lisa Crawford, President of FRESH, Harrison, Ohio	B-16	12
K	Karen Bell, President Crosby Elementary PTA, Harrison, Ohio	B-18	13
L	Norma Nungester, Harrison, Ohio	B-20	14
M	Holly Schick, State Director of the Ohio SBDC, Columbus, Ohio	B-22	15
N	Unsigned letter submitted by the Fernald Atomic Trades & Labor Council, Ross, Ohio	B-28	16
O	Graham E. Mitchell, Project Manager, Ohio Environmental Protection Agency, Dayton, Ohio	B-36	17
P	Maud Naroll, State Clearinghouse Coordinator, Department of Administration, Carson City, Nevada	B-38	18
ORAL COMMENTS AND ATTACHMENTS			
Q	Oral Comment by Bob Tabor	B-41	19
R	Oral Comment by Jerry Monahan	B-54	20
S	Submitted Attachment to Bob Tabor's Oral Comment	B-57	21
T	Oral Comment by Vicky Dastillung	B-93	22
U	Oral Comment by Robert Richardson	B-94	23
V	Oral Comment by Pam Dunn	B-94	24
W	Oral Comment by Lisa Crawford	B-94	25
X	Submitted Attachment to Robert Richardson's Oral Comment	B-95	26
Y	Oral Comment by Richard Miller	B-96	27

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Comment A

COMMENT SHEET

DOE is interested in your comments on the cleanup alternatives being considered in the Proposed Plan / Environmental Assessment for Interim Remedial Action of Operable Unit 3, including the preferred alternative to decontaminate and dismantle the former production area at the Fernald site. Please use the space provided below to write your comments, then fold, staple or tape, and mail this form. We must receive your comments on or before the close of the public comment period on January 7, 1994. If you have questions about the comment period, please contact Ken Morgan, the DOE Public Information Officer at Fernald, at (513) 648-3131.

WE NEED A LITTLE MORE ACTION INSTEAD OF WORDS. LET'S GET STARTED AND GET IT CLEANED UP. WE CAN TALK FOREVER AND NEVER GET ANYTHING DONE.

Name: HENRY J WURZELRACHER
Address: [Redacted]
City: [Redacted]
Phone: [Redacted]

MAILING LIST ADDITIONS:

Please add my name to the Fernald Mailing List to receive additional information on the cleanup progress at the Fernald Environmental Management Project:

YES [X] NO []

- 5416

Comment B

COMMENT SHEET

DOE is interested in your comments on the cleanup alternatives being considered in the Proposed Plan / Environmental Assessment for Interim Remedial Action of Operable Unit 3, including the preferred alternative to decontaminate and dismantle the former production area at the Fernald site. Please use the space provided below to write your comments, then fold, staple or tape, and mail this form. We must receive your comments on or before the close of the public comment period on January 7, 1994. If you have questions about the comment period, please contact Ken Morgan, the DOE Public Information Officer at Fernald, at (513) 648-3131.

I concur with the implimentation of the preferred alternative to decontaminate and dismantle the former production area at the Fernald site!

My question is: why has it taken this long before you have first thought of what needs to be done. It has been several years since the job of cleaning the Fernald site has been contracted out. If it has been accomplished to date, what are the personnel of EPA RMC doing every day, besides burning up tax-payers dollars?

By all means start implimenting the planned clean-up of the site, and restore the environment to its pre-1952 condition, before the existence of Big Brothers Thornton, so our residents can go back to living our lives without this recurring threat.

Name: CARL A WOYCKE
Address: [Redacted]
City: [Redacted]
Phone: [Redacted]

MAILING LIST ADDITIONS:

Please add my name to the Fernald Mailing List to receive additional information on the cleanup progress at the Fernald Environmental Management Project:

YES ___ NO ___

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Comment C

COMMENT SHEET

DOE is interested in your comments on the cleanup alternatives being considered in the Proposed Plan / Environmental Assessment for Interim Remedial Action of Operable Unit 3, including the preferred alternative to decontaminate and dismantle the former production area at the Fernald site. Please use the space provided below to write your comments, then fold, staple or tape, and mail this form. We must receive your comments on or before the close of the public comment period on January 7, 1994. If you have questions about the comment period, please contact Ken Morgan, the DOE Public Information Officer at Fernald, at (513) 648-3131.

1-5-94

I'm restating my comment which was made at 00-3 workshop. Why don't we see more of the female gender in more, significant spots. It seems to be a "Good Old, Boy Club" with the mentality that female personnel can only fill clerical positions. Who knows, women might be able to do a better and more reputable job of some clean up jobs. I request some input from Headquarters concerning this issue.

Thank you -

Name: Maggie Merritt
Ad [redacted]
Cit [redacted]
Pho [redacted]

MAILING LIST ADDITIONS:

Please add my name to the Fernald Mailing List to receive additional information on the cleanup progress at the Fernald Environmental Management Project:

I'm on mailing list already YES ___ NO ___

- 5416

Comment D

COMMENT SHEET

DOE is interested in your comments on the cleanup alternatives being considered in the Proposed Plan / Environmental Assessment for Interim Remedial Action of Operable Unit 3, including the preferred alternative to decontaminate and dismantle the former production area at the Fernald site. Please use the space provided below to write your comments, then fold, staple or tape, and mail this form. We must receive your comments on or before the close of the public comment period on January 7, 1994. If you have questions about the comment period, please contact Ken Morgan, the DOE Public Information Officer at Fernald, at (513) 648-3131.

PLEASE FOLLOW OPTION 3 THE PREFERRED ALTERNATE PLAN FOR FERNALD THE ONLY OTHER OPTION WOULD BE ONE THAT PROGRESSES FASTER

THANK YOU

Name:

PAUL RUTENFRITZ

Address:

City:

Phone:

MAILING LIST ADDITIONS:

Please add my name to the Fernald Mailing List to receive additional information on the cleanup progress at the Fernald Environmental Management Project:

YES

NO

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Comment E

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COMMENT SHEET

DOE is interested in your comments on the cleanup alternatives being considered in the Proposed Plan / Environmental Assessment for Interim Remedial Action of Operable Unit 3, including the preferred alternative to decontaminate and dismantle the former production area at the Fernald site. Please use the space provided below to write your comments, then fold, staple or tape, and mail this form. We must receive your comments on or before the close of the public comment period on January 7, 1994. If you have questions about the comment period, please contact Ken Morgan, the DOE Public Information Officer at Fernald, at (513) 648-3131.

Under Alternative 2 -- "Surface Decontamination Only," why wouldn't you perform as though a decontamination effort as would be needed for alternative 3? The example you provided on page 7, list # - wouldn't it be more cost effective to remove all unused equipment and materials for reuse or recycling prior to any decontamination effort for alternative 2?

I agree that Alternative 3 is the best choice - but with the price tag to complete the activities and the uncertainty of available funding, doesn't it make sense to alter Alternative 2 decontamination activities to a higher degree so that the buildings/structures can be "free released"? In the event that funds were insufficient to continue with dismantlement - at least the buildings/structures were "cleaned-up" adequately, the first time effort.

Name: LAURA JANE WHITESIDES
Address: [Redacted]
City: [Redacted]
Phone: [Redacted]

MAILING LIST ADDITIONS:

Please add my name to the Fernald Mailing List to receive additional information on the cleanup progress at the Fernald Environmental Management Project:

YES

NO

- 5416**Comment F**
January 7, 1994

Department of Energy
Attention: Mr. Hamric
Fernald Environmental Management Project
P. O. Box 398705
Cincinnati, Ohio 45239-8705

After reviewing the available information regarding the early dismantling of the production buildings at Fernald, I would like voice to you some of my concerns as a resident who lives downwind of the proposed activity.

The information sent to my home for review stated that the risk to local residents was small. Is that risk known, and how was it calculated. If it is not known, as a resident I would like to ask that any plan for dismantling include air pollution modeling which will show what the risk to my family and neighbors is. I would like to know if there have been any air pollution models run which show the distribution of the contamination that will be caused as a result of these activities. Not screening types models, but specifically, comprehensive models which take into consideration terrain, wind speed, weather conditions, mixing height and the deposition patterns.

Only radiological contamination was mentioned in the literature sent to the public. One of my major concerns is the potential threat of asbestos contamination. Has any modeling specifically been done for this, either screening type or comprehensive.

One of the important considerations for risk based calculations is that Elda Elementary School, the Ross Middle School, and the Ross Senior High School are all in the direction of the prevailing wind pattern.

I feel that the plan to perform early dismantling of the production buildings is not a bad idea. However, I would like to request that risk

Comment F (Cont.)

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based calculations be applied in conjunction with airborne contamination models; and the actual risk quantified, prior to any dismantling of the production buildings.

I make this request in good faith, and trust it will be received as a good faith effort to improve the implementation of the proposed action, and that no effort will be made by any party to affect my employment at the FEMP.

Respectfully yours,



Lawrence L. Stebbins

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Comment G

COMMENT SHEET

DOE is interested in your comments on the cleanup alternatives being considered in the Proposed Plan / Environmental Assessment for Interim Remedial Action of Operable Unit 3, including the preferred alternative to decontaminate and dismantle the former production area at the Fernald site. Please use the space provided below to write your comments, then fold, staple or tape, and mail this form. We must receive your comments on or before the close of the public comment period on January 7, 1994. If you have questions about the comment period, please contact Ken Morgan, the DOE Public Information Officer at Fernald, at (513) 648-3131.

I support with some reservation the alternative
Decontaminate + Dismantle for OU 3.

- 1 - Continuous monitoring and maintenance during
(on site) temporary storage was not included in
the alternative 3 description

- 2 - How will Decontaminate + Dismantle.
Alternative save 4 years of monitoring
Cost if there is to be temporary storage
on site up until year 2012?

- 3 The name or location of the off-site disposal
site to be used for non-recyclable waste
should be in writing of alt. 3
Also what steps to be taken if off site
disposal site refuses Fernald waste.

second choice - alternative with no interim action - period as
user will stated all structures to be FSD under alt
alternatives

Name: David H. Sumner

Address: [Redacted]
City: [Redacted]
Phone: [Redacted]

MAILING LIST ADDITIONS:

Please add my name to the Fernald Mailing List to receive additional information on the cleanup progress at the Fernald Environmental Management Project:

YES NO

111

Comment H

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COMMENTS ON THE OU 3 PROPOSED PLAN / EA FOR THE INTERIM
REMEDIAL ACTION

- * The terms "interim storage" and "temporary storage" can mean very different things to different people. The public needs and deserves a guarantee that the "interim storage" will not be allowed to become "permanent" because of schedule slippage or funding problems. An agreement that spells out how long "interim" may be and how the public can enforce this is sorely needed. It should be signed by top officials who have the power to sign such a guarantee.
- * Be sure that proceeding with this IROD does not bias the ROD or eliminate options, such as off-site vs. on-site storage.
- * Because the annual Environmental Monitoring report is issued so long after the monitoring is actually done, the public deserves to see the environmental monitoring results often, perhaps monthly, so they can be assured that the OU 3 IROD activities are not affecting the community's air, water, or environmental quality.
- * Also, the monitoring done specifically for the IROD should be made easily available to the public. An update at RI/FS meetings would be nice. Fast turnaround on analyzing samples is important so that any problems will be detected promptly enough for mitigating measures to be taken.
- * Developing accurate real-time monitoring should be a DOE priority.
- * On page 1-1 and 1-2 it states that it is DOE policy to incorporate NEPA values into the RI/FS process "wherever practical". Where was it not practical? How does the general public know that all of NEPA was really incorporated in the document if they aren't NEPA experts?
- * How does an EA on an OU relate to the RI/FS EIS being done for the whole site?
- * The terminology used is not exactly up-front and honest with the public. The fact is that the "interim" ROD is actually a "final" ROD for the portion of OU 3 that dealt with the buildings. Once the IROD is chosen and buildings come down, we won't be able to change that. It's final.
- * A FONSI should not be written before the public and regulators have had the opportunity to comment on the EA.

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Comment H (Cont.)

* Throughout the document it says that data on contaminants is still being collected. Is there much potential for surprises to pop up as more data is collected?

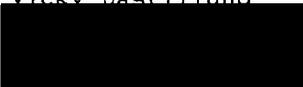
* While long-term effectiveness is not required to be considered for an IROD, it is important to the community that this be considered as much as possible. After all it was a lack of considering the long-term effects of activities at the FEMP that got us in this mess to start with.

* On page 4-10 it states that "airborne concentrations of contaminants, on the average, are assumed to increase by a factor of ten due to remedial actions." Why a factor of 10?

* The principle of ALARA should be emphasized to protect the workers and the community as much as possible.

* The document was refreshingly readable and included many short but informative statements that explained "why" things were being done.

Submitted by
Vicky Dastillung



0103

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Comment I

January 28, 1994

To: Mr. Ken Morgan
Fernald Environmental Management Project
U.S. Department of Energy
Fernald, Ohio

RE: Comments on the Proposed Plan/Environmental Assessment - OU 3

While I agree in principle with the early implementation of remediation of OU 3 I am concerned with interim storage discussed in this document with no future considerations being discussed in regards to the possibility of permanent storage on site of this material. DOE's past history of interim storage is anywhere from one, two, twenty-five to indefinite years. At the meeting Monday January 24, 1994 it was expressed that this storage facility was more-or-less to be a staging facility; this is not the terminology used in the PP/EA document for the Interim Record of Decision, there in a difference! It is therefore requested, strongly and urgently requested, that the Proposed Interim ROD language be modified to state that this temporary storage facility will not be in existence once the remediation of OU 3 is eventually completed and the decommissioning and demolition of this temporary storage facility will be included in the final ROD for OU 3. I am also concerned with the cost associated with the construction of this interim storage facility, that is that a considerable sum of funds will be expected for a structure that will be destroyed in a short period of time. It is unclear if there are other alternatives which may be suitable for the purpose of temporary/interim storage or staging, whichever its intentions; perhaps the use of structures currently of site for short-term while the issue of possible permanent on site storage is addressed and the funds intended for the interim facility applied to this. I am also still waiting for an answer to my question at the January 24, 1994 meeting pertaining to the differences in cost for this temporary facility as presented in two DOE documents, the site development (small) book states \$34 million and volume two the Gold book for OU 3 states \$8 million; I would like clarification of this variance. Again I wish to reiterate the need for wording modification to the OU 3 PP/EA and Interim ROD stating that this temporary storage facility will not be in existence once the remediation of OU 3 is eventually completed and the decommissioning and demolition of this temporary storage facility will be included in the final ROD for OU 3.

Sincerely



Ms. Pam Dunn



cc: F.R.E.S.H, Inc
Mr. John Applegate, chair, Citizens Task Force
file

0104

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Comment J

January 30, 1994

RE: Public Comments O.U.
3 Proposed Plan

Mr. Ken Morgan
Public Relations
U.S. Department of Energy
P.O. Box 398705
Cincinnati, OH 45239-8705

Dear Mr. Morgan:

The purpose of this letter is to provide official comments on the Operable Unit 3 Proposed Plan:

1. The Assistant Secretary of Env. Rest. & Waste Management, Mr. Thomas Grumbly, must sign the final IROD; along with the Fernald Site Manager (Mr. Hamric); U.S. EPA Director, President of FERMCO and also an added letter of concurrence from the Ohio EPA.
2. The public must have a guarantee that waste storage is interim and that the long-term plan for waste is made in a timely manner. Interim must be defined in number of years.
3. There should be continuous monitoring of buildings as they are torn down and the results should be made available in a timely fashion.
4. The public must be involved in the long-term storage and disposal planning phase. They must also be kept apprised of situation on a regular basis. They must be allowed to see the spec's of interim-storage plans and ideas. As each O.U. waste storage issue arises, they must be added together and then work toward the long-term plan for waste storage & disposal.
5. Final permanent storage facility must be that, and not the interim-storage site. One cannot become the other -- they must be totally separate of one another.
6. Any documents relevant to this O.U. that are placed in the Administrative Record or the Reading Room, the community must be notified and afforded the opportunity to comment on them, if appropriate.
7. DOE/FERMCO must show how this will save money and time. They must share their plans for D & D as we move through the process.
8. DOE/FERMCO must look at the long-term waste plan before it can even think about interim-storage. It should be called "interim" until it's deemed "long-term" & "permanent"! They must define how long "interim" really is -- with a deadline or proposed deadline. They must re-evaluate at that time, with

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Comment J (Cont.)

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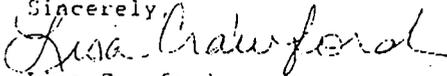
(2)

community input, for the reasons as to why it's longer or there's no long-term plan as of yet.

2. The community must and will be walked through this process. This must be guaranteed. Roundtables should be held as future plans or updates occur.

If you have questions about these comments, please contact me as soon as possible. I look forward to seeing your official comments with regard to these attached comments.

Sincerely



Lisa Crawford
President, F.R.E.S.H., INC.

LC/eac

cc: files

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Comment K

*Crosby Elementary School PTA**8382 New Haven Rd.**Harrison, Ohio 45030**Karen Bell, President*

H-2159

January 4, 1994

Mr. K. L. Morgan
Public Information Officer
DOE Field Office, Fernald
U. S. Department of Energy
P.O. Box 398705
Cincinnati, Ohio 45239-8705

Dear Mr. Morgan:

The members of Crosby Elementary PTA's Executive Board and Crosby Elementary School's staff, which are members of the PTA, have read and discussed the information presented in the "Fact Sheet - Decontamination and Dismantlement of Buildings and Structures at Fernald, dated December 1993" and the "Proposed Plan/Environmental Assessment for Interim Remedial Action of Operable Unit 3".

We are submitting our comments and concerns as an attachment to this letter. We are submitting them after the specified public comment period closing date of January 7, 1994, as we were informed that the public comment period was extended for 30 days as announced at the public meeting held on January 5, 1994.

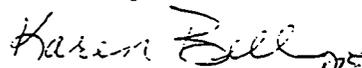
The PTA Board has taken the position that the PTA's responsibilities and actions are based in representing the issues of Parents and Teachers out of concern for our children and students. Because of the proximity of the school to the Fernald Site, Crosby Elementary School's PTA would like to have an informed membership. The PTA would like DOE and FERMCO to maintain community relations with our school membership and their families.

The Board has adopted the following position:

"In general, the Crosby Elementary School PTA supports the clean-up effort at Fernald and the concept the clean-up schedule could be improved."

In adopting this position the Board has tried to maintain sensitivity to the fact that the different alternatives could affect job and financial security of families at our school. This affect could in turn be impacted on the children at our school.

Sincerely,



Crosby Elementary PTA
Karen Bell, President

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Comment K (Cont.)

Attachment:
Crosby Elementary PTA, January 4, 1994

COMMENT SHEET

Would the required information on effects to personal health and environment be available for the areas to be demolished ahead of the site RI/FS. Could any contamination be brought out of the site. If so what additional information does RI/FS provide.

Would limits be established and monitored (air and water) at the work area boundaries. How are limits established, for adults or children. The school generally is not downwind or downstream of Fernald. Many of the students however live in the trailer park south-east of Fernald.

Lead-paint has been shown to be dangerous for children. Do you monitor for lead. Could construction work increase this hazard. Could it be brought off-site.

Would the tearing down of the buildings affect where hazardous material is stored.

Would the start of demolition in any way affect the outcome of the RI/FS as far as continuing to store construction waste on site. The promise has been to return the site to a clean area.

There have been articles in the paper that land in our area has been looked at for storage of waste. Is this true. That seems like a breach of promise.

Would the traffic be increased affecting the school bus routes.

Would construction traffic going off-site be monitored to keep roads clean from mud spreading contamination.

How will it affect the jobs of our parents. Will there be job loss affecting the financial situation of families and students at our school. Will there be stressful home situations created affecting students at school.

Fernald receives national attention. Would the clean-up effort attract any violence to the area. The site has had bomb threats in the past.

Although Fernald is in our school district, it receives no gain of school tax. No additional support appears to come from the construction phase. Could DOE/Fernald financially assist the school in hook-up to the new public water system?

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Comment L

**COMMENTS ON PROPOSED PLAN/
ENVIRONMENTAL ASSESSMENT FOR
INTERIM REMEDIAL ACTION
OF OPERABLE UNIT 3**

Norma J. Nungester
[REDACTED]

February 2, 1994

Page 5-5

5.2 Preferred Alternative

I have serious reservations about storage under tent-like structures of drums of mixed and hazardous waste and do not believe it is stable or sturdy enough for weather conditions. While interim action is not supposed to address long-term, it must be strong enough to withstand weather conditions such as heavy snow, strong winds, and rainfalls. All of which can and do occur in our area.

Since the storage location is northeast of the production area, we could have drums exposed with any emissions travelling via the prevailing winds. If your designed water collection system overflows, as the current water retention system has been known to do, clay or till underneath may serve as a pathway or conduit for contaminants to the south and/or east where there is less or no clay or till to protect the aquifer and through any cracks contained therein.

While the preferred alternative may provide the best alternative of those considered, and it sounds good in theory or in words, what about two or three years hence when these barrels are rusting and leaking mixed and hazardous waste onto and into the ground and the air? The K-65 silos were cracked and leaking within a few years, although they were supposedly designed to last 25 years and were made of concrete. Barrels of thorium were found falling apart and leaking in the mid 1980's after being re-packed in the 1970's.

Is this in compliance with CERCLA? How about NEPA? Are you permitted to store radionuclides over an aquifer? Even for a so-called few years?

Health effects: General Public

Please do not compare it to an average individual in the United States receiving an annual radiation dose of 300 millirem¹. Our natural background in the Fernald area before FEMP was constructed was two parts per million.

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Comment L (Cont.)

Preferred Alternative
Operable Unit 3
Page 2

Norma J. Nungester
February 2, 1994

People have to live with natural background, but some of these are man-made contaminants, and many do not naturally occur in this area (thorium comes to mind). Residents would not have come in contact with them via air, water, or inhalation were it not for the FEMP facility being located in the Fernald area.

If a person has received a dose year after year after year, from naturally occurring and manmade radionuclides, your mere 300 millirem may be the cumulative amount that puts him in the high-risk category.

We, of course, have no way of knowing this since the DOE refused to do or disclaimed health effects studies in the past.

Health effect: Workers

When the buildings are dismantled, or in the process, where are these workers to go? Are they expected to be out of doors for eight hours a day.

The cleaning and dismantling should be done by experienced Fernald Atomic Trades Council workers who have worked with these contaminants throughout the years; not people experienced in only building and dismantling and cleaning of some hazardous contaminants.

The contractors should not be allowed to order workers to open cylinders or drums, as they have done in the recent past, which endanger their lives. The FEMP safety record must improve. The demolishing of good equipment such as fire engines to fill scrap shipments must stop.

¹(Fact Sheet for the proposed Plan/Environmental Assessment for Interim Remedial Action)

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Comment M

COMMENT SHEET

DOE is interested in your comments on the cleanup alternatives being considered in the Proposed Plan / Environmental Assessment for Interim Remedial Action of Operable Unit 3, including the preferred alternative to decontaminate and dismantle the former production area at the Fernald site. Please use the space provided below to write your comments. then fold, staple or tape, and mail this form. We must receive your comments on or before the close of the public comment period on January 7, 1994. If you have questions about the comment period, please contact Kerri Morgan, the DOE Public Information Officer at Fernald, at (513) 648-3131.

Comment attached. January 5, 1994

Multiple horizontal lines for writing comments.

Name: HOLLY SCHICK, STATE DIRECTOR of the OHIO SBDC
Address: OHIO DEPARTMENT OF DEVELOPMENT 77 S. HIGH STREET, 28th FLOOR
City: COLUMBUS State/Zip: OHIO 43266-0101
Phone: (614) 466-2711 or 1-800-848-1300

MAILING LIST ADDITIONS:

Please add my name to the Fernald Mailing List to receive additional information on the cleanup progress at the Fernald Environmental Management Project:

YES x NO

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Comment M (Cont.)



OHIO SMALL BUSINESS DEVELOPMENT CENTERS

Building Excellence in Enterprise

George V. Voinovich
GovernorDonald E. Jakeway
Development Director

TO: Ken Morgan, the DOE Public Information Officer at Fernald

January 5, 1994

This comment is in response to DOE's request for public comments regarding the cleanup process alternatives. The following statement serves as a notification to the U.S. Department of Energy that the Ohio SBDC wishes to participate and assist in the decision-making process for the remediation of the Fernald site.

The Ohio Small Business Development Center (SBDC), under the Ohio Department of Development and in partnership with the Small Business Administration, provides counseling, training and technical support to Ohio small businesses. The Ohio SBDC also has a well established government procurement network program called Ohio Procurement Technical Assistance (OPTA). The OPTA outreach centers provide prime contracting and subcontracting assistance to Ohio businesses through counseling, training and education, and through various advocacy initiatives.

The Ohio SBDC office was contacted by a consortium of Ohio based businesses wanting information on subcontracting opportunities related to the clean up and remediation process at the DOE Fernald Site. Our office has begun to research the potential economic impact associated with this massive remediation project that DOE oversees.

We wish to take the lead in developing a statewide economic strategy for Ohio small businesses as it relates to the potential impacts of the DOE environmental management projects within the state. This initiative would establish a mechanism to coordinate local interests and represent communities to assist in the following process:

- *developing a network to share information and resources, maximizing local and statewide opportunities for the enhancement of:*
 - *public awareness*
 - *small business contracting opportunities*
 - *economic impact*
 - *safety education and training*
 - *public/private alliances*
 - *innovative technology and research*
 - *reuse of property, (etc.)*
 - *environmental restoration*
- *as it relates to opportunities at DOE sites within Ohio*
- *addressing the economic impact of potential contracting opportunities for local businesses and businesses throughout the State of Ohio*
- *addressing the environmental needs of the immediate areas impacted*



An Office of the Ohio Department of Development

77 S. High St., P.O. Box 1001, Columbus, Ohio 43266-0101 (614) 466-2711

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Comment M (Cont.)

page 2

The Ohio SBDC recognizes the tremendous magnitude of the problem facing DOE. Our goal is to create an atmosphere of cooperation, trust and understanding in order to benefit small businesses and local economies within the state and to assist DOE in reaching its remediation goals.

In response to DOE's invitation to comment on the alternatives being considered for the cleanup of Operable Unit 3 at the Fernald Environment Management Project, the Ohio SBDC wishes to provide information to the public on the proposed initiatives and contracting opportunities at the Fernald site. We want to work with the DOE Fernald office on areas applicable to local economic development, technology reinvestment, workforce and community transition as it relates to the phases of remediation process.

The Ohio SBDC intends to work with the DOE site personnel for Operable Unit 3 in a timely manner and in accordance with the cleanup goals and schedule. The Ohio SBDC has been identified by the DOE Office of Facility Transition and Management, EM-60 as the Ohio contact for economic development assistance. (see attachments from a 1994 DOE Handbook)

In summary, we wish to assist in making this remediation project a success that benefits Ohio economically and environmentally; and one that will provide DOE with a national model for future remediation projects. We look forward to hearing from you and developing a partnership of co-determination for achieving success.



Holly I. Schick, State Director
Ohio Small Business Development Center
Ohio Department of Development

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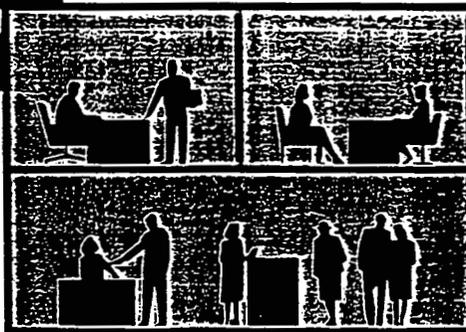
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Comment M (Cont.)



U.S. Department of Energy

Economic Development Funding, Assistance, and Points of Contact



FY 1994 Handbook

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Comment M (Cont.)

PREFACE

This handbook provides information on federal and state economic development funding, assistance, and points of contact. It is for planning purposes only and is not intended as a solicitation.

As with any reference guide, revisions will be necessary as conditions change or as new factors come to light. Of immediate concern to the economic development planner are budget appropriation figures which affect economic development funding levels for FY 1994. These figures should become available by November 1993, and will be included in a revision to this document at that time.

Updates will be provided to assess programs contained in the handbook, identify changes as they occur, and to provide updated information as new contacts, funding, and programs are established.

This document was prepared by Joseph Pastel and Laura Prout of Science Applications International Corporation under contract with the Department of Energy, in consultation with the agencies described in the following text. Copies are distributed free of charge to economic development representatives at DOE sites and surrounding communities upon request.

To obtain additional copies please contact:

Kitty R. Gandee
Office of Facility Transition and Management, EM-60
United States Department of Energy
1000 Independence Ave., SW
Washington, D.C. 20585
(202) 586-3605

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Comment M (Cont.)

APPENDIX A: Federal and State Economic Development Contacts

for DOE sites in:

California

Colorado

Florida

Idaho

Illinois

Missouri

Nevada

New Mexico

Ohio

South Carolina

Tennessee

Washington

EDA Regional Offices	JTPA Liaison	SBA Regional Offices	State SBD/C
SEATTLE REGIONAL OFFICE Jackson Federal Bldg 915 Second Ave. Suite 1865 Seattle, WA 98174 (206) 353-0586	Mr. Thomas Hoop Economic Development Department P.O. Box 826860 Sacramento, CA 94230 916) 854-8210	REGION IX 71 Stevenson St. 20th Floor San Francisco, CA 94105-2839 (415) 744-8402	Mr. Barbara Hayes California Trade and Commerce Agency 801 K Street, Suite 1700 Sacramento, California 95814 (916) 324-8086
DENVER REGIONAL OFFICE 1244 Speer Boulevard Room 670 Denver, CO 80204 (303) 866-4714	Mr. Leslie B. Pearson Governor's Job Training Office Suite 850 720 South Colorado Boulevard Denver, CO 80222 (303) 733-8222	REGION VII 909 18th St. Suite 701 Denver, CO 80202 (303) 284-7188	Mr. Phil Garcia Office of Business Development 1825 Broadway, Suite 1710 Denver, Colorado 80202 (303) 862-8888
ATLANTA REGIONAL OFFICE 611 West Peachtree St. Suite 1820 Atlanta, GA 30308-3510 (404) 730-3002	Ms. Shirley Gessner Department of Labor and Employment Security 2012 Capital Circle Suite 200 Nathan Building Tallahassee, FL 32399 (904) 822-7021	REGION IV 1375 Peachtree St. N.E. Fifth Floor Atlanta, GA 30367-4102 (404)347-2797	Mr. Jerry Gossage University of West Florida 19 West Garden Street Pensacola, Florida 32501 (904) 444-2080
SEATTLE REGIONAL OFFICE Jackson Federal Bldg 915 Second Ave. Suite 1865 Seattle, WA 98174	Ms. Corinne Ryan Idaho Department of Employment 317 Mason Street Boise, ID 83725-0001 (208) 334-6110	REGION X 2815 Fourth Ave. Room 440 Seattle, WA 98121 (206) 353-5676	Mr. Ronald R. Hall Idaho State University College of Business 1810 University Drive Boise, Idaho 83725 (208) 385-1640, 1-800-825-3815
CHICAGO REGIONAL OFFICE 111 North Canal Suite 855 Chicago, IL 60606-7204 (312) 353-7706	Mr. William D. Dorso JTPA Programs Division Department of Commerce and Community Affairs 620 East Adams 6th Floor Springfield, IL 62701 (217) 785-8006	REGION V 300 S. Riverside Plaza Suite 1875 S Chicago, IL 60606-8917 (312) 353-5000	Mr. Jeff Mitchell Dept. of Commerce & Community Affairs 620 East Adams Street, 6th Floor Springfield, Illinois 62701 (217) 324-6856
DENVER REGIONAL OFFICE 1244 Speer Boulevard Room 670 Denver, CO 80204 (303) 866-4714	Mr. Larry Finney Division of Job Development and Training Department of Economic Development 221 Main Drive Joliet, IL, IL 61708 (312) 731-7798	REGION VI 911 Walnut St. 3th Floor Kansas City, MO 64108 (816) 425-3606	Mr. Tom Hall Western State University 1845 Fairmont Wheaton, Kansas 67220-0146 (316) 886-1383
SEATTLE REGIONAL OFFICE Jackson Federal Bldg 915 Second Ave. Suite 1865 Seattle, WA 98174 (206) 353-0586	Ms. Barbara Winters Jobs/Job Training Office Capital Complex 400 West King Canton City, NY 83710 (702) 887-4310	REGION IX 71 Stevenson St. 20th Floor San Francisco, CA 94105-2839 (415) 744-8402	Mr. Sam Mason University of Nevada, Reno College of Business Administration, Room 411 Reno, Nevada 89567-0100 (702) 784-1717
AUSTIN REGIONAL OFFICE 611 East Sixth St. Austin, TX 78701 (512) 482-3461	Mr. Pamela G. Bacz New Mexico Department of Labor P.O. Box 1928 Albuquerque, NM 87103 (505) 841-8408	REGION VI 8225 10th George Drive Building C Dallas, TX 75225-3291 (214) 767-7833	Mr. Randy Gossan Santa Fe Community College P.O. Box 4187 Santa Fe, New Mexico 87502-4187 (505) 436-1382
CHICAGO REGIONAL OFFICE 111 North Canal Suite 855 Chicago, IL 60606-7204 (312) 353-7706	Ms. Evelyn Samoshitz Job Training Partnership-Ohio Division Bureau of Employment Services 145 South First Street 4th Floor Columbus, OH 43215 (614) 466-3817	REGION V 300 S. Riverside Plaza Suite 1875 S Chicago, IL 60606-8917 (312) 353-5000	Ms. Holly L. Scholt Department of Development 77 South High Street Columbus, Ohio 43228-1001 (614) 466-2711
ATLANTA REGIONAL OFFICE 611 West Peachtree St. Suite 1820 Atlanta, GA 30308-3510 (404) 730-3002	Dr. Robert E. Dand South Carolina Employment Security Commission P.O. Box 985 Columbia, SC 29202 (803) 737-2617	REGION IV 1375 Peachtree St. N.E. Fifth Floor Atlanta, GA 30367-4102 (404)347-2797	Mr. JODD LLOYD University of South Carolina College of Business Administration 1710 College Street Columbia, South Carolina 29208 (803) 777-4507
ATLANTA REGIONAL OFFICE 611 West Peachtree St. Suite 1820 Atlanta, GA 30308-3510 (404) 730-3002	Mr. James R. Wyke Tennessee Department of Labor 501 Union Building Nashville, TN 37219 (615) 741-2582	REGION IV 1375 Peachtree St. N.E. Fifth Floor Atlanta, GA 30367-4102 (404)347-2797	Dr. Kenneth A. Burns Memphis State University South Campus (Gossett Plaza) Building #1 Memphis, Tennessee 38152 (901) 678-2500
SEATTLE REGIONAL OFFICE Jackson Federal Bldg 915 Second Ave. Suite 1865 Seattle, WA 98174 (206) 353-0586	Mr. Larry A. Mao Training and Employment Assistance Division Employment Security Department 805 Washington Drive, S.E., MS HG 11 Olympia, WA 98504-6311 (206) 436-6811	REGION X 2815 Fourth Ave. Room 440 Seattle, WA 98121 (206) 353-5676	Mr. Lynn M. Anderson Washington State University College of Business and Economics 441 Todd Hall Pullman, Washington 99164-6740 (509) 335-1576

- 5416
Comment N

COMMENT SHEET

DOE is interested in your comments on the cleanup alternatives being considered in the *Proposed Plan / Environmental Assessment for Interim Remedial Action* of Operable Unit 3, including the preferred alternative to decontaminate and dismantle the former production area at the Fernald site. Please use the space provided below to write your comments, then fold, staple or tape, and mail this form. We must receive your comments on or before the close of the public comment period on January 7, 1994. If you have questions about the comment period, please contact Ken Morgan, the DOE Public Information Officer at Fernald, at (513) 648-3131.

Comments are attached

Name: FAST LLC
Address: Box 126
City: ROSS State/Zip: OH 45061
Phone: _____

MAILING LIST ADDITIONS:

Please add my name to the Fernald Mailing List to receive additional information on the cleanup progress at the Fernald Environmental Management Project:

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YES

NO

0110

Comment N (Cont.)

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Fernald Atomic Trades & Labor Council

AFL - CIO Metal Trades Affiliated

P.O. Box 126, Ross, Ohio 45061



**Comments of the Fernald Atomic Trades and Labor Council (FAT&LC)
February 7, 1994
Concerning the
Environmental Assessment (EA) for Operable Unit 3 (OU-3)
Fernald Environmental Management Project (FEMP)
U.S. Department of Energy (DOE)
Fernald, Ohio**

INTRODUCTORY COMMENTS ON OPERABLE UNIT 3 ENVIRONMENTAL ASSESSMENT

We support the DOE's effort to obtain the earliest, least cost and safest cleanup of the Fernald site. We support this interim action for OU 3 as well. However, we have reservations about whether the Environmental Assessment was properly scoped, whether risks have been properly assessed, and whether certain mitigating measures have been taken to reduce avoidable risk. Thus, our comments are intended to strengthen the EA and mitigate certain risks which we believe must be addressed in order for DOE to permissibly issue a Finding of No Significant Impact (FONSI). If the risks are properly assessed, and the mitigating actions we request are undertaken, a full EIS for this interim action will not be required.

These comments are also intended to supplement the verbal comments of Robert Tabor, speaking on behalf of FAT&LC, that were given at the public hearing on January 5, 1994 at the Plantation in Harrison, Ohio. See transcript of hearing, pages 122-136.

FAT&LC appreciates DOE's 30 day extension of the comment period. This added time provided a chance for a Roundtable with FRESH and FAT&LC to address ongoing concerns regarding NEPA compliance.

1. HAS DOE TAKEN A "HARD LOOK" AT THE "WORST CASE". IS THE RISK ASSESSMENT PREPARED BY A PARTY WITHOUT ANY POSSIBLE CONFLICT OF INTEREST. AND IF NOT, WHAT MEASURES HAVE BEEN TAKEN TO MITIGATE THESE RISKS?

The EA lacks the required "worst case" analysis resulting from a catastrophic failure or release from the central storage facility (CSF). The CSF is a tent which covers radioactive and other contaminated debris, waste and rubble from the demolition and decontamination of up to 200 buildings in OU 3. A "worst case" scenario is required when

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Comment N (Cont.)

Comments of FAT&LC on EA for OU-3

Page 2

preparing an EIS, pursuant to 40 CFR 1502.22. A worst case analysis would require a probability analysis, a dispersion model and an environmental impact analysis. One credible catastrophic failure is a hurricane or tornado tearing the fabric roof off of the CSF and spreading contaminated material around.

The ostensible "worst case" postulated in the EA was a ruptured High Efficiency Particulate Air filter blowing matter for 24 hours. Obviously, if a filter ruptured, the blower motor switch would be turned off! To suggest that a ruptured filter is the "worst case" scenario trivializes the intent of CEQ regulation under NEPA to examine the impacts of a worst case scenario, especially where the record contains testimony that a tornado (or comparable event) has hit near the OU-3 once before (see transcript page 51).

To the extent that there are gaps in relevant information, or scientific uncertainty, as may be the case here, CEQ regulations require the agency to "always make clear that such information is lacking or that uncertainty exists."

The EA document fails to identify these risks or the uncertainty associated with them.

FERMCO and its subcontractors, acting as agents of the Responsible Party, the U.S. Department of Energy, apparently prepared the risk assessment in the EA. According to FERMCO, the DOE and the two EPAs (US EPA and Ohio EPA) reviewed the Risk Assessments in the EA. The assumptions contained in the Risk Assessment were justified at the January 5, 1994 hearing by DOE's contractor, FERMCO, rather than DOE. An administrative agency may not delegate its public duties to private entities, particularly private entities whose objectivity may be questioned on grounds of conflict of interest. Sierra Club v Sigler, 695 F2d 957 (1983).

At the January 5, 1994 DOE public hearing, the following exchange between FERMCO and a citizen illustrates this point:

Citizen: Would it make sense to solicit comment on that from people here who are concerned about whether or not the document (EA) is properly scoped at this time?

FERMCO official: We are soliciting comments.

Citizen: No you're not, the DOE is soliciting comments.
 (Transcript at 95)

Has DOE taken a hard look at the environmental consequences from a worst case scenario from the temporary storage of radioactive debris in a fabric covered CSF compared with the other alternatives? Has DOE taken a hard look at mitigating this risk?

Comment N (Cont.)

Comments of FAT&LC on EA for OU-3

Page 3

Cost effective alternatives may be readily available, but not yet considered. Has DOE made a determination that this risk is inconsequential or so unlikely that it is not worthy of serious consideration?

The standard of scrutiny for reviewing this EA is higher when DOE uses a contractor to prepare documents for the agency, and when the contractor is speaking on behalf of the agency, as it did at the public hearing on January 5, 1994. Indeed, a review of this EA leaves the distinct impression that most, if not all of the EA was performed by the contractor working for DOE. While ostensibly the DOE was supervising, the shortage of DOE personnel leads us to question the thoroughness of DOE's review. We realize that the preparation of the EA was a mammoth task and that DOE rules permit the participation of contractors. However, the line between governmental officials making policy decisions, and that of an interested contractor engaging in inherently governmental activity has been blurred.

2. HISTORICAL RISK DATA THAT IS USED IN THE EA IS UNRELIABLE

The historical estimate of radionuclide discharges from the FEMP are based on 1987 Westinghouse data (referenced on page D-20 of the EA) that appear to grossly understate the true quantity of discharges. New emissions data was released in 1993. This EA must be updated to reflect the 1993 data on the quantity of uranium and other radionuclide releases when looking at past risks, as well as data collected in connection with the dose reconstruction project.

The annual and total mrem exposures (for skin, whole, eye, extremity and internal) are not detailed in the EA since environmental restoration work began (1989-1993).

The EA postulates that the average external exposures to workers at the FEMP was 166 mrem between 1986-87 when operations will still underway. It further states that the probability of an average exposure as high as 166 mrem/yr is low. FERMCO's own RAD I training manual notes that the US annual average radiation dose is 180 mrem per person. Thus, this risk profile from d&d activity assumes that worker exposure will be below the background levels for an average person not employed at the site.

Who has critically examined this assumption within DOE? If DOE agrees with that this level is achievable, will it lower the DOE and FERMCO administrative control levels at the FEMP correspondingly? If not, why not?

3. THERE IS NO ASSURANCE THAT THE CSF WILL NOT BY DEFAULT BECOME A LONG TERM STORAGE FACILITY. THUS SAFEGUARDS ARE REQUIRED TO ASSURE THAT THE "INTERIM ACTION" IS NOT A "FINAL ACTION"

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Comment N (Cont.)

Comments of FAT&LC on EA for OU-3

Page 4

The EA relies on the assumption that a Central Storage facility will be constructed to cover radioactive and contaminated soils, wastes and debris. These 30-40,000 square foot structures are effectively little more than a fabric covered tent. The EA also relies on the assumption that the CSF is temporary and that permanent disposal will take place after a final RI/FS and ROD is completed.

There are three major risks associated with the CSF that are not identified in Appendix E of the EA, and should have been scoped before the EA was drafted. They are:

1. The temporary (CSF) facility will, by default, become a longer term storage facility (i.e. wastes will continue to be stored after the point that the ROD is finalized in late FY 97) because of budget shortfalls, alternative waste disposal siting limitations, or technology shortfalls;
2. The CSF will become a permanent storage facility (due to budget or other reasons) i.e. final action will not be in full implementation by FY 2000 (it is noted that the design life of the CSF cover is 10 years and can be "repaired or replaced if needed to extend life); and
3. The CSF is subject to catastrophic failure due to tornado, hurricane or other event which will cause the waste and debris to be spread over the site and into the neighboring areas off site. This risk is not considered in Appendix E.4, and was not treated seriously at the January 5, 1994 hearing by FERMCO personnel. The risk from a tornado/hurricane should be compared with the risk of storing the debris in (decontaminated/locked down) standing buildings. The risk should also be assessed in terms of the likelihood and severity of such events that could spread the loose debris. While the likelihood of a tornado hitting the CSF may be low over 1-3 year period, how will the likelihood increase over 10-15 year period.

With respect to the three scenarios outlined above, the following questions emerge and deserve a clear reply:

1. Please define with precision the time frame covered by the word "interim".
2. By law or rule, what is the longest time period an action can be termed interim? 10 CFR 1021.104 does not delimit the time frame. If this term is not defined, will DOE stipulate to a maximum time period beyond which the action will no longer remain interim?
3. How can DOE and EPA guarantee that the interim action won't become permanent by default?

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Comment N (Cont.)

Comments of FAT&LC on EA for OU-3

Page 5

4. Budget crunches are very real. Has the possibility that funding will not be made available by Congress been factored in when deciding whether to rely on a fabric covered storage area instead of a more durable alternative? If so, how?

5. What are the environmental and health risks if the CSF becomes a long term or permanent storage facility? How are these risks mitigated in the EA?

6. Since there is no permanent storage facility, and a fabric tent will be used to cover the loose contaminated rubble, is the material safer in its current form from a catastrophic weather event (ie in a decontaminate and locked down building), than if it is turned into rubble?

7. Will contaminated rubble ultimately be put into a solidified form, and if so, does it make sense to begin treatment and solidification sooner to mitigate against the risks inherent in having loose rubble stored under a fabric tent?

4. DOE APPARENTLY PREJUDGED THE ADEQUACY OF THE EA TO SUPPORT A FONSI BEFORE EVER SEEKING PUBLIC COMMENT

Under questioning at the January 5, 1994 hearing in Harrison, Ohio, FERMCO revealed that DOE intends to issue a FONSI. Before the EA was ever opened to public review and comment on December 8, 1993, a draft FONSI had already been submitted dated November, 1993.

By drafting a FONSI in November, DOE has at least tentatively determined that a FONSI was warranted without even holding a public hearing on the EA. Thus, one is left to wonder whether the hearing process little more than a formality. Why else write a draft-FONSI before the EA has even been announced and released?

Why didn't DOE first announce its intent to issue a FONSI at the same time it released the EA for public comment on December 8, 1993?

In response to concerns that only an EA (and not a full EIS) would be done for the OU-3 Interim Action, Dave Kozlowski of DOE stated at the January 5 hearing:

"in April (1993) an action description memorandum was written for this project, which indicated that an environmental assessment would most likely be documentation that would be needed from NEPA, and that was submitted for public comment and it appeared in the Federal Register.
.."
(transcript page 93)

An inquiry to DOE's NEPA unit in headquarters (EH-25) informs us that there was no *Federal Register* notice on this NEPA action. The only related document DOE

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Comment N (Cont.)

Comments of FAT&LC on EA for OU-3

Page 6

could produce was a letter to the state of Ohio informing them of the intent to produce a combined EA for OU-3 and the CSF. Perhaps Mr. Kozlowski misspoke, in which case he should clarify this point of concern for the record. Was there a *Federal Register* notice, was there public comment on this notice, and why was the public not notified of an intent to perform an EA and not an EIS?

The transcript will also reveal that at no time did FAT&LC or Richard Miller of the Oil, Chemical & Atomic Workers Union ever call for an EIS instead of an EA for OU-3's interim action.

5. THE OU-3 BASELINE SUBMITTED BY FERMC0 TO DOE CALLS FOR THE REPLACEMENT OF THE CURRENT HOURLY WORKFORCE AND IS AT ODDS WITH THE EA'S ASSUMPTION OF MINIMAL SOCIOECONOMIC IMPACTS

The EA for OU-3 states that there will be "no change in the number of employees," and suggests there will be minimal socioeconomic impact from implementing the Recommended Alternative (#3). This conclusion is at odds with another FERMC0 document, the FEMP Baseline. FERMC0's current Baseline for the OU-3 calls for cutting the OU-3 hourly workforce from 170 down to 23 between FY 94-97 (SR-009, see section 1.1.1.3, spreadsheet dated December 6, 1993). Apparently, the existing hourly workforce will be replaced by subcontract workers. At the January 5, 1994 DOE hearing, the question of socioeconomic impact was raised, and the record reflects comments by a FERMC0 official agreeing that a different hourly workforce may be used to perform OU-3 activities.

FAT&LC has subsequently been informed by DOE that the Baseline is not a decisional document, and efforts are underway to implement the workforce continuity goals of Section 3161 of the FY 93 Defense Authorization Act, 42 USC 7274h. Until these workforce issues are resolved, however, the Environmental Assessment, as explained at the January 5 hearing, grossly understates the socioeconomic impacts. Such impacts and any accompanying uncertainties should be identified in the EA.

6. A FINDING OF NO SIGNIFICANT IMPACT (FONSI) REQUIRES THE FINDING THAT THE PROPOSED ACTION WILL NOT HAVE A SIGNIFICANT EFFECT ON THE HUMAN ENVIRONMENT. DOES THE EA MEET THIS TEST OR IS FURTHER MITIGATION REQUIRED?

If DOE issues a FONSI, 10 CFR 1021.322(2) requires that a FONSI must contain:

Any commitments to mitigation that are essential to render the impacts of the proposed action not significant, beyond those mitigation measures that are integral elements of the proposed action, and a reference to the Mitigation Action Plan. . .

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Comment N (Cont.)

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Comments of FAT&LC on EA for OU-3

Page 7

The EA and the Draft FONSI do not contain any means to mitigate the risks inherent in using a fabric covered structure to cover loose contaminated debris and waste from (1) becoming a long term storage facility; (2) becoming a permanent storage facility; or (3) catastrophic failure due to a tornado or hurricane.

The EA does not explore the conversion of an existing building(s) for interim storage of contaminated debris, waste and rubble that might mitigate against the dispersal of contamination in the event that there is a catastrophic event such as a tornado or hurricane. The EA must address this option.

We recommend a stipulation between DOE, EPA, Ohio EPA and members of the public that any FONSI contain the following:

1. A hammer date by which contaminated materials placed in the CSF must begin to be removed from the CSF on an ongoing basis for treatment and final disposal (estimated date January 1, 1998);
2. An enforceable agreement among FRESH, DOE and EPA that prohibits permanent storage of material from OU-3, to be signed by the Assistant Secretary of Energy for Environmental Restoration;
3. A system of fines/penalties against DOE and the contractor if waste and debris materials are stored in the CSF on more than an interim basis, including a definition of interim; and
4. A commitment to minimize adverse socioeconomic impacts to the community by retaining the existing long term hourly workforce to perform environmental restoration and waste management activity to the maximum extent feasible.

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Comment O



State of Ohio Environmental Protection Agency

Southwest District Office

40 South Main Street
Dayton, Ohio 45402-2086
(513) 285-6357
FAX (513) 285-6404

H-2096

George V. Voinovich
Governor

January 31, 1994

RE: PUBLIC COMMENTS
O.U. 3 PROPOSED PLANMr. Ken Morgan
Public Relations
U.S. DOE FEMP
P.O. Box 398705
Cincinnati, Ohio 45239-8705

Dear Mr. Morgan:

The purpose of this letter is to provide official comments on the Operable Unit 3 Proposed Plan:

1. The OU3 Proposed Plan is the culmination of efforts by Ohio EPA, U.S. EPA, and DOE to mitigate potential environmental releases, achieve a faster cleanup, and realize significant cost savings. The Proposed Plan recognizes that current structures have exceeded their design life and therefore have no future use other than decontamination and demolition. This, of course will be a gradual process where buildings that are not being used to support remediation will be taken down over the next 15-20 years.
2. OU3 waste storage - Ohio EPA, as well as the residents around Fernald, have significant concern with regard to DOE's historic definition of the term "interim storage". Ohio EPA concurs that laydown, sorting and interim storage areas are needed for this Interim Remedial Action. However, we want DOE assurances that interim storage does not become long term storage. DOE should address this issue by explicitly defining the terms and duration of "interim storage" within the Interim Record of Decision.
3. Additional storage area - With regard to building additional interim storage areas, Ohio EPA believes that DOE should make the maximum effort to utilize the Plant 1 Pad and other existing buildings and storage areas at Fernald. The Plant 1 Pad is currently undergoing a major removal action to upgrade the Pad and erect structures to provide interim storage for remediation waste like O.U.3's. To successfully utilize these areas will require a commitment from DOE to manage and ship waste residues currently stored on the Plant 1 Pad and other buildings. Ohio EPA expects DOE to make this commitment.
4. Environmental monitoring data should be collected as buildings are removed to ensure that engineering controls are effective in controlling environmental releases. This data must be made

- 5416

Comment O (Cont.)

Mr. Ken Morgan
January 31, 1994
Page #2

available to the public via roundtables, fact sheets, etc..

If you have any questions about these comments please contact Tom Schneider or me.

Sincerely,



Graham E. Mitchell
Project Manager

GEM/tas

cc: Lisa Crawford, FRESH
Jack Van Kley, Ohio AGO
Tom Schneider, DERR
Jim Saric, U.S. EPA
Ken Alkema, FERMCO
Lisa August, Geotrans
Jean Michaels, PRC
Jenifer Kwasniewski, DERR
Robert Owen, ODH

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Comment P

BOB MILLER
Governor

STATE OF NEVADA

JIMM P. CONWAY
Director



DEPARTMENT OF ADMINISTRATION

Capitol Complex
Carson City, Nevada 89710
Fax (702) 687-3983
(702) 687-4065

February 7, 1994

Thomas P. Grumbly
Assistant Secretary for Environmental
Restoration and Waste Management
U.S. Department of Energy
Washington, DC 20585

Re: SAI NV #94300068

Project: Operable unit 3, Proposed Plan/ Environmental Assessment for Interim
Remedial Action, Fernald Environmental Management Project, Fernald, Ohio

Dear Mr. Grumbly:

Attached is a comment from the Nevada Division of Environmental Protection concerning the above referenced project. This comment constitutes the State Clearinghouse review of this proposal as per Presidential Executive Order 12372. Please address this comment or concerns in your final decision.

Sincerely,

Maud Naroll
State Clearinghouse Coordinator

MNjbw
Enclosures

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Comment P (Cont.)

L. H. DODDION
Administrator

STATE OF NEVADA
BOB MILLER
Governor

PETER G. MONROE
Director

Administration	(702) 687-4670
Air Quality	687-5065
Mining Reclamation and Reclamation	687-4875
Water Quality Planning	687-5263
Water Pollution Control	687-5275
Fax	687-5255



Waste Management	687-5272
Chemical Hazard Management	687-5272
Federal Facilities	687-5272
Fax	687-5255

DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES
DIVISION OF ENVIRONMENTAL PROTECTION

Capital Complex
333 W. Nye Lane
Carson City, Nevada 89710

February 3, 1994

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CLEARINGHOUSE COMMENTS

NDEP # 94-068
SAI NV # 94300068

TITLE: U.S. DOE - Proposed Plan/EA for Interim Remedial Action for Fernald Environmental Management Project - NTS

The Division of Environmental Protection has reviewed the aforementioned State Clearinghouse item and has the following comments:

There has been no attempt to evaluate the appropriateness of the proposed interim actions but our comments concern the disposition of wastes generated from any of the alternative actions or the disposition of the materials in storage that have now been determined to be wastes.

Page 2-12 Section 2.3.2.1 Removal No.9 - Removal of Waste Inventories

This section addresses the 15,000 containers of thorium materials that have been declared waste and are proposed for shipment to the Nevada Test Site (NTS) for disposal. These actions are stated to be in compliance with EPA and DOT regulations and DOE Orders. It is not questioned whether or not the specific removal actions may be in compliance with the latter regulations however the proposed disposal facility on the NTS which would enable this action to occur is not in the same level formal compliance.

DOE Order 5820.2A Requires DOE to perform a detailed PERFORMANCE ASSESSMENT of a disposal facility, this has not been done for any of the disposal facilities on the NTS therefore DOE is technically not in compliance with its own Orders as this document states.

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Comment P (Cont.)

Page 2 - NDEP 94-068 - SAI 94300068

Page 3-7 under Section 3.4 Alternative 3 -- Decontaminate and Dismantle (this is the preferred alternative) In the second paragraph on this page it is stated " At this time ,NTS is the only facility for which a NEPA review has been completed that can receive wastes from FEMP." FEMP proposes to ship 500,000 cubic feet of waste from this action to NTS. This does not include the thorium materials declared waste referenced in the previous paragraph. I believe the intent of this statement is that this NEPA evaluation will only consider shipments to the NTS as that is the site DOE has directed them to ship low level wastes to. However the latter clearly implies that the disposal facilities at NTS have already been evaluated under the NEPA process. **THIS IS NOT TRUE.** Although DOE has designated and used the NTS as a low level disposal facility there has never been any NEPA evaluation of this action by DOE and this has been a continual point of contention with the State. Failure to perform NEPA evaluations for disposal facilities is also a violation of DOE Order 5820.2A



David R. Cowperthwaite
David R. Cowperthwaite
Clearinghouse Coordinator
Division of Environmental Protection

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Comment Q

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1 to work. There were some people that signed up as
2 they came in who wished to make statements. I will
3 give their names and call them up. People who wish
4 to make a statement, you need to come up to the
5 microphone, state your name clearly so the recorder
6 can easily get your comment.

7 I would like to start with Bob
8 Schwab.

9 MR. SCHWAB: Ken, Bob Tabor is going
10 to make that presentation in behalf of the
11 Council.

12 MR. MORGAN: All right, fine.

13 MR. TABOR: I have some comments,
14 the Fernald Atomic Trade --

15 MR. MORGAN: You need to state your
16 name.

17 MR. TABOR: Oh, I'm sorry, I'm
18 Robert Tabor, speaking in behalf of the Fernald
19 Atomic Trades and Labor Council.

20 The comments of the Fernald Atomic
21 Trades and Labor Council on the environmental
22 assessment for the Fernald Operable Unit 3, you'll
23 have to bear with me, I have a relatively lengthy
24 statement here, I'll try to move this along as fast

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Comment Q (Cont.)

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as I can.

January 5th, 1994. The Fernald

3 Atomic Trades and Labor Council has been the
4 primary representative of the hourly work force at
5 the Fernald site for over four decades. In the
6 course of this period we have not only performed
7 production work but have performed virtually every
8 kind of environmental cleanup work. Indeed, since
9 the shutdown of the site in 1989 our work has
10 focused on the environmental cleanup.

11 In the brief period in which the EA
12 has been publicly available, the FATLC has not been
13 able to undertake the full analysis, including
14 assessing backup documents that is required.
15 FATLC, therefore, respectfully requests that the
16 record be kept open for the reasonable period of
17 time to permit the FATLC and other stakeholders to
18 provide fuller comments, two or three weeks or
19 whatever the decision was.

20 However, information available to the
21 FATLC does raise basic questions which we hope will
22 be addressed by those who prepared the EA. These
23 questions go to both the EA's premises and the
24 extent to which relevant facts and law have been

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Comment Q (Cont.)

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1 site safety standards and required practices are
2 not adequate. If the EA's conclusion is to proceed
3 sooner rather than later, is to mitigate risk and
4 not increase it, these issues must be addressed by
5 the EA and solutions buttoned down before the
6 recommendation is approved. For example, A, FERMCO
7 and DOE documents record that the site it yet to
8 comply with many basic standards and protocol,
9 including alarm, rat control, and OSHA standards.
10 FATLC has previously provided such documents to DOE
11 and would be pleased to put them in the record
12 here. How have these deficiencies, some of which
13 have been commented upon critically by the defense
14 facility's Nuclear Safety Board and others, been
15 factored into the risk assessment?

16 B, in September 7th, 1993 memo on the
17 status of the site hazardous communication program
18 for compliance with OSHA, 29 CFR 1910-1200, a DOE
19 consultant reported that, "The overall site haz com
20 program is not in compliance with the current OSHA
21 standard, 29 CFR 1910-1200, nor the site document
22 chemical hazardous communications program, RN2806."

23 Most of FERMCO's internal time align
24 dates have not been met, nonetheless in a September

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Comment Q (Cont.)

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1 considered.

2 In essence, the EA supports the
3 recommended alternative immediate facility
4 dismantlement and demolition on grounds that quick
5 reaction will save costs and reduce needless worker
6 and community exposure to risk. In the absence
7 FATLC agrees this sounds plausible. However, it
8 has recently become clear evidence that present
9 site health and safety rules and practices, work
10 force plans, and by that token cost and safety
11 assumption are inadequate and indeed contrary to
12 law. Hither to these matters have not been
13 addressed. By that token it does not appear that
14 they are addressed in the EA. In raising them at
15 this same time, FATLC wants to make clear that it
16 hopes to work in good faith with FERMCO and the DOE
17 and other stakeholders to address these matters.
18 However, given the limited time available to file
19 comments and the fact that these matters remain to
20 be resolved, FATLC is obliged to raise these
21 matters here. We also will provide for the record
22 further documentation transmitted to DOE which
23 addresses these questions.

24 Firstly, it is now clear that the

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Comment Q (Cont.)

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1 30th, 1993 road map of the site, FERMCO stated that
2 it is in compliance with 29 CFR 1910 Occupational
3 Safety and Health standards. The FERMCO prepared
4 road map was forwarded by DOE Fernald to
5 headquarters, evidently for public distribution.
6 Is FERMCO in compliance with OSHA? Has anyone
7 checked? What does the EIS assume? What effect
8 would noncompliance have if work is speeded up?

9 C, in a November 30th, 1993 letter to
10 FERMCO, DOE informed FERMCO of basic deficiencies
11 in the FERMCO health and safety plan. In
12 particular, DOE stated the plan lacked basic worker
13 empowerment provisions which DOE stated are
14 essential to assuring health and safety. What does
15 the EIS assume about the adequacy of the basic site
16 health and safety plan? What effect would speedup
17 have in light of an inadequate plan?

18 D, the EA concludes that there is
19 relatively little risk of radioactive release from
20 the site. Once again, it is not clear whether this
21 assumption is founded on full knowledge of the site
22 activities. For example, FATLC has recently
23 brought to DOE and Congressional attention a
24 release of uranium hexafluoride that to FATLC's

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Comment Q (Cont.)

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1 understanding was not reported as required. DOE
2 has been on-site investigating this release and
3 related issues of nuclear safety. Are those who
4 prepared the EA aware of this episode and the
5 practices that underlie it? Has such an episode
6 been factored into the risk assessment?

7 E, documents confirm that FERMCO has
8 at least until extremely recently displayed what
9 has been called an insensitivity to health and
10 safety issues. For example, as discussed at recent
11 Congressional hearings, FERMCO's safety manual
12 actually counseled FERMCO employees not to provide
13 information on potential safety violations to
14 government compliance inspectors. Similarly,
15 FERMCO documents show that FERMCO ES&H staff
16 compared the cost of complying with health and
17 safety rules against the penalties for
18 noncompliance.

19 In the most recent past DOE and
20 FERMCO have stated a commitment to address basic
21 health and safety issues and deficiencies in
22 ongoing programs. FATLC looks forward to working
23 with them and all others in this process.
24 Nonetheless, the timing and extent to which they

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Comment Q (Cont.)

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1 will be addressed remains to be seen.

2 In addition to the specific questions
3 noted above, examples such as those above raise
4 more basic questions, including:

5 One, did those who -- let me see
6 here -- did those who reviewed the EA at the EPA
7 and the Ohio EPA question health and safety
8 assumptions provided by FERMCO and DOE?

9 Two, did the EA examine and/or
10 contemplate the health and safety deficiencies that
11 have recently surfaced? If not, how does their
12 presence affect the presumption that workers in the
13 community will be benefited by speedy action?

14 Three, what actions will be taken in
15 revising the EA to bring to bear critical analysis
16 on the deficiencies that have surfaced and on the
17 remedies that must be provided before action can
18 proceed?

19 Secondly, FERMCO has planned to
20 replace the FATLC work force which has long
21 performed cleanup tasks with a new work force, much
22 likely with less experience at the site and, for
23 all anyone knows, maybe less experience with
24 nuclear materials. This work force is to be

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Comment Q (Cont.)

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1 employed under a document called Project Labor
2 Agreement. Workers hired under this agreement will
3 be governed by the very FERMCO health and safety
4 plan which the DOE has just found deficient. In
5 contrast, FATLC, the negotiators of the Project
6 Labor Agreement, failed to insist on the worker
7 empowerment provisions which the DOE has confirmed
8 are essential for Fernald site health and safety.
9 FERMCO'S design to replace the long-term work force
10 is made plain by the baseline document which FERMCO
11 has recently provided to DOE. This document in
12 essence lays out the plans for the site, and DOE
13 must approve the document. The baseline volumes
14 for Operable Unit 3 show that virtually all work
15 will be subcontracted out under the Project Labor
16 Agreement. That is even though FATLC worker has
17 long performed cleanup at the site, the FERMCO plan
18 shows he or she will likely be fired to be replaced
19 by a new worker hired under a subcontract, perhaps
20 with no site experience, who will perform the same
21 or similar work and probably at higher pay.

22 The replacement of a worker with
23 nuclear cleanup experience is contrary to common
24 sense as well as equity. In the case of nuclear

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Comment Q (Cont.)

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1 sites there is a special premium on maintaining
2 those who have dealt with nuclear waste and no
3 particulars of the site. This experience is
4 essential because, as has been repeatedly found and
5 as DOE has acknowledged, traditional oversight
6 agencies such as OSHA, DOE, and environmental
7 agencies have lacked staff and other resources
8 needed to follow site work in the detail needed.

9 In this case the planned replacement
10 of the existing work force is without evident
11 regard for statutory and DOE policy to maintain, to
12 the extent practicable, the long-term work force as
13 cleanup proceeds. For example, see Section 31 of
14 the fiscal year 1993 Defense Authorization Act in
15 the DOE Five-Year Plan.

16 In addition to jeopardizing safe and
17 efficient cleanup, the replacement of the long-term
18 work force will obviously have impact on the
19 communities in which they live. We emphasize this
20 is not a case where workers will become unemployed
21 because there is no work to be done, rather it is a
22 case where experienced workers will be replaced for
23 the same or similar work with no apparent economic
24 or health and safety logic.

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Comment Q (Cont.)

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1 In light of the above, FATLC requests
2 that the revision of the EA address the following
3 questions: One, did those preparing the EA
4 consider Section 3161 and the work force continuity
5 policies expressed in the DOE Five-Year Plan? If
6 not, these must be considered.

7 Two, what assumptions does the EA
8 make about work force to be used in the cleanup of
9 OU-3? For example, does the EA assume that
10 whatever is stated in FERMCO's baseline will
11 govern? If not, what is assumed?

12 Three, if the EA made no assumptions
13 or accepted FERMCO's, what consideration was given
14 to the costs and health and safety effects of the
15 planned replacement of the Fernald Atomic Trade and
16 Labor Council work force as indicated in the FERMCO
17 OU-3 baseline? For example, in deposition
18 testimony FERMCO's president stated that in
19 determining to employ subcontract workers and
20 replace FATLC on cleanup work, FERMCO does not make
21 cost comparisons. That is, FERMCO would
22 subcontract work out even if it costs taxpayers
23 more. Does the EA's cost analysis and conclusions
24 contemplate this logic? Have those performing the

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Comment Q (Cont.)

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1 EA performed their own cost analysis of the way in
2 which FERMCO proposed to do the work?

3 As stated above, the Project Labor
4 Agreement lacks health and safety provisions which
5 DOE has recently told FERMCO are essential to
6 worker protection. Does the EA's recommendation to
7 press on with the work contemplate the use of a
8 work force that failed to insist upon protections
9 required by workers and the community? If so, what
10 consideration has been given to the effect on
11 worker and community safety?

12 The introduction of hundreds of new
13 workers to replace the FATLC work force will
14 require extensive training. However, at the same
15 time FERMCO would fire workers in whom taxpayers
16 have invested many thousands of dollars in training
17 and experience. Does the EA consider the cost and
18 safety consequences of this waste of scarce
19 taxpayer dollars?

20 Thirdly, if work is to proceed
21 expeditiously, then safe and efficient performance
22 requires an assured supply of trained personnel.
23 On the other hand, FERMCO has proposed to fire the
24 experienced FATLC work force. And on the other

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Comment Q (Cont.)

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1 hand, it admittedly does not have the plans and/or
2 resources to train needed workers. For example,
3 the November 30th, 1993 FERMCO baseline document
4 records that FERMCO is or has terminated contracts
5 who have been providing radiation worker protection
6 classes. This says FERMCO will reduce the number
7 of qualified RAD Worker II personnel by
8 approximately 50 percent weekly.

9 Additionally, development of other
10 DOE mandated training will be delayed because of
11 insufficient personnel to develop identified
12 training.

13 Have those preparing and reviewing
14 the EA considered the adequacy of the training
15 programs and related resources which underlie the
16 recommended alternative? If so, where is the
17 analysis? If not, such analysis is essential to
18 any recommendation for quick action.

19 Fourthly, have those preparing the EA
20 considered the impact on community dislocation of a
21 plan which would rapidly remove a long-standing and
22 community based work force and replace it with an
23 alternative work force, one which may have far less
24 roots in the Fernald communities? If so, where is

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Comment Q (Cont.)

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1 the analysis? While community impacts may be hard
2 to quantify, they will nonetheless be real.

3 FATLC notes that whatever rules may
4 govern the triggering of the EA/EIS where one is
5 prepared, it is axiomatic that related sociological
6 impacts must be considered. Moreover, in this
7 situation the need to consider community impacts is
8 independently mandated by Section 3161 and DOE's
9 own policies, including order 47.1 as well as the
10 Five-Year Plan. The EA states that there will be
11 no change in employment levels.

12 Fifthly, the EA proceeds on the
13 premise that the proposed actions can be considered
14 interim and, therefore, analysis of permanent
15 actions is not required at this time. As the
16 Fernald Atomic Trades and Labor Council understands
17 it, however, the OU-3 work includes shipping waste
18 off-site for permanent disposal elsewhere. This
19 would seem to be an action which could not be
20 characterized as interim.

21 Thank you for this opportunity. We
22 look forward to your response to our comments and
23 the opportunity to submit supplementary comments.
24 And I have here an additional document that I would

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Comment R

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1 like to submit for the records.

2 MR. MORGAN: Thank you.

3 MR. TABOR: Thank you.

4 MR. MORGAN: Jerry Monahan.

5 MR. MONAHAN: Jerry Monahan, Greater
6 Cincinnati Building Trades. I would like to make
7 just some brief remarks, mostly in response to Mr.
8 Tabor's remarks, but what I believe is inaccurate
9 description of the Project Labor Agreement.

10 The Project Labor Agreement that we
11 negotiated with the FERMCO Company in a traditional
12 fashion that is usually implemented at sites of
13 this type includes provisions for training of all
14 of our employees who previously might not have had
15 training. We have had employees at this site from
16 its inception; in fact, we were there before FATLC,
17 we built it before FATLC entered the picture. Our
18 workers currently attend training through grants of
19 the United States Government through our various
20 internationals, and in fact many of the FATLC
21 employees went to those same schools that we have
22 attended. Our record of safety has been
23 outstanding, and in fact the most recent accidents
24 have involved the FATLC Council and not the

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Comment R (Cont.)

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1 Building Trades Council.

2 As far as the issue of local, all of
3 our locals are in the Cincinnati area. I represent
4 approximately 13,000 employees who have worked at
5 this site whenever there was a need for
6 construction activities.

7 I also would like to bring up the
8 economics, that FATLC people did not normally
9 perform functions of construction, and to retrain
10 workers who had previously performed duties that
11 were in the plant and then to educate them and
12 bring their skill level up to the construction
13 trade would be very cost prohibitive. We're
14 sympathetic to the idea that the employment in the
15 past or whatever contribution the FATLC people
16 might have made. We are also aware of the laws
17 that govern it. As we understand it, many of these
18 decisions that had been made on the work or all of
19 them that have been made up to this time on the
20 work, are under provisions of law, the Davis Bacon
21 Law or the Service Contract Act. That has been the
22 guiding principle. That is separate from the
23 Project Labor Agreement.

24 Again, our workers will always be

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Comment R (Cont.)

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1 safe and they will be productive, and they are
2 trained. It's a misconception that they are not
3 trained or they're not aware of the dangers of
4 radiation or construction activities.

5 We have also attempted to resolve
6 these issues in separate fashion whenever requested
7 by the Department of Energy, by the FERMCO Company,
8 or any third-party politicians. We'll continue to
9 be cooperative. We intend to protect our
10 traditional work, which is construction activities,
11 and we have no intent of performing duties that
12 rightfully belong to FATLC. Thank you.

13 MR. MORGAN: Thank you. Virginia
14 Least.

15 Virginia Least.

16 Lisa Crawford.

17 MS. CRAWFORD: I defer my time, I
18 will hand my comments in in written fashion.

19 MR. MORGAN: Thank you. Edwa Yocum.

20 MS. YOCUM: I defer my time and I
21 will hand my comments in in written fashion.

22 MR. MORGAN: Thank you. Are there
23 any others who would like to speak? Vicki.

24 MS. DASTILLUNG: Vicki Dastillung.

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April 1994
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Comment S

SPIEGEL & MCDIARMID

350 NEW YORK AVENUE, N.W.
WASHINGTON, D.C. 20005-4798
TELEPHONE 202: 879-4000
TELECOPIER 202: 393-2866

December 13, 1993

Via Hand Delivery

The Honorable Hazel R. O'Leary
Secretary of Energy
U.S. Department of Energy
1000 Independence Avenue, S.W.
Washington, D.C. 20585

Re: Fernald, Ohio Site: Health and Safety Plans
and Practices

Dear Secretary O'Leary:

On behalf of the Fernald Atomic Trades & Labor Council ("FAT&LC") this letter is to welcome the critical attention which DOE is bringing to bear on health and safety at the Fernald, Ohio site, as evidenced by the Department's November 30 confirmation that the health and safety plan maintained by the prime contractor, Fernald Environmental Restoration management Corp. ("FERMCO"), evidently has deficiencies which require prompt correction.

In its November 30 letter to FERMCO, DOE indicated, as it has stated elsewhere, that its review of the FERMCO plan constitutes only a portion of ongoing DOE review of health and safety concerns at the site. FAT&LC welcomes this oversight. FAT&LC requests the opportunity to provide continued assistance, as may be appropriate. This letter is to note that there are several further issues which lend themselves to immediate attention. These include:

**ARE CONTRACTOR AND DOE REPRESENTATIONS
OF HEALTH AND SAFETY COMPLIANCE RELIABLE?**

First, there are questions about the accuracy of health and safety materials prepared by FERMCO and put out to the public under DOE imprimatur. For example, in a September 7, 1993 memorandum on a review of the Fernald Hazard Communication Program for Compliance with OSHA Rules (29 CFR 1910.1200), a DOE contractor (Modern Technologies) recorded that: "[t]he overall site HAZCOM Program is not in compliance with the current OSHA standard (29 CFR 1910.1200), nor the site document

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Chemical Hazard Communication Program (RM-2086). Most of FERMCO's internal timeline dates have not been met.¹

We have not learned of any subsequent document which attests to correction of the deficiencies found, and compliance with the OSHA HAZCOM rules.² However, on September 30, 1993, FERMCO submitted a "ROADMAP" for the site which states that it is "in compliance" with 29 CFR 1910/Occupational Safety and Health Standards (Attachment 2).

The ROADMAP is a "state of the site" document for the Fernald Environmental Management Project ("FEMP"). It serves as basic reference for officials and the community. On October 20, 1993 DOE Fernald transmitted FERMCO's draft to Headquarters and to the BDM ROADMAP coordinator for distribution in headquarters, with no indication that the document had been reviewed or evaluated and no statement on OSHA compliance (Attachment 2).

1. A copy of the document is attached (Attachment 1). Among other things, the findings raise questions about whether all chemicals coming onto the Fernald Site have Material Safety Data Sheets ("MSDS"). For example, the "main points" of the review included:

If IH [Industrial Hygiene] can not obtain MSDSs from the vendor, neither IH, nor any other group, are currently writing MSDSs for the site. Therefore, chemicals are on site without MSDSs, and there is no system for developing these if they can not be obtained from the vendor.

We note that the FERMCO contract provides, among other things, that the "Contractor agrees to submit a Material Safety Data Sheet . . . 5 days before the delivery of the material." See Section D.3 (FAR 52.223-3 Hazardous Material Identification and Material Safety Data (Nov. 1989). Has FERMCO been in compliance with this provision?

2. Indeed, FERMCO's own self-assessment for the period ending September 30, 1993 identifies under "Weaknesses" (at page 28):

1. Safety . . .

c. Hazard Communication needs improvement. Audits of work areas still find chemicals that are not listed in MSDS notebooks. Systems are being developed to identify chemicals, update MSDSs, and train employees.

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Can DOE assure the public that the ROADMAP's statements of regulatory compliance, when made, and today, are correct, in the face of near-contemporaneous documentation which raises questions? Or has DOE rubber stamped a parachute with holes in it?

**CAN DOE ASSURE THAT THOSE WHO QUESTION
FERMCO HEALTH AND SAFETY DIRECTION AND
PROTECTION WILL BE PROTECTED AGAINST RETALIATION?**

Second, there is the question of the adequacy of FERMCO supervisory direction, and the protection of those who question health and safety activities.

For example, FAT&LC brought to DOE attention evidence of a potentially serious episode involving uranium hexafluoride. On December 2 and 3 DOE officials visited the Fernald site to talk with FAT&LC members and others. We understand this investigation is continuing. In addition, FAT&LC officials have testified to their understandings regarding further questionable safety practices at the site.

FAT&LC is ready and willing to cooperate with DOE (and other appropriate official groups) in order to get to the bottom of questions that have been raised. However, the prospect of retaliation (against FAT&LC and any others) is a very live reality. What has been termed a "critical lack of sensitivity towards the important mission of health and safety"³ appears to be indistinguishable from a design to retaliate against those who raise health and safety principles.

First, the FERMCO Comprehensive Environmental Occupational Safety and Health Program ("CEOSH") expressly enjoins FERMCO employees from informing official Compliance Officers of health and safety violations.⁴

3. See December 1, 1993 statement of John Dingell, Chairman, Subcommittee on Oversight and Investigations, Committee on Energy and Commerce, U.S. House of Representatives.

4. It states that when Compliance Officers come on site:

Courteous treatment of the CO [Compliance Officer] is expected at all times and the following principles must be followed during the walk-around phase.

- Do not agree that any alleged violation exists.
- Do not point out any possible/probable violations.

(continued...)

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Second, on November 29, 1993 FERMCO evidently initiated a "business ethics and conduct policy" which subjects employees to dismissal if they fail to disclose "circumstances, investments, interests or affiliations which could reasonably be expected to . . . (e) reflect poorly on the Company or its clients, and (f) have the effect of diminishing the trust and confidence of the public, the government, our clients or other employees in the Company." We do not know if this policy was intended to chill employees from raising questions about FERMCO's performance or conduct to DOE or the U.S. Congress, but its effect can only serve to diminish the willingness of employees to become whistleblowers and retain their privacy. It has not escaped our attention that this policy surfaced 2 days before the December 1, 1993 hearing before the U.S. House of Representatives Energy and Commerce Committee, and shortly following U.S. District Court invitation that the Department review FERMCO's health and safety plan.

Third, in mid-1993, when FAT&LC expressed concern about the failure to provide work breaks for those wearing protective equipment during hot days, FERMCO told FAT&LC that "any future work for the FAT&LC will depend on their ability to perform without grievances, without abuse of non-productive time, and with efficiency."⁵

Since then, FERMCO has steadfastly sought to gut the (Article IV) health and safety protections (including the right to refuse work and right to report violations to the media or authorities) which FAT&LC won through hard fought bargaining years ago.

FERMCO's September 1993 "best and final" contract proposal deleted these extraordinary health and safety/whistleblower protections. On September 27, U.S. District Court Judge Spiegel ordered FERMCO to continue to honor the Article IV. In subsequent Court filings, however, FERMCO (with the support of the Greater Cincinnati

4. (...continued)

- Do not indicate that you have been or are aware of any alleged violations.
- Do not argue with the CO whether a violation or problem exists.
- Do not volunteer any information or make any admissions.

See EAPR 3-6: Revision O, page 3 of 7.

5. See Affidavit of FAT&LC President Robert Schwab (Attachment 3 at paragraphs 9 and 10), and FERMCO Industrial Relations memorandum on the July 15, 1993 Joint Labor-Management Committee Meeting (Attachment 4).

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Building and Construction Trades Council) continued to contend that the FERMCO CEOSHP is adequate to protect worker safety. By letter of November 30, of course, DOE confirmed that, in its judgment, the CEOSHP is deficient.

On December 2, however, a FERMCO public relations memorandum sought to dismiss the problems identified by DOE and Congress as "misinformation" from FAT&LC. On December 3, FERMCO delivered a "best and final" contract proposal to FAT&LC. Remarkably, FERMCO proposed to substitute its CEOSHP, which has just been found deficient, for the worker protection provisions FAT&LC successfully fought for long ago.⁶

What assurance is there that under color of "collective bargaining negotiations," FERMCO will not be permitted to destroy the fabric of worker health and safety protection that it took years to weave?

**HOW WILL THE PUBLIC KNOW THAT HEALTH
AND SAFETY COST CUTTING MEASURES
DO NOT COMPROMISE HEALTH AND SAFETY?**

Fourth, there are the questions raised by FERMCO's evident propensity to balance health and safety measures against costs. At the December 1 Congressional Hearing, for example, FERMCO confirmed that FERMCO ESH (environment safety and health) staff engage in calculation of the costs and benefits of complying with OSHA. Moreover, in August 1993 FERMCO proposed to DOE that costs could be cut by, among other things, making workers pay for their own safety equipment and reducing the frequency of testing for radiation exposures. FERMCO noted that the former would require DOE to "relax interpretation of regulatory guidelines," and that "[o]nly portions" of the latter could be implemented without violating OSHA 29 CFR 1910 (Attachment 5 at pages 15 and 17).

Will DOE assure that FERMCO's proposals to relax health and safety rules and cut health and safety costs be supported by analyses that are accessible to the stakeholders whom the rules are to protect?

6. FERMCO's memorandum transmitting the "best and final" offer accused FAT&LC President Schwab of "staying away" from contract negotiations on the morning of December 3. FERMCO was well aware that Mr. Schwab was in attendance at a meeting(s) with DOE investigators to consider the uranium hexafluoride matter. On December 9 FERMCO withdrew the December 3 "best and final" proposal.

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**HOW WILL THE PUBLIC KNOW THAT
FERMCO ENVIRONMENTAL COST-CUTTING
DOES NOT COMPROMISE HEALTH AND SAFETY?**

Fifth, FERMCO cost cutting proposals involve reducing environmental, as well as health and safety obligations. For example, FERMCO proposes to use "Interim Actions (IA) whenever possible to expedite cleanup activities." FERMCO explains that "savings result from avoidable and/or reduced NEPA, RI/FS costs, site's facility characterization costs and D&D acceleration." FERMCO noted that "EPA or the state of Ohio may ultimately place a limit on the use of Interim Actions" (Attachment 5 at page 21).

Will Stakeholders and the public have access to analyses needed to assure them that FERMCO proposals do not unduly cut regulatory corners, and have been carefully reviewed and approved by DOE (and other appropriate agencies)?

**CAN DOE ASSURE THAT SAFETY TRAINING
WILL PROTECT WORKERS AND BE DONE EFFICIENTLY?**

Finally, there are questions about the efficiency of health and safety training. FERMCO intends to rely heavily on training provided by the Greater Cincinnati Building and Construction Trades Council ("GCBCTC"), under its Project Labor Agreement ("PLA") with FERMCO.

However, the primary health and safety protection vehicle bargained for in the PLA is the CEOSHP. DOE's November 30 letter confirms that the CEOSHP apparently "lacks lack[s] the provisions which adequately integrate and empower workers in the development and implementation of a comprehensive health and safety program." The DOE letter further noted that, in DOE's experience, the "human factors" aspects of a comprehensive management program are as, or more, important than its "technical and programmatic aspects." In Federal court, however, GCBCTC as well as FERMCO, actively supported the adequacy of the FERMCO CEOSHP.

What actions will DOE take to assure that those who do Fernald-related worker training are sufficiently attuned to worker protection and empowerment requirements, and can communicate them with requisite vigor, notwithstanding potential contractor opposition?

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Comment S (Cont.)

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FERMCO has told DOE that the PLA will save money because the GCBCTC will provide training at union expense.⁷ But much of this "savings" presumably will be paid for by taxpayers, as these training programs are largely funded through DOE's environmental restoration budget.⁸ In this time of budget cuts, does DOE have confidence in FERMCO's assertion of training-related savings? Moreover, FERMCO has been laying off workers in whom many thousands of taxpayer training dollars have been invested. Does DOE know whether the claimed savings may be offset by previous training expenditures that will be lost?

In conclusion, FAT&LC realizes the matters addressed here are sensitive and complex. As you and your staff have recognized, however, the public interest demands that health and safety questions be addressed directly, and up front.

FAT&LC respectfully requests the opportunity to review and comment on FERMCO's response to the November 30 letter, prior to any approval by the Department. FAT&LC has been the primary representative of workers at the Fernald site for four decades. FAT&LC previously fought and bargained for the worker protections which, DOE's November 30 letter confirms, appear to be lacking in the FERMCO plan. FAT&LC further believes it would be of value if other Stakeholders, including community groups and other worker representatives, are also invited to comment on FERMCO's response.

7. The PLA "results in significant cost savings (e.g., 40 hour Hazardous Materials training for craft personnel at no expense to DOE). The overall estimated cost savings are \$15-20 million." Self Assessment, at page 6; item p.

8. Section 3131 of the FY 92 Defense Authorization Act provided \$10 million for hazardous waste worker training grants to unions and universities, and the FY 94 Defense Authorization Act authorized an added \$11 million. These training funds are administered through an interagency agreement between DOE and the National Institutes of Environmental Health Sciences ("NIEHS").

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Comment § (Cont.)

The Honorable Hazel R. O'Leary
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In any event, FAT&LC remains available to provide further information regarding the above, and such assistance as may be appropriate on these critical matters.

Very truly yours,



Dan Guttman
Attorney for
Fernald Atomic Trades & Labor Council

DG/kah

Attachments

cc (with attachments):

Tom Grumbly, Assistant Secretary
Robert Nordhaus, Esq., General Counsel
Tara O'Toole, Assistant Secretary
Dan Reicher, Esq., Deputy Chief of Staff
Scott Van Lente, Esq., DOE Counsel, Fernald
Bob Schwab (President, FAT&LC)
Melvin Hutson, Esq.
Richard Resnick, Esq.

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Comment S (Cont.)

Attachment 1

9-0070
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 SEP 13 1993

MTC/FES-93-305

MEMORANDUM

DATE: September 7, 1993

TO: W. J. Quaider, DOE-FN
 J. C. Simak, DOE-FN
 D. N. Harper, DOE-FN

FROM: M. B. Jones *mbj*

SUBJECT: STATUS OF SITE HAZARD COMMUNICATION PROGRAM (FOR COMPLIANCE WITH OSHA 29 CFR 1910.1200)

In order to provide continued follow-up on Industrial Hygiene (IH) program areas on-site, I met with Debbie Grant, FERMCO, IH Section, to determine the progress of FERMCO's Hazard Communication (HAZCOM) Program since my last status report on May 13, 1993. Attached are copies of the latest FEMP Hazard Communication Program Analysis and HAZCOM Check and Action Worksheet, which give FERMCO's timeline for completion of various portions of this program. (These have not been updated since the May report.)

In my discussion with Debbie Grant, several other groups were identified as important to contact in the overall program assessment. Additionally, I contacted 1) Receiving, to determine their policy and procedures for handling chemicals that arrive without a Material Safety Data Sheet (MSDS); 2) Training, for an update on the site HAZCOM training program; and 3) ESH, for a copy of a recent assessment report.

The following summarizes the main points of these discussions and reports. Topics are not listed in order of importance to the program.

1. All MSDS stations have been visited and an inventory of chemicals in the area taken by IH, except for the laboratory area and G3. The laboratory is conducting their own inventory, and it is moving very slowly. (FERMCO due date was 5/1/93.)
2. IH wrote up a HAZCOM training program for the porters, which was presented to them by their supervisors.
3. The following is the breakdown of MSDSs on-site:
 4258 Chemicals in the MSDS database
 787 No MSDSs as yet

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Of these 787 chemicals, 343 simply do not have MSDSs as yet, 444 may or may not be chemicals still on-site. IH is inquiring with the department supervisors to see if they really have these chemicals. So far, they have found only 20 on-site.

(FERMCO due date to have MSDSs from vendors was 6-1-93.)

4. Debbie Grant receives a purchase order for every chemical that comes on-site, but does not really have time to review these against the current MSDS database.
5. IH is looking into the Haz-Track System, which would bar code chemicals in and out of buildings to show the movement of chemicals throughout the site. One of the problems is that once chemicals are received, they do not necessarily stay with the same group that purchased them. MSDSs do not always accompany the chemicals when they move.
6. IH is looking into ordering some additional training videos, but money will not allow them to purchase anything at this time. (FERMCO due date to develop or buy videos was 6/1/93.)
7. The written HAZCOM Program has not been updated as yet. (FERMCO due date was 8/1/93.)
8. Annual general training varies per department or organization. It is not consistent at this time. (FERMCO due date 7/1/93.)
9. If departments call in for a safety meeting topic in August, HAZCOM will be suggested. IH will have to develop information for each group on the chemicals they are handling. HAZCOM safety meetings are not mandatory at this time. (FERMCO due date was 6/1/93. A letter was to be written by this date requiring one safety meeting per year to be devoted to HAZCOM.)
10. IH also indicated they currently had no system for tracking employees who had been trained.
11. If IH can not obtain MSDSs from the vendor, neither IH, nor any other group, are currently writing MSDSs for the site. Therefore, chemicals are on site without MSDSs, and there is no system for developing these if they can not be obtained from the vendor.
12. IH would like to get rid of the chemicals no longer being used on site, but there is no program in place to do this at the present time. (FERMCO due date was 5/1/93.)

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Comment S (Cont.)

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13. No system has been set up to revise MSDSs on a regular schedule nor a system set up to assure maintenance of the MSDS binders. (FERMCO's due date for both was 6/1/93.)
14. There is no system developed to write MSDSs for chemicals generated on-site. Even though employees have been exposed to fly ash during boiler plant operations, no MSDS exists for fly ash at this time.
15. FERMCO's training department is developing a "boiler plate" Task-Specific Job Briefing training program for 22 different areas on-site. These will include the MSDSs for each different area. The "boiler plate" program will include some specific training on the various sections of an MSDS and is expected to be completed for all 22 areas by the end of September 1993. A "draft" copy of the "boiler plate" program is attached. I understand a section on chemical families and storage compatibilities will be added before it is finalized. (FERMCO due date 7/1/93.)

It is anticipated that Daryl Miller will issue a letter requiring annual HAZCOM training when the 22 area programs are completed. The training will be given by the supervisor using the "boiler plate" program and the employees asked to sign an attendance roster for tracking purposes. (FERMCO due date 6/1/93.)

16. Attached is a portion of the recent ESH report on the site HAZCOM Program. It gives additional details of findings at several MSDS stations, MSDS availability to contractor, the potential OSHA penalty for non-compliance, etc.

SUMMARY AND RECOMMENDATIONS

The overall site HAZCOM Program is not in compliance with the current OSHA Standard (29 CFR 1910.1200), nor the site document Chemical Hazard Communication Program (RM-2086). Most of FERMCO's internal timeline dates have not been met.

1. Updating of the MSDSs at the individual stations, as is currently done, will always be a very labor-intensive operation. A site-wide computer system for accessing MSDSs should be investigated.
2. A system/program should be developed to remove unknown/unlabeled chemicals and no longer used chemicals from the site in a scheduled time frame.
3. IH needs to review all POs to assure chemicals coming into the site have MSDSs.

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Comment S (Cont.)

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4. The Receiving Department needs to have a written procedure on how they handle chemicals that arrive with no MSDS, and what paperwork is necessary to send chemicals back to a supplier.
5. The training programs need to be developed to specifically give adequate information on the terminology and use of the various sections of the MSDS. In a recent survey, OSHA identified that, even when MSDSs were available to employees, they did not understand the information presented on the sheets. This training must be documented.
6. If the supervisors will be providing the HAZCOM instruction, then they should be given separate training on the OSHA HAZCOM Standard and on the contents of the MSDS.
7. The laboratory inventory and MSDS Stations should be completed promptly.
8. The WEMCO document on HAZCOM (RM-2086) needs to be updated by FERMCO.
9. An on-site chemical tracking system is needed to fulfill the "cradle to grave" tracking requirement and determine the chemical movement between areas. (Modern Technologies has developed a system which is currently used at Wright-Patterson Air Force Base, which will be installed at 84 Air Force Bases around the country. FERMCO may wish to investigate this program.)
10. A better system for documenting and obtaining MSDSs from vendors should be developed. If a MSDS can not be obtained, the chemical needs to be disposed of or a MSDS developed by FERMCO.
11. A documented procedure should be instituted that assures contractors receive HAZCOM training and MSDSs for the hazardous chemicals they are working with.

I understand that Debbie Grant took a voluntary RIF in the last FERMCO staff reduction. Walt Mengel will be assuming responsibility for the site HAZCOM Program. Don Fleming indicated that he and Walt Mengel will be reviewing the entire program in the next few weeks.

Attachment

c: MTC-FES Program File

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Comment S (Cont.)

Attachment 2

DOE FORM 1375-2

United States Government

Department of Energy

Fernald Field Office

memorandum

DATE: OCT 20 1993
 OO E-0101-94

REPLY TO: FN:Youngmeyer
 ATTN OF:

SUBJECT: FISCAL YEAR 1994 ROADMAP

TO: Lenora J. Lewis, EM-10, FORS

Attached is the revised FY 1994 Roadmap submission for the Fernald Environmental Management Project (FEMP). This revision includes the Human Resource Projections and the Logic Diagrams, which were incomplete when the Roadmap Plan was submitted on October 1, 1993. A copy of this revision has been sent directly to the BDM Federal Roadmap Coordinator for distribution in Headquarters.

If you have any questions, please call Harley Youngmeyer at 513-648-3162.

WZ Murphy
 J. Phil Hamric *for*
 Manager

Attachment: As Stated

cc w/att:

- R. P. Whitfield, EM-40, FORS
- J. J. Fiore, EM-42, TREV
- K. A. Chaney, EM-424, TREV
- N. C. Kaufman, FERMCO



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Comment S (Cont.)

Fernald
Environmental
Management
Project

**Fiscal Year 1994
ROADMAP**

September 30, 1993

Prepared For The Department Of Energy By

Fernald Environmental Restoration Management Company

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Comment S (Cont.)

FY 1994 Roadmap
Regulatory Drivers

Regulation: 40 CFR Part 61/National Emission Standards for Hazardous Pollutants (NESHAP)

Regulating Authority: US EPA

Description: In general, NESHAP limits the emission of pollutants into the air. The requirements of 40 CFR Part 61 include the following:

1. Limit emissions of radionuclides (other than radon) to an effective dose of less than 10 mrem/yr to off-site residents.
2. Maintain continuous emission monitoring on any source (stack or vent) with a potential to emit more than 0.1 mrem/yr.
3. Receive approval for construction or modification of any facility with potential to emit more than 0.1 mrem/yr. Construction or modification conducted without approval on facilities that emit less than 0.1 mrem must be identified in annual report in the year it is completed.
4. Submit annual compliance demonstration report to the US EPA by June 30.
5. Limit the radon flux from any building, structure, pile, etc. used for internal storage or disposal of waste material containing radium to 20 pCi/m²s.
6. The flux standard does not apply during active remediation.

Status: In compliance

Regulation: 29 CFR 1910/Occupational Safety & Health Standards

Regulating Authority: Department of Labor

Description: 29 CFR 1910 ensures the safety and health of workers. It sets standards to prevent illness and injury, regulates employee exposure, and mandates that employees be informed of the dangers associated with any hazardous materials.

29 CFR 1910.120 also regulates safety and health training for employees at hazardous waste sites being cleaned up under CERCLA, in addition hazardous waste treatment, storage, and disposal operations conducted under RCRA. Training content and hour requirements are specified in the rule.

Status: In compliance

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Comment S (Cont.)

Attachment 3

AFFIDAVIT

1. My name is Robert Schwab. I am President of the Fernald Atomic Trades and Labor Council ("FAT&LC"). I have worked at the Fernald site since May of 1968.

2. I have worked at the site as a millwright. The work I have performed includes stripping buildings during dismantlement, and size reduction. (when buildings or equipment are torn down, they must be reduced in size for disposal).

3. In addition to President, I have served as FAT&LC'S health and safety director, and have held other FAT&LC offices.

4. I gave deposition testimony in this case on _____. A copy of my deposition is not presently available.

5. I understand that FERMCO intends to subcontract out the work of dismantling and demolishing Plant 7, a building on the site. FAT&LC members have long experience in dismantling, decontamination, and demolition (including asbestos abatement).

6. FAT&LC has examined the tasks that will be required in the dismantling and demolition of Plant 7, as defined by FERMCO. The results of this analysis are shown in Attachment I to this affidavit. As that document shows, literally dozens of the tasks involve work that can be performed by FAT&LC members, including pipefitters, welders, decontaminators, hazardous waste technicians, and motor vehicle operators.

7. In fact, the FAT&LC analysis confirms that many tasks in Plant 7 dismantling and demolition are within the capabilities of the FAT&LC members who were laid off in October. For example, the lay off included decontaminators, as well as welders, pipefitters and millwrights.

8. FAT&LC has told FERMCO, through the subcontract review committee (SRC), that its members, including laid off members, are capable of performing the work that will be required in the dismantling/decontamination/demolition of Plant 7. FAT&LC has stated that its members could perform the work at a lower cost than alternatives. FERMCO has indicated no interest in allowing FAT&LC members to perform the work.

9. As President of FAT&LC I have been informed by both salaried and hourly employees of potentially serious health and safety violations. As I stated at greater length in my deposition, in the past half year or so, these include:

a) I have been told that subcontractors are issuing their own radioactive work permits (RWPs) without required approval by radtechnicians.

b) I have been told that subcontractors have been directed not to stop work unless there is immediate threat to life or bodily injury. For example, in the work at the Plant 1 silo during a period where outside temperature was in the 90 degree range, workers in

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Comment S (Cont.)

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heavy suits were not permitted to get out of the suits to take rest breaks provided for by standard practice.

c) I have learned that the Company (FERMCO), in a departure from long-standing practice, ceased informing workers of bomb threats. (I learned of this when a reporter contacted us for comments on a threat, which we had not been given notice of).

10. During the Plant 1 silo incident FAT&LC members complained that the subcontractor (Martech) wanted FAT&LC members to remain in their suits, because subcontractor employees were doing so. FAT&LC sought to discuss procedures at a joint labor management meeting with FERMCO. I chaired this meeting for labor, Mr. Weatherred of FERMCO chaired the meeting for management. At the meeting Mr. Weatherred said that FAT&LC member were taking too long breaks. He told us that he was getting tired of grievances, and told us if we continued to file grievances we would not be there to do the work—it would be subcontracted. This statement is reflected in the minutes of the meeting.

11. In response to FAT&LC's expression of amazement that the bomb-notification policy had been altered, FERMCO promised, during the summer, that it would provide us with a new procedure. It has not yet done so.

FURTHER AFFIANT SYETH NOT.

Robert Schwab
Robert Schwab

Subscribed and sworn to before me
this 20 day of November 1993

Victoria L. Power
Notary Public

My commission expires:

VICTORIA L. POWER
NOTARY Public, State of Ohio
My Commission expires March 21, 1995

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Comment S (Cont.)

Attachment 4

ADMINISTRATION DIVISION
INDUSTRIAL REALTIONS DEPARTMENTWEEKLY SIGNIFICANT ITEMS
WEEK ENDING July 21, 1993

SIGNIFICANT ITEMS

The Fernald Atomic Trades and Labor Council (FATLC) alleges that FERMCO management is not abiding by a 1991 arbitration decision. The decision states who is authorized to drive a rental truck used by groundwater sampling. IR maintains that the ruling has not been violated.

Joint Labor-Management Committee met on July 15 to discuss various issues which included: Plant 1 silo, Plant 7 project, Smoking Policy, CRU3 Sampling, Applied Environmental Remediation Training, Work Time (start/quit, breaks, lunch), chemical unit employees operating "standup" fork lifts, chemical unit employees performing remediation of streets, and welder qualifications. Representatives from Construction were also present at the meeting. FERMCO management conveyed their concerns over the perception of the Fernald Atomic Trades and Labor Council's (FATLC) past and present performance and stressed management's concern that any future work for the FATLC will depend on their ability to perform without grievances, without abuse of non-productive time, and with efficiency.

Met with Security to discuss the computerization of the procedure used to report off by the represented workforce. Currently, when a represented employee reports off, they call the Communications Center who log the call as well as complete a form in triplicate that is distributed to interested parties. The computerization of this procedure will eliminate the form and cut down the communication time of the employee's absence. This will represent a cost savings, which is being calculated, for both Security and Industrial Relations.

OTHER IMPORTANT ISSUES

Coordinated a tour for senior executives of Indianapolis based Hubert, Hunt & Nichols Construction, a leading construction firm in the United States. They are considering bidding on upcoming packages at the FEMP. IR met with these representative to address questions regarding various aspects of the ERM mission.

Conducted a transition meeting with employees of Rust Construction and it's successor contractor, Wise. IR is making every effort to assist both Wise and Rust during the transition in order to insure minimum disruption. IR has arranged a meeting between Wise Construction and the Greater Cincinnati Building and Construction Trades Council (GCBCTC) to facilitate a smooth transition of the Union work force to the new Labor Broker.

ITEMS AWAITING DOE RESPONSE

ITEMS DOE HAS RESPONDED ON

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Comment S (Cont.)

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Attachment 5



P.O. Box 398704 Cincinnati, Ohio 45239-8704 (513) 738-6

G-5408

August 23, 1993

U. S. Department of Energy
Fernald Environmental Management Project
Letter No. C:OP:93-1242

Mr. Raymond J. Hansen, Acting Manager
DOE Field Office, Fernald
P. O. Box 398705
Cincinnati, Ohio 45239-8705

Dear Mr. Hansen:

CONTRACT DE-AC05-92OR21972, COST SAVINGS SUGGESTIONS

Reference: DOE-2750-93 (17AUG93)

Attached in accordance with the referenced request are 20 cost savings/avoidance suggestions. These are provided for your use in responding to Assistant Secretary Grumbly's Task Force on Cost Reductions. A copy of the Word Perfect file has been forwarded to Harley Youngmeyer by EMAIL in accordance with the DOE Headquarters request.

Sincerely,

N. C. Kaufman
President

NCK:ccl
Attachment

- c: Robert Mendelsohn, DOE Contract Specialist
- J. A. Rasile
- J. W. Thiesing
- C. C. Little
- S. C. Cossel
- N. P. Reeves
- File Record Storage Copy 102.1

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Comment S (Cont.)

FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

OFFICE OF ENVIRONMENTAL RESTORATION AND WASTE MANAGEMENT
COST SAVINGS INITIATIVE

PROPOSED COST SAVINGS INITIATIVE:

Un-layer support services subcontracts, which will provide for direct charging of all work.

ANTICIPATED COST SAVINGS:

\$5-15 million per year

JUSTIFICATION FOR ANTICIPATED COST SAVINGS:

Eliminates duplication of work and multiplication of overhead.

Allows FERMCO to take direct control of work being done, minimizing layered management

STEPS NECESSARY TO ACHIEVE ANTICIPATED COST SAVINGS:

Evaluate all subcontracts, developing the "hierarchy" with respect to layering.

Evaluate efficacy of self-perform or consolidation of existing subcontracts.

Renegotiate or close existing subcontracts and issue new ones only where unavoidable.

POSSIBLE HINDRANCES TO ACHIEVING ANTICIPATED COST SAVINGS:

Insufficient specific capability in-house.

Insufficient control of new subcontracts.

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Comment S (Cont.)

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FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

OFFICE OF ENVIRONMENTAL RESTORATION AND WASTE MANAGEMENT
COST SAVINGS INITIATIVE

PROPOSED COST SAVINGS INITIATIVE:

Eliminate redundancies in DOE Order 4700.1 and EPA requirements, including integration of 4700.1/CERCLA/RCRA/NEPA

ANTICIPATED COST SAVINGS:

Over \$5M/year for five years of Conceptual Design Reports alone

Others in the progress of being developed.

JUSTIFICATION FOR ANTICIPATED COST SAVINGS:

Based on just one CERCLA/RCRA Unit, (CRUI), savings to eliminating the CDRs in planning in \$3.5M.

STEPS NECESSARY TO ACHIEVE ANTICIPATED COST SAVINGS:

Evaluate all programs for duplications (e.g., CDR reports and RI/FS)

Develop recommendations based on purpose of redundant activities

Obtain approval for changes

NOTE: The results of this effort can be applied to DOE nationwide.

POSSIBLE HINDRANCES TO ACHIEVING ANTICIPATED COST SAVINGS:

Determining who has authority in DOE to approve changes.

Obtaining DOE Approval

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Comment S (Cont.)

FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

OFFICE OF ENVIRONMENTAL RESTORATION AND WASTE MANAGEMENT
COST SAVINGS INITIATIVE

PROPOSED COST SAVINGS:

Reduction in sampling and analytical costs associated with operation of the VOC wastewater treatment system.

ANTICIPATED COST SAVINGS:

\$21 Million

JUSTIFICATION FOR ANTICIPATED COST SAVINGS:

Cost of each sampling and analytical activity, and the number of samples and analyses eliminated

STEPS NECESSARY TO ACHIEVE ANTICIPATED COST SAVINGS:

US EPA and Ohio EPA Approval (obtained)

Determining those activities that can be eliminated

Revising procedures

POSSIBLE HINDRANCES TO ACHIEVING ANTICIPATED COST SAVINGS:

None identified.

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Comment S (Cont.)

FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

OFFICE OF ENVIRONMENTAL RESTORATION AND WASTE MANAGEMENT
COST SAVINGS INITIATIVE

PROPOSED COST SAVINGS:

Micropurging as a new ground water sampling technique. Under certain conditions, this technique can collect samples much more economically than previous methods.

ANTICIPATED COST SAVINGS:

\$300,000 per year

JUSTIFICATION FOR ANTICIPATED COST SAVINGS:

Cost saving from trial existing wells outfitted with Micropurging equipment.

NOTE: This technique can be applied nationwide to DOE

STEPS NECESSARY TO ACHIEVE ANTICIPATED COST SAVINGS:

Evaluate conditions at each well to determine where the technique is viable.

Initiate technique

POSSIBLE HINDRANCES TO ACHIEVING ANTICIPATED COST SAVINGS:

None identified

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Comment S (Cont.)

FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

OFFICE OF ENVIRONMENTAL RESTORATION AND WASTE MANAGEMENT
COST SAVINGS INITIATIVE

PROPOSED COST SAVINGS:

Using standard analytical methods in the Sitewide CERCLA Quality Assurance Project Plan (SCQ).

ANTICIPATED COST SAVINGS:

\$7 Million per year

JUSTIFICATION FOR ANTICIPATED COST SAVINGS:

Cost of non-standard methods compared to standard methods

Number of analyses

Elimination of one round of competitive bidding using standard methods.

NOTE: this is the first instance where the US EPA has sanctioned performance-based methods for CERCLA work. These radiochemical standards have set precedent and could be adopted DOE-wide.

STEPS NECESSARY TO ACHIEVE ANTICIPATED COST SAVINGS:

DOE Approval (Obtained)

Put into contracts (partially complete)

POSSIBLE HINDRANCES TO ACHIEVING ANTICIPATED COST SAVINGS:

None identified.

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Comment S (Cont.)

FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

OFFICE OF ENVIRONMENTAL RESTORATION AND WASTE MANAGEMENT
COST SAVINGS INITIATIVE

PROPOSED COST SAVINGS:

Eliminate unnecessary analyses, based on a reevaluation of monitoring requirements for surface water at the Great Miami River and Paddy's Run, water at manholes, and the general sump.

ANTICIPATED COST SAVINGS:

\$35,000 per year

JUSTIFICATION FOR ANTICIPATED COST SAVINGS:

Eliminate 3,600 analyses
Using laboratory resources more efficiently
Reduced waste

STEPS NECESSARY TO ACHIEVE ANTICIPATED COST SAVINGS:

Complete analysis
Obtain approval
Revise sampling plans

POSSIBLE HINDRANCES TO ACHIEVING ANTICIPATED COST SAVINGS:

None identified.

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Comment S (Cont.)

FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)OFFICE OF ENVIRONMENTAL RESTORATION AND WASTE MANAGEMENT
COST SAVINGS INITIATIVEPROPOSED COST SAVINGS:

Redevelop Site Access and Compliance Training Program at FEMP. Training to be accomplished in half the time and feature performance-based examination which is more effective than the old method of open book/open note testing.

ANTICIPATED COST SAVINGS:

Approximately 1,000 workers per year equates to an average of about \$2.5 Million per year.

JUSTIFICATION FOR ANTICIPATED COST SAVINGS:

\$2000 per general site worker. \$2,640 per limited site worker, and \$3,440 per administrative workers.

STEPS NECESSARY TO ACHIEVE ANTICIPATED COST SAVINGS:

Revise training
Implement new training program.

POSSIBLE HINDRANCES TO ACHIEVING ANTICIPATED COST SAVINGS:

None identified.

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Comment S (Cont.)

FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

OFFICE OF ENVIRONMENTAL RESTORATION AND WASTE MANAGEMENT
COST SAVINGS INITIATIVE

PROPOSED COST SAVINGS:

Use wastewater exclusion to reclassify three water treatment surface impoundments from Hazardous Waste Management Units (HWMU) to Solid Waste Management Units (SWMU).

ANTICIPATED COST SAVINGS:

Under evaluation

JUSTIFICATION FOR ANTICIPATED COST SAVINGS:

Costs associated with HWMUs versus costs of SWMUs.

STEPS NECESSARY TO ACHIEVE ANTICIPATED COST SAVINGS:

- Complete sampling and analyses
- Answer unresolved characterization issues.
- Obtain reclassification concurrence from EPA.

POSSIBLE HINDRANCES TO ACHIEVING ANTICIPATED COST SAVINGS:

Negative answer to unresolved characterization issues. EPA may not concur with the process.

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Comment S (Cont.)

FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

OFFICE OF ENVIRONMENTAL RESTORATION AND WASTE MANAGEMENT
COST SAVINGS INITIATIVE

PROPOSED COST SAVINGS:

Decrease the number of inspections for drummed low-level waste that does not contain RCRA hazardous waste.

ANTICIPATED COST SAVINGS:

Approximately \$21,000 Annually

JUSTIFICATION FOR ANTICIPATED COST SAVINGS:

Reduction in inspections from daily to bi-weekly
Cost for inspection personnel

STEPS NECESSARY TO ACHIEVE ANTICIPATED COST SAVINGS:

Identify with certainty the non-RCRA hazardous waste drums
Revise procedures.

POSSIBLE HINDRANCES TO ACHIEVING ANTICIPATED COST SAVINGS:

None identified.

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Comment S (Cont.)

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FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

**OFFICE OF ENVIRONMENTAL RESTORATION AND WASTE MANAGEMENT
COST SAVINGS INITIATIVE**

PROPOSED COST SAVINGS:

Establish an audit management program to manage audits from the planning stage through the closure, including coordinated scheduling of DOE-HQ audit visits, audit report consolidations, improved protocols, and coordination with other audit agencies.

ANTICIPATED COST SAVINGS:

Under evaluation

JUSTIFICATION FOR ANTICIPATED COST SAVINGS:

Probably the best area of opportunity for oversight functions, since there appears to be agreement between auditing organizations to try to improve audit management.

STEPS NECESSARY TO ACHIEVE ANTICIPATED COST SAVINGS:

- Complete prototype program (in progress)
- Obtain DOE approval
- Implement program

POSSIBLE HINDRANCES TO ACHIEVING ANTICIPATED COST SAVINGS:

Decide who can/will approve recommendations for prototype. Obtaining support of DOE-HQ organizations (turf battles).

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Comment S (Cont.)

FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

OFFICE OF ENVIRONMENTAL RESTORATION AND WASTE MANAGEMENT
COST SAVINGS INITIATIVE

PROPOSED COST SAVINGS INITIATIVE:

The proposed cost savings is to reduce lease costs and facility operating expenses while enhancing productivity by consolidating the majority of FERMCO's work force in a single off site office facility to be constructed using capital from a non-DOE source and leased back for the life of the project. The proposed facility would be constructed to FERMCO's requirements by a developer who will lease back to FERMCO for a 10 year period during which he will recoup his investment.

ANTICIPATED COST SAVINGS:

\$1,000,000 over the life of the project.

JUSTIFICATION FOR ANTICIPATED COST SAVINGS:

A detailed engineering analyses has been conducted evaluating facility requirements for the proposed off site facility as well as the costs for maintaining and operating the existing facilities including necessary upgrades for long term use. An inquiry package was assembled and developers were solicited for interest. Based on responses and projected life cycle costs (excluding cost benefit of improved productivity), the projected cost savings appear to be viable. Cost to upgrade and maintain 30-40 year facilities scheduled for demolition greatly exceed the costs of constructing and leasing newer facilities in the vicinity of Fernald.

STEPS NECESSARY TO ACHIEVE ANTICIPATED COST SAVINGS:

DOE real estate function must be willing to give the developer certain freedom in construction of the facility which will make it commercially attractive when DOE and FERMCO no longer require use of the offices. Additionally DOE and FERMCO must be willing to sign a long term lease which provides the developer security in his investment and a reasonable return for use of the developers capital.

POSSIBLE HINDRANCES TO ACHIEVING ANTICIPATED COST SAVINGS:

Current government regulations are overly restrictive for long term leases and rental of facilities. Developers have no incentive to construct DOE facilities for low returns, short leases and which are not commercially viable for future users. DOE's real estate function needs to be more liberal in interpreting current regulations governing real estate transactions and funding, or seek changes in the law.

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Comment S (Cont.)

FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)OFFICE OF ENVIRONMENTAL RESTORATION AND WASTE MANAGEMENT
COST SAVINGS INITIATIVEPROPOSED COST SAVINGS INITIATIVE:

The proposed cost savings is to immediately and fully depreciate all Fernald facilities, spare parts, equipment and machinery, feedstock and remaining product/by product facilitating disposal through excess, surplus and outright sales procedures.

ANTICIPATED COST SAVINGS:

\$1,000,000

JUSTIFICATION FOR ANTICIPATED COST SAVINGS:

Declaring all material as excess or scrap with no value allows relaxation of maintenance, tracking inventory costs and costs for plant upgrades necessary to keep value-less items operational or at a minimum, protected from further degradation under a contract which holds us accountable for loss in value of current assets. In a plant ultimately intended for demolition and disposal, it makes little sense to expend these costs when they only add to the ultimate disposal costs. This approach also provides the potential for waste management and recycle contractors to reduce their cost for dispositioning the site equipment if there is a possibility of decontamination and subsequent recycle or resale thus providing the possibility the contractor can profit if he can cost effectively recycle items. Adequate surveillance of all contaminated and hazardous property would be maintained.

STEPS NECESSARY TO ACHIEVE ANTICIPATED COST SAVINGS:

Systems to allow market based pricing of assets at sites scheduled for cleanup needs to be developed.

POSSIBLE HINDRANCES TO ACHIEVING ANTICIPATED COST SAVINGS:

Current property management systems are somewhat cumbersome in dealing with prompt disposal of contaminated sites. Waivers for NPL sites would help expedite the disposal process.

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Comment S (Cont.)

FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

OFFICE OF ENVIRONMENTAL RESTORATION AND WASTE MANAGEMENT
COST SAVINGS INITIATIVE

PROPOSED COST SAVINGS INITIATIVE:

Eliminate the annual requirement for preparation of the Energy Management Plan.

ANTICIPATED COST SAVINGS:

\$50 to 100 thousand annually

JUSTIFICATION FOR ANTICIPATED COST SAVINGS:

Preparation of an energy management plan is a carryover from a period associated with limited spinning reserves at many utilities coupled with national concern that conservation of electric and gas reserves was essential to the future survival of the US and its "cheap" energy economy. Concern that oil and gas reserves will disappear have greatly diminished at the same time that energy use at many of the DOE's facilities has dropped exponentially as processes are shut down with no intent to restart operations. Preparation of a plan which will have little or no impact on the costs of operating a fast declining facility serves no real benefit while requiring valuable human and financial resources to prepare plans which worry about power use by computers and light bulbs at a time when very inefficient steam plants are being operated to maintain obsolete facilities. The resources necessary to prepare the annual plan and monitor its implementation would no longer be required if the need for the plan is eliminated -- it is the cost of this labor and report production which will be saved.

STEPS NECESSARY TO ACHIEVE ANTICIPATED COST SAVINGS:

The DOE Order for this requirement should be eliminated or clarified to not apply to sites primarily involved in site remediation and shut down. FERMCO needs to justify the exemption for FEMP and obtain DOE approval to eliminate the plan and its requirements.

POSSIBLE HINDRANCES TO ACHIEVING ANTICIPATED COST SAVINGS:

Although energy use is a fraction of what it was when all facilities were fully operating, it is politically expedient to appear to be concerned with energy usage which is a popular theme with environmentalists who believe conservation is the solution to our problems. This societal perspective makes it difficult for DOE to focus on the more appropriate use for this money -- that of cleaning up the spreading contamination before it further invades our soils and water supplies. DOE must move beyond the less relevant societal pressures associated with the issue of energy use to the greater issue of mixed waste contamination and our stated intent to clean it up as soon as possible.

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Comment S (Cont.)

FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

OFFICE OF ENVIRONMENTAL RESTORATION AND WASTE MANAGEMENT
COST SAVINGS INITIATIVE

PROPOSED COST SAVINGS INITIATIVE:

Relax restrictions on disposal of DOE generated wastes at commercial facilities at such sites as Envirocare in Utah. This would allow immediate disposition of materials for which there is no current DOE site for disposal of mixed and other special wastes as well as allow increases in disposal of existing low level wastes beyond the limited quantities currently going to the NTS.

It would also allow for the efficient handling, transportation, and disposal of millions of cubic yards of LLW resulting from remediation of DOE sites like Fernald.

Commercial disposal costs are competitive with the REAL cost of disposal at DOE sites when all costs of disposal are considered as opposed to the artificially low rates charged by NTS to DOE generators.

ANTICIPATED COST SAVINGS:

Tens of millions depending upon relief granted and liability protection provided to shippers such as Fernald/FERMCO. Additional hundreds of millions for Fernald alone in cost savings for remediation waste disposal.

IUSTIFICATION FOR ANTICIPATED COST SAVINGS:

Significant costs are incurred daily for inspection and storage of mixed waste and other materials not suitable for NTS. Delays in shipping these wastes results in further degradation of drums resulting in increased surveillance, overpacks and ultimately an increased potential for leaks into the environment.

Disposal of future remediation wastes at licensed commercial facilities offers substantial savings in transportation and materials handling costs.

STEPS NECESSARY TO ACHIEVE ANTICIPATED COST SAVINGS:

DOE should immediately act to indemnify FERMCO and other site operators and approve shipment to commercial disposal facilities willing to accept DOE wastes.

POSSIBLE HINDRANCES TO ACHIEVING ANTICIPATED COST SAVINGS:

State politics, concerned environmentalists and others will immediately redirect their energies to closing the existing commercial facilities and otherwise block shipments to commercial sites for the same reasons they have tried to block shipments to other DOE facilities such as NTS and INEL. Commercial rates could increase exponentially if DOE does not retain its ability to dispose at its own sites. Without indemnification, site operators and FERMCO may continue to use government facilities because of the reduced risks of down stream liability for consequential damages in the event of disposal site failure.

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Comment S (Cont.)

FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)**OFFICE OF ENVIRONMENTAL RESTORATION AND WASTE MANAGEMENT
COST SAVINGS INITIATIVE****PROPOSED COST SAVINGS INITIATIVE:**

Reduce cycle time (e.g. monthly to quarterly) for testing of dosimetry (film) badges consistent with risk in various facilities. Reduce urinalyses and other physical testing consistent with worker risk. Reduce reporting requirements of worker exposure based on risk factors.

ANTICIPATED COST SAVINGS:

\$25-50 thousand per year for all tests at Fernald.

JUSTIFICATION FOR ANTICIPATED COST SAVINGS:

Costs of these programs are well documented and easily managed by controlling the performance of unnecessary tests. Not only are the tests themselves expensive but the costs of record keeping, protection of employee privacy and notification are reduced as well when cycle times are extended.

STEPS NECESSARY TO ACHIEVE ANTICIPATED COST SAVINGS:

Relax interpretation of regulatory guidelines and, if appropriate, revise regulations and/or the FERMCO Rad Manual based on reduced risk factor of a non-operating facility. DOE approval of proposed reductions may be necessary in some cases. FERMCO needs to evaluate the cost and risk factors of the alternatives, develop a proposal to DOE seeking their approval and revise the procedures prior to implementation.

POSSIBLE HINDRANCES TO ACHIEVING ANTICIPATED COST SAVINGS:

The appearance of indifference to worker exposures and public perception.
Need for regulatory acceptance of cycle time based on risk.

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Comment S (Cont.)

FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (FEMP)

**OFFICE OF ENVIRONMENTAL RESTORATION AND WASTE MANAGEMENT
COST SAVINGS INITIATIVE**

PROPOSED COST SAVINGS INITIATIVE:

Encourage craft work force to obtain required FERMCO site training as part of their prerequisite training prior to their being considered for future employment at the FEMP. In this approach, FERMCO does not incur labor costs of new-hire craft workers while they are being trained.

ANTICIPATED COST SAVINGS:

\$1.5-2.0 Million per year

JUSTIFICATION FOR ANTICIPATED COST SAVINGS:

By considering only workers from the bargaining units which are pre-trained, FERMCO avoids the 1-2 weeks of lost productivity experienced under previous approaches every time a new craft worker came on site. This can include OSHA, GET, respirator and radworker II training which would require in excess of 40 hours of training.

STEPS NECESSARY TO ACHIEVE ANTICIPATED COST SAVINGS:

This program has been implemented at the FEMP and will result in the out-year savings listed. Actual savings will depend on the turnover of craft workers and the hiring of new workers to replace those which depart.

POSSIBLE HINDRANCES TO ACHIEVING ANTICIPATED COST SAVINGS:

This can become an issue at any time during contract negotiations which are currently in progress.

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Comment S (Cont.)

FERNALD ENVIRONMENTAL MANAGEMENT PROJECT (TEMP)OFFICE OF ENVIRONMENTAL RESTORATION AND WASTE MANAGEMENT
COST SAVINGS INITIATIVEPROPOSED COST SAVINGS INITIATIVE:

Require all workers (or alternatively just subcontractors) to provide their own safety equipment (shoes only) and sweat garments and undergarments for wearing under the plant coveralls. At the present time these items are provided for all employees free of charge.

ANTICIPATED COST SAVINGS:

For subcontractors alone the cost savings associated with this proposal will be approximately \$500,000.

JUSTIFICATION FOR ANTICIPATED COST SAVINGS:

Although it is common practice to provide this equipment on many government sites, it is not necessarily common practice on private sector construction projects. In particular, subcontractors are almost always required to provide all of their own safety equipment and personal clothing. FERMCO would save original clothing costs, replacement costs, laundry costs and losses due to theft and abuse of company owned boots and clothing.

STEPS NECESSARY TO ACHIEVE ANTICIPATED COST SAVINGS:

Changes to union agreements may be required but otherwise this is a simple philosophic change in management by FERMCO and could be implemented immediately. As of 8/93 FERMCO will no longer issue safety shoes, glasses or hard hats to subcontractors. Undergarments may also be discontinued this fall.

POSSIBLE HINDRANCES TO ACHIEVING ANTICIPATED COST SAVINGS:

This could create a problem with the unions and could be perceived by the workers as a decreased emphasis on safety resulting in morale problems and a worsening of our current outstanding safety record. Only portions of this proposal could be implemented at Fernald without violating OSHA 29 CFR 1910. Additionally, the risk of needing to "buy" employees clothes which become contaminated may increase under this proposal.

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Comment T, U, & V

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1 safe and they will be productive, and they are
2 trained. It's a misconception that they are not
3 trained or they're not aware of the dangers of
4 radiation or construction activities.

5 We have also attempted to resolve
6 these issues in separate fashion whenever requested
7 by the Department of Energy, by the FERMCO Company,
8 or any third-party politicians. We'll continue to
9 be cooperative. We intend to protect our
10 traditional work, which is construction activities,
11 and we have no intent of performing duties that
12 rightfully belong to FATLC. Thank you.

13 MR. MORGAN: Thank you. Virginia
14 Least.

15 Virginia Least.

16 Lisa Crawford.

17 MS. CRAWFORD: I defer my time, I
18 will hand my comments in in written fashion.

19 MR. MORGAN: Thank you. Edwa Yocum.

20 MS. YOCUM: I defer my time and I
21 will hand my comments in in written fashion.

22 MR. MORGAN: Thank you. Are there
23 any others who would like to speak? Vicki.

24 MS. DASTILLUNG: Vicki Dastillung.

Spangler Reporting Services

PHONE (513) 381-3330 FAX (513) 381-3342.

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Comment W & X

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1 I won't wish to make any formal comments at this
2 time, but I do seem to feel that we do need the
3 30-day extension to the comment period, and I would
4 like to formally request that DOE provide us with a
5 Round Table or workshop on the EIS and NEPA process
6 as it relates to the OU-3 and the RI/FS process and
7 perhaps discuss with the public whether they would
8 need a Round Table or workshop of more detail on
9 the OU proposed plan. I would also like to ask
10 that the US EPA and Ohio EPA be included in those
11 meetings. Thank you.

12 MR. MORGAN: Thank you. Yes, sir.

13 MR. RICHARDSON: My name is Robert
14 Richardson, with Labor's Local Union 265. I didn't
15 sign up to speak, but I want to just for the
16 record, I want to submit a written statement.

17 MR. MORGAN: Thank you. Anyone
18 else?

19 MS. DUNN: I want to ditto what
20 Vicki said, and I will submit written comments.

21 MR. MORGAN: Thank you.

22 MS. CRAWFORD: FRESH dittos what
23 Vicki said.

24 MR. MORGAN: Thank you. Anyone

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Comment Y

FERMCO's baseline shows a significant reduction in manpower LOU3 that was just submitted to DOE. FERMCO hourly workforce declines from 150 to 20 hourly workers - This is reflected on page 44 of O.U. 3 volume 1 of Baseline

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Comment Z

1 else?

2 MR. MILLER: My name is Richard
 3 Miller. I would like to know whether there's going
 4 to be a public hearing on the finding of no
 5 significant impact for the public to be able to
 6 comment on that? I would like to know whether the
 7 environmental assessment is being performed
 8 separate from the environmental impact statement
 9 and why, and I would like to know why the finding
 10 of no significant impact was not incorporated in
 11 the discussion in the environmental assessment. In
 12 other words, why you're bifurcating the discussions
 13 since they are clearly interrelated. Thank you.

14 MR. MORGAN: Thank you. Anyone
 15 else? Going once, going twice, three times. Thank
 16 you. If anyone has any questions informally, we
 17 will remain here.

18 - - -
 19 MEETING CONCLUDED AT 9:50 P.M.

20 - - -

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381-3330

Spangler Reporting Services

PHONE (513) 381-3330 FAX (513) 381-3342

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APPENDIX C

ADMINISTRATIVE RECORD INDEX

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APPENDIX C

ADMINISTRATIVE RECORD INDEX

This appendix contains the listing of the documents and letters used to support the Operable Unit 3 Record of Decision for Interim Remedial Action. This listing represents the Administrative Record used in developing the selected remedy for OU3 interim remedial action. The documents detailed below are listed alphabetically.

1993 ANNUAL PROCEDURE UPDATES FOR REMOVAL ACTION NUMBERS 9, 12, AND 26
 Index #: R-022-204.1, R-020-204.12, R-030-204.4
 Document Date: 06/29/93
 From: DOE-FN
 To: EPA
 # of Pages: 2

1993 ANNUAL UPDATE OF PROCEDURAL DOCUMENTATION SUPPORTING FERNALD ENVIRONMENTAL MANAGEMENT PROJECT ASBESTOS REMOVALS (ASBESTOS PROGRAM) JUNE 1993
 Index #: R-030-204.5
 Document Date: 06/29/93
 From: DOE-FN
 To: EPA
 # of Pages: 300

ADDENDUM TO FMPC-2082 HISTORY OF FMPC RADIONUCLIDE DISCHARGES MARCH 1989
 Index #: G-000-101.7
 Document Date: 03/31/89
 From: WMCO
 To: DOE
 # of Pages: 22

ADDENDUM TO THE IMPROVED STORAGE OF SOIL & DEBRIS REMOVAL ACTION (RA) 17 WORK PLAN, REV. NO. 2
 Index #: R-028-204.6
 Document Date: 04/21/93
 From: DOE-FN
 To: EPA
 # of Pages: 20

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ANNUAL ENVIRONMENTAL REPORT FOR CALENDAR YEAR 1991

Index #: G-000-106.55
Document Date: 1991
From: WEMCO
To: DOE-FN
of Pages: 250

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ANNUAL WORK PROCEDURES UPDATE FERNALD ENVIRONMENTAL MANAGEMENT PROJECT SAFE SHUTDOWN REMOVAL ACTION NUMBER 12 JUNE, 1992

Index #: R-022-202.4
Document Date: 06/01/92
From:
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of Pages: 200

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APPLICATION TO SHIP WASTE TO THE NEVADA TEST SITE

Index #: R-020-104.1
Document Date: 11/01/92
From: WEMCO
To: DOE-FN
of Pages: 70

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APPROVAL OF EE/CA FOR REMOVAL ACTION 27

Index #: R-036-207.1
Document Date: 01/14/93
From: USEPA
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APPROVAL OF FEMP ASBESTOS ABATEMENT REMOVAL ACTION

Index #: R-030-207.3
Document Date: 09/02/92
From: OEPA
To: DOE-FN
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APPROVAL OF IMPROVED SOIL AND DEBRIS REMOVAL ACTION WORK PLAN (#17)

Index #: R-028-207.5
Document Date: 12/23/92
From: OEPA
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APPROVAL OF PHASE IV REMOVAL ACTIONS

Index #: G-000-708.57
Document Date: 02/16/93
From: OEPA
To: DOE-FN
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APPROVAL OF REMOVAL ACTION 9 - REMOVAL OF WASTE INVENTORIES

Index #: R-020-207.4
Document Date: 10/01/92
From: USEPA
To: DOE-FN
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APPROVAL OF REMOVAL ACTION 12 - SAFE SHUTDOWN PROGRAM

Index #: R-022-207.3
Document Date: 10/01/92
From: USEPA
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APPROVAL OF REMOVAL ACTION 13- PLANT 1 ORE SILOS WORK PLAN

Index #: R-019-207.4
Document Date: 05/15/92
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APPROVAL OF REMOVAL ACTION 15 SCRAP METALS PILE PROJECT PLAN

Index #: R-026-207.3
Document Date: 12/29/92
From: USEPA
To: DOE-FN
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APPROVAL OF REMOVAL ACTION 17 - IMPROVED STORAGE OF SOIL AND DEBRIS

Index #: R-028-207.3
Document Date: 09/30/92
From: USEPA
To: DOE-FN
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APPROVAL OF REMOVAL ACTION 24 PILOT PLANT SUMP WORK PLAN

Index #: R-031-207.4
Document Date: 11/19/92
From: USEPA
To: DOE-FN
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APPROVAL OF REMOVAL ACTION 25: NITRIC ACID TANK CAR WORK PLAN

Index #: R-035-207.5
Document Date: 03/04/93
From: USEPA
To: DOE-FN
of Pages: 1

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APPROVAL OF REMOVAL ACTION 26 - REVISED COMPILATION OF EXISTING DOCUMENTATION SUPPORTING ASBESTOS ABATEMENT

Index #: R-030-207.4
Document Date: 09/25/92
From: USEPA
To: DOE-FN
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APPROVAL OF REMOVAL ACTION 28 WORK PLAN

Index #: R-032-207.2
Document Date: 08/05/93
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APPROVAL OF REVISED OU #3 RI/FS WORK PLAN RTC

Index #: U-005-305.12
Document Date: 04/14/93
From: USEPA
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APPROVAL OF REVISED REMOVAL ACTION 17 - WORK PLAN AND ADDENDUM

Index #: U-028-207.8
Document Date: 06/10/93
From: USEPA
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APPROVAL OF REVISED REMOVAL ACTION 19 WORK PLAN

Index #: R-037-207.4
Document Date: 07/29/93
From: USEPA
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APPROVAL OF THE EE/CA FOR REMOVAL ACTION #17 - MANAGEMENT OF CONTAMINATED STRUCTURES

Index #: R-036-207.2
Document Date: 01/19/93
From: OEPA
To: DOE-FN
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APPROVAL OF THE FINAL O.U.3 RI/FS WORK PLAN ADDENDUM

Index #: U-005-305.14
Document Date: 06/08/93
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To: DOE-FN
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APPROVAL OF THE NITRIC ACID TANK CAR REMOVAL ACTION WORK PLAN

Index #: R-035-207.5

Document Date: 05/26/93

From: OEPA

To: DOE-FN

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APPROVAL OF THE SITE-WIDE CHARACTERIZATION REPORT

Index #: G-000-105.53

Document Date: 05/28/93

From: USEPA

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APPROVAL PLANT 1 ORE SILO R.A.W.P.

Index #: R-019-207.6

Document Date: 08/10/92

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APPROVAL WORK PLAN R.A. #14

Index #: R-015-207.6

Document Date: 07/29/92

From: OEPA

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ASBESTOS SURVEY & ASSESSMENT FOR THE FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Index #: R-030-101.1

Document Date: 02/28/92

From: DIAGNOSTIC ENGINEERING

To: WEMCO

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ASSESSMENT OF RADIATION DOSE AND CANCER RISK FOR EMISSIONS FROM 1951 THROUGH 1984

Index #: G-000-101.23

Document Date: 08/01/89

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BIOLOGICAL AND ECOLOGICAL SITE CHARACTERIZATION OF THE FEED MATERIALS PRODUCTION CENTER JANUARY 1990

Index #: G-000-105.16
Document Date: 01/02/90
From: MIAMI UNIVERSITY
To: DOE-FMPC
of Pages: 543

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BIOLOGICAL SAMPLING ANALYSIS AND RESOURCES REPORT MARCH 1990

Index #: G-000-302.5
Document Date: 03/01/90
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CATEGORICAL EXCLUSION DETERMINATION ASBESTOS ABATEMENT FOR CALENDAR YEARS 1992 AND 1993 NEPA DOC. NO. 362

Index #: R-030-108.1
Document Date: 11/12/91
From: DOE-FN
To: DOE-HQ
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CATEGORICAL EXCLUSION (CX) DETERMINATION PLANT 1 ORE SILOS REMOVAL ACTION, NEPA DOC. NO. 363

Index #: R-019-108.1
Document Date: 01/22/92
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CATEGORICAL EXCLUSION DETERMINATION PLANT 2/3 URANYL NITRATE HEXAHYDRATE REMOVAL ACTION NEPA DOC. NO. 358

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CATEGORICAL EXCLUSION DETERMINATION - PLANT 7 DISMANTLING, REMOVAL ACTION NO. 19, NEPA DOC. NO. 421

Index #: R-037-108.1
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CONSENT AGREEMENT AS AMENDED UNDER CERCLA SECTIONS 120 AND 106(a) SEPTEMBER 1991

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Index #: G-000-704.1
Document Date: 12/02/88
From: STATE OF OHIO
To: DOE-FMPC
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CONTAMINATED SOILS ADJACENT TO THE SEWAGE TREATMENT PLANT INCINERATOR REMOVAL ACTION 14 WORK PLAN ADDENDUM REVISION 2 JULY 1993

Index #: R-015-204.10
Document Date: 07/93
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CONTAMINATION AT THE FIRE TRAINING FACILITY REMOVAL ACTION WORK PLAN AND CLOSURE PLAN INFORMATION AND DATA PACKAGE DRAFT JUNE 1993

Index #: R-032-204.2
Document Date: 06/29/93
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DECONTAMINATION AND DISMANTLEMENT OF BUILDINGS AND STRUCTURES AT FERNALD FACT SHEET FOR THE PROPOSED PLAN/ENVIRONMENTAL ASSESSMENT FOR INTERIM REMEDIAL ACTION DECEMBER 1993

Index #: U-005-1006.3
Document Date: 12/93
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DOCUMENTATION SUPPORTING FERNALD ENVIRONMENTAL MANAGEMENT PROJECT ASBESTOS ABATEMENT REMOVAL ACTION NO. 26 ASBESTOS PROGRAM PROCEDURES

Index #: R-030-204.1
Document Date: 05/19/92
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DOCUMENTATION SUPPORTING FERNALD ENVIRONMENTAL MANAGEMENT PROJECT
REMOVAL OF WASTE INVENTORIES LOW LEVEL RADIOACTIVE WASTE AND THORIUM
MANAGEMENT

Index #: R-020-204.8

Document Date: 06/01/92

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DOCUMENTATION SUPPORTING FERNALD ENVIRONMENTAL MANAGEMENT PROJECT
REMOVAL OF WASTE INVENTORIES LOW LEVEL RADIOACTIVE WASTE AND THORIUM
MANAGEMENT

Index #: R-020-204.13

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DOCUMENTATION SUPPORTING FERNALD ENVIRONMENTAL MANAGEMENT PROJECT
REMOVAL OF WASTE INVENTORIES REMOVAL ACTION NO. 9

Index #: R-020-202.4

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DOCUMENTATION SUPPORTING FERNALD ENVIRONMENTAL MANAGEMENT PROJECT
REMOVAL OF WASTE INVENTORIES THORIUM MANAGEMENT PROCEDURES "TO BE
OVERPACKED"

Index #: R-020-204.6

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DOCUMENTATION SUPPORTING FERNALD ENVIRONMENTAL MANAGEMENT PROJECT
REMOVAL OF WASTE INVENTORIES THORIUM MANAGEMENT PROCEDURES "TO BE
OVERPACKED" REMOVAL ACTION

Index #: R-020-204.1

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DOCUMENTATION SUPPORTING FERNALD ENVIRONMENTAL MANAGEMENT PROJECT SAFE SHUTDOWN REMOVAL ACTION NUMBER 12 PART ONE

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DOCUMENTATION SUPPORTING FERNALD ENVIRONMENTAL MANAGEMENT PROJECT SAFE SHUTDOWN REMOVAL ACTION NUMBER 12 PART TWO

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DOCUMENTATION SUPPORTING FERNALD ENVIRONMENTAL MANAGEMENT PROJECT SAFE SHUTDOWN REMOVAL ACTION NUMBER 12 JUNE 1993

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DOE ENVIRONMENTAL ASSESSMENT OF THE PROPOSED LOW-LEVEL WASTE PROCESSING AND SHIPMENT SYSTEM

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DOSE AND RISK ASSESSMENTS IN SUPPORT OF THE OPERABLE UNIT 3 PROPOSED PLAN FOR INTERIM REMEDIAL ACTION (ENVIRONMENTAL DIMENSIONS INC - EDI)

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ENGINEERING EVALUATION/COST ANALYSIS, K-65 SILOS REMOVAL ACTION 15
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FEDERAL REGISTER PART II - ENVIRONMENTAL PROTECTION AGENCY 40 CFR PART 27
300 NATIONAL PRIORITIES LIST OF UNCONTROLLED HAZARDOUS WASTE SITES; FINAL 28
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Index #: G-000-101.52 30
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FEED MATERIALS PRODUCTION CENTER RI/FS OPERABLE UNIT 3 SCOPE OF WORK 35
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FINAL REPORT: ELECTROFISHING SURVEY OF THE GREAT MIAMI RIVER

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6**FY-94 COST ESTIMATE FOR THE OU3 PROPOSED PLAN/ENVIRONMENTAL ASSESSMENT DRAFT**

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To: DOE-FN

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13**HISTORY OF FMPC RADIONUCLIDE DISCHARGES, FMPC-2082, (TABLES 52 - 87)**

Index #: G-000-101.4

Document Date: 1987

From: WMCO

To: DOE-ORO

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19**IMPROVED STORAGE OF SOIL AND DEBRIS REMOVAL ACTION 17 WORK PLAN FEBRUARY 1993 REVISION NO. 2**

Index #: R-028-204.7

Document Date: 04/21/93

From: DOE-FN

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26**LOW LEVEL RADIOACTIVE WASTE SHIPPING DOCUMENTATION TO NEVADA TEST SITE REMOVAL OF WASTE INVENTORIES REMOVAL ACTION NUMBER 9 JANUARY 1992 - JUNE 1992 VOLUME 1**

Index #: R-020-712.1

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