



State of Ohio Environmental Protection Agency

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OCT 19 11 43 AM 1995 P.O. Box 1049
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October 4, 1995

Re: Director's Final Findings & Orders
United States Department of Energy
Fernald Environmental Management Project
Cincinnati, Ohio
Federal Facility Compliance Act of 1992
Site Treatment Plan

CERTIFIED MAIL

Mr. J. Phil Hamric
Manager, Ohio Field Office
United States Department of Energy
P.O. Box 3020
Miamisburg, Ohio 45343-3020

Dear Mr. Hamric:

Transmitted herewith are Final Findings & Orders of the Director concerning the matter indicated.

Sincerely yours,

Thomas E. Crepeau, Manager
Data Management Section
Division of Hazardous Waste Management

TEC/dhs

cc: Mark Navarre, Legal Supervisor
Michael Savage, Asst. Chief, DHWM
Tom Winston, Chief, SWDO
Paul Pardi, DHWM, SWDO
Stephanie Bogart, Esq., Ohio Field Office, USDOE
John Sattler, Fernald Env. Management Project, USDOE
Don Ofte, President, Fernald Environmental Restoration
Management Corporation

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George V. Voinovich, Governor
Nancy P. Hollister, Lt. Governor
Donald R. Schregardus, Director



Issue Date: October 4, 1995

Effective Date: October 4, 1995

BEFORE THE
OHIO ENVIRONMENTAL PROTECTION AGENCY

In the Matter Of:

United States Department of Energy : Director's Final
Fernald Environmental Management Project : Findings and Orders
P.O. Box 389705 :
Cincinnati, Ohio 45239 :

Respondent

It is hereby agreed by and among the parties hereto as follows:

I. JURISDICTION

These Director's Final Findings and Orders ("Orders") are issued to the United States Department of Energy ("Respondent" or "DOE") pursuant to the authority vested in the Director of Environmental Protection ("Director") under Chapters 3734. and 3745. of the Ohio Revised Code ("ORC").

II. PARTIES BOUND

These Orders shall apply to and be binding upon the Respondent, its assigns, and successors in interest. No change in ownership or operation of the Facility will in any way alter the Respondent's responsibilities under these Orders. Except as otherwise expressly provided herein, the Respondent's obligations under these Orders may be altered only by written approval of the Director.

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By: Mary Casin Date 10-4-95

III. DEFINITIONS

Unless otherwise stated below, all terms used in these Orders shall have the same meaning as used in Chapter 3734. of the ORC and the regulations promulgated thereunder.

Milestone:

A "milestone" is a fixed, firm, and enforceable date as set forth in the approved STP. A milestone is a requirement and is enforceable. Milestones correspond to the categories of milestones set forth in Order 1.B.

Revision:

A "revision" is a change to the approved STP which requires, for those affected portions of the STP, public notice by the Ohio EPA of availability of the revised STP, and consultation by Ohio EPA with affected states and U.S. EPA, pursuant to these Orders and Section 105 of the Federal Facility Compliance Act, 42 U.S.C. Section 6939c(b)(4). A revision shall include: (a) the addition or deletion of a treatment facility or a treatment technology with respect to the approved STP; and (b) an extension of milestone for a period greater than sixty (60) days. However, changes in waste volume, the addition or deletion of wastes or waste types, extensions of milestones for a period less than or equal to sixty (60) days, or changes to target dates shall not, by themselves, constitute revisions.

Target Date:

A "target date" is an anticipated completion date for a task that has not been designated as a milestone and shall be a goal for accomplishing a designated task. A target date is not a requirement and is not enforceable. Target dates correspond to the categories of target dates set forth in Order 1.B.

Unavoidable Delay:

An event of "unavoidable delay" means any event beyond the control of DOE which prevents or delays performance of any obligation required by the approved STP and these Orders, and which could not be overcome by due diligence on the part of DOE.

Funding Availability or Available Funds:

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By: Marcus Carwin Date 10-4-95

"Funding Availability" or "Available Funds" means: (1) DOE-FEMPS Environmental Restoration (ER) budget allocation, for determinations with respect to milestones for the current FY; and (2) DOE-FEMPS Environmental Management (EM) budget allocation (i.e. ER and Waste Management budget allocation or EM target funding level for the Facility), for determinations with respect to other schedules (e.g. FY + 1, FY + 2 milestones).

IV. FINDINGS OF FACT

1. The United States Department of Energy ("Respondent or DOE") owns and operates the Fernald Environmental Management Project ("FEMP"), a former uranium metal production facility, located near Fernald, Ohio in Hamilton and Butler Counties, approximately twenty (20) miles northwest of the city of Cincinnati ("Facility").
2. The Fernald Environmental Restoration Management Corporation ("FERMCO"), a California corporation licensed to do business in the State of Ohio on April 13, 1992, co-operates the Facility.
3. The Respondent is a "person" as defined in Sections 1.59 and 3734.01 of the ORC and rule 3745-50-10 of the Ohio Administrative Code ("OAC").
4. At the Facility, the Respondent generates "hazardous waste" as that term is defined by Section 3734.01 of the ORC and rules 3745-50-10 and 3745-51-03 of the OAC.
5. Mixed waste is defined as waste containing both a hazardous waste subject to the Resource Conservation and Recovery Act of 1976, 42 U.S.C. Section 6901 et seq, as amended ("RCRA"), and a source, special nuclear, or by-product material subject to the Atomic Energy Act of 1954, 42 U.S.C. Section 2011 et seq, as amended ("AEA").
6. The Ohio EPA received final authorization from the U.S. Environmental Protection Agency to regulate the hazardous waste component of mixed waste on June 30, 1989 (54 FR 27173).
7. At the Facility, Respondent has generated, continues to generate, and Respondent is storing mixed wastes subject to OAC rules 3745-59-30 (solvent wastes), 3745-59-32 (California list wastes), 3745-59-33 (first third wastes), 3745-59-34 (second third wastes), and 3745-59-35 (third third wastes),

hereinafter referred to as land disposal restricted ("LDR") mixed wastes.

8. The Respondent has represented to the Ohio Environmental Protection Agency ("Ohio EPA") that the treatment capability or capacity for these LDR mixed wastes is presently inadequate or unavailable.
9. Subject to certain conditions specified therein, OAC rule 3745-59-50 prohibits the storage of LDR mixed wastes at the Facility for longer than one (1) year. See also 42 U.S.C. Section 6924(j) and 40 Code of Federal Regulations, Part 268.
10. Section 105 of the Federal Facility Compliance Act of 1992 ("FFCA"), 42 U.S.C. Section 6939c, enacted October 6, 1992, requires the Secretary of Energy to develop and submit to the Ohio EPA, for review and approval, approval with modifications, or disapproval, a plan for the development of treatment capacities and technologies to treat all of the mixed waste at the Facility. Section 105 of the FFCA further provides for the Ohio EPA to consider the need for regional treatment facilities, to consult with the Administrator of the United States Environmental Protection Agency ("U.S. EPA") and any other state in which a facility affected by the plan is located, and to consider public comments in making its determination on the plan. Section 105 of the FFCA further provides for the Ohio EPA to approve, approve with modifications, or disapprove the plan within six (6) months after receipt of the plan (hereinafter, "Site Treatment Plan" or "STP").
11. Section 102(a) of the FFCA, 42 U.S.C. Section 6961(a), provides that each department, agency, and instrumentality of the executive, legislative, and judicial branches of the Federal Government (1) having jurisdiction over any solid waste management facility or disposal site, or (2) engaged in any activity resulting, or which may result, in the disposal or management of solid waste or hazardous waste shall be subject to, and comply with, all Federal, State, interstate and local requirements, both substantive and procedural, respecting control and abatement of solid waste or hazardous waste disposal and management in the same manner, and to the same extent, as any person is subject to such requirements, including the payment of reasonable service charges. Section 102(a) also provides that the United States expressly waives any immunity otherwise applicable to the United States with respect to such substantive or procedural requirements.

Further, Section 102(c) of the FFCA provides that, until October 6, 1995, the

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By: Mary Carver Date 10-4-95

waiver of sovereign immunity contained in Section 102(a) of the FFCA, with respect to civil, criminal, and administrative penalties and fines, shall not apply to departments, agencies, and instrumentalities of the executive branch of the Federal Government for violations of Section 3004(j) of the Solid Waste Disposal Act ("SWDA"), 42 U.S.C. Section 6924(j), involving storage of mixed waste that is not subject to an existing agreement, permit, or administrative or judicial order, so long as such waste is managed in compliance with all applicable requirements.

Section 102(c) of the FFCA further provides that, after October 6, 1995, the waiver of sovereign immunity contained in Section 102(a) of the FFCA, with respect to civil, criminal, and administrative penalties and fines, shall apply to departments, agencies, and instrumentalities of the executive branch of the Federal Government for violations of Section 3004(j) of the SWDA, 42 U.S.C. Section 6924(j), involving storage of mixed waste, except that such waiver of sovereign immunity shall not apply after October 6, 1995 for violations by the Respondent of Section 3004(j) of the SWDA, involving storage of mixed waste, so long as the Respondent is in compliance with both: a plan that has been submitted and approved pursuant to Section 105 of the FFCA, 42 U.S.C. Section 6939c, and which is in effect; and an order requiring compliance with such plan which has been issued pursuant to Section 105 of the FFCA, and which is in effect.

12. On April 6, 1993, Respondent published a *Federal Register* notice (58 FR 17875) describing its proposed process for developing the Site Treatment Plan ("STP") in three phases: the conceptual site treatment plan ("CSTP"), the draft site treatment plan ("DSTP"), and a proposed site treatment plan ("PSTP").
13. On October 29, 1993 and August 31, 1994 the Respondent submitted to the Ohio EPA a CSTP and a DSTP, respectively.
14. By letter dated February 17, 1994, the Ohio EPA provided comments to Respondent on the CSTP.
15. By letters dated October 19, 1994 and October 31, 1994, the Ohio EPA provided comments to Respondent on the DSTP.
16. On April 4, 1995, Respondent submitted to Ohio EPA the PSTP for the Facility.
17. On April 27, 1995, the Ohio EPA published a notice of availability of the PSTP,

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and has made the PSTP available to the public upon request; on May 17, 1995 the Ohio EPA held a public hearing to take public comment on the PSTP for the Facility.

18. The Ohio EPA has reviewed the PSTP, has considered the need for regional treatment facilities, has consulted with U.S. EPA and states in which a facility affected by the PSTP is located, and has considered all public comments received by Ohio EPA regarding the PSTP. Based upon such review, consultation, and consideration, the Ohio EPA transmitted written comments on the PSTP to Respondent on June 26, 1995.
19. On October 3, 1995, the Respondent submitted an amended PSTP to Ohio EPA in an effort to address Ohio EPA's comments on the PSTP.
20. The Background Volumes of the PSTP and Amended PSTP contain background information and underlying assumptions regarding the schedules and treatment technologies proposed in the PSTP and amended PSTP.
21. The Ohio EPA has reviewed the Respondent's amended PSTP, has considered the need for regional treatment facilities, has consulted with U.S. EPA and other affected states, and has reconsidered public comments received regarding the Respondent's PSTP.
22. Pursuant to ORC Section 3734.02(G), the Director of Ohio EPA may by Order exempt any person generating, storing, treating, transporting or disposing of hazardous waste in such quantities or under such circumstances that, in the Director's determination, it is unlikely that public health or safety or the environment will be adversely affected thereby, from any requirement to obtain a permit or license or comply with the manifest system or other requirements of ORC Chapter 3734.
23. Pursuant to ORC Section 3734.02(G), the Director has determined that it is unlikely that public health or safety or the environment will be adversely affected by the Respondent's storage of LDR mixed waste at the Facility provided that the Respondent complies with the requirements set forth in the following orders.
24. The Respondent's submittal of the PSTP and the amended PSTP, the Director's approval of the amended PSTP, and the Director's issuance of these Orders

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fulfill the requirement of section 105(b) of the FFCA, 42 U.S.C. Section 6939c(b) with respect to the Facility.

25. The Respondent entered into a Federal Facility Compliance Agreement with the U.S. EPA on July 18, 1986, that requires Respondent to conduct a Remedial Investigation and Feasibility Study ("RI/FS") at the Facility, pursuant to the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended ("CERCLA") 42 U.S.C. Section 9601, at seq. An objective of the RI/FS process is to characterize the nature, rate, and extent of contaminant migration at the Facility to the extent necessary to select a response action. During the RI/FS, the Respondent is required to make reasonable efforts to determine whether CERCLA hazardous substances at the Facility qualify as RCRA hazardous wastes. On June 29, 1990, U.S. EPA and DOE entered into a Consent Agreement which amended the provisions relating to the completion of the RI/FS and remedial action of the Federal Facility Compliance Agreement to meet the requirements of CERCLA Section 120 for a facility on the National Priorities List. This agreement was amended on September 20, 1991 ("Consent Agreement as Amended" commonly known as the "Amended Consent Agreement" or "ACA", Administrative Docket Number V-M-90-C-057).

26. Respondent currently conducts mixed waste treatment activities at the Facility pursuant to the Amended Consent Agreement. Respondent anticipates the treatment of all future generated ("remediation") mixed wastes, which are generated through implementation of the Amended Consent Agreement and which are similar in composition to past generated ("legacy") mixed wastes, through the treatment systems (facilities and technologies) identified in the amended PSTP. Respondent anticipates that decisions regarding treatment, if necessary, of any new types of remediation mixed wastes (i.e. remediation mixed wastes that are not similar in composition to legacy mixed wastes generated at the Facility) will be made in accordance with the Amended Consent Agreement and will be documented in future amendments to the approved STP. Respondent further anticipates that Respondent's efforts to ascertain the volumes and locations of remediation mixed wastes will be documented in accordance with the Amended Consent Agreement. Finally, Respondent anticipates that the volume, location and final remedy for each new type of remediation mixed waste stream will be identified in the record of decision or subsequent remedial action and remedial design work plans for the operable unit responsible for that mixed waste stream, in accordance with the

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Amended Consent Agreement.

V. ORDERS

The Director hereby issues the following Orders:

1. The Compliance Plan Volume of the amended PSTP submitted to Ohio EPA on October 3, 1995 (Attachment 1) is hereby approved, subject to the terms and conditions specified in these Orders. The Compliance Plan Volume of the amended PSTP will hereafter be referred to as the "approved STP". Respondent shall implement and comply with the approved STP, in accordance with the approved schedules contained therein, and shall comply with the following terms and conditions:
 - A. Covered Matters:
 - i. The approved STP and these Orders address storage and treatment of all mixed wastes at the Facility, which are not being stored in accordance with the LDR requirements of OAC rule 3745-59-50, whether such wastes were generated or accumulated in the past, are currently generated or accumulated, or will be generated or accumulated in the future.
 - ii. Remediation mixed wastes, generated by Respondent through implementation of CERCLA response activities (both removal actions and remedial actions), in accordance with the Amended Consent Agreement described in Finding no. 24, shall be managed by Respondent in accordance with the Amended Consent Agreement or in accordance with the treatment systems (facilities and technologies) identified in the approved PSTP, as follows:
 - a. Remediation mixed wastes, which are similar in composition to legacy mixed wastes, shall be identified to Ohio EPA by Respondent pursuant to Order I.D. (Amendments) and except as otherwise agreed by Respondent and Ohio EPA shall be managed and treated by Respondent pursuant to the treatment systems identified in the approved STP;
 - b. Remediation mixed wastes, which are not similar in composition

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to legacy mixed wastes, and are therefore to be managed and treated in accordance with the Amended Consent Agreement described in Finding no. 24, shall be identified to Ohio EPA by Respondent pursuant to Order I.D. (Amendments). However, the management and treatment of these remediation mixed wastes shall not constitute an enforceable part of the approved STP or these Orders.

B. Compliance Schedules:

i. Establishment of Milestones and Target Dates:

Milestones shall be established for a three year rolling period consisting of the current federal fiscal year (FY) plus two additional federal fiscal years (FY + 1 and FY + 2). On the effective date of these Orders, enforceable milestones in the approved STP are established for the next three federal fiscal years: FY (October 1, 1995 - September 30, 1996); FY + 1 (October 1, 1996 - September 30, 1997); and FY + 2 (October 1, 1997 - September 30, 1998). After expiration of the current fiscal year, what were previously FY + 1 milestones will become the current fiscal year (FY) milestones, what was previously FY + 2 milestones will become FY + 1 milestones. The planning schedule activities identified in the approved STP as FY + 3 target dates shall be converted to FY + 2 milestones. All conversions will be automatic and remain in effect, unless Respondent notifies Ohio EPA of any need to amend the milestones, pursuant to Order I.D.

Target dates shall be established for the out-years beyond the three year rolling milestone period. On the effective date of these Orders, non enforceable target dates in the approved STP are established for the out-years beyond FY + 2.

In accordance with Section X, Funding, the Ohio EPA will consider funding availability in reviewing DOE proposals for establishing and adjusting milestones and target dates pursuant to these Orders.

ii. Categories of Milestones and Target Dates:

The categories of activities for which milestones and target dates are established in the approved STP are listed in the following tables.

Depending upon the status of the facility or treatment options (e.g.

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operations under interim status or at differing stages of development), certain types of target dates or milestones may not be necessary, or an alternative activity that is more appropriate to the facility or treatment approach may be designated, as agreed to by the Parties.

Table 1. Typical schedule for treatment of wastes with existing treatment technologies

Type of Activity Selected for Scheduling as a Target Date and Milestone
a) submit permit applications [or other documentation?] to the appropriate agency(ies)
b) procure contract with vendor
c) initiate construction of facilities necessary for vendor operations
d) commence system testing
e) commence operations
f) submit for approval a treatment schedule for backlogged and currently generated mixed waste

Table 2. Typical schedule for treatment of mixed waste for which no existing treatment technology exists

Type of Activity Selected for Scheduling as a Target Date and Milestone
a) identify funding requirements for identification and development of appropriate technology
b) identify and develop technology
c) submit treatability study exemption(s) application, where applicable
d) submit research and development permit application(s), where applicable
e) submit for approval a schedule for treatment in accordance with Table 2.1 of a new schedule for development of alternative treatment technologies in accordance with this section.

Table 3. Typical Schedule for separation of mixed wastes

Type of Activity Selected for Scheduling as a Target Date and Milestone:
a) complete an estimate of the volume of waste generated by each case of radionuclide separation
b) complete an estimate of the volume of waste that would exist or be generated without radionuclide separation
c) complete an estimate of the costs of waste treatment and disposal of radionuclide separation is used compared to the estimated costs if it is not used
d) provide the assumptions underlying such waste volume and cost estimates
e) submit a plan for treatment or management of residues, as appropriate, in accordance with this section

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Table 4. Typical schedule for mixed wastes to be shipped off-site for treatment

Type of Activity Selected for Scheduling as a Target Date and Milestone
a) receive site agreements
b) initiate preparation of wastes for transport
c) complete shipment of mixed wastes for off-site treatment

- iii. For newly identified mixed waste streams generated or stored at the Facility, the notification of a need to amend the approved STP, need only identify the waste streams. If sufficient information on the newly identified mixed waste streams is not currently available to DOE, including those mixed waste streams that are not sufficiently characterized to allow identification of appropriate treatment in order to submit an amended STP within the timeframes set out in accordance with Order I.D.iii of these Orders, DOE in its written notification may propose an alternative schedule for submitting the amended STP that addresses the proposed amendment, including a proposed schedule for characterization where necessary. The final milestone/target date of the characterization schedule will be the requirement for Respondent to identify the method and location for the treatment of such wastes and a proposed schedule for that to occur.
- iv. For mixed wastes that need technology adaptation, the notification of a need to amend the approved STP, shall contain proposed schedules for identifying (1) the necessary treatment adaptation, and (2) the method and location for the treatment of such wastes and a proposed schedule for that to occur.

C. Annual Report:

On or before the 31st day of December, of each year these Orders remain in effect, DOE shall submit to Ohio EPA a written STP Annual Report for the previous federal fiscal year, and an updated STP which incorporates all approved amendments of the approved STP made during the previous fiscal year, for the Facility. The STP Annual Report shall include the following information: an accounting of the status of the projects described in the approved STP, updated Tables 1 through 8 of Section 3 of the Background Volume of DOE's amended PSTP; a statement regarding compliance with the milestones contained in the approved STP; a description of any projected difficulties in achieving compliance with future milestones and target dates; an index or chart that clearly indicates all pages of the approved STP affected by approved amendments of the approved

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STP a summary of new waste streams generated or identified within the previous fiscal year; and a summary of any additional waste characterization information regarding existing, new or projected waste streams. DOE may, at its option, delay submittal of its updated Tables 1 through 8 of Section 3 of the Background Volume of DOE's amended PSTP until the 31st day of March of each year following a federal fiscal year for which an STP Annual Report is required to be submitted pursuant to these Orders.

D. Amendments:

- i. If Respondent or Ohio EPA identifies a need for DOE to amend the approved STP, except for changes in volumes of wastes identified in the Background Volume of the amended PSTP, or in the approved STP, the Respondent or Ohio EPA shall provide written notification within 30 days of the identification of such need and the reasons therefor. The notification shall be of sufficient detail to fully explain the rationale for an amendment of the approved STP, including an accounting of the circumstances that justify an STP amendment. If sufficient information on the proposed amendment is not currently available to DOE in order to submit an amended STP within the timeframes set out in accordance with Order 1.D.iii below; DOE, in its written notification may propose an alternative schedule for submitting the amended STP that addresses the proposed amendment.
- ii. Ohio EPA agrees to consider, in its review, all reasons provided by DOE in its proposal to amend the approved STP.
- iii. DOE shall submit an amended STP a) within thirty (30) days from the date of the written notification to address a proposed extension of a milestone, or a proposed change of a treatment facility or treatment technology; b) within ninety (90) days from the date of the written notification to address a proposed change in target date, or any other aspect of the approved STP and c) annually, (with the annual report pursuant to Order 1.C.) to address changes in volumes of waste identified in the Background Volume of the amended PSTP or in the approved STP.
- iv. If DOE disagrees with an Ohio EPA notification of the need to amend the approved STP, DOE shall, within 30 days, so notify the Ohio EPA, in writing of the reasons for such disagreement. If DOE and the Ohio EPA are

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unable to resolve their disagreement, either DOE or Ohio EPA may invoke the dispute resolution procedures of Section IX. During the pendency of the dispute resolution process as set forth in Section IX for a good faith dispute over the Ohio EPA notification of the need to amend the approved STP, the time period for completion of work affected by the dispute shall be extended for a period of time not to exceed the actual time taken to resolve any good faith dispute in accordance with Section IX.

- v. The Ohio EPA will determine whether the Respondent's amended STP constitutes a "revision" of the approved STP, within the meaning of Section 105 of the FFCA, 42 U.S.C. Section 6939c(b)(4) and as further defined in Section III of these Orders. If the Ohio EPA determines that the amended STP constitutes a "revision" of the approved STP, within the meaning of Section 105 of the FFCA, 42 U.S.C. Section 6939c(b)(4) and as further defined in Section III of these Orders, the Ohio EPA will in a timely manner, 1) publish a notice of the proposed revision of the approved STP and 2) notify the Respondent in writing, of such determination.
- vi. Based on the Ohio EPA's review of the proposed revision to the STP, the Ohio EPA's consideration of the need for regional treatment facilities, the Ohio EPA's consultation with U.S. EPA and other affected states, and the Ohio EPA's consideration of all public comments received by Ohio EPA regarding the revised STP, the Ohio EPA will approve, approve with modifications, or disapprove the revised STP, in a timely manner, and will notify Respondent accordingly.
- vii. If the Ohio EPA determines that the Respondent's amended STP does not constitute a "revision" of the approved STP, within the meaning of Section 105 of the FFCA, 42 U.S.C. Section 6939c(b)(4) and as further defined in Section III of these Orders, the Ohio EPA will in a timely manner, provide written notification to Respondent of Ohio EPA's approval, approval with modifications, or disapproval of the proposed amended STP.
- viii. Prior to approving with modifications or disapproving a proposed amendment to the approved STP, Ohio EPA will consult with DOE regarding the proposed amendment. DOE and Ohio EPA shall attempt to resolve any disagreement with respect to a proposed amendment, including a proposed extension of a milestone, pursuant to the provisions of Section

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IX, Dispute Resolution. Determinations by Ohio EPA to approve with modifications or to disapprove a proposed amendment will be accompanied by a written statement detailing the reasons for modifications or disapproval.

E. Duty to Perform; Extensions

- i. Except as expressly provided in these Orders, DOE shall cause all work to be performed in accordance with the milestones established in the approved STP.
- ii. Pursuant to Order 1.D. of these Orders, DOE may request that a milestone be extended. Upon receipt of a proposed amendment to the approved STP that requests that a milestone be extended, the Ohio EPA will determine whether good cause for the requested milestone extension exists, and shall approve the proposed STP amendment if good cause for the requested milestone extension exists.
- iii. For purposes of Order 1.E. of these Orders, good cause for an extension of a milestone may include a delay caused by, or likely to be caused by: (a) an event of unavoidable delay; (b) Ohio EPA's failure to timely take any action contemplated by these Orders; (c) the good faith invocation of dispute resolution or the initiation of administrative or judicial action; (d) the Ohio EPA's approval of a proposed STP amendment to extend another milestone; (e) additional work agreed to by DOE and Ohio EPA; (f) an inconsistency or conflict between such milestone and the requirements of any other existing agreement, order or permit to which DOE is a party; (g) the failure of an off-site treatment facility [identified as a preferred option in the approved STP] to accept or treat wastes subject to these Orders as scheduled in the approved STP; or (h) the failure of a mobile treatment facility [identified as a preferred option in the approved STP] to become available for treatment of wastes subject to these Orders as scheduled in the approved STP.
- iv. The Ohio EPA's determination of whether good cause for extension of a milestone exists is necessarily a fact specific determination. The foregoing examples of circumstances that may constitute good cause for extension of a milestone shall not be construed to create a presumption that such circumstances will, in any particular instance, be determined by Ohio EPA

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to constitute good cause for extension of a milestone.

2. An exemption from the prohibition on storage of LDR mixed wastes, as set forth in OAC rule 3745-59-50, is hereby granted to Respondent and its contractor, FERMCO, to store at the Facility LDR mixed wastes generated by Respondent, at the Facility, provided that the Respondent complies with these Orders.

VI. LIMITATIONS OF DIRECTOR'S APPROVAL

These Orders shall not be construed as the Ohio EPA's authorization to Respondent to construct or operate facilities or to initiate treatment activities as proposed in the approved STP, unless otherwise expressly stated in Order number 1 or 2. Nothing in these Orders shall be construed as limiting applicable laws regarding the construction of facilities, operation of treatment facilities associated with the approved STP, or regarding approvals required for such construction of facilities, operation or treatment activities.

VII. NOTICE

All documents to be submitted pursuant to these Orders shall be submitted to the following persons at the following addresses:

Ohio EPA:

Ohio Environmental Protection Agency
Southeast District Office
Division of Hazardous Waste Management
401 East Fifth Street
Dayton, Ohio 45402
Attn: RCRA Group Leader and FFCA Project Manager

and

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Ohio Environmental Protection Agency
Division of Hazardous Waste Management
Attn: Michael A. Savage, Assistant Chief
1800 WaterMark Drive
Columbus, Ohio 43216-1049

DOE:

U.S. DOE, Fernald Environmental Management Project
P.O. Box 538705
Cincinnati, Ohio 45253-8705
Attn: Fernald Site Manager

or to such persons and addresses as may hereafter be otherwise specified in writing.

VIII. PROJECT MANAGERS

Within ten (10) business days of the effective date of these Orders, Ohio EPA and DOE shall each designate a Project Manager. Each Party shall notify the other party in writing of the designated Project Manager. Either Party may change its designated Project Manager by notifying the other Party, in writing, ten (10) business days before the change, if possible.

Each Project Manager shall be the primary contact regarding the implementation of these Orders. Except as otherwise provided in Section VII of these Orders, communications between the Parties concerning these Orders shall be directed through the Project Manager, for further dissemination to the respective Project Manager's organization.

The Project Managers shall represent their respective organization regarding the implementation of these Orders, including changes to schedules and requirements, except as otherwise provided in Order 1.D. (Amendments), or Section IX (Dispute Resolution). The Project Managers shall meet periodically, as appropriate, to discuss progress and problems regarding the implementation of these Orders.

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By: Mary Carvin Date 10-4-95

IX. DISPUTE RESOLUTION

- A. If a dispute arises regarding the approved STP or these Orders, the procedures of this Section shall apply. For purposes of this Section, the term "Parties" means DOE and Ohio EPA.
- B. Respondent and Ohio EPA shall make reasonable efforts to informally resolve any good faith dispute regarding these Orders at the Project Manager level, within thirty (30) days following the occurrence of the actions or circumstances giving rise to the dispute. If resolution cannot be achieved informally, the disputing party may elevate the dispute for resolution pursuant to this section. If Respondent does not submit a written notification of dispute to Ohio EPA within thirty (30) days following the occurrence of the actions or circumstances giving rise to the dispute, Respondent shall be deemed to have accepted the position of the Ohio EPA.
- C. To initiate formal dispute resolution, the disputing party shall submit to the other party a written notification of any good faith dispute regarding these Orders. The written notification of dispute shall specify the nature of the dispute, the work affected by the dispute, the disputing party's position with respect to the dispute and the information the disputing party is relying upon to support its position. The Project Managers and designated representatives of the Parties shall attempt to resolve such dispute within thirty (30) days of written notification of the dispute. For DOE, the designated representatives shall include the Director of the Fernald Area Office. For Ohio EPA, the designated representatives shall include the Chief of the Division of Hazardous Waste Management.
- D. If the Project Managers and designated representatives of the Parties are unable to resolve such dispute, within thirty (30) days of written notification of the dispute, then either Party may submit a written statement of the dispute to the Ohio EPA's Deputy Director of Programs (the Director's designee, duly delegated with the authority to resolve disputes under this Section of these Orders). The Deputy Director may meet with the Project Managers and designated representatives of the Parties, and may request additional information regarding the nature of the dispute and the respective positions of the parties. Within thirty (30) days of receipt of the written statement of dispute, the Deputy Director will consult with the Manager of the Ohio Field Office (or the Manager's designee) and will notify the Project Managers and designated representatives of the Parties in writing of the Director's final decision regarding the dispute. The

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final decision shall be signed by the Director and shall be binding on the Parties, subject to administrative or judicial appeal or review according to applicable law.

- E. Except as provided in this Section, the Respondent shall maintain compliance with these Orders. However, if the Parties agree that there is a good faith dispute, the time period for completion of work affected by dispute shall be extended for a period of time not to exceed the actual time taken to resolve such good faith dispute in accordance with this Section. The time periods designated in this Section of these Orders may be extended by mutual written agreement of the Parties. The Parties may consult with and invite the participation of U.S. EPA and other states affected by a dispute during the dispute resolution process, as appropriate.
- F. Unless timely appeal is sought, DOE shall incorporate the resolution and final decision of the Ohio EPA into the appropriate plan, schedule or procedure and shall proceed with implementation in accordance with Order 1.D. (Amendments) and the amended plan, schedule or procedure, within thirty (30) days of such resolution and final decision.

X. FUNDING

DOE shall take all necessary steps to obtain sufficient funding to comply with the provisions of the approved STP and these Orders. DOE shall consult with the Ohio EPA in formulating its annual EM budget request as set forth in this section.

By March 31 of each year following issuance of these Orders, DOE shall provide Ohio EPA with information or a briefing on the proposed EM budget request for the Facility, including appropriate supporting documents. In the process of formulating its annual budget request, DOE may be subject to target funding guidance directed by the Office of Management and Budget (OMB). The information or briefing shall address the impacts of such OMB target funding guidance. The Ohio EPA agrees, subject to the Ohio Public Records Law, ORC Section 149.43, not to release confidential budget information to any other person or entity prior to submission by the President of his budget request to Congress unless required to do so by court order. DOE may seek to intervene in any proceeding brought to compel or enjoin release of this information. If allowed to intervene, DOE may assert its interest in, and the legal basis for, maintaining the confidentiality of this information.

DOE and Ohio EPA shall discuss work scope, priorities, milestones and target dates,

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and Activity Data Sheet (ADS) funding levels required to comply with the approved STP and these Orders. These discussions shall be conducted before DOE Fernald submits its annual budget request and supporting ADS to DOE Ohio Field Office. Ohio EPA will consider funding availability in reviewing DOE proposals for establishing and adjusting milestones and target dates pursuant to these Orders. Ohio EPA's comments to DOE may include those additional or accelerated activities recommended by Ohio EPA that are believed by Ohio EPA to be outside of EM target funding levels for the Facility. DOE may revise its budget request and supporting documents to resolve the comments of Ohio EPA. DOE reserves the right to identify which activities it believes cannot be accomplished within the established EM target funding levels for the Facility. Nothing herein shall effect DOE's ultimate responsibility or authority to formulate and submit to the President appropriate budget requests and to allocate appropriate funds to serve DOE's missions.

XI. OTHER APPLICABLE LAWS

Nothing in these Orders shall be construed as waiving or compromising in any way the applicability and enforcement of any other statutes or regulations applicable to the Respondent's activities at the Facility. The Ohio EPA reserves all rights and privileges except as specified herein.

XII. RESERVATION OF RIGHTS

Nothing contained herein shall be construed to prevent the Ohio EPA from seeking legal or equitable relief to enforce the terms of these Orders or from taking other administrative, legal or equitable action as deemed appropriate and necessary, including seeking penalties against the Respondent for noncompliance with these Orders. Nothing contained herein shall be construed to prevent the Ohio EPA from exercising its lawful authority to require the Respondent to perform additional activities at the Facility pursuant to Chapter 3734. of the ORC or any other applicable law in the future. Nothing in these Orders shall be construed to limit the authority of the Ohio EPA to seek relief for violations not addressed in these Orders. Nothing herein shall restrict the right of the Respondent to raise any administrative, legal or equitable claim or defense with respect to such further actions which the Ohio EPA may seek to require of the Respondent. Nothing contained herein shall restrict the right of the Respondent to raise any administrative, legal or equitable claim or defense (including lack of authority) with respect to any administrative or judicial appeal or review of any Ohio EPA notification of need to amend the approved STP. The Director reserves the

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right to revoke these Orders upon a finding that such revocation is necessary to protect human health or safety or the environment. DOE reserves the right to seek administrative or judicial review of any such revocation.

It is the position of the Ohio EPA that the federal Anti-Deficiency Act, 31 U.S.C. Section 1341, as amended, does not apply to any obligations set forth in these Orders, and except as otherwise provided in these Orders, obligations hereunder are unaffected by the Respondent's failure to obtain adequate funds or appropriations from Congress. It is Respondent's position that the obligations set forth in these Orders are subject to the provision of the Anti-Deficiency Act and are subject to funding availability. The Parties agree that it is premature to raise and resolve the validity of such positions at this time.

XIII. MODIFICATION

Except as provided in Section XII - Reservation of Rights regarding revocation of these Orders, these Orders may be modified only by mutual agreement of Respondent and Ohio EPA. Any modification of these Orders shall be in writing, shall be effective upon signature and issuance by the Director, and shall be incorporated into these Orders and be enforceable in the same manner as any requirement of these Orders. In February of 1999, and periodically (e.g., every three (3) years) thereafter, as appropriate, unless DOE and Ohio EPA mutually agree that no modification of these Orders is warranted, DOE and Ohio EPA shall conduct a good faith dialogue to determine whether the compliance schedule and funding structure of these Orders should be modified. Such dialogue shall consider the experiences and perspectives of DOE and Ohio EPA regarding the implementation of these Orders during the previous three federal fiscal years, the most recent information on current and projected funding availability, and the status of major technical issues that are expected to affect the management of the Facility's mixed waste. If DOE and Ohio EPA agree that modification of these Orders is warranted, DOE and Ohio EPA shall endeavor to complete and implement such modifications within six (6) months of the initiation of such dialogue. Subject to the first paragraph of this Section, if DOE and Ohio EPA disagree as to whether modification of these Orders is warranted, or regarding the extent to which these Orders should be modified, either DOE or Ohio EPA may invoke formal dispute resolution, pursuant to Section IX to facilitate agreement.

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By: Mary Gavin Date 10-4-95

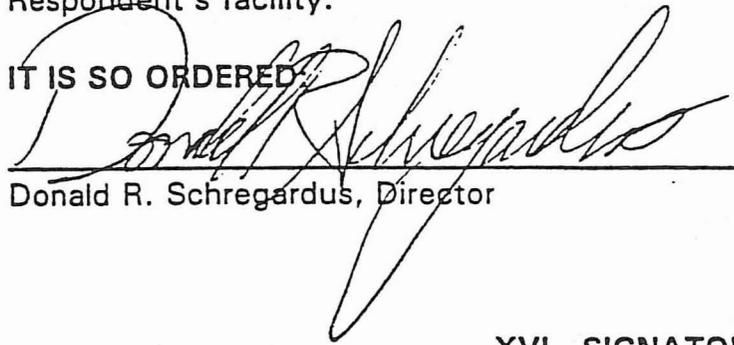
XIV. TERMINATION

The Respondent's obligations under these Orders shall terminate when the Respondent demonstrates in writing and certifies to the satisfaction of the Ohio EPA that all obligations under these Orders have been performed or that all mixed wastes subject to these Orders are being stored and will continue to be stored in compliance with OAC Rule 3745-59-50, and the Ohio EPA Division of Hazardous Waste Management acknowledges, in writing, Ohio EPA's acceptance of this demonstration and certification.

XV. OTHER CLAIMS

Except as otherwise expressly provided in Order No. 2, nothing in these Orders shall constitute or be construed as a release from any claim, cause of action or demand in law or equity against any person, firm, partnership or corporation, not a signatory to these Orders, for any liability arising out of or relating to the operation of the Respondent's facility.

IT IS SO ORDERED:



Donald R. Schregardus, Director

October 4, 1995

Date

XVI. SIGNATORIES

Each undersigned representative of a party signatory to these Orders certifies that he or she is fully authorized to enter into the terms and conditions of these Orders and to legally bind such signatory to this document.

XVII. WAIVER

The Respondent agrees that these Orders are lawful and reasonable and that the times provided for compliance herein are reasonable. The Respondent, by acceptance of these Orders, agrees to comply with all conditions of these Orders and acknowledges that the Respondent's failure to do so may result in immediate revocation of these Orders and further legal action by Ohio EPA.

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The Respondent hereby waives the right to appeal or otherwise challenge the issuance, of these Orders. Nothing in these Orders shall affect DOE's rights to seek administrative or judicial review of final decisions by the Ohio EPA Director pursuant to Section IX (Dispute Resolution), or final actions by the Director pursuant to ORC Section 3745.04 or other applicable law.

The Ohio EPA and the Respondent agree that in the event that these Orders are appealed by any other party to the Environmental Board of Review, or any court, the Respondent retains the right to intervene and participate in such appeal in support of these Findings and Orders. In such event, the Respondent shall continue to comply with these Orders notwithstanding such appeal and intervention unless these Orders are stayed, vacated, or modified.

IT IS SO AGREED:

United States Department of Energy

By: R. D. Folken for

October 3, 1995

Date

J. P. Hamric ^{Manager,}
^{Ohio Field Office}

Title

Ohio Environmental Protection Agency

Donald R. Schregardus
Donald R. Schregardus, Director

October 4, 1995

Date

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FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

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OHIO EPA

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DIV. OF HAZARDOUS WASTE MGT.

**PROPOSED SITE
TREATMENT PLAN**



PLAN VOLUME

OHIO E.P.A.

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By: Mary Cavin Date 10-4-95

Plan Volume Summary

The Plan Volume is the second of two volumes that comprise the Proposed Site Treatment Plan (PSTP). The Plan Volume identifies treatment capacity to be developed and associated schedules as required by the FFCAct. The Plan Volume also addresses implementation of the Proposed Site Treatment Plan and establishes milestones and target dates that will be enforced by the implementing FFCAct Order. It references, but does not duplicate, details on the options as discussed in the Background Volume.

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PROPOSED SITE TREATMENT PLAN
 PLAN VOLUME
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FERNALD ENVIRONMENTAL MANAGEMENT PROJECT
PROPOSED SITE TREATMENT PLAN
PLAN VOLUME

1.0 PURPOSE AND SCOPE

- 1.1 The U.S. Department of Energy (DOE) is required to prepare a plan for developing treatment capacities and technologies for each facility at which DOE generates or stores mixed waste, pursuant to Section 3021(b) of the Resource Conservation and Recovery Act (RCRA), 42 U.S.C 6939c(b), as amended by Section 105(a) of the Federal Facility Compliance Act [(P.L. 102-386) (FFCA)]. The mixed waste must be treated or otherwise managed in accordance with the land disposal restriction standards under Section 3004 of RCRA. Upon submission of the plan to the appropriate regulatory agency, the FFCA requires the recipient agency to solicit and consider public comments, and approve, approve with modification, or disapprove the plan within six months. The agency is to consult with EPA and any State in which a facility affected by the plan is located. Upon approval of a plan, the regulatory agency must issue a FFCA Order requiring compliance with the approved plan.
- 1.2 The DOE Fernald Office, hereinafter referred to as DOE-FN, has prepared this Proposed Site Treatment Plan (PSTP) for mixed waste at the FEMP, which identifies how DOE-FN proposes to obtain treatment of the site's mixed waste or develop technologies for treatment where technologies do not exist or need modification. For some waste streams, a plan and schedules for characterizing wastes, undertaking technology assessments, and for providing the required plans and schedules for developing capacities and technologies, as appropriate, are provided.
- 1.3 This section intentionally left blank.
- 1.4 This section intentionally left blank.
- 1.5 This section intentionally left blank.
- 1.6 This section intentionally left blank.

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2.0 IMPLEMENTATION OF THE PROPOSED SITE TREATMENT PLAN

The mechanisms and procedures for administering and implementing the treatment plans and schedules in Sections 3.0 through 5.0 of the Plan Volume will be established in the FFCAct Order.

2.1 This section intentionally left blank.

2.2 Modification of Technologies

Emerging or new technologies not yet considered that provide opportunities to manage waste more safely, effectively, and at lower cost than the current technologies identified in the PSTP may be identified in the future. Working closely with regulators and other interested parties during the implementation of the PSTP, DOE will continue to evaluate and develop technologies that offer potential advantages in the areas of public acceptance, risk abatement, performance, and life-cycle cost. Should more promising technologies be identified, DOE may request a modification of its PSTP in accordance with provisions of the implementing FFCAct Order.

3.0 MIXED LOW LEVEL WASTE STREAMS

The Plan Volume of the PSTP establishes overall schedules for achieving compliance with LDR requirements for mixed wastes at the FEMP. The schedules include those activities required to bring existing waste treatment facilities or technologies into operation, and those required to develop new facilities and capacity for treatment. The assumptions upon which individual schedules are dependent are contained in Sections 3.0 through 5.0 of the Background Volume. The schedules may be affected if the underlying assumptions change. The project completion dates provided on the schedules do not include final disposition of treatment residues. Dates provided in the Plan Volume schedules become enforceable through the procedure established in the implementing FFCAct Order.

3.1 Mixed Waste Streams for which Technology Exists

The FEMP has identified seven Preferred Options for the treatment of characterized mixed low level waste streams in inventory. Only minor modifications of the Preferred Option, if any, are needed to treat the wastes. These preferred options and their respective waste streams are presented in Sections 3.1.1 through 3.1.7.

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3.1.1 Waste Stream for which Technology Exists - Preferred Option:
Hydrofluoric Acid (HF) Neutralization System

Project Name: HF RCRA Closure

The FEMP mixed waste stream for which the Preferred Option is identified as the HF Neutralization System is listed in Table 1 of the Background Volume. Treatment can be accomplished through the use of on-site existing facilities. Treatment of this single waste stream is planned as a RCRA Closure of a Hazardous Waste Management Unit (HWMU) using the HF Neutralization System. Detailed information on this treatment is located in Section 3.1.1 of the Background Volume.

Consistent with closure plan requirements, this project is expected to be completed within 180 days after final approval of the Closure Plan Information and Data (CPID) from OEPA. The schedules presented below reflect dates established by the approved closure plan.

MIXED WASTE STREAM FOR WHICH TECHNOLOGY EXISTS

Project Start Date: January 31, 1992 (COMPLETED)

Schedule for submitting all applicable permit applications: Not applicable. Treatment of this waste stream will be performed under a RCRA Closure of a HWMU. The CPID for this project was submitted on July 17, 1994 and approved by the OEPA in February 1995. (COMPLETED)

Schedule for entering into contracts: The contract necessary for this project is in place. (COMPLETED)

Schedule for initiating construction: December 31, 1994 (COMPLETED)

Schedule for conducting systems testing: June 30, 1995 (COMPLETED)

Schedule for commencing operations: June 30, 1995 (COMPLETED)

Schedule for processing backlogged and currently generated mixed wastes: June 30, 1995 through August 30, 1995 (COMPLETED)

Project Completion Date: September 30, 1995 (COMPLETED)

PROJECT UPDATE

Treatment of this waste stream was completed as scheduled.

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PSTP - Plan Volume
STP-001 Rev 1.1

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3.1.2 Waste Stream for which Technology Exists - Preferred Option:
Uranyl Nitrate Hexahydrate (UNH) Treatment System

Project Name: UNH Neutralization System

The FEMP mixed waste stream for which the Preferred Option is identified as the UNH Treatment System is listed in Table 2 of the Background Volume. For clarity, it should be noted the scope of waste treatment under this Preferred Option is more extensive than that covered by the Director's Final Findings and Orders (DF&O), dated December 27, 1994 directing treatment of UNH material. Specifically, this Preferred Option includes treatment of approximately 30,000 gallons of radiologically contaminated nitric acid from the Nitric Acid Recovery (NAR) system. This waste stream was not included within the above-referenced DF&O. Treatment of the UNH waste stream associated with this preferred option was completed by September 25, 1995. Treatment can be accomplished through the use of on-site existing facilities augmented with new piping and new skid-mounted pumps. The FEMP is a CERCLA site and has been working with USEPA and OEPA to treat this waste on-site through CERCLA Removal Action #20. Detailed information on this treatment is located in Section 3.1.2 of the Background Volume.

The construction phase of the UNH Neutralization System is scheduled and proceeding.

MIXED WASTE STREAM FOR WHICH TECHNOLOGY EXISTS

Project Start Date: November 30, 1993 (COMPLETED)

Schedule for submitting all applicable permit applications:
Not applicable. No permit required. Treatment of this waste will be performed under CERCLA Removal Action #20. (COMPLETED)

Schedule for entering into contracts: No contracts anticipated.

Schedule for initiating construction: May 31, 1994 (COMPLETED)

Schedule for conducting systems testing:
March 24, 1995 (COMPLETED)

Schedule for commencing operations: Operations is the date the FEMP began treatment utilizing this Preferred Option.
March 24, 1995 (COMPLETED)

Schedule for processing backlogged and currently generated mixed wastes: March 24, 1995 - April 30, 1996

Project Completion Date: April 30, 1996†

† Denotes milestone dates

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3.1.3 Waste Stream for which Technology Exists - Preferred Option:
Thorium Nitrate Treatment System

Project Name: Thorium Nitrate

The FEMP mixed waste stream for which the Preferred Option is identified as Thorium Nitrate Treatment System is listed in Table 3 in the Background Volume. Treatment of this single waste stream is planned under CERCLA Removal Action #9. Treatment of this waste stream will occur on-site using a vendor provided service. Detailed information on the alternatives is located in Section 3.1.3 of the Background Volume.

MIXED WASTE STREAM FOR WHICH TECHNOLOGY EXISTS

Project Start Date: December 31, 1994 (COMPLETED)

Schedule for submitting all applicable permit applications:
Not applicable. Treatment of this waste stream will be performed under CERCLA Removal Action #9. The Project Specific Plan for this project was submitted in August 31, 1995. (COMPLETED)

Schedule for entering into contracts: Award contract with vendor for treatment. May 31, 1995 (COMPLETED)

Schedule for initiating construction: Vendor will supply and mobilize equipment needed for treatment. August 31, 1995 (COMPLETED)

Schedule for conducting systems testing: Systems testing will determine Operational Readiness using water to simulate operations. September 30, 1995 (COMPLETED)

Schedule for commencing operations: Operations will begin with the recirculation of the thorium waste as specified in the Project Specific Work Plan. September 30, 1995 (COMPLETED)

Schedule for processing backlogged and currently generated mixed wastes: September 30, 1995 - February 29, 1996

Project Completion Date: February 29, 1996†

† Denotes milestone dates

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3.1.4 Waste Streams for which Technology Exists - Preferred Option: Wastewater Treatment

Project Name: Liquid Mixed Waste Project

The FEMP mixed waste streams for which the Preferred Option is identified as Wastewater Treatment are located in Table 4 of the Background Volume. Treatment of these waste streams will occur on-site in an existing facility. This project is part of the Liquid Mixed Waste Project. Liquids are will be bulked, tested and a determination will be made whether they are acceptable for the FEMP Wastewater Treatment System. Detailed information on this treatment is located in Section 3.1.4 of the Background Volume.

The Liquid Mixed Waste Project is designed to address treatment and disposal of all liquid mixed waste currently in storage through the WWTS or the TSCA Incinerator Preferred Options.

MIXED WASTE STREAMS FOR WHICH TECHNOLOGY EXISTS

Project Start Date: October 31, 1994 (COMPLETED)

Schedule for submitting all applicable permit applications: Not applicable. This project will be initiated as part of CERCLA Removal Action #9 (RA #9). RA #9 will be modified to clarify the scope of work and will be consistent with the FEMP's Investigation Derived Waste (IDW) policy and NPDES permit and will meet the requirements of the RCRA wastewater treatment unit exclusion.

Schedule for entering into contracts: No contract is required.

Schedule for initiating construction: No construction is required for this project.

Schedule for conducting systems testing:
Tank set-up and testing of WWTS is complete.
October 31, 1994 (COMPLETED)

Schedule for commencing operations: Operations is the date the FEMP will begin treatment utilizing this Preferred Option. February 29, 1996†

Schedule for processing backlogged and currently generated mixed wastes: February 29, 1996 through September 30, 1996

Project Completion Date: September 30, 1996†

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† Denotes milestone dates

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3.1.5 Waste Streams for which Technology Exists - Preferred Option: Ohio Mobile Stabilization System

Project Name: Stabilization Project

The FEMP mixed waste streams for which the Preferred Option is identified as Ohio Mobile Stabilization System are listed in Table 5 of the Background Volume. Treatment of these waste streams will occur on-site using a vendor provided mobile service. Detailed information on this treatment is located in Section 3.1.5 of the Background Volume.

The FEMP published a request for information in the *Commerce Business Daily*. Multiple responses were received from companies capable of performing Mobile Stabilization.

The FEMP will implement the Stabilization Project as part of CERCLA Removal Action #9 (RA #9), however, treatment operations will not begin prior to Ohio EPA approval.

MIXED WASTE STREAMS FOR WHICH TECHNOLOGY EXISTS

Project Start Date: October 31, 1994 (COMPLETED)

Schedule for submitting all applicable permit applications: Not applicable. This project will be initiated as part of RA #9. The Project Specific Plan for this project was submitted in September 30, 1995. (COMPLETED)

Schedule for entering into contracts: May 31, 1995 (COMPLETED)

Schedule for initiating construction: Vendor will supply a fully constructed mobile system. October 31, 1995†

Schedule for conducting systems testing: November 30, 1995† Complete Operational Readiness Review.

Schedule for commencing operations: Operations is the date the FEMP will begin treatment utilizing this Preferred Option. November 30, 1995†

Schedule for processing backlogged mixed wastes: November 30, 1995 through September 30, 1996

Project Completion Date: September 30, 1996†

† Denotes milestone dates

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3.1.6 Waste Streams for which Technology Exists - Preferred Option: Ohio Mobile Chemical Treatment System

Project Name: Chemical Treatment Project

The FEMP mixed waste streams where the Preferred Option is identified as Ohio Mobile Chemical Treatment System are listed in Table 6 of the Background Volume. Treatment of these waste streams will occur on-site using vendor provided services. Detailed information on this treatment is located in Section 3.1.6 of the Background Volume.

Multiple contracts will be entered into for the performance of treatment for each technology in the Chemical Treatment Project. Specific work plans will be developed by the vendor for each technology. The technology specific work plans will be submitted to the State for approval. Construction of the facilities will be initiated upon State approval of the technology specific work plans.

MIXED WASTE STREAMS FOR WHICH TECHNOLOGY EXISTS

Project Start Date: October 31, 1994 (COMPLETED)

Schedule for submitting all applicable permit applications:
Not applicable. It is anticipated that this project will be initiated as part of CERCLA Removal Action #9. The Draft Work Plan for this project will be submitted in November 30, 1995.†

A schedule for commencing operations will be provided in each technology project specific work plan submitted for approval.

Schedule for entering into contracts:
The contract for implementation of the first technology will be entered into in April 30, 1996.†
The project specific work plan for each technology will be submitted for approval within 120 days of entering into the contract.†
The contract for the last technology will be entered into in September 30, 2000.

Schedule for initiating construction: Vendor will supply a fully constructed mobile system. Construction for each technology will be initiated within 30 days of approval of the project specific work plan.†

Schedule for conducting systems testing:
Operational Readiness and systems testing will be completed 120 days after completion of treatment facility construction.†

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Schedule for commencing operations:

Treatment will be initiated within 14 days of completion of system testing for each technology.†

Schedule for processing backlogged and currently generated

mixed wastes: February 28, 1997 through September 30, 2001
A schedule for processing backlogged and currently generated mixed waste will be provided by technology in each project specific work plan submitted for approval.

Project Completion Date: September 30, 2001

† Denotes milestone dates .

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3.1.7 Waste Streams for which Technology Exists - Preferred Option: TSCA Incinerator

Project Name: Liquid Mixed Waste Project

The FEMP mixed waste streams (liquid portion only) for which the Preferred Option is identified as the TSCA Incinerator are listed in Table 7 of the Background Volume. Treatment of these waste streams will occur off-site at the DOE K-25 site in Oak Ridge, Tennessee.

The FEMP is currently allotted 693,000 pounds or approximately 318,780 kilograms of mixed low level waste treatment capacity per year at the TSCA Incinerator. The FEMP plans to bulk mixed waste for shipment to the TSCA Incinerator. Detailed information on this treatment is located in Section 3.1.7 of the Background Volume.

Bulking and transport of these wastes will be implemented as part of CERCLA Removal Action #9 (RA #9). However, these activities will not begin prior to Ohio EPA approval.

The milestone dates for TSCA Incinerator are shipping dates. The shipping dates are dependent on acceptance of the waste by the Oak Ridge Reservation and the State of Tennessee.

The Liquid Mixed Waste Project is designed to address treatment and disposal of all liquid mixed waste currently in storage through the WTS or the TSCA Incinerator Preferred Options.

MIXED WASTE STREAMS FOR WHICH TECHNOLOGY EXISTS

Project Start Date: October 1994 (COMPLETED)

Schedule for submitting all applicable permit applications: Not applicable. This project will be initiated as part of RA #9. (COMPLETED)

Schedule for entering into contracts: Contracting complete (DOE facility to DOE facility agreement).

Schedule for initiating construction: No construction is required for this project.

Schedule for conducting systems testing: Tank set-up and testing were completed in October 1994. October 31, 1994 (COMPLETED)

Schedule for commencing operations: Operations began with the bulking of waste streams. June 30, 1995 (COMPLETED)

Schedule for processing backlogged and currently generated mixed wastes: June 30, 1995 through September 30, 1996

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Project Completion Date: Shipments from the FEMP to the TSCA Incinerator will be complete by September 30, 1996†

† Denotes milestone dates

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By: Maria Casini Date 10-4-95

3.2 Mixed Waste Streams for which Technology Exists But Needs Adaptation or for which No Technology Exists

The FEMP has not identified any mixed waste streams for which significant adaptation and technology development is required for treatment. After final characterization, which will occur as a part of the project management process, certain variances may be requested. Specifically, there may be some constituents for which the LDR treatment standard is incineration. The FEMP may request a variance to allow chemical destruction or stabilization. Also, certain debris may require a technology which is not practical, therefore, a variance may be requested for these wastes.

3.3 Mixed Waste Streams Requiring Further Characterization or for which Technology Assessment Has Not Been Done

All FEMP mixed low level waste streams identified in the PSTP, detailed in Appendix C, have a Preferred Option for treatment.

4.0 This section intentionally left blank.

5.0 This section intentionally left blank.

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APPENDIX I

RECEIPT AND MANAGEMENT
OF TREATMENT RESIDUALS

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By: Mary Gavin Date 10-4-95

Appendix I. Receipt and Management of Treatment Residuals

Appendix I provides a residue management plan for the FEMP. The FEMP will seek approval of the OEPA if required to receive back and manage treatment residuals derived from the off-site treatment of FEMP wastes prior to final disposition. This plan was developed to address the possible return and management of treatment residues resulting from incineration at the TSCA Incinerator.

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By: Mary Caron Date 10-4-95

APPENDIX I
RECEIPT AND MANAGEMENT OF TREATMENT RESIDUALS
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By: Mary Cassin Date 10-4-

1.0 INTRODUCTION

This appendix identifies the steps that the FEMP will follow when accepting FEMP treatment residuals from an off-site treatment facility. No hazardous waste from off-site facilities is accepted and/or stored at the FEMP unless the conditions of this Residual Management Plan and of the Consent Decree and its stipulated amendment are met. Under the terms of the Consent Decree, "No hazardous or mixed waste from an off-site source not already listed in the [FEMP] Part B Permit Application, or a revision as of the date of entry of this Consent Decree, shall be stored, disposed or treated at the [FEMP] without the prior approval of the State of Ohio."

This Residuals Management Plan is considered an Interim Final document. No later than December 31, 1995, DOE shall submit a Final Residuals Management Plan for review and approval by the Ohio EPA. Upon approval of the Ohio EPA, the approved Final Residuals Management Plan shall supercede this Interim Final Document and be automatically incorporated into the Compliance Plan Volume.

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2.0 SOURCE(S) OF TREATMENT RESIDUALS

The FEMP anticipates that it will continue to send hazardous waste off-site for treatment prior to final disposition. The FEMP may be requested and/or required to receive back and manage residues derived from the treatment of FEMP wastes prior to their disposal. An example of treatment generating residues is the current use of the Department of Energy TSCA Incinerator located in Oak Ridge, Tennessee for the treatment of mixed wastes amenable to incineration.

Currently, the FEMP does not anticipate receiving residues back from the TSCA Incinerator. If this situation should change, the residues will be accepted under the conditions of this Residual Management Plan and of the Consent Decree and its Stipulated Amendment and in accordance with Section C-Waste Characteristics of the FEMP's RCRA Part B Permit Application.

The liquid mixed wastes that are shipped to the TSCA Incinerator for treatment are comingled with the wastes from other DOE sites. The existing incineration process, process configuration, and storage of post process residuals does not allow for dedicated batching or batch segregation from individual DOE sites. The resulting residuals from this treatment process could potentially contain any combination of EPA waste codes identified in the FEMP's RCRA Part B permit application. The FEMP cannot accept any residues containing waste codes that are not identified in the permit application or without prior approval of the State of Ohio. In addition, the FEMP cannot accept off-site waste unless that waste contains radionuclides which have originated from the FEMP or without prior approval of the State of Ohio. Any other off-site waste will be brought on-site only in accordance with the Consent Decree and its Stipulated Amendments.

The FEMP is currently anticipating that most of the liquid mixed wastes on-site meeting the TSCA Waste Acceptance Criteria will be shipped to the TSCA Incinerator for treatment. An annual burn plan is formulated for the incineration of all mixed waste liquids at the TSCA Incinerator. This burn plan allots a predetermined percentage of the total mixed waste liquid capacity of the TSCA Incinerator to the FEMP for the incineration of FEMP wastes. The total maximum quantity of treatment residuals that could be returned to the FEMP would be based on the actual percentage of mixed wastes contributed by the FEMP. For example, if the FEMP contributed one-third of all liquid mixed waste incinerated at the TSCA Incinerator, the residues returned would be no more than approximately one third of the total residues generated.

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By: Mary Carwin Date 10-4-95

3.0 RECEIPT AND MANAGEMENT OF TREATMENT RESIDUALS

The FEMP will request waste characterization data for each waste stream of treatment residues to be shipped to the FEMP from an off-site treatment facility. The off-site treatment facility will provide the data and level of detail that is required to characterize waste generated at the FEMP. This data precedes actual shipment of the waste so that FEMP personnel can review the data and confirm that the waste meets FEMP waste acceptance criteria. The off-site treatment facility will furnish information for each waste stream such as:

- Physical parameters such as pH, color, physical state, flashpoint, particle size, specific gravity, density, viscosity, liquid content, compatibility;
- TCLP analytical results for toxicity characteristic constituents;
- RCRA waste code(s) with analytical data if the codes have been determined on the basis of analytical information;
- Analytical data concerning all radiological constituents, if the FEMP waste was incinerated with waste from another site..
- Land disposal restriction information such as total organic carbon, total suspended solids, constituent specific organic scans as necessary; and
- Generator certifications that the information for each waste stream is complete and accurate.

Results from analyses will be reviewed by FEMP personnel to determine whether the waste can be accepted by the FEMP. If it is determined that the waste can be accepted, the off-site treatment facility will be notified to schedule shipment of the waste. If it is determined that the waste can not be accepted, the off-site treatment facility will be notified in writing.

When the treatment residues arrive at the FEMP, acceptance verification is initiated by facility personnel. The following areas will be examined:

- Documentation;
- Manifest and land disposal notification/certification;
- Verification of manifest information; container count, weight, waste codes, etc.;
- Container condition and labelling; and

ORIO E.P.A. Fingerprint analysis of the waste as specified in the FEMP RCRA Part B Permit Application, Section C, Table C-3.

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By: Mary Cavin Date 10-4-95

Designated personnel examine the hazardous waste manifest and land disposal restriction notification and certifications. Absent or incomplete receiving/shipping documentation such as an incomplete hazardous waste manifest or incomplete or missing land disposal restriction information are corrected or completed prior to acceptance of the hazardous waste shipment.

After verification of container condition and proper labeling, the contents of the containers will be examined to verify the physical state of the waste. The FEMP will sign the manifest in accordance with Ohio Administrative Code (OAC) 3745-65-71. The off-site treatment facility will be contacted immediately by phone if any discrepancies or other problems are discovered in documentation, condition of containers, or identification of the treatment residues. If discrepancies cannot be resolved, the off-site treatment facility will be informed that the FEMP has rejected the residue shipment and will return the residue to the off-site treatment facility. The FEMP will send a letter describing the discrepancy and the attempts to resolve the discrepancy to OEPA and USEPA if the discrepancy is not resolved within 15 days of hazardous waste receipt.

The FEMP will perform fingerprint sampling and analysis on all incoming shipments of waste treatment residues based on knowledge of the waste. The analysis performed on the returned treatment residues will be determined by the waste matrix and contaminants of concern as described in Section C, Table C-3 of the FEMP RCRA Part B Permit Application.

Additional analyses will be performed and repeated for wastes to be received from off-site treatment facilities under any of these conditions:

- Before the first shipment, and at least annually thereafter;
- Whenever the process generating the waste changes; or
- Fingerprinting results do not match the manifested waste preacceptance ranges and the discrepancy cannot be resolved with the generator.

Test methods specified in "Test Methods for Evaluation of Solid Waste, Physical/Chemical Methods" (EPA Office of Solid Waste and Emergency Response, SW-846, latest edition), or other EPA approved methods will be used in analyzing treatment residues. The quality assurance and quality control provisions for the waste acceptance shall be in compliance with applicable provisions of the latest edition of the Sitewide CERCLA Quality Assurance Project Plan. Additionally, the Quality Assurance Program Description shall be applicable.

Between receipt of the treatment residues and verification, the residues will be segregated from other hazardous waste stored at the FEMP or other hazardous waste undergoing acceptance verification. If the treatment residues are rejected, the containers will remain segregated until it is feasible to return the containers to the off-site treatment facility.

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By: Mary Carvin Date 10-4-95

Upon evaluation of the waste analysis data, a Reactivity Group Code will be stenciled onto the container. Each container will be assigned a storage location based on the physical state and its Reactivity Group Code. Any subsequent movement of the residues will be recorded in the FEMP's hazardous waste tracking system. The residues will be stored in a hazardous waste storage unit identified in the FEMP's RCRA Part B Permit Application pending final disposition.

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