File- 004

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5

IN THE MATTER OF:	)	
	)	
U.S. DEPARTMENT OF ENERGY	)	Administrative
FEED MATERIALS PRODUCTION CENTER	)	Docket Number: V-W-90-C-057
	)	
FERNALD, OHIO	)	
	)	
OH6 890 008 976	)	

AGREEMENT RESOLVING DISPUTE CONCERNING DENIAL OF REQUEST FOR EXTENSION OF TIME FOR CERTAIN OPERABLE UNIT 4 MILESTONES

On the basis of the facts set forth below and in accordance with Sections XIV, XVII, and XXXIII of the September 1991 Amended Consent Agreement ("ACA"), the United States Department of Energy ("U.S. DOE") and the United States Environmental Protection Agency ("U.S. EPA") hereby agree to resolve all disputed matters relating to U.S. EPA's denial of U.S. DOE's September 26, 1996, request for an extension of time for certain Operable Unit 4 ("OU 4") milestones.

BACKGROUND

1. On November 3, 1995, U.S. DOE informed U.S. EPA that an evaluation of the Vitrification Pilot Plant ("VITPP") schedule indicated that schedule slippages would occur to the Fernald Residues Vitrification Plant.

2. During the period from January 1996 through the date of this Agreement, U.S. DOE has conducted weekly telephone conferences with U.S. DOE's Prime Contractor for the Fernald Environmental Management Project ("FEMP"), U.S. EPA, and Ohio EPA in order to provide status updates and to seek regulatory input and guidance.

3. On September 26, 1996, U.S. DOE requested an extension of time under Section XVIII of the ACA to meet the initial OU 4 regulatory milestones associated with the full scale vitrification facility identified in the Remedial Design ("RD") and Phase I Remedial Action ("RA") Work Plans.

4. On October 2, 1996, U.S. EPA notified U.S. DOE of its denial of the September 26, 1996, extension request and its intent to assess stipulated penalties under the ACA.

5. On October 9, 1996, U.S. DOE and U.S. EPA entered into an Agreement to suspend the ACA time periods for initiation of the Formal Dispute Resolution Process until May 15, 1997 ("the October 9, 1996, Agreement"), while continuing to engage in Informal Dispute Resolution.

6. On May 15, 1997, U.S. DOE and U.S. EPA entered into an Agreement in Principle to resolve this dispute which tolled the assessment of stipulated penalties provided all disputed matters were formally resolved by no later than July 14, 1997.

7. Pursuant to the October 9, 1996, Agreement and the May 15, 1997, Agreement in Principle, U.S. DOE and U.S. EPA met to discuss the path forward on dispute resolution on October 30, 1996, January 14, 1997, February 19, 1997, March 24, 1997, April 16, 1997, April 29, 1997, June 16, 1997, and June 23, 1997 in addition to participating in the weekly telephone conferences.

8. During the Informal Dispute Resolution, the Fernald Citizen's Task Force ("FCTF") reviewed the issues with OU 4 and reported its initial recommendations to the U.S. DOE, U.S. EPA, and the Ohio EPA on March 15, 1997. An Independent Technical Review Team ("IRT") was also convened to examine issues associated with remediation of the Silos' contents. The IRT reported its findings and conclusions on April 28, 1997.

9. The Parties agree that U.S. EPA will provide public notice and a thirty (30) day public comment period and conduct a public meeting to accept public comments on this Agreement. The parties agree to review any public comments and revise this Agreement as appropriate.

10. Throughout this dispute, the Parties have consulted with, and accepted input from, the Ohio Environmental Protection Agency.

11. Pursuant to Section XXXIII of the ACA, the ACA may be modified upon written consent of the Parties.

GOOD FAITH

12. Among other factors, U.S. EPA's assent to the terms of this Agreement, including the penalty provisions, is based upon U.S. DOE's demonstration of good faith in resolving this matter.

Specific instances of U.S. DOE good faith include, but are not limited to, the following:

a. Establishment of the IRT composed of nationally and internationally recognized experts in vitrification and stabilization technologies to evaluate and provide recommendations on the OU 4 Remedial Action;

b. Development of "Value-Engineering" studies that will be an overall evaluation process of OU 4, including the path forward and cost estimates;

c. Development, preparation, and, as described in Attachment A hereto, implementation of a "Lessons Learned" document from OU 4;

d. Participation in weekly conference calls and other settlement conferences;

e. Public participation efforts with the FCTF and the IRT on the OU 4 technical issues;

f. Establishment and documentation of reviews relating to the December 1996 melter incident. The review teams included nationally recognized experts from the vitrification industry; and

g. Agreement to implement, in accordance with Attachment B hereto, projects which will prevent pollution and enhance, restore or maintain the quality of an environmental resource in or near the FEMP.

h. Cooperation in resolving this matter within the informal dispute resolution period.

i. U.S. DOE's commitment to continue to investigate and maintain the integrity of the silos, and monitor and minimize radon emissions from the silos.

TERMS OF RESOLUTION

In order to resolve this dispute, and to concentrate the Parties' efforts on environmental restoration activities at the FEMP, U.S. DOE and U.S. EPA agree as follows:

13. U.S. DOE agrees to implement, in accordance with the specified work plans and schedules, the projects described in Attachment B to this Agreement. If U.S. DOE fails to meet any project schedule or otherwise implement these projects, U.S. DOE

agrees that U.S. EPA may assess a stipulated penalty up to the following negotiated amounts:

Project One	$200,000
Project Two	$100,000
Project Three	$100,000
Project Four	$300,000
Project Five	$275,000

At its sole discretion, U.S. EPA may accept a U.S. DOE proposed alternative or modified project in lieu of assessing an additional monetary penalty. Assessment of a stipulated penalty pursuant to this provision, or approval of an alternative or modified project, shall satisfy DOE's obligation to complete performance of the original project. Any penalty assessed under this paragraph shall be paid from funds specifically authorized and appropriated for that purpose in accordance with Section XVII of the ACA. U.S. DOE expressly waives any right to invoke dispute resolution or in any other way contest the assessment of a monetary penalty under this paragraph.

14. U.S. DOE agrees to the assessment of a monetary penalty in the amount of $100,000, to be paid from funds specifically authorized and appropriated for that purpose in accordance with Section XVII of the ACA.

15. U.S. DOE agrees to request funds in its Fiscal Year (FY) 1999 budget request for the monetary penalty assessed in paragraph 14 of this Agreement. In the event U.S. EPA assesses an additional monetary penalty pursuant to paragraph 13, U.S. DOE agrees to request funds for such a penalty in the first available FY budget cycle, but no later than 24 months, following the U.S. EPA assessment. In accordance with Section XVII.C. of the ACA, U.S. DOE shall make any penalty payments payable to the Hazardous Substances Response Trust Fund and remit such payments within ninety (90) days of receiving authorization to spend funds appropriated for the penalty payments to:

Hazardous Substances Response Trust Fund
P.O. Box 70753
Chicago, IL 60673

Or, if sent by overnight mail service:

First National Bank
525 West Monroe Street

7th Floor Mailroom
Chicago, IL 60661

Any penalty payments made under this agreement should include a reference to the DOE - Fernald Site. Copies of such payments shall be mailed to:

Superfund Division
Federal Facilities Section
SRF-5J
77 West Jackson Blvd.
Chicago, IL 60604

ATTN: James Saric

16. Pursuant to Section XII of the ACA, a primary report submitted pursuant to the ACA may be modified upon consensus by the Project Managers on the need for modification. The Parties agree that the letter from J. Saric to J. Reising, "OU 4 Post-ROD Changes", dated May 21, 1997, constituted the concise written request for modification in compliance with Section XII J.1. of the ACA. The Parties further agree that the need exists for the modification of the OU 4 Feasibility Study/Proposed Plan and Remedial Design/Remedial Action Work Plans and the reports submitted thereunder.

17. This Agreement shall modify Section X, paragraph C.4. of the ACA by requiring the submittal of additional OU 4 documents pursuant to the following schedules:

Activity	Due Date
Submit Draft Explanation of Significant Differences (ESD) for Silo 3 to U.S. EPA for review, comment, and approval.	September 15, 1997
Award multi-tech proof of principle contract for Silos 1 and 2.	August 10, 1998
Submit Draft Supplemental Feasibility Study/Proposed Plan (FS/PP) to U.S. EPA for review, comment, and approval.	February 1, 2000
Submit Draft Record of Decision (ROD) Amendment for Silos 1 and 2 to U.S. EPA for review, comment, and approval.	December 29, 2000

18. As a result of, and in consideration for, DOE's agreement to prepare an ESD for Silo 3, and award a multi-tech proof of principle contract, submit a supplemental FS/PP and amend the OU 4 ROD for Silos 1 and 2, the Parties agree that the current schedules contained in the RD/RA work plans submitted pursuant to the approved OU 4 ROD are no longer effective. A replacement RD/RA Work Plan will be developed for Silo 3 within 60 days of the finalization of the ESD. A replacement RD/RA Work Plan will be developed for Silos 1 and 2 within 60 days of finalization of the ROD amendment. The Parties agree that the time frames and procedures for review and approval of documents submitted pursuant to paragraph 17, as well as submission of other necessary and related documents such as a draft Amended RD/RA Work Plan, shall be determined in accordance with Sections XI and XII of the ACA.

19. In order to incorporate into the ACA the ESD for Silo 3, and the award of the multi-tech proof of principle contract, supplemental FS/PP and ROD amendment for Silos 1 and 2, the Parties have revised page 36 and added page 36a of the ACA which are attached hereto as Attachment C.

20. In the event U.S. DOE fails to comply with any term of this Agreement, except for those activities described in Attachment B hereto, U.S. EPA reserves the right to pursue any remedies it may have available to it under the ACA or the Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. §§ 9601, et seq. In the event U.S. DOE fails to implement any of those activities described in Attachment B hereto, U.S. EPA shall have available to it the remedies specified in Paragraph 13.

21. U.S. DOE agrees not to further dispute the U.S. EPA October 2, 1996 "good cause" determination in any proceeding by U.S. EPA to enforce the terms of this Agreement.

22. The Parties agree that this Agreement resolves all disputed matters relating to U.S. EPA's denial of U.S. DOE's September 26, 1996, request for an extension of time for certain Operable Unit 4 ("OU 4") milestones.

23. No provision of this Agreement shall be interpreted to require obligation or payment of funds in contravention of the Anti-Deficiency Act, 31 U.S.C. § 1341.

24. Nothing in this Agreement or in the ACA shall be interpreted or construed as an admission of liability by U.S. DOE.

25. U.S. DOE and U.S. EPA individually certify that the signatories to this Agreement have the authority to bind U.S. DOE and U.S. EPA to the requirements of this Agreement.

IT IS SO AGREED:

By: Robert Folker Date: 7-14-97
Robert Folker, Acting Manager
U.S. Department of Energy
Ohio Field Office

By: William E. Muno Date: 7/22/97
William E. Muno, Director
Superfund Division
U.S. Environmental Protection Agency
Region V

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ATTACHMENT A

SILOS PROJECT LESSONS LEARNED

Throughout the planning and implementation of Silos Project activities, primarily those involved with design, construction and operation of the Vitrification Pilot Plant, lessons learned have been collected from a variety of internal and external sources. The primary purpose of operating a pilot plant facility is the generation of lessons learned to guide subsequent design and operation of the full scale facility. Sources of lessons learned have included design and readiness reviews, investigations by the three review teams convened to study the December 26, 1996 melter incident, and other formal and informal input from personnel involved in the project. Lessons learned input has also been collected from a variety of external sources including FEMP stakeholders and the Silos Project Independent Review Team.

A detailed database is maintained including each specific lesson learned and its source, the person responsible for addressing the item, and ultimately a summary of the disposition of the item. This database is continually updated and is included as an appendix in the Interim Treatability Study Reports prepared and submitted to DOE, USEPA, and OEPA for each Pilot Plant Campaign.

The Vitrification Pilot Plant Lessons Learned database currently contains 237 individual lessons learned. A large number of specific operational and design items were identified with specific applicability to design and operation of the full scale vitrification facility. During the initial campaigns of Phase I, immediate equipment modifications or operational changes were often implemented to provide near-term resolution of problems and improve subsequent Pilot Plant operations. More significantly, lessons learned during Pilot Plant operations will form a major basis for design of the full-scale vitrification facility. Many of these vitrification lessons learned will also be applicable to the Silo 3 Solidification Project and, if the path forward for Silo 1 and 2 remediation were to change, to implementation of an alternate stabilization technology for the K-65 residues.

One of the primary lessons learned from the experience to date in the Silos Project is the benefit of a disciplined approach to project management, including as a key factor the direct incorporation of lessons learned into design, operational, and other project decisions. The project has been, and will continue to be staffed with experienced project and operations managers and engineering personnel. As evidenced by efforts such as the Independent Review Team and the three Melter Incident Review Teams, the project has made beneficial use of outside expertise to aid in key decisions. The organization of the Silos Project has been restructured in preparation for implementation of the path forward for remediation of the K-65 and Silo 3 residues. Engineering, project management and operational expertise from within the Silos project and from other successful design and waste treatment projects has been utilized in forming project teams to focus the necessary expertise upon each major facet of the path forward . These teams will continue to utilize outside industry expertise in designing and implementing treatment of the K-65 and Silo 3 residues. Factors such as demonstrated discipline in project management and technical expertise in similar treatment technologies will be major factors in selection of vendors for Silos Project remediation activities.

Many of the lessons learned accumulated during design, construction, and operation of the Vitrification Pilot Plant will also be applied in planning and implementation of other waste treatment and remediation projects at the FEMP. In addition to the need to maintain a disciplined approach to project management, lessons applicable to future projects include the need for early comprehensive identification of requirements, continuity of engineering staff through all phases of the project, and integration between personnel responsible for design of process and ancillary equipment, will be applied to future projects. The Silos Project lessons learned database, as well as the FEMP-wide DOE complex-wide lessons learned databases will continue to be utilized in planning and implementation of FEMP remedial activities.

LESSONS APPLICABLE TO VITRIFICATION ACTIVITIES

Identified below are examples, consolidated from a large number of more specific detailed items, of major vitrification-specific lessons learned from Phase I operation of the Pilot Plant. Although lessons learned played a key role in identifying operational and design changes during Phase I to improve operation in later Phase I campaigns, the ultimate resolution of these operational lessons learned will be achieved through design of the full-scale vitrification facility. Phase I lessons learned, including those identified in the Melter Incident Final Report, will form a primary basis for design of the full-scale facility.

- The combination of high temperature and high concentrations of sulfate and lead in the silo residues make high temperature operation of a three chamber melter for processing of silo residues problematic. The Melter Incident Final Report recommends that the final design 'consider alternate melter design(i.e., gas, low-temperature, electrical)'

  In designing the full-scale facility, consideration will be given to a variety of measures, including lower temperature operation, reduced waste loading and different materials of construction. The full-scale facility will likely not utilize a three chamber melter.

- Presence of sulfates results in foaming and in formation of a molten sulfate layer on the surface of the glass. This situation increases melter power requirements.

  Use of urea to reduce sulfates was identified for implementation in subsequent Pilot Plant operation. In design of the full-scale melter, consideration will be given to providing higher retention times and/or more power input to provide for destruction of sulfates. The problems caused by sulfates played a major role in the recommendation not to vitrify Silo 3 residues.

- Numerous bends and small size of piping, inadequate pump design, and interaction between additives, all contribute to frequent plugging of the melter feed system.

  The experience gained in resolving these problems with the Pilot Plant feed system will be incorporated into the design of the feed system for the full-scale vitrification facility, as well as design of waste retrieval and other material handling systems involved in silos remediation.

- High particulate loading downstream of the scrubber, along with long piping runs and

numerous bends contributed to insufficient capacity in the off gas system. The desiccant tower did not provide sufficient removal of moisture from the off gas, resulting in high moisture loading to the HEPA and prefilter.

Many modifications, including spray nozzles upstream of the quench tower and above the scrubber, and heat tracing / insulation of the off gas system were implemented prior to Campaign 4 to remedy this problem.

Design of the full-scale vitrification facility will include a complete rework of the off-gas system. This design will incorporate features such as maintaining higher temperature through the filters, increased blower capacity, use of a chiller and other enhanced moisture removal capacity, and location of equipment to shorten and simplify piping runs in response to lessons learned from pilot plant operation.

- Frequent plugging of the gem machine - In design of the full-scale facility, consideration will be given to use of a water cooled cutter, graphite lining, or switch to an alternate waste form.

- Bottom Drain leaking and 'glow events' - In designing the full scale facility, consideration will be given to deletion of the inner glass containment shell and all bottom penetrations.

LESSONS APPLICABLE TO OTHER FEMP PROJECTS

In addition to lessons implemented to improve subsequent silos vitrification activities, a wide variety of technical, operational, and project management lessons have been accumulated from design, construction, and operation of the Vitrification Pilot Plant which will be applied to other projects at the FEMP.

Project Management

- Expertise developed in implementation of successful engineering, waste management, and operations efforts at the FEMP, as well as outside industry expertise should be utilized in evaluating and resolving technical or design issues, assessing operational problems and making strategic path-forward decisions.

- Project organizational structure should include an outside technical review by industry experts.

- Managers, engineers, operators, and maintenance personnel should be trained by experts in design, operation, and any unique phenomena associated with key equipment.

As has been done to date in the Silos Project, engineering, project management and operational expertise from successful design, operations and waste management projects will be utilized to form project teams to focus the necessary expertise upon implementation of key remedial projects. These teams will continue to utilize outside industry expertise and place emphasis on discipline in project management, and demonstrated technical expertise in selecting vendors for implementing these projects.

Incorporation of Lessons Learned into Project Execution

- A detailed database of lessons learned should be maintained from the inception of the project to provide a resource for improving subsequent stages of the project. The Melter Incident Final report identified that although concerns with bubbler tube erosion had been raised during initial project evaluations, concern was not carried forward into the Final Hazard Analysis Report. The Melter Incident report recommended that "concerns that arise must be captured and maintained until formal resolution is reached through an approval process."

- Detailed maintenance logs should be kept to maintain a retrievable record of equipment maintenance for use in future design activities.

Lessons learned from previous projects here, and at other facilities, will be factored into initial planning of future projects and tracked through the design and implementation phases. Utilization of outside industry expertise to review the planning and design process will expand the base of lessons learned from which to draw upon and provide assurance that lessons learned are being factored into the project. The Silos Project lessons learned database, as well as the FEMP-wide DOE complex-wide lessons learned databases will continue to be utilized in planning and implementation of FEMP remedial activities.

Requirements Identification

- All functional requirements, including those for utility and ancillary systems (electrical loading and layout, emergency / backup power, fire protection, weather protection, controller/ DCS logic) as well as operational constraints and capacity requirements should be identified as early in the design process as possible.

- Design change control should be applied during Title I design to verify and justify deviations from originally specified functional requirements

- Requirements for readiness reviews, equipment inspection and testing, and system operability and construction acceptance testing should be considered early in the design process.

- Configuration management should be implemented at the inception of the project

- Maintenance requirements, and maintenance support availability should be considered in specifying equipment.

- The Melter Incident Final Report recommended that site and functional area requirements, including the need to implement formal documented design change control, must be identified in contract specifications prior to issuing the Invitation for Bid or Request for Proposal.

A disciplined requirements identification process will be the initial step in the planning of major FEMP remedial activities. This process will include the development of a detailed Project Execution Plan which comprehensively identifies the requirements of each functional area which are applicable to the project or activity in question. Strict formal design review and change control will be applied to assure that any deviations from these originally

specified requirements are identified and appropriately reviewed. Site specific requirements will be specifically identified and formally communicated to potential vendors.

Design of Ancillary Systems

- Steps to deal with the moisture, particulate loading, and plugging problems in the Pilot Plant off gas system will be incorporated into design of off gas systems for other projects involving the processing of high moisture materials, such as the Waste Pit Remediation facilities.

- Measures implemented to improve operation of the Pilot Plant feed system, such as use of large radius bends rather than elbows, and use of short, straight pipe runs will be applied to design of other material handling systems involving slurries and other wet materials.

- The vendor and design personnel responsible for the main processing equipment (e.g., the melter) should be intimately involved in design of ancillary and utility (off gas, feed, wastewater) systems.
- Critical components should be evaluated collectively for operational impact. A material failure and trending process should be developed to identify deficiencies that potentially can affect similar processes or materials.

Project Integration

- Wherever possible, standard design and drawing formats will be utilized to facilitate interfaces and integration between functional areas.

- Subject matter experts from all disciplines (construction, procurement, operations, maintenance, health & safety, environmental) should be involved from the early design criteria and equipment specification stages and continuously throughout the project. Comprehensive review and input must be maintained to assure identification of interfaces, integration requirements or potential conflicts between functional areas.

- Continuity of vendors and engineering support throughout the project should be maximized. Design of many, or all systems by a single organization should be considered, along with maintaining the same engineering personnel from system engineering and design through the startup and operational support phases.

- Interaction and communication must be maintained between the personnel responsible for analysis and review of operational and environmental data and operations personnel to assure a consistent understanding of operational changes, test results, sampling issues, etc.

ATTACHMENT B

PROJECT 1 : ESTABLISHMENT OF A CONSERVATION AREA NEAR THE FEMP

This proposal involves establishing a conservation area on a piece of property that is considered to have high ecological value in the area surrounding the FEMP. Ideally, this area would contain habitats such as riparian areas, wetlands, etc. The proposal would involve DOE and the Regulatory Agencies working with groups such as the Nature Conservancy, the U.S. Fish and Wildlife Service and/or the Ohio Department of Natural Resources to establish a Conservation area on the property. The Conservation area would allow preservation of habitat near the site and would further enhance the proposed Natural Resource Restoration Plan for the FEMP by preserving habitat contiguous with the restored FEMP Site.

Further research would be needed on any piece of property targeted for an easement to determine if the current landowners are willing to cooperate in the establishment of the easement and exactly what the cost would be. The targeted property would be between 30 and 100 acres in size. The establishment of a conservation easement is expected to cost less than the cost of purchasing.

A proposal outlining the proposed property for the area would be submitted to the Agencies no later than November 21, 1997, for review and approval by U.S. EPA.

PROJECT 2: RESEARCH GRANTS FOR ECOLOGICAL RESTORATION

This proposal would provide a great deal of flexibility in terms of cost and schedule for implementation. Essentially DOE would be able to establish grant(s) for whatever dollar amount they chose and establish time frames for the grants that fit the proposed research projects (e.g., annual or biannual). The recommended approach for initiating this proposal would be to identify a set dollar amount as negotiated with the Agencies. The focus of the grants would be to implement research projects involving actual field work (as opposed to only "paper" or "conceptual" research) that would support the proposed restoration efforts at the FEMP. Input would be solicited from Universities participating in the Technical University Program on what type of research would be feasible and beneficial in this region. DOE, in conjunction with the Regulatory Agencies, could review and select the proposals that were determined to be most beneficial. The schedule for conducting the actual research would be dependent on the project that was selected. The general areas of ecological restoration research that would be emphasized are as follows:

Representative Vegetation Plots - The purpose of this research would be to establish vegetation plots that would be representative of the habitats that are targeted for establishment as part of site restoration plans (e.g., riparian, wetland, grassland, Oak-Hickory forests). Permanent plots would be established by placing reinforcement bars at specified areas where follow-up monitoring such as vegetative measurements would occur. The monitoring would focus on the success of the plots and how external influences and management practices influence the various habitats.

Pilot Restoration Projects for Target Species - This research would focus on the success of restoration techniques for targeted species that have specific relevance in this area. The species of interest could be species that are listed for protection (i.e., threatened or endangered species at the state or federal level) or species that would be typical of the land-uses proposed for establishment at the FEMP. The results of the pilot restoration projects would provide information directly applicable to the proposed restoration of the site.

Invasive Species Control - Various techniques for control of non-native species could be employed. These techniques would involve biocontrol methods such as the introduction of plant-specific insects which feed on invasives. Properties of invasive species could be examined to determine their effect on native vegetation.

Techniques for Success Monitoring - Techniques for monitoring the success at the habitat level and/or the species level to ensure that restoration techniques are meeting established goals. Possibilities could include photo monitoring, satellite imagery, etc. As with the specific proposals above, techniques that prove successful could be implemented as part of the restoration efforts at the FEMP.

The precise schedule for each individual grant would vary depending on the scope of the research proposed. Areas of the FEMP that will be targeted for the research will have to be certified clean prior to implementation. Areas that will be targeted will likely be west of Paddys Run. Through the implementation of an accelerated certification process, areas west of Paddys Run can be certified by July of 1998. In parallel with the certification process, a workplan outlining proposed research projects will be developed and submitted to the Agencies by November 21, 1997, for review and approval by U.S. EPA.

PROJECT 3: CREATION OF WILD BIRD/WILD FLOWER HABITAT AREA

The goal for this proposal would be to create a protected habitat for regional species of wild birds and wildflowers both in the same area of the FEMP. Ideally, this project would be implemented in an area that would provide aesthetic appeal to employees, visitors and neighbors. The project would have to implemented in an area that has been certified clean and is expected to require the construction of a shelter and access. The installation of electricity or other utilities for the Habitat Area is not expected to be necessary with the possible exception of water. The costs for the proposal would include planting wildflowers, installing feeders, creating pathways and installing a bird blind.

As with the previous project, the area selected for the habitat area will have to be certified clean prior to implementation. Options for the location of this project would likely be limited to Area 1, Phase I or an area west of Paddys Run. As stated previously, it is anticipated that the area west of Paddys Run can be certified by July of 1998 through an accelerated certification program. In parallel with certification efforts, a Workplan outlining the details of the project will be developed and submitted to the Agencies no later than December 31, 1997, for review and approval by U.S. EPA.

PROJECT 4: RAILROAD TRACK RECYCLING

This proposal involves the size reduction, decontamination, and transport off site for recycling and reuse of 300-500 tons of steel train track rails from the former process area. The monetary amount to be expended on this effort will be commensurate with the amount denoted for Project 4 in Paragraph 13 of the settlement agreement. Steel train track rails will be removed from the former process area and decontaminated either through the onsite FEMP Material Release Facility (MRF) or through a private supplier of decontamination and recycling services. Based on the radiological characterization of the train rails, a wide variety of decontamination techniques may be appropriate, including manually operated abrasive blasting (such as vacuum grit blasting or sodium bicarbonate blasting), automated abrasive blasting (such as continuous feed descaling), or other less aggressive techniques. DOE-FEMP will provide to the agencies a detailed Work Plan for this proposal,which will identify the specific decontamination/release strategy to be utilized, the tonnage of steel to be recycled, and a project schedule, by September 15, 1997, for review and approval of U.S. EPA.

PROJECT 5: STRUCTURAL STEEL DEBRIS RECYCLING

This project involves the decontamination, transport, radiological surveying, and recycling and reuse of 300-500 tons of structural steel and/or oversized material (e.g., steel beams, steel mill rollers, mill stands, counterweights, large tanks or pressure vessels, etc.). The monetary amount to be expended on this effort will be commensurate with the amount denoted for Project 5 in Paragraph 13 of the Settlement Agreement. These materials would be decontaminated and recycled through either the onsite FEMP Material Release Facility (MRF) or through a private supplier of decontamination and recycling services. Based on the radiological characterization and physical configuration of the materials, a wide variety of decontamination techniques may be appropriate, including manually operated abrasive blasting (such as vacuum grit blasting or sodium bicarbonate blasting), automated abrasive blasting (such as continuous feed descaling), or other less aggressive techniques. DOE-FEMP will provide to the agencies a detailed Work Plan for this proposal, which will identify the specific decontamination/release strategy to be utilized, the specific materials and tonnages included, and a project schedule, by September 15, 1997, for review and approval of U.S. EPA.

ATTACHMENT C

c. FS Report/Comprehensive Response Action Risk Evaluation: September 10, 1993;

d. Proposed Plan: September 10, 1993;

Proposed Draft Record of Decision: June 10, 1994

Operable Unit 4 Modification of December 7, 1994 Record of Decision.

e. Submit Draft Explanation of Significant Differences (ESD) for Silo 3 to U.S. EPA for review, comment, and approval: September 15, 1997

f. Award multi-tech proof of principle contract for Silos 1 and 2: August 10, 1998

g. Submit Draft Supplemental Feasibility Study/Proposed Plan(FS/PP) to U.S. EPA for review, comment, and approval: February 1, 2000

h. Submit Draft Record of Decision (ROD) Amendment for Silos 1 and 2 to U.S. EPA for review, comment, and approval: December 29, 2000

#5. **Operable Unit 5: Environmental Media.** Groundwater, surface water, soil not included in the definitions of OU #1-4, sediments, flora, and fauna.

a. Initial Screening of Alternatives: April 16, 1993;

b. RI Report/Baseline Risk Assessment*: June 24, 1994;

c. FS Report/Comprehensive Response Action Risk Evaluation: November 16, 1994;

d Proposed Plan: November 16, 1994;

Proposed Draft Record of Decision: July 3, 1995.

* The Site-Wide Ecological Assessment shall be included in the Baseline Risk Assessment for OU 5.

Comprehensive Site-Wide Operable Unit: An evaluation of remedies selected for OUs 1-5, above (including remedial and removal actions) to ensure that they are Protective of human health and the environment on a site-wide basis, as required by CERCLA, the NCP and applicable U.S. EPA policy and guidance.

a. Site-Wide RI/Projected Residual Risk Assessment Work Plan Addendum: No later than six (6) months following signature of the ROD for OU 3;

b. Site-Wide RI/Projected Residual Risk Assessment Report: The Site-Wide RI/Projected Residual Risk Assessment Report shall be submitted in accordance with the schedule approved in the Work Plan Addendum above;

c. FS Report: If required by U.S. EPA, the FS Report shall be provided in accordance with the schedule approved in the Work Plan Addendum above.