FERNALD CITIZENS TASK FORCE

FRIDAY MAILING

5/23/97

INCLUDED IN THIS MAILING ARE:

- ❑ Fernald Monthly Report and Summary - April 1997
- ❑ Silos Project Independent Review Team Minority and Majority Final Reports

ANNOUNCEMENTS:

- ❑ **WORKSHOP ON OU2 AND OU5** *(Confirmed)*: There is a workshop scheduled to discuss OU2 and OU5 on Tuesday, May 27, 1997 at the Plantation (9660 Dry Fork Road in Harrison, OH.) Topics to be covered include: Soil Certification Program Status, On-Site Disposal Facility construction schedule, parking lot/road closure/road realignment plans, and other issues as needed.
- ❑ **WASTE MANAGEMENT COMMITTEE:** The Waste Management Committee will meet on Monday, June 9, 1997, to discuss the Silos Path Forward. The meeting will take place in the Uno Building at 6:00 p.m.
- ❑ **SILO 3 - SECOND WORKSHOP:** There will be a second workshop on Silo 3 on June 16, 1997. The meeting will take place at the Plantation at 7:00 p.m.

QUESTIONS:

Please call John at [redacted] or Doug at [redacted] with questions or concerns. You may also fax or e-mail us at:

John	FAX: 281-3331	E-MAIL: john.applegate@law.uc.edu
Doug	FAX: 648-3629	E-MAIL: [redacted]

[redacted]

FERNALD CITIZENS TASK FORCE

FERNALD MONTHLY REPORT SUMMARY

April 1997

OPERABLE UNIT 1

MAJOR WORK INITIATED/COMPLETED - APRIL 1997

- ❑ Began evaluation of Alternate Remediation Subcontract Approach (ARASA) Proposals April 4, 1997.
- ❑ Initiated off-site trestle construction activities.

MAJOR WORK TO BE INITIATED/COMPLETED - MAY 1997

- ❑ Complete evaluation of ARASA RFPs and request Best and Final Offers (BAFOs).
- ❑ Request bids for the procurement of 135 railcars.

OPERABLE UNIT 2

MAJOR WORK INITIATED/COMPLETED - APRIL 1997

- ❑ Telephone/electric poles were installed in preparation for relocation of the fiber optic cable which are currently buried in the path of future On Site Disposal Facility (OSDF) Leachate Conveyance System.
- ❑ Awarded a contract to Petro Environmental Technologies Inc. on April 3, 1997 for the construction of Phase I of the OSDF.
- ❑ Begin installation of piping for the OSDF Leachate Conveyance System.

OPERABLE UNIT 3

MAJOR WORK TO BE INITIATED/COMPLETED - MAY 1997

- ❑ Submit comment responses and revisions to the Integrated Remedial Design/Remedial Action Work Plan by May 24, 1997.

OPERABLE UNIT 4

MAJOR WORK INITIATED/COMPLETED - APRIL 1997

- ❑ Completed and issued the final version of the IRT reports on April 21, 1997.

MAJOR WORK TO BE INITIATED/COMPLETED - MAY 1997

- ❑ The Agencies have agreed to formal dispute resolution process of missed OU4 milestones by May 15, 1997.

OPERABLE UNIT 5

MAJOR WORK INITIATED/COMPLETED - APRIL 1997

- ❑ Submitted the Design, Monitoring, and Evaluation Program Plan for the Aquifer Restoration Project (ARP)/Advanced Waste Water Treatment (AWWT) to the Agencies on March 27, 1997, meeting the deadline of April 1,1997.
- ❑ Submitted the Draft Final Baseline Remedial Strategy Report to Agencies on April 11, 1997.
- ❑ Submitted Draft Final Remediation Action Work Plan for Aquifer Restoration to the Agencies on April 11, 1997.
- ❑ Awarded Sewage Treatment Plant Phase I contract on April 15, 1997.
- ❑ Submitted initial Draft South Plume Performance Monitoring and Maintence Plan for OU5 to DOE-FEMP on April 30, 1997.
- ❑ Began design work on Storm Water Retention Basin (SWRB) and Biodenitrification Surge Lagoon (BSL) along with upgrades to the AWWT.
- ❑ For the Soil Characaterization and Evacuation Project (SCEP): Sent samples collected from Area 1, Subareas A,B,B1 and pump station for analysis; and assigned additional resources to the development and redesign of Sitewide Evacuation Plan.

MAJOR WORK TO BE INITIATED/COMPLETED - MAY 1997

- ❑ Submit Final OSDF Groundwater/Leak Detection and Leachate Monitoring Plan to the Agencies on May 23, 1997.
- ❑ Submit Integrated Environmental Monitoring Plan (IEMP) to Agencies on May 23, 1997.

WASTE MANAGEMENT

MAJOR WORK INITIATED/COMPLETED - APRIL 1997

- Shipped 319.00 m^3 low level waste to Nevada Test Site (NTS).
- Treated 109.00 m^3 in the Neutralization/Precipitation/Deactivation/Stabilization Project (NPDS) and revised the Perma-Fix procedure for processing of enriched pyrophoric materials.
- Completed and transmitted work plan for Treatment, Storage, and Disposal Facility (TSDF) Project to DOE-FEMP.
- Initiated sampling of Thoria Gel containers from Building 60 on April 9,1997.
- Completed Hazards and Operability Analysis (HAZOP) on the RCI Solvent Extraction Process and submitted it to the Independent Safety Review Committee (ISRC) on April 28,1997.
- Resubmitted Auditable Safety Record (ASR) and Unreviewed Safety Questions (USQs) to ISRC for review on April 30, 1997.

MAJOR WORK TO BE INITIATED/COMPLETED - MAY 1997

- Ship Batch 7 and 8 to the TSCA Incinerator.
- Ship silver recovery cartridges to the Safety Kleen Facility in Lexington, SC on May 6, 1997. Note: Although this is performed under the Hazardous Waste Recycling Project, these cartridges are considered non-hazardous.

THORIUM OVERPACK PROJECT (TOP)

ALL FIGURES CUMULATIVE FOR THE PROJECT AS OF APRIL 30, 1997

- Overpacked 5,354 Drums.
- Filled 913 Thorium Overpack Containers (TOC's).
- Shipped 865 TOC's.

FERNALD MONTHLY PROGRESS SUMMARY April 1997

The following represents a summary of major accomplishments at Fernald by Operable Unit. Please contact Terry Hagen (513-648-5261) or Tisha Patton (513-648-5277) for any additional information.

OPERABLE UNIT 1

April 1997

- Enforceable Milestones Completed
  - None

- Major Work Initiated/Completed
  - Began evaluation of ARASA Proposals April 4, 1997
  - Continued north railyard construction
  - Continued modifications to Waste Pits Remedial Action Project (WPRAP) north access road
  - Continued development of the Transportation Plan
  - Continued development of specification for the procurement of 135 railcars
  - Initiated off-site trestle construction activities

May 1997 (Anticipated)

- Enforceable Milestones Expected to Be Completed
  - None

- Major Work to be Initiated/Completed
  - Complete evaluation of ARASA RFPs and request Best and Final Offers (BAFOs)
  - Continue north railyard construction
  - Continue modifications to WPRAP north access road
  - Continue development of the Transportation Plan, a Remedial Action Work Plan (RAWP) deliverable
  - Request bids for the procurement of 135 railcars
  - Continue off-site trestle construction activities

OPERABLE UNIT 2

April 1997

- Enforceable Milestones Completed
  - On-Site Disposal Facility (OSDF)
    - Milestone requiring construction of the OSDF to commence by April 30, 1997 (as found in the OU2 RAWP) was met on January 27, 1997, when Notice to Proceed was given to Village Building Services, Inc. to begin work on the OSDF Leachate Conveyance System, an integral component of the OSDF design
  - Soil Characterization & Excavation Project (SCEP)
    - None
- Major Work Initiated/Completed
  - OSDF
    - Telephone/electric poles were installed in preparation for relocation of the fiber optic cables which are currently buried in the path of the future OSDF Leachate Conveyance System

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- Awarded a contract to Petro Environmental Technologies, Inc., on April 3, 1997, for the construction of Phase I of the OSDF
- SCEP
  - Submitted site preparation procurement package for the remediation of the Southern Waste Units (Active Flyash Pile, Inactive Flyash Pile and Southfield) for Davis-Bacon determination
  - Continued work on the Integrated Remedial Design Package for the Operable Unit Waste Units; completion of this package is dependent on successful completion of the OU5 Area 1, Phase I Certification Report

May 1997 (Anticipated)

- Enforceable Milestones Expected to Be Completed
  - OSDF
    - None
  - SCEP
    - None

- Major Work to be Initiated/Completed
  - OSDF
    - Begin installation of piping for the OSDF Leachate Conveyance System
  - SCEP
    - Continue April 1997 activities identified above

OPERABLE UNIT 3

April 1997

- Enforceable Milestones Completed
  - Submitted comment responses and revisions to the Thorium/Plant 9 Implementation Plan to the Agencies on April 4, 1997

- Major Work Initiated/Completed
  - Safe Shutdown
    - Continued line draining and holdup material removal in Plant 2/3
    - Continued planning for safe shutdown activities in Plants 6 and 8
  - D&D
    - Continued activities in Boiler Plant/Water Plant

May 1997 (Anticipated)

- Enforceable Milestones Expected to Be Completed
  - Submit comment responses and revisions to the Integrated Remedial Design/Remedial Action Work Plan by May 24, 1997

- Major Work to be Initiated/Completed
  - Safe Shutdown
    - Continue line draining and holdup material removal in Plant 2/3
  - D&D
    - Continue activities in Boiler Plant/Water Plant

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OPERABLE UNIT 4

April 1997

- Enforceable Milestones Completed
  - None

- Major Work Initiated/Completed
  - Issued formal response letter to Agency comments on the Draft Final Silo 3 Alternatives Evaluation Report on April 2, 1997
  - Completed and issued the final version of the Independent Review Team (IRT) Reports on April 21, 1997
  - Issued formal response letter to comments from the Fernald Citizens Task Force (FCTF) on the Draft Final Silo 3 Alternatives Evaluation Report on April 29, 1997

May 1997 (Anticipated)

- Enforceable Milestones Expected to Be Completed
  - None

- Major Work to be Initiated/Completed
  - Attend meeting of the Waste Management Committee of the FCTF on May 7, 1997, to discuss issues associated with the Silos Project path forward
  - Attend the full FCTF meeting on May 10, 1997, to provide support and answer questions as the Task Force continues to review the Silos Project path forward
  - Conduct a public meeting on May 14, 1997, to provide support and answer questions on evaluating the best technology for stabilization/solidification of Silo 3 residues
  - The Agencies have agreed to formal dispute resolution process of missed OU4 milestones by May 15, 1997, allowing the Silos Project to finalize a path forward with input from the IRT, DOE, the Agencies, and public stakeholders

OPERABLE UNIT 5

April 1997

- Enforceable Milestones Completed
  - Aquifer Restoration Project (ARP)/Advanced Waste Water Treatment (AWWT)
    - Submitted the Design, Monitoring, and Evaluation Program Plan (DMEPP) to the Agencies on March 27, 1997, meeting the actual milestone date of April 1, 1997
    - Submitted Draft Final Baseline Remedial Strategy Report to the Agencies on April 11, 1997
    - Submitted Draft Final Remedial Action Work Plan for Aquifer Restoration to the Agencies on April 11, 1997
    - Submittal of the Final Restoration Area Verification Sampling Program Project-Specific Plan to the Agencies, originally scheduled for April 29, 1997, has been deferred per verbal agreement with Jim Saric, USEPA
  - SCEP
    - None

- Major Work Initiated/Completed
  - ARP/AWWT
    - Awarded Sewage Treatment Plant Phase I contract on April 15, 1997
    - Submitted initial Draft South Plume Performance Monitoring and Maintenance Plan for Operable Unit 5 to DOE-FEMP on April 30, 1997

- Continued construction of storm sewers in west parking lot in support of the Parking Lot Stormwater Runoff Diversion Project; anticipated completion date is June 24, 1997
- Began design work on the following:
  - Sludge removal from the Storm Water Retention Basin (SWRB) and the Biodenitrification Surge Lagoon (BSL)
  - Miscellaneous upgrades to the AWWT
- SCEP
  - Continued assessment of analytical data associated with ongoing Comparability Study
  - Continued development of the Area 1, Phase I Certification Report
  - Sent collected samples from Area 1, Subareas A, B, B1, and the pump station (all OSDF support facilities) for analysis
  - Assigned additional resources to the development and redesign of the Sitewide Excavation Plan

May 1997 (Anticipated)

- Enforceable Milestones Expected to Be Completed
  - ARP/AWWT
    - Submit Final Integrated Environmental Monitoring Plan (IEMP) to the Agencies on May 23, 1997
    - Submit Final OSDF Groundwater/Leak Detection and Leachate Monitoring Plan to the Agencies on May 23, 1997
  - SCEP
    - None

- Major Work to be Initiated/Completed
  - ARP/AWWT
    - Award contract for AWWT Resin Regeneration Project
  - SCEP
    - Comparability Study mentioned in April activities will be divided into two reports, with the first report focusing on the field application of High Purity Germanium detectors; submit draft of the first report to DOE in May 1997
    - Deliver Draft Soil Certification Report for Area 1, Phase I to DOE (actually due June 1, 1997, based on the recent milestone extension granted by USEPA); all data for this report have been received, with more than 80% of it validated

WASTE MANAGEMENT

April 1997

- Enforceable Milestones Completed
  - None

- Major Work Initiated/Completed
  - Low Level Waste
    - Shipped 319.00 m^3 low level waste to Nevada Test Site (NTS)
  - Mixed Waste Treatment Projects
    - Chemical Treatment Projects
      - Neutralization/Precipitation/Deactivation/Stabilization (NPDS) Project
        - Revised Perma-Fix procedure for processing of enriched pyrophoric materials
        - Treated 109.00 m^3 of mixed waste
      - Completed and transmitted Work Plan for the Treatment, Storage, and Disposal Facility (TSDF) Project to DOE-FEMP

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- Initiated sampling of Thoria Gel containers from Building 60 for the Thorium Stabilization Project on April 9, 1997
- RCI Solvent Extraction Project
  - Conducted project ribbon cutting ceremony on April 15, 1997
  - Completed Hazards and Operability Analysis (HAZOP) and submitted it to the Independent Safety Review Committee (ISRC) for review on April 28, 1997
  - Resubmitted Auditable Safety Record (ASR) and Unreviewed Safety Questions (USQs) to the ISRC for review on April 30, 1997

May 1997 (Anticipated)

- Enforceable Milestones to Be Completed
  - None

- Major Work to be Initiated/Completed
  - Mixed Waste Treatment Projects
    - Chemical Treatment Projects
      - Ship Batch 7 and Batch 8 (approximately 150 drums) to the TSCA Incinerator
      - Ship silver recovery cartridges to the Safety Kleen facility in Lexington, South Carolina on May 6, 1997; note that although this activity is performed under the auspices of the Hazardous Waste Recycling Project, these particular cartridges are considered non-hazardous

THORIUM OVERPACKING PROJECT UPDATE (TOP)

All figures cumulative for the project as of April 30, 1997

- Overpacked 5,354 drums
- Filled 913 Thorium Overpack Containers (TOCs)
- Shipped 865 TOCs

RESULTS OF THE INDEPENDENT REVIEW TEAM

The Independent Review Team (IRT) was convened in November 1996 to assist and advise FDF, DOE, stakeholders and regulatory personnel in recommending a path for the disposal of wastes in Operable Unit 4 (OU4) contained in Silos 1,2, and 3. The IRT originally consisted of nine members with a wide variety of experience in disposal issues, with two more team members added later that had specific experience in cementation. The IRT considered three alternatives for disposal of the wastes:

- Alternative I - Vitrify the wastes from all three silos
- Alternative II - Vitrify wastes in Silos 1 and 2, while stabilizing Silo 3 wastes
- Alternative III - Stabilize all wastes

Because all eleven members were unable to come to a unanimous decision on the issue, two reports were produced by the IRT, one reporting the findings of the majority, and the other reporting the findings of the minority.

SUMMARY OF THE FINAL MAJORITY REPORT FOR THE SILOS PROJECT INDEPENDENT REVIEW TEAM

Considering the alternatives for disposal of the wastes and the goal of immobilizing these wastes as safely, efficiently, and cost effectively as possible, the group majority concluded that Alternative II presented the best plan for the wastes stored at the Fernald site.

This result was based on various lines of reasoning. Silo 3 waste has a high sulfate concentration and, since sulfate has low solubility in glass, vitrification is an impossibility for Silo 3 waste, eliminating Alternative I from consideration. The high and varying lead content of the waste from Silos 1 and 2 could cause precipitation in a melter, thereby making cementation of this waste unrealistic, and eliminating Alternative III from consideration. The vitfication process keeps radon levels in waste from Silos 1 and 2 at a minimum, as well as reduces the amount of material to be transported, and the concurrent costs associated with that transport. Alternative II also meets current regulatory commitments and would provide the best alternative for the stakeholders involved. The majority of the IRT, however, recommends that the implementation of Alternative II be done by a turnkey subcontractor who has experience in vitrification and who has worked with DOE before. Cementation of wastes for all three silos was suggested as a contingency plan if the implementation of Alternative II is not successful. Six of the IRT signed the majority report.

SUMMARY OF THE FINAL MINORITY REPORT FOR THE SILOS PROJECT INDEPENDENT REVIEW TEAM

In contrast to the majority opinion, the minority opinion is that cementation (Alternative III) is the best method for disposal of wastes in all three silos in OU4. The minority eliminated Alternative I from the list of possible alternatives based on the high sulfate content in the wastes from Silo 3. The minority feels that cementation is the best means of disposal for waste from Silos 1 and 2 because of the increased cost associated with the continuation of vitrification and the unrealistic expectation of finding a turnkey subcontractor that would be able to vitrify sulfate containing raw materials. Significant difficulties accompany the process of vitrification, which FDF was not able to overcome. The minority feels that waste loading during cementation would reduce cost for processing and transportation by reducing the bulk of material transported, countering the majority opinion that cementation would be too expensive. Also, cost analysis of the cementation process did not account for a 24 hours/day, 7 days/week operating schedule for the processing facility. Taking this into consideration would lower the cost estimates beyond those which were considered. Cementation is also a better known technology, and there are known available turnkey subcontractors experienced in cementation. The minority also concluded that vitrification of the waste from Silos 1 and 2 will result in increased gamma radiation from the disposal products, and that the dilution of the radium by cementation will prevent this increased radiation. The minority also suggests that an interim storage facility be present to house wastes in the result of a disruption in transportation. Both groups agree that a complete characterization of wastes is needed. The minority feels that with this characterization, the presence of a high sulfate content in the wastes will prove vitrification to be an impossibility. The minority is of the opinion that, based on cost and goals presented in the ten year plans, cementation is the only alternative for the wastes from all three silos. Five members of the IRT signed the minority report, including the two members who were added to the team for their cementation expertise.