



Department of Energy

**Ohio Field Office
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1929

JAN 15 1999

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

DOE-0342-99

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

Dear Mr. Saric and Mr. Schneider:

**CONSOLIDATED CONSENT AGREEMENT/FEDERAL FACILITY COMPLIANCE
AGREEMENT/FEDERAL FACILITY AGREEMENT/REMEDIAL INVESTIGATION/FEASIBILITY
STUDY/CONSENT DECREE MONTHLY REPORT FOR THE PERIOD OF DECEMBER 1, 1998,
THROUGH DECEMBER 31, 1998, AND QUARTERLY REPORT FOR THE PERIOD OF
OCTOBER 1, 1998, THROUGH DECEMBER 31, 1998, INCLUDING REMOVAL ACTION
STATUS REPORT**

This letter transmits the amended Consent Agreement Monthly Report for the period of December 1, 1998, through December 31, 1998, and the Quarterly Report for the period October 1, 1998, through December 31, 1998. This report is formatted to reflect the proposal presented in the letter, DOE-0395-96, J. Reising to J. A. Saric and T. Schneider, "Phase VII Removal Actions and Reporting Requirements under the FEMP Legal Agreements," dated January 16, 1996, and agreed to by the U.S. Environmental Protection Agency (U.S. EPA) and Ohio Environmental Protection Agency (OEPA).

If you have any questions, please contact me at (513) 648-3139.

Sincerely,

Johnny W. Reising
Fernald Remedial Action
Project Manager

FEMP:Reising

Enclosures

JAN 15 1999

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Mr. James A. Saric
Mr. Tom Schneider

cc w/enclosures:

N. Hallein, EM-42, CLOV
G. Jablonowski, USEPA-V, SRF-5J
R. Beaumier, TPSS/DERR, OEPA-Columbus
D. Sarno, FCAB
V. Dastillung, FRESH
P. Dunn, FRESH
F. Barker, Tetra Tech
D. Carr, FDF/52-2
T. Hagen, FDF/65-2
AR Coordinator, FDF/78

cc w/o enclosures:

A. Tanner, OH/FEMP
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M. Schupe, HSI GeoTrans
J. Harmon, FDF/90
R. Heck, FDF/2
S. Hinnefeld, FDF/90
B. Irvine, FDF/65-2
T. Walsh, FDF/65-2
ECDC, FDF/52-7

**CONSOLIDATED CONSENT AGREEMENT/FEDERAL FACILITY COMPLIANCE
AGREEMENT/FEDERAL FACILITY AGREEMENT/REMEDIATION INVESTIGATION/FEASIBILITY
STUDY/CONSENT DECREE MONTHLY REPORT DECEMBER 1 THROUGH 31, 1998,
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INCLUDING REMOVAL ACTION STATUS REPORT**

Introduction

This report describes actions at the Fernald Environmental Management Project (FEMP) from October 1, 1998 through December 31, 1998. The monthly and quarterly reports have been revised to reflect the proposal presented in the letter, DOE-0395-96, J. Reising to J.A. Saric and T. Schneider, "Phase VII Removal Actions and Reporting Requirements under the FEMP Legal Agreements", dated January 16, 1996, and agreed to by USEPA and OEPA.

The Department of Energy - Fernald, has given direction to utilize the submittal of the Quarterly Integrated Environmental Monitoring Plan (IEMP) reports to satisfy the effluent radionuclide reporting requirements of the Consolidated Consent Agreement/Federal Facility Compliance Agreement/Federal Facility Agreement/Remedial Investigation/Feasibility Study/Consent Decree Quarterly Report.

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OPERABLE UNIT 1 - WASTE PITS REMEDIAL ACTION PROJECT

October 1998

- Enforceable Milestones
 - None

- Major Work Initiated/Continued/Completed
 - Continued review of draft RA deliverables by Agencies
 - Received final approval from USEPA for RD Package
 - Continued review of IT authorization to operate documents
 - Continued construction of treatment facility by IT Corp.
 - Continued to develop the Solid Waste Management Plan
 - Initiated rail operations training
 - Continued Rail Tender negotiations

November 1998

- Enforceable Milestones
 - None

- Major Work Initiated/Continued/Completed
 - Continued review of draft RA deliverables by the Agencies
 - Continued construction of waste processing facility by IT Corp.
 - Continued review of IT authorization to operate documents
 - Completed rail operations training
 - Continued Rail Tender negotiations

December 1998

- Enforceable Milestones
 - None

- Major Work Initiated/Continued/Completed
 - Continued review of draft RA deliverables by Agencies
 - Submitted First Load Out Work Plan to the Agencies
 - Continued construction of waste processing facility
 - Initiated training of FAT&LC personnel for ARASA Operations

- Continued Rail Tender negotiations

CONSOLIDATED CONSENT AGREEMENT/FEDERAL FACILITY COMPLIANCE AGREEMENT/FEDERAL FACILITY AGREEMENT/REMEDIAL INVESTIGATION/FEASIBILITY STUDY/CONSENT DECREE MONTHLY REPORT DECEMBER 1 THROUGH 31, 1998, AND QUARTERLY REPORT OCTOBER 1, 1998 THROUGH DECEMBER 31, 1998, INCLUDING REMOVAL ACTION STATUS REPORT

January 1999 (Anticipated)

- Enforceable Milestones
 - None

- Major Work Initiated/Continued/Completed
 - Continue review of draft RA deliverables by Agencies
 - Continue construction of waste processing facility
 - Continue training of FAT&LC personnel for ARASA Operations
 - Continue Rail Tender negotiations

OPERABLE UNIT 2 - ON-SITE DISPOSAL FACILITY AND SOIL CHARACTERIZATION AND EXCAVATION PROJECT

Additional OU2 soils-related activities reported under OU5/Soils Characterization and Excavation Project

October 1998

- Enforceable Milestones
 - None

- Major Work Initiated/Continued/Completed
 - On-Site Disposal Facility (OSDF)
 - Completed secondary liner system for Cell 2
 - Installed Leak Detection System for Cell 2
 - Completed primary liner system for Cell 2
 - Continued placing Impacted Material in Cell 1
 - Leachate Conveyance System
 - Installed Leachate Collection System for Cell 2
 - Soil Characterization & Excavation Project (SCEP)
 - Completed Site Preparation of SWUs
 - Completed Sewage Treatment Plant Excavation Package October 7, 1998

November 1998

- Enforceable Milestones
 - None

- Major Work Initiated/Continued/Completed

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- On-Site Disposal Facility (OSDF)
 - Initiated 1-foot protective layer for Cell 2
 - Continued placing impacted material in Cell 1
- SCEP
 - Initiated excavation of Active Fly Ash Piles
 - Initiated construction of Site Preparation Facilities

December 1998

- Enforceable Milestones
 - Completed liner protection for Cell 2 November 20, 1998, prior to December 31, 1998 deadline
- Major Work Initiated/Continued/Completed
 - On-Site Disposal Facility (OSDF)
 - Prepared Cells 1 and 2 for winter slow down activities
 - Placed crusting agent on exposed surfaces in accordance with the surface water and erosion control plan
 - Continued placing impacted material in Cell 1
 - Continued placing impacted material in Cell 2
 - Soil Characterization and Excavation project (SCEP)
 - Continued excavation of Active Fly Ash Piles
 - Continued construction of Site Preparation Facilities
 - Issued response to comments document and a supplemental characterization package with regard to the Implementation Plan Area 1, Phase II, to Agencies on December 22, 1998
 - Natural Resource Restoration
 - Continued discussions with Natural Resource Trustees regarding settlement of Ohio's claim
 - Conducted field walk through and preliminary assessment screening of Conservation Area on December 14, 1998

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January 1999 (Anticipated)

- Enforceable Milestones
 - On-Site Disposal Facility (OSDF)
 - None
 - Soil Characterization and Excavation Project (SCEP)
 - None

- Major Work to be Initiated/Continued/Completed
 - On-Site Disposal Facility
 - Complete crusting agent application for Cell 1 as weather allows
 - Soil Characterization and Excavation Project (SCEP)
 - Precertification activities are planned for Area 2, Phase III for Radiation Tracking System (RTRAK)
 - Continue construction of Site preparation Facilities
 - Begin Treatability Study in area of Trap Range
 - Natural Resource Restoration
 - Continue discussions with Natural Resource Trustees regarding settlement of Ohio's claim
 - Issue DOE Findings and Responsiveness Summary
 - Continue project activities in the On-Property Public Access Habitat Area
 - Begin final negotiations with land owners upon completion of appraisal report in Conservation Area

OPERABLE UNIT 3 - FACILITIES CLOSURE AND DEMOLITION PROJECT

October 1998

- Enforceable Milestones
 - Submittal of Project Closeout Report for Sewage Treatment Plant Complex to the Agencies was made October 28, 1998; in advance of the actual milestone date of November 4, 1998

- Major Work Initiated/Continued/Completed
 - Safe Shutdown
 - Plant 2
 - Continued holdup material removal
 - Completed line draining in extraction area

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- Plant 6
 - Continued holdup removal in selected areas
 - Completed electrical isolation of T-Hopper green salt processing equipment
- Non-Nuclear Materials
 - Completed various utility disconnects
 - Completed equipment removal at Tank Farm Complex
 - Completed isolation of sewage line and electrical utilities at Building 81
- Recycling Supplemental Environmental Projects
 - Arranged to ship remaining track rail (225 tons), spike plates (130 tons) and rail spikes (6 tons) to DOE in Ashtabula, Ohio for decontamination and unrestricted release
 - Began to plan for shipment of 1,350 tons of copper windings to DOE in Oak Ridge, Tennessee, as a site-to-site property transfer for recycling
- D&D
 - Thorium/Plant 9 Complex
 - Completed final cleaning and application of "lockdown" coating to interior and exterior transite panels to reduce asbestos inhalation hazard
 - Completed D&D of Buildings 9B, 9C, 9D and 81
 - Maintenance/Tank Farm D&D and Water Storage Tank Project
 - Issued authorization to contractor to mobilize for water storage tank construction
 - Miscellaneous Small Structures
 - Began planning for D&D of next seven structures
 - Boiler Plant/Water Plant
 - Continued project completion activities

November 1998

- Enforceable Milestones
 - None
- Major Work Initiated/Continued/Completed
 - Safe Shutdown
 - Plant 2
 - Completed holdup removal in selected areas
 - Completed isolation of electrical utilities

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- Plant 6
 - Continued holdup removal in selected areas
 - Completed isolation and draining of condensate systems
 - Completed and constructed air-lock containment to enclose chip pickling, degreasing area
- Non-Nuclear Facilities
 - Began line draining and holdup material removal at Tank Farm
- D & D
 - Maintenance/Tank Farm & Water Storage Tank Project
 - Began new water storage tank construction
 - Plant 5 Project
 - Conducted pre-bid meeting and site tour with pre-qualified subcontractors
 - Completed planning and design for relocation of T-95 from plant 2/3 and Break Trailer to Plant 5
 - Began T-95 relocation activities
 - Prepared Plant 5 Complex Implementation Plan to 90% completion
 - Building 12
 - Relocated equipment from Bldg. 12 to Bldg. 30/45
 - Review was made by FDF of subcontractor Deluge System design
 - Thorium / Plant 9 Complex
 - Continued interior and exterior D&D activities
 - Completed sludge and water removal from waste water tanks
 - Completed demolition of Building 9
 - Boiler Plant
 - Continued toward completion of project and demobilization of subcontractor
 - Sewage Treatment Plant
 - Performed final administrative Project Closeout Activities
- Technical Services
 - Completed FEMP Closure Plan Book 8, 9, and 10
 - Completed Natural Habitat Project
 - Demolished Structure 39C, Incinerator Sprinkler Riser House
 - Assisted Soil and Water Group in completing SPR-Model Contract Crosswalk Document
 - Continued Main Electrical Redistribution Project

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December 1998

- Enforceable Milestones
 - None

- Major Work Initiated/Continued/Completed
 - Safe Shutdown
 - Plant 2
 - Continued holdup removal in selected areas
 - Plant 6
 - Continued holdup removal in selected areas
 - Recycling Supplemental Environmental Projects
 - Continued project activities
 - D&D
 - Completed Tank Farm Implementation Plan
 - Building 12 Relocation
 - Continued Carpenter Shop renovation
 - Continued Bldg. 30/45 renovation
 - Completed relocation of Stores to Northstar Warehouse
 - Began installing paint booth adjacent to Bldg. 30/45
 - Began facility shutdown activities
 - Plant 5
 - Conducted project tour on December 10, 1998 for subcontractors
 - Technical Services
 - Completed the Traveler (ready to work) for the New R-Track Bldg
 - Completed punchlist for Habitat Project
 - Issued formal revision to Work Traveler to install two trailers in support of Plant 6 D&D
 - Continued Electric Redistribution Project
 - Miscellaneous Small Structures
 - Completed demolition of 8F
 - Conducted walk through December 17, 1998, for subcontractors
- D & D
 - Plant 3
 - Completed Plant 3 Complex Draft Implementation Plan and made ready for DOE's transmittal to the Agencies for review and approval

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- Maintenance/Tank Farm & Water Storage Tank Project
 - Began to prepare Draft Boiler Plant/Water Plant Project Completion Report for internal review
 - Continued mobilization and field activities for construction of new Water Storage Tank by contractor
 - Continued demobilization activities

January (Anticipated)

- Enforceable Milestones
 - None
- Major Work Initiate/Continued/Completed
 - Develop and submit Plant 9 Completion Report to DOE for forwarding to Agencies
 - Boiler Plant/Water Plant D&D
 - Continue preparation for Project Close-out Report
 - Thorium /Plant 9 D&D Project
 - Complete structural steel size reduction
 - Complete demobilization activities
 - Begin preparing Project Close-out Report
 - Recycling Supplemental Environmental Projects
 - Continue project activities
 - Plant 5 Project
 - Submit draft Implementation Plan for Plant 5 Complex D&D for internal/DOE review
 - Continue procurement process and site tours with pre-qualified subcontractors
 - Continue relocation activities of T-95 from Plant 2/3 and Break Trailer from Boiler Plant to Plant 5
 - Thorium / Plant 9 Complex
 - Initiate Thorium/Plant 9 Project Completion Report
 - Complete structural steel shearing operation on Plant 9A
 - Continue demobilization activities
 - Sewage Treatment Plant
 - Complete Project Closeout Activities
 - Plant 6 Complex/East Warehouse Complex
 - Continue planning of RFP package

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- Technical Services
 - Complete contract for Plant 6
 - Continue Power Redistribution
- Building 12 Relocation
 - Continue Carpenter Shop renovation
 - Continue Bldg. 30/45 renovation
- Miscellaneous Small Structures
 - Begin to develop Task Order 405 Completion Report

OPERABLE UNIT 4 - SILOS PROJECT

October 1998

- Enforceable Milestones
 - None
- Major Work Initiated/Continued/Completed
 - Silos 1 & 2 Project
 - Continued review of proposals for AWR Project
 - Responded to OEPA comments on Silo Infrastructure Design Package and PSP
 - Conducted Public Status Briefing on Silos project activities on October 5, 1998
 - Briefed USEPA and OEPA on scope and content of Silo 1 and 2 FS revision
 - Approved Proof of Principle Testing work plans from EnVitCo (joule-heated vitrification testing contractor)
 - Silos 3 Project
 - Conducted oral presentations from potential contractors; received Final Technical and Price Proposals and initiated evaluation
 - Initiated dismantlement of Silo 3 Small Scale Waste Retrieval System

November 1998

- Enforceable Milestones
 - None

**CONSOLIDATED CONSENT AGREEMENT/FEDERAL FACILITY COMPLIANCE
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- Major Work Initiated/Continued/Completed
 - Silos 1 & 2 Project
 - Continued Review of proposals for AWR project
 - Briefed OEPA and USEPA on status of revised Silos 1 and 2 FS/PP
 - Approved remaining vendor QA/QC plans and work plans for Proof of Principle testing. Tentatively scheduled 72-hour demonstration tests for all four vendors
 - Silo 3 Project
 - Continued review of Final Technical and price proposals for Silo 3 project
 - Briefed Silos Project Critical Analysis Team on FDF review of Final Technical and Price Proposals for Silo 3
 - Completed dismantlement of Silo 3 Small Scale Waste Retrieval System

December 1998

- Enforceable Milestones
 - Awarded contract for Silo 3 remediation to Rocky Mountain Remediation Services (RMRS) on December 18, 1998, prior to RD Workplan milestone date of June 24, 1999
- Major Work Initiated/Continued/Completed
 - Presented Silos project status at Fernald Citizens Advisory Board Offsite Issues Subcommittee on December 10, 1998
 - Continued Trailer Upgrade portion of Silos Infrastructure Project
 - Silos 1 & 2 Project
 - Completed 72-hour Proof of Principle demonstration tests at Vortec (vitrification-other). The test was observed by FDF, DOE, OEPA, USEPA, and Silos Critical Analysis Team (CAT) team personnel
 - Awarded VitPP Waste Disposition contract to Theta Engineering, Inc. on December 16, 1998
 - Briefed Silos project CAT team on review of proposals for Silos 1 and 2 AWR contract; submitted Consent package to DOE
 - Briefed Stakeholders, USEPA and OEPA on Silo 1 and 2 headspace radon concentrations

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January 1999 (Anticipated)

- Enforceable Milestones
 - None
- Major Work to be Initiated/Continued/Completed
 - Complete Trailer Upgrade portion of Silos Infrastructure Project
 - Silo 1 and 2 Project
 - Conduct Internal FDF review of initial sections of FS revision in preparation for submittal to DOE
 - Respond to additional OEPA comments on the design package for the Silos Infrastructure Project
 - Observe 72-hour Proof of Principle demonstration tests at EnVitCo (vitrification-joule heated), Chem-Nuclear Services (chemical stabilization - other) and IT (chemical stabilization-cement based). Tests will also be observed by DOE, OEPA, USEPA, and Silo CAT team.
 - Conduct kickoff meeting with Theta Engineering on VitPP Waste Disposition contract
 - Silo 3 Project
 - Issue Notice to proceed to RMRS for Silo 3 remediation contract

OPERABLE UNIT 5 - AQUIFER RESTORATION AND WASTEWATER PROJECT

October 1998

- Enforceable Milestones
 - Submitted monthly NPDES Discharge Monitoring Report to the OEPA on October 14, 1998 for the month of September
 - Met 20 parts per billion (ppb) monthly average uranium discharge to Great Miami River as required by OU5 Record of Decision
- Major Work Initiated/Continued/Completed
 - Completed Sludge Removal System design on October 26, 1998
 - Began designing the Ozone Injection System for the Stormwater Retention Basin

**CONSOLIDATED CONSENT AGREEMENT/FEDERAL FACILITY COMPLIANCE
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- Established a Project Task Order under the Basic Ordering Agreement with Lockwood Greene Technologies for design of AWWT Lab expansion on October 19, 1998. Lockwood Green initiated activities on October 20, 1998.
- Completed bi-annual revision of the Integrated Environmental Monitoring Plan (IEMP) and submitted revised draft to the Agencies on October 29, 1998

November 1998

- Enforceable Milestones
 - Submitted monthly NPDES Discharge monitoring Report to OEPA on November 12, 1998 covering the month of October
 - Met 20 parts per billion (ppb) monthly average uranium discharge to Great Miami River as required by OU5 Record of Decision
- Major Work Initiated/Continued/Completed
 - Submitted the Re-Injection Demonstration Operation Report for the month of September on November 9, 1998 for transmittal to the Agencies
 - The General Sump Phaseout was mobilized on November 3, 1998
 - Conducted 30% Design Review on November 10, 1998 with Lockwood Green on the AWWT Lab Extension Project
 - Continued changes to Stormwater Retention Basin System as agreed upon in meeting with OEPA

December 1998

- Enforceable Milestones
 - Submitted monthly NPDES Discharge monitoring Report to the OEPA covering the month of November on December 14, 1998
 - Submitted the NPDES Noncompliance Report covering the month of November to the OEPA on December 14, 1998
 - Exceeded 20 parts per billion (ppb) monthly average uranium discharge to Great Miami River as required by OU5 Record of Decision. **NOTE:** USEPA and OEPA were notified of the exceedance. The occurrence is being evaluated and will be discussed during the January 21, 1999 conference call.
- Major Work Initiated/Continued/Completed
 - Conducted 60% Design Review with Lockwood Green on the AWWT Lab Expansion Project on December 2, 1998
 - Continued the installation of the Ozone Injection System at the Biosurge Lagoon

CONSOLIDATED CONSENT AGREEMENT/FEDERAL FACILITY COMPLIANCE AGREEMENT/FEDERAL FACILITY AGREEMENT/REMEDIAL INVESTIGATION/FEASIBILITY STUDY/CONSENT DECREE MONTHLY REPORT DECEMBER 1 THROUGH 31, 1998, AND QUARTERLY REPORT OCTOBER 1, 1998 THROUGH DECEMBER 31, 1998, INCLUDING REMOVAL ACTION STATUS REPORT

- Submitted the Re-Injection Demonstration Operating Report for the month of November on December 7, 1998 for transmittal to the Agencies
- Continued changes to Stormwater Retention Basin System as agreed upon in meeting with OEPA

January 1999 (Anticipated)

- Enforceable Milestones
 - Submit monthly NPDES Discharge Monitoring Report to OEPA covering the month of December
 - Meet 20 parts per billion (ppb) monthly average uranium discharge to Great Miami River as required by OU5 Record of Decision
- Work to be Initiated/Continued/Completed
 - Continue changes to Stormwater Retention Basin System as agreed upon in meeting with OEPA
 - Initiate construction of the Storm Water Retention Basin (SWRB) and Bio-Surge Lagoon (BSL) Sludge Removal Systems
 - Complete design and initiate construction of the AWWT Laboratory Expansion Project
 - Initiate construction of the Ozone Injection System for the SWRB
 - Submit to USEPA, ARWWP Operations and Maintenance Master Plan (OMMP) Revision
 - Continue pre-design monitoring of South Field area for additional extraction wells
 - Perform quarterly groundwater remedy performance monitoring
 - Discuss the December, 1998 exceedence of the 20 parts per billion (ppb) monthly average uranium discharge to Great Miami River during the January 12, 1999 conference call with the Agencies

WASTE MANAGEMENT

October 1998

- Enforceable Milestones
 - None

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- Major Work Initiated/Continued/Completed
 - Low Level Waste
 - Continued to investigate offsite treatment options and onsite treatment technologies
 - Organic Treatment Project
 - Continued the revision of the Statement of Work and schedule for the Organic Treatment Project (OTP) will begin. The revision will be made to include LLW and NPDS inventory requiring treatment. Project inventory will increase based on addition of an unknown amount of LLW
 - Mixed Waste Shipping
 - Continued to identify sampling and container requirements for the 150 drums of waste materials determined to be candidate for shipment and disposal (below LDR treatment standards)
 - Mixed Waste Treatment Projects
 - Liquid Mixed Waste
 - Obtained approval from TSCA Incinerator and the State of Tennessee for the shipment of Batch 7 to TSCA Incinerator for treatment. Batch 8 shipment to TSCA incinerator was approved October 21, 1998
 - Continued to evaluate newly generated waste streams for bulking into Batch 9 and Batch 10
 - Chemical Treatment Projects
 - Neutralization/Precipitation/Deactivation/Stabilization (NPDS) Project
 - Moved 61 drums and boxes from Plant 6 in support of demobilization
 - Repackaged and transferred cement chips generated during drum crushing activities
 - Hazardous Waste/Recycling Project
 - Assisted with disposition of the remaining Building 12 chemical inventory
 - Thorium Legacy Waste Stabilization Project
 - Cleared Building 64 pad of trailers and boxes belonging to other projects
 - Worked on startup activities for Low Level Waste operations
 - Evaluated impact of Waste management self-assessment to commencement of SSR
 - Repackaging operations of LLW for shipments remain on hold pending closeout of corrective actions from Triennial Audit and DOE/HQ moratorium on shipping

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- Waste Minimization/Pollution Prevention
 - Completed processing of 95 tons of shredded copper at Alaron Corporation
 - Began preparation of scrap copper motor winding containers for shipment to East Tennessee Technology Park, Oak Ridge, TN
 - Continued the evaluation for the recycle of rail, spike plates and spikes
 - Investigated the potential re-use of 6000 B-25 containers currently stored at Envirocare

November 1998

- Enforceable Milestones
 - None
- Major Work Initiated/Continued/Completed
 - Low Level Waste
 - Organic Treatment Project
 - Continued to define new inventory and quantify changes in project scope
 - Mixed Waste Shipping
 - Continued to identify sampling and container requirements for waste materials determined to be candidate for shipment and disposal (below LDR treatment standards)
 - Mixed Waste Treatment Projects
 - Liquid Mixed Waste
 - Completed bulking of RCI Solvent Extraction aqueous wastes
 - Bulked 500 gallons of oil from Plant 6 Safe Shutdown
 - Received approval from TSCA Incinerator and the State of Tennessee for the shipment of Batch 7 to TSCA Incinerator for treatment. Batch 8 shipment has been approved and will follow shipment of Batch 7
 - Continued to evaluate newly generated waste streams for bulking into Batch 9 and Batch 10
 - Chemical Treatment Project
 - Neutralization/Precipitation/Deactivation/Stabilization (NPDS) Project
 - Treated a total of 429 drums in FY 98
 - Continued demobilization of equipment from Plant 6
 - Emptied concrete mix silo, and de-energized utilities to PermaFix process equipment

CONSOLIDATED CONSENT AGREEMENT/FEDERAL FACILITY COMPLIANCE AGREEMENT/FEDERAL FACILITY AGREEMENT/REMEDIAL INVESTIGATION/FEASIBILITY STUDY/CONSENT DECREE MONTHLY REPORT DECEMBER 1 THROUGH 31, 1998, AND QUARTERLY REPORT OCTOBER 1, 1998 THROUGH DECEMBER 31, 1998, INCLUDING REMOVAL ACTION STATUS REPORT

- Hazardous Waste/Recycling Project
 - Donated Building 12 excess chemicals to the One Way Farm
- Thorium Legacy Waste Stabilization Project
 - Completed "mock-up" task order
 - Obtained performance grade requirements and quality levels for HEPA system and white metal boxes
 - Completed Operations Drills Documentation and Standard Startup Review
 - Continued to hold repackaging operations of LLW for shipment pending closeout of corrective actions from Triennial Audit and DOE/HQ moratorium on shipping
- Waste Minimization/Pollution Prevention
 - Continued to evaluate the shipment of copper motor winding containers to the East Tennessee Technology Park, Oak Ridge, TN
 - Continued to evaluate proposals for recycling rail plates, and rail spikes
 - Began inspection of 145 drums suspected to contain shredded copper
 - Began to investigate the potential re-use of 6000 B-25 containers currently stored at Envirocare

December 1998

- Enforceable Milestones
 - Federal Facility Compliance Act Site Treatment Plan Annual Report was submitted for transmittal to OEPA on December 29, 1998
- Major Work Initiated/Continued/Completed
 - Mixed Waste Shipping
 - Continued to identify sampling and container requirements for waste materials determined to be candidate for shipment and disposal (below LDR treatment standards)
 - Mixed Waste Treatment Projects
 - Organic Treatment Project
 - Continued to define new inventory and quantify changes in project scope
 - Re-evaluated waste streams from the Fire Training Facility to determine if the waste is suitable for disposition through the OSDF

**CONSOLIDATED CONSENT AGREEMENT/FEDERAL FACILITY COMPLIANCE
AGREEMENT/FEDERAL FACILITY AGREEMENT/REMEDIAL INVESTIGATION/FEASIBILITY
STUDY/CONSENT DECREE MONTHLY REPORT DECEMBER 1 THROUGH 31, 1998,
AND QUARTERLY REPORT OCTOBER 1, 1998 THROUGH DECEMBER 31, 1998,
INCLUDING REMOVAL ACTION STATUS REPORT**

- Liquid Mixed Waste
 - Bulked 2100 gallons of oil from Plant 6 Safe Shutdown
 - Delayed the anticipated ship date for Batch 7 to allow TSCA Incinerator to complete DOT certification activities
 - Continued to evaluate newly identified waste streams for suitability for bulking into Batches 10 and 11
- Chemical Treatment Project
 - Neutralization/Precipitation/Deactivation/Stabilization (NPDS) Project
 - Decontaminated dismantled equipment, packed into Sea/Land containers
 - Completed demobilization of PermaFix equipment on December 13, 1998
 - Submitted package of documents describing the USEPA's determination regarding the path forward for 61 drums of treated sodium sulfide waste to Nevada Test Site on December 21, 1998
- Thorium Legacy Waste Stabilization Project
 - Finalized revisions to procedures and task order
 - Completed PEP self-assessment on December 23, 1998
 - Began preparation of Integrated Safety Management presentation
 - Began training new HazWats to project specific training
- Waste Minimization/Pollution Prevention
 - Began recycling efforts on 90 tons of scrap steel generated from size reduction of two large, non-contaminated, propane tanks.
- Hazardous Waste/Recycling
 - Performed shipment of labpack to Heritage Environmental on December 21, 1998

January 1999 (Anticipated)

- Enforceable Milestones
 - None
- Work to be Initiated/Continued/Completed
 - Mixed Waste Shipping
 - Continue to identify sampling and container requirements for waste materials determined to be candidate for shipment and disposal (below LDR treatment standards)

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**CONSOLIDATED CONSENT AGREEMENT/FEDERAL FACILITY COMPLIANCE
AGREEMENT/FEDERAL FACILITY AGREEMENT/REMEDIAL INVESTIGATION/FEASIBILITY
STUDY/CONSENT DECREE MONTHLY REPORT DECEMBER 1 THROUGH 31, 1998,
AND QUARTERLY REPORT OCTOBER 1, 1998 THROUGH DECEMBER 31, 1998,
INCLUDING REMOVAL ACTION STATUS REPORT**

- Liquid Mixed Waste Project
 - Finalize shipment date of Batch 7 to TSCA Incinerator for treatment, with shipment of Batch 8 to follow.
 - Continue to evaluate newly generated waste streams for bulking into Batch 9 and Batch 10
- Neutralization/Precipitation/Deactivation/Stabilization (NPDS) Project
 - Obtain NTS Waste Acceptance of 61 drums of sodium sulfide waste treated by PermaFix
- Thorium Legacy Waste Project
 - Begin other priority waste streams shipments ahead of thorium waste streams, currently Low-Level-Waste repackaging operations for shipment are on hold
- RCI Solvent Extraction Project
 - Complete removal of solids remaining in Bldg. 80, RCI Solvent Extraction aqueous waste tanks
- Organic Treatment Project
 - Revise Statement of Work and schedule for the Organic Treatment Project to include LLW and NPDS inventory requiring treatment
 - Continue investigation of offsite treatment options and onsite treatment technologies
 - Complete re-evaluation of waste streams from Fire Training Facility

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ATTACHMENT A & B
EFFLUENT AND RADON DATA
ARE NOW REPORTED IN THE IEMP SUBMITTAL

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ATTACHMENT C

REMOVAL ACTION STATUS REPORT

Note: All Removal Action except 3, 9, 12, 17, 26 and 27 are completed and closed. Removal Action 3, 9, 12, 17, 26 and 27 are Programmatic Removal Actions and work continues under them. All documentation for work done this quarter under these Programmatic Removal Actions is located in the Post-Rod files. Gradually work performed under these actions is being phased out and being done pursuant to appropriate Remedial Actions.

| REMOVAL ACTION NAME | # | STATUS | CLOSURE DATE | SCOPE |
|----------------------------------------------------------------------------------|----|----------------------------------------|-------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Inactive Flyash Pile | 23 | Closed | June 29, 1992 | Conduct field investigation to identify locations requiring material removal |
| Pilot Plant Sump | 24 | Closed | January 14, 1994 | Remove liquid and sludge from the sump |
| Nitric Acid Rail Car | 25 | Closed | November 12, 1993 | Remove residual contents from tank car and decontaminate and dispose of tank car |
| Asbestos Removal | 26 | Closed - Transferred to Post-ROD | May 22, 1997 | Mitigate the potential for contaminant and migration of asbestos fibers |
| Management of Contaminated Structures | 27 | Closed - Transferred to Post-ROD | May 22, 1997 | Management of contaminated structures |
| Fire Training Facility | 28 | Closed | July 11, 1995 | Remove, decontaminate, dispose, treat or store contaminated structures, equipment, and soil from the former Fire Training Facility |
| Erosion Control of Inactive Flyash Pile; AKA: Temporary Nitrate Storage Tanks | 29 | Closed | March 2, 1994 | Mitigate the threat of erosion induced slope failure and discharge of flyash to Paddy's Run |
| KC2 Warehouse Well | 30 | Closed | May 28, 1997 | Minimize future groundwater contamination by intercepting contaminated seeps that drain from the South Field and Inactive Flyash Pile and infiltrate to the GMA |
| South Field and Inactive Flyash Piles Seepage Control Project | 31 | Closed | December 6, 1995 | |

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SCOPE

| REMOVAL ACTION NAME | # | STATUS | CLOSURE DATE | SCOPE |
|--------------------------------------------------------------------------------------|----|----------------------------------|--------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Extraction of Water Under FEMP Buildings AKA: Plant 6 Contaminated Perched Water | 1 | Closed | September 13, 1995 | Pump water from extraction wells underneath Plants 2/3, 6, 8, and 9. Treat extracted water for volatile organic chemicals and uranium removal before discharge |
| Waste Pit Area Runoff Control | 2 | Closed | July 2, 1992 | Collect and treat contaminated storm water run-off from the waste pit area |
| South Plume | 3 | Closed, transferred to Post-ROD | May 22, 1997 | Collect and treat contaminated storm water from waste pit area, install new alternate water supply, pump an discharge groundwater from South Plume, install and operate interim Advanced Waste Water Treatment System, Conduct groundwater monitoring and institutional controls, conduct groundwater modeling and geochemical investigation |
| Silo 1 and 2 | 4 | Closed | May 17, 1994 | Install bentonite cap to reduce and monitor radon emissions, provide follow-on monitoring |
| K-65 Decant Sump Tank | 5 | Closed | March 5, 1993 | Periodically remove liquid from K-65 decant sump tank |
| Waste Pit 6 - Exposed Material | 6 | Closed | March 25, 1992 | Eliminate potential airborne contamination by resubmerging exposed pit material |
| Plant One Pad Continuing Release | 7 | Closed | February 16, 1995 | Implement run-on/off control, install new pad, and upgrade existing Plant 1 Storage Pad |
| Inactive Flyash Piles/ South Field Area | 8 | Closed | December 23, 1991 | Install plastic chain link barrier and post warning signs |
| Removal of Waste Inventory | 9 | Closed - Transferred to Post-ROD | May 22, 1997 | Disposition of low-level waste off-site |
| Active Flyash Pile Controls | 10 | Closed | May 16, 1997 | Complete interim surface stabilization and complete active Flyash pile controls |
| Pit 5 Experimental Treatment Facility (ETS) | 11 | Closed | April 22, 1992 | Remove contents, structure, and filter material. Backfill and cap with clay cover |
| Safe Shutdown | 12 | Closed - Transferred to Post-ROD | May 22, 1997 | Remove uranium and other material from former processing equipment and ship material and equipment off-site |
| Plant 1 Ore Silos | 13 | Closed | November 6, 1995 | Dismantle fourteen ore silos and their support structures |
| Contaminated Soils Adjacent to Solid Waste Incinerator at the Sewage Treatment Plant | 14 | Closed | January 3, 1995 | Isolate or remove and dispose of contaminated soils from the vicinity of the sewage treatment plant |
| Scrap Metals Pile | 15 | Closed | November 14, 1994 | Disposition of LLW Ferrous/non-ferrous scrap metal, Containerize and dispose of scrap copper |
| Collect Uncontrolled Production Area Runoff - Northeast | 16 | Closed | May 22, 1997 | Collect storm water run-off from the northeast perimeter of the former production area in the Storm Water Retention Basin |
| Improved Storage of Soil and Debris | 17 | Closed - Transferred to Post-ROD | May 22, 1997 | Improve storage of existing and future generated soils and debris |
| Control Exposed Material in Pit 5 | 18 | Closed | May 13, 1993 | Eliminate potential airborne contamination by re-submerging exposed pit material |
| Plant 7 Dismantling | 19 | Closed | August 18, 1995 | Dismantle and dispose of the Plant 7 structure |
| Uranyl Nitrate Neutralization Project | 20 | Closed | January 16, 1997 | Neutralize, filter and package UNH inventory |
| Silo 3 | 21 | Closed | February 24, 1993 | Mitigate the potential release of hazardous waste material by covering and sealing dust collector hopper, removing dust collector, and capping and covering obvious release pathways |
| Waste Pit Area Containment Improvement | 22 | Closed | August 1, 1993 | Stabilize south barrier of Pit 4; regarding drainage ditches along Pits 3, 4, 5, and 6; and resurface road between Pits 3, 4, 5, and 6 |

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