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Department of Energy

**Ohio Field Office
Fernald Area Office
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Cincinnati, Ohio 45253-8705
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JAN 16 1998

DOE-0356-98

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

**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 FROM DECEMBER 1, 1997, THROUGH
DECEMBER 31, 1997, AND QUARTERLY REPORT FROM OCTOBER 1, 1997, THROUGH
DECEMBER 31, 1997, INCLUDING EFFLUENT RADIATION REPORTS, RADON REPORTS,
AND REMOVAL ACTION STATUS REPORT**

This letter transmits the amended Consent Agreement Monthly Report from December 1, 1997, through December 31, 1997, and the Quarterly Report from October 1, 1997, through December 31, 1997. 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).

Sincerely,

**Johnny W. Reising
Fernald Remedial Action
Project Manager**

Enclosure: As Stated

cc w/enc:

N. Hallein, EM-42, CLOV
G. Jablonowski, USEPA-V, 5HRE-8J
R. Beaumier, TPSS/DERR, OEPA-Columbus
F. Barker, Tetra Tech
D. Carr, FDF/52-2
T. Hagen, FDF/65-2
AR Coordinator, FDF/78

cc w/o enc:

A. Tanner, DOE-FEMP
F. Bell, ATSDR
D. S. Ward, HSI GeoTrans
J. Harmon, FDF/90
R. Heck, FDF/2
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Introduction

This report describes actions at the Fernald Environmental Management Project (FEMP) from October 1 through December 31, 1997. 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.

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OPERABLE UNIT 1 - WASTE PITS REMEDIAL ACTION PROJECT

October 1997

- Enforceable Milestones Completed
 - None
- Major Work Initiated/Completed
 - Awarded Alternative Remedial Action Subcontracting Approach (ARASA) subcontract
 - Continued on-site rail infrastructure upgrade
 - Continued development of Transportation and Disposal Plan, a Remedial Action Work Plan (RAWP) deliverable
 - Completed Okeana trestle upgrade
 - Continued Paddy's Run trestle upgrade
 - Continued development of Waste Management Plan
 - Completed construction of Camp Run and Wynn Road offsite trestle upgrades
 - Awarded contract for procurement of radiological equipment

November 1997

- Enforceable Milestones Completed
 - None
- Major Work Initiated/Completed
 - Completed Paddy's Run trestle upgrade
 - Continued on-site rail infrastructure upgrade
 - Mobilized locomotive maintenance building erection subcontractor; began construction
 - Began implementing Alternative Remedial Action Subcontracting Approach (ARASA) subcontract pre-mobilization deliverables
 - Completed draft version of Transportation and Disposal Plan, a Remedial Action Work Plan (RAWP) deliverable
 - Continued development of Waste Management Plan

December 1997

- Enforceable Milestones Completed
 - None
- Major Work Initiated/Completed
 - Continued on-site rail infrastructure upgrade
 - Continued erection and installation of rail maintenance building
 - Awarded contract for Shandon Yard Upgrade to CSXT Railroad December 15, 1997; initiated construction
 - Awarded contract for Locomotive Maintenance Facility utilities installation

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- Acquired two excess 60-ton locomotives from Department of Defense in Umatilla, Oregon
- Transmitted Amendment to Final Remedial Action (RA) Work Plan for Remedial Actions at Operable Unit 1 to Agencies December 15, 1997; includes Submittal Register providing enforceable milestone dates for submittal of ARASA subcontractor Remedial Design (RD) deliverables
- Continued to review Alternative Remedial Action Subcontracting Approach (ARASA) subcontract pre-mobilization deliverables
- Submitted Transportation and Disposal Plan (RAWP deliverable) to DOE-FEMP for review
- Continued development of Waste Management Plan

January 1998 (Anticipated)

- Enforceable Milestones
 - None
- Major Work to be Initiated/Completed
 - Complete on-site rail infrastructure construction
 - Complete erection of Rail Maintenance Facility
 - Complete Shandon Yard Upgrade construction
 - Complete Locomotive Maintenance Facility utilities installation
 - Award contract for rail and access road lighting
 - Continue to review ARASA pre-mobilization contract deliverables
 - Submit draft ARASA RD deliverables to DOE-FEMP
 - Continue development of Waste Management Plan

OPERABLE UNIT 2 - ON-SITE DISPOSAL FACILITY

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

October 1997

- Enforceable Milestones Completed
 - None
- Major Work Initiated/Completed
 - On-Site Disposal Facility (OSDF)
 - Completed installation of Cell 1 compacted clay liner
 - Initiated installation of Cell 1 secondary composite liner
 - Leachate Conveyance System (LCS)
 - Completed installation of southern and eastern portions of LCS
 - Completed installation of Permanent Lift Station
 - Initiated final testing of leachate lines

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- Haul Road/Relocated North Entrance Road
 - Completed Relocated North Entrance Road paving, shoulder work, and painting, and reopened road October 20, 1997
 - Completed gravel base and geotextile installation on Haul Road
 - Began asphalt paving on southern and northern portions of Haul Road

November 1997

- **Enforceable Milestones Completed**
 - None
- **Major Work Initiated/Completed**
 - On-Site Disposal Facility (OSDF)
 - Completed installation of Cell 1 secondary composite liner and leak detection system
 - Initiated installation of Cell 1 primary composite liner
 - Leachate Conveyance System (LCS)
 - Installed electrical instruments for Manholes 1, 2, 3, and Permanent Lift Station
 - Worked on construction punchlist items
 - Began preparation for Integrated Construction Acceptance Testing (ICAT) and Systems Operability Testing
 - Haul Road/Relocated North Entrance Road
 - Completed asphalt paving, shoulder work, and painting to finish Haul Road

December 1997

- **Enforceable Milestones Completed**
 - Submitted request for extension of December 31, 1997 milestone for placement of seasonal cover on OSDF to Agencies; new approved milestone date is January 15, 1998
 - Completed construction of Relocated North Entrance Road October 20, 1997, and construction of Haul Road December 5, 1997, in advance of March 27, 1998, milestone date for completion of both roads
 - Began impacted material placement December 23, 1997, in advance of March 27, 1998, milestone date
- **Major Work Initiated/Completed**
 - On-Site Disposal Facility (OSDF)
 - Completed installation of Cell 1 secondary and primary composite liners and leak detection system
 - Successfully performed Standard Startup Review (SSR)
 - Completed installation of Cell 1 leachate collection system and protective layer
 - Initiated first placement of impacted material (from East Stockpile)
 - Leachate Conveyance System (LCS)
 - Continued working on construction punchlist items
 - Successfully performed Integrated Construction Acceptance Testing (ICAT), Systems Operability Testing (SOT), and SSR
 - Began system operations

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- Haul Road/Relocated North Entrance Road
 - Completed all field

January 1998 (Anticipated)

- **Enforceable Milestones**
 - Place seasonal cover on OSDF by January 15, 1998
- **Major Work to be Initiated/Completed**
 - **OSDF**
 - Apply seasonal cover (i.e., crusting agent) to Cell 1 protective layer
 - Perform inspection and necessary maintenance of seasonal cover
 - Commence construction of OSDF Material Transfer Area
 - **LCS**
 - Complete outstanding construction punchlist items
 - Perform routine system maintenance

OPERABLE UNIT 3

October 1997

- **Enforceable Milestones Completed**
 - None
- **Major Work Initiated/Completed**
 - **Safe Shutdown**
 - Completed holdup material removal from various areas in Plants 2/3, 6, and 8
 - Completed energy isolation procedures in Buildings 78 and 81, and process trailers
 - Excavated underground utility lines for Plants 6 and 8
 - **D&D**
 - **Boiler Plant/Water Plant**
 - Continued asbestos abatement and equipment removal around boilers
 - Completed demolition of Water Plant and Railroad Scale House
 - Sized, segregated, and containerized debris from demolition activities
 - **Thorium/Plant 9 Complex**
 - Installed subcontractor office trailers and supporting utilities
 - Initiated mobilization activities (installation of fencing, establishment of queuing areas, etc.)

November 1997

- **Enforceable Milestones Completed**
 - None

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- Major Work Initiated/Completed
 - **Safe Shutdown**
 - Completed holdup material removal in selected areas of Plant 8
 - Completed energy isolation procedures in Buildings 78
 - Excavated domestic water line for Building 78
 - **D&D**
 - Boiler Plant/Water Plant
 - Continued asbestos abatement/removal activities
 - Completed demolition of Fly Ash Silo, Electrostatic Precipitators, and Clearwell Building; initiated demolition of railroad tracks
 - Sized, segregated, and containerized debris from demolition activities
 - Thorium/Plant 9 Complex
 - Continued mobilization activities (installation of fencing, establishment of queuing areas, etc.)
 - Proceeded with preparation/submittal of Safe Work Plans
 - Initiated demolition of railroad tracks

December 1997

- Enforceable Milestones Completed
 - Submitted Revised Plant 1 Complex Project Completion Report to Agencies December 23, 1997, meeting the actual due date of January 30, 1998
- Major Work Initiated/Completed
 - **Safe Shutdown**
 - Completed holdup material removal from various areas of Plant 8
 - Completed utility line isolation and removal of excess equipment in Building 78
 - Excavated domestic water line for Building 78
 - **D&D**
 - Boiler Plant/Water Plant
 - Completed asbestos abatement/removal activities from boilers
 - Continued demolition of railroad tracks
 - Began transite removal at Boiler Plant
 - Sized, segregated, and containerized debris from demolition activities
 - Thorium/Plant 9 Complex
 - Completed mobilization activities at Magnesium Storage Warehouse (Building 32) and Plant 9 (installation of fencing, set-up of staging areas, etc.)
 - Continued with preparation/submittal of Safe Work Plans
 - Continued demolition of railroad tracks
 - Completed asbestos abatement, interior demolition, and interior concrete removal in Building 32
 - Completed building preparation for Plant 9 (i.e., set-up of vestibule, decontamination area, and waste handling area, etc.)
 - Maintenance/Tank Farm Complex
 - Continued Implementation Plan development

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- Sewage Treatment Plant Complex
 - Continued Implementation Plan development

January 1998 (Anticipated)

- Enforceable Milestones
 - None
- Major Work to be Initiated/Completed
 - **Safe Shutdown**
 - Complete biohazard cleanup and removal in Plant 2/3
 - Initiate asbestos cleanup and biohazard cleanup in Plant 6; continue utility disconnects
 - Continue holdup material removal in selected areas of Plant 8
 - Continue underground utility disconnects and energy isolation procedures in Plant 8
 - **D&D**
 - Boiler Plant/Water Plant
 - Initiate demolition of Boiler Plant and Coal Handling Area
 - Complete demolition of pipe bridge and Wet Salt Storage Bin
 - Complete transite removal at Boiler Plant
 - Continue ongoing sizing, segregation, and containerization of debris
 - Thorium/Plant 9 Complex ---
 - Continue preparation of subcontractor work plans
 - Perform structural D&D of Building 32 and begin interior D&D activities in Plant 9
 - Maintenance/Tank Farm Complex
 - Complete Implementation Plan development
 - Sewage Treatment Plant Complex
 - Continue development of Implementation Plan

OPERABLE UNIT 4

October 1997

- Enforceable Milestones Completed
 - None
- Major Work Initiated/Completed
 - Received USEPA comments on Draft Silo 3 Explanation of Significant Differences (ESD); submitted response to comments and Revised ESD to Agencies for approval
 - Initiated preparation of Request for Proposal (RFP) for Silos 1 and 2 Multi-Tech Proof-of-Principle Testing
 - Completed re-scoping of RFP for Silo 3 Waste Project
 - Initiated development of design basis for Transfer Tank Area and Radon Control System
 - Received responses to Commerce Business Daily (CBD) announcement for Silos 1 and 2 Multi-Tech Proof-of-Principle Testing
 - Initiated scoping of Silos 1 and 2 Feasibility Study (FS) revision

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- Continued dismantlement/removal of piping and equipment at Vitrification Pilot Plant

November 1997

- Enforceable Milestones Completed
 - Submitted following deliverables to Agencies November 20 1997, as agreed in the OU4 Dispute Settlement Agreement:
 - Work Plan for Establishment of a Conservation Area Near the FEMP
 - Work Plan for Research Grants for Ecological Restoration

NOTE: The two Work Plans listed above are Supplemental Environmental Projects required under the OU4 Dispute Resolution dated July 22, 1997; they are to be managed and implemented under the auspices of OU5, through the Soils Characterization and Excavation Project.

- Major Work Initiated/Completed
 - Began preparation of Preliminary Screening of Technologies for treatment of Silos 1 and 2 material
 - Initiated preparation of Request for Proposal (RFP) for Silos 1 and 2 Multi-Tech Proof-of-Principle Testing
 - Received responses to Commerce Business Daily (CBD) announcement for Silos 1 and 2 Multi-Tech Proof-of-Principle Testing; identified 20 potential vendor teams as qualified to receive RFP
 - Issued Silo 3 Waste Project Draft RFP for review and comment by Agencies, stakeholders, and potential subcontractors
 - Received USEPA approval of Draft Silo 3 Explanation of Significant Differences (ESD); issued Draft Final ESD for public comment November 17, 1997, and conducted public hearing on ESD at November 25, 1997, Fernald Cleanup Progress Briefing
 - Briefed stakeholders on radon emissions and the concept for the Accelerated Waste Retrieval/Transfer Tank Area/Radon Control System Project on November 20, 1997, at meeting of Fernald Residents for Environment, Safety and Health (FRESH)
 - Continued dismantlement/removal of piping and equipment at Vitrification Pilot Plant

December 1997

- Enforceable Milestones Completed
 - Submitted Work Plan for Habitat Area Project to Agencies December 29, 1997, meeting the actual due date of December 31, 1997

NOTE: The Work Plan listed above is a Supplemental Environmental Project required under the OU4 Dispute Resolution dated July 22, 1997; it is to be managed and implemented under the auspices of OU5, through the Soils Characterization and Excavation Project.

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- Major Work Initiated/Completed
 - **Silos 1 & 2 Project**
 - Prepared initial draft of Request for Proposal (RFP) for Multi-Tech Proof-of-Principle Testing; briefed stakeholders on RFP, as well as on Initial Screening of Technologies, at December 9, 1997, Fernald Cleanup Progress Briefing
 - **Silo 3 Project**
 - Held public hearing on Draft Final Explanation of Significant Differences (ESD) at meeting of Nevada stakeholders on December 2, 1997; closed public comment period on December 16, 1997, and initiated preparation of Responsiveness Summary and Final ESD
 - Discussed stakeholder comments on Draft RFP at December 1, 1997, meeting of Fernald Citizens Advisory Board Waste Management Committee
 - Began incorporation of comments from stakeholders, regulators, and potential vendors on Draft RFP
 - Initiated System Operability/Mock-Up Testing of Small Scale Waste Retrieval at Silo 4
 - **Accelerated Waste Retrieval (AWR)**
 - Convened Critical Analysis Team December 9-11, 1997, to evaluate conceptual AWR strategy; team recommended continuing to pursue AWR
 - Issued Commerce Business Daily announcement
 - Prepared Draft National Environmental Policy Act (NEPA) Supplemental Analysis for DOE-FEMP and DOE-OH's review
 - Submitted Revised Workplan for Recycling, December 9, 1997

January 1998 (Anticipated)

- Enforceable Milestones
 - None
- Major Work to be Initiated/Completed
 - **Silos 1 & 2 Project**
 - Receive stakeholder comments on Draft RFP and Initial Screening of Technologies at January 13, 1998, Fernald Cleanup Progress Briefing; review comments and continue preparation of Final RFP
 - **Silo 3 Project**
 - Submit Final ESD to Agencies for approval
 - Issue response to comments on Draft RFP and finalize Qualified Bidders list
 - Continue Systems Operability/Mock-Up Testing efforts on Small Scale Waste Retrieval System
 - **AWR**
 - Collect and process responses to CBD announcement
 - Make Draft NEPA Supplemental Analysis available to stakeholders
 - **Silos Support Projects**
 - Prepare final report outlining results of testing on Silo 4 core samples

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OPERABLE UNIT 5

October 1997

- **Enforceable Milestones Completed**
 - **Aquifer Restoration/Wastewater Project (ARWWP)**
 - Submitted Design, Monitoring, and Evaluation Program Plan (DMEPP) Semi-Annual Report to Agencies September 23, 1997, meeting actual milestone date of October 1, 1997
 - Submitted National Pollutant Discharge Elimination System (NPDES) Permit Renewal Application to OEPA September 22, 1997, meeting actual milestone date of October 2, 1997
 - **Soils Characterization and Excavation Project (SCEP)**
 - Submitted Prefinal Area 2 Phase I (*Southern Waste Units*) Integrated Remedial Design Package (IRDP) to Agencies October 23, 1997; delayed from milestone date of October 20, 1997, in order to resolve issues associated with Waste Acceptance Criteria (WAC) attainment strategy and real-time instrument applications raised by Agencies
- **Major Work Initiated/Completed**
 - **ARWWP**
 - Continued construction on Advanced Waste Water Treatment (AWWT) Ion Exchange Regeneration System; systems operability testing has been initiated
 - Continued construction activities on AWWT expansion
 - Began drilling monitoring wells for Injection Demonstration System
 - Began drilling extraction wells for South Plume Optimization Project
 - **SCEP**
 - Removed downed trees, metal debris, and approximately 35 cubic yards of contaminated soil from Paddy's Run channel, in response to recently discovered embankment erosion problem west of K-65 silos
 - Conducted field sampling activities in Area 1 Phase II (*Southern Half of East Field*) to generate data to be used in support of remediation, and in Paddy's Run Embankment area to monitor erosion
 - Submitted formal schedule extension request October 27, 1997, to delay submittal of the Area 3 (*Northern Portion of the Former Production Area*) IRDP from its current date of July 2, 1998, to March 31, 2000; extension was requested to allow:
 - Incorporation of lessons learned from Area 2 Phase I excavation activities
 - Necessary pre-design investigations and their incorporation into design effort
 - Agency review and comment on various Project Specific Plans (PSPs)
 - Met with USEPA October 21, 1997, to discuss WAC attainment and real-time instrument application issues, and to discuss requested delay of Area 2 Phase I IRDP submittal
 - Continued field implementation of Area 2 Phase I Site Prep package
 - Continued development of IRDPs for Area 1 Phase II and Area 3

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November 1997

- **Enforceable Milestones Completed**
 - **Aquifer Restoration/Wastewater Project (ARWWP)**
 - Submitted Final Operations and Maintenance Master Plan to Agencies November 7, 1997
 - Submitted monthly National Pollutant Discharge Elimination System (NPDES) Discharge Monitoring Report to OEPA November 13, 1997, for October 1997 report month
 - **Soils Characterization and Excavation Project (SCEP)**
 - Submitted Prefinal Area 1 Phase II (*Southern Half of East Field*) Integrated Remedial Design Package (IRDP) to Agencies November 20, 1997; required crosswalk of hazardous waste management unit (HWMU) closure components for Sludge Drying Beds (HWMU #41) in Area 1 Phase II submitted to OEPA November 26, 1997, within seven-day time frame mandated by the RCRA/CERCLA Integrated Closure Director's Final Findings and Orders dated June 1996
 - Submitted Draft Work Plans for Establishment of a Conservation Area Near the FEMP and for Research Grants for Ecological Restoration (see November Enforceable Milestones for Operable Unit 4 - Silos Projects)

- **Major Work Initiated/Completed**
 - **ARWWP**
 - Continued construction activities associated with Advanced Waste Water Treatment (AWWT) Ion Exchange Regeneration System, and also with AWWT Expansion
 - Completed drilling of monitoring wells for Injection Demonstration System
 - Completed drilling extraction well RW-6 and began drilling RW-7 for South Plume Optimization Project
 - Relocated Bionitrification/Effluent Treatment System to new Sewage Treatment Plant (STP); completed design of new STP piping and issued contractor bidding package
 - **SCEP**
 - Met with OEPA November 5, 1997, to discuss real-time instrument application, WAC attainment issues, and Area 2 Phase I (*Southern Waste Units*) IRDP submittal delay
 - Continued weekly inspections of embankment erosion area along Paddy's Run channel; completed evaluation of alternatives for stabilization of embankment, and presented conceptual design of recommended alternative to Agencies
 - Continued Area 2 Phase I Site Prep package field implementation activities, including grading and graveling of support area, installation of geotextile material under stockpile areas, and clearing/grubbing for retention basins
 - Submitted response to comments on Area 2 Phase I Site Prep package to Agencies November 14, 1997
 - Received OEPA comments on Draft Sitewide Excavation Plan (SEP)
 - Continued development of Project Specific Plans (PSPs) and IRDP for Area 3 (*Northern Portion of the Former Production Area*)

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December 1997

- **Enforceable Milestones Completed**
 - **Aquifer Restoration/Wastewater Project (ARWWP)**
 - Submitted monthly National Pollutant Discharge Elimination System (NPDES) Discharge Monitoring Report for November 1997 to OEPA December 12, 1997
 - Submitted first Quarterly Integrated Environmental Monitoring Program Report to Agencies December 19, 1997
 - **Soils Characterization and Excavation Project (SCEP)**
 - Submitted Draft Work Plan for Habitat Area Project to Agencies December 29, 1997 (see December Enforceable Milestones for Operable Unit 4 - Silos Projects)

- **Major Work Initiated/Completed**
 - **ARWWP**
 - Submitted response to comments from Agencies December 19, 1997, on the following project documents:
 - Draft Final Baseline Remedial Strategy Report (response to OEPA only)
 - September 1997 Design, Monitoring, and Evaluation Program Plan
 - Re-Injection Demonstration Test Plan
 - Project Specific Plan for Well 22
 - Continued various construction activities associated with:
 - Advanced Waste Water Treatment (AWWT) Resin Regeneration System
 - AWWT Facility Expansion
 - South Plume Optimization
 - Injection Demonstration System
 - Awarded contract for interconnecting piping for new Sewage Treatment Plant December 11, 1997
 - **SCEP**
 - Submitted Paddy's Run Embankment Stabilization Project Work Plan for Phase II stabilization activities and associated Conceptual Design Report to Agencies December 10, 1997; met with Agencies during month to tour area and discuss potential stabilization methods
 - Continued Area 2 Phase I (*Southern Waste Units*) Site Prep package field implementation activities
 - Continued discussions with Agencies on Draft Sitewide Excavation Plan (SEP) issues including Certification Unit sizes and delineation, hot-spot criteria and identification, Hazardous Waste Management Unit closure requirements, and selection of Constituents of Environmental Concern
 - Continued development of Project Specific Plans (PSPs) and Integrated Remedial Design Package (IRDP) for Area 3 (*Northern Portion of the Former Production Area*)
 - Submitted Revised Workplan for Recycling, December 9, 1997 (A Supplemental Environmental project)

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January 1998 (Anticipated)

- **Enforceable Milestones**
 - **ARWWP**
 - Submit monthly NPDES Discharge Monitoring Report to OEPA
 - Meet 20 ppb average monthly uranium discharge to Great Miami River
 - **SCEP**
 - None

- **Major Work to be Initiated/Completed**
 - **ARWWP**
 - Submit South Field Extraction System/South Plume Optimization Startup Monitoring Plan to Agencies
 - Continue all construction and readiness activities
 - **SCEP**
 - Initiate field implementation of Paddy's Run Embankment Stabilization Phase II stabilization efforts, contingent upon review and comments from Agencies
 - Continue field implementation of Area 2 Phase I Site Prep package
 - Perform additional sampling activities in Area 1 Phase I (*Northern Half of East Field & Areas North of Production Area*), West Soil Stockpile, in support of Waste Acceptance Criteria attainment
 - Initiate Final Remediation Levels (FRL) attainment precertification field activities for Area 8 Phase I (*On-Property OU5 Soil in Area West of Paddy's Run*)
 - Continue development of PSPs and IRDP for Area 3
 - Submit response to comments to Agencies for:
 - Area 1 Phase I Certification Report
 - Draft Sitewide Excavation Plan
 - Workplan for Stabilization of Paddy's Run Embankment
 - Submit the following documents:
 - Revised Area 2 Phase I Site Preparation package construction drawings and technical specifications
 - Addendum to OU5 Remedial Design Work Plan to outline strategy for off-property FRL attainment certification
 - Draft Work Plan for Aesthetic Barrier Project
 - Letter outlining revised strategy for wetland mitigation
 - Await USEPA response to request for schedule extension delaying submittal of Area 3 IRDP from current milestone date of July 2, 1998 to March 31, 2000
 - Await OEPA comments on several SCEP submittals presently in review:
 - Waste Acceptance Criteria Attainment Completion Reports, Area 1 Phase I, Eastern Portion and Western Portion, both submitted June 1997
 - RTRAK (Radiation Tracking System) Applicability Study Report, submitted July 1997
 - Comparability of In-Situ Gamma Spectroscopy (HPGe) and Laboratory Data Report, submitted July 1997

Submittal of response to comments documents for reports listed above dependent upon receipt of OEPA comments

**CONSOLIDATED CONSENT AGREEMENT/FEDERAL FACILITY COMPLIANCE
AGREEMENT/FEDERAL FACILITY AGREEMENT/REMEDIAL INVESTIGATION/FEASIBILITY
STUDY/CONSENT DECREE MONTHLY REPORT DECEMBER 1-31, 1997 AND QUARTERLY
REPORT OCTOBER 1 THROUGH DECEMBER 31, 1997 INCLUDING EFFLUENT RADIATION
REPORTS, RADON REPORTS, AND REMOVAL ACTION STATUS REPORT**

WASTE MANAGEMENT

October 1997

- Enforceable Milestones Completed
 - None
- Major Work Initiated/Completed
 - Low Level Waste
 - No shipments of low level waste to Nevada Test Site (NTS) were made during October 1997, due to ongoing suspension of Waste Stream #6 - Residues; processing of residue materials continued during month in order to develop a surplus for release when suspension is lifted

NOTE: In the September 1997 version of this report, it was incorrectly reported that the FEMP had shipped a total of 612,035 cf low level waste to NTS during FY97; actual FY97 low level waste shipping total was 612,145 cf.

- Mixed Waste Treatment Projects
 - Mixed Waste Shipping --- Prepared 307 drums of treated laundry sump cake for disposal at Envirocare; shipment completed October 28, 1997
 - Liquid Mixed Waste --- Received waste characterization sampling results on Batch #7 (19,000+ gallons of mixed waste) and began analysis; also began bulking of Batch #9 (newly generated waste streams)
 - Chemical Treatment Projects
 - Neutralization/Precipitation/Deactivation/Stabilization (NPDS) Project --- Total of 606 drums treated in this project as of October 27, 1997
 - Organic Extraction Project (RCI/Terra-Kleen) --- Completed solvent washing of soils; preliminary results indicate treatment was successful, with contaminated solvent successfully distilled and recovered for reuse, and contaminants concentrated for disposal
 - Hazardous Waste/Recycling Project --- Completed second shipment of photographic chemicals October 7, 1997
 - Thorium Legacy Waste Stabilization Project --- Continued characterization of thorium legacy inventory; thorium legacy waste was moved from Building 81 to Building 64/65, and subcontractor submitted Phase I documents (Safe Work Plan, Health & Safety Plan, general construction/engineering documents, etc.) for review

November 1997

- Enforceable Milestones Completed
 - None

**CONSOLIDATED CONSENT AGREEMENT/FEDERAL FACILITY COMPLIANCE
AGREEMENT/FEDERAL FACILITY AGREEMENT/REMEDIAL INVESTIGATION/FEASIBILITY
STUDY/CONSENT DECREE MONTHLY REPORT DECEMBER 1-31, 1997 AND QUARTERLY
REPORT OCTOBER 1 THROUGH DECEMBER 31, 1997 INCLUDING EFFLUENT RADIATION
REPORTS, RADON REPORTS, AND REMOVAL ACTION STATUS REPORT**

- Major Work Initiated/Completed
 - Low Level Waste
 - No shipments of low level waste to Nevada Test Site (NTS) were made during November 1997, as a result of pre-existing suspension of Waste Stream #6 - Residues; suspension lifted November 19, 1997
 - Mixed Waste Treatment Projects
 - Liquid Mixed Waste --- Continued analysis of waste characterization sampling results from Batch #7 (19,000+ gallons of mixed waste), and bulking of Batch #9 (newly generated waste streams); completed sampling of Batch #8 (newly generated low level waste)
 - Chemical Treatment Projects
 - Neutralization/Precipitation/Deactivation/Stabilization (NPDS) Project --- Treated 17 drums of waste during month; total of 623 drums treated in project as of November 25, 1997
 - Organic Extraction Project (RCI/Terra-Kleen) --- Completed demonstration phase and received analytical results for evaluation
 - Hazardous Waste/Recycling Project --- Completed training of shipping subcontractor's personnel
 - Thorium Legacy Waste Stabilization Project --- Continued characterization of thorium legacy inventory; Final Technology Work Plan submitted to DOE-FEMP November 24, 1997

December 1997

- Enforceable Milestones Completed
 - None
- Major Work Initiated/Completed
 - Low Level Waste
 - Shipped total of 11,063 cf low level waste to Nevada Test Site (NTS); all shipping suspended as of December 16, 1997, due to incidents involving transportation of white metal boxes to NTS
 - Mixed Waste Treatment Projects
 - Liquid Mixed Waste --- Completed TSCA application for Batch #7 (19,000+ gallons of mixed waste) and sampling of Batch #8 (newly generated low level waste)
 - Chemical Treatment Projects
 - Neutralization/Precipitation/Deactivation/Stabilization (NPDS) Project --- Treated total of 623 drums in project as of December 31, 1997; identified 60 more drums for potential treatment, pending contract extension determination
 - RCI Solvent Extraction Project --- Completed demonstration phase; after examination of analytical results, it was determined that full-scale treatment contract option will not be exercised
 - Hazardous Waste/Recycling Project --- Shipped Lab Pack shipment of 15 drums December 10, 1997 via Heritage Environmental Services, Inc., to their Indianapolis facility.

**CONSOLIDATED CONSENT AGREEMENT/FEDERAL FACILITY COMPLIANCE
AGREEMENT/FEDERAL FACILITY AGREEMENT/REMEDIAL INVESTIGATION/FEASIBILITY
STUDY/CONSENT DECREE MONTHLY REPORT DECEMBER 1-31, 1997 AND QUARTERLY
REPORT OCTOBER 1 THROUGH DECEMBER 31, 1997 INCLUDING EFFLUENT RADIATION
REPORTS, RADON REPORTS, AND REMOVAL ACTION STATUS REPORT**

- Thorium Legacy Waste Stabilization Project --- Continued characterization of thorium legacy inventory; submitted Final Technology Work Plan to Agencies December 4, 1997

January 1998 (Anticipated)

- Enforceable Milestones
 - None
- Major Work to be Initiated/Completed
 - Low Level Waste
 - Waste shipping on hold pending results of investigation/evaluation of white metal box incidents
 - Mixed Waste Treatment Projects
 - Liquid Mixed Waste Project --- Receive Batch #8 sampling results; continue evaluation of newly generated waste streams for potential bulking into Batch #9 and Batch #10
 - Chemical Treatment Projects
 - NPDS Project --- Continue evaluating potential for treatment of additional 60 drums
 - RCI Solvent Extraction Project --- Prepare Commerce Business Daily announcement requesting letters of interest from qualified vendors to perform treatment of tri-mixed and mixed waste in project
 - Thorium Legacy Waste Stabilization Project --- Begin repackaging for eventual shipment to NTS

ATTACHMENT A

EFFLUENT RADIATION REPORTS

EFFLUENT RADIATION REPORT

OCTOBER 1997

PARSHALL FLUME (Effluent to Great Miami River 11000004001)

	Flow (gallons)	Total Alpha (pCi/l)	Total Beta (pCi/l)	Total U (ug/l)	Total U (kg)	Calculated Total U-238 (pCi/l) (1)
Total	55,577,000	N/A	N/A	N/A	1.77	N/A
Avg (2)	1,793,000	11	21	8.4	0.06	3
Max	2,547,000	26	45	31.9	0.11	11
Min	65,000	9	16	2.1	0.01	1

STORMWATER RETENTION BASIN BYPASSES

	Flow (gallons)	Total Alpha (pCi/l)	Total Beta (pCi/l)	Total U (ug/l)	Total U (kg)	Calculated Total U-238 (pCi/l) (1)
Total	0	N/A	N/A	N/A		
Avg (2)						
Max						
Min						

STORMWATER RETENTION BASIN OVERFLOWS

	Flow (gallons)	Total Alpha (pCi/l)	Total Beta (pCi/l)	Total U (ug/l)	Total U (kg)	Calculated Total U-238 (pCi/l) (1)
Total	0	N/A	N/A	N/A		
Avg (2)						
Max						
Min						

- (1) The activity of this discharge has been and will continue to be reported as Uranium-238 (pCi/l) in accordance with the Ohio EPA format for reporting uranium. Since this does not account for the activity of the other uranium isotopes in the effluent, the total uranium data is also presented. The calculated Total U-238 is based on a conversion factor of 337.84 pCi U-238/mg Total U applied to the measured value of total uranium.
- (2) Average values presented are flow-weighted.
- (3) Analytical results not yet available.

SOUTH PLUME WELLFIELD				SOUTH FIELD LEACHATE SYSTEM	
	Flow (gallons)	Total U (ug/l)	Total U (kg)	Quarterly Sampling Required No Sample Collected This Month East Sump	
Total	56,871,000	N/A	3.42	Solids	mg/l
Avg (2)	1,835,000	15.9	0.11	Total U	ug/l
Max	2,101,000	21.1	0.16	West Sump	
Min	724,000	12.0	0.04	Solids	mg/l
STORMWATER RUNOFF TO PADDY'S RUN				Total U	ug/l
				Precipitation	1.75 in
Total U				4.97 kg	Total Gallons

EFFLUENT RADIATION REPORT

NOVEMBER 1997

PARSHALL FLUME (Effluent to Great Miami River 11O00004001)

	Flow (gallons)	Total Alpha (pCi/l)	Total Beta (pCi/l)	Total U (ug/l)	Total U (kg)	Calculated Total U-238 (pCi/l) (1)
Total	66,383,000	N/A	N/A	N/A	1.34	N/A
Avg (2)	2,213,000	10	15	5.3	0.04	2
Max	3,069,000	13	20	9.9	0.09	3
Min	1,843,000	10	14	1.0	0.01	0

STORMWATER RETENTION BASIN BYPASSES

	Flow (gallons)	Total Alpha (pCi/l)	Total Beta (pCi/l)	Total U (ug/l)	Total U (kg)	Calculated Total U-238 (pCi/l) (1)
Total	0	N/A	N/A	N/A		
Avg (2)						
Max						
Min						

STORMWATER RETENTION BASIN OVERFLOWS

	Flow (gallons)	Total Alpha (pCi/l)	Total Beta (pCi/l)	Total U (ug/l)	Total U (kg)	Calculated Total U-238 (pCi/l) (1)
Total	0	N/A	N/A	N/A		
Avg (2)						
Max						
Min						

- (1) The activity of this discharge has been and will continue to be reported as Uranium-238 (pCi/l) in accordance with the Ohio EPA format for reporting uranium. Since this does not account for the activity of the other uranium isotopes in the effluent, the total uranium data is also presented. The calculated Total U-238 is based on a conversion factor of 337.84 pCi U-238/mg Total U applied to the measured value of total uranium.
- (2) Average values presented are flow-weighted.
- (3) Analytical results not yet available.

SOUTH PLUME WELLFIELD				SOUTH FIELD LEACHATE SYSTEM	
	Flow (gallons)	Total U (ug/l)	Total U (kg)	Quarterly Sampling Required No Sample Collected This Month East Sump	
Total	63,124,000	N/A	3.94	Solids	mg/l
Avg (2)	2,104,000	16.5	0.13	Total U	ug/l
Max	2,359,000	20.8	0.17	West Sump	
Min	1,660,000	9.0	0.06	Solids	mg/l
STORMWATER RUNOFF TO PADDY'S RUN				Total U	ug/l
				Precipitation	2.58 in
Total U				7.33 kg	Total Gallons

EFFLUENT RADIATION REPORT

DECEMBER 1997

PARSHALL FLUME (Effluent to Great Miami River 11O00004001)

	Flow (gallons)	Total Alpha (pCi/l)	Total Beta (pCi/l)	Total U (ug/l)	Total U (kg)	Calculated Total U-238 (pCi/l) (1)
Total	91,014,000	N/A	N/A	N/A	3.40	N/A
Avg (2)	2,936,000	(3)	(3)	9.9	0.11	3
Max	3,408,000	(3)	(3)	21.7	0.26	7
Min	2,380,000	(3)	(3)	1.4	0.01	0

STORMWATER RETENTION BASIN BYPASSES

	Flow (gallons)	Total Alpha (pCi/l)	Total Beta (pCi/l)	Total U (ug/l)	Total U (kg)	Calculated Total U-238 (pCi/l) (1)
Total	0	N/A	N/A	N/A		
Avg (2)						
Max						
Min						

STORMWATER RETENTION BASIN OVERFLOWS

	Flow (gallons)	Total Alpha (pCi/l)	Total Beta (pCi/l)	Total U (ug/l)	Total U (kg)	Calculated Total U-238 (pCi/l) (1)
Total	0	N/A	N/A	N/A		
Avg (2)						
Max						
Min						

- (1) The activity of this discharge has been and will continue to be reported as Uranium-238 (pCi/l) in accordance with the Ohio EPA format for reporting uranium. Since this does not account for the activity of the other uranium isotopes in the effluent, the total uranium data is also presented. The calculated Total U-238 is based on a conversion factor of 337.84 pCi U-238/mg Total U applied to the measured value of total uranium.
- (2) Average values presented are flow-weighted.
- (3) Analytical results not yet available.

SOUTH PLUME WELLFIELD				SOUTH FIELD LEACHATE SYSTEM	
	Flow (gallons)	Total U (ug/l)	Total U (kg)	Quarterly Sampling Required Sample Collected 12/29/97 East Sump	
Total	66,783,000	N/A	4.49	Solids	28 mg/l
Avg (2)	2,154,000	17.8	0.14	Total U	57.4 ug/l
Max	2,513,000	22.1	0.19	West Sump	
Min	1,759,000	5.6	0.04	Solids	30 mg/l
STORMWATER RUNOFF TO PADDY'S RUN				Total U	123 ug/l
Precipitation				2.18 in	
Total U				6.19 kg	
				Total Gallons	Totalizer not working

ATTACHMENT B

RADON REPORTS

**CONSOLIDATED CONSENT AGREEMENT / FEDERAL FACILITY COMPLIANCE AGREEMENT/
FEDERAL FACILITY AGREEMENT MONTHLY PROGRESS REPORT**

MONTH: OCTOBER
YEAR: 1997

FACILITY: Fernald Environmental Management Project
U.S. Department of Energy
7400 Willey Road, P.O. Box 538704
Cincinnati, Ohio 45253 Hamilton

**SELECTED ENVIRONMENTAL MONITORING
RADON CONCENTRATIONS REPORT**

Report Generated:
01/08/98

Daily Averages	AMS05		AMS06		PILOT PLANT WAREHOUSE		AMS11		AMS16 Background 2		K65NW		K65SW		K65SE		K65NE	
	(pCi/L)	(pCi/L)	(pCi/L)	(pCi/L)	(pCi/L)	(pCi/L)	(pCi/L)	(pCi/L)	(pCi/L)	(pCi/L)	(pCi/L)	(pCi/L)	(pCi/L)	(pCi/L)	(pCi/L)	(pCi/L)	(pCi/L)	
	10/01/97	3.0	0.8	0.8	0.4	0.7	0.3	1.2	0.7	0.7	0.1	2.8	1.9	1.7	1.2	4.3	3.7	3.8
10/02/97	1.8	1.5	1.4	1.0	1.4	1.0	2.0	1.4	1.0	0.4	3.4	2.7	3.2	2.8	18.2	15.7	14.9	14.3
10/03/97	1.3	1.0	1.0	0.8	1.0	0.5	1.4	0.8	0.8	0.2	2.3	1.7	2.3	1.9	6.6	6.0	6.6	6.1
10/04/97	0.9	0.5	0.7	0.3	0.8	0.2	0.9	0.3	0.8	0.2	1.8	0.9	1.5	1.1	1.7	1.1	2.4	1.8
10/05/97	1.8	1.4	1.2	0.8	1.1	0.7	1.5	0.9	1.0	0.4	2.5	1.8	2.8	2.4	5.0	4.4	4.9	4.4
10/06/97	1.9	1.5	1.3	0.9	1.2	0.8	1.8	1.3	1.0	0.3	2.7	2.1	3.1	2.7	6.6	6.0	6.6	6.0
10/07/97	2.2	1.8	1.6	1.2	1.4	1.0	2.2	1.7	1.1	0.4	3.0	2.3	3.0	2.5	11.4	10.8	8.2	7.6
10/08/97	2.5	2.1	1.8	1.4	1.5	1.1	2.4	1.8	1.2	0.5	3.6	2.9	3.4	3.0	14.2	13.6	9.4	8.8
10/08/97	1.9	1.5	1.3	0.9	1.4	1.0	1.6	1.0	0.9	0.2	2.4	1.7	2.7	2.2	6.4	5.8	3.8	3.3
10/10/97	0.9	0.8	0.8	0.4	0.8	0.2	1.2	0.7	0.7	0.1	1.8	1.1	1.7	1.2	3.5	2.9	2.4	1.8
10/11/97	2.2	1.9	1.8	1.2	1.4	1.0	2.3	1.7	1.1	0.5	4.2	3.5	5.1	4.6	15.8	15.2	8.2	7.7
10/12/97	2.1	1.8	1.5	1.1	1.8	1.2	2.3	1.7	1.2	0.5	3.7	3.1	4.8	4.1	18.3	16.7	8.8	8.2
10/13/97	0.5	0.2	0.5	0.1	0.5	0.1	0.7	0.2	0.5	-0.1	1.1	0.4	0.7	0.2	1.8	1.2	1.3	0.7
10/14/97	0.8	0.5	0.6	0.3	0.6	0.2	0.8	0.2	0.8	-0.1	1.6	1.0	1.2	0.8	5.8	5.2	5.7	5.2
10/15/97	1.3	1.0	0.9	0.5	0.8	0.4	1.1	0.8	0.8	0.2	2.0	1.3	2.3	1.8	4.8	4.2	4.6	4.1
10/16/97	1.2	0.8	0.7	0.4	0.7	0.3	1.2	0.8	0.8	0.2	1.6	1.0	3.2	2.7	3.9	3.3	2.9	2.4
10/17/97	0.9	0.5	0.7	0.3	0.6	0.2	1.0	0.4	0.8	0.1	1.5	0.8	2.1	1.6	2.3	1.7	2.1	1.8
10/18/97	1.5	1.2	1.2	0.8	1.0	0.6	1.5	0.9	0.8	0.2	3.7	3.0	5.0	4.5	12.2	11.6	7.3	6.7
10/19/97	2.5	2.1	1.8	1.4	1.7	1.2	2.3	1.8	1.2	0.5	4.6	4.0	5.0	4.6	18.1	15.5	12.6	12.1
10/20/97	1.9	1.5	1.4	1.0	1.1	0.7	1.6	1.0	0.9	0.3	2.5	1.9	3.0	2.3	10.0	9.5	8.8	8.3
10/21/97	1.9	1.5	1.3	0.9	1.2	0.8	1.7	1.2	0.8	0.2	1.9	1.5	3.5	2.6	13.2	12.6	10.3	9.7
10/22/97	1.8	1.4	1.1	0.7	1.0	0.6	1.6	1.1	0.8	0.2	2.1	1.7	3.0	2.1	11.8	11.1	9.7	9.1
10/23/97	2.5	2.1	1.6	1.2	1.6	1.2	2.2	1.7	1.1	0.4	5.1	4.8	5.9	5.0	29.3	28.7	15.1	14.6
10/24/97	2.0	1.6	1.6	1.2	1.3	0.8	1.8	1.3	1.1	0.4	4.8	4.6	9.2	8.2	18.2	17.8	13.0	12.4
10/25/97	0.7	0.4	0.7	0.3	0.7	0.2	0.8	0.2	0.6	-0.1	0.9	0.5	4.0	3.1	0.9	0.3	0.8	0.3
10/26/97	0.8	0.4	1.0	0.6	0.6	0.2	0.8	0.2	0.6	-0.1	5.7	5.3	13.8	12.9	3.0	2.5	2.0	1.4
10/27/97	0.8	0.3	0.5	0.1	0.5	0.1	0.7	0.1	0.4	-0.2	0.6	0.3	1.4	0.4	2.2	1.5	2.2	1.6
10/28/97	1.0	0.7	0.8	0.4	0.6	0.2	1.1	0.6	0.7	0.1	1.1	0.7	3.4	2.4	5.0	4.2	5.8	5.3
10/29/97	1.9	1.6	1.4	1.1	1.3	0.9	1.6	1.0	0.8	0.2	3.0	2.6	4.0	3.1	12.7	11.8	12.4	11.8
10/30/97	2.4	2.0	1.8	1.5	1.6	1.2	2.2	1.7	1.2	0.5	3.9	3.5	4.2	3.3	15.1	14.2	10.9	10.4
10/31/97	1.5	1.1	1.1	0.8	1.0	0.6	1.3	0.7	0.8	0.2	4.8	4.4	5.7	4.7	6.7	5.9	4.7	4.1

Monthly Statistics

	AMS05	AMS06	PILOT	AMS11	AMS16	K65NW	K65SW	K65SE	K65NE									
AVERAGE:	1.6	1.2	1.1	0.8	1.0	0.8	1.5	0.9	0.9	0.2	2.8	2.2	3.7	3.1	9.3	8.7	6.9	6.4
MAXIMUM:	2.5	2.1	1.8	1.5	1.7	1.2	2.4	1.8	1.2	0.5	5.7	5.3	13.9	12.9	29.3	28.7	15.1	14.6
MINIMUM:	0.5	0.2	0.5	0.1	0.5	0.1	0.7	0.1	0.4	-0.2	0.6	0.3	0.7	0.2	0.9	0.3	0.8	0.3
MEDIAN:	1.8	1.4	1.2	0.8	1.0	0.6	1.5	0.9	0.8	0.2	2.5	1.9	3.2	2.6	6.7	6.0	6.6	6.0
STD. DEV:	1.2	1.2	0.8	0.8	0.7	0.7	1.0	1.0	0.4	0.4	2.6	2.7	4.9	4.7	12.8	12.8	8.0	8.0

- STANDARD LEGEND:
1. "(a)" indicates edited data due to erroneous readings from the monitoring equipment.
 2. "(b)" indicates partial or complete data loss due to monitor malfunction.
 3. "(c)" indicates partial or complete data loss due to programming error in monitor.
 4. The first column for each location is non-instrument background corrected, the second column is corrected.

**CONSOLIDATED CONSENT AGREEMENT / FEDERAL FACILITY COMPLIANCE AGREEMENT/
FEDERAL FACILITY AGREEMENT MONTHLY PROGRESS REPORT**

MONTH: OCTOBER
YEAR: 1997

FACILITY: Fernald Environmental Management Project
U.S. Department of Energy
7400 Willey Road, P.O. Box 538704
Cincinnati, Ohio 45253 Hamilton

**K-65 SILO REPORT
RADON CONCENTRATIONS**

Summary of Continuous Monitoring Results Report Date: 01/08/98

Daily Statistics	SILO 1				SILO 2			
	Average	Maximum	Minimum	Std. Dev.	Average	Maximum	Minimum	Std. Dev.
10/01/97	1.07E+07	1.11E+07	9.90E+06	3.71E+05	7.46E+06	7.77E+06	6.78E+06	2.18E+05
10/02/97	1.07E+07	1.14E+07	3.85E+06	6.62E+05	7.63E+06	8.00E+06	2.70E+06	4.13E+05
10/03/97	1.07E+07	1.11E+07	1.02E+07	2.99E+05	7.52E+06	7.97E+06	7.08E+06	2.77E+05
10/04/97	1.05E+07	1.11E+07	9.75E+06	3.78E+05	7.31E+06	7.68E+06	6.77E+06	2.62E+05
10/05/97	1.05E+07	1.10E+07	1.00E+07	3.51E+05	7.28E+06	7.63E+06	6.91E+06	2.29E+05
10/06/97	1.02E+07	1.09E+07	1.42E+06	8.46E+05	7.23E+06	7.62E+06	9.57E+05	5.61E+05
10/07/97	1.00E+07	1.05E+07	9.12E+06	4.15E+05	7.25E+06	7.55E+06	6.70E+06	2.35E+05
10/08/97	1.00E+07	1.05E+07	9.16E+06	4.41E+05	7.30E+06	7.65E+06	6.64E+06	2.55E+05
10/09/97	1.01E+07	1.05E+07	5.23E+06	4.03E+05	7.30E+06	7.64E+06	3.69E+06	3.28E+05
10/10/97	9.87E+06	1.04E+07	8.99E+06	3.58E+05	7.23E+06	7.60E+06	6.76E+06	2.09E+05
10/11/97	1.02E+07	1.09E+07	9.53E+06	4.37E+05	7.53E+06	7.84E+06	7.16E+06	2.27E+05
10/12/97	1.03E+07	1.09E+07	9.62E+06	4.74E+05	7.56E+06	7.95E+06	7.09E+06	2.75E+05
10/13/97	1.04E+07	1.09E+07	1.00E+07	2.37E+05	7.43E+06	7.89E+06	6.72E+06	2.44E+05
10/14/97	1.04E+07	1.10E+07	5.88E+03	1.34E+06	7.59E+06	7.97E+06	-1.15E+05	9.90E+05
10/15/97	1.08E+07	1.12E+07	1.01E+07	2.99E+05	7.78E+06	8.04E+06	7.31E+06	1.67E+05
10/16/97	1.13E+07	1.16E+07	7.83E+06	3.32E+05	8.00E+06	8.32E+06	5.57E+06	2.72E+05
10/17/97	1.17E+07	1.19E+07	1.10E+07	1.75E+05	8.34E+06	8.61E+06	7.78E+06	1.60E+05
10/18/97	1.18E+07	1.22E+07	1.14E+07	2.80E+05	8.47E+06	8.73E+06	7.93E+06	1.92E+05
10/19/97	1.19E+07	1.25E+07	1.11E+07	4.59E+05	8.56E+06	8.87E+06	8.17E+06	2.31E+05
10/20/97	1.17E+07	1.22E+07	4.32E+03	9.77E+05	8.41E+06	8.84E+06	-1.16E+05	7.01E+05
10/21/97	1.19E+07	1.23E+07	1.12E+07	3.09E+05	8.41E+06	8.74E+06	7.93E+06	1.94E+05
10/22/97	1.20E+07	1.25E+07	1.13E+07	3.77E+05	8.42E+06	8.78E+06	7.31E+06	1.90E+05
10/23/97	1.22E+07	1.28E+07	1.12E+07	3.88E+05	7.34E+06	8.95E+06	3.89E+06	1.54E+06
10/24/97	1.24E+07	1.26E+07	1.19E+07	1.16E+05	8.91E+06	9.08E+06	8.34E+06	1.30E+05
10/25/97	1.21E+07	1.24E+07	1.15E+07	1.87E+05	8.78E+06	9.05E+06	8.00E+06	2.61E+05
10/26/97	1.22E+07	1.24E+07	1.18E+07	7.28E+04	8.79E+06	9.00E+06	7.99E+06	1.58E+05
10/27/97	1.23E+07	1.25E+07	1.18E+07	1.64E+05	8.77E+06	9.02E+06	8.34E+06	1.38E+05
10/28/97	1.19E+07	1.25E+07	7.04E+03	9.86E+05	8.68E+06	9.04E+06	-1.15E+05	7.31E+05
10/29/97	1.18E+07	1.22E+07	1.09E+07	3.71E+05	8.77E+06	9.13E+06	8.25E+06	2.19E+05
10/30/97	1.17E+07	1.22E+07	5.10E+03	1.04E+06	8.82E+06	9.18E+06	-1.15E+05	7.66E+05
10/31/97	1.18E+07	1.21E+07	1.15E+07	1.89E+05	8.88E+06	9.15E+06	8.58E+06	1.45E+05

Headspace Grab Sample Results

Date:	SILO 1	SILO 2
10/02/97	1.22E+07	7.43E+06
10/06/97	1.16E+07	7.48E+06
10/09/97	1.24E+07	6.99E+06
10/14/97	1.32E+07	6.88E+06
10/16/97	1.31E+07	7.74E+06
10/20/97	1.33E+07	8.64E+06
10/23/97	1.44E+07	8.24E+06
10/28/97	1.48E+07	7.98E+06

NOTES: Negative values may occur when input values from the DAQ system are low, due to regression parameters used in determining concentrations. The low value phenomenon is caused by problems associated with the DAQ system (i.e. power surges, equipment failure, grab sampling, etc.).

- STANDARD LEGEND:
1. All values reported in pCi/L.
 2. Data reported to three significant digits to remain consistent with the calibration data.
 3. Shaded Cells indicate partial/complete data loss due to equipment malfunction.

**CONSOLIDATED CONSENT AGREEMENT / FEDERAL FACILITY COMPLIANCE AGREEMENT /
FEDERAL FACILITY AGREEMENT MONTHLY PROGRESS REPORT**

MONTH: NOVEMBER
YEAR: 1997

FACILITY: Fernald Environmental Management Project
U.S. Department of Energy
7400 Willey Road, P.O. Box 538704
Cincinnati, Ohio 45253 Hamilton

**SELECTED ENVIRONMENTAL MONITORING
RADON CONCENTRATIONS REPORT**

Report Generated:
01/08/98

Daily Averages	AMS05		AMS06		PILOT PLANT WAREHOUSE		AMS11		AMS16 Background 2		K65NW		K65SW		K65SE		K65NE	
	(pCi/L)	(pCi/L)	(pCi/L)	(pCi/L)	(pCi/L)	(pCi/L)	(pCi/L)	(pCi/L)	(pCi/L)	(pCi/L)	(pCi/L)	(pCi/L)	(pCi/L)	(pCi/L)	(pCi/L)	(pCi/L)	(pCi/L)	(pCi/L)
11/01/97	0.9	0.5	0.7	0.3	0.8	0.2	0.9	0.3	0.8	(a)	1.9	1.5	1.9	0.9	4.0	3.1	4.5	3.9
11/02/97	0.7	0.3	0.5	0.2	0.8	0.2	0.7	0.1	0.5	(a)	0.7	0.3	1.3	0.4	1.7	0.9	3.0	2.4
11/03/97	0.5	0.2	0.5	0.1	0.5	0.1	0.6	0.1	0.4	(a)	0.8	0.2	1.1	0.1	1.2	0.3	1.5	1.0
11/04/97	0.8	0.2	0.5	0.1	0.8	0.1	0.7	0.1	0.5	(a)	0.8	0.3	1.1	0.2	1.0	0.2	1.0	0.4
11/05/97	0.8	0.5	0.7	0.3	0.8	0.2	0.9	0.3	0.8	(a)	5.5	5.1	4.8	3.7	1.7	0.9	1.1	0.8
11/08/97	0.9	0.5	0.8	0.4	0.8	0.2	1.0	0.4	0.7	(a)	1.2	0.9	7.0	8.1	1.9	1.1	1.2	0.8
11/07/97	1.0	0.8	0.7	0.3	0.8	0.4	1.1	0.8	0.8	(a)	2.0	1.7	2.2	1.2	5.5	4.8	3.3	2.7
11/08/97	0.7	0.4	0.8	0.2	0.8	0.1	0.8	0.2	0.8	(a)	0.7	0.3	1.3	0.3	3.7	2.8	1.4	0.8
11/09/97	1.2	0.8	0.8	0.4	0.8	0.4	1.0	0.5	0.9	(a)	1.8	1.5	4.1	3.1	8.4	5.5	5.8	5.0
11/10/97	1.3	0.9	0.9	0.6	0.8	0.5	1.1	0.5	0.7	0.2	2.1	1.7	2.8	1.8	7.0	6.1	7.2	6.7
11/11/97	0.7	0.3	0.5	0.1	0.8	0.2	0.8	0.2	0.5	0.2	0.7	0.4	1.4	0.5	7.7	6.9	6.8	6.0
11/12/97	0.8	0.5	0.7	0.3	0.7	0.3	0.9	0.3	0.8	0.4	1.4	1.0	2.8	1.8	17.4	16.5	12.8	12.3
11/13/97	1.0	0.8	1.0	0.6	0.7	0.3	1.0	0.4	0.9	0.5	1.7	1.3	12.3	11.3	5.2	4.4	4.5	3.9
11/14/97	0.7	0.4	0.8	0.2	0.8	0.2	0.8	0.2	0.8	0.2	0.7	0.3	1.4	0.4	2.2	1.3	1.2	0.7
11/15/97	0.7	0.3	0.8	0.2	0.8	0.2	0.7	0.2	0.8	0.2	0.7	0.3	1.2	0.3	1.8	0.8	2.8	2.3
11/16/97	0.8	0.2	0.5	0.1	0.5	0.1	0.7	0.1	0.8	0.2	0.8	0.2	1.1	0.2	2.7	1.9	2.2	1.7
11/17/97	1.1	0.7	0.8	0.4	0.8	0.4	0.9	0.3	0.9	0.5	2.3	1.9	2.4	1.4	10.8	10.0	18.2	15.7
11/18/97	1.7	1.4	1.4	1.0	1.4	1.0	1.4	0.9	1.3	0.9	2.8	2.4	3.4	2.4	32.2	31.4	43.8	43.1
11/19/97	1.3	1.0	0.9	0.5	1.0	0.6	1.2	0.7	1.1	0.7	1.8	1.5	2.5	1.5	8.2	8.3	9.2	8.7
11/20/97	1.8	1.5	1.4	1.1	1.3	0.9	1.8	1.2	1.2	0.8	4.1	3.7	4.9	4.0	8.5	7.7	8.2	7.6
11/21/97	2.0	1.6	1.4	1.1	1.3	0.9	1.6	1.0	1.1	0.7	3.3	2.9	9.2	8.2	10.5	9.7	8.2	7.6
11/22/97	0.7	0.4	0.8	0.2	0.6	0.2	0.8	0.2	0.7	0.3	0.7	0.3	1.3	0.4	2.7	1.8	1.8	1.2
11/23/97	0.7	0.4	0.8	0.2	0.8	0.2	0.8	0.2	0.7	0.3	1.0	0.6	1.3	0.4	3.2	2.4	4.1	3.8
11/24/97	1.3	1.0	0.9	0.6	0.8	0.5	1.0	0.4	0.9	0.5	3.8	3.4	5.4	4.5	11.5	10.7	12.7	12.1
11/25/97	1.1	0.8	1.0	0.6	1.0	0.6	1.0	0.5	0.9	0.6	2.2	1.8	2.8	1.7	14.8	13.7	17.3	16.7
11/26/97	0.7	0.3	0.5	0.2	0.8	0.2	0.7	0.2	0.8	0.2	0.8	0.2	1.2	0.2	1.9	1.1	2.5	1.9
11/27/97	1.3	1.0	1.1	0.7	1.0	0.6	1.3	0.7	1.0	0.6	5.8	5.5	3.1	2.2	7.9	7.1	8.2	5.6
11/28/97	0.8	0.3	0.8	0.2	0.5	0.1	0.8	0.2	0.8	0.2	1.8	1.3	1.8	0.8	2.1	1.2	3.1	2.6
11/29/97	1.2	0.8	1.0	0.7	0.7	0.3	1.0	0.5	1.1	0.8	5.3	5.0	7.8	6.6	4.8	3.7	4.8	4.2
11/30/97	0.9	0.6	0.8	0.6	0.8	0.2	1.0	0.4	0.7	0.3	2.9	2.5	9.2	8.2	1.8	0.8	1.0	0.4

Monthly Statistics

	AMS05		AMS06		PILOT		AMS11		AMS16		K65NW		K65SW		K65SE		K65NE	
AVERAGE:	1.0	0.8	0.8	0.4	0.7	0.3	1.0	0.4	0.8	0.4	2.0	1.7	3.4	2.5	6.4	5.8	6.6	6.1
MAXIMUM:	2.0	1.8	1.4	1.1	1.4	1.0	1.8	1.2	1.3	0.9	5.8	5.5	12.3	11.3	32.2	31.4	43.8	43.1
MINIMUM:	0.5	0.2	0.5	0.1	0.5	0.1	0.8	0.1	0.4	0.2	0.8	0.2	1.1	0.1	1.0	0.2	1.0	0.4
MEDIAN:	0.9	0.5	0.7	0.3	0.8	0.2	0.9	0.3	0.7	0.2	1.8	1.4	2.4	1.5	4.3	3.4	4.3	3.8
STD. DEV.:	0.7	0.7	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	3.0	3.0	5.6	5.6	12.5	12.5	16.0	16.0

- STANDARD LEGEND:
1. "(a)" indicates edited data due to erroneous readings from the monitoring equipment.
 2. "(b)" indicates partial or complete data loss due to monitor malfunction.
 3. "(c)" indicates partial or complete data loss due to programming error in monitor.
 4. The first column for each location is non-instrument background corrected, the second column is corrected.

MONTHLY PROGRESS REPORT

MONTH: NOVEMBER
YEAR: 1997

FACILITY: Fernald Environmental Management Project
U.S. Department of Energy
7400 Willey Road, P.O. Box 538704
Cincinnati, Ohio 45253 Hamilton

K-65 SILO REPORT
RADON CONCENTRATIONS

Summary of Continuous Monitoring Results

Report Date: 01/08/98

Daily Statistics	SILO 1				SILO 2			
	Average	Maximum	Minimum	Std. Dev.	Average	Maximum	Minimum	Std. Dev.
11/01/97	1.20E+07	1.22E+07	1.18E+07	1.12E+05	8.93E+06	9.05E+06	8.79E+06	5.39E+04
11/02/97	1.22E+07	1.24E+07	1.21E+07	7.01E+04	8.93E+06	9.11E+06	8.22E+06	1.39E+05
11/03/97	1.21E+07	1.25E+07	1.96E+04	1.27E+06	8.91E+06	9.14E+06	-1.15E+05	9.45E+05
11/04/97	1.19E+07	1.21E+07	1.16E+07	1.22E+05	8.76E+06	8.96E+06	8.48E+06	1.02E+05
11/05/97	1.15E+07	1.18E+07	1.09E+07	1.98E+05	8.80E+06	9.06E+06	8.20E+06	1.64E+05
11/06/97	1.16E+07	1.18E+07	1.11E+07	1.37E+05	8.86E+06	9.11E+06	8.51E+06	1.02E+05
11/07/97	1.17E+07	1.19E+07	1.13E+07	1.22E+05	9.01E+06	9.21E+06	8.65E+06	1.25E+05
11/08/97	1.18E+07	1.20E+07	1.12E+07	1.55E+05	8.74E+06	9.19E+06	7.38E+06	4.30E+05
11/09/97	1.17E+07	1.21E+07	1.09E+07	3.62E+05	8.92E+06	9.23E+06	8.33E+06	2.63E+05
11/10/97	1.17E+07	1.19E+07	4.00E+06	4.68E+05	9.00E+06	9.19E+06	2.99E+06	3.71E+05
11/11/97	1.18E+07	1.20E+07	1.12E+07	1.53E+05	9.00E+06	9.19E+06	8.53E+06	1.24E+05
11/12/97	1.19E+07	1.22E+07	1.13E+07	2.36E+05	9.03E+06	9.53E+06	8.25E+06	3.06E+05
11/13/97	1.23E+07	1.29E+07	1.11E+07	2.61E+05	9.25E+06	9.68E+06	7.69E+06	3.50E+05
11/14/97	1.24E+07	1.26E+07	1.18E+07	1.21E+05	9.01E+06	9.65E+06	8.52E+06	3.33E+05
11/15/97	1.25E+07	1.28E+07	1.23E+07	1.79E+05	8.74E+06	8.97E+06	8.19E+06	1.62E+05
11/16/97	1.26E+07	1.29E+07	1.23E+07	1.15E+05	8.74E+06	8.94E+06	8.44E+06	1.20E+05
11/17/97	1.26E+07	1.34E+07	2.63E+06	9.78E+05	8.68E+06	9.02E+06	2.02E+06	4.60E+05
11/18/97	1.27E+07	1.36E+07	1.00E+07	4.95E+05	8.82E+06	9.11E+06	7.13E+06	2.23E+05
11/19/97	1.24E+07	1.28E+07	1.14E+04	1.55E+06	8.74E+06	9.12E+06	-1.16E+05	1.12E+06
11/20/97	1.26E+07	1.29E+07	1.21E+07	2.37E+05	9.01E+06	9.65E+06	8.39E+06	2.53E+05
11/21/97	1.26E+07	1.27E+07	1.24E+07	6.57E+04	8.88E+06	8.99E+06	8.60E+06	5.59E+04
11/22/97	1.25E+07	1.26E+07	1.23E+07	9.04E+04	8.83E+06	8.92E+06	8.71E+06	6.84E+04
11/23/97	1.23E+07	1.24E+07	1.19E+07	1.59E+05	8.51E+06	8.76E+06	8.03E+06	1.98E+05
11/24/97	1.18E+07	1.24E+07	4.71E+03	1.24E+06	8.30E+06	8.71E+06	-1.15E+05	8.56E+05
11/25/97	1.19E+07	1.24E+07	1.15E+07	2.87E+05	8.27E+06	8.65E+06	7.68E+06	2.73E+05
11/26/97	1.19E+07	1.20E+07	1.17E+07	8.11E+04	7.88E+06	8.29E+06	6.96E+06	3.42E+05
11/27/97	1.19E+07	1.24E+07	1.15E+07	2.53E+05	8.16E+06	8.47E+06	7.76E+06	1.19E+05
11/28/97	1.15E+07	1.17E+07	1.13E+07	1.57E+05	7.75E+06	8.10E+06	7.39E+06	1.33E+05
11/29/97	1.14E+07	1.15E+07	9.11E+06	1.70E+05	7.77E+06	7.91E+06	6.19E+06	1.26E+05
11/30/97	1.17E+07	1.19E+07	1.15E+07	1.09E+05	7.88E+06	7.94E+06	7.78E+06	3.27E+04

Headspace Grab Sample Results

Date:	SILO 1	SILO 2
11/03/97	1.43E+07	9.39E+06
11/05/97	1.41E+07	8.41E+06
11/10/97	1.50E+07	8.35E+06
11/13/97	1.48E+07	9.41E+06
11/17/97	1.38E+07	1.03E+07
11/19/97	1.47E+07	9.76E+06
11/24/97	1.47E+07	9.35E+06
11/25/97	1.42E+07	9.71E+06

NOTES: Negative values may occur when input values from the DAQ system are low, due to regression parameters used in determining concentrations. The low value phenomenon is caused by problems associated with the DAQ system (i.e. power surges, equipment failure, grab sampling, etc.).

STANDARD LEGEND:

1. All values reported in pCi/L.
2. Data reported to three significant digits to remain consistent with the calibration data.
3. Shaded Cells indicate partial/complete data loss due to equipment malfunction.

**CONSOLIDATED CONSENT AGREEMENT / FEDERAL FACILITY COMPLIANCE AGREEMENT/
FEDERAL FACILITY AGREEMENT MONTHLY PROGRESS REPORT**

MONTH: DECEMBER
YEAR: 1997

FACILITY: Fernald Environmental Management Project
U.S. Department of Energy
7400 Willey Road, P.O. Box 538704
Cincinnati, Ohio 45253 Hamilton

**SELECTED ENVIRONMENTAL MONITORING
RADON CONCENTRATIONS REPORT**

Report Generated:
01/12/98

Daily Averages	AMS05		AMS06		PILOT PLANT WAREHOUSE		AMS11		AMS16 Background 2		K65NW		K65SW		K65SE		K65NE	
	Non-instrument background corrected	Corrected																
12/01/97	0.5	0.2	0.5	0.1	0.5	0.1	0.6	0.1	0.5	0.2	0.6	0.2	1.5	0.5	0.9	0.1	0.7	0.1
12/02/97	0.7	0.3	0.7	0.3	0.5	0.1	0.6	0.1	0.6	0.2	3.8	3.4	7.2	6.3	1.0	0.2	0.8	0.2
12/03/97	0.8	0.4	0.9	0.5	0.6	0.2	0.9	0.3	0.7	0.3	5.2	4.8	4.9	4.0	3.6	2.7	3.8	3.2
12/04/97	0.7	0.3	0.5	0.2	0.6	0.2	0.7	0.2	0.6	0.2	0.6	0.2	1.3	0.3	4.9	4.0	4.6	4.0
12/05/97	0.6	0.3	0.5	0.2	0.6	0.2	0.7	0.2	0.7	0.3	0.6	0.3	1.2	0.2	3.7	2.9	4.7	4.1
12/06/97	0.7	0.3	0.5	0.1	0.6	0.2	0.7	0.2	0.8	0.5	0.7	0.3	1.2	0.3	1.6	0.8	4.1	3.5
12/07/97	0.6	0.3	0.5	0.2	0.6	0.2	0.7	0.1	0.6	0.2	0.7	0.3	1.2	0.3	1.5	0.7	2.9	2.3
12/08/97	0.6	0.3	0.7	0.3	0.5	0.1	0.7	0.1	4.7	0.2	10.1	9.7	5.7	4.7	2.2	1.3	1.9	1.3
12/09/97	0.8	0.4	0.9	0.5	0.6	0.2	0.8	0.2	0.8	0.4	4.9	4.5	11.2	10.2	1.0	0.2	0.9	0.3
12/10/97	0.8	0.5	0.9	0.6	0.7	0.2	0.8	0.2	0.7	0.3	2.4	2.0	10.9	9.9	2.7	1.9	2.7	2.1
12/11/97	0.6	0.3	0.5	0.1	0.5	0.1	0.6	0.0	0.5	0.1	0.6	0.2	1.3	0.3	2.7	1.8	1.5	0.9
12/12/97	0.6	0.3	0.5	0.1	0.6	0.2	0.6	0.1	0.5	0.1	0.8	0.4	1.3	0.4	10.4	9.6	10.1	9.6
12/13/97	0.7	0.3	0.5	0.1	0.5	0.1	0.7	0.1	0.6	0.2	0.8	0.4	1.4	0.4	4.6	3.8	6.3	5.7
12/14/97	0.8	0.4	0.6	0.3	0.6	0.2	0.8	0.2	0.6	0.3	1.6	1.3	3.2	2.2	5.0	4.2	2.8	2.2
12/15/97	1.5	1.1	1.1	0.8	1.2	0.7	1.2	0.6	1.2	0.8	2.5	2.1	3.1	2.1	24.1	23.2	23.9	23.3
12/16/97	1.9	1.5	1.4	1.1	1.4	1.0	1.5	0.9	1.2	0.8	4.2	3.8	3.8	2.8	21.8	20.9	22.4	21.9
12/17/97	1.8	1.4	1.4	1.1	1.5	1.1	1.5	0.9	1.3	0.9	3.8	3.4	4.1	3.1	15.1	14.3	11.8	11.3
12/18/97	1.4	1.1	1.2	0.8	1.1	0.7	1.3	0.7	1.3	0.9	3.4	3.0	5.6	4.6	8.6	7.7	7.5	6.9
12/19/97	1.4	1.1	1.0	0.6	0.9	0.5	1.1	0.5	1.0	0.7	1.8	1.4	2.4	1.4	6.4	5.6	4.5	3.9
12/20/97	1.4	1.1	1.2	0.8	1.3	0.9	1.3	0.7	1.0	0.6	1.7	1.3	2.3	1.3	9.9	9.1	7.7	7.1
12/21/97	0.6	0.3	0.8	0.4	0.5	0.1	0.7	0.2	0.5	0.2	1.4	1.0	10.8	9.8	1.0	0.2	0.8	0.2
12/22/97	0.7	0.3	0.8	0.5	0.5	0.1	0.7	0.2	0.6	0.2	1.1	0.8	7.8	6.9	1.1	0.3	1.8	1.3
12/23/97	0.7	0.3	0.5	0.2	0.5	0.1	0.7	0.1	0.6	0.2	0.7	0.3	2.4	1.4	3.3	2.4	4.0	3.5
12/24/97	0.7	0.3	1.0	0.6	0.5	0.1	0.8	0.2	0.6	0.2	5.2	4.8	15.7	14.7	1.4	0.6	1.3	0.7
12/25/97	0.6	0.2	0.5	0.1	0.5	0.1	0.7	0.1	0.5	0.1	0.5	0.2	1.1	0.1	1.2	0.4	2.6	2.0
12/26/97	0.6	0.2	0.5	0.1	0.5	0.1	0.7	0.1	0.6	0.2	0.6	0.3	1.1	0.2	1.8	1.0	4.7	4.1
12/27/97	0.7	0.4	0.6	0.3	0.6	0.2	0.8	0.2	0.7	0.3	4.0	3.6	3.1	2.1	22.7	21.8	18.2	17.7
12/28/97	0.9	0.6	0.8	0.4	0.8	0.4	0.9	0.3	0.9	0.6	6.1	5.7	5.5	4.6	9.4	8.6	14.1	13.5
12/29/97	1.1	0.7	0.9	0.5	0.7	0.3	1.0	0.4	1.0	0.6	7.7	7.4	8.5	7.5	12.5	11.7	8.9	8.4
12/30/97	0.7	0.4	0.6	0.2	0.6	0.2	0.8	0.2	0.8	0.4	0.8	0.5	1.3	0.4	3.1	2.3	5.4	4.9
12/31/97	0.9	0.5	0.6	0.2	0.7	0.2	0.8	0.3	18.0	0.5 (a)	0.9	0.5	1.4	0.4	2.2	1.4	2.8	2.2

Monthly Statistics

	AMS05		AMS06		PILOT		AMS11		AMS16		K65NW		K65SW		K65SE		K65NE	
AVERAGE:	0.9	0.5	0.8	0.4	0.7	0.3	0.9	0.3	1.4	0.4	2.6	2.2	4.3	3.3	6.2	5.3	6.1	5.6
MAXIMUM:	1.9	1.5	1.4	1.1	1.5	1.1	1.5	0.9	18.0	0.9	10.1	9.7	15.7	14.7	24.1	23.2	23.9	23.3
MINIMUM:	0.5	0.2	0.5	0.1	0.5	0.1	0.6	0.0	0.5	0.1	0.5	0.2	1.1	0.1	0.9	0.1	0.7	0.1
MEDIAN:	0.7	0.3	0.7	0.3	0.6	0.2	0.8	0.2	0.7	0.3	1.6	1.3	3.1	2.1	3.3	2.4	4.1	3.5
STD. DEV.:	0.7	0.7	0.5	0.5	0.5	0.6	0.5	0.5	6.1	0.5	4.7	4.7	7.3	7.3	12.9	12.9	11.8	11.8

- STANDARD LEGEND:
1. "(a)" indicates edited data due to erroneous readings from the monitoring equipment.
 2. "(b)" indicates partial or complete data loss due to monitor malfunction.
 3. "(c)" indicates partial or complete data loss due to programming error in monitor.
 4. All radon concentrations recorded are in units of pCi/L.

**CONSOLIDATED CONSENT AGREEMENT / FEDERAL FACILITY COMPLIANCE AGREEMENT /
FEDERAL FACILITY AGREEMENT MONTHLY PROGRESS REPORT**

MONTH: DECEMBER
YEAR: 1997

FACILITY: Fernald Environmental Management Project
U.S. Department of Energy
7400 Willey Road, P.O. Box 538704
Cincinnati, Ohio 45253 Hamilton

**K-65 SILO REPORT
RADON CONCENTRATIONS**

Summary of Continuous Monitoring Results

Report Date: 01/12/98

Daily Statistics	SILO 1				SILO 2			
	Average	Maximum	Minimum	Std. Dev.	Average	Maximum	Minimum	Std. Dev.
12/01/97	1.18E+07	1.21E+07	1.14E+07	1.74E+05	8.39E+06	8.69E+06	7.93E+06	2.11E+05
12/02/97	1.14E+07	1.18E+07	3.13E+03	1.46E+06	8.12E+06	8.45E+06	-1.26E+05	1.05E+06
12/03/97	1.17E+07	1.19E+07	9.28E+06	1.60E+05	8.19E+06	8.38E+06	6.57E+06	1.85E+05
12/04/97	1.21E+07	1.22E+07	1.16E+07	8.74E+04	8.35E+06	8.48E+06	8.07E+06	7.67E+04
12/05/97	1.23E+07	1.26E+07	1.21E+07	1.08E+05	8.13E+06	8.55E+06	7.47E+06	2.16E+05
12/06/97	1.24E+07	1.27E+07	1.10E+07	1.99E+05	8.26E+06	8.51E+06	7.44E+06	1.50E+05
12/07/97	1.22E+07	1.23E+07	1.21E+07	6.24E+04	8.46E+06	8.77E+06	8.15E+06	1.57E+05
12/08/97	1.21E+07	1.23E+07	2.57E+04	1.01E+06	8.73E+06	9.00E+06	-1.26E+05	7.51E+05
12/09/97	1.23E+07	1.24E+07	1.21E+07	9.14E+04	8.83E+06	9.01E+06	8.33E+06	1.37E+05
12/10/97	1.23E+07	1.25E+07	9.86E+06	1.60E+05	8.94E+06	9.02E+06	7.11E+06	1.21E+05
12/11/97	1.19E+07	1.32E+07	2.06E+05	1.83E+06	9.10E+06	1.02E+07	-1.11E+05	1.41E+06
12/12/97	1.19E+07	1.21E+07	1.14E+07	1.47E+05	9.49E+06	9.69E+06	9.15E+06	1.30E+05
12/13/97	1.19E+07	1.22E+07	9.36E+06	2.18E+05	9.44E+06	9.77E+06	7.33E+06	2.65E+05
12/14/97	1.18E+07	1.21E+07	1.13E+07	2.16E+05	9.11E+06	9.80E+06	5.31E+06	1.20E+06
12/15/97	1.18E+07	1.24E+07	4.60E+06	5.89E+05	8.05E+06	9.75E+06	3.36E+06	1.64E+06
12/16/97	1.19E+07	1.24E+07	1.13E+07	3.41E+05	8.36E+06	1.04E+07	3.86E+06	2.08E+06
12/17/97	1.17E+07	1.21E+07	9.62E+06	3.59E+05	9.92E+06	1.02E+07	8.01E+06	2.05E+05
12/18/97	1.18E+07	1.21E+07	1.13E+07	2.58E+05	1.01E+07	1.03E+07	9.59E+06	1.39E+05
12/19/97	1.16E+07	1.19E+07	1.12E+07	2.56E+05	9.99E+06	1.02E+07	9.54E+06	1.77E+05
12/20/97	1.18E+07	1.21E+07	9.34E+06	2.20E+05	1.00E+07	1.03E+07	8.00E+06	1.98E+05
12/21/97	1.17E+07	1.19E+07	1.14E+07	1.30E+05	9.67E+06	1.00E+07	8.99E+06	1.93E+05
12/22/97	1.15E+07	1.19E+07	4.73E+06	5.09E+05	9.70E+06	9.88E+06	3.92E+06	4.03E+05
12/23/97	1.13E+07	1.15E+07	1.12E+07	6.00E+04	9.58E+06	9.71E+06	9.25E+06	8.98E+04
12/24/97	1.15E+07	1.16E+07	9.75E+06	1.22E+05	9.52E+06	9.66E+06	8.19E+06	1.14E+05
12/25/97	1.14E+07	1.15E+07	1.13E+07	4.35E+04	9.46E+06	9.54E+06	9.27E+06	7.47E+04
12/26/97	1.13E+07	1.14E+07	1.12E+07	4.74E+04	9.16E+06	9.39E+06	8.58E+06	1.45E+05
12/27/97	1.13E+07	1.15E+07	8.97E+06	1.54E+05	9.33E+06	9.46E+06	7.40E+06	1.34E+05
12/28/97	1.15E+07	1.17E+07	1.11E+07	1.82E+05	9.45E+06	9.65E+06	9.21E+06	1.02E+05
12/29/97	1.17E+07	1.19E+07	3.66E+06	5.63E+05	9.60E+06	9.79E+06	2.03E+06	5.07E+05
12/30/97	1.21E+07	1.22E+07	9.65E+06	1.56E+05	9.57E+06	9.88E+06	7.81E+06	3.16E+05
12/31/97	1.20E+07	1.28E+07	1.13E+07	3.72E+05	9.65E+06	1.03E+07	9.16E+06	3.06E+05

Headspace Grab Sample Results

Date:	SILO 1	SILO 2
12/02/97	1.28E+07	1.03E+07
12/04/97	1.37E+07	9.31E+06
12/08/97	1.44E+07	9.82E+06
12/11/97	1.36E+07	1.03E+07
12/15/97	1.29E+07	1.06E+07
12/17/97	1.35E+07	1.03E+07
12/22/97	1.40E+07	1.02E+07
12/29/97	1.36E+07	1.06E+07

NOTES: Negative values may occur when input values from the DAQ system are low, due to regression parameters used in determining concentrations. The low value phenomenon is caused by problems associated with the DAQ system (i.e. power surges, equipment failure, grab sampling, etc.).

STANDARD LEGEND:

1. All values reported in pCi/L.
2. Data reported to three significant digits to remain consistent with the calibration data.
3. Shaded Cells indicate partial/complete data loss due to equipment malfunction.

ATTACHMENT C

REMOVAL ACTION STATUS REPORT

Note: All Removal Action except 3, 9, 12, 17, and 27 are completed and closed. Removal Action 3, 9, 12, 17, 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
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 if 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

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	