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**CONSOLIDATED CONSENT AGREEMENT/FEDERAL FACILITY
COMPLIANCE AGREEMENT/ FEDERAL FACILITY
AGREEMENT/REMEDIAL INVESTIGATION/FEASIBILITY
STUDY/CONSENT DECREE MONTHLY REPORT DECEMBER 1 THRU
31, 1996 AND QUARTERLY REPORT OCTOBER 1 THRU DECEMBER
31, 1996**

01/16/97

**DOE-0429-97
DOE-FEMP EPAS
31
REPORT**



Department of Energy

**Ohio Field Office
Fernald Area Office**

P. O. Box 538705
Cincinnati, Ohio 45253-8705
(513) 648-3155



JAN 16 1997

DOE-0429-97

**Mr. James A. Saric, Remedial Project Director
U.S. Environmental Protection Agency
Region V - 5HSF-5J
77 W. 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
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QUARTERLY REPORT - OCTOBER 1 THROUGH DECEMBER 31, 1996**

This letter transmits the amended Consent Agreement Monthly Report for the period October 1 through 31, 1996, and Quarterly Progress Report that describes the activities accomplished October 1 through December 31, 1996. 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 the U.S. Environmental Protection Agency (U.S. EPA) and Ohio Environmental Protection Agency (OEPA).

If you or your staff have any questions regarding this letter, please contact me at (513) 648-3139.

Sincerely,

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

FEMP:Reising

Enclosures: As Stated

cc w/encs:

S. Fauver, EM-42/CLOV
D. Govans, EM-42/CLOV
R. Beaumier, TPSS/DERR, OEPA-Columbus
G. Jablonowski, USEPA-V, 5HRE-8J
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D. Carr, FDF/9
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cc w/o encs:

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D. S. Ward, GeoTrans
J. Harmon, FDF/90
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T. Walsh, FDF/65-2
EDC, FDF/52-7

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Introduction

This report describes actions at the Fernald Environmental Management Project (FEMP) from October 1, 1996 through December 31, 1996. 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

October 1996

- Enforceable Milestones Completed
 - Submitted Draft OU1 Remedial Action Work Plan (RAWP) to the Agencies on October 17, 1996
- Major Work Initiated/Completed
 - Awarded the On-Site Rail Installation contract to Annex Railroad Buildings of Indianapolis on October 8, 1996
 - Initiated resolution of outstanding DOE issues on Alternative Remedial Action Subcontracting Approach (ARASA) Request for Proposal (RFP)
 - Resolved outstanding DOE issues concerning Branch Line Trestle Upgrade contract

November 1996

- Enforceable Milestones Completed
 - None
- Major Work Initiated/Completed
 - Continued resolution of outstanding DOE issues on Alternative Remedial Action Subcontracting Approach (ARASA) Request for Proposal (RFP)
 - Initiated resolution of outstanding CSXT issues on Okeana Trestle Branch Line Upgrade

December 1996

- Enforceable Milestones Completed
 - Obtained USEPA approval on December 10, 1996, of the OU1 Remedial Action Work Plan (RAWP); and a condition approval of the RAWP by OEPA on December 23, 1996
- Major Work Initiated/Completed
 - Began preparations for final submittal of RAWP to Agencies
 - Held Public Workshop regarding status of OU1 on December 3, 1996
 - Initiated installation of the North Railyard subbase
 - Issued Notice to Proceed to on-site rail subcontractor
 - Installed concrete pad for Loadout Building

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- Continued resolution of outstanding CSXT issues on Okeana Trestle Branch Line Upgrade
- Received letter from DOE dated December 23, 1996, directing Waste Pits Remedial Action Project to proceed with a capital leasing arrangement for the Alternative Remedial Action Subcontracting Agreement (ARASA) procurement

January 1997 (Anticipated)

- Enforceable Milestones
 - Submit Final OU1 RAWP to Agencies by January 10, 1997
- Major Work Initiated/Completed
 - Mobilize on-site rail subcontractor
 - Initiate rail construction in North Railyard
 - Continue to pursue resolution of outstanding CSXT issues on Okeana Trestle Branch Line Upgrade
 - Issue ARASA Capital Lease Request for Proposal to approved bidders by January 31, 1997

OPERABLE UNIT 2

October 1996

- Enforceable Milestones Completed
 - On-Site Disposal Facility (OSDF)
 - Submitted the OSDF Final Design Review Package and RAWP to the Agencies for final approval on October 14, 1996
 - Soil Characterization & Excavation Project (SCEP)
 - None
- Major Work Initiated/Completed
 - OSDF
 - Awarded contract for construction of the Haul Road and Rerouted North Entrance Road on October 7, 1996, to Barrett Paving
 - Issued Request for Proposal for Phase I Construction of the OSDF on October 25, 1996
 - SCEP
 - Initiated internal Fluor Daniel Fernald (FDF) review of the Removal Action Implementation Plan for the Southern Waste Units of OU2

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- Completed periodic maintenance of the Active Flyash Pile washout; this is a recurring activity which involves regrading of the material surface and application of crusting agents to minimize erosion
- Initiated and completed construction of modifications to the seepage control system in the South Field

November 1996

- Enforceable Milestones Completed
 - On-Site Disposal facility (OSDF)
 - None
 - Soil Characterization & Excavation Project (SCEP)
 - None
- Major Work Initiated/Completed
 - OSDF
 - Held Prebid Meeting for potential bidders on the OSDF Phase I Construction Project on November 7, 1996
 - SCEP
 - Completed internal review of the Remedial Action Implementation Plan for the Southern Waste Units; this document was integrated into the submittal of the 90% Design Package for the OU2 Southern Waste Units listed under major SCEP activities for December 1996

December 1996

- Enforceable Milestones Completed
 - On-Site Disposal facility (OSDF)
 - None
 - Soil Characterization & Excavation Project (SCEP)
 - None
- Major Work Initiated/Completed
 - OSDF
 - Performed work to prepare the East Field for installation of groundwater monitoring wells for Cells 1 and 2 of the OSDF
 - Received bids for OSDF Phase I Construction Project

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- SCEP
 - Submitted 90% Design Package for the OU2 Southern Waste Units (Southfield, Active and Inactive Flyash Pile) to DOE on December 1, 1996

January 1997 (Anticipated)

- Enforceable Milestones
 - OSDF
 - Submit OSDF Groundwater Monitoring Plan to the Agencies by January 31, 1997
 - SCEP
 - None
- Major Work Initiated/Completed
 - OSDF
 - Install four Type 2 groundwater monitoring wells for Cells 1 and 2 of the OSDF
 - SCEP
 - None

OPERABLE UNIT 3

October 1996

- Enforceable Milestones Completed
 - None
- Major Work Initiated/Completed
 - Safe Shutdown
 - Continued holdup material removal in Plant 5
 - Continued line draining in Plant 2/3
 - Initiated holdup material removal in Plant 2/3
 - D&D
 - Continued activities in Plant 1; approaching completion of interior cleanup

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November 1996

- Enforceable Milestones Completed
 - Submitted OU3 Integrated Remedial Design/Remedial Action Work Plan to the Agencies on November 20, 1996

- Major Work Initiated/Completed
 - Safe Shutdown
 - Continued holdup material removal in Plant 5
 - Continued line draining in Plant 2/3
 - Continued holdup material removal in Plant 2/3
 - D&D
 - Continued Plant 1 activities
 - Issued RFP for decontamination and demolition of Boiler Plant/Water Plant Complex

December 1996

- Enforceable Milestones Completed
 - Submitted Revised Boiler Plant/Water Plant Complex Implementation Plan to the Agencies on December 4, 1996
 - Completed field work on dismantlement of temporary nitrate tanks on December 24, 1996

(Note that the December 2, 1996, milestone for Demolition of High and Low Nitrate Tanks was not met. A letter serving as "Certification to Construction Completion" dated January 7, 1997, John Bradburn to Jack Craig was issued to inform that the above-grade dismantlement of the [temporary] High and Low Nitrate Tanks was completed on December 24, 1996)

- Major Work Initiated/Completed
 - Safe Shutdown
 - Continued holdup material removal in Plant 5
 - Continued line draining in Plant 2/3
 - Continued holdup material removal in Plant 2/3
 - D&D
 - Continued Plant 1 activities, including removal of exterior transite
 - Received proposals from prospective vendors for decontamination and demolition of Boiler Plant/Water Plant Complex on December 23, 1996

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January 1997 (Anticipated)

- Enforceable Milestones
 - Submit OU3 Integrated Remedial Action Thorium/Plant 9 Complex Implementation Plan for Above-Grade Decontamination and Dismantlement by January 6, 1997

- Major Work Initiated/Completed
 - Safe Shutdown
 - Continued holdup material removal in Plant 5
 - Continued line draining in Plant 2/3
 - Continued holdup material removal in Plant 2/3
 - D&D
 - Continued Plant 1 activities
 - Review vendor proposals for decontamination and dismantlement of Boiler Plant/Water Plant Complex
 - Submit Project Completion Report for Building 4A Complex D&D

OPERABLE UNIT 4

October 1996

- Enforceable Milestones Completed
 - None

(Note that the October 7, 1996, milestone for submittal of the Phase II Remedial Action Work Plan was not met. On September 26, 1996, U.S. DOE requested an extension under Section XVIII of the 1991 Amended Consent Agreement. The request for an extension was denied in a letter dated October 2, 1996 from James A. Saric, U.S. EPA to Johnny W. Reising, DOE-FN.)

- Major Work Initiated/Completed
 - Vitrification Pilot Plant (VITPP)
 - Initiated standdown of the VITPP to make appropriate modifications to the facility prior to Campaign #4 testing
 - Prepared and presented materials at a Public Meeting on October 15, 1996, held to discuss issues related to the VITPP and the OU4 Path Forward
 - Silo 3 Remedial Alternative
 - Submitted draft responses to comments from Agencies concerning the Silo 3 Alternative Report on October 8, 1996

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- Received comments on the Silo 3 Report from the Nevada Test Site (NTS) Citizens Advisory Board on October 9, 1996
- Overall OU4 Issues
 - Received USEPA rejection of DOE's request for an extension for the first missed OU4 milestone (Radon Treatment System Title I/II Design, Preliminary 30%, due September 30, 1996) on October 2, 1996; formal dispute resolution for missed milestones will occur after the OU4 Path Forward has been defined. DOE's request (and EPA's rejection) dealt with a total of six CY-1996 milestones
 - Attended meeting of the Fernald Citizens Task Force (FCTF) Waste Management Committee on October 16, 1996, to discuss development of a path forward for FCTF on OU4 issues
 - Attended meeting of FCTF Transportation Committee on October 24, 1996, to discuss issues related to inter-modal transport of Fernald waste to the NTS..
 - Attended meeting with Agencies on October 30, 1996 to discuss resolution of request for extension of OU4 milestones.

November 1996

- Enforceable Milestones Completed
 - None
(The November 13, 1996, milestone for Silo Superstructure Award/Construction was not met. On September 26, 1996, U.S. DOE requested an extension of listed milestones, under Section XVIII of the 1991 Amended Consent Agreement. The request for an extension was denied in a letter dated October 2, 1996, from James A. Saric, U.S. EPA to Johnny W. Reising, DOE-FEMP.)
- Major Work Initiated/Completed
 - Vitrification Pilot Plan (VITPP)
 - Completed all engineering design and implementation for VITPP modifications necessary to initiate Phase I, Campaign #4
 - Performed pump-out of Decant Sump on November 18 and 20, 1996, and transferred contents to the Advanced Waste Water Treatment Slurry Dewatering Facility for treatment; this recurring activity is triggered each time the sump reaches 75% capacity
 - Introduced feed material into the VITPP on November 30, 1996, for initiation of Phase I, Campaign #4 activities

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- Silo 3 Remedial Alternative
 - Attended meeting with members of the Nevada Test Site Community Advisory Board on November 6, 1996, to review draft responses to comments from Nevada stakeholders on the Draft Final Evaluation of Silo 3 Alternatives
 - Issued the Commerce Business Daily announcement for the Silo Residues Project during the week of November 18, 1996, after requesting and receiving comments from stakeholders such as the Agencies, the Fernald Citizens Task Force (FCTF), and Fernald Residents for Environmental Safety & Health (FRESH)
- Overall OU4 Issues
 - Attended FCTF Full Board meeting on November 9, 1996, to respond to any questions concerning OU4 in general
 - Convened Silos Project Independent Technical Review Team kick-off meeting on November 14 and 15, 1996; the objective of this team is to evaluate and help determine the Silos Project's path forward based on their collective technical expertise

December 1996

- Enforceable Milestones Completed
 - None

(Note that the December 4, 1996, milestone for the Vitrification Pilot Plant Title I Preliminary 30% Design and the Pre-Final 90% Design Criteria Package were not met; pursuant to a letter dated October 9, 1996, DOE and the USEPA have agreed to place dispute resolution in abeyance until Spring 1997. At that time DOE expects to obtain the information necessary for it and the regulators, in conjunction with the stakeholders, to make the decision to proceed with vitrification or to pursue an alternative form of stabilization.)
- Major Work Initiated/Completed
 - Vitrification Pilot Plan (VITPP)

VITPP operations have been suspended at the FEMP while the DOE and Fluor Daniel Fernald evaluate a December 26th incident that resulted in a small stream of non-radioactive molten glass leaking from the bottom of the melter unit. The melter unit emptied its contents into a secondary container designed to capture it. A small amount of molten glass then leaked from the containment area onto the floor. The epoxy floor paint ignited but was quickly extinguished resulting in no additional damage. Non-radioactive surrogate material, simulating the silo waste, was being vitrified at the time of the incident. The DOE and Fluor Daniel Fernald have initiated an evaluation

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to determine why the incident happened and what impact it may have on the project's path forward; this evaluation is expected to take at least four weeks to complete. Results will be shared with FEMP stakeholders as soon as they become available.

- Silo 3 Remedial Alternative
 - Published the Commerce Business Daily announcement for the Silo 3 Residues Project on December 3, 1996; qualified vendors must submit expressions of interest with the required information by January 10, 1997
 - Submitted Revised Draft Final Evaluation of Silo 3 Alternatives to the Agencies on December 16, 1996
- Overall OU4 Issues
 - Held second meeting of the Silos Project Independent Technical Review Team on December 12 and 13, 1996

January 1997 (Anticipated)

- Enforceable Milestones
 - None

(The January 2, 1997, milestone for the Radon Treatment System Title I/II 90% Pre-Final Design will not be met; see the statement regarding the DOE/USEPA agreement for abeyance of dispute resolution listed previously under the OU4 December enforceable milestones section.)
- Major Work Initiated/Completed
 - Receive comments from the Agencies on the Draft Final Evaluation of Silo 3 Residues Alternatives
 - Conduct third meeting of the Silos Project Independent Technical Review Team; scheduled for January 21-23, 1997
 - Receive expressions of interest from qualified vendors for remediation of Silo 3 residues; once these are received, Silos Project personnel will evaluate them to determine which vendors meet the necessary requirements, with the intention of eventually providing a final copy of the Request for Proposal to this shortened list of qualified vendors
 - Informal dispute resolution meeting is scheduled for January 14, 1997
 - A Notice of Availability (NOA) will be published announcing availability of the Revised Draft Final Evaluation of Silo 3 Alternatives for public inspection.
 - Three incident review teams have been formed to evaluate the cause of the December 26, 1996 melter incidents and the impact on the path forward for Operable Unit 4. Initial assessments from the three teams are expected during January.

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OPERABLE UNIT 5

October 1996

- Enforceable Milestones Completed
 - Aquifer Restoration Project (ARP)/Advanced Waste Water Treatment (AWWT)
 - Submitted the five items listed below as required in the Schedule of Remedial Design Deliverables for Groundwater in the Remedial Design Work Plan (RDWP); although the due date for these items was October 1, 1996, they were all actually submitted in late September
 - Draft Baseline Remedial Strategy Report for Aquifer Restoration; submitted on September 30, 1996
 - Phase II South Field Test Report (listed as "Short-Term Injection Test Report" in the RDWP); submitted on September 28, 1996
 - Project Specific Plan for the Restoration Area Verification Sampling Program; submitted on September 28, 1996
 - Preliminary Design Package for the Injection Demonstration; submitted on September 26, 1996
 - Preliminary Design Packages for the South Plume Optimization; submitted on September 26, 1996
 - Submitted the OU5 RAWP for the Aquifer Restoration Project to the Agencies on October 30, 1996; actual due date for this deliverable was November 1, 1996
 - SCEP
 - None
- Major Work Initiated/Completed
 - ARP/AWWT
 - Continued work on AWWT Multimedia Filter Project; all new and rehabbed filter tanks are now on site and installed in position
 - Continued AWWT Expansion planning and bidding efforts; construction contract is anticipated to be awarded by February 28, 1997
 - Began AWWT Resin Regeneration design efforts; this project will use a concentrated brine solution for the regeneration process
 - Began design preparations for the Bionitrification By-Pass; the layout will construct a new line between the Bionitrification Surge Lagoon and the AWWT outside of the major remediation areas parallel to the OSDF leachage line

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SCEP

- Submitted response to comments to the Agencies on the Area 1, Phase I RAWP on October 9, 1996
- Continued Precertification of Area 1, Phase I and portions of the railyard; this activity identifies areas of contamination so that they can be removed prior to the more expensive and time-consuming Certification activities
- Initiated Comparability Study of real time field analytical methods and laboratory analysis for Uranium contamination in soil
- Completed the delineation of the Firing Range remedial boundary using X-ray fluorescence for lead in soil; this activity resulted in a revised estimate of 70 cubic yards requiring treatment, a decrease of 230 cubic yards in material to be treated which represents a significant cost avoidance
- Kelchner Environmental continued stripping soils in Area 1, Phase I east of the North Access Road; this activity supports the preparation of the OSDF footprint and the relocated North Access Road
- Initiated internal FDF review of the Site Wide Excavation Plan
- Began revising the Natural Resources Impact Assessment in response to comments from the Natural Resource Trustees (NRTs)
- Initiated internal FDF review of the Draft Statement of Work for excavation of impacted material in Area 1, Phase I

November 1996

- Enforceable Milestones Completed
 - Aquifer Restoration Project (ARP)/Advanced Waste Water Treatment (AWWT)
 - Submitted the OU5 Remedial Action Work Plan (RAWP) for the Aquifer Restoration Project to the Agencies on October 30, 1996 (actually due November 1, 1996); the successful completion of this milestone was previously noted in the October 1996 Monthly Progress Summary

SCEP

- None

- Major Work Initiated/Completed

ARP/AWWT

- Continued installation efforts on AWWT Multimedia Filter Project
- Issued AWWT Expansion procurement/solicitation packages on November 26, 1996; construction contract is anticipated to be awarded by February 28, 1997

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- Continued design preparations for the Bionitrification By-Pass; this design is being planned to follow the path of the OSDF leachage pipeline to reduce costs through commonality of ditching work
- SCEP
 - Completed and transmitted to the Natural Resource Trustees the revised Draft FEMP Natural Resource Impact Assessment in response to their previous comments
 - Met with the Natural Resources Committee of the FCTF and the NRTs on November 14, 1996, to discuss their respective conceptual restoration goals for the Fernald site; as a follow-up to this meeting, individual copies of the Draft FEMP Natural Resource Impact Assessment were sent to each committee member
 - Completed Precertification of the Rail Yard; this activity identifies areas of contamination so that they can be removed prior to the more expensive and time-consuming activities associated with Certification
 - Initiated Precertification activities in the OSDF Support Areas
 - Continued Comparability Study of real time field analytical methods and laboratory analysis for Uranium contamination in soil; sample collection phase is complete
 - Kelchner Environmental completed excavation of the soils in Area 1, Phase I east of the North Access Road; this activity supports the preparation of the OSDF footprint and the relocated North Access Road
 - Continued internal FDF review of the Draft Statement of Work for excavation of impacted material in Area 1, Phase I

December 1996

- Enforceable Milestones Completed
 - Aquifer Restoration Project (ARP)/Advanced Waste Water Treatment (AWWT)
 - Submittal to the Agencies of the Draft Final Project Specific Plan for the Restoration Area Verification Sampling Program has been moved to January 15, 1997; this change is a result of the normal 30 day allowable response period after receipt of comments from the agencies
 - SCEP
 - None
- Major Work Initiated/Completed
 - ARP/AWWT
 - Completed installation and integrated construction acceptance testing on the multimedia filters at the AWWT

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- Completed and reviewed 90% Injection Demonstration design package
- Initiated drilling of South Plume Injection Demonstration wells
- Completed sludge removal from temporary tanks in the Waste Pit Area
- Held pre-bid meeting for award of contract for construction of the AWWT expansion
- Submitted permit information summary for the AWWT expansion
- **SCEP**
 - Completed physical soil sampling for certification in the East Field Area; certification is progressing on the remaining OSDF support areas
 - Continued Comparability Study of real time field analytical methods and laboratory analysis for radionuclide contamination in soil; sample collection phase has been completed
 - Kelchner Environmental completed final grading and seeding of Area 1, Phase I, and has suspended operations for the winter
 - Completed revisions to the RAWP for Area 1, Phase I in response to comments from the Agencies, and resubmitted the revised document to them on December 9, 1996
 - Distributed the Draft Site-Wide Excavation Plan (SEP) for DOE review on December 4, 1996; the SEP is accompanied by the following support plans:
 - (1) Natural Resource Restoration Plan
 - (2) Site-Wide Extent of Excavation
 - (3) Data Update
 - (4) Spatial Distribution
 - (5) Grading Plan
 - (6) Sequencing Plan
 - Continued internal FDF review of the Draft Statement of Work for excavation of impacted material in Area 1, Phase I

January 1997 (Anticipated)

- **Enforceable Milestones**
 - **ARP/AWWT**
 - Submit South Plume Optimization and Injection Demonstration pre-final design packages to the Agencies on January 15, 1997
 - Submit response-to-comments document for the Baseline Remedial Strategy Report to the Agencies on January 16, 1997
 - Submit response-to-comments document for the Integrated Environmental Monitoring Plan to the Agencies on January 31, 1997
 - Submit response-to-comments document for the RAWP for Aquifer Restoration to the Agencies on January 31, 1997

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- SCEP
 - None
- Major Work Initiated/Completed
 - ARP/AWWT
 - Complete startup and initiate continuous operation of the AWWT multimedia filters
 - Award contract for construction of Parking Lot Stormwater Diversion project
 - Complete design of AWWT ion exchange regeneration system using brine
 - Initiate design of biodenitrification bypass pipeline
 - SCEP
 - Continued assessment of analytical data associated with the ongoing Comparability Study; scheduled for completion in late January
 - Submit Draft Geotechnical Study for the Former Production area to DOE on January 16, 1997
 - Prepare responses to additional comments received from OEPA on the Natural Resource Impact Assessment; these responses to be prepared during January and February, with the next meeting of the Natural Resource Trustees tentatively scheduled for February 1997

WASTE MANAGEMENT

October 1996

- Enforceable Milestones Completed
 - None
- Major Work Initiated/Completed
 - Low Level Waste
 - Shipped 519.80 m³ low level waste to Nevada Test Site (NTS)
 - Chemical Treatment Projects
 - Treated 57.80 m³ in the Neutralization/Precipitation/Deactivation/Stabilization (NPDS) Project

November 1996

- Enforceable Milestones Completed
 - None

**CONSOLIDATED CONSENT AGREEMENT/FEDERAL FACILITY COMPLIANCE
AGREEMENT/FEDERAL FACILITY AGREEMENT/REMEDIATION INVESTIGATION/FEASIBILITY
STUDY/CONSENT DECREE MONTHLY REPORT DECEMBER 1 - 31, 1996 AND QUARTERLY
REPORT OCTOBER 1 THROUGH DECEMBER 31, 1996 INCLUDING EFFLUENT RADIATION
REPORTS AND RADON REPORTS**

- Major Work Initiated/Completed
 - Low Level Waste
 - Shipped 425.00 m³ low level waste to Nevada Test Site (NTS)
 - Mixed Waste Treatment Projects
 - Shipped 31.20 m³ mixed waste to the TSCA Incinerator
 - Treated 0.20 m³ mixed waste in the Waste Water Treatment System (WWTS)
 - Chemical Treatment Projects
 - Treated 14.20 m³ in the Neutralization/Precipitation/Deactivation/Stabilization (NPDS) Project
 - Shipped 10.00 m³ in the Hazardous Waste/Recycling Project
 - The review of the Draft Work Plan for the RCI Solvent Extraction Project was completed and comments were resolved prior to November 15, 1996

December 1996

- Enforceable Milestones Completed
 - None
- Major Work Initiated/Completed
 - Low Level Waste
 - Shipped 231.0 m³ low level waste to Nevada Test Site (NTS)
 - Chemical Treatment Projects
 - Treated 8.0 m³ in the Neutralization/Precipitation/Deactivation/Stabilization (NPDS) Project
 - Continue to draft Work Plan and obtain rates for future mixed waste generation for the Treatment, Storage, and Disposal Facility (TSDF) Project
 - Continue to develop Sampling and Analysis Plans to complete characterization for the Thorium Stabilization Project; the thorium inventory to be characterized has been identified

January 1997 (Anticipated)

- Enforceable Milestones
 - None

**CONSOLIDATED CONSENT AGREEMENT/FEDERAL FACILITY COMPLIANCE
AGREEMENT/FEDERAL FACILITY AGREEMENT/REMEDIAL INVESTIGATION/FEASIBILITY
STUDY/CONSENT DECREE MONTHLY REPORT DECEMBER 1 - 31, 1996 AND QUARTERLY
REPORT OCTOBER 1 THROUGH DECEMBER 31, 1996 INCLUDING EFFLUENT RADIATION
REPORTS AND RADON REPORTS**

- Major Work Initiated/Completed
 - Chemical Treatment Projects
 - Complete first draft of Work Plan for the Treatment, Storage, and Disposal Facility (TSDF) Project
 - Initiate sampling of containers from Building 60 for the Thorium Stabilization Project

THORIUM OVERPACK PROJECT UPDATE

October 1996

All figures year-to-date as of September 30, 1996

- Overpacked 1,696 drums
- Filled 278 Thorium Overpack Containers (TOCs)
- Shipped 266 TOCs

November 1996

All figures year-to-date as of November 30, 1996

- Overpacked 2,276 drums
- Filled 358 Thorium Overpack Containers (TOCs)
- Shipped 338 TOCs

December 1996

All figures year-to-date as of December 31, 1996

- Overpacked 2,777 drums
- Filled 465 Thorium Overpack Containers (TOCs)
- Shipped 426 TOCs

**CONSOLIDATED CONSENT AGREEMENT/FEDERAL FACILITY COMPLIANCE
AGREEMENT/FEDERAL FACILITY AGREEMENT/REMEDIAL INVESTIGATION/FEASIBILITY
STUDY/CONSENT DECREE MONTHLY REPORT DECEMBER 1 - 31, 1996 AND QUARTERLY
REPORT OCTOBER 1 THROUGH DECEMBER 31, 1996 INCLUDING EFFLUENT RADIATION
REPORTS AND RADON REPORTS**

ATTACHMENT A

EFFLUENT RADIATION REPORTS

OCTOBER, NOVEMBER, DECEMBER 1996

EFFLUENT RADIATION REPORT

7954

OCTOBER 1996

	Flow (gallons)	Total Alpha (pCi/l)	Total Beta (pCi/l)	Total U (ug/l)	Total U (kg)	Calculated Total U-238 (pCi/l) (1)
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PARSHALL FLUME (Effluent to Great Miami River 11000004001)

Total	72,300,000	N/A	N/A	N/A	3.73	N/A
Avg (2)	2,332,000	12	55	14	0.12	5
Max	3,408,000	23	99	20	0.23	7
Min	1,579,000	10	14	9	0.06	3

STORMWATER RETENTION BASIN BYPASSES

Total	0	N/A	N/A	N/A		
Avg (2)						
Max						
Min						

STORMWATER RETENTION BASIN OVERFLOWS

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)		
Total	44,946,000	N/A	2.77	No Sample Collected This Month Quarterly Sampling Required East Sump	
Avg (2)	1,450,000	16.3	0.09	Solids	N/A
Max	1,574,000	22.3	0.12	Total U	N/A
Min	1,293,000	4.5	0.03		
STORMWATER RUNOFF TO PADDY'S RUN				West Sump	
				Solids	N/A
				Total U	N/A
Precipitation				2.21 in	
Total U				6.28 kg	
				Total Gallons	N/A

000021

EFFLUENT RADIATION REPORT

7954

OCTOBER 1996

	Flow (gallons)	Total Alpha (pCi/l)	Total Beta (pCi/l)	Total U (ug/l)	Total U (kg)	Calculated Total U-238 (pCi/l) (1)
--	-------------------	------------------------	-----------------------	-------------------	-----------------	--

PARSHALL FLUME (Effluent to Great Miami River 11O00004001)						
Total	72,300,000	N/A	N/A	N/A	3.73	N/A
Avg (2)	2,332,000	12	55	14	0.12	5
Max	3,408,000	23	99	20	0.23	7
Min	1,579,000	10	14	9	0.06	3
STORMWATER RETENTION BASIN BYPASSES						
Total	0	N/A	N/A	N/A		
Avg (2)						
Max						
Min						
STORMWATER RETENTION BASIN OVERFLOWS						
Total	0	N/A	N/A	N/A		
Avg (2)						
Max						
Min						
<p>(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.</p> <p>(2) Average values presented are flow-weighted.</p> <p>(3) Analytical results not yet available.</p>						

SOUTH PLUME WELLFIELD				SOUTH FIELD LEACHATE SYSTEM	
	Flow (gallons)	Total U (ug/l)	Total U (kg)	No Sample Collected This Month Quarterly Sampling Required East Sump	
Total	44,946,000	N/A	2.77		
Avg (2)	1,450,000	16.3	0.09	Solids	N/A
Max	1,574,000	22.3	0.12	Total U	N/A
Min	1,293,000	4.5	0.03	West Sump	
STORMWATER RUNOFF TO PADDY'S RUN				Solids	N/A
				Total U	N/A
Precipitation				2.21 in	
Total U				6.28 kg	
				Total Gallons	N/A

000022

EFFLUENT RADIATION REPORT

NOVEMBER 1996

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	58,081.000	N/A	N/A	N/A	3.02	N/A
Avg (2)	1,936.000	11	86	14	0.10	4
Max	2,747.000	19	140	25	0.21	8
Min	1,351.000	10	46	7	0.04	2

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)	Quarterny Sampling Required No Sample Collected This Month East Sump	
Total	34,855.000	N/A	2.55	Solids	
Avg (2)	1,162.000	19.4	0.09	Total U	
Max	1,494.000	32.6	0.13		
Min	712.000	11.5	0.04	West Sump	
STORMWATER RUNOFF TO PADDY'S RUN				Solids	
				Total U	
Precipitation				4.08 in	
Total U				11.59 kg	
				Total Gallons	

EFFLUENT RADIATION REPORT

DECEMBER 1996

PARSHALL FLUME (Effluent to Great Miami River 11O00004001)

	Flow (gallons)	Total Alpha (pCi/l)(2)	Total Beta (pCi/l)(2)	Total U (ug/l)	Total U (kg)	Calculated Total U-238 (pCi/l) (1)
Total	80,579,000	N/A	N/A	N/A	10.07	N/A
Avg (3)	2,599,000	12	37	33	0.32	10
Max	4,350,000	94	100	130	2.14	44
Min	2,086,000	10	53	15	0.12	5

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	1,430,000	N/A	N/A	N/A	2.33	N/A
Avg (3)	N/A	N/A	N/A	N/A	N/A	N/A
Max	1,430,000	340	140	431	2.33	146
Min	1,430,000	340	140	431	2.33	146

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 (3)						
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) Analytical results not yet available for all daily samples.
- (3) Average values presented are flow-weighted.

SOUTH PLUME WELLFIELD				SOUTH FIELD LEACHATE SYSTEM		
	Flow (gallons)	Total U (ug/l)	Total U (kg)	Quarterly Sampling Required Sample Collected 12/19/96 East Sump		
Total	40,966,000	N/A	3.70	Solids	23.0 mg/l	
Avg (2)	1,321,000	23.9	0.12	Total U	890 ug/l	
Max	1,447,000	29.6	0.15	West Sump		
Min	916,000	16.7	0.06	Solids	19.0 mg/l	
STORMWATER RUNOFF TO PADDY'S RUN				Total U	3500 ug/l	
				Precipitation		4.72 in
Total U				13.41 kg	Total Gallons - December	235

**CONSOLIDATED CONSENT AGREEMENT/FEDERAL FACILITY COMPLIANCE
AGREEMENT/FEDERAL FACILITY AGREEMENT/REMEDIAL INVESTIGATION/FEASIBILITY
STUDY/CONSENT DECREE MONTHLY REPORT DECEMBER 1 - 31, 1996 AND QUARTERLY
REPORT OCTOBER 1 THROUGH DECEMBER 31, 1996 INCLUDING EFFLUENT RADIATION
REPORTS AND RADON REPORTS**

ATTACHMENT B

RADON REPORTS

OCTOBER, NOVEMBER, DECEMBER 1996

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

MONTH: OCTOBER
YEAR: 1996

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:
01/15/97

Daily Averages	AMS 5	AMS 6	PILOT PLANT	BKGD 1	BKGD 2	K65,NW	K65,SW	K65,NE	K65,SE
	(pCi/L)	(pCi/L)	WAREHOUSE (pCi/L)	(Fairfield) (pCi/L)	(Miami town) (pCi/L)	(pCi/L)	(pCi/L)	(pCi/L)	(pCi/L)
10/01/96	1.1	1.1	1.1	N/A (b)	0.8	1.7	2.0	10.2	11.0
10/02/96	0.7	0.7	0.8	N/A (b)	0.6	1.2	1.5	5.5	3.5
10/03/96	0.4	0.8	0.4	N/A (b)	0.4	0.9	1.4	1.1	1.0
10/04/96	0.6	0.7	0.5	N/A (b)	0.5	1.3	4.3	1.0	0.9
10/05/96	1.0	0.9	0.7	N/A (b)	0.7	2.4	3.8	8.0	8.7
10/06/96	1.6	1.4	1.2	N/A (b)	0.8	2.2	3.0	19.1	21.8
10/07/96	1.7	1.5	1.3	0.8	0.9	3.0	3.0	27.3	27.8
10/08/96	1.3	1.2	1.0	1.0	0.7	2.9	3.2	17.2	12.7
10/09/96	0.7	0.7	0.6	0.7	0.5	1.1	1.4	2.9	3.5
10/10/96	0.8	1.0	0.8	0.8	0.6	1.2	1.4	3.1	2.7
10/11/96	1.0	0.8	0.7	0.9	0.7	2.5	1.9	8.7	8.2
10/12/96	1.3	1.3	1.1	1.0	0.8	2.1	2.2	18.5	12.8
10/13/96	1.2	1.1	0.9	0.7	0.7	1.6	2.0	8.8	4.8
10/14/96	1.2	1.1	0.9	0.9	0.8	2.1	2.7	8.1	4.2
10/15/96	0.9	1.1	0.7	1.2	0.8	2.1	3.5	3.9	4.5
10/16/96	1.6	N/A (c)	1.3	1.7	0.9	2.1	2.7	15.0	13.3
10/17/96	1.6	N/A (c)	1.3	1.6	0.8	2.0	2.8	12.5	10.9
10/18/96	0.4	N/A (c)	0.5	0.5	0.4	1.1	1.2	3.7	4.2
10/19/96	0.7	N/A (c)	0.8	0.8	0.5	1.7	2.1	8.5	8.1
10/20/96	0.8	N/A (c)	0.7	0.9	0.7	2.1	2.9	13.7	7.8
10/21/96	0.9	0.9	0.8	1.0	0.7	2.8	3.7	7.5	8.5
10/22/96	1.0	1.0	0.8	1.0	0.8	5.1	2.9	2.9	3.4
10/23/96	0.4	0.5	0.4	0.6	0.4	0.4	0.8	1.7	0.8
10/24/96	0.5	0.8	0.5	0.6	0.5	0.8	1.3	5.3	2.5
10/25/96	1.1	1.1	1.0	1.3	0.7	2.4	1.9	11.0	10.4
10/26/96	0.8	0.8	0.6	0.8	0.6	2.7	2.7	1.5	1.3
10/27/96	0.5	0.8	0.5	0.6	0.5	1.7	3.2	7.3	2.9
10/28/96	0.8	0.8	0.7	0.9	0.6	1.1	2.3	12.7	11.7
10/29/96	1.0	1.1	0.9	1.1	0.7	2.8	3.3	13.8	14.8
10/30/96	0.5	0.8	0.4	0.5	0.4	0.3	0.9	2.6	1.3
10/31/96	0.5	0.8	0.5	0.8	0.4	0.3	1.0	8.8	2.9

NOTE: Background #1 moved to AMS #11 during the second week of the month.

Monthly Statistics

	AMS 5	AMS 6	PILOT	BKGD 1	BKGD 2	K65,NW	K65,SW	K65,NE	K65,SE
AVERAGE:	0.9	0.9	0.8	0.9	0.6	1.9	2.4	8.8	7.5
MAXIMUM:	1.7	1.5	1.3	1.7	0.9	5.1	4.3	27.3	27.8
MINIMUM:	0.4	0.5	0.4	0.5	0.4	0.3	0.8	1.0	0.8
MEDIAN:	0.9	0.8	0.7	0.8	0.7	2.0	2.4	7.0	5.4
STD. DEV:	0.4	0.3	0.3	0.3	0.1	0.9	0.9	6.3	6.2

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 values reported in pCi/L are non instrument background corrected.

000026

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

MONTH: OCTOBER
YEAR: 1996

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: 01/15/97

Daily Statistics	SILO 1				SILO 2			
	Average	Maximum	Minimum	Std. Dev.	Average	Maximum	Minimum	Std. Dev.
10/01/96	3.06E+06	7.12E+06	1.21E+05	1.89E+06	6.48E+06	6.72E+06	4.25E+06	2.01E+05
10/02/96	2.22E+06	5.64E+06	-2.92E+03	1.49E+06	6.20E+06	6.47E+06	5.67E+06	1.99E+05
10/03/96	8.88E+04	9.95E+05	-5.43E+04	1.81E+05	5.97E+06	6.35E+06	1.27E+06	3.96E+05
10/04/96	7.07E+05	4.16E+06	5.81E+04	5.71E+05	6.25E+06	6.49E+06	5.84E+06	1.17E+05
10/05/96	2.64E+06	5.94E+06	1.40E+05	1.75E+06	6.38E+06	6.62E+06	6.07E+06	1.38E+05
10/06/96	3.53E+06	5.99E+06	3.09E+05	2.00E+06	6.39E+06	6.65E+06	6.00E+06	1.88E+05
10/07/96	3.81E+06	6.10E+06	6.34E+05	1.85E+06	6.44E+06	6.71E+06	6.02E+06	1.93E+05
10/08/96	2.27E+06	6.03E+06	-7.79E+03	2.09E+06	6.48E+06	6.72E+06	6.11E+06	1.57E+05
10/09/96	8.47E+05	5.34E+06	-5.64E+03	1.31E+06	6.55E+06	6.68E+06	6.21E+06	1.04E+05
10/10/96	3.31E+05	2.60E+06	-1.80E+04	3.87E+05	6.41E+06	6.60E+06	5.99E+06	1.13E+05
10/11/96	1.91E+06	5.66E+06	8.16E+04	1.65E+06	6.40E+06	6.55E+06	6.24E+06	6.51E+04
10/12/96	2.12E+06	4.99E+06	3.54E+05	1.11E+06	6.43E+06	6.67E+06	6.02E+06	1.51E+05
10/13/96	2.00E+06	5.11E+06	1.32E+05	1.46E+06	6.40E+06	6.65E+06	6.00E+06	1.66E+05
10/14/96	2.60E+06	5.67E+06	-6.68E+04	1.94E+06	6.30E+06	6.57E+06	1.27E+06	5.15E+05
10/15/96	2.75E+06	5.53E+06	1.13E+04	2.11E+06	6.32E+06	6.55E+06	6.05E+06	1.48E+05
10/16/96	2.17E+06	5.36E+06	4.13E+04	1.62E+06	6.35E+06	6.56E+06	6.02E+06	1.50E+05
10/17/96	2.94E+06	5.30E+06	3.59E+05	1.49E+06	6.29E+06	6.56E+06	5.85E+06	2.13E+05
10/18/96	1.10E+06	4.88E+06	-4.17E+03	1.24E+06	6.37E+06	6.58E+06	5.69E+06	1.51E+05
10/19/96	1.38E+06	4.29E+06	1.36E+05	8.11E+05	6.33E+06	6.48E+06	5.86E+06	9.55E+04
10/20/96	1.63E+06	4.42E+06	7.10E+04	1.06E+06	6.40E+06	6.59E+06	6.14E+06	9.51E+04
10/21/96	2.63E+06	6.68E+06	-5.64E+04	1.68E+06	6.40E+06	6.60E+06	1.27E+06	3.55E+05
10/22/96	4.88E+06	7.43E+06	3.19E+03	1.81E+06	6.40E+06	7.14E+06	1.38E+06	6.66E+05
10/23/96	8.61E+05	5.14E+06	-1.75E+04	1.20E+06	6.09E+06	7.01E+06	3.74E+06	5.25E+05
10/24/96	7.63E+05	4.03E+06	-9.94E+03	8.10E+05	5.93E+06	6.66E+06	1.38E+06	6.49E+05
10/25/96	2.52E+06	6.53E+06	3.19E+03	1.47E+06	6.13E+06	6.87E+06	1.38E+06	6.51E+05
10/26/96	2.47E+06	6.77E+06	3.19E+03	1.85E+06	6.14E+06	6.80E+06	1.38E+06	6.85E+05
10/27/96	3.45E+06	6.56E+06	3.19E+03	1.60E+06	6.12E+06	6.74E+06	1.38E+06	6.20E+05
10/28/96	3.31E+06	6.64E+06	3.19E+03	1.76E+06	6.15E+06	6.85E+06	3.15E+06	5.86E+05
10/29/96	4.55E+06	7.68E+06	9.86E+05	1.84E+06	6.15E+06	6.92E+06	1.38E+06	7.01E+05
10/30/96	2.44E+05	2.66E+06	-2.91E+04	5.25E+05	5.47E+06	6.64E+06	3.90E+06	6.44E+05
10/31/96	1.83E+06	6.67E+06	-2.47E+03	1.50E+06	6.09E+06	6.77E+06	1.38E+06	4.77E+05

Headspace Grab Sample Results

Date:	SILO 1	SILO 2
10/03/96	1.40E+03	6.01E+06
10/07/96	5.48E+06	6.50E+06
10/10/96	2.71E+03	6.17E+06
10/14/96	1.34E+05	6.12E+06
10/17/96	5.12E+06	6.33E+06
10/21/96	6.61E+06	6.64E+06
10/24/96	4.12E+06	5.75E+06
10/28/96	9.67E+04	6.22E+06

NOTES: Negative values occur when problems with the DAQ system are encountered (input parameters are low in relation to regression values, malfunction of the mechanics of the system, or power loss).
Shaded cells indicate partial or complete data loss (>10%) due to monitoring system malfunction.
Blackened cells indicate data affected by electronic data transfer process which may be @ 10% less than radon data recorded using Pylon monitors.

- Standard Headspace 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: 1996

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:
01/15/97

Daily Averages	AMS 5	AMS 6	PILOT PLANT	BKGD 1	BKGD 2	K65,NW	K65,SW	K65,NE	K65,SE
	(pCi/L)	(pCi/L)	WAREHOUSE (pCi/L)	(Fairfield) (pCi/L)	(Miami town) (pCi/L)	(pCi/L)	(pCi/L)	(pCi/L)	(pCi/L)
11/01/96	0.8	0.7	0.5	0.7	0.5	0.3	1.8	9.8	8.8
11/02/96	0.8	0.8	0.8	0.9	0.8	0.5	1.5	7.2	5.2
11/03/96	1.0	0.9	0.7	1.1	0.7	0.9	2.9	15.4	8.4
11/04/96	1.4	1.4	1.1	1.8	0.8	2.0	3.9	18.4	13.9
11/05/96	0.5	0.8	0.5	0.8	0.5	N/A	(b) 1.1	1.9	1.3
11/06/96	1.2	1.0	0.7	1.0	0.8	N/A	(b) 3.5	2.7	2.4
11/07/96	0.4	0.5	0.4	0.5	0.4	N/A	(b) 0.9	1.1	1.4
11/08/96	0.4	0.5	0.4	0.5	0.4	N/A	(b) 0.9	3.5	3.4
11/09/96	0.5	0.8	0.4	0.8	0.5	N/A	(b) 0.9	4.0	2.2
11/10/96	0.5	0.8	0.4	0.8	0.5	N/A	(b) 1.0	5.2	3.4
11/11/96	0.8	0.8	0.4	0.8	0.5	N/A	(b) 1.3	5.2	2.9
11/12/96	0.8	0.9	0.8	1.5	0.7	N/A	(b) 1.8	14.9	8.2
11/13/96	0.5	0.8	0.5	0.7	0.5	1.1	1.8	8.7	8.8
11/14/96	0.5	0.8	0.4	0.8	0.4	0.9	2.4	1.3	0.7
11/15/96	0.7	0.8	0.4	0.9	0.8	5.4	5.7	1.2	0.8
11/16/96	1.1	1.0	0.7	1.1	0.7	3.7	4.7	2.3	3.5
11/17/96	0.5	0.8	0.4	0.8	0.5	3.0	2.1	1.7	0.9
11/18/96	0.7	0.8	0.7	0.8	0.8	3.1	3.1	14.7	14.8
11/19/96	1.1	1.0	0.9	1.5	1.0	3.8	7.8	19.2	17.8
11/20/96	0.5	0.8	0.5	0.7	0.8	0.8	4.0	1.4	2.0
11/21/96	0.4	0.8	0.5	0.7	0.8	1.0	4.5	1.7	1.7
11/22/96	0.5	0.5	0.4	0.7	0.8	4.8	3.9	4.3	3.9
11/23/96	0.8	0.7	0.5	0.8	0.7	4.8	3.2	8.3	8.1
11/24/96	0.9	0.9	0.8	0.6	0.9	3.2	3.4	4.0	5.5
11/25/96	0.8	0.9	0.8	0.7	0.8	1.7	5.4	1.9	2.2
11/26/96	0.4	0.5	0.4	1.1	0.8	0.8	0.9	1.1	1.8
11/27/96	0.5	0.5	0.5	0.9	0.8	2.1	3.8	8.9	4.7
11/28/96	0.7	0.7	0.7	0.5	0.8	3.9	7.7	22.2	22.7
11/29/96	1.0	1.0	0.9	0.8	0.9	7.7	8.1	28.8	28.8
11/30/96	0.4	0.5	0.5	0.8	0.8	4.4	1.0	1.0	0.9

Monthly Statistics

	AMS 5	AMS 6	PILOT	BKGD 1	BKGD 2	K65,NW	K65,SW	K65,NE	K65,SE
AVERAGE:	0.7	0.7	0.8	0.8	0.8	2.7	3.1	7.3	8.1
MAXIMUM:	1.4	1.4	1.1	1.8	1.0	7.7	7.8	28.8	28.8
MINIMUM:	0.4	0.5	0.4	0.5	0.4	0.3	0.9	1.0	0.7
MEDIAN:	0.8	0.8	0.5	0.7	0.8	1.0	3.0	4.2	3.5
STD. DEV:	0.3	0.2	0.2	0.3	0.2	1.9	2.0	7.3	8.5

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 values reported in pCi/L are non instrument background corrected.

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

MONTH: NOVEMBER
YEAR: 1996

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: 01/15/97

Daily Statistics	SILO 1				SILO 2			
	Average	Maximum	Minimum	Std. Dev.	Average	Maximum	Minimum	Std. Dev.
11/01/96	2.62E+06	7.28E+06	-4.73E+04	1.56E+06	5.97E+06	6.82E+06	1.27E+06	8.00E+05
11/02/96	1.30E+06	4.91E+06	3.19E+03	7.30E+05	6.35E+06	7.46E+06	1.38E+06	4.97E+05
11/03/96	1.57E+06	5.27E+06	6.42E+05	8.18E+05	6.42E+06	6.86E+06	5.93E+06	1.92E+05
11/04/96	4.27E+06	8.22E+06	1.09E+06	2.17E+06	6.35E+06	7.42E+06	4.79E+06	4.87E+05
11/05/96	5.88E+06	9.51E+06	1.27E+06	2.37E+06	6.07E+06	7.01E+06	-5.74E+04	1.08E+06
11/06/96	8.65E+06	1.01E+07	6.44E+06	9.71E+05	6.52E+06	8.67E+06	5.20E+06	6.93E+05
11/07/96	9.32E+06	9.76E+06	6.84E+06	4.05E+05	6.89E+06	7.20E+06	5.28E+06	2.77E+05
11/08/96	9.43E+06	9.58E+06	8.96E+06	8.71E+04	7.01E+06	7.20E+06	6.49E+06	1.36E+05
11/09/96	9.33E+06	9.44E+06	9.04E+06	7.21E+04	6.99E+06	7.36E+06	2.21E+06	9.40E+05
11/10/96	9.28E+06	9.41E+06	8.94E+06	7.48E+04	1.32E+06	2.15E+06	1.28E+06	1.13E+05
11/11/96	9.12E+06	9.26E+06	8.75E+06	8.97E+04	1.28E+06	1.29E+06	1.28E+06	3.34E+03
11/12/96	9.06E+06	9.49E+06	1.35E+05	7.93E+05	3.67E+06	7.63E+06	1.27E+06	2.67E+06
11/13/96	9.15E+06	9.60E+06	-1.89E+04	1.43E+06	6.51E+06	7.71E+06	1.29E+06	1.18E+06
11/14/96	9.24E+06	9.79E+06	-5.64E+04	9.04E+05	7.09E+06	9.35E+06	-1.40E+05	7.60E+05
11/15/96	9.26E+06	9.32E+06	6.58E+06	1.62E+05	7.84E+06	8.03E+06	5.55E+05	4.46E+05
11/16/96	9.31E+06	9.37E+06	9.18E+06	2.74E+04	7.91E+06	8.12E+06	7.43E+06	1.20E+05
11/17/96	9.36E+06	9.38E+06	9.28E+06	1.67E+04	7.89E+06	8.03E+06	7.54E+06	8.08E+04
11/18/96	9.38E+06	9.43E+06	6.54E+06	1.69E+05	7.99E+06	8.20E+06	7.43E+06	1.37E+05
11/19/96	1.02E+07	1.11E+07	9.47E+06	5.78E+05	7.64E+06	8.12E+06	6.84E+06	3.00E+05
11/20/96	1.10E+07	1.13E+07	1.08E+07	9.24E+04	6.89E+06	7.42E+06	6.34E+06	2.44E+05
11/21/96	1.11E+07	1.13E+07	1.06E+07	1.34E+05	6.27E+06	6.72E+06	5.51E+06	2.67E+05
11/22/96	1.07E+07	1.09E+07	1.01E+07	1.77E+05	6.67E+06	7.40E+06	5.83E+06	3.37E+05
11/23/96	1.07E+07	1.09E+07	1.02E+07	2.08E+05	6.99E+06	7.52E+06	5.87E+06	4.58E+05
11/24/96	1.07E+07	1.08E+07	1.03E+07	9.01E+04	7.44E+06	7.58E+06	7.20E+06	6.98E+04
11/25/96	1.09E+07	1.13E+07	1.06E+07	1.36E+05	7.11E+06	7.44E+06	6.65E+06	1.74E+05
11/26/96	1.07E+07	1.12E+07	1.01E+07	2.60E+05	6.59E+06	7.02E+06	6.05E+06	2.46E+05
11/27/96	1.03E+07	1.06E+07	9.78E+06	1.66E+05	6.47E+06	7.49E+06	5.94E+06	4.58E+05
11/28/96	1.04E+07	1.08E+07	9.88E+06	2.01E+05	6.88E+06	7.62E+06	5.96E+06	5.02E+05
11/29/96	1.06E+07	1.09E+07	1.01E+07	1.73E+05	7.04E+06	7.58E+06	6.24E+06	4.76E+05
11/30/96	1.07E+07	1.08E+07	1.03E+07	6.96E+04	7.60E+06	7.73E+06	7.32E+06	1.24E+05

Headspace Grab Sample Results

Date:	SILO 1	SILO 2
11/01/96	6.32E+06	6.19E+06
11/05/96	5.90E+05	6.87E+06
11/07/96	9.76E+06	6.60E+06
11/13/96	9.74E+06	6.70E+06
11/14/96	8.98E+06	7.51E+06
11/18/96	8.99E+06	7.92E+06
11/21/96	1.04E+07	7.26E+06
11/25/96	1.00E+07	7.27E+06

NOTES: Negative values occur when problems with the DAQ system are encountered (input parameters are low in relation to regression values, malfunction of the mechanics of the system, or power loss).
Shaded cells indicate partial or complete data loss (> 10%) due to monitoring system malfunction.
Blacked out cells indicate data affected by electronic data transfer process which may be ~ 10% less than radon data recorded using Pylon monitors.
Silo #1 sampling line replaced on 11/05/96.

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: 1996

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:
01/15/97

Daily Averages	AMS 5	AMS 6	PILOT PLANT WAREHOUSE	BKGD 1 AMS-11	BKGD 2 (Miamitown)	K65.NW	K65.SW	K65.NE	K65.SE
	(pCi/L)	(pCi/L)	(pCi/L)	(pCi/L)	(pCi/L)	(pCi/L)	(pCi/L)	(pCi/L)	(pCi/L)
12/01/96	0.5	0.8	0.5	0.6	0.7	4.8	2.4	3.0	2.2
12/02/96	0.5	0.8	0.8	0.7	0.8	2.9	2.0	4.8	3.7
12/03/96	0.8	0.8	0.8	0.7	0.7	2.3	1.7	5.3	8.7
12/04/96	0.8	0.7	0.5	0.7	0.8	3.4	10.1	5.2	4.8
12/05/96	0.7	0.9	0.8	0.8	0.8	7.8	8.4	3.8	3.8
12/06/96	0.5	0.5	0.5	0.8	0.7	8.2	2.1	4.8	2.9
12/07/96	0.8	0.8	0.8	0.7	0.7	1.0	1.3	9.9	8.7
12/08/96	0.7	0.7	0.7	0.9	0.8	1.6	2.0	13.9	9.8
12/09/96	0.7	0.7	0.5	0.7	0.7	4.7	2.1	4.0	3.4
12/10/96	0.8	0.8	0.5	0.8	0.8	4.0	1.1	1.5	1.1
12/11/96	0.7	0.7	0.5	0.8	0.7	0.8	1.4	2.0	1.4
12/12/96	0.8	0.8	0.5	0.8	0.7	0.8	2.8	2.5	3.1
12/13/96	0.7	0.8	0.5	0.8	0.8	2.9	5.1	8.2	5.8
12/14/96	0.9	0.9	0.8	0.8	0.8	8.8	9.4	8.7	8.4
12/15/96	0.8	0.8	0.5	0.7	0.7	5.8	4.2	3.2	2.8
12/16/96	0.9	1.0	0.8	0.7	0.7	8.1	8.1	2.0	2.7
12/17/96	0.8	0.9	0.5	0.8	0.8	3.0	3.5	4.1	3.7
12/18/96	0.8	0.7	0.5	0.7	0.7	1.8	1.0	5.0	3.9 (e)
12/19/96	0.9	0.8	0.4	1.1	0.8	18.1 (e)	1.2	7.1	7.1 (e)
12/20/96	1.0	0.8	0.4	1.4	0.9	7.2 (e)	1.8	8.4	8.4 (e)
12/21/96	1.0	1.0	0.5	1.0	0.8	3.8	2.4	4.0	1.2 (e)
12/22/96	0.8	0.7	0.4	0.5	0.8	1.5	0.8	1.1	1.1
12/23/96	0.8	0.8	0.4	0.5	0.8	1.3	1.0	2.3	1.3
12/24/96	0.8	0.7	0.5	0.8	0.8	1.0	1.0	5.2	4.8 (e)
12/25/96	0.8	0.7	0.4	0.8	0.7	1.5	1.9	14.8	18.5 (e)
12/26/96	0.8	0.9	0.5	0.7	0.8	3.1	5.0	8.7	8.5
12/27/96	0.9	0.9	0.8	0.7	0.7	8.2	2.5	2.4	2.5
12/28/96	0.8	0.8	0.4	0.5	0.5	0.8	0.8	1.0	0.8
12/29/96	0.7	0.7	0.5	0.7	0.8	0.9	1.2	3.8	3.7
12/30/96	0.7	0.8	0.8	0.7	0.8	2.0	2.3	3.8	4.3
12/31/96	0.7	0.9	0.8	0.7	0.7	1.8	2.4	2.3	3.4

Monthly Statistics

	AMS 5	AMS 6	PILOT	BKGD 1	BKGD 2	K65.NW	K65.SW	K65.NE	K65.SE
AVERAGE:	0.7	0.8	0.5	0.7	0.7	3.8	3.0	5.1	4.4
MAXIMUM:	1.0	1.0	0.7	1.4	0.9	18.1	10.1	14.8	18.5
MINIMUM:	0.5	0.5	0.4	0.5	0.5	0.8	0.8	1.0	0.8
MEDIAN:	0.7	0.8	0.5	0.7	0.7	3.0	2.1	4.1	3.5
STD. DEV.:	0.1	0.1	0.1	0.2	0.1	3.4	2.8	3.3	3.4

- STANDARD LEGEND:
1. "(a)" indicates edited (>10%) data due to erroneous readings from the monitoring equipment.
 2. "(b)" indicates partial (>10%) or complete data loss due to monitor malfunction.
 3. "(c)" indicates partial (>10%) or complete data loss due to programming error in monitor.
 4. "(e)" indicates partial (>10%) or complete data loss due to operation outside of OEM parameters.
 5. All values reported in pCi/L are non instrument background corrected.

000030

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

MONTH: DECEMBER
YEAR: 1996

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: 01/15/97

Daily Statistics	SILO 1				SILO 2			
	Average	Maximum	Minimum	Std. Dev.	Average	Maximum	Minimum	Std. Dev.
12/01/96	1.09E+07	1.12E+07	1.06E+07	1.31E+05	7.31E+06	7.72E+06	6.25E+06	4.72E+05
12/02/96	1.06E+07	1.10E+07	1.00E+07	2.42E+05	6.79E+06	7.30E+06	5.97E+06	3.36E+05
12/03/96	1.06E+07	1.08E+07	1.22E+05	1.07E+06	6.49E+06	7.12E+06	-1.71E+05	7.29E+05
12/04/96	1.03E+07	1.07E+07	9.81E+06	2.55E+05	6.74E+06	7.39E+06	5.73E+06	5.00E+05
12/05/96	1.09E+07	1.12E+07	2.91E+06	5.10E+05	6.75E+06	7.42E+06	1.78E+06	7.31E+05
12/06/96	1.08E+07	1.11E+07	1.03E+07	1.78E+05	7.48E+06	7.90E+06	7.09E+06	2.49E+05
12/07/96	1.06E+07	1.09E+07	1.00E+07	2.38E+05	7.45E+06	7.94E+06	6.90E+06	2.64E+05
12/08/96	1.08E+07	1.10E+07	1.04E+07	1.83E+05	6.38E+06	6.98E+06	5.76E+06	2.62E+05
12/09/96	1.05E+07	1.09E+07	9.71E+06	2.96E+05	6.84E+06	7.82E+06	6.03E+06	5.01E+05
12/10/96	1.04E+07	1.07E+07	2.54E+06	4.99E+05	7.40E+06	7.94E+06	1.61E+06	5.03E+05
12/11/96	1.04E+07	1.08E+07	1.02E+07	8.35E+04	7.58E+06	7.86E+06	7.07E+06	1.80E+05
12/12/96	1.04E+07	1.06E+07	1.89E+05	6.08E+05	7.40E+06	7.74E+06	6.79E+06	1.93E+05
12/13/96	1.01E+07	1.03E+07	7.40E+06	2.12E+05	6.90E+06	7.34E+06	-7.21E+04	4.61E+05
12/14/96	9.94E+06	1.03E+07	9.36E+06	2.51E+05	6.84E+06	7.48E+06	5.97E+06	4.20E+05
12/15/96	1.00E+07	1.03E+07	9.59E+06	1.52E+05	7.09E+06	7.53E+06	6.48E+06	3.82E+05
12/16/96	1.04E+07	1.06E+07	3.19E+06	4.44E+05	7.11E+06	7.49E+06	1.92E+06	3.94E+05
12/17/96	1.07E+07	1.09E+07	1.03E+07	8.79E+04	7.03E+06	7.60E+06	6.47E+06	3.13E+05
12/18/96	1.07E+07	1.09E+07	7.33E+06	2.76E+05	6.09E+06	6.88E+06	4.48E+06	4.07E+05
12/19/96	1.09E+07	1.11E+07	1.05E+07	1.03E+05	5.29E+06	6.28E+06	3.99E+06	6.22E+05
12/20/96	9.16E+06	1.09E+07	5.79E+06	1.64E+06	5.01E+06	6.23E+06	4.13E+06	6.77E+05
12/21/96	8.32E+06	1.07E+07	5.33E+06	2.40E+06	6.08E+06	7.51E+06	4.34E+06	1.27E+06
12/22/96	1.06E+07	1.07E+07	1.03E+07	5.69E+04	7.59E+06	8.01E+06	7.17E+06	2.20E+05
12/23/96	1.06E+07	1.08E+07	1.03E+07	7.46E+04	8.03E+06	8.21E+06	7.58E+06	1.17E+05
12/24/96	1.10E+07	1.11E+07	1.07E+07	1.11E+05	6.91E+06	8.16E+06	5.58E+06	8.77E+05
12/25/96	1.07E+07	1.10E+07	1.01E+07	1.76E+05	6.56E+06	7.33E+06	5.80E+06	3.87E+05
12/26/96	1.05E+07	1.07E+07	2.90E+06	4.87E+05	7.05E+06	7.75E+06	3.08E+06	5.85E+05
12/27/96	1.05E+07	1.07E+07	1.01E+07	1.06E+05	7.74E+06	8.05E+06	7.31E+06	2.09E+05
12/28/96	1.03E+07	1.05E+07	9.74E+06	1.53E+05	7.65E+06	7.99E+06	7.15E+06	1.67E+05
12/29/96	1.01E+07	1.03E+07	9.60E+06	1.41E+05	7.58E+06	7.87E+06	-7.21E+04	4.85E+05
12/30/96	1.01E+07	1.03E+07	4.96E+06	3.38E+05	7.29E+06	7.64E+06	5.23E+06	2.55E+05
12/31/96	1.00E+07	1.01E+07	9.51E+06	9.34E+04	7.36E+06	7.64E+06	6.69E+06	1.71E+05

Headspace Grab Sample Results

Date:	SILO 1	SILO 2
12/03/96	9.19E+06	7.32E+06
12/05/96	8.91E+06	7.70E+06
12/10/96	9.93E+06	7.55E+06
12/13/96	9.46E+06	7.20E+06
12/16/96	8.93E+06	7.93E+06
12/19/96	8.84E+06	7.67E+06
12/23/96	1.00E+07	7.62E+06
12/26/96	9.84E+06	7.54E+06
12/30/96	8.94E+06	8.03E+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.).

Shaded cells indicate instruments operation outside of Manufacturer's suggested temperature range, resulting in reduced daily averages.

ANDARD 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.