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DRAFT REMEDIAL ACTION WORK PLAN FOR REMEDIAL ACTIONS AT OPERABLE UNIT 1 - OCTOBER 1996

10/17/96

DOE-0047-96
DOE-FN EPAS
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WORK PLAN

DRAFT
REMEDIAL ACTION WORK PLAN FOR REMEDIAL ACTIONS AT OPERABLE UNIT 1

FERNALD ENVIRONMENTAL MANAGEMENT PROJECT
FERNALD, OHIO

OCTOBER 1996

U.S. DEPARTMENT OF ENERGY
FERNALD AREA OFFICE

DRAFT

OPERABLE UNIT 1

DRAFT REMEDIAL ACTION WORK PLAN

Department of Energy

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OCT 17 1996

DOE-0047-97

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Dear Mr. Saric and Mr. Schneider:

TRANSMITTAL OF THE OPERABLE UNIT 1, DRAFT REMEDIAL ACTION WORK PLAN

The purpose of this letter is to transmit the Department of Energy, Fernald Environmental Management Project (DOE-FEMP) Operable Unit 1 (OU1) Remedial Action Work Plan (RAWP) for your review and approval. The OU1 RAWP provides the framework for implementing remedial activities authorized under the OU1 Record of Decision (ROD) and the Remedial Design Work Plan (RDWP) and its addendum. Presented in this work plan is the overall OU1 remedial action strategy, including a discussion of the integration of the Alternative Remedial Action Subcontracting Approach (ARASA) subcontractor and DOE activities.

If you have any questions with regard to this item, please contact Dave Lojek at (513) 648-3127.

Sincerely,

Johnny Reising

Johnny W. Reising
Fernald Remedial Action
Project Manager

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Enclosure: As Stated

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LIST OF ACRONYMS AND ABBREVIATIONS

ACA	Amended Consent Agreement
ARARs	Applicable or Relevant and Appropriate Requirements
ARASA	Alternative Remedial Action Subcontracting Approach
AWWT	Advanced Wastewater Treatment
BAT	Best Available Technology
BSL	Biodenitrification Surge Lagoon
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFC	certified for construction
CBD	Commerce Business Daily
CRP	Community Relations Plan
CSXT	CSX Transportation, Inc.
D&D	Decontamination and Dismantlement
DBO	design, build, and operate
DOE	U.S. Department of Energy
DOE-FN	U.S. Department of Energy - Fernald Area Office
DOE-OH	U.S. Department of Energy - Ohio Field Office
FAT&LC	Fernald Atomic Trades and Labor Council
FDF	Fluor Daniel Fernald, Inc.
FEMP	Fernald Environmental Management Project
FERMCO	Fernald Environmental Restoration Management Corporation
FFCAct	Federal Facility Compliance Act
FRL	Final Remediation Level
GCBCTC	Greater Cincinnati Building and Construction Trades Council
LLRW	low-level radioactive waste
MAGLC	maximum allowable ground level concentrations
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NEPA	National Environmental Policy Act
NPDES	National Pollutant Discharge Elimination System
NRC	Nuclear Regulatory Commission
NTS	Nevada Test Site
ODNR	Ohio Department of Natural Resources
Ohio EPA	Ohio Environmental Protection Agency
OHPO	Ohio Historic Preservation Office
O&M	Operations & Maintenance
OSDF	On-site Disposal Facility
OU1	Operable Unit 1
OU2	Operable Unit 2
OU3	Operable Unit 3
OU5	Operable Unit 5
PCDF	Permitted Commercial Disposal Facility

LIST OF ACRONYMS AND ABBREVIATIONS (contd.)

PPE	personal protective equipment
QA	Quality Assurance
RA	Remedial Action
RAWP	Remedial Action Work Plan
RD	Remedial Design
RDWP	Remedial Design Work Plan
ROD	Record of Decision
RFP	Request for Proposal
SAP	Sampling and Analysis Plan
SARA	Superfund Amendments and Reauthorization Act of 1986
SOW	Statement of Work
U.S. EPA	U.S. Environmental Protection Agency
WAC	waste acceptance criteria

1.0 INTRODUCTION

1.1 PURPOSE AND SCOPE

The purpose of this Remedial Action Work Plan (RAWP) is to present the activities and schedule required to implement the Operable Unit 1 (OU1) selected remedy. This remedy is described in the Record of Decision (ROD) for Remedial Actions at OU1 of the Fernald Environmental Management Project (DOE 1995a), signed by the U.S. Environmental Protection Agency (U.S. EPA) on March 1, 1995. The overall goal of the OU1 remedial action is to safely remediate all the OU1 components in a timely, efficient and cost-effective manner, ensuring compliance with all applicable or relevant and appropriate requirements (ARARs), and protecting human health and the environment.

This RAWP is the primary document to be used in identifying the strategy, activities, and schedule required to implement the OU1 remedial action and has been prepared in accordance with Section XI of the 1991 Amended Consent Agreement (ACA) between the U.S. Department of Energy (DOE) and the U.S. EPA (USEPA 1991) and the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA), (hereinafter jointly referred to as "CERCLA"). This work plan has also been prepared, where feasible, utilizing guidance provided in the Superfund Remedial Design and Remedial Action Guidance (USEPA 1986) and the Guidance on EPA Oversight of Remedial Designs and Remedial Actions Performed by Potentially Responsible Parties (USEPA 1990). The OU1 remedial design and subsequent remedial actions are being implemented by the DOE, as the lead agency responsible for CERCLA activities at the Fernald Environmental Management Project (FEMP).

1.2 PROJECT APPROACH

The selected remedy presented in the OU1 ROD generally consists of the following activities: 1) Excavation of wastes from the pits (along with any residual contaminated soils from beneath the pits); 2) Preparation of the wastes (e.g., sorting, crushing, shredding); 3) Treatment by thermal drying (as necessary to remove free water and achieve optimum moisture content to meet the waste acceptance criteria (WAC) of the disposal facility); 4) Blending to achieve a uniform product, and loadout into railcars (or boxes, as applicable);

5) Transportation from the FEMP via rail; and 6) Off-site disposal at a Permitted Commercial Disposal Facility (PCDF), or DOE's Nevada Test Site (NTS), as necessary, due to radiological levels in the waste product.

The project approach for implementing this remedy apportions the responsibility for performing the above activities between Fluor Daniel Fernald, Inc., DOE's current prime contractor for environmental remediation at the FEMP, and a subcontractor via the Alternative Remedial Action Subcontracting Approach (ARASA). Under this apportionment, Fluor Daniel Fernald, Inc. is responsible for implementing the activities identified in items 5 and 6, including on-site rail activities. Fluor Daniel Fernald, Inc. is also responsible for monitoring work performed by the ARASA subcontractor and for performing the infrastructure improvement activities identified in the Site Improvement Plan, and the transportation and disposal activities identified in the Transportation and Disposal Plan, both documents of which were a part of the U.S. EPA approved OU1 Pre-Final Design Packages, I and II (DOE 1996a).

The ARASA subcontractor is responsible for implementing the activities identified in items 1-4. Implementation of these remediation components requires the subcontractor to be responsible for the design of the remediation facilities, the construction of those facilities, facility testing, facility operations and maintenance, and the eventual decontamination and dismantlement of the facilities. A performance specification, i.e., statement of work (SOW), has been prepared for the ARASA subcontract based on the design, build, and operate (DBO) layout presented in the pre-final design package submitted to EPA in March 1996. The target date for release of the ARASA subcontract RFP to potential bidders is October 1996.

1.3 SUMMARY OF THE WORK PLAN APPROACH

The OU1 RAWP provides the framework for implementing remedial activities authorized under the OU1 ROD and the Remedial Design Work Plan (RDWP)(DOE 1995b) and its addendum (DOE 1996b). Presented in this work plan is the overall OU1 remedial action strategy, including a discussion of the integration of the ARASA subcontractor and DOE activities. The general approach of this work plan is as follows:

- Summarize the purpose and scope of the OU1 remedial design as identified in the OU1 ROD, the RDWP, and the RDWP addendum;
- Describes the primary requirements and considerations for the implementation of all remedial actions necessary to implement the OU1 selected remedy;
- Sets forth an overall implementation strategy; and
- Provides a framework document from which the remedial action deliverables will be prepared for review and approval.

The ACA requires that this RAWP provide a schedule for the implementation of activities required to complete remediation. The schedule, presented in Section 2.0 of this work plan, provides the dates for activities to be implemented as identified in the RDWP and its addendum. The schedule includes submittal dates for remedial action deliverables to be completed by DOE and a submittal date for the ARASA subcontractor deliverable schedule.

1.4 WORK PLAN ORGANIZATION

This RAWP is comprised of six sections; the sections and their contents are as follows:

Section 1.0 Introduction - Includes a discussion of the purpose and scope of this RAWP, the planned project approach, and the work plan organization.

Section 2.0 Remedial Action Implementation Strategy - Identification of 15-Month Criteria activities, procurement issues affecting scheduling, construction and operations sequencing and logistics, site-wide integration, and waste management activities.

Section 3.0 Project Permit Requirements - Discussion of permits that are applicable to remedial activities.

Section 4.0 Remedial Action Work Plan Deliverables and Schedule - Identification of ARASA and DOE/Fluor Daniel Fernald, Inc. deliverables and schedule.

Section 5.0 Remedial Action Team - Description of roles and responsibilities of the remedial action team.

Section 6.0 Community Relations - Planned community relations activities throughout the remainder of remedial design and remedial action.

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2.0 REMEDIAL ACTION IMPLEMENTATION STRATEGY

This section describes the implementation strategy for Operable Unit 1 (OU1) remedial action activities. Sections 2.1 and 2.2 include identification of 15-month criteria activities and start and completion of remedial activities. The remaining sections address procurement issues, construction and operations sequencing, project integration, and waste management.

2.1 15-MONTH CRITERIA ACTIVITY IDENTIFICATION

Section 120(e)(2) of CERCLA requires a federal facility to commence substantial continuous physical on-site remedial action no later than 15 months from ROD signature. The OU1 ROD was signed on March 1, 1995; therefore, commencement of activities was to begin not later than June 1, 1996. On April 1, 1996 (DOE 1996c), OU1 began implementation of site preparation activities necessary to prepare the OU1 site for construction and operation of remediation facilities; and to support infrastructure development, (e.g., railyards). These activities included drainage pipe modifications, construction of retaining walls, installation of erosion control measures, and site clearing and grading for the construction of the waste processing facility, as well as activities required to construct the stormwater management system that will support OU1 remediation. In addition, the OU1 Site Improvement Plan was amended to present revised design plans for activities that supported on-site rail improvements (construction of the north railyard) and construction of the OU1 plant facility. Implementation of these activities will continue through September 1997.

Additional activities that will continue during and after the above construction activities include award of contracts for the PCDF, off-site rail upgrades, and the ARASA subcontract, all of which support continuous physical on-site remedial action.

2.2 START AND COMPLETION OF REMEDIAL ACTIVITIES AND O&M

As discussed in Section 2.1, initiation of remedial activities started on April 1, 1996. Initiation of operations, i.e., loading of waste, will begin no later than March 1, 1999; completion of operations, including above-ground decontamination and dismantlement (D&D) will be May 31, 2005. These proposed enforceable dates are provided in Table 2-1.

2.3 PROCUREMENT ISSUES THAT AFFECT SCHEDULE

Various procurement activities are under way, or are being planned, at the FEMP to support the remediation of OU1. The following sections discuss the more significant of those activities, and the effect they may have on the OU1 remediation schedule (e.g., on the start of and/or completion of OU1 remediation activities).

2.3.1 Rail

There are three separate contractual actions planned under the general category of rail: 1) Trestle Upgrades (On-site and Off-site), 2) Rail Tender, and 3) Lease of Rail Cars (Gondolas). In accordance with the OU1 ROD, rail is the chosen method of transportation for moving the OU1 wastes to a PCDF. Therefore, these procurement activities must be completed prior to off-site shipment.

a) Trestle Repair:

In order to facilitate the safe movement of unit trains on and off the FEMP site, four (4) trestles have to be upgraded. One trestle (Paddys Run) is located on site, while the remaining three trestles (South Wynn Road, Camp run, and Okeana) are located off site. All trestle repairs are expected to be completed by January 1998.

Paddys Run Trestle: The extended cantilever walkway design of the trestle is complete. A separate review of the trestle's ability to withstand the projected weight has been conducted and results are forthcoming during October 1996. After evaluation of the results, Fluor Daniel Fernald, Inc. will either proceed with the construction of the cantilever system only; or commence with additional design and construction of the reinforcing structures. All Paddy's Run trestle repairs are expected to be completed by September 1997.

South Wynn Road, Camp Run, and Okeana Trestles: Ralph Whitehead and Associates, under contract with CSX Transportation, Inc. (CSXT), have completed the design phase for the Okeana trestle. The remaining two trestles require minor upgrades; design of the repairs for these two trestles will be performed by CSXT. CSXT has been directed

by the FEMP to obtain independent quotes for the upgrade to the Okeana trestle. CSXT's proposal was received on August 8, 1996. Award of this work, (subject to availability of funding), is anticipated by November 8, 1996.

b) Rail Tender:

A tender is a voluntary rate agreement provided by the carrier (CSXT) to a shipper (DOE/Fluor Daniel Fernald, Inc.) which provides reduced rates to the government (DOE). DOE has submitted, to CSXT, a draft of a tender agreement that DOE would prefer to see CSXT issue to DOE. DOE and CSXT are currently exchanging views on the elements to be contained in an appropriate tender agreement. The tender will be in place prior to initiation of shipments to the PCDF.

c) Lease of Rail Cars (Gondolas):

The FEMP has performed extensive transportation studies in order to determine an economical and safe method of transporting the large volume of low-level radioactive waste (LLRW) material required for shipment to a PCDF. Based on the results of these studies, DOE selected rail transportation for use under the OU1 project. OU1 planning indicates that initial production/shipment rates will require approximately 130 gondola rail cars. The target award date for leasing rail cars is October 1997.

2.3.2 ARASA

ARASA provides a contracting strategy that differs from the previously planned DBO concept as a means of implementing portions of the selected remedy identified in the OU1 ROD. A notice seeking qualified sources was published in the Commerce Business Daily (CBD) on March 29, 1996, with a suspense date of April 26, 1996. Of the nine firms that responded, seven have been approved to receive the Request for Proposal (RFP). A draft of the SOW contained in this RFP, was submitted to U.S. EPA and Ohio EPA for information and comment by letter of June 28, 1996. Comments were received from Ohio EPA in a letter dated July 29, 1996. The draft RFP was submitted to respective bidders on July 18, 1996, with comments received on August 7, 1996. Applicable comments have been incorporated; the target date for release of the RFP to the potential bidders is October 1996.

OU1 anticipates conducting a pre-proposal conference approximately two weeks after release of the final RFP to potential bidders. At that time, potential bidders will be provided the opportunity to raise questions or concerns regarding the RFP. It is planned to have proposals from offerors due approximately four weeks after the pre-proposal conference. Upon evaluation of proposals, negotiations will be conducted. Fluor Daniel Fernald, Inc. anticipates the award of a firm fixed price/firm unit price services subcontract in June of 1997. The performance period will be from date of award through fiscal year 2005.

2.3.3 Waste Disposal at a Permitted Commercial Disposal Facility (PCDF)

The U.S. Department of Energy - Ohio Field Office (DOE-OH) submitted an RFP to vendors on August 28, 1996 for the disposal of LLRW at a PCDF. The RFP was closed September 13, 1996. The RFP includes waste disposal for Fernald, as well as other DOE sites, the intent being that DOE may benefit overall from volume discounts based on the large volume of waste disposed from multiple sites. DOE-OH anticipates the award of a contract in the first quarter of fiscal year 1997. The performance period for DOE's contract is a four-year base, with three, two-year options. OU1 expects to utilize this contract to secure the services of a PCDF (or PCDFs) for LLRW disposal.

2.4 CONSTRUCTION AND OPERATIONS SEQUENCING AND LOGISTICS

The following sections provide a basic discussion of the general phases of the OU1 remedial action.

2.4.1 Site Improvements

As discussed in Section 2.1, various site improvements have been initiated in support of OU1 remedial action. These improvements are in support of all OU1 remediation activities, including the ARASA activities defined in the following sections in that these improvements provide an infrastructure upon which the ARASA subcontractor can construct its facilities.

2.4.2 Pre-Mobilization

Premobilization for the ARASA subcontractor consists of activities which take place after award of the subcontract and prior to authorization to mobilize. Activities within this phase include participation in various alignment and project meetings with organizations including

Fluor Daniel Fernald, Inc. management, DOE, the EPAs, the represented workforce, etc. During this phase, the subcontractor shall also develop and submit for review and approval the Remedial Design Documents Package identified for submittal to the EPAs (see Section 4.1.1), as well as documents requiring only FEMP review and approval. The subcontractor will also initiate the development of various remedial action documents; however, submittal and/or approval of such remedial action documents is not necessary to obtain authorization to mobilize. The subcontractor shall plan for and conduct, during this phase of the work, any environmental investigations, engineering studies, geotechnical investigations, and site surveys as deemed necessary by the subcontractor to complete its design.

2.4.3 Mobilization

Mobilization for the ARASA subcontractor involves bringing the personnel, tools, material, and equipment to the job site to perform site preparation for construction of the treatment facilities. In this phase of the project, the subcontractor will install any temporary offices, trailers, etc., for use during performance of the subcontract, as well as ensure that all personnel training requirements necessary to initiate mobilization activities (e.g., project Health & Safety Program) are met, and receive all material and equipment required to construct and operate the facility, etc.

2.4.4 Site Preparation

Following mobilization, the subcontractor shall perform any site preparation activities that are required; these activities are in addition to the site improvement activities discussed in Section 2.4.1 and may include earthwork required to construct the subcontractor's remediation facility; installation of all utilities (e.g., aboveground utilities, gas and water, power lines) from the Fluor Daniel Fernald, Inc. point source to the remediation facility; establish all necessary and required haul roads; implement environmental control measures (e.g., erosion and sediment controls); furnish a mobile on-site laboratory, if necessary, and/or all off-site analytical services for performing analyses of all the subcontractor's samples; furnish an on-site respirator wash facility and/or contract with a licensed cleaning service as required to maintain respirator cleanliness; furnish an on-site radiological laundry facility and/or contract with a licensed

cleaning service as required to maintain washable Anti-C's; furnish control point trailers for storage of the personal protective equipment (PPE); and provide any additional portable structures, which it deems necessary.

2.4.5 Facility Construction

For the ARASA subcontractor, this phase of the project shall include all activities necessary to sequence and perform all construction activities to achieve the initiation of operations, such that a product is produced and loaded which meets the PCDF WAC, on or before March 1, 1999. In total, the ARASA subcontractor will erect all required buildings (including concrete foundations and pads) required for the treatment facility in accordance with the subcontractors certified for construction (CFC) design, and install all process equipment (e.g., thermal drying equipment, shredder-crusher, conveyors, etc.) in accordance with the subcontractor's design specifications, drawings and vendor recommendations.

2.4.6 Pre-Operational Programmatic Activities

Following completion of the facility construction activities, but prior to initiation of operations, various pre-operational programmatic activities shall be performed, including operational training of personnel, start-up and operational testing, etc.

2.4.7 Operations

The operations phase of the remediation work begins when authorization to operate is issued by the FEMP, which occurs after the completion of the facility construction, approval by the EPAs, of the Remedial Action Documents Package (see Section 4.1.2) and completion of standard Start-Up review. For the ARASA subcontractor, operations shall consist of excavation of the waste pits, blending/mixing, staging stock piles of waste and debris, loading of waste into treatment equipment, treating waste, staging, sampling and analysis of the treated waste, preparation of railcars (or boxes, as applicable), and loading of railcars (or boxes) utilizing represented labor (i.e., Fernald Atomic Trades & Labor Council (FAT&LC) and Greater Cincinnati Building and Construction Trades Council (GCBCTC)) in accordance with agreements which the site has with this workforce. Integrated into these ARASA subcontractor operations will be the transportation and disposal activities which make up the remainder of the remedial action, and which will be performed by others at the FEMP. The

transportation activities will include on-site rail operations for the delivery of railcars to the subcontractor and the handling of railcars loaded by the subcontractor.

2.4.8 Maintenance

Maintenance consists of the maintenance of all items in support of the OU1 remediation activities. Maintenance will include inspections and maintenance activities of all of its facilities and equipment, including replacement of parts and equipment. Maintenance will also include the maintenance of all existing facilities, equipment, utilities, etc., within the subcontractor's work area (e.g., including the stormwater management system, pit covers, clearwell, roads, etc.

2.4.9 Decontamination and Dismantlement

Under the D&D phase, the ARASA subcontractor shall be responsible for the decontamination, dismantlement and disposition of the subcontractor's waste remediation facility including decontamination of equipment and buildings. The subcontractor shall use one or more of the following five (5) options to perform the decontamination and dismantlement of the facility: 1) Decontaminate the equipment and material to the free release criteria thus enabling reuse by the subcontractor for future projects or disposal; 2) Decontaminate and dismantle the equipment and material to the waste acceptance criteria for disposal in the On-Site Disposal Facility (OSDF); 3) Decontaminate and dismantle the equipment and material to the waste acceptance criteria for PCDF disposal; 4) Decontaminate and dismantle the equipment and material to the waste acceptance criteria for disposal at NTS; and 5) The subcontractor may also have the option to either use its Nuclear Regulatory Commission (NRC) license, if it possesses one, to remove its equipment from the site, or transfer its equipment to another DOE facility. The ARASA subcontractor will be required to submit a D&D implementation plan that addresses the scope of work for D&D activities and is consistent with the format of the OU3 Implementation Plan. The current date for submittal of an implementation plan for the D&D of OU1 facilities, as provided in the May 17, 1996, revised schedule for submittal of OU3 implementation plans (DOE 1996d), is April 1, 2004. The ARASA subcontractor may propose an alternative date, reflective of its schedule, within the submittal register to be submitted to EPA.

2.4.10 Site Restoration

Site restoration activities will commence once final remediation levels in the waste pit area have been achieved in accordance with the Soils Characterization and Excavation Project protocol (see Section 2.5.1). Site restoration consists of restoration of the waste pit area including grading, excavation, compaction, filling, and survey of the project area as identified by the CFC drawings and the ARASA subcontractor's Excavation Plan, in accordance with the Soil Excavation and Characterization Project, Site-wide Excavation Plan. The subcontractor will ensure that the waste pit area is protected from contaminated areas when the restoration activities take place.

2.5 INTEGRATION WITH OTHER OPERABLE UNITS (OUs)

Implementation of the OU1 remediation activities will require extensive integration and coordination between the OU1 remediation activities and those of the other FEMP remediation projects (i.e., those addressing the remedies for Operable Units 2, 3, and 5), as discussed in the following subsections. These remediation projects are aligned with the operable unit definitions contained within the ACA; the principal exception is the Soil Remediation Project, which includes the scope of the OU2 ROD. The Soil Characterization and Excavation Project also includes the remediation of contaminated soils, which is a component of the selected remedy of the OU5 ROD. Reference is made to either the operable unit or to the project designation, whichever is more appropriate.

A general integration issue relates to the need for the OU1 remediation facility to manage the shipment of materials from other FEMP remediation projects. Specifically, mechanisms have been put into place should it be necessary for the OU1 remediation facility to ship materials (identified as requiring disposal at the PCDF) from other remediation projects, such as the Soil Characterization and Excavation Project, by rail with the OU1 materials. The ARASA subcontract provides for the subcontractor to treat, as necessary to meet the PCDF WAC, and load into Fluor Daniel Fernald, Inc. furnished railcars, wastes received from other FEMP projects destined for disposal at the PCDF. Table 2-2 provides a summary of the significant integration issues between OU1 and other projects.

2.5.1 Integration with the Soil Characterization and Excavation Project

This project includes activities from two additional RODs (i.e., the OU2 and OU5 RODs) with which the OU1 remedial action will integrate. First, the Soil Characterization and Excavation Project has within its scope the removal of the OU2 source units (i.e., inactive flyash pile, sanitary landfill, etc.), which will be provided to the ARASA subcontractor for management and disposal at the PCDF, as discussed in Section 2.5.

In addition, the scope of the Soil Characterization and Excavation Project includes the various components of the OU5 ROD associated with the site-wide excavation of contaminated soils, disposition of those soils, and site-wide restoration activities. Excavation of soils below the pit liners will continue to a point until final remediation levels (FRLs) are met. The excavation will be directed by the Soils Characterization and Excavation Project; determination of the depth of excavation, final disposition, and certification sampling (for FRL attainment) of the excavated soils and base of excavation will be performed by the Soils Characterization and Excavation Project in accordance with its excavation, sampling and analysis, and certification plans.

Another activity within the site-wide soils remediation efforts which will be integrated into the OU1 remediation efforts relates to the final site-wide restoration activities to be performed by the Soil Characterization and Excavation Project vis-a-vis the restoration activities to be performed by the ARASA subcontractor. OU1 restoration activities have been included within the scope of the ARASA subcontract, with the intent that timing and the presence of the subcontractor, with its excavation equipment mobilized and available, will enable the ARASA subcontractor to perform final restoration of the waste pit area, according to the final site-wide restoration plan. This effort has been integrated into the ARASA subcontract through the inclusion of conceptual contours in the subcontract provided by the Soil Characterization and Excavation Project. The ARASA subcontract provides Fluor Daniel Fernald, Inc. the right to adjust the waste pit area contours during final site restoration to achieve a cut/fill balance and to match the final total site contours, based on the Soil Characterization and Excavation Project's Site-wide Excavation Plan.

2.5.2 Integration with the On-Site Disposal Cell Project

Integration with the On-Site Disposal Cell Project primarily relates to the potential placement of OU1 soils, and possibly debris from the D&D of the remediation facility, in the OSDF. Specifically, residual contaminated soils, as amenable, will be placed in the OSDF. The ARASA subcontractor will be performing the excavation of the soils beneath the waste units, as provided in the Site-wide Excavation Plan. The ARASA subcontractor will, through the excavation process, be directed by the Soil Characterization and Excavation Project to place those soils which meet the OSDF WAC, in a distinct staging area for final sampling (as necessary) and loading into the appropriate container for transport and placement in the OSDF. As discussed in Section 2.4.9, one option for disposal of debris generated from the D&D of the remediation facility is to place some of this material in the OSDF. As with the soils, the subcontractor will be required to follow approved EPA RD and RA documents in the performance of activities leading to placement of materials in the OSDF, e.g., the OSDF Impacted Materials Placement Plan.

2.5.3 Integration with the Facilities Closure and Demolition Project

The ARASA subcontractor is responsible for the D&D of its remediation facilities. To ensure consistency across the site relative to D&D, the Facilities Closure and Demolition Project organization has been involved in developing the technical requirements for the statement of work for the ARASA subcontract (i.e., ensuring that D&D activities are similarly addressed across the site). As with the other D&D projects, the ARASA subcontractor will be required to develop and submit an Implementation Plan covering the D&D of its facilities, to the EPAs for review and approval (See Section 4.1.3). The major difference, is that the ARASA subcontractor will have incentives, and may have other mechanisms, to provide for means of disposal beyond those afforded a typical D&D subcontractor (see Section 2.4.9). OU1 and the ARASA subcontractor shall keep the Facilities Closure and Demolitions Project informed of planned OU1 remediation activities to ensure that these activities are coordinated with the overall D&D activities of the FEMP, thereby minimizing constraints placed on the implementation of OU1 remediation efforts.

2.5.4 Integration with the AWWT & Wastewater Project

The AWWT & Wastewater Project is responsible for assessing the capabilities of the FEMP's wastewater treatment system. In this regard, integration involves ensuring that the ARASA subcontractor's activities relative to the collection, treatment, and discharge of both stormwater and process wastewater collected during OU1 remediation facilities operation will help to ensure continued FEMP compliance with the National Pollutant Discharge Elimination System (NPDES) permit (See Section 3). In the ARASA SOW, technical requirements have been established relative to the separation and collection of stormwater and wastewater, as well as discharge points, minimum characteristic and volumetric discharge limits, and the need for the ARASA subcontractor to pretreat wastewater to ensure compliance with these discharge limits. The Sampling & Analysis Plan (SAP) to be developed by the ARASA subcontractor for submittal to the EPAs for review and approval (See Section 4.1.2), is to address any sampling necessary to ensure compliance with these discharge limitations.

2.5.5 Integration with the Aquifer Restoration Project

Integration with the Aquifer Restoration Project relates to activities associated with preventing adverse impact to the aquifer through the OU1 remediation activities, maintaining the ability to monitor the state of the aquifer, and integrating the OU1 remediation activities with the physical aquifer restoration activities (i.e., potential pumping of the aquifer in/near the waste pit area). In terms of ensuring that the OU1 remediation activities do not impact the groundwater underlying the waste pit area, language has been placed in the ARASA subcontract stating that the subcontractor is to provide for systems to control groundwater infiltration and plan the remediation activities in such a manner that the presence, control, and disposal of groundwater does not become an operations problem.

When it is deemed necessary to remove monitoring wells so as to proceed with the remediation of the waste pits, the Aquifer Restoration Project will be consulted. The subcontractor may remove 1000 series wells as the excavation proceeds, the 1000 series wells within each pit are at a depth above their respective waste pit liners. The DOE/Fluor Daniel Fernald, Inc., however, will abandon all 2000 and 3000 series wells within the excavation/site restoration area. The subcontractor will provide the FEMP with 60 days written notice as to when the 2000 and 3000 series wells need to be abandoned.

Finally, ongoing groundwater remediation for the Aquifer Restoration Project will include installing recovery wells and pipelines in the Waste Pit Area; this work will require coordination with the OU1 remediation activities.

2.6 WASTE MANAGEMENT ACTIVITIES

Through the implementation of the OU1 remedial action, numerous waste streams will be generated (i.e., during facility construction, operations, maintenance, and D&D), primarily by the ARASA subcontractor, which will need to be managed. The primary waste stream to be generated through the OU1 remediation activities is solid waste, which includes the pit wastes, and contaminated soil. In addition, secondary wastes will also be generated through the implementation of the OU1 remedial action which will need to be managed, such as construction waste, PPE, stormwater, wastewater, and air discharges. Although the specific means for managing these wastes will be defined by the ARASA subcontractor through its various deliverables, some specific technical requirements (e.g., waste acceptance criteria, if known, for the various waste streams) have been included in the SOW for the ARASA subcontract. The following sections summarize the management of these various waste streams as reflected in the direction provided to the ARASA subcontractor.

2.6.1 Pit Waste

For the purposes of the ARASA subcontract, pit wastes are defined as all capping materials, wastes contained within the pits, wastes generated by processing (such as PPE, sludges, etc.) and all liner materials surrounding the waste pits. Per the OU1 ROD, all pit wastes require disposal at a PCDF.

The pit wastes shall be adequately size reduced/blended to form a product that has consistent physical, chemical, and radiological characteristics which meet the PCDF WAC. Sampling and analysis to certify attainment of the criteria must be performed in accordance with the EPA approved Sampling & Analysis Plan (see Table 4-3). Wastes that meet the PCDF WAC will be loaded into lined railcars, with a hard cover.

Pit wastes that cannot be treated, either because of their physical size or their chemical characteristics (e.g., RCRA wastes) by the subcontractor's remediation facilities to meet the

PCDF WAC, will be segregated and placed in a staging area for final disposition based on the characteristics of the waste. For example, pit wastes which have radiological concentrations above the WAC of the PCDF may be containerized and sent to NTS for disposal.

2.6.2 Contaminated Soil

"Contaminated soil" is soil below the waste pit liners that has contamination levels above the FRLs identified in the OU1 RDWP. These soils shall be excavated by the subcontractor under the direction of the Soil Characterization and Excavation Project. The soil will be sampled by the Soil Characterization & Excavation Project (insitu where possible) to determine if the soil must be disposed of at the PCDF, the OSDF, or elsewhere (e.g., NTS). The requirements for the soil to be disposed of at the PCDF will be the same as the pit waste disposal requirements discussed above. Soil destined for disposal at the OSDF will be stockpiled for eventual transportation to the OSDF in accordance with the OSDF Impacted Materials Placement Plan.

2.6.3 Construction and D&D Waste

Any wastes generated by the subcontractor during construction of the remediation facilities shall be dispositioned either as radiological waste or sanitary waste, depending on the area in which it was generated. Sanitary construction waste (i.e., non-radioactive construction waste) is to be placed in a clean waste container for unrestricted release. Radiological construction waste shall be packaged in the appropriate container reflective of the disposition of the wastes (i.e., reflective of the characteristics of the waste). Soils generated during construction excavation activities shall be stockpiled and utilized for blending during the processing of OU1 waste.

The subcontractor is responsible for the following waste handling criteria: generation, size minimization (as necessary), segregating the waste by material type, and loading in containers. The segregation of wastes by type is based on potential treatment and disposition options, and existing material management strategies, as well as the regulatory drivers for segregation and disposition of materials. If the waste is found to contain holdup residual material, the subcontractor will be responsible for removing and drumming the holdup material.

Materials generated by the subcontractor during D&D may be dispositioned through various scenarios, depending on the amounts and types of contamination, the need and desire to reuse, the capabilities of the subcontractor to decontaminate the materials and equipment, the ability to transfer the material to another site/facility, etc. (see Section 2.4.9).

2.6.4 Stormwater and Wastewater

The ARASA subcontract provides that wastewater or contaminated stormwater collected from the subcontractor's contaminated work areas will be treated at the AWWT System prior to discharge to the Great Miami River, with the FEMP NPDES permit governing the discharge from the AWWT. Further, the subcontract provides that wastewater and contaminated stormwater shall be either transferred directly to the Biodenitrification Surge Lagoon (BSL); or, for non-process wastewater and contaminated stormwater, indirectly via the Clearwell prior to entering the AWWT. In order to ensure that the AWWT discharge remains in compliance with the NPDES permit, the RFP provides that the ARASA subcontractor is to not exceed a maximum 24-hour flow rate discharge from the OU1 remediation activities of 200 gallons per minute. In addition, the RFP provides that the subcontractor include pretreatment to remove suspended solids in its wastewater and stormwater management plan, with a maximum allowable concentration of suspended solids in the water (from any source) delivered to the BSL shall not be greater than 1000 ppm. Finally, the subcontract provides that water discharges to the BSL shall be subjected to pH adjustment ($\geq$ 10) to precipitate dissolved metals. The pH of the process water shall be between 6 and 10 prior to discharge to the BSL.

During the D&D phase, the subcontractor has been directed to perform testing of effluent generated and collected through decontamination of the subcontractor's facilities and equipment. Based on the results of this testing, the subcontractor will be directed to transport the liquid effluent to the AWWT and/or pump the liquid effluent into a Fluor Daniel Fernald, Inc. approved sump.

2.6.5 Air Emissions

Remediation activities will produce fugitive and point source emissions of air contaminants. The excavation, waste transfer activities, and waste stockpiles will produce fugitive emissions, while the dryer should be the only source of point source emissions. The ARASA

subcontractor must apply Best Available Technology (BAT) to all emission sources (fugitive and point) as required (i.e., substantive requirement) by the Ohio EPA's permit to install and permit to operate. Point source emissions that exceed the maximum allowable ground level concentrations (MAGLC) at the site boundary must meet BAT to lower emissions below the calculated stack limits based on the MAGLC values. Using BAT covers all toxic, particulate, and radiological emissions from point and fugitive sources. In addition, the subcontract states that radon emissions from the point sources shall meet a stack limit based on a maximum allowable off-site impact of 0.5 pCi/L annual average, and that radionuclide emissions, excluding radon, shall meet 40 CFR 61, Subpart H.

2.6.6 Waste Minimization

Design and construction of the subcontractor's remediation facility shall be done with conscientious attention to waste minimization. Generation of unnecessary waste will be minimized through such activities as having the ARASA subcontractor unpack its equipment and material prior to entering the Controlled Area whenever possible. Waste minimization also involves minimizing the number of tools/equipment needed to complete the job should be brought into the Controlled Area. In addition, the subcontractor has been directed to not bring any hazardous material into the construction zone unless prior approval is received. Alternatives to hazardous materials will be used whenever possible.

TABLE 2-1

ENFORCEABLE MILESTONES

ACTIVITY	DATE
15-Month Criteria	June 3, 1996
OU1 Transportation and Disposal Plan	April 30, 1998
Initiation of Operations (i.e., Loading of Waste)	March 1, 1999
Completion of Operations (including above-ground D&D)	May 31, 2005

NOTE: The ARASA subcontractor's Submittal Register, which will be provided to EPA 60 days after award of the ARASA subcontract, will require an amendment to the OU1 RAWP. The amendment will establish additional milestones for the ARASA subcontractor's RD and RA deliverables.

TABLE 2-2

INTEGRATION BETWEEN PROJECTS

PROJECT	INTEGRATION ACTIVITY
Soil Characterization and Excavation Project	• Directs excavation of soils by OU1 below pit liners • Directs final disposition of these OU1 soils • Provides FRL certification sampling • Directs final grading and contouring • Provides soils from areas outside OU1 which exceed OSDF WAC, for disposal by OU1 at PCDF
On-site Disposal Cell Project	• Disposal of OU1 contaminated soils meeting OSDF WAC • Disposal of debris which meets OSDF WAC from D&D of OU1 remediation facility
Facilities Closure and Demolition Project	• OU1 will coordinate D&D activities associated with the OU1 ARASA remediation facility with this project
AWWT and Wastewater Project	• Processes wastewater and stormwater from OU1 remediation facility in accordance with the requirements established by the AWWT and Wastewater Project
Aquifer Restoration Project	• Removal of monitoring wells will be conducted in consultation with the Aquifer Restoration Project

3.0 PROJECT PERMIT REQUIREMENTS

3.1 NPDES Permit Modifications & Revisions

The DOE-Fernald Area Office (DOE-FN), U.S. EPA, and Ohio EPA have agreed that off-site discharges of process wastewater and stormwater associated with CERCLA remedial actions conducted at the Fernald Site will be subject to compliance with both substantive and administrative provisions of Ohio EPA's NPDES permit program. In accordance with the terms and conditions of the existing site NPDES Permit (Ohio EPA Permit No. 1IO00004*ED) and Ohio EPA's NPDES permit regulations promulgated in OAC 3745-33, a permit modification is required for any discharges that the Director of Ohio EPA determines will have the potential to significantly alter the character of the waste streams currently being treated and discharged under the existing version of the site NPDES permit. Applications for permit modifications must be filed with Ohio EPA at a minimum of 180 days prior to the proposed commencement of the discharge for which the permit is being modified.

Based on its evaluation of process wastewater discharges associated with the Operable Unit 1 (OU1) remedial action, DOE-FN believes these discharges will be of significant nature to warrant an NPDES permit modification. In addition, modification to the existing permit will also be required to reflect the addition of a new industrial stormwater outfall to Paddys Run Creek. Discharges from this outfall will be comprised of overflows from the new stormwater management basin that will be used to collect stormwater runoff for the waste processing area.

Given that process wastewater and stormwater discharges associated with the OU1 remedial action are scheduled to commence no later than March 1, 1999, an application for permit modification would have to be submitted for Ohio EPA review and approval by September 1, 1998, to satisfy the 180 day notification requirement described above. Due to the close proximity of this date to the March 31, 1998 expiration date of the existing permit, DOE-FN proposes that all permit modifications required to reflect discharges associated with the OU1 remedial action be addressed during the normal permit renewal process. Therefore, DOE-FN plans to submit information on discharges associated with the OU1 remedial action concurrently with its scheduled September 30, 1997, permit renewal application.

3.2 Cultural Resource Compliance

Section 106 of the National Historic Preservation Act requires Federal agencies to take into account the effects of their actions on properties that are on, or eligible for inclusion on, the National Register of Historic Places. The FEMP has defined "cultural resources" to include those resources identified by the following: Antiquities Act: For the Preservation of American Antiquities; Historic Sites, Buildings, and Antiquities Act; National Historic Preservation Act of 1966, as amended; Archaeological Resources Protection Act of 1979; the American Indian Religious Freedom Act; and the Native American Graves and Protection and Repatriation Act of 1990.

Response actions supporting the OU1 remediation include on-site (i.e., site preparation, on-site rail upgrades) and off-site activities (i.e., trestle upgrades). On-site response actions and/or associated activities supporting the OU1 remediation will be conducted in accordance with the "Programmatic Agreement Among the U.S. Department of Energy, Fernald Office, the Advisory Council on Historic Preservation, and the Ohio Historic Preservation Office Regarding Archaeological Investigations at the Fernald Environmental Management Project," which was signed on September XX, 1996. Requirements associated with off-site activities such as the trestle upgrades will be addressed on a case-by-case basis in cooperation with the OHPO, DOE and Fluor Daniel Fernald, Inc..

4.0 REMEDIAL ACTION WORK PLAN DELIVERABLES AND SCHEDULE

4.1 ARASA SUBCONTRACTOR DELIVERABLES TO THE EPAs

The ARASA approach requires a subcontractor to provide services necessary to perform certain aspects of the remedy delineated in the OU1 ROD, with oversight by DOE/Fluor Daniel Fernald, Inc. Specifically, this concept comprises the following apportionment of the remediation activities between the subcontractor and DOE: the subcontractor will be responsible for the excavation, treatment, and packaging (e.g., loadout into railcars), of the waste materials from the pits (as well as potential wastes from other FEMP remediation projects as discussed in Section 2.5); and DOE/Fluor Daniel Fernald, Inc. will continue to have responsibility for the direct management of waste shipping and disposal, including management of the on-site rail logistical activities. Table 4-1 lists the deliverables discussed in the March 1996, Pre-final Design package, and shows the integration of those deliverables into the ARASA approach, specifically into the ARASA subcontractor deliverables.

The ARASA subcontract calls for the subcontractor to develop numerous documents for submittal for EPA review and approval. Essentially, the ARASA subcontract provides for the subcontractor to submit these deliverables in three packages. These packages include a package containing Remedial Design (RD) documents, a package containing Remedial Action (RA) documents, and the Implementation Plan for the D&D of the subcontractor's remediation facilities. The ARASA subcontractor's schedule of these deliverables will be provided to EPA in August 1997. The contents of each of these packages are discussed in the following sections.

4.1.1 ARASA Subcontractor Remedial Design Documents Package

Pursuant to the ARASA subcontract, the subcontractor is to submit various documents for EPA review and approval which support the construction of the subcontractor's remediation facilities. These documents relate to either the design of the subcontractor's remediation facilities, the performance of site preparation activities to support the eventual construction of the subcontractor's remediation facilities, or support other activities leading up to the construction and operation of the subcontractor's remediation facilities. Table 4-2 provides a listing of the various documents identified in the ARASA subcontract as being included in

the Remedial Design Documents Package, which are to be developed and submitted for compliance review and approval by Fluor Daniel Fernald, Inc., DOE, and the EPAs prior to Fluor Daniel Fernald, Inc. giving the subcontractor authorization to mobilize. The ARASA subcontractor's Remedial Design Documents Package will be prepared consistent with the Addendum to the OU1 Remedial Design Work Plan.

4.1.2 ARASA Subcontractor Remedial Action Documents Package

Pursuant to the ARASA subcontract, the subcontractor is to submit various documents for EPA review and approval which support the operations and maintenance of the subcontractor's remediation facilities. Table 4-3 provides a listing of the documents identified in the ARASA subcontract as being included in the Remedial Action Documents Package, which is to be developed and submitted for compliance review and approval by Fluor Daniel Fernald, Inc., DOE, and the EPAs prior to Fluor Daniel Fernald, Inc. giving the subcontractor authorization to operate.

4.1.3 D&D Implementation Plan

Prior to the start of D&D activities, the subcontractor will develop and submit, for review and approval by Fluor Daniel Fernald, Inc., DOE, and the EPAs, an Implementation Plan for the D&D of the subcontractor's facilities. The Implementation Plan will include a discussion of the key elements of the subcontractor's proposed D&D activities, including a scope of work, a description of the general approach to D&D (including sequencing, characterization, materials management and disposal, environmental monitoring, a summary of supporting drawings and specifications, etc.). These key elements are consistent with the outline for implementation plans provided in the OU3 RD/RA Work Plan. The current date for submittal of an implementation plan for the D&D of OU1 facilities, as provided in the May 17, 1996, revised schedule for submittal of OU3 implementation plans (DOE 1996d), is April 1, 2004. The ARASA subcontractor may propose an alternative date, reflective of its schedule, within the submittal register to be submitted to EPA.

4.2 DOE REMEDIAL ACTION DELIVERABLES TO THE EPAs

Transportation from the FEMP to the PCDF is the responsibility of DOE/Fluor Daniel Fernald, Inc.. Infrastructure improvement activities required to support this function are being

conducted in accordance with the previously approved OU1 Site Improvement Plan and its amendment.

4.2.1 Transportation Plan

Transportation and disposal-related activities associated with the remedial action phase of the project will be addressed in the Transportation Plan as follows. As indicated in Table 4-4, this plan will be submitted to EPA in April 1998.

4.2.1.1 Incident Plan

Federal regulations and DOE Orders require the FEMP (as shipper) to have emergency plans and procedures in place to respond to transportation accidents. Currently, the FEMP has a "Transportation Emergency Plan" (FERMCO 1995) and associated emergency preparedness procedures that cover only truck transport incidents. This plan will be revised prior to initiation of shipments to include rail transport.

The contingency plan for OU1 remedial action project activities is covered by the existing "FEMP Emergency Plan" (FERMCO 1996). That plan describes the emergency preparedness program that complements the engineered safety features of the FEMP, details the procedures to be followed at the FEMP in the event of an accident or emergency, and is the document which governs the spill response actions at the FEMP. The "FEMP Emergency Plan" is distributed to participating mutual aid organizations and other local organizations such as local fire departments, hospitals, etc., in the general vicinity of the FEMP.

The Incident Plan will provide a summary of the "Transportation Emergency Plan" and "FEMP Emergency Plan"; and, in addition, will specifically address emergency response procedures and training of FEMP and off-site personnel specifically for occurrences resulting from OU1 remediation activities. The Incident Plan will include procedures for evaluation, notification, and subsequent emergency actions including train crew, local authorities, railroad emergency response, state emergency response, DOE and Fluor Daniel Fernald, Inc. responsibilities.

4.2.1.2 FEMP Rail Operations

Rail operations at the FEMP will address management of railcars and processed waste materials at the site, including the preparation of unit trains, before departure from the FEMP. FEMP rail operations will include a discussion of operations and maintenance of rail facilities, waste handling, inspection and maintenance, rail shipment documentation, and unit train transfer; operational environmental controls, equipment maintenance, and health and safety issues.

4.2.2 Remedial Action Report

Upon satisfactory completion of the OU1 remedial activities i.e., within 60 days following DOE approval of the Certification of Construction Completion, a Remedial Action Report, the official record of remedial action activities, must be submitted to the EPAs for review and approval. Based on a scheduled completion date of May 31, 2005, the Remedial Action Report should be submitted to the EPAs by July 31, 2005. The Remedial Action Report provides documentation that OU1 remedial activities have been conducted in accordance with the OU1 RAWP and its associated deliverables; and that the remedy has been completed and meets the goals established in the OU1 ROD.

TABLE 4-1
INTEGRATION OF ARASA AND PRE-FINAL DESIGN

PRE-FINAL DELIVERABLE	STATUS UNDER ARASA
RD DELIVERABLES	
Plant Facilities Design Criteria Package	Reformatted Due to ARASA: This package will be revised under ARASA and used as a basis for establishing performance criteria/requirements for the ARASA subcontractor. The ARASA subcontractor, in turn, will provide revised Design Criteria that demonstrates how the subcontractor's technology complies with the design criteria. **To be included in the Plant Facilities Engineering Package of the Design Package (see Table 4-2).**
Plant Facilities Engineering Package	Changes Due to ARASA: This package will be provided to the subcontractor for information only. The subcontractor will submit a Facilities Engineering Package to demonstrate his basis for design and operation. **The ARASA subcontractor is to submit a Plant Facilities Engineering Package in the Design Package (see Table 4-2).**
Equipment Specifications	Changes Due to ARASA: Specification information based on the technology used by the selected subcontractor will be submitted to EPA for review and comment. **To be included in the Plant Facilities Engineering Package of the Design Package (see Table 4-2).**
Site Improvement Plan	No changes because of ARASA: The Site Improvement Plan submitted in the Pre-final Design Package remains unchanged and is being implemented as planned.
Construction Schedule	Changes Due to ARASA: The Construction Schedule submitted with the Pre-final Design Package was revised to reflect changes resulting from ARASA; DOE will be responsible for site improvements and *infrastructure development* and the ARASA subcontractor will be responsible for providing the schedule for and implementing construction of the treatment facility. **As part of the Design Package (see Table 4-2), the subcontractor will submit a Pre-Operational Schedule.**
Excavation Plan	Changes Due to ARASA: This plan will be used by the ARASA subcontractor as a reference document for developing an independent excavation plan. **As part of the Design Package (see Table 4-2), the subcontractor will submit an Excavation Plan.**
site restoration plan/D&D Plan	No changes because of ARASA: The Site-wide Excavation Plan will direct excavation of soils beneath the waste pits and will direct final grading and contouring of the OU1 area. The OU3 D&D Implementation Plan format will be used as a basis for developing the OU1 D&D Implementation Plan as discussed in Section 2.5.3.
Transportation and Disposal Plan	No changes because of ARASA: The Transportation and Disposal Plan submitted with the Pre-final Design Package remains unchanged.

TABLE 4-2
ARASA SUBCONTRACTOR
REMEDIAL DESIGN DOCUMENTS PACKAGE

DOCUMENT	DESCRIPTION OF CONTENTS
Design Package	This document will contain the basis for the subcontractor's design, developed in accordance with the requirements of the ARASA subcontract. The specific items included in this package (which are consistent with the proposal provided in the Addendum to the OU1 Remedial Design Work Plan) are as follows: - A Plant Facilities Engineering Package which will provide: a description of the operation/processes, including the sequence and operating parameters, associated with the subcontractor's design; the design criteria specific to the subcontractor's design, including the subcontractor's strategy, based on the proposed design, for complying with the ARARs and substantive permit requirements; related drawings; and specification information for various individual items of equipment (dryer, shredder, pumps, tanks, blowers, condensers, etc.). - An Excavation Plan which will define all activities, actions, and requirements necessary to properly and safely perform all excavation activities in conformance with applicable regulations and requirements, including a description of processes to be used in the excavation of waste from each of the various waste units and transfer to the remediation facility. - A Pre-Operational Schedule showing the subcontractor's activities from pre-mobilization through the completion of facility construction and start-up.
Health & Safety Plan (Pre-Operational)	This health and safety plan will cover activities to be performed by the subcontractor during Site Preparation and Facility Construction.
Environmental Control Plan (for Pre-Operational Activities, such as Site Preparation and Facility Construction)	This document will discuss the methods and materials to be used by the subcontractor during site preparation and facility construction to prevent erosion of soil either by wind or surface water in the work area to reduce sediment loading in the stormwater, to suppress and minimize the creation and dispersion of dust, and to capture stormwater.
Site Preparation Plan	This document will provide various information, such as drawings and specifications, regarding the work to be performed by the subcontractor, above and beyond that already performed under the approved Site Improvements Project included in the approved OU1 Pre-Final Design Packages, needed to prepare the site for facility construction and operations.
Operation & Maintenance Plan for Existing FEMP Facilities	In accordance with the subcontract, the subcontractor will assume operation and maintenance responsibility of various equipment and facilities within its work area (e.g., the stormwater management system, pit covers, clearwell, roads, etc.), when it receives authorization to mobilize. The subject document will provide the subcontractor's plan for the operation and maintenance of these existing equipment and facilities. This plan will essentially be the first phase of the subcontractor's Operation and Maintenance Plan.

TABLE 4-3
ARASA SUBCONTRACTOR
REMEDIAL ACTION DOCUMENTS PACKAGE

DOCUMENT	DESCRIPTION OF CONTENTS
Operations & Maintenance Plan	This document provides information relative to the subcontractor's plans for the operation and maintenance of its remediation facilities. The Operations & Maintenance (O&M) Plan will provide a description of the operations, equipment, and process(es) to be used to treat the waste, including handling of secondary waste streams. The O&M Plan will also include a Contingency Plan providing a list of potential problems that could be anticipated, a plan for developing corrective actions and contingency operations to prevent undue hazard in the event of an failure, a plan for emergency situations and emergency shutdowns, and safety tasks required in event of systems failure (may be linked to site safety plan developed during remedial responses). In addition, the O&M Plan will include: the operating and control plan for the subcontractor's remediation facility, on a system-by-system basis; process flow diagrams; site layout drawings; a plan describing special planning, handling, treatment, and disposal considerations, to be used by the subcontractor should it encounter non-typical waste streams that will require such handling; a description of the health and safety controls put in place in support of operations; a discussion as to how the subcontractor's operations and maintenance activities will provide compliance with the substantive permitting requirements; a discussion as to how the subcontractor's operations and maintenance activities will provide compliance with the ARARs and TBCs for OU1; and a list of various procedures and other plans developed by the subcontractor in support of project operations (It is not intended that these procedures and plans be submitted to the EPAs, unless specifically requested of by the EPAs.).
Operational Environmental Control Plan	This document will discuss the methods and materials to be used by the subcontractor during the operations phase of the project to prevent erosion of soil either by wind or surface water in the work area, to suppress and minimize the creation and dispersion of dust, to ensure emissions from processing equipment meet ARARs and ALARA requirements, and to provide for the proper management of stormwater and wastewater generated within the subcontractor's work area.
Sampling and Analysis Plan	The SAP shall describe all sampling and analysis activities including methods to certify that the processed waste material will meet the PCDF WAC, to verify that discharged water will meet the on-site AWWT WAC, and to verify that fugitive and point source air contaminants are controlled. Methods of sample collection to achieve representative samples of the waste streams shall be described. Analytical methods for air, waste, and water analysis shall be listed. Screening or sampling methods for process control shall be described. Quality control for sampling and analysis shall be described, including internal and external (duplicate samples, blanks) QC and calibration of equipment. Sample chain-of-custody procedures and data management functions shall be described.
Health & Safety Plan (Operational)	This health and safety plan will cover activities to be performed by the subcontractor during the Operational phase of the project.

TABLE 4-4

DOE REMEDIAL ACTION DOCUMENTS PACKAGES

DOCUMENT	COMPONENTS	DESCRIPTION OF CONTENTS
Transportation and Disposal Plan	Incident Plan	Summary of the Transportation Emergency Plan and the FEMP Emergency Plan; will address emergency response procedures and training for off-site incident scenarios
	FEMP Rail Operations	Management of railcars, preparation of unit trains, O&M of rail facilities, inspection and maintenance, documentation, and health and safety issues.
Remedial Action Report	Remedial Action Report	Document completion of OU1 remedial activities conducted in accordance with the RAWP and its associated deliverables.

5.0 REMEDIAL ACTION TEAM

The governing document for CERCLA response actions at the FEMP is the ACA between the DOE and the EPA Region V, signed in September 1991. As such, ultimate project management responsibility lies with these two agencies as defined by that agreement. The DOE is the lead agency responsible for CERCLA and NPDES activities at the FEMP. In addition, the Ohio EPA has been granted regulatory authority over certain RCRA and NPDES activities. Each agency has engaged contractors to perform specific scopes of work related to their prime areas of responsibility.

For the implementation of the remedial action, Figure 5-1 identifies the relationship among the regulators, DOE administrative and programmatic organizations, the stakeholder community, Fluor Daniel Fernald, Inc. (DOE's prime contractor at the FEMP), and subcontractor's to Fluor Daniel Fernald, Inc., including the ARASA subcontractor.

The following sections provide some specific details relative to the DOE organization which will be directly involved in the Operable Unit 1 (OU1) remediation activities. In addition, a description is provided of the Fluor Daniel Fernald, Inc. organization which will put in place to manage these activities, along with a brief discussion of the roles and responsibilities of the Fluor Daniel Fernald, Inc. organization and the ARASA subcontractor. Specifics relative to stakeholder participation in the OU1 remediation process are provided in Section 6.0 of this RAWP.

5.1 DOE

DOE-FN is responsible for the day-to-day operations of the site. DOE-FN involvement is essentially two-fold, with the DOE OU1 Team Leader providing the overall programmatic direction to Fluor Daniel Fernald, Inc. for this project, and with field oversight being provided by the DOE-FN Facility Representatives Department which will independently monitor Fluor Daniel Fernald, Inc.'s performance of the remediation operations and management.

5.2 Fluor Daniel Fernald, Inc. and its Subcontractors

As the prime contractor to DOE, Fluor Daniel Fernald, Inc. is responsible for providing DOE with support necessary to facilitate the implementation of the selected remedy for OU1. The Project Manager for the Fluor Daniel Fernald, Inc. Waste Pits Remedial Action Project (i.e., OU1) will provide the overall project management and technical guidance to the Fluor Daniel Fernald, Inc. team consisting of Engineering, Construction, Operations, and Project Support personnel, including support from Procurement, Health & Safety, Quality Assurance, and Environmental Compliance.

As discussed in Section 1.2 of this RAWP, Fluor Daniel Fernald, Inc. is directly responsible for managing waste shipment and disposal (including on-site rail activities). Although the ARASA subcontractor is directly responsible for excavation, waste preparation, waste treatment, and loadout of the waste into railcars, Fluor Daniel Fernald, Inc. is responsible for the oversight of these activities, so as to ensure that the overall project is implemented in accordance with the OU1 ROD. Oversight will include document review, surveillance of subcontractor construction and operations activities, inspections, health & safety and quality assurance audits, etc.

Fluor Daniel Fernald, Inc. will also have selected direct involvement in the activities identified as being the responsibility of the subcontractor. For example, Fluor Daniel Fernald, Inc. personnel (i.e., the FAT&LC workforce and supervision) will be utilized by the subcontractor in the performance of its remediation activities.

Figure 5-2 provides a general representation of the relationship between Fluor Daniel Fernald, Inc. and the ARASA subcontractor, although the specific details of the relationship will not be defined until the ARASA procurement action is completed. Quality assurance (QA), will be directly administered by the subcontractor. Fluor Daniel Fernald, Inc.'s participation in health and safety, and quality assurance activities will consist of oversight and audit responsibilities. Implementation of the radiological control program will be performed directly by Fluor Daniel Fernald, Inc.

Figure 5-1

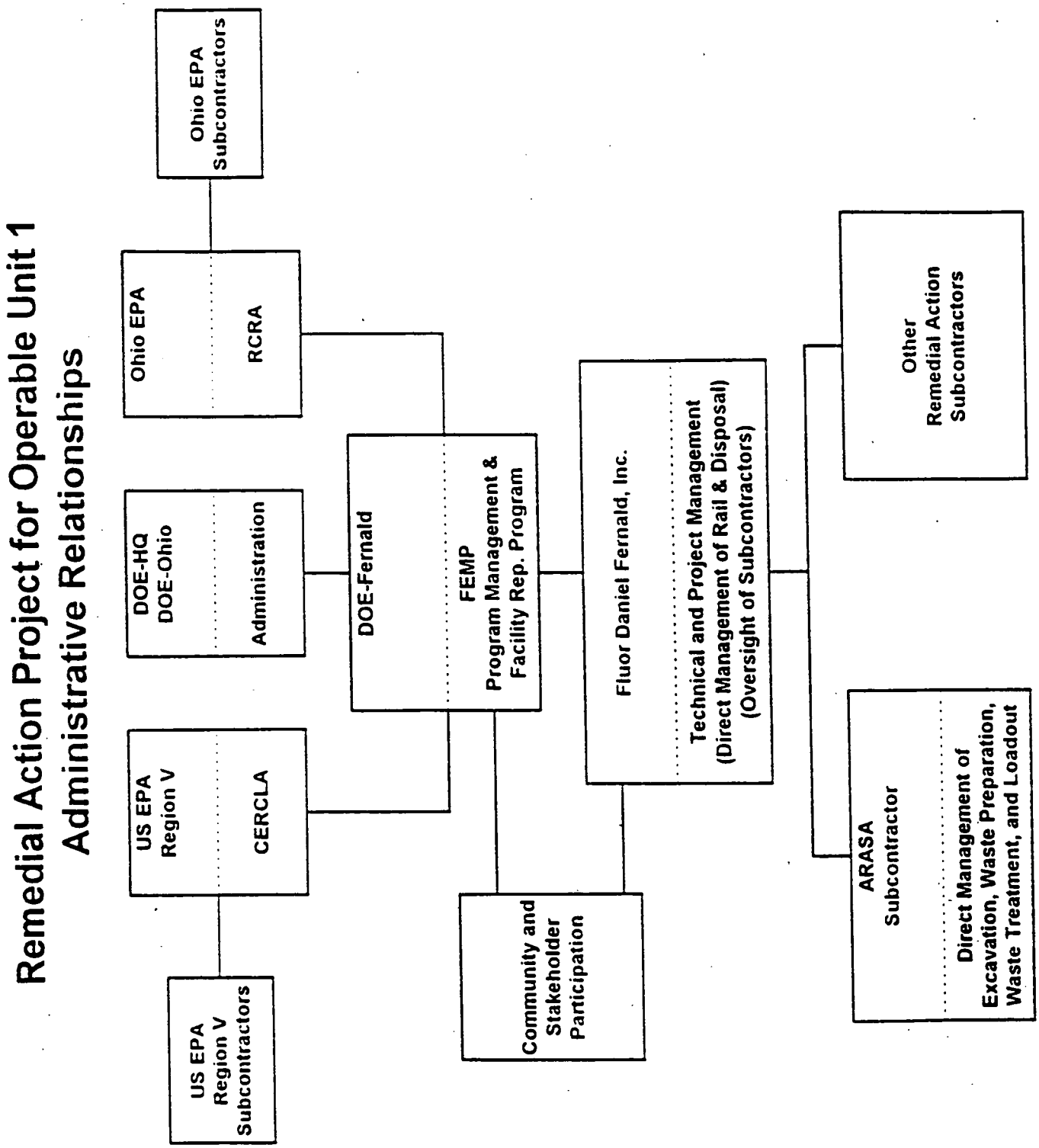
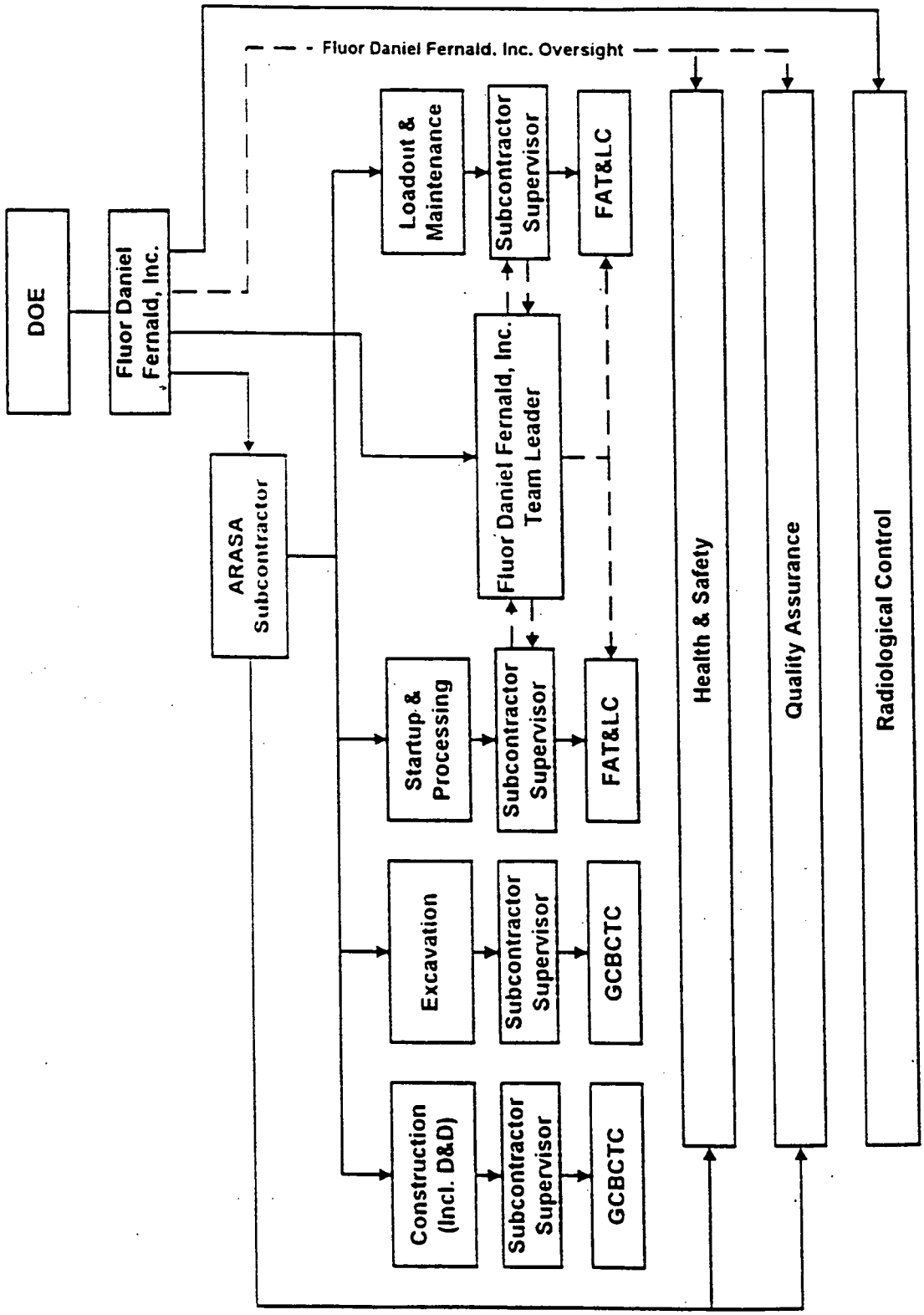

Remedial Action Project for Operable Unit 1
Administrative Relationships
Ohio EPA Subcontractors
Ohio EPA
RCRA
DOE-HQ
DOE-Ohio
Administration
US EPA
Region V
CERCLA
US EPA
Region V
Subcontractors
DOE-Fernald
FEMP
Program Management &
Facility Rep. Program
Community and
Stakeholder
Participation
Fluor Daniel Fernald, Inc.
Technical and Project Management
(Direct Management of Rail & Disposal)
(Oversight of Subcontractors)
Other
Remedial Action
Subcontractors
ARASA
Subcontractor
Direct Management of
Excavation, Waste Preparation,
Waste Treatment, and Loadout

Figure 5-2

Project Organization - Waste Pits Remedial Action Project



Key

DOE Department of Energy
GCBCTC Greater Cincinnati Building & Construction Trades Council
FAT&LC Fernald Atomic Trades & Labor Council

6.0 COMMUNITY RELATIONS

6.1 COMMUNITY RELATIONS DURING REMEDIAL DESIGN AND REMEDIAL ACTION

Throughout the ARASA remedial design and remedial action process, DOE will continue to make key decision-making documents available to the public for their inspection. As these documents are issued, DOE will inform the public of their availability. DOE will continue to update the public through briefings at township and citizens' group meetings, community roundtables, workshops, etc.

6.2 COMMUNITY RELATIONS DURING REMEDIAL ACTION

The "Community Relations Plan for the U.S. Department of Energy Fernald Environmental Management Project, Fernald, Ohio, (CRP)," (DOE 1995c) was revised in September/October 1994, and approved by Ohio EPA in December 1994 and by EPA in January 1995. The CRP complies with the public participation requirements of all applicable laws and regulations, including CERCLA, the Federal Facility Compliance Act (FFCAct), National Environmental Policy Act (NEPA) , and the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), and also reflects EPA guidance in "Community Relations in Superfund: A Handbook" (January 1992).

The CRP provides details about how management will involve the public in decisions related to the site during the remedial action phase of CERCLA response action at the FEMP. Required activities are summarized below.

Required Public Involvement During Remedial Action

- Provide a public briefing upon completion of the ARASA subcontractor's final engineering design and prior to the beginning of the remedial action [NCP 300.435].
- Publish in a local newspaper of general distribution a "Notice of Availability" of documents submitted to the EPA under the remedial action [DOE commitment/directive].

Throughout the duration of FEMP remediation activities, the CRP may be revised to reflect changing community concerns, as well as changes in the law, regulations or regulatory agreements.

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