



**FACT SHEET**  
**Development of**  
**CERCLA Remedial Action**  
**Closeout Reports**  
**for the Fernald Closure Project**  
**April 2005**

**BACKGROUND**

The Fernald Closure Project (FCP) is nearing physical completion of major elements of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) remedial actions for the five operable units at the site. The FCP's baseline schedule is forecasting that all of the CERCLA remedial actions will be physically complete by March 2006, with the exception of aquifer restoration under Operable Unit 5, which continues as a post-closure activity. With the physical completion of the individual remedies in sight, it is appropriate to consider the closeout documentation steps that will be necessary to demonstrate the successful completion of the remedial actions.

Consistent with EPA guidance for the conduct of closeout activities for CERCLA remedial action sites, DOE and EPA have concluded that Final Remedial Action Reports will be prepared for Operable Units 1, 2, 3, and 4, and an Interim Remedial Action Report will need to be prepared for Operable Unit 5, to recognize that certain activities will continue beyond the March 2006 baseline closure date (e.g., groundwater remediation, On-Site Disposal Facility monitoring and care).

The individual remedial action closeout reports are the first step on the way to deleting the FCP from the list of National Priority Sites. However, DOE and EPA recognize that to support the preparation of these reports, as well as accommodate their earliest possible submittal dates, several administrative alignments are necessary to address the physical and geographic interfaces between the five operable units. DOE and EPA believe the early submittal and approval of these reports as part of the FCP baseline is advantageous to DOE, regulator, and stakeholder interests.

**DEFINITION OF THE  
FCP'S OPERABLE UNITS**

**Operable Unit 1**

Waste Pits

*(Pits 1 through 6, Burn Pit, and Clearwell)*

**Operable Unit 2**

Other Waste Units

*(Solid Waste Landfill, Lime Sludge Ponds, Active and Inactive Fly Ash Piles, and Southfield Area)*

**Operable Unit 3**

Production Area Facilities and Legacy Waste Inventories

**Operable Unit 4**

Silo 1&2 and Silo 3

**Operable Unit 5**

Contaminated Environmental Media

*(Soil, Surface Water, Sediment, and Groundwater)*



*Major portions of the FCP's CERCLA response actions are nearing physical completion, and regulatory focus is shifting to final closeout and documentation activities.*



## ALIGNMENT MODIFICATIONS

The alignment modifications described below serve to define where and how certain discrete portions of the individual operable unit remedies will be documented as part of the closeout reports. These alignment modifications do not affect the scope of the actual remedies being implemented nor the schedule for when remedial activities will be complete. The realignments are:

- Addressing the completion of soil excavation and certification activities within the Operable Units 1, 2, and 4 boundaries as part of Operable Unit 5, and documenting the completion of the soil activities associated with these source operable units within an Interim Remedial Action Report prepared under Operable Unit 5. Under this strategy, soil excavation and certification activities will be complete within all areas in accordance with the current baseline schedule of March 2006.
- Addressing the closure of the on-site disposal facility (OSDF) under Operable Unit 5 and documenting its completion through an Interim Remedial Action Report prepared under Operable Unit 5. The construction and capping of the OSDF will be complete in accordance with the current baseline schedule of March 2006. Currently, the OSDF is a recognized component of Operable Units 2, 3, and 5.
- Addressing the final step of Operable Unit 3 dismantlement and dispositioning (D&D) activities for the groundwater infrastructure remaining after March 2006, as part of an Interim Remedial Action Report under Operable Unit 5. All other D&D activities associated with the former production facilities and remediation facilities constructed under Operable Units 1, 2, and 4 will be complete in accordance with the current baseline schedule of March 2006.
- Addressing the D&D of the Operable Units 1 and 4 remediation facilities as part of the Final Remedial Action Report for Operable Unit 3.

## JUSTIFICATION

The changes outlined in this fact sheet are justified as they better align the closeout of certain discrete remedial activities (e.g., soil excavation and D&D activities) historically recognized as part of the source operable units (1, 2, and 4) with Operable Units 5 and 3, as illustrated below:

- **Operable Unit 1:** One of the components of the Operable Unit 1 remedy is the excavation of contaminated soils underneath and adjacent to the waste pits. The Operable Unit 1 Record of Decision (ROD) identifies the disposition of these soils is to be made consistent with the Operable Unit 5 ROD. DOE believes the excavation, disposition and certification of the soils in the waste pit area and the final natural resource restoration of the waste pit area are appropriately Operable Unit 5 activities, and as such, should be completed and documented under Operable Unit 5 through an Operable Unit 5 Interim Remedial Action Report (discussed below).

While the soil cleanup activities will be addressed administratively in an Operable Unit 5 Interim Remedial Action Report, the physical completion of the Operable Unit 1 soils cleanup activities will continue to be executed in accordance with the current Operable Unit 1 baseline schedule.

Similarly, the D&D of the remediation facilities for Operable Unit 1 will be recognized in the Operable Unit 3 Final Remedial Action Report. With these alignment modifications, the Operable Unit 1 Final Remedial Action Report can be tentatively submitted for agency approval in spring 2005, once all waste materials (waste pit contents, caps, and liners) destined for off-site disposal have been successfully disposed of at the Envirocare disposal facility.

- **Operable Unit 2:** This operable unit consists of several miscellaneous waste units and includes the construction and operation of the OSDF. Similar to Operable Unit 1, one of the components of the Operable Unit 2 remedy is the excavation/certification of the soils surrounding and beneath the individual waste units. DOE believes the excavation, disposition and certification of the soils as well as the natural resource restoration of the former waste-unit areas are appropriately Operable Unit 5 activities, and as such, should be completed and documented under an Operable Unit 5 Interim Remedial Action Report. As with the Operable Unit 1 area soils, Operable Unit 2 area soil cleanup activities will be complete by March 2006.

In addition, DOE believes it is advantageous to address the OSDF under Operable Unit 5, through an Operable Unit 5 Interim Remedial Action Report. While the construction and operation of the OSDF was historically within the province of Operable Unit 2, the OSDF is integral to the other operable units, in particular Operable Unit 5, as it was discussed in both the Operable Unit 5 Feasibility Study and Operable Unit 5 Proposed Plan. Further, the Operable Unit 2 ROD identifies a 30-year monitoring requirement of the OSDF and the long term monitoring and care of the facility is already an Operable Unit 5 remedy component (Section 9.1.7 of the Operable Unit 5 ROD).

Aligning the OSDF closure and Operable Unit 2 soils in this way allows the Operable Unit 2 remedy to be documented as complete with the completion of waste excavation (and disposal) from the Operable Unit 2 Solid Waste Landfill subunit in the spring of 2005. The Operable Unit 2 Final Remedial Action Report can therefore be tentatively submitted for agency approval during the summer of 2005, to document that all waste removal activities from the Operable Unit 2 waste subunits are complete.



➤ **Operable Unit 3:** All D&D activities for all of the former production-related facilities will be complete in accordance with the current baseline schedule of March 2006. Additionally, the D&D of the remediation facilities constructed under Operable Units 1, 2, 4, and 5 are also within the purview of Operable Unit 3, as indicated in the Operable Unit 3 ROD for Interim Remedial Action and the Operable Unit 3 Integrated RD/RA Work Plan. The D&D of these remedial action facilities will be complete in accordance with the current baseline schedule of March 2006.

However, the groundwater remedy being conducted under Operable Unit 5 will extend beyond the completion of the other remedies and will require the excavation and D&D of all remaining groundwater infrastructure (treatment facilities and pumping systems) when the groundwater remedy has been completed during the post-closure period. Because the only remaining D&D activities beyond the March 2006 closure date are associated with the groundwater infrastructure it is appropriate to document the completion of this subset of D&D activities within the Operable Unit 5 Final Remedial Action Report that will be prepared when groundwater cleanup is complete.

Documenting the D&D of the groundwater infrastructure as part of the Operable Unit 5 Final Remedial Action Report allows DOE to close out the Operable Unit 3 remedy and prepare the Final Remedial Action Report for Operable Unit 3 once the D&D activities for the Silo's remediation facilities are complete. The Final Remedial Action Report for Operable Unit 3 can therefore be tentatively submitted for agency approval in Spring 2006.

➤ **Operable Unit 4:** Similar to the Operable Unit 1 alignment, documenting the completion of soil cleanup under Operable Unit 5 and the D&D of the remediation facilities under Operable Unit 3 allows DOE to submit a Final Remedial Action Report to the regulatory agencies once the Silos waste materials have been successfully dispositioned. The Final Remedial Action Report for Operable Unit 4 can therefore be tentatively submitted for agency approval in early 2006.

As of the issuance of this fact sheet, there have been questions raised by the State of Nevada involving the location of the ultimate disposal of the Operable Unit 4 Silo waste material. The Operable Unit 4 remedy cannot be completed until the silo material has been successfully dispositioned. While every effort is being made to address the questions raised in a manner so as to remain on schedule with the current baseline date of March 2006, a delay could result in the submission of the Operable Unit 4 Final Remedial Action Report beyond the March 2006 date. In addition, such a delay could also delay the submission of the Operable Unit 3 Final Remedial Action Report because of the coinciding delay in the D&D of the Operable Unit 4 remediation facilities as well as a delay in submitting the Operable Unit 5 Interim Remedial Action Report because of the coinciding delay in the certification of Operable Unit 4 soils.

➤ **Operable Unit 5:** An Interim Remedial Action Report is appropriate for Operable Unit 5 as final groundwater remediation will not be achieved by March 2006 (final remediation levels (FRLs) for surface water and sediment cannot be certified until the groundwater remedy has been completed), there will be several areas where soil certification cannot be completed because of the remaining groundwater infrastructure, and the On-Site Disposal Facility will be subject to the long-term care and monitoring requirements of the Operable Unit 5 ROD. Therefore, an Interim Remedial Action Report will be prepared under Operable Unit 5 and will be comprised of three distinct parts; one each for groundwater remediation, soils remediation, and the On-Site Disposal Facility.

In addition to the standard informational requirements of a Final Remedial Action Report, the Interim Remedial Action Report for Operable Unit 5 will contain the appropriate statements and supporting documentation including:

- A statement and supporting documentation that the groundwater remediation system is operating "properly and successfully."
- A description of activities necessary to maintain the effectiveness and integrity of the groundwater remediation system.

- A statement and supporting documentation that the OSDF and leachate collection system is operating "properly and successfully."
- A description of activities necessary to maintain the effectiveness and integrity of the OSDF and leachate collection system.
- An indication of the location of all the soil remediation areas that have been certified to achieve the FRLs defined in the Operable Unit 5 ROD as well as the location of those areas that cannot be certified because of groundwater activities still under way.

The Operable Unit 5 Interim Remedial Action Report can be tentatively submitted for agency approval in the Spring of 2006. (A Final Remedial Action Report will be submitted for Operable Unit 5 upon completion of groundwater remediation and associated D&D/certification activities.)

The attached table summarizes the documentation steps outlined in this fact sheet.

➤ **Preliminary Closeout Report (PCOR):** In addition to the Remedial Action Reports described above, DOE and USEPA will prepare a PCOR to document construction completion at the FCP. While the Remedial Action Reports address each of the individual Operable Units, the PCOR addresses the FCP as a whole. The PCOR will be submitted for agency review before the FCP is transferred to Legacy Management - tentatively scheduled to occur in April 2006.

#### NEXT STEPS

- DOE will continue to execute the fieldwork to complete all remedial activities in accordance with the approved RODs and baseline schedules for each operable unit.
- DOE will begin to assemble the necessary information and documentation to begin preparing the remedial action reports described above and submit the reports in accordance with a target schedule included in the attached table.
- DOE will prepare an Interim Residual Risk Assessment reflecting conditions upon the FCP entering the legacy management phase and a Final Residual Risk Assessment upon completion and certification of the groundwater remedy.



## Summary of CERCLA Remedial Action Closeout Reports and Schedule

Operable Unit	Key Closeout Activity	Where Documented	Remaining Scope	Where Documented
Operable Unit 1 Waste Pits	Waste pit contents successfully dispositioned off site	Final Remedial Action Report for Operable Unit 1 (Spring 2005)	Soil Remediation within Operable Unit 1 boundary	Interim Remedial Action Report for Operable Unit 5 (Spring 2006)
			D&D of Operable Unit 1 Remediation Facilities	Final Remedial Action Report for Operable Unit 3 (Spring 2006)
Operable Unit 2 Other Waste Units	Wastes from Solid Waste Landfill, Lime Sludge Ponds, Fly Ash Piles, and Southfield successfully placed in OSDF or dispositioned off site as required	Final Remedial Action Report for Operable Unit 2 (Summer 2005)	Soil Remediation within Operable Unit 2 boundary	Interim Remedial Action Report for Operable Unit 5 (Spring 2006)
Operable Unit 3 Production Area	D&D of site-wide facilities (except for groundwater infrastructure); completion of Legacy Waste disposal	Final Remedial Action Report for Operable Unit 3 (Spring 2006)	None	NA
Operable Unit 4 Silos	Silo contents for Silos 1&2 and Silo 3 successfully dispositioned off site	Final Remedial Action Report for Operable Unit 4 (Spring 2006)	Soil Remediation within Operable Unit 4 boundary	Interim Remedial Action Report for Operable Unit 5 (Spring 2006)
			D&D of Operable Unit 4 Remediation Facilities	Final Remedial Action Report for Operable Unit 3 (Spring 2006)
Operable Unit 5 Environmental Media	Groundwater remediation infrastructure is installed and operating.  Completion of all soil remediation site wide, except for beneath long-term groundwater facilities  The On-Site Disposal Facility is capped	Interim Remedial Action Report for Operable Unit 5 (Spring 2006)  Interim Remedial Action Report for Operable Unit 5 (Spring 2006)  Interim Remedial Action Report for Operable Unit 5 (Spring 2006)	D&D of groundwater facilities once groundwater remedy is complete; certification of surface water and sediments	Final Remedial Action Report for Operable Unit 5 (post-closure)
			Soil remediation and certification beneath groundwater facilities	Final Remedial Action Report for Operable Unit 5 (post-closure)
			Long-term care and monitoring	Final Remedial Action Report for Operable Unit 5 (post-closure)
<b>Risk Assessment Documentation</b>				
Site Wide Residual Risk Assessment	Perform an Interim Residual Risk Assessment within 90-days of the FCP entering the legacy management phase	Will be referenced in the Operable Unit 5 Interim remedial Action Report. The actual assessment will be documented under separate cover	A Final Residual Risk Assessment will be conducted subsequent to the completion of all remedial actions including groundwater certification currently targeted to be complete 2025. (1991 Amended Consent Agreement; Section XI (D))	Final Remedial Action Report for Operable Unit 5 (post-closure)

