

# FERNALD ENVIRONMENTAL MANAGEMENT PROJECT



## Remedial Design Fact Sheet for Operable Unit 2 - Area 2, Phase I Southern Waste Units South Field Firing Range

March 1999

### OVERVIEW

This Remedial Design Fact Sheet documents a change to the Operable Unit 2 Record of Decision (ROD) which had established off-site disposal of South Field Firing Range soils containing lead.

- The quantity of Firing Range soils containing lead contamination above final remediation levels (FRLs) will change from 300 cubic yards to 100 cubic yards based on the results from additional sampling and analysis.
- The assumption that all lead-containing Firing Range soils above cleanup levels is a mixed waste will change. Forty cubic yards of the soil will be considered a mixed waste (with a characteristically hazardous lead component) and 60 cubic yards will be considered above the FRL for lead only.
- The treatment for Firing Range mixed waste will be clarified from treatment to in situ stabilization treatment.
- The Firing Range mixed waste will be disposed of at the On-Site Disposal Facility (OSDF) instead of off site.

Note that these changes pertain only to Firing Range soil contaminated with lead above the RCRA toxicity characteristic leaching procedure (TCLP) limit of 5.0 mg/L for lead; lead is a constituent of concern (COC) for the Firing Range only and not the entire South Field area.

These changes are consistent with the treatment and disposition approach for six other geographic locations within the FEMP with a reasonable potential for the presence of soil that qualifies as a RCRA characteristically hazardous waste as identified in the Operable Unit 5 ROD (DOE 1996). The need for these changes was discovered:

- After predesign sampling, which was done to determine excavation limits for the Firing Range soil;
- Before the Area 2, Phase I (Southern Waste Units) excavation including the South Field; and
- Before in-situ stabilization treatment of the Area 1, Phase II Trap Range.

These particular changes have been identified as "non-significant post-ROD changes," as they do not significantly alter the physical area of remediation, remediation goals, type of waste, or treatment levels to be attained. These changes are believed to decrease the volume of waste that was to be handled as a mixed waste and reduce the clean-up cost of disposal. This optional Fact Sheet was prepared in accordance with U.S. EPA's Guide to Addressing Pre-ROD and Post-ROD Changes (OSWER Publication 9355.3-02FS-4, April 1991), which accommodates refinements to the remedy that were discovered to be necessary after ROD signature.

### BASIS FOR THE CHANGES

As identified in the Operable Unit 2 ROD, 300 cubic yards of lead containing material from the South Field Firing Range was assumed to be a mixed waste and would be handled as a mixed waste requiring treatment. Further, the Operable Unit 2 ROD states that as a mixed waste, the material will be treated and shipped to an off-site disposal facility that is approved to accept mixed waste.

However, for the six reasons listed below, in situ stabilization treatment with disposal at the OSDF is justifiable:

1. *Significantly less volume than originally estimated* - Additional sampling and analysis since the OU2 ROD demonstrates that the material to be handled as mixed waste is 40 cubic yards, rather than the 300 cubic yards originally estimated.
2. *A suitable stabilization technology has been identified* - It has been determined that existing in situ stabilization technology has successfully stabilized lead contaminated soil below the TCLP lead limit of 5.0 mg/L. This technology would permit the stabilization of the 40 cubic yards of RCRA characteristically hazardous soil to an above-lead FRL soil that would be below the radiological and lead waste acceptance criteria (WAC) for the OSDF.

3. *No change regarding the final cleanup levels and protectiveness to the groundwater* - No modification from the original final cleanup level, or FRL, is proposed.
4. *Consistent with the approach allowed in the Operable Unit 5 ROD* - The changes are consistent with the treatment and disposition approach for six other geographic locations within the FEMP with a reasonable potential for the presence of soil that qualifies as a RCRA characteristically hazardous waste as identified in the Operable Unit 5 ROD (DOE 1996). The Operable Unit 5 ROD was signed six months after the Operable Unit 2 ROD, which established the original Firing Range remediation approach.
5. *Consistent with the approach to be implemented in the Area 1, Phase II Trap Range* - The stabilization technology and approach suggested for the Firing Range is consistent with the treatability and full-scale in situ stabilization treatment approach to be taken in the Area 1, Phase II Trap Range (one of the six geographic areas identified in #4 above). Further, the remediation of the Firing Range is scheduled to occur within the same timeframe as the Trap Range remediation.
6. *Significant cost savings* - Significant cost savings are anticipated due to the reduced volume of soil to be stabilized for lead, utilization of technology employed on site in the Area 1, Phase II Trap Range and within same timeframe, and on-site disposal.

This remedy will provide the same level of protectiveness to the soils and groundwater as the remedy originally identified in the Operable Unit 2 ROD. With these refinements, the Operable Unit 2 South Field Firing Range remedy continues to provide remediation levels for soils that are health protective. The changes enhance the Operable Unit 2 South Field Firing Range remedy in that they better align the remediation approach with similar soils provided in the Operable Unit 5 ROD.

For additional information concerning these changes please contact Mr. Gary Stegner, DOE FEMP Public Affairs at (513) 648-3153 or refer to the Area 2, Phase I Southern Waste Units Implementation Plan. This plan is located at the FEMP Public Environmental Information Center, Delta Building, 10995 Hamilton-Cleves Highway, Harrison, Ohio 45030, Telephone: (513) 648-7480.

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