Explanation of Significant Differences
For The Midvale Slag Operable Unit One Superfund Site
Winchester Estates Southeast Parcel

INTRODUCTION

This Explanation of Significant Differences (ESD) has been prepared to document the changes to the Midvale Slag, Operable Unit No. 1 (OU1) Superfund Site Record of Decision (ROD). The ROD was issued by the U.S. Environmental Protection Agency (EPA) on April 28, 1995. The selected remedy is described in the ROD as Alternative 3.

The Utah Department of Environmental Quality (UDEQ) is the lead agency at the site, with support provided by the EPA. The changes to the ROD have been made as a result of new information that UDEQ and the EPA received subsequent to the issuance of the ROD. This ESD will address two changes to the remedy presented in the ROD and are described in detail later in this document. These changes do not fundamentally alter the sitewide remedy presented in the ROD. The modified remedy will remain protective of human health and the environment.

This ESD is prepared in fulfillment of EPA's public participation responsibilities under Section 117(c) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 U.S.C. Section 9601, et seq. (CERCLA), as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA), and Section 300.435(c)(2)(i) of the National Oil and Hazardous Substances Contingency Plan (NCP), 40 Code of Federal Regulations (CFR) Part 300. These laws and regulations require EPA to publish an ESD when the remedy to be implemented differs significantly from the remedy described in the ROD.

This ESD and supporting documentation will become a permanent part of the administrative record file for the site and is available for public review at the following locations:

EPA Superfund Records Center
999 18th Street, Fifth Floor
Denver, Colorado 80202
Hours: Monday-Friday 8:00 am - 4:30pm
Telephone: (303)312-6473

Utah Department of Environmental Quality
Division of Environmental Response and Remediation
168 North 1950 West, First Floor
Salt Lake City, Utah 84116
Hours: Monday-Friday 8:00am - 5:00pm
Telephone: (801)536-4479

Tyler Branch Library
315 South Wood
Midvale, Utah 84047

SUMMARY OF SITE HISTORY, CONTAMINATION PROBLEMS, AND SELECTED REMEDY

Little information is available describing historical activities on OU1 prior to the 1940's. Before that time, it is generally believed that the land was used as pasture with no industrial activities. A 1952 aerial photograph of the southern two-thirds of OU1 showed no evidence of commercial/industrial use or disturbed ground with the exception of a small landfill (less than 1 acre) and an associated unpaved road. Disposal of domestic trash and household goods occurred on the southwest corner of the LF Parcel from approximately the 1940's until a landfill was established by the county in the 1960's. The South Valley Water Reclamation District operated the Midvale WWTP on the Midvale OU1 Site (LR Parcel) from 1959 until 1986. The plant originally consisted of a trickling filter system. An aerated lagoon system consisting of three lagoons was added in 1976 and operated until the closure of the WWTP in 1986. The lagoons were closed according to an approved Closure Plan and material excavated as part of the Interstate Highway 215 construction project was subsequently deposited on the former lagoon location. The land to the south of the Midvale Slag OU1 Site was the site of historical smelting activities beginning in 1871 and ending in 1958.

It is the smelting activities that are presumed to account for the contaminants detected at OU1. The former smelter site is being addressed under CERCLA as Operable Unit 2 of the Midvale Slag Site. There are no known discrete waste sources at OU1. The only suspected waste features within the OU1 boundaries are the small landfill and abandoned WWTP and associated lagoons. Site characterization data suggest that both of the features have not contributed to elevated levels of the contaminants of concern (arsenic, cadmium, and lead) detected in site soils. It is inferred from available data that the metal (and metalloid) contaminants detected on OU1 are derived from discrete waste sources identified on OU2.

The transport mechanisms postulated to account for contaminants at OU1 include the following:

- Wind transport of slag dust onto OU1 from slag piles on OU2.
- Surface water transport of slag dust and possible larger particles onto OU1 from slag piles on OU2.
- Fallout of smelter fume onto OU1 from smelter chimneys on OU2 and/or the south chimney on OU1 of the Sharon Steel site.
- Deliberate placement of slag and possible other smelter waste onto OU1 to fill wetlands or other low areas, and to sand roads in the Winchester Estates development during snow or ice events.

The major components of the selected remedy, as presented in the ROD, include the following:

- Excavating native surface soils at 14 residential yards (Parcel WENW) to a minimum

depth of 18 inches with confirmatory sampling to identify areas requiring additional excavation. Clean fill is to be imported to restore the original grade, and each yard will be restored as closely as possible to its original condition. The wastes, being non-hazardous, would be transported to the nearest solid waste (RCRA Subtitle D) landfill.

- Placing a compacted permeable soil cover (Non-RCRA Cap) over exposed native soils in the undeveloped residential area (Parcel WESE). The cap would be accomplished using a portion of existing clean fill from the LG and LR parcels. This remedial action would be coupled with erosion controls (grading and revegetation, and ground water monitoring). The final compacted surface will be covered with topsoil and revegetated with native plants to minimize erosion by wind and surface water.
- Implementing deed restrictions or other institutional controls on the remaining parcels of the operable unit to prohibit residential land use unless additional remediation to residential soil clean up levels occurs.

DESCRIPTION OF THE SIGNIFICANT DIFFERENCES AND THE BASIS FOR THOSE DIFFERENCES

The first change is the elimination of the requirement to place a 2-foot-thick permeable soil cover over contaminated soil on Parcel WESE. Instead of covering contaminated soil on the WESE Parcel, contaminated soil will be excavated and relocated to Midvale Slag Operable Unit 2. The second change is to eliminate the requirement to not breach the monolayer soil cover on Parcel WESE. The ROD required, as a measure to prevent future development activities from breaching the soil cover, that deed restrictions or other institutional controls be implemented on the WESE parcel. This control is no longer necessary due to the remedy change on that parcel.

The changes reflected in this ESD are based on new information that the UDEQ and the EPA received subsequent to the issuance of the ROD. The UDEQ determined that the information supports the need to correct and/or clarify certain aspects of the remedy described in the ROD. These changes do not fundamentally alter the overall approach of the sitewide remedy.

Modification of two foot permeable soils cover on Parcel WESE: The ROD requires a 2-foot-thick monolayer soils cover on Parcel WESE. A vegetation plan would then be implemented with drought tolerant plant species consistent with the local ecosystem. Continued site investigations concurrent with the remedial design have indicated that, contaminated soils are generally within the uppermost 6 inches for the majority of the site. Due to the proximity of the Midvale Slag OU2 Site, it is more economical to excavate and relocate the contaminated soils.

This modification to the ROD offers two advantages; one, it is more economical; and two it provides for clean, developable property. Initial cost comparisons indicate that possibly 30 to 40 percent reduction in total remediation cost for the WESE parcel may be realized. This savings can be mostly attributed to the fact that lower costs are incurred in excavating, loading, hauling, and unloading 6 inches of material than would be if 18 inches of fill material were excavated, loaded, hauled, and unloaded with similar haul distances. This change is in compliance with all Applicable or Relevant and Appropriate Requirements.

Elimination of controls implemented for the protection of the permeable soil cover: Due to the remedy change and elimination of the permeable soil cover, the need to protect the cover is no longer needed. This leaves the WESE parcel more developable by not restricting future excavation.

SUPPORT AGENCY COMMENTS

The EPA concurs with the remedy changes presented in this ESD.

AFFIRMATION OF THE STATUTORY DETERMINATIONS

Considering the new information that has been developed and the changes that have been made to the selected remedy, UDEQ and EPA believe the remedy: remains protective of human health and the environment; complies with applicable or relevant federal and state requirements appropriate to this remedial action at the time the original ROD was signed; is cost effective; and utilizes permanent solutions to the maximum extent practicable for this site.

PUBLIC PARTICIPATION ACTIVITIES

Notice is hereby made that this ESD and its supporting documentation is available for review through the administrative record file located at the above listed locations.