Explanation of Significant Differences

Delatte Metals Superfund Site

Ponchatoula, Louisiana

United States Environmental
Protection Agency
Region 6
Superfund Division

December 2004

I. Introduction

Site Name: Delatte Metals Superfund Site
Site Location: Ponchatoula, Tangipahoa Parish, Louisiana
Lead Agency: U. S. Environmental Protection Agency, Region 6 (EPA)
Support Agency: Louisiana Department of Environmental Quality (LDEQ)

This decision document presents the Explanation of Significant Differences (ESD) for the Delatte Metals Superfund Site (Site), in Ponchatoula, Tangipahoa Parish, Louisiana. The ESD is issued in accordance with Section 117(c) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), 42 U.S.C. § 9601 et seq., as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA), and the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), Section 300.435(c)(2)(I). The Director of the Superfund Division has been delegated the authority to sign this ESD.

II. Statement of Purpose

The EPA is issuing this ESD for the Delatte Metals Superfund Site (Site) to document the increase in cost; increase in waste volume treated and disposed; and, revisions to the cleanup values. The total volume of waste treated and disposed was 85,444 tons; this represents an increase of 32,794 tons over the estimated 52,650 tons presented in the September 26, 2000, Record of Decision (ROD). The final remedial action (RA) cost of $13.1 million is an increase of $3.2 million over the ROD estimate of $9.9 million. Cleanup values were established for additional on-facility and off-facility areas identified for cleanup during the remedial action.

III. Site History

Background
The Delatte Metals Superfund Site includes the Delatte Metals, Inc., (DMI) facility, the abandoned North Ponchatoula Battery facility and parts of the off-facility areas. The Site is located at 19113 Weinberger Road in Tangipahoa Parish about 2.5 miles southeast of Ponchatoula, Louisiana with an estimated 645 persons living within one-mile. The combined area of the two facilities is approximately 18.9 acres. The approximate total area of the Site, encompassing both facilities and off-facility areas, is 56.8 acres.

During the 1960s, under the name Delatte and Fuscia Battery Company, battery recycling and smelting operations were conducted in the DMI facility area of the Site. In the early 1980s, the facility name was changed to Delatte Metals, Inc. The operations performed at the facility included spent lead-acid battery demolition to remove associated lead plates and the subsequent lead smelting of the lead plates to produce lead ingots. The typical process at the facility involved sawing off the tops of the batteries and removing the lead plates in the battery saw building. After opening the battery cases, the battery acid was drained into a sump. Before the

mid-1980s, the acid was pumped from the sump to an unlined pond located on the north side of the Site. After the closure of the acid pond, the acid was pumped through an underground pipe to the acid tank farm. The spent acid was then shipped offsite for recycling. Similar operations took place at the North Ponchatoula Battery facility.

From the mid-1980s through the 1990s, Louisiana Department of Environmental Quality (LDEQ) worked with both facilities in attempts to correct deficiencies in environmental practices. In September 1997, however, Louisiana Governor Mike Foster formally requested that the Site be addressed by EPA and listed on the Superfund National Priorities List (NPL). A Hazard Ranking System documentation package was subsequently prepared and the Site was proposed for addition to the NPL in July 1998. On January 19, 1999, EPA formally announced the addition of the Site to the NPL in the Federal Register.

Removal Action

On July 24, 1998, EPA signed an Action Memorandum for a time-critical removal action at the Site. The proposed action involved a large source control action that included site controls to address active areas of residential properties as well as stabilization, removal, and offsite disposal of crushed battery casings, slag piles, settling basin solids, waste in tote bags and waste piles inside the battery saw building. Onsite activities began on September 9, 1998, with the establishment of a command post and associated utilities, delivery of heavy equipment, construction of the loading truck staging area, and the identification of truck routes. Transportation and disposal of contaminated battery chips, battery mud and debris began on October 12, 1998. Removal activities were completed in less than six months and resulted in the removal of approximately 30,000 tons of crushed battery casings, smelter slag, smelter ash, and other source material; 68 tons of grossly contaminated smelter equipment; 28 drums of lead contaminated oil and oil debris; approximately 6,617 gallons of sulfuric acid; and, approximately 650 tons of scrap metal. In addition, contaminated sediment in a roadside ditch along Weinberger Road was excavated to facilitate the installation of a public water supply pipe, and contaminated soil found in the active areas of two residential properties was excavated.

Remedial Investigation/Feasibility Study

During 1999 and 2000, EPA conducted field sampling and investigation activities at the Site including collection and analyses of soil, sediment, surface water, ground water, and animal tissue samples. The Remedial Investigation and Feasibility Study reports identified the types, quantities, and locations of contaminants found in these samples and developed ways to address the contamination problems. A treatability study report was also completed to assess the applicability of different remedial technologies. In addition, a Human Health Risk Assessment and an Ecological Risk Assessment were performed to determine the current and future effects of contaminants on human health and the environment.

Lead was identified as the one contaminant of concern that posed the greatest potential risk to human health and ecological receptors and natural habitats. Lead was detected in all onsite surface and shallow subsurface soil sampling locations, in several surface and shallow subsurface offsite soil sampling locations, in sediment and surface water samples collected from

various off-facility ecological habitats and Selsers Creek, and in ground water samples from the first water-bearing zone that is a very acidic environment and tends to flow towards Selsers Creek.

Remedial Construction Activities
The EPA began onsite RA construction November 19, 2002. The EPA and the State conducted the RA as planned, and completed a pre-final inspection on July 30, 2003. During the inspection, several punch list items were identified for completion; however, RA construction activities had been completed according to design specifications. The preliminary close out report was signed on September 22, 2003, initiating the operational and functional period. The final inspection was conducted on July 21, 2004. All punch list items identified during the pre-final inspection were completed and no other outstanding items existed. The final Remedial Action report was accepted on September 22, 2004, initiating the Operation and Maintenance phase under the lead of the Louisiana Department of Environmental Quality.

IV. Selected Remedy

After review and response to comments, the Record of Decision was signed on September 26, 2000. The Remedial Action Objectives (RAOs) for the Site were and are to:

- Treat or remove the principal threat wastes at the Site;
- Reduce or eliminate the direct contact threats associated with contaminated soil; and,
- Minimize or eliminate contaminant migration to the ground water and surface waters to levels that ensure beneficial reuse of these resources.

In order to achieve these RAOs, certain numerical risk-based cleanup levels would have to be maintained or attained in the various environmental media. These were:

Soil: Industrial: 1,700 milligrams per kilogram (mg/kg) lead; Residential: 500 mg/kg lead; and, Ecological: 80 mg/kg lead.
Sediment: Industrial: Not Applicable (n/a); Residential; n/a; and, Ecological: 100 mg/kg lead.
Ground Water: Industrial: n/a; Residential: 15 micrograms per liter (µg/l) lead; and, Ecological: n/a.
Surface Water: Industrial: n/a; Residential: n/a; and, Ecological: 0.6 µg/1 lead.
Air: Industrial: n/a; Residential: n/a; and, Ecological: n/a.

Lead was the most abundant and widespread at the Site and was co-located at the same locations where other heavy metals were detected. Since the source of the contamination was mainly in surface and subsurface soils, the selected remedy was designed primarily to address the soil contamination. (The reference to soil contamination includes sediment.) It was expected that when the soil cleanup levels for lead were achieved, the other forms of cleanup would also be achieved: sediment to 100 mg/kg lead for ecological; ground water to 15 µg/1 lead for residential; and, surface water 0.6 µg/1 lead for ecological. Because the other metals were found

at the same locations as lead, it was expected that they would be addressed also.

Therefore, the measurement of success at accomplishing the RAOs was based on the media specific numerical cleanup levels that were achieved in the various designated areas of soil contamination. These were:

- Industrial: 1,700 mg/kg lead in soil;
- Residential: 500 mg/kg lead in soil; and,
- Ecological: 80 mg/kg lead in soil.

This ROD addressed the contamination in the soil, sediment, surface water and ground water at the Site by:

- Immobilization to address the principal threat wastes in the soil (thus eliminating the source of contamination for sediment, surface water, ground water);
- Offsite disposal to transport immobilized wastes to a disposal facility;
- Permeable treatment walls to neutralize the acidity of the shallow ground water and limit the migration of dissolved metals;
- Institutional controls in the form of deed notices to inform the public of Site conditions; and,
- Ground water monitoring to ensure the effectiveness of the selected remedy.

V. Basis for the Document

Cost

The original cost estimate to implement the remedial action described in the ROD was $9.9 million (net present worth). Costs were estimated for an anticipated 30-year Operation and Maintenance (O&M) time period and at a discount rate of 7%. More detailed cost estimate documentation can be found in the Feasibility Study. The bid price for the project was $12.2 million. The difference between the ROD estimate and the contractor bid value was due to the underestimation of costs associated with the permeable reactive barrier wall installation, required lime application, clear and grub activity, survey subcontractor costs, excavation/treatment/disposal costs, surface restoration and the need for storm water control.

Approximately $13.1 million has been expended on the RA. RA cost growth was due to change orders submitted in January, April, May, and June 2003. These orders were associated with the increase in the total volume of contaminated soil and waste excavated, treated, and disposed; the increase in the total amount of soil required for backfill; the unanticipated increase in total weight of contaminated wastes and soils; surface road failure during offsite disposal; additional site preparation (clear and grub) activity; permeable reactive barrier shoring requirements; extensive rainfall; and, rate changes associated with Site remedial activity. A breakdown of the final costs can be found in the final Remedial Action Report dated September 22, 2004.

Volume

Battery wastes were encountered at depths up to 15 feet below ground surface (bgs) and at on-facility locations not previously identified. Therefore, the discovery and remediation of these new locations increased the volume of waste material that required treatment and disposal. Because these were defined as principal threat wastes, removal, treatment and disposal were necessary to eliminate the wastes as a source of contamination for sediment, surface water, and ground water and as a threat to human health and the environment. No source materials discovered during the remedial action were left in place above the risk-based cleanup levels.

Cleanup Values

On January 8, 2003, EPA revised the cleanup criteria based on additional soil sample data collected during the RA. The purpose of this sampling was to better delineate areas designated for remediation. These data allowed areas to be more easily separated into future land use categories of ecological, residential, or industrial and then remediated based on the cleanup criteria for that particular use. Additional ecological areas not representative of drainage areas were reassessed using revised toxicity values resulting in a 200 mg/kg cleanup level for these areas.

On April 9, 2003, EPA revised the cleanup criteria for M-, P-, and Q- excavation grids since the areas were considered residential rather than ecological. These grids were located in established ecological environments. Because of intrusive remediation activities that eliminated these ecological environments and the possible reuse as residential, these areas were redefined as residential and thus required a residential cleanup value.

On May 15, 2003, EPA revised the cleanup criteria for Cypress Swamp. Weighing the detrimental effects of habitat destruction versus estimated risk in the Cypress Swamp area indicated that limiting remedial efforts to the removal of highly-contaminated sediments will serve to adequately protect current and future human health and the environment. Therefore, the sediments with concentrations greater than 500 mg/kg lead were removed to a depth of 6 inches (after removal of overlying detrital material) and back-filled with 6 inches of clean fill material. This removed a large portion of the contamination and provided a barrier to future ecological exposure to remaining contamination, while maintaining the hydrology and habitat value of the area.

VI. Description of Significant Differences

The EPA is issuing this ESD to document the increase in cost and the increase in waste volume as well as the revisions to the cleanup levels. No other significant differences exist between the final remedial action and the selected remedy presented in the 2000 ROD. All components of the 2000 ROD, including RAOs and remedial technologies, were instituted in order to achieve protection of human health and the environment.

Cost

Item	ROD Estimate	RA Total	Difference
Cost	$9.9 million	$13.1 million	$3.2 million

Volume

Item	ROD Estimate	RA Total	Difference
Waste Volume: treated and disposed	52,650 tons	85,444 tons	32,794 tons

Cleanup Values

On January 8, 2003, EPA revised the cleanup criteria based on additional data collected during the RA, resulting in further delineation of remedial areas. The following revisions were implemented.

1. For ecological excavation areas identified during the RI and RD, the soil remediation level was maintained at 80 mg/kg.
2. For additional ecological areas that were identified during the RA, soil was remediated to or below 200 mg/kg (around grids H-1, I-1, and O-1).
3. Sample point RA-16, near Grid O-1, with a concentration of 227 mg/kg was considered as effectively meeting the 200 mg/kg target. This determination was based on the isolation of the sample location, the existence of sample points with lower concentrations surrounding the area, and the conservative assumptions that were used to determine risk.
4. No excavation was to be performed within the dripline of the large magnolia tree in Grid I-1. The landowner had requested that the large magnolia tree not be removed. After reviewing additional sampling data from the area, removal of soil within the dripline of the magnolia was found not to be necessary.
5. On-facility soils were to be excavated to 1,700 mg/kg both horizontally and vertically.
6. Off-facility soils (except those identified in item 2) are to be excavated using the following criteria:
    - 0 to 6 inches below ground surface (bgs)—80 mg/kg lead in soil (ecological standard);
    - 6 to 24 inches bgs—500 mg/kg lead in soil (residential standard); and,
    - > 24 inches bgs—1,700 mg/kg lead in soil (industrial standard).

On April 9, 2003, EPA, revised the cleanup criteria for M-, P-, and Q- excavation grids since the areas were considered residential rather than ecological. Excavation within the tributary still used the ecological criteria. The revised criteria listed below were used.

- For soils 0 to 24 inches bgs, the cleanup level was 500 mg/kg lead in soil

(residential standard).

- For soils greater than 24 inches bgs, the cleanup level was the industrial standard, 1,700 mg/kg lead in soil.

On February 18, 2003, staff from the EPA, the U.S. Fish and Wildlife Service, the LDEQ, and Tetra Tech EM, Inc., met to discuss the remediation of the cypress swamp. At this meeting, EPA revised the cleanup level for the swamp to excavating to a depth of approximately 6 inches of sediment in areas where the lead concentrations exceeded 500 mg/kg.

VII. Support Agency Comments

The support agency has been consulted and provided the opportunity to comment on this ESD in accordance with NCP §§ 300.435 (c)(2) and 300.435 (c)(2)(i) and CERCLA § 121 (f).

VIII. Statutory Determinations

The EPA has determined that these significant changes comply with the statutory requirements of CERCLA § 121, 42 U.S.C. § 9621, are protective of human health and the environment, comply with Federal and State requirements that are applicable or relevant and appropriate to the remedial action, are cost-effective, and utilize permanent solutions and alternative treatment technologies to the maximum extent practicable. This remedy also satisfies the statutory preference for treatment as a principal element of the remedy (i.e., reduces the toxicity, mobility, or volume of hazardous substances, pollutants, or contaminants as a principal element through treatment). The hazardous wastes will be excavated, stabilized, and disposed offsite.

IX. Public Participation

This ESD will become part of the Administrative Record (NCP 300.825(a)(2)), which has been developed in accordance with Section 113 (k) of CERCLA, 42 U.S.C. § 9613 (k), and which is available for review at the Ponchatoula Branch Library, 380 N. 5th Street, Ponchatoula, Louisiana, 70454, Monday - Friday, 8:30 a.m. to 6:30 p.m.; Louisiana Department of Environmental Quality, Public Records Center, Galvez Building Rm 127, 602 N. Fifth Street, Baton Rouge, Louisiana, 70802, Monday - Friday, 8:00 a.m. to 4:30 p.m.; and, United States Environmental Protection Agency, Region 6, 12th Floor Library, 1445 Ross Avenue, Dallas, Texas, 75202, Monday - Friday, 7:30 a.m. to 4:30 p.m. As required by NCP § 300.435(c)(2)(i)(B), a Notice of Availability and a brief description of the ESD has been published in the local paper.

X. Authorizing Signatures

This ESD documents the significant changes related to the remedy at the Delatte Metals Superfund Site. These changes were selected by EPA with the concurrence of the Louisiana Department of Environmental Quality.

U.S. Environmental Protection Agency

By: Pamela Phillips, Acting Date: 12/14/04

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CONCURRENCE PAGE FOR THE DELATTE METALS SUPERFUND SITE EXPLANATION OF SIGNIFICANT DIFFERENCES

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