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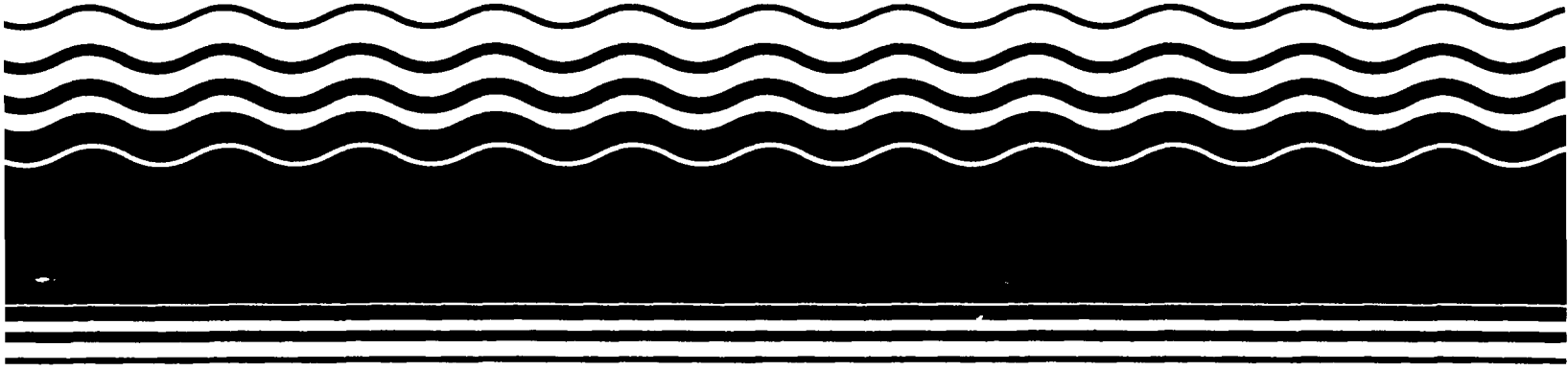
EPA Superfund Explanation of Significant Difference for the Record of Decision:

Brown's Battery Breaking, Shoemakersville, PA 12/1996



EXPLANATION OF SIGNIFICANT DIFFERENCES
BROWN'S BATTERY BREAKING
TILDEN TOWNSHIP, BERKS COUNTY, PENNSYLVANIA

A. INTRODUCTION

Statement of Purpose.

The Environmental Protection Agency, Region III (EPA) is issuing this Explanation of Significant Differences (ESD), pursuant to its authority in Section 117(c) of the Comprehensive, Environmental Response, Compensation and Liability Act of 1980, as amended (CERCLA), 42 U.S.C. § 9617(c), and the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), at 40 C.F.R. § 300.435(c)(2)(i), for the July 2, 1992, Record of Decision ("OU-2 ROD") issued for the Brown's Battery Breaking Superfund Site (the "Site") in Tilden Township, Pennsylvania. EPA is the lead agency for the Site and the Pennsylvania Department of Environmental Protection ("DEP") is the support agency. EPA has identified an aspect of the soils and casings treatment portion of the remedy set forth in the OU-2 ROD that is appropriate to change through this ESD. This change is being made to allow the contaminated soils and casings treatment portion of the remedy to be constructed at either a secondary lead smelter in Reading, Pennsylvania, as called for in the Record of Decision, or at any other location which is permitted to treat hazardous waste and has been determined to be acceptable to take CERCLA cleanup wastes pursuant to Section 121(d)(3) of CERCLA and 40 C.F.R. § 300.440. EPA has determined that this change does not fundamentally alter the remedy selected in the OU-2 ROD with respect to scope, performance, or cost. In accordance with 40 C.F.R. § 300.825(a)(2), this ESD will become part of the administrative record file located in EPA Region III, 841 Chestnut Building, Philadelphia, PA 19107 and at the Hamburg Borough Library, 35 North 3rd Street, Hamburg, PA 19526.

B. SITE CHARACTERISTICS.

The Site is an inactive lead-acid battery processing facility located in Tilden Township, Berks County, Pennsylvania. The facility recovered lead-bearing materials from automobile and truck batteries from 1961 to 1971. The operation involved breaking the vulcanized rubber battery casings, draining acid from the batteries, and recovering the lead-alloy grids, plates and plugs.

From 1961 to 1965, the lead-recovery process used at the Site consisted of placing batteries on their sides on a conveyer belt that carried them to a hydraulic guillotine. The guillotine sliced the top from each battery casing, allowing access to the lead alloy grids. In the early years of operation, the open-top

batteries were manually inverted and the sulfuric acid was poured directly onto the ground, along with the battery grids. The empty battery casings were deposited on the ground surface in several areas of the site. Battery grids were loaded onto a dump trailer for transport and resale.

From 1965 to 1971, the battery casings were rinsed with water to remove residual lead, and the rinsewater containing residual lead was collected in steel tanks. At the end of each work day, the lead was recovered and shoveled into the dump trailer containing the battery grids. The rinsewater was then dumped directly on the ground. Casings were crushed after rinsing. The smaller battery casing pieces were often used as a substitute for road gravel both onsite and offsite.

DEP's predecessor agency, the Pennsylvania Department of Environmental Resources ("DER"), initiated an investigation of lead contamination at a dairy farm located near the Site in the spring of 1980. The dairy farm had become contaminated through the use of crushed battery casings as road cover. The Site was identified as the source of the battery casings. Subsequent testing conducted by DER and the Pennsylvania Department of Health at the Site provided sufficient evidence to indicate that a serious health threat existed on the Site. EPA studied the Site in the fall of 1983 and conducted a Removal Action during the winter of 1983 and spring of 1984. This Removal Action consisted of excavation and consolidation of battery casings and contaminated soils. In addition, this action included onsite containment of the wastes beneath a low permeability soil cap located in the southwest quadrant of the Site. This area is referred to as the "containment area". The Site was placed on the EPA Superfund National Priorities List (NPL) in June 1986.

EPA began a Remedial Investigation/Feasibility Study (RI/FS) for the Site in 1988. The purpose of the RI/FS was to characterize the extent of contamination at the Site, quantify risks to human health, and evaluate potential environmental risks and remedial alternatives. Site characterization included sampling and analysis of surface and subsurface soil, ground water, surface water, sediment, ambient air, interior dust and blood-lead levels of onsite residents. A baseline risk assessment was conducted as part of the investigation and includes quantification of risks to human health. An evaluation of remedial alternatives is presented in the Feasibility Study portion of the RI/FS report.

Major findings of the RI/FS include the following:

- Onsite surface soils and shallow subsurface soils are contaminated with varying concentrations of lead, ranging from less than 500 mg/kg to 60,000 mg/kg.

- Soil and groundwater contamination resulted from onsite deposition of battery wastes. These wastes included crushed rubber battery casings, battery acid, and metallic lead grids, posts, and plugs. These materials remain onsite and must be addressed along with contaminated soils.

- The shallow groundwater aquifer onsite is contaminated with lead, metals, dissolved solids and acid.

- Lead is being transported from the Site to the adjacent Schuylkill River.

- The bedrock aquifer onsite is contaminated with sulfate, cadmium, beryllium, manganese, dissolved solids and acid.

C. SIGNIFICANT DIFFERENCES

Selected Remedy For the Soils and Battery Casings in the OU-2 ROD

The objective of the Soils and Casings portion of the OU2 ROD is excavation of soils and casings in areas where the lead level exceeds 1000 parts per million (ppm), and offsite treatment of those soils and casings using an innovative thermal treatment technology consisting of a new gassification furnace to be connected to an existing secondary lead smelter in Reading, Pennsylvania. EPA also has selected a contingent soil alternative of onsite solidification/stabilization of the soils and casings and offsite disposal should the innovative technology not prove implementable.

The ground water portion of the remedy (ie., pumping and treating the shallow bedrock aquifer and further study of the deep bedrock aquifer) is not a subject of this action.

Description of the Significant Differences

This ESD modifies the innovative thermal treatment technology, allowing the Potentially Responsible Party to construct the innovative technology at any location which is permitted to treat hazardous waste and is a facility determined to be acceptable to take CERCLA cleanup wastes pursuant to Section 121(d)(3) of CERCLA and 40 C.F.R. § 300.440. This ESD specifically does not allow for such construction to take place at an existing Superfund Site, even if all necessary permits are be obtained for such a Site.

The change is the result of significant public opposition which arose in the community surrounding the treatment facility

selected in the OU-2 ROD. The community residents expressed their opposition, which began after EPA issued the OU-2 ROD, through letters of protest and the filing of a federal lawsuit regarding alleged violations and environmental conditions at Exide Corporation's Laureldale plant (the selected treatment facility). However, the innovative technology remains more beneficial to the environment than the contingent solidification and off-site disposal remedy because it avoids the disposal of large volumes of waste into crowded landfills. Given the public opposition to the innovative technology being used at the Laureldale facility, the ESD provides greater flexibility and therefore a greater likelihood that the environmentally beneficial innovative remedy can in fact be implemented.

D. SUPPORT AGENCY COMMENTS

The above changes to the remedy have been coordinated with DEP pursuant to 40 C.F.R. § 300.435(c)(2)(i). DEP has concurred with the changes to the selected remedy as described in this ESD by letter dated September 25, 1996.

E. AFFIRMATION OF STATUTORY DETERMINATONS

Considering the new information that has been developed and the changes that have been made to the selected remedy, EPA believes that the remedy, as modified by this ESD, remains protective of human health and the environment, complies with Federal and State requirements that are applicable or relevant and appropriate to this remedial action, and is cost-effective. In addition, the revised remedy utilizes permanent solutions and alternative treatment (or resource recovery) technologies to the maximum extent practicable for this Site.

F. PUBLIC PARTICIPATION ACTIVITIES

This ESD has been made part of the administrative record file and is available for review at the two locations identified below:

United States Environmental Protection Agency
Region III
841 Chestnut Building
Philadelphia, Pennsylvania 19107
(215) 566-3157
Hours: 8:30 a.m. to 5:00 p.m.
Monday through Friday

or

Hamburg Borough Library
35 North 3rd Street
Hamburg, PA 19526
(215) 562-2843
Hours: M, T, Th 1:30-8:30 P.M.

EPA has opened a public comment period from November 27, 1996 to December 30, 1996 to solicit comments on this ESD. Comments should be sent to:

Richard Watman
Remedial Project Manager
United States Environmental Protection Agency
Region III (3HW22)
841 Chestnut Building
Philadelphia, Pennsylvania 19107

Thomas C. Voltaggio, Director
Hazardous Waste Management Division