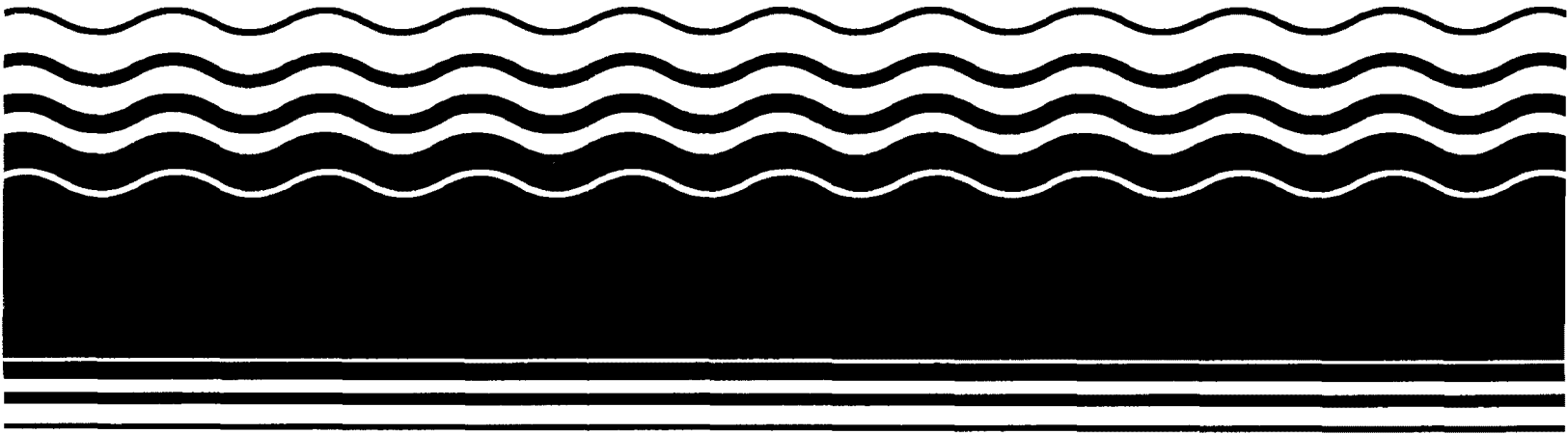


**PB98-963137
EPA 541-R98-149
March 1999**

**EPA Superfund
Record of Decision Amendment:**

**Hercules 009 Landfill
Brunswick, GA
8/14/1998**





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

4WD-SSMB

MEMORANDUM

SUBJECT: Explanation of Significant Difference
Hercules 009 Landfill Superfund Site
Brunswick, Glynn County, Georgia

FROM: Curt Fehn, Chief *[Signature]*
South Site Management Branch

TO: Richard D. Green, Director
Waste Management Division

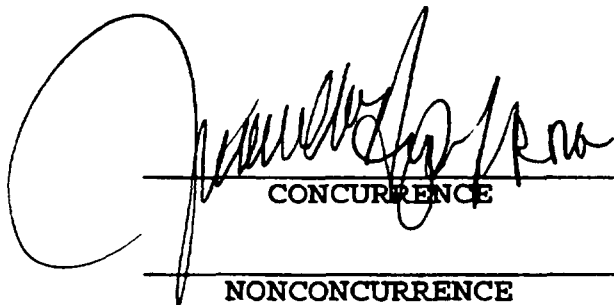
This memorandum serves to present the Hercules 009 Landfill Superfund Site Explanation of Significant Difference (ESD) for concurrence. The Record of Decision (ROD) was signed on March 25, 1993. The attached ESD amends the ROD by changing the type of cover to be placed on the treated landfill soils and sludges. The ESD also explains EPA's justification for determining the appropriate treatment depth in the landfill cells.

The remedy selected in the ROD includes in-situ stabilization of subsurface and consolidated surface soils, construction of a cover over the treated soils to reduce rainwater infiltration and direct contact, and long-term monitoring of groundwater.

Although the fundamental aspects of the remedy selected in the ROD are unchanged, the ESD is necessary to change the type of cover to be placed on the landfill. The State of Georgia, as represented by the Environmental Protection Division (EPD), has been provided an opportunity to comment on and concurs with this ESD. All other aspects of the selected remedy remain unchanged at the time of issuance of this ESD. I recommend concurrence with this ESD.

Attached is a copy of the ESD Fact Sheet which will be distributed to the public. The fact sheet explains the changes to the remedy and the Agency's rationale for the change.

Following concurrence with this ESD, the Agency will place the fact sheet and supporting documentation in the Administrative Record. EPA will provide notice of the availability of the ESD and supporting documentation to the public by notice in the local paper and mailing the fact sheet to the site mailing list.



CONCURRENCE

NONCONCURRENCE

8/14/98

DATE

DATE

Attachment



U.S. ENVIRONMENTAL PROTECTION AGENCY-REGION IV
Superfund Fact Sheet

August 1998

Hercules 009 Landfill Site

Brunswick, Glynn County, Georgia

Introduction

The U.S. Environmental Protection Agency (EPA) is issuing this Explanation of Significant Difference (ESD) to clarify the cleanup decision document for the Hercules 009 Landfill (Hercules) Superfund Site. EPA, in consultation with the Georgia Environmental Protection Division (GAEPD), signed the *Record of Decision (ROD)* selecting the remedy for the Site in March 1993. Although the clarifications provided in this ESD to the ROD represent a significant change to the construction of the landfill cover, they do not fundamentally change the remedy. The remedy remains fully protective of human health and the environment.

EPA is issuing this ESD in accordance with Section 117(c) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), as amended, and Section 300.435(c)(2)(i) of the National Contingency Plan (NCP). CERCLA is the Superfund law, and the NCP contains the regulations setting forth how EPA will carry out its responsibilities under the law. Terms in *bold italics* are defined in a glossary on page 3.

This ESD will become part of the *Administrative Record* for the cleanup decision for the Hercules

Site. The record is available for review at the *Information Repository* located at:

Brunswick-Glynn Regional Library
208 Gloucester Avenue
Brunswick, Georgia.

Background

The Hercules 009 Landfill Site consists of land originally used as a borrow pit during the construction of Highway Spur 25. Hercules was issued a permit in 1975 to use the property as a waste landfill for wastewater sludge generated during the manufacturing process for toxaphene. The permit was cancelled after discovering toxaphene in the drainage ditch adjacent to the site. The landfill was closed in 1983 in accordance with existing GA EPD regulations.

Hercules, Incorporated, as a Potentially Responsible Party (PRP) at the Site completed a *Remedial Investigation (RI)* and *Feasibility Study (FS)* in 1992 under EPA oversight pursuant to an Administrative Order on Consent (AOC). The RI was designed to gather enough information regarding the nature and extent of contamination in order for EPA to make a remedy selection. The RI found toxaphene contamination in soils, sludges, and groundwater. The

FS analyzed alternative remedies for ensuring protection of human health and the environment at the Site.

EPA selected the cleanup remedy described below for the site with a Record of Decision dated March 1993. The Agency then entered into a Consent Decree with Hercules to design and implement the remedy for the site.

Selected Remedy

The major components of the selected remedy for the Site include:

- Conducting a treatability study to evaluate in-situ stabilization of site soils and sludges,
- Implementation of in-situ stabilization of subsurface soils and sludges and consolidated surface soils,
- Construction of a cover over the treated soils to minimize rainwater infiltration and direct contact with the treated soil,
- Long-term monitoring of groundwater, as well as surface water and sediment in the on-site pond and adjacent drainage ditch,
- Implementation of a groundwater pump and treat system, if EPA believes that groundwater contaminants will not naturally attenuate below performance standards over time,
- Operation and maintenance of the cover for a minimum of thirty years, and
- Institutional controls to restrict land use and groundwater use.

Explanation of Significant Differences

The scope of this ESD involves a change in the cover for the treated soil in the landfill and in the treatment of the soils excavated from outside the landfill. This ESD also describes technical concerns and additional groundwater information, which arose or became available during the remedial design.

The ROD specified that surface soils from outside the landfill cells would be placed in the landfill for treatment. A multi-media or clay cover was to be constructed over the treated soils. The change described in this ESD is to treat the surface soils from outside the landfill in an on-site treatment unit and use the treated soil as the landfill cover. These surface soils originated in the site areas adjacent to the landfill and contain greater than 0.25 ppm toxaphene. The soils are currently stockpiled in the southern portion of the Hercules property.

The landfill cover will use soils from the stockpile which contain toxaphene at a concentration consistent with the treatment standards for hazardous wastes contained in Subpart D of RCRA Land Disposal Restrictions at 40 CFR Part 268. Previous testing results indicate that all stockpiled soil meets these standards. The soil will be screened to remove material greater than 3 inches, such as stumps and roots. Rejected material will be disposed of on-site or buried within the soil-cement material. The screened soil will be blended with dry Portland cement and water in an on-site pug mill. A mixture of at least 3% Portland cement and 97% soil by weight will be used for the cover. The blended

material will be placed and graded to form a cover over the entire landfill. The cover will be between one and three feet in thickness. The cover will be tested for compliance with construction standards. An additional multi-media or clay cover will not be constructed.

Technical and safety concerns have arisen during the Remedial Design phase of the project. Specifically, concerns exist for slope instability (which could cause equipment or personnel to fall into the treatment area), hydrostatic inflow (the "blow-in" of groundwater caused by different groundwater levels between the landfill and the regional groundwater), and admixture dilution (the mixing of excess groundwater with the soil/cement mixture). These situations could cause unsafe working conditions or unfavorable construction conditions, which could make the remedy less effective.

Groundwater monitoring data collected in 1994 and 1998 have shown that toxaphene has not migrated into the groundwater beneath the site. Treatment of subsurface soils and sludges above the regional groundwater table will add an additional level of safety to ensure that toxaphene will not migrate into the groundwater. The need for groundwater monitoring to determine whether the remedial action is effective is not modified by this ESD. Given current knowledge of site circumstances, EPA does not expect the groundwater pump and treat contingency to be needed at the site.

As a consequence of the groundwater data and the technical and safety concerns, EPA has determined that contaminated sludge and soil will be treated until the performance standard is met or the regional groundwater table is reached, whichever comes first. Treatment in this manner will reduce the

possibility of "blow-in" and of side sloping. Dilution will be controlled by limited groundwater pumping, as necessary. This action is consistent with the groundwater modeling used to determine the subsurface soil performance standard of 76 ppm. The groundwater model and its results apply to the soil located above the regional groundwater table, i.e., the unsaturated soil. If treatment does not proceed to the regional groundwater table, confirmatory samples will be taken to establish the concentration of toxaphene remaining in the soil at that level.

Data gathered by measuring groundwater levels tend to indicate that complete solidification of toxaphene sludge can be achieved notwithstanding the technical concerns expressed in this ESD. Toxaphene remaining in the soil will not pose an unacceptable risk to human health and the environment.

Statutory Determination

The selected remedy for the Hercules Superfund Site remains fully protective of human health and the environment, in compliance with Federal and State standards applicable or relevant and appropriate to the cleanup, and cost-effective.

Glossary

Administrative Record:

Documentation of basis for EPA selection of a Superfund cleanup remedy, placed with Information Repository.

Information Repository: Documents located near a Superfund site for public review.

PRP: Potentially Responsible Party - a company or individual who owned or operated or trans-ported or disposed waste at a Superfund site.

Record of Decision (ROD): Document stating EPA's rationale for cleanup remedy selection at a Superfund site.

Remedial Investigation (RI)/

Feasibility Study (FS): Superfund long-term cleanup study to collect necessary data to determine the type and extent of contamination at NPL sites and to evaluate possible risk reduction measures.

Superfund: Common name for the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) established to address uncontrolled or abandoned hazardous waste sites.



EPA Contacts

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