Explanation of Significant Differences
Combe Fill North Landfill Superfund Site

United States Environmental Protection Agency

Site Name:	**Combe Fill North Landfill Superfund Site**
CERCLA ID #:	**NJD980530596**
Site Location:	**149 Gold Mine Road Mount Olive Township, Morris County, NJ 07828**
Support Agency:	**U.S. Environmental Protection Agency, Region 2**
Lead Agency:	**New Jersey Department of Environmental Protection**

I. Introduction

This decision document presents an Explanation of Significant Differences (ESD) for the Combe Fill North Superfund Site (Site), located in Mount Olive, New Jersey. The Record of Decision (ROD) for Operable Unit 1 (OU1) which was issued on September 29, 1986, is modified by this ESD.

The U.S. Environmental Protection Agency (EPA) is issuing this ESD in accordance with Section 117(c) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended (CERCLA), 42 U.S.C. §§ 9601-9675, and the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), § 300.435(c)(2)(i).

This ESD will become part of the Administrative Record for the Combe Fill North Superfund Site (NCP 300.825(a)(2)), which has been developed in accordance with Section 113(k) of CERCLA, 42 U.S.C. § 9613(k).

This ESD and the Administrative Record are available for review online at https://www.epa.gov/superfund/combe-fill-north and at the information repository maintained at the Mount Olive Public Library located at 140 Wolfe Road, Budd Lake, New Jersey 07828, Monday - Thursday, 9:00 am to 8:00 pm, and Friday, 9:00 am – 5:00 pm, Saturday, 10:00 am to 4:00 pm; and at the EPA Region 2 Superfund Records Center, 290 Broadway, 18th Floor, New York, New York 10007, (212) 637-4308, Monday - Friday, 9:00 a.m. to 5:00 p.m.

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II. Statement of Purpose

Since the ROD was issued by EPA in 1986, EPA has identified the need to implement institutional controls (ICs) at the Site. The selected remedy in the 1986 ROD does not include ICs for soil and groundwater impacted by contamination at the Site. EPA has determined that a change to the selected remedy to incorporate the implementation of ICs at the Site is warranted.

The purpose of this ESD is to provide the public with an explanation of the modification to the selected remedy, summarize the information that supports this modification, and confirm that the revised remedial action complies with the statutory requirements of Section 121 of CERCLA, 42 U.S.C. § 9621. This ESD documents EPA's decision to implement ICs under New Jersey law in the form of a deed notice and the establishment of a groundwater Classification Exception Area/Well Restriction Area (CEA/WRA) as part of the OU1 remedy for the Site.

Section 117(c) of CERCLA and Section 300.435(c)(2)(i) of the NCP require the publication of an ESD when modifications to the original selected remedy are necessary and such modifications significantly change but do not fundamentally alter the remedy selected in the ROD with respect to scope, performance, or cost.

III. Site History and Contamination

Site History

The Site is located on Gold Mine Road near the junction of U.S. Highways 206 and 46 and Interstate 80 in Mount Olive Township, New Jersey. The landfill comprises 65 acres of the 103-acre property. A shopping center is located to the east; Gold Mine Road is located to the south and wooded areas are located to the north and west of the Site.

The Site was first operated as a municipal landfill beginning in 1966. Morris County Landfill, Inc., operated the landfill from 1969 until 1978. By deed dated September 18, 1978, the property was sold to the Combe Fill Corporation (CFC), a wholly owned subsidiary of Combustion Equipment Associates. The landfill reportedly accepted municipal, vegetative, and industrial (nonchemical) wastes and small amounts of dry sewage sludge. From September 1978 until January 1981, when the landfill was owned and operated by CFC, CFC was repeatedly cited for violations of New Jersey solid waste administration codes.

The predominant stratigraphic unit at the Site is terminal moraine. The soils consist of unsorted, non-stratified, and unconsolidated clay, silt, sand, gravel, cobbles, and boulders. The bedrock underlying the terminal moraine is Byram Gneiss, a very light- to dark-gray granitic gneiss. Geologic cross-sections illustrate an increase in the depth to bedrock to the north and northwest across the Site. The bedrock morphology is likely related to erosion and the scouring action of glaciers over rocks of the Appalachian Highlands.

The Site is underlain by a shallow unconfined aquifer in the glacial deposits. The water table in the glacial deposits is a subdued image of the surface topography which slopes to the northwest across the Site. Surface water runoff drains into two small streams, north and west of the Site, that are tributaries to Wills Brook, which empties into the Musconetcong River.

Some of the land surrounding the Site is wooded; the nearby developed areas are residential, retail, and light industry. The area around nearby Budd Lake is a developed resort and U.S. Route 46 is highly commercialized. The Site property is currently owned by Gold Mine Road Solar, LLC, a solar development company.

On September 8, 1983, the Site was included on the National Priorities List. The New Jersey Department of Environmental Protection (NJDEP) is the lead agency at the Site. On November 21, 1983, NJDEP

signed a cooperative agreement with EPA to conduct a remedial investigation/feasibility study (RI/FS) at the Site.

In August 1984, NJDEP initiated the RI/FS. Soil, leachate, surface water, sediments, and groundwater were sampled between December 1984 and July 1985. Low concentrations of hazardous substances were found at the Site during the RI. Soils, leachate, surface water, sediments, and groundwater were sampled between December 1984 and July 1985. Soils at the Site were found to contain methylene chloride at 123 parts per billion (ppb); ethylbenzene and toluene were found in leachate at 21 ppb and 25 ppb; and hexachlorobenzene, phenol, and bis(2-ethylhexyl) phthalate were found in the groundwater at the Site at 3.3 ppb, 56.6 ppb, and 49.5 ppb, respectively.

The draft RI/FS was completed in June 1986. The Site was covered with rocky, permeable soil, and waste was known to exist in a shallow aquifer that is connected to a deeper aquifer that served more than 10,000 people within two miles of the Site. As a result, this population was considered potentially threatened by contaminants that could enter this source of drinking water. This assessment was refined by NJDEP by conducting additional sampling events during and after the design and implementation of the remedy. Specifically, a review of groundwater sampling results from May 1992 to August 1998 indicated that volatile organic contaminant concentrations were detected below the Maximum Contaminant Levels (MCLs). However, metals contamination, specifically iron and manganese, has continuously exceeded the MCLs.

Site Contamination

Contaminants found at the Site were detected at levels below existing health risk guidelines in the following media:

Soil: Lead, Mercury, and Methylene Chloride
Leachate: Ethylbenzene and Toluene
Ground water (Monitoring Wells): Phenol, Phthalate, and Cyanide
Ground water (Potable Wells): Methylene Chloride, Trichloroethylene, and Selenium
Surface water: Phthalates and Lead

Some or all of the contaminants identified at the Site are hazardous substances as defined in Section 104(14) of CERCLA, 42, U.S.C. § 9601(14), and 40 C.F.R. § 302.4.

Recently, 1,4-dioxane groundwater concentrations detected in the perimeter wells and residential wells show that there are impacts from the landfill beyond the Site boundaries.

On November 27, 2017, NJDEP commenced activities to extend a municipal waterline to properties affected by 1,4-dioxane contamination located north/northwest of the Site. Each of the 28 existing domestic wells at these properties were decommissioned and all new service connections were made to connect to the municipal water supply of Mount Olive Township. On June 25, 2018, Phase 1 activities were completed.

On October 29, 2018, Phase 2 began. This phase involved the installation of nine new water service connections; sealing and abandoning of four existing commercial wells; installation of four new service connections at the properties where wells were abandoned; installation of five service connections; and installation of a Route 46 Water Main Crossing. Phase 2 was completed on March 7, 2019. The identified impacted or threatened residences were connected to the waterline and their potable wells were sealed.

Currently, annual groundwater and surface water sampling activities are ongoing. Additional sampling activities to fully delineate the groundwater contaminant plume emanating from the landfill, will be conducted by NJDEP. For private wells impacted by the landfill, residents are either supplied bottled water or connected to the public drinking water supply.

NJDEP is planning to install new monitoring wells and will schedule regular sampling of these new wells. The information from the monitoring well sampling will inform the extent of the CEA/WRA that will be established for the Site.

Surface water sampling was conducted at eight locations in March 2021 and few Site-related contaminants were detected. The surface water result of 1.1 ppb at SW-7 exceeded the screening level of 0.4 ppb for 1,4-dioxane. In August 2022, NJDEP collected three additional surface water samples for 1,4-dioxane, and one result exceeded the screening level at 1.5 ppb.

IV. Selected Remedy

EPA issued the OU1 ROD on September 29, 1986. This document is available in the Superfund Enterprise Management System under Record Number 500001.

The components of the selected remedy as outlined in the 1986 ROD included:

- Grade and compact the 65-acre waste disposal area;
- Cap the landfill in accordance with appropriate solid waste management criteria;
- Install a drainage system, including perimeter ditches and corrugated metal pipes;
- Install a methane venting system;
- Construct a security fence surrounding the Site; and
- Implement an appropriate monitoring program to ensure the effectiveness of the remedial action.

The remedial action objectives (RAOs) were:

- Ensure that the potential groundwater contamination from the landfill will not affect the water supply wells downgradient of the landfill Site.
- Prevent leachate from contacting people through surface water migration, direct contact, or chemical volatilization.

The RAOs were developed to address the potential release of hazardous substances, since at that time there was limited evidence of a significant release. Potential exposure routes included contact with groundwater and surface water that could be contaminated by chemicals leaching from the landfilled waste. The purpose of the cap is to provide adequate protection from potential releases to groundwater, which is used extensively for drinking water purposes, through the use of a clay layer above and below the waste material (see Figure 1).

In December 1987, NJDEP started remedial design activities through a cooperative agreement with EPA. Field sampling activities were conducted during the winter of 1988, and the final design was completed in May 1989.

In October 1989, NJDEP started remedial action activities to implement the selected remedy. On-Site construction to install the cap cover, monitoring wells, and other components of the selected remedy commenced in December 1989. Remedial action activities were completed in 1991. Detailed information on the remedial action is available in NJDEP's Close Out Report, dated April 21, 1993.

V. Description of Significant Differences and Basis for the ESD

The remedy specified in the OU1 ROD does not include ICs for soil and groundwater. Due to hazardous substances, pollutants, or contaminants remaining at the Site above levels that allow for unlimited use and unrestricted exposure to soil and groundwater, EPA has determined that institutional controls are necessary to ensure long term protectiveness of human health and the environment and to protect the integrity of the remedy. Accordingly, EPA has determined that institutional controls in the form of a deed notice and a

CEA/WRA should be implemented at the Site to minimize the potential for human exposure to landfill contamination.

CEA/WRAs are ICs that provide notice of restrictions on well installations and other uses of groundwater in a localized area where water quality standards are not being met. In addition, the implementation of a deed notice will restrict landfill disturbance and minimize exposure to contaminated soils at the Site.

As discussed above, NJDEP is continuing its investigation of off-site groundwater contamination. Once that investigation is complete, EPA and NJDEP will determine if any additional remedial measures are necessary.

VI. Support Agency Comments

NJDEP is the lead agency for the Site. EPA prepared this ESD and NJDEP was provided with the opportunity to review and comment on this ESD in accordance with NCP § 300.435 (c)(2) and CERCLA Section 121(f). The NJDEP concurred with this ESD in a letter dated September 25, 2023.

VII. Statutory Determinations

EPA has determined that the remedy, as modified by these significant changes, complies with the statutory requirements of CERCLA Section 121, 42 U.S.C. § 9621, is protective of human health and the environment, complies with federal and state requirements that are applicable or relevant and appropriate to the remedial action, is cost-effective, and utilizes permanent solutions and alternative treatment technologies to the maximum extent practicable.

Because the remedy selected in the 1986 OU1 ROD as modified by this ESD will result in hazardous substances, pollutants, or contaminants remaining on site above levels that allow for unlimited use and unrestricted exposure, the next statutory review will be conducted in September 2024.

VIII. Public Participation

In accordance with CERCLA Section 117(d) and Section 300.435(c)(2) of the NCP, a formal public comment period is not required when issuing an ESD. EPA will announce the availability of the ESD in a local newspaper of general circulation with a notice briefly summarizing this ESD. The ESD and the documents that provide the basis for the ESD will be placed in the Administrative Record for the Site in accordance with Section 300.825(a)(2) of the NCP and the information repository maintained at the address set forth in Section I, above. The ESD will also be placed on

EPA's Site page located at https://www.epa.gov/superfund/combe-fill-north.

IX. Authorizing Signature

EPA has determined the remedy for the Site, as modified by this ESD, is protective of human health and the environment, and will remain so, provided the actions presented in this report are implemented as described above.

This ESD documents the significant changes related to the remedy at the Site. U.S. EPA selected these changes with the concurrence of the NJDEP.

U.S. Environmental Protection Agency

Pat Evangelista Digitally signed by Pat Evangelista Date: 2023.09.27 17:08:26 -04'00'

Pat Evangelista
Director
Superfund and Emergency Management Division
EPA, Region 2

Date: September 27, 2023

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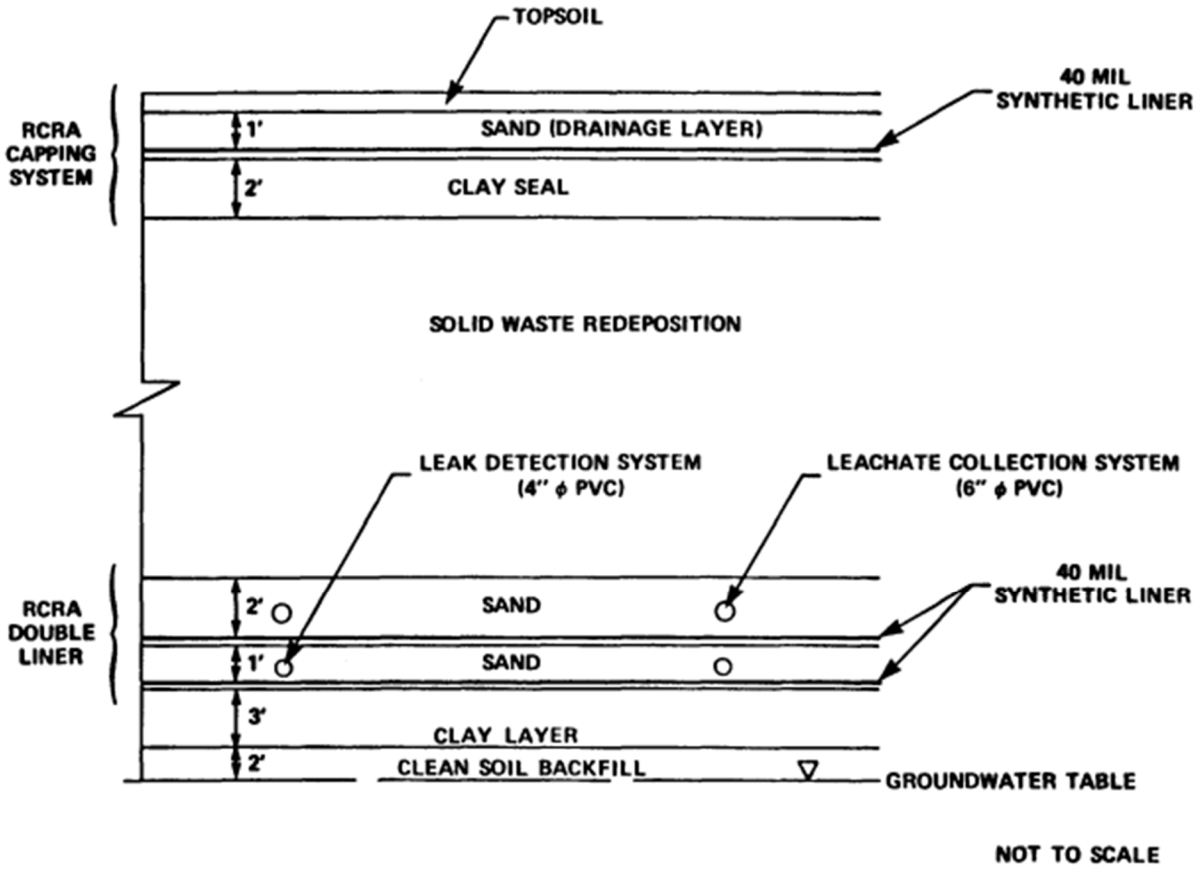
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LINER
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CLEAN SOIL BACKFILL
GROUNDWATER TABLE
NOT TO SCALE

Figure 1