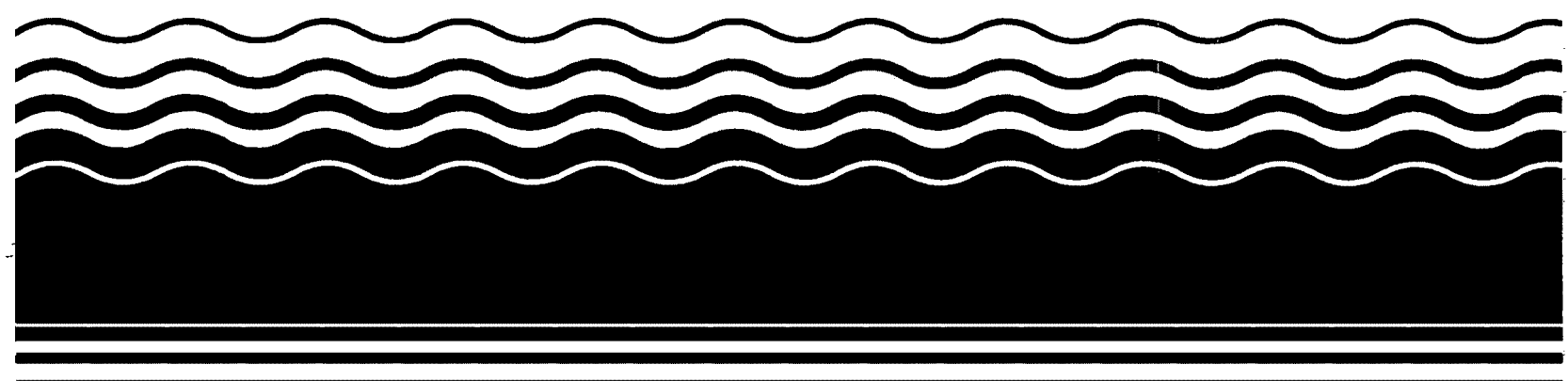


**PB98-963112  
EPA 541-R98-044  
September 1998**

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

**Ramapo Landfill  
Ramapo, NY  
11/26/1997**



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION II

DATE: NOV 25 1997

SUBJECT: Explanation of Significant Differences for the Ramapo Landfill Superfund Site

FROM: Richard L. Caspe, P.E., Director  
Emergency and Remedial Response Division

TO: Jeanne M. Fox  
Regional Administrator

Attached is an Explanation of Significant Differences (ESD) for the Ramapo Landfill Superfund site.

The March 31, 1992 Record of Decision (ROD) called for, among other things, the installation of a cap with an impermeable barrier only on the top (flat) portion of the Ramapo Landfill. In addition, the ROD indicated that the landfill's side slopes would not require an impermeable barrier, unless further study concluded that incorporating an impermeable barrier would result in a significantly more effective remedy.

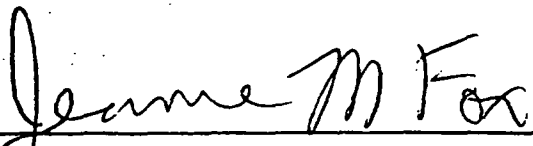
As a result of the studies called for in the ROD, it was determined that a landfill cover which included an impermeable barrier on the side slopes of the landfill would be significantly more protective and cost-effective than a cover without an impermeable barrier on the side slopes. The attached ESD documents these findings.

Please indicate your approval of the ESD by signing below.

If you have any questions related to the ESD, please call me at extension 4390.

Attachment

Approved:

  
\_\_\_\_\_  
Jeanne M. Fox  
Regional Administrator

11/26/97

Date

# Explanation of Significant Differences

## RAMAPO LANDFILL SITE

Town of Ramapo  
Rockland County, New York

EPA  
Region 2

December 1997

### INTRODUCTION

In accordance with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Section 117(c), and Section 300.435(c)(2)(i) of the National Oil and Hazardous Substances Contingency Plan, if after the Environmental Protection Agency (EPA) selects a remedial action, there is a significant change with respect to that action, an explanation of the significant differences and the reasons such changes were made must be published.

The March 31, 1992 Record of Decision (ROD) called for, among other things, the installation of a cap with an impermeable barrier only on the top (flat) portion of the Ramapo Landfill. In addition, the ROD indicated that the landfill's side slopes would not require an impermeable barrier, unless further study concluded that incorporating an impermeable barrier would result in a significantly more effective remedy.

As a result of the studies called for in the ROD, it was determined that a landfill cover which included an impermeable barrier on the side slopes of the landfill would be significantly more protective and cost-effective than a cover without an impermeable barrier on the side slopes. The engineering design of the remedy was completed in June 1994. The construction of the cover over the top and the side slopes of the landfill was completed in May 1997.

This Explanation of Significant Differences (ESD) will become part of the Administrative Record file for the site. The entire Administrative Record for the site, which includes the remedial investigation and feasibility study (RI/FS) report, ROD, and other relevant documents are available for public review at the following location:

Finkelstein Public Library  
24 Chestnut Street  
Spring Valley, New York

Hours: Mon.-Thur., 9:00 am - 9:00 pm  
Fri., 9:00 am - 6:00 pm  
Sat., 10:00 am - 5:00 pm  
Sun., 12:00 Noon - 5:00 pm

and

Suffern Free Public Library  
Washington and Maple Avenues

Suffern, New York

Hours: Mon.-Thur., 10:00 am - 9:00 pm  
Fri.-Sat., 10:00 am - 5:00 pm  
Sun., 1:00 pm - 5:00 pm

The Administrative Record file and other relevant reports and documents are also available for public review at the EPA Region II office at the following location:

U.S. Environmental Protection Agency  
290 Broadway, 18<sup>th</sup> floor  
New York, New York 10007

Hours: 9:00 am - 5:00 pm (Monday - Friday)

The difference from the selected remedy is not considered by EPA or the New York State Department of Environmental Conservation (NYSDEC) to be a fundamental alteration of the remedy selected in the ROD. The remedy modification increases the protectiveness of the action with respect to human health and the environment, increases the cost-effectiveness of the action, and complies with federal and state requirements that were identified in the ROD.

### SUMMARY OF SITE HISTORY, CONTAMINATION PROBLEMS, AND SELECTED REMEDY

The Ramapo Landfill site is located on a 96-acre tract in the Town of Ramapo, Rockland County, New York. Approximately 50 acres of the site are covered with fill material (the "landfill portion" of the site). The landfill portion of the site is mounded into two major lobes (northern and southern). Both landfill lobes consist of mixed refuse. Substances reportedly disposed of in the landfill portion of the site include industrial sludge and other wastes reportedly from a pharmaceutical company, sewage sludge, municipal refuse, asbestos, construction and demolition debris, yard debris, paint sludge, and liquid wastes reportedly from a paper company.

In 1971, the Rockland County Department of Health granted a permit to the Town of Ramapo for the operation of the sanitary landfill. Municipal waste was accepted in the landfill until 1984. The Town of Ramapo continued to accept construction and demolition debris at the site until 1989.

In September 1983, the Ramapo Landfill site was placed on

## the Superfund National Priorities List.

Based upon the results of the RI/FS, on March 31, 1992, a ROD was signed. The major components of the selected remedy are as follows:

- Installation of a cap on the top of the landfill;
- Excavation and consolidation of contaminated soils within the capped area;
- Installation of groundwater extraction wells to supplement the existing leachate collection system;
- Collection and diversion of leachate seeps to the leachate collection system;
- Conveyance of the collected leachate and groundwater to a publicly-owned treatment works for off-site treatment.
- Imposition of property deed restrictions to prevent the installation of drinking water wells at the site and restrict activities which could affect the integrity of the cap;
- Performance of operation, maintenance, and long-term monitoring activities; and
- Development of a contingency plan for rapid implementation of measures to protect nearby residents and users of groundwater if those measures are determined to be necessary.

The ROD also stated that an impermeable barrier would be placed on the landfill's side slopes if confirmatory studies indicated that the remedy's overall effectiveness would be significantly enhanced.

### DESCRIPTION OF SIGNIFICANT DIFFERENCES AND THE REASONS FOR THOSE DIFFERENCES

The confirmatory studies called for in the ROD indicated that the exclusion of an impermeable barrier from the landfill cap on the side slopes would result in increased infiltration of rainfall through the cap. This would cause the generation of greater quantities of contaminated groundwater than a landfill cap with an impermeable barrier on the side slopes, which would result in greater operational costs to collect and treat a larger volume of contaminated groundwater and leachate.

In addition, it was determined that either a thicker soil cover or an impermeable barrier would be needed on the side slopes to provide adequate control of landfill gases. The impermeable barrier was found to be the less costly of the two options.

Therefore, based upon the results of the confirmatory studies, it was concluded that a cap with an impermeable

barrier on the landfill's side slopes would be more protective and more cost-effective than a cap without an impermeable barrier on the side slopes.

### SUPPORT AGENCY COMMENTS

NYSDEC supports the change to the remedy due to its environmental, public health, and technical advantages over the remedy selected in the ROD.

### AFFIRMATION OF STATUTORY DETERMINATIONS

EPA and NYSDEC believe that the modified remedy increases the protectiveness of the action with respect to human health and the environment, increases the cost-effectiveness of the action, and complies with federal and state requirements that are applicable or relevant and appropriate to this remedial action. In addition, the remedy, continues to utilize permanent solutions and alternative treatment technologies to the maximum extent practicable for this site.

### PUBLIC PARTICIPATION ACTIVITIES

EPA and NYSDEC rely on public input to ensure that the concerns of the community are considered. Towards this end, EPA invites comments or questions related to this ESD. Comments or questions should be directed to:

Robert Nunes  
Remedial Project Manager  
Central New York Remediation Section  
U.S. Environmental Protection Agency  
290 Broadway, 20<sup>th</sup> Floor  
New York, New York 10007-1866

Telephone: (212) 637-4254  
Telefax: (212) 637-3966  
Internet: nunes.robert@epamail.epa.gov