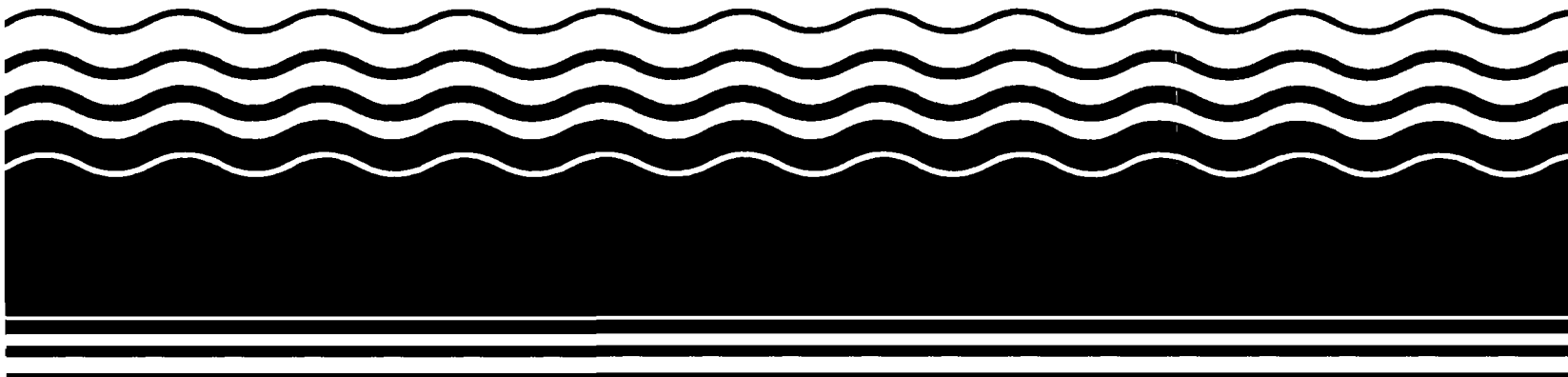


**PB96-963130  
EPA/ESD/R01-96/127  
May 1997**

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

**Landfill and Resource Recovery Inc.,  
(L&RR), North Smithfield, RI  
9/16/1996**



**DECLARATION FOR THE  
EXPLANATION OF SIGNIFICANT DIFFERENCES**

**SITE NAME AND LOCATION**

Landfill and Resource Recovery Site  
North Smithfield, Rhode Island

**STATEMENT OF PURPOSE**

This decision document sets forth the basis for the determination to issue the attached Explanation of Significant Differences (ESD) for the Landfill and Resource Recovery Site (the Site) in North Smithfield, Rhode Island.

**STATUTORY BASIS FOR ISSUANCE OF ESD**

Section 117(c) of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), requires that, if any remedial or enforcement action is taken under Section 106 of CERCLA after adoption of a final remedial action plan, and if such action differs in any significant respects from the final plan (i.e., in scope, performance or cost), the United States Environmental Protection Agency (EPA) shall publish an explanation of the significant differences and the reasons why such changes were made. EPA guidance (OSWER Directive 9355.3-02) further provides that issuance of an ESD is appropriate where the Agency determines the need for changes to the Record of Decision (the ROD) which are significant but which do not fundamentally alter the overall remedy. In this present case, because the required adjustments to the ROD do not fundamentally alter the selected remedy for the Site, this ESD is being issued properly.

In accordance with Section 117(d) of CERCLA, this ESD will become part of the Administrative Record which is available for public review at both the EPA New England Record Center in Boston, Massachusetts, and the North Smithfield Municipal Annex Building in North Smithfield, Rhode Island.

**OVERVIEW OF ESD**

On September 29, 1988, EPA issued a final remedial action plan in the form of a ROD for the Site. At the time the ROD was written, EPA had identified air emissions from the landfill as the principal risk at the Site. To address this risk, the ROD called for a comprehensive remedy including upgrading the landfill closure, construction and operation of a gas collection and thermal destruction treatment system, remediation of wetlands near the Site and Site monitoring. On March 8, 1991, EPA issued an ESD to remove requirement for the wetlands remediation. Since then, the landfill closure and an enclosed flare system have been designed and constructed. Operation, maintenance and monitoring activities are currently on-going at the Site.

More recently, EPA has re-evaluated information in the Administrative Record supporting the issuance of the ROD and has determined that a clarification to the remedy described in the ROD is necessary. Specifically, EPA has determined that the groundwater standards referenced in the ROD are to be used to evaluate and monitor the integrity and performance of the landfill closure and are not, by themselves, cleanup or performance standards for groundwater. This is consistent with the determination by EPA that the risk from the Site emanated from air emissions from the landfill and not from groundwater. EPA is reserving its rights to address groundwater at a later point in time should it be determined that the groundwater presents a risk to human health or the environment.

This ESD is being issued to clarify the remedy set forth in the ROD, as modified by the March 8, 1991 ESD.

#### DECLARATION

For the foregoing reasons, by my signature below, I approve the issuance of an Explanation of Significant Differences for the Landfill and Resource Recovery Site in North Smithfield, Rhode Island, and the changes stated therein.

9/16/96  
Date

Linda M. Murphy  
Linda M. Murphy, Director  
Office of Site Remediation and Restoration  
U.S. Environmental Protection Agency  
Region 1, EPA-NEW ENGLAND

**EXPLANATION OF SIGNIFICANT DIFFERENCES  
LANDFILL AND RESOURCE RECOVERY SITE  
NORTH SMITHFIELD, RHODE ISLAND**

**I. INTRODUCTION**

**A. Site Name and Location**

Site Name: Landfill and Resource Recovery Site

Site Location: North Smithfield, Providence County, Rhode Island

**B. Lead and Support Agencies**

Lead Agency: United States Environmental Protection Agency

Support Agency: Rhode Island Department of Environmental Protection

**C. Legal Authority**

Section 117© of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), requires that, if any remedial or enforcement action is taken under Section 106 of CERCLA after adoption of a final remedial action plan, and if such action differs in any significant respects from the final plan (i.e. scope, performance or cost), the United States Environmental Protection Agency (EPA) shall publish an explanation of the significant differences and the reasons such changes were made. On September 29, 1988, EPA issued a final remedial action plan in the form of a Record of Decision (the ROD) for the Landfill and Resource Recovery Site (the Site). The ROD called for a comprehensive remedy including upgrading the landfill closure, construction and operation of a gas collection and thermal destruction treatment system, remediation of wetlands near the Site and Site monitoring. On March 8, 1991, EPA issued an Explanation of Significant Differences (ESD) to remove requirement for the wetlands remediation. More recently, EPA has re-evaluated information in the Administrative Record supporting the issuance of the ROD and has determined that a clarification to the remedy described in the ROD is necessary. Accordingly, this second Explanation of Significant Differences (ESD) is being issued.

In accordance with Section 117(d) of CERCLA, this ESD will become part of the Administrative Record which is available for public review at both the EPA Region 1 Record Center in Boston, Massachusetts, and the North Smithfield Municipal Annex Building in North Smithfield, Rhode Island.

## **II. SUMMARY OF SITE HISTORY, CONTAMINATION PROBLEMS AND SELECTED REMEDY**

### **A. Site History and Contamination Problems**

The Site consists of an inactive landfill in the Town of North Smithfield, Rhode Island. In 1969, the landfill and adjacent areas were purchased by Landfill, Inc., which began operation as a solid waste disposal area. The landfill and adjacent areas were sold to Landfill and Resource Recovery, Inc., (L&RR, Inc.) in 1974, which developed it into a facility accepting commercial, domestic and industrial waste. L&RR, Inc. is the current owner of the Site. The Site is located on Oxford Turnpike, northwest of Pound Hill Road.

Beginning in March 1978, the Rhode Island Department of Environmental Management (RIDEM) required L&RR, Inc., to manifest hazardous industrial waste, as defined by state law, entering the landfill. Approximately 707,755 gallons of waste were manifested for disposal at the landfill between March 1978 and September 1979. The manifested waste included hazardous substances in liquid, solid and sludge form, both drummed and in bulk. In September 1979, RIDEM ordered L&RR, Inc., to cease accepting hazardous industrial wastes. Based on documents available in addition to the RIDEM manifests, EPA has estimated that more than two million gallons of waste, which include hazardous substances, was accepted for disposal at the landfill between March 1978 and September 1979.

In June 1983, L&RR, Inc. and RIDEM signed a Consent Order and Agreement that required L&RR, Inc. to perform certain landfill closure activities. The state court issued an order (the 1983 Court Order) approving the agreement between L&RR, Inc., and RIDEM for closure of the landfill. L&RR, Inc., commenced closure activities pursuant to the 1983 Court Order and landfilling ceased in January 1985. Certain of the closure activities included grading and covering approximately 80 percent of the landfill with a synthetic cover.

During 1985 and 1986, GCA Corporation, under contract to EPA, observed the landfill closure activities and evaluated whether such activities complied with the Resource Conservation and Recovery Act (RCRA) Subtitle C regulations. Based upon GCA's report EPA determined that the landfill closure failed to meet the requirements of the RCRA Subtitle C regulations, including, but not limited to, failing to minimize erosion, failing to minimize infiltration and failing to function with minimum maintenance. In June 1988, an EPA Remedial Investigation (RI) and Feasibility Study (FS) was completed for the Site. The site characterization performed as part of the RI evaluated potential contamination in air, groundwater, subsurface soils, surface water the Site. Health risks associated with contamination at the Site were evaluated for inhalation of gaseous emissions from the landfill, exposure to groundwater and exposure to surface water and sediment. Elevated levels of volatile organic compounds, deemed unsafe by EPA, were detected in emissions from landfill vents and in fugitive emissions from the

landfill. Significant erosion and maintenance problems, especially with the uncapped portion of the Site were also detected. Significantly, at the time the Site was evaluated, EPA determined there was no health risk presented by the groundwater at the Site.

On September 29, 1988, following the publication of EPA's proposed plan and the close of the public comment period on the plan, EPA issued a ROD which described the selected remedy to be implemented at the Site. This ROD was later modified by an ESD, issued on March 8, 1991.

On February 26, 1990, EPA mailed special notice letters pursuant to Section 122(e) of CERCLA to approximately one hundred (100) potentially responsible parties (PRPs) to initiate negotiations and facilitate a settlement to implement the selected remedy. As the resultant negotiations failed to produce a settlement, on June 29, 1990, pursuant to Sections 104(e) and 106(a) of CERCLA, EPA issued a Unilateral Administrative Order (UAO) to an owner and operator of the facility and a number of generators and transporters of hazardous substances for performance of response actions at the Site. This UAO was modified on October 19, 1990 and again on January 30, 1992.

The remedy has been designed and constructed. Certain of the PRPs are currently continuing operation, maintenance and monitoring activities. Negotiations are currently ongoing with certain of the PRPs to resolve cost issues and the work remaining regarding the ROD.

#### **B. Summary of the Selected Remedy**

The selected remedy for the Site, which is embodied in the ROD, as modified by the ESD and as currently being implemented, consists of the following components:

- a. Upgrading the Landfill closure by extending the steep side slopes in the uncovered northeast area of the Landfill, installing a synthetic cover in this area; (2) establishing a cover thickness of at least twenty-four (24) inches and vegetation over the entire Landfill; (3) upgrading the surface water runoff management system; (4) ensuring Site security by installing and maintaining a fence around the entire Site; and (5) establishing institutional controls.
- b. Collecting and treating the Landfill gas using a thermal destruction technology so that volatile organic compound concentrations in ambient air are reduced and risks to public health and the environment are minimized.
- c. Post-closure inspection, operation and maintenance of the Landfill cap, gas collection and treatment system, and other components of the remedy; long-term monitoring of the groundwater, surface water, Landfill gas emissions and migration, and ambient air to ensure that the remedy remains protective.

### **III. DESCRIPTION OF SIGNIFICANT DIFFERENCES**

As part of the RI, EPA sampled and analyzed groundwater near the base of the landfill. No significant levels of contaminants were found in groundwater at that time. As a result, the ROD did not directly address groundwater. It did, however, require that the landfill be closed in a manner that provides the maximum protection to groundwater by minimizing infiltration of liquids through the landfill cover. As a result, the ROD required the landfill to be covered in such a way so as to minimize the potential for groundwater contamination from the landfill. The ROD also calls for the groundwater to be monitored on a periodic basis to insure that the selected remedy remains protective of human health and the environment. Additional groundwater sampling has been conducted in 1995 and 1996 and the data is currently being evaluated.

Included in the ROD were a number of applicable or relevant and appropriate requirements including maximum contaminant levels (MCLs) under the Safe Drinking Water Act. At the time the ROD was issued, EPA did not clearly specify the role of these regulations in the selected remedy. Since the issuance of the ROD, EPA has re-evaluated information in the administrative record supporting the issuance of the ROD, including the RI. This ESD is being issued to clarify EPA's position that MCLs were included in the ROD to evaluate and monitor the integrity and performance of the landfill closure and are not, by themselves, cleanup or performance standards for groundwater. This interpretation is consistent with EPA's decision at the time of the ROD not to actively address groundwater at the Site.

As discussed above, the ROD also calls for the groundwater to be monitored on a periodic basis. The monitoring plan described in the ROD has been modified to some degree to ensure a more cost-effective monitoring program based upon specific hydrologic conditions and the new groundwater monitoring data. Data generated from this monitoring will be reviewed by EPA to determine the effectiveness of the landfill closure. Should this data indicate a defect or deterioration in the landfill closure, the landfill will be reexamined and corrective action will be taken, if necessary, to minimize infiltration and the subsequent migration of contaminants from the landfill. In addition, if particular wells consistently yield levels of chemicals above MCLs, consideration will be given to expanding the monitoring program to ensure that the remedy remains protective of human health and the environment. EPA has reserved its rights to address groundwater in the future should information indicate that the groundwater presents an unacceptable risk to human health or the environment. Finally, EPA has included surface water sampling and monitoring in the monitoring plan for the Site. This has been included so that EPA can more effectively evaluate the landfill closure at the Site.

### **IV. SUMMARY OF CHANGES**

The ROD for the Site has been clarified by the ESD to make clear that MCLs are to be used to evaluate and monitor the integrity and performance of the landfill closure and are not, by themselves, cleanup or performance standards for groundwater. In addition, monitoring requirements have been modified to reflect more recent data and a more cost effective approach to monitoring.

## **V. SUPPORT AGENCY COMMENTS**

The State of Rhode Island has deferred concurrence on this ESD until resolution of an existing State Court Order.

## **VI. STATUTORY DETERMINATIONS**

Considering the adjustment to the selected remedy set forth in the ROD, EPA believes that the remedy remains protective of human health and the environment, complies with all 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 technologies to the maximum extent practicable for this site.

## **VII. PUBLIC PARTICIPATION**

In accordance with Section 117(d) of CERCLA, this ESD will become part of the Administrative Record which is available for public review at both the EPA Region 1 Record Center in Boston, Massachusetts and the North Smithfield Municipal Annex Building in North Smithfield, Rhode Island.

## **VIII. CONTACTS**

For further information on this ESD or the L&RR Site please contact:

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Remedial Project Manager  
U.S. Environmental Protection Agency  
JFK Federal Building  
Boston, MA 02203  
(617)573-5749



In addition, the State of Rhode Island can also be contacted for additional information regarding the Site:

Greg Fine  
Division of Site Remediation  
Rhode Island Department of Environmental Management  
235 Promenade Street  
Providence, RI 02908-5767  
(401)277-3872