EXPLANATION OF SIGNIFICANT DIFFERENCE AT THE McALLISTER POINT LANDFILL SOURCE CONTROL OPERABLE UNIT NAVAL EDUCATION & TRAINING CENTER NEWPORT, RHODE ISLAND

AUGUST 1996

EXPLANATION OF SIGNIFICANT DIFFERENCE
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DECLARATION FOR THE EXPLANATION OF SIGNIFICANT DIFFERENCE

SITE NAME & LOCATION

Source Control Operable Unit - McAllister Point Landfill, Site 1
Naval Education and Training Center
Newport, Rhode Island

STATEMENT OF PURPOSE

This decision document sets forth the basis for the determination to issue the attached Explanation of Significant Difference (ESD) for the McAllister Point Landfill at the Naval Education and Training Center Superfund Site in Newport, Rhode Island.

STATUTORY BASIS FOR ISSUANCE OF THE ESD

Under Section 117(c) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), if the lead agency determines that the remedial action at a site differs significantly from the Record of Decision (ROD) for that site, the lead agency shall publish an Explanation of Significant Difference (ESD) between the remedial action being undertaken and the remedial action set forth in the ROD and the reasons such changes are being made. Section 300.435(c) of the National Contingency Plan (NCP), and EPA guidance (OSWER Directive 9355.3-02), indicate that an ESD, rather than a ROD amendment, is appropriate where the changes in issue do not fundamentally alter the overall remedy with respect to scope, performance, or cost. Because the adjustments to the remedial action do not fundamentally alter the overall remedy for the McAllister Point Landfill with respect to scope, performance, or cost, this ESD is properly being issued.

In accordance with Section 300.435(c) of the NCP, this ESD will become part of the Administrative Record that is available for public review at the NETC Public Works Office, and at the information repositories at the Newport Public Library, the Middletown Free Library, and the Portsmouth Public Library, all on Aquidneck Island. A notice that summarizes this ESD will be published in two local newspapers.

DESCRIPTION OF THE ESD

This Explanation of Significant Difference documents a change to the Record of Decision (ROD) for the McAllister Point Landfill Source Control Operable Unit at NETC Newport dated September 27, 1993, that significantly changes, but does not fundamentally alter the remedy selected in the ROD. This change does not alter the remedy of the source control ROD in terms of scope, performance or cost. It changes the ROD as follows:

- Permits construction to begin prior to issuance of the Management of Migration Operable Unit Record of Decision;
- Permits the investigations relating to the offshore sediments and landfill gas treatment to be conducted after the initiation and completion of landfill cap construction, respectively;
- Modifies the cap components in the far northern end and a long narrow strip of the eastern edge of the landfill, and along the side slope facing Narragansett Bay; and
- Permits inclusion of additional material from Derecktor Shipyard and the Melville North Landfill to be used as necessary subgrade fill in the construction of the cap.

DECLARATION

For the foregoing reasons, by my signature below, I approve the issuance of an ESD for the McAllister Point Landfill at the Naval Education and Training Center Superfund Site in Newport, Rhode Island and the changes stated therein.

By: _____ Date: 20 Jun 96
R. C. Bogle

Title: Captain, U.S. Navy
Commanding Officer
Naval Education and Training Center
Newport, Rhode Island

DECLARATION

For the foregoing reasons, by my signature below, I approve the issuance of an ESD for the McAllister Point Landfill at the Naval Education and Training Center Superfund Site in Newport, Rhode Island and the changes stated therein.

By: Linda M. Murphy
Linda M. Murphy

Date: Oct. 2, 1996

Title: Director, Office of Site Remediation and Restoration
U.S. Environmental Protection Agency, Region I
JFK Federal Building
Boston, Massachusetts

EXPLANATION OF SIGNIFICANT DIFFERENCE
McALLISTER POINT LANDFILL
SOURCE CONTROL OPERABLE UNIT
NAVAL EDUCATION TRAINING CENTER
NEWPORT, RHODE ISLAND

I. INTRODUCTION

A. Site Name and Location:

Site Name:	Site 01 - McAllister Point Landfill Naval Education Training Center (NETC)
Site Location:	Newport, Rhode Island

B. Lead and Support Agencies

Lead Agency:	United States Department of the Navy (Navy)
Support Agencies:	United States Environmental Protection Agency (USEPA)
	Rhode Island Department of Environmental Management (RIDEM)

Pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) 120(e), the Navy, USEPA and RIDEM entered into a Federal Facility Agreement (FFA), dated March 23, 1992, regarding the cleanup of environmental contamination at NETC. The FFA sets forth the roles and responsibilities of each of the parties.

C. Legal Authority

Under CERCLA 117(c), the National Contingency Plan (NCP) 300.435(c), and USEPA guidance (OSWER Directive 9355.3-02), the lead agency may determine that a significant change to the selected remedy, as described in the Record of Decision (ROD), is necessary after the ROD is signed. The lead agency is then required to address post-ROD significant changes through a published explanation of significant difference and the reasons such changes were made. USEPA guidance (OSWER Directive 9355.3-02) further categorizes changes to a ROD as either a non-significant or minor change; a significant change to a component of the remedy; or a fundamental change to the overall remedy. The Navy, as lead agency has determined that there is a significant difference between the remedial action being taken and that set forth in the ROD, and is therefore required to publish an Explanation of Significant Difference (ESD) explaining the changes in the remedy and the reasons such changes are being made.

D. Summary of the Explanation of Significant Difference

This Explanation of Significant Difference documents a change to the September 27,1993 Record of Decision (ROD) for the McAllister Point Landfill Source Control Operable Unit at NETC Newport. The herein documented change significantly changes, but does not fundamentally alter the remedy selected in the ROD. The change does not alter the remedy of the source control ROD in terms of scope, performance, or cost, but could potentially impact costs of any future remediation of sediments associated with the Management of Migration Operable Unit at the landfill. The change to the ROD is as follows:

- Permits construction to begin prior to the issuance of the Management of Migration Operable Unit Record of Decision;
- Permits the investigations relating to the offshore sediments and landfill gas treatment to be conducted after the initiation and completion of landfill cap construction, respectively;
- Modifies the cap components in the far northern end and a long narrow strip of the eastern edge of the landfill, and along the side slope facing Narragansett Bay;
- Permits inclusion of additional material from Derecktor Shipyard and the Melville North Landfill to be used as necessary subgrade fill in the construction of the cap.

E. Availability of Documents

This ESD will be added to the Information Repositories and made available to the public at the following locations:

Public Works Office
Naval Education and Training Center
Newport, Rhode Island 02841-5000
(401) 841-3735

Newport Public Library
300 Spring Street
Aquidneck Park
Newport, Rhode Island 02840
(401) 847-8720

Middletown Free Library
700 West Main Road
Middletown, Rhode Island 02842
(401) 846-1573

Portsmouth Public Library
2658 East Main Road
Portsmouth, Rhode Island 02871
(401) 683-9457

II. SUMMARY OF SITE HISTORY, ENFORCEMENT HISTORY AND SELECTED REMEDY

A. Site Description

NETC Newport is a National Priorities List (NPL) site. There are four areas of concern (AOC's) and seven study areas (SA's) within NETC Newport that are under investigation. This ESD relates to the McAllister Point Landfill (Site 01).

Portions of the NETC facility are located in Newport, Middletown, and Portsmouth, Rhode Island. The facility layout is long and narrow, following the shoreline of Aquidneck Island for nearly 6 miles bordering Narragansett Bay. A facility location map is provided on Figure 1. The McAllister Point Landfill is located in the central portion of the facility, in the town of Middletown, Rhode Island, as shown in Figure 2.

The McAllister Point Landfill site covers approximately 11.5 acres and is situated between Defense Highway and Narragansett Bay. Penn Central Railroad tracks run in a north-south direction along the eastern side of the site, parallel to Defense Highway. Access to the site is from Defense Highway in the south-central portion of the site. Figure 3 shows the layout of the site.

B. Site History

The Newport base first became active in 1869 with the experimental Torpedo Station at Goat Island. From the 1900's through World War II, the Newport base was used for a refueling depot. Following World War II, NETC Newport was restructured to support research and development, specialized training and preparedness for modern warfare.

The McAllister Point Landfill was the site of a sanitary landfill which operated over a 20-year period. From 1955 until the mid-1970's, the site accepted all wastes generated at the Naval complex. The landfill received waste from all operational areas (machine shops, ship repair, etc.), Navy housing areas (domestic refuse), and from the 55 ships homeported at Newport prior to 1973 (approximately fourteen 40-cubic yard containers each day). The materials disposed at the site reportedly included spent acids, paints, solvents, waste oils (diesel, lube, and fuel), and polychlorinated biphenyl-contaminated transformer oil.

During the period of 1955 through 1964, wastes were trucked to the site, spread with a bulldozer, and covered. In 1965, an incinerator was built at the landfill. From 1965 through 1970 to 1971, approximately 98 percent of all the wastes were burned before being disposed in the landfill. The incinerator was closed around 1970 due to the resultant air emissions. During the remaining years that the site was operational, all wastes were again disposed directly into the landfill. Based on a review of aerial photographs of the site covering the period from 1965 through 1975, a change in the shape of the shoreline in the central portion of the site is evident, indicating filling of Narragansett Bay in this area.

Following the closure of the landfill at McAllister Point, a three-foot thick covering of clay/silt was reportedly placed over the site. Current observations confirm the presence of a clay/silt material over portions of the landfill, although it is not continuous over the entire landfill area.

C. Regulatory History

A summary of regulatory history at NETC Site 01 since the issuance of the Source Control Operable Unit ROD follows:

- The Navy and USEPA signed a ROD for the Source Control Operable Unit at the McAllister Point Landfill (Site 01) on September 27, 1993. Under CERCLA 120(e), remedial action must begin 15 months later, or December 27, 1994.

  In October 1993, the Phase II RI fieldwork began at the McAllister Point Landfill and was completed in January 1994.

- In December 1993, the 35% design development for the source control McAllister Point Landfill cap was submitted. Regulatory comments were received January 31, 1994

- On February 14, 1994, the draft Phase II RI report for the McAllister Point Landfill was submitted. Regulatory comments were received April 6, 1994.

- On March 21, 1994, the 90% design submission for the source control McAllister Point Landfill cap was submitted. Regulatory comments were received May 5, 1994.

- In May 1994, bidding documents for the McAllister Point Landfill Cap were submitted to the Navy. Contracting with the Navy's Remedial Action Contractor began. Bidding documents were forwarded to regulators August 31, 1994.

- On July 5, 1994, the draft final Phase II RI report for the McAllister Point Landfill was submitted. Regulatory comments were received August 5, 1994.

- Construction of the landfill cap started December 27, 1994.

D. Selected Remedy

The 1993 ROD for the Source Control Operable Unit at McAllister Point Landfill required a RCRA Subtitle C multi-layer cover system for the landfill. This cover system provides containment and isolation of the landfill contents, control of leachate generation as a result of surface infiltration, and protects against surface erosion and landfill gas migration. The cover system addresses the principal threats to human health and the environment and is intended to be a permanent source control remedy.

In summary, the selected remedy includes the following components:

- Capping of the site with a RCRA Subtitle C multi-layer cap.
- Shore protection to prevent cap damage from wave action and storm surge events and surface controls to minimize erosion and manage runoff.
- Landfill gas controls to manage landfill gas migration.
- Use of fencing to control site access and future site use.
- Five-year reviews to assess the performance of the containment system.
- Required additional investigations to evaluate the need to remediate groundwater, hot spots, offshore sediments, and landfill gases.

III. DESCRIPTION OF SIGNIFICANT DIFFERENCE

The Source Control ROD issued in September 1993 states:

> "The selected remedy addresses remediation of the source of contamination at the McAllister Point Landfill site by eliminating or reducing the risks posed by the presence of the landfill at the site. This action is intended to be the permanent source control remedy for Site 01 and will be combined with a management of migration remedial alternative at a later date, if required. A Record of Decision will be issued for the management of migration operable unit prior to the commencement of construction of the source control operable unit remedial action."

The selected remedy for the Source Control Operable Unit is described in the ROD issued in September 1993. The remedial design/remedial action being taken by the Navy for the source control operable unit is consistent with the requirements set forth in the 1993 ROD. The following changes are being made to the Source Control ROD:

> Construction may begin before issuance of the Management of Migration Operable Unit Record of Decision;

The management of contaminant migration at the McAllister Point Landfill site was to be addressed by a second operable unit with the management of migration remedial alternatives to be developed and evaluated following the completion of additional field investigations. The 1993 ROD specified the nature of the additional field investigations to be conducted and that the Record of Decision for the management of migration operable unit was to be issued prior to the commencement of construction for the source control operable unit.

The Phase II Remedial Investigations (RI) commenced in October 1993 and were conducted in accordance with the approved Phase II RI work plan with findings of the investigations submitted in accordance with the FFA (i.e., draft and draft final Phase II RI reports). Results of the investigations to determine nature and extent of groundwater contamination, and hot spots were conducted and presented in the Phase II RI Report. Leachate generation calculations were prepared as part of the landfill cap design and presented in the Leachate Generation, Fate and Transport Report. All Phase II RI findings were evaluated during the design and review of the source control RCRA Subtitle C landfill cap.

Review of the Phase II RI results identified some outstanding issues that must be fully addressed before completing the decision-making documents for the management of migration operable unit. The primary issue is the requirement for additional data in order to fully characterize the nature and extent of contaminated near-shore sediments and associated ecological risks. In addition, outstanding technical issues for the Leachate Generation Fate and Transport modeling and bedrock investigations must be resolved. As a result of the outstanding issues, USEPA and RIDEM have not fully concurred on the results of the Phase II RI Report or the Leachate Generation, Fate and Transport Report. To determine whether leachate remediation is necessary, the Navy plans to monitor groundwater contaminant concentrations and compare these results to the modeling study.

Based on the unresolved issues, nonconcurrence of the Phase II RI and the complexity of the integration of the actions associated with the two operable units, completion of the Feasibility Study, Proposed Plan and Record of Decision for the Management of Migration prior to the commencement of construction of the source control operable unit remedial action was not achievable. This ESD does not alter the remedy of the source control ROD in terms of scope, performance or cost, but recognizes that it was appropriate to begin construction before issuance of the Management of Migration Operable Unit Record of Decision.

> Investigations relating to the offshore sediments and landfill gas treatment will be conducted during Source Control Operable Unit remedial action;

The 1993 ROD required that several investigations, including investigations relating to the offshore sediments and landfill gas treatment, be undertaken so that an appropriate landfill cap design could be prepared. The Navy initially planned to examine placing the offshore sediments under the cap if they required remediation. The ecological risk assessment for the sediments offshore of the McAllister Point Landfill, issued in September 1995, indicated that such sediments pose a risk to biota communities adjacent to the landfill. The Navy, USEPA, and the RIDEM are evaluating the appropriate remedy for these sediments.

The Navy has designed a passive gas collection system for installation with the cap. Landfill gas concentrations will be monitored to assess the design accuracy and determine whether active gas collection or gas treatment is appropriate. If active gas collection is necessary, the passive gas collection system will be converted into an active gas collection system.

- Additional materials from Derecktor Shipyard and Melville North Landfill are being used as necessary subgrade fill in the construction of the cap;

Materials excavated during a removal action undertaken by the Navy at the former Derecktor Shipyard (see Figure 2) has been consolidated under the RCRA Subtitle C cap. Expended black beauty blasting grit had been stored at Derecktor Shipyard. Approximately 16,600 cubic yards of grit and impacted soil was transported to the landfill and graded into the waste layer, and will lie under the completed cap. The removal of such material had some environmental benefit in itself, and all of this material was necessary for use as subgrade fill during the cap construction. Soil from a separate removal action at the Melville North landfill is likewise being used. This soil is contaminated with oil, and showed characteristics of unacceptable leachable lead levels. The lead in this soil is fixated with cement to prevent leaching.

> The cap components in the far northern end, in a long narrow strip of the eastern edge of the landfill, and on the lower portion of the side slopes will not conform to RCRA Subtitle C capping requirements.

A soil cap will be placed over a triangular portion of the far northern end of the landfill as well as along a narrow strip of the eastern edge of the landfill and in the railroad right-of-way adjacent to the railroad tracks. Available information indicates that relatively thin deposits of debris and fill (five feet or less) that do not contain hazardous substances were placed in these northern and eastern areas. The soil cap will serve as a barrier to existing surface soil and is similar to the closure provided over solid waste or construction debris landfills. The soil cap will be in direct contact with the adjacent RCRA Subtitle C cap. On the side slopes facing Narragansett Bay, the impermeable cap layer will not extend below five feet above mean high water. This will minimize potential effects of differential pressure due to tidal action on the face of the landfill.

IV. SUPPORT AGENCY COMMENTS

The Navy, USEPA, and RIDEM recognize that the meeting of the Management of Migration Record of Decision before construction of the source control remedial action was not possible. USEPA and RIDEM are aware of the requirement to modify the source control operable unit ROD as described above. With these changes, the Navy is addressing contamination at the McAllister Point Landfill in a manner that remains protective of human health and the environment. The USEPA and the RIDEM support these changes.

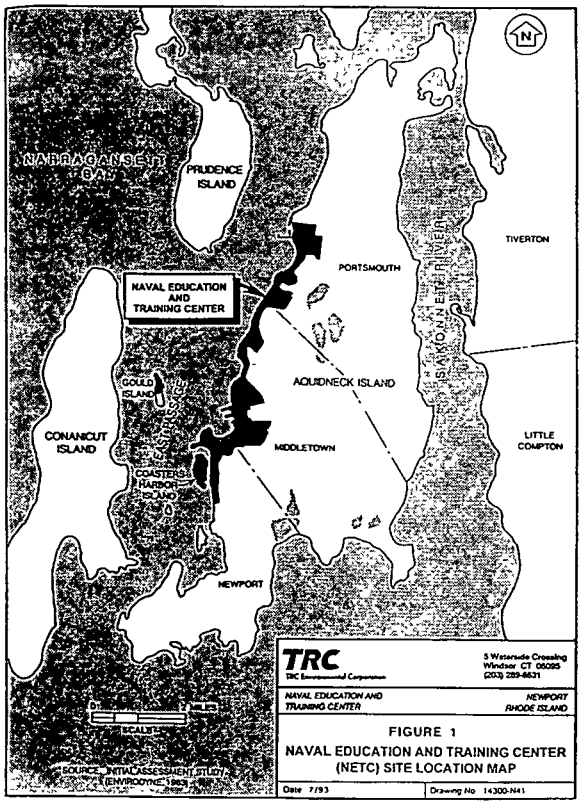
V. STATUTORY DETERMINATIONS

Considering the above-described modification to the Source Control Operable Unit ROD, the Navy believes that the modified remedy remains protective of human health and the environment, complies with Federal and State requirements that are applicable or relevant

and appropriate to the remedial action, and is cost-effective.

VI. PUBLIC PARTICIPATION

This ESD, as well as all other material relating to investigations and remedy selection, is available for public review and comment at the locations listed in Section I. A notice of availability and brief description of the ESD will be published in two local newspapers.



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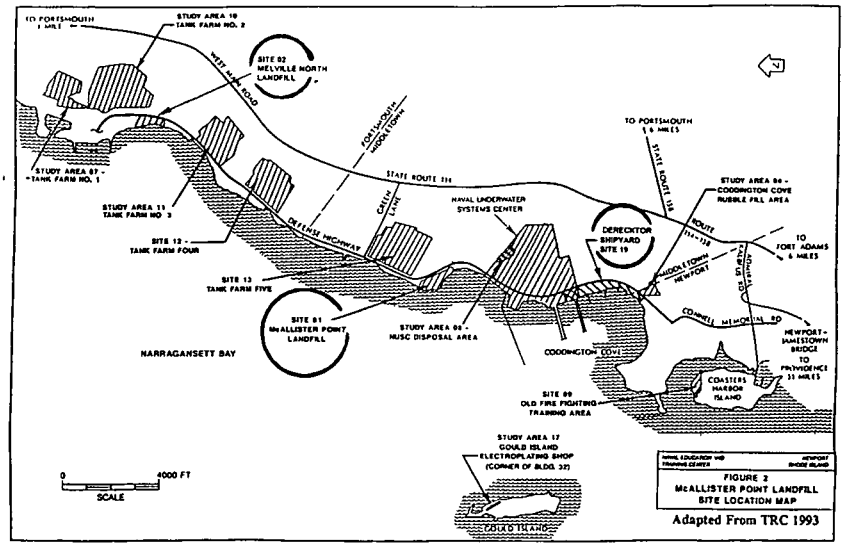
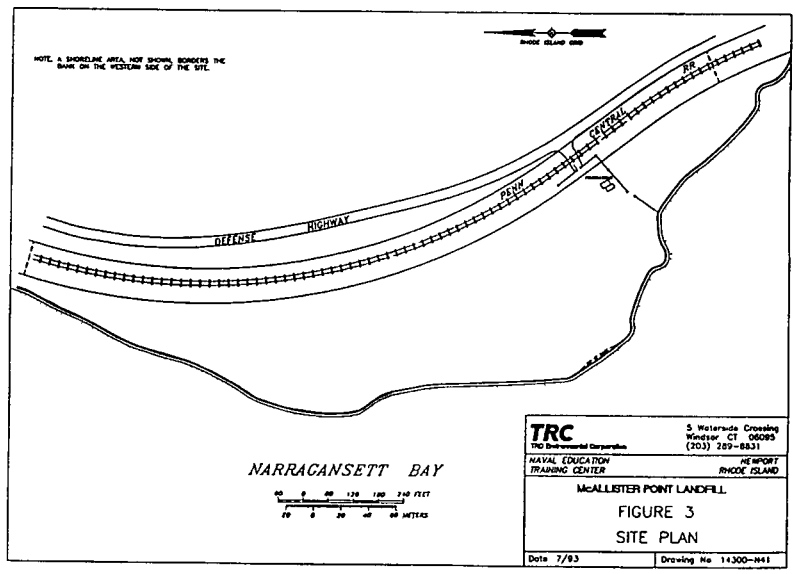
STUDY AREA AND LOCUS PLAN





ACRONYMS

AOC	Area of Contamination
ARAR's	Applicable or Relevant and Appropriate Requirements
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
ESD	Explanation of Significant Difference
FFA	Federal Facility Agreement
FS	Feasibility Study
IAS	Initial Assessment Study
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NETC	Naval Education and Training Center
NPL	National Priorities List
OSWER	Office of Solid Waste and Emergency Response
PCB	Polychlorinated biphenyl
RCRA	Resource Conservation and Recovery Act
RI	Remedial Investigation
RIDEM	Rhode Island Department of Environmental Management
ROD	Record of Decision
SA	Study Area
USEPA	United States Environmental Protection Agency