Five-Year Review

for

Naval Station Newport
Newport, Rhode Island

Engineering Field Activity Northeast
Naval Facility Engineering Command
Contract Number N62467-94-D-0888
Contract Task Order 0842

December 2004

FIVE-YEAR REVIEW
FOR
NAVAL STATION NEWPORT
NEWPORT, RHODE ISLAND

COMPREHENSIVE LONG-TERM
ENVIRONMENTAL ACTION - NAVY (CLEAN) CONTRACT

CONTRACT NUMBER N62467-94-D-0888
CONTRACT TASK ORDER 0842

Prepared for:
Department of the Navy
Engineering Field Activity Northeast
Environmental Branch (Code EV2)
Naval Facilities Engineering Command
10 Industrial Highway, Mail Stop #82
Lester, Pennsylvania 19113-2090

APPROVED:

R.P. McLaughlin — 10 Dec 04

CAPT Robert P. McLaughlin, Jr. — **Date**
Commanding Officer
Naval Station Newport

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 1
1 CONGRESS STREET, SUITE 1100
BOSTON, MASSACHUSETTS 02114-2023

December 22, 2004

Curtis Frye, Remedial Project Manager
U.S. Department of the Navy
Naval Facilities Engineering Command
Northern Division
10 Industrial Highway
Code 1823, Mail Stop 82
Lester, PA 19113-2090

Re: Second Five-year Review for the Naval Education and Training Center Superfund Site

Dear Mr. Frye:

Thank you for the opportunity to review the *Five-Year Review for Naval Station Newport, Newport, Rhode Island*, dated December 2004. Upon review, EPA concurs with the findings that the remedies that have been implemented at the McAllister Point Landfill and Tanks 53 and 56 are protective of human health and the environment. EPA also agrees that we will review the protectiveness of the selected remedies for the sites currently under investigation (Tank Farms 1 through 5; Building 32 at Gould Island; the Old Fire Fighting Training Area; the Coddington Cove Rubble Fill Area; and the Naval Undersea Systems Center Disposal Area) in subsequent five-year reviews.

EPA reviewed the document for compliance with the Comprehensive Five-Year Review Guidance (OSWER No. 9355.7-03B-P dated June 2001). The report includes five-year reviews for the McAllister Point Landfill (Site 01)- Source Control Operable Unit and Tank Farm Five - Tanks 53 and 56 (Site 13) - Groundwater Containment Operable Unit. This statutory review for these sites is consistent with the guidance provided in the OSWER directives. For those operable units that are still in the investigation phase, EPA is pleased to see the Navy reiterate its commitment to continuing the CERCLA process in accordance with the Federal Facilities Agreement. Access is restricted at most of the sites that have not yet been remediated to minimize potential threats to human health.

This second five-year review requirement was prompted by the first five-year review (completed on December 27, 1999) that was prompted by the remedial action start for the McAllister Point Landfill. Consistent with Section 121(c) of the CERCLA, the next five-year review must be finalized on or before December 27, 2009.

Sincerely,

Susan Studlien, Director
Office of Site Remediation and Restoration

cc: Paul Kulpa, RIDEM, Providence, RI
Cornelia Mueller, NETC, Newport, RI
Bryan Olson, EPA, Boston, M A
Kymberlee Keckler, EPA, Boston, M A

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ACRONYMS

ARAR	Applicable or Relevant and Appropriate Requirement
AWQC	Ambient Water Quality Criteria
bgs	below ground surface
COC	Contaminant of Concern
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CS	Confirmation Study
DESC	Defense Energy Support Center
DFSP	Defense Fuel Support Point
DL	Detection Limit
EPA	Environmental Protection Agency
ERA	ecological risk assessment
FFA	Federal Interagency Facilities Agreement
IAS	Initial Assessment Study
IR	Installation Restoration
LTMP	Long-Term Monitoring Program
MCL	Maximum Contaminant Level
mg/kg	milligrams per kilogram
MSL	mean sea level
MW	monitoring well
NAVSTA	Naval Station
ND	non detect
NETC	Naval Education and Training Center
NPL	National Priorities List
NUSC	Naval Undersea Systems Center
OFFTA	Old Fire Fighting Training Area
O&M	Operations and Maintenance
OSWER	Office of Solid Waste and Emergency Response
PCB	polychlorinated biphenyl
ppb	parts per billion
ppbv	parts per billion by volume
ppm	parts per million
ppmv	parts per million by volume
POTW	publicly-owned treatment works
PRG	preliminary remediation goals
QA/QC	Quality Assurance/Quality Control
RAB	Restoration Advisory Board
RAO	Remedial Action Objective
RCRA	Resource Conservation and Recovery Act
RIDEM	Rhode Island Department of Environmental Management

ACRONYMS (cont.)

RI/FS	Remedial Investigation/Feasibility Study
ROD	Record of Decision
SARA	Superfund Amendments and Reauthorization Act
SASE	Study Area Screening Evaluation
SDWA	Safe Drinking Water Act
SED	sediment
SI	Site Investigation
SW	surface water
SVOC	Semi-volatile organic compound
TBC	To be Considered
TCL	Target Compound List
TSCA	Toxic Substances Control Act
TtNUS	Tetra Tech NUS, Inc.
USEPA	U.S. Environmental Protection Agency
USGS	U.S. Geological Survey
UST	underground storage tank
µg/L	micrograms per liter
VOC	Volatile organic compound

Navy Five-Year Review Key Information

SITE IDENTIFICATION		
Site name *(from WasteLAN)*: Naval Station Newport Superfund Site (formerly Newport Naval Education & Training Center)		
EPA ID *(from WasteLAN)*: RI6170085470		
Region: 1	**State: RI**	**City/County: Newport, Middletown, Portsmouth, Jamestown/Newport County**
SITE STATUS		
NPL status: Final		
Remediation status (choose all that apply): operating		
Multiple OUs?* Yes	**Construction completion date:** Site 01: 1996, 2001; Site 13: 1994	
Has site been put into reuse? No		
REVIEW STATUS		
Lead agency: U.S. Department of the Navy, Engineering Field Activity Northeast		
Author name: Curtis Frye		
Author title: Remedial Project Manager	**Author affiliation:** U.S. Department of the Navy, Engineering Field Activity Northeast	
Review period: February 2004 to December 2004		
Date(s) of site inspection: March 23, 2004		
Type of review: Post-SARA		
Review number: 2 (second)**		
Triggering action: First Five-Year Review – December 1999		
Triggering action date *(from WasteLAN)*: December 1999		
Due date *(five years after triggering action date)*: December 2004		

* "OU" refers to operable unit.

** First Five-Year Review was completed in 1999

Key Information, cont'd.

Issues:

McAllister Point Landfill: Groundwater at the McAllister Point Landfill is classifed as GA-NA. The groundwater monitoring results continue to indicate that site groundwater is not suitable for drinking. This is consistent with other locations on the NAVSTA Newport Superfund Site. The saltwater intrusion due to the coastal location of the site may prevent it from ever reaching the GA classification. Monitoring should continue to document any changes in groundwater concentrations.

The area of Narragansett Bay along NAVSTA Newport is designated as a shellfish closure area by RIDEM. If this ban were to be lifted in the future, that would effectively lift the ban for the McAllister Point Landfill area.

Tank Farm Five, Tanks 53 and 56: No issues were identified during the five-year review for Tanks 53 and 56 at NAVSTA Newport Tank Farm Five.

Recommendations and Follow-up Actions:

McAllister Point Landfill: Based on the results of the site inspection and review, there are several issues that do not effect the protectiveness of the remedy, but could impact the remedy in the future. The issue of deed restrictions as institutional controls needs to be considered for the future if ownership of the property changes. If the shellfish ban for Naragansett Bay is lifted, the shellfish data collected as part of the marine sediment monitoring program should be evaluated to assess any uncertainties regarding the impact of site contaminants on this marine resource. All scheduled monitoring associated with OU1 should continue, and if monitoring data are consistently below applicable standards, a decrease in frequency should be considered to optimize the cost-effectiveness of the monitoring. Monitoring in accordance with the OU4 marine sediment/ management of migration ROD should continue.

Tank Farm Five, Tanks 53 and 56: Based on the results of the site inspection and review, there are no major recommendations or required actions to be taken at the site. The remedies are complete; RAOs have been met and currently remain protective of human health and the environment. The monitoring well network was repaired and the wells were redeveloped and sampled in May 2004. It is recommended that a ROD revision for No Further Action be implemented if the evaluation of the data from this fifth round (May 2004) monitoring shows that contaminant concentrations are below RIDEM GA Groundwater Objectives and federal MCLs. The May 2004 monitoring data should also be used to assess the need for a continuation of groundwater monitoring and further five-year reviews.

Key Information, cont'd.

Protectiveness Statement(s):

McAllister Point Landfill: The remedies at the McAllister Point Landfill are protective of human health and the environment and exposure pathways that could result in unacceptable risks are being controlled. The source control remedy is complete and groundwater, vent gas, and ambient air monitoring is on-going. The most recent groundwater monitoring annual results show few detections of VOCs and SVOCs and no concentrations exceeding the AWQCs, which are used for general comparison purposes. Exceedances of the AWQCs for some metals have been seen. The groundwater and vent gas monitoring data have shown consistent and stable results and show no indications of any issues with the protectiveness of the remedy. The dredging and backfilling activities for the near shore and off-shore marine sediment remedial action (OU4) are complete. The planned habitat mitigation activities have been implemented; ecological restoration and eel grass monitoring are on-going. Post-dredging habitat monitoring has indicated positive results for the biological habitats of the dredged and restored areas and constructed artificial reefs, and eel grass beds that are healthy but still show impacts from the dredging activities. Monitoring should continue to ensure the current protectiveness of the remedy.

Tank Farm Five, Tanks 53 and 56: The remedy at Tank Farm Five, Tanks 53 and 56 is protective of human health and the environment and exposure pathways that could result in unacceptable risks are being controlled. The source of contamination has been removed, and the groundwater treatment system remains shut down due to attainment of RAOs. Groundwater monitoring results do not indicate a groundwater problem. The results of the most recent monitoring round are consistent with the results from the first three rounds. A comparison of the monitoring data to RIDEM and federal groundwater standards indicates concentrations of potential contaminants of concern have attenuated following the source removal action.

Next Review:

The next five-year review of the NAVSTA Newport sites will be completed in December 2009.

1.0 INTRODUCTION

This document presents the second five-year review of the Naval Station (NAVSTA) Newport, formerly the Naval Education and Training Center (NETC), Superfund Site in Newport, Rhode Island. Tetra Tech NUS, Inc. (TtNUS) has conducted this five-year review under the Comprehensive Long-Term Environmental Action Navy (CLEAN) Contract, Task Order (CTO) 842, as requested by the Navy. This five-year review addresses the operable units at the two NAVSTA Newport sites which have had remedial actions implemented and were evaluated in the first five-year review (December 1999):

- Site 01 - McAllister Point Landfill, Source Control Operable Unit (OU1); and
- Site 13 - Tank Farm Five, Interim Remedial Action for Tanks 53 and 56, to address the Groundwater Containment Operable Unit.

Since the first five-year review was completed in 1999, a second ROD was issued for marine sediment/management of migration (OU4) at the McAllister Point Landfill. The remedial action specified in the 2000 ROD has been implemented and is therefore also discussed in this five-year review.

1.1 PURPOSE

The purpose of this five-year review is to determine if the remedies selected for and implemented at the McAllister Point Landfill and Tank Farm Five – Tanks 53 and 56, are protective of human health and the environment. This report summarizes the five-year review process, investigations and remedial actions undertaken at each Site; evaluates the monitoring data collected; reviews the Applicable or Relevant and Appropriate Requirements (ARARs) specified in each site's Record of Decision(s) (ROD) for changes; discusses any issues identified during the review; and presents recommendations to address these issues.

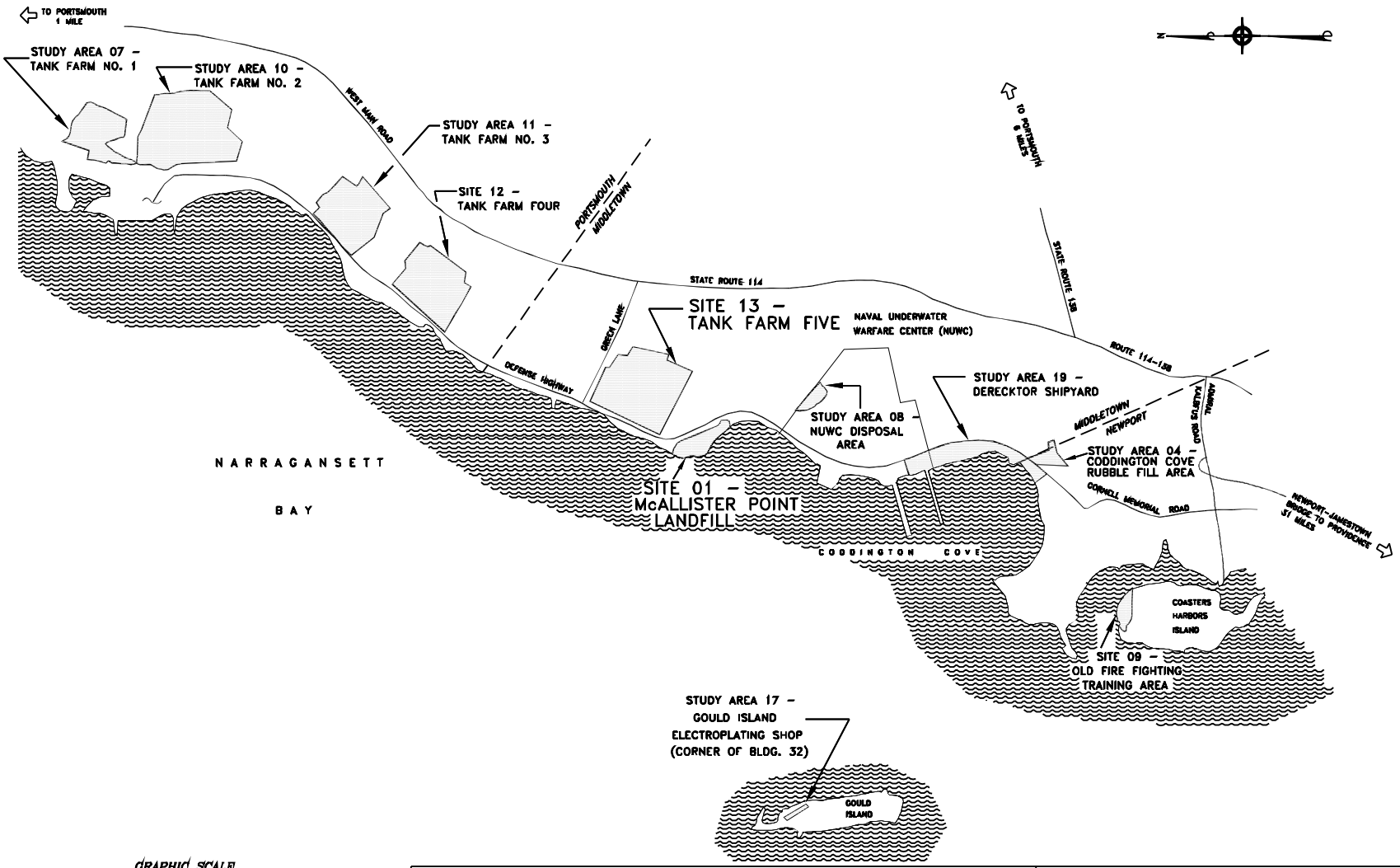
These two sites (see Figure 1-1) were included in the first five-year review of NAVSTA Newport, as appropriate for their progress in remediation, pursuant to the U.S. Environmental Protection Agency's (USEPA) five-year review guidance. The other NAVSTA Newport sites and study areas (defined in the Federal Interagency Facility Agreement 1992, FFA), are in various stages of pre-remedial investigation and are therefore not included in detail in this five-year review. The locations of the sites and study areas listed below are shown on Figure 1-1. Each of the listed sites is briefly discussed in Section 4 of this document along with the progress of the various investigations underway. These sites and study areas include:

- Study Area 04 – Coddington Cove Rubble Fill Area

W5204313F

1-2

CTO 842



NAVSTA NEWPORT SITES AND STUDY AREAS		FIGURE 1–1	
NAVSTA NEWPORT – FIVE-YEAR REVIEW			
NEWPORT, RHODE ISLAND			
DRAWN BY:	D.W. MACDOUGALL	REV.:	0
CHECKED BY:	P. CALL	DATE:	NOVEMBER 24, 2004
SCALE:	AS NOTED	FILE NO.:	DWG\5152\3584\FIG_1-1.DWG

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(978)658-7899

- Study Area 07 – Tank Farm No. 1
- Study Area 08 – Naval Undersea Systems Center (NUSC) Disposal Area
- Site 09 – Old Fire Fighting Training Area (OFFTA)
- Study Area 10 – Tank Farm No. 2
- Study Area 11 - Tank Farm No. 3
- Site 12 – Tank Farm No. 4
- Site 13 – Tank Farm No. 5
- Site 17 – Building 32, Gould Island
- Site 19 – Derecktor Shipyard

The Navy must implement five-year reviews consistent with the Comprehensive Environmental Response Compensation, and Liability Act (CERCLA) §121 and the National Contingency Plan. CERCLA §121 states:

> "If the President selects a remedial action that results in any hazardous substances, pollutants, or contaminants remaining at the site, the President shall review such remedial action no less often than each five years after the initiation of such remedial action to assure that human health and the environment are being protected by the remedial action being implemented. In addition, if upon such review it is the judgment of the President that action is appropriate at such site in accordance with section [104] or [106], the President shall take or require such action. The President shall report to the Congress a list of facilities for which such review is required, the results of all such reviews, and any actions taken as a result of such reviews."

The National Contingency Plan 40 CFR §300.430(f)(4)(ii) states:

> "If a remedial action is selected that results in hazardous substances, pollutants, or contaminants remaining at the site above levels that allow for unlimited use and unrestricted exposure, the lead agency shall review such action no less often than every five years after the initiation of the selected remedial action."

This is the second five-year review for NAVSTA Newport. The first five-year review was completed in December 1999 as a post-SARA statutory review. This statutory five-year review is required since hazardous contamination remains at the two NAVSTA Newport sites above levels that allow for unlimited use and unrestricted exposure. The triggering action for the initial statutory review was initiation of the remedial actions at Tank Farm Five, Tanks 53 and 56, and the McAllister Point Landfill. The review was completed in accordance with USEPA Comprehensive Five-Year Review Guidance, OSWER No. 9355.7-03B-P (USEPA, 2001).

1.2 OVERVIEW OF NAVAL STATION NEWPORT

The NAVSTA Newport area has been used by the U.S. Navy since the Civil War era. Activities have increased during war times and later decreased as Naval forces were reorganized. Since 1900, the facility was used as a refueling depot. The Shore Establishment Realignment Program reorganization in April 1973 resulted in reductions in personnel and the Navy excessed a large portion of the acreage of the original facility. The Naval Education Training Center (NETC) was subsequently established. In the mid-1990's several new laboratories at the Naval Undersea Warfare Center (formerly NUSC) were constructed to provide research, development, testing, and evaluation, engineering and fleet support for submarines and underwater systems. In October 1998 NAVSTA Newport was established as the primary host command, taking over base operating support responsibilities from NETC.

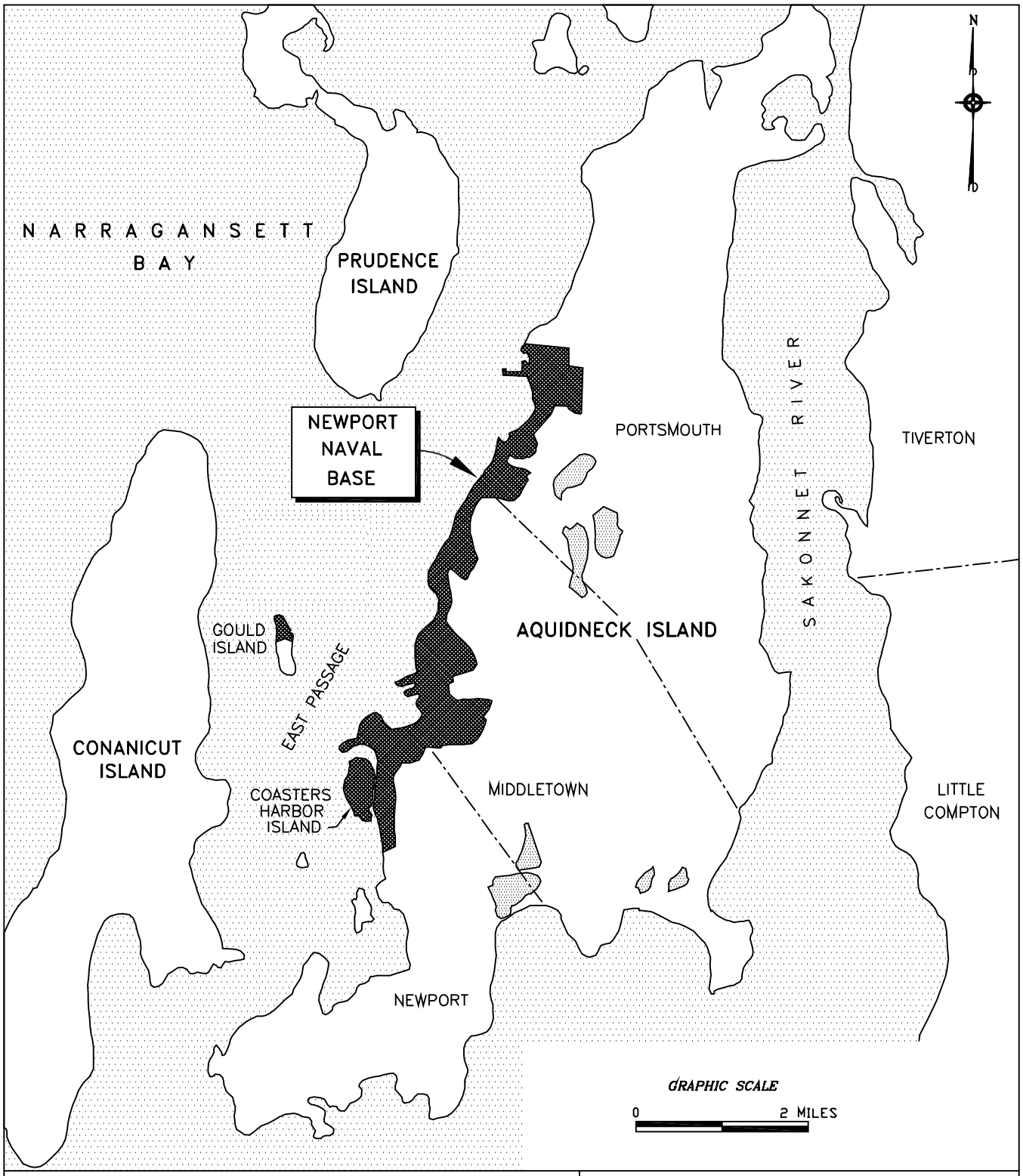
1.2.1 Site Information

NAVSTA Newport (formerly NETC) encompasses 1,063 acres on the west shore of Aquidneck Island facing the east passage of Narragansett Bay, in the towns of Portsmouth, Middletown, and Newport, Rhode Island (Figure 1-2). The Base also encompasses the northern third of Gould Island in the Town of Jamestown, Rhode Island. The site includes multiple areas of contamination, including one landfill, a fire fighting training area, an old shipyard, five tank farms, and varying degrees of groundwater contamination. The Navy is the lead agency for site investigation and cleanup, with formal oversight provided by USEPA via a Federal Interagency Facilities Agreement (FFA) and the Rhode Island Department of Environmental Management (RIDEM).

1.2.2 History and Chronology

An Initial Assessment Study (IAS), completed in 1983, identified 18 sites where contamination was suspected to pose a threat to human health and the environment. Six of the 18 sites were investigated further in a Confirmation Study (CS), completed in 1986. A Phase I RI/FS was completed in 1992. This RI/FS covered: McAllister Point Landfill (Site 01), Melville North Landfill (Site 02), Old Fire Fighting Training Area (Site 09), Tank Farm Four (Site 12), and Tank Farm Five (Site 13). The McAllister Point Landfill, Melville North Landfill, and Tank Farm Four had been previously investigated in both the IAS and CS; and Tank Farm Five in the IAS. The Old Fire Fighting Training Area (OFFTA) had not been investigated as part of either the IAS or CS.

Investigations at four of the five sites have continued under the Department of Defense Installation Restoration (IR) Program following the listing of NAVSTA Newport (then NETC) on the NPL in 1989.



SITE LOCUS			FIGURE 1-2
NAVSTA NEWPORT – FIVE-YEAR REVIEW			
NEWPORT, RHODE ISLAND			
DRAWN BY:	D.W. MACDOUGALL	REV.:	0
CHECKED BY:	P. CALL	DATE:	NOVEMBER 24, 2004
SCALE:	AS NOTED	ACAD NAME:	DWG\5152\3584\FIG_1-2.DWG

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These investigations have led to decision documents for the McAllister Point Landfill and Tank Farm Five - Tanks 53 and 56. Ten additional sites (Tank Farm One, Tank Farm Two, Tank Farm Three, Coddington Cove Rubble Fill Area, NUSC Disposal Area, OFFTA, Tank Farms Four and Five, Derecktor Shipyard, and Building 32, Gould Island) are also being investigated under the IR Program. The Melville North Landfill has been investigated under RIDEM regulations, rather than under the IR program, since it was not owned by the Navy at the time of the NPL listing. Since the Melville North Landfill is not considered a CERCLA site, it is not discussed further in this five-year review.

A chronology of the major activities at the NAVSTA Newport CERCLA sites and IR Program investigations completed at the sites mentioned above is shown in the table below. Detailed information concerning the McAllister Point Landfill and Tank Farm Five – Tanks 53 and 56, is included in Sections 2.1 and 3.1, respectively, of this document.

EVENT	DATE
Initial Assessment Study (IAS) completed. IAS identified 18 potentially contaminated sites.	March 1983
Confirmation Study (CS) completed for: Site 01, Site 02, Site 07, Site 12, Site 14, and Site 17.	May 1986
NETC Newport listed on the NPL.	November 21, 1989
Draft Phase I RI and Human Health Risk Assessment Report completed for Sites 01, 02, 09, 12, and 13.	January 1992
Federal Interagency Facilities Agreement between EPA, RIDEM and U.S. Navy signed.	March 23, 1992
Defense Fuel Supply Point begins investigations of **Tank Farms One, Two, and Three.**	August 1992
Record of Decision for **Tank Farm Five, Tanks 53 & 56** (interim groundwater pump and treat remedy) issued.	September 29, 1992
Preliminary Site Assessment Report, **Derecktor Shipyard** completed.	May 1, 1993
Record of Decision for **McAllister Point Landfill** (source control action) issued.	September 27, 1993
Remedial Investigation Report and Human Health Risk Assessment for **McAllister Point Landfill** completed.	July 1, 1994
Ecological Risk Assessment and Feasibility Study Report for **McAllister Point Landfill** completed.	October 1, 1994
Restoration Advisory Board (RAB) established.	1996
Marine Ecological Risk Assessment Report for **McAllister Point Landfill** completed.	March 1997
Draft Final Phase II RI Report, Revision 1 for **McAllister Point Landfill** completed.	April 1997
Marine Ecological Risk Assessment Report, **Derecktor Shipyard** completed.	May 1997
Draft Final Study Area Screening Evaluation Report, **Derecktor Shipyard** completed.	June 1, 1997

EVENT	DATE
Final Human Health Risk Assessment, **Derecktor Shipyard** completed.	September 29, 1998
McAllister Point Landfill Final Feasibility Study completed (management of migration and marine sediment).	May 3, 1999
Final Feasibility Study, **Derecktor Shipyard** (marine portions, offshore contamination) completed.	July 29, 1999
Marine Ecological Risk Assessment Report, **OFFTA** completed.	November 1999
First Five-Year Review Report completed.	December 1, 1999
Phase I Predesign Investigation for Offshore Areas of the **McAllister Point Landfill** completed.	February 2000
Record of Decision, **McAllister Point Landfill** (marine sediment/management of migration) issued.	March 1, 2000
Draft Final Study Area Screening Evaluation Report, **Gould Island Electroplating Shop** (Building 32) completed.	December 28, 2000
Final RI Report, **OFFTA** completed.	July 1, 2001
Feasibility Study for Soil, Groundwater and Marine Sediment, **OFFTA** (submitted as final).	September 2002
Draft Sediment and Groundwater Monitoring Work Plan, **OFFTA** completed.	June 2004
Draft Soil Predesign Investigation Report, **OFFTA** completed.	July 2004
Final Remedial Investigation Work Plan, **Building 32, Gould Island** completed.	July 2004
Draft Sediment Investigation Work Plan, **Derecktor Shipyard** completed.	July 2004
Final Action Memorandum, Soil Management and Removal, **OFFTA** completed.	August 2004
Draft Final Study Area Screening Evaluation Report, **NUSC Disposal Area** completed.	September 2004

1.2.3 Land Use

The 1,063-acre NAVSTA Newport site has been used by the Navy as a refueling depot since 1900. An 11-acre portion of the site along the shore of Narragansett Bay, known as the McAllister Point Landfill, accepted wastes consisting primarily of domestic refuse, acids, solvents, paint, waste oil, and oil contaminated with polychlorinated biphenyls (PCBs) from 1955 to the mid-1970s. Five tank farms are located in the Melville area; one is located in Midway. Sludge from nearby tank farms was reportedly disposed of on the ground or burned in chambers. Other contaminated areas, such as the Melville North Landfill, are classified as Formerly Used Defense sites and are being addressed separately. Surface water and groundwater flows toward the bay, which is used for boating and fishing. One of the tank farms is located 300 feet from a coastal wetland. Other areas of concern include OFFTA (Site 09), Tank Farm Four (Site 12), Tank Farm Five (Site 13), Gould Island, and Derecktor Shipyard. Private wells located

within 3 miles of the site provide drinking water to an estimated 4,800 people and irrigation water for 220 acres of land. Approximately 10,000 people live within 3 miles of the NAVSTA Newport.

1.2.4 Physical Characteristics of NAVSTA Newport

Elevations at NAVSTA Newport range from near mean sea level (MSL) to approximately 170 feet above MSL in the Melville North area (TtNUS, 1999). Areas at low elevations are susceptible to flooding during storm surges. NAVSTA Newport is located at the southeastern end of the Narragansett Basin, which consists of non-marine sedimentary rock of the Pennsylvanian age. The bedrock is primarily of the Rhode Island Formation. Glacially-derived unconsolidated deposits overly the bedrock. These surficial deposits consist of till, sand, gravel, and silt and range in thickness from 1 to 150 feet (TtNUS, 1999a). Till, which overlies bedrock, is the most extensive glacial deposit found in Rhode Island. NAVSTA Newport is located on the Narragansett till plain. Stratified drift, or outwash deposits, overlie the till and are composed of sorted sand, silt, and gravel.

Groundwater supply wells are located throughout Aquidneck Island. The wells are used primarily for domestic supply; but small industries and businesses also make use of groundwater. No wells have been identified on NAVSTA Newport except on Gould Island. The average depth of groundwater is 14 feet on Aquidneck Island. Over-pumping of groundwater wells located near the shoreline has resulted in salt water intrusion in some wells. The groundwater is less than 10 feet below ground surface in most portions of NAVSTA Newport. Groundwater flows east to west across NAVSTA Newport toward Narragansett Bay. The groundwater has been classified by RIDEM as GB at OFFTA, e.g. not suitable for public or private drinking water use (TtNUS, 2001); and as Class GA-NA, e.g. groundwater suitable for drinking water without treatment, but not in compliance with that classification, at the McAllister Point Landfill, Tank Farm Four, and Tank Farm Five (TRC, 1994).

NAVSTA Newport is located in the Narragansett Bay drainage basin. All surface water flows toward and empties into Narragansett Bay. Two streams, Gomes Brook and Normans Brook, are located on the site and are classified as Class B surface waters by RIDEM. Surface runoff is discharged to Narragansett Bay through storm water collection systems.

1.3 FIVE-YEAR REVIEW PROCESS

This is the second five-year review for the Site. The first five-year review, completed by the Navy in 1999, concluded that the source control remedy for McAllister Point Landfill had been successfully implemented and remains protective of human health and the environment. Similarly, the groundwater remedy selected for Tank Farm Five, Tanks 53 and 56, was determined to have been successfully implemented

and groundwater monitoring data indicated that contaminants do not remain at levels that pose an unacceptable risk to human health of the environment.

The second five-year review for NAVSTA Newport was led by Curtis Frye, the EFANE Remedial Project Manager. The following team members assisted in the review:

- Kymberlee Keckler, USEPA Region I Remedial Project Manager
- Paul Kulpa, RIDEM Remedial Project Manager
- Amanda Cerise, NAVSTA Newport IR Program Manager
- Cornelia Mueller, NAVSTA Newport IR Program Manager
- Dave Dorocz, NAVSTA Newport Environmental Department Lead
- Phoebe Call, TtNUS Project Manager
- Katie Lang, TtNUS Project Scientist

The five-year review included the following activities: a review of relevant documents, including decision documents and monitoring reports (see Appendix A); a site inspection; and limited interviews. A summary of relevant data regarding the components of the Site remedies is presented in Sections 2 and 3 for the McAllister Point Landfill and Tank Farm Five, Tanks 53 and 56, respectively. A site inspection was completed on March 23, 2004. Attendees included the TtNUS project team. After completion of the inspection of the Tank Farm Five and McAllister Point Landfill areas, the project team met with NAVSTA Newport environmental staff.

Notice of the preparation of the five-year review for NAVSTA Newport was provided to community representatives via a mailing to the Restoration Advisory Board (RAB) members on April 14, 2004. The notice encouraged public participation in the five-year review process. A presentation on the five-year review process and objectives was made by TtNUS at the April 21, 2004 RAB meeting. Feedback was solicited, and obtained, from meeting attendees for the site interview phase of the work. Copies of the final five-year review report will be made available for review in the information repositories listed below.

- Newport Public Library, Aquidneck Park, Newport, RI 02840
- Middletown Free Library, Middletown, RI 02842
- Portsmouth Free Library Association, Portsmouth, RI 02871
- Jamestown Philomenian Library, Jamestown, RI 02835

1.4 REPORT ORGANIZATION

This report has been organized to address the various components and general format requirements specified in the Comprehensive Five-Year Review Guidance, OSWER No. 9355.7-03B-P (USEPA, 2001). Section 1 provides an overview of NAVSTA Newport, including history, chronology, and the five-year review process. Section 2 provides information in accordance with the USEPA guidance for the McAllister Point Landfill. Section 3 provides information in accordance with the USEPA guidance for Tank Farm Five – Tanks 53 and 56. Section 4 includes a brief summary of the history, investigations performed, and current activities underway at each of the remaining 10 sites at NAVSTA Newport that are included in the FFA. The following appendices are included in the report. Appendix A is a list of documents reviewed and referenced in this report; Appendix B includes a site inspection summary with photographs; Appendix C is a list of individuals interviewed; Appendix D includes a summary of ARARS applicable to McAllister Point Landfill and Tank Farm Five – Tanks 53 and 56; and Appendix E is a copy of "Installation Restoration (IR) Site Access and Use," NAVSTA Newport/Local Area Rhode Island Coordinator Instruction 5090.15A.

2.0 SITE 01 - McALLISTER POINT LANDFILL

2.1 HISTORY AND SITE CHRONOLOGY

The McAllister Point Landfill at NAVSTA Newport was operated as a sanitary landfill over a 20-year period. From 1955 until the mid-1970's the site accepted all the wastes generated at the Naval complex, including waste from all operational areas (machine shops, ship repair, etc.), Navy housing areas (domestic refuse), and from the 55 ships home ported at Newport prior to 1973 (approximately 14 40-cubic yard containers each day). The materials disposed of at the landfill reportedly included spent acids, paints, solvents, waste oils (diesel, lubrication, and fuel), polychlorinated biphenyl (PCB)-contaminated transformer oil; domestic refuse; and construction debris.

During the period of 1955 through 1964, wastes were trucked to the site, spread out with a bulldozer, and covered. In the late 1950's or early 1960's, an incinerator was built at the landfill. From that time through about 1970, approximately 98 percent of all the wastes were burned in the incinerator and the ash and unburned materials were disposed of 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 of 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. After disposal activities ceased in 1973, a three-foot thick covering of clay/silt was reportedly placed over the central portion of the landfill, and the site remained inactive.

In November 1989, NAVSTA Newport (then NETC), including the landfill, was listed on the EPA's National Priority List (NPL) of abandoned or uncontrolled hazardous waste sites subject to requirements of CERCLA and the Superfund Amendments and Reauthorization Act of 1986 (SARA). Following completion of the Phase I Remedial Investigation, a Record of Decision (ROD) was signed by USEPA and the Navy in September 1993 that selected a multi-media, low permeability cap as a source control measure for the landfill, as discussed in Section 2.2. Construction of the landfill cap commenced in 1995, and was completed in 1996, when the landfill was formally closed in compliance with a Consent Decree Agreement between the Navy and USEPA.

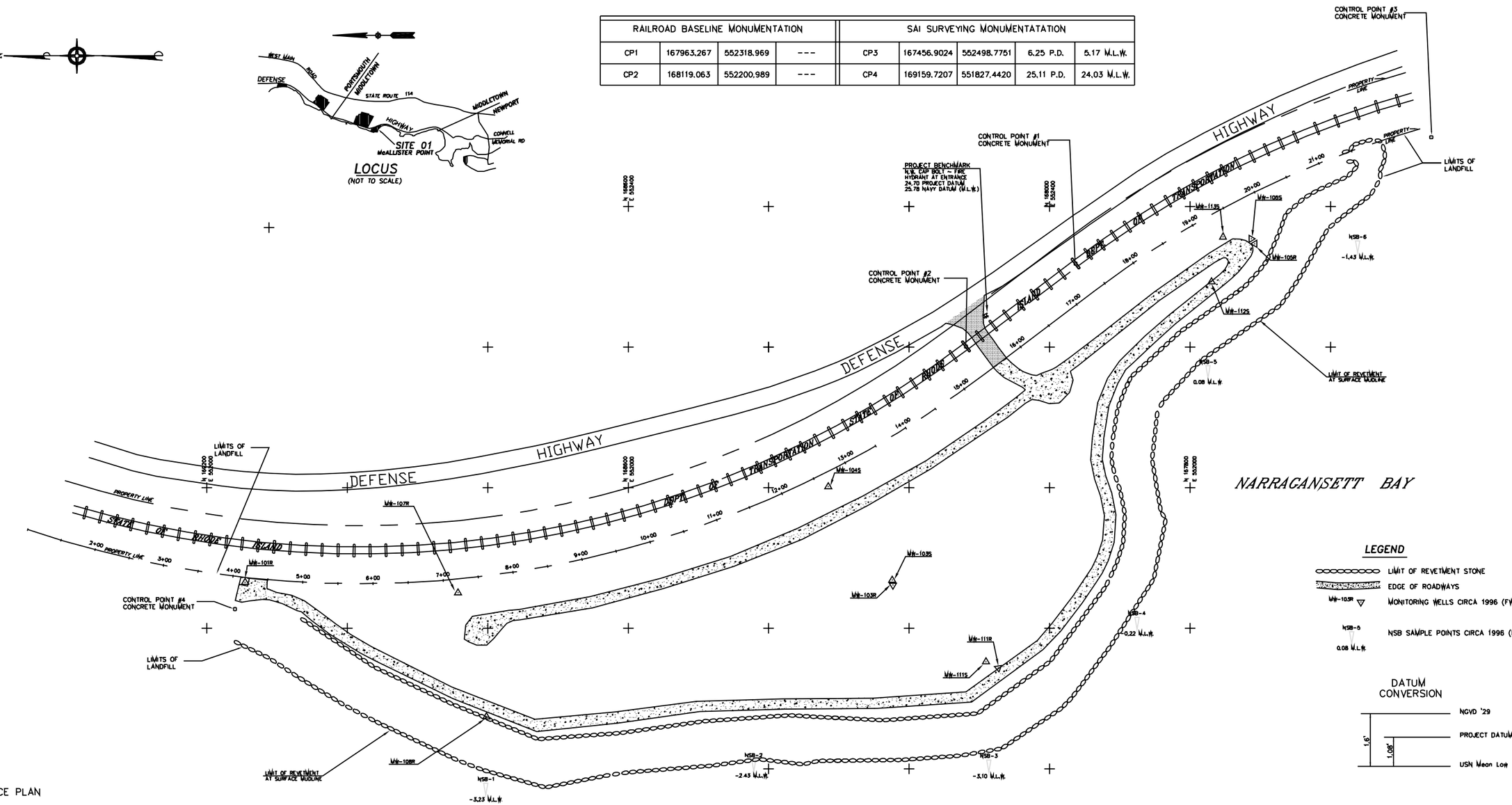
Additional information on site use and history can be found in the Draft Final Remedial Investigation Report, Revision 1 (B&RE, 1997a). A chronology of important events regarding the operation and remedies for the McAllister Point Landfill is shown in the table below.

EVENT	DATE
Landfill operations commenced.	1955
Incinerator built.	1965
Ceased operation of incinerator due to air emission issues.	Approx. 1970
Landfill disposal activities ceased.	1973
NETC Newport listed on NPL	November 21, 1989
Record of Decision (source control, landfill cap) issued.	September 27, 1993
Remedial Investigation Report and Human Health Risk Assessment completed.	July 1, 1994
Ecological Risk Assessment completed.	October 1, 1994
Feasibility Study Report completed.	October 1, 1994
RCRA Subtitle C cap design completed.	1994
Landfill cap construction activities.	March 1995 – October 1996
30-year operations and maintenance (O&M) period began.	1997
Marine Ecological Risk Assessment completed.	March 1997
Draft Final Phase II RI Report, Revision 1 completed.	April 1997
Final Feasibility Study (management of migration and marine sediment) completed.	May 3, 1999
First Five-Year Review completed.	December 1, 1999
Phase I Predesign Investigation for Offshore Areas of the McAllister Point Landfill completed.	February 2000
Record of Decision (management of migration, contaminated marine sediments) issued.	March 1, 2000
Dredging completed.	October 2001
Eel grass restoration performed.	May 2001 – October 2001
Marine sediment remedial construction work completed.	November 15, 2001
Restoration of onshore areas used during the remedial action completed.	May 2002
Long-term monitoring and O&M.	On-going

2.2 BACKGROUND

The McAllister Point Landfill (Site 01), covers approximately 11.5 acres in the central portion of the NAVSTA Newport facility, and is situated between the Defense Highway (to the east) and Narragansett Bay (to the north, south, and west) (Figure 2-1). Railroad tracks along a right-of-way for the Rhode Island Department of Transportation run in a north-south direction along the eastern side of the site, parallel to the Defense Highway. A locked chain-link fence surrounds the site. Access to the site is via an access road off of Defense Highway, through a gate in the south-central portion of the site.

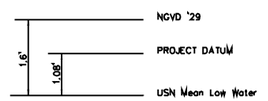
RAILROAD BASELINE MONUMENTATION				SAI SURVEYING MONUMENTATATION				
CP1	167963.267	552318.969	---	CP3	167456.9024	552498.7751	6.25 P.D.	5.17 M.L.W.
CP2	168119.063	552200.989	---	CP4	169159.7207	551827.4420	25.11 P.D.	24.03 M.L.W.



LEGEND

- LIMIT OF REVETMENT STONE
- EDGE OF ROADWAYS
- MW-105R — MONITORING WELLS CIRCA 1996 (FWEC)
- NSB-5, 0.08 M.L.W. — NSB SAMPLE POINTS CIRCA 1996 (B&R)

DATUM CONVERSION



NOTES;

REFERENCE PLAN

1) PLAT SHOWING LAND IN CITY OF NEWPORT & TOWNS OF MIDDLETOWN & PORTSMOUTH, ACQUIRED FOR RAILROAD PURPOSES ON BEHALF OF THE STATE OF RHODE ISLAND & PROVIDENCE PLANTATIONS, BY THE DIRECTOR OF TRANSPORTATION, RAILROAD PLAT NO. 1.

2) SAI SURVEYING CO. INC. 5-22-97 SITE PLAN, MCALLISTER POINT LANDFILL, NAVAL EDUCATION AND TRAINING CENTER, MIDDLETOWN, RHODE ISLAND FOR BROWN AND ROOT ENVIRONMENTAL

GENERAL NOTE

1) NSB SAMPLE POINTS ELEVATIONS ARE LISTED AS NAVY MEAN LOW WATER.

2) DATUM USED FOR PLAN = PROJECT DATUM, HORIZONTAL COORDINATES BASED ON REFERENCE PLAN NO. 1, NOTED ABOVE.

GRAPHIC SCALE

0' 150' 300'

MCALLISTER POINT LANDFILL			
NAVSTA NEWPORT – FIVE-YEAR REVIEW			
NEWPORT, RHODE ISLAND			
DRAWN BY:	D.W. MACDOUGALL	REV.:	0
CHECKED BY:	P. CALL	DATE:	NOVEMBER 24, 2004
SCALE:	AS NOTED	FILE NO.:	DWG\5152\3584\FIG_2-1.DWG

FIGURE 2-1

TETRA TECH NUS, INC.
55 Jonspin Road Wilmington, MA 01887
(978)658-7899

Physical Characteristics

Approximately 6 acres of the 11.5 acre site were used for the landfill operations. The central to north-central portion of the site is a mounded area; the northern and southern areas are flat. Ground elevations are approximately 15 to 35 feet above mean low water level across the site. The grade drops steeply to the shoreline along the western edge of the site (TRC, 1994). There are wooded areas north of the mounded area and in the northeast portion of the site between the railroad tracks and Defense Highway (TRC, 1994).

The overburden materials include: a silt, clay, and shale fragment layer; a silt and sand layer; domestic and construction debris (e.g. fill); and glacial till deposits. The two layers overlying the fill are discontinuous and are assumed to be cover placed on the fill material in 1973. The fill material ranged from 3 to 8 feet thick in the northern and eastern portions of the site to 25 to 28 feet thick in the western portion of the site, along the shoreline. Bedrock underlies the glacial till deposits at depths of 3 feet in the north portions of the site and is found at depths of 28 feet in the central portion of the site (B&RE, 1997a).

Shallow and deep groundwater flows from east to west toward Narragansett Bay. Depth to groundwater varies a great deal across the site due to site topography and location; seasonal variations in depth to groundwater have also been observed. Depth to groundwater ranges from approximately 7 to 9 feet below ground surface (bgs) in the southern portion of the site; and from 14 to 28 feet bgs in the central portion of the site. The greatest depth to groundwater was observed along the western edge of the site (TRC, 1994). There are no surface water bodies on the site. Surface water run-off flows from the landfill area down the western slope of the site into Narragansett Bay and from the eastern portion of the site into drainage swales constructed on the landfill cap and then into culverts that discharge into the bay. Rainfall generally infiltrates into the ground surface and does not directly discharge to Narragansett Bay (Foster Wheeler, 2002).

Currently, the landfill is covered by a multi-media low-permeability cap that prevents direct exposure to and further erosion of landfill materials. This cap was constructed in 1995 and 1996 as part of the remedial action described in Section 2.2. The surface of the cap is vegetated and graded to promote runoff of precipitation, thus minimizing potential infiltration that could cause further leaching of landfill contaminants. The toe of the landfill slope facing Narragansett Bay is covered with a stone revetment to protect the cap from wave erosion. The capped area, excluding the revetment, is fenced. Access to the shoreline adjacent to the landfill is not completely restricted.

A passive gas vent system was installed during construction of the cap to dissipate potential off gas buildup that could disturb the capping materials. A network of groundwater monitoring wells on site is used as part of the long-term monitoring program.

Land and Resource Use

The site is located in the middle of the 6-mile long NAVSTA Newport base on Aquidneck Island. The site is surrounded by other portions of the Navy base and by Narragansett Bay. Future use of the site is restricted by institutional controls established under the 1993 ROD to use as a landfill. As of 1994, the site was zoned by the Navy as "open space" (TRC, 1994). Access is restricted under the NAVSTA Newport instruction - "Installation Restoration (IR) Site Access and Use," NAVSTA Newport/Local Area Rhode Island Coordinator Instruction 5090.15A (June 2003).

Narragansett Bay along the NAVSTA Newport shoreline, including the McAllister Point Landfill, has been designated by RIDEM as a shellfish closure area (bivalves only) due to known or potential sewage discharges. Use of the area for shellfishing may be a potential future use (U.S. Navy, 2000).

Groundwater at the McAllister Point Landfill has been classified by RIDEM as GA Non-Attainment (GA-NA). The GA classification indicates that the groundwater is known or expected to be suitable for drinking water use without treatment. The NA designation indicates that the area is not in compliance with the classification. The goal for a non-attainment area is to restore the groundwater resource to its quality classification. This goal may not be achieveable due to the landfilled materials that remain on the Site and potential salt water intrusion, due to the site's location along the shoreline (U.S. Navy, 2000).

2.3 REMEDIAL ACTIONS

There have been two separate remedial actions implemented at the McAllister Point Landfill. A source control remedy, referred to as operable unit one (OU1), was selected following completion of investigations and a feasibility study in the early 1990s and issuance of a ROD in 1993. In addition to the source control remedy, the 1993 ROD also required the studies described in Section 2.3.1. In April 1996, during construction of the source control remedy, landfill debris was discovered in the intertidal zone following a winter construction hiatus. This discovery led to investigations of the extent of landfill debris in Narragansett Bay and completion of a feasibility study for marine sediment/management of migration. A second ROD, including a remedy to address marine sediment contamination, referred to as OU4, was issued in March 2000.

The basis for the selection of the remedy described in the 1993 and 2000 RODs for each operable unit and implementation of the selected remedies are described below in Sections 2.3.1 and 2.3.2, respectively.

2.3.1 Remedy Selection

The basis for the selection of the source control and marine sediment/management of migration remedies, in the 1993 and 2000 RODs, respectively, is described below.

Source Control

Remedial action objectives (RAOs) were developed for the site to aid in the development and screening of response alternatives, and to mitigate existing and future potential threats to human health and the environment. As summarized in the 1993 ROD, these RAOs were:

- To minimize potential environmental impacts by minimizing off-site migration of potentially contaminated surface soils, and by limiting the infiltration of precipitation to the underlying waste within the landfill area, thereby minimizing leachate generation; and

- To minimize potential risk to human health associated with exposure to the landfill area.

As stated in the 1993 ROD, the selected "source control" remedy is comprised of the following components:

- Capping of the site with a RCRA Subtitle C multi-layer cap;
- Establishing landfill gas controls to manage landfill gas migration;
- Constructing surface controls to minimize erosion and manage runoff;
- Fencing and institutional controls (deed restrictions) to control site access and future site use;
- Operation and maintenance and site monitoring; and
- Five-year review.

In addition, the 1993 ROD contains provisions for undertaking additional studies which include:

- Determining if additional measures, beyond capping, must be taken to reduce the amount of groundwater in contact with the contaminated materials of the landfill;

- Determining the nature and extent of groundwater contamination and whether additional measures, beyond capping, are necessary to meet federal or state groundwater standards and to reduce to acceptable levels any unacceptable risks to human health or the environment from groundwater contamination;

- Determining whether “hot spots” (isolated areas of higher concentrations of contaminants) within the landfill materials, if present, will need to be addressed by a separate remedial action or can be addressed by the landfill cap; and

- Determining the nature and extent of any near-shore sediments that have been affected by site-related contamination, and whether they will need to be addressed by a separate remedial action or whether they can be addressed through consolidation under the landfill cap.

Marine Sediment/Management of Migration

As described above, the 1993 ROD required investigations of sediments offshore of the landfill, in addition to the implementation of the source control remedy. Those investigations, as well as the investigations completed following the April 1996 discovery of landfill debris in the intertidal zone, determined the presence of landfill material and sediment contamination in both nearshore and offshore areas. The remedy selected in the 2000 ROD covers nearshore and elevated-risk offshore areas and offshore areas with low risk. RAOs for the nearshore and elevated-risk offshore areas include:

- Prevent human ingestion of shellfish impacted by sediments with contaminants of concern (COC) concentrations exceeding the selected Preliminary Remedial Goals (PRGs);

- Prevent exposure of aquatic organisms to sediments with COC concentrations exceeding the selected PRGs;

- Prevent avian predator ingestion of shellfish impacted by sediments with COC concentrations exceeding the selected PRGs;

- Minimize migration of sediments with COC concentrations exceeding the selected PRGs to offshore areas and previously unaffected areas of Narragansett Bay; and

- Prevent washout of landfill debris into the marine environment.

The RAOs for the offshore areas with low risk include:

- Prevent exposure of aquatic organisms to sediments with COC concentrations exceeding the selected PRGs; and

- Minimize migration of sediments with COC concentrations exceeding the selected PRGs to previously unaffected areas of Narragansett Bay.

Sediment PRGs were developed for six COCs to achieve a risk reduction for all identified receptors (aquatic organisms, avian predators, and human health) and all sediment areas. These PRGs are shown in the table below. The ROD anticipated that remediating the sediments to the PRGs for the six COCs would also reduce concentrations of other co-located COCs.

Contaminant of Concern	Selected PRGs
Copper	52.9 (ppb in porewater)
Nickel	33.7 (ppb in porewater)
Anthracene	513 (ppb in sediment)
Fluorene	203 (ppb in sediment)
Pyrene	2,992 (ppb in sediment)
Total PCBs	3,634 (ppb in sediment)

Source: U.S. Navy, 2000

The nearshore/elevated-risk offshore area remedial action included dredging of an estimated 34,000 cubic yards of contaminated sediment and debris, screening and separating materials by size, dewatering the sediment and debris, treatment of the dewatering liquids and discharge to Narragansett Bay, disposal of contaminated sediment/debris within the McAllister Point Landfill cap or other off-site facility, and backfilling the dredged area with clean material. Following completion of the dredging and backfill operations, the ROD required monitoring to assess the success of site restoration and reestablishment of aquatic habitats. The ROD assumed that monitoring would be required for five years and one five-year review would be conducted since the remedy was intended to completely remove all contaminated sediment exceeding the selected PRGs (U.S. Navy, 2000).

The 2000 ROD included a removal action for “nearshore” sediments and “elevated risk-offshore” sediments, as well as limited action for the “offshore areas with low risk”. The ROD did not include institutional controls or access restrictions and did not recommend any cleanup actions for groundwater or landfill gas (U.S. Navy, 2000). The limited action alternative did include long-term monitoring (30 years) of sediment and biota and five-year reviews. Annual monitoring was required until the Navy and

regulatory agencies determined that the frequency could be reduced from annual to once every 5 years (U.S. Navy, 2000).

2.3.2 Remedy Implementation

Implementation of the source control remedy is described below. As previously mentioned, during construction of the landfill cap, landfill debris was discovered in the intertidal area beyond the landfill boundary. This discovery lead to further investigations, culminating in a second ROD in March 2000, as described above. Implementation of the marine sediment remedy described in the 2000 ROD is also described below.

Source Control

The remedial activities for the McAllister Point Landfill (Source Control) were completed in 1996, and consisted of the following elements:

- Construction of a heavy armor stone revetment to protect the western slope of the landfill from wave erosion;
- Re-grading and reconsolidation of waste material;
- Clean-up of exposed debris within close proximity to the shoreline;
- Covering the fill area with a RCRA Subtitle C multi-layer cap;
- Installing a passive gas collection venting system;
- Installing surface controls to minimize erosion and collect runoff;
- Installing a perimeter chain-link fence and implementing procedures to control site access and use;
- Revegetation planting of upland habitat; and
- Installing groundwater monitoring wells to replace the wells that were destroyed during capping of the landfill.

A final Certification Report for Remedial Action (Halliburton NUS Corp., 1997) was submitted to the Navy, USEPA, and RIDEM in February 1997. The report documented and certified that the methods, procedures, and inspection and testing activities conducted to close the landfill were performed in accordance with the EPA-approved 100 percent design project specifications and drawings, and the Material Quality Assurance/Construction Quality Assurance Plan. The data collected during the project were used as the basis to certify that the landfill was closed in accordance with the project specifications and drawings. As part of the remedy, institutional controls were implemented including fencing, access controls, and restrictions of the area to future use as a landfill. An Operation and Maintenance (O&M)

Plan was prepared in March 1997 (Foster Wheeler, 1997). The 30-year O&M period is now underway, in accordance with the May 1997 Operations and Maintenance Manual (see Section 2.3.3).

Marine Sediment/Management of Migration

Following the issuance of the 2000 ROD, a number of studies were completed as part of the remedial design phase of work. The Pre-Design Investigation evaluated the use of the McAllister Point Landfill for disposal of contaminated marine sediments. A baseline marine habitat survey was completed, followed by completion of a habitat mitigation plan. The remedial design reflected the decision to dispose of contaminated sediment and landfill debris at licensed off-site facilities, rather than under the McAllister Point Landfill cap.

Mobilization activities commenced in late February 2001. Site preparation activities included: construction of haul roads to and around the material handling area staged at Tank Farm Five; installation of silt and chain link fencing; and construction of the material handling area. The material handling area and a water collection pond at Tank Farm Five were constructed in accordance with the agency-approved design documents and included a geotextile membrane liner, sand and gravel layers. Turbidity curtains were installed at the perimeter of the nearshore and elevated risk offshore areas to minimize the migration of sediments during the dredging activities. Turbidity curtains were also used as the dredging progressed to separate confirmed clean areas from active dredging areas.

The landfill debris layer in the nearshore area generally ranged from 1-foot to 10-feet thick. Dredging was performed from a haul road constructed along the shore line. The debris dredged from this area included bricks, scrap metal, glass, submarine netting, automobile tires, a safe, ash, sandblast grit, and a decayed metal storage tank; no drums were found (Foster Wheeler, 2003a). Once the landfill debris layer had been removed and the bottom of contaminated sediment reached based on visual inspection of the material, confirmation samples were collected. After an area was confirmed clean, the area was backfilled with materials appropriate to the area and graded.

Dredging of the sediment from the “elevated risk offshore” area was performed from a barge. Once the bottom extent of the landfill debris material was reached and the material in the clamshell bucket was visually clean, confirmation samples were collected (Foster Wheeler, 2003a). After an area was confirmed clean, the area was backfilled with materials appropriate to the area and graded.

The confirmation samples from both the nearshore and elevated risk offshore areas were analyzed for total anthracene, pyrene, fluorene, and PCBs. Porewater copper and nickel samples were analyzed from every 2,000 square foot area, or every other sample grid (Foster Wheeler, 2003a). Once the confirmation

sample results met the PRGs (see table in Section 2.3.1) the area was considered clean. Areas that did not initially meet the PRGs were excavated further and the sampling process repeated until the area was determined to be clean (Foster Wheeler, 2003a). The confirmation sampling program included collection of field duplicates, equipment rinsates, and other QA/QC samples.

The dredged materials were staged in the material handling area and stockpiled in 500 cubic yard piles. Samples were taken from each stockpile for waste characterization and based on the analytical results, an appropriate off site disposal facility was selected. Dredged sediment and landfill debris were disposed as follows: non-hazardous materials were taken to two RCRA Subtitle D facilities in Massachusetts; non-TSCA PCB material was disposed of in New Hampshire; and non-hazardous material with lead concentrations greater than 2000 ppm and non-TSCA PCB material were disposed of in South Carolina. Approximately 46,263 tons of contaminated sediment, 86 tons of scrap metal, and 18.5 tons of steel submarine netting were removed during the remedial action (Foster Wheeler, 2003a). A small amount of material was found that emitted low level radioactivity identified by standard screening processes. This material was containerized into three 55-gallon steel drums, which were removed and properly disposed of by Navy personnel.

Approximately 895,540 gallons of water from the water collection pond were treated and discharged to the Newport publicly-owned treatment works (POTW) under an industrial user wastewater discharge permit. The treatment system that had been installed to treat contaminated groundwater from the Tank 53 area was modified to treat the water from the collection pond. The treatment system included pH adjustment, bag filter units, and carbon units. The treated water was sampled to confirm that the water discharged to the POTW met the PRGs.

Prior to the removal of contaminated sediment, a Habitat Mitigation Plan was developed to restore habitat destroyed during the dredging operations to the conditions documented during a baseline habitat survey conducted in 2000. The mitigation plan included replacement of dredged sediments with clean backfill, construction of fish habitat structures, and off-site eelgrass restoration including transplanted and seeded eelgrass. The work was completed in 2001; monitoring in July 2002 found poor survival of the planted eelgrass (SAIC, 2004). Further monitoring included in the Habitat Mitigation Plan is discussed in Sections 2.3.3 and 2.4.2.

Demobilization, including removal of all temporary facilities and equipment, was completed on December 14, 2001. A site inspection completed in November 2001 identified an area along the shoreline containing miscellaneous metal debris. This material was removed in December 2001. Additional areas with vitrified landfill debris were observed in January and March 2002. These materials were removed in March 2002 (Foster Wheeler, 2003a). Confirmation samples were collected and after

the area was determined to be clean, the area was backfilled. A final inspection conducted on March 28, 2002, verified that all debris had been removed (Foster Wheeler, 2003a).

2.3.3 Operations and Maintenance

Source Control

Following completion of the above-referenced elements of the source control remedy, the 30-year operations and maintenance (O&M) period commenced. Based on the O&M plan (Foster Wheeler, 1997), the O&M program includes the following activities:

- Annual collection and analysis of groundwater and landfill gas samples;
- Quarterly and semi-annual inspection and repair of the landfill cap system, as necessary;
- Annual survey of stone revetment and settling platform; and
- Annual mowing of the landfill cover.

The O&M plan (Foster Wheeler, 1997) specified quarterly monitoring of all wells for 3 years (1997 – 1999). After 3 years the frequency of monitoring would be reduced to annual events along with a reduction in the number of monitoring wells sampled. At the direction of the Navy, all wells were sampled annually in 2000, 2001, and 2002 (often some of the wells were dry or there was too little water to collect a sample). Landfill inspections were also continued on quarterly basis for first five years of O&M (1997 – 2002). Landfill inspections are also required after any storm event with wind speeds greater than 50 mph or 5 inches of rain. The landfill inspections included: cap, stormwater drainage system, revetment, gas monitoring wells and vents, access road, perimeter fence, vegetation, and groundwater monitoring wells. The actual and planned monitoring and maintenance activities and frequencies for the landfill are summarized in Table 2-1. Groundwater and landfill gas monitoring results and landfill inspection observations are discussed in Section 2.4.2.

Marine Sediment/Management of Migration

Following implementation of the restoration components of the mitigation plan (clean backfill, construction of artificial reefs and eelgrass restoration), followup habitat monitoring was conducted in the spring, summer, and fall of 2003. Post-dredging habitat monitoring includes assessments of: the aquatic habitat in the backfilled and restored area; the expansion of eel grass into the dredged area; monitoring of two seeded areas and one transplant area; and the habitat value provided by artificial reefs placed offshore in 2001 (SAIC, 2004). The monitoring results are discussed in Section 2.4.2.

A separate monitoring effort is required for the marine environment as a long-term monitoring program (LTMP). The LTMP has two elements, one for the dredged area (nearshore and elevated-risk offshore) and one for the offshore rea. In the dredged area, porewater chemistry, biota, toxicity, and benthic community structure are to be evaluated for the first five years (ROD assumed years 1, 2, and 5) after RA completion. In the offshore area, sediment chemistry, biota, toxicity and benthic community structure are to be evaluated in the long term (up to 30 years). The LTMP is currently being scoped and a work plan is being prepared.

TABLE 2-1
LONG-TERM MONITORING AND MAINTENANCE ACTIVITIES AT McALLISTER POINT LANDFILL
FIVE-YEAR REVIEW
NAVSTA NEWPORT
NEWPORT, RHODE ISLAND

ACTIVITY	FREQUENCY
Monitoring Events*	
Groundwater Monitoring Well Sampling (including water level measurements)	Year 1 – 3, quarterly (all wells) Year 4 – 7, annually or as needed (all wells) Year 8 – 30, annually or as needed (number of wells TBD)
Gas Monitoring Well/Vents Sampling	Year 1, field screening annually Year 2 – 7, field screening quarterly Annual gas sampling and analysis
Inspections/Maintenance Events*	
Landfill Cap	Years 1-5, quarterly Years 6 – 30, semiannually
Revetment	Same as above
Access road/ramp	Same as above
Perimeter fence	Same as above
Groundwater monitoring wells	Same as above
Gas monitoring wells/vents	Same as above
Vegetation	Semiannually – for 30 years
Mowing	Annually – for 30 years
Storm drainage system	Semiannually – for 30 years
Settlement survey	Annually – for 30 years

* O&M phase began in 1997; monitoring and maintenance projected for a 30 year period per the 1993 ROD.

2.4 FIVE-YEAR REVIEW FINDINGS

2.4.1 Site Inspection

A site inspection was completed on March 23, 2004. The landfill cover was well vegetated, no erosion was observed. The groundwater monitoring and gas vents were observed and appeared to be in good condition; the monitoring wells were secured with locks. The revetment also appeared to be in good condition. There was no evidence of vandalism on the site. The perimeter fence was well secured and in good condition. Photographs taken during the site inspection are included in Appendix B.

The 1993 ROD noted that historically community concern and involvement had been low. A community relations plan was prepared by the Navy in July 1990. The NAVSTA Newport environmental staff indicated that community involvement has continued to be minimal. Individuals interviewed at the April 21, 2004 RAB meeting indicated a general satisfaction with the actions taken to date at the landfill and felt well informed about cleanup activities and progress. They were not aware of any citizen complaints but a number of RAB members expressed disappointment that although the Navy had undertaken an extensive habitat enhancement and eelgrass restoration program, that restoration had not been completely successful due to unforeseen events (crab predation, etc.).

2.4.2 Document and Analytical Data Review

This five-year review included a review of relevant McAllister Point Landfill documents including decision documents and monitoring reports (see Appendix A). A summary of relevant O&M data and inspection observations is presented in this section.

Groundwater and landfill gas monitoring results for the last 3 years (2001 – 2003) are summarized in Table 2-2. Groundwater results are compared to AWQC marine chronic values due to the close proximity of the landfill to Narragansett Bay and the discharge of groundwater from the landfill to the bay. Where marine chronic values are not available, other criteria, such as marine acute, freshwater chronic, or freshwater acute, AWQCs are used. While the AWQCs were developed for surface water environments, and are not directly applicable to groundwater, they are used for general comparison purposes.

The unfiltered groundwater samples showed exceedances of the AWQCs for arsenic, barium, cobalt, copper, iron, manganese and nickel in 2001 and 2003. The 2002 results showed exceedances for six of the same metals, except for copper. In all 3 years all wells, with one exception, had at least one exceedance of an AWQC (Foster Wheeler, 2002, 2003; ECC, 2004).

Settlement survey results indicated that in the period between October 1996 and July 2003, settlement at the monitoring wells ranged from 0.01 to 0.93 feet (ECC, 2004). Inspections of the cap, stormwater drainage system, revetment, gas monitoring wells and vents, access road, perimeter fence, vegetation, and groundwater monitoring wells have indicated that all are in satisfactory condition. Due to issues with the access ramp noted in inspections in 2000, the ramp was paved in 2001, during the dredging activities. Some ruts in the landfill cap were noted resulting from the 2001 and 2002 mowing; vegetation had recovered these areas by the July 2003 inspection. The 2003 inspections (May & July) showed all components in good condition (ECC, 2004).

TABLE 2-2
GROUNDWATER/LANDFILL GAS MONITORING RESULTS – 2001 – 2003
AT McALLISTER POINT LANDFILL
FIVE-YEAR REVIEW
NAVSTA NEWPORT
NEWPORT, RHODE ISLAND

Sample type/analysis	2001 [a]	2002 [b]	2003 [c]
GW – VOCs	All < AWQCs	All < AWQCs	All < AWQCs
GW – SVOCs	All < AWQCs	All < AWQCs	All < AWQCs
GW – metals	7 metals > AWQCs	6 metals > AWQCs	7 metals > AWQCs
Gas – VOCs	ND – 3,400 ppmv	10 VOCs detected	0.78 – 4810 ppbv
Gas – SVOCs	ND – 45 ug	1 SVOC in standpipe sample	1 – 6.5 ppbv
Gas – methane	8,400 – 690,000 ppmv	ND – 89,000 ppmv	1.5 – 720,000 ppmv
Gas – total hydrocarbons	1.6 – 96 ppmv	ND – 22 ppmv	0.12 – 60 ppmv

[a] Foster Wheeler, 2002
[b] Foster Wheeler, 2003
[c] ECC, 2004

The findings of the first year of post-dredging habitat monitoring are summarized below (SAIC, 2004):

- Restoration to pre-dredging conditions was generally noted based on the physical characteristics and biological habitats observed in the area that had been dredged.

- Although impacts of the dredging on the size of the eelgrass bed were still evident, the remaining eelgrass may be expanding toward the impacted area; recolonization may occur naturally.

The artificial reefs appear to be effective in providing habitat for a diverse group of marine organisms (SAIC, 2004).

2.4.3 ARAR and Site-Specific Action Level Changes

The ARARs listed in the decision documents for this site are shown in Appendix D, Tables D-1 through D-3. No new ARARs have been promulgated that would call into question the protectiveness of the remedy. Site documents state that the landfill cap and dredging of contamination marine sediments have eliminated any direct exposure pathways currently existing at the site.

2.4.4 Progress Since Last Five-Year Review

The first five-year review concluded that the source control remedy was successfully implemented and remains protective of human health and the environment (TtNUS, 1999c). The review recommended that no further response actions were required and trends in groundwater monitoring, landfill gas vent, and ambient air data should continue to be evaluated and reported. In addition, the review recommended that the deed restrictions included as part of the source control remedy should be implemented if the property is excessed by the Navy. These issues, along with minor problem areas, are discussed further in Section 2.5, Question 1, below.

A second ROD for marine sediment/management of migration was issued in March 2000. The remedy has been implemented, as described in Section 2.3.2, and post-dredging monitoring activities are on-going, as described in Section 2.3.3.

Landfill monitoring and maintenance and post-dredging habitat monitoring have continued. The landfill vent gas and ambient air monitoring results have not indicated a need for active gas collection and treatment. The status of the monitoring and institutional controls is discussed in Section 2.5 of this document.

2.5 ASSESSMENT

The following conclusions support the determination that the remedy at the McAllister Point Landfill remains protective of human health and the environment.

Question 1. Is the remedy functioning as intended by the decision documents?

- ***HASP/Contingency Plan:*** The monitoring program is on-going at the site and should continue, until goals of the remedy are met and/or monitoring is unnecessary or impracticable.

- ***Implementation of Institutional Controls and Other Measures:*** Institutional controls, consisting of access controls via a locked gate and surrounding fencing, have been implemented and maintained appropriately in accordance with the NAVSTA Newport instruction, "Installation Restoration (IR) Site Access and Use," NAVSTA Newport/Local Area Rhode Island Coordinator Instruction 5090.15A (included as Appendix E). Public access to the site is restricted, and controlled by the Navy. At this time, these are the only Institutional Controls that can be implemented by the Navy, since a deed restriction can not be placed on the property. However, if there is a change in the property ownership in the future, a deed restriction should be considered as a further institutional control to be placed on the site.

- ***Remedial Action Performance:*** The first five-year review completed in 1999 noted that there were no substantial areas of non-compliance with any of the remedial objectives for McAllister Point Landfill. A second ROD for the McAllister Point Landfill was signed in 2000 to address the marine sediment/management of migration. As described in Section 2.3.2, this remedy included the dredging of contaminated sediments and off-site disposal, and included the construction of artificial reefs and eelgrass restoration in 2001. Monitoring is on-going. Initial monitoring conducted in 2003 did not note any major problems with remedy implementation.

- ***System Operations/O&M:*** Mowing should continue as currently scheduled for the site, along with the groundwater, vent gas, and ambient air monitoring. The condition of the wells, vents, fences and all locks as well as settling and revetment condition should continue to be noted in order to properly fulfill the goals of the ROD.

- ***Costs of Operations/O&M:*** There have been no issues with the remedy associated with costs.

- ***Opportunities for Optimization:*** Monitoring should continue as scheduled. If monitoring results indicate that groundwater, vent gas and sediment sampling results are remaining below site RAOs, then a decrease in monitoring frequency should be considered. In order to comply with the 2000 ROD, the viability of the artificial reefs, and the eelgrass beds should be monitored until regrowth or stabilization is evident. An air modeling study of the landfill gas generated at the landfill is underway. The results of this study will be used to assess the technical basis for a reduction in the landfill gas and ambient air monitoring currently required as part of the long-term monitoring program.

- ***Indicators of Remedy Problems:*** Minor problem areas at the McAllister Point Landfill noted in the 1999 Five-Year Review Report were: the lack stormwater samples collected due to no runoff; erosion along roadway; and the absence of deed restriction implementation. These issues have

subsequently been dealt with. As stated in the 1999 Five-Year Review, the Navy is not authorized to implement deed restrictions, so it is not possible for the deed to be modified. However, the Navy can implement "Land Use Controls", i.e. access controls, which have been implemented as discussed above. If the property were to change hands, it may be possible for a deed restriction to be placed on the property in the future.

Question 2: Are the assumptions used at the time of the remedy selection still valid?

- ***Changes in Standards and TBCs:*** As part of this five-year review, Applicable or Relevant and Appropriate Requirements (ARARs) and To Be Considered (TBC) guidance for the Site presented in the ROD were reviewed, and a review of current ARARs was conducted. No new standards have been promulgated that would affect the protectiveness of the cap or the off-shore actions.

- ***Changes in Exposure Pathways:*** There have been no changes in exposure pathways since the implementation of the 1993 and 2000 RODs. The area of Narragansett Bay along the NAVSTA Newport shoreline is currently a shellfish closure area due to known or potential sewage discharges (U.S. Navy, 2000). The 2000 ROD notes that this ban only applies to some species of shellfish, and does not include lobster or finfish. Although it is currently not legal to collect shellfish in this area, it is a potential future use. However, implementation of the marine sediment dredging remedy in the nearshore and elevated risk off-shore areas has eliminated site contaminants as a potential ingestion exposure pathway.

- ***Changes in Toxicity and Other Contaminant Characteristics:*** There have been no changes in toxicity or other contaminant characteristics that would call into question the protectiveness of the remedy. The remedy remains protective.

- ***Changes in Risk Assessment Methodologies:*** There have been no changes to risk assessment methods that would affect the protectiveness of the remedy. Monitoring should continue to ensure that contaminant concentrations remain below standards so any potential risk can be properly calculated.

Question 3. Has any other information come to light that could call into question the protectiveness of the remedy?

No additional information has been identified that would call into question the protectiveness of the remedy.

2.6 ISSUES

Groundwater is classifed as GA-NA. The groundwater monitoring results continue to indicate that site groundwater is not suitable for drinking. This is consistent with other locations on the NAVSTA Newport site. The saltwater intrusion due to the coastal location of the site may prevent it from ever reaching the GA classification. Monitoring should continue to document any changes in groundwater concentrations.

The area of Narragansett Bay along NAVSTA Newport is designated as a shellfish closure area by RIDEM. If this ban were to be lifted in the future, that would effectively lift the ban for the McAllister Point Landfill area.

2.7 RECOMMENDATIONS AND REQUIRED ACTIONS

Based on the results of the site inspection and review, there are several issues that do not effect the protectiveness of the remedy, but could impact the remedy in the future. The issue of deed restrictions as institutional controls needs to be considered for the future if ownership of the property changes. If the shellfish ban for Narragansett Bay is lifted, the shellfish data collected as part of the marine sediment monitoring program (e.g. LTMP) can be evaluated to assess any uncertainties regarding the impact of site contaminants on this marine resource. All scheduled monitoring associated with OU1 should continue, and if monitoring data are consistently below applicable standards, a decrease in frequency should be considered to optimize the cost-effectiveness of the monitoring. Monitoring in accordance with the OU4 marine sediment/management of migration ROD should continue.

If there is a future change in land use of the site that includes buildings meeting the definition of “inhabited buildings” in EPA’s Subsurface Vapor Intrusion Guidance, an evaluation of vapor intrusion to indoor air will be completed in accordance with the EPA guidance.

2.8 PROTECTIVENESS STATEMENT

The remedy at McAllister Point is protective of human health and the environment and exposure pathways that could result in unacceptable risks are being controlled. The source control remedy (OU1) is complete and functioning as intended. Groundwater, vent gas, and ambient air monitoring are on-going. The most recent groundwater monitoring annual results show few detections of VOCs and SVOCs and no concentrations exceeding the AWQCs, which are used for general comparison purposes. Exceedances of the AWQCs for some metals have been seen. The groundwater and vent gas monitoring data have shown consistent and stable results and show no indications of any issues with the protectiveness of the remedy.

The dredging and backfilling activities for the near shore and off-shore marine sediment remedial action (OU4) are complete. The planned habitat mitigation activities have been implemented; ecological restoration and eel grass monitoring are on-going. Post-dredging habitat monitoring has indicated positive results for the biological habitats of the dredged and restored areas and constructed artificial reefs, and eel grass beds that are healthy but still show impacts from the dredging activities. Monitoring should continue to ensure the current protectiveness of the remedy.

3.0 SITE 13 – TANK FARM FIVE, TANKS 53 AND 56

3.1 HISTORY AND SITE CHRONOLOGY

Tanks 53 and 56 were constructed in 1942 of reinforced concrete and had a capacity of approximately 2.52 million gallons. The tanks were constructed in blasted bedrock sockets and were approximately 116 feet in diameter and 33 feet deep. Approximately 4 feet of soil covered the tanks, and they were surrounded by a 4-foot wide, crushed-rock ring drain system. The ring drain system was installed to remove groundwater from around the tank and to prevent tank damage caused by hydraulic stresses and tank flotation.

Fuel oils were stored in the tanks from approximately World War II through 1974. In 1975, as part of an oil recovery program, the Navy began using the two tanks to store used oil for alternate use as a heating fuel oil (TRC, 1993). In 1982, RIDEM adopted hazardous waste regulations that were applicable to the waste oils stored in Tanks 53 and 56. Subsequent sampling of the waste oils in 1983 indicated that the oil and sludge layers were considered hazardous due to elevated concentrations of lead. Also, the water phase was found to contain dissolved hydrocarbon compounds.

In 1984, the Navy decided to discontinue use of the tanks. In 1985, results of a groundwater sampling round using monitoring wells located within the Tank 53 ring drain indicated the presence of chlorinated and aromatic hydrocarbon compounds. In September 1985, RIDEM issued NAVSTA Newport a Hazardous Waste Facility Permit for Tanks 53 and 56, which included a stipulation to remove the contents and close the tanks in accordance with federal hazardous waste regulations and RIDEM requirements applicable for USTs used for oil and hazardous substance storage.

Further investigations conducted in 1986 confirmed the presence of VOCs in the Tank 53 ring drain. Lower concentrations of VOCs were detected in groundwater up to 150 feet downgradient of Tank 53. In January 1990, oil was observed overflowing from the tank gauging chamber and onto the ground as a result of surface water entering the tank through cracks in the tank roof. The Navy took immediate action to lower the level in the tank to prevent further overflow. RIDEM issued an Immediate Compliance Order, which required that the Navy remove the contents of the tank, begin remediation of contaminated groundwater and soils surrounding the tank, and initiate an investigation to determine the extent of oil contamination in the vicinity of Tank 53.

In 1992, pursuant to the Immediate Compliance Order, the Navy completed the removal of sludge, oil, and water from the tank, and cleaned the interior surfaces of the tank. Also in 1992, an Interim Action ROD was signed by USEPA and the Navy that selected a management of migration alternative consisting

of groundwater extraction, treatment, and discharge as an interim remedial action for the Tanks 53 and 56 site. Additional pertinent site activity since implementation of the Interim Action ROD is included below in Section 3.2.

Additional information on site use and history can be found in the Remedial Investigation Report (TRC, 1992) and the Soil Investigation Report – Tank Farm Five – Tanks 53 and 56 (TRC, 1993a). A chronology of important events regarding the operation and remedy for Tanks 53 and 56 at Tank Farm Five is shown in the table below.

EVENT	DATE
Tank Farm Five constructed.	Early 1940s
Tank Farm Five used for fuel storage.	World War II to 1974
Began using Tanks 53 and 56 for waste oil storage.	1975
Ceased using Tanks 53 and 56 for waste oil storage.	1984
Tank Closure Plan for Tanks 53 and 56 was completed.	September 1987
NETC Newport listed on NPL.	November 21, 1989
Groundwater investigation conducted as part of Tanks 53 and 56 closure investigation.	June 1991
Contents of Tanks 53 and 56 were removed and the tank interiors were cleaned.	Summer 1992
Interim Action Record of Decision (interim groundwater pump and treat remedy).	September 29, 1992
Soils investigation conducted as part of Tanks 53 and 56 closure investigation.	October 1992
Design for a groundwater extraction and treatment/ containment system completed.	1993
Construction of system completed.	December 1994
Operation of the groundwater extraction and treatment system.	December 1994 – December 1996
Final Tank Closure Certification Report, Tanks 53 and 56 completed.	September 6, 1996
First post-remedial action groundwater sampling round.	December 1996
Second post-remedial action groundwater sampling round.	March 1997
Third post-remedial action groundwater sampling round.	August 1997
Demolition of the tanks.	1998-1999
Installation of two bedrock monitoring wells, per RIDEM request.	Late 1999
First Five-Year Review completed.	December 1, 1999
Fourth post-remedial action groundwater sampling round.	May 2001
Repairs to monitoring well network and redevelopment of all wells.	May 2004
Fifth post-remedial action groundwater sampling round.	May 2004

3.2 BACKGROUND

Tank Farm Five, Tanks 53 and 56, is located in the central portion of the NAVSTA Newport facilities, in Middletown, Rhode Island (Figure 3-1). The 85-acre tank farm is the site of 11 underground storage tanks (USTs), numbered 49 through 59. Tanks 53 and 56 are located in the western portion of the Tank Farm Five site. Tank Farm Five is bordered to the northwest by Defense Highway, to the southwest by a cemetery, to the east by residences, and to the northeast by Greene's Lane.

Physical Characteristics

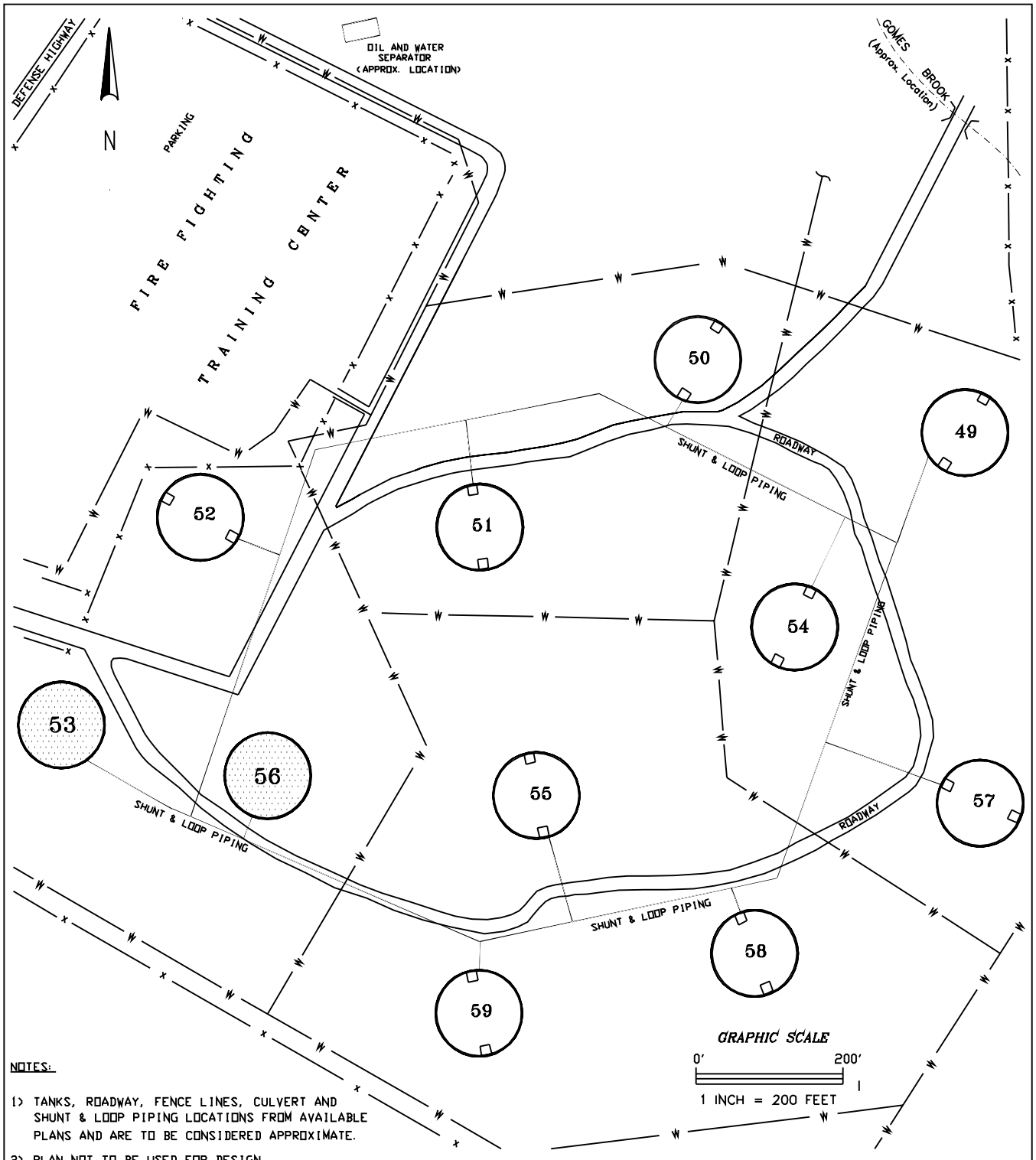
A paved road provides access to the site, passing between the tank locations in a loop. Site topography generally slopes to the north. Gomes Brook is located approximately 1,200 feet north of Tanks 53 and 56, passing through the northeastern portion of the site and draining toward the west into Narragansett Bay. The tanks are located in the gradually sloping central portion of the site.

Overburden materials include fill around the tanks underlain by native sand and silt and glacial till layers. The till layer ranges from 1 to 21 feet in depth and overlies highly weathered bedrock. The zone of weathered bedrock, up to 22 feet in depth, overlies competent bedrock.

Groundwater in the southern portion of the site, where Tanks 53 and 56 are located, flows generally west-northwest toward Narragansett Bay. Groundwater in the northern portion of the site flows toward Gomes Brook. The groundwater is classified as GA-NA (defined in Section 1.2.4).

3.3 REMEDIAL ACTIONS

A ROD for the Interim Remedial Action – Groundwater Operable Unit – Tank Farm Five, Tanks 53 and 56, (Site 13) was signed by the NAVSTA Newport Commanding Officer and the Regional Administrator of USEPA Region I in September 1992, with RIDEM concurrence. The objective of the interim remedial action ROD was to remediate contaminated groundwater around Tanks 53 and 56. At the time it was anticipated that a final ROD including both groundwater and source control components would be issued within 5 years. Since the other nine tanks in Tank Farm Five were used for storage of fuels only, they are being investigated under the RIDEM UST program (see Section 4.8).



NOTES:

1) TANKS, ROADWAY, FENCE LINES, CULVERT AND SHUNT & LOOP PIPING LOCATIONS FROM AVAILABLE PLANS AND ARE TO BE CONSIDERED APPROXIMATE.

2) PLAN NOT TO BE USED FOR DESIGN.

TANK FARM 5 – LOCATION OF TANKS 53 & 56		FIGURE 3–1	
NAVSTA NEWPORT – FIVE–YEAR REVIEW		TETRA TECH NUS, INC.	
NEWPORT, RHODE ISLAND		55 Jonspin Road Wilmington, MA 01887 (978)658–7899	
DRAWN BY:	D.W. MACDOUGALL	REV.:	0
CHECKED BY:	P. CALL	DATE:	NOVEMBER 24, 2004
SCALE:	AS NOTED	ACAD NAME:	DWG\5152\3584\FIG_3-1.DWG

3.3.1 Remedy Selection

Remedial action objectives were developed based on information obtained from various investigations regarding contaminants and potential exposure pathways. The following four RAOs were used to develop and screen alternatives to mitigate existing and future potential threats to human health and the environment.

- Minimize further migration of the contaminated groundwater;
- Minimize any future negative impact to Gomes Brook and Narragansett Bay resulting from the discharge of contaminated groundwater;
- Reduce the potential risk associated with the future ingestion of contaminated ground water; and
- Reduce the time required for restoration of the aquifer.

The selected remedy was an interim remedial action for groundwater only. Soil contamination was evaluated separately and was envisioned as part of a final ROD for groundwater and soils. The components of the interim remedy as described in the 1992 ROD included:

- Groundwater extraction to contain contaminated groundwater and prevent its migration and potential discharge to surface water bodies;

- Groundwater treatment using coagulation/filtration and UV oxidation to treat organic and inorganic contaminants;

- Discharge of treated groundwater to the local wastewater treatment facility; and

- Continued groundwater monitoring to confirm the capture of contaminated groundwater.

3.3.2 Remedy Implementation

In 1993, the design for the groundwater extraction and treatment/containment system was completed. Construction of the system was completed in December 1994. The system was designed to contain groundwater in the vicinity of Tank 53 and to prevent it from migrating further toward Narragansett Bay. The system consisted of two sets of extraction wells, a treatment system, and groundwater monitoring wells.

The groundwater extraction and treatment system operated during the period from December 1994 to December 1996 when the system was shut down because analytical results for influent samples were

below the cleanup levels established in the Interim Action ROD. Also within this time period (1995 to 1996) the Navy conducted a source removal action at Tank 53, as discussed below, which likely contributed to meeting the established cleanup levels in groundwater.

While the selected interim remedial action for the Tanks 53 and 56 site is a groundwater management of migration remedy, and does not have a "source control" component as part of the Interim Action ROD implemented under CERCLA, the Navy elected to also implement a separate source removal action. As stated in the Interim Action ROD, the soil contamination in the vicinity of Tanks 53 and 56, and soil cleanup strategies were to be evaluated separately. The investigation and remediation of soil contamination at Tanks 53 and 56 are subject to RIDEM UST regulations, while the investigation and remediation of groundwater contamination is addressed under CERCLA, and by the Interim Action ROD signed by USEPA and the Navy in September 1992.

Soil conditions at the tanks were investigated and reported separately, as summarized in "Soil Investigation, Tank Farm Five, Tanks 53 and 56" (TRC, 1993a). The report presented the Navy's selected remedial alternative for soil at Tanks 53 and 56, and from 1995 through 1996, contaminated soils surrounding Tank 53 were removed and disposed of off site under a RCRA action. Remediation of soil near Tank 56 was determined not necessary, based on sampling and analytical data. The ring drain at Tank 53 was re-constructed with clean stone/soils. However, the ring drain pumping system was not placed back into operation, rather, the tank was ballasted with clean water to address concerns about flotation.

Three post-remedial action groundwater sampling events were conducted in December 1996, March 1997, and August 1997. EPA MCLs and RIDEM GA objectives were not exceeded except for total metals in the unfiltered groundwater samples collected using bailer methods (B&RE, 1997b). The results of the three groundwater sampling events were summarized in a Technical Memorandum (B&RE, 1997b) which recommended that the groundwater extraction and treatment system remains shut down.

RIDEM's February 17, 1998 approval for the demolition of tanks at Tank Farm Five also requested the installation of two additional bedrock wells downgradient of Tank 53 in conjunction with the Tanks 53 and 56 groundwater investigation operable unit. RIDEM also requested performance of a soil gas survey to assist in locating the two bedrock wells in optimal locations. The survey was completed and the "Passive Soil Gas Investigation Report, Tanks 53 and 56, Tank Farm Five" (TtNUS, 1999b) presented the results of the soil gas investigation and recommended proposed locations for two bedrock monitoring wells downgradient of Tank 53, per RIDEM's request. Tanks 53 and 56 were demolished along with the other nine tanks in Tank Farm Five from late 1998 through early 1999 as part of UST closure activities

performed by the Navy in accordance with RIDEM regulations. Further details are provided in Section 4.8.

The two bedrock wells were installed in late 1999 and sampled in January 2000. Groundwater sampling round number four was conducted in May 2001. Based on the results of that sampling round, discussed in Section 3.4.2, additional monitoring was required.

3.4 FIVE-YEAR REVIEW FINDINGS

3.4.1 Site Inspection

A site inspection was completed on March 23, 2004 by the TtNUS project team. The area of former Tanks 53 and 56 was well vegetated, monitoring wells were observed and those accessible and inspected closely were generally not secured and were in poor condition. The poor condition of wells in the monitoring network was noted in the May 2001 fourth sampling round report; the report included recommendations for repairs as described in Section 3.4.2 below. The former groundwater treatment plant building remains in the vicinity of former Tank 53. The team walked the entire loop road through Tank Farm Five. Piles of rubble, excess materials, and brush were observed in a number of locations; the largest area of debris was in the area of Tank 50. The wetland that naturally formed in the former Tank 57 area appeared to be well established. A chain-link fence was observed around the perimeter of the area. Gates, secured with locks, restrict access to the entire area. Photographs taken during the site inspection are included in Appendix B.

The NAVSTA Newport environmental staff indicated that community involvement has generally been minimal. Individuals interviewed at the April 21, 2004 RAB meeting indicated a general satisfaction with the actions taken to date at the tank farm and felt well informed about cleanup activities and progress. They were not aware of any problems, incidents, or citizen complaints regarding the activities associated with Tanks 53 and 56 at Tank Farm Five.

3.4.2 Document and Analytical Data Review

Following the shut down of the groundwater extraction and treatment system in 1996, three of four planned rounds of quarterly sampling were conducted to confirm whether the operation of the system should be terminated or whether additional operation and sampling was necessary.

Analytical results from 11 wells (monitoring and extraction wells) sampled during the three events conducted between December 1996 and August 1997, following implementation of the interim remedial

action, are summarized in the "Technical Memorandum – Summary of Analytical Results – Sample Round 3 for Tank 53 – Tank Farm 5" (B&RE, 1997b). Groundwater samples were analyzed for VOCs, SVOCs, metals, pesticides/PCBs, and petroleum hydrocarbons. The report states that results for potential contaminants of concern do not exceed current (August 1996) RIDEM Class GA groundwater quality standards. The report concludes that based on the analytical results from these events and from previous investigations "it appears that the removal action that the Navy conducted in the ring drain has effectively removed the source of contamination and concentrations of potential contaminants of concern have attenuated. Consequently, the extraction and treatment system should remain shut down" (B&RE, 1997b).

A bedrock groundwater investigation was completed in 1999 in response to a request from RIDEM. Two locations were selected and two bedrock wells were installed in each location in late 1999 and sampled in early 2000. The groundwater sample results showed no contaminants detected above GA standards and no detections of gasoline- or diesel-range organics (TtNUS, 2000).

A fourth groundwater sampling round was conducted in May 2001. Samples were again collected using bailers. Two wells were open and damaged; the analytical results were not considered valid (TtNUS, 2002). Exceedances of the RIDEM GA Groundwater Objectives and federal MCLs for bis(2-ethylhexyl)phthalate were noted in four wells. The fourth sampling round report recommended that the surface seals and protective casings on the two wells be repaired or replaced, and that all the wells in the monitoring network be repaired, redeveloped, surveyed, and resampled (TtNUS, 2002). These recommendations were implemented in May 2004, followed by completion of the fifth sampling round. The fifth sampling round used the EPA low-flow sampling protocol, which is not only the current groundwater sampling standard, but also avoids the turbidity impacts seen in the unfiltered results from the prior four sampling rounds (TtNUS, 2004e). If the results of the fifth round meet RIDEM and federal MCL groundwater standards, the Navy will recommend a ROD revision to No Further Action (NFA).

3.4.3 ARAR and Site-Specific Action Level Changes

The ARARs listed in the decision documents for this site are shown in Appendix D, Tables D-4 through D-6. No new ARARs have been promulgated that would call into question the protectiveness of the remedy. Site RAOs have been met, and the groundwater treatment system remains shut down due to the results of monitoring on-site. Site documents state that the source of contamination was sucessfully removed with the demolition of the tanks on-site, so there is no direct exposure pathway currently existing at the site.

3.4.4 Progress Since Last Five-Year Review

The first five-year review concluded that the groundwater remedy selected for Tanks 53 and 56 was successfully implemented and that groundwater monitoring data indicate that contaminants do not remain at levels that pose an unacceptable risk to human health or the environment (TtNUS, 1999c). The groundwater extraction and treatment system was shut down in December 1996 after two years of operation since groundwater cleanup levels had been attained. The review recommended that no further response actions were required. The review also noted that groundwater data would be evaluated following the installation of the bedrock monitoring wells and sampling round requested by RIDEM.

Following the completion of the first five-year review, two bedrock monitoring wells were installed in late 1999 and then sampled in January 2000. Groundwater monitoring round number four was performed in May 2001. Based on the results of monitoring round number four, the Navy determined that the wells in the monitoring network needed to be repaired, redeveloped, surveyed, and resampled. The repair work was completed in spring 2004, prior to completion of monitoring round number five in May 2004. These activities and the groundwater monitoring results are discussed further in Section 3.4.2 and Section 3.5, Question 1 below.

3.5 ASSESSMENT

The following conclusions support the determination that the remedy at Tanks 53 and 56, and Tank Farm Five remains protective of human health at the environment.

Question 1. Is the remedy functioning as intended by the decision documents?

- ***HASP/Contingency Plan:*** Monitoring should continue according to site documents, however, if contaminant concentrations are consistently below applicable state and federal standards, then monitoring could be discontinued.

- ***Implementation of Institutional Controls and Other Measures:*** The site is currently fenced-off and locked. Access by the public is restricted in accordance with the NAVSTA Newport instruction, "Installation Restoration (IR) Site Access and Use," NAVSTA Newport/Local Area Rhode Island Coordinator Instruction 5090.15A (included as Appendix E). Since the tanks and contaminated soils have been removed, there is no need for any further institutional controls beyond those already in place.

- ***Remedial action performance:*** The first five-year review noted that there were no areas of non-compliance with any of the remedial objectives for Tank Farm Five, Tanks 53 and 56. The first five-year review also noted that the groundwater remedy for Tank Farm Five, Tanks 53 and 56 had been successfully implemented and that monitoring data in general indicate that contaminants do not remain on site at levels that pose an unacceptable risk to human health or the environment. As discussed in Section 3.4.2, the results from monitoring round five, completed in May 2004, will be used to assess the need for a continuation of groundwater monitoring. A review of the May 2004 data indicates that the results are consistent with the first three sampling rounds. EPA MCLs and RIDEM GA objectives were not exceeded, with the exception of arsenic in an unfiltered sample collected using a bailer (due to fines in the sample the result may be biased high) (TtNUS, 2004e). There have been no changes at this site to alter the protectiveness of the remedy at Tank Farm Five, and the monitoring data continues to indicate that the remedy is protective of human health and the environment.

- ***System Operations/O&M:*** The groundwater treatment system has been shut down since December 1996. Operations and maintenance should continue as needed. The monitoring well network was repaired and the wells were redeveloped in May 2004. Fences and locks should be maintained to restrict access.

- ***Cost of Operations/O&M:*** There were no issues associated with cost for this remedy.

- ***Opportunities for Optimization:*** If groundwater meets the RIDEM and Federal groundwater standards, monitoring should be discontinued at this site.

- ***Indicators of Remedy Problems:*** Since the treatment system has been shut down due to the attainment of remedial goals, and no contaminants have been consistently detected above GA groundwater standards in overburden or bedrock groundwater samples, the remedy at this site remains protective and therefore there are no indicators of any problems.

Question 2: Are the assumptions used at the time of the remedy selection still valid?

- ***Changes in Standards and TBCs:*** As part of this five-year review, ARARs and TBC guidance for the Site presented in the ROD were reviewed, and a review of current ARARs was conducted. There have been no changes in any ARARs that would affect the protectiveness of the remedy at Tank Farm Five, Tanks 53 and 56.

- ***Changes in Exposure Pathways:*** The source of groundwater contamination has been removed, and site RAOs have been met. Groundwater monitoring results from the May 2004 fifth monitoring round indicate that any site contaminants detected are below RIDEM standards and federal MCLs, with the exception of one arsenic result which may be biased high due to the sample collection method. There are no current human or ecological receptor exposure pathways.

- ***Changes in Toxicity and Other Contaminant Characteristics:*** There have been no changes in toxicity or other contaminant characteristics that would call into question the protectiveness of the remedy. The remedy remains protective.

- ***Changes in Risk Assessment Methodologies:*** There have been no changes in risk assessment methods that would call into question the protectiveness of the remedy. The remedy remains protective.

Question 3. Has any other information come to light that could call into question the protectiveness of the remedy?

No additional information has been identified that would call into question the protectiveness of the remedy.

3.6 ISSUES

No issues were identified during the five-year review for Tanks 53 and 56 at Tank Farm Five at NAVSTA Newport.

3.7 RECOMMENDATIONS AND REQUIRED ACTIONS

Based on the results of the site inspection and document and data review, there are no major recommendations or required actions to be taken at the site. The remedies are complete; RAOs have been met and currently remain protective of human health and the environment. The monitoring well network was repaired and the wells were redeveloped and sampled in May 2004. It is recommended that a ROD revision for No Further Action be implemented if the evaluation of the data from this fifth monitoring round (May 2004) shows that contaminant concentrations are below RIDEM GA Groundwater Objectives and federal MCLs. The May 2004 monitoring data should also be used to assess the need for a continuation of groundwater monitoring and further five-year reviews.

If there is a future change in land use of the site that includes buildings meeting the definition of “inhabited buildings” in EPA’s Subsurface Vapor Intrusion Guidance, an evaluation of vapor intrusion to indoor air will be completed in accordance with the EPA guidance.

3.8 PROTECTIVENESS STATEMENT

The remedy at Tanks 53 and 56 at Tank Farm Five is protective of human health and the environment and exposure pathways that could result in unacceptable risks are being controlled. The source of contamination has been removed, and the groundwater treatment system remains shut down due to attainment of RAOs. Groundwater monitoring results do not indicate a groundwater problem. The results of the most recent monitoring round are consistent with the results from the first three rounds. A comparison of the monitoring data to RIDEM and federal groundwater standards indicates concentrations of potential contaminants of concern have attenuated following the source removal action.

4.0 OTHER SITES AND STUDY AREAS

4.1 STUDY AREA 04 – CODDINGTON COVE RUBBLE FILL AREA

The Coddington Cover Rubble Fill (CCRF) Area is a small area (less than 8 acres) that was used from 1978 to 1982 as an area for general fill. Records researched for the IAS indicated that the area was used for the disposal of rubble, concrete, asphalt, slate, wood, brush, and possibly small quantities of ash. (U.S. Navy, 2002). The area lies on the shoreward side of Coddington Highway, between the highway and the rail spur, south of the former Derecktor Shipyard area (see Figure 1-1). A secure, fenced storage area is located directly north of the site and the Defense Automated Printing Service/Supply Department (Building 47) is to the east. A Navy housing development abuts the south and west boundary of the CCRF Area. The area is fenced, with the exception of an area to the southwest, and unoccupied.

There is no historical chemical data available for the site, and there is currently no site activity. A record review and field sampling plan was issued in May 2004. The records review, including historical aerial photographs, was used to develop the field sampling plan to gather preliminary information through a focused field investigation (TtNUS, 2004). The field sampling plan included excavation of test pits in areas of suspected fill and collection of soil and groundwater samples to characterize the waste materials in the fill areas. The field work was completed in May and July 2004. The data from the field sampling effort will be used to determine if contaminants are present at concentrations above screening criteria (TtNUS, 2004). Based on a review of the data, recommendations will be made regarding future actions at the CCRF Area.

If a remedial action is selected for the CCRF Area under CERCLA § 121 in the future, the protectiveness of the selected remedy will be reviewed in subsequent five-year reviews for NAVSTA Newport.

4.2 STUDY AREA 07 – TANK FARM NO. 1

Tank Farm No. 1 was constructed in the early 1940s and was in operation by the Navy between World War II and 1970. There are six 60,000-barrel USTs that were used for storage of diesel oil, fuel oil, jet fuel, 100-octane gasoline, and aviation fuel. According to previous investigation reports, tank bottom sludges were placed in pits on the site. Approximately 6,000 gallons of these sludges were reportedly disposed of in this manner on the site (U.S. Navy, 2002c). The site was included in the 1983 IAS and the 1986 CS. A fence around the tank farm area restricts access to the site.

The Defense Energy Support Center (DESC) was licensed by the Navy to use the tank farm as part of Defense Fuel Support Point (DFSP) Melville for petroleum fuel storage and distribution between 1974 and

1998. The tanks were cleaned and ballasted between 1996 and 1997 and the site was administratively closed by DESC in 1998. (TtNUS, 2001). Further investigations are being planned by DESC to fully characterize and remediate, under the RIDEM UST regulations, any petroleum contamination that occurred as a result of DESC operations. The UST program is mandated by the federal Resource Conservation and Recovery Act. Following DESC's efforts, the NAVSTA Newport IR Program, which is mandated by CERCLA, will conduct investigations for possible former sludge pits as necessary and for areas of contamination other than petroleum.

If a remedial action is selected for Tank Farm No. 1 under CERCLA § 121 in the future, the protectiveness of the selected remedy will be reviewed in subsequent five-year reviews for NAVSTA Newport. The remedial action selection process will evaluate risk from future recreational uses of the site, such as use for a golf course, in establishing cleanup goals for the site.

4.3 STUDY AREA 08 – NAVAL UNDERSEA SYSTEMS CENTER (NUSC) DISPOSAL AREA

This disposal area, located in Middletown, Rhode Island was reportedly used for disposal of rubble and inert materials, including scrap lumber, tires, wire, cable, and empty paint cans. The site was included in the 1983 IAS with a recommendation for no further action (NFA). Further investigations have been performed under a SASE (TtNUS, 2004d).

The NUSC disposal area consists of approximately 8 acres of land adjacent to two streams, associated wetlands, and a small pond. The upland portions have been used as fill and storage areas since the Navy developed the site in the early 1950s. Currently there is a secured storage area and open storage area (both paved – approximately 2.3 acres) as well as open fields (1.6 acres) and brush covered areas (4.2 acres).

The SASE was conducted in June through November 2003, and included a passive soil gas investigation, and collection of soil, sediment, surface water, and groundwater samples. The passive soil gas analysis indicated some areas where elevated VOCs were present, and these, along with other target areas identified in the work plan were investigated with a series of test pits, soil borings, and groundwater monitoring wells. Chlorinated solvents (trichloroethene (TCE) and tetrachloroethene (PCE)) were found in groundwater at the north (downgradient) end of the site. TCE was also found in soil gas in the central portion of the site, near drums which were found buried in the ground; only low concentrations of TCE were detected in soils and groundwater co-located with the drums. In the south eastern portion of the site, methylbenzene compounds were detected at elevated concentrations in soil under the pavement (TtNUS, 2004d).

Other findings included a large number of what appear to be aerosol paint cans in the stream embankment in the south west portion of the site, confirmed through test pit excavation in this area. Elevated concentrations of lead were found co-located with these containers and in the stream sediments downstream as far as the NUWC pond (TtNUS, 2004d).

The data evaluated in the SASE indicates that fill, containing different types of contaminants, has been placed at the site. Some of these contaminants have been released from the fill through leaching or percolation, and have moved from the fill areas to the stream and the groundwater. Other contaminants found within the fill that are resistant to chemical change or physical movement have not been released (TtNUS, 2004d). Preliminary human health and ecological risk assessment activities were completed to identify contaminants of potential concern.

The SASE concluded that limited removal actions may be necessary and that additional efforts will be required to complete a remedial investigation, including a baseline human health and ecological risk assessment, for the site (TtNUS, 2004d).

If a remedial action is selected for the NUSC Disposal Area under CERCLA § 121 in the future, the protectiveness of the selected remedy will be reviewed in subsequent five-year reviews for NAVSTA Newport.

4.4 SITE 09 – OLD FIRE FIGHTING TRAINING AREA

The 5.5-acre site, located on Coaster's Harbor Island, adjacent to Narragansett Bay, was constructed in 1944 to train Navy personnel in fighting ship-board fires. Waste oils were used to train personnel in fire fighting operations (TRC, 1992). Several buildings were present to simulate ship compartments; these buildings, with several burning pits and paved areas, served as the principal areas of activity. The fire fighting training facility was closed in 1972. Upon closure, the training structures were reportedly demolished and buried in three mounds on the site, and then the entire area was covered with topsoil. The three soil mounds are currently the primary features. One, approximately 20 feet high is located in the center of the site; the other two, approximately 5 - 6 feet high, are located on the western side of the site. The balance of the site is generally flat (TtNUS, 2001). The quantity of demolition debris buried on the site is unknown. Access to the site is restricted on the east, south and west sides by a chain-link fence and rope barriers.

The site was converted to a recreational area with a playground, a picnic area with an open pavilion and barbecue grills, and a baseball field following the demolition activities in the early 1970s. The area was used for a variety of recreational activities between 1976 and 1998. A child day care center was also in

operation at the site until 1994 when it was relocated to a larger facility on base (TtNUS, 2001). The site, now referred to as Katy Field, is not currently in use.

An Initial Assessment Study was conducted in 1983 that concluded that the site did not pose any threat. However, oil was found in the subsurface soil in 1987 during work to expand the child day-care center. In 1992, the Navy initiated a Remedial Investigation (RI) that included this area. The Phase I RI reported in 1994 that VOCs, pesticides, and fuel components were present in soils and groundwater. It was determined at that time that the contaminant concentrations did not pose an immediate threat to humans. In 1996, the Navy initiated a study as a follow up to the Phase I RI to attempt to define possible continuing sources of oil contamination to the property (U.S. Navy, 2003).

In 1998 the USEPA requested that Katy Field and the recreational area around it be closed due to concerns about the adequacy of the characterization of site contaminants and exposure scenarios. The Navy immediately performed a human health risk assessment at Katy Field to determine the possible health effects to adults and children from recreational use of the site. This study concluded that risks to site users were negligible. The Navy decided to keep the site closed until all investigations under CERCLA had been competed (U.S. Navy, 2003).

An ecological risk assessment was conducted in the harbor adjacent to the site in 1998. This study found some potential for risk to ecological receptors in the near shore areas from contaminants related to old fuel releases. Follow-up sediment studies have confirmed some contaminants present but also the presence of sensitive species such as eelgrass and shellfish in this area (U.S. Navy, 2003).

An RI Report, based on the Phase I and II investigations conducted in the early 1990s was completed in July 2001 (TtNUS, 2001). This report incorporated the offshore ecological investigation (1998), a marine ecological risk assessment (2000) and three supplemental investigations (1997 – 2000). A Feasibility Study (FS) was completed in September 2002 that evaluated remedial action alternatives to restore the site for unlimited use. Two phases of pre-design work have been completed on the marine sediment following completion of the FS. A decision on a remedy for the off-shore portion of the site, e.g. marine sediment, has not yet been completed (U.S. Navy, 2004). Remediation of groundwater was not deemed necessary at the time the FS was completed due to an incomplete exposure pathway, though monitoring is anticipated (TtNUS, 2004a).

In summer 2003, the Navy announced plans for a removal action to excavate and remove contaminated soil at the site. Completion of this removal action would eliminate any unacceptable risks and allow the Navy unrestricted use of the property. The Navy documented the decision to conduct a non-time critical

removal action to remove the three mounds of contaminated soil and debris in an Action Memorandum, dated August 13, 2004 (U.S. Navy, 2004). The soil removal action began in September 2004.

If a remedial action is selected for OFFTA under CERCLA § 121 in the future, the protectiveness of the selected remedy will be reviewed in subsequent five-year reviews for NAVSTA Newport.

4.5 STUDY AREA 10 – TANK FARM NO. 2

This tank farm, located in Melville, was constructed in the early 1940s and used by the Navy between World War II and 1970. Eleven 60,000-barrel USTs were used for storage of fuel. According to previous investigation reports, approximately 100,000-175,000 gallons of tank bottom sludges were disposed in pits on site (U.S. Navy, 2002c). The site was part of the 1983 IAS. A fence around the tank farm area restricts access to the site.

The Defense Energy Support Center (DESC) was licensed by the Navy to use the tank farm as part of Defense Fuel Support Point (DFSP) Melville for petroleum fuel storage and distribution between 1974 and 1998. The tanks were cleaned and ballasted between 1996 and 1997 and the site was administratively closed by DESC in 1998. (TtNUS, 2001). Further investigations are being planned by DESC to fully characterize and remediate, under the RIDEM UST regulations, any petroleum contamination that occurred as a result of DESC operations. The UST program is mandated by the federal Resource Conservation and Recovery Act. Following DESC's efforts, the NAVSTA Newport IR Program, which is mandated by CERCLA, will conduct investigations for possible former sludge pits as necessary and for areas of contamination other than petroleum.

If a remedial action is selected for Tank Farm No. 2 under CERCLA § 121 in the future, the protectiveness of the selected remedy will be reviewed in subsequent five-year reviews for NAVSTA Newport. The remedial action selection process will evaluate risk from future recreational uses of the site, such as use for a golf course, in establishing cleanup goals for the site.

4.6 STUDY AREA 11 - TANK FARM NO. 3

This tank farm, located in Melville, was constructed in the early 1940s and was used by the Navy between World War II and 1970. Seven 60,000-barrel USTs were used for storage of fuel. According to previous investigation reports, tank bottom sludges were disposed in burning chambers, which were constructed of steel sides and sand bottoms (U.S. Navy, 2002c). The site was part of the 1983 IAS. A fence around the tank farm area restricts access to the site.

The Defense Energy Support Center (DESC) was licensed by the Navy to use the tank farm as part of Defense Fuel Support Point (DFSP) Melville for petroleum fuel storage and distribution between 1974 and 1998. The tanks were cleaned and ballasted between 1996 and 1997 and the site was administratively closed by DESC in 1998 (TtNUS, 2001). Further investigations by DESC commenced in June 2004 to fully characterize and remediate, under the RIDEM UST regulations, any petroleum contamination that occurred as a result of DESC operations. The UST program is mandated by the federal Resource Conservation and Recovery Act. Following DESC's efforts, the NAVSTA Newport IR Program, which is mandated by CERCLA, will conduct investigations for possible former sludge pits as necessary and for areas of contamination other than petroleum.

If a remedial action is selected for Tank Farm No. 3 under CERCLA § 121 in the future, the protectiveness of the selected remedy will be reviewed in subsequent five-year reviews for NAVSTA Newport. The remedial action selection process will evaluate risk from future recreational uses of the site, such as use for a golf course, in establishing cleanup goals for the site.

4.7 SITE 12 – TANK FARM NO. 4

Tank Farm Four is approximately 80 acres, located in Portsmouth. The site is bordered by Narragansett Bay to the east, Defense Highway to the west, and wooded, undeveloped areas to the north and south (TRC, 1992). The topography slopes to the west; the ground elevation falls to mean sea level on the west corner where Normans Brook crosses the site. The brook flows off the site and into Narragansett Bay. The tanks were located in the central portion of the site (TRC, 1992).

The tank farm was constructed in the early 1940s and was used between World War II and 1970. Twelve 60,000-barrel USTs were used for storage of fuel (U.S. Navy, 2002b). Tank bottom sludges may have been disposed of on site. The site was part of the 1983 IAS and the CS in 1986. In October 2004, the Navy began field work on a Site Investigation (SI) to fully characterize the entire site under the IR Program. Review Areas are areas targeted for investigation during the SI. These were selected as areas where residual contaminants may be present based on regulatory review of historical records. The work includes investigating for possible former sludge pits, assessing piping not previously assessed, demolishing two structures known as Ruin #1 (a former oil water separator/burn pit) and Ruin #2 (a former oil-water separator), and sampling other Review Areas including fence lines and transformer vaults.

All tanks in Tank Farm Four were cleaned and ballasted between 1994 and 1997 and were demolished between 1997 and 1998 as part of UST closure activities conducted by the Navy under RIDEM UST regulations. Test pits were dug around the perimeter of each tank and a composite soil sample analyzed

to ensure no contamination was present. A 15-foot layer of sand was placed into the bottom of each tank and each tank roof was imploded individually. The demolition objective was to collapse and separate the tank roof from the tank walls while maintaining the basic structural integrity of the tank floor and side walls. Following tank demolition, each tank site was backfilled with clean borrow material (Foster Wheeler, 1999).

If a remedial action is selected for Tank Farm No. 4 under CERCLA § 121 in the future, the protectiveness of the selected remedy will be reviewed in subsequent five-year reviews for NAVSTA Newport. The remedial action selection process will evaluate risk from future recreational uses of the site, such as use for a golf course, in establishing cleanup goals for the site.

4.8 SITE 13 – TANK FARM NO. 5

Tank Farm Five is approximately 80 acres and is located in the north-central part of NAVSTA Newport, in Middletown. The site is bordered by Narragansett Bay to the east, Defense Highway to the west, a wooded area and cemetery to the south, and Green Lane to the northeast. The site topography slopes to the north. Ground elevation falls to mean low water level in the northeastern part of the site, where Gomes Brook crosses the site. The brook flows off site and into Narragansett Bay (TRC, 1992).

This tank farm, located in the mid-portion of NAVSTA Newport, was constructed in the early 1940s and was used between World War II and 1970. Eleven 60,000-barrel USTs were used for storage of fuel. Tank bottom sludges were burned on the site. Approximately 10,000-175,000 gallons of oily sludges were disposed on site. The site was part of the 1983 IAS. The tanks were cleaned and ballasted between 1994 and 1997 (TtNUS, 2001).

Activities associated with Tanks 53 and 56 are discussed in Section 3. These two tanks were used for storage of waste oils used in an oil recovery program. The other tanks in Tank Farm Five were used exclusively for storage of virgin fuel oils.

All tanks in Tank Farm Five, including Tanks 53 and 56, were demolished from late 1998 through early 1999 as part of UST closure activities conducted by the Navy under Rhode Island regulations. The tanks were imploded individually, with the demolition objective being to collapse and separate the tank roof from the tank walls while maintaining the basic structural integrity of the tank floor and side walls. A 15-foot layer of sand was placed into the tank to absorb the shock from the collapsing tank roof and to avoid formation of void spaces between the tank floor and collapsed roof. The ballast water was removed from the tanks and pump rooms prior to sand placement. Following tank demolition, each tank site was backfilled with certified clean fill (TtNUS, 2000).

In October 2004, the Navy began field work on a Site Investigation to fully characterize the entire site under the IR Program. The work includes investigating for possible former sludge pits, assessing piping not previously assessed, demolishing a former oil-water separator/burn pit, and sampling other Review Areas including fence lines and transformer vaults.

If a remedial action is selected for Tank Farm No. 5 under CERCLA § 121 in the future, the protectiveness of the selected remedy will be reviewed in subsequent five-year reviews for NAVSTA Newport. The remedial action selection process will evaluate risk from future recreational uses of the site, such as use for a golf course, in establishing cleanup goals for the site.

4.9 SITE 17 – BUILDING 32, GOULD ISLAND

The FFA initially identified Study Area 17 as three small rooms in the southwest corner of Building 32 at the northeast end of Gould Island. Gould Island lies between Aquidneck and Conanicut Islands, about 1.5 miles from the NAVSTA Newport shoreline. Electroplating and degreasing operations were performed in Building 32 during the mid-1940s, when it was used to service and store torpedoes. Wastes generated from the electroplating and degreasing operations, included muriatic acid, chromic acid, copper cyanide, sodium cyanide, sodium hydroxide, nickel sulfate, Anodex cleaner, and degreasing solvents. (TtNUS, 2004b).

Study Area 17 was included in the IAS (1983). The report suggested that rinse water from the operations was disposed directly into the bay and that contaminated sediments might be present off shore. The CS (1986) reported that sediment samples revealed slightly elevated concentrations of cyanide and copper. Mussels collected from the area of the rinse water out-fall contained elevated levels of copper (U.S. Navy, 2002a).

A waste inventory and sampling report characterized waste materials present in Building 32. Liquid samples were collected in 1992 from the Electroplating Shop area, revealing elevated levels of cadmium and organic chemicals. As a result, in 1992, the Navy initiated a removal action to dispose of liquid and semi-liquid wastes from the plating shop area (U.S. Navy, 2002a).

In 1997, the Navy performed UST removal and closure actions near Building 32. In an agreement with the USEPA and RIDEM, the Navy conducted the first phase of the SASE on all of Building 32. This study found low concentrations of degreasing and fuel-related contaminants in the soils under the building. Based on the findings of the Phase I SASE, the Navy designated the former Building 32 area as Site 17 in April 2000 (TtNUS, 2004b). Site 17 will encompass all of former Building 32 and any contamination emanating from it.

Building 32 was demolished in 2001 to the slab elevation, along with other unused buildings at Gould Island due to the deteriorated condition of the structure and the potential safety threat it caused. PCB contamination was found in some of the concrete floors and soils of the transformer vaults and the switch house following the demolition. Remedial activities to remove PCB-contaminated soil and concrete were completed in 2002. Based on sampling results, materials were disposed off-site as TSCA-regulated waste. Confirmatory samples were collected and the remediation activities were completed in September 2003 (U.S. Navy, 2002a).

Based on the contamination identified in the investigations summarized above, the Navy plans to conduct a remedial investigation to determine the nature and extent of contamination at and near the former Building 32 area. A Work Plan describing background information and the procedures for performing the RI at Site 17 was recently finalized. The RI will be based on prior investigations, site background information, and known and suspected contaminant migration pathways (TtNUS, 2004b).

If a remedial action is selected for the Building 32 area on Gould Island under CERCLA § 121 in the future, the protectiveness of the selected remedy will be reviewed in subsequent five-year reviews for NAVSTA Newport.

4.10 SITE 19 – DERECKTOR SHIPYARD

The Navy used the site along Narragansett Bay until the military realignment program in 1973 when the area was no longer necessary to support military activities. In 1979, the Navy leased the 41-acre site to the Rhode Island Port Authority and Economic Development Corporation, which issued a concurrent sublease to Robert E. Derecktor of Rhode Island, Inc. From 1979 to 1992, when Derecktor filed for bankruptcy, the site was used to repair, maintain, and construct private and military ships. These operations generated sand blast grit, paint, and other ship manufacturing wastes.

Based on the findings of a Preliminary Assessment completed by the Navy in May 1993, the Derecktor Shipyard was added to the FFA list of sites (TtNUS 2004c) as a study area. The Navy undertook a series of short-term actions to significantly reduce the potential for contamination to pose a health or environmental risk and to migrate beyond its current location. These actions included removing contaminant-filled drums and containers and sandblast grit; excavating and removing above ground and underground storage tanks; locating storm drain systems; and cleaning interiors of remaining buildings to ensure the safety of personnel conducting additional studies (U.S. Navy, 2002b).

An SASE was completed in June 1997. The SASE report concluded that the site contained small pockets of soil contamination but that overall human and ecological risks were not substantial as long as the

property remained industrial. Concurrent with the SASE, NAVSTA Newport conducted a marine ecological risk assessment (ERA) and human health risk assessment to quantify how contaminants present in bay sediments might be affecting plants and marine life, as well as fishermen collecting lobster and shellfish from the site (U.S. Navy, 2002b). Based on the SASE, the status was changed from a "Study Area" to a "Site".

The Navy implemented the recommendations for on shore restorations, including removal of soil hot spots, removal of an under-ground septic vault, and demolition of some of the deteriorating buildings. A feasibility study was conducted in 1999 for the marine areas near the site. The FS recommended limited dredging of sediments from the pier areas to reduce human and ecological risk. The Navy is currently completing an investigation to better understand the nature of the contamination in offshore marine sediments and to address uncertainties concerning the available sediment data. Since no data have been collected since the late 1990s, an additional sediment characterization effort was deemed necessary. The new data will be evaluated along with the historical data and the FS will be revised to reflect the current conditions in the marine sediments at the shipyard (TtNUS, 2004c).

If a remedial action is selected for the Derecktor Shipyard under CERCLA § 121 in the future, the protectiveness of the selected remedy will be reviewed in subsequent five-year reviews for NAVSTA Newport.

APPENDIX A

DOCUMENT REVIEW LIST/REFERENCES

DOCUMENT REVIEW LIST/REFERENCES

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APPENDIX B

SITE INSPECTION REPORT

NAVSTA Newport Site Inspection – March 23, 2004

Attendees:

Phoebe Call – TtNUS, EFANE Contractor, Project Manager
Katie Lang – TtNUS, EFANE Contractor, Project Specialist
Tracy Dorgan - TtNUS, EFANE Contractor, Project Specialist

The site inspection commenced at approximately 9:30 AM and concluded approximately 1:00 PM. The weather was sunny and clear with a light breeze and the temperature was approximately 60 degrees. Observations made by the contractor are noted below.

Site Inspection Notes:

Initially drove the entire length of NAVSTA Newport to observe the locations of all sites and study areas covered in this five-year review. The only extensive walkovers, inspections, and photo documentation were completed at Tank Farm Five and the McAllister Point Landfill.

The area of former Tanks 53 and 56 was well vegetated, monitoring wells were observed and those accessible and inspected closely were generally not secured and were in poor condition. The former groundwater treatment plant building remains in the vicinity of former Tank 53. The team walked the entire loop road through Tank Farm Five. Piles of rubble, excess materials, and brush were observed in a number of locations; the largest area of debris was in the area of Tank 50. The wetland that naturally formed in the former tank 57 area appeared to be well established. A chain-link fence was observed around the perimeter of the area. Gates, secured with locks, restrict access to the entire area.

The inspection team walked the top of the McAllister Point Landfill and drove the perimeter road to check the condition of the landfill cap, fence line, and revetment. The landfill cover was well vegetated, no erosion was observed. The groundwater monitoring and gas vents were observed and appeared to be in good condition; the monitoring wells were secured with locks. The revetment also appeared to be in good condition. There was no evidence of vandalism on the site. The perimeter fence was well secured and in good condition.

The 1993 ROD noted that historically community concern and involvement had been low. A community relations plan was prepared by the Navy in July 1990. The NAVSTA Newport environmental staff indicated that community involvement has continued to be minimal.

Site photographs taken during the site inspection follow this report.

NAVAL STATION NEWPORT – CTO 842

Photo No: 1

Date: March 23, 2004

Description: McAllister Point Landfill. Facing south. Note revetment along the shoreline, perimeter fence and well-vegetated slope.

Photo No: 2

Date: March 23, 2004

Description: McAllister Point Landfill. Facing south. Close up view of revetment and area dredged in 2001.

Photo No: 3

Date: March 23, 2004

Description: McAllister Point Landfill. Facing south from top of capped area. Note dense vegetation on cap – both top and slope.

Photo No: 4

Date: March 23, 2004

Description: McAllister Point Landfill. Facing north. Note perimeter fence, vegetation, and rock-lined swales.

Photo No: 5

Date: March 23, 2004

Description: Tank Farm Five, Tank 53 area. Facing west. View of vegetated area covering former tank location.

Photo No: 6

Date: March 23, 2004

Description: Tank Farm Five, Tank 53 area. Facing southwest. Note monitoring well in the foreground.

Photo No: 7

Date: March 23, 2004

Description: Tank Farm Five, Tank 53. Facing east. Building used as part of the groundwater treatment system.

Photo No: 8

Date: March 23, 2004

Description: Tank Farm Five, Tank 56 area. Facing east. Section of loop road evident at left side of photo. Note rubble piles in distance near tree line.

Photo No: 9

Date: March 23, 2004

Description: Tank Farm Five, Tank 56 area. Facing southeast. View of vegetated area covering former tank location.

Photo No: 10

Date: March 23, 2004

Description: Tank Farm Five. Area of Tank 50. Facing north. Note piles of brush and rubble to the left of the loop road.

APPENDIX C

INTERVIEW LIST

INDIVIDUALS INTERVIEWED FOR THE NAVSTA NEWPORT FIVE-YEAR REVIEW

Name/Position	Organization	Date
David Dorocz/ Department Head	NAVSTA Newport Environmental Department	3/23/04 4/21/04
Amanda Cerise/ Manager	NAVSTA Newport IRP	3/23/04
Dr. D.K. Abbass/ Director	Rhode Island Marine Archaeology Project, RAB member	4/21/04
David W. Brown	RAB member	4/21/04
James Myers	RAB member, town representative Jamestown, RI	4/21/04
Stacey McFadden	Aquidneck Island Citizen's Advisory Board, RAB member	4/21/04

APPENDIX D

ARARS AND TBCS

TABLE D-1
CHEMICAL-SPECIFIC APPLICABLE OR RELEVANT AND APPOPRIATE REQUIREMENTS, ADVISORIES AND GUIDANCE - McALLISTER POINT LANDFILL
FIVE-YEAR REVIEW
NAVSTA NEWPORT
NEWPORT, RHODE ISLAND

Requirement	Citation	Requirement Synopsis	Current Status/Applicability
FEDERAL			
EPA Risk Reference Doses (RfDs)	None	Toxicity values for evaluating noncarcinogenic effects resulting from exposures to contamination.	Applicable- EPA RfDs were used to characterize risks due to noncarcinogens in groundwater.
EPA Human Health Assessment Group Cancer Slope Factors (CSFs)	None	A slope factor is used to estimate an upper-bound probability of an individual developing cancer as a result of a lifetime of exposure to a particular level of a potential carcinogen.	Applicable- EPA CSFs were used to compute the individual incremental cancer risk resulting from exposure to certain compounds.
Clean Water Act, Ambient Water Quality Criteria (AWQC)	40 CFR 131, Section 304	Non-enforceable guidelines established for the protection of human health and/or aquatic organisms	Relevant and appropriate- Sediment PRGs were derived using these water quality criteria. Sediments exceeding PRGs had to be addressed to meet standards.

Requirement	Citation	Requirement Synopsis	Current Status/Applicability
STATE			
Remediation regulations- Risk Management Section	DEM-DSR-01-93 Section 8	This section of the remediation regulations sets forth remediation requirements for impacted media at contaminated sites.	Relevant and Appropriate- PRGs were developed to minimize the risk to affected media.
RI Water Pollution Control Act. RI Water Quality Regulations	RIGL 46-12 et seq.	Establishes general requirements and effluent limits for discharge to area waters.	Relevant and appropriate- Sediment PRGs were derived using these water quality criteria. Sediments exceeding PRGs had to be addressed to meet standards.

TABLE D-2
LOCATION-SPECIFIC APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS, ADVISORIES AND GUIDANCE - McALLISTER POINT LANDFILL
FIVE-YEAR REVIEW
NAVSTA NEWPORT
NEWPORT, RHODE ISLAND

Requirement	Citation	Requirement Synopsis	Current Status/Applicability
FEDERAL			
Wetlands Executive Order 11990	40 CFR 6, Appendix A	Regulates activities conducted in a wetland area to minimize the destruction, loss, or degradation of the wetlands.	Applicable if the implementation of the cap or associated shoreline protection impacts coastal or on-shore wetlands.
Clean Water Act, Section 404	33 USC 1344; 40 CFR Part 230 and 33 CFR Parts 320-323	Regulates the discharge of dredge and fill materials into waters of the United States, including special aquatic sites. Such discharges are not allowed if practicable alternatives are available.	Applicable- Refilling of the excavated/dredged aquatic habitats will only satisfy this requirement if no practicable alternative that has less effect is available.
Rivers and Harbors Act, Section 10	33 USC 403; 33 CFR Parts 320-323	Sets forth criteria for obstructions or alterations of navigable waters	Applicable- Excavation/dredging and habitat restoration will comply with the Act's environmental standards.
Executive Order 11988- Floodplain Management	40 CFR Part 6, Appendix A	The Order requires Federal agencies to evaluate the potential effects of actions it may take within a designated 100-year flood plain of a waterway to avoid adversely impacting floodplains wherever possible.	Applicable- The potential for restoring and preserving floodplains so that their natural and beneficial values can be realized will be considered and incorporated into any plan or action wherever feasible.
Fish and Wildlife Coordination Act of 1958- Protection of Wildlife Habitats	16 USC 661	Requires consultation with federal and state conservation agencies during planning and decision-making process which may impact water bodies including wetlands. Measures to prevent, mitigate or compensate for losses of fish and wildlife will be given due consideration whenever a modification of a water body is proposed.	Applicable- If the remedial action impacts a water body, consultation with the USFWS, RIDEM and other federal and state agencies involved in fish and wildlife matters is required.

TABLE D-2 (cont.)
LOCATION-SPECIFIC APPLICABLE OR RELEVANT AND APPROPRIATE
FIVE-YEAR REVIEW
NAVSTA NEWPORT
NEWPORT, RHODE ISLAND
PAGE 2 OF 3

Requirement	Citation	Requirement Synopsis	Current Status/Applicability
FEDERAL (cont.)			
Endangered Species Act-Protection of Endangered Species	16 USC 1531	Restricts activities in areas inhabited by registered endangered species.	Applicable- Federally endangered loggerhead turtles and federally endangered Kemp's ridley turtles occur in the waters of Narragansett Bay. Appropriate agencies will be consults to fine ways to minimize adverse effects to the listed species from the removals and restoration remedy.
Coastal Zone Management Act	16 USC Parts 1451 et seq.	Requires that any actions must be conducted in a manner consistent with state approved management programs.	Applicable- the entire site is located in a coastal zone management area, therefore, applicable coastal zone management requirements need to be addressed.
National Historic Preservation Act	16 USC 470 et seq., 26 CFR Part 800	Requires action to take into account effects on properties included on or eligible for the National Register of Historic Places and minimizes harm to National Historic Landmarks.	Applicable- Historic vessels may be sunken in the area. Excavation/dredging and restoration activities will be carried out to minimize potential harm to historic sites.

TABLE D-2 (cont.)
LOCATION-SPECIFIC APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS, ADVISORIES AND GUIDANCE - McALLISTER POINT LANDFILL
FIVE-YEAR REVIEW
NAVSTA NEWPORT
NEWPORT, RHODE ISLAND

Requirement	Citation	Requirement Synopsis	Current Status/Applicability
STATE			
Rhode Island Wetlands Laws	RIGL 2-1-18 et seq.	Defines and establishes provisions for the protection of swamps, marshes and other freshwater wetlands in the state.	Regulation applicable if implementation of the remedial action impacts wetland areas.
Rhode Island Coastal Resources Management Law	RIGL, Title 46, Chapter 23	Creates Coastal Resources Management Council and sets standards and authorizes promulgation of regulations for management and protection of coastal resources.	Applicable- McAllister Point Landfill is located in a coastal area, the lead agency must coordinate with the RI Coastal Management Council and ensure that all actions are consistent with the Coastal Zone Management Plan.
Endangered Species Act	RIGL 20-37-1, et seq.	Regulates activities affecting state-listed endangered or threatened species or their critical habitat.	Applicable- The state listed endangered loggerhead turtles and federally endangered Kemp's ridley turtles occur in the waters of Narragansett Bay. Appropriate agencies will be consults to fine ways to minimize adverse effects to the listed species from the removals and restoration.
Hazardous Waste Management-Location Standards for Hazardous Waste Facilities	RIGL 23-19.1-7; CRIR 12-030-003 (10.00)	RI is delegated to administer the federal RCRA statute through its state regulations. A facility located in a 100 year floodplain must be maintained to prevent washout of any hazardous waste by a 100-year flood.	Relevant and appropriate- Some of the landfill wastes in the nearshore area maybe classified as hazardous waste. The removal of these materials permanently eliminates the risk of washout.

TABLE D-3
ACTION-SPECIFIC APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS, ADVISORIES AND GUIDANCE - McALLISTER POINT LANDFILL
FIVE-YEAR REVIEW
NAVSTA NEWPORT
NEWPORT, RHODE ISLAND

Requirement	Citation	Requirement Synopsis	Current Status/Applicability
FEDERAL			
RCRA Subtitle C Requirements	40 CFR 264	Outlines specifications and standards for design, operation, closure and monitoring of performance for hazardous waste storage, disposal, and treatment facilities.	Substantive requirements will be met and adhered to onsite.
RCRA Subpart B- General Facility Standards	40 CFR 264.10-264.18	General requirements regarding waste analysis, security, training, inspections, and location applicable to a facility which stores, treats or dispose of hazardous wastes (a TSDF facility).	Relevant and Appropriate- NETC was issued a Hazardous Waste Facility Permit by RIDEM in 1985, RCRA General Facilities Standards are relevant to interim remedial actions conducted at the facility.
RCRA Subpart C- Preparedness and Prevention	40 CFR 264.30-264.37	Requirements applicable to the design and operation, equipment and communications associated with a TSDF facility, and to arrangements with local response departments.	Relevant and Appropriate- NETC was issued a Hazardous Waste Facility Permit by RIDEM in 1985, RCRA General Facilities Standards are relevant to interim remedial actions conducted at the facility.
RCRA Subpart D- Contingency Plan and Emergency Procedures	40 CFR 264.50-264.569	Emergency planning procedures applicable to a TSDF facility	Relevant and Appropriate- NETC was issued a Hazardous Waste Facility Permit by RIDEM in 1985, RCRA General Facilities Standards are relevant to interim remedial actions conducted at the facility.
RCRA Subtitle F- Groundwater Protection	40 CFR 264.90-264.56	Groundwater monitoring/corrective action requirements; dictates adherence to MCLs and establishes points of compliance.	Relevant and appropriate- Studies conducted will include groundwater monitoring program. Standards will be met.
RCRA Subpart G- Closure/Post-Closure Requirements	40 CFR 264.110-118	Establishes requirements for the closure and long-term management of a hazardous disposal facility	Substantive standards and requirements will be met.

TABLE D-3 (cont)
ACTION-SPECIFIC APPLICABLE OR RELEVANT AND APPROPRIATE
REQUIREMENTS, ADVISORIES AND GUIDANCE - McALLISTER POINT LANDFILL
FIVE-YEAR REVIEW
NAVSTA NEWPORT
NEWPORT, RHODE ISLAND

Requirement	Citation	Requirement Synopsis	Current Status/Applicability
FEDERAL (cont.)			
RCRA Subpart N- Landfill Requirements	40 CFR 264.301-.310	Placement of a cap over hazardous waste requires a cover designed and constructed to comply with regulations.	Relevant and Appropriate- Cap design will meet regulatory requirements. Cap maintenance will be attended to, closure and post closure substantive requirements will be complied with.
Clean Water Act- National Pollutant Discharge Elimination System (NPDES) Permit Requirements	40 CFR 122-125	Permits contain applicable effluent standards (i.e. technology-based and/or water quality-based) monitoring requirements, and standards and special conditions for discharge.	Any drainage off the temporary debris/sediment storage area and any dewatering discharge will be treated by an on-site treatment plant and discharged to Narragansett Bay.
Clean Air Act (CAA), National Emission Standards for Hazardous Air Pollutants (NESHAPS)	42 USC 7411, 7412; 40 CFR Part 61	NESHAPS are emission standards for specific chemicals. Certain activities are regulated including site remediation.	Applicable- Monitoring of air emissions from the dewatering facility will be used to assess compliance with these standards if threshold levels are reached. O&M will minimize potential air releases.
RCRA Proposed Rule- Proposed Amendments for Landfill Closures	52 CFR 8712	Provides an option for the application of alternate closure and post closure requirements based on a consideration of site-specific conditions including exposure pathways of concern.	To be Considered- Cap and post-closure monitoring will be designed taking into account exposure pathways of concern.
EPA Guidance: Final Covers on Hazardous Waste Landfills and Surface Impoundments	EPA 530-SW-89-047	EPA Technical Guidance for landfill covers. Presents recommended technical specifications for multilayer landfill cover design.	To be Considered- Cap construction will consider these standards.

TABLE D-3 (cont.)
ACTION-SPECIFIC APPLICABLE OR RELEVANT AND APPROPRIATE
REQUIREMENTS, ADVISORIES AND GUIDANCE - McALLISTER POINT LANDFILL
FIVE-YEAR REVIEW
NAVSTA NEWPORT
NEWPORT, RHODE ISLAND
PAGE 3 OF 6

Requirement	Citation	Requirement Synopsis	Current Status/Applicability
FEDERAL (cont.)			
Migratory Bird Treaty Act	16 USC 703-712	Prohibits hunting, possessing, killing or capturing of migratory birds, birds in danger of extinction and those birds' eggs or nests.	Since construction activities during the breeding season may "take" birds or their nests, actions must be taken to avoid destroying nests during breeding season.
Clean Water Act, Section 404, Requirements for Discharge of Dredged Fill or Material	40 CFR Part 230.10	Regulates the discharge of dredge and fill materials into waters of the United States, including special aquatic sites. Such discharges are not allowed if practicable alternatives are available.	Applicable- Refilling of the excavated/dredged aquatic habitats will only satisfy this requirement if no practicable alternative that has less effect is available.

Requirement	Citation	Requirement Synopsis	Current Status/Applicability
STATE			
RI Hazardous Waste Management Act of 1978: Rules and Regulations and Proposed Amendments:	RIGL 23-19.1 et seq.	Rules and regulations for hazardous waste generation, transportation, treatment storage and disposal.	Relevant and Appropriate- Substantive requirements applicable to closure will be met and adhered to onsite.
- Section 7	RIGL 23-19.1 et seq.	Restricts location, design, construction and operation of landfills from endangering groundwater, wetlands or floodplains	Relevant and Appropriate- Landfill cap will be constructed so as to prevent contamination of groundwater, wetlands or floodplains
-Section 8	RIGL 23-19.1 et seq.	Outlines requirements for groundwater protection, general waste analysis, security procedures, inspections and safety.	Relevant and Appropriate- Remedial actions will comply with substantive portions of this section applicable to landfill closure.

TABLE D-3 (cont.)
ACTION-SPECIFIC APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS, ADVISORIES AND GUIDANCE - McALLISTER POINT LANDFILL
FIVE-YEAR REVIEW
NAVSTA NEWPORT
NEWPORT, RHODE ISLAND

Requirement	Citation	Requirement Synopsis	Current Status/Applicability
STATE (cont.)			
-Section 9	RIGL 23-19.1 et seq.	Outlines operational requirements for treatment storage and disposal facilities	Relevant and Appropriate- Remedial actions will comply with substantive portions of this section applicable to landfill closure.
-Section 10	RIGL 23-19.1 et seq.	Outlines design and operation requirements for land disposal facilities, including landfills	Relevant and Appropriate- Remedial actions will meet all non-location specific requirements of this section applicable to landfill closure.
RI Solid Waste Management Facilities Rules and Regulations: -Section 14.12	RIGL 23-19.1 et seq.	Sets performance standards for landfill covers of maximum remolded permeability coefficient of 1E-7 cm/sec	Relevant and Appropriate- Design of landfill cover will meet this requirement
RI Clean Air Act- General Air Quality and Air Emissions Requirements	RIGL, Title 23, Chapter 23		
-RI Air Pollution Control Regulations: -Regulation 1- Visible Emissions	RIGL, Title 23, Chapter 23	No air contaminant emissions will be allowed for more than 3 mins in any one hour which are > or equal to 20% opacity	Applicable- Air emissions from remedial actions will meet emission regulations.
-Regulation 5- Fugitive Dust	RIGL, Title 23, Chapter 23	Requires that reasonable precaution be taken to prevent particulate matter from becoming airborne.	Applicable- On-site remedial actions will use good industrial practices to prevent particulate matter from becoming airborne.
-Regulation 7- Emissions Detrimental to Person or Property	RIGL, Title 23, Chapter 23	Prohibits emissions of contaminants which may be injurious to human, plant or animal life or cause damage to property or which reasonably interfere with the enjoyment of life and property.	Applicable- All emissions from landfill vents will meet this requirement or gas treatment will be required.

TABLE D-3 (cont.)
ACTION-SPECIFIC APPLICABLE OR RELEVANT AND APPROPRIATE
REQUIREMENTS, ADVISORIES AND GUIDANCE - McALLISTER POINT LANDFILL
FIVE-YEAR REVIEW
NAVSTA NEWPORT
NEWPORT, RHODE ISLAND

Requirement	Citation	Requirement Synopsis	Current Status/Applicability
STATE (cont.)			
-Regulation 15- Control of Organic Solvent Emissions	RIGL, Title 23, Chapter 23	Limits the amount of organic solvents emitted to the atmosphere.	Applicable- If emissions from landfill gas vents exceed limits in this regulation, emissions controls will be designed and implemented to meet these requirements.
-Regulation 17- Odors	RIGL, Title 23, Chapter 23	Prohibits the release of objectionable odors across property lines.	Applicable- No remedial action or air emissions will emit objectionable odors beyond the facility boundary, as practicable.
-Regulation 22- Air Toxics	RIGL, Title 23, Chapter 23	Prohibits the emissions of specified contaminants at rates which would result in ground level concentrations greater than acceptable ambient levels or acceptable ambient levels with LAER, as set in the regulation.	Applicable if necessary to meet these standards, air emissions controls equipment will be designed for landfill gas emissions control.
Clean Air Act- Air Pollution Control	RIGL 23-23 et seq, CRIR 12-31-09	Establishes guidelines for the construction, installation or operation of potential air emission units. Establishes permissible emission rates for some contaminants.	Applicable- Site processing of debris and sediment and treatment of dewatering liquid will meet the substantive provisions of the standards if threshold levels are reached.
RI Water Pollution Control Act- Water Quality Regulations for Water Pollution Control	RIGL, 46-12, et seq.	Establishes general requirements and effluent limits for discharge to area waters.	Applicable- RIPDES requirements pertaining to storm water discharges will be met.
RI Water Pollution Control Act- RI Regulations for the Pollutant Discharge Elimination System (RIPDES)	RIGL, 46-12, et seq.	Permits contain applicable effluent standards, monitoring requirements, and standards and special conditions for discharge, including storm water discharges from land disposal facilities which have received industrial wastes.	Applicable- Storm water discharge improvements would be designed to provide compliance with these regulations and drainage would be monitored in compliance with these regulations.

TABLE D-3 (cont.)
ACTION-SPECIFIC APPLICABLE OR RELEVANT AND APPROPRIATE
REQUIREMENTS, ADVISORIES AND GUIDANCE - McALLISTER POINT LANDFILL
FIVE-YEAR REVIEW
NAVSTA NEWPORT
NEWPORT, RHODE ISLAND
PAGE 6 OF 6

Requirement	Citation	Requirement Synopsis	Current Status/Applicability
STATE (cont.)			
Hazardous Waste Management-Identification and Listing of Hazardous Wastes	RIGL 23-19.1; CRIR 12-030-003 (3.25)	RI is delegated to administer the federal RCRA statute through its state regulations. A facility located in a 100 year floodplain must be maintained to prevent washout of any hazardous waste by a 100-year flood.	Relevant and Appropriate- Landfill debris and sediments that may be hazardous waste will be removed, monitoring will assess whether hazardous materials are released during excavation/dredging.
Hazardous Waste Management-Standards for Treatment, Storage, Disposal Facilities	RIGL 23-19.1; CRIR 12-030-003 (3.25)	Outlines specifications and standards for design, operation, closure, and monitoring of performance for hazardous waste storage, treatment and disposal facilities. The standards for 40 CFR 264 are incorporated by reference.	Applicable- Landfill debris and sediments that may be hazardous waste will be removed. Removal, dewatering and treatment dewatering fluids will satisfy these provisions for any hazardous waste excavated.
Hazardous Waste Management-Solid Waste Management Facilities	RIGL 23-19.1; CRIR 12-030-003 (3.25)	Rules and regulations are more stringent than the federal standards under 40 CFR 258. The standards require minimization of environmental hazards associated with the operation of solid waste facilities.	Applicable- Removal of all debris will satisfy the substantive requirements of these provisions. Removal of non-hazardous sediments and using waste piles for dewatering prior to disposal in a RCRA D facility will satisfy the substantive requirements of these provisions

TABLE D-4
CHEMICAL-SPECIFIC APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS, ADVISORIES AND GUIDANCE – TANK FARM FIVE, TANKS 53 AND 56
FIVE-YEAR REVIEW
NAVSTA NEWPORT
NEWPORT, RHODE ISLAND

Requirement	Citation	Requirement Synopsis	Current Status/Applicability
FEDERAL			
Safe Drinking Water Act- Maximum Contaminant Levels (MCLs)	40 CFR 141.11 -.16	MCLs directly apply to "public water systems", defined as systems with at least 15 connections which service a minimum of 25 persons	Relevant and Appropriate- MCLs were used to assess risk associated with the ingestion of site groundwater.
Safe Drinking Water Act- Maximum Contaminant Level Goals (MCLGs)	40 CFR 141.50 -.51	Non-enforceable health goals for public water supply systems, set at levels which result in no known or anticipated adverse health effects.	Relevant and Appropriate- Non-zero MCLGs are to be used as remedial goals, per the NCP (40 CFR 300). Contaminant concentrations were compared to MCLGs to assess potential risks associated with ingestion of groundwater.
Resource Conservation and Recovery Act, Subpart F: Groundwater Protection Standards, Alternate Concentration Limits	40 CFR 264.94	Sets groundwater protection standards or allows for the development of alternate concentration limits for facilities which treat, store, or dispose of hazardous waste.	Relevant and Appropriate- Groundwater at NETC is not a current source of drinking water therefore RCRA groundwater concentrations are not applicable but may be relevant and appropriate.
EPA Risk Reference Doses (RfDs)	None	Toxicity values for evaluating noncarcinogenic effects resulting from exposures to contamination.	Applicable- EPA RfDs were used to characterize risks due to noncarcinogens in groundwater.
EPA Human Health Assessment Group Cancer Slope Factors (CSFs)	None	A slope factor is used to estimate an upper-bound probability of an individual developing cancer as a result of a lifetime of exposure to a particular level of a potential carcinogen.	Applicable- EPA CSFs were used to compute the individual incremental cancer risk resulting from exposure to certain compounds.
Clean Water Act, Effluent Discharge Limitations	40 CFR 401.15	Regulates the discharge of contaminants from an industrial point source.	Applicable if groundwater is discharged directly to surface water. However, treated groundwater was discharged to the Newport WWTP.

TABLE D-4 (cont.)
CHEMICAL-SPECIFIC APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS, ADVISORIES AND GUIDANCE – TANK FARM FIVE, TANKS 53 AND 56
FIVE-YEAR REVIEW
NAVSTA NEWPORT
NEWPORT, RHODE ISLAND

Requirement	Citation	Requirement Synopsis	Current Status/Applicability
STATE			
RI Groundwater Protection Act- Public Drinking Water Regulations	RIGL, 46-13 et seq.	Establishes provisions for the protection and management of potable drinking waters, including the development of groundwater classifications and associated standards which specify maximum contaminant levels for each classification.	Applicable- Contaminant concentrations will be compared to the established groundwater quality standards.
RI Pollution Control Law- RI Water Quality Standards	RIGL 46-12 et seq.	Establishes water use classification and water quality criteria for all waters of the state. Also established acute and chronic water quality criteria for the protection of aquatic life.	Applicable if groundwater is discharged directly to surface water. However, treated groundwater was discharged to the Newport WWTP.

TABLE D-5
LOCATION-SPECIFIC APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS, ADVISORIES AND GUIDANCE - TANK FARM FIVE, TANKS 53 AND 56
FIVE-YEAR REVIEW
NAVSTA NEWPORT
NEWPORT, RHODE ISLAND

Requirement	Citation	Requirement Synopsis	Current Status/Applicability
FEDERAL			
Wetlands Executive Order 11990	40 CFR 6, Appendix A	Regulates activities conducted in a wetland area to minimize the destruction, loss, or degradation of the wetlands.	Regulation applicable if implementation of the remedial action impacts wetland areas.
Wetlands Construction and Management Procedures	40 CFR 6, Appendix A	Sets forth EPA policy for carrying out the provisions of Executive Order 11990 (see above)	Regulation applicable if implementation of the remedial action impacts wetland areas.

Requirement	Citation	Requirement Synopsis	Current Status/Applicability
STATE OF RHODE ISLAND			
Rhode Island Wetlands Laws	RIGL 2-1-18 et seq.	Defines and establishes provisions for the protection of swamps, marshes and other freshwater wetlands in the state.	Regulation applicable if implementation of the remedial action impacts wetland areas.
RI Groundwater Protection Act	RIGL, Title 46, Chapter 13.1 et. seq.	Provides for protection of state groundwater, required the maintenance or upgrading of existing or potential drinking water sources.	Applicable- Groundwater at Tank Farm Five is GA-NA.

TABLE D-6
ACTION-SPECIFIC APPLICABLE OR RELEVANT AND APPROPRIATE
REQUIREMENTS, ADVISORIES, AND GUIDANCE - TANK FARM FIVE, TANKS 53 AND 56
FIVE-YEAR REVIEW
NAVSTA NEWPORT
NEWPORT, RHODE ISLAND

Requirement	Citation	Requirement Synopsis	Current Status/Applicability
FEDERAL			
Hazardous and Solid Waste Amendments of 1984 (HSWA)- Land Disposal Restrictions		Prohibits placement of hazardous wastes in locations of vulnerable hydrogeology and lists certain wastes, which will be evaluated for prohibition by EPA under RCRA.	A residual sludge containing hazardous constituents was generated from the treatment system. If analysis of the sludge fails TCLP analysis, land disposal restrictions were potentially applicable.
RCRA Generator Requirements for Manifesting Waste for Off-Site Disposal	40 CFR 262	Standards for manifesting, making and recording off-site hazardous waste shipments for treatment/disposal.	Applicable for the off-site disposal/treatment of the treatment system residual if determined to be hazardous.
RCRA Transporter Requirements for Off-Site Disposal	40 CFR 263	Standards for transporters of hazardous waste materials.	Applicable for the off-site disposal/treatment of the treatment system residual if determined to be hazardous.
RCRA Subpart B- General Facility Standards	40 CFR 264.10-264.18	General requirements regarding waste analysis, security, training, inspections, and location applicable to a facility which stores, treats or dispose of hazardous wastes (a TSDF facility).	Relevant and Appropriate- NETC was issued a Hazardous Waste Facility Permit by RIDEM in 1985, RCRA General Facilities Standards are relevant to interim remedial actions conducted at the facility.
RCRA Subpart C- Preparedness and Prevention	40 CFR 264.30-264.37	Requirements applicable to the design and operation, equipment and communications associated with a TSDF facility, and to arrangements with local response departments.	Relevant and Appropriate- NETC was issued a Hazardous Waste Facility Permit by RIDEM in 1985, RCRA General Facilities Standards are relevant to interim remedial actions conducted at the facility.

TABLE D-6 (cont.)
ACTION-SPECIFIC APPLICABLE OR RELEVANT AND APPROPRIATE
REQUIREMENTS, ADVISORIES, AND GUIDANCE - TANK FARM FIVE, TANKS 53 AND 56
FIVE-YEAR REVIEW
NAVSTA NEWPORT
NEWPORT, RHODE ISLAND

Requirement	Citation	Requirement Synopsis	Current Status/Applicability
FEDERAL (cont.)			
RCRA Subpart D- Contingency Plan and Emergency Procedures	40 CFR 264.50- 264.569	Emergency planning procedures applicable to a TSDF facility	Relevant and Appropriate- NETC was issued a Hazardous Waste Facility Permit by RIDEM in 1985, RCRA General Facilities Standards are relevant to interim remedial actions conducted at the facility.
RCRA Subpart X- Miscellaneous Units	40 CFR 264.600-264.999	Environmental performance standards, monitoring requirements and post-closure care requirements applicable to miscellaneous units (not otherwise defined in the RCRA regulations) used to treat, store, or dispose hazardous waste.	Relevant and Appropriate- NETC was issued a Hazardous Waste Facility Permit by RIDEM in 1985, RCRA General Facilities Standards are relevant to interim remedial actions conducted at the facility.
RCRA Land Disposal Restrictions	40 CFR 268	Identifies hazardous wastes that are restricted form land disposal and sets treatment standards for restricted wastes.	A residual sludge containing hazardous constituents was generated from the treatment system. If analysis of the sludge fails TCLP analysis, land disposal restrictions were potentially applicable.
Safe Drinking Water Act- Underground Injection Control Requirements	40 CFR 144 and 146	Establishes general requirements, technical criteria and standards for underground injection wells.	Applicable IF treated groundwater is discharged to groundwater. Preferred alternative was to discharge to WWTP.
Clean Water Act- National Pollutant Discharge Elimination System (NPDES) Permit Requirements	40 CFR 122-125	Permits contain applicable effluent standards (i.e. technology-based and/or water quality-based) monitoring requirements, and standards and special conditions for discharge.	Applicable if treated groundwater is discharged to groundwater or surface water. Preferred alternative was to discharge to WWTP. A permit would be required if the treated groundwater is discharged on-site.

TABLE D-6 (cont.)
ACTION-SPECIFIC APPLICABLE OR RELEVANT AND APPROPRIATE
REQUIREMENTS, ADVISORIES, AND GUIDANCE - TANK FARM FIVE, TANKS 53 AND 56
FIVE-YEAR REVIEW
NAVSTA NEWPORT
NEWPORT, RHODE ISLAND

Requirement	Citation	Requirement Synopsis	Current Status/Applicability
FEDERAL (cont.)			
Clean Water Act- Discharge to Publicly-Owned Treatment Works (POTW)	40 CFR 403	A national pretreatment program designed to protect municipal wastewater treatment plants and the environment from damage that may occur when hazardous, toxic or other non-domestic wastes are discharged into a sewer system.	Applicable- Since discharge alternative preferred is to the Newport WWTP. Treated groundwater will have to meet discharge limitations established by the WWTP.
Hazardous Materials Transportation Act- Rules for Transportation of Hazardous Materials	49 CFR 170, 171	Procedures for packaging, labeling, manifesting, and off-site transport of hazardous materials.	Applicable for off-site disposal/ treatment of the treatment system residual, if determine to be hazardous.
Federal Water Pollution Control Act- Ocean Discharge Criteria	40 CFR 200-223	Establishes general requirements for discharge into United States' oceans.	Applicable if treated groundwater is discharged to groundwater or surface water. Preferred alternative was to discharge to WWTP. A permit would be required if the treated groundwater is discharged on-site.
Occupational Safety and Health Act (OSHA)- Recordkeeping, Reporting and Related Regulations	29 CFR 1904	Outlines recordkeeping and reporting requirements.	Applicable because hazardous materials are present at Tank Farm Five. Apply for all contractors/ subcontractors involved in hazardous activities.
OSHA General Industry Standards	29 CFR 1910	Establishes requirement for 40-hour training and medical surveillance of hazardous waste workers. Establishes Permissible Exposure Limits (PELs) for workers at hazardous waste operations and during emergency response.	Applicable because hazardous materials are present at Tank Farm Five. Apply for all contractors/ subcontractors involved in hazardous activities. If PELs are exceeded during site activities, appropriate respiratory equipment will be worn.

TABLE D-6 (cont.)
ACTION-SPECIFIC APPLICABLE OR RELEVANT AND APPROPRIATE
REQUIREMENTS, ADVISORIES, AND GUIDANCE - TANK FARM FIVE, TANKS 53 AND 56
FIVE-YEAR REVIEW
NAVSTA NEWPORT
NEWPORT, RHODE ISLAND

Requirement	Citation	Requirement Synopsis	Current Status/Applicability
FEDERAL (cont.)			
OSHA Safety and Health Standards	29 CFR 1926	Regulations specify the type of safety equipment and procedures for site remediation/excavation.	Applicable because hazardous materials are present at Tank Farm Five. During remedial activities appropriate safety equipment must be worn and a health and safety plan followed.

Requirement	Citation	Requirement Synopsis	Current Status/Applicability
STATE			
RI Water Pollution Control Act. RI Water Quality Regulations	RIGL 46-12 et seq.	Establishes general requirements and effluent limits for discharge to area waters.	Applicable if treated groundwater is discharged to groundwater or surface water, however preferred alternative was to discharge to WWTP.
RI Water Pollution Control Act. RI Pollutant Discharge Elimination Systems	RIGL 46-12 et seq.	Permits contain applicable effluent standards (i.e. technology-based and/or water quality-based) monitoring requirements, and standards and special conditions for discharge.	Applicable if treated groundwater is discharged to groundwater or surface water, however preferred alternative was to discharge to WWTP.
RI Water Pollution Control Act. RI Pretreatment Regulations	RIGL 46-12 et seq.	Establishes rules concerning pretreatment of water prior to discharge to a Rhode Island POTW.	Applicable- Effluent levels established by the WWTP were achieved prior to discharge.
RI Water Pollution Control Act. Underground Injection Control Regulations	RIGL 46-12 et seq.	Establishes the general requirements, technical criteria and standards for underground injection wells.	Applicable if treated groundwater is discharged to groundwater or surface water, however preferred alternative was to discharge to WWTP.

TABLE D-6 (cont.)
ACTION-SPECIFIC APPLICABLE OR RELEVANT AND APPROPRIATE
REQUIREMENTS, ADVISORIES, AND GUIDANCE - TANK FARM FIVE, TANKS 53 AND 56
FIVE-YEAR REVIEW
NAVSTA NEWPORT
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PAGE 5 OF 5

Requirement	Citation	Requirement Synopsis	Current Status/Applicability
STATE (cont.)			
RI Hazardous Waste Management Act of 1978, Hazardous Waste Management	RIGL 23-19.1 et seq.	Rules and regulations for hazardous waste generation, transportation, treatment, storage and disposal.	Applicable for off-site treatment/disposal of the treatment system residual, if hazardous.
RI Hazardous Substance Community Right-to-Know Act, Public Right-to-Know Requirements	RIGL Title 23, Chapter 24.4	Establishes rules for the public's right-to-know concerning hazardous waste storage and transportation.	Applicable for the off-site disposal/treatment if residual is hazardous. Documents applicable to remediation of groundwater in the vicinity of Tanks 53 and 56 at Tank Farm Five will be available for public review.

APPENDIX E

INSTALLATION RESTORATION (IR) SITE ACCESS AND USE

DEPARTMENT OF THE NAVY
NAVAL STATION NEWPORT
690 PEARY ST
NEWPORT, RI 02841-1522

IN REPLY REFER TO
NAVSTANPT/LOCAL AREA RI
COORDINST 5090.15A
Code N8N
17 Jun 03

NAVSTA NEWPORT/LOCAL AREA RHODE ISLAND COORDINATOR INSTRUCTION 5090.15A

Subj: INSTALLATION RESTORATION (IR) SITE ACCESS AND USE

Ref: (a) Comprehensive Environmental Response Compensation and Liability Act (CERCLA)
(b) Federal Facilities Agreement of 1992
(c) Superfund Amendments and Reauthorization Act (SARA)
(d) Administrative Record
(e) Navy/Marine Corps Installation Restoration Manual February 1992

1. Purpose. To control access and use of IR Sites at Naval Station Newport.

2. Cancellation. NAVSTANPT/LOCAL AREA RI COORDINST 5090.15.

3. Background. The NAVSTA IR Program consists of 12 study areas. These areas include Building 32 Gould Island, Derecktor Shipyard, McAllister Point Landfill, Melville North Landfill, Old Fire Fighter Training Area (Katy Field), Coddington Cove Rubble Fill, Naval Undersea Warfare Center Disposal Area, and Tank Farms 1-5. A Locus Map of each site can be viewed on our Restoration Advisory Board website at www.nsnpt.navy.mil/Environmental/rab_home.htm.

4. Discussion. This instruction establishes the procedures for controlling site access and use of IR sites and abutting properties (offshore areas, land and facilities) to protect against exposure to hazardous substances.

5. Responsibilities

a. Commanding Officer, NAVSTA Newport shall:

(1) Ensure compliance with references (a) through (e).

(2) Approve or disapprove of the recommendations made by NAVSTA Environmental Protection Storefront.

b. NAVSTA Environmental Protection (Code N8N) shall:

(1) Process all requests for site use and access, and provide written recommendations to the Commanding Officer for final disposition.

(2) Authorize limited access and use by contractors, consultants and others for the purpose of administering the IR Program.

(3) The IR Program Manager shall conduct annual visual inspections of all sites to ensure that all necessary land use controls have been implemented.

(4) If a significant change occurs, prepare and forward a report to the USEPA and RIDEM certifying the change in use and land use controls.

c. NAVSTA Security (Code N53) shall:

(1) Report any incidents of unauthorized access and use to NAVSTA Environmental Protection.

(2) Remove any individuals not authorized access and use.

d. All NAVSTA Newport area and tenant commands shall:

(1) Request, in writing, permission from NAVSTA Environmental Protection Storefront for access and use of IR sites by Navy personnel and contractors.

(2) Ensure all personnel and contractors under their cognizance are aware that access and use of IR sites are prohibited without prior approval from Commanding Officer, NAVSTA Newport.

/s/
R. A. COOPER

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