# Explanation of Significant Difference

# for

# McAllister Point Landfill
# Naval Station Newport
# Newport, Rhode Island

## Naval Facilities Engineering Command
## Mid-Atlantic

**Contract Number N62472-03-D-0057**
**Contract Task Order 65**

**September 2007**

**Abstract**

The Navy has provided an additional protection requirement to the remedy for Site 1, McAllister Point Landfill, at the Naval Station (NAVSTA) Newport (the Base), which is located in Middletown Rhode Island. This change was made under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) to assure that protection from contaminants present would remain if the property was ever excessed by the Navy. Institutional Controls, restricting disturbance of the capped area were instituted September 26, 2007 with the issuance of the NAVSTA Newport /Local Area Rhode Island Coordinator Instruction No. 5090.15A, which adds a prohibition on disturbing the ground and groundwater. If the Navy ever conveyed the property, deed restrictions meeting State and local recording standards for restrictions that will run with the land would be recorded documenting the need for the applicable restriction(s) to remain in place. The Navy will monitor compliance with all institutional controls at least annually. The rest of the actions of the Record of Decision were implemented including construction of the cap to isolate contaminants, maintenance of the cap, and performance of long-term air and groundwater monitoring. This altered remedy remains protective of human health and the environment, complies with federal and state requirements, and remains cost – effective.

## 1.0 INTRODUCTION

### Site Name and Location

Site Name: McAllister Point Landfill

Site Location: Middletown, Rhode Island

### Lead and Support Agencies:

Lead Agency: US Navy, Naval Facilities Engineering Command

Support Agencies: US Environmental Protection Agency Region I,
Rhode Island Department of Environmental Management, Division of Site Remediation

### Legal Authority

Under Section 117(c) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 U.S.C. § 9617 (c), 40 C.F.R. § 300.435(c) of the National Contingency Plan (NCP), and the Federal Facilities Agreement (FFA) entered into between the Navy, EPA and the State in 1992, if the any of the parties to the FFA determines that differences in the remedial action significantly change but do not fundamentally alter the remedy selected in the Record of Decision (ROD) with respect to scope, performance, or cost, Navy shall publish an Explanation of Significant Differences (ESD). The ESD shall explain the differences between the remedial action being undertaken and the remedial action set forth in the ROD and the reasons such changes are being made.

**Site History**

The NAVSTA Newport area has been used by the U.S. Navy since the Civil War era. Activities increased during war times and later decreased as Naval forces were reorganized. Beginning in 1900, the facility was used as a refueling depot. Expansion peaked in the 1960s and 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 October 1998 NAVSTA Newport was established as the primary host command, taking over base operating support responsibilities from NETC.

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 and Middletown, and the City of Newport, Rhode Island (Figure 1). The site includes multiple areas of contamination, including the McAllister Point Landfill, a former fire fighting training area, an old shipyard, and five abandoned tank farms. NETC was added to the National Priorities List (NPL) in 1989, although the Navy has changed the name of the facility from Naval Education and Training Center to Naval Station Newport (NAVSTA). McAllister Point Landfill is identified as Operable Unit 1 for NETC. The Navy is the lead agency for site investigation and cleanup, with formal oversight provided by USEPA and the Rhode Island Department of Environmental Management (RIDEM) via a Federal Interagency Facilities Agreement (FFA) of 1992.

For the McAllister Point Landfill, one source control Record of Decision (ROD) has been signed and the selected remedial actions implemented. During the five year review conducted in 2004, it was noted that if the property was transferred, a land use restriction may not carry forward with the new deed to the property. This Explanation of Significant Difference (ESD) describes the need for, and implementation of Institutional Controls in the form of a “Base Instruction” that will limit the use of the property while it is under control of the Navy and would also be incorporated into any future property deed, meeting State and local recording standards for restrictions that will run with the land, that would be created if the property were to be excessed or otherwise conveyed. Institutional controls put into place will be monitored at least yearly to confirm compliance.

**Statement of Purpose**

The selected remedy in the McAllister Point Landfill (OU1) ROD included capping landfill waste in place. A remedial design for cap construction was prepared and completed in 1996. Therefore, waste remains in place in accordance with the ROD and design.

Under the Federal Facilities agreement entered into between the Navy, EPA and the State in 1992, any of the parties may identify a significant change to a selected remedy described in a ROD after a ROD has been issued. USEWPA guidance categorizes post-ROD changes into three categories:

- A non-significant or minor change
- A significant change to a component of the remedy
- A fundamental change to the overall remedy.

The Navy and EPA have determined that a non-significant change implementing institutional controls to the remedy (addition of land use controls to the cap) is made by the creation and implementation of the Base Instruction preventing human intrusion into the cap materials or damage to the surrounding fence; requiring that compliance with all institutional controls be evaluated at least yearly; and by requiring that if the property is ever excessed or otherwise conveyed deed restrictions, meeting State and local recording standards for restrictions that will run with the land, will be established to put applicable land use restrictions on the property:. This change is entirely consistent with the September 1993 ROD.

In accordance with CERCLA §117(c) and NCP § 300.435(c)(2)(i) and §300.825(a)(2), this ESD will be placed in the Administrative Record File for NAVSTA IR Site 1, and will be provided to the information repositories. These repositories are noted in Section 2, below.

## 2.0 SITE HISTORY, DESCRIPTION, AND CONTAMINATION

An Initial Assessment Study (IAS), completed in 1983, identified 18 sites on the Base 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 (Remedial Investigation/Feasibility Study) was completed in 1992. This RI/FS covered the McAllister Point Landfill (Site 01), as well as several other sites at NAVSTA.

Approximately 10,000 people live within 3 miles of the NAVSTA Newport. 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.

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). 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.

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 the 55 ships home ported at Newport prior to 1973 (approximately 14 40-cubic yard containers daily). 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 concern about 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. Additional information on site use and history can be found in the Draft Final Remedial Investigation Report, Revision 1 (B&RE, 1997a).

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 (Comprehensive Environmental Response, Compensation, and Liability Act) 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. This ROD is commonly referred to as the Source Control ROD. Construction of the landfill cap commenced in 1995, and was completed in 1996 in compliance with the ROD.

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. The second five year review was conducted in 2004, which provided similar results, but did note that if the landfill property were ever transferred, land use restrictions might not transfer forward

through a new deed for the property. Copies of the five-year review reports are available in the information repositories listed below.

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

**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. In 1994, the Navy established the area as an "open space" (TRC, 1994).

Access is currently restricted by postings and fences. This restriction has been formalized under the NAVSTA Newport instruction - "Installation Restoration (IR) Site Access and Use," NAVSTA Newport/Local Area Rhode Island Coordinator Instruction 5090.15A (July 2007).

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).

## 3.0 REMEDIAL ACTION SELECTED

As stated in the previous section, the 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. The source control remedy, selected in the 1993 ROD is described below.

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-type 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;
- Continued investigations of the marine sediment downgradient of the site;
- Operation and maintenance and site monitoring; and
- Five-year reviews.

## 4.0 REMEDY CONDUCTED

Implementation of the remedy selected is described below.

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-type 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.

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.

## 5.0 OPERATIONS AND MAINTENANCE

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). RIDEM has requested biannual groundwater monitoring. 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.

## 6.0 BASIS FOR THIS EXPLANATION OF SIGNFICIANT DIFFERENCE

During the five year review conducted in 2004, the following issues were noted:

- The issue of deed restrictions as institutional controls needs to be considered for the future if ownership of the property changes.

- 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.

While the 1993 McAllister Point Landfill ROD required fencing and institutional control (deed restrictions) to control site access and future site use, no formal mechanism to enforce them was established. While the property remains under the control of the Navy, the base instruction (Appendix A) ensures that the cap integrity will be maintained, the fence will remain secure the area at all times, and the institutional controls put into place will be monitored at least annually to confirm compliance. The issuance of the base instruction does not fundamentally alter the remedy and will better ensure that the remedy remains protective of human health and the environment.

If the property is ever is ever excessed or otherwise conveyed deed restrictions, meeting State and local recording standards for restrictions that will run with the land, will be established to put applicable land use restrictions on the property.

## 7.0 DESCRIPTION OF THE SIGNIFICANT DIFFERENCE

This ESD documents the modification to the ROD that significantly changes, but does not fundamentally alter, the selected remedy. The change to the remedy for Site 1 source control does not alter the general method of remediation. Instead, it augments the remediation selected by preventing access to contaminants left in place in the landfill. The change requires that institutional controls be implemented and enforced to ensure that the contaminated soil and sediment remains covered and does not present a risk to human health or the environment.

Because waste remains capped in place, the relevant and appropriate closure and post closure standards under the federal Resource Conservation and Recovery Act (RCRA) 42 USC § 6925 and 40 CFR 264 are being complied with. The soil and waste have been covered with a RCRA C-type cap on the landfill, which protects human and ecological receptors from accidental contact/ingestion, meets ARARs (applicable or relevant appropriate requirements) identified in the ROD, and satisfies the RAOs in the FS.

### Role of the Base Instruction

Institutional controls that restrict the disturbance of the capped area, restrict access to the site, restrict change in land use and limit activities to those necessary to maintain and monitor the cap were instituted with the NAVSTA Newport /Local Area Rhode Island Coordinator Instruction 5090.15A, dated September 26, 2007. This includes a restriction preventing alteration of the ground surface in any way and preventing interaction with or use of the groundwater. Further, the instruction provides a step by step

process to conduct work, should it be required for any reason, that would involve the alteration of the ground, soil, fill or groundwater present at the site. It is standard operating procedure to review this Base Instruction prior to planning or conducting any work that is on or near this property.

If the property is ever is ever excessed or otherwise conveyed deed restrictions, meeting State and local recording standards for restrictions that will run with the land, will be established to put applicable land use restrictions on the property.

The implementation of this change in the remedy had a minimal impact on the total duration and cost of implementing the remedial action for the site because the Navy intended to manage the waste left in place under the landfill cap as long as it retains the property, which is currently planned for the foreseeable future.

## 8.0 ADDITIONAL INFORMATION

### Support Agency Comments

EPA has reviewed and provided comments to this ESD. In signing the ESD, EPA concurs with the findings of this document. Although a State letter of concurrence is not required, RIDEM has concurred with the establishment of the institutional controls for the McAllister Point landfill.

### Affirmation of the Statutory Determinations

The proposed changes to the selected remedy described in the 1993 ROD will continue to satisfy all statutory requirements of CERCLA and the NCP. The altered remedy remains protective of human health and the environment, complies with federal and state applicable or relevant and appropriate requirements and remains cost effective. The institutional controls addressed under this ESD are compliant with federal and state closure/post closure standards for hazardous waste landfills cited under the ROD. Because hazardous substances have been left on site at levels that do not allow for unrestricted use and exposure, CERCLA Section 121c requires that the Navy review the adequacy of the remedy at least every 5 years. These five year reviews will continue, with the next one anticipated for 2009.

### Public Participation Compliance

As set forth in NCP § 300.435(c)(2)(i), the Navy, as lead agency is required to publish a notice of availability and a brief description of the ESD in a major local newspaper. This notice will be published

(after signature) on October 1, 2007 in the *Newport Daily News*. The Records of Decision and other pertinent background documentation are available in the administrative record available in the public libraries in Newport, Middletown and Portsmouth RI. In addition, a presentation to the NAVSTA RAB (Restoration Advisory Board) will complete the public outreach effort.

**Points of Contact**

Questions about this ESD for McAllister Point Landfill, or for further information, please contact:

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## 9.0 DECLARATION

The issuance of this Explanation of Significant Difference for the Record of Decision for Source Control, McAllister Point Landfill, Operable Unit 1, Naval Education Training Center Superfund Site, Middletown, Rhode Island, also known as Site 1, Naval Station (NAVSTA) Newport, is concurred with and recommended for immediate implementation.

Department of the Navy:

By: _____

Date: 18 Oct 2007

Captain Michel T. Poirier
Commanding Officer
Naval Station Newport

United States Environmental Protection Agency:

By: _____

Date: 10-31-07

for James T. Owens III
Director
Office of Site Remediation and Restoration

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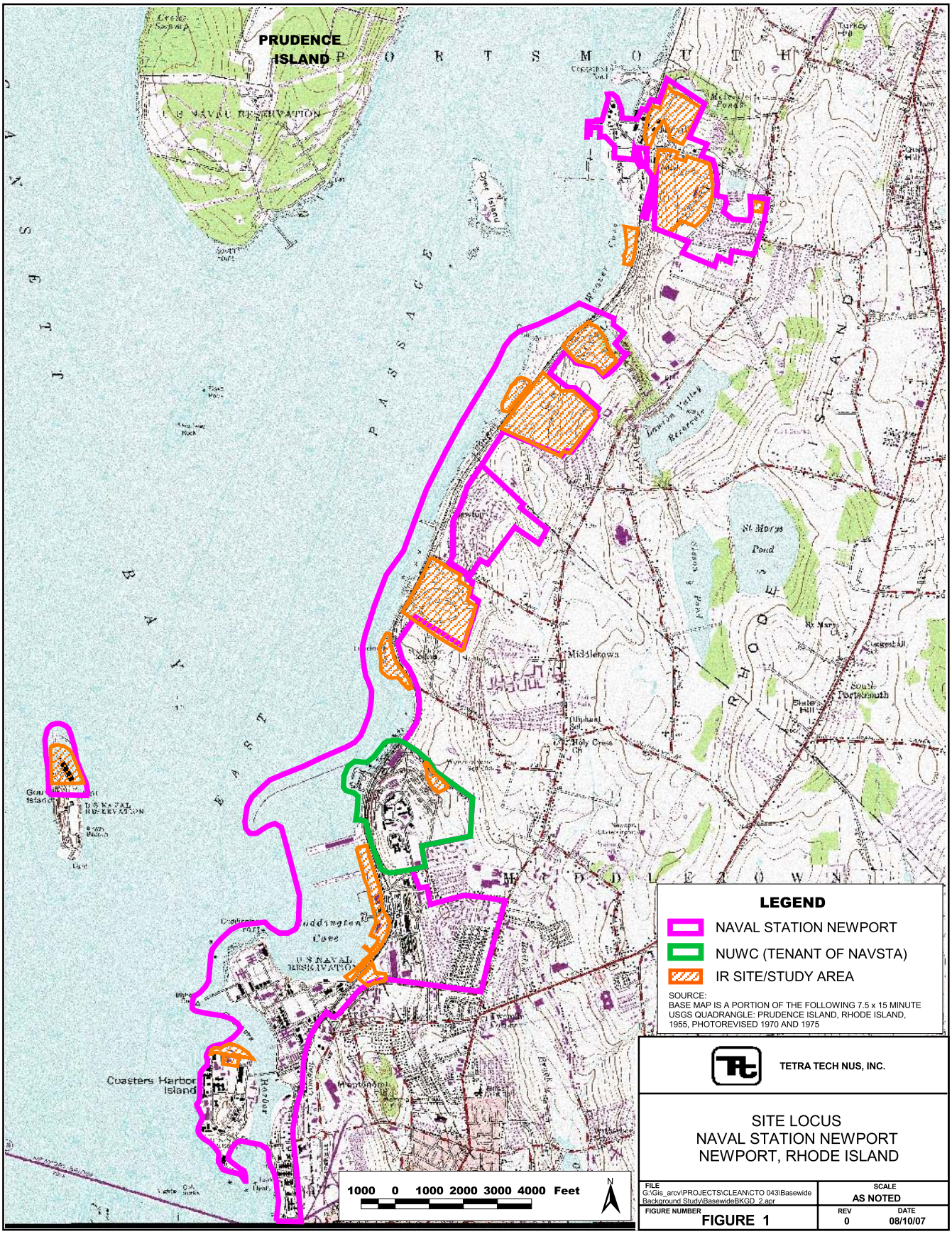
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NUWC (TENANT OF NAVSTA)
IR SITE/STUDY AREA
SOURCE:
BASE MAP IS A PORTION OF THE FOLLOWING 7.5 x 15 MINUTE USGS QUADRANGLE: PRUDENCE ISLAND, RHODE ISLAND, 1955, PHOTOREVISED 1970 AND 1975
TETRA TECH NUS, INC.
SITE LOCUS
NAVAL STATION NEWPORT
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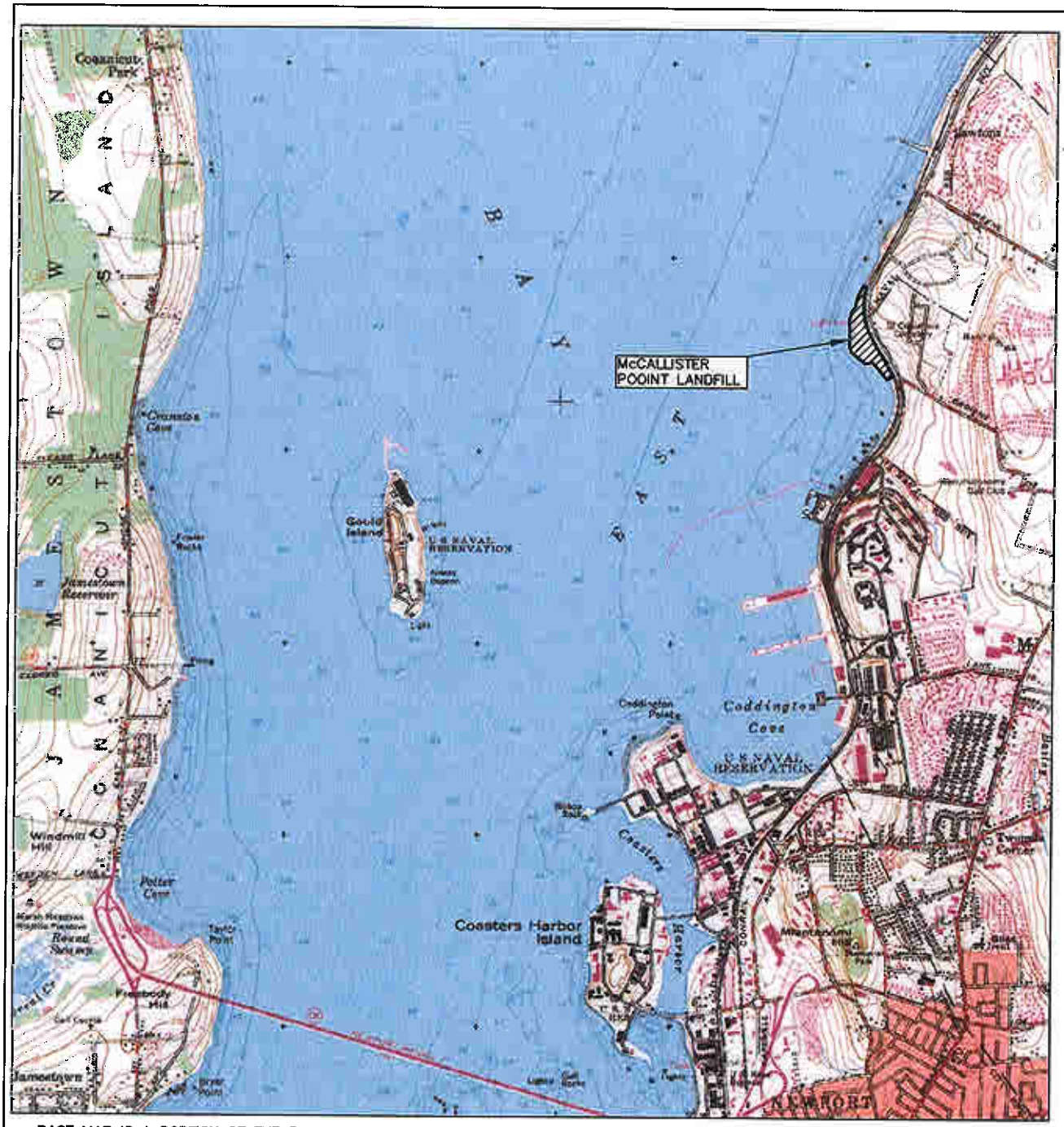


BASE MAP IS A PORTION OF THE FOLLOWING 7.5 X 15 MINUTE U.S.G.S. QUADRANGLE:
PRUDENCE ISLAND, RHODE ISLAND, 1955, PHOTOREVISED 1970 AND 1975

GRAPHIC SCALE
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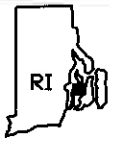


QUADRANGLE LOCATION

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|---|---|
| SITE LOCUS | FIGURE 2 |
| McCALLISTER LANDFILL | |
| NAVSTA NEWPORT – NEWPORT, RHODE ISLAND | |

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| SCALE: | AS NOTED | ACAD NAME: | \00632\0440\FIG_2.DWG |

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