

AR#0490

NUIS-8.0

61986



Proposed Plan

NAVAL STATION NEWPORT
Installation Restoration Program
October 2002
Old Fire Fighting Training Area
Newport, Rhode Island

The Cleanup Proposal...

After careful study of the Old Fire Fighting Training Area, the Navy proposes a plan to reduce risk from soil, groundwater and sediment (Figures 1 and 2):

ONSHORE AREA

- **Excavate** contaminated soil and debris.
- **Dispose** contaminated soil and debris in an off-site facility.
- **Restore** The excavated areas for unrestricted use of the property.
- **Monitor** The groundwater at the site.

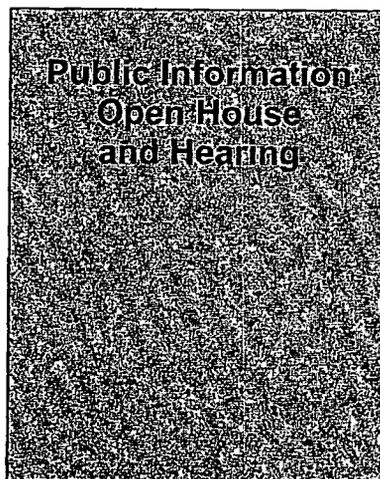
OFFSHORE AREA

- **Fence** the intertidal area to restrict access to contaminated shoreline sediment.
- **Monitor** sediment to see if on-shore actions provide improvement to the sediment.

More on page 2

How would the cleanup affect the local area?

The Navy invites you to attend a public information open house and public hearing on _____ to find out about the proposed cleanup plan and how it compares with other cleanup options for the site. The Navy will respond to your questions and concerns about the proposed cleanup and how it may affect you. For further information on the open house and hearing, call Melissa Griffin at 401-841-6375.



What do you think?

The Navy is accepting public comment on this proposal from _____. You don't have to be a technical expert to comment -- if you have a concern or preference, the Navy wants to hear it before making a final decision.

To comment formally:

Offer oral comments during the public information open house and hearing on _____ (see page 6 for details about providing formal comments).

Provide written comments at the open house and hearing, by fax, or by mail postmarked no later than ____ to:

Melissa Griffin
NAVSTA Newport IR Site Manager
Environmental Protection
Department
Building 1
1 Simonpietri Drive
Newport, RI 02841
Fax: (401) 841-7071

E-mail comments by _____ to:
griffinm@nsnpt.navy.mil

In accordance with the Comprehensive Environmental Response, Compensation and Liability Act, (Section 117) the law that established the Superfund program, this document summarizes the Navy's cleanup proposal. For detailed information on the options evaluated for use at the site, see the Old Fire Fighting Training Area Feasibility Study available for review at the information repositories at the Portsmouth, Middletown, and Newport Public Libraries.

A Closer Look at the Navy's Proposal...

ON-SHORE AREAS

1. Excavate contaminated soil and debris.

Soil at the site contains remnant contaminants from use of fuel and from fire training operations. Polynuclear Aromatic Hydrocarbon (PAH) compounds, common in oil and produced by burning, exist in the soil at the site at concentrations that exceed standards for unrestricted use of the property. Some metals are also present in soils that exceed state criteria for residential property.

The approximate areas where soil excavation would occur are shown on Figure 1 (page 3). Approximately 58,000 cubic yards of material (approximately 5 acres) will have to be excavated:

- Perform a pre-design investigation to confirm the extent of contaminated soil and debris.
- Remove the clean topsoil from the mounds and the ball field area.
- Excavate the contaminated soil and debris using conventional earth-moving equipment.
- Transport the contaminated soil/debris offsite in trucks.
- Dispose of this material in an approved off-site facility.
- Backfill the excavated areas with clean soils.
- Stabilize the shoreline from erosion with a new stone revetment wall.

2. Monitor groundwater to assure contaminant concentrations decrease.

Groundwater at the site also contains some remnant contaminants from fire training operations. Benzene and PAH compounds, common in oil and some of which are produced by burning, exist in the groundwater at the site. Although concentrations of these contaminants are unacceptable for drinking water sources, this is an implausible use of water taken from this site because the water is brackish and saline. Incidental contact during digging and construction is a more plausible way for people to come into contact with the groundwater, so a risk management decision has been made to perform monitoring and restrict use of the water.

Under the Navy's plan, the groundwater would be monitored to assure that removal of the contaminated soils results in a reduction of contaminant concentrations in that water.

- Collect groundwater samples periodically for five years
- Compare results to those collected before the soil removal.
- Determine if the removal of the soils has had a positive effect on the groundwater.
- Determine when contaminant concentrations may be reduced to below target levels.
- Review site conditions every 5 years to assess the effectiveness of the alternative.

OFF-SHORE AREAS

Perform an Interim Action: Restrict access to the shoreline and monitor sediment.

Marine sediment in Coasters Harbor was found to contain PAH compounds. These compounds may pose a risk of health effects to persons using the intertidal area (the area between high tide and low tide, currently a gravelly beach) for recreation 240 days per year or more. These contaminants are also predicted to inhibit growth and reproduction of some marine animals.

Sediment sampling data collected over five years shows that sediment conditions are dynamic and contaminants may be swept in and out with fine grain sediments. The approximate areas where sediments may pose risk to persons using the shoreline for recreation and to marine organisms are shown on Figure 2.

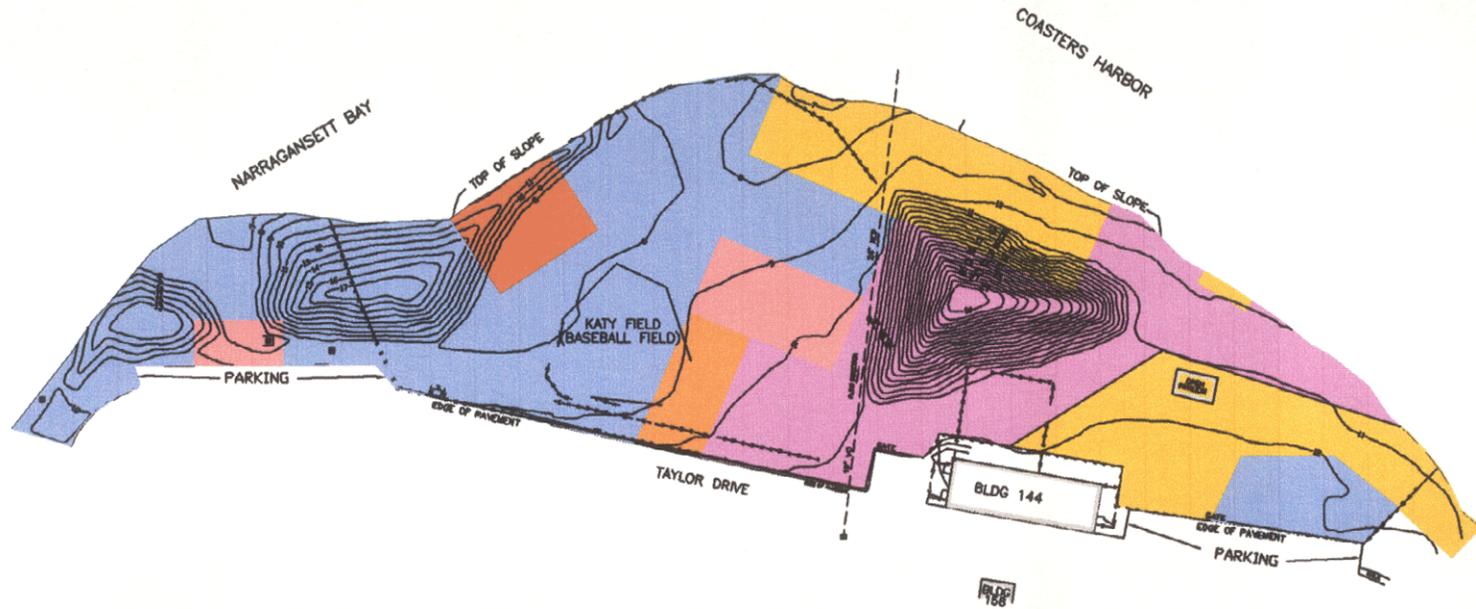
Under the Navy's plan, an interim action would be implemented to reduce exposure to the contaminants and to monitor the contaminant concentrations after removal of the source (soil).

- Set up a railing-style fence and signs to designate the intertidal shoreline a "no access" area.
- Monitor sediment at the site periodically to evaluate changing conditions following removal of the on-site soils.
- After five years, determine if removal of the on-shore soil has reduced the contaminant concentrations in the sediments at the shoreline, and reevaluate the need for any further actions.

This interim action complies with Navy and EPA policies on sediment response actions.

LEGEND

- EXCAVATE TO 10 FT. BELOW GROUND SURFACE
- EXCAVATE TO 9 FT. BELOW GROUND SURFACE
- EXCAVATE TO 8 FT. BELOW GROUND SURFACE
- EXCAVATE TO 6 FT. BELOW GROUND SURFACE
- EXCAVATE TO 4 FT. BELOW GROUND SURFACE
- EXCAVATE TO 2 FT. BELOW GROUND SURFACE



APPROXIMATE SCALE

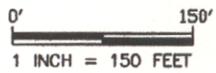
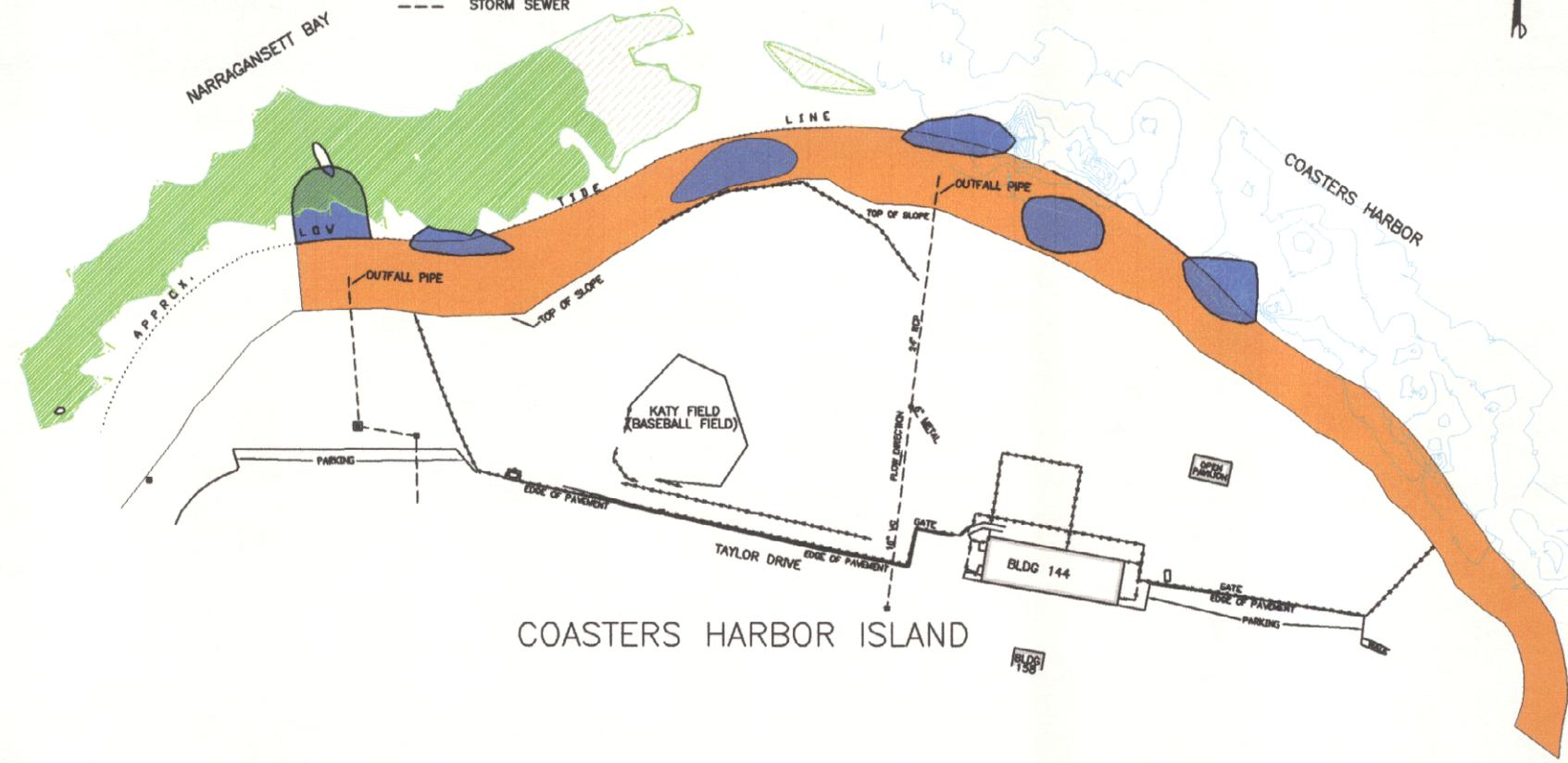


FIGURE 1
CONCEPTUAL SOIL EXCAVATION
PLAN

LEGEND

-  ACTION AREA BASED ON HUMAN AND ECOLOGICAL EXPOSURES
-  ACTION AREA BASED ON RECREATIONAL/RESIDENTIAL EXPOSURE TO SEDIMENT
-  ACTION AREA BASED ON ECOLOGICAL EXPOSURES
-  EEL GRASS BED
-  SPARSE EEL GRASS
-  OYSTER DENSITY (# per 50cm x 50cm quadrat)
-  CATCH BASIN
-  FENCE
-  STORM SEWER



APPROXIMATE SCALE
 0'  150'
 1 INCH = 150 FEET

FIGURE 2
 SEDIMENT ACTION AREAS

Why is Cleanup Needed?

A human health risk assessment was conducted for the site soil, groundwater, sediment, and for ingestion of shellfish from the site. A marine ecological risk assessment was conducted for the site sediment. The goals of these assessments were to determine whether people or marine life could be harmed by exposure to contaminants at or near the former training facility. The human health risk assessment concluded that:

- Residential use of the property would exceed state risk criteria for people who contact the soils through regular gardening, digging and lawn care.
- Contaminants in sediment exceed state risk criteria for people using the intertidal area (the area between high tide and low tide) for recreation for 240 days per year or more through regular, prolonged contact with that sediment.
- Contaminants may pose risk to people habitually eating shellfish collected from the site (40 meals per year). However, such an activity does not currently exist, nor could exist due to the size and nature of the affected area.
- Marine animals near the site may be affected by contaminants in sediments, particularly those near storm drain out falls.

Contaminants of greatest concern are polyaromatic hydrocarbons (PAHs), and a few metals.

The identified risks that trigger the need for remediation of the site are:

ONSHORE (Above High Tide)

- The possibility of health effects from contaminants in soil exceeds state and federal acceptable levels for people using the site for residential purposes.
- The possibility of health effects from contaminants in groundwater on site would exceed state and federal acceptable levels for a drinking water source. However, use of the water for such a source is not plausible in the foreseeable future.

OFFSHORE (Below High Tide):

- Possibility of health effects from contaminants exceeds state targets for people using the intertidal area for recreational purposes 240 days per year or more.
- Intermediate probability of risk was identified for marine organisms exposed to site-related contaminants in sediment. High probability of risk was identified at one station.

Site History

The Old Fire Fighting Training Area, used as a fire training school by the Navy from the 1940s to the early 1970's, is located on 5.5 acres along the north end of Coasters Harbor Island.

1940s: The site opened as a Navy fire training area. Fire training exercises were conducted, which involved using water to extinguish burning oil in a series of pits and simulated ship compartments. Oil was carried into the soils of the training area and to the shoreline of Coasters Harbor Island.

1972 to 1974: The fire training facility was closed. Most of the structures at the site were demolished, debris and some soils were pushed into three mounds at the site, covered and seeded.

1976: The site was dedicated and reopened as Katy Field (ball field and picnic area).

1989: NAVSTA Newport sites were added to EPA's National Priorities List of sites.

1992: A Federal Facilities Agreement, signed by the Navy, EPA, and RIDEM, identified responsibilities for cleanup activities and a schedule by which to implement them.

1996: A citizens advisory committee called a Restoration Advisory Board (RAB) was established to assist the Navy in addressing the IR program sites.

1997 and 1998: Studies determined that oil-related contaminants are present in subsurface soil up to 10 feet below ground surface. The Site was closed to recreational activities and fenced to restrict access during remaining investigations and cleanup.

1998-2000: Risk Assessments were conducted to determine risks to the off-shore environment from contaminants in the site soil. Studies concluded that contaminants are present at concentrations that pose some increased risk to marine animals, the highest area of risk was found near one of the storm drain outfalls.

2001: Remedial Investigation was completed documenting that there would be increased risks to persons using the site for residential property or for intensive recreation along the shoreline, and to persons habitually eating shellfish collected from Coasters Harbor.

2002: A feasibility study was developed to evaluate remedial action alternatives for the soils, groundwater and the marine sediments at the site.

The Nine Criteria For Choosing a Cleanup

The Navy uses nine criteria to balance the pros and cons of cleanup alternatives. Evaluation of these criteria is required by CERCLA, the law that established the Superfund program. We have already evaluated how well each of the cleanup alternatives developed for Old Fire Fighting Training Area meets the first seven criteria (See tables on pages 9 and 10). Once comments from the EPA, the state, the Restoration Advisory Board, and the community are received, the Navy will consider the last two criteria and select the cleanup plan.

1. **Overall protection of human health and the environment:** Will it protect you and the plant and animal life on and near the site? The Navy will not choose a plan that does not meet this basic criterion.
2. **Compliance with Applicable or Relevant and Appropriate Requirements (ARARs):** Does the alternative meet all federal and state environmental and state facility siting statutes, regulations, and requirements? The Navy will not choose a plan that does not meet this basic criterion unless a waiver is granted.
3. **Long-term effectiveness and permanence:** Will the effects of the cleanup plan last or could contamination cause future risk?
4. **Reduction of toxicity, mobility or volume through treatment:** Does the alternative reduce the harmful effects of the contaminants, the spread of contaminants, and the amount of contaminated material through treatment?
5. **Short-term effectiveness:** Could the cleanup cause short-term hazards to workers, residents, or the environment?
6. **Implementability:** Is the alternative technically feasible? Are the right goods and services and space at an approved disposal facility available?
7. **Cost:** What is the total cost of an alternative over time? The Navy must find a plan that gives necessary protection for a reasonable cost.
8. **State acceptance:** Does the Rhode Island Department of Environmental Management agree with the Navy's proposal?
9. **Community acceptance:** What objections, suggestions or modifications does the public offer during the comment period?

Different Kinds of Cleanup

The Navy looks at numerous technical approaches to determine the best way to reduce the risks presented by a Superfund site. We then narrow the possibilities to approaches that would protect human health and the environment. Although reducing risks often involves combinations of highly technical processes, there are limited basic options for each media.

1. Take no action:

Leave the site as it is.

2. Isolate the Contaminants

Provide a barrier from contaminants to the people or animals that may be affected by it. Barriers can be as simple as fences (to keep people away) or as complex as underwater cover systems.

3. Remove Contaminants:

Remove contaminated material (soil, groundwater, etc.) and dispose of it or treat it elsewhere.

4. Treat Contamination On Site:

Use a chemical or physical process on the site to destroy or remove the contaminants. Treated material can be left on site. Contaminants captured by the treatment process are disposed in an approved disposal facility.

5. Monitor the Contaminants:

Many remedies are combined with monitoring after completing the remedial action to assure that the action achieved the cleanup objectives. If contaminants increase again or fail to decrease after the action, another solution may have to be sought.

6. Interim Actions:

An interim action may be selected for one part of the site until another part of the site is restored. For instance, if the removal of soils is likely to result in a reduction in groundwater contamination, the interim action for groundwater may be to monitor that water until that reduction is confirmed.

What are the Cleanup Objectives and Levels?

SOIL AND GROUNDWATER

Investigations at the site concluded that there are contaminants in the soils and groundwater at the site that pose unacceptable risk to persons using the property for residential purposes.

The Navy identified three cleanup objectives to address these risks:

- Prevent people from contact with soil containing contaminants that exceed acceptable levels developed for unrestricted use of this site.
- Address the soil in a manner that will prevent further degradation of groundwater at the site, and that will result in a decrease in groundwater contamination. In the meantime, prevent use of the groundwater as a drinking water source*.
- Allow reuse of the site as an unrestricted, residential area as soon as reasonably practicable. This includes no environmental controls on site development, other than those already imposed by general zoning and building restrictions.

*The Groundwater at the site is given a GB classification by the State. This Classification indicates that the water is unsuitable for consumption without treatment. Additionally, the water is unsuitable for general supply because it is brackish and saline, due to the proximity of the ocean. A city water supply provides water to the rest of Coasters Harbor Island, and this water supply is available for use if the site is redeveloped. However, contaminant target levels have been calculated for reference. These target levels were calculated based on use as drinking water.

MARINE SEDIMENT

The ecological risk assessment concluded that some contaminated sediment in Coasters Harbor pose a intermediate probability of risk to marine animals. At one station near a storm drain out fall, the contaminants were concluded to pose a high probability of risk to marine animals (contaminants predicted to inhibit growth and reproduction of some marine animals).

The human health risk assessment concluded that sediment in the intertidal area (the area between high and low tide) may pose a risk to people using the intertidal area for recreation 240 days per year or more. Additionally, it was concluded that people who habitually eat lobsters and shellfish from Coasters Harbor (40 meals per year or more taken from this area), may have a risk of health effects. However, no such regular consumption currently exists, nor could exist due to the size and nature of the affected area.

The Navy identified two cleanup objectives to address the identified risks:

- Reduce exposure of aquatic organisms to sediment containing contaminants exceeding the cleanup levels for protection of ecological receptors.
- Reduce people's exposure to beach sediment containing contaminants exceeding the cleanup levels for protection of humans.

Cleanup Alternatives for the Old Fire Fighting Training Area

The Old Fire Fighting Training Area Feasibility Study report reviews the options the Navy considered for cleanup. The options, referred to as "cleanup alternatives," are different combinations of ways to restrict access to, contain, move, or treat contamination to protect public health and the environment.

The Navy developed separate sets of options to deal with onshore soils and groundwater and the marine sediment areas.

During the upcoming comment period, the Navy welcomes your comments on the proposed cleanup plan as well as the other approaches we evaluated. These alternatives are summarized below. Please consult the Old Fire Fighting Training Area Feasibility Study available at the Newport, Portsmouth, and Middletown public libraries for more detailed information.

Soil Alternatives

Alternative 1: No Action

- Leave the site as it is.
- Conduct 5-year reviews of site contamination and risks.

Alternative 2: Excavation, Treatment, Backfill

- Remove soils exceeding cleanup levels from the site in sections.
- Segregate soil from debris, stones, and fill materials.
- Treat soils with a low temperature thermal system to remove organic compounds.
- Treat soils for metals using a soil washing process.
- Backfill excavated areas with cleaned soil.
- Dispose of debris and rubble offsite.
- Construct new retaining wall on shoreline.

Alternative 3: Excavation and Disposal

- Remove soils exceeding cleanup levels from the site in sections.
- Segregate soil from debris, stones and fill materials.
- Dispose of debris, rubble and soil at appropriate landfills.
- Backfill excavated areas with clean fill.
- Construct new retaining wall on shoreline.

The need to clean up soil at the site is based on the objective to reduce the contaminants present, and to have an unrestricted use of the property. Therefore, Alternative 3 is the Navy's preferred alternative for soil.

Groundwater Alternatives

Alternative 1: No Action

- Leave the site as it is.
- Conduct 5-year reviews of site contamination and risks.

Alternative 2: Limited Action

- Establish an Environmental Land Use Control agreement, attached to title or property deed that restricts use of groundwater at the site from being used for drinking water supply.
- Monitor groundwater periodically to assure a contaminant reduction trend after soil contaminant removal.
- Conduct 5-year reviews of site contamination and risks.

Alternative 3: Active Remediation

- Construct a groundwater treatment system
- Install extraction wells
- Pump groundwater from the ground, treat that water and dispose of it through the local wastewater treatment plant.
- Conduct annual monitoring to evaluate effectiveness of the system.
- Conduct 5-year reviews of site contamination and risks.

Remediation of groundwater is evaluated as a matter of course. The water at the site will not be used for water supply, because of the state designation, the salinity of the water at the site, and the availability of city water supply. Therefore, Alternative 2 is the Navy's preferred alternative for groundwater.

Sediment Alternatives

Alternative 1: No Action

- Leave the site as it is.
- Conduct 5-year reviews.

Alternative 2: Limited Action as an Interim Remedy

- Construct shoreline fencing, and signs to stop people from regular recreation in the intertidal area.
- Implement monitoring of intertidal and subtidal sediments where cleanup levels are exceeded, in order to determine if sediment conditions improve after soil is removed.
- Conduct 5-year reviews, and reevaluate the need to conduct additional action.

Alternative 3: Limited Removal and Disposal

- Excavate intertidal sediments that pose a human and ecological risk.
- Dispose of the sediments in an approved off-site facility.
- Backfill the excavated area with clean fill.
- Monitor contaminant concentrations in subtidal sediments.
- Conduct 5-year reviews.

Alternatives 4 and 5: Removal and Disposal.

- Dredge intertidal and subtidal sediment where cleanup levels are exceeded.
 - Alt 4 – Avoid dredging in eelgrass beds
 - Alt 5 – Remove all contaminants, including those in eelgrass.
- Dispose the contaminated sediment in an approved off-site facility.
- Backfill the dredged area with clean fill
- Monitor site restoration (Alt. 4) or Actively restore sensitive marine habitats interrupted by dredging (Alt. 5).

IMPORTANT NOTES:

It has been determined that the Navy should not impact sensitive ecological areas (eelgrass beds) that are present at the site for the objectives above, based on the contaminants present in those areas, and the concentrations at which they were found. Removal of the sediment would result in destruction of a viable shoreline ecosystem including important shellfish (oyster, clam and scallop) seed areas, and may encroach on eelgrass beds present to the north.

The source of the contaminants in the sediment, and the manner in which those sediments interact with other contaminant influences are both uncertain. It is believed that removal of the source contaminants (onshore soil) will result in an overall improvement in the condition of the sediment.

Due to the uncertainty of the source of the contaminants in the sediment, Alternative 2 (monitoring after soil removal) is the Navy's preferred alternative for sediment, as an interim action only. If monitoring shows sediment concentrations are not decreasing after the removal of the site soils, the need for removing contaminated sediment will be reevaluated.

For More Detailed Information

This publication summarizes a number of reports and studies to help the public understand and comment on the proposal for the site. All of the technical and public information publications prepared to date for the site are available for review at the NAVSTA Newport information repositories:

Middletown Public
Library
W. Main Road
Middletown, RI
401-846-1573
Hrs. M-F 10 – 8;
F-S 10 - 5

Newport Public
Library
300 Spring Street
Newport, RI
401-847-8720
Hrs. M 12:30 – 9
T-Th 9:30 – 9
F-Sa 9:30 – 6
S 1 – 5

Portsmouth Public
Library
2658 E. Main Road
Portsmouth, RI
401-683-9457
Hrs. M-Th 9 – 8
F-S 9 – 5

Additionally, information can be obtained by contacting the Navy, EPA, or RIDEM at:

Jim Shafer
Remedial Project Manager
Engineering Field Activity Northeast,
Naval Facilities
Engineering Command
10 Industrial Highway, Mail Stop 82
Lester, PA 19113
(610) 595-0567 ext. 241

Kymerlee Keckler
Remedial Project Manager
Federal Facilities, Superfund Section
U.S. Environmental Protection Agency (HBT)
One Congress Street – Suite 1100
Boston, MA 02114-2023
(617) 918-1385 or (888) 372-7341

Paul Kulpa
Remedial Project Manager
Office of Waste Management
R.I. Department of Environmental Management
235 Promenade Street
Providence, RI 02908-5767
(401) 222-2297 ext. 7111

The public is invited to attend the Restoration Advisory Board (RAB) meetings held on the third Wednesday of each month at 7:00 p.m. in the Naval Station Newport Officer's Club.

Why Does the Navy Recommend this Proposed Plan?

The Navy recommends a cleanup plan that uses excavation to address contaminated soil at the site, monitoring and land use restrictions to address the groundwater at the site, and access restrictions, and monitoring to address sediment because these approaches:

- Best meet CERCLA criteria, pending receipt of state and community comments.
- Address the highest risk areas by removing contaminated soil from the environment and disposing it properly, thereby ensuring long-term protection of human health and the environment.
- Address groundwater by land use restrictions and monitoring after soil removal, allowing a period of recovery after the contaminant source is removed.
- Address sediment by restricting access to the intertidal area, and monitoring after the soil removal, allowing a period of recovery without damage to the ecological systems present.

The Navy expects to have reviewed all comments and signed the Record of Decision (ROD) describing the chosen cleanup plan in the spring of 2003. The ROD and a summary of responses to public comments will then be made available to the public at the information repositories at the Portsmouth, Middletown, and Newport public libraries. The Navy will announce the decision through the local news media, the RAB, and a community mailing list.

What impacts would the cleanup have on the local community and the environment?

- Noise and traffic for a period of four to six months.
- No access to the area below high tide at the site for an undetermined period of time.
- Construction activities and transport of contaminated soil between the Naval Station's Gate 1 and an off-site disposal facility over a six-month period may cause some inconvenience by disrupting local traffic.



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Use This Space to Write Your Comments

Or to be added to the mailing list

The Navy wants your written comments on the options under consideration for reducing risk from soil at Coasters Harbor Island that have been contaminated by chemicals from the Old Fire Fighting Training Area. You can use the form below to send or fax written comments. If you have questions about how to comment, please call Melissa Griffin at 401-841-6375. This form is provided for your convenience. Please mail this form or additional sheets of written comments, postmarked no later than _____ to:

Melissa Griffin
NAVSTA Newport IR Site Manager
Environmental Protection Department
Building 1
1 Simonpietri Drive
Newport, RI 02841
Fax: (401) 841-7071

Or E-mail to
Melissa Griffin at griffinm@nsnpt.navy.mil

(Attach sheets as needed)

Comments Submitted by: _____

MAILING LIST ADDITIONS, DELETIONS OR CHANGES

If you did not receive this through the mail and would like to

- be added to the site mailing list
- note a change of address
- be deleted from the mailing list

Name: _____
Address: _____

please check the appropriate box and fill in the correct address information above.

What's a Formal Comment?

To make a formal comment you need only to speak to the person recording formal comments at the public information open house and hearing on _____ or submit a written comment during the comment period.

Federal regulations require the Navy to distinguish between "formal" and "informal comments. While the Navy uses your comments throughout the site investigation and cleanup, the Navy is required to respond to formal comments in writing only. The Navy will not respond to your formal comments during the open house and hearing.

The fact that the Navy responds to formal comments in writing only does not mean that we cannot answer questions. People will be available throughout the open house to discuss any questions or informal comments you have about the site and cleanup proposal.

The Navy will review the transcript of all formal comments received at the open house and hearing, and all written comments received during the public comment period, before making a final cleanup decision. The Navy will then prepare a written response to the formal written and oral comments received.

Your formal comment will become part of the official public record. The transcript of comments and the Navy's written responses will be issued in a document called a Responsiveness Summary when the Navy releases the final cleanup decision.



Place
Stamp
Here

**Melissa Griffin
NAVSTA Newport IR Site Manager
PWD, Building 1
1 Simonpietri Drive
Newport, RI 02841**

COMPARISON OF SOIL ALTERNATIVES

The Nine Criteria for Selecting a Cleanup Remedy	Alternative 1 No Action	Alternative 2 Removal, Ex Situ Treatment, Backfill	Alternative 3** Removal and Disposal
1 - Protects human health and the environment	NO	YES	YES
2 - Meets federal and state standards	NO	YES	YES
3 - Provides long-term effectiveness and permanence	NO	YES	YES
4 - Reduces mobility, toxicity, and volume through treatment	NO	YES	NO
5 - Provides protection from short-term impacts	NA	YES	YES
6 - Implementable (can it be done?)	YES	YES	YES
7 - Cost	\$70,000	\$14 M	\$9 M
8 - RIDEM Acceptance	To be determined after public comment period.		
9 - Community Acceptance	To be determined after public comment period.		
10 - Time to Achieve Cleanup	Not Achieved	6-8 Months	4-6 Months

YES = Meets criterion; NO = Does not meet criterion; PARTIALLY = Partially meets criterion; POTENTIALLY = May meet criterion; NA = Not applicable

**This is the Navy's preferred remedy for the soil.

COMPARISON OF GROUNDWATER ALTERNATIVES

The Nine Criteria for Selecting a Cleanup Remedy	Alternative 1 No Action	Alternative 2** Limited Action: Monitoring and Land Use Controls	Alternative 3 Active Remediation: Pump and Treat Groundwater
1 - Protects human health and the environment	NO	YES	YES
2 - Meets federal and state standards	NO	POTENTIALLY	POTENTIALLY
3 - Provides long-term effectiveness and permanence	NO	YES	NO
4 - Reduces mobility, toxicity, and volume through treatment	NO	NO	YES
5 - Provides protection from short-term impacts	NA	YES	YES
6 - Implementable (can it be done?)	YES	YES	YES
7 - Cost	\$70,000	\$500,000	\$2 M
8 - RIDEM Acceptance	<i>To be determined after public comment period.</i>		
9 - Community Acceptance	<i>To be determined after public comment period.</i>		
Time to achieve cleanup goal (See note 1)	Not Achieved	Organics - 19 Years Metals - Longer	Organics - 19 Years Metals - Longer

YES = Meets criterion; NO = Does not meet criterion; PARTIALLY = Partially meets criterion; POTENTIALLY = May meet criterion; NA = Not applicable

**This is the Navy's preferred remedy for the Groundwater.

(1) - Cleanup goals for groundwater are Target Levels calculated for reference only, based on use of the groundwater as a drinking water source. Since this is an implausible scenario, these Target Levels do not have to be met, but they will be used for comparison purposes as the water quality improves.

COMPARISON OF SEDIMENT ALTERNATIVES

The Nine Criteria for Selecting a Cleanup Remedy	Alternative 1 No Action	Alternative 2** Limited Action: Monitoring and Land Use Controls	Alternative 3 Limited Removal and Disposal	Alternative 4 Removal and Disposal Option A	Alternative 5 Removal and Disposal Option B
1 - Protects human health and the environment	NO	POTENTIALLY	POTENTIALLY	POTENTIALLY	YES
2 - Meets federal and state standards	NO	POTENTIALLY	POTENTIALLY	POTENTIALLY	YES
3 - Provides long-term effectiveness and permanence	NO	POTENTIALLY	POTENTIALLY	POTENTIALLY	YES
4 - Reduces mobility, toxicity, and volume through treatment	NO	NO	NO	NO	NO
5 - Provides protection from short-term impacts	NA	YES	PARTIALLY	PARTIALLY	NO
6 - Implementable (can it be done?)	YES	YES	YES	YES	YES
7 - Cost	\$70,000	\$650,000	\$3.1 M	\$3.9 M	\$4.1 M
8 - RIDEM acceptance	To be determined after the public comment period				
9 - Community acceptance	To be determined after the public comment period				
Time to achieve cleanup goal	Not Achieved	1-5 Years	3-4 Months	6-8 Months	6-8 Months

YES = Meets criterion; NO = Does not meet criterion; PARTIALLY = Partially meets criterion; POTENTIALLY = May meet criterion; NA = Not applicable

**This is the Navy's preferred remedy for the sediment.



TETRA TECH NUS, INC.

55 Jonspin Road • Wilmington, MA 01887-1020
Tel 978.658.7899 • Fax 978.658.7870 • www.tetrattech.com

C-NAVY-09-02-1578W

September 5, 2002

Project Number N4152

Mr. James Shafer
Remedial Project Manager
EFA Northeast, Naval Facilities Engineering Command
10 Industrial Highway, Mail Stop 82
Lester, Pennsylvania 19113

COPY

Reference: CLEAN Contract No. N62472-90-D-1298
Contract Task Order No. 0833

Subject: Draft Proposed Plan
Old Fire Fighting Training Area
Naval Station Newport, Newport Rhode Island

Dear Mr. Shafer:

Enclosed you will find four copies of the Draft Proposed Remedial Action Plan (PRAP) for the site referenced above. The draft PRAP has been prepared in conjunction with the Final Feasibility Study, submitted under separate cover letter.

Please be advised that we have received the first set of sediment data from the phase 2 predesign investigations at OFFTA (samples collected July 2002). This data does not support previous findings that high concentrations of PAHs exist within the eelgrass at the sediment station SD-410. On the contrary, the new data show clean conditions in the areas sampled. Additional data is still pending from Battelle, and both sets will be made available to all parties as soon as it is all received.

If you have any questions regarding this material, please do not hesitate to contact me.

Very truly yours,

Stephen S. Parker
Project Manager

SSP/rp.

Attachment

- c: K. Finkelstein, NOAA (w/encl. - 1)
- M. Griffin, NSN (w/encl. - 2)
- M. Imbriglio, NSN (w/encl. - 7)
- K. Keckler, USEPA (w/encl. - 4)
- P. Kulpa, RIDEM (w/encl. - 4)
- C. Powell, RIF&W (w/encl. - 1)
- J. Stump, Gannet Flemming (w/encl. - 2)
- J. Trepanowski/G. Glenn, TtNUS (w/encl. - 1)
- File N4152-3.2 (w/o encl.), N4152-8.0 (w/encl. - 1)