



# Explanation of Significant Differences

Center  
 Site 9, Old Fire Fighting Training Area  
 Naval Station Newport, Rhode Island  
 Addition of Asbestos as a Contaminant of Concern

SITE: NEWPORT NAVAL TRNG  
 BREAK: 5.4  
 OTHER: 52251

## INTRODUCTION AND STATEMENT OF PURPOSE

An Explanation of Significant Differences (ESD) is required for Site 9, Old Fire Fighting Training Area (OFFTA) at Naval Station (NAVSTA) Newport, Rhode Island (formerly the Naval Education and Training Center), to modify the Record of Decision (ROD) by adding asbestos as a contaminant of concern (COC). The modification is significant because it adds a COC to be addressed by the selected remedy but does not fundamentally alter the overall cleanup approach documented in the ROD for Site 9, signed in September 2010.

The Navy is the lead agency, with oversight from the United States Environmental Protection Agency (EPA) and Rhode Island Department of Environmental Management (RIDEM), for cleanup of sites at NAVSTA Newport in the Installation Restoration Program (IRP) under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) as modified by the Superfund Amendments and Reauthorization Act of 1986 (SARA).

The Navy is issuing this ESD for Site 9 at NAVSTA Newport as part of the public participation requirements under Section 117(c) of CERCLA, Section 300.435(c)(2)(i) of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), and the Navy IRP. In accordance with Section 300.825(a)(2) of the NCP, this ESD will become part of the Administrative Record for the facility. The Administrative Record also contains background information that was used in determining the selected remedy, as documented in the ROD, and in preparing this ESD. The Administrative Record for NAVSTA Newport is included as part of the Information Repository, which is available for review at the following web site:

<http://go.usa.gov/Tsy>

This ESD documents the addition of asbestos as a COC in soil, that will be addressed by the selected remedy. The ROD outlined the Navy's planned response to contaminated soil and groundwater at Site 9, including covering contaminated soil with a geotextile-lined soil cover in the grassy areas or with asphalt/concrete in paved areas, maintaining the cover, and implementing land use controls (LUCs). The ROD identified the COCs for Site 9 based on the results of the Remedial Investigation (RI); however, during installation of a replacement stone revetment on the Site 9 site (conducted as

part of a non-time-critical removal action [NTCRA]), asbestos-containing materials (ACM) were discovered, buried in soil at the site. These materials were identified as pieces of vinyl asbestos floor tile containing between 3 and 5 percent asbestos by bulk analysis. Although asbestos was not originally identified as a COC for Site 9, the remedy for the site as outlined in the ROD will be protective of human health and the environment with respect to the COCs identified in the ROD, as well as asbestos.

## SITE HISTORY, CONTAMINATION, AND SELECTED REMEDY

### Site History

NAVSTA Newport was placed on the National Priorities List (NPL) in 1989. Multiple investigations have been performed at Site 9, including a RI (2001), Groundwater Risk Evaluation (2002), Draft Feasibility Study (2002), Soil Pre-Design Investigation (2004 - 2005), Supplemental Risk Evaluation (2007), and Revised Draft Final Feasibility Study, finalized through a July 2010 Technical Memorandum (2009 - 2010). The final remedy for the site was documented in the ROD, which was signed by the Navy and EPA Region 1 in September 2010, with concurrence from RIDEM.

Site 9 measures approximately 8.2 acres in area and is comprised of a mix of active parking areas and construction lay-down areas for construction projects in the immediate vicinity. As proposed by the Navy in 2004, future use of the site was to be unrestricted. However, in 2008, the NAVSTA Master Plan was updated, and the site was identified as planned parking for a new fitness facility to be constructed south of the site. The selected remedy will be protective of human health and the environment under this planned land use, which would be equivalent to an industrial/commercial use.

The site was the location of a Navy fire-fighting training facility from World War II until 1972. During training operations, fuel oils were ignited in various structures at the site and then were extinguished by trainees. Underground piping reportedly carried the water/oil mixture from underground storage tanks (USTs) to the structures. Unburned fuels and water were drained from the buildings and routed to an oil-water separator before being discharged to Coasters Harbor. Upon closure in 1972, the training structures were demolished and buried in mounds on the site. The entire area was then covered with topsoil and converted to a recreational area that included a baseball field, picnic



area, and open pavilion. This recreational area was opened in 1976 as "Katy Field", for Navy use. During a short period in the 1990s, local community youth baseball teams were permitted to use the baseball field, and a former one-story concrete block building, Building 144, was used as a day care facility. ~~Katy Field was used for recreation until it was closed and fenced in October 1998 because of potential environmental and human health concerns. Building 144 was demolished in 2009.~~

In 2003, the Surface Warfare Officers School (SWOS) Applied Instruction Building was constructed on a portion of the site, south of (the now former) Katy Field (Building 1362). The SWOS is separated from the former Katy Field by Taylor Drive. During construction, contaminants detected within the construction zone were determined to be similar to and contiguous with those at the former Katy Field. As a result, the SWOS area and soils under a portion of Taylor Drive were added to Site 9.

A series of NTCRAs have been conducted to remove soil-covered mounds of debris resulting from demolition of the fire-fighting training area, to remove soil with contaminant concentrations exceeding RIDEM upper concentration limits (UCLs), and to replace the stone revetment along the shoreline to prevent erosion of contaminated soil from the site.

During the removal action associated with the stone revetment replacement, ACM was encountered, which likely resulted from poor housekeeping practices associated with prior building demolition activities at NAVSTA. The work plan for the removal action was revised to include removal and off-site disposal of ACM encountered during excavation activities within the footprint of the revetment.

#### **Soil Contaminants of Concern at Site 9**

Soils remaining at the site after completion of the removal actions contain polycyclic aromatic hydrocarbons (PAHs) and metals comingled with petroleum-related contaminants, at concentrations that pose potentially unacceptable risk to human receptors under a hypothetical future residential scenario and unrestricted recreational scenario, as well as under the current industrial use scenario. The soil COCs listed in the ROD for Site 9 include arsenic, lead, manganese, and the PAHs, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, and dibenzo(a,h)anthracene. Asbestos was not identified as a COC in the ROD. This ESD adds asbestos to the list of soil COCs for Site 9.

#### **Selected Remedy**

The selected remedy for Site 9 includes the following components:

- An asphalt/soil cover system.
- Surface water control structures in paved areas.
- Development and implementation of LUCs.
- Maintenance of the cover systems.
- Monitoring.

- Five-year reviews.

#### **Cover System**

The asphalt/soil cover system will be designed and constructed over the area of contaminated soil (approximately 8.6 acres) to reduce site-wide average soil exposure concentrations to levels less than industrial cleanup criteria. Areas that are not paved will receive a 2-foot soil cover consisting of geotextile and 18 inches of clean fill overlain by 6 inches of topsoil, which will be graded and vegetated to prevent ponding of rainwater and to prevent erosion. Areas that are currently paved (or to be paved) for parking, roadways, and sidewalks will provide an effective barrier preventing access to contaminated soil, including soil containing total petroleum hydrocarbons (TPH). Areas to be paved will be provided an asphalt cover or a surface cover of another material providing a reduced permeability, similar to that of asphalt.

The geotextile will separate the clean fill from the underlying contaminated soil and will serve as a marker layer if any future land-disturbing activities are conducted. Grassed traffic islands around the parking lots of the SWOS building will be covered with a modified permeable cap consisting of 6 inches of topsoil underlain by a geogrid that will serve as a barrier layer to incidental excavation in the area. The existing 6 inches of topsoil will be stripped off, the geogrid placed, and the 6 inches of topsoil replaced. Alternatively, these grassed parking lot islands could be paved and replaced with vehicle stops.

For areas that are currently covered by pavement or sidewalks (including Taylor Drive, the SWOS parking areas, walkways, etc.), the existing pavement will provide a suitable barrier preventing direct contact with underlying soil, and preventing infiltration of precipitation and surface runoff into underlying soil.

The replacement stone revetment along the northern perimeter of the site (replaced as part of a NTCRA) will protect the northern edge of the soil cover from erosion by ocean waves, provide stability during coastal flooding events, and will contain any potential migration of contaminated soil toward the nearby marine sediments. Long-term maintenance of the revetment will be conducted, along with asphalt/soil cover maintenance, as described below.

#### **Surface Water Controls**

Surface water control structures will be installed in paved areas to collect surface water runoff and prevent infiltration into the subsurface, and to direct it to existing or new on-site storm drainage systems.

#### **LUCs**

LUCs will be developed and implemented to accomplish the following:

- Establish a waste management area for the site, where contaminants associated with releases from fire-fighting training operations remain in place. The waste

management area will encompass all of the area within the Site 9 boundary and will be maintained and monitored by the Navy.

- Restrict property uses to those consistent with industrial/commercial activities, such as parking, roadways, sidewalks, material stockpiles, heavy equipment storage, etc.
- Prevent use of groundwater at the property for any consumptive purpose, including household use, drinking water supply, irrigation, or industrial use.
- Prevent excavation or disturbance of the asphalt/soil cover, monitoring wells, and any other components of the remedy, and prevent access to contaminated soil by persons who are not adequately trained and properly informed of the hazards associated with such activities.
- Establish LUCs compliance monitoring requirements, as described below.

The LUCs will be established and implemented in accordance with a post-ROD LUCs Remedial Design (RD) that is currently in draft final format and undergoing regulatory review. If the property is transferred from the Navy to another federal owner, upon meeting the requirements for transfers under the facility's Federal Facility Agreement, the Navy will ensure as part of the transfer process that the gaining agency is made aware of the existing controls and will take appropriate action to ensure that such controls remain in place. If the property is ever transferred to non-federal ownership, deed restrictions that incorporate the LUCs required by the ROD and that meet state property law standards will be recorded. Although the Navy may transfer the procedural LUCs responsibilities to another party by contract, property transfer agreement, or through other means, the Navy shall retain ultimate responsibility for remedy integrity. LUCs will be maintained at Site 9 until concentrations of COCs in soil and groundwater are at levels that allow for unrestricted use and exposure.

#### **Maintenance**

Maintenance of the cover systems will be conducted to ensure continued protection of possible receptors. Maintenance will be conducted as needed and as defined by the periodic inspection schedule to be generated by the Installation Commander's designee.

#### **Monitoring**

Monitoring will be conducted to ensure that the cover system remains intact, that the revetment is not breached and is still preventing soil erosion, and that contaminants are not migrating beyond the property boundary. A Long-Term Monitoring Program (LTMP) Work Plan will be developed to describe the monitoring parameters. At a minimum, the monitoring program will include the following.

- Groundwater monitoring upgradient of the compliance boundary to ensure that contaminants are not migrating away from the site into areas that have no current LUCs to prevent groundwater use.
- Sediment monitoring downgradient of the compliance boundary to ensure that contaminants are not migrating

into the marine ecosystem.

- Annual inspections of the cover system, revetment, and land use / land improvements, to ensure that there are no violations of the LUCs. The Installation Commander or designee will provide annual certifications of the inspections to EPA and RIDEM. If a violation of the restrictions occurs, a description of the violation and the corrective actions to be taken to restore protectiveness will be reported to EPA and RIDEM.

#### **Five-Year Reviews**

Five-year reviews will be required because contaminants with concentrations that exceed cleanup goals are being managed in place. The five-year reviews for Site 9 will be prepared along with reviews for the other IRP sites on the same cycle. Five-year reviews will be conducted in accordance with current Navy and EPA guidance. The need to continue each element of the Site 9 LTMP will be revisited at each five-year review cycle, and the LTMP Work Plan will be revised as appropriate. The last five-year review was conducted in 2009, and the next five-year review will be conducted in 2014 (final report due December 2014).

### **BASIS FOR THE DOCUMENT**

This ESD addresses the Navy's discovery of asbestos, a new COC discovered in soil at Site 9 after the signing of the ROD. During construction of the replacement stone revetment at Site 9 in 2010, the Navy discovered pieces of resilient floor covering in the subsurface and found that this material contained asbestos. This material is also known as vinyl asbestos tile (VAT). The Remedial Action Contractor reported that there are two types of ACM present, green floor tile containing 3 percent asbestos, and brown floor tile containing up to 5 percent asbestos. During excavation activities, the ACM was observed as loose pieces in the subsurface soils, measuring approximately 1 inch to 6 inches in diameter, and also as whole tiles affixed to pieces of concrete rubble. Soils with ACM which were excavated for construction of the revetment were stockpiled in the center of the site. The stockpiled soils were tested to ensure proper offsite disposal. The testing results indicated that asbestos was not detected in 16 of the 18 samples. Two samples had a maximum detected concentration of 0.10% asbestos.

### **DESCRIPTION OF SIGNIFICANT DIFFERENCES**

ACM appears to have been inadvertently placed at the shoreline of the site at some time in the past as part of the placement of concrete floor slabs to reduce erosion. Over time, some of this material apparently became dislodged from the concrete and mixed within subsurface soil at the shoreline.

The ACM encountered during construction of the revetment was managed in compliance with regulatory requirements, temporarily stockpiled on site, and subsequently disposed at an off-site facility licensed to receive asbestos-containing wastes. In addition to the ACM removed from the site, it is

possible that additional ACM (VAT) remains comingled with the subsurface soil along the shoreline, landward of the revetment. Any residual asbestos remaining at the site must be adequately managed and isolated from potential exposure by means of the soil/asphalt cover specified in the ROD.

The ACM found during the excavation of the replacement stone revetment may extend landward of the limits of the excavation, and/or may be present where soils were stockpiled during revetment construction; therefore, it is presumed that there may be other pieces of VAT in the subsurface soil that will be covered with the soil/asphalt cover specified in the ROD. This material will be managed in place, along with the other site COCs, through establishment of a waste management area, as documented in the ROD. This ESD documents the addition of asbestos as a soil COC that will be addressed by the selected remedy. The ROD outlined the Navy's planned response to contaminated soil and groundwater at Site 9, including covering contaminated soil with a geotextile-lined soil cover in the grassy areas or with asphalt/concrete in paved areas, maintaining the cover and implementing LUCs.

Because ACM was present on-site, the following remedial components are added to the CERCLA remedy for this site.

- Exposure to asbestos in soil will be prevented where asbestos may be present at Site 9 until the final cover remedy is implemented. Such exposure will be prevented through implementing LUCs established for Site 9 through the LUCs RD, and performing any work at the site in accordance with the NESHAPs ARAR in Table A-3 of the ROD and Attachment A of this ESD.
- During installation of the final cover, in accordance with OSHA 29CFR 1926.1101 and NESHAP 40 C.F.R. § 61.151, health and safety measures will be used to prevent the release of asbestos into the air (e.g., soil will be kept wet during construction).
- Once the final cover is installed, and in accordance with the LUCs RD, the Navy will develop a Long-Term Management Plan for the entire site. Elements of the Long-Term Management Plan will include specific controls to be implemented to prevent the release of asbestos into the environment during the activities and uses of the site that are consistent with the LUCs objectives in the ROD, including standards under NESHAP 40 C.F.R. § 61.151, and are allowed within the site, as defined in the LUCs RD.

The selected remedy will be protective of human health and the environment with regard to the original list of COCs as presented in the ROD, and with regard to asbestos, which is now a COC, as documented in this ESD. The cover required by the ROD will prevent potential receptors' direct exposure to asbestos and will prevent asbestos fibers from becoming airborne.

## **SUPPORT AGENCY COMMENTS**

EPA and RIDEM representatives, as part of the NAVSTA Newport IR Team, have had ongoing involvement in the decision-making process associated with the change in the Site 9 remedy. The Navy has obtained concurrence from the EPA and RIDEM on the modification to the cleanup remedy for Site 9.

## **STATUTORY DETERMINATIONS**

The Navy acknowledges that asbestos has been released into the environment at Site 9. The remedy documented in the ROD is an appropriate response action for the asbestos, therefore, additional investigation or risk assessment for asbestos at Site 9 is not required. The primary standards for addressing asbestos at the site are the Clean Air Act, National Emission Standards for Hazardous Air Pollutants [NESHAPs].

The Appendix A, Table A-3 of the ROD that lists ARARs for the remedial action included a general citation to these regulations as applicable standards pertaining to the management of potential air pollutants during cover construction activities. Although asbestos is not specifically listed in the synopsis text for the NESHAP regulations in Table A-3 of the ROD, asbestos is included as a regulated material under these regulations. As cited in the ROD, the action to be taken to attain this ARAR is to monitor air emissions during regrading of soil prior to installation of the cover, and this action is also appropriate to address risks posed by asbestos during the cover installation. However, the State Solid Waste Management standards, cited in the ROD as ARARS for permanently covering the OFFTA wastes, do not regulate the disposal of asbestos. Therefore, this ESD specifically adds NESHAP standards for inactive asbestos waste disposal sites, found at 40 CFR Part 61.151, as Relevant and Appropriate asbestos disposal standards for the cover portion of the remedy. Attachment A lists the asbestos-specific ARARs that will be added to Appendix A, Table A-3 of the ROD, by this ESD.

The scope, performance, and cost of the remedy are not altered by the addition of measures to address asbestos at this site, and there is no significant change to any component of the remedy. The proposed change to the selected remedy will continue to satisfy the statutory requirements of CERCLA Section 121, and the modified remedy will remain protective of human health and the environment and will continue to comply with federal and state ARARs and to be cost effective.

## **PUBLIC PARTICIPATION**

Public participation requirements as outlined in the NCP, Section 300.435 (c) (2) (i), have been met by including this ESD in the Administrative Record for Site 9 and by publishing in local newspapers a notice of availability of the ESD. In addition, the Navy regularly meets to discuss the status and progress of the IRP with the Restoration Advisory Board.

(RAB), which includes representatives from the local community. Representatives from the Navy, EPA, and RIDEM attend these meetings. The presence of the asbestos at Site 9 was discussed at RAB meetings on July 20, 2011 and January 18, 2012.

**FOR MORE INFORMATION**

If you have questions or would like further information about the ESD for Site 9 - OFFTA at NAVSTA Newport, please contact:

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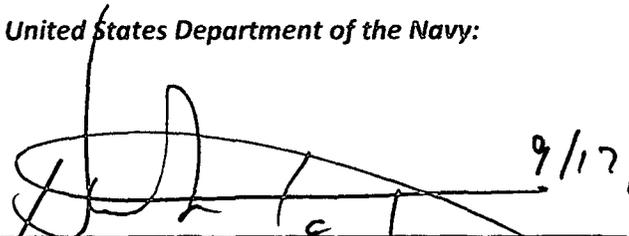
Ms. Pamela Crump  
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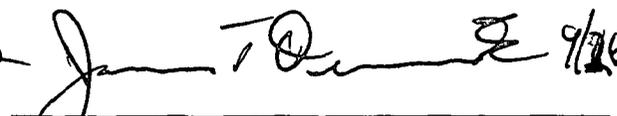
**DECLARATION**

For the foregoing reasons, by my signature below, I approve the issuance of this Explanation of Significant Difference for the Record of Decision for Site 9 at NAVSTA Newport

*United States Department of the Navy:*

*United States Environmental Protection Agency:*

  
\_\_\_\_\_  
Captain Douglas Mikatarian  
Commanding Officer, NAVSTA Newport  
Date 9/17/12

  
\_\_\_\_\_  
James T. Owens  
Director  
Office of Site Remediation and Restoration  
U.S. EPA Region 1  
Date 9/26/12

**ATTACHMENT A – ADDITIONAL ARAR AND TBC FOR SITE 9 ROD**

Requirement	Citation	Status	Synopsis of Requirement	Action to Be Taken to Attain ARAR
Clean Air Act (CAA), National Emission Standards for Hazardous Air Pollutants (NESHAPS), Standards for Inactive waste disposal sites for asbestos mills and manufacturing and fabricating operations	42 U.S.C. §§7411 & 7412; 40 C.F.R. §61.151	Relevant and Appropriate	NESHAPS standards for preventing air releases from inactive asbestos disposal sites, including cover standards, dust suppression, and land use controls.	Although this site is not an active waste disposal site, unless a specific area of asbestos-contamination is defined, the entire area of the Site will be covered in a manner that meets the substantive requirements of these standards. Land use controls will be established to maintain the cover and to address any potential asbestos exposure in case the cover is disturbed. If a smaller area of asbestos contamination is defined then these standards will apply to the smaller area.
Framework for Investigating Asbestos-Contaminated Superfund Sites	OSWER Directive #9200.0-68 (Sept. 2008)	To Be Considered	Guidance on investigating and characterizing the potential human exposure from asbestos contamination in outdoor soil at Superfund sites.	Guidance allows response actions at a site without further characterization, after review of historical and current information, if review of the site conditions supports a response.



RHODE ISLAND  
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
235 Promenade Street, Providence, RI 02908-5767 TDD 401-222-4462

26 September 2012

Mr. James T. Owens, III, Director  
U.S. EPA – New England, Region 1  
Office of Site Remediation and Restoration  
5 Post Office Square  
Suite 100 (OSRR 07-3)  
Boston, MA 02109-3912

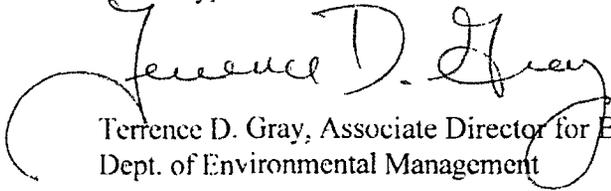
RE: Site 09 - Old Fire Fighting Training Area (OFFTA)  
Naval Station Newport, Rhode Island

Dear Mr. Owens:

The Office of Waste Management has conducted a review of the *Explanation of Significant Differences* (ESD), dated September 2012, for Site 09 – Old Fire Fighting Training Area (OFFTA), Naval Station Newport, Rhode Island. As a result of this review, the Department is in favor of proceeding within the framework of this ESD.

If you have any questions please feel free to contact Matthew DeStefano of my staff at (401) 222-2797, extension 7141.

Sincerely,



Terrence D. Gray, Associate Director for Environmental Protection  
Dept. of Environmental Management

cc: L. Hellested, RIDEM OWM  
M. DeStefano, RIDEM OWM  
P. Crump, RIDEM OWM  
B. Olson, USEPA OSRR  
K. Keckler, USEPA OSRR  
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