



**TETRA TECH**

C-NAVY-03-14-5330W

March 31, 2014

Project Number G01609

Ms. Maritza Montegross  
Navy NAVFAC MIDLANT, Northeast IPT  
Bldg. Z-144, 2<sup>nd</sup> Floor  
Virginia Avenue  
Norfolk, Virginia 23511

Reference: CLEAN Contract No. N62472-03-D-0057  
Contract Task Order No. 145

Subject: Final Explanation of Significant Differences (ESD) to the Site 3 Record of Decision (ROD)  
Southern Flight Test Area (SFTA)  
Naval Weapons Industrial Reserve Plant (NWIRP) Bedford, Massachusetts

Dear Ms. Montegross:

Tetra Tech is pleased to provide copies of the final (signed) ESD document for Site 3 and the SFTA at NWIRP Bedford. The final ESD was first provided for approval in September 2013. The enclosed version includes the recently completed signature page (signed by NAVSEA and EPA) and the MassDEP acceptance letter.

Please contact me at (978) 474-8449 or [jim.ropp@tetrattech.com](mailto:jim.ropp@tetrattech.com) should you have any questions.

Sincerely,

James Ropp  
Project Manager

Enclosure – Final ESD (2 hardcopies, CD)

- c: M. Audet, EPA (w/ encl. – hardcopy, email)
- D. Gallagher, MassDEP (w/ encl. – hardcopy, email)
- G. Lakner, NAVSEA (w/ encl. – hardcopy, email)
- L. Williams, NAVSEA (w/ encl. – email)
- J. Broderick, NAVSEA (w/ encl. – email)
- C. Strickland, Hanscom AFB (w/ encl. – hardcopy, email)
- J. O’Keefe, Resolution (w/ encl. – email)
- RDM Data Manager, Tetra Tech Pittsburgh (w/ encl. – hardcopy, CD)
- Bedford Free Public Library, reference desk (w/ encl. – hardcopy)
- G. Glenn, Tetra Tech (w/o encl. – email)
- File G01609-3.2 (w/o encl.), G01609-8.0 (w/ encl. – original)

Tetra Tech, Inc.

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# Explanation of Significant Differences to the Record of Decision for Site 3 – Chlorinated Solvent Groundwater Plume Naval Weapons Industrial Reserve Plant (NWIRP) Bedford, Massachusetts

## INTRODUCTION

### SUMMARY OF EXPLANATION OF SIGNIFICANT DIFFERENCES (ESD)

The Navy will modify the selected remedial action for Operable Unit 1 (Site 3), as documented in the Record of Decision (ROD) for Site 3, to include the NWIRP property south of Hartwell Road known as the Southern Flight Test Area (SFTA). This change does not alter the overall remedy for Site 3, but rather expands it to include the additional SFTA property.

The Navy's environmental investigations have shown that trichloroethene (TCE) is present in bedrock groundwater at the SFTA at concentrations exceeding regulatory criteria, but that natural attenuation of the TCE is occurring at an acceptable rate to achieve those criteria. TCE is also the primary contaminant of concern (COC) in Site 3 groundwater. Multiple elements of the selected remedy for Site 3 are similar to those needed for the SFTA. Therefore, the selected remedy for Site 3 will be expanded to include the following:

- Monitored natural attenuation (MNA) of TCE in bedrock groundwater at the SFTA.
- Land Use Controls (LUCs) at the SFTA to control site use and to prevent exposure to TCE via groundwater use or potential vapor intrusion into indoor air.
- 5-year reviews that include the SFTA.

The SFTA is a comparatively small area to be added to Site 3. The SFTA can be addressed efficiently and effectively as part of the overall Site 3 remedial action. The modified remedy remains protective of human health and the environment, complies with federal and state requirements, and is cost effective. The existing MNA Sampling and Analysis Plan (SAP) and Land Use Control Remedial Design (LUC RD) for Site 3 will be updated to incorporate the SFTA remedy.

This ESD documents a significant change to the remedy established in the September 2010 ROD for Site 3, the Chlorinated Solvent Groundwater Plume, at NWIRP Bedford, in Bedford, Massachusetts. The change will expand the groundwater monitoring/MNA program and the LUCs at Site 3 to include the additional SFTA property, where similar groundwater contamination has been identified.

Based on sampling data from the SFTA in 2013, the Navy has determined that components of the Site 3 remedy can be modified to effectively address the contamination at the SFTA while remaining protective of human health and the environment at both sites. This ESD summarizes the information that led to making the decision to alter the Site 3 remedy, describes the changes, and affirms that the revised remedy complies with the National Contingency Plan (NCP) and the requirements of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980 and the Superfund Amendments and Reauthorization Act (SARA) of 1986.

The Navy began evaluating environmental conditions at NWIRP Bedford in 1986, under the Department of Defense (DoD) Installation Restoration Program (IRP) in accordance with the requirements of CERCLA. In May 1994, the United States Environmental Protection Agency (USEPA) placed NWIRP Bedford on the National Priorities List (NPL) after the investigations identified environmental contamination on the property. A Federal Facility Agreement (FFA) between the Navy and the USEPA was signed in September 1999. The Navy is the lead agency, with oversight by the USEPA, for performing cleanup of NWIRP Bedford sites under the IRP. The Massachusetts Department of Environmental Protection (MassDEP) is not party to the FFA, but participates in discussions and strategy sessions, and provides oversight and guidance through review of the Navy's IRP documents.

The Navy is currently conducting the CERCLA remedial action at Site 3 to mitigate risks associated with elevated concentrations of TCE and other chlorinated volatile organic compounds (CVOCs) in groundwater. The SFTA is an area within NWIRP Bedford that has similar groundwater contamination, but in a smaller area and

with lower concentrations of TCE than at Site 3. In September 2010, the Navy and USEPA, with concurrence from MassDEP, signed a ROD to document the selected remedial action for Site 3. This ESD presents a significant change to the ROD by incorporating the SFTA into the Site 3 remedial action.

This ESD and supporting documentation will become part of the Administrative Record for NWIRP Bedford and will be included in the public Information Repository, in accordance with Section 300.825(a)(2) of the NCP. The Administrative Record contains background information that was used in determining the selected remedy, as documented in the ROD, and in preparing this ESD. The Information Repository for NWIRP Bedford is available for public review at the following location:

**The Bedford Free Public Library (Reference Desk)**  
7 Mudge Way, Bedford, Massachusetts 01730  
781-275-9440

#### **Hours of Availability**

Monday to Thursday - 9:00 AM to 9:00 PM

Friday - 9:00 AM to 6:00 PM

Saturday - 9:00 AM to 5:00 PM

Sunday (September through May) - 1:00 PM to 5:00 PM

### **SITE DESCRIPTION AND HISTORY**

NWIRP Bedford is a 46-acre facility located in the Town of Bedford, Middlesex County, Massachusetts. NWIRP Bedford is owned by the Navy and was historically operated by the Raytheon Company of Waltham, Massachusetts. The mission of NWIRP Bedford was to design, fabricate, and test prototype weapons equipment such as missile guidance and control systems. Activities at NWIRP Bedford were historically conducted in two main structures: the Components Laboratory located north of Hartwell Road and the Flight Test Facility to the south of Hartwell Road (Figure 1). Raytheon conducted its operations at NWIRP Bedford from the mid-1950s through December 2000. The facility has remained vacant since that time except for the Navy's ongoing environmental cleanup activities.

The initial environmental investigations performed at NWIRP Bedford were conducted in accordance with the Massachusetts Contingency Plan (MCP) (310 Code of Massachusetts Regulations 40.0000). Since NWIRP Bedford was added to the NPL in 1994, the Navy's environmental investigations have been conducted through the IRP which meets the requirements of CERCLA.

The locations of Site 3 and the SFTA are shown on Figure 1. More detailed descriptions of the sites can be found in the September 2000 Phase II Remedial Investigation (RI), the September 2010 Site 3 ROD, the

February 2013 SFTA Supplemental Groundwater and Soil Gas Sampling report, as well as in various supporting documents which are available for review as part of the Administrative Record.

### **SITE 3**

Site 3, the Chlorinated Solvent Groundwater Plume, comprises a large area in the northern portion of NWIRP Bedford (north of Hartwell Road) where elevated concentrations of CVOCs are present in overburden and bedrock groundwater. The Site 3 CVOC plume is believed to be the result of various individual releases of chlorinated solvents associated with the industrial operations in and around the Components Laboratory. TCE is the predominant COC in groundwater at Site 3.

The Navy has conducted multiple investigations at Site 3 since 1986, including the Phase I and II RI, in which the physical characteristics of the site, the nature and extent of contamination, and the potential associated human health and ecological risks were assessed. In 1997, the Navy implemented a groundwater pump-and-treat system as an Interim Remedial Action (IRA) to prevent off-migration of contaminants to the adjacent wetland area. A row of 23 extraction wells are located along the facility's western property line. Groundwater monitoring for Site 3 has been conducted on and off Navy property since that time. The Navy completed supplemental source area investigations in 2002, 2004, and 2010 as well as a pilot studies in 2005, 2010, and 2011 to evaluate potential source area cleanup options.

Following signature of the ROD in 2010, the Navy designed and constructed a full-scale remediation system for Site 3, which commenced operation in November 2012. Due to the extent of contamination and the nature of the groundwater aquifer (situated in a tight glacial till and fractured bedrock), the ultimate cleanup of Site 3 is expected to require several decades.

### **SOUTHERN FLIGHT TEST AREA**

The SFTA is located in the southern portion of NWIRP Bedford (south of Hartwell Road) and is bounded by the airfield of Lawrence G. Hanscom Field/Hanscom Air Force Base. The SFTA has been vacant since 2000, and most of the buildings have been decommissioned and demolished since that time. A small area of CVOC contamination, predominantly TCE, is present in bedrock groundwater at the SFTA. The original source of the contamination is uncertain; however, no remaining source of TCE has been found at the site.

Environmental investigations were conducted at the SFTA as part of the overall Phase I RI (1990) and Phase II RI (2000) for NWIRP Bedford. No significant soil contamination was identified at the SFTA, and no unacceptable risks associated with analytes in soil were identified for current and likely future site use scenarios.

As shown on Figure 2, TCE is present in bedrock groundwater, but no dense non-aqueous phase liquid (DNAPL) is believed to be present based on the detected concentrations.

Historically, the highest concentration of TCE, 250 micrograms per liter ( $\mu\text{g/L}$ ), was found in the shallow bedrock aquifer at well MW-24R, located in the central portion of the SFTA. TCE concentrations at this and the other locations at the SFTA have decreased substantially over time. The Navy has been conducting semi-annual groundwater monitoring at the SFTA since 2002 which has shown that TCE concentrations are continuing to attenuate toward the target cleanup goal. Recent groundwater sampling results indicate that the current maximum TCE concentration at the site is approximately 38  $\mu\text{g/L}$  and that the target cleanup goal is exceeded in only three of the eight bedrock monitoring wells at the site (MW-8B, MW-24R, and MW-84R). Based on the observed TCE concentration trends, it is estimated that the target cleanup goal for SFTA groundwater will be achieved within 9 to 16 years. The Navy will continue to monitor the attenuation of contaminant concentrations over time. If it determined that contaminant concentrations are no longer attenuating at an acceptable rate, then the Navy, EPA, and MassDEP will reconvene to discuss whether additional actions are necessary to achieve cleanup goals.

The decreases in TCE concentrations are likely due to a combination of natural attenuation processes in SFTA groundwater and the effects of a groundwater extraction system operated by the Air Force to the east of the SFTA to address a separate area of groundwater contamination. The Air Force's groundwater remediation system at the adjacent Hanscom Field has been operating since 1991 and likely influences the direction and the velocity of groundwater flow in the SFTA. The extraction system is believed to be capturing groundwater that flows from the SFTA site. In 2008, the Navy and the Air Force signed a Memorandum of Understanding (MOU) to ensure continued groundwater monitoring and sharing of information for the SFTA and Air Force sites. This ESD will ensure the continued monitoring, control, and oversight of the SFTA cleanup under CERCLA. In the event that the Air Force discontinues their groundwater remediation system adjacent to the SFTA, then the Navy's monitoring program will evaluate the potential changes to the groundwater flow direction and velocity at the SFTA and whether MNA will remain effective for achieving cleanup goals within a reasonable timeframe. If it determined that contaminant concentrations are no longer attenuating at an acceptable rate, then the Navy, EPA, and MassDEP will reconvene to discuss whether additional actions are necessary for the protection of human health and the environment.

## SUMMARY OF THE SITE 3 SELECTED REMEDY

The selected remedy for Site 3 was documented in a ROD signed by the Navy and USEPA in September 2010, with concurrence from MassDEP. The selected remedy addresses CVOC contamination at Site 3 with the following components:

- In-situ enhanced bioremediation of the source area
- Downgradient groundwater extraction and ex-situ treatment for plume capture and control
- MNA/Long-Term Monitoring (LTM)
- LUCs
- Five-Year Reviews

Bioremediation of the source area commenced in 2012. The groundwater extraction and treatment system has been in operation since 1997. LTM of CVOCs in groundwater continues to be conducted, along with MNA assessments, to verify that the remedy is effectively reducing contaminant concentrations. LUCs have been implemented to prevent the use of site groundwater, residential use of the site, occupancy of site structures, and to ensure continued maintenance of the remediation systems. Five-year reviews will be conducted until site conditions allow for unrestricted use and unlimited exposure.

## BASIS FOR THIS EXPLANATION OF SIGNIFICANT DIFFERENCES

The Navy undertook a supplemental groundwater and soil gas investigation at the SFTA in February 2013 to further delineate the extent of TCE and to gather new MNA and soil gas data to support decisions for the site. The February 2013 data confirmed that:

- Low-level TCE contamination (in excess of the regulatory criteria) is still present in bedrock groundwater in a localized area in the southern portion of the SFTA;
- Groundwater conditions are generally favorable to natural attenuation processes; and
- Low levels of TCE are present in soil gas, with one of seven sampling locations exceeding a selected screening criterion.

The new data, in conjunction with the historical data collected since 1989, indicate that the TCE in bedrock groundwater is continuing to attenuate and at an acceptable rate for the overall site cleanup. Therefore, implementing MNA for TCE in bedrock groundwater, LUCs to prevent groundwater use and control property use, and 5-year reviews will be effective for the

continued protection of human health and the environment at the SFTA. These three remedy elements are already being implemented under similar conditions at Site 3. The identified COCs and cleanup goals for Site 3 and the SFTA are also similar. The cleanup goal for TCE at both sites is the federal and state Maximum Contaminant Level (MCL). The Navy believes that modifying the Site 3 ROD to incorporate the remedy for the SFTA property is an efficient and cost effective approach to address the SFTA without fundamentally altering the Site 3 remedy.

The remedy for Site 3, with modifications based on this ESD, will continue to meet the Applicable, Relevant and Appropriate Requirements (ARARs) and the Remedial Action Objectives (RAOs) identified in the Site 3 ROD, but will now also be expanded to include the SFTA property. The ESD will enhance protectiveness for the SFTA by conducting MNA until cleanup goals are achieved, establishing LUCs that are enforceable under federal and state programs, and including the SFTA in the CERCLA 5-year reviews.

## DESCRIPTION OF SIGNIFICANT DIFFERENCES

### SCOPE

This ESD documents a modification to the Site 3 ROD that significantly changes, but does not fundamentally alter, the selected remedy. The change does not alter the Site 3 remedial action except to include the additional SFTA property. The components of the Site 3 remedy and the changes to be implemented through the ESD are summarized below and in Table 1.

- MNA – Monitoring at the SFTA will be conducted to assess the effectiveness of natural attenuation over time, until the cleanup goal for TCE has been achieved. The current SAP for Site 3 will be modified to include the TCE plume at the SFTA. The scope of the MNA program (e.g., sampling frequency, analytical parameters) for Site 3 and the SFTA will be similar. The modified SAP will identify which wells at the SFTA are to be included in the overall MNA program. The MNA evaluations will include the predicted timeframes for remediation for Site 3 and the SFTA. The Site 3 cleanup goal for TCE in groundwater is 5 µg/L based on federal and state drinking water criteria. The cleanup goal for TCE at the SFTA will also be 5 µg/L to meet the same objective of restoring groundwater quality for beneficial reuse. It is expected that groundwater at the SFTA will achieve cleanup goals prior to groundwater at Site 3.
- LUCs – The existing LUC RD for Site 3 will be modified to include the SFTA property, as shown

on Figure 3. The LUCs for the SFTA will be similar to those for Site 3 and will ensure that future use of the property allows no groundwater extraction or production supply wells to be installed or permitted on the property, that there will be no unacceptable exposures from potential vapor intrusion into indoor air spaces, and that any components of the remedy are not disturbed without appropriate safety precautions.

- 5-Year Reviews – The reviews required by CERCLA for environmental remedies at NWIRP Bedford will be expanded to include the SFTA. The reviews will be conducted by the Navy, USEPA, and MassDEP. The first 5-year review for NWIRP Bedford is planned for 2014.

The monitoring and LUC components of the Site 3 remedy are affected by the addition of the SFTA, only to the extent that bedrock groundwater monitoring wells at the SFTA will be included in the Site 3 monitoring program, and the Site 3 LUC implementation actions (e.g., annual inspections and reporting) will now extend over a larger area to include the SFTA.

### REQUIREMENTS

The Site 3 remedial action, with modifications based on this ESD, will continue to meet the ARARs and RAOs identified in the ROD. Specifically,

- MNA will mitigate unacceptable risks to human health associated with the use of SFTA groundwater as a drinking water supply by reducing TCE concentrations in groundwater to cleanup goals.
- LUCs will prevent the use of SFTA groundwater for human consumption until groundwater cleanup levels have been achieved.

The Site 3 ROD also includes a RAO to prevent the migration of COCs in groundwater at concentrations greater than cleanup goals. At Site 3, this is accomplished through groundwater treatment and operation of a groundwater extraction system. At the SFTA, no remaining source of TCE is present and continued natural attenuation of the residual TCE will prevent migration of the TCE plume.

There are no new ARARs or RAOs identified for the Site 3 ROD based on this ESD.

### COSTS

Additional costs for the Site 3 monitoring program will be required in order to amend the current SAP and LUC RD to incorporate the SFTA property. These costs will be less than creating new, separate documents for the SFTA. Additional operation and maintenance costs will

be required in order to include the MNA sampling and LUC inspections at the SFTA. However, these additional costs will be comparatively small, relative to the overall Site 3 program and some overall savings are to be expected by combining monitoring programs for Site 3 and the SFTA.

## SUPPORT AGENCY COMMENTS

USEPA and MassDEP representatives have been involved in the decision-making process associated with this ESD and have indicated support for incorporating MNA and LUC actions at the SFTA with those for Site 3. The Navy has obtained concurrence from the USEPA (see page 6) and MassDEP (see Attachment A) on the modification to the Site 3 remedial action.

## AFFIRMATION OF THE STATUTORY DETERMINATIONS

The proposed changes to the selected remedy described in the September 2010 ROD for Site 3 will continue to satisfy all statutory requirements of CERCLA Section 121 and the NCP. The altered remedy remains protective of human health and the environment, complies with federal and state ARARs, and remains cost-effective.

## PUBLIC PARTICIPATION

The Navy, USEPA, and MassDEP meet periodically with the community through a Restoration Advisory Board (RAB) to provide information about the progress of environmental cleanups at NWIRP Bedford and to obtain the public's input. The public participation requirements outlined in Section 300.435(c)(2)(i) of the NCP have been met by including this ESD in the Administrative Record and by publishing a notice of availability for this ESD in a local newspaper. The Navy also issued a fact sheet describing this ESD on August 6, 2013 and held a RAB meeting on August 21, 2013 to solicit public input on the ESD (see Attachment B). The reports and documents referenced in this ESD are available for public review as part of the NWIRP Bedford Administrative Record and Public Information Repository.

## FOR MORE INFORMATION

If you have questions about this ESD, or would like further information about the environmental investigations described herein, please contact the Navy's public affairs office or one of the following site managers:

NAVFAC MID-ATLANTIC  
Attn: Public Affairs Officer, Code 09PA  
9742 Maryland Avenue  
Norfolk, VA 23511-3095  
Fax: (757) 341-1481  
[Thomas.Kreidel@navy.mil](mailto:Thomas.Kreidel@navy.mil)

Ms. Maritza Montegross  
Navy Project Manager  
Phone: (757) 341-2013

Mr. Matt Audet  
USEPA Project Manager  
5 Post Office Square, Suite 100  
Mail Code OSRR07-3  
Boston, MA 02109-3912  
Phone: (617) 918-1449  
[Audet.Matthew@epa.gov](mailto:Audet.Matthew@epa.gov)

Mr. Dave Gallagher  
MassDEP Project Manager  
1 Winter Street  
Boston MA 02108  
Phone: (617) 574-6877  
[David.C.Gallagher@state.ma.us](mailto:David.C.Gallagher@state.ma.us)



## Tables

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**Table 1**  
**Summary of Remedy Components and Changes to the Site 3 ROD**  
**Explanation of Significant Differences**  
**NWIRP Bedford, Massachusetts**  
**Page 1 of 2**

Summary of Remedy Components per the Site 3 ROD	Summary of Changes per the ESD
<p><b>In-situ enhanced bioremediation of the source area:</b> The Site 3 source area is being treated in place through the application of nutrients and other amendments into the overburden aquifer to enhance the biodegradation of contaminants. An additional treatment zone is being implemented downgradient of the source area as a polishing step. Pilot tests were conducted in 2010 and 2011 to determine some design parameters.</p>	<p>No change to this Remedy Component for Site 3.</p>
<p><b>Downgradient groundwater extraction and ex-situ treatment:</b> The downgradient portion of the Site 3 plume is being captured and controlled by a pump and treat system. The contaminated groundwater is extracted via pumping wells and treated ex-situ at a treatment plant located at NWIRP Bedford. If determined to be necessary based on long-term monitoring data trends, an additional set of extraction wells may be installed to capture the northern lobe of the Site 3 plume.</p>	<p>No change to this Remedy Component for Site 3.</p>
<p><b>Monitored Natural Attenuation (MNA) and Long-Term Monitoring (LTM):</b> LTM of CVOCs in groundwater and MNA assessments are being performed to verify that the overall Site 3 plume is attenuating at an acceptable rate.</p>	<p>The LTM/MNA program for Site 3 will be expanded to include MNA of TCE in bedrock groundwater at the SFTA.</p> <ul style="list-style-type: none"> <li>➤ The current Sampling and Analysis Plan (SAP) for Site 3 will be amended to include MNA sampling of groundwater at selected SFTA monitoring wells.</li> <li>➤ The same MNA indicator parameters assessed at Site 3 will also be evaluated at the SFTA; e.g., nitrate, nitrite, sulfate, sulfide, chloride, methane, ethene, ethane, dissolved organic carbon, and dissolved iron and manganese.</li> <li>➤ The SAP will be modified to specify monitoring of TCE and its degradation by-products, cis-1,2-dichloroethene and vinyl chloride in groundwater at selected SFTA monitoring wells. These analytes are a subset of the CVOCs already being monitored at Site 3; therefore, there is no change to the Site 3 COC list.</li> <li>➤ The cleanup goal for TCE in groundwater at the SFTA will be established at the federal and state MCL of 5 µg/L, the same as that to be achieved at Site 3. There are no changes to any Site 3 goals.</li> </ul>

**Table 1**  
**Summary of Remedy Components and Changes to the Site 3 ROD**  
**Explanation of Significant Differences**  
**NWIRP Bedford, Massachusetts**  
**Page 2 of 2**

Summary of Remedy Components per the Site 3 ROD	Summary of Changes per the ESD
<p><b>Land Use Controls (LUCs):</b> Interim LUCs have been implemented through a Land Use Control Remedial Design (LUC RD) for Site 3 to:</p> <ul style="list-style-type: none"> <li>➤ Prevent use of Site 3 groundwater as a drinking water supply until COC concentrations in groundwater achieve cleanup levels.</li> <li>➤ Prevent occupancy of current and future Site 3 structures until COC concentrations allow for industrial use of the property.</li> <li>➤ Prevent residential development of the Site 3 area until COC concentrations allow for unlimited use and unrestricted exposure.</li> <li>➤ Maintain the integrity of the current or future remedial and monitoring systems, such as extraction and treatment wells, monitoring wells, and in-situ enhanced bioremediation.</li> </ul>	<p>The Site 3 LUC RD will be amended to include the SFTA with the same types of LUCs:</p> <ul style="list-style-type: none"> <li>➤ Prevent use of SFTA groundwater as a drinking water supply until TCE concentrations in groundwater achieve the cleanup goal.</li> <li>➤ Prevent occupancy of current and future SFTA structures until it can be demonstrated that there are no unacceptable risks associated with vapor intrusion of TCE from SFTA groundwater to indoor air.</li> <li>➤ Prevent residential development of the SFTA area until it is demonstrated that soil and groundwater conditions allow for unlimited use and unrestricted exposure.</li> <li>➤ Maintain the integrity of groundwater monitoring wells at the SFTA.</li> </ul>
<p><b>Five-Year Reviews:</b> Five-year reviews will be conducted by the Navy, USEPA, and MassDEP until site conditions are restored to allow for unrestricted use and unlimited exposure.</p>	<p>The SFTA will be incorporated into the five-year reviews for NWIRP Bedford until site conditions are restored to allow for unrestricted use and unlimited exposure.</p>

## Figures

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FIGURE 1 - SITE LOCATION MAP

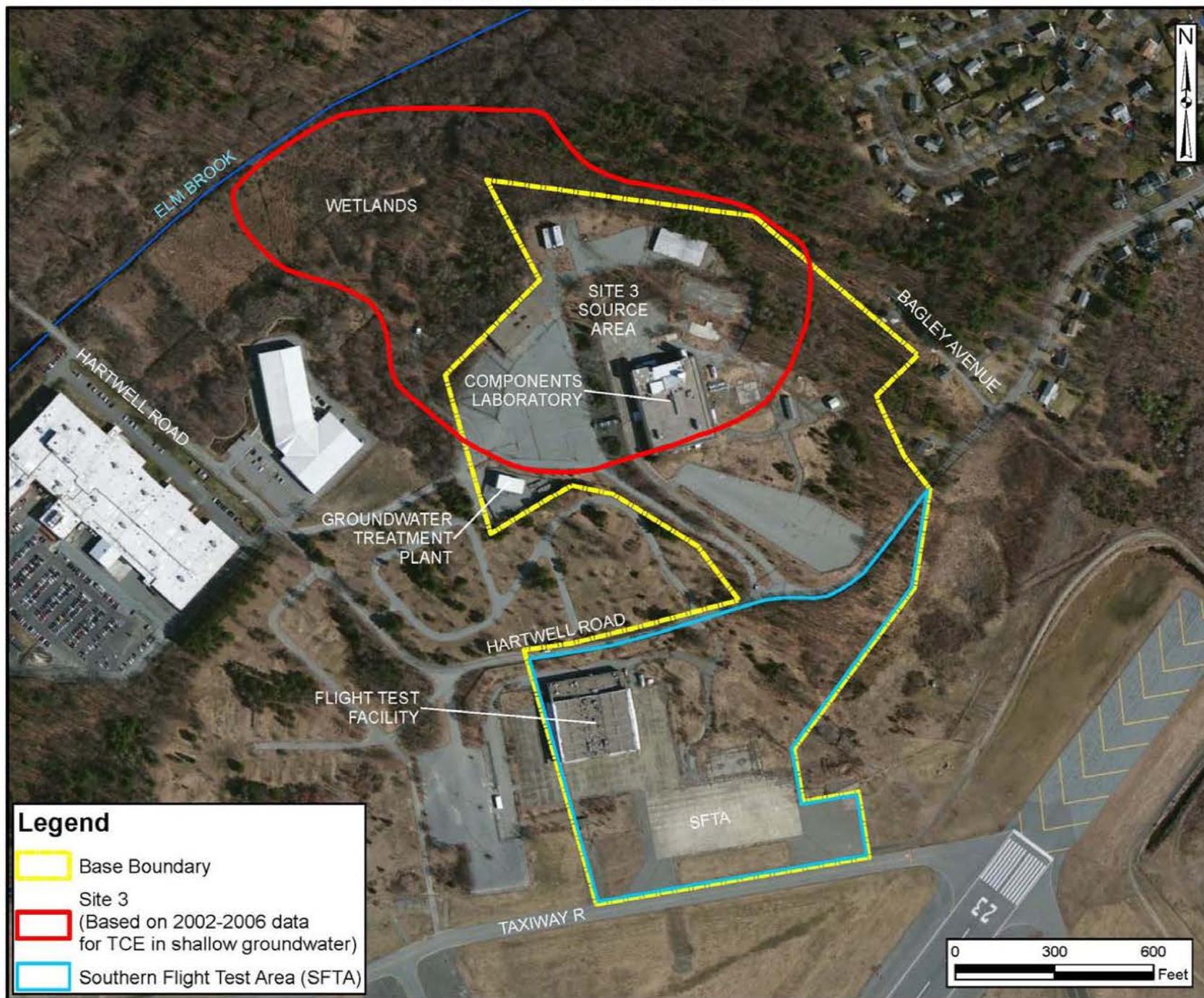
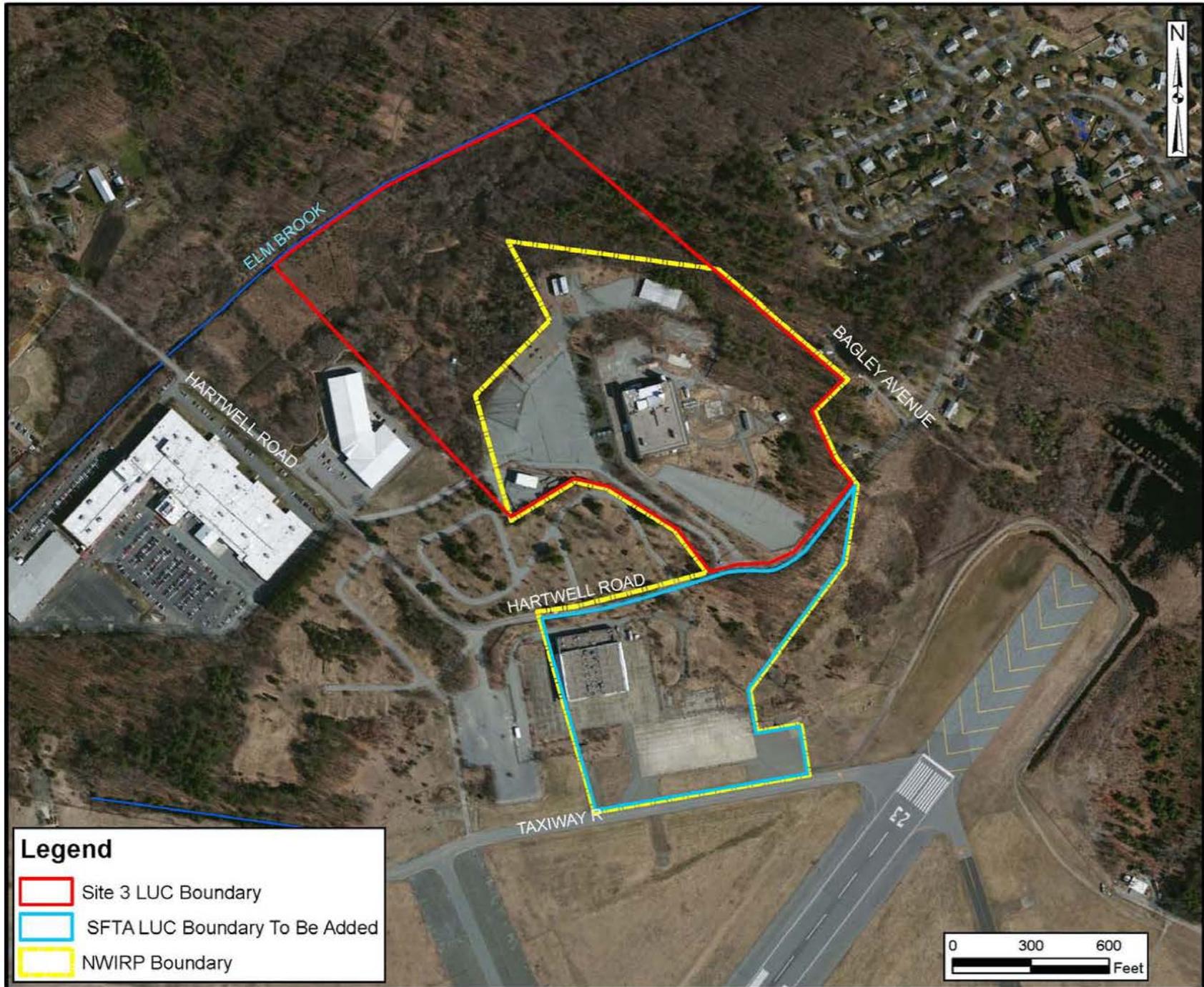


FIGURE 2 - EXTENT OF TCE IN BEDROCK GROUNDWATER AT THE SFTA



FIGURE 3 - REVISED LAND USE CONTROL EXTENT



**Attachment A**  
**MassDEP Statement**

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Commonwealth of Massachusetts  
Executive Office of Energy & Environmental Affairs

# Department of Environmental Protection

One Winter Street Boston, MA 02108 • 617-292-5500

DEVAL L. PATRICK  
Governor

RICHARD K. SULLIVAN JR.  
Secretary

KENNETH L. KIMMELL  
Commissioner

September 30, 2013

James T. Owens III, Director  
Office of Site Remediation and Restoration  
U.S. Environmental Protection Agency  
5 Post Office Square, Suite 100  
Mail Code: OSRR07-03  
Boston, MA 02114-2023

Re: Explanation of Significant Differences  
Site 3  
Naval Weapons Industrial Reserve Plant  
MassDEP RTN 3-0002611

Dear Mr. Owens:

The Massachusetts Department of Environmental Protection (MassDEP) reviewed the *Explanation of Significant Difference (ESD), Site 3, Naval Weapons Industrial Reserve Plant, Bedford* dated August 2013. The ESD changes the Site 3 Record of Decision (ROD) by adding the Southern Flight Test Area site to Site 3 as they have similar groundwater contamination and conditions. The ESD requires a groundwater monitoring/Monitored Natural Attenuation program and land use controls to be implemented for the Southern Flight Test Area. The ESD summarizes the results from the site investigation and describes the land use controls and monitoring that will be applied to the Southern Flight Area. MassDEP agrees with the changes to the Site 3 ROD proposed in the ESD for the Southern Flight Area.

If you have any questions or comments, please contact David Gallagher, Project Manager (617-574-6877), or Anne Malewicz, Federal Facilities Section Chief (617-292-5659).

Sincerely,



Benjamin Ericson  
Assistant Commissioner  
Bureau of Waste Site Cleanup

cc: M. Montegross, USN-Norfolk  
M. Audet, USEPA

**Attachment B**  
**Responsiveness Summary**

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**COMMENT SHEET**  
**Explanation of Significant Differences to the Site 3 Record of Decision**

Use this space to write your comments.

The Navy invites your written comments on the proposed change to the Site 3 (Chlorinated Solvent Groundwater Plume) remedial action at the Naval Weapons Industrial Reserve Plant (NWIRP), Bedford, Massachusetts. You can use the form below to send written comments. If you have questions about how to comment, please call the Navy Public Affairs Office at (757) 341-1410. This form is provided for your convenience.

Please mail this form or additional sheets of written comments, postmarked no later than September 5, 2013, to the address shown below:

NAVFAC MID-ATLANTIC  
Attn: Public Affairs Officer, Code 09PA  
9742 Maryland Ave.  
Norfolk, VA 23511-3095  
Fax: (757) 341-1481  
[thomas.kreidel@navy.mil](mailto:thomas.kreidel@navy.mil)

Douglas B. Theriault  
151 C Bagley Ave  
Bedford MA 01730  
tel # 781-275-8202

Has any soil gas testing been done on site 3 and was 151 C Bagley Ave included?

Is it possible there could be Vapor intrusion at 151 C Bagley Ave?

Why hasn't the trash on the North lobe hillside on site 3 been removed?

151 C Bagley Ave sits at the base <sup>along</sup> of the North lobe Hillside on site 3 <sup>where</sup> ~~and~~ <sup>in</sup> ground water is usually present in the basement.

Thank you

Douglas B. Theriault

Comment Submitted by: \_\_\_\_\_

Address: \_\_\_\_\_

**COMMENT SHEET**

**Explanation of Significant Differences to the Site 3 Record of Decision**

Use this space to write your comments.

The Navy invites your written comments on the proposed change to the Site 3 (Chlorinated Solvent Groundwater Plume) remedial action at the Naval Weapons Industrial Reserve Plant (NWIRP), Bedford, Massachusetts. You can use the form below to send written comments. If you have questions about how to comment, please call the Navy Public Affairs Office at (757) 341-1410. This form is provided for your convenience.

Please mail this form or additional sheets of written comments, postmarked no later than September 5, 2013, to the address shown below:

NAVFAC MID-ATLANTIC  
Attn: Public Affairs Officer, Code 09PA  
9742 Maryland Ave.  
Norfolk, VA 23511-3095  
Fax: (757) 341-1481  
[thomas.kreidel@navy.mil](mailto:thomas.kreidel@navy.mil)

I would like to recommend The Navy, The EPA that would continue to clean up Efforts on the Southern Flight Test Area.

I do not think the Southern Flight test Area do not pose Environmental problems at all.

I would like recommend The Navy, EPA Massport not to demolish the former Raytheon Hangar known as Southern Flight test Area.

Someday in the Near Future Hanscom AFB ~~may~~ May need the former Raytheon Hangar and the former Composites Laboratory Building to be use for possible Base Expansion only. If The Air Force may decide to Expand Hanscom AFB,

we need to Expand Hanscom AFB to Protect our jobs and our Local Economy.

Comment Submitted by: John Stella  
Address: P.O. Box 543 Bedford MA 01730

**Navy Responses to Public Comments on the August 2013 Fact Sheet  
Regarding the Explanation of Significant Differences (ESD) to the Record of Decision  
for Site 3 – Chlorinated Solvent Groundwater Plume  
Naval Weapons Industrial Reserve Plant (NWIRP) Bedford, Massachusetts**

On August 6, 2013, the Navy issued a Fact Sheet describing the planned ESD for the Site 3 Record of Decision (ROD). A public comment period was held from August 7 to September 5, 2013. Responses to the written public comments received during that time are provided below.

Response to Comments from Douglas Theriault

The Navy has been conducting a long-term groundwater monitoring program at NWIRP Bedford, Massachusetts. Groundwater monitoring wells have been installed across the Navy property, including locations along the property line adjacent to Bagley Avenue. Soil gas samples have not been collected from Bagley Avenue; however, no vapor intrusion hazards are anticipated for those residences based on the results of groundwater samples collected and analyzed. Potential vapor intrusion would be associated with the presence of volatile organic compounds (VOCs) in shallow groundwater. VOCs were not detected in the shallow groundwater monitoring well (identified as MW-26S) located at the property line nearest to 151C Bagley Avenue. Other wells along the property line in that area similarly meet regulatory standards which are based on drinking water standards. It is also noted that the groundwater contamination on Navy property primarily travels toward the west/northwest, which is away from Bagley Avenue. The Navy's groundwater monitoring reports are available for public review at the reference desk of the Bedford Free Public Library.

Soil gas testing has been conducted at Site 3 in the past, and further testing will be conducted before allowing building occupancy at the Site. The Navy will check into the status of the trash noted on the hillside.

Response to Comments from John Stella

The Navy will continue its environmental investigation and cleanup of the Southern Flight Test Area (SFTA), in order to restore the groundwater quality in accordance with federal and state regulatory standards. Based on the Navy's investigations to date, it is expected that the planned Monitored Natural Attenuation (MNA) program will be effective for restoring groundwater quality at the SFTA. With environmental remedial actions underway at NWIRP, the Navy is now working to transfer the property for beneficial reuse. At this time, the Navy has no plans to demolish the hangar or the Components Laboratory and would prefer to transfer the property with those buildings in place for the new owner(s).