

**RECORD OF DECISION**

**OPERABLE UNIT 4 – FIRE FIGHTING TRAINING AREA**

**NAVAL AIR STATION SOUTH WEYMOUTH  
WEYMOUTH, MASSACHUSETTS**

**September 2004**

SDMS DocID 000214417



**Record of Decision  
Naval Air Station South Weymouth  
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**PART 1: DECLARATION FOR THE RECORD OF DECISION**

**1.0 SITE NAME AND LOCATION**

Naval Air Station South Weymouth  
1134 Main Street  
Weymouth, Massachusetts 02190  
MA2170022022  
Operable Unit 4 – Fire Fighting Training Area (FFTA)

**2.0 STATEMENT OF BASIS AND PURPOSE**

This decision document presents the No Action decision for Operable Unit (OU) 4, the Fire Fighting Training Area (FFTA) at the Naval Air Station (NAS) South Weymouth, in Weymouth, Massachusetts, which was chosen in accordance with the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), 42 USC § 9601 *et seq.*, as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA), and is consistent with the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), 40 CFR Part 300 *et seq.*, as amended. The regulatory program performed under the context of these combined laws and regulations is commonly referred to as "Superfund."

This decision is based on the Administrative Record (AR), which has been developed in accordance with Section 113 (k) of CERCLA, and which is available for review at the U.S. Department of the Navy's (Navy) northeastern office Engineering Field Activity Northeast (EFANE), in Lester, Pennsylvania. Public information repositories are also kept at the Tufts Library in Weymouth, Massachusetts; the Abington Public Library in Abington, Massachusetts; the Hingham Public Library in Hingham, Massachusetts; the Rockland Memorial Library in Rockland, Massachusetts; and the Navy Caretaker Site Office (CSO) in Weymouth, Massachusetts. The AR Index (Appendix D) identifies each of the items comprising the AR upon which the selection of this decision is based.

The Navy has investigated the FFTA site in accordance with CERCLA and the NCP. The results of these investigations and resulting human health and ecological risk assessments support a No Action decision for the FFTA. Note, however, that residual petroleum compounds have been identified in subsurface soils at the site. Under CERCLA, sites that are exclusively petroleum-contaminated are not subject to assessment under the CERCLA process (see, e.g., CERCLA Section 101(14), which excludes petroleum from the definition of "hazardous substances"). On this basis, No Action is necessary for the FFTA under CERCLA, and EPA concurs with the Navy's conclusions concerning compliance with CERCLA. Petroleum residuals at the site will be addressed pursuant to applicable Massachusetts state law.

This No Action decision has been selected by the U.S. Environmental Protection Agency (EPA) and the Navy. The Massachusetts Department of Environmental Protection (MADEP) concurs with this decision (Appendix A).

**3.0 DESCRIPTION OF THE SELECTED DECISION**

This Record of Decision (ROD) sets forth the No Action under CERCLA decision for the FFTA at NAS South Weymouth. There are no principal or low-level threats at the FFTA. The Navy has investigated the FFTA site in accordance with CERCLA and the NCP. The results of these investigations and resulting human health and ecological risk assessments support a No Action decision for the FFTA. Note, however, that residual petroleum compounds have been identified in subsurface soils at the site. Under CERCLA, sites that are exclusively petroleum-contaminated are not subject to assessment under the CERCLA process (see, e.g., CERCLA Section 101(14), which excludes petroleum from the definition of "hazardous substance"). On this basis, No Action is necessary for the FFTA under CERCLA, and EPA concurs with the Navy's conclusions concerning compliance with CERCLA. Petroleum residuals at the site will be addressed pursuant to

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applicable Massachusetts state law.

The FFTA, OU 4, is one of several operable units currently on record at NAS South Weymouth. The FFTA has been addressed independently from the rest of NAS South Weymouth so that the Navy can proceed with closure of this site as soon as it has met the requirements of the Superfund process. The No Action decision for the FFTA is not expected to have an impact on the strategy or progress for the rest of the sites at NAS South Weymouth, nor does it preclude further investigation and/or remediation at the FFTA for non-CERCLA contamination, if indicated. Additional details on the strategy and schedule for remediation for NAS South Weymouth are in the Site Management Plan (SMP), updated in June 2003.

#### 4.0 STATUTORY DETERMINATIONS

No remedial action is necessary at the FFTA under CERCLA to ensure the protection of human health and the environment.

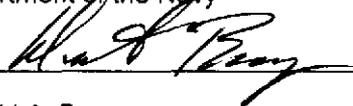
#### 5.0 AUTHORIZING SIGNATURES

This ROD documents that No Action under CERCLA is necessary to ensure the protection of human health and the environment at the FFTA, OU 4, at NAS South Weymouth. This decision was selected by the Navy and EPA, with concurrence by MADEP.

Concur and recommended for immediate implementation:

U.S. Department of the Navy

By:

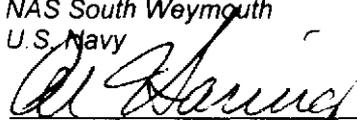


Date:

9/30/04

David A. Barney  
BRAC Environmental Coordinator  
Caretaker Site Office  
NAS South Weymouth  
U.S. Navy

By:



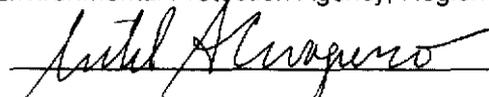
Date:

9/29/04

Al Haring  
Director, Environmental Restoration Division  
Engineering Field Activity Northeast  
Naval Facilities Engineering Command  
U.S. Navy

U.S. Environmental Protection Agency, Region I

By:



Date:

9/30/04

 Susan Studien  
Director, Office of Site Remediation and Restoration  
Region I - New England  
U.S. EPA

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**PART 2: THE DECISION SUMMARY**

**1.0 SITE NAME, LOCATION AND DESCRIPTION**

The NAS South Weymouth property is located primarily in the town of Weymouth, Massachusetts (Figure 1), and portions of NAS South Weymouth extend into the adjacent towns of Abington and Rockland, Massachusetts. The FFTA is located within the town of Rockland. The property is currently owned by the U.S. Government, and was historically operated by the U.S. Navy.

NAS South Weymouth was developed during the 1940s for dirigible aircraft used to patrol the North Atlantic during World War II. The facility was closed at the end of the war and was reopened in 1953 as a Naval Air Station for aviation training. NAS South Weymouth was in continuous use since that time until it was operationally closed on September 30, 1996, and administratively closed on September 30, 1997.

NAS South Weymouth was placed on the National Priorities List (NPL) in May 1994 by EPA pursuant to CERCLA. As such, cleanup of CERCLA sites at NAS South Weymouth proceeds under CERCLA, 42 USC § 9601 *et seq.*, as amended by SARA, and is consistent with the NCP, 40 CFR Part 300 *et seq.*, as amended. The Navy is the lead agency, and EPA provides oversight, for CERCLA activities at NAS South Weymouth. The U.S. Department of Defense (DoD) is the sole source of cleanup funding for the property. There are several operable units within NAS South Weymouth NPL site (MA2170022022) that the Navy is addressing under CERCLA. This ROD relates to the FFTA, OU 4.

The FFTA was formerly used for fire fighting training exercises. The FFTA is located in the southeastern portion of NAS South Weymouth, adjacent to the midpoint of Taxiway C (refer to Figure 2). The FFTA is a flat, open, asphalt-paved area, approximately 3.9 acres in size. The asphalt is broken in many areas, where grass has grown through the asphalt. Minor residual debris from fire fighting activities such as wood, metal, glass, and concrete pits are still present today.

A more complete description of the FFTA can be found in Section 3.0 of the Remedial Investigation (RI) Phase II Report (Tetra Tech NUS/ENSR, 2001).

**2.0 SITE HISTORY AND ENFORCEMENT ACTIVITIES**

**2.1 Site History**

The FFTA was used for an estimated 38 years, between 1950 and 1986, and then again from 1988 through 1990. The primary purpose of the FFTA during its operation was for fire fighting training exercises.

It is estimated that during training operations, the use of fuels peaked at a maximum of 500 to 1,500 gallons of fuel per month. Fuel consisted primarily of waste oil or residual jet fuel, with other surplus fuels on occasion. During the earliest training exercises, fuels were placed in old vehicles, which were then ignited and extinguished for training purposes. Subsequent exercises involved placing fuels in various containers and concrete burn pits. During a brief period from 1986 to 1988, exercises were temporarily suspended. There are no records of underground storage tanks (USTs) to store or contain fuel at the FFTA. Geophysical surveys and test pitting did not reveal the presence of any buried tanks or storage structures.

Materials used to extinguish the fires included high-pressure water and fire-suppressant foams. Four concrete burn pits, which were used for the final 2 years of training (1988 through 1990), are still present, but contain evidence of wear, including chips, breaks, and cracks.

**2.2 History of Investigations**

Previous investigations and enforcement activities at the FFTA are summarized below:

- Installation Restoration (IR) Program, 1983. In response to the growing awareness of the potential effects

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of hazardous materials on human health and the environment, the DoD developed the IR Program to investigate and cleanup potential problem areas created by past events at federal facilities. The IR Program was the catalyst for environmental investigations at NAS South Weymouth.

- Preliminary Assessment (PA), Argonne National Laboratory, 1988. The PA included a records search, interviews, and a site walkover. The purpose of the PA was to identify and evaluate past waste practices at NAS South Weymouth and make an assessment of the associated potential for environmental contamination.
- Site Inspection (SI), Baker Environmental, Inc., 1991. The SI included site walkovers, geophysical surveys, installation of groundwater monitoring wells, and the collection of soil, sediment, surface water, and groundwater samples at eight sites at the NAS South Weymouth property. The purpose of the SI was for "screening" purposes to identify sites for further study and to provide information necessary to develop a comprehensive work plan for further study. The SI identified three additional sites for further environmental investigation.
- Phase I RI Study, Brown & Root Environmental/ENSR, 1998. The Phase I RI included a literature search, geophysical survey, soil-vapor survey, immunoassay testing, ecological assessment, test pit excavation, monitoring well, well point and piezometer installation, hydraulic conductivity testing, groundwater gauging and water level measurements, stream gauging, and surface soil, subsurface soil, groundwater, hydric soil/sediment, and surface water. This information was used to refine the Conceptual Site Model (CSM) and identify areas warranting further study.
- Phase II RI, Tetra Tech NUS/ENSR, 2001. The Phase II RI was conducted to address and fill data gaps from the Phase I RI and previous investigations, and to further verify the absence of hazardous substances from the site. The Phase II included further ecological assessment, groundwater gauging, water level measurements, and surface soil sampling.
- Residual Petroleum Investigation, ENSR, April 2002. The Navy conducted an additional environmental investigation at the FFTA to further investigate the presence of residual petroleum. Test pits were excavated and soil samples were collected.

### **2.3 History of CERCLA Enforcement Activities**

In May 1994, NAS South Weymouth was listed on EPA's NPL, indicating that the NAS South Weymouth property was a priority for environmental investigation and cleanup. Environmental studies and activities at NAS South Weymouth have been conducted by the Navy in accordance with CERCLA and the NCP.

Based on the designation of the NAS South Weymouth property as an NPL site, a Federal Facility Agreement (FFA) was executed by the Navy and EPA. The FFA became effective in April 2000. This agreement establishes the Navy as the lead agency for the investigation and cleanup of designated sites within the NAS South Weymouth property, with EPA providing oversight. The MADEP is not a part of the FFA. In accordance with CERCLA and the NCP, MADEP has participated in ongoing discussions and strategy sessions, and has provided oversight and guidance through their review of IR Program documents.

In accordance with the FFA, a SMP with task schedules and deliverables is updated annually each June, and is published each October. The SMP, which serves as a management tool for planning, reviewing, and setting priorities for environmental investigative and remedial response activities to be conducted at NAS South Weymouth. The SMP is available for review at the Navy's EFANE office in Lester, Pennsylvania; at the Tufts Library in Weymouth, Massachusetts; at the Abington Public Library in Abington, Massachusetts; at the Hingham Public Library in Hingham, Massachusetts; at the Rockland Memorial Library in Rockland, Massachusetts; and at the Navy CSO, in Weymouth, Massachusetts.

### **3.0 COMMUNITY PARTICIPATION**

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Throughout the site's history, community involvement has been ongoing. The Navy has kept the community and other interested parties apprised of site activities through informational meetings, fact sheets, press releases, public meetings, and regular contact with local officials. Also, the Navy meets on a regular basis to discuss the status and progress of the IR Program with the Restoration Advisory Board (RAB), which includes representatives from the neighboring community. Representatives from the Navy, EPA Region I, MADEP, and local government have attended all public meetings and hearings. Below is a brief chronology of public outreach efforts.

- In September 1995, the Navy initiated a series of public meetings, at which the RAB process was explained and community members were asked to join the RAB. A sufficient number of volunteers were assembled and RAB meetings began in March 1996. Since that time, RAB meetings have been held on a monthly basis or as needed to keep the RAB and local community informed of IR activities. These meetings have provided updates of IR activities throughout the process.
- In July 1998, the Navy released a community relations plan that outlined a program to address community concerns and keep citizens informed about and involved in remedial activities.
- The North and South Rivers Watershed Association (NSRWA) applied for and was awarded a Technical Advisory Grant (TAG) from the EPA and MADEP. This TAG allows the NSRWA to hire a Technical Advisor to review documents, attend meetings, and prepare evaluation reports.
- The RAB for NAS South Weymouth has applied for and has been granted a Technical Assistance for Public Participation (TAPP) grant from the DoD. This grant allows the RAB to obtain technical assistance from experts in the environmental field to help them understand the environmental cleanup programs at the base.
- Several fact sheets have been prepared about the NAS South Weymouth property during the course of investigation and study at the base. These fact sheets have been provided to the public mailing list for the NAS South Weymouth NPL site, and are listed in the AR index provided in Appendix D.
- The Navy published a notice and brief analysis of the RI report and Proposed Plan in the Patriot Ledger on August 25, 2003; in the Weymouth News on August 27, 2003; in the Hingham Journal on August 28, 2003; and in the Abington/Rockland Mariner on August 29, 2003. In addition, the Navy made the plan and RI available to the public at the Tufts Library in Weymouth, Massachusetts; at the Abington Public Library in Abington, Massachusetts; at the Hingham Public Library in Hingham, Massachusetts; at the Rockland Memorial Library in Rockland, Massachusetts; and at the Navy CSO, in Weymouth, Massachusetts.
- From September 4, 2003 to October 4, 2003, the Navy offered the Proposed Plan for public comment, in accordance with the requirements of the NCP and the SMP developed for the NAS South Weymouth Superfund program.
- On September 10, 2003, the Navy held an informational meeting to present the Navy's Proposed Plan to the community. At this meeting, representatives from the Navy answered questions from the public. In addition, the Navy held a public hearing, at which oral comments on the Proposed Plan were recorded for the record. A transcript of comments received at the public hearing is included as an attachment to this ROD as Appendix E2.
- The Navy has provided responses to both oral comments received at the public hearing and written comments received during the comment period. These responses are provided in the Responsiveness Summary, which is included in Part 3 of this ROD.

In addition, the Navy is providing an index of the AR available for public review at the Navy's EFANE office in Lester, Pennsylvania (see Appendix D). Information repositories have also been established at the Tufts Library in Weymouth, Massachusetts, at the Abington Public Library in Abington, Massachusetts, at the Hingham Public Library in Hingham, Massachusetts, at the Rockland Memorial Library in Rockland,

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Massachusetts, and at the Navy CSO, in Weymouth, Massachusetts.

#### **4.0 SCOPE AND ROLE OF OPERABLE UNIT OR RESPONSE ACTION**

As outlined in the FFA for NAS South Weymouth, there are several operable units undergoing study (as necessary) at the base. OU 4 is one of the operable units (refer to Table 1) being addressed, and is the subject of this ROD. Each operable unit at NAS South Weymouth progresses through the CERCLA cleanup process independent of each other. Regarding the status of the other OUs, please refer to Table 1, Summary of Operable Units.

The Navy has investigated the FFTA site in accordance with CERCLA and the NCP. The results of these investigations and resulting human health and ecological risk assessments support a No Action decision for the FFTA. Note, however, that residual petroleum compounds have been identified in subsurface soils at the site. Under CERCLA, sites that are exclusively petroleum-contaminated are not subject to assessment under the CERCLA process (see, e.g., CERCLA Section 101(14), which excludes petroleum from the definition of "hazardous substance"). On this basis, No Action is necessary for the FFTA under CERCLA, and EPA concurs with the Navy's conclusions concerning compliance with CERCLA. Petroleum residuals at the site will be addressed pursuant to applicable Massachusetts state law.

For the selected decision described in this ROD (No Action under CERCLA), it is anticipated that site closure can be completed when the ROD signatures are obtained. The proposed No Action under CERCLA decision for the FFTA is not expected to have an impact on the strategy or progress for the rest of the sites at NAS South Weymouth, nor does it preclude the further investigation and/or remediation at the FFTA for non-CERCLA contamination, if indicated. Additional details on the strategy and schedule for the remediation of NAS South Weymouth are available in the SMP.

#### **5.0 SITE CHARACTERISTICS**

The FFTA is located in the southeastern portion of NAS South Weymouth, adjacent to the midpoint of Taxiway C (refer to Figure 2). The FFTA is an open area, approximately 3.9 acres (169,883 square feet) in size. Topographically, the FFTA is relatively flat. Its primary surface feature is a semi-circular area that is paved with asphalt. The flat portion of the semi-circle is adjacent to Taxiway C, while the curved portion of the semi-circle is adjacent to wetlands, a cranberry bog, and woodland. An unpaved road provides access to the FFTA from the east via woodland, while Taxiway C provides access to the FFTA from the west. A small stream (the eastern branch of French Stream) flows from north to south, and is culverted under the asphalt paving. It later joins the main branch of French Stream, south of the Base.

The surface asphalt is broken in many areas, where grass has grown through (refer to Figure 3). Minor residual debris from fire fighting activities such as wood, metal, glass, and concrete pits are still present today. Based upon observations during investigations completed at the site, there are multiple layers of asphalt underlying the FFTA. These layers indicate that the FFTA area was paved on numerous occasions over its 38-year history. The lowest layers of asphalt (2 to 4 feet below the surface) are the most weathered and exhibit a lack of asphalt cohesion. Only remnants of coarse aggregate and tar-like material remain from the original asphalt structure. The geology of the subsurface consists of soil and boulders within silt and gravel, which is indicative of an upper glacial till. A summary of training exercises conducted at the FFTA is presented in Part 2, Section 2.1 of this ROD.

Based on historical site use, potential contaminants associated with the FFTA included volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), pesticides, polychlorinated biphenyls (PCBs), dioxins, and inorganics (metals). Other potential contaminants include ethylene dibromide (EDB) and methyl-tertiary-butyl ether (MTBE). During the 1996 Phase I RI and/or 1999 Phase II RI sampling programs, surface soil, subsurface soil, hydric soil/sediment, groundwater and surface water samples were collected and analyzed for these parameters. In general, soil samples were collected to assess surface, shallow subsurface, and deeper subsurface soil conditions. Test pit excavations and soil boring drilling with soil sampling were performed to characterize the soil. In addition, monitoring wells were installed to assess

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groundwater conditions beneath the site. Refer to Figure 4 for sample locations. For the most part, chemicals detected at the FFTA were very close to laboratory detection limits. Chemicals detected in environmental media at concentrations above the detection limit at the FFTA were generally either consistent with background conditions or consistent with expected residual from Base activities.

At one time during the Phase I RI investigation, field personnel reported the presence of "petroleum sheen, stains, seeps, and odors" in some of the 1996 test pits. As a result, multiple samples were collected from those and other test pits, as well as the entire FFTA during both the 1996 and 1999 RI field programs. The additional sampling led to the conclusion that the reported observation of petroleum sheen, stains, seeps, and odors was most likely associated with the highly weathered subsurface asphalt and rich organic peat material present at the site. Asphalt is generally made up of a mixture of sand, gravel, and a product obtained from crude oil. According to literature reviewed from the American Petroleum Institute (API) and other sources, when petroleum-based fuels come into contact with asphalt, a reaction occurs that dissolves and breaks apart the asphalt. Because adjacent soil and groundwater samples have not shown evidence of residual fuels or other chemicals of potential concern (COPCs), the Navy concluded that the reported "petroleum" observation did not warrant further investigation or response. It was solely attributed to dissolved asphalt residuals and natural peat strata, which posed no potential human health or ecological risks.

In early 2002 during consideration of the No Action decision for the FFTA, EPA and MADEP requested that the Navy return to the FFTA again, to further investigate the presence of residual petroleum. The Navy complied, and directed ENSR to excavate four additional test pits in April 2002. The test pitting locations were selected by EPA and MADEP to coincide with areas that revealed evidence of potential petroleum staining in 1966 aerial photographs and the 1996 reported observation of petroleum impacts. Navy, EPA, and MADEP representatives were onsite to direct the test pitting and sampling activities. During the test pitting, several small, localized areas of residual petroleum were observed in the upper-most portion of two of the test pits, adjacent to the weathered subsurface asphalt. All parties agreed that the residual petroleum was not consistent throughout the test pits, but was sporadic and "spotty" in its presence. Soil immediately adjacent to these localized areas exhibited no indications of any residual petroleum or petroleum impacts. Soil samples were collected for laboratory analysis from the localized petroleum residuals, as well as areas immediately adjacent and in contact with those residuals. The analytical results indicated that the samples of residual petroleum contained petroleum-related chemicals that are common to both asphalt and petroleum-based fuel, and that the samples of immediately adjacent soil contained no petroleum-related chemicals. This information, combined with visual observations during the April 2002 test pitting, confirmed that the residual petroleum does not appear to have migrated under existing site conditions and is confined to the weathered subsurface asphalt at the site. These conclusions were consistent with data collected as part of the Phase I and II RI programs for the FFTA (Tetra Tech NUS/ENSR, 1998 and 2001), and provided the justification for the Navy to proceed with the No Action decision for the site under CERCLA. However, it does not preclude the possibility of further response actions for the petroleum residuals (i.e., non-CERCLA contamination), if necessary.

A conceptual site model (CSM) for the FFTA was presented in the RI Phase II report (Tetra Tech NUS/ENSR 2001). This CSM is shown in Figure 5. The CSM is a three dimensional picture of site conditions that illustrate potential contaminant sources, release mechanisms, exposure pathways, migration routes, and potential human and ecological receptors. The model documents current and potential future site conditions, and shows what is known about human and ecological exposure through contaminant release and migration to potential receptors. The risk assessments conducted at the FFTA were based on this CSM.

The results of the risk assessments are presented in Section 7.0, Summary of Potential Site Risks.

## **6.0 CURRENT AND POTENTIAL FUTURE SITE AND RESOURCE USES**

NAS South Weymouth was operationally closed on September 30, 1996, and administratively closed on September 30, 1997. As such, historical operations conducted at the base are no longer occurring. The base is located within a residential/light commercial area.

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The FFTA has not been used since 1990. The surface of the FFTA is paved with asphalt, which is broken in many areas, where grass has grown through. Concrete burn pits that were used for a portion of the site training exercises are still present today. The FFTA is generally an open area, directly adjacent to Taxiway C, and fans out to thriving wetlands, a cranberry bog, and woodland (refer to Figure 2).

Although land reuse plans are currently being discussed (2003), all potential reuse scenarios were assessed during the RI risk assessment and FS evaluations (refer to Section 7.0) as required under CERCLA. This included the potential for groundwater ingestion as a drinking water source. Recreational, commercial, and/or R&D uses are proposed for the west side of the FFTA, and open space use is proposed for the east site of the site.

## **7.0 SUMMARY OF POTENTIAL SITE RISKS**

Baseline human health and ecological risk assessments were conducted for the FFTA. Initial assessments were performed in 1997/1998 as part of the Phase I RI program, and expanded assessments were performed in 2000/2001 as part of the Phase II RI program (Tetra Tech NUS/ENSR, 2001). The baseline risk assessments evaluated many exposure pathways, including both current and reasonable expected future exposure scenarios for the FFTA. Specifically, the baseline risk assessments were performed to estimate the probability and magnitude of potential adverse human health and ecological effects from exposure to contaminants associated with the site if no remedial actions were taken. The assessments provide the basis for taking action, and identify the chemicals and exposure pathways that need to be addressed by the remedial action, if necessary. A summary of the human health risk assessment, followed by a summary of the ecological risk assessment is discussed below.

### **7.1 Human Health Risk Assessment**

The human health risk assessment followed a four-step process: 1) hazard identification, which identified those hazardous substances that, given the specifics of the site, were of significant concern; 2) exposure assessment, which identified actual or potential exposure pathways, characterized the potentially exposed populations and determined the extent of possible exposure; 3) toxicity assessment, which considered the types and magnitude of adverse health effects associated with exposure to hazardous substances; and 4) risk characterization and uncertainty analysis, which integrated the three earlier steps to summarize the potential risks posed by hazardous substances at the site, including potential carcinogenic and non-carcinogenic risks and a discussion of the uncertainty in the risk estimates.

Fourteen of the 84 chemicals detected at the site were selected for evaluation in the human health risk assessment as COPCs. The COPCs were selected to represent potential site hazards based on toxicity, concentration, frequency of detection, mobility and persistence in the environment and can be found in Table 6-31 in the Phase II RI report (Tetra Tech NUS/ENSR, 2001).

The COPCs are summarized in Table 2. This table contains the exposure point concentrations (EPC) used to evaluate the reasonable maximum exposure (RME) scenario in the baseline risk assessment for the COPCs. Estimates of average or central tendency case (CTC) exposure concentrations for the COPCs be found in Tables 6-26, 6-27, 6-30, 6-31, 6-34, 6-35, 6-38, 6-39, 6-42 and 6-43 in the Phase II RI report (Tetra Tech NUS/ENSR, 2001).

Potential human health effects associated with exposure to the COPCs were estimated quantitatively or qualitatively through the development of several hypothetical exposure pathways. These pathways were developed to reflect the potential for exposure to the COPCs based on present uses, potential future uses, and location of the site. The risk evaluation for both current site use (on-site worker, trespassing child, and construction worker), and hypothetical future site use (on-site resident and recreational child) assumed that potential human receptors would be exposed to COPCs at the FFTA via incidental ingestion or dermal contact from surface soil, sediment and surface water. It also assumed that the hypothetical construction worker would be exposed to surface and subsurface soil via inhalation of fugitive dusts and that the hypothetical future resident would be exposed to groundwater via ingestion and inhalation of volatiles while showering.

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Average daily doses of COPCs were estimated using conservative assumptions relative to the rates of potential contact with soil, sediment, groundwater or surface water, the frequency and duration of contact, and other parameters. Exposure assumptions are presented in Tables 6-12 through 6-17 in the Phase II RI report (Tetra Tech NUS/ENSR, 2001).

Excess lifetime cancer risks were determined for each receptor by multiplying a daily dose with the chemical-specific cancer potency factor. Cancer potency factors have been developed by EPA from epidemiological or animal studies to reflect a conservative "upper bound" of the risk posed by potentially carcinogenic compounds. The resulting risk estimates are expressed in scientific notation as a probability (e.g.,  $1 \times 10^{-6}$  for 1/1,000,000, which indicates that an average individual is not likely to have greater than a one in a million chance of developing cancer over 70 years as a result of site-related exposure to the compound at the stated concentration). All risks estimated represent an "excess lifetime cancer risk," or the additional cancer risk above the background level from other causes. EPA's generally acceptable risk range for site-related exposure is  $1 \times 10^{-4}$  to  $1 \times 10^{-6}$ . EPA protocol at the time of risk characterization considered carcinogenic risks to be additive when assessing exposure to a variety of substances. A summary of the potential carcinogenic toxicity data relevant to the COPCs is presented in Table 3. This table provides the carcinogenic risk information that is relevant to the COPCs in surface soil, sediment, groundwater, and surface water at the FFTA. At the time of risk characterization, there were no slope factors available for the dermal route of exposure. Therefore, in accordance with EPA guidance, the oral slope factors for these chemicals were used to evaluate dermal exposure. Different absorption adjustment factors were used for the oral and dermal exposure routes.

In assessing the potential for adverse effects other than cancer, a hazard quotient (HQ) is calculated by dividing the daily dose by the reference dose (RfD) or other suitable benchmark. RfDs have been developed by EPA and represent a level to which an individual may be exposed that is not expected to result in any deleterious effect. RfDs are derived from epidemiological or animal studies and incorporate uncertainty factors to help ensure that adverse health effects will not occur. A HQ less than or equal to 1 indicates that a receptor's dose of a single contaminant is less than the RfD, and that adverse non-carcinogenic effects from that chemical are unlikely. The HQs for each COPC, for which the receptor is potentially exposed to via a specific pathway, are summed to yield the Hazard Index (HI) for that pathway. A total HI is then calculated for each receptor by summing the pathway-specific HIs. A HI less than or equal to 1 indicates that adverse non-carcinogenic effects are unlikely. A summary of the potential non-carcinogenic toxicity data from chronic and subchronic exposure, relevant to the COPCs, is presented in Table 4 and 5, respectively. These tables provide the non-carcinogenic risk information that is relevant to COPCs in soil, sediment, groundwater and surface water. Similar to the carcinogenic risk data, the dermal dose-response values applied during risk characterization were the same as the oral dose-response values for these chemicals.

Table 6 depicts the human health risk summary for the COPCs in soil, sediment, groundwater, and surface water evaluated to reflect current and potential future site use corresponding to the RME scenario. Refer to Section 6.0 of the Phase II RI report (Tetra Tech NUS/ENSR, 2001) for a more comprehensive risk summary.

The IEUBK model was used to evaluate the hazard potential posed by exposure of young children less than 7 years of age to lead in surface water at the site. The outcome of the model revealed that 0.41% of an exposed population is predicted to have blood lead levels greater than 10 microgram per deciliter ( $\mu\text{g}/\text{dl}$ ). It is EPA policy to protect 95% of the sensitive population against blood lead levels in excess of 10  $\mu\text{g}/\text{dl}$ . Therefore, this percentage is less than the exceedance probability of 5% that has been used in evaluating the potential need for cleanup actions.

In summary, the results of the human health risk assessment showed that potential carcinogenic and non-carcinogenic risks under the current and future scenarios were within or below the acceptable risk benchmarks at the FFTA for all potential reuse scenarios, including residential use.

The risk assessment uses assumptions that have uncertainties associated with them. Some of the assumptions have a firm scientific basis, while others do not. Some level of uncertainty is introduced into the risk characterization process every time an assumption is made. In regulatory risk assessment, the

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methodology dictates that assumptions err on the side of overestimating potential exposure and toxicity. Such estimates may be useful for regulatory decision making, but do not provide a realistic estimate of potential health impacts. The effect of using numerous assumptions, some of which represent upper estimates of potential exposure and toxicity, is to develop risk estimates which are protective of the majority of the population including highly exposed or highly sensitive receptors.

As described in Section 5.0, Site Characteristics, in early 2002, four test pits were excavated to visually inspect whether or not petroleum product exists in those locations. While excavating the four new test pits, localized areas of petroleum-impacted soil were observed. Soil samples were collected for laboratory analysis from the observed petroleum-impacted layers and beneath the impacted zones. Sample selection was a joint Navy, EPA and MADEP decision..

Based on a request by the MADEP and EPA relative to completing the CERCLA process at the FFTA, a CERCLA risk-based evaluation was performed using EPA Region IX PRGs. Several petroleum constituents and metals were detected at levels that exceed their respective PRGs. Previous PRG-comparisons, using historic RI data collected from the FFTA, identified only arsenic and thallium as COPCs. This recent test-pitting event identified several other detectable parameters warranting PRG comparison.

Constituents that exceeded their respective PRG values include arsenic, iron, manganese, naphthalene and 2-methylnaphthalene. The highest arsenic, iron and manganese concentrations detected are within the range of what is considered background levels as indicated in previous investigations at the FFTA.

In addition, the naphthalene and 2-methylnaphthalene are petroleum-related compounds. The exceedences of PRGs for these two compounds were only detected in the petroleum-impacted samples and not in the environmental samples collected below. Therefore, the concentrations of non-petroleum related compounds are consistent with previous data for the FFTA and do not present potential risk exceedences.

EPA has concurred with the Navy's conclusions relative to the Navy's compliance with CERCLA, and in an EPA letter dated October 17, 2002, EPA offered the following parallel conclusions:

- Arsenic and manganese results from the test pits for surface soil and subsurface soil were similar to those obtained in the RI, and the addition of the 2002 test pit samples to the RI results would not be expected to alter the risk assessment results obtained from the RI.
- Supplemental risk calculations using ratios of 95% UCLs to Region 9 PRGs were performed by EPA for the organic constituents 2-methylnaphthalene and naphthalene, which were not included in the original risk assessment. The resulting HQs equaled 0.2 for 2-methylnaphthalene and 0.07 for naphthalene for a residential receptor.
- The Navy's data continues to demonstrate that there is no unacceptable risk from chemicals present at the FFTA, and that No Action is necessary under CERCLA.

## **7.2 Ecological Risk Assessment**

In addition to the human health risk assessment described above, an ecological risk assessment was also performed. The ecological risk assessment evaluated potential risks to ecological receptors that may occur in the presence of chemical stressors in environmental media. The ecological risk assessment was completed in three steps: (1) problem formulation, (2) risk analysis, and (3) risk characterization.

Problem formulation is the initial step of the ecological risk assessment and provides the basis for decisions regarding the scope and objectives of the risk assessment. Information is collected in order to develop a conceptual site model (Figure 5), in which the COPCs and exposure pathways are identified.

The analytes detected in surface soil, hydric soil/sediment, tissue and surface water at the FFTA were

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evaluated for consistency with background conditions at NAS South Weymouth, benchmark screening (for sediment and surface water) and essential nutrients. Following these evaluations, 6 inorganic constituents, 18 organic compounds and groups were selected as COPCs for surface soil; 7 organic compounds were selected as COPCs for sediment; 5 inorganic constituents and 2 organic compounds were selected as COPCs for surface water; 2,3,7,8-TCDD TEQ was selected as a COPC for earthworm tissue; and 2 inorganic constituents were selected for COPCs for small mammal tissue. The COPCs used in the ecological risk assessment are presented in Table 7. These COPCs represent the analytes that were detected at concentrations that warranted further evaluation.

The ecological receptor groups evaluated included terrestrial vertebrates (e.g., small mammals, birds), terrestrial invertebrates (e.g., earthworms), wetland invertebrates (e.g., benthic macroinvertebrates), wetland vertebrates (e.g., amphibians, small mammals, birds), and terrestrial and wetland plants (e.g., ruderal growth vegetation, hydrophytic vegetation). The ecological exposure pathways evaluated included:

- Direct contact with surface soil by terrestrial invertebrates;
- Direct contact with surface soil by terrestrial plant species;
- Incidental ingestion of sediment/hydric soil, surface water and surface soil by vertebrate wildlife;
- Direct contact with surface water and hydric soil/sediment by wetland vertebrates (i.e., amphibians); and
- Vertebrate wildlife ingestion of prey items that have bioaccumulated COPCs from surface water, soils, and sediment/hydric soils.

The exposure pathways used in the ecological risk assessment are presented in Table 8.

The risk analysis phase of the ecological risk assessment is based on the conceptual site model developed in the problem formulation phase. Risk analysis includes the characterization of potential ecological exposure and corresponding effects. The ecological exposure assessment involves the identification of potential exposure pathways and an evaluation of the magnitude of exposure identified ecological receptors. The ecological effects assessment describes the potential for adverse effects associated with the identified COPCs to ecological receptors and reflects the type of assessment endpoints selected. Table 8 presents a summary of these endpoints. The methods and procedures used to identify and characterize ecological exposure and effects are described in detail in Section 7.2 of the Phase II RI (Tetra Tech NUS/ENSR, 2001).

The ecological risk characterization phase of the ecological risk assessment integrates the results of the exposure and effects phases of work, and presents an integrated approach that uses field data, laboratory data, and theoretical methods to provide estimates of actual or potential risks to ecological receptors. The results of the ecological risk assessment suggested that ecological risks are not anticipated from exposure to COPCs in surface soil, sediment, or surface water at the FFTA. Exposure point concentrations of cadmium, chromium, copper and silver in soil, and 4,4'-DDD, 4,4'-DDE, 4,4'-DDT, total PAH, acetone and carbon disulfide in sediment/hydric soil exceeded chronic benchmarks. No acute benchmarks were exceeded. However, in light of the lack of toxicity in the toxicity testing program, there is considerable uncertainty associated with the use of these benchmarks. In addition, concentrations of several COPCs (dissolved phase inorganic aluminum, barium, lead, manganese, and vanadium; and probable laboratory contaminants bis 2-ethylhexylphthalate and carbon disulfide) in surface water in the palustrine wetland east of the FFTA exceeded screening values. As a result, a theoretical potential risk could be inferred for sensitive receptors from exposure to surface water at the FFTA. However, the presence of water in this wetland system is ephemeral, and it is possible that the metals are colloidal bound to dissolved organic carbon (DOC), and DOC-metal complexes are generally not bioavailable. Therefore, the ecological risk assessment concluded that potential exposures to chemical stressors in the wetland environments at the FFTA are not likely to result in significant potential risk (refer to Table 8).

The ecological risk assessment integrated a variety of methodologies to assess potential ecological risks. The conclusions regarding overall risk to ecological receptors were based on a weight-of-evidence approach, incorporating the results of all components of the assessment methodology (i.e., an approach that integrated results of physical, biological, toxicological, and field measurement endpoints to draw risk-based conclusions).

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The weight-of-evidence components were designed to provide measures of potential risks for different ecological receptors and exposure pathways, and provided relative measures of exposure and effects in the site and at background (reference) locations.

Similar to the human health risk assessment, the ecological risk assessment uses assumptions that have uncertainties associated with them, which influence the results and conclusions of the risk assessment. Some of the assumptions may underestimate potential risk, some have an unknown effect on potential risk, while some assumptions tend to overestimate potential risk. Uncertainties in the ecological risk assessment process for the FFTA are summarized in Table 7-33 of the Phase II RI (Tetra Tech NUS/ENSR, 2001).

### **7.3 Basis for Response Decision**

In summary, the risk assessments performed did not identify potential human health or ecological risks in excess of regulatory thresholds associated with the FFTA.

## **8.0 DOCUMENTATION OF NO SIGNIFICANT CHANGES**

The Navy presented a Proposed Plan recommending No Action under CERCLA at NAS South Weymouth on September 10, 2003. The Navy reviewed all written and verbal comments submitted during the public comment period. It was determined that no significant changes to the decision, as originally identified in the Proposed Plan, were necessary. Therefore, No Action under CERCLA will be implemented at the FFTA.

The Navy has investigated the FFTA site in accordance with CERCLA and the NCP. The results of these investigations and resulting human health and ecological risk assessments support a No Action decision for the FFTA. Note, however, that residual petroleum compounds have been identified in subsurface soils at the site. Under CERCLA, sites that are exclusively petroleum-contaminated are not subject to assessment under the CERCLA process (see, e.g., CERCLA Section 101(14), which excludes petroleum from the definition of "hazardous substance"). On this basis, No Action is necessary for the FFTA under CERCLA, and EPA concurs with the Navy's conclusions concerning compliance with CERCLA. Petroleum residuals at the site will be addressed pursuant to applicable Massachusetts state law.

## **9.0 STATE ROLE**

The MADEP submitted comments on the Proposed Plan during the public comment period, indicating that the state does not support the No Action decision for the FFTA based upon the petroleum contamination observed at the site and several inaccurate statements presented in the Proposed Plan. The Navy has responded to MADEP's comments in the Responsiveness Summary located in Part 3 of this ROD. MADEP concurs with the Navy's and EPA's No Action decision for OU-4 at NAS South Weymouth (see Appendix A).

The Navy has investigated the FFTA site in accordance with CERCLA and the NCP. The results of these investigations and resulting human health and ecological risk assessments support a No Action decision for the FFTA. Note, however, that residual petroleum compounds have been identified in subsurface soils at the site. Under CERCLA, sites that are exclusively petroleum-related are not subject to assessment under the CERCLA process (see, e.g., CERCLA Section 101(14), which excludes petroleum from the definition of "hazardous substance"). On this basis, No Action is necessary for the FFTA under CERCLA, and EPA concurs with the Navy's conclusions relative to the Navy's compliance with CERCLA. Petroleum residuals at the site will be addressed pursuant to applicable Massachusetts state law.

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**Table 1  
Summary of Operable Units**

Site	IR Program Site Designation	Operable Unit Designation	Site Abbreviation	Site Description	Regulatory Status (as of November 2003)
West Gate Landfill	1	1	WGL	Disposal area used for a variety of C&D debris, municipal, and other waste materials.	PA, SI, Phase I and II RI, FS completed.
Rubble Disposal Area (Upland)	2	2	RDA	Disposal area used for primarily building demolition debris.	PA, SI, RI, and FS completed. PRAP issued in February 2003 and ROD signed in December 2003 selecting excavation and offsite disposal of PCB-impacted material, construction of a soil cap for the landfill material, long-term monitoring, and institutional controls.
Rubble Disposal Area (Wetland)	2	9	RDA	Steep sloping area adjacent to RDA.	Combined with OU 2. No separate actions being performed.
Small Landfill	3	3	SL	Disposal area used primarily for concrete, metal, and wood.	PA, SI, RI completed. No FS necessary. PRAP issued recommending No Action with Groundwater Monitoring. ROD signed in March 2002, selecting No Action with Groundwater Monitoring.
Fire Fighting Training Area	4	4	FFTA	Area designated for dispensing fuels for igniting and extinguishing fires.	PA, SI, Phase I and II RI completed. Additional follow-up site investigation completed. PRAP issued recommending No Action under CERCLA.
Tile Leach Field	5	5	TLF	Sand bed used to receive and distribute treated industrial wastewater.	PA, SI, RI completed.
Fuel Farm	6	NA (MCP)	NA (MCP)	Tank farm and fuel dispensing area	Site transferred into the MCP program based on exhibiting only fuel-related issues.
Sewage Treatment Plant	7	7	STP	Wastewater treatment plant used primarily for domestic wastewater.	PA, SI, RI completed. FS and PRAP are being considered.
Abandoned Bladder Tank Fuel Storage Area	8	8	ABTFS	Area in which temporary above-ground tanks were used for quick aircraft refueling.	PA, SI, RI completed. PRAP issued recommending No Action. ROD signed in March 2003, selecting No Action.
Building 81	9	10	Building 81	Building was formerly used for motor pool (i.e., vehicle maintenance). Only the footprint of Building 81 currently remains onsite.	RI work plan being finalized.
Building 82	10	11	Building 82	Building formerly used for aircraft maintenance and storage.	RI work plan being finalized.
<b>Notes:</b>				PA = Preliminary Assessment	
NA (MCP) = Site transferred to the state Massachusetts Contingency Plan (MCP) program.				SI = Site Inspection	
IR = Installation Restoration (U.S. Department of Defense [DoD] Superfund compliance program)				RI = Remedial Investigation (Phase I and II)	
OU = Operable Unit				FS = Feasibility Study	
				PRAP = Proposed Remedial Action Plan	
				C&D = Construction and demolition debris	

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Table 2 Summary of Chemicals of Potential Concern Used in Human Health Risk Assessment							
Exposure Point	Chemical of Potential Concern	Maximum Concentration Detected	Units	Frequency of Detection	Exposure Point Concentration	Units	Statistical Measure
Surface Soil	Antimony	7.7E+00	mg/kg	3/6	7.7E+00	mg/kg	Max
	Benzo(a)pyrene	2.6E-01	mg/kg	4/6	2.6E-01	mg/kg	Max
	Total 2,3,7,8-TCDD TEQ	4.1E-05	mg/kg	5/6	4.1E-05	mg/kg	Max
Subsurface Soil	Arsenic	2.3E+00	mg/kg	23/23	1.3E+00	mg/kg	95% UCL
	Thallium	1.0E+00	mg/kg	1/23	4.8E-01	mg/kg	95% UCL
Hydric Soil/ Sediment	Benzo(a)anthracene	3.1E+00	mg/kg	6/9	3.1E+00	mg/kg	Max
	Benzo(a)pyrene	2.6E+00	mg/kg	6/9	2.6E+00	mg/kg	Max
	Benzo(b)fluoranthene	1.2E+00	mg/kg	7/9	1.2E+00	mg/kg	Max
	Indeno(1,2,3-CD)pyrene	9.4E-01	mg/kg	4/9	9.4E-01	mg/kg	Max
Groundwater	Acetone	1.2E-01	mg/L	2/3	1.2E-01	mg/L	Max
	Bis(2-Ethylhexyl)phthalate	4.9E-02	mg/L	2/8	4.9E-02	mg/L	Max
	Chromium VI	2.0E-02	mg/L	4/17	2.0E-02	mg/L	Max
Surface Water	Aluminum	7.5E+00	mg/L	8/8	6.5E+00	mg/L	95% UCL
	Bis(2-Ethylhexyl)phthalate	6.0E-03	mg/L	2/7	5.8E-03	mg/L	95% UCL
	Lead*	8.8E-02	mg/L	4/8	-	mg/L	-
	Thallium	6.8E-03	mg/L	1/8	3.9E-03	mg/L	95% UCL
	Vanadium	1.2E-01	mg/L	3/8	1.2E-01	mg/L	Max

Notes:  
mg/kg – milligram per kilogram (ppm)  
95% UCL – 95% Upper Confidence Limit  
Max – Maximum Concentration  
TCDD – Tetra chlorodibenzo-p-dioxin  
TEQ – Toxicity equivalency quotient  
\* Lead was assessed using the IEUBK model.

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Table 3 Potential Carcinogenic Toxicity Data Summary from Human Health Risk Assessment					
Chemical of Potential Concern	Oral CSF (mg/kg)/day*	Oral CSF Reference (Last Verified)	Inhalation CSF (mg/kg)/day <sup>1</sup>	Inhalation CSF Reference (Last Verified)	Weight of Evidence/ Cancer Guideline Description
Acetone	NA	NA	NA	NA	NA
Aluminum	NA	NA	NA	NA	NA
Antimony	NA	NA	NA	NA	NA
Arsenic	1.5E+00	IRIS (6/00)	1.5E+01	IRIS (6/00) (b)	A
Benzo(a)anthracene	7.3E-01	(a)	3.1E-01	(a)	B2
Benzo(a)pyrene	7.3E+00	IRIS (6/00)	3.1E+00	RBC (4/13/00)	B2
Benzo(b)fluoranthene	7.3E-01	(a)	3.1E-01	(a)	B2
Bis(2-Ethylhexyl)phthalate	1.4E-02	IRIS (6/00)	1.4E-02	NCEA (96)	B2
Chromium VI	NA	NA	4.1E+01	HEAST (97)	A
Indeno(1,2,3-CD)pyrene	7.3E-01	(a)	3.1E-01	(a)	B2
Thallium	NA	NA	NA	NA	NA
Total 2,3,7,8-TCDD TEQ	1.5E+05	HEAST (97)	1.5E+05	HEAST (97)	B2
Vanadium	NA	NA	NA	NA	NA

Notes:  
 CSF: Cancer Slope Factor  
 (mg/kg)/day: milligram per kilogram per day  
 TCDD – Tetra chlorodibenzo-p-dioxin  
 TEQ – Toxicity equivalency quotient  
 NA: Not Available  
 IRIS: Integrated Risk Information System, an online computer database of toxicological information (EPA, 2000)  
 HEAST: Health Effects Assessment Summary Tables, published annually by the EPA (1997)  
 NCEA: National Center for Environmental Assessment  
 RBC: NCEA as cited in the EPA Region III Risk-Based Concentration Table, 4/13/00  
 (a): CSF for Benzo(a)pyrene multiplied by appropriate toxicity equivalence factor  
 (b): Converted from unit risk of 1/ug/m<sup>3</sup> to an inhalation CSF of 1/mg/kg-day  
 A: Human carcinogen  
 B2: Probable human carcinogen – Indicates sufficient evidence in animals or no evidence in humans  
 \* In accordance with EPA guidance, dermal slope factors were based on the oral slope factors for these chemicals. Different absorption adjustment factors were used for the oral and dermal exposure routes.

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Table 4 Potential Non-Carcinogenic Toxicity Data Summary from Human Health Risk Assessment (Chronic Exposure)				
Chemical of Potential Concern	RfD (mg/kg-day)	Target Organ/ Critical Effect at LOAEL	EPA Confidence Level	Reference (Last Verified)
<b>Pathway: Ingestion and Dermal Contact</b>				
Acetone	1.0E-01	Increased liver/kidney weights, nephrotoxicity	Low	IRIS (6/00)
Aluminum	1.0E+00	Neurotoxicity in off-spring	Low	NCEA (6/20/94)
Antimony	4.0E-04	Longevity, blood glucose, and cholesterol	Low	IRIS (6/00)
Arsenic	3.0E-04	Hyperpigmentation, keratosis & poss vascular complications	Medium	IRIS (6/00)
Benzo(a)anthracene	3.0E-02	Kidney effects	Low	IRIS (6/00) (a)
Benzo(a)pyrene	3.0E-02	Kidney effects	Low	IRIS (6/00) (a)
Benzo(b)fluoranthene	3.0E-02	Kidney effects	Low	IRIS (6/00) (a)
Bis(2-Ethylhexyl)phthalate	2.0E-02	Increased relative liver weights	Medium	IRIS (6/00)
Chromium VI	3.0E-03	No adverse affects	Low	IRIS (6/00) (b)
Indeno(1,2,3-CD)pyrene	3.0E-02	Kidney effects	Low	IRIS (6/00) (a)
Thallium	8.0E-05	No adverse affects	Low	IRIS (6/00) (c)
Total 2,3,7,8-TCDD TEQ	NA	NA	NA	NA
Vanadium	7.0E-03	No effects reported	NA	HEAST (97)
<b>Pathway: Inhalation</b>				
Acetone	NA	NA	NA	NA
Aluminum	1.0E-03	Psychomotor and cognitive impairments	NA	NCEA (6/20/97)
Antimony	NA	NA	NA	NA
Arsenic	NA	NA	NA	NA
Benzo(a)anthracene	NA	NA	NA	NA
Benzo(a) pyrene	NA	NA	NA	NA
Benzo(b)fluoranthene	NA	NA	NA	NA
Bis(2-Ethylhexyl)phthalate	NA	NA	NA	NA
Chromium VI	3.0E-05	Lactate dehydrogenase in bronchioalveolar lavage fluid	Low	IRIS (6/20) (d)
Indeno(1,2,3-CD)pyrene	NA	NA	NA	NA
Thallium	NA	NA	NA	NA
Total 2,3,7,8-TCDD TEQ	NA	NA	NA	NA
Vanadium	NA	NA	NA	NA
<b>Notes:</b> RfD: Reference Dose LOAEL: Lowest observed adverse effects level EPA: Environmental Protection Agency IRIS: Integrated Risk Information System, an online computer database of toxicological information (EPA, 2000) HEAST: Health Effects Assessment Summary Tables, published annually by the EPA (1997) NCEA: National Center for Environmental Assessment TCDD – Tetra chlorodibenzo-p-dioxin TEQ – Toxicity equivalency quotient NA: Not available (a): Dose response value for pyrene, based on structural similarity (b): RfD for chromium VI (c): RfD for thallium carbonate (d): Converted from RfC (RfC*20 cubic meter/70 kilogram = inhalation RfD)				

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Table 5 Potential Non-Carcinogenic Toxicity Data Summary from Human Health Risk Assessment (Subchronic exposure)				
Chemical of Potential Concern	RfD (mg/kg-day)	Target Organ/ Critical Effect at LOAEL	EPA Confidence Level	Reference (Last Verified)
<b>Pathway: Ingestion</b>				
Acetone	1.0E-01	Increased liver/kidney weights, nephrotoxicity	Low	IRIS (6/00)
Aluminum	1.0E+00	Neurotoxicity in off-spring	Low	NCEA (6/20/94)
Antimony	4.0E-04	Longevity, blood glucose, and cholesterol	NA	HEAST (97) (a)
Arsenic	3.0E-04	Hyperpigmentation, keratosis & poss vascular complications	NA	HEAST (97) (a)
Benzo(a)anthracene	3.0E-02	Kidney effects	Low	IRIS (6/00) (b)
Benzo(a)pyrene	3.0E-02	Kidney effects	Low	IRIS (6/00) (b)
Benzo(b)fluoranthene	3.0E-02	Kidney effects	Low	IRIS (6/00) (b)
Bis(2-Ethylhexyl)phthalate	2.0E-02	Increased relative liver weights	Medium	IRIS (6/00)
Chromium VI	2.0E-02	No adverse affects	NA	HEAST (97) (a)
Indeno(1,2,3-CD)pyrene	3.0E-02	Kidney effects	Low	IRIS (6/00) (b)
Thallium	8.0E-04	Altered liver function, increased serum lactate dehydrogenase, alopecia	NA	HEAST (97) (a,c)
Total 2,3,7,8-TCDD TEQ	NA	NA	NA	NA
Vanadium	7.0E-03	No effects reported	NA	HEAST (97) (a)
<b>Pathway: Inhalation</b>				
Acetone	NA	NA	NA	NA
Aluminum	1.0E-03	Neurotoxicity	NA	NCEA (7/30/93)
Antimony	NA	NA	NA	NA
Arsenic	NA	NA	NA	NA
Benzo(a)anthracene	NA	NA	NA	NA
Benzo(a) pyrene	NA	NA	NA	NA
Benzo(b)fluoranthene	NA	NA	NA	NA
Bis(2-Ethylhexyl)phthalate	NA	NA	NA	NA
Chromium VI	3.0E-05	Lactate dehydrogenase in bronchioalveolar lavage fluid	Low	IRIS (6/20) (d)
Indeno(1,2,3-CD)pyrene	NA	NA	NA	NA
Thallium	NA	NA	NA	NA
Total 2,3,7,8-TCDD TEQ	NA	NA	NA	NA
Vanadium	NA	NA	NA	NA
<b>Notes:</b> RfD: Reference Dose LOAEL: Lowest observed adverse effects level EPA: Environmental Protection Agency IRIS: Integrated Risk Information System, an online computer database of toxicological information (EPA, 2000) HEAST: Health Effects Assessment Summary Tables, published annually by the EPA (1997) NCEA: National Center for Environmental Assessment TCDD – Tetra chlorodibenzo-p-dioxin TEQ – Toxicity equivalency quotient NA: Not available (a): Subchronic RfD. (b): Dose response value for pyrene, based on structural similarity (c): RfD for thallium carbonate (d): Converted from RfC (RfC*20 cubic meter/70 kilogram = inhalation RfD) *In accordance with EPA guidance, dermal slope factors were based on the oral slope factors. Different absorption adjustment factors were used for the oral and dermal exposure routes.				

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Table 6 Summary of Human Health Risk Assessment			
Scenario Evaluated	Media	Total Carcinogenic Risk (statistical chance)	Total Non-Carcinogenic Risk (hazard index)
<b>On-site Worker</b>			
Ingestion/Dermal Contact	Surface Soil	6.8E-07	0.01
	Hydric Soil/Sediment	7.2E-08	0.000008
	Surface Water	1.1E-09	0.00042
<b>On-site Worker Total</b>		<b>7.5E-07</b>	<b>0.01</b>
<b>Trespassing Child</b>			
Ingestion/Dermal Contact	Surface Soil	4.1E-07	0.007
	Hydric Soil/Sediment	6.0E-07	0.0002
	Surface Water	1.1E-08	0.009
<b>Trespassing Child Total</b>		<b>1.0E-06</b>	<b>0.015</b>
<b>Construction Worker</b>			
Inhalation	Surface Soil	3.6E-10	Not Calculated
Inhalation	Subsurface Soil	1.6E-09	Not Calculated
Ingestion/Dermal Contact	Surface Soil	4.5E-08	0.011
	Subsurface Soil	1.3E-08	0.002
<b>Construction Worker Total</b>		<b>6.0E-08</b>	<b>0.01</b>
<b>Future Resident</b>			
Ingestion/Dermal Contact	Surface Soil	3.3E-06	0.1
	Hydric Soil/Sediment	1.5E-06	0.0006
	Surface Water	2.1E-08	0.032
Ingestion	Groundwater	1.0E-05	0.7
<b>Future Resident Total</b>		<b>1.5E-05</b>	<b>0.8</b>
<b>Future Recreational Child</b>			
Ingestion/Dermal Contact	Surface Soil	2.0E-06	0.1
	Hydric Soil/Sediment	1.3E-06	0.0006
	Surface Water	1.9E-08	0.032
<b>Future Recreational Child Total</b>		<b>3.3E-06</b>	<b>0.1</b>

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**Table 7**  
**Summary of Chemicals of Potential Concern Used in Ecological Risk Assessment**

Exposure Medium	Chemical of Concern	Frequency of Detection	Minimum Concentration	Maximum Concentration	Units	Maximum Exposure Point Concentration	Units	Statistical Measure	
Surface Soil	<b>Inorganics</b>								
	Antimony	3/6/6	8.00E-01	7.70E+00	mg/kg	7.70E+00	mg/kg	Max	
	Beryllium	5/6/6	3.00E-01	5.70E-01	mg/kg	5.20E-01	mg/kg	95% UCL	
	Cadmium	4/6/6	4.20E-01	4.80E+00	mg/kg	4.80E+00	mg/kg	Max	
	Chromium	6/6/6	2.30E+00	2.11E+01	mg/kg	2.11E+01	mg/kg	Max	
	Copper	6/6/6	3.40E+00	8.49E+01	mg/kg	6.40E+01	mg/kg	95% UCL	
	Silver	1/6/6	1.54E+01	1.54E+01	mg/kg	1.54E+01	mg/kg	Max	
	<b>Pesticides/PCBs</b>								
	4,4'-DDD	2/6/6	3.60E+00	3.90E+00	µg/kg	3.70E+00	µg/kg	95% UCL	
	4,4'-DDE	1/6/6	3.70E+00	3.70E+00	µg/kg	2.90E+00	µg/kg	95% UCL	
	4,4'-DDT	1/6/6	4.30E+00	4.30E+00	µg/kg	3.30E+00	µg/kg	95% UCL	
	Dieldrin	1/6/6	3.20E+00	3.20E+00	µg/kg	2.60E+00	µg/kg	95% UCL	
	Endosulfan I	1/1/6	9.00E-01	9.00E-01	µg/kg	9.00E-01	µg/kg	Max	
	Endosulfan Sulfate	2/6/6	2.00E+00	2.50E+00	µg/kg	2.20E+00	µg/kg	95% UCL	
	Endrin	3/6/6	3.00E+00	7.10E+00	µg/kg	6.40E+00	µg/kg	95% UCL	
	Endrin Ketone	1/6/6	3.20E+00	3.20E+00	µg/kg	2.60E+00	µg/kg	95% UCL	
	Heptachlor Epoxide	2/6/6	9.00E-01	1.90E+00	µg/kg	1.50E+00	µg/kg	95% UCL	
	Methoxychlor	1/6/6	1.25E+01	1.25E+01	µg/kg	1.13E+01	µg/kg	95% UCL	
	<b>Semivolatile Organic Compounds</b>								
	Bis(2-Ethylhexyl)phthalate	3/6/6	9.20E+01	1.26E+03	µg/kg	9.75E+02	µg/kg	95% UCL	
	Butylbenzylphthalate	1/4/6	3.60E+02	3.60E+02	µg/kg	3.60E+02	µg/kg	Max	
	Diethylphthalate	1/2/6	9.30E+01	9.30E+01	µg/kg	9.30E+01	µg/kg	Max	
	Total PAH	5/6/6	9.84E+02	3.57E+03	µg/kg	3.36E+03	µg/kg	95% UCL	
	<b>Volatile Organic Compounds</b>								
	2-Butanone (MEK)	2/6/6	4.50E+00	1.20E+01	µg/kg	9.70E+00	µg/kg	95% UCL	
	Acetone	1/6/6	6.10E+01	6.10E+01	µg/kg	6.10E+01	µg/kg	Max	
	Toluene	3/5/6	2.00E+00	5.00E+00	µg/kg	4.60E+00	µg/kg	95% UCL	
	<b>Dioxins</b>								
	Total 2,3,7,8-TCDD TEQ (Bird)	5/6/6	3.00E+00	2.40E+01	pg/g	2.40E+01	pg/g	Max	
	Total 2,3,7,8-TCDD TEQ (Mammal)	5/6/6	4.00E+00	3.10E+01	pg/g	3.10E+01	pg/g	Max	
	Hydric Soil/Sediment	<b>Pesticides/PCBs</b>							
		4,4'-DDD	1/5/5	8.80E+00	8.80E+00	µg/kg	8.80E+00	µg/kg	Max
4,4'-DDE		3/5/5	2.00E+00	1.00E+01	µg/kg	1.00E+01	µg/kg	Max	
4,4'-DDT		4/6/6	2.20E+00	1.65E+01	µg/kg	1.65E+01	µg/kg	Max	
<b>Semivolatile Organic Compounds</b>									
Carbazole		3/8/9	4.60E+01	6.80E+02	µg/kg	6.80E+02	µg/kg	Max	
Total PAH		7/9/9	7.28E+02	2.40E+04	µg/kg	2.40E+04	µg/kg	Max	
<b>Volatile Organic Compounds</b>									
Acetone		4/8/8	3.80E+01	3.20E+02	µg/kg	3.20E+02	µg/kg	Max	
Carbon Disulfide		1/7/8	4.50E+00	4.50E+00	µg/kg	4.50E+00	µg/kg	Max	
Surface Water	<b>Inorganics</b>								
	Aluminum	8/8/8	1.60E+02	7.53E+03	µg/L	6.49E+03	µg/L	95% UCL	
	Lead	4/8/8	1.00E+00	8.80E+01	µg/L	8.80E+01	µg/L	Max	
	Zinc	6/8/8	1.10E+01	3.90E+01	µg/L	3.50E+01	µg/L	95% UCL	
	<b>Inorganics (Dissolved)</b>								
	Aluminum	2/2/2	4.09E+02	1.91E+03	µg/L	1.91E+03	µg/L	Max	
	Barium	1/2/2	2.30E+01	2.30E+01	µg/L	2.30E+01	µg/L	Max	
	Lead	2/2/2	5.70E-01	3.08E+00	µg/L	3.08E+00	µg/L	Max	
	Manganese	2/2/2	1.65E+02	3.49E+02	µg/L	3.49E+02	µg/L	Max	
	Vanadium	1/2/2	4.20E+01	4.20E+01	µg/L	4.20E+01	µg/L	Max	
	<b>Semivolatile Organic Compounds</b>								
	Bis(2-Ethylhexyl)phthalate	2/7/7	5.00E+00	6.00E+00	µg/L	6.00E+00	µg/L	Max	
	<b>Volatile Organic Compounds</b>								
	Carbon Disulfide	2/2/6	2.00E+00	3.00E+00	µg/L	3.00E+00	µg/L	Max	

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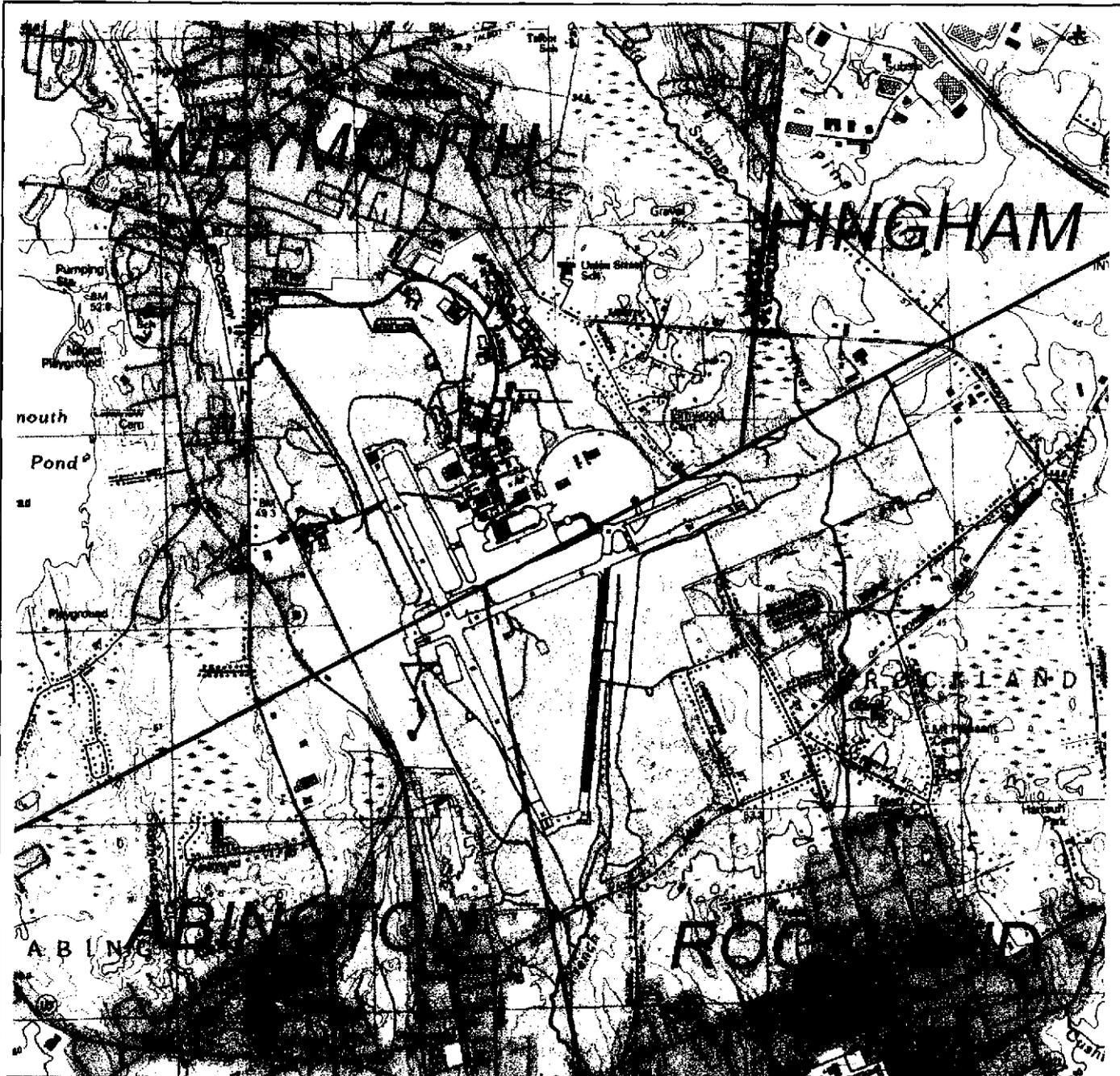
Table 7 (continued)								
Summary of Chemicals of Potential Concern Used in Ecological Risk Assessment								
Exposure Medium	Chemical of Concern	Frequency of Detection	Minimum Concentration	Maximum Concentration	Units	Maximum Exposure Point Concentration	Units	Statistical Measure
Earthworm Tissue	<i>Dioxins</i>							
	Total 2,3,7,8-TCDD TEQ (Mammal)	1/1	1.99E+00	1.99E+00	pg/g	1.99E+00	pg/g	Max
	Total 2,3,7,8-TCDD TEQ (Bird)	1/1	1.88E+00	1.88E+00	pg/g	1.88E+00	pg/g	Max
Small Mammal Tissue	<i>Inorganics (Dissolved)</i>							
	Cadmium	2/2	5.00E-01	8.20E-01	mg/kg	8.20E-01	mg/kg	Max
	Copper	2/2	2.30E+00	3.40E+00	mg/kg	3.40E+00	mg/kg	Max
Notes: mg/kg - milligram per kilogram (ppm) µg/kg - microgram per kilogram (ppb) pg/g - picogram per gram 95% UCL - 95% Upper Confidence Limit Max - Maximum Concentration PCB - Polychlorinated Biphenyl MEK - Methyl Ethyl Ketone TCDD - Tetra Chlorodibenzo-p-dioxin TEQ - Toxicity Equivalency Quotient Frequency of Detection displayed as: number of detected values / number of samples used to calculate statistics/ total number of samples collected not including duplicates or as number of detected values/ number of samples used to calculate statistics								

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**Table 8  
Summary of Potential Exposure Pathways Used in the Ecological Risk Assessment and Ecological Risk Findings**

Potential Receptor	Sensitive Environment (Y/N)	Sensitive Species (Y/N) <sup>(1)</sup>	Exposure Routes Evaluated	Assessment Endpoints	Measurement Endpoints	Findings
Terrestrial invertebrates and plants	N	N	Direct Contact	Sustainability of an invertebrate and plant community which reflects the available habitat at the FFTA and can serve as a forage base for higher trophic level receptors.	<ul style="list-style-type: none"> <li>- Laboratory toxicity testing of earthworms and plants using site soils and earthworm and plant species.</li> <li>- Comparison of bulk FFTA surface soil COPC concentrations to soil quality screening benchmarks for plants and invertebrates.</li> <li>- Evaluation of earthworm tissue burden data relative to literature-derived Critical Body Residues (CBRs).</li> </ul>	No significant potential risks identified.
Terrestrial Vertebrates	N	N	ingestion	Sustainability of terrestrial small mammal and avian populations that reflect the available habitat at the FFTA and can serve as a forage base for higher trophic level receptors.	<ul style="list-style-type: none"> <li>- Food chain analysis using conservative assumptions and concentrations of COPCs in surface soils.</li> <li>- Evaluation of small mammal tissue burden data relative to literature-derived CBRs.</li> <li>- Qualitative field assessment of the small mammal and avian communities at the FFTA.</li> </ul>	Little to no significant potential risks were identified.
Wetland Invertebrates	N	N	Direct Contact	Sustainability of a healthy and well-balanced benthic invertebrate community that reflects the available habitat at the FFTA.	<ul style="list-style-type: none"> <li>- Evaluation of simultaneously extracted metals (SEM) and acid volatile sulfides (AVS) data.</li> <li>- Comparison of sediment data to literature-derived low effect and severe effect sediment quality guidelines.</li> <li>- Comparison of total recoverable and dissolved metal concentrations in surface water to acute and chronic water quality criteria and guidelines.</li> <li>- Sediment screening level invertebrate toxicity testing.</li> </ul>	Results suggest no significant ecological risk to wetland receptors; however, there is some uncertainty with this finding due to slightly elevated concentrations of dissolved phase inorganic constituents in the water column in the wetlands east of the FFTA.
Wetland Vertebrates	N	N	Direct Contact	Sustainability of healthy amphibian populations, which reflects the available habitat at the FFTA.	<ul style="list-style-type: none"> <li>- Comparison of sediment data to literature-derived low effect and severe effect sediment quality guidelines.</li> <li>- Sediment screening level amphibian toxicity testing.</li> </ul>	Results suggest no significant ecological risk to wetland receptors; however, there is some uncertainty with this finding due to slightly elevated concentrations of dissolved phase inorganic constituents in the water column in the wetlands east of the FFTA.

**Notes:**  
(1) Although a state-listed species of special concern (eastern box turtle) may occur in the vicinity of the Site, these receptors were not extensively evaluated due to the lack of available ecotoxicological data.  
(2) Y = Yes; N = No



**LANDSCAPE  
FEATURES**

-  NAS SOUTH WEYMOUTH  
PROPERTY BOUNDARY
-  BUILDINGS
-  PAVEMENT OUTLINES
-  SURFACE WATER
-  MUNICIPALE BOUNDARIES



0 0.25 0.5 1 1.5 2 Kilometers

0 0.15 0.3 0.6 0.9 1.2 Miles

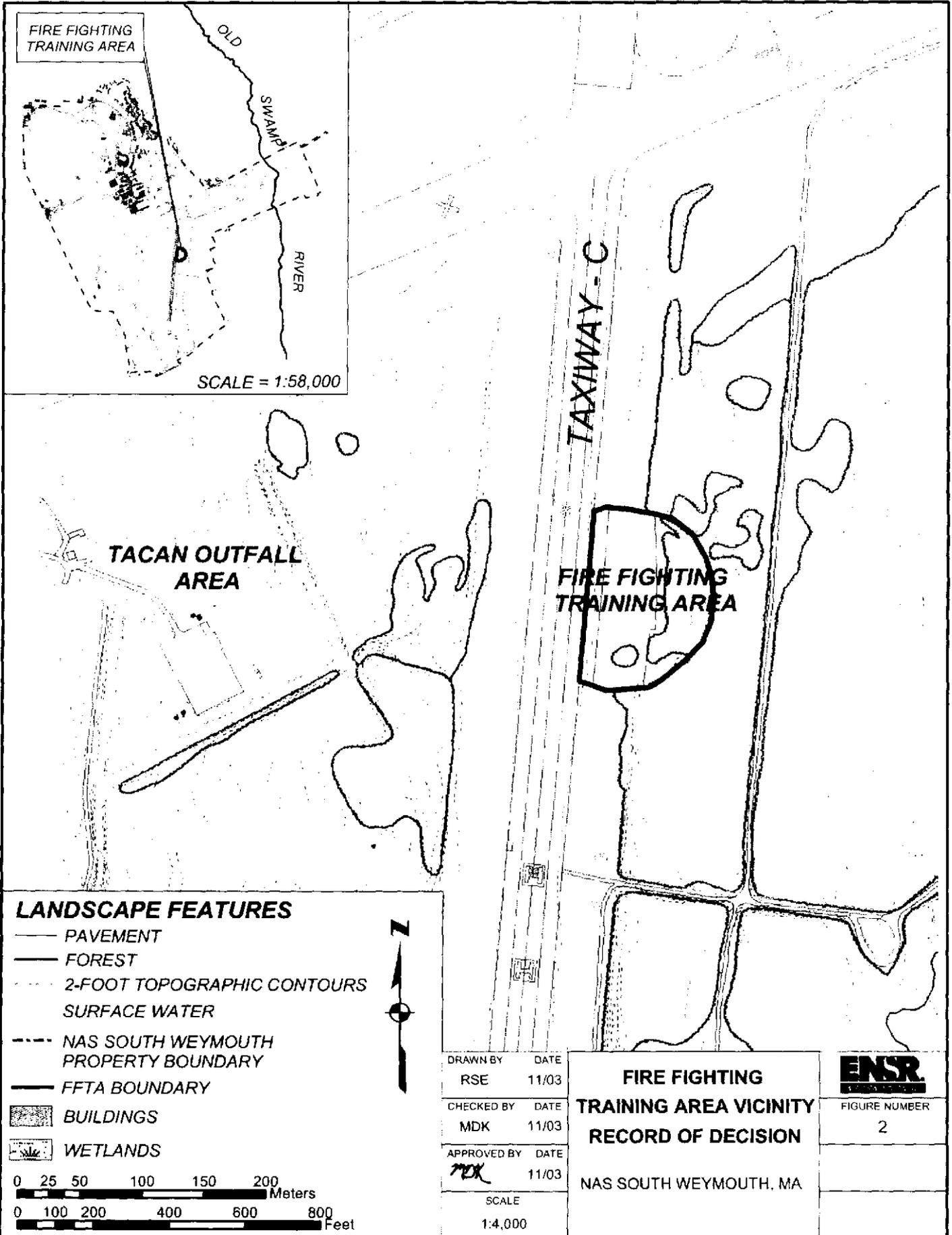
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**SITE LOCUS  
RECORD OF DECISION**  
NAS SOUTH WEYMOUTH, MA



FIGURE NUMBER  
1

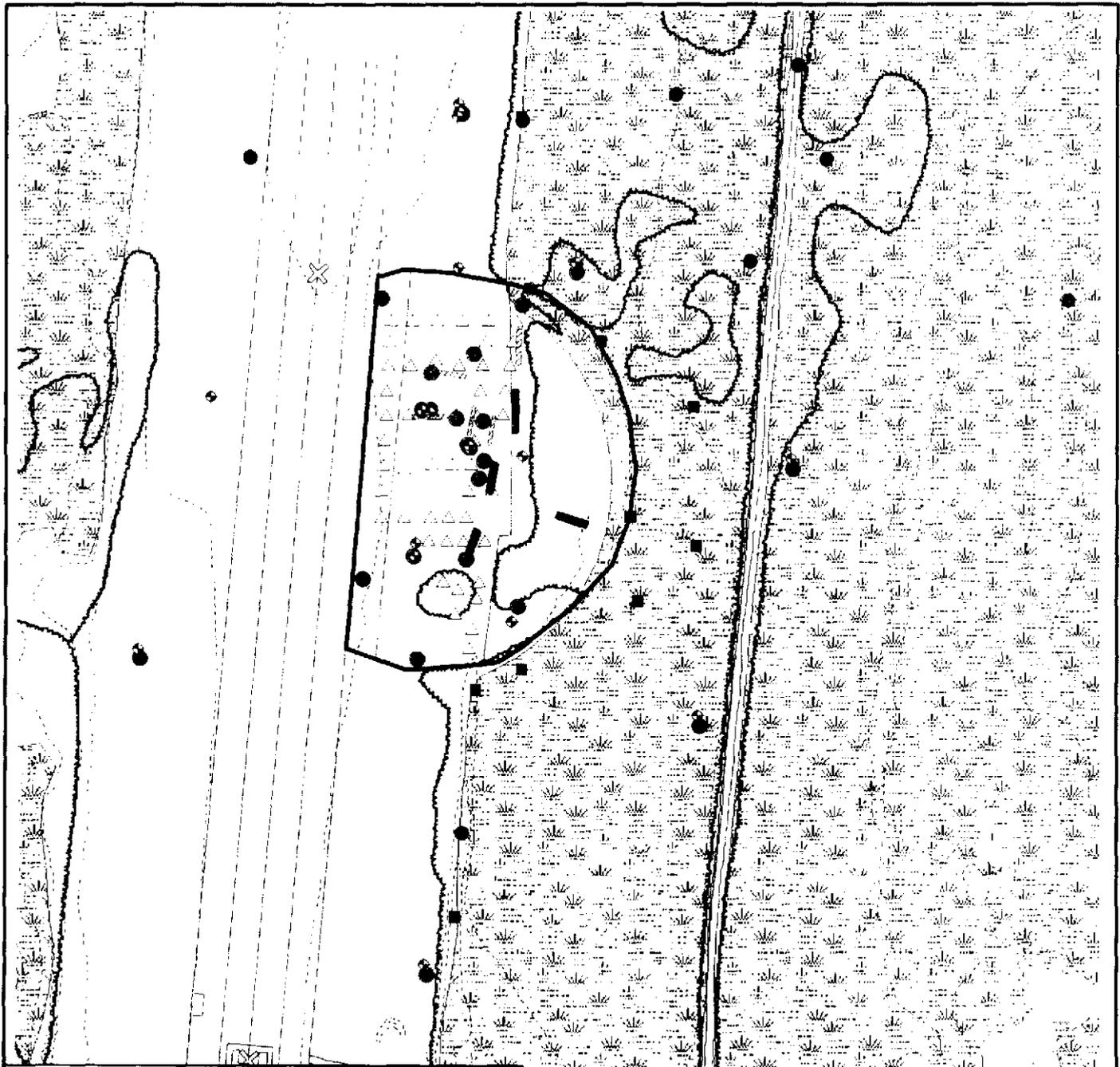


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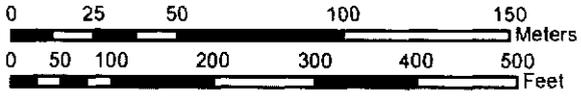
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Figure 3: Site Photograph





- |  |                                       |
|--|---------------------------------------|
| <b>LANDSCAPE FEATURES</b>                  | <b>SAMPLE LOCATIONS</b>               |
| — PAVEMENT                                 | ◆ GROUNDWATER                         |
| — FOREST                                   | ● PIEZOMETER                          |
| - - - 2-FOOT TOPOGRAPHIC CONTOURS          | ● SOIL                                |
| - - - NAS SOUTH WEYMOUTH PROPERTY BOUNDARY | ■ SURFACE WATER/ SEDIMENT             |
| — SURFACE WATER                            | △ ESTIMATED SOIL GAS SAMPLE LOCATIONS |
| — FFTA BOUNDARY                            | <b>1996 TRENCHES</b>                  |
| WETLANDS                                   | ▨ TRENCH                              |
|  | <b>2002 TRENCHES</b>                  |
|  | ■ SAMPLE                              |
|  | ■ TRENCH                              |



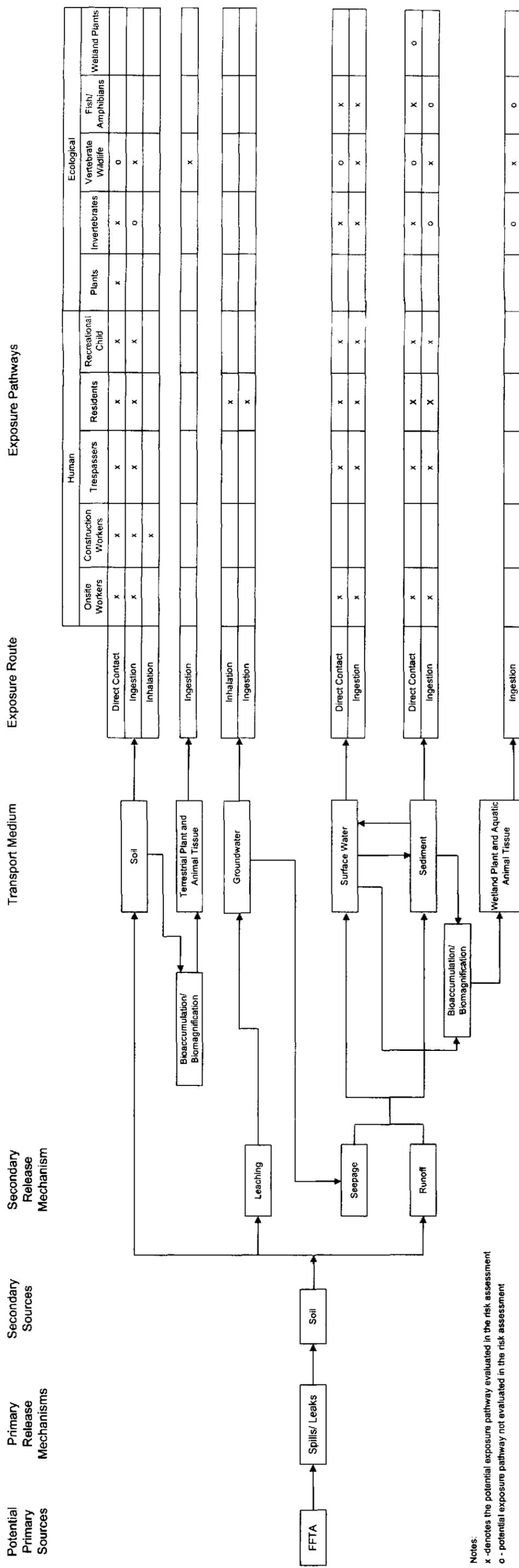
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**FIRE FIGHTING  
TRAINING AREA VICINITY  
RECORD OF DECISION**

NAS SOUTH WEYMOUTH, MA

<b>ENSR</b>
FIGURE NUMBER
4

Figure 5: Fire Fighting Training Area Conceptual Site Model



Notes:  
 x - denotes the potential exposure pathway evaluated in the risk assessment  
 o - potential exposure pathway not evaluated in the risk assessment

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**PART 3: THE RESPONSIVENESS SUMMARY**

**1.0 STAKEHOLDER ISSUES AND NAVY RESPONSES**

Comments were received during the public comment period and at the public hearing on the Proposed Plan for the FFTA, OU 4. A copy of the comments received during the public comment period and a copy of the transcript for the public hearing are attached as Appendix E1 and E2, respectively. Comment responses are provided in Section 3.0.

The Navy has reviewed all comments received from the public and regulatory agencies pertaining to the Proposed Plan for the FFTA at NAS South Weymouth. As described in the Proposed Plan, the Navy's preferred decision for the FFTA is No Action, under CERCLA, is necessary at the FFTA to protect human health and the environment. Upon reviewing the comments received, the stakeholders' major concern relates to addressing the residual petroleum observed at the FFTA under applicable Massachusetts state law after the No Action ROD is signed.

The Navy's general response to this important concern is that the sporadic presence of residual petroleum associated with the weathered subsurface asphalt is not classified as a CERCLA hazardous substance (40 CFR Part 116), and it does not meet the definition of a RCRA hazardous waste (40 CFR Part 261). In addition, the residual petroleum, and the FFTA in its entirety, does not pose unacceptable risks to human health or ecological receptors under CERCLA. Further, the historic inclusion of the FFTA under CERCLA was based on the possibility that non virgin petroleum-based combustible liquids could have been used for fire fighting training exercises, in addition to the reported use of petroleum-based fuels. That possibility has not been substantiated through the numerous investigations conducted. Under CERCLA, sites that are exclusively petroleum-related are not entitled to assessment under the CERCLA process (CERCLA Section 101(14)). On this basis, No Action is necessary for the FFTA under the guidelines of CERCLA, and EPA concurs with the Navy's conclusions concerning compliance with CERCLA. However, petroleum residuals at the site will be addressed pursuant to applicable Massachusetts state law.

**2.0 TECHNICAL AND LEGAL ISSUES**

No technical or legal issues pertaining to the ROD for the FFTA have been identified.

**3.0 COMMENT RESPONSES**

Section 3.1 presents verbal comments recorded at the Public Hearing on September 10, 2003, with Navy responses. Section 3.2 presents written comments received between September 4, 2003 and October 4, 2003, with Navy responses.

**3.1 Verbal Comments and Responses**

Note that the following comments are paraphrased. Refer to the Public Hearing Transcript for a complete set of verbal comments recorded at the public hearing on September 10, 2003.

1. **Comment from Mary Parsons, Rockland Resident.** Ms. Parsons had the following questions regarding the FFTA: (1) Why is the FFTA a Superfund site?; (2) Would the site become a MCP site under the oversight of the MADEP?; and (3) Has the potential presence of PCBs in fractured bedrock at the FFTA been investigated?

Ms. Parsons referenced meeting minutes from a 1999 meeting between the South Shore Tri-Town Development Corporation (SSTTDC) and Navy representative regarding a comment made by Mr. David Drozd suggesting that the SSTTDC does not necessarily need to cleanup sites as long as certain requirements are met. Ms. Parsons indicated that she would further clarify this statement in her written

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comments. Ms. Parsons is concerned that the Navy is trying to transfer the property without cleaning up the Superfund sites.

**Navy Response:** *In 1994, NAS South Weymouth was listed on the National Priorities List (NPL). Seven of the sites within NAS South Weymouth, including the FFTA, required further environmental evaluation under CERCLA as a result of this listing. The historic inclusion of the FFTA under CERCLA was based on the possibility that non virgin petroleum-based combustible liquids could have been used for fire fighting training exercises, in addition to the reported use of petroleum-based fuels. That possibility has not been substantiated through the numerous investigations conducted.*

*The Navy has investigated the FFTA site in accordance with CERCLA and the NCP. The results of these investigations and resulting human health and ecological risk assessments support a No Action decision for the FFTA. Note, however, that residual petroleum compounds have been identified in subsurface soils at the site. Under CERCLA, sites that are exclusively petroleum-contaminated are not subject to assessment under the CERCLA process (see, e.g., CERCLA Section 101(14), which excludes petroleum from the definition of hazardous substances). On this basis, No Action is necessary for the FFTA under CERCLA, and EPA concurs with the Navy's conclusions concerning compliance with CERCLA. Petroleum residuals at the site will be addressed pursuant to applicable Massachusetts state law.*

*During the 1999 Phase II RI program, 13 soil borings were advanced to characterize overburden and bedrock conditions, collect subsurface soil samples, bedrock cores, and in some cases, install groundwater monitoring wells. PCBs were not detected in any of the subsurface soil samples collected. Further, PCBs were not detected in surface soil, sediment, groundwater, and surface water. Since PCBs were not detected in any of the 5 matrices during the 1999 Phase II RI program, it was concluded that the fuels historically used at the FFTA for training exercises did not contain PCBs.*

*The Navy has conducting numerous environmental investigation and cleanup activities at NAS South Weymouth. These activities have been conducted in accordance with CERCLA and the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), or in accordance with the Massachusetts Contingency Plan (MCP). Transferring property ownership does not circumvent CERCLA laws. In fact, Section 120(h)(3)(C) of the CERCLA law specifically authorizes the transfer of property at which remedial actions are not yet completed, conditioned upon approval by the EPA Regional Administrator with concurrence of the state Governor. EPA and the Navy have emphasized to the community that property transfer would not stop the environmental investigations/restorations at NAS South Weymouth. Although it is possible that new property owners could direct the investigations/restorations with continued oversight by EPA and MADEP, the Navy would expect EPA and MADEP to require the new owners to meet the same cleanup standards to which the Navy has been held.*

2. **Comment from Patty Whittemore, United States Environmental Protection Agency, Region I.** Ms. Whittemore submitted and distributed EPA's written statement regarding the FFTA.

**Navy Response:** *Please refer to the Navy's response to EPA's comment in Section 3.2, Written Comments and Responses, comment number 2.*

3. **Comment from Dave Chaffin, Massachusetts Department of Environmental Protection.** Mr. Chaffin stated that the MADEP does not support the Proposed Plan for the FFTA because it does not describe how the Navy plans to address the impacts observed at the site, and because it contains several incorrect statements. Mr. Chaffin stated that the MADEP would be submitting written comments.

**Navy Response:** *Please refer to the Navy's response to MADEP's comment in Section 3.2, Written Comments and Responses, comment number 3.*

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**3.2 Written Comments and Responses**

Note the following section presents the written comments received during the public comment period (September 4, 2003 through October 4, 2003) and the Navy's responses to those comments. Refer to the attached comment package for a copy of the written comments received during the public comment period.

1. **Comment from Philip Barber, Weymouth Resident.** I am reassured that the cleanup procedure is being performed under the procedures of the Comprehensive Environmental Response, Compensation, and Liability Act, better known as Superfund. Under this law, the Navy is working to return environmentally restored property to our communities. This is being performed through records review, field investigations and assessment of the Fire Fighting Training Area.

From the information I received there was stained soil and metallic and wood specks of material, caused by the training using aviation fuel, which fall within the EPA acceptable risk of  $1 \times 10^{-6}$  (1 in 10,000) chance of causing cancer).

I believe that if the risk to humans from the Fire Fighting Training Area property of the Navel Base is no greater than the risk to humans, of the rest of the town, the Navy has done their job.

**Navy Response:** *The Navy appreciates Mr. Barber's support for the selected decision.*

2. **Written Statement from the United States Environmental Protection Agency, Region I.** EPA requests that the following statement be entered into the public record:

In our comments on the Proposed Plan for Operable Unit 4, Fire Fighting Training Area (FFTA), at the South Weymouth Naval Air Station National Priorities List Site (which comments we have presented in letters to the Navy dated June 5, 2003, October 17, 2002, January 9, 2002 and November 30, 2001), EPA has requested that the Navy:

- Take a response action under the Massachusetts Contingency Plan (MCP) to address the petroleum contamination at the FFTA site. While the site does not pose any unacceptable risk to human health or the environment under CERCLA, it does present an actionable risk under the MCP. The April 2002 test pitting effort showed that free-phase light non-aqueous phase liquid (LNAPL) is present at the site, as well as localized areas of petroleum-contaminated soil.
- If the Navy is to meet BRAC requirements and guidelines to ensure the health and safety of the communities that will use the former base property, then it must address this MCP risk in a timely and effective manner. EPA recommends that the Navy work with the Massachusetts Department of Environmental Protection to resolve this issue quickly.
- Under CERCLA Section 101(14), the term "hazardous substances" does not include petroleum, *i.e.*, petroleum is exempted under CERCLA and must be addressed under state law, which here is the MCP.

EPA will agree with the final Proposed Plan if the free-phase LNAPL is adequately addressed under the MCP.

**Navy Response:** *The Navy has investigated the FFTA site in accordance with CERCLA and the NCP. The results of these investigations and resulting human health and ecological risk assessments support a No Action decision for the FFTA. Note, however, that residual petroleum compounds have been identified in subsurface soils at the site. Under CERCLA, sites that are exclusively petroleum-contaminated are not subject to assessment under the CERCLA process (see, e.g., CERCLA Section 101(14), which excludes petroleum from the definition of hazardous substances ). On this basis, No Action is necessary for the*

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*FFTA under CERCLA, and EPA concurs with the Navy's conclusions concerning compliance with CERCLA. Petroleum residuals at the site will be addressed pursuant to applicable Massachusetts state law.*

3. **Comment from the Massachusetts Department of Environmental Protection.** The Department has reviewed the third revised *Proposed Plan, Operable Unit 4 – Fire Fighting Training Area, Naval Air Station South Weymouth, Massachusetts*, received September 3, 2003. As explained in our June 3, 2003 letter on the previous version of the proposed plan, the Department cannot endorse the proposed plan because it does not indicate that the Navy intends to cleanup the weathered petroleum product observed in test pits excavated at the site in April 2002 and reported in test pits excavated in January 1996. In addition, the revised proposed plan includes several inaccurate statements, identified in the attached comments, which do not represent site conditions or the Department's position on the proposed plan.

If the Navy intends to address the petroleum contamination under the Massachusetts Contingency Plan (MCP), rather than under CERCLA, we recommend that the proposed plan and Record of Decision include explicit statements that indicate that the Navy will address the petroleum contamination under the MCP. Alternatively, as discussed on September 10, the Navy could submit a separate letter that states the Navy intends to address the petroleum contamination under the MCP.

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General Comment

As explained in our June 3, 2003 letter on the previous version of the proposed plan, the Department cannot endorse the proposed plan because it does not indicate that the Navy intends to cleanup the weathered petroleum product observed in test pits excavated at the site in April 2002 and reported in test pits excavated in January 1996. In addition, the revised proposed plan includes several inaccurate statements, identified below, which do not represent site conditions or the Department's position on the proposed plan. If the Navy intends to address the petroleum contamination under the Massachusetts Contingency Plan (MCP), rather than under CERCLA, we recommend that the proposed plan and Record of Decision include explicit statements that indicate the Navy will address the petroleum contamination under the MCP. Alternatively, as discussed on September 10, the Navy could submit a separate letter that states the intent to address the petroleum contamination under the MCP, and the proposed plan and record of decision could be clarified to indicate that the Navy proposes No Action under CERCLA.

Specific Comments

1. Page 2: Under the heading *History of Site Investigations*, the two statements indicating that the risk assessments showed that cleanup was not warranted to protect human health and the environment should be deleted because the risk assessment did not account for the presence of weathered petroleum. Similar statements scattered through the proposed plan should also be deleted.
2. Page 3: Under the heading *Getting the Word Out!*, the statement indicating that DEP selected a No Action decision for the site should be deleted. Remedy selection is a Navy responsibility, not a DEP responsibility; further, DEP cannot agree with the proposed plan because it does not indicate that the Navy intends to cleanup the weathered petroleum at the site.
3. Page 4: Under the heading *What environmental impacts may have resulted from activities at the FFTA?*, characterization of the weathered petroleum observed at the site as "petroleum-like product mixed with soil" understated the situation. DEP, USEPA, and Navy representatives observed and agreed that the material observed in the April 2002 test pits was weathered petroleum product.
4. Page 5: Under the heading *Inorganics*, statements indicating that the metals detected in surface water samples were not attributable to the activities conducted at the site and were "likely from an upstream source" are inconsistent with site conditions. In particular, melted metal debris, apparently related to

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**Naval Air Station, South Weymouth, MA**  
**Part 3: The Responsiveness Summary**

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fire fighting training activities, is scattered across the site, and the nearest potential alternative source of metals contamination is located more than 500 feet from the site (Runway 8-26), or possibly more than 1,000 feet (if Runway 8-26 is not a potential source).

5. Page 6: The justification provided for No Action under the heading *Why does the Navy propose No Action?*, which indicates that fuel releases at the site did not impact subsurface soils or groundwater and indicates that the risk assessments showed that the site does not pose potential risks to humans or ecological receptors, misrepresents site conditions and the results from the risk assessments. The information gathered during the remedial investigation indicates that weathered petroleum product is present in the subsurface, and indicates that fuel almost certainly migrated through subsurface soil into groundwater (groundwater was encountered at a bout 3 feet below grade, and elevated manganese concentrations, an indicator of fuel degradation, were reported in groundwater samples collected downgradient of the site). The risk assessments did not address nor account for the presence of weathered petroleum.

**Navy Response:** *In response to MADEP's general comment, the Navy has investigated the FFTA site in accordance with CERCLA and the NCP. The results of these investigations and resulting human health and ecological risk assessments support a No Action decision for the FFTA. Note, however, that residual petroleum compounds have been identified in subsurface soils at the site. Under CERCLA, sites that are exclusively petroleum-contaminated are not subject to assessment under the CERCLA process (see, e.g., CERCLA Section 101(14), which excludes petroleum from the definition of hazardous substances). On this basis, No Action is necessary for the FFTA under CERCLA, and EPA concurs with the Navy's conclusions concerning compliance with CERCLA. Petroleum residuals at the site will be addressed pursuant to applicable Massachusetts state law. For the specific comments presented by MADEP, the following responses have been prepared:*

1. *The Navy has investigated the FFTA site in accordance with CERCLA and the NCP. The Proposed Plan presents a summary of the investigations and risk assessment performed for the FFTA as required by CERCLA and the NCP. The Navy has studied and evaluated the FFTA relative to potential risks, and has concluded that the FFTA does not pose unacceptable risks to human health or the environment under CERCLA. EPA has concurred with the Navy's conclusions relative to the Navy's compliance with CERCLA, and in an EPA letter dated October 17, 2002, EPA offered the following parallel conclusions:*
  - *Arsenic and manganese results from the test pits for surface soil and subsurface soil were similar to those obtained in the RI, and the addition of the 2002 test pit samples to the RI results would not be expected to alter the risk assessment results obtained from the RI.*
  - *Supplemental risk calculations using ratios of 95% UCLs to Region 9 PRGs were performed by EPA for the organic constituents 2-methylnaphthalene and naphthalene, which were not included in the original risk assessment. The resulting HQs equaled 0.2 for 2-methylnaphthalene and 0.07 for naphthalene for a residential receptor.*
  - *The Navy's data continues to demonstrate that there is no unacceptable risk from chemicals present at the FFTA, and that No Action is necessary under CERCLA.*
2. *The Navy is aware that MADEP does not currently endorse the No Action decision for the FFTA. During preparation of the Proposed Plan, MADEP provided comments to the Navy requesting that the text clearly indicate that the No Action decision is proposed by the Navy and EPA, not MADEP. The Navy incorporated those comments and revised the majority of the Proposed Plan accordingly. However, one particular section was erroneously left unchanged. The Navy acknowledged the error to the community during the Public Hearing on the Proposed Plan, and again reiterates its apology to MADEP.*

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3. *Several sporadic areas of residual petroleum were observed by the Navy, EPA, and MADEP during the April 2002 investigation. According to literature reviewed, when fuel comes into contact with asphalt, a reaction occurs that dissolves and breaks apart the asphalt. Based on the technical literature, field observations, and analytical results, there is an indistinguishable difference between the insoluble and immobile fractions of weathered petroleum-based fuels and the dissolved fractions of the weathered subsurface asphalt. Direct sampling of the material yielded a conclusion of no significant risks posed under CERCLA. The material description presented in the Proposed Plan and at the Public Hearing is consistent with this conclusion.*
4. *Based upon the investigations performed, the Navy concluded that the four metals detected above background in surface water are not attributable to the FFTA. There are several factors that support this conclusion:*
- *Metal concentrations detected in surface soil, subsurface soil, hydric soil, and groundwater were generally consistent with background conditions.*
  - *Groundwater flow at the FFTA is westerly and therefore does not appear to discharge to surface water in the wetlands east of the site.*
  - *Hydric soil samples associated with each of the surface water samples do not correlate with these metals in surface water (i.e., concentrations of metals in hydric soil were consistent with background conditions).*

*Although the presence of these metals in surface water does not appear to be attributed to the FFTA, the potential risks posed by these metals at the FFTA were evaluated. No human health or ecological risks in excess of regulatory risk thresholds were identified.*

5. *Localized areas of residual petroleum were observed in shallow subsurface soil, immediately below the weathered subsurface asphalt. However, the soil in contact with the residual petroleum did not reveal any evidence of petroleum or petroleum impacts. Based upon the historic (1996 and 1999) and recent (2002) investigations performed, there is no evidence that the weathered asphalt, residual petroleum, or historic training exercises have impacted deeper soil or groundwater. Conversely, the analytical results of soil in contact with the residual petroleum, combined with the analytical results of nearby groundwater, confirm that the residual petroleum does not appear to have migrated under existing site conditions.*
4. **Comment from Mary Parsons, Rockland Resident.** These are my written comments to the Proposed Plan for Operable Unit 4, Fire Fighting Training Area, NAS south Weymouth.

It is my understanding that the EPA laws that govern cleanup of contaminated sites under CERCLA are minimum requirements. The FFTA was used for fire training practice and that jet fuel was poured directly onto the ground or onto an object, such as an automobile, and in later years (1980's) in burn pits. The fuel would be ignited and the fire fighters would extinguish the blaze.

I understand that under CERCLA petroleum is exempt and any petroleum contamination must be addressed under state law. I am requesting to know the Navy's responsibility under Massachusetts state law.

I would like an explanation of Navy's proposed "**NO FURTHER ACTION**" when the April 2002 test pitting effort showed that free -phase light non-aqueous phase liquid (LNAPL) is present at the site. Does this mean that if the state of Massachusetts didn't have environmental laws such as the MCP, the Navy would leave the contamination because it doesn't come under the EPA?

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Has the groundwater in bedrock at the FFTA been tested for polychlorinated hydrocarbons? If not, why not? Have you tested fractured bedrock?

Who will be responsible for future contamination found in or near this site?

I would like a written explanation for a comment made, by David Drozd, in 1998 at an SSTDC meeting (Nov. 19, 1998), suggesting **“the SSTDC should try to consider ways that meet CERCLA without necessarily requiring a cleanup.”** He then goes on to explain how reuse plans can kill two birds with one stone, such as putting a road over a contaminated site or a parking lot as a cap on a contaminated site. Sorry, but I feel that the Navy is cheating the towns out of a proper cleanup of contaminated sites. And uses community Restoration Advisory Boards as a front to make the community think that the Navy is doing right by the community, when in fact, it doesn't pay attention to the oral or written comments on contaminated sites by the local citizens and town boards. The Navy's mind is made up on what action will be taken on the cleanup of contamination long before that plan is presented to the public. I realize that cleanup of contamination of Navy Base is the lowest priority in the Navy's budget and that the Navy is not in the environmental cleanup business. If the Navy can pay Lennar Corp. a lump sum for cleanup of NAS South Weymouth: then, I feel that the Navy can take that lump sum and pay a contractor to do the cleanup; therefore, preserving the public's involvement in cleanup of NAS South Weymouth. The Navy currently employs people to oversee this process at NAS South Weymouth and could continue to do this.

**Navy Response:** *Please refer to the Navy's response to your verbal comment recorded during the public hearing, Section 3.1, comment number 1.*

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**Appendix A: Massachusetts Department of Environmental Protection Letter of Concurrence**

Refer to attached copy.



COMMONWEALTH OF MASSACHUSETTS  
EXECUTIVE OFFICE OF ENVIRONMENTAL AFFAIRS  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
ONE WINTER STREET, BOSTON, MA 02108 617-292-5500

MITT ROMNEY  
Governor

ELLEN ROY HERZFELDER  
Secretary

KERRY HEALEY  
Lieutenant Governor

ROBERT W. GOLLEDGE, Jr.  
Commissioner

Ms. Susan Studlien  
Director, Site Remediation and Restoration  
U.S. Environmental Protection Agency  
JFK Building  
Boston, MA 02203-2211

Re: Record of Decision  
Fire Fighting Training Area  
Former South Weymouth NAS  
RTN 3-2621  
September 22, 2004

Dear Ms. Studlien:

The Massachusetts Department of Environmental Protection has reviewed the *Record of Decision for Operable Unit 4, Fire Fighting Training Area, Naval Air Station South Weymouth*, (ROD) received September 17, 2004. The ROD selects a No Action Under CERCLA decision. Based on: (1) the Navy's written commitment in the ROD to address petroleum contamination at the site in accordance with state law and (2) our joint discussions with the Navy during which we agreed that petroleum contamination at the site would be addressed under the Massachusetts Contingency Plan (MCP), the Department offers concurrence on the record of decision.

For the record, it is the Department's expectation that Navy will move forward expeditiously to complete response actions in accordance with the MCP after the record of decision is executed. In addition, as explained in our February 11, 2004 letter to the Navy, we intend to provide direct oversight to accomplish this. We encourage EPA to participate in the associated review process.

If you have any questions or comments, please contact David Chaffin, Project Manager (617 348-4005), or Anne Malewicz, Federal Facilities Section Chief (617 292-5659).

Very truly yours,

  
Richard Chaffin  
Acting Assistant Commissioner  
Bureau of Waste Site Cleanup

CC: D. Barney, USN-S. Weymouth  
P. Marajh-Whittemore, USEPA  
Executive Director, SSTTDC  
RAB Members

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**Appendix B: References**

- EA Engineering and Science, 2003. Site Management Plan for Naval Air Station South Weymouth, Weymouth, Massachusetts.
- ENSR International, 2003. LSP Opinion – Petroleum Impacts at the FFTA, NAS South Weymouth, MA, Memorandum dated February 2003.
- Tetra Tech NUS/ENSR 2001. Phase II Remedial Investigation Fire Fighting Training Area Naval Air Station South Weymouth, Weymouth, Massachusetts, April 2001.
- U. S. Navy, 2003. Proposed Plan for Operable Unit 4, Fire Fighting Training Area, Naval Air Station South Weymouth, Massachusetts. Fact Sheet.
- U.S. Environmental Protection Agency (EPA), 1988, Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA. October 1988. EPA/540/G-89/004.
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- EPA. 1992a. Supplemental Guidance to RAGS: Calculating the Concentration Term. OSWER Directive 9285.7-081. Office of Solid Waste and Emergency Response.
- EPA. 1992b. Guidance for Data Usability in Risk Assessment (Part A). Office of Emergency and Remedial Response, Washington, D.C. Publication 9285.7-09A.
- EPA. 1997a. Exposure Factors Handbook. Volumes I - III. Office of Health and Environmental Assessment, Washington, D.C. August 1997. EPA/600/P-95/002Fa.
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- EPA. 1999a. A Guide to Preparing Superfund Proposed Plans, Records of Decision, and Other Remedy Selection Decision Documents. Office of Solid Waste and Emergency Response. PB98-963241.
- EPA 1999b. Region 1 Model Record of Decision Summary. December 1999.
- EPA. 2000. Integrated Risk Information System (IRIS). Environmental Criteria and Assessment Office. U.S. Environmental Protection Agency, Cincinnati, OH. [URL: <http://www.epa.gov/ngispgm3/iris>]

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**Appendix C: Glossary**

**Background Conditions:** Conditions consistent with areas of the Base that were unaffected by disposal or releases of chemicals by the Navy.

**Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA):** A federal law passed in 1980 and amended in 1986 by the Superfund Amendments and Reauthorization Act (SARA) governing the investigation and cleanup of abandoned and/or controlled hazardous waste sites. Navy compliance with CERCLA/SARA (see IR Program definition) is funded by the Department of Defense (DOD) under the Defense Environmental Restoration Act (DERA).

**Chemicals of Potential Concern (COPCs):** Compounds identified as a possible source of risk based upon a comparison between compound concentration and established screening levels (e.g., Federal Primary Drinking Water Standards).

**Detection Limit:** The minimum concentration of a chemical in an environmental sample that can be accurately and precisely measured by the laboratory.

**Excess lifetime cancer risk range:** Upper bound probability of an individual developing cancer as a result of a lifetime of exposure to a particular level of a potential carcinogen. The predicted cancer risk level is compared against an acceptable range of  $1 \times 10^{-4}$  to  $1 \times 10^{-6}$ .

**Hazard Index:** A measure of the potential for toxic (non-cancer related) effects from exposure to non-carcinogenic chemicals. A Hazard Index of 1 or less is considered an acceptable risk level by EPA.

**Information Repository:** A public file containing site information, documents of on-site activities, and general information about a site.

**Installation Restoration (IR) Program:** A component of the DERA created under CERCLA regulations and funded by the DOD. The purpose of the Program is to identify, assess, characterize, and clean up or control contamination from past hazardous waste disposal operation and hazardous material spills at military activities.

**National Priorities List:** EPA's list of sites for priority cleanup under the Superfund Program.

**Operable Unit:** Operable units are site management tools that define discrete steps towards comprehensive actions, based on geographical portions of a site, specific site problems, initial phases of action, or any set of action performed over time or concurrently at different parts of the site.

**Polynuclear aromatic hydrocarbons (PAHs):** Chemical compounds such as benzo(a)pyrene, naphthalene, anthracene, and phenanthrene, which are usually byproducts of combustion.

**Proposed Plan:** A plan for site cleanup that is made available to the public for comment.

**Remedial Investigation (RI):** A summary report of the information collected on the nature and extent of contamination and the problems that the contamination could potentially cause (including assessment of human health and ecological risks) at a CERCLA site.

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**Appendix D. Administrative Record Index**

File Number	Vol. Number	Doc. Number	Doc. Type	Document Title	Doc. Date	Document Author	Document Recipient	Document Location	OU
<b>1.0 Site Assessment</b>									
<b>1.2 Preliminary Assessment</b>									
1.2		1.2-1	R	Preliminary Assessment, NAS South Weymouth, Massachusetts	1998	Argonne National Laboratory	U. S. Dept. of the Navy	A.R. File	1,2,3,4,5,7,8,9
<b>1.3 Site Inspection/Investigation</b>									
1.3		1.3-1	R	Work Plan Site Investigation at NAS South Weymouth, Massachusetts	Mar-90	Baker Environmental Inc	U. S. Dept. of the Navy	A.R. File	1,2,3,4,5,7,8,9
1.3		1.3-2	R	Site Investigation at Naval Air Station South Weymouth, Massachusetts	Dec-91	Baker Environmental Inc	U.S. Dept of the Navy	A.R. File	1,2,3,4,5,7,8,9
<b>3.0 Remedial Investigation (RI)</b>									
<b>3.2 Sampling and Analysis Data</b>									
3.2		3.2-1	R	Data Validation Addenda Remedial Investigation South Weymouth Naval Air Station Weymouth, Massachusetts Addenda Volumes I, II, III, IV, V, & VI	Jan-97	Brown & Root Environmental (ENSR)	U.S. Dept of the Navy	A.R. File	1,2,3,4,5,7,8,9
3.2		3.2-2	R	Final Summary Report of Background Data Summary Statistics for NAS South Weymouth	Feb-00	Stone & Webster	U.S. Dept of the Navy	A.R. File	1,2,3,4,5,7,8,9,10
<b>3.6 Remedial Investigation Reports</b>									
3.6		3.6-1	R	Phase I Remedial Investigation, Naval Air Station, South Weymouth, Massachusetts Volumes I, II, III, & IV	July-98	Brown & Root Environmental (ENSR)	U.S. Dept of the Navy	A.R. File	1,2,3,4,5,7,8,9
3.6		3.6-2	R	Turtle Investigation Report for CY 1999	Apr-00	ENSR	U.S. Dept of the Navy	A.R. File	1,2,3,4,5,7,8,9,10
3.6		3.6-4	R	Basewide Groundwater Flow Assessment Phase II Remedial Investigation (secondary document, supplement to the Phase II RI)	Dec-00	Tetra Tech (ENSR)	U.S. Dept of the Navy	A.R. File	1,2,3,4,5,7,8,9,10
3.6		3.6-8	R	Turtle Investigation Report for CY 2000	Apr-01	ENSR	U.S. Dept of the Navy	A.R. File	1,2,3,4,5,7,8,9,10
3.6		3.6-9	R	Phase II Remedial Investigation FFTA, NAS South Weymouth, Weymouth, Massachusetts (no appendices were re-issued)	Apr-01	Tetra Tech NUS (ENSR)	U.S. Dept of the Navy	A.R. File	4
3.6		3.6-10	R	Phase II Remedial Investigation Appendices, FFTA, NAS South Weymouth (AD-A)	Oct-00	Tetra Tech NUS (ENSR)	U.S. Dept of the Navy	A.R. File	4

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3.6		3.6-11	R	Phase II Remedial Investigation Appendices, FFTA, NAS South Weymouth (HH, ECO & RI)	Feb-01	Tetra Tech NUS (ENSR)	U.S. Dept of the Navy	A.R. File	4
3.6		3.6-12	L	Potential Effects of Elevated pH Values on the Representativeness of Groundwater Samples, NAS South Weymouth (secondary document, supplement to Phase II RI)	Feb-02	ENSR	U.S. Dept of the Navy	A.R. File	1,2,3,4,5,7,8,9,10,11
3.6		3.6-13	M	LSP Opinion - Petroleum Impacts at the FFTA, NAS South Weymouth, MA (secondary document, supplement to Phase II RI)	Feb-03	ENSR	U.S. Dept of the Navy	A.R. File	4
3.7		Work Plans and Progress Reports							
3.7		3.7-1	R	Final Remedial Investigation Work Plan (Phase I), Naval Air Station, South Weymouth, Massachusetts	Jul-95	Brown & Root Environmental (ENSR)	U.S. Dept of the Navy	A.R. File	1,2,3,4,5,7,8,9
3.7		3.7-2	R	Final Remedial Investigation Work Plan (Phase I) FSP, QAPP, HASP; Volumes I and II	Nov-95	Brown & Root Environmental (ENSR)	U.S. Dept of the Navy	A.R. File	1,2,3,4,5,7,8,9
3.7		3.7-3	L	Ecological Technical Memorandum Work Plan, Naval Air Station, South Weymouth, MA	Jul-98	Brown & Root Environmental (ENSR)	U.S. Dept of the Navy	A.R. File	1,2,3,4,5,7,8,9
3.7		3.7-4	R	Phase II RI Work Plan NAS South Weymouth, MA (7 volumes including appendices)	Apr-99	Tetra Tech NUS (ENSR)	U.S. Dept of the Navy	A.R. File	1,2,3,4,5,7,8,9
3.7		3.7-6	L	Proposed Scope of Work - Focused Test Pitting Program, FFTA, NAS South Weymouth	Jan-02	ENSR	U.S. Dept of the Navy	A.R. File	4
3.9		Health Assessments							
3.9		3.9-1	R	Public Health Assessment for USNAS South Weymouth CERCLIS No. MA2170022022	Mar-98	U.S. Dept of Health & Human Services	Public	A.R. File	1,2,3,4,5,7,8,9
3.9		3.9-2	R	Public Health Assessment for USNAS South Weymouth, CERCLIS no. MA2170022022	Sep-99	U.S. Dept of Health & Human Services	Public	A.R. File	1,2,3,4,5,7,8,9
3.9		3.9-3	R	Public Health Assessment for USNAS South Weymouth, CERCLIS no. MA2170022022	Aug-01	U.S. Dept of Health & Human Services	Public	A.R. File	1,2,3,4,5,7,8,9
<b>4.0 Feasibility Study (FS)</b>									
4.9		Proposed Plans for Selected Remedial Action							
4.9		4.9-4	P	Proposed Plan for Operable Unit 4, FFTA, NAS South Weymouth, Weymouth, Massachusetts	Sep-03	ENSR	Public	A.R. File	2

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<b>5.0 Record of Decision (ROD)</b>									
Responsiveness Summaries									
5.3		5.3-10		Copy of Public Comments Received in the Proposed Plan for the FFTA (Included as Appendix E1 of the FFTA Record of Decision)	9/4/03 to 10/4/03	Public	U.S. Dept of the Navy	A.R. File	4
5.3		5.3-11		Transcript of the Public Hearing on the Proposed Plan for the FFTA (Included as Appendix E2 of the FFTA Record of Decision)	Sep-03	Public	U.S. Dept of the Navy	A.R. File	4
5.3		5.3-12		Responsiveness Summary (Included as Part 3: The Responsiveness Summary of the FFTA Record of Decision)	2004	ENSR	Public	A.R. File	4
Record of Decision									
5.4		5.4-4	R	Record of Decision, Operable Unit 4, FFTA, NAS South Weymouth, Weymouth, Massachusetts	2004	ENSR	U.S Dept of the Navy	A.R. File	4
<b>10.0 Enforcement/Negotiation</b>									
Federal Facility Agreements									
10.16		10.16-1	L	Federal Facility Agreement for South Weymouth Naval Air Station National Priorities List Site	Apr-00	EPA	U.S. Dept of the Navy	A.R. File	1,2,3,4,5,7,8,9
<b>13.0 Community Relations</b>									
Community Relations Plans									
13.2		13.2-1	R	Community Relations Plan Naval Air Station, South Weymouth, MA	Jul-98	U.S. Dept of the Navy	Public	A.R. File	1,2,3,4,5,7,8,9
Public Meetings/Hearings									
13.4		13.4-1		Restoration Advisory Board Workshop Guidebook	Jul-94	EPA	Public	A.R. File	1,2,3,4,5,7,8,9
13.4		13.4-6		Public Notice: Notification of Restoration Advisory Board Meeting (Monthly)	1995 - 2003	EA	Public	A.R. File	1,2,3,4,5,7,8,9,10,11
13.4		13.4-7		Restoration Advisory Board Meeting Minutes (Monthly)	1995 - 2003	U.S. Dept of the Navy	Public	A.R. File	1,2,3,4,5,7,8,9,10,11
Fact Sheets/Information Updates									
13.5		13.5-1		U.S. Navy Fact Sheet No. 1, NAS South Weymouth	Dec-96	ENSR	Public	A.R. File	1,2,3,4,5,7,8,9
13.5		13.5-2		The Former Naval Air Station South Weymouth	Feb-98	U.S. Dept of the Navy	Public	A.R. File	1,2,3,4,5,7,8,9

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13.5		13.5-3		Environmental Update, NAS South Weymouth	Mar-98	NSRWA	Public	A.R. File	1,2,3,4,5,7,8,9
13.5		13.5-4		Groundwater Flow NAS South Weymouth	Oct-98	ENSR	Public	A.R. File	1,2,3,4,5,7,8,9
13.5		13.5-6		Environmental Cleanup Activities NAS South Weymouth Fact Sheet	Apr-00	ENSR	Public	A.R. File	1,2,3,4,5,7,8,9
13.5		13.5-7		Arsenic Information from the Former Naval Air Station South Weymouth Fact Sheet	Nov-01	ENSR	Public	A.R. File	1,2,3,4,5,7,8,9
13.6				Mailing List					
13.6		13.6-1		Community Relations Mailing List: State, Federal and Local Agencies (including Media and Public Libraries)	N/A	U.S. Dept of the Navy	N/A	A.R. File	1,2,3,4,5,7,8,9
13.6		13.6-2		Community Relations Mailing List: Other Parties (e.g., general public) - CONFIDENTIAL (due to potential Privacy Act violations)	N/A	U.S. Dept of the Navy	N/A	EFANE	1,2,3,4,5,7,8,9
<b>17.0 Site Management Records</b>									
17.6				Site Management Plans and Reviews					
17.6		17.6-1	R	Site Management Plan Revision 4.0 NAS South Weymouth, MA	Jun-03	EA	U.S. Dept of the Navy	A.R. File	1,2,3,4,5,7,8,9
Notes:									
AD-A									
A.R. – Administrative Record									
CERCLIS – Comprehensive Environmental Response, Compensation, and Liability Information System									
CY – Calendar Year									
EA – EA Engineering, Science and Technology									
ECO – Ecological									
EFANE – Environmental Field Activity Northeast									
EPA – Environmental Protection Agency									
FFTA – Fire Fighting Training Area									
FSP – Field Sampling Plan									
HASP – Health and Safety Plan									
HH – Human Health									
L – Letter									
LSP – Licensed Site Professional									
M – Memorandum									
NAS – Naval Air Station									
NSRWA – North and South Rivers Watershed Association									
OU – Operable Unit									
QAPP – Quality Assurance Project Plan									
R – Report									

**Record of Decision  
Naval Air Station, South Weymouth, MA  
Appendices**

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**Appendix E1. Public Comments on the Proposed Plan for the FFTA**

Refer to attached copies.

# We Welcome Your Comments!

## What is a Formal Comment?

Federal regulations make a distinction between "formal" comments received during the 30-day public comment period, and "informal" comments received outside the comment period. While the Navy uses comments throughout the cleanup process to help make cleanup decisions, it is required to respond to formal comments.

Formal comments can be in writing or made orally. To make a formal comment on this Proposed Plan, you need only to (1) offer oral or written comments during the public information session or public hearing on September 10, 2003 or (2) send written comments, post marked no later than October 4, 2003.

Your formal comments will become a part of the official record for the FFTA. This is a crucial element in the decision making process for the site. The Navy will consider all comments received during the comment period prior to making the final cleanup decision for the site.



## Use this form!

The Navy encourages your written comments on the Proposed Plan for the FFTA at NAS South Weymouth. You can use the form below to send written comments. If you have questions about how to comment, please call Mark Krivansky at (610) 595-0567 ext. 153.

## Please use this space for comments.

U.S. Department of the Navy

C/o Alexandra Stanley

September 4, 2003

Dear Sir:

I am reassured that the cleanup procedure is being performed under the procedures of the Comprehensive Environmental Response, Compensation, and Liability Act, better known as Superfund.

Under this law, the Navy is working to return environmentally restored property to our communities. This is being performed through records review, field investigations and assessment of the Fire Fighting Training Area.

From the information I received there was stained soil and metallic and wood specks of material, caused by the training using aviation fuel, which fall within the EPA acceptable risk of  $1 \times 10^{-6}$  (1 in 10,000) chance of causing cancer).

I believe that if the risk to humans from the Fire Fighting Training Area property of the Naval Base is no greater than the risk to humans, of the rest of the town, the Navy has done their job.

Comments submitted by:

*Philip D. Barber*

Philip D. Barber

Address: 446 Pleasant St. S, Weymouth



Philip D. Barber  
446 Pleasant St.  
Weymouth, MA 02190-2639



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

**EPA Statement Regarding Proposed Plan for  
Operable Unit 4, Fire Fighting Training Area,  
at South Weymouth Naval Air Station National Priorities List Site  
September 10, 2003 Public Hearing**

EPA requests that the following statement be entered into the public record:

In our comments on the Proposed Plan for Operable Unit 4, Fire Fighting Training Area (FFTA), at the South Weymouth Naval Air Station National Priorities List Site (which comments we have presented in letters to the Navy dated June 5, 2003, October 17, 2002, January 9, 2002 and November 30, 2001), EPA has requested that the Navy:

- Take a response action under the Massachusetts Contingency Plan (MCP) to address the petroleum contamination at the FFTA site. While the site does not pose any unacceptable risk to human health or the environment under CERCLA, it does present an actionable risk under the MCP. The April 2002 test pitting effort showed that free-phase light non-aqueous phase liquid (LNAPL) is present at the site, as well as localized areas of petroleum-contaminated soil.
- If the Navy is to meet BRAC requirements and guidelines and ensure the health and safety of the communities that will use the former base property, then it must address this MCP risk in a timely and effective manner. EPA recommends that the Navy work with the Massachusetts Department of Environmental Protection to resolve this issue quickly.
- Under CERCLA Section 101(14), the term "hazardous substances" does not include petroleum, *i.e.*, petroleum is exempted under CERCLA and must be addressed under state law, which here is the MCP.

EPA will agree with the final Proposed Plan if the free-phase LNAPL is adequately addressed under the MCP.



COMMONWEALTH OF MASSACHUSETTS  
EXECUTIVE OFFICE OF ENVIRONMENTAL AFFAIRS  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
ONE WINTER STREET, BOSTON, MA 02108 617-292-5500

MITT ROMNEY  
Governor

KERRY HEALEY  
Lieutenant Governor

ELLEN ROY HERZFELDER  
Secretary

ROBERT W. GOLLEDGE, Jr.  
Commissioner

Mr. Mark Krivansky  
Department of the Navy  
Naval Facilities Engineering Command  
10 Industrial Highway, Mail Stop No. 82  
Lester, Pennsylvania 19113-2090

Re: Revised Proposed Plan  
Fire Fighting Training Area  
Former S. Weymouth NAS  
RTN 3-2621  
September 22, 2003

Dear Mr. Krivansky:

The Department has reviewed the third revised *Proposed Plan, Operable Unit 4 - Fire Fighting Training Area, Naval Air Station South Weymouth, Massachusetts*, received September 3, 2003. As explained in our June 3, 2003 letter on the previous version of the proposed plan, the Department cannot endorse the proposed plan because it does not indicate that the Navy intends to cleanup the weathered petroleum product observed in test pits excavated at the site in April 2002 and reported in test pits excavated in January 1996. In addition, the revised proposed plan includes several inaccurate statements, identified in the attached comments, which do not represent site conditions or the Department's position on the proposed plan.

If the Navy intends to address the petroleum contamination under the Massachusetts Contingency Plan (MCP), rather than under CERCLA, we recommend that the proposed plan and Record of Decision include explicit statements that indicate that the Navy will address the petroleum contamination under the MCP. Alternatively, as discussed on September 10, the Navy could submit a separate letter that states the Navy intends to address the petroleum contamination under the MCP.

If you have any questions about the comments, please contact David Chaffin, Project Manager: (617) 348-4005.

Very truly yours,

Anne Malewicz  
Federal Facilities Section Chief  
Bureau of Waste Site Cleanup

Mr. Mark Krivansky

Page 2

September 17, 2003

CC: D. Barney, USN-S. Weymouth  
P. Marajb-Whittemore, USEPA  
Executive Director, SSTDC  
RAB Members  
E. Worrall, MADEP-Boston

**DEP COMMENTS ON  
REVISED PROPOSED PLAN  
FIRE FIGHTING TRAINING AREA  
S. WEYMOUTH NAVAL AIR STATION (RTN 3-2621)  
SEPTEMBER 22, 2003**

**General Comment**

As explained in our June 3, 2003 letter on the previous version of the proposed plan, the Department cannot endorse the proposed plan because it does not indicate that the Navy intends to cleanup the weathered petroleum product observed in test pits excavated at the site in April 2002 and reported in test pits excavated in January 1996. In addition, the revised proposed plan includes several inaccurate statements, identified below, which do not represent site conditions or the Department's position on the proposed plan. If the Navy intends to address the petroleum contamination under the Massachusetts Contingency Plan (MCP), rather than under CERCLA, we recommend that the proposed plan and Record of Decision include explicit statements that indicate that the Navy will address the petroleum contamination under the MCP. Alternatively, as discussed on September 10, the Navy could submit a separate letter that states the intent to address the petroleum contamination under the MCP, and the proposed plan and record of decision could be clarified to indicate that the Navy proposes No Action under CERCLA.

**Specific Comments**

1. Page 2: Under the heading *History of Site Investigations*, the two statements indicating that the risk assessments showed that cleanup was not warranted to protect human health and the environment should be deleted because the risk assessments did not account for the presence of weathered petroleum. Similar statements scattered through the proposed plan should also be deleted.
2. Page 3: Under the heading *Getting the Word Out!*, the statement indicating that DEP selected a No Action decision for the site should be deleted. Remedy selection is a Navy responsibility, not a DEP responsibility; further, DEP cannot agree with the proposed plan because it does not indicate that the Navy intends to cleanup the weathered petroleum at the site.
3. Page 4: Under the heading *What environmental impacts may have resulted from activities at the FFTA?*, characterization of the weathered petroleum observed at the site as "petroleum-like product mixed with soil" understates the situation. DEP, USEPA, and Navy representatives observed and agreed that the material observed in the April 2002 test pits was weathered petroleum product.
4. Page 5: Under the heading *Inorganics*, statements indicating that the metals detected in surface water samples were not attributable to the activities conducted at the site and were "likely from an upstream source" are inconsistent with site conditions. In particular, melted

metal debris, apparently related to fire fighting training activities, is scattered across the site, and the nearest potential alternative source of metals contamination is located more than 500 feet from the site (Runway 8-26), or possibly more than 1,000 feet (if Runway 8-26 is not a potential source).

5. Page 6: The justification provided for No Action under the heading *Why does the Navy propose No Action?*, which indicates that fuel releases at the site did not impact subsurface soils or groundwater and indicates that the risk assessments showed that the site does not pose potential risks to humans or ecological receptors, misrepresents site conditions and the results from the risk assessments. The information gathered during the remedial investigation indicates that weathered petroleum product is present in the subsurface, and indicates that fuel almost certainly migrated through subsurface soil into groundwater (groundwater was encountered at about 3 feet below grade, and elevated manganese concentrations, an indicator of fuel degradation, were reported in groundwater samples collected downgradient of the site). The risk assessments did not address nor account for the presence of weathered petroleum.

Mary A. Parsons  
754 Union St.  
Rockland, MA 02370

September 28, 2003

Mark Krivansky,  
EFA Northeast Remedial Project Manager  
[krivanskyme@efane.navfac.navy.mil](mailto:krivanskyme@efane.navfac.navy.mil)

Dear Mr. Krivansky,

These are my written comments to the Proposed Plan for Operable Unit 4, Fire Fighting Training Area, NAS south Weymouth.

It is my understanding that the EPA laws that govern cleanup of contaminated sites under CERCLA are minimum requirements. The FFTA was used for fire training practice and that jet fuel was poured directly onto the ground or onto an object, such as an automobile, and in later years (1980's) in burn pits. The fuel would be ignited and the fire fighters would extinguish the blaze.

I understand that under CERCLA petroleum is exempt and any petroleum contamination must be addressed under state law. I am requesting to know the Navy's responsibility under Massachusetts state law.

I would like an explanation of Navy's proposed "**NO FURTHER ACTION**" when the April 2002 test pitting effort showed that free -phase light non-aqueous phase liquid (LNAPL) is present at the site. Does this mean that if the state of Massachusetts didn't have environmental laws such as the MCP, the Navy would leave the contamination because it doesn't come under the EPA?

Has the groundwater in bedrock at the FFTA been tested for polychlorinated hydrocarbons? If not, why not? Have you tested fractured bedrock?

Who will be responsible for future contamination found in or near this site?

I would like a written explanation for a comment made, by David Drozd, in 1998 at an SSTTDC meeting (Nov. 19, 1998), suggesting "**the SSTTDC should try to consider ways that meet CERCLA without necessarily requiring a cleanup.**" He then goes on to explain how reuse plans can kill two birds with one stone, such as putting a road over a contaminated site or a parking lot as a cap on a contaminated site. Sorry, but I feel that the Navy is cheating the towns out of a proper cleanup of contaminated sites. And uses community Restoration Advisory Boards as a front to make the community think that the Navy is doing right by the community, when in fact, it doesn't pay attention to the oral or written comments on contaminated sites by the local citizens and town boards. The Navy's mind is made up on what action will be taken on the cleanup of contamination long before that plan is presented to the public. I realize that cleanup of contamination of Navy Base is the lowest priority in the Navy's budget and that the Navy is not in the

environmental cleanup business. If the Navy can pay Lennar Corp. a lump sum for cleanup of NAS South Weymouth: then, I feel that the Navy can take that lump sum and pay a contractor to do the cleanup; therefore, preserving the public's involvement in cleanup of NAS South Weymouth. The Navy currently employs people to oversee this process at NAS South Weymouth and could continue to do this.

Mary A. Parsons  
754 union Street  
Rockland, MA 02370

**Record of Decision  
Naval Air Station, South Weymouth, MA  
Appendices**

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**Appendix E2 Transcript of Public Hearing on the Proposed Plan for the FFTA**

Refer to attached copy.

PUBLIC INFORMATION SESSION  
AND PUBLIC HEARING

Fire Fighting Training Area  
Area of Concern 55A  
Area of Concern 55B

September 10, 2003  
8:30 p.m.  
Naval Air Station  
South Weymouth, MA

*Leavitt Reporting, Inc.*

1207 Commercial Street, Rear  
Weymouth, MA 02189

Tel. 781-335-6791  
Fax: 781-335-7911  
[leavittreporting@att.net](mailto:leavittreporting@att.net)

Hearings ♦ Conferences ♦ Legal Proceedings

1 (Meeting opened at 8:35 p.m.

2 Mark Krivansky, Chairman.)

3 MR. KRIVANSKY: Good evening to  
4 everybody. It is now approximately 8:35. We are  
5 going to get started with the public hearing portion  
6 of this evening's activities. Again, there was  
7 actually three sites that we are discussing:  
8 55A and 55B and also the Fire Fighting Training  
9 Area.

10 What I'm going to ask everybody to do  
11 is please step up to the mike. The mike is only  
12 recording. It doesn't amplify but it gives everyone  
13 a point to stand and be able to communicate to the  
14 Navy their concerns or comments on the proposed  
15 plans for any of the three sites that we've  
16 discussed this evening.

17 What I would ask you to do is a couple  
18 of things. When you first come up, please state  
19 your name, and if you can, please spell your name  
20 for the stenographer so that we make sure we've got  
21 everybody, and we can get these comments back to  
22 them at a later date when they're responded to in  
23 the Responsiveness Summary for the respective record

1 of decision.

2 Also, since there are three sites we're  
3 discussing, I would ask that you let us know what  
4 site you're making your comment on. If it's Fire  
5 Fighting Training Area comments, please state that,  
6 and 55A and/or B, please state that also.

7 We'll stay here this evening until  
8 everybody has had the opportunity to comment.  
9 Again, as part of the public hearing this is to go  
10 on the formal record, the Responsiveness Summary is  
11 where the Navy will respond to your formal comments.  
12 You also have the opportunity to send in comments  
13 either through the mail or electronically by e-mail,  
14 and I encourage everybody to do any way that they  
15 find agreeable. Also you can just drop off written  
16 comments in the back as another option.

17 And we'll stay and listen to  
18 everybody's comments, and then I'd like to thank  
19 everybody, and we'll close the evening. And  
20 there is a RAB tomorrow night, just to remind  
21 anybody who is interested.

22 We're not going to talk about any  
23 particular site. I'll let you come up and tell me

1 what site your comment is. I welcome the first  
2 person to please step up. Mary.

3 MS. PARSONS: My name is Mary Parsons,  
4 P A R S O N S, and I'm from the Town of Rockland. I  
5 am sorry, I just got here. I didn't have the  
6 benefit of your earlier informational meeting. I  
7 came from one hearing which I was involved in to  
8 this hearing.

9 But I had a question on the EPA's  
10 minimum requirements on the Fire Fighter Training  
11 Area. What made this a Superfund site? Because of  
12 the fuel involved in it? Anyone?

13 MR. KRIVANSKY: Just as part of the  
14 public hearing, the Navy although is going to  
15 respond, this is where you state a comment.

16 MS. PARSONS: This is just going to be  
17 on the record.

18 MR. KRIVANSKY: We take it down and  
19 then we'll respond.

20 MS. PARSONS: And you'll respond in  
21 writing?

22 MR. KRIVANSKY: Right.

23 MS. PARSONS: My other question, does

1 this now become an MCP site under the Department of  
2 Environmental Protection of Massachusetts? And did  
3 anyone look into polychlorinated hydrocarbons in the  
4 fractured bedrock because it states here you only  
5 went down so far in the surface and there is many  
6 layers of pavement. So I would like those answered.

7 And concerning areas of concern, 55B,  
8 there is a statement, "The average concentration of  
9 chromium in surface soil also exceeded the  
10 terrestrial invertebrate benchmark values." I  
11 didn't see where you stated what type of chromium.  
12 And I would like to know an answer to that.

13 And it also says, "However, because of  
14 the uncertainties associated with the soil benchmark  
15 values, further action at this AOC was not  
16 recommended based on these exceedances." I don't  
17 quite understand how you, when you say no further  
18 action when it exceeds benchmark. So I would like  
19 that clarified.

20 And then on another subject that is  
21 more related to this, goes back to like 1999 and  
22 into the meeting minutes of the South Shore Tri-Town  
23 Development Corporation and the Navy real estate

1 person, it was in their meeting minutes, and I think  
2 the date is November 1999, and I will clarify it in  
3 written comments, that Mr. David Drozd is suggesting  
4 to the SSTDC to meet certain requirements without  
5 necessarily cleaning up. And I would like to have  
6 that statement addressed if that's the Navy's  
7 intent. Because as I see it, I'm seeing more no  
8 further action involved here than basically removing  
9 these Superfund sites. So I really would like a  
10 statement from the Navy in writing concerning that  
11 because it kind of gives the perception that you're  
12 trying to get out of here without really cleaning  
13 up. And your idea of clean-up may be different than  
14 the residents' idea of clean-up. Thank you.

15 MR. KRIVANSKY: Thank you, Mary. We  
16 welcome anyone else that may have a comment. Please  
17 step forward.

18 MS. WHITTEMORE: Patty Whittemore,  
19 EPA, Fire Fighting Training Area. EPA will just  
20 submit a written statement for the record.

21 (Ms. Whittemore then distributed copies  
22 of an EPA comment letter.)

23 MR. KRIVANSKY: I encourage whoever

1 would like to step forward. I am going to wait a  
2 few minutes. I don't know if there are any late  
3 arrivals, to make sure we don't miss anybody that  
4 wants to take advantage of this evening, if you feel  
5 you have an opportunity to please step forward.  
6 Otherwise you are welcome to exit at your  
7 convenience.

8 MR. CHAFFIN: Dave Chaffin, DEP, just a  
9 brief statement. DEP cannot endorse the proposed  
10 plan as written because it doesn't indicate that the  
11 Navy intends to clean up the weathered petroleum  
12 product that we observed at the site. And because  
13 it includes several statements that misrepresents  
14 site conditions. We'll submit written comments  
15 before the close of the public comment period.

16 MR. KRIVANSKY: Thank you. Is anybody  
17 going to make a comment? We're more than happy to  
18 -- I was sure someone's cell phone would go off.

19 I would like to thank everybody for  
20 coming this evening, if it was for the poster  
21 session, the informational session, or for the  
22 hearing. If there are no further comments, we'll  
23 close the public hearing for 55A, B, and Fire

1 Fighter Training. Thank you and good evening.

2 (Whereupon the hearing concluded at 8:50 p.m.)

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