Moffett Federal Airfield Proposed Plan for No Further Action Sites

Moffett Federal Airfield, California *December 2001*

U.S. NAVY ANNOUNCES PROPOSED PLAN

The U.S. Navy invites you to comment on the results of environmental investigations and on its proposed no-action plan for the following sites at Moffett Federal Airfield, California:

- Site 23 - Golf Course Fill Area 3
- Weapons Storage Bunkers
- Upland Soils
- Stationwide Remedial Investigation Human Health Risk Assessment Exposure Areas 4090 and 4158

PUBLIC COMMENT PERIOD

December 15, 2001 to January 28, 2002

PUBLIC MEETING

Thursday, January 10, 2002
7:30 p.m.
At the Mountain View City Council Chambers

See page 13 of this proposed plan for more detailed information.

Inside this Fact Sheet:

- Introduction
- History of Environmental Investigations
- Summary Descriptions and Rationale for Proposing No Action at Each Site
- The No Action Preferred Alternative
- Glossary of Terms
- Information Repository
- Community Participation
- For More Information
- Dates to Remember

The location of Moffett Federal Airfield is shown in Figure 1. See Figure 2 for the location of the five sites proposed for no action at Moffett Federal Airfield. All words that appear in **bold print** are defined in the glossary of terms on page 11.

INTRODUCTION

This **proposed plan** explains the Navy's proposal that no cleanup action be taken at these sites. The Navy, the **U.S. Environmental Protection Agency (EPA)**, and the **California Regional Water Quality Control Board (RWQCB)**, San Francisco Bay Region, evaluated the results of field investigations, laboratory analysis, and the **human health risk assessment (HHRA)** and the **ecological risk assessment (ERA)** for these sites. Based on the low chemical concentrations detected at the five sites, they concluded that the risk levels are within or below EPA's range of allowable risks for protection of human health and the environment. The information evaluated is detailed in a **remedial investigation (RI)** report, a **feasibility study (FS)** report, an addendum to the FS report, and other site documentation, and is summarized in this proposed plan. This proposed plan explains why the Navy is proposing that no action be taken at these five sites and provides the public an opportunity to comment.

The 45-day public comment period on the proposed plan begins December 15, 2001, and ends January 28, 2002. A public meeting will be held at 7:30 p.m. on Thursday, January 10, 2002 at the Mountain View City Council Chambers. You are encouraged to submit written or oral comments on the Navy's proposed no-action plan for these sites. The Navy, in consultation with EPA and RWQCB, will select a final remedy (under federal guidelines, no action is considered a "remedy") for these sites, taking into account comments received from the community, after the public comment period has ended. All significant responses to comments will be addressed in a Responsiveness Summary. The Responsiveness Summary will be part of the **Record of Decision (ROD)**, which will formally document the environmental decision for these sites.

ACRONYMS USED IN THIS PROPOSED PLAN

CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
EPA	U.S. Environmental Protection Agency
ERA	Ecological Risk Assessment
FS	Feasibility Study
HHRA	Human Health Risk Assessment
IRP	Installation Restoration Program
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NPL	National Priorities List
PAHs	Polynuclear Aromatic Hydrocarbons
PCBs	Polychlorinated Biphenyls
RI	Remedial Investigation
ROD	Record of Decision
RWQCB	California Regional Water Quality Control Board
SVOCs	Semivolatile Organic Compounds
TPH	Total Petroleum Hydrocarbons
VOCs	Volatile Organic Compounds

The RI report, FS report, addendum to the FS report, and other documents that describe the field investigations, laboratory analysis, and risk assessments at these sites are contained in the **Administrative Record** file and are available for public review at the Mountain View Public Library (see page 12 for location and hours). This proposed plan highlights information and is intended to be a companion document to the RI and FS reports. The Navy encourages the public to review the documents in the Administrative Record file to gain an understanding of these sites and the environmental assessments and investigations that have been conducted. The Navy is issuing this proposed plan as part of its public participation responsibilities under Section 117(a) of the **Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)**, also known as "**Superfund,**" and Section 300.430(f)(2) of the **National Oil and Hazardous Substances Pollution Contingency Plan (NCP)**. The next steps in the CERCLA process are described in Figure 3 on page 4.

HISTORY OF ENVIRONMENTAL INVESTIGATIONS

In 1984, the Navy began environmental assessments and investigations at Moffett Federal Airfield. The Airfield was included on the Superfund National Priorities List in 1987. The Navy, EPA, and the State of California signed a **Federal Facility Agreement** on September 14, 1990. The Federal Facility Agreement outlines the Navy's responsibility for investigation and cleanup of contamination that resulted from past Navy activities at Moffett Federal Airfield.

The stationwide FS report for Moffett Federal Airfield was completed on September 30, 1999. In the stationwide FS report, the Navy identified and evaluated a range of alternatives to clean up environmental contamination at sites that had not been assessed in other remedial actions at Moffett Federal Airfield. In October 2000, the Navy, EPA, and RWQCB renegotiated the Federal Facility Agreement. During negotiations, the Navy proposed, and EPA and RWQCB agreed, that the sites recommended for no action in the stationwide FS report would be addressed separately from other stationwide sites. The addendum to the stationwide FS report provided additional documentation to support the recommendations for no action at specific sites. This proposed plan specifically pertains to the sites proposed for no action in the addendum to the stationwide FS report.

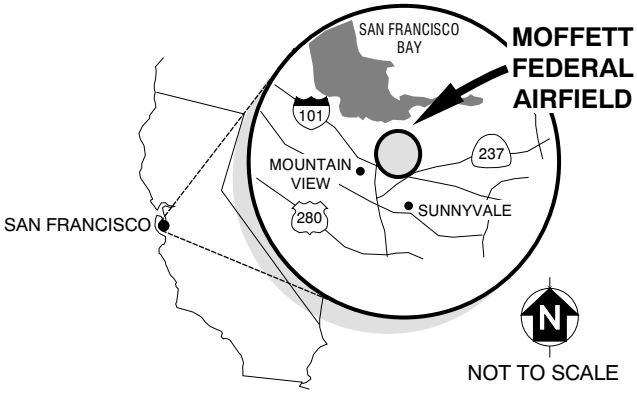


FIGURE 1: LOCATION MAP

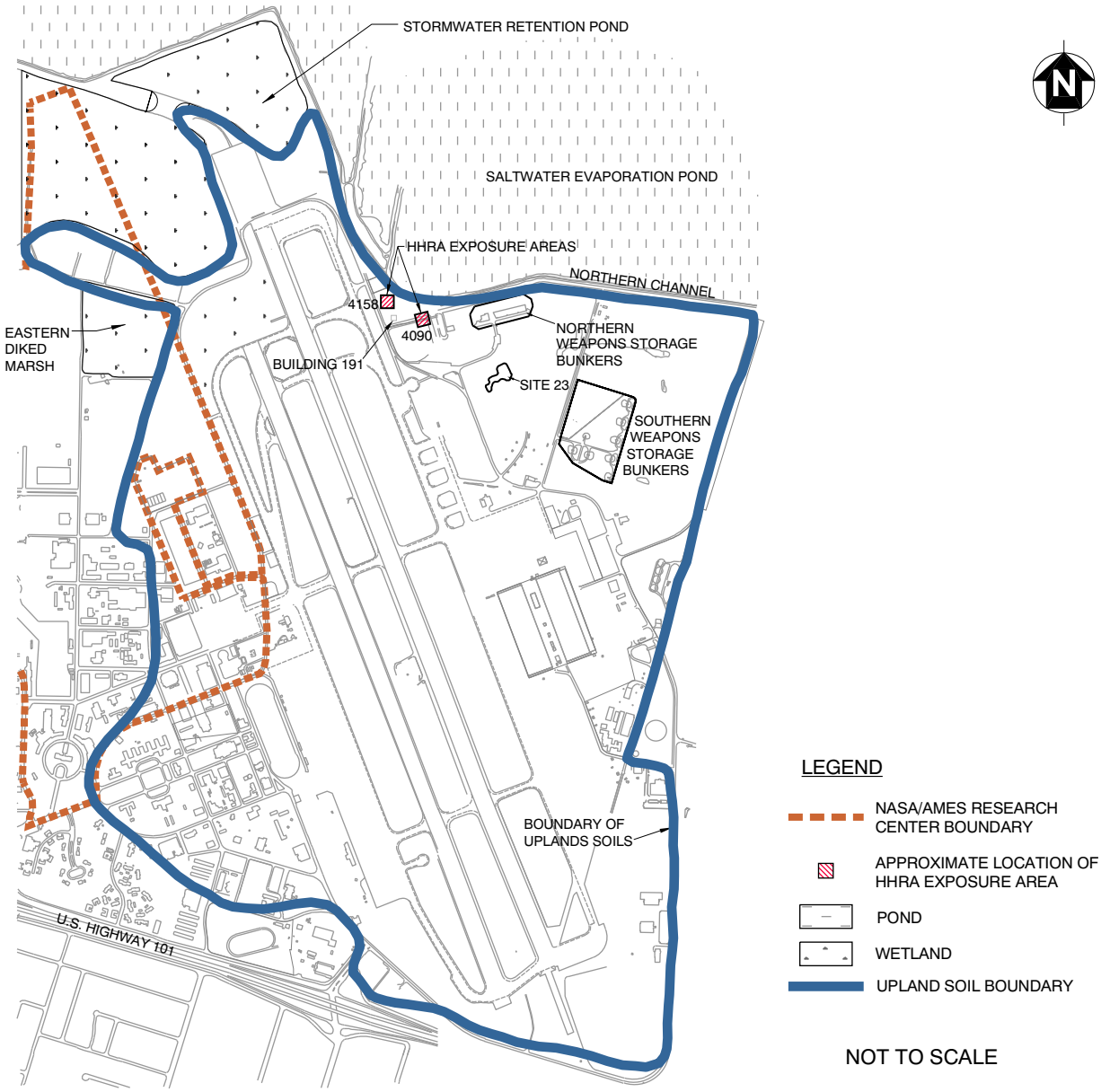


FIGURE 2: SITE LOCATION MAP, MOFFETT FEDERAL AIRFIELD

SUMMARY DESCRIPTIONS AND RATIONALE FOR PROPOSING NO ACTION AT EACH SITE

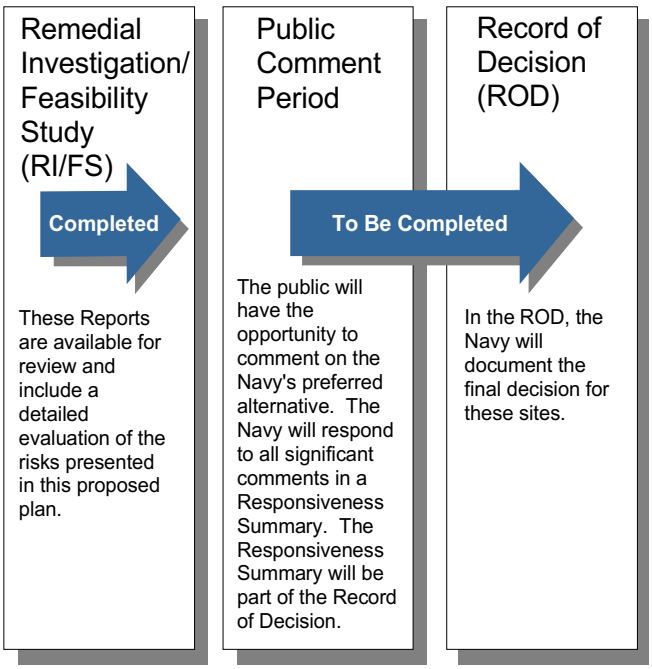
The Navy began environmental assessments and investigations at Moffett Federal Airfield in 1984 to identify various sites that posed potential risks to human health and the environment. This section presents a brief description of the conditions at each site; summarizes previous investigations conducted at each site, including the nature and extent of contamination; and presents the results of the HHRA and where appropriate, ERA for each site. See Figure 2 for the specific location of the five sites at Moffett Federal Airfield. **Groundwater** at these sites has already been addressed in previous records of decision for Moffett Federal Airfield.

(continued on page 6)

To better understand the site descriptions and risk values presented in this section, please refer to Table 1 on page 4, and read the risk assessment process discussion in the shaded box on page 5.

FIGURE 3: THE CERCLA PROCESS

What's Next at Site 23, Weapons Storage Bunkers, Upland Soils, and Exposure Areas 4090 and 4158



THE NEXT STEPS

1. Public Comment Period
   If new information or comments submitted during the comment period are sufficient to support changes, the Navy's decision may be different from the no-action alternative presented in this proposed plan.
2. Final Decision
   The Navy willl evaluate the comments received during the public comment period and make a final decision for each site. The final decision will be documented in a Record of Decision.

TABLE 1: RISK RANGES TO PROTECT HUMAN HEALTH

Health Risks	Risk Estimates of Potential Concern	Generally Allowable Risk Estimates	Allowable Risk Estimates
Cancer	More than 1 additional cancer case in a population of 10,000 (greater than 1×10^{-4})	1 additional cancer case in a population of 10,000 to 1 additional cancer case in a population of 1,000,000 (1×10^{-4} through 1×10^{-6})	Less than 1 additional cancer case in a population of 1,000,000 (less than or equal to 1×10^{-6})
Noncancer	A hazard index greater than 1 should be evaluated further	Hazard index equal to 1	A hazard index less than 1

THE RISK ASSESSMENT PROCESS

As part of the stationwide RI, the Navy conducted human health and ecological risk assessments that followed federal and state guidelines. The risk assessments for Moffett Federal Airfield included the sites presented in this proposed plan. These risk assessments evaluated the potential risks to human health and the environment from exposure to chemicals identified at these sites. For an overview of the ecological risk assessment for these sites, please see the sections on the Weapons Storage Bunkers and Upland Soils. The human health risk assessments identified contaminants, **exposure pathways**, potential human **receptors**, and the possible risks of exposure to the contaminants using the following four-step process:

- Step 1: Evaluating Contamination
- Step 2: Identifying Exposure Pathways
- Step 3: Estimating Health Hazards
- Step 4: Characterizing Site Risks

Evaluating Contamination

In Step 1, the Navy examined concentrations of chemicals found at a site as well as past scientific studies on the effects of these chemicals on people. The types and quantities of chemicals present in soil at the five sites presented in this proposed plan were investigated under the stationwide RI.

Identifying Exposure Pathways

In Step 2, the Navy considered the various ways that people might be exposed to the contaminants identified in Step 1, the concentrations that people might be exposed to, and the potential frequency and duration of exposure. Three human health risk scenarios were initially considered at Moffett Federal Airfield. These three scenarios consisted of residential (housing), recreational (hiking, playing golf), and occupational (employment facilities and work areas) scenarios. The human health risk assessment estimates the risk posed to an individual who is exposed to contaminants in soil through pathways that include soil contact with the skin, eating soil, and inhaling dust particles. Wherever possible, site-specific information is used in the risk assessment process.

Estimating Hazards

In Step 3, the Navy used information from Step 2 combined with information on the toxicity of each chemical to assess potential health risks. EPA considers two types of risk: cancer and noncancer. The likelihood that any kind of cancer would result from chemicals at a site is generally expressed as a probability - for example, "1 additional cancer case in 10,000 people." Estimates of cancer risk are typically presented in scientific notation - for example, a 1 in 10,000 chance, would be expressed as 1×10^{-4} and a 1 in 1 million chance as 1×10^{-6}. EPA's generally allowable risk range is 1×10^{-4} through 1×10^{-6} (see Table 1 on page 4 for more information).

For noncancer evaluation, a degree of safety is built into the calculation of hazard indices. Therefore, EPA considers a hazard index of less than 1 as safe, and does not expect any health effects. A hazard index of greater than 1 indicates that a lifetime of exposure to the chemical may have the potential to cause adverse health effects and should be evaluated further. This by itself does not require cleanup action, but indicates the need to take into account the types of chemicals, historical activities, and potential toxic effects of the chemicals of potential concern.

Calculated risk levels are an indication of potential risk, and are not absolute predictions that health effects will occur at a certain level. Actual human exposures and health effects are likely to be less than are calculated for the risk assessment. Assumptions made during the risk assessment process provide a margin of safety to protect public health and are designed to overestimate potential risk.

Characterizing Site Risks

In Step 4, the Navy and regulatory agencies decide whether site risks are high enough to cause health problems for people at or near the sites. The results of the three previous steps are combined, evaluated, and summarized.

EPA provides guidelines to be used to assess the types of chemicals, degree of exposure to the chemicals, and potential toxic effects of the chemicals of concern. EPA has established the risk ranges to protect human health to assist with the risk management decision. These ranges are presented in Table 1 on page 4.

Site 23 - Golf Course Fill Area 3

Description

Site 23 is located on 2 acres just south of the Northern Weapons Bunkers area, in the western portion of the golf course (Figure 2). The area was used for incidental disposal of excess soil and debris from the golf course, including, piles of soil, concrete, crushed asphalt, grass clippings, and mulch. There is no historical information to suggest that hazardous substances were disposed of in Golf Course Fill Area 3.

Nature and Extent of Contamination

Golf Course Fill Area 3 was investigated as part of the stationwide RI. Samples of subsurface soil and surface debris were collected and analyzed for **volatile organic compounds (VOC)**, **semivolatile organic compounds (SVOC)**, **total petroleum hydrocarbons (TPH)**, pesticides, **polychlorinated biphenyls (PCB)**, and metals.

Low levels of petroleum-related VOCs, SVOCs, and TPH were found in both samples of subsurface soil and surface debris. Pesticides were also found, but only in several samples of surface debris. No PCBs were detected. Metals were found in soil samples collected, but at concentrations that are typical and occur naturally in soils. The chemicals found are consistent with the type of surface debris in the area and the pesticides used for maintenance at the golf course.

Summary of Potential Risk

At Site 23, humans could be exposed to contaminants in soil through pathways that include contacting soil with the skin, eating soil, and inhaling dust particles. The Navy evaluated possible risks to humans under three scenarios: residential (living in the area), occupational (working in the area), and recreational (playing in the area). The results of the HHRA for Site 23 are as follows.

	Total Hazard Index	Total Cancer Risk
Residential Exposure Scenario	0.11 (less than 1)	2.0×10^{-5}
Occupational Exposure Scenario	0.02 (less than 1)	9.1×10^{-10}
Recreational Exposure Scenario	0.01 (less than 1)	2.6×10^{-10}

Based on the risk estimates, Site 23 does not pose a significant human health risk. The potential carcinogenic (cancer-causing) risks for Site 23 are well below the EPA's allowable risk range (1×10^{-4} through 1×10^{-6}) for occupational and recreational exposures. The potential carcinogenic risk for residents exposed to the soil at Site 23 over 30 years does not exceed two additional cases per 100,000 people (2.0×10^{-5}). The cancer risk at Site 23 is within EPA's allowable range (1×10^{-4} through 1×10^{-6}) for residential use. Residential development at Site 23 is unlikely because the site will remain a recreational golf course under future land-use scenarios. To better understand the risk estimates for Site 23, please read the discussion on the risk assessment process in the shaded box on page 5.

The risk from chemicals that cause diseases other than cancer (the “noncancer risk”) at Site 23 is below EPA's allowable level (equal to 1) and does not pose a risk for the residential, occupational, or recreational users.

The ERA was conducted to evaluate the potential for contact between ecological receptors (animals and plants) and contaminants. Site 23 was included in the ERA for upland soils and is discussed in further detail in the summary of potential risk from upland soils.

Rationale for Proposing No Action

The results of the investigation at Golf Course Fill Area 3 indicate that potential risk to human health is within EPA's generally allowable risk range. No ecological risk was identified specifically for Golf Course Fill Area 3. Therefore, the Navy proposes no action for Golf Course Fill Area 3.

Weapons Storage Bunkers

Description

There are two groups of weapons storage bunkers: the Northern Weapons Storage Bunkers, and the Southern Weapons Storage Bunkers. The weapons storage bunkers are located in two fenced areas in the northeastern portion of Moffett Federal Airfield, near the golf course (Figure 2). The Northern Weapons Storage Bunkers cover about 5 acres and include seven high-explosive magazines. The Southern Weapons Storage Bunkers cover about 10 acres and include nine high-explosive magazines.

Each magazine consists of a heavy-gauge, corrugated steel arch that forms its roof and sides. The floors of the magazines are concrete, without drains. Each magazine is about 30 feet long, 20 feet wide, and 20 feet high. The magazines are covered with soil to form long, earth-covered bunkers. Only one magazine in the Northern Weapons Storage Bunkers is still used to store ammunition and holds ordnance for the California Air National Guard. The Northern Weapons Storage Bunkers contained two diesel underground storage tanks. One of the tanks was removed in 1992, and the other tank was removed in 1994. No source for or evidence of contamination was identified in the Southern Weapons Storage Bunkers.

Nature and Extent of Contamination

The area near the Northern Weapons Storage Bunkers was investigated as part of the stationwide RI. An inventory of the Northern Weapons Storage Bunkers revealed two diesel storage tanks in the area. These tanks were evaluated and removed under RWQCB oversight. The soil samples collected in the Northern Weapons Storage Bunkers were analyzed for VOCs, SVOCs, TPH, PCBs, pesticides, and metals. Only metals were found in soil samples collected, but at concentrations that are typical and occur naturally in soils. No soil samples were collected at the Southern Weapons Storage Bunkers because no evidence of soil contamination was identified.

Summary of Potential Risk

At the Northern Weapons Storage Bunkers, humans could be exposed to metals in soil through pathways that include soil contact with the skin, eating soil, and inhaling soil dust particles. The Navy evaluated possible risks to humans under the residential exposure scenario. The results of the residential exposure scenario used in the HHRA for the Northern Weapons Storage Bunkers are as follows.

	Total Hazard Index	Total Cancer Risk
Residential Exposure Scenario	0.16 (less than 1)	1.0×10^{-5}

The potential carcinogenic risk for residents exposed to the soil at the Northern Weapons Storage Bunkers over 30 years does not exceed one additional cancer case per 100,000 people (1.0×10^{-5}). The cancer risk at the Northern Weapons Storage Bunkers is within EPA's allowable range (1×10^{-4} through 1×10^{-6}) for residential use. The risk under the occupational exposure scenario was not evaluated at the Northern Weapons Storage Bunkers. However, if the risk were evaluated, it would be lower than the residential exposure. To better understand the risk estimates for the Northern Weapons Storage Bunkers, please read the discussion of the risk assessment process in the shaded box on page 5.

The noncancer risk at the Northern Weapons Storage Bunkers is below EPA's allowable level (equal to 1) and does not pose a risk to residential or occupational users. No soil samples were collected in the Southern Weapons Storage Bunkers because no source for or evidence of soil contamination was identified. Therefore, no risk assessment was conducted for the Southern Weapons Storage Bunkers.

A stationwide ERA was completed at Moffett Federal Airfield in 1997. The burrowing owl was identified as the indicator species for the ERA. Indicator species are animals or plants that represent either a sensitive individual or population found at the site. Burrowing owls have been seen only in the Northern Weapons Storage Bunkers area. Dr. Lynne Trulio of San Jose State University has studied the population of burrowing owls extensively at Moffett Federal Airfield since 1998. According to Dr. Trulio, the population of burrowing

owls at Moffett Federal Airfield, including the Northern Weapons Storage Bunkers area, is healthy compared with other populations in the southern San Francisco Bay area. In fact, the population of breeding pairs of burrowing owls has been stable over the past 8 years, which Dr. Trulio attributes to Moffett Federal Airfield's management of the owls and their habitat. Dr. Trulio's research indicates that there do not appear to be any adverse effects on the burrowing owl population at Moffett Federal Airfield and at the Northern Weapons Storage Bunkers area in particular.

In summary, the result of the HHRA for the Northern Weapons Storage Bunkers is within EPA's allowable range and no ecological risk to the burrowing owl was identified for either of the weapons storage bunker areas.

Rationale for Proposing No Action

All tanks associated with the Weapons Storage Bunkers have been closed. No contamination has been identified in the Weapons Storage Bunkers. In addition, no risk to human health or ecological receptors has been identified. Therefore, the Navy proposes no action for the Weapons Storage Bunkers.

Upland Soils

Description

Upland soils are areas of Moffett Federal Airfield that support upland plant communities and include virtually all areas at the airfield that are not covered by ditches, marshes, or wetlands. Human activity has been significant in these areas. Certain areas of upland soils such as open grassy areas and the edges of golf courses and recreational fields are actively managed as burrowing owl habitat, but the majority of upland soils areas are either paved, landscaped, or have been altered substantially by land use during the last 100 years.

Nature and Extent of Contamination

Upland soils have been analyzed as a part of other investigations at Moffett Federal Airfield. Data for 225 samples collected from the upper 3 feet of upland soils during previous investigations at Moffett Federal Airfield were included in the data set for the stationwide ERA. Because all of the data were collected during previous investigations, many of the contaminated areas identified in the stationwide ERA have been or are being addressed under specific remedial actions.

Polynuclear aromatic hydrocarbons (PAH) and petroleum hydrocarbons were found infrequently in samples of upland soils. PCBs were found in less than 12 percent of the samples of upland soil that were not collected in landfills. Pesticides were found in 26 percent of upland soil samples. Concentrations of the metals cadmium, lead, mercury, thallium, and zinc were elevated in a few samples of upland soil.

Summary of Potential Risk

During the stationwide ERA, Moffett Federal Airfield was divided into upland and wetland areas based on classification systems used by the U.S. Fish and Wildlife Service and U.S Army Corps of Engineers for upland and wetland plant communities. Data from previous investigations at Moffett Federal Airfield were included in the data set to evaluate upland soils. Upland soils have been evaluated for risk to human health separately; these areas are addressed either under separate actions, or the assessment concluded there was no risk to human health.

The burrowing owl was identified as the indicator species in the ERA conducted for the upland soils. As discussed in the summary of potential risk for the weapons storage bunkers on page 7, Dr. Trulio has studied the burrowing owl population extensively at Moffett Federal Airfield since 1998. According to Dr. Trulio's observations, the burrowing owl population is healthy and stable and does not appear to be adversely affected by the low levels of pesticides, PAHs, TPH, and metals in upland soils.

Rationale for Proposing No Action

Because no source of contamination was identified for the upland soils and the burrowing owl population (the receptor identified as the most sensitive) does not appear to be adversely affected by contaminants at the site, the Navy proposes no action for upland soils.

■ HHRA Exposure Area 4090

Potential risks to human health posed by contamination at Moffett Federal Airfield were assessed using an exposure area approach for the HHRA conducted as part of the stationwide RI. Moffett Federal Airfield was divided into a grid of equal half-acre squares, which is consistent with the size of a city lot, to establish the exposure areas. Each half-acre square, called an exposure area, was then assigned a unique number. According to the HHRA in the stationwide RI, Exposure Area 4090 was not associated with a specific stationwide site (Figure 2). No historical information has been found to indicate that hazardous substances were released at the site.

Description

HHRA Exposure Area 4090 overlies a portion of North Patrol Road Ditch and a small portion of Installation Restoration Program (IRP) Site 2, Golf Course Landfill.

Nature and Extent of Contamination

Samples of soil collected at the exposure area were analyzed for TPH, PCBs, pesticides, and metals. Low levels of TPH, PCBs, pesticides, and metals were found in the soil samples collected.

Summary of Potential Risk

At HHRA Exposure Area 4090, humans could be exposed to contaminants in soil through pathways that include soil contact with the skin, eating soil, and inhaling dust particles. HHRA Exposure Area 4090 is primarily a ditch. Under all reasonable future land-use scenarios, it would be maintained as a drainage ditch for flood control, and residential development would be prohibited. Current and future occupational exposures at the ditch consist of maintenance operations. Therefore, the Navy evaluated possible risks to humans under an occupational scenario.

Risk was estimated using site-specific exposure data for this area. The site-specific occupational exposure estimates used for Exposure Area 4090 assume that maintenance personnel visit the ditch for a maximum of 1 hour per day, 250 days per year, for 25 years. Under this site-specific occupational scenario, the results of the human health risk assessment for Exposure Area 4090 are as follows.

	Total Hazard Index	Total Cancer Risk
Occupational Exposure Scenario	0.19 (less than 1)	2.9×10^{-7}

The site-specific potential carcinogenic risk for workers exposed to the soil at Exposure Area 4090 does not exceed 2.9 additional cancer cases per 10 million people (2.9×10^{-7}). The cancer risk at Exposure Area 4090 is below EPA's allowable risk (1×10^{-6}) for occupational use. The site-specific noncancer-causing risk at Exposure Area 4090 is below EPA's allowable level (equal to 1) and does not pose a risk to occupational users. To better understand the risk estimates for Exposure Area 4090, please read the discussion of the risk assessment process in the shaded box on page 5.

Ecological risk was not specifically evaluated for HHRA Exposure Area 4090, but the area was included in the stationwide ecological assessment for wetland areas and is being addressed under a separate action.

Rationale for Proposing No Action

HHRA Exposure Area 4090 is part of North Patrol Road Ditch. Under all reasonable future land-use scenarios, it would be maintained as a drainage ditch for flood control. Residential development is unlikely, and the site-specific occupational cancer risk and noncancer hazard index estimates are below EPA's allowable levels with respect to human health. Potential risks to ecological receptors for the entire North Patrol Road Ditch will be evaluated as part of the Northern Channel Feasibility Study. Therefore, the Navy proposes no action for HHRA Exposure Area 4090.

HHRA Exposure Area 4158

Potential risks to human health posed by contamination at Moffett Federal Airfield were assessed using an exposure area approach for the HHRA conducted as part of the stationwide RI. As with Exposure Area 4090, Moffett Federal Airfield was divided into a grid of equal half-acre squares. Each half-acre square was then assigned a unique number. According to the HHRA in the stationwide RI, Exposure Area 4158 was not associated with a specific stationwide site (Figure 2). No historical information has been found to indicate that hazardous substances were released at the site.

Description

HHRA Exposure Area 4158 is located slightly south of IRP Site 11, the Engine Test Stand Area. Sampling locations that are part of Site 11 are located in the center of HHRA Exposure Area 4158. A concrete and asphalt pad covers Site 11. In addition, it is fenced and access is limited to authorized personnel.

Nature and Extent of Contamination

Surface and subsurface samples were collected, and low levels of VOCs, SVOCs, TPH, and metals were found in some of the soil samples.

Summary of Potential Risk

At HHRA Exposure Area 4158, humans could be exposed to contaminants in soil through pathways that include soil contact with the skin, eating soil, and inhaling dust particles. The Navy evaluated possible risks to humans under two scenarios: residential and occupational. The results of the HHRA for Exposure Area 4158 are as follows.

	Total Hazard Index	Total Cancer Risk
Residential Exposure Scenario	0.95 (less than 1)	9.2×10^{-5}
Occupational Exposure Scenario	0.16 (less than 1)	2.5×10^{-5}

The potential carcinogenic risk for residents exposed to the soil at Exposure Area 4158 over 30 years does not exceed 9.2 additional cancer cases per 100,000 people (9.2×10^{-5}). The potential carcinogenic risk for workers exposed to soil at Exposure Area 4158 does not exceed 2.5 cancer cases per 100,000 people (2.5×10^{-5}). The cancer risks at Exposure Area 4158 are within EPA's allowable range (1×10^{-4} through 1×10^{-6}) for residential and occupational users. The noncancer risks at Exposure Area 4158 are below EPA's allowable level (equal to 1) and do not pose a risk to residential and occupational users. To better understand the risk estimates for Exposure Area 4158, please read the discussion of the risk assessment process in the shaded box on page 5.

Ecological risk was not specifically evaluated for HHRA Exposure Area 4158, but was included in the stationwide ecological assessment for upland soils. As explained on page 8, no ecological risks were identified for upland soils.

Rationale for Proposing No Action

Site 11 was investigated during the RI for Operable Unit 2-East and no risks to human health were identified. A no-action ROD was signed for Operable Unit 2-East in October 1994. Although Site 11 was closed in 1994, risk at HHRA Exposure Area 4158 was evaluated as part of the Moffett Federal Airfield stationwide HHRA. The results of the investigation at HHRA Exposure Area 4158 indicate that potential risk to human health is within EPA's generally allowable risk range. No ecological risk was identified specifically for HHRA Exposure Area 4158. Therefore, the Navy proposes no action for HHRA Exposure Area 4158.

THE NO ACTION PREFERRED ALTERNATIVE

Under CERCLA, no action is appropriate for sites when there is no current or potential threat to human health or the environment. As discussed in this proposed plan, the HHRA for these sites shows that, under the current and most likely future use scenarios, the sites do not pose a threat to human health. The ERA for these sites also indicates that there is no threat to the environment. Therefore, the Navy proposes no action for these sites.

GLOSSARY OF TERMS

Administrative Record Documents that contain information the government relies on to select response actions including the RI/FS, the proposed plan, the ROD, and public comments.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA or Superfund) A law that establishes a program to identify hazardous waste sites and establishes procedures for cleaning up sites to be protective of human health and the environment.

Ecological Risk Assessment (ERA) An analysis of the potential harm to plants and animals exposed to hazardous substances released from a site.

Exposure Pathway The way a chemical comes in contact with living organisms.

Federal Facility Agreement An agreement signed by the Navy, EPA, and RWQCB that sets forth the actions and schedule the Navy is expected to meet to address environmental contamination at Moffett Federal Airfield.

Feasibility Study (FS) A study to identify, screen, and compare ways to clean up contamination.

Groundwater Water present below the ground surface.

Human Health Risk Assessment (HHRA) An analysis of the potential negative human health effects caused by hazardous substances released from a site.

National Oil and Hazardous Substances Pollution Contingency Plan (NCP) Regulations for cleaning up sites under CERCLA.

Polychlorinated biphenyls (PCBs) Toxic chemicals formerly used in transformer oils to keep them cool.

Polynuclear aromatic hydrocarbons (PAHs) Complex organic compounds associated with petroleum products.

Proposed Plan A document that reviews the cleanup alternatives presented in the FS, summarizes the recommended cleanup actions, explains the reasons for recommending them, and solicits comments from the community.

Record of Decision (ROD) A decision document that identifies the cleanup alternative chosen for implementation at a Superfund site based on information from the RI/FS and public comments.

Receptor A representative human or animal that is used in evaluating risks. For example, when the human health risks for an occupational scenario are evaluated, a construction worker is the hypothetical receptor.

Regional Water Quality Control Board (RWQCB) A state environmental regulatory agency that is providing oversight of environmental restoration at Moffett Federal Airfield.

Remedial Investigation (RI) An investigation of the types, amounts, and locations of contamination at a site.

Semivolatile Organic Compounds (SVOCs) Organic (carbon-containing) compounds, such as certain oils and pesticides, that do not evaporate readily at room temperature.

Superfund The common name for CERCLA. It refers to a fund of dollars designated for cleanup that is created by a tax on oil and gas industries.

Total Petroleum Hydrocarbons (TPH) Organic compounds that are either fuel or components of fuel.

U.S. Environmental Protection Agency (EPA) The lead regulatory agency that provides oversight of the environmental restoration at Moffett Federal Airfield.

Volatile Organic Compounds (VOCs) Organic compounds, such as dry-cleaning solutions or degreasing solvents, that evaporate readily at room temperature.

INFORMATION REPOSITORY

All site-related documents are available for review at:

Mountain View Public Library
585 Franklin Street
Mountain View, California 94041
Contact: Reference Desk
Monday through Thursday 10:00 a.m. to 9:00 p.m.
Friday and Saturday 10:00 a.m. to 6:00 p.m.
Sunday 1:00 p.m. to 5:00 p.m.

Documents Pertinent to this Proposed Plan include:

- Final Station-wide Remedial Investigation Report, Moffett Federal Airfield, California - May 1996
- Final Phase I Site-wide Ecological Assessment Report - September 1995
- Final Phase II Site-wide Ecological Assessment Report - July 1997
- Revised Final Station-wide Feasibility Study Report - September 1999
- Revised Final Responses to Comments on the Revised Final Stationwide FS Report - March 2, 2001
- Draft Final Addendum to the Revised Final Stationwide Feasibility Study Report - July 6, 2001

COMMUNITY PARTICIPATION

The Navy, EPA, and RWQCB provide information on the proposed no-action plan for Site 23, Weapons Storage Bunkers, upland soils, and Exposure Areas 4090 and 4158 to the public through public meetings, the Moffett Federal Airfield Administrative Record file, and announcements published in the *San Jose Mercury News*. The Navy, EPA, and RWQCB encourage the public to gain a more comprehensive understanding of these sites and the Superfund activities that have been conducted at Moffett Federal Airfield.

There are two ways for you to provide your comments during the public comment period between December 15, 2001 and January 28, 2002. You may send written comments to:

Mr. Art Tamayo, Remedial Project Manager
Engineering Field Division Southwest
Naval Facilities Engineering Command
1230 Columbia Street, Suite 1100
San Diego, California 92101
Telephone: (619) 532-0981
Fax: (619) 532-0940
E-mail: tamayoar@efdsw.navfac.navy.mil

Alternatively, you may submit your comments during the public meeting beginning at 7:30 p.m. on Thursday, January 10, 2002, at the Mountain View City Council Chambers. A court reporter will be at the meeting to record public comments.

After the public comment period is over, the Navy, EPA, and RWQCB will review and consider the submitted comments before making a final decision on the remedial action alternative to be used at these sites. Responses to significant comments will be addressed in a Responsiveness Summary. The Responsiveness Summary will be part of the **Record of Decision**, which will formally document the specific environmental decision for these sites.

FOR MORE INFORMATION

If you have any questions about the proposed Moffett Federal Airfield no-action sites, please contact:

Mr. Art Tamayo, Remedial Project Manager
Engineering Field Division Southwest
Naval Facilities Engineering Command
1230 Columbia Street, Suite 1100
San Diego, California 92101
Telephone: (619) 532-0981
Fax: (619) 532-0940
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DATES TO REMEMBER – MARK YOUR CALENDAR

PUBLIC COMMENT PERIOD:

December 15, 2001 to January 28, 2002

PUBLIC MEETING:

Thursday, January 10, 2002, 7:30 p.m.

The meeting will be held at the:

Mountain View City Council Chambers
City Hall Plaza Conference Room
City Hall Building 500 Castro Street
Mountain View, California 94041

Mr. Art Tamayo, Remedial Project Manager
Engineering Field Division Southwest
Naval Facilities Engineering Command
1230 Columbia Street, Suite 1100
San Diego, California 92101

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INSIDE:

Proposed Plan for
No Further Action Sites at
Moffett Federal Airfield

Comment Form

Moffett Federal Airfield Proposed Plan for No Further Action Sites

Your input on the Proposed Plan for the No Further Action Sites at Moffett Federal Airfield is important to the Navy, U.S. Environmental Protection Agency and the California Regional Water Quality Control Board. Comments provided are valuable in helping understand your concerns.

You may use the space below to write your comments, then fold, staple, and mail or place in the comment box. If you have any questions regarding the Proposed Plan for the No Further Action Sites, please contact Mr. Art Tamayo, Remedial Project Manager at (619) 532-0981. Those with electronic communication capabilities may submit their comments to the Navy via the Internet at the following e-mail address: tamayoar@efdsw.navfac.navy.mil

Your Name _____

Address _____

City/State/Zip Code _____

(fold in half to mail your comments)

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PLACE
POSTAGE
HERE

Mr. Art Tamayo
Remedial Project Manager
Engineering Field Division Southwest
Naval Facilities Engineering Command
1230 Columbia Street, Suite 1100, Code 06CT.AT
San Diego, CA 92101