

ENVIRONMENTAL RESTORATION PROGRAM

Travis Air Force Base

Community Involvement Plan

FINAL



60 CES/CEVR
Travis Air Force Base, California



DEPARTMENT OF THE AIR FORCE
60TH CIVIL ENGINEER SQUADRON (AMC)

July 11, 2003

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FROM: 60 CES/CEVR
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SUBJECT: Final 2003 Community Involvement Plan Update

The attached document is the final 2003 Travis Air Force Base Environmental Restoration Program (ERP) Community Involvement Plan (CIP) Update. Section 3 of the CIP contains the information that was collected from the additional community interviews. If you have any questions concerning this updated plan, please contact Mr. Glenn Anderson at (707) 424-4359.

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Final 2003 Community Involvement Plan Update

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Travis Air Force Base



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Community Involvement Plan
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**Prepared for
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July 11, 2003

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1.0 OVERVIEW OF THE COMMUNITY INVOLVEMENT PLAN

The Air Force developed this update to the **Community Involvement Plan** (CIP) as a guideline for continuing the community involvement activities associated with the environmental cleanup at Travis Air Force Base (AFB), California.

This document provides information about community concerns and explains how the Air Force will involve the public in the decision-making process during the ongoing environmental cleanup of Travis AFB. The public, often referred to as stakeholders, includes community residents and businesses, who are just outside base boundaries; elected officials; state and federal regulators; and special-interest groups, which can include local groups like the Solano County Farmlands and Open Space Foundation and national organizations such as the Sierra Club.

The Air Force's community involvement program promotes open communication among everyone involved in, or affected by, the **Superfund** process. The goal is to build trust, to focus on real problems, and find workable solutions. When the public is actively involved in the activities and decisions related to cleaning up the Superfund site at Travis AFB, better cleanup decisions are made and the cleanup process is better understood. The primary objectives of the community involvement program are to:

- Solicit public participation in the decision-making process regarding the proposed plans and **remediation** of the base
- Provide for the timely exchange of information regarding Travis AFB remedial actions
- Continue established communication with stakeholders
- Provide a centralized point of contact for the public to express concerns about the cleanup program. The Community Involvement Coordinator serves as the point of contact and is responsible for disseminating information through various sources

Information presented in this document was obtained from the Air Force; local, state, and federal regulatory agencies; and through interviews conducted with residents, businesses and environmental groups, and civic and professional organizations. Interviews were conducted in July, August, and December 2000.

This CIP includes the following:

- A brief history of Superfund, the Air Force Environmental Restoration Program (ERP) process, and oversight responsibilities for the cleanup
- The history of Travis AFB, the environmental site investigation, and a summary of the risks
- A profile of the Travis AFB area, a review of community involvement in the program, and a discussion of past and current concerns raised during community interviews
- A discussion of stakeholder involvement objectives and the techniques designed to implement them

The CIP contains the following attachments:

- A list of key ERP contacts and interested parties
- Lists of locations for public meetings and the information repositories

- A glossary of acronyms and technical terms
- A list of major ERP milestones

1.1 A Brief History of Superfund

In 1980, the United States Congress enacted the **Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)**, commonly known as Superfund. CERCLA requires the investigation and cleanup of inactive or abandoned sites where hazardous substances were released or spilled that may endanger human health or the environment (see Figure 1).

Congress amended and reauthorized the Superfund law in October 1986 as the **Superfund Amendments and Reauthorization Act (SARA)**. SARA established the **Defense Environmental Restoration Program (DERP)**. Restoration programs at Department of Defense (DoD) facilities, including Travis AFB, are managed under DERP. Similarly, funds for DERP programs come from the **Defense Environmental Restoration Account (DERA)**, instead of CERCLA (Superfund). Nevertheless, DERP programs must comply with the requirements of CERCLA. In 1997, the fund source was redesignated as the **Environmental Restoration Account (ERA)**.

1.2 The Air Force Environmental Restoration Program Process

Federal agencies with sites where hazardous substances were released or spilled must comply with CERCLA to the same extent as any other owner of a public or private hazardous-waste site.

As a result, the DoD ordered all branches of the Armed Forces to identify hazardous-waste disposal sites on its installations and to comply with environmental laws when implementing remedial activities. Several years later, the DoD established the ERP in response to CERCLA. The ERP was created to identify, investigate, and clean up hazardous-waste disposal sites at military installations.

With its national defense mission, the Air Force has long been engaged in a wide variety of operations that involve the use, storage, and disposal of hazardous materials. The Air Force took a proactive approach and developed its own ERP to meet the requirements of the DoD and CERCLA. The ERP was established as the following four-phase program:

1. Installation Assessment/Records Search
2. Confirmation/Qualification
3. Technology Development
4. Remedial Action



Preliminary Assessment (PA)/Site Inspection (SI)

Discover and verify potential hazardous waste sites



Remedial Investigation (RI)/ Feasibility Studies (FS)

Develop remedial investigation work plans to sample, investigate, and analyze the sites. Conduct site studies (RI), develop Baseline Risk Assessment (BRA) and develop possible cleanup remedies (FS)



Proposed Plan (PP)

Proposed cleanup remedy for each site
(includes a minimum 30-day public comment period)



Record of Decision (ROD)

Select cleanup remedies for sites



Remedial Design (RD) and Remedial Action (RA)

Design cleanup remedies and
construct treatment system



Operation and Maintenance

Carry out long-term cleanup of the site. Monitor effectiveness
of cleanup remedies.

FIGURE 1
ENVIRONMENTAL RESTORATION
PROGRAM PROCESS

TRAVIS AIR FORCE BASE, CALIFORNIA

CH2MHILL

Following the passage of SARA in 1986, the ERP was modified to conform to the U.S. Environmental Protection Agency's (EPA) program for the remediation of hazardous-waste sites. The terminology used to describe the phases (see Figure 1) was similarly modified. Because older reports carry original ERP phase names, the Superfund terminology is listed in Table 1-2, along with the corresponding name from the ERP process, to help clarify the current cleanup process in place at Travis AFB.

TABLE 1-1
Current Phases of the ERP

ERP Phase	Superfund Terminology
Installation Assessment/Records Search	Preliminary Assessment/Site Investigation (PA/SI)
Confirmation/Qualification	Remedial Investigation (RI)
Technology Development	Feasibility Study Proposed Plan
Remedial Action (RA)	Remedial Design/Remedial Action Removal Actions

1.3 Agencies with Oversight Responsibilities

Under federal rules, the Air Force has the lead responsibility for managing the investigation and cleanup activities, and oversees technical and community involvement work at the site. The DoD provides funds for the cleanup. However, several state and federal agencies are parties to the **Federal Facilities Agreement (FFA)** at Travis AFB and have direct responsibilities for oversight of the cleanup. These agencies include the U.S. EPA, the California Department of Toxic Substances Control (DTSC), and the San Francisco Bay Regional Water Quality Control Board (SFBRWQCB).

The regulatory agencies are charged with ensuring that any remedial activities implemented at Travis AFB protect human health and the environment, and comply with all **applicable or relevant and appropriate requirements (ARARs)**, which include state and federal laws and regulations. Listed below are the points of contact for the agencies. A comprehensive contact list for these agencies and others, who are directly or indirectly involved with the Travis AFB ERP, is provided in Appendix C.

John Lucey
Remedial Project Manager
Federal Facilities Cleanup Office
U.S. Environmental Protection Agency (U.S. EPA)
75 Hawthorne Street. H-9-1
San Francisco, CA 94105-3901
(415) 972-3145
U.S. EPA Toll-free Superfund Hotline: (800) 231-3075

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California Department of Toxic Substances Control (DTSC)
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Sacramento, CA 95826
(916) 255-3741

Sarah Raker
Remedial Project Manager
San Francisco Bay Regional Water Quality Control Board (SFBRWQCB)
1515 Clay Street, Suite 1400
Oakland, CA 94612
(510) 622-2377

Cliff Sennello
Bay Area Air Quality Management District (BAAQMD)
939 Ellis Street
San Francisco, CA 94109
(415) 749-4979

1.4 Travis AFB Restoration Advisory Board

The DoD began to establish Restoration Advisory Boards (RAB) in 1993 as the focal point for community involvement in the cleanup of hazardous-waste sites at military installations across the nation.

A RAB was established at Travis AFB in January 1995 to facilitate this community involvement. The RAB, which is an advisory body representing a broad spectrum of stakeholders such as local residents, businesses, governments, regulatory agencies, and the Air Force, specifically addresses issues associated with restoration activities at Travis AFB. A complete list of Travis AFB RAB members is provided in Appendix A. A local community member and a Travis AFB representative jointly chair the RAB. The purpose of the RAB is to:

- Provide an opportunity for stakeholders to relate community issues and concerns about the environmental cleanup program at Travis AFB to the Air Force and regulatory agencies in an open communication forum
- Discuss key issues, including the scope of studies and level of cleanup
- Review plans and reports
- Recommend project requirements
- Recommend priorities among sites and projects

RAB meetings are typically held on the fourth Thursday in January, April, July, and October at 7 p.m. The meetings are held at various locations in Fairfield and Vacaville. All meetings are open to the public and are advertised in the *Daily Republic*, *The Reporter*, and the Travis AFB *Tailwind* at least 1 week in advance. The exact date and location are also included on the back cover of the quarterly ERP newsletter, *Guardian*, which is sent to everyone on the mailing list 2 weeks prior to the meeting, and posted on the Travis AFB Environmental Cleanup Program public web site at: <http://www.travis.af.mil/pages/enviro>

The Air Force can consider adjourning the Travis AFB RAB when there is no longer a need for it, or when community interest in it declines. RAB adjournment will not be an independent, unilateral evaluation by the DoD. Travis AFB must first discuss it with the community before making the decision.

Once the Air Force has decided to adjourn the RAB, the rationale for this action must be documented, and the community notified. Travis AFB must ensure that its overall community involvement program provides for continued stakeholder input if cleanup activities are not yet complete after RAB

adjournment. An installation may also re-activate or re-establish its RAB if community interest is sufficient.

Travis AFB has no plans to disband the RAB at any time in the near future.

More information about the RAB is available on the Travis AFB Environmental Cleanup Program public web site at: <http://www.travis.af.mil/pages/enviro/pubpart/rab.html>.

2.0 TRAVIS AFB BACKGROUND

2.1 Location

Travis AFB is located in Fairfield, California, midway between Sacramento and San Francisco (*see Figure 2*). It occupies 6,383 acres in a Solano County area, which consists of mostly agricultural and livestock grazing land. The base is surrounded to the south and west by residential and commercial districts, and to the north, east, and southeast by farmland. It lies in the Suisun-Fairfield Basin along the western edge of the Sacramento Valley, bordered to the north and west by the foothills of the Coast Ranges, and to the east by the valley. Other cities located near Travis AFB include Suisun City and Vacaville.

Suisun Marsh, part of the San Francisco Bay **estuary** system, is located south of the base. Union Creek flows through Travis AFB and discharges into Suisun Marsh via Hill Slough. The tidal marsh drainage joins the flow from the Sacramento and San Joaquin rivers through Suisun Bay and Carquinez Strait for eventual discharge to the Pacific Ocean via San Francisco Bay.

2.2 History

What began as an isolated airstrip on a windswept California prairie with a few tarpaper barracks and maintenance hangars is now the site of the largest military aerial port in the United States – providing rapid global mobility through airlift and aerial refueling.

In April 1942, the Army Corps of Engineers authorized expenditure of \$1 million to build a bomber base in the San Francisco Bay Area. By September of that year, the Army Air Corps and Navy were practicing takeoffs and landings on its runways. The Navy especially liked the prevailing winds at the base, which simulated conditions at sea, and for a time the runway was painted with an outline of an aircraft carrier deck.

The suitability of the site as a major aerial port and supply marshaling point for the Pacific Theater, however, soon scrapped plans for the bomber base. When the installation was officially named the Fairfield-Suisun Army Air Base on February 8, 1943, it was also assigned to the Air Transport Command (ATC). By the close of World War II, the Fairfield-Suisun AAB handled 75 percent of all ATC cargo and mail shipments to the South Pacific.

Construction in the postwar era made Fairfield-Suisun one of the most modern installations in the newly formed Air Force. The base received the name it carries today on October 20, 1950, in honor of its commanding officer, Brigadier General Robert Falligant Travis, who perished in a B-29 crash during takeoff on August 5th of that year.

Throughout the Cold War, Travis AFB – with forces assigned to the Military Air Transport Service, later designated Military Airlift Command – enhanced its reputation for excellence as the “Gateway to the Pacific.”

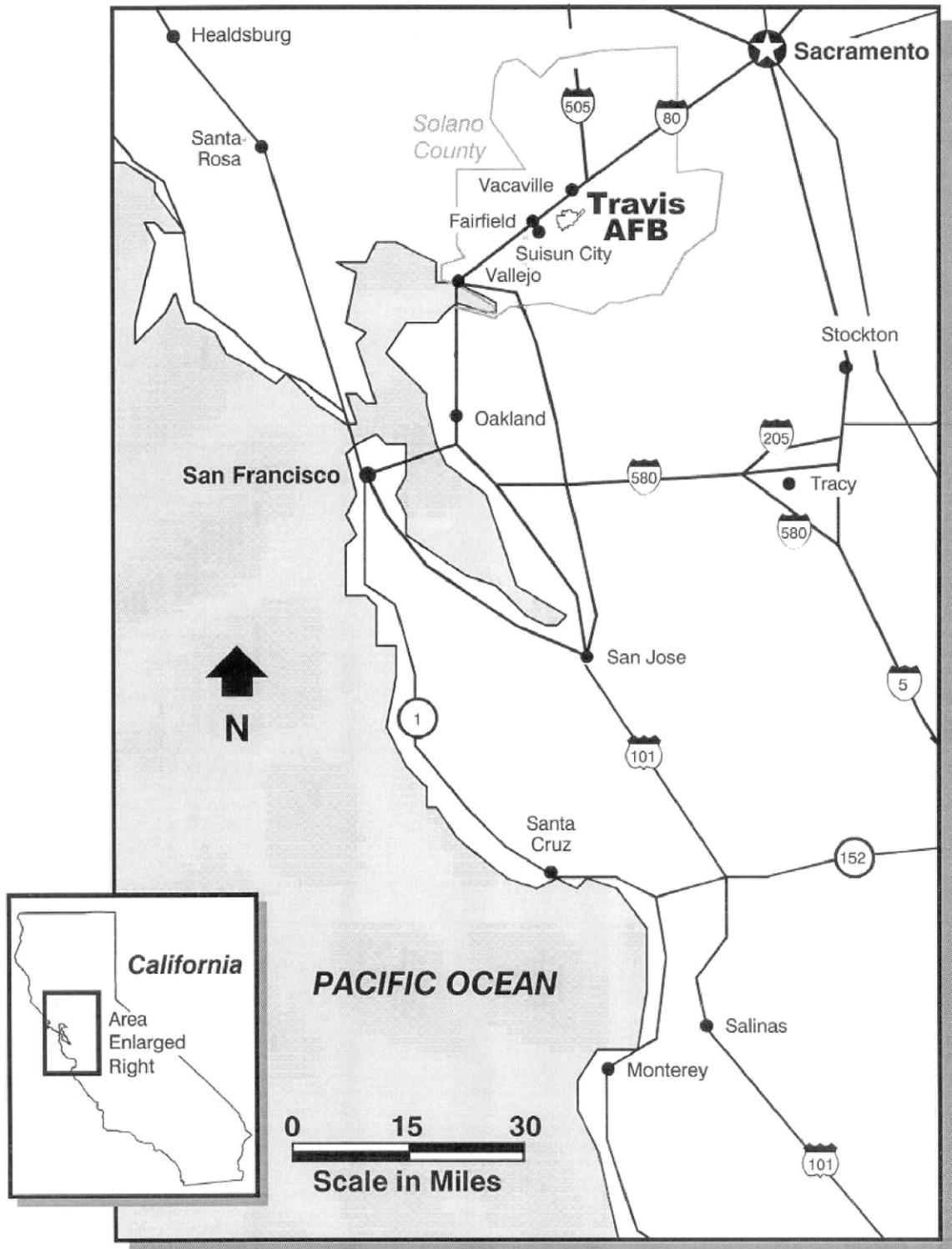


FIGURE 2
GENERAL LOCATION MAP
 TRAVIS AIR FORCE BASE, CALIFORNIA

During the peak years of the Vietnam War, 1966-1970, more than 1 million passengers and 200,000 tons of cargo moved through Travis each year.

During Operation Homecoming in 1973, 280 prisoners of war, nearly half the number of Americans held, returned home through Travis AFB. Two years later, Operation Babylift brought 2,945 Southeast Asian children to the United States, and Project New Life brought 68,394 Southeast Asian refugees (the “boat people”) through Travis in 1979 and 1980.

Following realignment actions in 1994, Travis lost its C-141 “Starlifter” cargo aircraft, which has been at the base since 1965. In their place, the base acquired two squadrons of KC-10 “Extender” tanker aircraft. The squadrons of refuelers joined two squadrons flying the massive C-5 “Galaxy” airlifter, which arrived at Travis in 1970.

For more information, visit the Travis Museum on-line at www.travis.af.mil/public/air-museum/.

2.3 Present Role

Today, Travis AFB is the largest base in Air Mobility Command (AMC), supporting worldwide airlift and air refueling operations with a fleet of 37 C-5 cargo and 27 KC-10 tanker aircraft. Travis AFB is the largest employer in Solano County. A team of 7,136 active-duty joint military, 3,580 Reserve military, and 3,326 civilian employees accomplish the base’s mission and supporting functions. With more than \$11 billion in assets, Travis has an annual total economic impact of about \$1 billion dollars in Solano County.

Known as “America’s First Choice” and the “Gateway to the Pacific,” Travis has played a major role in military operations in both war and peace since 1943. The base was a major airlift hub supporting warfighting efforts throughout the Pacific Rim during World War II, Korea, and Vietnam. In more recent years, Travis has played a vital role in the worldwide deployment and employment of military forces for Operation Desert Storm in Southwest Asia and Operation Allied Force in the Balkans.

The base has also supported humanitarian relief efforts on every continent, as well as providing, special airlift support for everything from presidential support to scientific research conducted by America’s space program.

The host unit at Travis AFB is the 60th Air Mobility Wing, which is commanded by Brigadier General Bradley Baker. Travis is also home to the Headquarters, 15th Air Force, and the 349th Air Mobility Wing, a Reserve associate Wing that works alongside its active-duty counterparts. Other tenant organizations on the base include the Army’s 3rd Brigade, 91st Division; Naval Fleet Air Reconnaissance Squadron Three; and the Air Force’s second-largest hospital, David Grant Medical Center.

2.4 Site Investigation

The Travis AFB Environmental Restoration Program began in 1983. The Air Force conducted an extensive records search and interviewed past and present base employees, who were familiar with past disposal practices, to identify sites where hazardous materials were disposed of or spilled. Additional interviews were conducted with local, state, and other federal agency personnel. Field and helicopter reconnaissance inspections were also conducted at former hazardous waste sites on the base.

As a result of the investigation, 14 sites at Travis AFB were ranked according to the **Hazard Assessment Rating Methodology (HARM)**, which uses methodology similar to the U.S. EPA’s **Hazard Ranking**

System (HRS). The HARM scoring model rates specific sites to set priorities for follow-up work. This is accomplished by considering four aspects of the potential hazard:

1. The possible receptors of the hazard;
2. The waste and its characteristics;
3. The potential pathways for **migration**; and
4. Containment efforts.

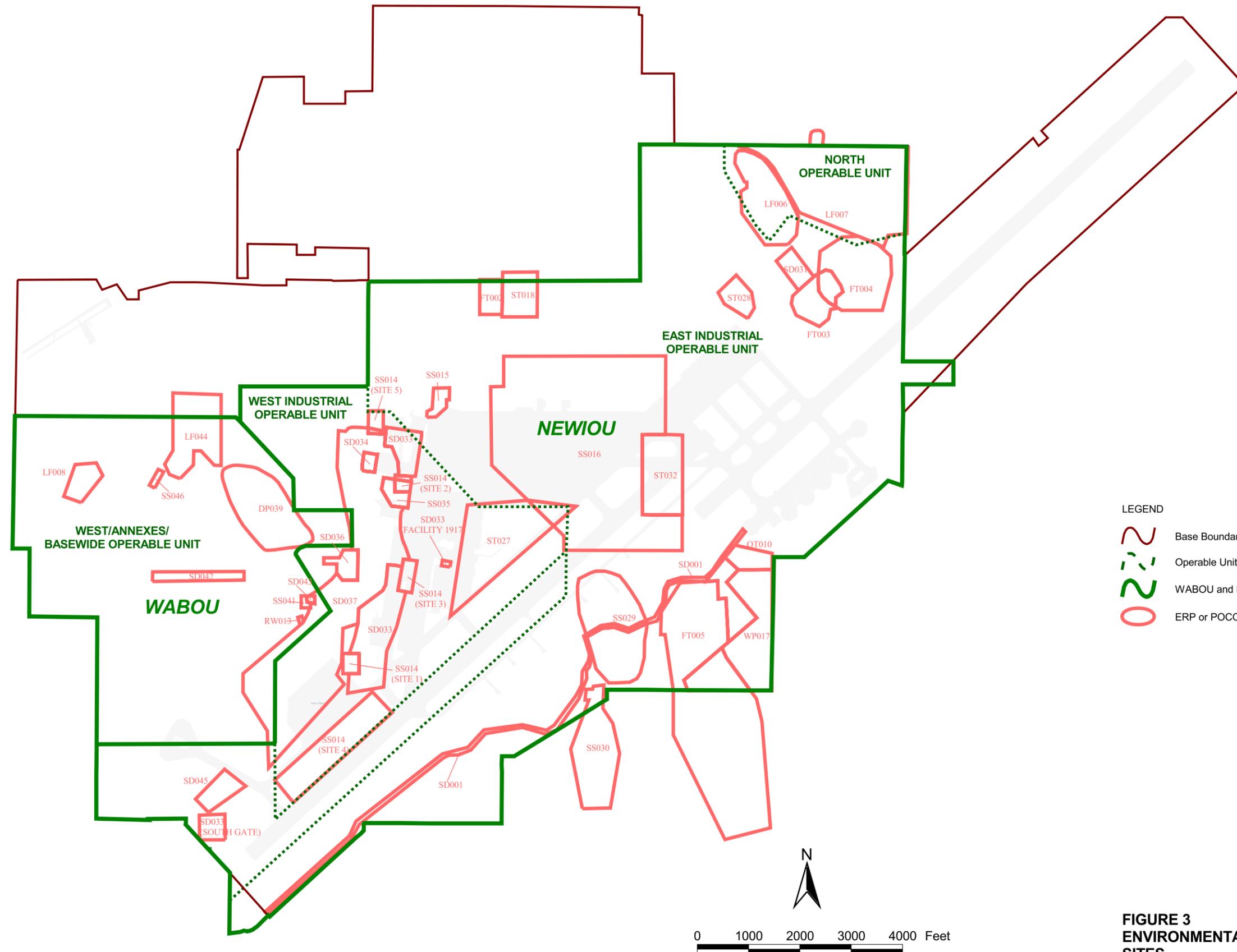
These sites were further investigated during 1985 and 1986. Since then, more sites have been added to the list. Twenty-nine of these sites are located at Travis AFB (*see Figure 3*). The other five sites are located off base at the Potrero Hills Annex. Two additional sites, at Point Arena Air Force Station, have been transferred to Air Combat Command, and are no longer part of the Environmental Restoration Program.

In 1991, a **RCRA Facilities Assessment (RFA)** was performed. The environmental inspection examined current and active facilities to identify manufacturing processes and potential avenues for contaminant releases to the environment. As a result, a total of 105 potential sites were identified. To date, 11 of the RFA areas have been added to the Environmental Restoration Program, either as separate sites or as part of other sites. Contamination was not detected at any of the other RFA sites.

Finally, a secondary Preliminary Assessment/Site Investigation (PA/SI) was performed in 1993. It focused on the former Fairfield Air Station, which was contained within the borders of Travis AFB. The PA/SI also included annexes not adequately evaluated during previous investigations and recently identified as **areas of concern (AOC)**. All sites were grouped into four distinct areas, known as **operable units**, based on geographic location at the base, as well as the **source** and nature of suspected contaminants (*see Figure 3*).

Two **upgradient ambient** locations were established to determine **background** water quality conditions. The water **samples** collected from the sites were retained as examples of normal groundwater conditions.

The Remedial Investigation (RI) field program was conducted to gather information necessary to determine the nature and extent of environmental hazards, if any, associated with each site. The scope of work was designed so that feasibility studies could be initiated to evaluate potential remedial actions. In addition, a **risk assessment** was performed to identify sites that present a potential threat to human health and/or the environment, or to identify sites that may qualify for a finding of No Further Action.



LEGEND

-  Base Boundary
-  Operable Unit Boundaries within the NEWIOU
-  WABOU and NEWIOU Operable Unit Boundaries
-  ERP or POCO Site Boundary

FIGURE 3
ENVIRONMENTAL RESTORATION PROGRAM
SITES
 TRAVIS AIR FORCE BASE, CALIFORNIA

For working and identification purposes, the base was divided into the North (NOU), East Industrial (EIOU), West Industrial (WIOU), and the West/Annexes/Basewide (WABOU) **operable units**. After completing the Remedial Investigations in 1996, the North, East and West Industrial operable units were combined to form the North/East/West Industrial Operable Unit (NEWIOU) for the purpose of the Feasibility Study (FS), Proposed Plan (PP), and **Record of Decision (ROD)**. The consolidation produced a saving of \$500,000 and approximately six months of work time.

2.5 Summary of Sites and Risks

There are a total of 42 sites in the Travis AFB Environmental Restoration Program. Remedial investigations of all Travis AFB sites identified the following site conditions:

- Soils at Travis AFB have been impacted by past disposal practices. The primary contaminants detected in the surface and subsurface soils were **total petroleum hydrocarbons (TPH)**, **metals**, and **trichloroethylene (TCE)**.
- Surface water in the storm sewers and Union Creek has been impacted by past discharges. The primary contaminants detected include metals, fuels, pesticides, and TCE.
- Sediments in Union Creek have been adversely affected by past discharges from the storm sewers and surface runoff. The primary contaminants are metals, and PAHs.
- Organic compounds from past disposal practices have impacted the groundwater. The primary contaminants are TCE; benzene; pesticides; 1,1,1-trichloroethane (1,1,1-TCA); tetrachloroethene (PCE); 1,2-dichloroethane (1,2-DCA); 1,1-DCE; and chlorobenzene. RI data have demonstrated that there are several individual contaminant sources rather than one major source.
- Travis AFB facilities sit atop several layers of soil, which contain groundwater. The groundwater is located about 10–15 feet below ground surface in primarily low permeability silt and clay. The groundwater is not used to supply water to the base, but does provide small amounts of domestic and stock water for nearby off-base areas.

Remedial investigations are complete for all four operable units. The findings have confirmed that past Air Force disposal practices have adversely affected the environment at Travis AFB. The extent and magnitude of these impacts are now more clearly defined, and the data indicate that contaminants from various sites and sources generally interact within the geographic zones. Sites that require remediation are included in feasibility studies that evaluate **remedial alternatives** for each site.

The operable units are described briefly, below. Alphanumeric names in parentheses following site names are the official designations of the sites (*see Figure 3*).

2.5.1 North Operable Unit

The North Operable Unit, located in the northeast corner of Travis AFB, consists of the following sites:

1. Landfill #1 (LF006)

Site LF006 is a former landfill located in the northeastern part of the base. The 17-acre site operated as a trench and burn landfill from 1942 until the mid-1950s when the area was covered and compacted. The landfill received general refuse and some industrial waste.

Trichloroethylene (TCE) has contaminated the groundwater and may be a source of potential human health risks. The **Interim Record of Decision** (IROD) specifies monitored **natural attenuation** assessment for the remedial action of the groundwater, which is currently in progress. The RI concluded that no further action was necessary for the soil.

2. Landfill #2 (LF007)

Landfill #2 is a former landfill that occupies about 73 acres. It was operated as a trench-and-cover landfill from the early 1950s through 1974 when it was closed and capped with native soil. The landfill was used primarily for the disposal of general refuse, such as wood, glass, and construction debris. From the early 1950s until 1964, a portion of the eastern part of the landfill was used for storage of excess and waste materials, including oils, hydraulic fluid, and **solvents** for resale or disposal. Three separate areas of groundwater have been contaminated with benzene, chlorobenzene, **polychlorinated biphenyls** (PCB), and **dioxins**. One of the **plumes**, which has low levels of TCE, extends off base to the north. The IROD specifies a monitored natural attenuation assessment at the on-base plumes and extraction and treatment for the off-base plume. Contaminants of concern in the soil include PAH, PCB, **semi-volatile organic compounds** (SVOC), and metals and may be a source of potential human health and ecological risks. The Air Force completed the maintenance of the existing cap for most of the area in 2002. Capping the site allows the Air Force to properly manage the landfill without transferring the soil to another landfill off base. For the area in the eastern side of the landfill that has PCB contamination, the Air Force proposes to excavate the contaminated soil and place it in an on-base CAMU.

3. Cyanide Disposal Pit (OT011)

Interviews with former base employees revealed that during the late 1960s, ten 25-pound cardboard **cyanide** containers from the metal processing shop were buried in a pit. The exact location is unknown, but it is believed to be under or north of the current firing range, and between Landfill #2 (LF007) and the base boundary. No evidence of contamination was detected during the remedial investigation. Therefore, no further investigation or remedial action is planned for the site.

2.5.2 East Industrial Operable Unit

The East Industrial Operable Unit (EIOU) is located in the east-central portion of Travis AFB. It incorporates many of the facilities where industrial activities on the base take place, including aircraft maintenance and repair facilities, an inactive sewage treatment plant, and four inactive fire training areas. The East Industrial Operable Unit consists of:

1. Union Creek Storm Sewer System (SD001)

The Union Creek Storm Sewer System consists of the creek, which runs parallel to the base runway, and its associated **surface water** facilities. Union Creek is not a source of contamination, but has received contaminated groundwater or storm sewer contamination from upstream. Some contamination originated from Site SS016 and the trichloroethylene-contaminated groundwater plume there. Cleanup and containment of the contaminated groundwater upstream has been initiated. Additionally, **polycyclic aromatic hydrocarbons** (PAH) have been identified in the soil

at the site, and **pesticides**, PAH, and metals were detected in the creek **sediment** and may be a source of potential ecological risks. The Air Force plans to excavate the contaminated soils and sediment and place them in a **corrective action management unit (CAMU)**. Excavation will be conducted to minimize impacts on the existing habitat.

2. **Fire Training Areas #1 (FT002), #2 (FT003), #3 (FT004), and #4 (FT005)**

Fire Training Areas #1 (FT002), #2 (FT003), #3 (FT004), and #4 (FT005) are located on the northeastern part of the EIOU. Waste fuel, oil and solvents were burned at the sites during fire training exercises conducted between 1943 and 1950, 1950 and 1952, 1953 and 1962, and 1962 through 1988, respectively. Trichloroethylene, low concentrations of dioxins, and some metal contaminants have been found at the fire training areas. It was common practice at Travis AFB, and at many fire-fighting facilities throughout the country, for firefighters to practice extinguishing fires by burning waste solvents and oils in open pits. Dioxins are a by-product of the combustion of certain solvents. Contaminated groundwater from FT005 extended 1,600 feet beyond the south base boundary until the plume was fully encapsulated in June 2001. The contaminated groundwater is being pumped back to the base and treated at the **South Base Boundary Groundwater Treatment Plant (SBBGTP)**. The soil at these sites contains metals, PAHs pesticides, and dioxins, and may be a source of potential human health and ecological risks. The Air Force plans to **excavate** the contaminated soils and sediment and place them in a CAMU on base or take them to an off-base landfill.

3. **Sludge Disposal Area (OT010)**

The former **Sludge** Disposal Area (OT010) is located at an inactive sewage treatment plant between Union Creek and multiple oxidation ponds. Metals, pesticides, and PAH have been detected in the soil and may be a source of potential and ecological risks. The Air Force proposes excavation of the contaminated soil and removal to the CAMU.

4. **Solvent Spill Area (SS015)**

Site SS015 is comprised of the former Solvent Spill Area, which covers about 1.4 acres in an area previously used for stripping paint from aircraft, and Buildings 550 and 552. Building 552 is a former hazardous materials storage shed, and a fenced, bermed concrete pad that was formerly used as a temporary hazardous waste collection point. Contaminants found in groundwater include TCE, **dichloroethene**, **vinyl chloride**, **chloroform**, PCE, and other trace SVOC and may be a source of potential human health risks. Current plans call for a monitored natural attenuation assessment of the contaminated groundwater. The soil is contaminated with PAH and metals and may be a source of potential human health and ecological risks. The Air Force proposes to excavate the contaminated soil and place it in the CAMU.

5. Oil Spill Area (SS016)

The former Oil Spill Area (SS016) consists of an area where waste oil reportedly was disposed of or spilled, and Buildings 11, 14, 20, 42/1941, 139/144, and the Storm Sewer Right of Way. The site served as the base's original industrial area beginning in 1943. Numerous solvent cleaning operations were undertaken in the area, resulting in a series of leaks and spills, which has contaminated the groundwater. The 180-acre plume located beneath the aircraft parking ramp is being treated at the Central Groundwater Treatment Plant by **ultraviolet oxidation** and **vapor phase granulated activated carbon** technologies. The Air Force proposes excavation of PAH- and PCB-contaminated soil to the CAMU.

6. Inactive Oxidation Ponds (WP017)

About 30 percent of WP017 is covered by sewage treatment plant oxidation ponds, which were operational from the 1950s to the late 1970s. The plant processed both domestic and industrial wastes. Ponds along the southern base boundary were used from the late 1970s to 1990 to bury construction materials and landscape debris. Soil contaminants found at the site include PCB, metals, and pesticides. The Air Force proposes excavation of the contaminated soil and removal to the CAMU or a landfill.

7. North/South Gas Station (ST018)

The North/South Gas Stations (ST018) are located on opposite sides of Travis Avenue, directly across from one another and adjacent to site FT002. Both gas stations are still active. Leaking underground storage tanks and associated pipelines have been replaced. As a petroleum only contaminated site (POCOS), the San Francisco Bay Regional Water Quality Control Board is the lead oversight agency. Monitored natural attenuation, along with controlling plume migration, will be evaluated and used as necessary. Limited monitoring of the plume is ongoing. Fuel products have leaked into and contaminated the subsurface with benzene, **toluene**, **ethylbenzene**, and **xylenes**. MTBE is also being evaluated. The Air Force is evaluating natural attenuation as the remedial action for the site.

8. Buildings 363 & 1201 Underground Fuel Storage Areas (ST028)

Buildings 363 and 1201 (ST028) are underground fuel storage areas. One tank was used for hazardous waste storage. The site, which contained eleven 25,000-gallon fuel tanks, was active from 1948 to 1983. The groundwater is contaminated with leaking fuel. As a POCOS, the San Francisco Bay Regional Water Quality Control Board is the lead oversight agency for the site. Monitored natural attenuation, along with controlling plume migration, will be evaluated and used as necessary. Limited monitoring of the plume is ongoing.

9. Monitoring Well 329 (SS029)

Site SS029, originally identified with **Monitoring Well 329**, is located south of an abandoned taxiway in the south-central portion of the EIOU. Aircraft maintenance activities are suspected of contaminating the groundwater with primarily TCE. The contaminated groundwater is treated at the SBBGTP. Soil contamination on the 5.5-acre site includes PAH, **volatile organic compounds** (VOC), SVOC, and metals and may be a source of potential human health and ecological risks. The Air Force proposes to excavate the contaminated soil and transport it to the CAMU or a landfill.

10. Monitoring Well 269 (SS030)

Monitoring Well 269 (SS030) is located at the south boundary of the base adjacent to the communications facility (Building 1125). A possible source of contamination may be the facility's septic system. Contaminated groundwater at the site has migrated 1,700 feet beyond the base boundary before it was fully contained in June 2000. The groundwater is being pumped back to the SBBGTP. Contaminants of concern found in the soil on the 1.6-acre site include PAH, metals, VOC, and SVOC and may be a source of potential human health and ecological risks. The Air Force proposed excavation of the soil and removal to the CAMU or landfill.

11. Building 1205 Aircraft and Heavy Equipment Maintenance Facility (SD031)

Aircraft and heavy equipment maintenance has been conducted at Building 1205 (SD031) dating back to the 1950s. Chlorinated solvents, benzene, and the metal **nickel** have been found in the groundwater, and may be a source of potential human health risks. Groundwater treatment is being conducted at the North Groundwater Treatment Plant.

12. Monitoring Well 246 (ST032)

Monitoring Well 246 (ST032) consists of two distinct plumes: one contains fuel product floating on the groundwater and the other is co-mingled with the eastern portion of the SS016 plume. A **passive product skimmer** is being used to remove the floating product from the plume. The remaining portions of the site contain fuel contamination that readily undergoes natural degradation at the low concentration levels found. The soil is contaminated with metals, VOC, PAH, pesticides, and PCB and may be a source of potential human health and ecological risks. The Air Force proposes excavation and removal of the soil to the CAMU or a landfill.

2.5.3 West Industrial Operable Unit

The West Industrial Operable Unit (WIOU) is located in the west-central part of Travis AFB. It incorporates three locations where jet fuel had been released from the jet fuel distribution pipeline, as well as the bulk fuel storage area. Contaminants associated with jet fuel include benzene, toluene, ethylbenzene, and xylenes. The WIOU also includes several aircraft maintenance and repair facilities. TCE and petroleum hydrocarbons have been released from leaking oil/water separators and storage tanks at these facilities. Releases of the same compounds occurred from the Sanitary Sewer and Storm Sewer System B pipelines because oil/water separators, wash racks, and floor drains discharged to the pipelines. The WIOU remedial investigation was completed in February 1996. The West Industrial Operable Unit consists of:

1. Former Jet Fuel Spill Area (SS014)

The Jet Fuel Spill Area (SS014) is located along the jet fuel distribution pipeline. It consists of five distinct spill areas. Like other petroleum only contaminated sites, monitored natural attenuation, along with controlling plume migration, is the preferred remedial alternative for the site. A passive product skimmer is being used to remove free product at one spill area.

2. TF-33 Test Stand Area (ST027)

TF-33 Test Stand Area (ST027) is located in the industrial core area. Facilities at the site began testing aircraft engines in 1957 and are ongoing today. Total petroleum hydrocarbons have been identified in the soil and groundwater. Hydraulic oil has been observed seeping up through the cracks in the pavement when aircraft are on the test stand. As a POCOS, the San Francisco Bay Regional Water Quality Control Board is the lead oversight agency. Monitored natural

attenuation, along with controlling plume migration, will be evaluated and used as necessary. Limited monitoring of the plume is ongoing.

3. Storm Sewer System B (SD033)

Storm Sewer System II (SD033) includes the west branch of Union Creek, parts of Storm Sewer II, Buildings 810 and 1917, the area around the South Gate, and Outfall II. All of the facilities are listed as one site because past activities at these locations have been identified as a possible contaminant source for Storm Sewer II. Building 810 is used for aircraft refurbishing activities. An oil/water separator (OWS), sump and wash rack that used to be located at the facility and discharged to Storm Sewer II have been abandoned and the facility no longer discharges wastes to the storm sewer. Wastes generated at the facilities in the past included paints, solvents, lubricants, PCB, and fuels. Building 1917 was used as an aircraft wash down area. Wastes generated at the building during past activities include solvents, soaps, engine oil, hydraulic fluid, and jet fuel. The primary contaminants are TCE and 1,2-DCE in the groundwater; VOC, PAH, and metals in the sediment; and metals in the surface soil and sediment. These contaminants may be a source of potential human health and ecological risks. The IROD specifies plume migration control for Storm Sewer II groundwater and monitored natural attenuation for the three remaining plumes at the site. The Air Force proposed to excavate contaminated soils and sediment and place them in the CAMU. For the surface water contamination, the Air Force's preferred alternative is source control. The west branch of Union Creek is not a source of contamination, but receives contaminated water from groundwater or storm sewer contamination upstream. Therefore, cleanup or containment of the contaminated groundwater upstream and excavation of the contaminated soil and sediment will clean up the surface water.

4. Building 811 (SD034)

Building 811 (SD034), which is located in the northern portion of the WIOU, includes an indoor wash rack that is used to wash, strip, and treat aircraft parts prior to painting. **Wastewater** from the wash rack flows into the oil/water separator, which can be directed into either the sanitary sewer or a concrete-lined overflow pond located just west of the facility. In 1994, the OWS was removed and replaced after a hole was discovered in it. The primary contaminants at the site include TCE, 1,2-DCE, and fuel in the groundwater. These contaminants may be a source of potential human health risks. The IROD specifies migration control for the groundwater plume. Soil contamination at the site is limited to fuel. The Air Force proposes monitored natural attenuation as the remedial action.

5. Buildings 818 & 819 (SS035)

Site SS035 contains Buildings 818 and 819 and includes a wash area, and oil/water separator and sump, a hydraulic lift storage area, and a hazardous materials accumulation area. Asphalt and roadbase cover most of the site though there is some exposed soil and grass along the east end of Building 818. The primary groundwater contaminant is fuel. The IROD specifies monitored natural attenuation as the remedial action. PCB and metals were detected in the soil at the site and may be a source of potential human health and ecological risks. The Air Force proposes excavation of the contaminated soil and removal to the CAMU.

6. Building 872 (SD036)

Site SD036, located in the western-central part of the WIOU, includes Buildings 872, 873, and 876. The site contains several buildings and paved areas in an active area of the base. The

primary groundwater contaminants are DCE, TCE, and vinyl chloride, which may be a source of potential human health risks. The IROD specifies source control and migration control. The Air Force proposed monitored natural attenuation for the contaminated soil at the site.

7. Sanitary Sewer (SD037)

The Sanitary Sewer (SD037) encompasses a large part of the WIOU, including Buildings 837/838, 919, 977, and 981; the Ragsdale/V area; and the Area G Ramp. Operations at these facilities have included an oil/water separator, sumps, wash racks, and a fuel hydrant system. A large groundwater plume contains primarily TCE and fuels, and may be a source of potential human health risks. The IROD specifies source control and migration control using groundwater treatment technology and a natural attenuation assessment at the downgradient portion of the site. PAH, VOC, SVOC, and metals were identified in the soil at this location and may be a source of potential ecological risks. The Air Force proposes excavation and removal to the CAMU for part of the contaminated soil and monitored natural attenuation for the remaining soils contaminated with fuel only.

2.5.4 North/East/West Industrial Operable Unit (NEWIOU)

The first three operable units merged to become the North/East/West Industrial Operable Unit (NEWIOU) for the purpose of completing the Feasibility Study (FS), Proposed Plan (PP), and Record of Decision (ROD). The reorganization resulted in a cost and time savings. The Feasibility Study for the NEWIOU was completed in September 1996. The Proposed Plan for the groundwater portion was completed in September 1996 and a NEWIOU Groundwater Interim Record of Decision was finalized in late of 1997. The Proposed Plan for the Soils, Sediment, and Surface Water was completed in July 1998, and it is anticipated that the Record of Decision will be completed by January 2005.

2.5.5 West/Annexes/Basewide Operable Unit

The West/Annexes/Basewide Operable Unit (WABOU) is located on the west side of the base and contains facilities for light industrial activities, horse and cattle grazing, and weapon storage and maintenance. It includes the former Fairfield Air Force Station, an Atomic Energy Commission facility that was used to store and maintain nuclear components. It also includes off-base annexes and sites that had not been previously investigated in other operable units. The WABOU consists of 41 discrete sites, 9 of which require remedial action:

1. Landfill #3 (LF008)

Landfill #3 (LF008) consists of several trenches used in the mid-1970s to dispose of expired pesticides. Several chlorinated pesticides are present in the waste material and soil beneath the trenches, and may be a source of potential human health and ecological risks. In addition, several chlorinated pesticides are present in the groundwater surrounding the trenches. The Air Force has constructed a series of extraction wells to pump the contaminated groundwater to the Central Groundwater Treatment Plant for processing. The Air Force will excavate the pesticide containers and contaminated soil and take them to an off-base landfill in the summer of 2003.

2. Low-Level Radioactive Burial Site #2 (RW013)

The Low-Level Radioactive Burial Site #2 (RW013) was a fenced, back-filled trench that once received waste materials from the nuclear weapons maintenance activities in Building 903. This was the only site on Travis AFB with elevated radioactive readings, and it may have been a source of potential human health risk. The Air Force excavated the waste materials and contaminated soil and transported them to an off-base radioactive waste repository specifically designed to handle these materials in late 2002. The soil remedial action met the residential cleanup levels that were promulgated in the WABOU Soil ROD (Travis AFB, 2002). The remedial action report that documents the completion of this remedial action will be finalized by the summer of 2003.

3. Building 755 Battery and Electric Shop (DP039)

Building 755 is the base Battery and Electric Shop (DP039). A former acid neutralization sump used to dispose of battery acid was connected to the building and also received chlorinated solvents. The sump was removed, but a plume of solvent-contaminated groundwater remains. A high level solvent concentration of TCE, one of a family of chlorinated solvents, was found beneath the water table from where the sump was removed. The Air Force has constructed a dual-phase extraction (DPE) system to clean up the contamination. The Air Force is also evaluating several innovative technologies that may accelerate the cleanup of the contaminated groundwater. In 1999, the **Air Force Center for Environmental Excellence (AFCEE)** installed a reactive wall downgradient of the former sump area. The wall is a reactive zone that uses iron filings to chemically degrade the solvents. The treatability study that supports this technology evaluation was completed in 2002. AFCEE also planted a series of red-bark eucalyptus trees in a portion of the solvent plume downgradient of the reactive wall. These trees are part of a treatability study for the evaluation of phytostabilization, a means of stopping the migration of a plume. If the innovative technologies prove to be ineffective, the Air Force proposes to install at least one extraction well in the central portion of the plume to remove high concentrations of dissolved solvents and an extraction well network around the plume to prevent its future migration. Since the site is located in an industrial area, the Air Force has placed a land-use restriction on the property to ensure that it is not used for residential purposes without first addressing the lead residue in the soil.

4. Building 905 Entomology Shop (SS041)

Building 905 is the Entomology Shop (SS041) that was used to mix and store pesticides and herbicides. The site also includes an outdoors concrete wash rack that was once used to wash pesticide applicator vehicles. The topsoil surrounding the wash rack contains a variety of chlorinated pesticides and may be a source of potential human health risk. The groundwater beneath the shop contains low concentrations of pesticides. The Air Force has installed two extraction wells to pump the contaminated groundwater to the Central Groundwater Treatment Plant for processing. The Air Force will excavate the contaminated soil and place it in the CAMU in 2003.

5. Buildings 929, 931 & 940 Industrial Facilities (SD042)

Building 929 is a storage shed near a former hazardous waste accumulation area. Building 931 is a maintenance facility for portable electrical generators. Building 940 is a former paint drying facility that was located with the former Fairfield Air Force Station, an Atomic Energy Commission facility that stored and maintained nuclear weapons. No elevated radioactive residue

was found. All of these industrial facilities contributed metals and petroleum residue to an outdoor drainage ditch, which may be a source of potential human health and ecological risk. The Air Force will excavate the contaminated soil and place it in the CAMU in 2003.

6. Building 916 Emergency Generator Facility (SD043)

Building 916 is the Emergency Generator Facility (SD043) that once allowed the sump beneath two diesel generators to drain into an outdoor drainage ditch. A small TCE plume is downgradient of the facility. In addition, at least one electrical transformer on a former concrete pad adjacent to the building leaked cooling oil containing PCB into the surface soil. The Air Force has installed two extraction wells to remove the contaminated groundwater and treat it at the Central Groundwater Treatment Plant. The Air Force has placed a land-use restriction on the property to ensure that it is not used for residential purposes without first addressing the PCB residue in the soil, because the PCB concentration does not present an unacceptable risk to either local workers or the environment.

7. Landfill X (LF044)

Landfill X (LF044) consists of several buried piles of asphalt and concrete and is located next to a field that is used for heavy equipment training. Metals and PAH have been found in the soil. These compounds may be a source of potential human health and ecological risk. The Air Force installed a fence around the perimeter of the site to protect the vernal pools located near the east side of the training area. Also, a berm was constructed within the fence to prevent the accidental flushing of sediment from the training area into the vernal pools.

8. Small Arms Range (SD045)

The former Small Arms Range (SD045) is a decommissioned facility that was used for small arms training. Lead was detected in the soil and may be a source of potential human health and ecological risk. The Air Force will excavate the contaminated soil and place it in the CAMU in 2003.

9. Railhead Munitions Staging Area (SS046)

The Railhead Munitions Staging Area (SS046) is a concrete pad next to a railroad spur near the conventional munitions storage area (A Bunker). The inactive railhead was used to bring munitions to Travis AFB. These operations resulted in the deposition of metals and PAH beneath the railroad tracks and in three isolated areas near the concrete pad. These compounds may be a source of potential human health and ecological risk. Since the railhead may be used in the future, the Air Force placed a land-use control on the property to ensure that it is not used for residential purposes without first addressing the contaminant residue in the soil.

10. Cypress Lakes Golf Course Annex (SS041)

The Cypress Lakes Golf Course Annex, the second component of site SS041, is a maintenance yard that contained several areas with elevated pesticide concentrations in the surface soil. These pesticides may have been a source of potential human health and ecological risk. In December 2000, the Air Force excavated the contaminated soil and delivered it to a licensed disposal facility. The soil removal action achieved the residential cleanup levels that were promulgated in the WABOU Soil ROD (Travis AFB, 2002), so no further action at the annex is required. The site is closed.

There are several other sites in the WABOU that merit some attention. The Radioactive Burial Site #1/Underground Storage Tank (RW012) is an underground storage tank that is connected via steel pipes to the floor drains of Building 903. The WABOU RI identified no contaminants in the tank or associated piping. The tank and piping were excavated and removed in late 2002. Building 903 is a former nuclear materials inspection laboratory/maintenance facility that was part of the former Fairfield Air Force Station. The WABOU RI identified no contaminant releases associated with these maintenance activities.

Grazing Management Units 7 & 8 (OT019), located on the western side of the base, is a parcel of land used for grazing and exercising horses. It was investigated during the WABOU RI due to reports of horse sickness in the 1985-1987 timeframe. No contaminants were identified during the WABOU RI.

Located about two miles south of Travis AFB is a 25-acre parcel called the Potrero Hills Annex. It is leased to Goodrich Corporation, a private firm that uses the annex and about 500 acres of surrounding property to design, develop, and manufacture explosive components for aircraft escape systems and air-bag initiators for aerospace, military, and automotive industries. The annex and surrounding Goodrich property are being investigated under a Site Cleanup Requirements Order that was issued by the San Francisco Bay Regional Water Quality Control Board on September 22, 1999.

The WABOU Remedial Investigation was finalized in May 1997, the WABOU Feasibility Study was finalized in April 1998, and the WABOU Groundwater Proposed Plan was completed in April 1998. The Air Force formally presented the preferred groundwater alternatives to the public at a public meeting on April 23, 1998, and held a 30-day public comment period from April 8, 1998 to May 8, 1998 to receive public input. The WABOU Groundwater Interim Record of Decision (ROD) was finalized in June 1999, and the WABOU Soil Proposed Plan was completed in July 1998. A 30-day comment period was held from July 8, 1998 to August 8, 1998 to let the public comment on the preferred alternatives. The Air Force formally presented its preferred alternatives to the public in a meeting on July 23, 1998. The WABOU Soil ROD was finalized in December 2002.

3.0 COMMUNITY BACKGROUND

This section provides a brief description of the communities represented in this Community Involvement Plan. The communities were selected based on their proximity to the base, or their actual or potential interest in base activities. People from these communities were interviewed during the updating of the CIP. Further, community leaders, elected officials, the media, public interest groups, and civic organizations, as well as other interested and potentially interested parties from these communities have been included on the Travis AFB list of contacts and interested parties.

3.1 Community Profile

Travis AFB is located in Fairfield, Solano County, California. It is named after Brigadier General Robert Falligant Travis, who perished in a B-29 crash on what was then named the Fairfield-Suisun Army Air Base on August 5, 1950. The base received the name it carries today on October 20, 1950.

Fairfield and Suisun City, which adjoin Travis AFB to the south, are located halfway between San Francisco and Sacramento. Fairfield, the county seat of Solano County, has experienced rapid growth due to its expanding commercial and industrial base. It has a population base of more than 102,000. Suisun City has a population of more than 26,000. New residential subdivisions in both areas are rapidly changing the rural appearance of these communities, although farmland still occupies a significant area. The Fairfield-Suisun Unified School system provides education for elementary through junior college students. The *Daily Republic* newspaper is published in Fairfield.

Vacaville is located about 7 miles north of Travis AFB in Solano County. Interstate 505, the Sacramento bypass for traffic moving between the San Francisco Bay area and the interior of Northern California or the Oregon border, originates in Vacaville. Population within the city is more than 93,000. The Vacaville Unified School District provides education for elementary through high school students. The city is served by bus transportation, and has a county-maintained airport used for charter and general aviation purposes. Vacaville is home to *The Reporter* newspaper and radio station KUIC 95.3 FM.

According to California Department of Finance projections, the population of Solano County has increased to approximately 412,000 by the end of 2002. A demographic profile reveals that more than 56% of the population is white; 15% Hispanic; 14% Asian/Pacific Islander; 14% Black; and less than 1% of all Solano County residents is American Indian.

Except for the immediate downtown areas of the local towns, the area is primarily agricultural and has a growing number of industrial enterprises. There are farmers and cattle or sheep ranches, as well as grazing and rangeland in the surrounding area. Neighboring properties are owned predominantly by absentee landowners with the exception of those living on the south base boundary. All Travis AFB Restoration Advisory Board members are local community members who reside and or work in these communities, and one owns a ranch southeast of the base. The Travis AFB mailing list includes all adjacent property owners, local residents, businesses and churches, civic and environmental groups, news media, elected officials, and local, state, and federal agencies.

Contaminated groundwater plumes from Travis AFB have migrated onto the property of two neighbors living on the south base boundary (*see sites FT005, and SS030 in Sections 2.5.2*) and onto one property to the north of the base (*see LF007 in Section 2.5.1*). These properties are used for grazing livestock. Once the installation of the remaining extraction wells is completed at FT005 in 2003, all plumes that have

migrated off-base to the south will be fully encapsulated. The extraction well networks will halt the plumes' migration and pump the contaminated groundwater back to the base for treatment. The Air Force plans to install the extraction well network at LF007 in 2003. There is no danger to the human health at this time, nor is there expected to be any in the future. The Air Force maintains regular contact with the affected property owners about the progress of the cleanup activities.

3.2 Past Community Involvement with Travis AFB

Numerous times since the summer of 1989, information was provided to local news media concerning the status of the Travis AFB Environmental Restoration Program. The news releases have generally coincided with significant ERP activities or accomplishments, and with status review meetings between Travis AFB, the California Department of Toxic Substances Control, the San Francisco Bay Regional Water Quality Control Board, and the U.S. Environmental Protection Agency.

Through the first half of 1990, community relations activities at Travis AFB consisted of several meetings with federal, state, and local regulatory agency representatives. In addition, interviews were conducted with local news media, and about 70 questionnaires were mailed to local residents, property owners, and public officials. Sixty additional questionnaires were mailed to Travis AFB mobile home park residents. Returned questionnaires did not express any immediate concerns about the contamination on Travis AFB or the environmental cleanup program. However, the mobile home park residents requested that additional information be provided, as it became available. They were added to the Travis AFB list of contacts and interested parties until the mobile home park closed in December 2001.

In December 1993, a fact sheet explaining the Environmental Restoration Program, public involvement opportunities, and background information about the base was prepared and distributed to more than 2,000 individuals and organizations. It asked interested recipients to contact the Environmental Management Office if they wanted to be placed on the mailing list to receive timely updates about the cleanup program. The fact sheet also informed stakeholders of the locations of the information repositories (IR). The IR is a file containing current information, technical reports and reference documents about the Travis AFB ERP site. All of these documents are available for public review. Appendix D lists the three Travis AFB information repositories.

Travis AFB held a public meeting on January 22, 1994, to discuss the ERP with community members. During the meeting, the Air Force confirmed that the B-29 bomber, which crashed at the base on August 5, 1950, was carrying a single nuclear-capable weapon without the nuclear core. As a result of the disclosure and the concern about the possibility of radiological contamination at the on-base crash site, the Air Force received extensive local and some national media coverage. In July 1995, a final fact sheet was published and mailed to all stakeholders on the mailing list, and articles were published in the Travis AFB *Tailwind*, *Daily Republic*, and *Reporter*. Both the fact sheet and the newspaper article included information about the history of the accident, the investigations at the crash site, and the laboratory results of the soil, surface water, and groundwater samples collected at the crash site. During the construction of a car wash and baseball field in that area in 1996, the remnants of a parachute, binoculars, and a piece of the B-29 were unearthed and tested for hazardous materials. No contamination was detected, thus confirming previous findings.

To further enhance and facilitate regular communication with the stakeholders, the Travis AFB Restoration Advisory Board (RAB) was established in January 1995, replacing the Travis AFB Technical Review Committee. The RAB held its first meeting in January 1995.

Initial RAB members were selected from a group of applicants by a selection panel, which included local elected officials from surrounding communities. They come from diverse backgrounds and are local residents, businesses, agriculture and livestock farmers, civic and environmental groups, school districts, city governments, and state and federal environmental regulatory agencies.

It should be noted that RAB members may be affected by and have a vested interest in the base's environmental cleanup program. As a result, RAB members are expected to:

- Identify common interests about the Travis AFB Environmental Restoration Program;
- Develop common goals and expectations for the cleanup program; and
- Develop the basis for all stakeholders to make informed comments.

The goal of the RAB is to:

- Establish a process that will lead to greater understanding and support of the assumptions underlying investigation and remediation of contamination at the base;
- Allow stakeholders access to information so they can provide meaningful input to critical decisions;
- Emphasize early public involvement and stakeholder input into decisions that lead to the investigation, ranking, cleanup standards, and remedies of base cleanup; and
- Make decisions based on technical and scientific information that is understood by all parties at the earliest possible point in the ERP.

Since the RAB was formed, membership had dwindled until the Air Force conducted a new recruiting drive in June 2000. The recruitment not only increased stakeholder membership to 25, but also revitalized community involvement and interest in the cleanup program. Efforts to maintain the RAB roster are initiated on an as-needed basis.

RAB meetings are typically held on the fourth Thursdays of January, April, July, and October at 7 p.m. The meetings are held at various locations in Fairfield and Vacaville. All meetings are open to the public and are advertised in the *Daily Republic*, the *Reporter*, and the Travis AFB *Tailwind* at least one week in advance. The date and location of the meetings are also announced on the back cover the ERP newsletter.

Since July 1995, newsletters detailing progress of the ERP have been produced and mailed to all stakeholders on the mailing list. The newsletters arrive in the mail at least one week prior to Travis AFB Restoration Advisory Board meetings.

The NEWIOU Groundwater Proposed Plan was printed and mailed to all stakeholders in September 1996. Comments were accepted between September 25 and October 24. A public meeting was held on October 17 to explain the remedial alternatives for the sites, and to solicit comments on the Air Force-preferred remedial action. Oral comments were received from one person: Bill Peterson of Fairfield, CA. Following the public meeting and prior to the conclusion of the public comment period, written comments were submitted by one person: the late Carl Freitas of Oakland, CA. All comments and responses are available for public review in the information repository.

In 1997, everyone on the mailing list with valid phone numbers was contacted to determine if they wanted to remain on the mailing list for information about the ERP. People were taken off the list upon request. Today, the mailing list is comprised of more than 1,150 area residents and property owners;

local, state and federal agencies; elected officials; news media; civic and environmental groups; businesses and churches; and Department of Defense officials.

In April 1998, the WABOU Proposed Plan for Groundwater Cleanup was printed and mailed to all stakeholders on the mailing list. A public comment period was conducted April 8 through May 8, and a public meeting was convened on April 23. Several community members attended the meeting and oral comments were received from one person: John Rundlett, a Suisun City Councilmember. No other comments were received. A transcript of the public meeting is available for public review in the information repository.

The Air Force used the NEWIOU Proposed Plan for Soil, Sediment, and Surface Water; the WABOU Proposed Plan for Soil Cleanup; and the July 8, 1998 – August 8, 1998 public comment period to solicit input on the basewide soil remediation approach. Stakeholders received both proposed plans prior to the start of the comment period. A public meeting was held on July 23, 1998. Several community members attended the meeting and the Air Force received oral comments from three people: Jim Whalen, David Kanouff, and Jon Weiss, all of whom were Travis AFB Restoration Advisory Board members. Rick Abbott submitted a written comment to the Air Force. No other comments were received. A transcript of the public meeting, which includes the oral comments, is available for public review in the information repository.

A fact sheet describing proposed revisions to soil cleanup decisions at sites SS043 and SS046 in the WABOU was produced and mailed to all stakeholders on the mailing list in February 2000. Comments were accepted from the public from February 23 to March 24, and a public meeting was held on March 15 to explain the original proposed remedial actions and the Air Force-preferred alternatives. One community member attended the public meeting. No written or oral comments were received. A transcript of the public meeting is available for public review in the information repository.

The Air Force has conducted two public tours of the contaminated sites on Travis AFB, as well as affected off-base landowners' properties, in recent years. Tours were held on October 30 and November 1, 1998, and May 4-5, 2001.

In addition to the tours, the ERP staff has taken its public affairs display board, which illustrates the cleanup process and the progress made, to numerous public events on Travis AFB and in the surrounding communities. Some of the events include the Travis AFB Air Expo and Open House (five out of the last eight years), Travis AFB Earth Day celebrations, and the Solano Air Fair in Vacaville. Brochures explaining how the public can get involved in the environmental cleanup program are available, along with postcards for stakeholders to provide feedback on the program and/or to request their names be placed on the mailing list.

Travis AFB staff has also made presentations to seventh- and eight-grade students at the Jepson Middle School in Vacaville in November 1997 and January 1999. Students were given demonstrations of how groundwater flows, how it is affected by contaminants, and how it is cleaned up. RAB member Emily Rued, a former teacher at the school and a former Travis AFB Community Involvement Coordinator, initially conceived the idea.

In June 1999, the Travis AFB Environmental Web Site became a part of the worldwide web. This public site is dedicated to provide local residents with information about the Travis AFB ERP. Site information is listed in seven sections: Participation, About Travis AFB, Projects, Library, Calendar, Links and Feedback. The Internet address for this web site is www.travis.af.mil/pages/enviro. The Environmental Flight updates the information on its web site a minimum of once a quarter.

The Travis AFB Environmental Restoration Program continues to seek opportunities to inform stakeholders about the cleanup program and engage them in the decision-making process for remedial actions.

3.3 Past Community Issues and Concerns

Since contamination was identified at Travis AFB during the four Remedial Investigations, overall public interest and concern has been relatively low. Current interest is primarily limited to the affected landowners near the southern boundary of Travis AFB (sites FT005 and SS030), and the landowner whose property is contaminated by a groundwater plume that has migrated beyond the north base boundary (LF007). The Air Force maintains regular direct communication with the affected property owners and/or their designated representatives. Additionally, the Air Force's efforts to clean up the plumes that have migrated beyond base boundaries have been written about in local daily newspapers and the Travis AFB *Tailwind*.

Local stakeholders have been informed of the contamination problem by local news media or by public affairs materials prepared by and mailed to their homes by the Air Force. These residents generally believe the Air Force is actively trying to clean up the contamination found on Travis AFB. Prompt and open responses to inquiries from the public, neighbors, and interested parties appear to be a factor in the low level of concern.

At the federal and state levels, interest and concern about Travis AFB centered on the potential contamination of domestic potable water supplies off-base and related health and safety issues, and the degradation of natural resources. Meetings about the ongoing environmental cleanup program are held monthly and extra meetings are scheduled as needed between Travis AFB; the U.S. Air Force Center for Environmental Excellence; Headquarters, Air Mobility Command; U.S. EPA; San Francisco Bay Regional Water Quality Control Board; and the California DTSC. These agencies are actively involved in the Travis AFB Environmental Restoration Program and participate in the selection and implementation of remedial actions.

More than 18 years have passed since the contamination was initially identified and, as may be expected, a number of community concerns have been identified. These concerns include:

- Exposure to contaminants that may cause long-term health effects and which may have occurred before the problem was identified;
- Schedule or expediency of efforts to clean up the contamination;
- Decrease in real estate values in the areas contaminated;
- Status of drinking water supplies; and
- Selection, implementation, and effectiveness of the remedial actions.

3.4 Community Relations Interview Questionnaire and Responses

A portion of the 2001 Community Involvement Plan consisted of community interviews. Their purpose was to identify any trends in the community's knowledge of and concerns about environmental contamination at Travis AFB and to identify the best methods to provide stakeholders with the

information they want about the cleanup program. To support the update of this Plan, additional community interviews were conducted with 9 people from Fairfield, Suisun City, Vacaville, and Solano County during the 16 June 2003 – 9 July 2003 timeframe. The interviews were conducted either face-to-face or over the telephone, using the same questions that were used during the 2001 interviews. To avoid duplication, the 2003 interviewees were selected from groups that were not interviewed in 2001; they included local residents, civic leaders and environmental groups.

The purpose of the interview and the reason for updating the Community Involvement Plan were explained before each interview. Interviewees were also given an overview of the Travis AFB Environmental Restoration Program. All interviewees were encouraged to freely express their concerns and their comments were recorded on the interview forms.

3.4.1 Background

1. How long have you lived or worked in this area?

0-5 years	1
6-15 years	2
16-30 years	2
31+ years	4

2. Are you familiar with the site/facility?

Yes	9
No	

a. Where have you received your **information** about the site/facility?

Cleanup Program (ERP) Newsletter	3
Contractor Working on Travis AFB	1
Former Air Force Servicemember or Reservist	2
Government Agencies	1
Newspapers	6
Restoration Advisory Board (RAB)	2
Travis AFB Officials	1
Travis AFB Tour	
Travis Regional Armed Services Committee	1
Haven't Received Any Information	

b. How and when did **you** first become aware of the site/facility?

- 1960 when aircraft flew over his new house.
- In the 1970's when assigned to Fort Ord.

- Since 1956 through personal knowledge.
- January 1996 after returning from Vietnam.
- 1960 when Benicia Arsenal was closed and interviewee was transferred to Travis AFB.
- 1994 when interviewee coordinated Suisun Marsh flights with Travis AFB Air Traffic Control Tower.
- 1995 at the start of reserve duty.
- 1973 through relatives who worked on Travis AFB.
- Was stationed at Travis AFB in 1985.

3.4.2 Environmental Concerns

3. Do you have any concerns about this site/facility?

- Concerned about the three off-base groundwater plumes and the time it takes to get a Record of Decision signed.
- Lives in Lawler Ranch and is concerned about proximity of home to base. Also concerned about welfare of local community.
- Would like to see Travis preserved. Interviewee has minor concerns about the connection between Travis and Suisun Marsh.
- Its geographical location to the Suisun Marsh and the local population.
- Aerial disturbance of waterfowl and other local species in Suisun Marsh by air craft. Storm water pollution from base through McCoy Creek or Denverton Slough to Suisun Marsh.
- Protection of natural resources, prevention of impact of urban sprawl on Travis AFB, vernal pool protection.
- Storm water runoff from the base and its impact on Suisun Marsh. Also, the impact of the flight path of aircraft on the marsh.
 - a. If so, which of these are most important to you?
 - The three off-base groundwater plumes.
 - Closeness of home to base.
 - Suisun Marsh.
 - The closeness of the base to the local population.
 - Storm water pollution prevention.
 - Vernal pool protection.
 - The impact of aircraft flights on the marsh.

3.4.3 Community Involvement

4. What do you know about the history of community involvement around this site/facility?

Nothing or very little	2
------------------------	---

Existence of the RAB	2
Receives newsletter	3
Read in newspapers	2

- Knowledge based on involvement with Travis RAB
- Remembers poster contest for elementary kids and is aware that minutes are kept in libraries.
- Is involved with the Travis Regional Armed Forces Committee (TR AFC). Remembers Commanders Night at Jelly Belly store and the TR AFC-sponsored Military Recognition Night at the Green Valley Country Club.
- Has learned about community involvement issues through involvement with Rotary Club, Vacaville Parks and Recreation, Vacaville Planning Commission and Office of Emergency Services.
- Aware of growth issues, vernal pool issues, impact of Wilcox Ranch purchase, issues through Farmland Open Space Foundation.
- Knowledgeable on Wilcox Ranch land purchase.
- Has attended Travis Open Houses, attended city council meetings, gave talks concerning safety related to the arrival of migratory birds (bird strike prevention).
 - a. Have you been actively involved with this site in any way?

Yes	7
No	2

- Active RAB member.
 - Reservist
 - Attends TR AFC meetings and other military and community events.
 - Member of Technical Review Focus Group.
 - Flew out of Travis in 1998 during floods. Has to coordinate with the base to support weekly surveys of Suisun Marsh during autumn.
 - Reservist.
 - Giving bird strike safety talks.
- b. Are you aware of any individuals or groups who have emerged as leaders on this issue?

Yes	3
No	6

- Jim Whalen, our community RAB co-chair.
- John Foster.
- Realtors Board
- Base Commanders and retired military who participate in base-related committees.

c. Do you feel they adequately represent your concerns?

Yes	4
No	
Not Applicable	5

- The RAB overall has concerns in mind.

5. Have you had any contact with U.S. Air Force, local, state or other officials regarding this site/facility?

Yes	6
No	3

a. If so, what was the nature of this contact?

- Through RAB affiliation.
- Through reserve duty and affiliation with County Sheriff Office.
- Meets with senators and congressional representatives through fund raisers and meetings.
- Dialogue with Air Force Co-chair of RAB, trustee with the Solano County Mosquito Abatement District, Citizens Advisory Committee with the U.C. Davis Mosquito Abatement Research Committee.
- Had discussions with representatives from Nature Conservancy home office in Washington D.C. concerning land protection around Travis AFB.
- Talked to City Councilperson about Open Space Issues.

3.4.4 Media

6. Do you feel that the media coverage has presented an accurate picture of the situation?

Yes	5
No	1
Don't Know	1
Don't Recall Seeing Anything	2

- Has not seen a lot of coverage.
- Some things have been sensationalized.
- Has seen examples of irresponsible reporting.
- Sometimes the media falls asleep.

7. Have you had any personal experiences with the media?

Yes	8
No	1

- Knows Richard Rico (Vacaville Reporter Owner) through Rotary Club.
- Has written articles for Tailwind.

b. Do you feel your concerns have been accurately reflected in media coverage?

Yes	5
No	1
Sometimes	1
Unsure	
Not Applicable	2

- Witnessed embellishment of non-environmental issues by media
- “Bay Area Backroads” (KCRA) featured their organization once. Interviewee’s experience has been positive.
- Most of the time, it does reflect my concerns.

8. Do you listen to news on the radio?

Yes	8
No	1

a. If so, what radio station do you listen to?

1140 KHTK (sports talk)	1
740 KCBS San Francisco (news)	2
810 KGO San Francisco (news/talk)	1
1530 KFBK Sacramento (news/talk)	1
105.1 KNCI (country music)	1
95.3 KUIC Vacaville (adult contemporary)	3
91.5 KLOVE (Christian music)	1
National Public Radio	1

9. Do you watch the news on television?

Yes	8
No	1

a. If so, what television station do you watch for the news?

CNN Atlanta	2
KCRA 3 (NBC) Sacramento	4
KGO 7 (ABC) San Francisco	3
KRON 4 (NBC) San Francisco	2
KTVU 2 (FOX) Oakland	1
KTXL 40 (FOX) Sacramento	2
KOVR 13 (CBS) Sacramento	2
KXTV 10 (ABC) Sacramento	2
MSNBC	1

10. What newspapers do you take?

Daily Republic (Fairfield)	6
The Reporter (Vacaville)	5
Travis AFB Tailwind	2

11. Do you have confidence in the Air Force’s ability to clean up this site or appropriately process the permit application/closure plan for this site?

Yes	9
No	
Not Sure	

3.4.5 Communication

12. Do you feel you have been kept adequately informed about the site/facility?

Yes	8
No	1

a. Why/why not?

- Received a lot of information at RAB meetings.
- Have not heard much about cleanup efforts.
- Lack of direct contact.

b. What, if any, communication problems have you experienced in the past?

- Our articles in local newspapers need to have an eye-catching title.

- Minor, routine, daily problems at base.
 - Heard negative information from the base about the goals of the Wilcox Ranch purchase by The Nature Conservancy. The media contributed to the problem.
- c. If not, what other kinds of information would you like to be receiving?
- Current coverage is satisfactory
 - Meetings and newsletters cover it.
 - Newsletters could use more photographs.
 - Not sure.
 - Environmental Information

13. What is the best way to provide you with information about the site/facility?

a. Newsletter/Fact Sheets

Yes	7
No	2

- Guardian is a good source.

b. Community Meetings

Yes	5
No	4

- This is issue-specific. I would only attend if I was interested in the topics.
- Once in a while, time permitting.

a. Workshops

Yes	6
No	3

- Possibly.
- Mentioned contracting workshop with local business leaders.
- This is issue-specific. I would only attend if I was interested in the topics.

b. Advisory Committee

Yes	9
No	

- RAB is the best way for this.
- Mentioned the quarterly Base Advisory Committee for on-base dialogue.

- Once in a while, time permitting.

c. Other

Yes	6
No	3

- Bus Tour
- Web site sounds like a great idea.
- Thinks that web sites and e-mail provides good ways to send out information.
- Web site and newsletter work best.

14. Are you aware of any specific translation/interpretation needs in this community?

Yes	2
No	7

- Sees this in classrooms.
- Have not heard much about this issue, although there may be a Hispanic influence to consider.
 - a. If yes, which language?

Hmong	
Spanish	2
Tagalog	

15. Can you suggest a convenient location(s) for:

a. Community Meetings

Suisun Recreation Center	1
California Teachers Association Building	1
Oak & More (Alamo Plaza)	1
Local library	1
Solano County Office of Education (Cordelia)	2
Travis AFB	1
Travis Credit Union Vacaville Building (community room)	1
Solano County Mosquito Abatement District Building	3
Fairfield Senior Center	1
Suisun Civic Center	1

Ulatis Community Center (Vacaville)	2
Vacaville Senior Center	2
Northern Solano County Association of Realtors Building	1

b. Local Information Repositories

County Environmental Office	1
Fairfield Senior Center	1
New Library next to McBride Center in Vacaville	1
Rush Ranch	1
Vacaville Chamber of Commerce	1
Web-based Library	1

16. Can you suggest anyone else we may want to talk to?

- Rich Scandrette (FEMA)
- Solano Land Trust
- Napa-Solano Autobon Society
- Sierra Club
- Gary Tatum (Vacaville Chamber of Commerce)
- Mark Essman (Fairfield Chamber of Commerce)
- Dennis Becker (Grizzly Island Unit Manager)
- Jim Ball (Solano Land Trust)

17. Any other comments, suggestions or concerns you would like to add?

- Thinks the environmental office is doing a great job.
- Recommended our participation (15 minute presentation) in the Suisun Resource Conservation District (SRCD) landowner workshops, held twice a year. Also recommended our contribution of an article in the SRCD newsletter.

3.4.6 Results of the 2003 Community Interviews

There were no significant differences between the input from the 2001 interviews and that of the 2003 interviews. Several of the interviewees mentioned that they get a lot of their information from the Internet and that they are more receptive to web-based information sources. All interviewees had at least one environmental concern that pertained to Travis AFB, but they also expressed some level of confidence that the Air Force is capable of cleaning up Travis AFB. Several of the local environmental groups provided some ideas for promoting community outreach and exchanging information.

4.0 OBJECTIVES AND RESPONSIBILITIES OF THE COMMUNITY INVOLVEMENT PROGRAM

Community involvement objectives and responsibilities have been developed to encourage and facilitate public participation in the Travis AFB ERP. They are intended to ensure that stakeholders are informed about activities taking place at Travis AFB and, at appropriate times, have an opportunity to provide input during the cleanup process. To be effective, the community involvement program must be formulated according to the community's need for information, and its interest and willingness to participate in the process.

4.1 Specific Objectives

The following objectives were developed to guide the implementation of community involvement activities.

4.1.1 Inform, Enlist Support and Participation of Elected Officials and the Restoration Advisory Board

City officials and RAB members provide an invaluable resource for the Air Force's effort to understand and monitor community concerns. Local officials' and RAB members' frequent contact with other stakeholders living near Travis AFB provide direct lines of communication, in which questions and concerns may be addressed or referred to the Air Force. The Air Force will keep RAB members; federal, state and local agencies; and elected officials informed and involved in the community involvement program. The addresses and phone numbers of these individuals are listed Appendices A and B.

4.1.2 Identify and Assess Community Perception of Travis AFB

Information regarding stakeholder perception of and concerns about Travis AFB are indispensable. At this time, stakeholders are primarily concerned about the progress, or lack thereof, being made on the environmental cleanup; impacts on wetlands, migratory species, and air quality in the area; containing contaminated groundwater plumes that have migrating offbase; and about potential human health and ecological risks. Understanding these concerns will help the Air Force to focus the level of effort for community involvement at Travis AFB. It is important to plan community involvement activities that will promote stakeholder participation in the ERP. Background information and local concerns will determine the activities that best meet the stakeholders' needs.

4.1.3 Provide Follow-up Explanations About Technical Activities and Contaminants

Concise, easily understood, and timely information should be available to all stakeholders concerning the schedule of technical activities, their purpose, and their outcome. Where information cannot be released to the public, either because of quality assurance requirements or the sensitivity of enforcement proceedings, a clear and simple explanation as to why the information must be withheld is in order. A written, basic description and discussion of the contaminants on Travis AFB should be provided so that residents understand possible threats to the public near or onsite. The Community Involvement Coordinator should also attempt to identify special situations or concerns where more specialized information is desired by individuals or groups. Finally, the Community Involvement Coordinator will field all inquiries from stakeholders to ensure they are handled efficiently and consistently.

4.1.4 Inform the Community About the Procedures, Policies, and Requirements of the Superfund Program

Everyone interviewed acknowledged that Travis AFB is an industrial facility, and like many other industrial facilities across the country, it has contamination. Some interviewees also knew that oversight for the cleanup program is being provided by federal and state regulatory agencies. Most of them were not aware that the cleanup is driven by Superfund. In order to dispel possible confusion about the Air Force's purpose and responsibilities for the cleanup program at Travis AFB, the public should understand the Superfund process. Stakeholders should also be aware of Superfund's community involvement requirements as outlined in the *Community Relations in Superfund: A Handbook* (1992). The following building blocks for community involvement are required:

- **Community Interviews**

Discussions must be held with local stakeholders in order to assess their concerns and appropriate community involvement activities. *(Conducted in July, August, and December 2000)*

- **Community Involvement Plan**

A complete CIP, based on community interviews, must be developed and approved. *(Completed in August 2001 and updated in July 2003)*

- **Information Repository**

An Information Repository must be established that includes each item developed, received, published, or made available pursuant to the Superfund Amendment and Reauthorization Act. These items are available for public inspection and printing or copying at the Vacaville Public Library.

- **Administrative Record**

The Air Force must establish an administrative record, which contains many of the documents, reports, correspondence, and other material related to the Superfund site at Travis AFB. In order for the public to review these documents, a copy of the administrative record is maintained at a public facility in the community or area of a Superfund site. The Air Force must inform the public of the administrative record's location. *(Established in September 1994)*

- **Public Comment Period on Engineering Evaluation/Cost Analyses and Proposed Plan**

The Engineering Evaluation/Cost Analyses (EE/CA) and Proposed Plan must be provided to the public for review and comment for a period of not less than 30 calendar days. Both oral and written comments must be considered. *(Following were the Proposed Plan Comment Periods: NEWIOU Groundwater, September 25 – October 24, 1996; WABOU Groundwater, April 8 – May 8, 1998; NEWIOU Soil, Sediment and Surface Water and WABOU Soil, July 8 – August 8, 1998; and revisions to the WABOU Soil Proposed Plan for sites SS043 and SS046 only, February 23 – March 24, 2000.)*

- **Public Meeting for Proposed Plan**

Before adoption of any cleanup plan, an opportunity for a public meeting at or near Travis AFB must be provided. A meeting transcript must be prepared and made available to the public. *(Public meetings conducted: NEWIOU Proposed Plan for Groundwater Cleanup, October 17, 1996; WABOU Proposed Plan for Groundwater Cleanup, April 23, 1998; NEWIOU Soil, Sediment and Surface Water and the WABOU Soil, July 23, 1998; revision to the WABOU Soil Proposed Plan for sites SS043 and SS046 only, March 15, 2000.)*

- **Responsiveness Summary**

A response to each of the significant comments, criticisms, and new data submitted on the Proposed Plan and EE/CA must be prepared. The Responsiveness Summary for the Proposed Plan is included in the Record of Decision. The responsiveness summary for the EE/CA is included in the **Action Memorandum**. No comments were received for the EE/CA. Comments were received for the Proposed Plans and they were discussed in *Section 3.2*.

4.2 Specific Responsibilities

Responsibilities for implementing the specific activities identified in the Travis AFB Community Involvement Plan are as follows:

4.2.1 Office of the Secretary of the Air Force Chief of Legislative Liaison

Coordinates notification to appropriate Congressional delegations with the Secretary of the Air Force for Public Affairs (SAF/PA) and other Air Staff agencies on Travis AFB Environmental Restoration Program matters, as necessary.

4.2.2 Chief of Public Affairs, Headquarters Air Mobility Command (HQ AMC/PA)

- Coordinates the release of information not previously cleared for release with SAF/PA.
- Provides additional guidance and assistance in support of the Community Involvement Program, as required.

4.2.3 Chief of Public Affairs, 60th Air Mobility Wing (60 AMW/PA)

- Acts as liaison between the 60th Air Mobility Wing commander and Air Mobility Command Public Affairs Office (PAO) and the 60th Civil Engineer Squadron's Environmental Flight. This includes coordination of public appearances by Wing leadership and release of information to the public or media. The 60 AMW/PA may receive "routine" information flow, such as newsletters and required legal notices, as a courtesy copy in conjunction with the public release. Releases that directly or indirectly quote Wing or higher headquarters leadership or federal, state, or local elected officials, as well as any release that reasonably could be expected to prompt significant media/public inquiries, should be coordinated through 60 AMW/PA prior to release. Any public release being distributed to media outlets serving a nationwide audience, to include television or radio networks, magazines, and major newspapers, will be coordinated through the 60 AMW/PA prior to release.
- While 60 CES Environmental Flight subject-matter experts will normally serve as public spokespersons on environmental issues, all unsolicited media queries about base environmental programs and requests for media interviews will be coordinated with the 60 AMW/PA. The PAO will provide media training to 60 CES spokespersons, or identify other spokespersons, as needed.
- Given sufficient advance notification, 60 AMW/PA will provide manning support for tours, press conferences, and other public affairs activities as required by the 60 CES Environmental Flight.
- The PAO will provide support as needed to communicate environmental information to internal audiences via the base newspaper, Commander's Access Channel (closed-circuit television), Commander's Call topics, or special base community notices.

4.2.4 Community Involvement Coordinator, 60th Civil Engineer Squadron Environmental Flight (60 CES/CEVR)

- Informs HQ AMC/PA of all queries, releases, public briefings, tours, or requests for visits pertaining to the Travis AFB program.
- Serves as base point of contact for all program issues.
- Coordinates all community relations issues with 60 AMW/PA.
- Prepares fact sheets, reports, and other pertinent information and distributes the materials to the Vacaville Public Library, the primary information repository; and to the Fairfield-Suisun Community Library and the Travis AFB Mitchell Memorial Library, which serve as smaller information repositories.

4.2.5 Freedom of Information Act Manager, 60th Communications Squadron (CS/SCXER)

- Coordinates, immediately upon receipt, Freedom of Information Act requests with Headquarters, Air Mobility Command, and Headquarters, U.S. Air Force, as appropriate.

5.0 STAKEHOLDER INVOLVEMENT ACTIVITIES

The Superfund law requires that certain community involvement activities be conducted at designated milestones throughout the cleanup process (*see Figures 4 and 5*). To facilitate the flow of information among stakeholders, the Travis AFB Community Involvement Coordinator is designated to respond directly to media and public inquiries regarding site activities. Activities that will be conducted throughout the duration of the Travis AFB cleanup program are described below.

5.1 Community Involvement Techniques

Although the community is generally satisfied with the cleanup activities taking place at Travis AFB, it should be noted that as final cleanup remedies are selected, community interest may increase. Community interest typically increases with the development of the Proposed Plan and selection of a final cleanup remedy. In addition, community interest in cleanup methods, cleanup cost, length of time needed to implement the cleanup, and final disposition of areas that have been cleaned up will require timely communication with all stakeholders. Following are some of the community involvement techniques the Air Force will use to inform and engage stakeholders in the selection of cleanup methods.

5.1.1 Initiate and Maintain Contact with Local Officials and Community Leaders

The process of conducting community interviews has already established an initial communications link between the community and Travis AFB. The Community Involvement Coordinator who helped conduct the interviews will continue to monitor the community's pulse as the designated spokesperson for the Travis AFB Environmental Restoration Program. Access to a contact person reduces the frustration that may accompany attempts to obtain information and communicate with several agencies and organizations involved in the cleanup. The Community Involvement Coordinator will also maintain contact with appropriate local officials and community leaders, including Travis AFB Restoration Advisory Board members, to provide them an opportunity to freely express any concerns they may have during the cleanup.

The Air Force will provide local officials and community leaders with periodic updates on site activities. Clear and understandable information will be provided about the ongoing activities and any potential risks associated with Travis AFB. Appropriate officials and community leaders include local agencies (*Appendix B*), elected officials (*Appendix B*) and Restoration Advisory Board members (*Appendix A*). The addresses and phone numbers of these individuals are listed in the appendices.

5.1.2 Facilitate Restoration Advisory Board Development and Meetings

One of the ways communities can participate in restoration process is by forming a Restoration Advisory Board (RAB). The RAB, co-chaired by one community and one Air Force representative, is comprised of community members with diverse interests. It offer the Air Force a public forum to hear — and to respond to — community preferences for site cleanup activities.

The existence of a RAB does not eliminate or lessen the need for the Air Force to keep stakeholders informed about its plans and decisions throughout the cleanup process. Instead, the Air Force will meet with the Travis AFB Restoration Advisory Board at least quarterly to keep it informed of the program's progress and to solicit input for remedial alternatives. RAB members are expected to share this information with their respective communities and organizations and to provide the Air Force and regulatory agencies timely feedback from the community. RAB members are also afforded the opportunity to comment on draft technical reports at the same time as the regulatory agencies. The dates for future RAB meetings can be found on the Travis AFB Environmental Cleanup public web site at: <http://www.travis.af.mil/pages/enviro/news/index.html>.

5.1.3 Initiate and Maintain Contact with Local Stakeholders

The information that stakeholders can provide the Air Force about the background of Travis AFB is valuable in planning the cleanup activities. The Air Force maintains a current mailing list in the 60th Civil Engineer Squadron's Environmental Flight at Travis AFB as one means of providing information to stakeholders. Through regular and frequent contact, stakeholders can voice their concerns regarding the site directly to the following designated Air Force representatives:

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Col. Michael Sevier
Chairman, Environmental
Protection Committee
60 AMW/CV
400 Brennan Circle
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(707) 424-2453

5.1.4 Establish and Maintain an Information Repository

An information repository (IR) is a file required by Superfund that contains documents and other information about the site and Superfund. It typically includes consent orders, work plans, reports, correspondence, and other documents used by the Air Force to select remedial alternatives.

The establishment of an IR provides stakeholders with access to site-related information. Travis AFB maintains three IRs. A full-scale information repository is located at the Vacaville Public Library, and smaller repositories are in the Fairfield-Suisun Community Library and the Mitchell Memorial Library at Travis AFB. At the Vacaville Community Library, the public can search and view documents contained on a 13-volume set of compact discs. Additional CDs will be added about every two years to keep the set up to date. The smaller repositories in Fairfield and on Travis AFB are limited to Restoration Advisory Board and Remedial Program Manager notebooks, which contain all applicable meeting minutes, newsletters, fact sheets, and proposed plans.

Travis AFB also maintains a complete administrative record, which is a legal file that contains all the information used by the Air Force to select a remedial alternative under CERCLA/SARA. The AR is

stored at Travis AFB. The IR and AR are identical files, and are maintained at the locations listed in *Appendix D*.

5.1.5 Establish and Maintain a Public Worldwide Web Site

The Travis AFB Environmental Cleanup Program public web site went online in January 1999. It provides stakeholders with information about each of the cleanup sites and the key personnel involved in the cleanup program. The site also includes various meeting minutes, news releases, and newsletters. Viewers can also get information about upcoming meetings and ask questions of or provide direct feedback to the Travis AFB restoration staff about any aspect of the program. The web site is located at <http://www.travis.af.mil/pages/enviro>.

5.1.6 Write and Distribute News Releases

Prepared statements will be released to local newspapers, and radio and television stations announcing significant information or milestones achieved in the Travis AFB Environmental Restoration Program. Copies of the news releases should be sent to the appropriate city officials and community leaders, if possible, before their release. The news releases will be distributed to all of the news media in *Appendix B*, at a minimum, and will be placed in the IR, which is available to the public in the Vacaville Public Library. Because news releases typically contain only the most important information, other details that stakeholders' desire are often excluded. News releases alone cannot address all the public's concerns; therefore, this Community Involvement Plan includes additional communication methods to augment news releases. The news releases can be found on the Travis AFB Environmental Cleanup public web site at: <http://www.travis.af.mil/pages/enviro/news/index.html>.

5.1.7 Prepare and Distribute Newsletters

Since January 1995, quarterly newsletters have been prepared and distributed to everyone on the mailing list. The Travis AFB Environmental Restoration Program newsletter, *Guardian*, is published quarterly to coincide with Restoration Advisory Board meetings that are typically held the fourth Thursday in the months of January, April, July and August. The newsletter reviews past Restoration Advisory Board meeting discussion topics and previews upcoming issues, in addition to providing stakeholders with other relevant cleanup program news. Each newsletter also includes the agenda for the upcoming RAB meeting and a map to the meeting location. Newsletters will be mailed to everyone on the mailing list about two weeks prior to an upcoming RAB meeting. Extra copies of the newsletter will be distributed to the information repositories (*Appendix D*), and to the city halls in Fairfield, Suisun City and Vacaville. The past four issues are available on the web site at <http://www.travis.af.mil/pages/enviro/news/index.html>.

5.1.8 Prepare and Distribute Fact Sheets

Fact sheets, written in non-technical language and produced to coincide with particular milestones during the investigation and cleanup process, are intended to provide the community with detailed information about the site. The Proposed Plans will be released in the form of fact sheets and will outline each of the alternatives being considered for cleanup of sites. A description of the Air Force-recommended alternative will also be provided in each Proposed Plan. Additional fact sheets may be issued to describe the cleanup as it progresses. Other fact sheets may be developed to respond to specific community information needs. The fact sheets will be included in the information repository and distributed to all stakeholders on the mailing list. Copies will also be available to the public in the information repositories

and at the city halls in Fairfield, Suisun City and Vacaville. The fact sheets are available for public review on the web site at <http://www.travis.af.mil/pages/enviro/library/index.html>.

5.1.9 Hold Public Meetings

A meeting provides an opportunity for the Air Force to present information and a proposed course of action. Air Force staff is available to provide information and answer questions. A public meeting is not necessarily a formal public hearing where testimony is received. Instead, it might be a meeting to exchange information and receive comments. Public meetings provide stakeholders with an opportunity to express their concerns to Air Force and regulatory agency representatives. Superfund requires an opportunity for a public meeting upon completion of the Proposed Plan during the public comment period. The public meeting provides a chance for the Air Force to directly address citizens' questions and comments, and to discuss the recommended cleanup alternative. Public meetings or information availability sessions may also be held at other times throughout the process. The Travis AFB Community Involvement Coordinator and Travis AFB Remedial Program Manager will conduct these meetings. Scheduling public meetings should remain flexible to account for technical milestones and public interest.

Site-specific presentations improve the public's understanding of the problems associated with spills or releases of hazardous substances and what the Air Force is doing about them. Presentations can easily be adapted to suit different audiences. Each presentation should at least describe the problem, describe how the problems affects or potentially can affect the public and the environment, discuss what the Air Force is doing about it, explain how stakeholders can help or obtain additional information, and respond to questions from the audience. A presentation for Travis AFB could describe the history of the base, discuss previous removal activities at the base, illustrate the Superfund program, highlight the timetable for Air Force cleanup actions, and explain and evaluate the cleanup alternatives being considered. Through question and answer periods, the Air Force has an opportunity to identify stakeholders' concerns. Presentations are suitable for public meetings, small group meetings, and special interest groups. Visual aids should be used whenever possible to enhance and reinforce the information being presented.

5.1.10 Hold Public Comment Periods

Superfund requires that a minimum 30-day comment period be held after completion of the Proposed Plan. The purpose of the comment period is to enable all interested parties, including local officials, residents, businesses, and groups, an opportunity to express their opinions about the recommended alternative and participate in the decision-making process for site cleanup. During the proceedings, the Air Force will receive verbal comments, which are recorded by a court reporter as a verbatim transcript, and formally respond to all significant comments in the Responsiveness Summary.

In accordance with Air Force requirements, the comment period will be announced to the public in a display advertisement about one-sixteenth of a page in local newspapers of general circulation, such as the *Daily Republic*, *The Reporter*, and the *Travis AFB Tailwind*. A news release announcing the comment period for the site also will be sent to news media. Community input during this period is highly encouraged.

5.1.11 Publish Notices

Before adoption of any plan for cleanup is undertaken, Superfund requires that a notice and brief explanation of the Proposed Plan for cleanup be published in a major local newspaper of general

circulation, such as the *Daily Republic* and *The Reporter*. A notice, which explains the final cleanup plan adopted by the Air Force, will be published and the final decision document will be made available to the public before any cleanup activities take place. Notices or advertisements also will be published in the newspapers to announce all public meetings.

5.1.12 Prepare Public Meeting Transcripts

A verbatim transcript will be prepared for any public hearing held during a public comment period to announce the Travis AFB recommended alternative. The transcript will be included in the information repository and will be available for public review.

5.1.13 Prepare Responsiveness Summary

All comments received during a public comment period will be addressed in a document called a Responsiveness Summary. This report is required by Superfund as part of the final decision document called an Action Memorandum. The Action Memorandum is a formal document that details the process by which the final cleanup action for the site was chosen. It will be placed in the information repository.

5.1.14 Prepare and Distribute Public Service Announcements

The Air Force will prepare and distribute public service announcements (PSA) to publicize Restoration Advisory Board meetings and other cleanup program events. The PSAs will be distributed to public access television stations in Fairfield and Vacaville, and to the 60th Air Mobility Wing Public Affairs Office to be aired on the Commander's Access Channel at Travis AFB.

5.1.15 Maintain a Speaker's Bureau

If requested by a stakeholder, as Air Force representatives will be available to speak at local meetings to explain the Travis AFB Environmental Restoration Program, and how stakeholders can get involved in the decision-making process for the selection of remedial actions.

5.1.16 Conduct Site Tours

As major programmatic changes occur or upon request from the RAB, the Air Force will conduct on-site tours of the restoration sites for local residents; local, state, and federal officials; and other interested parties, such as civic groups and environmental organizations. Site tours are an important part of the community involvement program as they permit stakeholders to see first-hand the cleanup of Travis AFB.

5.1.17 Revise the Community Involvement Plan

Through the various means of communication and interaction previously listed, the Air Force will note changes in community concerns, information needs, and activities, and modify this Community Involvement Plan, as necessary, to respond to those changes.

The CIP addresses community relations during the Remedial Design/Remedial Action (RD/RA) phase of the Environmental Restoration Program and is revised biannually, or as often as necessary. During the RD/RA phase, cleanup remedies are designed and the treatment systems are constructed.

5.2 On-Base Employee Involvement Techniques

To ensure effective communication between the Air Force and on-base employees and keep them informed of public participation opportunities, the following communications shall be used as part of the Travis AFB Community Involvement Program:

5.2.1 Commander's Call

A Commander and/or representative of Travis AFB should meet periodically with employees, managers and employee groups to keep employees informed of program developments and to address questions and concerns. Pertinent environmental cleanup program information will be provided to 60th AMW/PA to be included in the monthly commander's call topics. Commanders use these topics to inform their military and civilian employees about major activities and issues of concern to the Travis AFB community.

5.2.2 Fact Sheets, Newsletters, and Policy Letters

These media are distributed to all local residents and property owners, Air Force Government Employees Union officials, the Equestrian Center, base commanders, and other interested parties through the mail.

5.2.3 Bulletin Boards and Posters

All fact sheets, articles, and other pertinent information should be posted on bulletin boards in areas accessible to Travis AFB employees, such as in libraries, cafeterias, and union offices.

5.2.4 Base Newspaper

Articles written for the quarterly ERP newsletter and public notices are frequently printed in the Travis AFB *Tailwind*.

5.2.5 On-Base Information Repository

The Mitchell Memorial Library on Travis AFB is a small-scale information repository. As such, it is limited to Restoration Advisory Board and Remedial Program Manager notebooks, which contain all applicable meeting minutes, newsletters, fact sheets, and proposed plans.

5.3 Regulatory Agency Involvement Techniques

Other important stakeholders in the cleanup of Travis AFB are the San Francisco Bay Regional Water Quality Control Board, the California Department of Toxic Substances Control, and the U.S. Environmental Protection Agency Region IX. In accordance with the Federal Facilities Agreement, these agencies share responsibilities and oversight for the cleanup activities at Travis AFB. The Air Force will use the following techniques to keep the regulatory agencies informed.

5.3.1 Remedial Program Manager (RPM) Meetings

RPM meetings are typically held every month with the regulatory agencies to review project status, accomplishments, upcoming activities, and schedules. See *Appendix C* for a list of potential agency attendees.

5.3.2 Telephone Conference Calls

In addition to monthly RPM meeting held at Travis AFB, the Air Force will hold a weekly teleconference with the agencies to provide update of program activities.

5.3.3 Specific Milestone Meetings

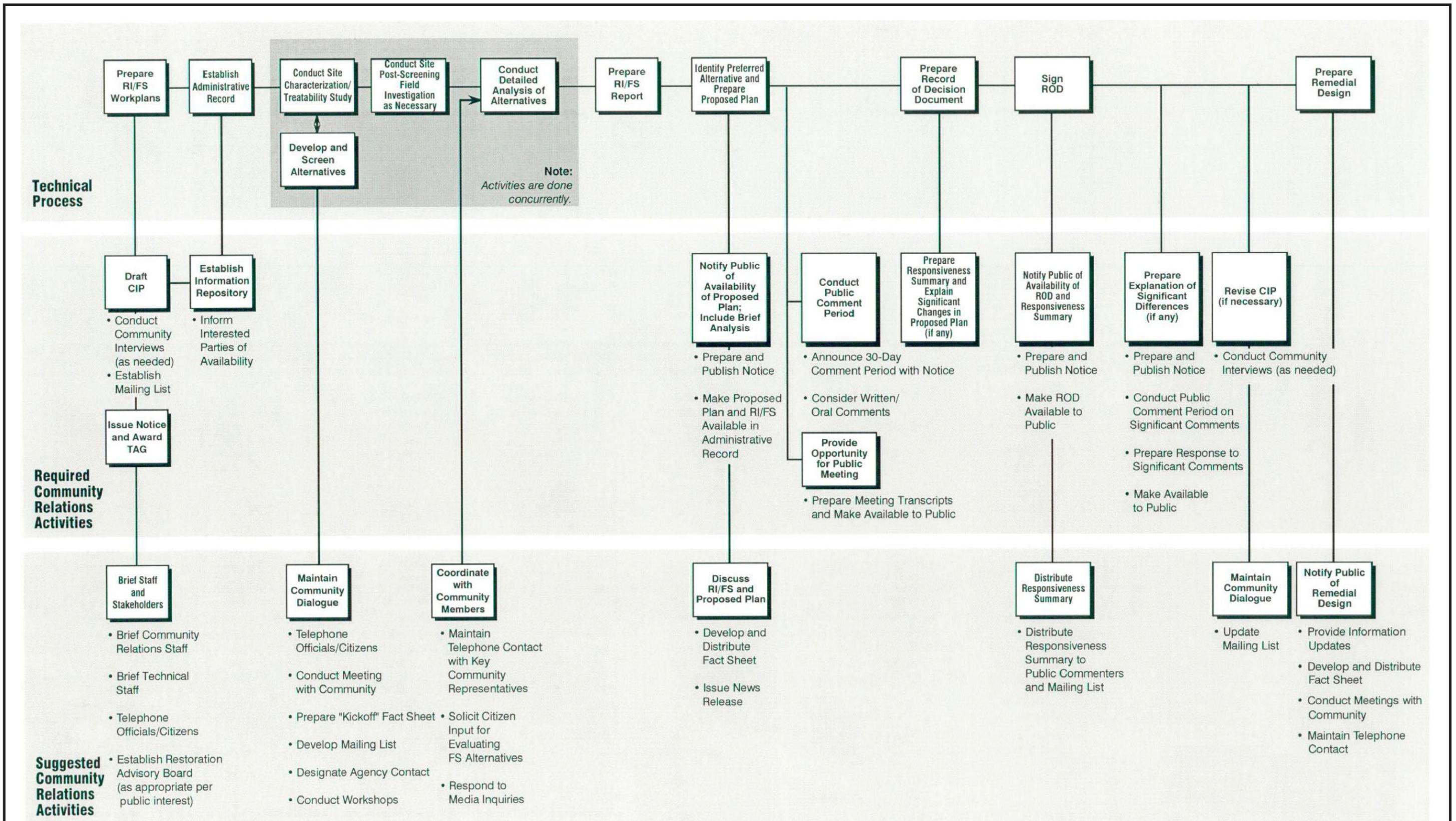
As the need arises, the Air Force and regulatory agencies will meet to review milestones, discuss and resolve concerns, and discuss unanticipated problems or changes in program. See *Appendix C* for potential agency attendees.

5.3.4 Newsletter, News Releases and Fact Sheets

Copies of all newsletters, news releases, fact sheets, and other information distributed as part of the Travis AFB community involvement program will be provided to the regulatory agencies. The materials will be distributed for informational purposes and so the agencies can adequately respond to any public inquiries.

5.4 Schedule

The community relations program is an ongoing part of the Environmental Restoration Program at Travis AFB. Certain activities will be scheduled in conjunction with key milestones and decision points of the ERP (*see Figures 4 and 5*).



NOTE: BASED ON DRAFT NATIONAL OIL AND HAZARDOUS SUBSTANCES POLLUTION CONTINGENCY PLAN (NCP) REQUIREMENTS

FIGURE 4
COMMUNITY INVOLVEMENT ACTIVITIES
RELATIONSHIP TO SUPERFUND PROCESS
 TRAVIS AIR FORCE BASE, CALIFORNIA

TASKS	PROJECT MILESTONES FOR EACH OPERABLE UNIT			
	Start of RI	End of FS/ Proposed Plan	ROD	RD/RA
COMMUNITY INTERVIEWS/ DEVELOP CIP	R			
NEWS RELEASES		S		
INFORMATION REPOSITORIES/ ADMINISTRATIVE RECORD				
MAILING LIST				
RESTORATION ADVISORY BOARD MEETINGS				
PROGRAM EVALUATION				S
MEETINGS* WITH RESIDENTS AND LOCAL OFFICIALS				
FACT SHEET	S	S		R
PUBLIC COMMENT PERIOD		R		
PUBLIC NOTICES	R	R	R	
PUBLIC MEETINGS		R		S
RESPONSIVENESS SUMMARY			R	
REVISE CIP (EVERY TWO YEARS)			R	

KEY

- * Meetings to be Held as Necessary
- █ Ongoing Activities
- R Required Activity Performed at Project Milestones
- S Suggested Activity Performed at Project Milestones

FIGURE 5
COMMUNITY INVOLVEMENT
ACTIVITIES SCHEDULE
 TRAVIS AIR FORCE BASE, CALIFORNIA
CH2MHILL

6.0 REFERENCES

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- U.S. Environmental Protection Agency. *Community Relations in Superfund: A Handbook*. 1992.
- U.S. Environmental Protection Agency. *Community Involvement Plan (Final) for Masters Metals Superfund Site, Cleavland, Ohio*. 1999.
- 60 AW/PA & 60 AW/EM. *Community Relations Plan for Travis Air Force Base Installation Restoration Program Remedial Investigation and Feasibility Study*. 1991.
- 60 AMW/EM. *Community Relations Plan (Final)*. 1998.
- 60 CES/CEVR. *Community Involvement Plan (Final)*. 2001

Appendix A
Key ERP Project Contacts

APPENDIX A

Key ERP Project Contacts

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Restoration Advisory Board Members

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*These RAB members are employed by, or have been designated as the official representatives of, the organizations that appear in *italic* beneath their names.

**These people are employed by, or are members of, the organizations that appear in *italic* beneath their names. While they are not official representatives of those organizations, they bring to the RAB the concerns of people in their respective professions.

Appendix B
List of Contacts and Interested Parties

List of Contacts and Interested Parties

Other Department of Defense

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(916) 568-4725

Liberty Christian Center
1200 Civic Center Drive
Fairfield, CA 94533
(707) 425-9673

MG/McBail Company
Box 1056
Alamo, CA 94507

Macedonia Church of God
805 Tree Duck Way
Suisun City, CA 94585

Mosquito and Vector Control District
2950 Industrial Court
Fairfield, CA 94533

Phytosphere Research
1027 Davis Street
Vacaville, CA 95688
(707) 452-8735

Pastor Luis Rosales
Primera Iglesia Bautista Emmanuel
230 Brown Street
Vacaville, CA 95688
(707) 446-4060

Roth & Miller Realty
1313 E. Monte Vista Avenue
Vacaville, CA 95688

Sanwa Bank
P.O. Box 67
Fairfield, CA 94533
(707) 425-6431

Shepherd of the Hills Lutheran Church
580 Trinity Drive
Vacaville, CA 95688
(707) 448-8599

John Gebers
Solano Acura
2459 Magellan Road
Fairfield, CA 94533
(707) 427-2200

Steve Dunn
Solano Signs
1331 Oliver Road
Fairfield, CA 94533
(707) 427-0400

Southern Pacific Company
49 Stevenson Street, 15th Floor
San Francisco, CA 94105-2909

St. Paul's United Methodist Church
101 West Street
Vacaville, CA 95688
(707) 448-5154

Temple Baptist Church
600 E. Tabor Street
Fairfield, CA 94533
(707) 426-5683

Trinity Baptist Church of Vacaville
401 W. Monte Vista Avenue
Vacaville, CA 95688
(707) 448-5430

Trinity Lutheran Church
2075 Dover Avenue
Fairfield, CA 94533
(707) 425-2944

True Love Baptist Church
1956 Pennsylvania Avenue
Fairfield, CA 94533
(707) 426-1123

Valley Evangelical Free Church
5063 Maple Road
Vacaville, CA 95688
(707) 448-7222

Rudy Urban
Western Sign Company
1755 Woolner Avenue, Suite A
Fairfield, CA 94533
(707) 422-6011

Appendix C
Regulatory Agency Contacts

Regulatory Agency Contacts

Bay Area Air Quality Management District (BAAQMD)

Cliff Sennello
Bay Area Air Quality Management District
939 Ellis Street
San Francisco, CA 94109
(415) 749-4979

California Department of Fish & Game

Mike Rugg
Water Quality Biologist
California Department of Fish & Game
7329 Silverado Trail
P.O. Box 47
Yountville, CA 94599
(707) 944-5523

California Department of Toxic Substances Control (DTSC)

Jose Salcedo
Remedial Project Manager
California Department of Toxic Substances Control
8800 Cal Center Drive
Sacramento, CA 95826-3200
(916) 255-3741

Michelle Trotter
Public Participation Specialist
California Department of Toxic Substances Control
8800 Cal Center Drive
Sacramento, CA 95826
(916) 255-6441

San Francisco Bay Water Quality Control Board (SFBRWQCB)

Sarah Raker
Remedial Project Manager
San Francisco Bay Water Quality Control Board
1515 Clay Street, Suite 1400
Oakland, CA 94612
(510) 622-2377

Solano County Environmental Management Office

Brad Nicolet
Solano County Department of Environmental Management
601 West Texas Street
Fairfield, CA 94533
(707) 421-6765

U.S. Environmental Protection Agency, Region IX (U.S. EPA)

John Lucey
Remedial Project Manager
Federal Facilities Cleanup Office
U.S. Environmental Protection Agency
75 Hawthorne Street, H-9-1
San Francisco, CA 94105
(415) 972-3145
Toll-free Number: 1-800-231-3075

Viola K. Cooper
Community Involvement Coordinator
U.S. Environmental Protection Agency
75 Hawthorne Street, SFD-3
San Francisco, CA 94105-3901
(415) 972-3243

U.S. Fish & Wildlife Service (USFWS)

Mr. Ken Fuller
U.S. Fish and Wildlife Service
2800 Cottage Way, Room W-2065
Sacramento, CA 95825-1846
(916) 414-6625

Appendix D
Information Repository and Administrative
Record Locations

Information Repository and Administrative Record Locations

Information Repositories

Vacaville Public Library

1020 Ulatis Drive
Vacaville, CA 95688
(707) 449-6290

Monday - Thursday: 10 a.m. - 9 p.m.
Friday - Saturday: 10 a.m. - 5 p.m.
Sunday: 1 p.m. - 5 p.m.

Complete Information Repository

Mitchell Memorial Library

510 Travis Boulevard (Building 436)
Travis AFB, CA 94535
(707) 424-3279

Monday - Thursday: 10 a.m. - 9 p.m.
Friday: 10 a.m. - 6 p.m.
Saturday: Closed
Sunday: 12 p.m. - 6 p.m.

Mini/partial Information Repository
AR Index, RAB & RPM notebooks

Fairfield-Suisun Community Library

1150 Kentucky Street
Fairfield, CA 94533
(707) 421-6500

Monday - Thursday: 10 a.m. - 9 p.m.
Friday - Saturday: 10 a.m. - 5 p.m.
Sunday: 1 p.m. - 5 p.m.

Mini/partial Information Repository
AR Index, RAB & RPM notebooks

Administrative Record

Prior to July 2003:
60 CES/CEVR
580 Hickam Avenue, Building 246
Travis AFB, California 94535-2176
(707) 424-3739

After July 2003:
60 CES/CEVR
???? Hickam Avenue, Building 570
Travis AFB, California 94535-2176
(707) 424-3739

Monday - Friday: 8 a.m. - 4 p.m.
(Closed Saturday and Sunday)

Appendix E
Recommended Locations for Public Meetings

Recommended Locations for Public Meetings

Anheuser-Busch Inc.

3101 Busch Drive
Fairfield, CA 94533
(707) 429-2000

Fairfield City Hall/Civic Center

1000 Webster Street
Fairfield, CA 94533
(707) 428-7423

Fairfield Community Center

1000 Webster Street
Fairfield, CA 94533
(707) 428-7435

Fairfield Senior Center

1200 Civic Center Drive
Fairfield, CA 94533
(707) 428-7421

Fairfield-Suisun Chamber of Commerce

1111 Webster Street
Fairfield, California 94533
(707) 425-4625

Fairfield-Suisun Community Library

1150 Kentucky Street
Fairfield, California 94533
(707) 421-6500

Fairfield-Suisun Sewer District

1010 Chadbourne Road
Suisun City, CA 94585
(707) 429-8930

Jelly Belly

2400 North Watney Way
Fairfield, CA 94533
(707) 428-2800

John A. McBride Senior Center

411 Kendal Street
Vacaville, CA
(707) 469-6660
Nut Tree Airport
301 County Airport Road
Vacaville, CA
(707) 446-0322

Solano County Government Chambers

580 Texas Street
Fairfield, CA 94533
(707) 421-6100

Suisun City Hall

701 Civic Center Boulevard
Suisun City, CA 94585
(707) 421-7300

Suisun City Senior Center

318 Merganser Drive
Suisun City, CA 94585
(707) 421-7203

Three Oaks Community Center

1100 Alamo Drive
Vacaville, California 95687
(707) 449-6124

Ulatis Community Center

1000 Ulatis Drive
Vacaville, CA 95688
(707) 449-6216

Vanden High School

2591 Markeley Lane
Fairfield, CA 94533
(707) 437-8270

Northern Solano County

Association of Realtors
3690 Hilborn Rd
Fairfield, CA 94533
(707) 422-9140

Appendix F
Key ERP Milestones

APPENDIX F

Key ERP Milestones

Travis AFB named to National Priorities List	1989
Federal Facilities Agreement signed	1990
Federal Facilities Agreement renegotiated to create four Operable Units	1993
Travis AFB Restoration Advisory Board Formed	1995
Central Groundwater Treatment Plant Online	1995
NEWIOU Groundwater Interim Record of Decision	1997
South Base Boundary Groundwater Treatment Plant Online	1998
WABOU Groundwater Interim Record of Decision	1999
West Treatment and Transfer Plant Online	2000
North Groundwater Treatment Plant Online	2000
WABOU Soil Record of Decision	2002
Travis AFB Groundwater 5-Year Review	2003

Past Investigative Activities

Preliminary Assessment (Phase I) Engineering Science, Atlanta, GA	1983
Remedial Investigation (Phase II, Stage 1) Roy F. Weston, Inc. West Chester, PA	1984 - 1986
Remedial Investigation (Phase II, Stage 2) Roy F. Weston, Inc. West Chester, PA	1987 - 1990
Remedial Investigation Roy F. Weston, Inc. West Chester, PA	1990
Remedial Investigation, North & South Gas Stations (Phase II, Stage 1) Roy F. Weston, Inc. West Chester, PA	1989 - 1991

Preliminary Assessment/Site Inspection TF33 Test Stand Roy F. Weston, Inc. West Chester, PA	1991 - 1992
RCRA Facility Assessment Roy F. Weston, Inc. West Chester, PA	1991 - 1992
Remedial Investigation, EIOU Roy F. Weston, Inc. West Chester, PA	1993 - 1995
Remedial Investigation, NOU Radian Corporation, Sacramento, CA	1993 - 1995
Remedial Investigation, WIOU Radian Corporation, Sacramento, CA	1994 - 1995
Remedial Investigation, WABOU CH2M HILL, Sacramento, CA	1995 - 1997

Response Actions Undertaken

11,000 gallons of JP-4 jet fuel recovered after pipeline failure at JFSA-2.	1985 - 1986 Complete
5,000 gallons of JP-4 jet fuel recovered after pipeline failure at JFSA-3.	1990 Complete
23 underground storage tanks removed. Approximately 240 cubic yards of contaminated soil removed and treated.	Complete
Recovered floating product from JFSA-1 (Fuel Storage Area G)	1993 - Ongoing
Treated contaminated groundwater from the tower area (TARA, Tower Area Removal Action)	1995 - Ongoing
Treatment of water in the storm sewer contaminated with TCE before the water reached Union Creek.	1993 - 1995 Complete

Removed 144 cubic yards of pesticide-contaminated soil at the Cypress Lakes Golf Course maintenance yard.	2000-2001 Complete
Removed and disposed of 38 cubic yards of U-234 and U-235 contaminated waste and soil from the Radioactive Burial Site #2 (RW013)	2002-2003 Complete

Appendix G
List of Acronyms and Glossary

List of Acronyms and Glossary

Acronyms

AF	Air Force
AFB	Air Force Base
AFCEE	Air Force Center for Environmental Excellence
AMC	Air Mobility Command
AOC	Area of Concern
ARAR	Applicable, or Relevant and Appropriate Federal or State Standards, Requirements, Criteria or Limitations
BAAQMD	Bay Area Air Quality Management District
BRA	Baseline Risk Assessment
CAA	Clean Air Act of 1971 as amended
CAMU	Corrective Action Management Unit
CES	Civil Engineer Squadron
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act of 1980 as amended (Also known as "Superfund")
CIP	Community Involvement Plan
DCE	Dichloroethene
DERA	Defense Environmental Restoration Account (Changed in 1996 to ERA)
DERP	Defense Environmental Restoration Program (Changed in 1996 to ERP)
DCA	Dichloroethane
DOD	Department of Defense
DTSC	California Department of Toxic Substances Control
EE/CA	Engineering Evaluation/Cost Analysis
EIOU	East Industrial Operable Unit
ERA	Environmental Restoration Account
ERP	Environmental Restoration Program

FOIA	Freedom of Information Act
FR	Federal Register
FS	Feasibility Study
FY	Fiscal Year
HARM	Hazardous Assessment Rating Methodology
HQ AMC	Headquarters, Air Mobility Command, Scott AFB, IL
HRS	Hazard Ranking System
IRP	Installation Restoration Program
IROD	Interim Record of Decision
JP4	Jet Fuel
LEL	Lower Explosive Limit
MCL	Maximum Contaminant Levels
NEPA	National Environmental Policy Act
NEWIOU	North, East, West Industrial Operable Unit
NOU	North Operable Unit
NPL	National Priority List
O&M	Operation and Maintenance
OU	Operable Unit
OWS	Oil/Water Separator
PA	Public Affairs
PA	Preliminary Assessment
PA/SI	Preliminary Assessment/Site Inspection
PAH	Polycyclic Aromatic Hydrocarbon
PAO	Public Affairs Office
PCB	Polychlorinated Biphenyl
PCE	Tetrachloroethene
POCOS	Petroleum Only Contaminated Site

PP	Proposed Plan
QAPP	Quality Assurance Project Plan
RA	Remedial Action
RAB	Restoration Advisory Board
RCRA	Resource Conservation and Recovery Act of 1976, as amended RCRA 3004(u)Section in the amended (1984) Resource Conservation and Recovery Act
RD	Remedial Design
RD/RA	Remedial Design/Remedial Action
RFA	RCRA (Resource Conservation and Recovery Act) Facilities Assessment
RI	Remedial Investigation
RI/FS	Remedial Investigation/Feasibility Study
ROD	Record of Decision
RPM	Remedial Program Manager
RS	Responsiveness Summary
SAF	Office of the Secretary of the Air Force
SARA	Superfund Amendments and Reauthorization Act of 1986
SBBGTP	South Base Boundary Groundwater Treatment Plant
SCDEM	Solano County Department of Environmental Management
SFBRWQCB	San Francisco Bay Regional Water Quality Control Board
SI	Site Inspection
SSA	Solvent Spill Area
SVOC	Semi-Volatile Organic Compound
TCE	Trichloroethylene (an industrial solvent)
TPH	Total Petroleum Hydrocarbons
U.S. EPA	U.S. Environmental Protection Agency
UST	Underground Storage Tank
VOC	Volatile Organic Compound
WABOU	West/Annexes/Basewide Operable Unit
WIOU	West Industrial Operable Unit

Glossary

Administrative Record: A file that contains all information used by the lead agency to make its decision on the selection of a response action under CERCLA/SARA. This file, available for public review, is established at or near the site, usually at one of the information repository locations, while a duplicate is held in a central location, such as the lead agency headquarters.

Ambient: Refers to the air, soil, groundwater or other portion of the environment reflects natural conditions in the vicinity of the location of suspected contamination.

Applicable or Relevant and Appropriate Requirements (ARARs): Criteria involved in choosing cleanup remedies; an integral part of the decision-making procedure outlined in the National Contingency Plan (NCP).

Area of Concern (AOC): An area where chemical releases are suspected from the past that has been approved for further investigation, but has not yet been classified a site.

Arsenic: An element found in nature that has varying appearances. It has been used in the production of boric acid, pharmaceutical products, and pesticides. It is a by-product of copper, zinc and lead smelting and is highly toxic by inhalation or ingestion; a suspected human carcinogen.

Background: “Naturally” occurring levels of any substance in nature; the concentration level of substances in a location prior to any release of hazardous material. A background concentration is the average level of a chemical found naturally in the environment. Background concentrations are compared with levels found near a hazardous waste site to determine whether contamination is present.

Baseline Risk Assessment (BRA): A part of the RI/FS report that describes the risks to public health and the environment from the Superfund site; sometimes improperly referred to as an endangerment or exposure assessment.

Benzene: A volatile organic chemical produced as a by-product of coal tar distillation, coal processing, and coal coking; widely used in the chemical and drug industries as a solvent, constituent of motor fuels as an octane booster and in the manufacture of many chemical compounds and rubber. A known cause of cancer, it is toxic by ingestion, inhalation, or absorption. Long-term overexposure may cause leukemia, some types of cancer and a type of anemia called aplastic anemia.

Cancer Risk: The potential or probability of contracting cancer due to exposure to carcinogenic substances. Cancer risk is often expressed as expected number of cases (population risk) or excess lifetime probability per person (individual risk).

Chloride: A series of chlorine-containing compounds.

Chlorobenzene: A solvent used in the manufacture of paints. It is toxic by inhalation, ingestion, or direct skin contact.

Chloroform: A chlorinated form of methane that has been used as a refrigerant, a solvent, a fumigant, and an insecticide. This volatile liquid is toxic by inhalation and is prohibited by the FDA from use in drugs, cosmetics, and food preparation.

Cleanup: Actions taken to deal with a release or threatened release of hazardous substances that could affect public health or the environment. The term is often used broadly to describe various response actions or phases of remedial responses, such as the remedial investigation/feasibility study.

Community Involvement Plan (CIP): A document that outlines specific community involvement activities that occur during the remediation of a site.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980: A Federal law passed in 1980 and modified in 1986 by the Superfund Amendments and Reauthorization Act (SARA) authorizing identification and remediation of abandoned hazardous waste sites.

Corrective Action Management Unit (CAMU): A designated area of land within a facility where cleanup actions, such as consolidation of contaminated soil, can take place without being considered a new disposal facility. It is permissible under United States and California regulations to give regulatory agencies flexibility in selecting and implementing the most effective and appropriate waste management strategies at large, complex sites such as Travis AFB.

Cyanide: A chemical primarily used in the extraction of ore, in electroplating and in metal treatment. Cyanide can be absorbed into the blood and block the ability of blood to take in oxygen. Exposure to a lot of cyanide at once may cause death in minutes. Early signs of cyanide poisoning include dizziness, numbness, rapid pulse, and nausea. Long term exposure to small amounts of cyanide compounds may cause appetite loss, weakness, and dizziness.

Defense Environmental Restoration Program (DERP): Established in 1984, DERP promotes and coordinates efforts for the evaluation and cleanup of contamination at DoD installations. DERP guides the Air Force, Army, Navy, and Defense Logistics Agency Installation Restoration Programs.

1,2 - Dichloroethane (1,2-DCA): A volatile, moderately toxic organic chemical used as a solvent and fumigant. 1,2-DCA can cause skin irritation and liver and kidney damage.

1,1 - Dichloroethene (1,1-DCE): A colorless liquid with a mild, sweet odor resembling that of chloroform. 1,1-DCE is a breakdown product of the more highly chlorinated hydrocarbons.

1,2 - Dichloroethene (t 1,2-DCE): A colorless liquid with a sweet odor. 1,2-Dichloroethene has two forms, cis- and trans- 1,2-DCE, which are often present as a mixture. Cis- 1,2-DCE is a breakdown product of the more highly chlorinated hydrocarbons.

Dioxin: Large hydrocarbon molecules with varying numbers of chlorine atoms. Dioxins are formed by the incomplete burning of other chlorine-containing compounds and as impurities in the manufacture of chemicals.

Downgradient: A downward hydrologic slope that causes ground water to move toward lower elevations.

Dual-Phase Extraction (DPE): A dual-phase extraction system applies a vacuum to the underground soil layers and draws contaminated water in the extraction well, thereby lowering the local water table in the vicinity of the solvent pools. The vacuum also stirs up the air between the soil particles. Any pure solvent pools that are exposed to the air by the lowered water table will evaporate, and the contaminated vapors will be drawn out of the extraction well by the vacuum.

Engineering Evaluations/Cost Analyses (EE/CA): An analysis of removal action alternatives for a contaminated site, which undergoes public review and comment. An EE/CA, or its equivalent, is required for removal actions with a planning period of at least six months before on-site activities must be initiated.

Environmental Restoration Account (ERA): DOD monies used to fund remediation of its sites. (Changed in 1996 from DERA)

Estuary: Areas where fresh water from rivers and salt water from near shore ocean waters are mixed. These areas may include bays, mouths of rivers, salt marshes, and lagoons. These water ecosystem shelter and feed marine life, birds, and wildlife.

Ethylbenzene: A chemical commonly found in petroleum products. It can be toxic by inhalation, ingestion, or direct skin contact.

Excavate/Excavation: To remove by scooping or digging out.

Feasibility Study: A U.S. Environmental Protection Agency term for the development, evaluation, selection, and description of remedial action alternatives. See *Remedial Investigation/Feasibility Study*, also.

Federal Facilities Agreement (FFA): An agreement between local, state, and federal agencies to share responsibilities and oversight for IRP activities at Travis AFB. These agencies are the U.S. EPA, California Department of Toxic Substances Control, and the San Francisco Bay Regional Water Quality Control Board. These agencies ensure that remediation activities implemented at Travis AFB protect public health and the environment, and comply with all applicable state and federal regulations.

Freedom of Information Act (FOIA): The Act provides that any person has the right to access, enforceable in court, to federal records, except to the extent that such records or parts of those records, are protected from disclosure by one of those exemptions.

Groundwater: Precipitation (rain, snow, hail, etc.) that soaks into a layer of rock, sand or gravel located beneath the ground's surface. The layer is capable of storing water within cracks and pore spaces, or between grains of sand. When water contained within the layer accumulates in sufficient quantity it may be used for drinking or other purposes. The water contained in the aquifer is called ground water.

Hazard Ranking System (HRS): A scoring system used by U.S. EPA to evaluate potential relative risks to public health and environment from releases or threatened releases of hazardous substances. EPA and State use the HRS to calculate a site score (0 to 100) based on

the actual or potential release of hazardous substances from a site through air, surface water, or groundwater. The score is the primary factor used to decide if a hazardous waste site should be placed on the National Priorities List.

Heavy Metals: Metals such as arsenic, cadmium, chromium, cobalt, lead, and mercury that have often been used in the manufacture of pigments, inks, and paints. Heavy metals can be highly toxic at fairly low concentrations.

Herbicide: A chemical pesticide designed to control or destroy plants, weeds, or grasses.

Hazardous and Solid Waste Amendments (HSWA) of 1984: Amendments to RCRA establishing a timetable for landbans and more stringent requirements for USTs.

Hydrocarbons: Any of the numerous organic compounds like benzene that contain only hydrogen and carbon which are derived principally from petroleum, coal tar, and vegetable sources. Some hydrocarbons are suspected of causing cancer, while benzene is known to cause cancer.

Information Repository: A file containing current information, technical reports, and reference documents regarding a Superfund site. The information repository is usually located in a public building that is convenient for local residents such as a public school, city hall, or library.

Inorganic Compounds: One of two primary classes of chemical compounds, the other being organic compounds. Unlike organic compounds, inorganic compounds do not contain carbon. Water, sulfuric acid, table salt, and ammonia are examples of inorganic compounds. Also known as inorganic chemicals or inorganics.

Installation Restoration Program (IRP): The specially funded program established in 1978 under which the DOD has been identifying and evaluating its hazardous waste sites and controlling the migration of hazardous contaminants from those sites.

Interim Record of Decision (IROD): A public, legally binding document explaining cleanup alternatives that will be used at a site until the final remedy is selected. The IROD is based on information and technical analyses generated during the remedial investigation/feasibility study and consideration of public comments and community concerns.

Leachate: The liquid that trickles through or drains from waste carrying soluble components from the waste. After leachate enters the soil, it can travel downward into ground water or be carried off-site as runoff.

Lead: A metal commonly found in plumbing, automotive batteries, foil and solder which can be toxic by ingestion or inhalation of contaminated dust or fumes. It accumulates in the body, and can build up to dangerous levels over long periods of time. It can cause brain, bone and nerve damage.

Lower Explosive Limit (LEL): The lowest concentration in air at which a chemical will ignite.

Mercury: A naturally occurring metal found mainly in Spain and Yugoslavia. Mercury has many uses in industry including pulp and paper manufacturing, in agriculture as a

fungicide and in measuring instruments. It is highly toxic by skin absorption or inhalation of fumes or vapor.

Metals: A group of chemical elements characterized by their luster and ability to conduct electricity and heat. Arsenic, chromium, copper, lead, and nickel are examples of metals.

Methane: A volatile organic compound (VOC), commonly known as natural gas, resulting from the decay of organic matter, which is used as a fuel, and also in the petrochemical industry. It is a severe fire and explosion hazard.

Migration: The movement of oil, gas, contaminants, water, or other liquids through the environment especially through porous and permeable rock.

Mitigation: Actions taken to improve site conditions by limiting, reducing, or controlling toxicity and contamination sources.

Monitoring Wells: Special wells installed at selected locations on or near a hazardous waste site. The wells are used to sample ground water at selected depths and to evaluate the direction of groundwater flow, as well as the types and amounts of contaminants present.

National Contingency Plan (NCP): Formally titled the National Oil and Hazardous Substances Pollution Contingency Plan; regulations promulgated by U.S. EPA to implement CERCLA and Sec. 311 of CWA.

National Environmental Policy Act (NEPA) of 1970): Federal statute outlining national environmental policy and establishing the Council on Environmental Quality (CEQ).

National Priorities List (NPL): The official U.S. EPA list of top priority hazardous waste sites in the country that are eligible for investigation and cleanup under the CERCLA/SARA.

Natural Attenuation: Contaminants are broken down into harmless components by microorganisms that naturally live in the subsurface soil.

Nickel: A metal found throughout nature, and as a trace element in food and water; used in coins, batteries, ceramics, stainless steel, and other commercial grade metals. Exposures to low levels of nickel over long periods of time may cause cancer.

Nitrate: A compound of nitrogen that occurs naturally. It is used in fertilizers, explosives and other chemicals. High levels in drinking water may cause illness in infants and animals.

Non-Cancer Risk: The potential or probability to incur a non-cancer health effect (e.g., lead poisoning, neurological disorders, liver disease) due to exposure to hazardous substances. Often indicated by comparing an estimated dose to a reference dose.

Operable Unit (OU): A term used to describe a certain portion of a CERCLA site. An operable unit may be established based on a particular type of contamination, contaminated media (such as soils or water), source of contamination and/or geographical location.

Operations and Maintenance (O&M): Activities conducted at a CERCLA plant or treatment unit to ensure functionality after startup has been completed.

Passive Product Skimmer: Consists of a hydrophobic (water-repelling) skimming element mounted on a vertical pipe, which is counterbalanced to float at such a depth that the skimming element is at the water-product interface. The free-product floating on the water table passes through the hydrophobic filter, and enters a collection chamber in the center of the device. The skimmer is then periodically lifted out of the well, the collected product is disposed of, and the skimmer is returned to its place.

Pesticide: A chemical used by farmers or gardeners to combat agricultural pests. Pesticides are classified according to the target pests affected -- insecticides affect insects; fungicides, fungi; herbicides, plants; rodenticide, rodents; bacteriocide, bacteria; miticide, mites; nematocide, worms; molluscicide, mollusks.

Plume: A body of contaminated ground water flowing from a specific source. The movement of ground water is influenced by such factors as local ground water flow pattern, the characteristics of the aquifer in which the ground water is contained, and the density of contaminants.

Polychlorinated Biphenyls (PCB): A family of pathogenic and teratogenic industrial organic compounds used as a heat-transfer agent from 1929 until it was banned in 1979 under TSCA. In addition to their use in electric transformers as insulators and coolants, PCBs have also been used in lubricants, hydraulic fluids, carbonless copy paper, adhesives, microscope emersion oils, and caulking compounds. PCBs are also produced in certain combustion processes. PCBs are extremely persistent in the environment, because they are very stable, non-reactive and highly heat resistant. Burning them produces even more toxins. Chronic exposure to PCBs is believed to cause liver damage. PCBs are known to bioaccumulate in the fatty tissues of humans and animals. U.S. EPA banned the use of PCBs, with limited exceptions, in 1979. In general, PCBs are not as toxic in high short-term doses as some other chemicals, although severe and long-term exposure can cause liver damage. PCBs have also been found to cause cancer in laboratory animals.

Polycyclic Aromatic Hydrocarbons (PAH also known as Polyaromatic hydrocarbons): A group of highly reactive semi-volatile organic compounds, such as pyrene, which result from the incomplete combustion of organic substances. They are often found in motor oil, are common components of creosote and can cause cancer.

Preliminary Assessment (PA): The process of collecting and reviewing available information about a known or suspected hazardous waste site or release. EPA or states use this information to determine if the site requires further study. If further study is needed, a site inspection is undertaken.

Proposed Plan (PP): A summary of the cleanup alternatives the U.S. EPA has considered for controlling contamination at a Superfund site; it indicates the alternative that the U.S. EPA prefers for the site.

Public Comment Period: A time period during which the public can review and comment on various documents and U.S. EPA actions. Comment periods can range from 21 to 60 days, depending on the document being reviewed.

RCRA Facilities Assessment (RFA): An environmental inspection of current and active industrial facilities that identifies manufacturing processes and potential avenues for contaminant releases to the environment.

Resource Conservation and Recovery Act (RCRA) of 1976: Amended in 1984; federal law that regulates management and disposal of hazardous materials and wastes that are currently being generated, treated, stored, disposed or distributed; replaced the former Solid Waste Disposal Act (SWDA).

Record of Decision (ROD): A document issued after the remedial investigation and feasibility study (RI/FS) that describes U.S. EPA's selected remedy for cleanup of a NPL site.

Remedial Action (RA): Action taken or ordered by U.S. EPA to stop or substantially reduce a release, or threat of release, of hazardous substances which are not of immediate threat to human health or the environment. If the substances pose an immediate threat, they will be removed in a Removal Action.

Remedial Alternative: A method or combination of methods designed to protect public health, welfare and the environment over the long-term, from releases of hazardous substances at a Superfund site. Remedial alternatives are usually projects or a combination of technologies that contain, remove, or destroy most of the contaminants in the air, water, soil and/or ground water at a Superfund site.

Remedial Design (RD): A phase of the remedial action that follows the remedial investigation and feasibility study, and includes the development of engineering drawings and specifications for a site cleanup.

Remedial Investigation/Feasibility Study (RI/FS): An investigation at a Superfund site to assess contamination and environmental problems, and to evaluate cleanup alternatives. The process consists of two distinct but related phases. The first phase is RI that examines the nature and extent of contamination problems at the site. The second phase is the FS that evaluates different methods to remediate or clean up the contamination problems found during the RI.

Remediate/Remediation: To remove or isolate hazardous materials that have contaminated an area so the area can be used for other purposes without fear of exposing humans, plants, or animals to adverse environmental conditions.

Removal Action: A prompt action taken or ordered by U.S. EPA in response to immediate and significant threats to public health or the environment. Also known as removal.

Responsiveness Summary (RS): The section within the ROD that summarizes comment received from the public during the public comment period, and provides U.S. EPA's or other lead agency responses to them.

Restoration Advisory Board (RAB): A board consisting primarily of members of the public, which replaces the Technical Review Committee at Travis AFB. RAB members have the opportunity to review all IRP reports and provide input to investigation and cleanup decisions. The Travis AFB RAB meets quarterly.

Risk Assessment: A study based on the results of the remedial investigation, to determine the extent to which chemical contaminants found at a Superfund site pose a risk to public health and the environment.

Sample: A small amount or number of something being studied, such as sediments, soil, water, or fish, taken from different locations. Samples are obtained to find out the nature and extent of pollution or contamination present in the environment and to determine areas where no contamination is present.

Superfund Amendments and Reauthorization Act (SARA) of 1986: Federal law enacted on October 17, 1986, reauthorizing and expanding the jurisdiction of CERCLA.

SARA Title III: Part of SARA mandating public disclosure of chemical information and development of emergency response plans in case of a chemical release.

Sediment: The layer of soil, sand, and minerals that covers the bottoms of lakes, rivers, and oceans that often absorb contaminants. It consists of very small particles of clay, silt, and sand.

Semi-Volatile Organic Compounds (SVOC): a group of chemical compounds, which evaporate in air at a slower rate than volatile organic compounds. Many are suspected or known to cause cancer or other illness. Also known as semi-volatiles or semi-volatile organics.

Site Inspection (SI): A technical phase that follows a preliminary assessment designed to collect more extensive information on a hazardous waste site. The information is used to score the site with the Hazard Ranking System to determine whether a short-term removal action or long-term remedial action is needed.

Sludge: A thickened solid/liquid waste of an industrial or recycling process; a semi-solid residue from industrial or water treatment processes that may be contaminated with hazardous materials.

Solvent: A chemical that can dissolve other chemicals.

Source: A geographic area, facility, or portion of a facility where air emissions regulated under CAA may be released; as applied to hazardous waste it is the point of origin of contamination for subsurface sources such as underground storage tanks or pipelines.

Sulfate: A series of naturally occurring sulfur compounds. Their reactive concentrations in groundwater can indicate that contaminants are naturally degrading.

Superfund: The commonly used term that describes the federal legislation authorizing U.S. EPA to investigate and respond to the release or threatened release of hazardous substances into the environment from abandoned hazardous waste sites. It is formally known as CERCLA, the Comprehensive Environmental Response, Compensation and Liability Act of 1980. Superfund was reauthorized as SARA, the Superfund Amendments and Reauthorization Act of 1986. The Act created a special tax that goes into a trust fund, commonly known as Superfund, to investigate and clean up hazardous waste sites. Under the program, U.S. EPA can:

- pay for site cleanup when parties responsible for the contamination cannot be located or are unwilling or unable to perform the work; and
- take legal action to force parties responsible for site contamination to clean up the site or pay back the federal government for the cost of the cleanup.

Superfund Amendments and Reauthorization Act of 1986 (SARA): A Federal law that reauthorized and expanded the jurisdiction of SARA.

Surface Water: Bodies of water that are above ground, such as lakes, ponds, rivers, streams and creeks.

Tetrachloroethene (PCE): A colorless liquid with a chloroform or sweet odor.

Toluene: A clear volatile liquid with a sweet, pungent odor that is used in the manufacture of other organic compounds, dyes, and explosives. Toluene is used as a solvent for paints and coatings, and is a component of automobile and aviation fuels. It can be toxic by ingestion, inhalation, or skin absorption. Skin or eye contact may cause irritation and drying of tissue. Overexposure may result in central nervous system depression, drowsiness, or fainting.

Total Petroleum Hydrocarbons (TPH): Fuel producing lubricants, oils, or the by-products of the degradation or incomplete combustion of fuels. Some TPH compounds, such as gasoline, are also considered to be volatile organic compounds.

1,1,1 - Trichloroethane (1,1,1-TCA): A volatile, organic solvent that can cause nervous system depression and cardiovascular effects in high doses.

Trichloroethene (TCE, a.k.a. trichloroethylene): A stable, colorless liquid with a sweet odor, a low boiling point and which readily evaporates. It has many common uses such as a general solvent, a degreaser in dry cleaning or in the manufacturing of pharmaceuticals. It is very irritating to the skin and may cause adverse health effects if inhaled or ingested. Overexposure to trichloroethene may cause headache, vertigo, and nausea. Long-term overexposure may cause damage to the liver and other organs.

Toxic Substances Control Act (TSCA) of 1976: Federal law authorizing U.S. EPA to gather information on chemical risks.

Ultraviolet Oxidation: A chemical process that uses radiation and hydrogen peroxide in treatment plants to break down chlorinated organic compounds into harmless substances. It is a commercially-available groundwater treatment technology that has been used for more than ten years to destroy a variety of organic and explosive contaminants including petroleum hydrocarbons; chlorinated hydrocarbons (such as industrial solvents and cleaners); and ordnance compounds.

Underground Storage Tank (UST): As defined and regulated by RCRA, a tank with 10 percent or more of this volume underground including piping connected to the tank; used to store petroleum products or CERCLA-regulated hazardous chemicals.

United Nations Environment Program (UNEP): An arm of the United Nations that deals with global environmental issues.

Unsafe Level: An amount of pollution, or contamination, in the environment believed to be harmful to the health of people.

Upgradient: An upward slope; demarks areas that are higher than contaminated areas and, therefore, are not prone to contamination by the movement of polluted ground water.

Vapor Phase Granulated Activated Carbon: An inorganic form of carbon that is used to remove organic chemicals from an air stream.

Vernal Pool: A seasonal wetland that is characterized by being wet in the Spring time, having no outlet through which water can flow, and containing particular varieties of plants and invertebrate animals. Vernal pools are most visible in Spring when concentric rings of wildflowers bloom around them. Fairy shrimp, an endangered species, sometimes inhabit vernal pools.

Vinyl Chloride: Used as a chemical intermediate, primarily in the manufacture of plastics. Primary effects are depression of the central nervous system. Acute liver problems are also a factor, and there have been suggestions of liver cancer following massive exposures. Further studies are ongoing.

Volatile Organic Compounds (VOC): A group of organic compounds that are used in various industrial applications, such as solvents, degreasers, paints, thinners and fuels, which evaporate very rapidly when exposed to air. Due to this tendency, VOCs disappear more rapidly from surface water than ground water. Since ground water does not usually come in contact with air, VOCs are not easily released and can be present for many years in ground water used for drinking water. When present in drinking water, VOCs may pose a potential threat to human health. Also known as volatile organics or volatiles. Examples of VOCs include light alcohols, acetone, trichloroethene (TCE), perchloroethylene (PCE, a.k.a. tetrachloroethene), dichloroethylene, benzene, vinyl chloride, toluene, and methylene chloride.

Wastewater: The used water from private, community or industrial processes that contain dissolved, partially dissolved or solid materials.

Wetland: An area that is regularly saturated by surface or ground water and, under normal circumstances, capable of supporting vegetation typically adapted for life in saturated soil conditions. Wetlands are critical to sustaining many species of fish and wildlife. Wetlands generally include swamps, marshes and bogs, and may be either coastal or inland. Coastal wetlands have salt or brackish (mixtures of salt and fresh) water, and most have tides, while inland wetlands are non-tidal and freshwater. Coastal wetlands are integral components of estuaries.

Xylenes: A volatile chemical used as a solvent, a cleaning fluid, as an ingredient in paint, lacquers, enamels, varnishes, and adhesives such as rubber cement, as well as in the leather industry. It may be toxic by inhalation or ingestion, and is very irritating to the eyes. Overexposure may result in dizziness, drowsiness, a staggering gait, or fainting.