



**Installation Restoration Program
Vandenberg Air Force Base**



COMMUNITY INVOLVEMENT PLAN DECEMBER 2002



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**VANDENBERG AIR FORCE BASE
COMMUNITY INVOLVEMENT PLAN**

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EXECUTIVE SUMMARY

This Community Involvement Plan (CIP) was prepared for the Vandenberg Air Force Base (AFB) community and for surrounding communities. The CIP defines methods for keeping these communities informed. It also gives them an opportunity to provide input during the decision-making process for environmental cleanup at Vandenberg AFB. In addition to meeting the specific state and federal requirements, the CIP was designed to respond to the unique concerns and interests of community members affected by Vandenberg AFB.

Based on interviews covering a representation of the communities, public opinion of Vandenberg AFB and its environmental record is generally positive, particularly in the areas nearest the base. However, some concern was raised regarding the outreach program of the base. Prior to the community interviews, some people had little knowledge of the existence or extent of past hazardous waste sites on the base. Once informed about the Installation Restoration Program (IRP), they showed minimal interest in the cleanup program. However, most of the parties interviewed indicated the desire to be kept informed.

During the interviews, community members made several suggestions on how to best accomplish this goal. Most interviewees preferred periodic fact sheets and news releases or newspaper articles. Some felt speakers to community groups (especially youth groups) would be effective; others wanted City Council briefings by a base representative. The Mayors of Lompoc and Santa Maria stated that all documentation received regarding Vandenberg AFB was shared with the city council members.

The community relations activities presented in the CIP are either required or designed to directly address these community concerns and interests. Fact sheets are prepared periodically that contain detailed information on the IRP sites and their risks, overall progress of the program, other issues of concern, and upcoming public participation activities. News releases announce public meetings, other CIP events, and IRP milestones. Paid public notices are posted in local newspapers. The IRP community relations coordinator at Vandenberg AFB answers IRP-related questions and is available to answer public inquiries (Appendix F). Speakers knowledgeable of the IRP are available to community groups. To further the flow of information, special IRP tours of the base for interested groups and briefings are available as needed.

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1.0 OVERVIEW OF THE COMMUNITY INVOLVEMENT PLAN

1.1 INTRODUCTION

In response to federal law, Vandenberg AFB, in association with the California Environmental Protection Agency (Cal/EPA) Department of Toxic Substances Control (DTSC) and the California Regional Water Quality Control Board (CRWQCB) have implemented an environmental assessment and cleanup program. The program, called the Installation Restoration Program (IRP), addresses areas on the base where hazardous substances were released or may have been released. Part of the IRP includes developing a plan for keeping the community involved and informed during the investigation and cleanup activities.

1.2 PURPOSE OF THE COMMUNITY INVOLVEMENT PLAN

The purpose of this CIP is to document community background and concerns regarding cleanup, and to identify specific activities that will meet community involvement goals by (1) providing timely information about cleanup efforts, and (2) establishing opportunities for two-way communication between communities and the base. The most significant avenue the base uses to facilitate cleanup information is through quarterly meetings with its Community Advisory Board (CAB) members. Members of the CAB represent the public at large and act as a liaison between the base and their respective communities. This CIP describes the many methods Vandenberg AFB uses to inform CAB members and the public about studies and cleanup effort findings. It also describes Vandenberg AFB's history and mission, and the communities covered by this CIP.

1.3 HISTORICAL OVERVIEW OF THE COMMUNITY ADVISORY BOARD

In the mid 1980s, federal facilities, including the Department of Defense (DoD) were required to establish Technical Review Committees (TRC) according to the Superfund Amendments and Reauthorization Act (SARA) and Executive Order 12580. The purpose of establishing TRCs was to facilitate communication between federal facilities and the local communities, and to provide a means of exchanging information regarding cleanup.

In 1987, Vandenberg chartered its first TRC whose primary purpose was to foster community awareness and obtain constructive community review and comment on the environmental restoration (base cleanup) actions taken at Vandenberg AFB.

In 1994, the U.S. Environmental Protection Agency (U.S. EPA) and DoD expanded and modified the concept of the TRC according to the requirements set forth by SARA, and implemented a Restoration Advisory Board (RAB). The RABs were comprised of local community members, representatives of federal, state, local, and tribal governments, military representatives, and local environmental groups or advocates. By the end of 1994, Vandenberg AFB expanded its TRC to become the Restoration Advisory Board (RAB) which enhanced community participation and provided a forum for communication among Air Force, state agencies, local officials, and community representatives. The RAB worked with the base discussing key issues, reviewing plans and reports, identifying project requirements, and recommending priorities for cleanup activities. The first RAB meeting was held in 1995.

The RAB quickly became an integral working partner at Vandenberg AFB. In May 1996, the Vandenberg Environmental Management Office introduced the concept of transitioning the RAB to a new organization, the CAB. The primary driver for the conversion was to expand the scope of the RAB to include environmental issues other than base cleanup. The structure of the CAB could accommodate

review of environmental issues from the four major environmental management programs: Environmental Compliance, Pollution Prevention, Conservation, and Environmental Restoration. Vandenberg AFB's first CAB meeting was held on January 24, 1997. Today, the CAB still exists and meets quarterly. This group of volunteers continues to be the "liaison" of environmental issues to the public.

1.4 METHOD FOR DEVELOPING THE CIP

The CIP was developed using the *Superfund Community Involvement Handbook: (U.S. EPA 2002)*, DTSC's *Public Participation Policy and Guidance Manual (2001)*, and Department of the Air Force's *Public Affairs Environmental Handbook (1989)*. Public comment obtained by conducting personal interviews of community members and elected officials was another valuable source of information.

To formulate an effective plan for meeting the needs of communities near Vandenberg AFB, members of those communities were interviewed. These individuals represented a broad cross-section of the communities in Santa Barbara County; the interviews were conducted in 1997 and again in 2002 to assess if community interest and support had changed.

This CIP has been designed and updated based on comments and suggestions received from the CAB review subcommittee, the CRWQCB, the DTSC public participation specialist, the individuals interviewed per DTSC policy and guidance, the California Health and Safety Code, and federal guidance documents on public participation.

The DTSC ensures the state public participation requirements of the CIP are met. This CIP addresses the requirements and guidance detailed in the DTSC manual. The U.S. EPA handbook provided additional direction regarding federal environmental regulations. The Air Force document provided important guidance for achieving the objectives of the CIP under the Air Force's IRP. Each document provides guidance for meeting requirements of state and federal laws and contains similar objectives in keeping communities informed about and involved in the remediation process. Government agencies and contractors involved in the IRP process are listed in Appendix A.

1.5 ORGANIZATION OF THE CIP

Section 1.0 Introduction. This section outlines the purpose and method for developing the CIP.

Section 2.0 Background and Historical Perspective of Vandenberg AFB. This section provides the environmental setting and history of the land now occupied by Vandenberg AFB.

Section 3.0 Regulatory Background and History of the IRP at Vandenberg AFB. This section explains the federal and state laws and the Department of Defense (DoD) requirements governing the Air Force's environmental cleanup program. This section also describes the types of contamination found at Vandenberg AFB, identifies the agencies overseeing the cleanup, and summarizes cleanup actions to date.

Section 4.0 Community Background Information. This section describes various communities on-base and in Santa Barbara County considered during development of this CIP. Some of these communities were selected based on proximity to Vandenberg AFB; others were selected for their interest in the base's past waste disposal activities.

Section 5.0 Community Advisory Board Roles and Responsibilities. This section describes membership, responsibilities, and involvement the CAB members have in Vandenberg AFB's cleanup process.

Section 6.0 Community Interviews and Summary of Community Concerns. This section describes the rationale and methodologies used in developing the contact list, formulating the interview questionnaire, and conducting community interviews. It presents a summary of community attitudes and concerns about the past waste disposal sites and cleanup progress at Vandenberg AFB.

Section 7.0 Required Community Involvement Activities. This section outlines the various required public participation activities, such as developing a CIP, distributing fact sheets, and holding community meetings.

Section 8.0 Additional Community Involvement Activities. This section describes optional community relations activities to facilitate public input into the cleanup process. While these activities are not required by state and federal regulations, they are included based on responses from the community interviews.

Section 9.0 References. This section lists references for documents used in preparing this CIP.

Section 10.0 Glossary of Acronyms and Terms. This section contains definitions of all acronyms and terms used in this plan.

Appendix A. This appendix contains a list of government agencies and contractors involved in the cleanup process that may be contacted for information.

Appendix B. This appendix contains a contact list of individuals and organizations interviewed for the plan.

Appendix C. This appendix contains the questionnaire used for conducting interviews.

Appendix D. This appendix lists the CAB members.

Appendix E. This appendix is a mailing list of key community leaders and interested parties (to ensure privacy, names of individuals not representing an office or organization are kept separately).

Appendix F. This appendix contains the names and addresses of the Community Relations Coordinators.

Appendix G. This appendix contains IRP fact sheets developed for public distribution.

2.0 LOCATION AND HISTORICAL PERSPECTIVE OF VANDENBERG AFB

2.1 LOCATION

Vandenberg AFB is located on the south-central coast of California, approximately 275 miles south of San Francisco, 140 miles northwest of Los Angeles, and 60 miles northwest of Santa Barbara (Figure 1). The City of Lompoc is 6 miles east of the base boundary.

The base contains two major watersheds: San Antonio Creek and the Santa Ynez River, both of which ultimately discharge into the Pacific Ocean. For more information on the geographical, hydrological, ecological, and other features of Vandenberg AFB, please refer to the Environmental Setting chapters of the *Remedial Investigation/Feasibility Study Work Plan OUs 1, 2, 3A, 3B, 4, and 5* (Vandenberg AFB 1993) or the *Preliminary Report/Work Plan for Leaking Underground Storage Tanks within the Cantonment Area* (Vandenberg AFB 1992). These documents are available in the Information Repositories listed on page 7-3.

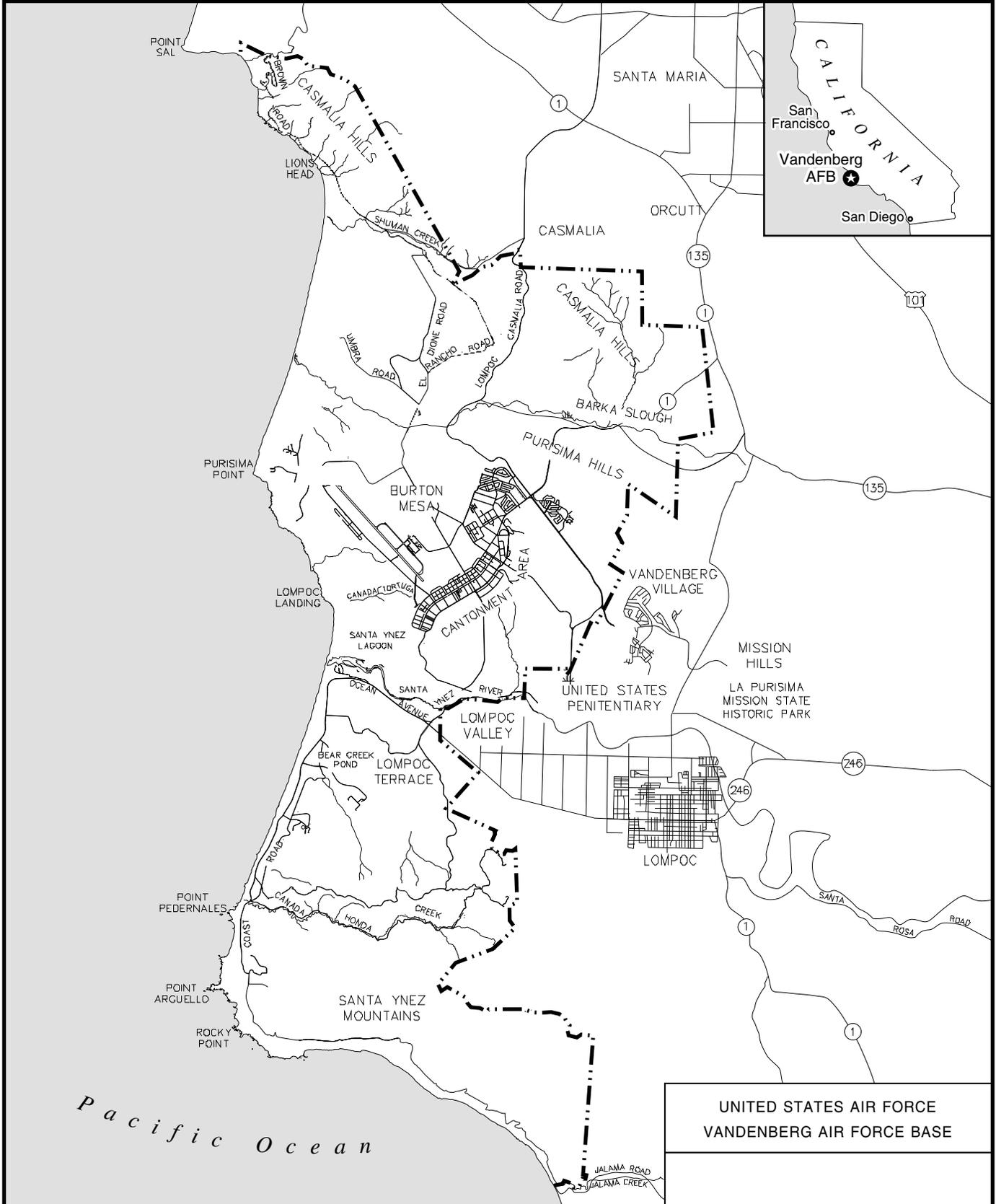
Significant on-site biological and cultural resources are protected by Vandenberg AFB. Some unique features include 35 miles of undeveloped coastline, 5,000 acres of preserved wetlands, and 9,000 acres of undisturbed sand dunes. These protected ecosystems contain many rare plants (surf thistle, Blochman's leafy daisy, Lompoc yerba santa, salt marsh bird's beak) and endangered species (unarmored threespine stickleback fish, California brown pelican, California least tern). In addition, more than 2,200 archaeological and historic sites have been identified on the base. Most of these sites contain cultural artifacts of the Chumash Indians, who once occupied the land.

2.2 HISTORY

Vandenberg AFB began as Camp Cooke Army Base in March 1941. At that time, the War Department (now DoD) established an artillery training facility on 90,000 acres centered around Burton Mesa.

From February 1942 until the end of World War II, armored and infantry divisions trained at Camp Cooke. A prisoner-of-war camp was also established at Camp Cooke and remained there until the end of the war. In 1945, a maximum-security army disciplinary barracks was constructed to house military prisoners during the war. After Camp Cooke was closed in June 1946, most of the base was leased for agriculture and grazing. Camp Cooke was briefly reopened during the Korean Conflict but was closed again in 1953.

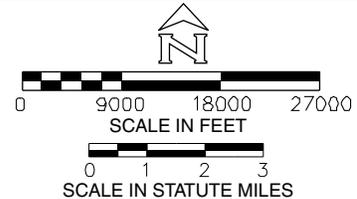
In June 1956, the Camp Cooke site was chosen by DoD to be the U.S. Air Force's first missile base. In June 1957, DoD transferred approximately 64,000 acres of Camp Cooke to the Air Force and redesignated the installation as Cooke AFB. The Army was temporarily allowed to keep its Disciplinary Barracks (today the U.S. Federal Penitentiary) and the southern portion of the installation (which was transferred to the Navy in 1958). The base became part of the Strategic Air Command in January 1958. It was renamed Vandenberg AFB in October of the same year in honor of General Hoyt S. Vandenberg, the second Air Force Chief of Staff. In December 1958, the base launched its first test missile. In 1965, the Naval Missile Facility at Point Arguello (20,000 acres) was transferred from the Navy to the Air Force and integrated into the base as "South Vandenberg." The Strategic Air Command continued to operate the Base under First Strategic Aerospace Division (1STRAD) until January 1991.



UNITED STATES AIR FORCE
VANDENBERG AIR FORCE BASE

VANDENBERG AFB
LOCATION MAP

- LEGEND
- ROADS & DRIVEWAYS
 - - - - VANDENBERG AFB BOUNDARY
 - ~ RIVER/CREEK
 - LAKE/POND
 - 101 U.S. FEDERAL HIGHWAY
 - ① STATE HIGHWAY



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VANDENBEG AIR FORCE BASE INSTALLATION RESTORATION PROGRAM

Under 1STRAD, the major tenant was the Space and Missile Test Organization, including its subordinate, the Western Space and Missile Center (WSMC), which conducted range operations. All base and Western Range operations are now the responsibility of the 30th Space Wing.

Since the first missile test launch in 1958, more than 1,700 intercontinental ballistic missiles (ICBMs) and polar-orbiting satellites have been launched from Vandenberg AFB. At present, Vandenberg AFB is the only facility in the United States that actively launches test ICBMs and polar-orbiting satellites.

Vandenberg AFB operates as a missile test base and aerospace center, supporting West Coast launch activities for the Air Force, DoD, National Aeronautics and Space Administration, and commercial contractors. The 30th Space Wing, formerly the WSMC, is the Air Force Space Command unit that operates the Base and the Western Range launch and tracking operations. The 30 SW is responsible for launching all polar-orbiting satellites, using boosters such as the Atlas E, Titan II, and Titan IV. They also support ICBM test launches.

Vandenberg AFB is the third largest U.S. Air Force installation, occupying 99,100 acres (154 square miles) along approximately 35 miles of Santa Barbara County coast. The base is bordered on the west and south by the Pacific Ocean, with the Casmalia Hills to the north and northeast, and the Lompoc and Purisima Hills to the east. The north and south sections of Vandenberg AFB are separated by Highway 146 (Ocean Avenue), with the main cantonment area located on the north side of Ocean Avenue.

3.0 REGULATORY BACKGROUND AND HISTORY OF THE IRP AT VANDENBERG AFB

3.1 THE SUPERFUND PROCESS

In 1980, Congress enacted the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). CERCLA requires investigation and cleanup of inactive or abandoned hazardous substance release sites and spills of hazardous substances that may endanger public health, welfare, or the environment (Anderson *et al.* 1984). U.S. EPA has authority to oversee the implementation of this law, and the resulting cleanup process. However, the agency delegated oversight responsibility to DTSC for sites, such as Vandenberg AFB, that are not currently on the National Priorities List.

In 1986, Congress passed another law that amended CERCLA. The Superfund Amendments and Reauthorization Act (SARA) made CERCLA applicable to all federal agencies including DoD.

3.2 DESCRIPTION OF THE AIR FORCE IRP

In 1980, DoD established an environmental program in response to the new CERCLA law. This program established the IRP to investigate and clean up hazardous material disposal sites at DoD installations. In 1981, the DoD ordered its military bases to identify all hazardous waste disposal sites to which they were contributors and to comply with environmental regulations when implementing remedial activities. While addressing the cleanup of hazardous substance release sites, a federal agency must comply with CERCLA in the same manner and to the same extent as any other owner of a public or private hazardous waste site.

The Air Force, due to its primary mission in national defense, has long been engaged in a wide variety of operations that involve the use, storage, and disposal of hazardous materials. The Air Force developed its own IRP consistent with DoD, CERCLA, and SARA requirements. The IRP was established as a four-phase program:

- Phase I, Installation Assessment/Records Search;
- Phase II, Confirmation/Quantification;
- Phase III, Technology Development; and
- Phase IV, Remedial Cleanup Action.

Following the passage of SARA, the IRP process was modified to conform to the U.S. EPA's and DTSC's terminology in describing remedial response program phases. The phases now used at Vandenberg AFB are:

- Preliminary Assessment/Site Inspection (PA/SI) (e.g., records search, interviews);
- Remedial Investigation/Feasibility Study (RI/FS) (sampling and analysis of soil and water);
- Draft Remedial Action Plan (RAP) (design and work plan for the selected cleanup action);
- Final RAP/Record of Decision (ROD) (construction and implementation of the cleanup);

- Remedial Design (RD) (design of the selected cleanup action); and
- Remedial Action (RA) (final implementation of the cleanup).

3.3 AGENCIES WITH OVERSIGHT RESPONSIBILITIES

In February 1991, Vandenberg AFB began negotiating a Federal Facility Site Remediation Agreement (FFSRA) with the Central Coast Regional Water Quality Control Board (CRWQCB) and DTSC. All parties signed the FFSRA on August 22, 1991. The FFSRA's overall intent is for the parties to fully cooperate in accelerating and streamlining the remediation process at Vandenberg AFB to the maximum extent possible consistent with applicable state and federal laws.

3.4 DESCRIPTION OF CONTAMINATION AND CLEANUP

Since the initiation of military and industrial activities in 1942, a variety of waste disposal practices were employed. With the passage in the late 1970s of federal laws and pursuant regulations controlling toxic and hazardous materials, Vandenberg AFB's disposal practices have changed—wastes are now disposed of according to current legal requirements.

Many operations at the base have remained relatively consistent throughout its history. Such activities include vehicle maintenance, painting, pesticide use, fire fighter training, construction and demolition, plating, dry cleaning, and recreational hobby shops.

In addition, Vandenberg AFB maintains, rebuilds, tests, and launches rockets and missiles. The types of wastes generated from these activities are waste oil, waste fuel (vehicle and rocket), scrap metal, solvents, paint wastes, pesticides, construction and demolition debris, plating sludge, dry cleaning filters and spent filtrates, sanitary trash, cutting oils and shavings, transformer oil, polychlorinated biphenyl (PCB)-contaminated soil, unburnable slag, unexploded ordnance, and scrap missile material.

3.5 PAST IRP WORK AT VANDENBERG AFB

The PA/SI phase of the IRP began in 1984. The focus of the investigation was on identifying the locations of all potentially hazardous or toxic materials contaminated sites on the base. The findings of the study were presented in two reports: *Problem Identification/Records Search* by Reynolds, Smith, and Hills, Inc. (1985) and *Problem Confirmation and Quantification* by Battelle-SAIC (1990). A supplemental PA/SI began in 1993. The supplemental PA was completed in 1995. The findings in the supplemental PA are defined in the *Supplemental Preliminary Assessment Final Report* (Tetra Tech 1995).

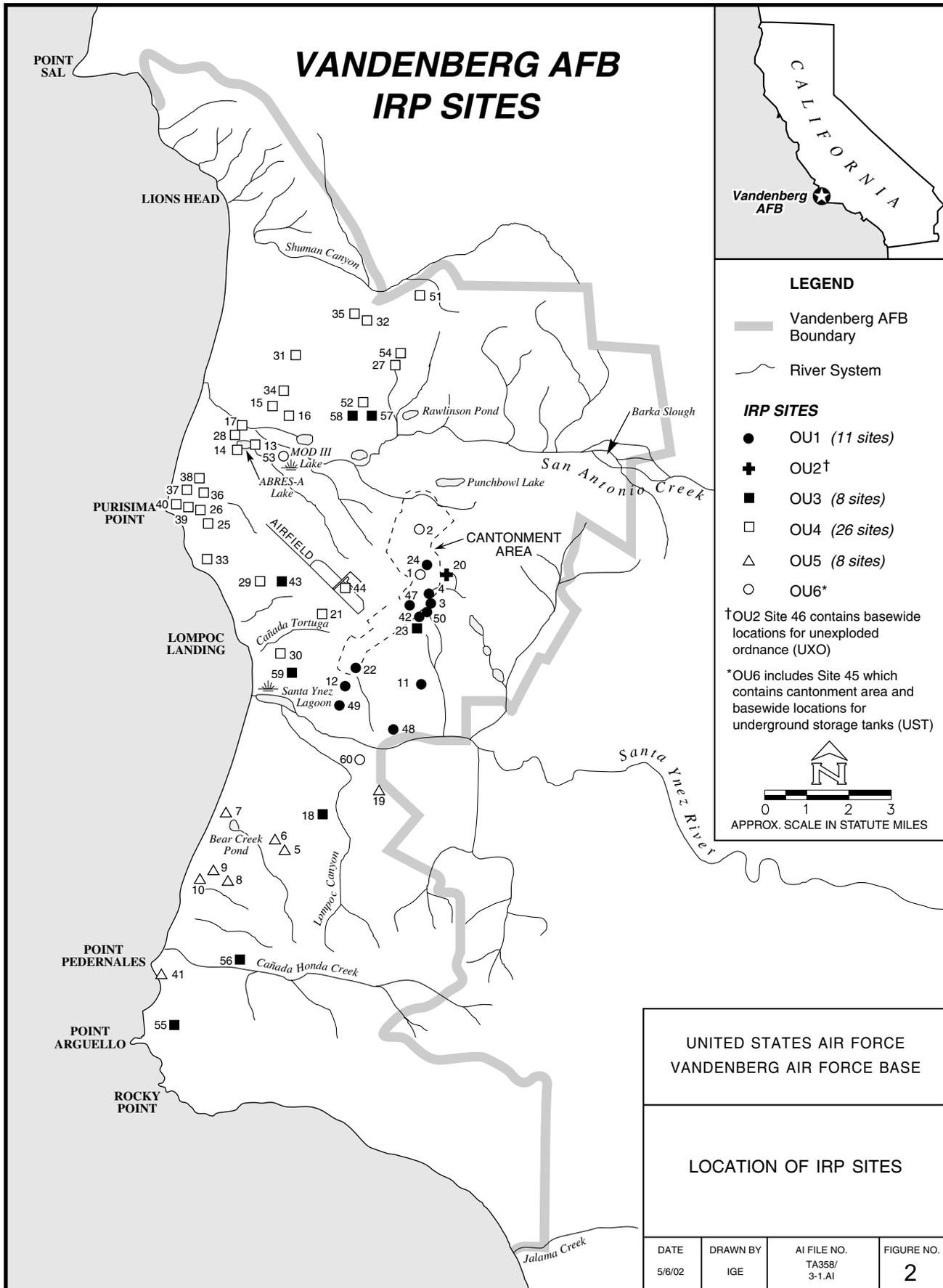
In 1990, the U.S. Bureau of Reclamation was contracted to handle the petroleum underground storage tank (UST) portion of IRP work. The Bureau removed inactive tanks and cleaned the contaminated soil encountered during tank excavations. The RI/FS Work Plans and Quarterly Reports prepared by the Bureau are available at the Information Repositories. To date, 630 of the 809 UST sites have undergone remediation, been cleaned to meet regulatory standards, and have received No Further Action approval from regulatory agencies.

In 1991, Vandenberg AFB began the RI/FS work, the second phase of the IRP, for all non-petroleum-contaminated sites. For those sites believed to pose little or no threat to the public health or environment, Preliminary Endangerment Assessment reports were drafted and submitted to the regulatory agencies. As the Preliminary Endangerment Assessment reports were finalized, they became available for public review at the Information Repositories (see Section 7.3). The completed and approved Preliminary

Endangerment Assessment Work Plan for Operable Unit 3A and the RI/FS Work Plans for the remaining Operable Units are also available at the Information Repositories.

An RI/FS Work Plan was prepared for the remaining non-petroleum contaminated sites. The plan describes the field investigation proposed for each site or group of sites to define the types and the extent of contamination. The Work Plan dated March 1993, included in the information repositories, has been implemented. Fieldwork will continue until the RI/FS data are complete. As modifications occur to any work plans or other documents, these changes are made available at the Information Repositories.

To date, Vandenberg AFB has identified 136 contaminated sites, 74 Areas of Concern, and 205 Areas of Interest (Figure 2). An Area of Concern is an area that has been identified as having a potential concern for posing risks to human health or the environment, and is closely monitored under the IRP. An Area of Interest is anything that may potentially cause environmental concern, but poses no serious or immediate human or ecological risk. Depending on the results of the remedial investigation, not all the sites will require cleanup. Many of the sites are abandoned USTs formerly used to store petroleum products or oils that may only need removal. Other sites, such as former landfill areas and launch facilities may require cleanup. Fact sheets describing the background and cleanup progress on these sites are provided in Appendix G.



4.0 COMMUNITY BACKGROUND INFORMATION

This section describes the communities represented in this CIP. Community interviews included the on-base community as well as other communities based on their proximity to the base and actual or potential interest in base activities. A representative sample of individuals from communities throughout the county was interviewed (Appendix B) during the development and subsequent updating of this CIP.

4.1 VANDENBERG AFB

Vandenberg AFB has an average daily on-base work staff of about 8,400. Of this number, 3,100 are military, the majority living on the base. The base provides 2,076 family housing units and a dormitory capacity of 1,030. The rest of the work staff consists of contractors, civil service, and employees of base services (e.g., Base Exchange).

4.2 LOMPOC VALLEY COMMUNITIES

Lompoc Valley lies about 55 miles northwest of the City of Santa Barbara between the Santa Ynez Mountains on the south and the Purisima Hills to the north. The valley is known primarily for its flower seed production, although oil production, agriculture, wineries, diatomaceous earth mining, tourism, and cattle ranching comprise a significant portion of the economy.

4.2.1 Lompoc

The City of Lompoc, established in the late 1800s, has a population of 41,000 and is the largest community in the valley and the third largest city in the county. Including unincorporated areas, it has a population of 55,000. Census data from 2000 indicate the population of Lompoc consists of 66.2 percent white, 6.2 percent black, 6.7 percent Asian, and 20.9 percent Hispanic ancestry. The center of town is located approximately 7 miles southeast of the main gate of Vandenberg AFB; however, property development extends westward to the boundary of the base (unincorporated areas include Mesa Oaks, Mission Hills, and Vandenberg Village). The economy of the city is based on agriculture, mining, and the military.

4.2.2 Vandenberg Village

Vandenberg Village is an unincorporated community under the jurisdiction of Santa Barbara County. However, the community of 5,400 elects a Board of Directors to govern the needs of the community through the Community Services District. Vandenberg Village is located about 5 miles southeast of the main gate at Vandenberg AFB, but only about 2 miles from the base boundary. Most of the residents currently work on the base or are retired military. Many residents work in Goleta or Santa Barbara.

4.2.3 Mission Hills

Like Vandenberg Village, Mission Hills is an unincorporated community administered by Santa Barbara County. Local services are provided by a Community Services District. Mission Hills is located about 5 miles from Vandenberg AFB. Most of the 3,100 residents work at the base.

4.3 SANTA MARIA VALLEY COMMUNITIES

The Santa Maria Valley extends 20 miles from the Pacific Ocean east to the Sierra Madre Mountains. The Casmalia Hills border it to the south. The flat, fertile valley is extremely suitable for productive

agriculture. The dairy industry, cattle breeding, oil exploration, business interests, and an expanding wine industry also contribute to the economy of the region.

4.3.1 Santa Maria

The City of Santa Maria was established in 1874 when four landowners donated acreage where their properties adjoined. Located about 10 miles northeast of the base boundary, the city of 77,000 residents is the agriculture and business hub of the Santa Maria Valley. Census data from 2000 indicate the population consists of 46 percent white, 45 percent Hispanic, 2 percent black, 5 percent Asian and 2 percent other. Strawberry farms, vineyards, ranches, and business interests dominate the economy. Orcutt, an unincorporated community of Santa Maria, has a population of about 30,000.

4.3.2 Guadalupe

Guadalupe, with a population of 6,030, was incorporated in 1946. It is primarily an agricultural town with some retirees. A few residents operate ranches that extend to the boundary of the base. The city, however, is about 5 miles from the nearest boundary.

4.3.3 Casmalia

Casmalia, an unincorporated community, consists of 200 residents governed by the County of Santa Barbara. The town is located immediately adjacent to Vandenberg AFB. Other than homes, the community has a restaurant, a post office, and a school. The nearby Casmalia Landfill is a National Priority Listed Superfund cleanup site.

4.4 SANTA YNEZ VALLEY COMMUNITIES

This valley is located about 30 miles northwest of Santa Barbara and about 30 miles east of Vandenberg AFB. The valley contains several century-old small towns and is known for its award-winning vineyards and horse breeding. Cattle ranches, citrus groves, and croplands are also important for the regional economy.

4.4.1 Buellton

Buellton, established as a community in 1920, is located at the junction of Interstate 101 and Highway 246. It serves as a travel stop for tourists and has an estimated population of approximately 3,500.

4.4.2 Solvang

Solvang was founded in 1911 when a group of Danish educators chose this location as the place to build a college and establish a Danish colony. Thousands of tourists come to this city for Danish pastries, imported Danish handicrafts, boutiques and galleries, cultural events, and viewing the Danish-style windmills and architecture. Although tourism is now the major economic force in this city of 3,500, Solvang was originally developed as an agricultural community.

4.5 SANTA BARBARA

Santa Barbara and the neighboring city of Goleta are located approximately 60 miles southeast of Vandenberg AFB. Santa Barbara is the largest city in Santa Barbara County and has a long settlement history from the time of the Chumash Indians. The population as of 2000 is 92,350 and consists of 58 percent white, 2 percent black, 3 percent Asian, 35 percent Hispanic, and 1 percent native/other. While

tourism is a major factor in the local economy, other components include the University of California; light industry introduced by a number of electronic and computer firms; special schools, such as the Brooks Institute for Photography; cultural and recreational activities (e.g., orchestra, galleries, theater, boating); and many business enterprises.

5.0 COMMUNITY ADVISORY BOARD ROLES AND RESPONSIBILITIES

Members of the CAB act in an advisory role to provide recommendations to the Vandenberg AFB IRP staff, the DTSC, and the CRWQCB. Membership of the CAB consists of approximately 25 individuals who reflect the diverse interests of the local community. Initially, CAB membership was obtained by soliciting members through public notices in the local newspapers. This process occurred in 1994 when the CAB was known as the TRC, and then in 1995 as the RAB.

Today, individuals seeking membership are required to complete a membership application. If openings are available, the existing CAB members and the Air Force review the applications with a goal of maintaining a well-rounded representation of individuals that are committed to sharing information with others in their communities. Existing CAB members are required to regularly attend the scheduled quarterly meetings. Their attendance is important for maintaining consistent information exchange between the Air Force and the local communities.

An announcement letter is sent to each CAB member as well as a pre-agenda of discussions planned for the meeting. Typically, a bus tour is provided after each meeting to further describe an area of interest or cleanup site. The tours provide an excellent opportunity for the CAB members to see first hand the cleanup progress at each site. Meeting minutes are developed and distributed to all CAB members.

Recently, the Vandenberg CAB formed a document review subcommittee that is responsible for reviewing and providing comments on draft documents, fact sheets, and plans before they are released to the general public. As required, the Air Force provides the group with copies of the draft documents and gives them approximately 2 weeks for comment.

6.0 COMMUNITY INTERVIEWS AND SUMMARY OF COMMUNITY CONCERNS

The community interviews are another part of the CIP, providing the basis for the recommendations presented. The opinions, comments, and suggestions of parties directly affected or concerned about cleanup activities at Vandenberg AFB were compiled to determine the components of this CIP. While some CIP activities are required (e.g., establishing community information repositories, developing a mailing list), others are implemented based on community concerns and interests. The 2002 interviews were conducted to assess the effectiveness of past IRP community relations, to improve those areas found lacking, and to build on our strengths.

This section presents the methods used for developing the contact lists and the interview questionnaires. It lists the primary community concerns expressed by individuals interviewed in 2002. These interviews were conducted using questionnaires (see Appendix C) to determine any changes in community concerns. Finally, this section presents suggestions made by the interviewees for community relations activities.

6.1 DEVELOPMENT OF CONTACT LIST AND QUESTIONNAIRE

Vandenberg AFB encompasses a large area of Santa Barbara County and is the second largest employer in the county after the University of California, Santa Barbara. Vandenberg AFB's influence is felt throughout the region to varying degrees. The impact of IRP activities on the community is minimized because of the vastness of the base and distance from local communities. Therefore, the contact list focused on mainly the communities nearest the base. Headquarters Air Force Space Command Public Affairs and DTSC reviewed and pre-approved the contact list of local citizens considered for interview. The 30 CES/CEVR office sent out letters inviting nine individuals to participate in the 2002 interview process. The letters were followed up with phone calls to set up appointments. All nine expressed interest in the interview process (Appendix B), however, only six people were actually interviewed for this CIP update.

The questions for the community interview questionnaire (Appendix C) were based on suggestions listed in the DTSC, U.S. EPA, and Air Force guidance documents. Public Affairs and DTSC reviewed and approved the questionnaire for these community interviews. In general, the questions were designed to be open-ended to encourage expression of thoughts and opinions.

The purpose of the questionnaire was to update and tailor the community involvement program. The following specific information was addressed:

- Knowledge of history of Vandenberg AFB, particularly past waste disposal activities;
- Level of concern and types of concerns regarding the IRP sites;
- Access to IRP information, type of information wanted;
- The community's interest and involvement in environmental issues in general;
- The best method for keeping the community informed;
- Others who should be included on the contact list; and
- Suggestions for optimal times and places to conduct public meetings.

6.2 COMMUNITY CONCERNS

Most of the individuals interviewed had substantial knowledge about the mission of the 30th Space Wing and expressed only some knowledge of the base cleanup programs. Public meetings such as the quarterly CAB meetings and the distribution of fact sheets concerning environmental programs were two outreach methods that seem to have improved citizens' awareness of the IRP.

Elected officials noted that they frequently received information on environmental issues and ensured that city council members received copies. All six interviewees expressed confidence in the 30th Space Wing's ability to protect the environment. Three individuals expressed interest in receiving more information concerning the IRP program and suggested the base submit articles in the local newspapers more frequently.

6.2.1 Level of Concern

Every individual interviewed had very little or no concern about the IRP sites. In general, the on-base community and surrounding communities felt a high level of confidence in the base's ability to handle the cleanup process effectively. Several individuals stated they were very comfortable with the regulatory oversight the DTSC provided the base cleanup program.

6.2.2 Cost

People had some concerns about the cost of the cleanup since funding ultimately is at taxpayers' expense. Individuals wanted assurance that the money spent was protecting their community's environment. Many nearby communities, especially Lompoc, Vandenberg Village, Mission Hills, and Casmalia, are economically dependent on Vandenberg AFB. Although Santa Maria is not as dependent, there is still a desire for the base to remain economically viable for the benefit of the community.

6.2.3 Objective of the Interview

Most of those interviewed expressed an interest about the reason for the interview. They also expressed satisfaction that the base was interested enough to conduct the interviews. Questions were raised on the impetus for selecting the IRP as a topic to cover during the interview since there were other, more "important," issues regarding the base. Commercial space, the military mission, other environmental issues, and the continued economic viability of the base again were considered to be significant issues.

6.2.4 Health Effects

Most of those interviewed were not aware of the on-site hazardous waste activities that now require cleanup. Individuals interviewed in adjacent communities presumed contamination was likely due to common practices during earlier years. Regardless, as a whole, the community at large feels that Vandenberg AFB is a "good neighbor" and is not concerned that contamination found at the IRP sites will affect their communities.

6.3 ENVIRONMENTAL CONCERNS NOT RELATED TO IRP

Some of those interviewed in the Lompoc community raised concerns regarding the decision to close local beaches from March through September due to the snowy plover nesting season. The western snowy plovers are listed as Threatened under the Endangered Species Act because over one-half of their historical nesting habitat has been destroyed or degraded by development and exotic plants like European

beachgrass. Other factors affecting plover populations include weather, predators and human disturbance. Predation in many areas, including Ocean Beach, increases when coyotes, crows, and other predators become attracted to human waste and litter. Vandenberg beaches are among *very* few sites that still support significant numbers of nesting plovers. Therefore, this beach is crucial to the survival and recovery of the species. Vandenberg Air Force Base supports 10-20 percent of the listed population of western snowy plovers.

Biologists from the U.S. Fish and Wildlife Service (USFWS) and Vandenberg have determined that the linear restrictions of the past did not adequately protect nesting plovers; particularly young chicks that need to feed near the water's edge. Therefore, certain areas of the beaches have been closed during the nesting season where the most populated plover habitats have been found on Vandenberg AFB. This is in effort to protect most of the snowy plover nests on the installation. These measures are particularly important to snowy plover recovery following recent severe population declines from 1997 to 1999.

During the months when local beaches are closed or have restricted access, the local community sponsors and manages a volunteer Docent Program at Surf Beach to educate the public regarding the endangered snowy plover. This has helped the Air Force operate and manage the beach closure enforcement program by maintaining boundaries and keeping foot traffic off nesting areas.

As a result of open communication between citizens, government officials, and the base, endangered species protection laws are being complied with.

6.4 SUGGESTIONS FOR COMMUNITY INVOLVEMENT ACTIVITIES

During the interviews, individuals were asked to suggest community involvement activities that would best inform the public about the IRP. Almost everyone interviewed had seen newspaper articles regarding cleanup and wanted to make sure that the issuing periodic fact sheets be continued. There was also a recommendation for Vandenberg AFB to develop an environmental web page to keep the public informed. The City of Lompoc offered to post meeting announcements, fact sheets, and articles on its web site, as deemed appropriate.

Most people felt public meetings would not be well attended by the general public. Having the CAB open to the general public and encouraging public representatives as well as the media clearly demonstrates Vandenberg AFB's openness. More articles placed in local newspapers (*Lompoc Record* and *Santa Maria Times*) to announce CAB and other public meetings, document review and comment periods, and other significant environmental activities were also suggested.

To facilitate communication, several individuals expressed interest in having speakers from the base give a talk to community groups as well as the local schools. One of the local elementary school principals who was interviewed felt base representatives should present briefings to youth organizations and at school assemblies.

7.0 REQUIRED COMMUNITY INVOLVEMENT ACTIVITIES

A variety of regulations, including the National Oil and Hazardous Substances Pollution Contingency Plan, SARA, and the state of California Health and Safety Code, define the requirements for community relations activities that take place during the CERCLA cleanup process. Table 1 summarizes the required community relations activities that are intended to keep the community informed of and involved in investigation and cleanup activities at Vandenberg AFB. The required components of the CIP presented in this section were designed to meet the needs and concerns of the community.

7.1 INTERVIEWS AND DEVELOPMENT OF THE 1999 COMMUNITY INVOLVEMENT PLAN UPDATE

The CIP was developed, in part, to outline the methods DTSC and Vandenberg AFB uses to provide the community with adequate and timely cleanup activity information and opportunities to comment on these activities. Community interviews (described in Section 6.0) were conducted not only to identify community concerns about the IRP, but also to identify how community leaders, interested agencies, organizations, and individuals could participate in designing the CIP. The interview process may be repeated periodically, to keep the CIP current. In the 2001 CIP update, the IRP fact sheets were included as well as updated lists of CAB members, government officials, and regulators.

7.2 PUBLICATIONS

7.2.1 Initial Fact Sheet

An initial RI/FS fact sheet was developed with DTSC at the beginning stages of the remedial investigation to inform the community of site activities. This fact sheet issued in September 1993 served as an introduction to the investigation and remediation process and explained the site history and results of preliminary investigations. It presented other important aspects of the CIP such as the locations of information repositories and meetings.

7.2.2 Periodic Fact Sheets

Fact sheets were produced for the Remedial Investigation kickoff and will be prepared for each draft RAP, as well as for other removal actions. DTSC and Vandenberg AFB jointly prepared the September 1993 Fact Sheet #1 as the introduction to the Remedial Investigation. The October 1994 Fact Sheet described the overall IRP and serves as the background information fact sheet until an update is needed.

Vandenberg AFB has periodically published the "Environmental Update," as a voluntary fact sheet. Each fact sheet provides the brief summary of the IRP process (provided in more detail in the 1994 brochure) and a summary of IRP progress. Specific IRP-related issues raised by the public during community interviews, and anytime subsequently, are addressed. In addition, these fact sheets summarize any significant events or milestones that occur during the year. The fact sheets might also outline upcoming events and any changes in the CIP or IRP. All fact sheets are sent to key community leaders and interested parties (Appendix E), made available at public meetings, and maintained in the information repositories and archive. The community interviews reinforced to base personnel that fact sheets are the most effective method of keeping the people informed about our cleanup efforts.

Table 1 Required Community Involvement Activities and Timing Technical Milestones

Required Community Relations Activities	Prior to CIP	Prior to RI/FS	PEA Reports	RI/FS Reports	Draft Remedial Action plan/ Public Comment Period	Final Remedial Action Plan/ Record of Decision	Remedial Design	Remedial Action
1. Interviews	X							
2. Initial Fact Sheet		X						
3. Kickoff Meeting		X						
4. Information Repositories		X		MAINTAINED THROUGHOUT PROCESS				
5. Administrative Record		X		MAINTAINED THROUGHOUT PROCESS				
6. Mailing List		X		MAINTAINED THROUGHOUT PROCESS				
7. Periodic Fact Sheets (1)		X	X	X	X	X	X	X
8. Public Notices					X	X		
9. Community Advisory Board		X	X	X	X	X	X	X
10. CIP Activities for RAP (2)					X			
11. 30-Day Comment Periods					X			
12. Public Meetings					X			
13. Press Releases (3)		X	X	AS NEEDED		X	X	X
14. Revisions to CIP (3)				AS NEEDED				
15. CIP Coordinator (3)		X						
16. Speakers Bureau (3)				UPON REQUEST				
17. Site Visits (3)				UPON REQUEST				
18. Briefings (3)				AS NEEDED				

Notes:

(1) Two are required (prior to RI/FS and Draft Remedial Action Plan); others are as needed

(2) Operable Unit Remedial Action Plan (RAP) activities include: 1) 30-day Comment Period; 2) Notice of RAP; 3) Public Meeting; 4) Posting near the site; and

5) Notify adjacent owners of proposed activity

(3) Additional (not mandatory)

The Environmental Management office issued two fact sheets in 2002 and plans to issue one additional fact sheet by the end of the year. Fact sheet topics are: Site 20, a decommissioned landfill, unexploded ordnance area, and a former drum disposal site; Sites 18 and 22, two former landfills used primarily for disposal of construction debris; and one additional topic to be determined. Two of these fact sheets have been developed and were distributed to the public. Copies of the fact sheets can be found in Appendix G.

7.2.3 Information Brochures

The Vandenberg AFB Environmental Restoration Office prepared two informational brochures, issued in January 1992, which addressed the Vandenberg AFB IRP, the FFSRA, and Operable Units in general terms. A one-page flyer was also prepared (August 1993) which provided suggestions on how to become more involved in the Vandenberg IRP. An informational brochure was issued in October 1994 explaining the seven-step process to cleanup with examples of current activities.

In January 2002, an informational poster board showing the number of sites that have been cleaned up was developed. The poster board is updated as cleanup progresses and is displayed at CAB and other public meetings.

7.3 INFORMATION REPOSITORY

A public area information repository is required to provide interested parties background and technical information about Vandenberg AFB. The information repository contains documents related to the IRP process. It includes work plans, technical reports, summary documents, and other information of public interest (e.g., fact sheets, and news releases). Information is kept updated. Documents continue to be available on a reserve basis at the repository; they may not be taken outside the repository location. Arrangements will be made to allow a designated printing company to duplicate materials at the requester's expense. Since those interested in the Vandenberg AFB IRP are from areas throughout the county, information repositories were established at three locations:

- Vandenberg AFB Library, 100 Community Loop, Building 10343, Vandenberg AFB, CA, 93437, phone: 805.606.6414
- Lompoc Public Library, 501 East North Avenue, Lompoc, CA 93436, phone: 805.736.3477
- Central Coast Regional Water Quality Control Board, 81 Higuera Street, Suite 200, San Luis Obispo, CA 93401, phone: 805.549.3147

Discussions will be held between the base and the Santa Maria Public Library to establish a fourth repository in Santa Maria.

7.4 ADMINISTRATIVE RECORD

An Administrative Record has been established for Vandenberg AFB that is updated as required and appropriate. The Administrative Record includes information that may form the basis for selecting a response or remedial action. The record is required under Section 113 of SARA and is stored at the Environmental Restoration office on Vandenberg AFB. Some of the documents included in the Administrative Record overlap with those in the information repositories. However, the Administrative Record is the only document file considered for judicial proceedings. The Administrative Record must be maintained for at least 10 years after completing all cleanup activities, as a legal resource and for public

information. An index of the Administrative Record is maintained at the information repositories. Arrangements will be made to allow a designated printing company to duplicate materials at the requester's expense. The base determined it is feasible to place the Administrative Record on compact disks so it can be made available to the public. Contact 30 CES/CEVR at 805.606.2071 to access the information contained in the Administrative Record.

7.5 MAILING LIST

The mailing list of interested parties, established in 1992 and continuously updated, is composed of the parties contacted and other parties suggested during both community interviews. It also includes federal, state, and local officials, local media, and others who expressed interest in reviewing information regarding the Vandenberg AFB cleanup. The mailing list is updated throughout the IRP process by adding names of community members or other interested individuals who inquire about sites. Fact sheets distributed by mail or at public meetings feature a clip-out coupon that can be returned by anyone who wishes to be added to the list. Anyone wanting to be added to the mailing list can also contact the IRP Community Relations Office at (805) 606-2071 or write to 30 CES/CEVCR, 802 13th Street, Suite 116, Vandenberg AFB, California 93437-5742.

7.6 TRANSITION OF COMMUNITY ADVISORY BOARD FROM RAB TO CAB

In May 1996, the Vandenberg Environmental Management Office introduced the concept of transitioning the RAB to a new organization known as the CAB. The primary driver for the conversion was to expand the scope of the RAB to include environmental issues other than base cleanup. The structure of the RAB could logically incorporate review of other environmental issues from the four major environmental management programs: Environmental Compliance, Pollution Prevention, Conservation, and Environmental Restoration.

The decision to expand the scope of the committee was driven by the awareness of Vandenberg AFB's extraordinary environmental setting, unique by virtue of its 35 miles of pristine California coastline, the number of endangered or threatened plant and animal species, and almost 100,000 acres of forests and wetlands. At the same time, the military mission conducted at Vandenberg AFB is vital to the nation's space and missile program.

In August 1996 the RAB formed a subcommittee to study issues involved in transitioning to the CAB. The community co-chair and other members were concerned that the broadening scope could become labor intensive and time consuming. During the next few months the expansion committee met with environmental project managers, public affairs office, and state regulators. The subcommittee concluded that increased community representation would be needed and agreed to assist in recruiting additional members. The consensus was that the RAB had been an extremely useful organization that enabled its members to stay informed and have input to cleanup programs. By broadening the scope of the organization, other environmental issues of concern to the community would have the same benefit.

At the October 1996 quarterly meeting, the CAB expansion committee prepared methods for recruiting new members and reviewed the rules of operation regarding membership, including selection procedures, duration of service, and community representation. This review ensured that the present membership believed that the selection process was fair and democratic. Some of the newer members included a representative from the Sierra Club and a member of the Chumash Tribal Council.

The membership moved to transition from the RAB to the CAB and the motion was carried. The new charter was submitted describing the structure and operational responsibility. It was approved and signed

The membership moved to transition from the RAB to the CAB and the motion was carried. The new charter was submitted describing the structure and operational responsibility. It was approved and signed by the co-chairs. In addition several new community members were voted into the CAB to increase the membership to 27 members.

Vandenberg AFB's first CAB meeting was held on 24 January 1997.

7.7 CIP ACTIVITIES FOR THE DRAFT REMEDIAL ACTION PLAN

After completion of the RI/FS phase, several community relations activities occur that are tied to the RAPs, describing cleanup actions for the sites. These activities include:

- (1) Availability of the draft RAP for a minimum 30-day public comment period;
- (2) County-wide publication of a notice of draft RAP availability for public review;
- (3) Public notice announcing a public meeting published in the *Lompoc Record* and the *Santa Maria Times*;
- (4) A public meeting directed by the Air Force with DTSC regulatory oversight to receive public input concerning the draft RAP;
- (5) Posting near the site; and
- (6) Notifying adjacent owners of the proposed activity.

Since the IRP is separated into several Operable Units (IRP site categories), these CIP actions will be repeated for each Operable Unit Remedial Action Plan. The purpose of these activities is to solicit public comments on proposed remedial actions. Many of the interviewees indicated concern over the methods of site remediation and how contaminated soils would be treated or disposed of. The public and local officials may have increased interest and concern in issues, such as hazardous waste transportation, that may involve off-base areas. The public comment period allows the community to comment on the final draft RAP for Air Force consideration.

8.0 ADDITIONAL COMMUNITY INVOLVEMENT ACTIVITIES

In addition to the activities that are required components of the CIP, there are a number of other activities that may be implemented to enhance the effectiveness of the program. Described below are a number of additional CIP activities intended to achieve the goals of the CIP and meet the needs of the community.

8.1 PUBLIC MEETINGS

Beyond the required draft Remedial Action Plan public meetings, Vandenberg AFB may also offer town hall meetings at various milestones, and as community interest warrants. These meetings may be held by Vandenberg AFB or DTSC. DTSC may even require additional meetings depending on the level of concern, if the general public or groups express specific concerns.

The CAB meetings are open to the public and notices are posted in advance. Updated IRP information as well as other environmental issues are extensively covered in each meeting. Local community members are welcome to attend.

8.2 NEWS RELEASES

Throughout the IRP process, announcements of public meetings, other CIP activities, and any significant IRP events or milestones will be distributed to the media. The local broadcast and print media will be contacted regarding all news releases, informational brochures, and fact sheets through the Public Affairs Office.

8.3 REVISIONS TO THE COMMUNITY INVOLVEMENT PLAN

The CIP will be modified during the course of the IRP to reflect changes in community interest and concern. Modifications will be made based upon ongoing communication with the community, and could include summaries of public meetings or summaries of additional interviews.

8.4 COMMUNITY RELATIONS COORDINATOR

A community relations coordinator has been designated by Vandenberg AFB to provide information about public participation activities, to respond to inquiries and concerns, or to refer callers to persons knowledgeable about the subject. The designated individual will attend the CAB meetings and will be well informed on the IRP and CIP issues. DTSC also assigns a public participation representative to provide guidance and oversight. The community relations coordinators are listed in Appendix F.

8.5 SPEAKERS BUREAU

The Public Affairs Office has established and publicized a speaker's bureau that consists of designated speakers who are knowledgeable on a particular topic. They are available to conduct presentations to interested groups. The base may add speakers to the bureau to present information on the IRP and CIP process. Slides and other visual aids may be used to enhance the presentations. Interested persons may call the Public Affairs Office at (805) 606-3595.

8.6 SITE VISITS

Upon request, tours may be arranged for interested groups. These tours are designed to give individuals an appreciation for the environmental resources found on the base, a feel for the relative extent of

hazardous substance contamination, and an understanding of the progress of the cleanup program. For more information, contact the IRP Community Relations Office at (805) 606-2071.

8.7 YOUTH OUTREACH

As part of the youth outreach program, Vandenberg AFB has developed many community partnerships with local schools, such as the 1997 Memorandum of Agreement with Cabrillo High School. Under this agreement, students in the marine science program survey the base's 35-mile coastline. Since 1991, students from Vandenberg Middle School have interviewed IRP staff as part of their science research projects. Elementary students from Santa Maria and Lompoc Unified School Districts toured Vandenberg's environmental sites during recent Earth Day observations. Also, schoolteachers are given the opportunity to shadow environmental project managers to gain professional insight for their classrooms.

8.8 BRIEFINGS

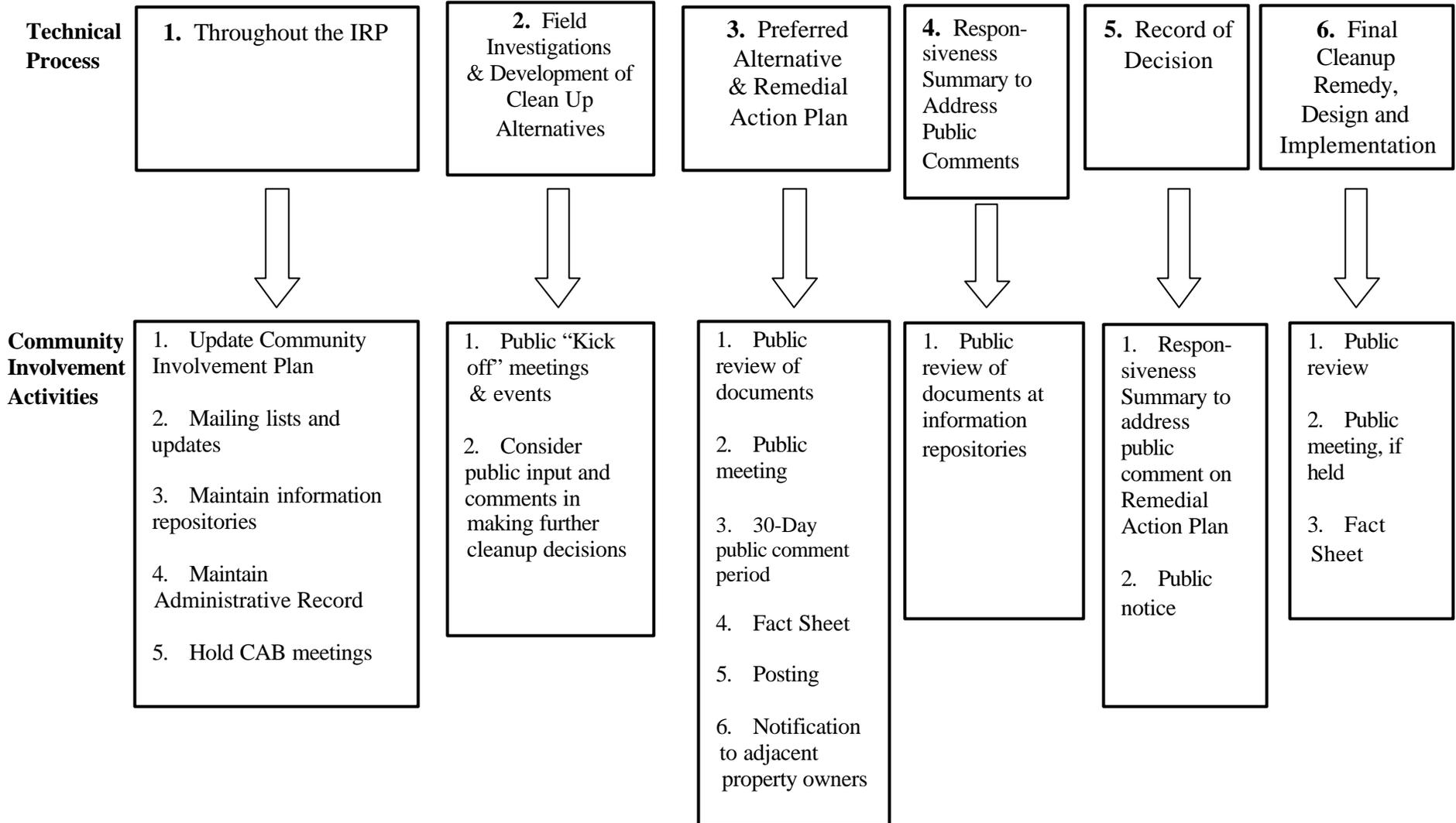
The IRP staff may contact elected officials and regulatory agencies regarding major IRP events at the base to inform community leaders in advance of general releases to the news media so that they can better respond to public inquiry. Base representatives are available to give briefings to the public. Alternate avenues will be sought to conduct briefings to varied audiences. Contact the IRP Community Relations Office at (805) 606-2071 to schedule a briefing.

8.9 MEDIA OPPORTUNITIES

Media tours, helicopter overflights, and interview opportunities may be arranged for interested media representatives. Interviews can be arranged on an individual basis; however, tours and overflights will be open to all media upon approval from the appropriate Vandenberg AFB officials. Contact the IRP Community Relations Office at (805) 606-2071 to arrange these media opportunities.

Figure 3 shows a summary of the above-mentioned CIP activities as they relate to technical aspects of the IRP.

Figure 3
Coordination of Technical and Community Involvement Activities



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10.0 GLOSSARY OF ACRONYMS AND TERMS

10.1 ACRONYMS

AFB	Air Force Base
CAB	Community Advisory Board
Cal/EPA	California Environmental Protection Agency
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (also known as Superfund)
CIP	Community Involvement Plan
CRWQCB	California Regional Water Quality Control Board
DoD	Department of Defense
DTSC	Department of Toxic Substances Control
FFSRA	Federal Facility Site Remedial Agreement
ICBM	intercontinental ballistic missile
IRP	Installation Restoration Program
PA/SI	Preliminary Assessment/Site Inspection
PEA	Preliminary Endangerment Assessment
RA	Remedial Action
RAB	Restoration Advisory Board
RAP	Remedial Action Plan
RCRA	Resource Conservation and Recovery Act
RD	Remedial Design
RI/FS	Remedial Investigation/Feasibility Study
ROD	Record of Decision
SARA	Superfund Amendments and Reauthorization Act
TRC	Technical Review Committee
U.S. EPA	United States Environmental Protection Agency

WSMC Western Space and Missile Center

10.2 TERMS

Community Advisory Board (CAB). This committee, established in 1997, expanded the scope of the RAB to enable public participation in environmental issues and programs beyond the Installation Restoration Program.

Community Involvement Plan (CIP). The CIP outlines specific community relations activities that occur during the remedial response actions at a site. Vandenberg AFB has prepared this CIP to fulfill EPA guidance and DTSC public participation requirements. The CIP describes how EPA, DTSC, and Vandenberg AFB will keep the public informed of the cleanup process and the ways citizens can review and comment on decisions that may affect the final actions. The CIP is available in the established information repositories.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). This is a federal law that was passed in 1980 and modified in 1986 by SARA. CERCLA created a special tax that goes into a trust fund, commonly known as Superfund, to investigate and clean up hazardous waste sites. Under CERCLA, regulations set forth for federal facilities governs environmental restoration activities at national priorities list (NPL) and non-NPL sites in accordance with the National Contingency Plan. The National Contingency Plan provides the organizational structure and procedures for, preparing for and responding to, discharges of oil and releases of hazardous substances, pollutants, and contaminants.

Cantonment Area. Originally used for temporary troop housing during World War II, this is now the base's main administrative area. It also includes the base community center, hospital, officer and enlisted quarters, and the majority of base housing.

Federal Facility Site Remediation Agreement (FFSRA). This is an agreement between state agencies and the Air Force that describes procedures, processes, and schedules for all cleanup activities at the base.

Installation Restoration Program (IRP). This program is the Air Force's version of the U.S. EPA CERCLA/Superfund process. According to the requirements of CERCLA and SARA, all federally owned facilities are required to remediate a site to the same degree as if it were privately owned.

National Priorities List (NPL). The U.S. EPA developed a system (called the Hazard Ranking System) to rank hazardous waste sites based on their potential to harm human health or the environment. Sites with the highest rankings are included on the NPL and are the only ones eligible for Superfund funding. Vandenberg AFB, however, is not on the NPL.

Operable Units. Federal regulations allow large, multi-site facilities, such as Vandenberg AFB, to divide the facility into smaller, manageable groups with similar characteristics (e.g., location, type of cleanup). These smaller areas are called operable units.

Preliminary Assessment/Site Inspection (PA/SI). This first phase of the IRP involves collection and review of all available information on past and present site contamination. Based on the results of this preliminary assessment, it is determined if further site investigation is needed in the form of a site inspection.

Preliminary Endangerment Assessment (PEA). These reports present an assessment of all available information on a potentially contaminated site to determine whether further action is necessary at that site. Typically, PEA reports are prepared for sites thought to pose little or no threat to public health or the environment. If the regulatory agencies agree, they will define these sites as (requiring) No Further Action.

Record of Decision (ROD). The document containing the final decision and agreement among the installation, the state, and EPA concerning selection of the remedial action at a site or a group of sites.

Remedial Action (RA). This is the final phase in the IRP process. Based on the Remedial Design, it implements the chosen response actions that stop or substantially reduce a release or threat of release of hazardous substances.

Remedial Action Plan (RAP). The draft RAP presents the preferred cleanup option as well as other alternatives for site remediation. After public review and comment, a final RAP is prepared that describes the proposed cleanup decision.

Remedial Design (RD). This phase follows the Remedial Action Plan and includes the development of engineering drawings and specifications for implementing the chosen remedy.

Remedial Investigations/Feasibility Study (RI/FS). A remedial investigation (RI) examines the nature and extent of contamination problems at a site. The feasibility study (FS) evaluates different remedial alternatives for site cleanup and recommends a preferred cleanup alternative.

Resource Conservation and Recovery Act (RCRA). A federal law that established a regulatory system to track hazardous substances from their generation to disposal. The law requires safe and secure procedures to be used in treating, transporting, storing and disposing of hazardous substances. RCRA is designed to prevent the creation of new, uncontrolled hazardous waste sites.

Restoration Advisory Board (RAB). This committee was established to promote the public participation in the IRP process. The Vandenberg AFB RAB expanded the former Technical Review Committee (TRC) which, according to Section 211 of SARA, requires that a TRC be formed whenever possible and practical to review and comment on actions and proposed actions regarding releases or threatened releases at the installation. The RAB is comprised of individuals from the regulatory community, the military, and interested citizens. The purpose of the RAB is to expand public participation in reviewing and commenting on Department of Defense proposed actions with respect to releases or threatened releases of hazardous substances at installations. At Vandenberg AFB the RAB transitioned into a CAB in 1996.

Superfund. See *Comprehensive Environmental Response, Compensation, and Liability Act*.

Superfund Amendments and Reauthorization Act of 1986 (SARA). This federal law updated and amended CERCLA. One of its provisions made CERCLA applicable to all DoD facilities (see also *Comprehensive Environmental Response, Compensation, and Liability Act*).

APPENDIX A

**GOVERNMENT AGENCIES AND CONTRACTORS INVOLVED
IN THE INSTALLATION RESTORATION PROGRAM PROCESS**

Government Agencies

Installation Restoration Program
30 CES/CEVR
806 13th Street, Suite 116
Vandenberg AFB, CA 93437-6011
(805) 734-8232, ext 50635

Air Force Center for
Environmental Excellence (AFCEE)
Environmental Restoration Division
Brooks AFB, TX 78235-5000
(512) 536-5327

Bureau Of Reclamation
P.O. Box 61470
Boulder City, NV 89006-1470
(702) 293-8151

California Environmental Protection Agency
Department of Toxic Substances Control
5796 Corporate Ave.
Cypress, CA 90630
(714) 484-5416

Santa Barbara County
Air Pollution Control Board
26 Castilian Drive B-23
Goleta CA 93117

California Environmental Protection Agency
Regional Water Quality Control Board
81 Higuera Street, Suite 200
San Luis Obispo, CA 93401
(805) 542-4632

U.S. EPA, Region IX
75 Hawthorne
San Francisco CA 94105

NOAA
c/o US U.S. EPA, Region IX
75 Hawthorne Street
San Francisco CA 94105

US Fish and Wildlife
2140 Eastman Ave, Suite 100
Ventura CA 93003

Santa Barbara County
Environmental Health Services
2125 S Centerpoint Pkwy #333
Santa Maria, CA 93455

Contractors

Tetra Tech, Inc.
4213 State Street, Suite 100
Santa Barbara, CA 93110-2847

Hydrogeologic
4600 North Gate Blvd., Suite 207
Sacramento, CA 95834

Montgomery Watson Harza (MWH)
1216 State Street, Suite 509
Santa Barbara, CA 93110

The Shaw Group
8545 United Plaza Blvd.
Baton Rouge, LA 70809

Earth Tech, Inc.
40200 Windgate Ct.
Palmdale, CA 93551

APPENDIX B

LIST OF INTERVIEWEES

Confidential contact information available from IRP archive by submitting written request to:

IRP Public Affairs Office
30 CES/CEVR
806 13th Street, Suite 116
Vandenberg AFB CA 93437-6011

Honorable Dick DeWees
Mayor, City of Lompoc
Lompoc, CA 93436

Honorable Joe Centeno
Mayor, City of Santa Maria
110 East Cook St.
Santa Maria, CA 93454

Mr. Frank Ortiz
Chief, Santa Maria Fire Dept.
314 West Cook Street, Room #8
Santa Maria, CA 93458

Ronald L. Fink (private citizen)
Lompoc, CA 93436

Mr. James MacKenzie (private citizen)
Lompoc, CA 93436

Mr. Benjamin Hernandez
American Express Financial Advisors
111 South I St. Suite G
Lompoc, CA 93436

Ed Cora, Principal
George Washington Battles School
605 E. Battles Road
Santa Maria, CA 93454-7209

Sharon Conley (private citizen)
Santa Maria, CA 93455

Jerry Connor (private citizen)
Santa Maria, CA 93454

APPENDIX C

**COMMUNITY INVOLVEMENT PLAN
INTERVIEW QUESTIONS**

1. How long have you live or worked in this area?
2. Are you familiar with Vandenberg's Installation Restoration Program (IRP)?
 - a. If yes, where have you received your information about the IRP?
 - b. How and when did you first become aware of the IRP sites?
3. Do you have any concerns about the IRP sites?
 - a. If yes, what are your concerns?
 - b. How would you describe the concerns of the community?
4. What do you know about the history of community involvement concerning the environmental cleanup at Vandenberg?
 - a. Have you personally been involved with Vandenberg in any way?
 - b. Are you aware of any individuals or groups who have emerged as leaders on this issue?
 - c. Do you feel these individuals/groups adequately represent your concerns?
 - d. Are you aware of the Community Advisory Board (CAB) established for Vandenberg?
 - e. Are you interested in participating?
5. Have you had any contact with local, state, or other officials regarding Vandenberg's IRP?
 - a. If so, what was the nature of the contact?
 - b. What kind of response did you receive?
6. Do you have confidence in the Air Force's ability to implement environmental cleanup at Vandenberg?
 - a. If no, how can the Air Force's credibility be improved?
7. Are you aware that the Department of Toxic Substances Control (DTSC) and the Regional Water Quality Control Board (RWQCB), both with the State of California, oversee the Air Force cleanup efforts at Vandenberg?
 - a. If yes, what is your opinion of the oversight provided by the DTSC and RWQCB for the cleanup program at Vandenberg?
 - b. If unfavorable opinion, any suggestions for improvement?
8. Do you feel you have been kept adequately informed about Vandenberg's IRP?
 - a. What would be a convenient way for you or other people in the community to receive information and how often? (public meetings, letters, fact sheets, workshops, open houses, service organizations, speakers)
 - b. How do you get most of your news? (television, radio, newspapers)
 - c. On which radio stations do you listen to the news?
 - d. On what TV stations do you watch the news?
 - e. To what newspaper(s) do you subscribe?
9. Have you ever requested information about Vandenberg's IRP?
 - a. If yes, who did you contact?
 - b. Did you get the information you wanted?

- c. Today, how would you go about obtaining information concerning the IRP?
- 10. Are you familiar with the information repositories established for the Vandenberg cleanup program?
 - a. Have you ever visited/used them?
 - b. Are they conveniently located for you?
- 11. Can you suggest anyone else we should contact?
- 12. Do you have any other comments or recommendations regarding the environmental cleanup at Vandenberg?

APPENDIX D

COMMUNITY ADVISORY BOARD MEMBERSHIP

Col Wayne Louis
30th SW Vice Commander
747 Nebraska Ave.
Vandenberg AFB, CA 93437

Dr. Roger Welt
CAB Community Co-Chair
Allan Hancock College
Santa Maria, CA 93454

Dr. Ning-Wu Chang
Cal-U.S. EPA/DTSC
5796 Corporate Ave.
Cypress, CA 90630

Mr. Chris Hahn
SB County Fire Dept
4410 Cathedral Oaks
Santa Barbara, CA 93101

Mr. Andrew Learned
Lompoc, CA 93436

Ms. Phyllis White
Vandenberg Village CSD
Lompoc, CA 93436

Mr. Ned Shores
Cabrillo High School
Lompoc, CA 93436

Mr. John Lewis
Lompoc, CA 93436

Ms. Linda Fargo
Santa Maria, CA 93455

Mr. Bill Meece
CRWQCB-CCR
81 Higuera Street, Suite 200
San Luis Obispo, CA 93401

Mr. Ron Fink
Lompoc, CA

Mr. James MacKenzie
Lompoc, CA

Ms. Sharon Conley
Santa Maria, CA

Mr. Frank Ortiz
Santa Maria Fire Chief
220 East Cook Street
Santa Maria, CA 93454

Ms. Kim Foreman
Cal-U.S. EPA/DTSC
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Cypress, CA 90630

Mr. Benjamin Hernandez
Lompoc, CA 93436

Mr. Jerry Connor
Santa Maria, CA 93454

Mr. David Romano
APCD
26 Castillian Dr. B-23
Goleta, CA 93117

Mr. Joseph Sesto
Santa Maria, CA 93454

Mr. Rick Skillin
Lompoc, CA 93436

Ms. Kate Sulka
SB County Fire Dept.
4410 Cathedral Oaks
Santa Barbara, CA 93101

Mr. Mel O'Campo
Santa Maria, CA 93454

Ms. Susan Warnstrom
Office of Supv 4th District SB
401 East Cypress
Lompoc, CA 93436

Mr. David Watts
Community of Santa Ynez
Solvang, CA 93463

Mr. Walter Burnet
Lompoc, CA 93436

Ms. Stacy Lawson
PO Box 8001
Lompoc, CA 93436

Non-Member Participants

30th Civil Engineering Squadron Commander

30th Space Wing Environmental Office Judge Advocate

30th Medical Group Bioenvironmental

30th Environmental Management Flight Chief

30th Environmental Management Flight IRP Chief

30th Environmental Management Flight IRP Community Relations Coordinator

30th Environmental Management Flight IRP Environmental Specialists

30th Environmental Management Flight IRP Engineers

Private Contractors involved in Vandenberg AFB's IRP

APPENDIX E

KEY COMMUNITY LEADERS AND INTERESTED PARTIES

Note: This list is abbreviated due to confidentiality of private citizens' information. Complete listing is kept in the IRP Administrative Record at Vandenberg AFB.

VANDENBEG AIR FORCE BASE INSTALLATION RESTORATION PROGRAM

Gail Marshall
3rd District
105 East Anapamu Street
Santa Barbara, CA 93101

Abel Maldonado
33rd Assembly District
1302 Marsh Street
San Luis Obispo, CA 93401

Helen Thomson
8th Assembly District
555 Mason Street, Suite 275
Vacaville, CA 95688

Joni Gray
4th District
511 E. Lakeside Pkwy
Suite 126
Santa Maria, CA 93455

Rod Pacheco
64th Assembly District
3740 Mission Inn Ave,
Ste N-6
Riverside, CA 92501

Senator Jack O'Connell
1260 Chorro St.
San Luis Obispo, CA 93401

Tom Urbanske
Fifth District Office
511 E. Lakeside Parkway, Suite 141
Santa Maria, CA 93455-1341

Rep. Elton Gallegly
300 Esplanade Drive, #1800,
Oxnard, CA 93030

Rep. Lois Capps
1428 Chapalla,
Santa Barbara, CA 93101

Honorable Joe Centeno
Mayor, Santa Maria
110 E. Cook Street, Room 1
Santa Maria, CA 93454-5190

Naomi Schwartz, Chair
1st District
105 East Anapamu Street
Santa Barbara, CA 93101

Susan Rose, Vice Chair
2nd District
105 East Anapamu
Santa Barbara, CA 93101

City Clerk Janet Kalland
110 E. Cook Street, Room 3
Santa Maria, CA 93454-5190

Mr. Rick Skillin
Santa Ynez, CA 93460

Council Member Bob Orach
110 E. Cook Street, Room 3
Santa Maria, CA 93454-5190

Honorable Ed Andrisek
Mayor, Solvang
P.O. Box 107
Solvang, CA 93464

Honorable Dick DeWees
Mayor, Lompoc
P.O. Box 8001
Lompoc, CA 93438-8001

Honorable Russell Hicks
Mayor, Buellton
P.O. Box 1819
Buellton, CA 93427

Los Berros Elementary School
905 W. Airport
Lompoc, CA 93436

Honorable Sam Arca
Mayor, Guadalupe
918 Obispo Street
Guadalupe, CA 93434

Honorable Harriet Miller
Mayor, Santa Barbara
P.O. Box 1990
Santa Barbara, CA 93102

SB City Fire Department
121 W Carrillo St
Santa Barbara, CA 93101

KEYT-TV, Channel 3
PO Box 729
Santa Barbara, CA 93102

Environmental Health Coalition
1717 Kettner Blvd Ste 100
San Diego, CA 92101-2532

VANDENBEG AIR FORCE BASE INSTALLATION RESTORATION PROGRAM

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Santa Barbara, CA 93109

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4350 Constellation Rd
Lompoc, CA 93436

Santa Barbara News Press
PO Box 1359
Santa Barbara, CA 93102

Audubon Society
5679 Hollister Ave # 5B
Goleta, CA 93117-3402

Martha Negus Orthopedic
Mountain View Blvd
VAFB, CA 93437

Air Pollution Control District
26 Castilian Dr #B-23
Goleta, CA 93117-3027

Sierra Club
PO Box 15755
San Luis Obispo, CA 93406

Maple Continuation HS
Hector Samaniego Principal
Carob St
VAFB, CA 93437

KSBY-TV
1772 Calle Joaquin
San Luis Obispo, CA 93405

Lompoc Record
P.O. Box 578
Lompoc, CA 93436

Allan Hancock College
Dr. Ann Foxworthy
800 S College Dr
Santa Maria, CA 93454-6399

Audubon Society
4412 Titan Ave
Lompoc, CA 93436-1027

Los Padres School
Sue Lyon Principal
Mountain View Blvd
Lompoc, CA 93437

SB Business College
303 Plaza Dr
Santa Maria, CA 93454-6943

Crestview Elementary
Utah Ave
Lompoc, CA 93437

Base Education Complex
Wyoming Ave
VAFB, CA 93437

Kiwanas Club Of Orcutt
PO Box 901
Santa Maria, CA 93456-0901

Vandenberg Middle School
Carmen Benedict, Principal
Mountain View Blvd
Lompoc, CA 93437

KTAP-Radio
104 W Chapel St
Santa Maria, CA 93454-4300

U.S. EPA, Region IX
Denise Klimas NOAA
75 Hawthorne St
San Francisco, CA 94105

KCOY Channel 12
John Piliros
1211 W McCoy Ln
Santa Maria, CA 93455-1036

Santa Maria Times
3200 Skyway Dr
Santa Maria, CA 93455-1824

HQ USAF/CEV
Washington, DC 20330-1260

KSMA-AM1240/KSNI-FM102.5
News Director
PO Box 1240
Santa Maria, CA 93456-1240

VANDENBEG AIR FORCE BASE INSTALLATION RESTORATION PROGRAM

KUHL-AM1440/KX-FM 99.1
PO Box 1964
Santa Maria, CA 93456-1964

State Water Quality Board.
William Leonard
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San Luis Obispo, CA 93401

Governor Gray Davis
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Department Of Fish & Game
1416 9th St Fl 12
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Irvine, CA 92612

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VAFB CA 93437

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Cabrillo High School
Lompoc, CA 93436

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CAB Community Co-Chair
Allan Hancock College
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Mr. David Romano
APCD
26 Castillian Dr. B-23
Goleta, CA 93117

Ms. Stacy Lawson
Lompoc Environmental Coordinator
PO Box 8001
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Mr. Ning-Wu Chang
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Mr Kerry Boyle
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Lompoc, CA 93436

Melchor O'Campo
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Mr Andrew Learned
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Mr Ned Shores
Cabrillo High School
Lompoc, CA 93436

Newman Whitmire
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CRWQCB-CCR
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San Luis Obispo, CA 93401

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Lompoc, CA 93436

Mr. David Watts
Solvang, CA 93463

Environmental Health Coalition
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CALPRIG
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VANDENBEG AIR FORCE BASE INSTALLATION RESTORATION PROGRAM

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Sierra Club
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Natural Resources
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US Fish & Wildlife Service
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Mr. Ben Hernandez
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APPENDIX F

COMMUNITY RELATIONS COORDINATORS

Mr. Ron MacLelland
Community Relations Coordinator
30 CES/CEVR
806 13th Street, Suite 106
Vandenberg AFB, CA 93437

Ms. Kim Foreman
Public Participation Specialist
Cal-EPA/DTSC
5796 Corporate Ave.
Cypress, CA 90630

APPENDIX G

IRP FACT SHEETS

List of Topics:

1. Underground Storage Tanks
2. Site 31, Former Missile Launch Facility (576-C)
3. Geographic Information System
4. Site 16, Mod III Lake ABRES-B Launch Complex
5. Site 9, Space Launch Complex No. 4-East (SLC-4E)
6. Sites 24 & 25, Entomology Wash Rack and Former Thor-Agena Missile Launching Facility
7. Sites 5 & 35, Space Launch Complex No. 3-East (SLC-3E) and Missile Silo 576-G
8. Site 20, Erosion Mitigation Project
9. Sites 18 & 22, Implementing Land Use Controls



Vandenberg Air Force Base Underground Storage Tank Removal Fact Sheet



Vandenberg Air Force Base, California

January 2000

Installation Restoration Program

HISTORY

Vandenberg Air Force Base (AFB) was once an Army training facility known as Camp Cooke. Camp Cooke infantry divisions were trained for combat from the early 1940s until the end of World War II. At that time the majority of buildings on Camp Cooke were heated by fuel oil, stored in underground storage tanks (USTs). Additionally, other petroleum products, such as aviation fuel, gasoline, and diesel were stored and dispensed at specific locations throughout the base.

In 1980, Congress enacted the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), which required investigation and cleanup of inactive or abandoned hazardous substance release sites and spills of hazardous substances that may endanger public health, welfare,

or the environment. In response to this new law, the Department of Defense (DoD) directed the services to implement an environmental program. The Air Force created the Installation Restoration Program (IRP). The IRP was established to investigate and clean up hazardous material disposal sites at all Air Force installations.

Vandenberg project managers began the initial preliminary assessment/site inspections under the IRP in 1984. The focus of the investigations was to identify the locations of all potentially hazardous or toxic materials or contaminated sites on the base. The investigation identified 731 known USTs. After the initial investigation phase was completed, Vandenberg project managers initiated a contract in 1990 to remove inactive tanks and clean contaminated soil encountered during tank excavations. Since then, identification assessments and tank removals, soil, and ground water cleanups have continued throughout the base.

CURRENT STATUS

To date, 680 UST sites have undergone clean-up to meet regulatory standards and have been closed by regulatory agencies. The remaining UST sites will be investigated and remediated using the Risk Based Corrective Action approach. In this streamlined approach to corrective action at petroleum and chemical releases, exposure and risk assessment procedures are integrated with traditional components to ensure appropriate, cost-effective remedies are selected.

CLEANUP METHOD

The preferred method for cleaning up contaminated soil excavated from UST sites is bioremediation. Petroleum hydrocarbon-impacted soil and water from the excavation activities at UST sites are transported to designated bioremediation cells. The soil is spread on plastic sheeting in the bioremediation cell areas. In a controlled environment, microorganisms in the soil will metabolize the fuel hydrocarbons, yielding non-toxic by-products. The cell is actively monitored to control moisture, nutrients, and carbon dioxide-to-oxygen ratios until the remediation process is completed and all interim and final sampling is done. The clean soil is then used for Civil Engineering projects as fill material.

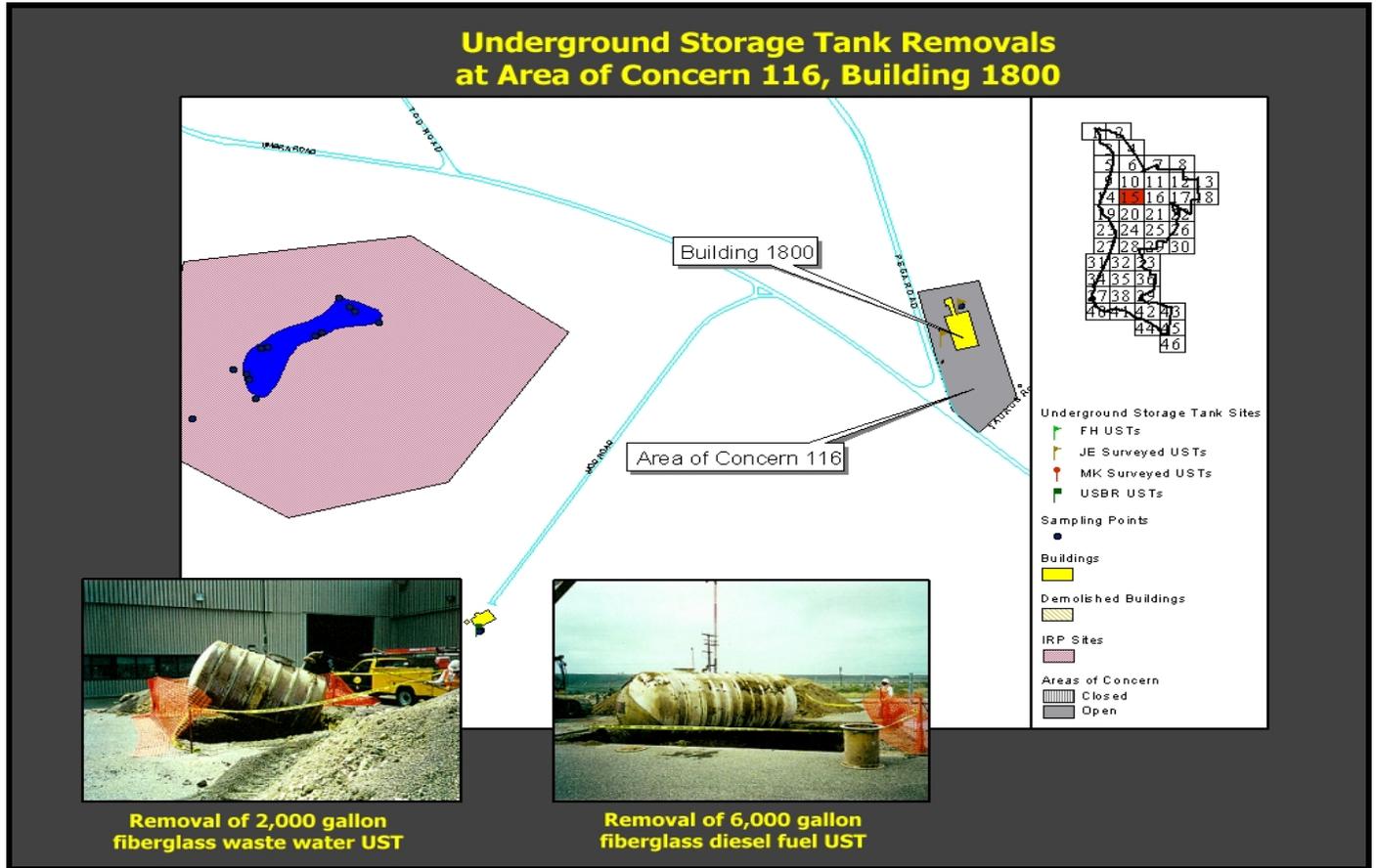


One of 25 USTs removed during FY 1998-1999 as part of the IRP

THE WAY AHEAD

Through the IRP, progress continues in investigating and cleaning up contamination from the USTs basewide. The base is committed to cleaning up sites using cutting edge technology that will effectively and efficiently decrease impacts to the environment. To effectively track and document the progress of cleanup at such a large number of sites, Vandenberg is using state-of-the-art information technology. The documentation and records of investigating and cleaning up USTs are continually updated in the Geographic Information System (GIS), providing a compressive electronic database of the UST removal program.

If you have questions about any aspect of this program, contact Mr. Ron MacLelland, Community Relations Coordinator, 806 13th Street, Suite 116, Vandenberg AFB, CA 93437-5242.



Graphic data capture assures accurate historical records

Installation Restoration Program
 30 CES/CEVCR
 806 13th Street, Suite 116
 Vandenberg Air Force Base, California 93437-5242



Vandenberg Air Force Base Installation Restoration Program Site 31 Fact Sheet



Vandenberg Air Force Base, California

July 2000

Installation Restoration Program

BACKGROUND

Site 31 is located in the northern half of Vandenberg AFB, California. The site is a former Missile Launch facility (576-C), and is approximately two miles north of San Antonio Creek, on Pike Road (see map on back page). The site was used in the early 1960s for Atlas E missile launches, an above ground "coffin" style launcher, as opposed to a gantry or silo.

A concrete-lined retention basin on the southeast side of the launch pad contains approximately 300 cubic yards of sediment. Polychlorinated biphenyls (PCBs),

pesticides, metals, and petroleum hydrocarbons have been identified. Approximately 360,000 gallons of impounded stormwater are contained in the retention basin and in an adjacent tank vault. The California red-legged frog, federally listed as threatened, has also been observed in the retention basin.



Site 31 retention basin.

SITE 31 STATUS

Vandenberg AFB has prepared an engineering evaluation/cost analysis (EE/CA) for Site 31 as part of a Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) non-time-critical interim removal action (IRA). The purpose of an IRA is to reduce risks at a site prior to completion of the remedial investigation. Evaluation of remedial alternatives is based on technical feasibility, reasonable cost, time constraints, and human health and ecological impacts. In this case, the EE/CA was used to evaluate and compare technological alternatives for removal and disposal of contaminants in retention basin sediments. The EE/CA was also used to evaluate and compare alternative methods for removing the California red-legged frog, a threatened amphibian under the Endangered Species Act, before removing the contaminated sediments. This EE/CA is not yet ready for public review and comment. Vandenberg is waiting for United States Fish and Wildlife Service (USFWS) to first review and then approve the document.

CLEANUP/REMOVAL ALTERNATIVES

The following removal action alternatives for the retention basin sediments at Site 31 have been identified and screened:

- No action;
- Capping of the sediments (e.g., clay cap with polyethylene liner); and
- Excavation and proper management/disposal of sediments.

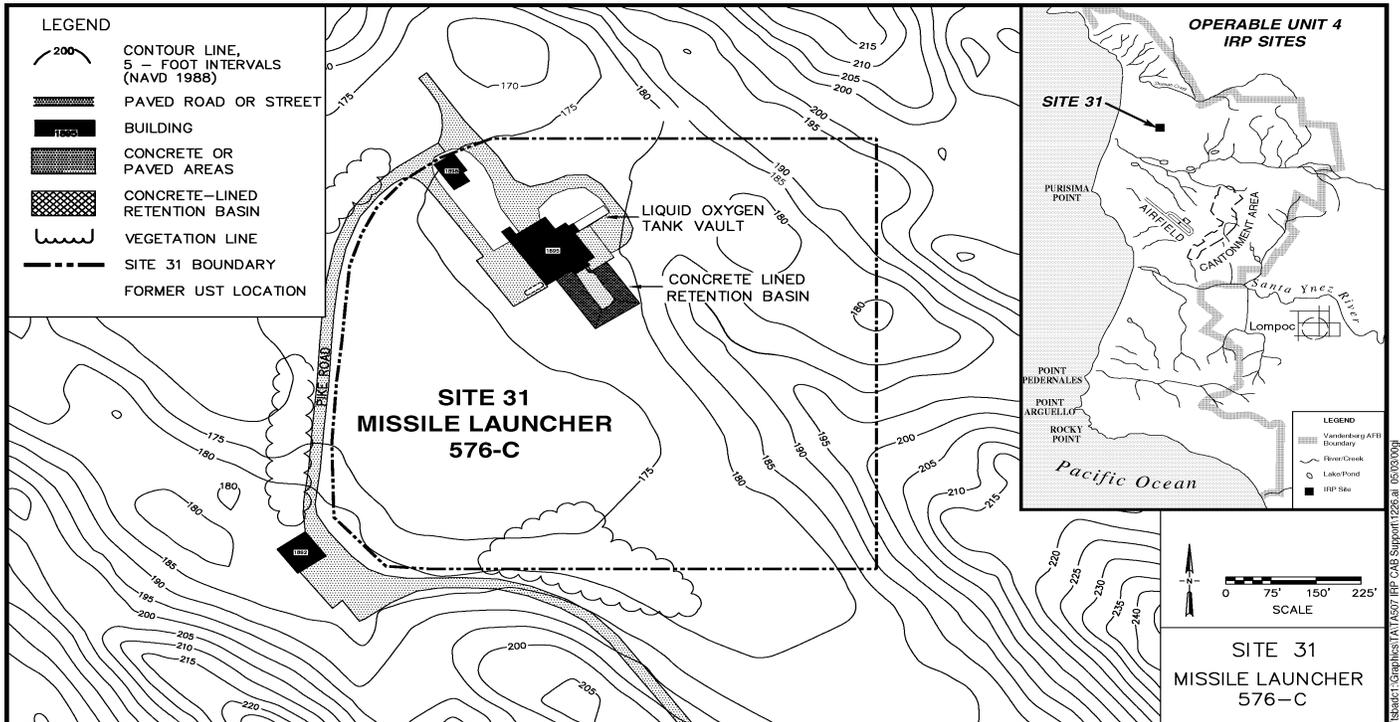
Vandenberg AFB has assessed cleanup alternatives at this site and recommends removal of retention basin water, removal of water from an adjacent former liquid oxygen (LOX) storage tank vault, and excavation and disposal of the retention basin sediments.

Vandenberg AFB is also in consultation with the USFWS to determine the most appropriate method of relocating the California red-legged frog. At present, the base is awaiting the USFWS Biological Opinion on this issue.

After removing retention basin water and sediments, the retention basin and LOX storage tank vault will be back-filled with clean construction fill to prevent a recurrence of ponding. Before the removal process begins, a proposed IRA plan will be drafted and approved by the Department of Toxic Substances Control (DTSC) and the USFWS. The DTSC will prepare the California Environmental Quality Act (CEQA) documentation as it considers the approval of the draft removal action plan. Once the EE/CA and Biological Opinion are received from the USFWS, public review and comments will be scheduled in accordance with CERCLA and the California Health and Safety Code. The public will then have 30 days to comment on the draft EE/CA.

The aforementioned documents are designed to significantly reduce potential risks to human and ecological receptors and will be an important step toward complete site cleanup and closure.

If you have questions about this site or any aspect of the IRP program, please contact Mr. Ron MacLelland, Community Relations Coordinator, 806 13th Street, Suite 116, Vandenberg AFB, CA 93437-5242.



Site 31 location map.

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Vandenberg Air Force Base Installation Restoration Program Geographic Information System



Vandenberg Air Force Base, California

July 2000

Installation Restoration Program

BACKGROUND

Vandenberg AFB significantly enhanced its Installation Restoration Program (IRP) by developing a new Geographic Information System (GIS). The environmental mission at Vandenberg is complex. Vandenberg, the third largest Air Force base in the nation, encompasses 99,100 acres, including over 2,500 prehistoric, historic, and Cold War cultural resources, and 13 endangered or threatened plant and animal species. With 136 IRP sites and 166 Areas of Concern (AOCs), it is easy to understand the benefits of using this new tool. The GIS provides current graphic displays of

these environmentally significant features. Faster and better decisions can now be made by accessing available information contained in the vast amount of data maintained by many different offices into a GIS-based decision support system. Implementation of the GIS supports the storage, organization, manipulation, analysis, and output of IRP spatial and thematic data. The GIS was built around a local version of the Air Force Center for Environmental Excellence's (AFCEE's) Environmental Restoration Program Information Management System (ERPIMS) database, which is updated as sampling is performed and analytical results are reported. These data are a critical part of the GIS application that allow it to serve as an intuitive, user-friendly geographic front-end to the ERPIMS database. The system therefore improves both the quantity and quality of the IRP information maintained at base level, while ensuring that important chemical, geologic, and hydrogeologic data are actually used, not just archived.

HISTORY

Implementation of the IRP GIS began in fiscal year 1997 (FY97) and the system has since been improved from a simple mapping tool to a comprehensive IRP data management and analysis resource. It was designed and implemented to be 100 percent compatible with the GIS capabilities being developed for multiple organizations across Vandenberg AFB. GIS data from these diverse organizations (e.g., Civil Engineering, Base Utilities, Natural and Cultural Resources) are incorporated into the system adding tremendously to its overall utility. The system became operational in March of 1998 when it was developed on two workstations in Building 7015. Upgrades in the Vandenberg AFB basewide local area network have allowed the system to be networked and shared across the base. Maintenance of the system includes updates to the data as discussed above as well as enhancements to the functionality of the application. The latter are being implemented to ensure that advancements in GIS and database technology are being captured as the system grows, thus ensuring that both the data and the functionality of the application are up to date.

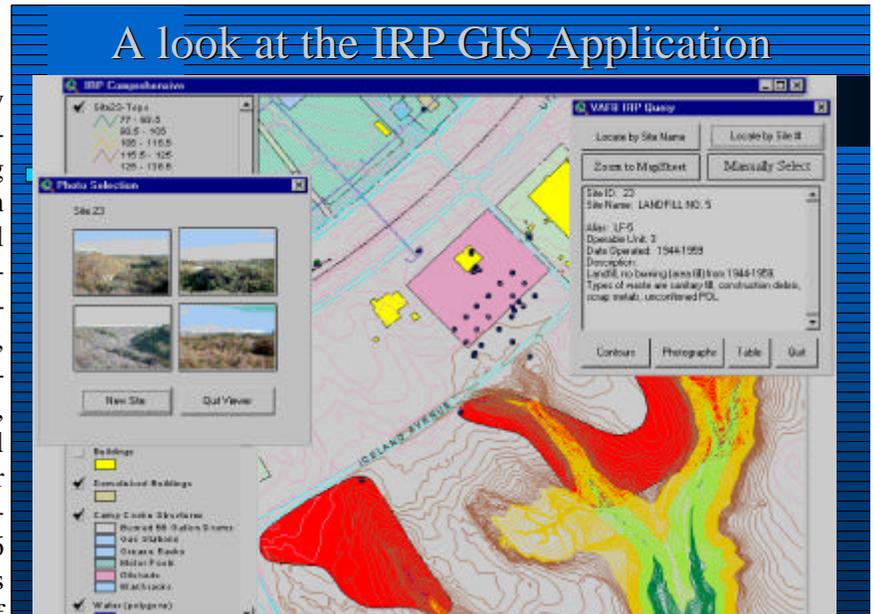


Photo tool – displays IRP site photo with one click

CURRENT USES

A recent application allowed data to be input from conventional surveys to map locations of underground storage tanks that had been removed, but not necessarily cleaned up. Using this recent application, we located the contamination that had been left with pinpoint accuracy, minimal cost, and the state regulators were able to concur with the site closure recommendation. Public meetings have been enhanced by the ability to produce custom maps demonstrating site locations, contamination of concern, along with other environmental information. Project cost calculations are more accurate since site conditions can be simulated electronically rather than using costly physical surveys. When the IRP office processes a digging permit, environmental constraint data can be easily accessed. Before the GIS was developed volumes of materials has to be gone through to determine if a proposed project was within the footprint of an IRP site or an AOC. The GIS assists us greatly in other ways as well, such as avoiding cultural resources when siting monitoring wells and other restoration work.



Location & identification of IRP site by name, manual selection, and location within a map

FUTURE ENHANCEMENTS

As new technologies evolve, more improvements and enhancements will become available allowing more uses and integration of GIS information. A planned enhancement to the GIS/ERPIMS interface will enable users to: 1) review well construction and borehole data (installation dates, well depth, screen depth and length, diameter, well material, etc.); 2) access analytical data for particular chemicals of concern (all locations on base where a chemical of concern has been detected, number of occurrences, concentrations, groundwater plumes); and 3) generate maps of the base, which show IRP locations and contaminant problems, generating maps of individual IRP sites, etc. These maps will be particularly useful for IRP briefings and required meetings (Community Advisory Board, Environmental Protection Committee, etc.) where visual presentation is necessary.

For more information on the Vandenberg AFB IRP GIS Project, please contact Mr. Ron MacLelland, 30 CES/CEVCR, at (805) 606-2071.

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Vandenberg Air Force Base Installation Restoration Program Site 16 – No Contamination Found



Vandenberg Air Force Base, California

November 2000

Installation Restoration Program

BACKGROUND

Installation Restoration Program (IRP) Site 16 is located approximately 525 feet southwest of the junction between Mod Road and Umbra Road, on north Vandenberg Air Force Base (AFB). The site covers approximately 51 acres and includes Mod III Lake and vegetated sand dunes surrounding the lake. Before becoming part of Vandenberg AFB, this site was used by Marshallia Ranch for agricultural purposes such as cattle ranching.



Site 16 with Mod III lake ABRES-B Launch Complex shown in the background.

The IRP is a DoD program that was established to identify and clean up environmental contamination from spills or disposals of fuels, oils, solvents, and other substances resulting from past military operations.

Since the 1960s, military personnel have occasionally used Mod III Lake for recreational purposes such as fishing and picnicking. Nearby IRP Sites 15 (Advanced Ballistic Re-Entry System-B Launch Complex) and 34 (Missile Launcher 576-F) are approximately 200 feet northwest and 1,700 feet north, respectively of IRP Site 16. Mod III Lake was named for the MOD III guidance system employed for Atlas missile launches at Site 15. Site 16 was identified as an IRP site in the late 1980s because the lake was a suspected recipient of launch wastewater from IRP Site 15. Subsequently, fishing was banned at the lake.

CURRENT STATUS

Vandenberg AFB proceeded with a remedial investigation (RI) of Site 16 based on previous findings. The RI included review of historical records, photographic analysis, and sediment, soil, surface water, and groundwater sampling. In addition, preliminary human health and ecological risk assessments were performed for Site 16.

Review of photographs, topographic maps, and site reconnaissance indicated that surface drainage from Sites 15 and 34 did not lead to Mod III Lake as previously reported. Therefore, Mod III Lake was not a recipient of ABRES-B launch wastewater. In addition, no sources of contamination such as underground storage tanks or former tank sites were identified. The concentration of metals, petroleum hydrocarbons, and semivolatile organic compounds detected in environmental samples were below levels of concern and considered naturally occurring. For example, the diesel range compounds detected in the soils and sediments did not match a diesel chromatogram pattern. This observation, coupled with the lack of sources for fuel contamination, the organic-rich nature of lake sediment, and documented presence of naturally occurring bitumens in site bedrock indicates that compounds detected at Site 16 are naturally occurring. Since there was a lack of contamination source at Site 16, no exposure pathways were found. Therefore, the site does not pose a risk to human health or the environment.

The RI was completed for Site 16 and indicates that no further environmental investigation is required. In January 2000, both the Department of Toxic Substances Control and the Regional Water Quality Control Board concurred with the no further action recommendation for Site 16 and the site investigation was officially closed.

FUTURE OF MOD III LAKE

Mod III Lake is still conducive to fishing and picnicking. Because the site has been officially closed, the base will once again allow the lake to be used for recreational purposes. For more information on Mod III Lake or the Vandenberg AFB IRP, please contact Mr. Ron MacLelland, 30 CES/CEVCR, at (805) 606-2071.



Once used for picnicking, Site 16 will be approved for recreational usage.

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Vandenberg Air Force Base Installation Restoration Program Cleanup at Site 9



Vandenberg Air Force Base, California

June 2001

Installation Restoration Program

INTRODUCTION

This fact sheet describes the proposed environmental cleanup actions at an Installation Restoration Program (IRP) site on Vandenberg Air Force Base. The IRP is an Air Force program to identify and clean up contamination on military bases resulting from past activities. This fact sheet also describes how to review and comment on the proposed cleanup actions.

SITE 9 BACKGROUND

IRP Site 9 consists of Space Launch Complex No. 4 West (SLC-4W) on the southern half of Vandenberg Air Force Base (AFB). The site is an active Titan Missile launch facility located on a hillside overlooking the Pacific Ocean between Surf Beach and Point Pedernales. Coast Road and Surf Road run parallel to the coastline between SLC-4 and the Pacific Ocean.

During the remedial investigation (RI) performed under the IRP, volatile organic compounds (VOCs) such as trichloroethene (TCE) were detected in groundwater at the site at concentrations exceeding California drinking water standards. Because the contaminated groundwater exceeds these standards and may discharge into the Pacific Ocean, removal of groundwater contamination is warranted to prevent potential adverse affects to public health, welfare, and the environment.

SITE 9 STATUS

To address groundwater contamination at Site 9, Vandenberg AFB prepared an Engineering Evaluation/Cost Analysis (EE/CA) as part of a Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) non-time critical interim removal action (IRA). The purpose of an IRA is to reduce risks at a site prior to completion of the remedial investigation. The EE/CA summarizes the site characteristics, identifies removal action objectives, describes removal action alternatives, analyzes these alternatives, and describes the recommended removal action alternative for VOC contaminated groundwater at Site 9. The removal action objectives for Site 9 are to (1) control migration of the groundwater contaminant plume; (2) reduce VOC contamination in the aquifer; (3) minimize impacts to sensitive habitats in the Site 9 area; and (4) reduce the release of TCE contaminated groundwater via a spring located near the Ocean (Ocean Spring 14).

SITE 9 CLEANUP/REMOVAL ALTERNATIVES

The following removal action alternatives for groundwater at Site 9 have been identified and screened:

- No action;
- Containment of the contaminant plume using a groundwater collection system along Surf Road; and
- Containment of the contaminant plume and source reduction in the SLC-4 area using air sparging, vapor extraction, or groundwater/vapor extraction technologies.



**Titan II missile being launched
from SLC-4W**

PROPOSED CLEANUP ACTION

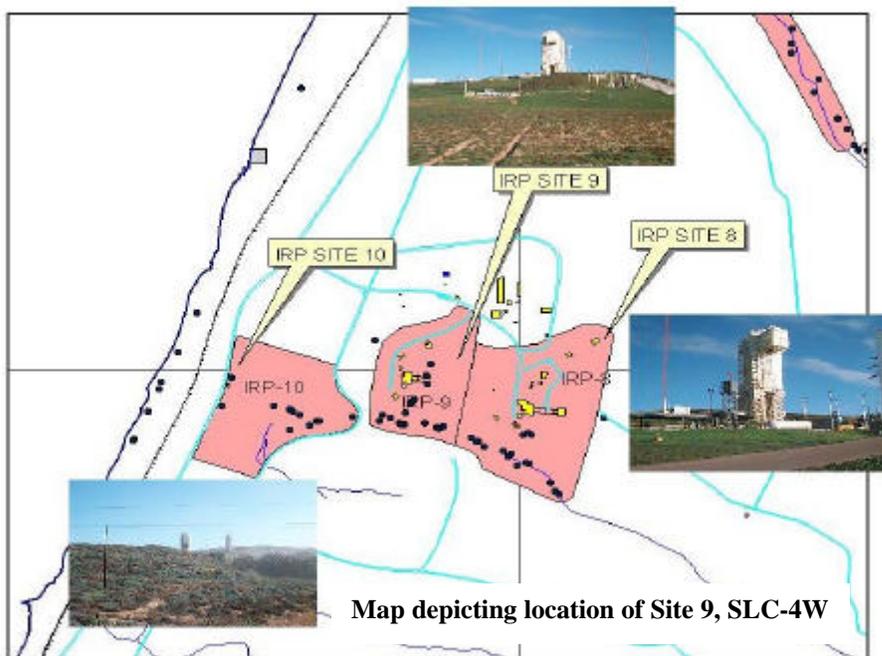
Vandenberg AFB has assessed cleanup alternatives at this site and recommends plume containment and source reduction by groundwater/vapor extraction. Plume containment will be accomplished by extracting groundwater from a horizontal well installed approximately 200 feet below Surf Road. The total length of the horizontal well is approximately 2,000 feet, and it is positioned perpendicular to the flow of the TCE contaminated groundwater. The TCE contaminated groundwater extracted from the horizontal well will be treated by an activated carbon adsorption system prior to discharge. Source reduction will occur up gradient of the horizontal well using an array of vertical extraction wells. Both groundwater and vapor will be extracted from the vertical wells. The TCE contaminated groundwater and vapors will also be treated by an activated carbon adsorption system prior to discharge. The treated groundwater and vapor streams will be sampled and tested to ensure compliance with regulatory requirements. This alternative will comply with regulatory requirements, is cost effective, and is the most protective of human health and the environment.

PUBLIC COMMENT PERIOD

A 30-day public review and comment period has been set for July 3 through August 2, 2001, to receive public input on the Draft EE/CA for Site 9. Also available for review and comment during this time will be the Draft Negative Declaration, a

finding by DTSC that the proposed cleanup actions will not have a significant effect on the environment, in accordance with the California Environmental Quality Act (CEQA). The documents will be available at two information repositories: Lompoc Library, Public Documents Section, 501 East North Ave., Lompoc; and Vandenberg AFB Library, Public Documents Section, 100 Community Loop, Bldg. 10343, Vandenberg AFB. Comments on the EE/CA must be postmarked by August 2nd and sent to Mr. Ron MacLelland, Community Relations Coordinator, 806 13th Street, Suite 116, Vandenberg AFB, CA 93437. Comments on the Negative Declaration should be postmarked by August 2nd and sent to: Dr. Ning-Wu Chang, DTSC Project Manager, 5796 Corporate Ave., Cypress, CA 90630. E-mailed comments will also be accepted at nchange@dtsc.ca.gov.

If you have questions about this site or any aspect of the IRP, please contact Mr. Ron MacLelland, Community Relations Coordinator, 806 13th Street, Suite 116, Vandenberg AFB, CA 93437-5242.



Map depicting location of Site 9, SLC-4W

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Vandenberg Air Force Base Installation Restoration Program Clean Up at Sites 24 and 25



Vandenberg Air Force Base, California

July 2001

Installation Restoration Program

INTRODUCTION

This fact sheet describes the proposed environmental cleanup actions at two Installation Restoration Program (IRP) sites on Vandenberg Air Force Base. The IRP is an Air Force program to identify and cleanup contamination on military bases resulting from past activities. This fact sheet also describes how to review and comment on the proposed cleanup actions.



Site 24 Entomology Wash Rack shown on right after heavy rains.

SITE 24 BACKGROUND

Site 24 is located in the Vandenberg Air Force Base (AFB) cantonment area near the intersection of Nebraska and Utah Avenues. Known as the "Entomology Wash Rack," IRP Site 24 was used for mixing pesticides and washing application equipment from 1965 until 1982. The IRP site is currently not used, but contains three storage buildings, a washrack, a covered concrete area containing an aboveground storage tank, and a concrete tank maintenance bay with an adjacent concrete sump.

Environmental investigations performed at the site under the IRP indicate elevated levels of trichloroethane in sludge samples from the sump, and total petroleum hydrocarbons (TPH), trichloroethane, and perchloroethene at levels that present a risk to human health and the environment in surrounding soils. The Air Force has determined that the elevated TPH and volatile organic compounds (VOCs) detected, warrants an interim removal action (IRA) to address the sump removal and affected soil and protect human health and the environment. Soil impacted by the sump is estimated at less than 150 cubic yards.

SITE 25 BACKGROUND

Site 25 is located on Aero Road in the northern half of Vandenberg AFB. The IRP site is a former Thor-Agena missile launching facility that was active from 1958 to 1984. The site currently contains the former missile launch structure, a paint booth, a hazardous wastewater collection and storage area, aboveground fuel tanks, and a 250,000 gallon water storage tank (Facility 1627). The aboveground fuel tanks are not associated with the proposed removal action around the water storage tank.

Environmental investigations performed at the site under the IRP indicate elevated lead and hexavalent chromium (chromium 6) concentrations in near-surface soil samples collected from a sand-blast grit area identified near Facility 1627 at a water storage tank. Site investigation results indicate



IRP staff and state regulators perform inspection at Site 25.

that approximately 185 cubic yards of shallow soil surrounding the water storage tank pose a significant potential health risk hazard and justifies an IRA.

CLEANUP/REMOVAL ALTERNATIVES FOR SITES 24 AND 25

In coordination with the Department of Toxic Substances Control (DTSC), a Removal Action Work Plan (RAW) was developed to address the TPH and VOC-contaminated soil at Site 24 and the metals-contaminated soil at Site 25. The RAW identified and screened the following removal alternatives for each site:

- No action;
- Excavation and disposal of sumps and affected soil; and
- Excavation and treatment of soils via bioremediation in a land treatment unit.

Based on a comparison of the cost effectiveness, feasibility of engineering and construction, and level of environmental protection, excavation and disposal of sumps and affected soil at Sites 24 and 25 was selected as the preferred alternative. The contaminated soil will be disposed of at a licensed, off-site facility, and later replaced with clean soil.

An engineering plan for executing the preferred removal action alternative is provided in the RAW. The engineering plan consists of procedures for excavation, waste characterization and disposal, confirmation soil sampling and analysis, and site restoration. The RAW also describes procedures for public involvement in the removal action activities.

PUBLIC COMMENT PERIOD

A 30-day public review and comment period has been set for July 3 through August 2, 2001, to receive public input on the draft RAW for each site. Also available for review and comment during this time will be the Draft Negative Declaration, a finding by DTSC that the proposed cleanup actions will not have a significant effect on the environment, in accordance with the California Environmental Quality Act (CEQA). The documents will be available at two information repositories: Lompoc Library, Public Documents Section, 501 East North Ave., Lompoc; and Vandenberg AFB Library, Public Documents Section, 100 Community Loop, Bldg. 10343, Vandenberg AFB. Comments on the RAWs must be postmarked by August 2nd and sent to Mr. Ron MacLelland, Community Relations Coordinator, 806 13th Street, Suite 116, Vandenberg AFB, CA 93437. Comments on the Negative Declaration should be postmarked by August 2nd and sent to: Mr. Ning-Wu Chang, DTSC Project Manager, 5796 Corporate Ave., Cypress, CA 90630. E-mailed comments will also be accepted at nchang@dtsc.ca.gov.

If you have questions about this site or any aspect of the IRP, please contact Mr. Ron MacLelland, Community Relations Coordinator, 806 13th Street, Suite 116, Vandenberg AFB, CA 93437-5242.

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Vandenberg Air Force Base Installation Restoration Program Removing Contamination at Sites 5 & 35



Vandenberg Air Force Base, California

May 2001

Installation Restoration Program

INTRODUCTION

This fact sheet describes the proposed environmental cleanup actions at two Installation Restoration Program (IRP) sites on Vandenberg Air Force Base. The IRP is an Air Force program to identify and cleanup contamination on military bases resulting from past activities. This fact sheet also describes how to review and comment on the proposed cleanup actions.

SITE 5 BACKGROUND

Site 5, Space Launch Complex No. 3 East (SLC-3E), is located in the southern half of Vandenberg Air Force Base (AFB), California. SLC-3E is an active Atlas missile launching facility where a total of 28 Atlas missiles have been launched. Since the completion of recent reconstruction, the SLC-3E launch complex has supported one launch. Launch deluge water used for fire and noise suppression during Atlas missile testing and launches is channeled away from the launch pad to a retention basin. In 1994, environmental investigations revealed a small pile of suspected sandblast grit that had been dumped on surface soil at the eastern side of this retention basin.



Site 5 with drilling rig and SLC-3E in background.

Under the IRP, surface and subsurface soil samples were collected from the suspected sandblast grit area and analyzed for the presence of metals. Several metals were detected above the background levels in surface and subsurface soil in the area. Although the subsurface soil sample results do not indicate that metals from the sandblast grit area have leached into the subsurface, lead levels in surface soil samples indicate potential risks to construction workers on the site.

SITE 5 CLEANUP/REMOVAL ALTERNATIVES

In coordination with the state Department of Toxic Substances Control (DTSC), a Removal Action Work Plan (RAW) was developed to address the lead-contaminated soil at the sandblast grit area. The RAW identified and screened the following removal alternatives: no action; onsite stabilization of the soil; and, excavation and proper management/disposal of soil. Vandenberg AFB has assessed cleanup alternatives at this site and recommends excavation and disposal of the sandblast grit contaminated soil. This alternative is the most protective of human health and the environment.

SITE 35 BACKGROUND

Site 35, Missile Silo 576-G, is located in the northern half of Vandenberg AFB. The site is a former Atlas F missile launching facility, and consists of a decommissioned missile silo, a control center, and a utility building located within a barbed wire livestock fence. Seven Atlas missiles were launched from Site 35 from 1962 to 1965. Environmental investigations indicate elevated levels of polychlorinated biphenyls (PCBs) in surface and subsurface soils. A human health risk assessment conducted for the site indicated that the PCB levels detected in the soil within the fenced area pose an unacceptable risk to current and future site workers.



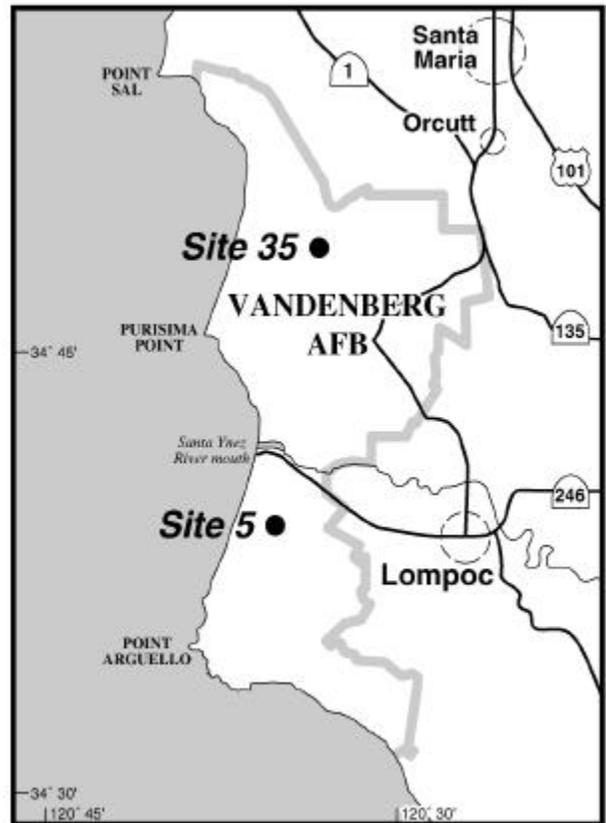
Site 35 soil excavation area.

SITE 35 CLEANUP/REMOVAL ALTERNATIVES

In coordination with DTSC, a RAW was developed to address the PCB-contaminated soil within the fenced area at Site 35. The RAW identified and screened the following removal alternatives: no action; capping the soil with an impermeable cover; and, excavation and proper management/disposal of the soil. Vandenberg AFB has assessed cleanup alternatives at this site and recommends excavation and disposal of the PCB-contaminated soil. This would eliminate potential current and future exposure pathways that the contaminated soils create. It would also be the most protective of human health and the environment.

PUBLIC COMMENT PERIOD

A 30-day public review and comment period has been set for May 16 through June 16, 2001, to receive public input on the draft RAW for each site. Also available for review and comment during this time will be the Draft Negative Declaration, a finding by DTSC that the proposed cleanup actions will not have a significant effect on the environment, in accordance with the California Environmental Quality Act (CEQA). The documents will be available at two information repositories: Lompoc Library, Public Documents Section, 501 East North Ave., Lompoc; and Vandenberg AFB Library, Public Documents Section, 100 Community Loop, Bldg. 10343, Vandenberg AFB. Comments on the RAWs must be postmarked by June 7 and sent to Mr. Ron MacLelland, Community Relations Coordinator, 806 13th Street, Suite 116, Vandenberg AFB, CA 93437. Comments on the Negative Declaration should be postmarked by June 7 and sent to: Mr. Omoruyi Patrick, DTSC Project Manager, 5796 Corporate Ave., Cypress, CA 90630. E-mailed comments will also be accepted at opatrick@dtsc.ca.gov.



Location map showing Sites 5 and 35 in relation to neighboring cities.

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Vandenberg Air Force Base Installation Restoration Program Site 20 Erosion Mitigation Project Fact Sheet



Vandenberg Air Force Base, California

February 2002

Installation Restoration Program

INTRODUCTION

This fact sheet describes a proposed project for controlling erosion at Installation Restoration Program (IRP) Site 20 on Vandenberg Air Force Base (AFB). This fact sheet also describes prevention of disturbance to a former landfill and drum disposal site. The IRP is an Air Force program to identify and cleanup contamination on military bases resulting from past activities.

SITE 20 BACKGROUND

Site 20 is located southeast of the Cantonment Area, Vandenberg AFB, California. The site includes a decommissioned landfill, an unexploded ordnance (UXO) area, and a former drum disposal site. The landfill was a primary disposal site at Vandenberg AFB between 1942 and 1957. Most of the waste disposed at the site was household refuse, but included some incinerator ash and slag, scrap metal, waste pesticides, and waste petroleum. At the drum disposal site, approximately fifty drums of petroleum wastes and solvents, as well as UXO, were reportedly buried.

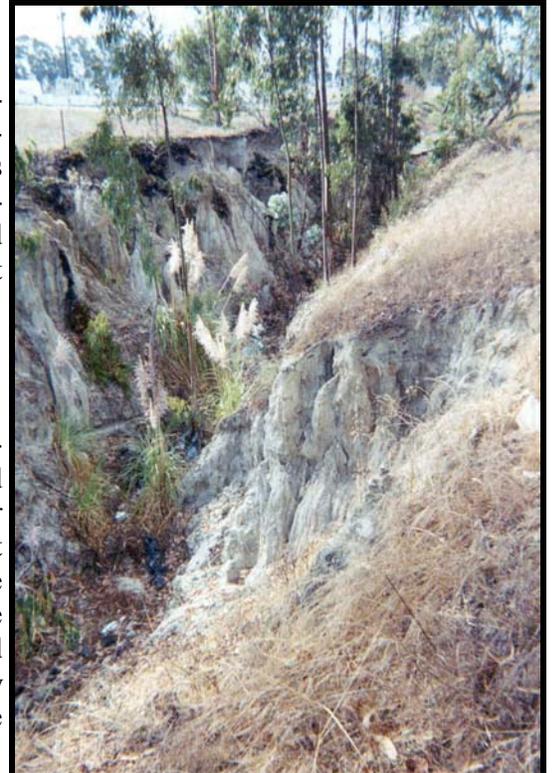
Currently, stormwater generated and collected west of Site 20 is channeled onto the site through culverts located near its southwestern and northwestern corners. Stormwater from culvert discharge points and local site run-off contribute to the erosion of fill material, soils, and bedrock in a primary ravine between the landfill and the drum disposal area. Additionally, stormwater from culvert discharge points and local site run-off appear to have cut a secondary ravine in the western portion of the landfill.

SITE 20 STATUS

Vandenberg AFB prepared an engineering evaluation/cost analysis (EE/CA) for Site 20 as part of a Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) non-time critical interim removal action (IRA). In the CERCLA administrative process, the purpose of an IRA is to reduce risks at a site prior to completion of the remedial investigation (RI). Evaluation of remedial alternatives for the IRA is based on technical feasibility, reasonable cost, time constraints, and human health and ecological impacts. In this case, the EE/CA was done to evaluate and compare technological alternatives for controlling stormwater and erosion that could cause hazardous substances to migrate or be released.

EROSION MITIGATION ALTERNATIVES

Eleven erosion mitigation alternatives for Site 20 were identified and screened. After the initial screening,



Erosion caused by stormwater runoff at Site 20.

the Air Force selected three alternatives for detailed evaluation. These alternatives were:

- Stormwater energy dissipater;
- Backfill primary ravine; and
- Geogrid slope stabilization.

Vandenberg AFB assessed the three erosion mitigation alternatives at this site and plans to implement the stormwater energy dissipater alternative. This alternative consists of constructing gabions (wire baskets containing gravel) in the primary ravine to slow stormwater flow and reduce erosion.

Where local run-off contributes to erosion, V-ditches will be cut parallel to the top edge of the primary ravine to divert run-off. To mitigate erosion in the secondary ravine, a corrugated metal pipe will be installed from Discharge Point 2 to an outlet structure in the primary ravine. After installation of the gabions, V-ditches, and metal pipe, critical areas of the site will be revegetated.

Vandenberg AFB will be drafting a construction project work plan and an engineering design. The Department of Toxic Substance Control (DTSC) and the Regional Water Quality Control Board will need to approve the plan and design before construction of the stormwater energy dissipater alternative begins.

PUBLIC REVIEW

A 30-day public review and comment period has been set for 19 February through 21 March 2002, to receive public input on the draft EE/CA for this site. Also available for review and comment during this time will be the Draft Negative Declaration, a finding by DTSC that the proposed cleanup actions will not have a significant effect on the environment, according to the California Environmental Quality Act (CEQA).

The documents will be available at two information repositories: Lompoc Library, Public Documents Section, 501 East North Ave., Lompoc; and Vandenberg AFB Library, Public Documents Section, 100 Community Loop, Bldg. 10343, Vandenberg AFB. Comments on the EE/CA must be postmarked by March 21, 2002 and sent to Mr. Ron MacLelland, Community Relations Coordinator, 806 13th Street, Suite 116, Vandenberg AFB, CA 93437. Comments on the Negative Declaration should be postmarked by March 21, 2002 and sent to: Mr. Ning-Wu Chang, DTSC Project Manager, 5796 Corporate Ave., Cypress, CA 90630. E-mailed comments will also be accepted at nchang@dtsc.ca.gov.

If you have questions about this project or any aspect of the IRP program, please contact Mr. Ron MacLelland, Community Relations Coordinator, 806 13th Street, Suite 116, Vandenberg AFB, CA 93437-5242.

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Vandenberg Air Force Base Installation Restoration Program Implementing Land Use Controls at Sites 18 & 22



Vandenberg Air Force Base, California

August 2002

Installation Restoration Program



INTRODUCTION

Panoramic view of Site 18.

This fact sheet describes the proposed actions for two Installation Restoration Program (IRP) sites on Vandenberg Air Force Base (AFB). The IRP is an Air Force program to identify and address contamination on military bases resulting from past activities. This fact sheet also describes how to review and comment on the proposed actions. Oral comments to the proposed plan will be received at a public meeting scheduled September 12, 2002 at the Allan Hancock College campus in Lompoc, CA.

SITE 18 BACKGROUND

Site 18, Landfill 3 and 4, is located in the southern half of Vandenberg AFB, California. The site is immediately east of Manzanita Road and approximately 3,000 feet south of Mesa Road and covers approximately 2 acres. Disposal at Site 18 began in the mid to late 1960s. The site received primarily construction debris. Site 18 is currently unused and land use is open space.

Under the IRP, surface and subsurface soil samples, and groundwater samples were collected adjacent to the landfill boundaries. Drilling within the landfill boundaries was not conducted because of the potential presence of unexploded ordnance (UXO). No significant contamination was detected in soil or groundwater collected adjacent to the landfill. A soil gas survey was also conducted at Site 18 and no landfill gas or volatile organic compounds (VOCs) were detected. Site 18 poses no immediate risks to human health and the environment; however, because no deep soil or groundwater samples were collected within the boundaries of the landfill, the potential exists for unknown substances to pose a risk should the land use change in the future.

SITE 22 BACKGROUND

Site 22, Landfill 11 and 11A, is located on the southern portion of Burton Mesa at Vandenberg AFB. The site covers approximately 5 acres southeast of the intersections of 35th Street, New Mexico Avenue, and Terra Road. Wastes disposed of at the site consisted primarily of construction debris, though small quantities of waste oils and solvents were also reportedly disposed of.

Under the IRP, soil and groundwater samples were collected and a soil gas survey was conducted. Drilling within the landfill boundaries was not conducted because of the potential presence of UXO. Two soil samples were collected from one boring drilled outside the landfill boundary. Low concentrations of VOCs were detected in soil. No significant contamination was detected in groundwater collected from two monitoring wells adjacent to the landfill. Methane was detected in soil gas at a concentration well below the acceptable emission standard. Site 22 does not appear to pose immediate risks to human health and the environment; however, because no deep soil or groundwater samples were collected within the boundaries of the landfill, the potential exists for unknown substances to pose a risk should the land use change in the future.

ALTERNATIVES AND SELECTED REMEDIES

In coordination with the State Department of Toxic Substances Control (DTSC), a Focused Feasibility Study (FFS) was prepared to evaluate actions that would minimize the future potential risks to human health and the environment. Based on the findings of the FFS, a draft Record of Decision (ROD)/Remedial Action Plan (RAP) was prepared to present the proposed remedies for Sites 18/22 and develop an implementation and maintenance plan. The FFS identified the following alternatives 1) no action and 2) land use controls. Vandenberg AFB has assessed the alternatives for Sites 18/22 and recommends land use controls. This alternative is the most protective of human health and the environment. The land use controls will consist of installation and maintenance of signs to keep people off the property and define the boundaries at Sites 18/22. Further, the base Geographic Information System will be amended to record that the land use at Sites 18/22 is restricted to current use unless written approval is obtained from the base environmental office, DTSC, and the Central Coast Regional Water Quality Control Board (RWQCB).

PUBLIC COMMENT PERIOD AND PUBLIC MEETING

A 30-day public review and comment period has been set for September 3, 2002 through October 2, 2002, to receive public input on the draft ROD/RAP for each site, along with the FFS. Also available for review and comment during this time will be the Draft Notice of Exemption, a finding by DTSC that the proposed actions will not have a significant affect on the environment, in accordance with the California Environmental Quality Act. The draft ROD/RAP documents will be available at two information repositories: Lompoc Library, Public Documents Section, 501 East North Ave., Lompoc; and Vandenberg AFB Library, Public Documents Section, 100 Community Loop, Bldg. 10343, Vandenberg AFB. Comments on the ROD/RAP must be postmarked by October 2, 2002 and sent to Ron MacLelland, Community Relations Coordinator, 806 13th Street, Suite 116, Vandenberg AFB, CA 93437. Comments on the Notice of Exemption should be post-marked or emailed by October 2, 2002 and sent to: Dr. Ning-Wu Chang, DTSC Project Manager, 5796 Corporate Ave., Cypress, CA 90630, nchang@dtsc.ca.gov.

Additionally, a public meeting will be held on September 12, 2002 at the Allan Hancock College, Lompoc Campus, Building 1 at 10:00 a.m. A briefing on the proposed plan will be presented, and a formal oral comment period will be available for those who would like to voice their concerns. Immediately following the public comment period, will be the Community Advisory Board (CAB) meeting. The CAB acts in an advisory role in order to provide recommendations to the IRP cleanup process, the DTSC, and the RWQCB. Membership of the CAB consists of approximately 25 individuals who reflect the diverse interests of the local community. For directions to the public meeting location, please contact Mr. Ron MacLelland, 30 CES/CEVR, at (805) 606-2071.

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