



Vandenberg Air Force Base Proposed Plan for Closure and No Further Action at Site 47



Vandenberg Air Force Base, California

June 2007

1.0 INTRODUCTION

1.1 SITE NAME AND LOCATION

The Public is invited to review and comment on a Draft Proposed Plan/Draft Remedial Action Plan (Draft PP/Draft RAP) for Installation Restoration Program (IRP) Site 47 on Vandenberg Air Force Base (AFB). The proposed action for IRP Site 47 is No Further Action (NFA). The IRP is an Air Force program that identifies and cleans up contamination resulting from past activities on military bases. The public comment period runs from 1 June 2007 through 2 July 2007. Also available for review and comment during this time will be the Draft Notice of Exemption (NOE), a finding by the Department of Toxic Substances Control (DTSC) that the proposed action will not have a significant effect on the environment, in accordance with the California Environmental Quality Act (CEQA).

Site 47, Lockheed Wash Pad, is located on the northern corner of New Mexico Avenue and 10th Street in the main cantonment area of Vandenberg AFB (Figure 1). It consists of an approximately 40 by 60 foot, concrete pad, formerly used to wash rolling stock, and the surrounding surface and subsurface soils.



Site 47: Former Lockheed Wash Pad

Public Comment Period 1 June 2007 through 2 July 2007

You are invited to review this environmental proposal and send written comments during the comment period indicated above. See page 14 for information on how to submit comments and find additional documents. A public comment form is provided on page 15.

Public Meeting 14 June 2007

10:00 a.m. Room 1-202/203

Allan Hancock College, Lompoc Valley Center,
One Hancock Drive, Lompoc CA

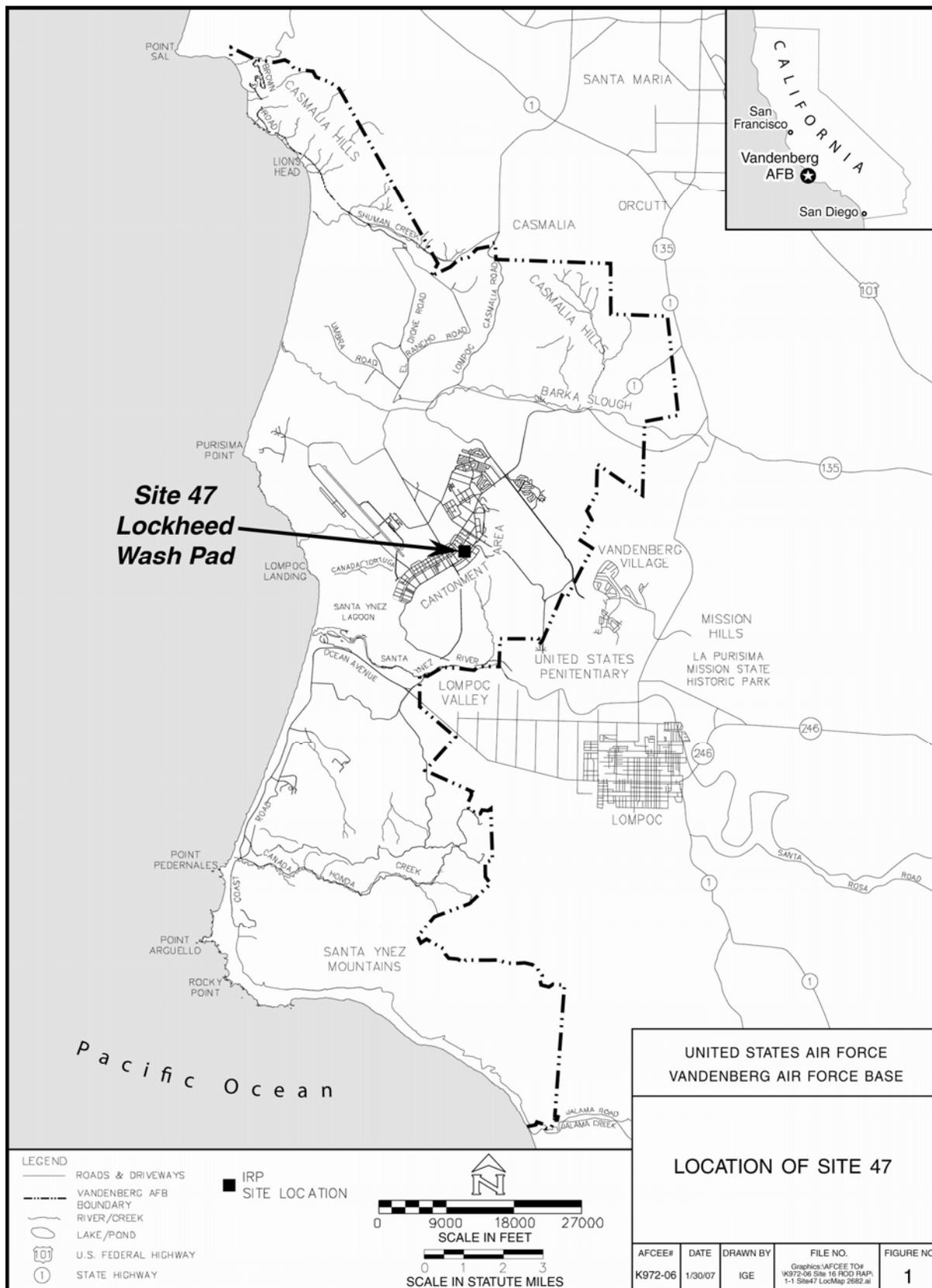
This meeting is an opportunity for you to hear more about the environmental proposal, to ask questions, and to give verbal and written comments in person.

Wash water was originally drained through a storm drain line that ran into a culvert and discharged at an outfall area on the southeast side of New Mexico Avenue. Currently no operations are conducted at the wash pad, and storm water is now directed into a base storm drain system that parallels New Mexico Avenue.

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1.2 PURPOSE OF DOCUMENT

The purpose of the Proposed Plan is to facilitate public involvement in the remedy selection process for Site 47 at Vandenberg AFB, and to identify and explain the U.S. Air Force's preferred alternative for the site. The Proposed Plan is required to fulfill public participation requirements of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) §117(a) and National Oil and Hazardous Substances Pollution Contingency Plan (NCP) §300.430(f)(2). The format of this Proposed Plan is consistent with the non-binding guidance provided in the U.S. Environmental Protection Agency document *A Guide to Preparing Superfund Proposed Plans, Records of Decision, and Other Remedy Selection Documents*.

1.2.1 CERCLA CLEANUP PROCESS

Environmental investigations and cleanup follow the steps shown in Figure 2. These investigations are carried out in accordance with various laws and regulations, including CERCLA, Superfund Amendments and Reauthorization Act, and the NCP. Steps 1 and 2 have been completed for Site 47. During step 1, a Preliminary Assessment/Site Investigation (PA/SI) was performed. The PA/SI involved interviewing base personnel, performing records searches, conducting site reconnaissance, and evaluating available data to assess former site activities that could result in environmental contamination. During step 2, the Remedial Investigation (RI), environmental sampling was conducted to identify the nature and extent of contamination at the site and to determine if the site poses a risk to human health and the environment. During the RI, contaminated sediment from the wash pad drains was removed, and the wash pad drain system was sealed. This remedial activity rendered the site acceptable for unrestricted and unlimited land use since the site no longer poses an unacceptable risk to human health and the environment. If significant risks had still been present after the RI interim removal action, a Feasibility Study (step 3) would have been performed for Site 47 to evaluate alternative methods for completing site cleanup. However, this step was not necessary for Site 47 since the wash pad drain system has been sealed and RI findings indicated no significant contamination or risk remains at the site. The reports for Site 47 completed during these steps are available for review in the Vandenberg AFB Administrative Record and at the DTSC. The PP is step 4 and is based on previous field investigation and reports that were done in the prior steps noted above. After step 4, the U.S. Air Force will review public comments and make a decision regarding the environmental management for the site. They will then write the Record of Decision (ROD), which is step 5. Any further cleanup action would be step 6. Once a site is considered are clean, a final report is written that describes what was done, and the process is over or "closed." However, no further remedial action (step 6) is necessary for Site 47 in order to protect human health and the environment.

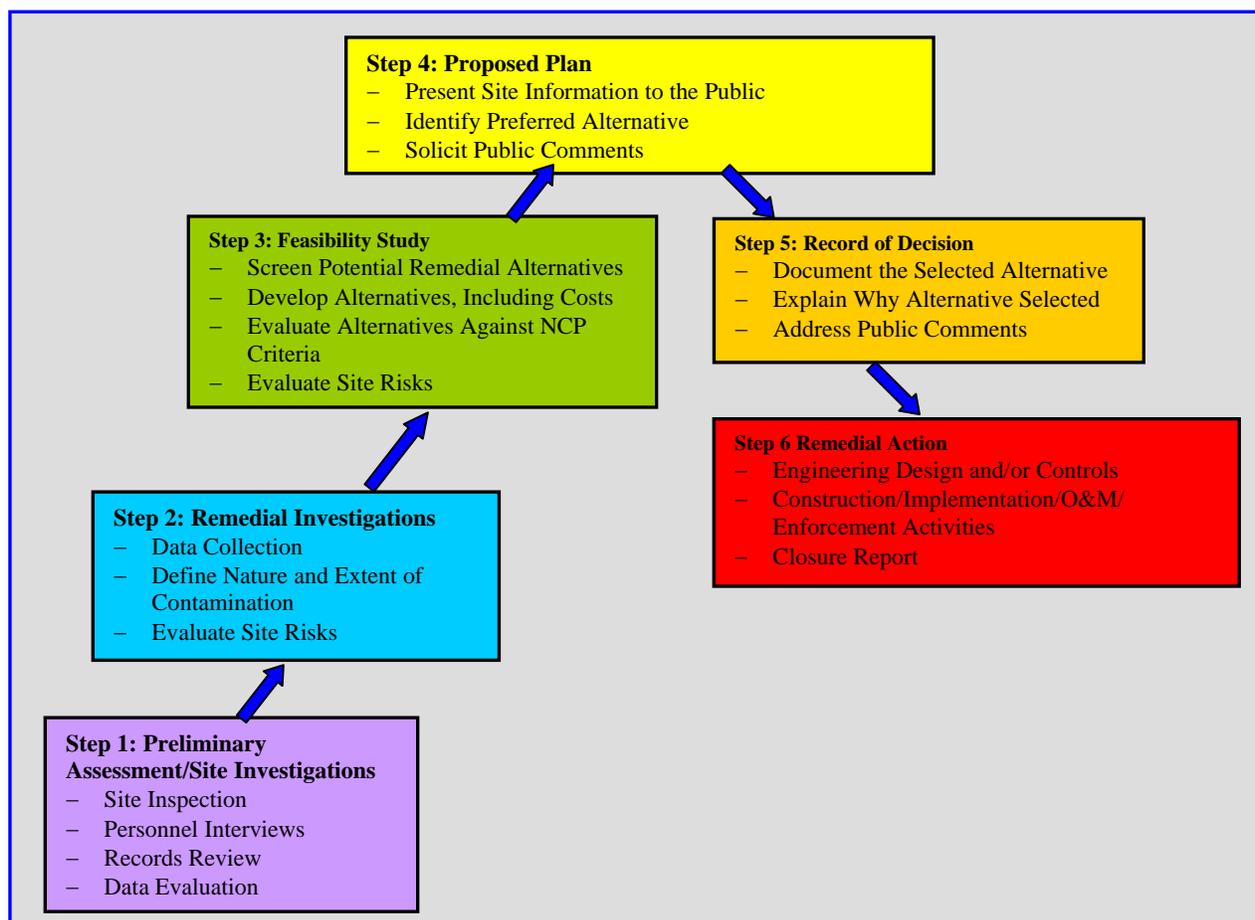


Figure 2. CERCLA Process

1.3 LEAD AND SUPPORT AGENCIES

Vandenberg AFB is being investigated and cleaned up in accordance with a Federal Facilities Site Remediation Agreement (FFSRA), signed by the U.S. Air Force, and the State of California in August 1991. The lead agency responsible for environmental investigations at Vandenberg AFB is the U.S. Air Force with oversight from the California Environmental Protection Agency (Cal/EPA). The State of California in the FFSRA is represented by two agencies in the Cal/EPA. They are the DTSC and the Central Coast Regional Water Quality Control Board (RWQCB). The DTSC is the lead regulatory agency for CERCLA cleanups and the RWQCB is the lead agency for petroleum-related CERCLA cleanups. DTSC evaluated whether there would be any potential environmental impact resulting from the NFA cleanup decision for Site 47. They determined that Site 47 would not have a significant effect on human health or the environment. DTSC's finding is documented in an NOE prepared pursuant to CEQA. The NOE is available to the public at the information repositories listed on page 10.

1.4 DESCRIPTION OF SELECTED REMEDY

The selected remedy for Site 47 is NFA. The U.S. Air Force and the lead regulatory agencies (DTSC and RWQCB) concur with the selected remedy.



Based on the environmental investigation results described below, conditions at Site 47 do not pose an unacceptable risk to human health and the environment. Therefore, the proposed NFA remedy is consistent with CERCLA. By letter dated 2 May 1997, the DTSC and the RWQCB concurred with the recommendation for no further investigation at the site. A copy of this letter is found in the Administrative Record (AR# 1051) for the Vandenberg AFB IRP. The IRP was implemented at Vandenberg AFB to investigate and cleanup contamination resulting from past site operations.

2.0 SITE BACKGROUND

The wash pad at the site was used in the early 1960s for cleaning “rolling stock” (i.e., vehicles with wheels, such as trucks). During subsequent years, steam cleaning equipment was used at the wash rack to remove paint and paint remover off the rolling stock. Wastes were disposed of via a drain in the wash pad. The wash pad wastewater was discharged via a storm drain line that released wastewater to grade on the southeast side of New Mexico Avenue. Therefore, the soils at the New Mexico Avenue wastewater outfall were included in the environmental investigations for the site. Environmental sampling and analysis of sediment from the wash drains indicated elevated concentrations of arsenic and lead, so the sediment was removed and the wash pad drain system was sealed in November 1995.

Currently, no operations are conducted at the wash pad, and a fence restricts access to the site. Most of the site is paved with gravel, asphalt, or concrete. Storm water generated at the site is directed into a storm drain system that parallels New Mexico Avenue.

The site is at an elevation of approximately 440 feet above mean sea level on the southwestern edge of a paleomarine terrace known as Burton Mesa. Subsurface geology consists of interbedded sands, silts, and clays referred to as the Orcutt Formation. In general, finer grained soils are present at the site from 5 to 25 feet below ground surface (bgs). Based on lithologic boring data, bedrock was encountered below the alluvium at depths of approximately 40 to 50 feet. Bedrock consists of fractured and folded siliceous shales and diatomite of the Monterey Formation. No groundwater was encountered in borings drilled to bedrock at the site, and no surface water was encountered during site investigations.

The Conceptual Site Model (CSM) identified the potential primary contamination source as the wash pad. Steam cleaning and washing operations released chemicals of potential concern to the surface and subsurface soils near the pad and in areas where runoff from the pad was likely to drain or was directed via the storm drain system. The transport media for chemicals of potential concern for surface soils are surface water, air, and surface and subsurface soils.

2.1 HISTORY OF ENVIRONMENTAL INVESTIGATIONS AT SITE 47

Environmental investigation activities conducted for Site 47 included a records search; personal interviews; geologic surveys; soil gas, soil, and sediment sampling; environmental data analyses; and data validation. Science Applications International Corporation (SAIC) conducted the Phase II, Stage 1, investigation during 1987 through 1988 and Jacobs Engineering Group completed additional sampling to address Phase II data gaps for use in the RI from 1992 through 1996.

From 1992 through 1993, Aerovironment conducted a soil gas survey at 20 locations along a 25-foot grid east of Building 7420 and west of Building 7437 at the site to assess the presence of volatile organic compounds (VOCs) in subsurface soils. No VOCs were detected in any of the soil gas samples collected.

During 1992, two sediment samples were initially collected in each of the two drains at Site 47 and analyzed for possible contamination from wash pad operations. Both samples were analyzed for metals



and semivolatile organic compounds (SVOCs). Essential human nutrients detected above background criteria were calcium, iron, potassium, magnesium, and sodium. The metals barium, cadmium, chromium, copper, lead, nickel, silver, vanadium, and zinc were detected in the sediment samples at concentrations above background levels. All metals were detected below residential Preliminary Remediation Goals (PRGs) and industrial PRGs with the exception of lead concentrations, which exceeded the residential PRG of 150 milligrams per kilogram (mg/kg). The SVOCs 4-methylphenol and bis(2 ethylhexyl)phthalate were detected in the storm drain sediment samples. However, neither compound was detected at a concentration that exceeded residential PRGs or industrial PRGs.

The sediment from the wash drains containing metals above background threshold values (BTVs) and SVOCs was removed and the wash pad drain system was sealed in November 1995. As a result of the sediment removal in November 1995, there are no known sediment constituents remaining at Site 47 that exceed residential PRGs or industrial PRGs and constituents of concern that could present risk to human health and the environment have been removed from the site.

During 1992 through 1993, surface and subsurface soil samples were collected from three borings (47-JB-1, 47-JB-2, and 47-JB-3) at the site and analyzed for metals and VOCs. Borings 47-JB-1 and 47-JB-2 were drilled to bedrock; however, no groundwater was encountered in either boring. The boring locations were selected based on drainage areas that may have been impacted from wash pad activities.

For evaluating risks due to exposure to chemicals detected at IRP sites, soil/sediment samples collected from the surface to 10 feet bgs are considered, since 10 feet bgs is the accepted as the maximum depth for reasonable receptor exposure. In soil samples collected from the 0 to 10-feet-bgs depth interval at Site 47, cadmium, sodium, nickel, lead, and vanadium were detected at concentrations above the BTVs established for Vandenberg AFB. However, none of these metals were detected at concentrations above their respective residential PRGs and industrial PRGs.

Arsenic was detected in a single sample collected at 20 to 21 feet bgs from boring 47-JB-2; it was present at a concentration of 57.4 mg/kg, which exceeds the residential PRG and the industrial PRG. However, chemical constituents present in soils at depths greater than 10 feet are not considered accessible to ecological or human receptors, thus they are not included in the data considered in risk assessments. Other than low concentrations of acetone, which is a common laboratory contaminant, no VOCs were detected in site soil.

2.2 INVESTIGATION SUMMARY

Contaminated sediment from the wash pad drain was removed, and the wash pad drain system was sealed in 1995. Subsequent environmental investigative findings demonstrate that existing conditions at Site 47 do not pose a threat to human health or the environment under current and reasonably anticipated future site conditions. Current conditions allow for unrestricted and unlimited land use.

The Site 47 RI Report recommended no further investigation. By letter dated 2 May 1997, both the DTSC and the RWQCB concurred with the recommendation for no further investigation at Site 47. These documents can be found in the Administrative Record for the Vandenberg AFB IRP (AR# 1051).

There have not been any enforcement activities at this site.

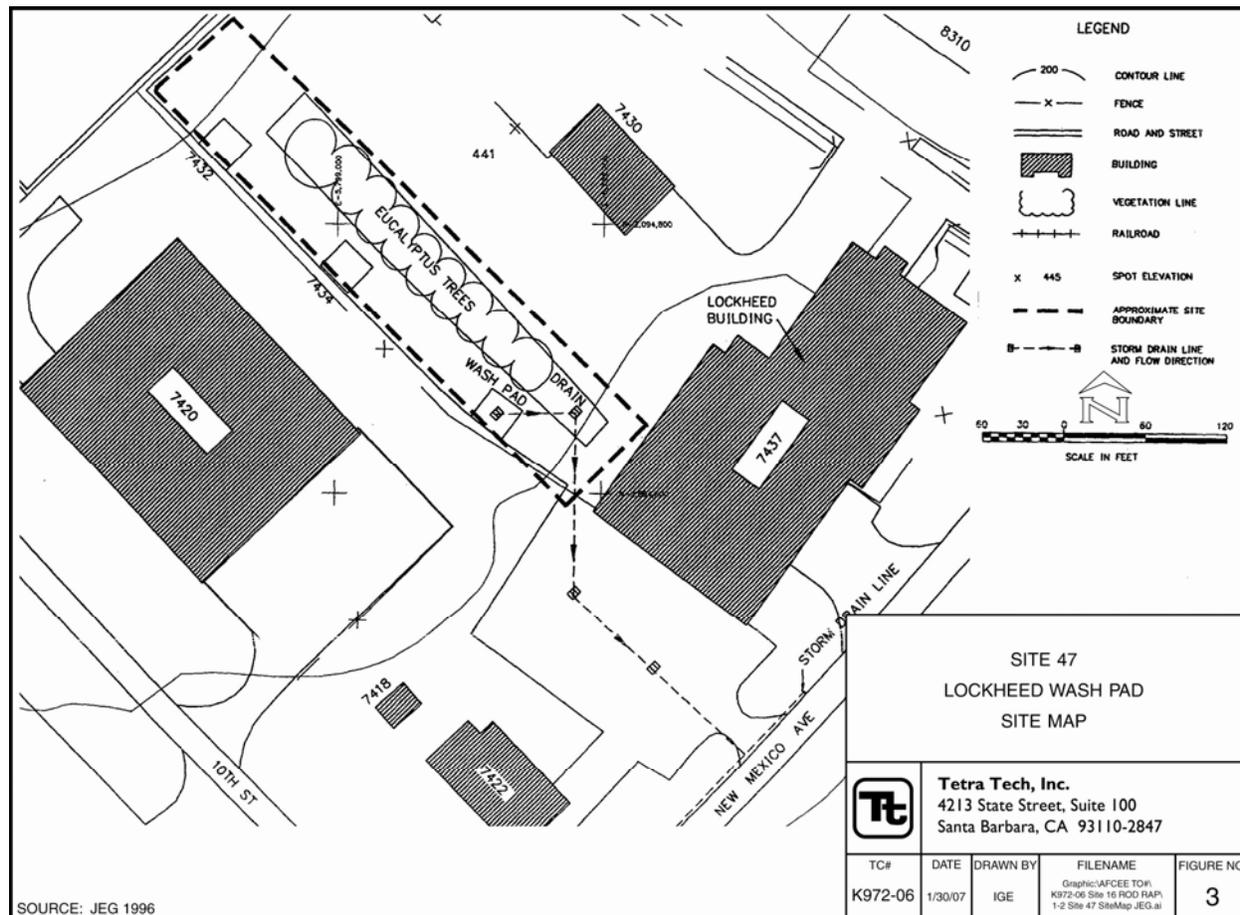


3.0 SITE CHARACTERISTICS

The site is located in a fenced industrial area of low relief at an elevation of 440 feet above mean sea level in the main cantonment area of Vandenberg AFB. It comprises approximately 0.8 acre and is mostly paved, with the exception of a stand of eucalyptus trees. Figure 3 shows site characteristics such as topography, surrounding structures, and access roadways. No surface water or groundwater is present at the site.

The Vandenberg AFB geographic information system database land use layer classifies the present and future land use at Site 47 as industrial. Site 47 is located within a land use area designated for no hunting.

The RWQCB Basin Plan designates groundwater resources at Vandenberg AFB as potentially suitable for agricultural water supply, municipal and domestic water supply, and industrial use. The Basin Plan is available on the Internet at: <http://www.swrcb.ca.gov/rwqcb3/BasinPlan/Index.htm>. Since groundwater resources were not found at Site 47, the proposed remedy of NFA will have no impact on groundwater resources at the Site.



4.0 SCOPE AND ROLE OF RESPONSE ACTION

In cooperation with the DTSC and the RWQCB, and in accordance with the FFSRA and applicable guidance, the U.S. Air Force performed investigations at Site 47 as part of the overall IRP to determine



the potential for hazardous waste sites to impact human health and the environment. Remedial Investigations were conducted, and a report was prepared documenting the field activities and sampling results. Contaminated sediment from the wash pad drains was removed, and the site does not pose an unacceptable risk to human health and the environment. Current conditions allow for unrestricted and unlimited land use.

5.0 SUMMARY OF SITE RISKS

Currently, no operations are conducted at Site 47, and a perimeter fence surrounds the site. There is no perennial surface water at the site, and investigations did not indicate the presence of groundwater beneath Site 47.

The metals and SVOCs previously detected in sediment samples from the wash pad drain system were removed and have therefore been excluded from the risk characterization performed for Site 47.

The CSM describes the site and identifies possible sources of contamination still present, potential migration pathways, and potential receptors. The CSM identified the primary contamination source as the wash pad. Potential migration pathways included surface water, air, and surface and subsurface soils. Since groundwater is not present at the site, it was not considered a migration pathway for potential site contaminants.

The only potential receptors are hypothetical workers who would be on-site for IRP activities or for future activities and operations, as the Vandenberg AFB GIS database land use layer classifies the present and future land use as industrial. Because residences are not located within 0.25 mile of Site 47, a residential exposure scenario was not completed.

The human health risk evaluation showed that maximum concentrations of chemicals of potential concern detected in surface and subsurface soils represent acceptable risks to hypothetical on-site workers. The slightly elevated arsenic concentration in soil at 20 feet bgs is below the 10-foot depth generally considered in human health and ecological risks. Since Site 47 is located in an industrial land use area, is fenced, and is mostly paved with the exception of a stand of eucalyptus trees, ecological receptors are unlikely to use the ground on-site and thus contact the soil, which contains concentrations of nickel and lead that are slightly above background levels. Therefore, it is unlikely that a significant pathway exists, and soils at Site 47 are not considered to pose a significant ecological risk.

In summary, existing conditions at Site 47 do not pose a threat to human health or the environment under current and reasonably anticipated future land use conditions. In addition, although a residential risk exposure was not evaluated during the RI, there are no known and accessible constituents present in site media that would pose an unacceptable risk to human health and the environment, and current conditions allow for unrestricted and unlimited land use.

6.0 DESCRIPTION OF THE "NO ACTION" PREFERRED ALTERNATIVE

A determination has been made based on environmental investigation findings, the fact that contaminated sediment posing a potential threat to human health and/or the environment was removed from the wash pad drains, and the fact that the wash pad drain system was sealed. Therefore, there are no discharged contaminants present at the site, or which have migrated to the site. Based on this determination, No Further Action is the preferred alternative that will not adversely impact human health or the environment. Under the NFA alternative, no remedial action would be performed and no institutional



controls would have to be implemented. The proposed remedy is consistent with CERCLA regulations and the objectives of the selected remedy: to maintain current and future land use as industrial.

7.0 COMMUNITY PARTICIPATION

Formal comments on this Proposed Plan can be submitted during the public comment period or at the public hearing. The 30-day public comment period is being held from:

1 June 2007 through 2 July 2007.

Please note that comments received outside of the public comment period are considered informal and may not receive a response. Comments may also be provided during the public hearing which will be held at 10:00 a.m. on:

14 June 2007.

The U.S. Air Force and the regulatory agencies will consider all formal comments prior to making a final decision for Site 47. All comments and responses will be documented in the *Responsiveness Summary*, which will be part of the official record and published in the Record of Decision. Copies of the Responsiveness Summary will be mailed to everyone who submits a formal comment. In addition, the U.S. Air Force will announce the decision through the local media, the site mailing list, and its website.

Interested parties may submit comments in several ways:

1. Mail written comments to:

Ronald MacLelland
Community Relations Coordinator
1515 Iceland Avenue, Room 181C
Vandenberg AFB, CA 93437-5319

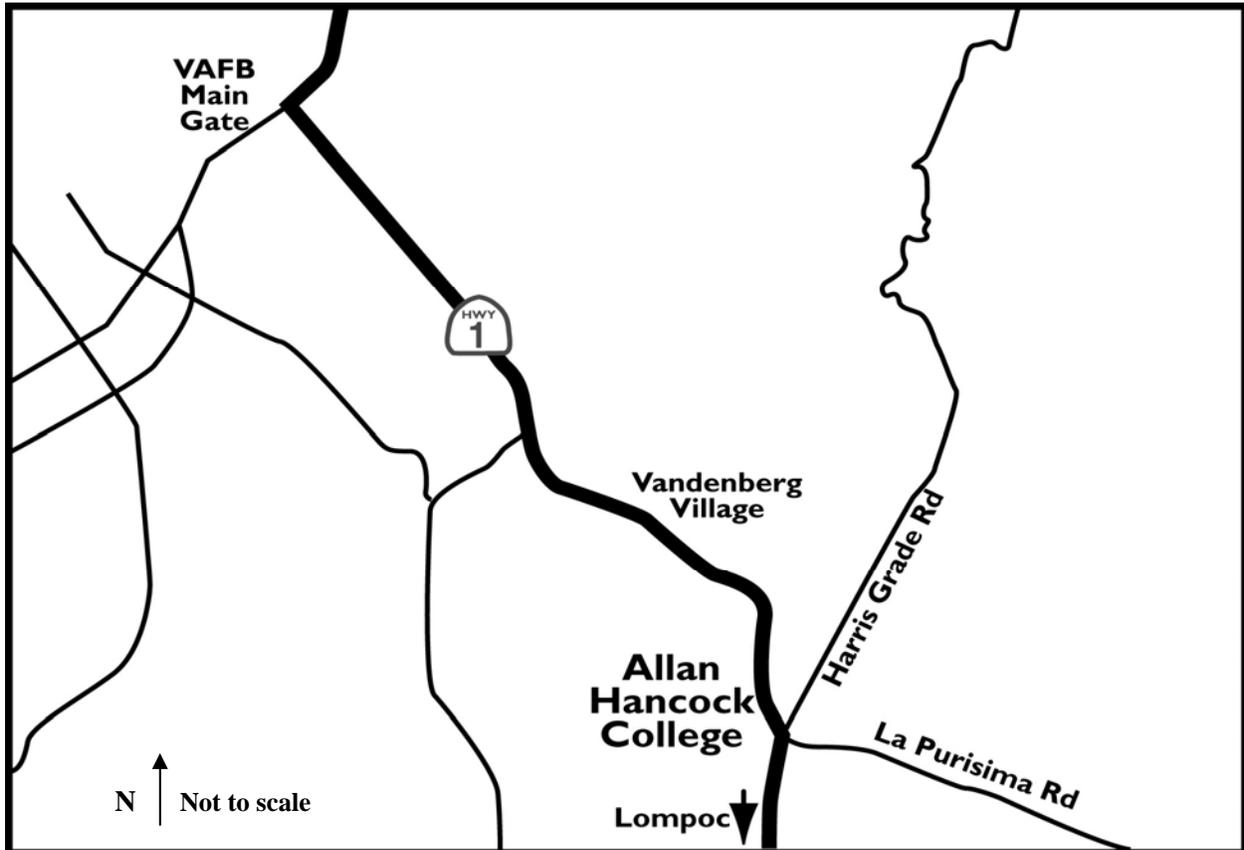
Manjulika Chakrabarti
DTSC Project Manager
5796 Corporate Avenue
Cypress, CA 90630-4632

2. Fax written comments to: Ronald MacLelland at (805) 606-6137 or Manjulika Chakrabarti at (714) 484-5437.
3. Email comments to: Ronald.maclelland@vandenberg.af.mil or MChakrab@dtsc.ca.gov.
4. Offer verbal comments during the public hearing to be held in conjunction with the Community Advisory Board meeting on:

Date: 14 June 2007

Time: 10:00 a.m.

Location: Allan Hancock College, Lompoc Valley Center, One Hancock Drive, Lompoc, CA (805) 735-3366 (see next page for college location).



Upon completion, the Record of Decision and Responsiveness Summary will be added to the Administrative Record. The Administrative Record is available for review at the following information repositories:

DTSC Repository, 5796 Corporate Avenue, Cypress, CA. Hours: M-F, 8:00 a.m to 5:00 p.m.
Call (714) 484-5336 for appointment.

Lompoc Library, 501 East North Avenue, Lompoc, CA. Call (805) 736-3477 for current hours.

Regional Water Quality Control Board, Central Coast Division, 895 Aerovista Place, Suite 101, San Luis Obispo, CA. Hours: M-F 8:00 a.m. to 5:00 p.m. Call Carol Kolb (805) 542-4625, Linda Stone (805) 542-4695, or email ckolb@waterboards.ca.gov.

Vandenberg AFB Library, 100 Community Loop, Building 10343a, Vandenberg AFB, CA. Hours: M-Th, 12:00-9:00 p.m.; F-Sun 12:00-6:00 p.m.



GLOSSARY OF ACRONYMS AND TERMS

Specialized acronyms used in this Proposed Plan are defined below:

AFB	Air Force Base
bgs	below ground surface
BTV	background threshold value
Cal/EPA	California Environmental Protection Agency
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CSM	Conceptual Site Model
DTSC	Department of Toxic Substances Control
FFSRA	Federal Facility Site Remediation Agreement
IRP	Installation Restoration Program
mg/kg	milligrams per kilogram
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NFA	No Further Action
NOE	Notice of Exemption
PA/SI	Preliminary Assessment/Site Investigation
PP	Proposed Plan
PRG	Preliminary Remediation Goal
RAP	Remedial Action Plan
RI	Remedial Investigation
ROD	Record of Decision
RWQCB	Regional Water Quality Control Board
SAIC	Science Applications International Corporation
SVOC	semivolatile organic compound
VOC	volatile organic compound

Specialized terms used in this Proposed Plan are defined below:

Administrative Record: a collection of documents generated during the investigation of the site, which form the basis for selection of a Remedial Action, and are placed in a central location for public review.

Background: the concentration of a substance in an environmental medium (air, water, or soil) that occurs naturally and/or is not the result of human activities.



California Environmental Quality Act: act requiring California public agency decision-makers to document and consider the environmental impacts of their actions. Also requires an agency to identify ways to avoid or reduce environmental damage and to implement those measures where feasible, and provides a means to encourage public participation in the decision-making process.

Comprehensive Environmental Response, Compensation, and Liability Act: also known as Superfund, the federal law that guides cleanup of hazardous waste sites.

Conceptual Site Model: an integral part of a site investigation and/or risk assessment, as it provides the framework from which the study design is structured. It follows contaminants from the media, through transport and fate pathways (air, soil, surface water, and groundwater), to the human and/or ecological receptors.

Federal Facilities Site Remediation Agreement: a negotiated, non-regulatory legal agreement governing the CERCLA and RCRA administration process for cleanup at certain non-National Priorities List sites. Provisions of FFSRAs are factors in setting project execution priorities through risk management, and are also tools for formalization commitments, making selection of Remedial Action less adversarial.

Groundwater: underground water that fill pores in soils or openings in rocks to the point of saturation. Groundwater is often used as a source of drinking water via municipal or domestic wells.

Installation Restoration Program: the U.S. Department of Defense program implemented at U.S. military bases to identify, investigate, and clean up contamination resulting from past operations.

Institutional Controls: non-engineering measures that reduce or eliminate exposures, such as deed restrictions or land use restrictions.

National Oil and Hazardous Substances Pollution Contingency Plan: the federal regulation that sets forth the procedures for implementing cleanup under CERCLA (commonly known as Superfund).

No Further Action: a determination based upon an evaluation of the historical use of the site, or of area(s) of concern at that site, as applicable, that there are no discharged contaminants present at the site, or at any other site to which a discharge originating at the site has migrated, or that any discharged contaminants present at the site or that have migrated from the site have been remediated in accordance with applicable remediation regulations.

Notice of Exemption: a determination made by DTSC that an activity is categorically or statutorily exempt from CEQA. An NOE should be public noticed (i.e., placed on DTSC's website).

Preliminary Remediation Goals: risk-based concentrations developed by the California EPA, and used as screening levels in determining if further evaluation is warranted, and an estimation of potential human health risks.

Proposed Plan: a document that summarizes for the public the preferred cleanup alternative for a site and presents the rationale for the preference.

Receptor: human or ecological entity exposed to a stressor.

Record of Decision: a document presenting the final cleanup action selected under an agreement with the regulatory agencies.



Responsiveness Summary: a document that presents written responses to the formal comments received during the public comment period and is appended to the Record of Decision

Volatile Organic Compound: any organic compound that evaporates readily to the atmosphere. For example, benzene, a VOC found in gasoline, can be emitted into the atmosphere when gasoline evaporates. VOCs are also used in paints, plastics, solvents, and other products.



Attachment A: Public Comment Form



Public Comment Form
For
Public Draft Proposed Plan/Draft Remedial Action Plan
Site 47
Vandenberg AFB, California

Name: _____

Date: _____

Email Address: (optional) _____

Mailing Address: (optional) _____

Category: (please check appropriate category)

- | | |
|---|--|
| <input type="checkbox"/> Private Citizen | <input type="checkbox"/> County Agency |
| <input type="checkbox"/> Private Organization | <input type="checkbox"/> City Agency |
| <input type="checkbox"/> Federal Agency | <input type="checkbox"/> Tribal Agency |
| <input type="checkbox"/> State Agency | <input type="checkbox"/> Other |

Other: _____

Comment(s):



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(Please use this page for add additional comments.)