



Vandenberg Air Force Base Proposed Plan for Closure and No Further Action at Site 54



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 54 on Vandenberg Air Force Base (AFB). The proposed action for IRP Site 54 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 54: Looking East

Site 54, Missile Silo Complex 395-A, consists of three abandoned Titan I missile silos and a network of concrete-lined and unlined surface channels. The site was used from September 1961 to March 1965

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 16.

Public Meeting 14 June 2007

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

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

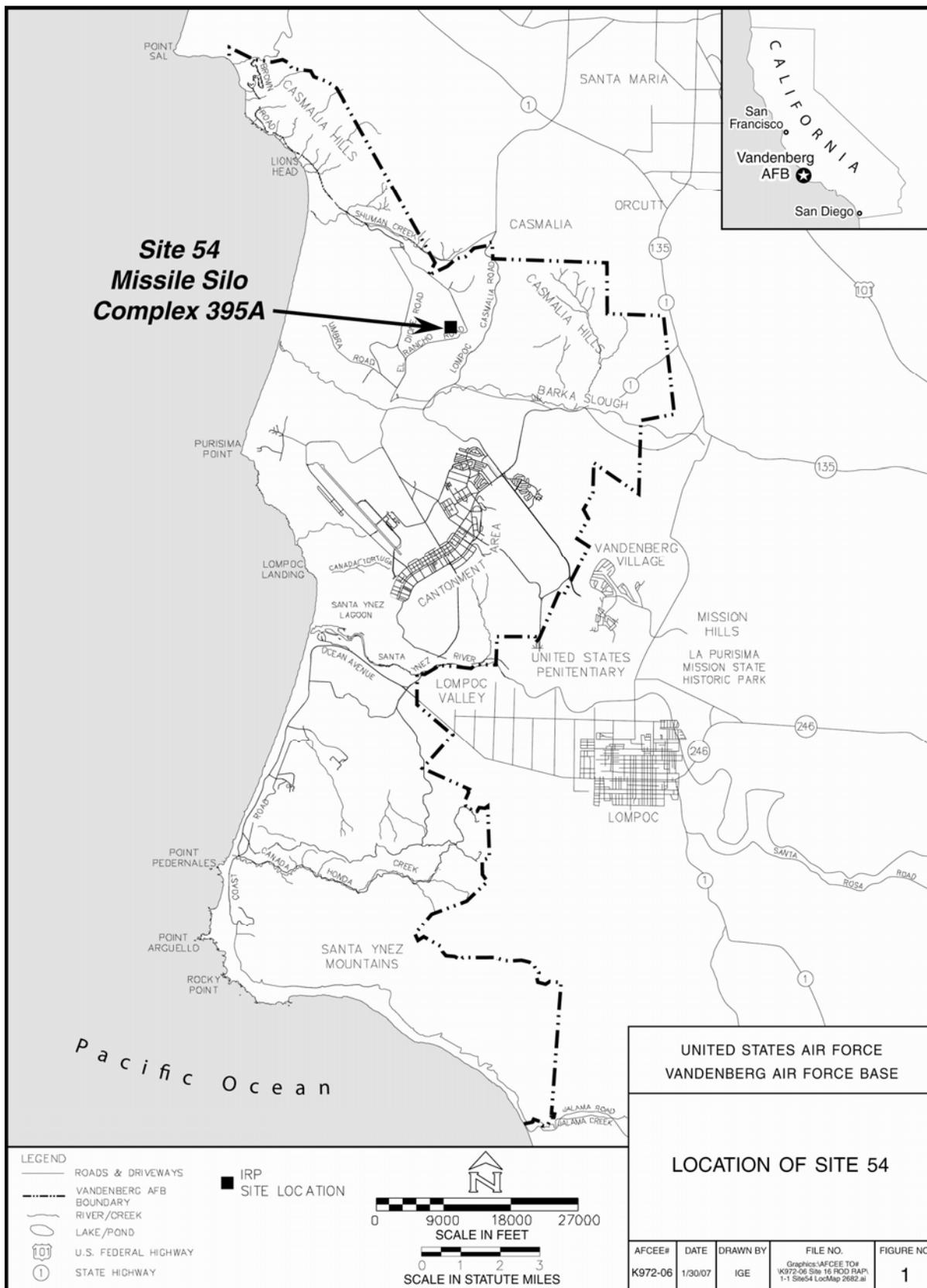
This meeting is an opportunity for you to hear more about the environmental proposal, to ask questions, and to give verbal and written comments in person.

as a Training Base Facility. A total of 19 Titan I missiles were launched from Missile Silo 395-A. The Titan I missiles were fueled with a mixture of rocket propellant No. 1 (RP-1) and liquid oxygen, and flushed with trichloroethene (TCE) prior to launch. Currently no operations are conducted at the site.

| CONTENTS | Page |
|--|------|
| Introduction | 1 |
| Purpose of Document | 4 |
| CERCLA Cleanup Process..... | 4 |
| Lead and Support Agencies..... | 4 |
| Description of Selected Remedy | 5 |
| Site Background | 5 |
| History of Environmental Investigation | 7 |
| Investigation Summary..... | 8 |
| Site Characteristics | 9 |
| Scope and Role of Response Action..... | 9 |
| Summary of Site Risks..... | 9 |
| Description of the "No Action" Preferred Alternative..... | 10 |
| Community Participation | 10 |
| Glossary | 12 |
| Public Comment Form | 16 |

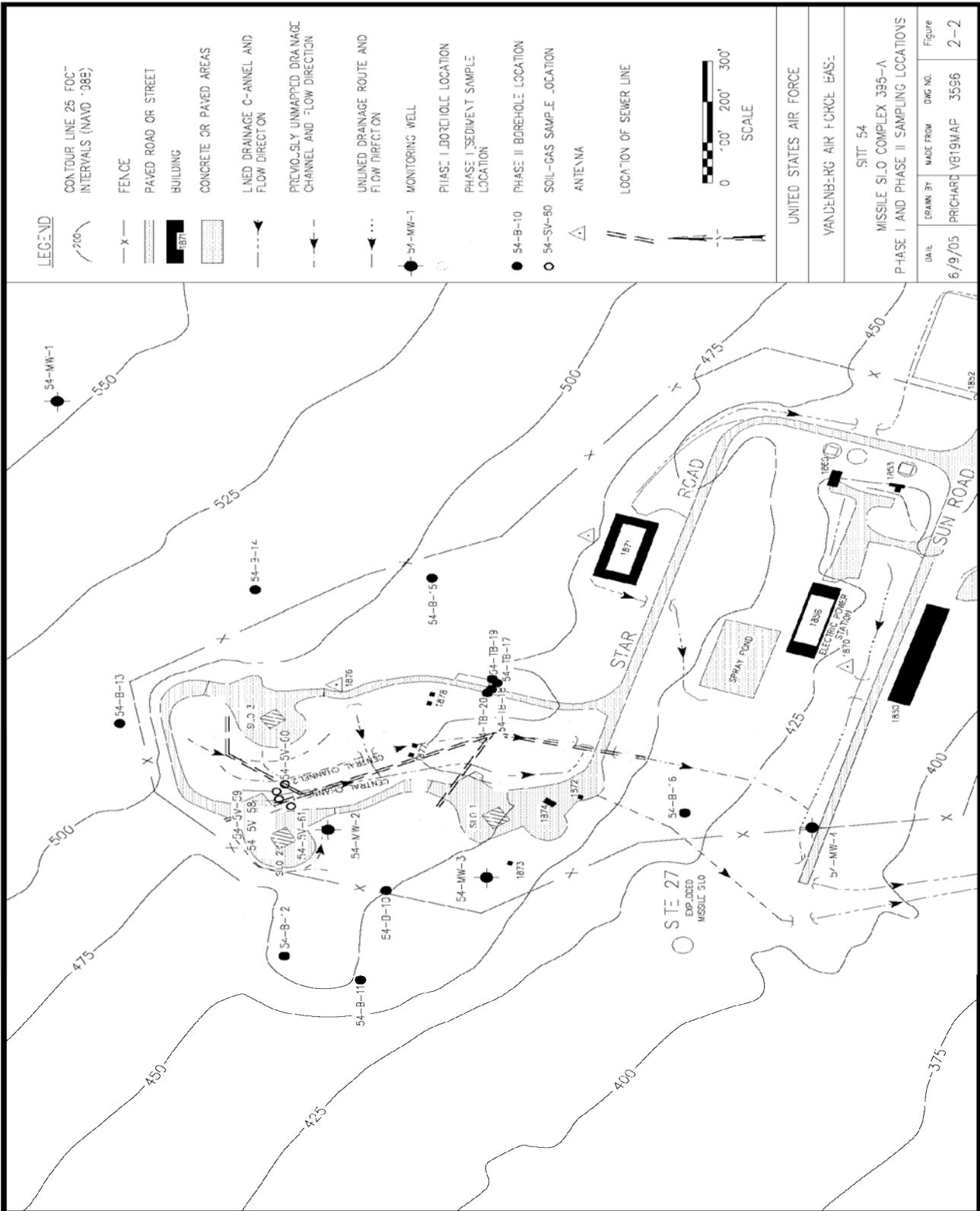


Vandenberg Air Force Base Proposed Plan for Closure and No Further Action at Site 54
 Vandenberg Air Force Base, California
 June 2007





Vandenberg Air Force Base Proposed Plan for Closure and No Further Action at Site 54
 Vandenberg Air Force Base, California
 June 2007





1.2 PURPOSE OF DOCUMENT

The purpose of the PP is to facilitate public involvement in the remedy selection process for Site 54 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 (EPA) 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 3. 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 54. 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. If significant risks had been identified, a Feasibility Study (Step 3) would have been performed for Site 54 to evaluate alternative methods for site cleanup. However, this step was not necessary for Site 54 since the RI findings indicated no significant contamination or risks and recommended no further action. The reports for Site 54 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 prior field investigations and reports that were done in the previous 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, which is Step 5. Any cleanup action would be Step 6. Once a site is considered clean, a final report is written that describes what was done and the process is over or "closed." However, no remedial action (Step 6) is necessary for Site 54 in order to protect human health and the environment.

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 54. They determined that Site 54 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 11.

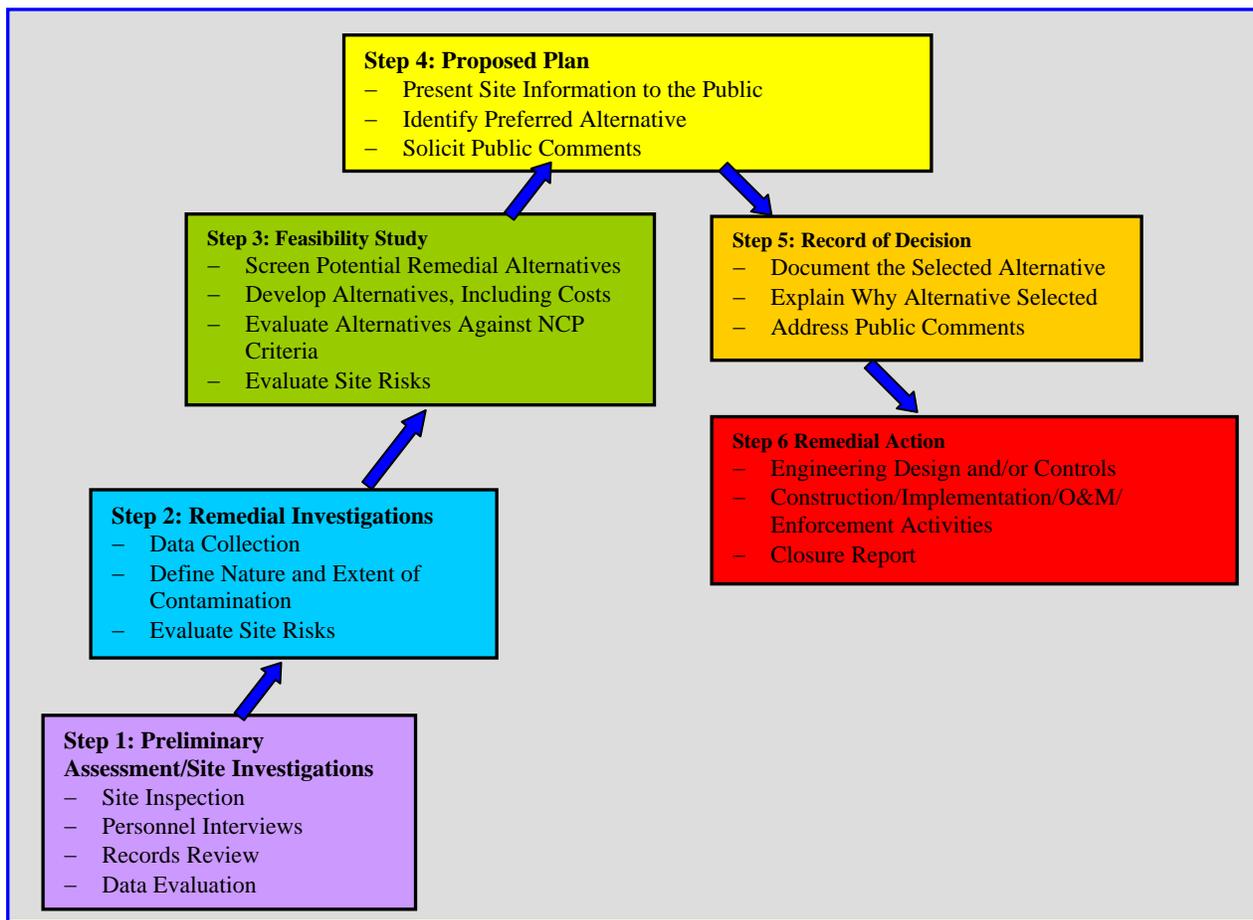


Figure 3. CERCLA Process

1.4 DESCRIPTION OF SELECTED REMEDY

The selected remedy for Site 54 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 54 do not pose an unacceptable risk to human health and the environment. Therefore, the proposed NFA remedy is consistent with CERCLA. By letter dated 23 April 2001, 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# 1680) 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

Site 54 comprises three abandoned Titan I missile silo training facilities. These silos were designed to house missiles prior to launch, but were not designed for in-silo launches. Rather, missiles were raised out of the silo with an elevator and then launched from the surface. Each of the three silos is surrounded by a concrete pad of approximately 20,000 square feet and is connected to the other pads by a concrete roadway. The doors to the access tunnels of the silos are welded shut. A network of concrete-lined and



unlined channels was used to direct deluge water from launches southward and across adjacent IRP Site 27 to a concrete-lined retention basin next to El Rancho Road.

Site 54 is on the eastern margin of the San Antonio Terrace. The ground surface at the site consists of graded fill material that is nearly flat and is approximately 475 feet above mean sea level (msl). North and south of the silos, the ground surface slopes gently toward the southwest. To the west of the silo complex is a steep slope of fill material. Site features are illustrated on Figure 2.

Bedrock beneath Site 54 is diatomite and diatomaceous mudstone and shale of the Sisquoc Formation. Overlying the Sisquoc Formation is the unconsolidated Orcutt Formation, which is mainly composed of sands and silty sands ranging from 0 to 20 feet thick. Immediately beneath the pad area, the bedrock is overlain by up to 40 feet of fill material. The fill material consists largely of silty sands with shale bedrock gravel clasts. Bedrock outcrops at Site 54 are observed along the fence on the northeast side of the site and immediately south of the site near the Exploded Missile Silo (IRP Site 27). North of the site, the top of bedrock slopes gently to the southwest. Beneath the silo complex, the top of bedrock was excavated during construction and appears to be horizontal. South of the site, the top of bedrock slopes steeply to the southwest toward IRP Site 27.

Based on data from an upgradient background well (54-MW-1), located approximately 650 feet northeast of the site boundary, groundwater was measured at approximately 542 feet above msl, or 10 feet below ground surface (bgs). Groundwater is assumed to flow to the southwest following bedrock topography. In the silo area, three deep boreholes (54-MW-2, 54-MW-3, and 54J-B-9) were drilled to bedrock approximately 440 feet above msl to investigate the presence of groundwater; groundwater was not encountered in these borings. One monitoring well (54-MW-4) was installed downslope of the pads on the south side of the site. Groundwater at this well was encountered above bedrock at approximately 22 feet bgs. There is no apparent perennial surface water at Site 54. Storm water at Site 54 flows to the south and southwest toward San Antonio Creek via a complex of lined and unlined channels that cross IRP Site 27.

A Conceptual Site Model (CSM) of Site 54 was developed during the RI. Based on a literature search, the primary source of contamination at Site 54 was the deluge water released during launches, which may have entrained contaminants from the pad area and carried them downslope. These contaminants may have included waste TCE from pre-launch engine flushes, lubrication oil, paint, and metals. Based on records from launch activities at Vandenberg AFB, brass nozzles used to direct deluge water, along with other exposed metal parts, paint, and other surface coatings, were abraded by the engine blast and deluge water. It is likely that similar processes occurred at Site 54. Sandblasting or scrubbing of the silo was likely followed by repainting after launches and may represent an additional potential primary source of contamination. During the RI, an unlined drainage channel was observed to contain standing water that appeared to be coming from a broken metal pipe near Building 1856. There was concern regarding this pipe, as two diesel underground storage tanks (USTs) were formerly next to Building 1856. However, the USTs were removed and this potential source of contamination is no longer present.

Primary migration pathways at Site 54 include volatilization of organic compounds to the air during launches and deluge water directed off-site via the network of concrete-lined drainage channels. Because no groundwater was encountered above bedrock in the pad area, shallow groundwater was not considered a likely pathway for contaminant migration. Contaminants carried off-site and to the subsurface via deluge and storm water runoff may, however, have been transported to shallow groundwater beneath nearby Site 27 and areas to the south. These contaminants would then have been transported toward San Antonio Creek and eventually the Pacific Ocean. Therefore, secondary sources of contamination that



may have resulted from off-site migration from Site 54 have been evaluated separately in the baseline risk assessment performed for adjacent Site 27.

No secondary sources of contamination were identified at Site 54. For human health and ecological risks to exist, there must be a complete exposure pathway consisting of a contaminant source, a transport medium, a route of exposure, and an exposed population. The lack of a secondary contaminant source at Site 54 means that no complete exposure pathway exists for human or biological receptors.

2.1 HISTORY OF ENVIRONMENTAL INVESTIGATIONS AT SITE 54

Environmental investigation activities conducted at Site 54 included a records search; personal interviews; geologic surveys; geophysical survey; soil gas, soil, sediment, and groundwater sampling; environmental data analyses; and data validation. The records search revealed that radioactive materials were not used, stored, or disposed of at Site 54. Prior to the RI work performed by Tetra Tech, Inc. (Tetra Tech) during 1993 through 1996, Jacobs Engineering Group prepared a Phase I RI Work Plan for Site 54 and installed monitoring well 54-MW-1 in 1992.

In 1993 and during the Phase I RI, a total of 50 soil gas samples were collected along the concrete lined and unlined drainage channels at Site 54. No volatile organic compounds (VOCs) were detected in any of the samples. Methane was detected at two of the locations on opposite sides of the main concrete-lined drainage channel. The locations where methane was detected corresponded with the location of sewer lines, as indicated by as-built engineering diagrams of the site. During the Phase II RI conducted from 1995 through 1996, five soil gas samples were collected to confirm the presence and evaluate the source of high methane concentrations. No VOCs or methane were detected in the Phase II soil gas samples.

Four sediment samples were collected from unlined and concrete-lined deluge water channels next to or downgradient from the pad area and analyzed for metals. Antimony, arsenic, cadmium, calcium, lead, and sodium were detected in sediment samples at concentrations above background threshold values (BTVs) for surface alluvium. However, much of the fill material and sediment encountered at the site contained shale bedrock fragments, which are the likely source of these metals.

Tetra Tech collected 22 surface soil samples and 35 subsurface soil samples during the RI at Site 54 to assess potential contamination in the drainage channels, next to the silos, in the pad area, and at the RP-1 UST.

Elevated metal concentrations above background were detected in both surface and subsurface soil samples. Three surface soil samples contained arsenic at concentrations above the BTVs and residential Preliminary Remediation Goals (PRGs) and industrial PRGs. Of the 24 fill material samples, 12 contained one or more metals at concentrations exceeding a subsurface alluvium BTV.

Out of the 11 subsurface native soil samples, 5 contained metals at concentrations above the subsurface alluvium BTVs; all 5 samples were collected from well boring 54-MW-4. Arsenic was detected above BTVs and both residential PRGs and industrial PRGs in two samples, iron above BTVs and the residential PRG in one sample; and vanadium above BTVs and residential PRGs in two samples.

Results of the metals analysis were reviewed for trends or patterns to assess the source of these apparently elevated concentrations. Based on a review of data collected during the RI, it was apparent that the elevated metal concentrations detected in the fill material were not related to site activity, but rather reflect naturally elevated metal concentrations associated with portions of the Monterey Shale and Sisquoc Formations observed within the fill materials at Site 54. Metal concentrations in the fill material



did not differ significantly from naturally occurring concentrations in bedrock, corroborating the interpretation of a natural origin. The elevated concentrations of metals detected in subsurface soils (all from boring 54-MW-4) are attributed to stronger adsorption of background metals onto the finer lithologies (i.e., sandy clays and clay) encountered in boring 54-MW-4.

All 35 subsurface soil samples collected during the RI were analyzed for total petroleum hydrocarbons (TPH) using U.S. EPA method 8015. TPH were detected in one sample at a concentration in excess of the Vandenberg AFB Action Level of 100 milligrams per kilogram (mg/kg). This surface soil near location 54J-B-8, was removed during the Phase II investigation, transferred to a 55-gallon drum, and disposed of off-site. No TPH were detected in the four soil samples collected to investigate for potential leaks associated with the RP-1 UST.

The only VOCs detected in soil samples were low levels of acetone and methylene chloride, which are common laboratory contaminants and suspected laboratory artifacts. Furthermore, there are no known sources of these compounds at Site 54, and the detected concentrations are all well below respective residential PRGs and industrial PRGs.

Four groundwater monitoring wells, designated as 54-MW-1 through 54-MW-4, were installed at the site. Analysis of groundwater samples from well 54-MW-1 indicated no metals above BTVs, and low concentrations of acetone and Freon 11. These VOCs are common laboratory contaminants used in the preparation and analysis of environmental samples and are considered laboratory artifacts. Groundwater was not encountered in monitoring wells 54-MW-2 and 54-MW-3, which were installed beneath the pad area. Downslope from the pad area at monitoring well 54 MW-4, the only detected potential groundwater constituent of concern was molybdenum, which was detected at a concentration slightly above the background level of 12.0 micrograms per liter ($\mu\text{g/L}$). This concentration is well below the tap water PRG of 180 $\mu\text{g/L}$ in groundwater. No organic contaminants were detected in the groundwater samples from wells 54 MW-1 and 54-MW-4. Monitoring wells 54-MW-1, 54-MW-2, and 54-MW-3 were removed (properly abandoned) in accordance with all applicable state and federal regulations during October 2002 since they are no longer needed for site characterization or groundwater monitoring.

During site visits, access to the silo was investigated. The access doors to silo tunnels were welded shut, and drilling through the 4-foot-thick concrete doors covering the silo top was deemed impractical. It was determined there was no practical and safe means of collecting samples at the silo. The Sisquoc Formation comprising bedrock at Site 54 does not provide a viable aquifer host in the region, and its characterization at other sites at Vandenberg AFB indicates it is generally impermeable. Therefore, although silo water has not been verified to be present due to access restrictions and safety issues, its likelihood of potentially impacting groundwater is considered remote. The potential for contaminants to reside inside the silo and associated structures should be assessed using appropriate procedures if and when the facility is demolished.

2.2 INVESTIGATION SUMMARY

Investigative findings demonstrated that existing contaminants do not pose an unacceptable risk to human health and the environment. Current conditions allow for unrestricted and unlimited land use.

The Site 54 RI Report recommended no further investigation. By letter dated 23 April 2001, both the DTSC and the RWQCB concurred with the recommendation for no further investigation at Site 54. These documents can be found in the Administrative Record for the Vandenberg AFB IRP (AR # 1680).

There have not been any enforcement activities at this site.



3.0 SITE CHARACTERISTICS

Figure 2 shows site characteristics such as topography, surrounding structures, and access roadways. The site is located in the northern half of Vandenberg AFB and 1.6 miles north of San Antonio Creek. Site 54 is immediately adjacent to IRP Site 27 (Exploded Missile Silo), which lies downgradient and to the southwest of Site 54. Bedrock beneath Site 54 consists of Sisquoc Formation shale. Overlying the Sisquoc Formation is the unconsolidated Orcutt Formation. Groundwater at the site is encountered from approximately 10 to 22 feet bgs. Groundwater is not present in the areas surrounding the silos. There is no perennial surface water at Site 54.

The Vandenberg AFB geographic information system database land use layer classifies the present and future land use at Site 54 as industrial.

The RWQCB Basin Plan designates groundwater resources at Vandenberg AFB, including those at Site 54, 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>. 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 54 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. The site does not pose an unacceptable risk to human health and the environment, and current conditions allow for unrestricted and unlimited land use.

5.0 SUMMARY OF SITE RISKS

Site 54 consists of three abandoned missile silos and a network of concrete-lined and unlined surface drainages. A CSM was developed and a human health and ecological risk characterization was performed for Site 54. Based on findings generated during the RI work, TPH and VOCs are not an issue in soil, soil gas, or groundwater at the site. Metals in soils were noted to exceed BTVs in some samples, however, the exceedances are associated with naturally elevated metal concentrations associated with fragments of the Monterey Shale and Sisquoc Formations within the fill materials at Site 54.

No organic compounds were detected in groundwater beneath the site. Only one metal, molybdenum, was detected in groundwater from well 54-MW-4 at a concentration slightly above its BTV, but well below the tap water PRG.

In general, for human health and ecological risks to exist there must be a complete exposure pathway. A complete exposure pathway consists of a contamination source, a transport medium, a route of exposure, and an exposed population. Based on findings from the RI, the only documented potential anthropogenic contamination source, based on sampling and analysis of site media, is molybdenum in groundwater from well 54-MW-4. This metal has been detected at a concentration slightly above the BTV, but below the tap water PRG. However, because no groundwater was encountered above bedrock in the pad area, shallow groundwater was not considered a likely pathway for contaminant migration. In addition, since the doors to the silos are welded shut and the 4-foot-thick concrete roof is intact, there is no pathway for human contact with potential water within the silos.



Therefore, given the general absence of a contaminant source and the lack of a migration pathway at Site 54, no complete exposure pathway exists. Consequently, none of the potential receptors at Site 54 and its vicinity are considered to be at risk. In addition, although a residential risk exposure was not evaluated during the RI, there are no known and accessible constituents present in site media not attributable to background conditions 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 that 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 54. 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:

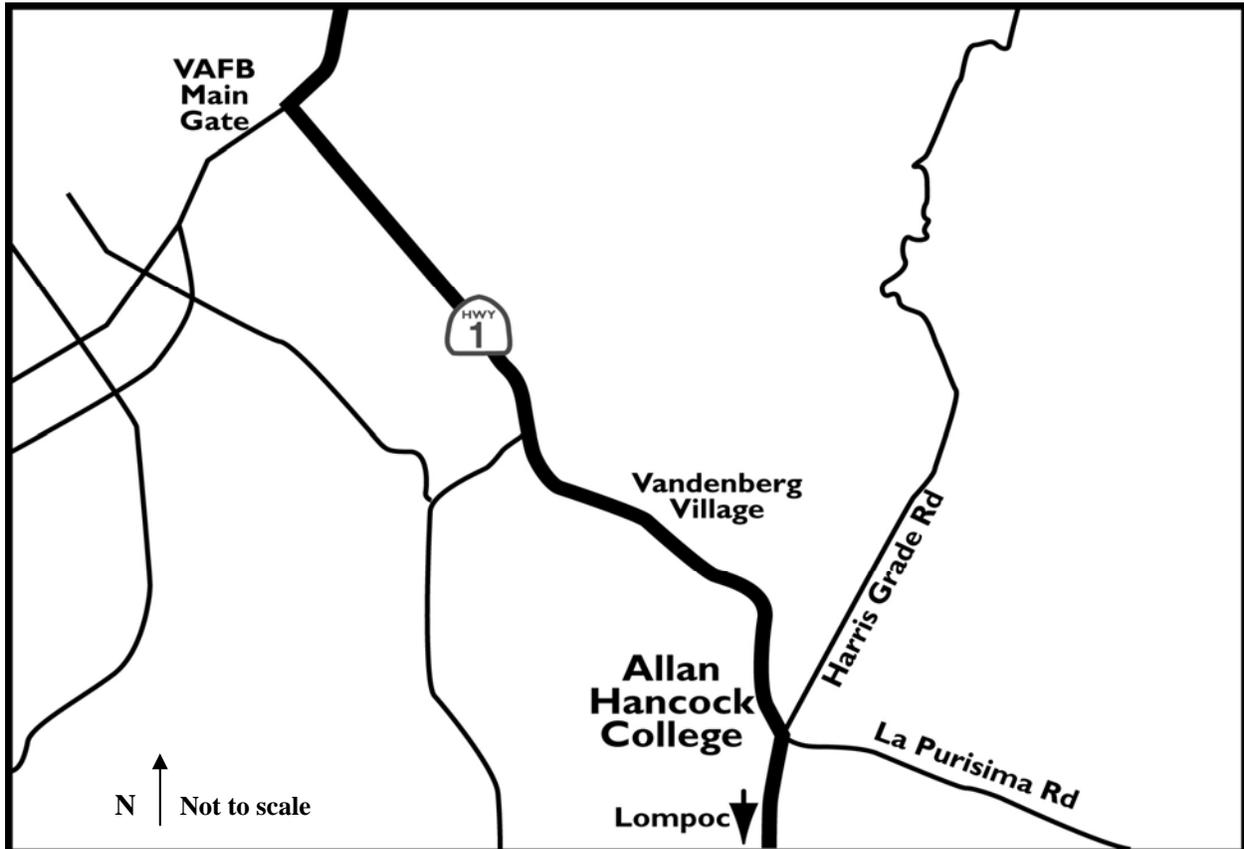
Ronald MacLelland
Community Relations Coordinator
1515 Iceland Avenue, Room 181C
Vandenberg AFB, CA 93437-5319

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 at 10:00 a.m. on:
Date: 14 June 2007.
Location: Room 1-202/203, Allan Hancock College, Lompoc Valley Center, One Hancock Drive, Lompoc, CA (805) 735-3366 (see below 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 |
| µg/L | micrograms per liter |
| msl | mean sea level |
| NCP | National Oil and Hazardous Substances Pollution Contingency Plan |
| NFA | No Further Action |
| NOE | Notice of Exemption |
| PA/SI | Preliminary Assessment/Site Investigation |
| PRG | Preliminary Remediation Goal |
| PP | Proposed Plan |
| RAP | Remedial Action Plan |
| RI | Remedial Investigation |
| RWQCB | Regional Water Quality Control Board |
| Tetra Tech | Tetra Tech, Inc. |
| TPH | total petroleum hydrocarbons |
| TCE | trichloroethene |
| U.S. EPA | U.S. Environmental Protection Agency |
| UST | underground storage tank |
| 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.

Anthropogenic: caused by humans.

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: a 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 54
Vandenberg AFB, California

Name: _____

Date: _____

Email Address: (optional) _____

Mailing Address: (optional) _____

Category: (please check appropriate category)

_____ Private Citizen

_____ Private Organization

_____ Federal Agency

_____ State Agency

_____ County Agency

_____ City Agency

_____ Tribal Agency

_____ Other

Other: _____

Comment(s):



Vandenberg Air Force Base Proposed Plan for Closure and No Further Action at Site 54
Vandenberg Air Force Base, California
June 2007



(Please use this page for additional comments.)